



Stormwater Facility Plan

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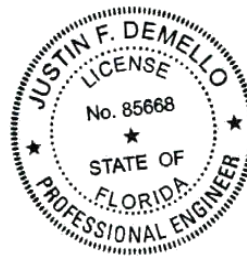
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City of LaBelle

November 2024

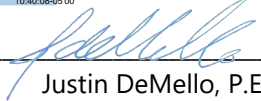
CERTIFICATION BY ENGINEER

The information contained in this report is true and correct to the best of his knowledge, the report was prepared in accordance with sound engineering principles, and he discussed the recommendations, costs, and funding approach with the City of LaBelle (City) or the City's delegated representative. This Stormwater Facilities Plan was prepared to meet the requirements of the Florida Clean Water State Revolving Fund (CWSRF) Program under Chapter 62-503, F.A.C. and this certification pertains only to the planning analysis presented in this report. Certification for design and construction of the proposed facilities will be completed under a separate CWSRF project.



Justin deMello, P.E.
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SUMMARY OF FINDINGS AND RECOMMENDATIONS

The City of LaBelle (City) has recognized the need for stormwater planning and capital improvements to enable development and redevelopment in the City, enhance flood protection, and improve water quality in the Caloosahatchee River watershed. The City’s priority for this Stormwater Facility Plan is to evaluate existing stormwater assets and their ability to meet the normal/census-based growth and identify locations to improve flooding and water quality.

This Stormwater Facilities Plan was prepared by Woodard & Curran, Inc. (Woodard & Curran) to meet the requirements of the Florida Stormwater State Revolving Fund (CWSRF) program. The Facilities Plan is a planning-level document that defines project needs and costs to allow the City to secure grant and low-interest funds for the design and construction of stormwater infrastructure. It describes the City’s needs for a 20-year planning period beginning in the year 2025 and through the year 2045. The City has experienced rapid growth in recent years that is anticipated to continue, similar to adjacent communities. Protecting the region’s natural resources is important to maintain the quality of life as the City and surrounding communities experience continued development over time.

The City is approximately 9,270 acres. The City is a low-lying area that experiences flooding and stormwater quality issues throughout the year during precipitation events. The City lacks sufficient, modern stormwater management infrastructure and experiences stormwater-related issues, such as flooding, erosion, and limited water quality treatment. Additionally, the City is interested in advancing their septic to sewer program to continue to improve water quality.

Two sets of three alternatives were evaluated to address the identified deficiencies. The alternatives are organized into stormwater improvements and on-site disposal. The stormwater improvements alternatives include no action, small-scale dispersed systems, and large-scale concentrated systems alternatives. The on-site disposal alternatives include no action, conversion to performance-based septic, and collection system expansion alternatives. The recommended alternatives are the stormwater improvement Alternative 3 (Large-Scale Concentrated Systems) and the on-site disposal Alternative 3 (Collection System Expansion).

The total capital cost of the stormwater improvement Alternative 3, and the capital cost per equivalent residential unit (ERU) of the on-site disposal Alternative 3, are presented in 2024 dollars in Table ES-1-1.

TABLE ES-1-1: ESTIMATED CAPITAL COST OF RECOMMENDED PROJECTS

Cost Item	Estimated Cost	
	Stormwater Improvement	On-Site Disposal
Construction Base Cost (2024)	\$10,409,000	\$14,500
Construction Contingency 10%	\$1,040,900	\$1,450
Engineering, Permitting and Design 10%	\$1,040,900	-
Engineering Services During Construction 8%	\$832,720	-
Fiscal, Legal and Administrative 3%	\$312,270	-
Land Acquisition	\$150,000	-
Construction Escalation to mid-point of construction (end of 2026 7%)	\$728,630	\$1,015
Total Opinion Capital Cost	\$14,514,420	\$16,965

The projects are anticipated to be funded in conjunction with and as part of the CWSRF financing for the Stormwater Facilities Plan recommendations. A capital financing plan (CFP), which describes the projected financial impact on the users of the stormwater system, is provided in Appendix A. Table ES-1-2 identifies where the CWSRF program requirements are addressed in this Facility Plan.

TABLE ES-1-2: CROSS REFERENCE CHECKLIST

CWSRF PLANNING DOCUMENT REQUIREMENT	SECTION
GENERAL	
<ul style="list-style-type: none"> • Sufficient illustrative detail of the local area to: <ul style="list-style-type: none"> ○ Identify where the project or activity is located. ○ Confirm the service area census tracts. 	1.1, 1.2, 2.1
<ul style="list-style-type: none"> • A description of the existing and recommended facilities, estimated capital costs, estimated operation and maintenance costs, and repair and replacement costs, if applicable. 	1.2, 3.3.2, 3.3.4
<ul style="list-style-type: none"> • The need or justification for the project. 	1.1, 1.3
<ul style="list-style-type: none"> • The environmental and economic impacts and benefits of the project. 	4.2, 4.3
<ul style="list-style-type: none"> • A description of the O&M program and the capacity (both managerial and technical) of the existing system. 	2.3.1, 5.2
COST COMPARISON AND SELECTED ALTERNATIVES	
<ul style="list-style-type: none"> • A cost comparison of at least three alternatives using life cycle costs – no action is an alternative. 	3.3.4
<ul style="list-style-type: none"> • A discussion of the various factors that affected the decision-making process that lead to the “selected alternative” and a rationale for selecting that alternative. 	3.3.5
<ul style="list-style-type: none"> • A project cost breakdown with the total cost reflective of the data used in the cost comparison. 	3.3.4
<ul style="list-style-type: none"> • The useful life for each major component in the project, used in the life cycle cost analysis. 	3.3.3
<ul style="list-style-type: none"> • Capital costs for each project phase. 	N/A
<ul style="list-style-type: none"> • Expected operation, maintenance, and repair/replacement costs, and changes to the technical and managerial costs needed to implement the proposed alternatives 	3.3.3

CWSRF PLANNING DOCUMENT REQUIREMENT	SECTION
<ul style="list-style-type: none"> • Identification of industrial control systems being, or proposed to be, used by the project. 	N/A
COST AND EFFECTIVENESS ANALYSIS	
<ul style="list-style-type: none"> • A cost and effectiveness analysis of the processes, materials, techniques, and technologies for carrying out the proposed project. 	4.5
<ul style="list-style-type: none"> • Does the selected alternative maximize the potential for water and energy efficiency considering the cost of constructing, operating, and maintaining, and replacing the project or activity, as necessary? If not, please provide explanation. 	4.4
ENVIRONMENTAL REVIEW	
<ul style="list-style-type: none"> • A list of threatened, endangered, proposed, and candidate species and designated critical habitats that may be present in the project area (may be obtained from U.S. Fish & Wildlife Service). 	2.1.9
<ul style="list-style-type: none"> • A discussion of any significant adverse effects upon flora, fauna, threatened or endangered plant or animal species, surface water bodies, prime agricultural lands, wetlands, or undisturbed natural areas. 	2.1.9
<ul style="list-style-type: none"> • A discussion of any significant adverse human health or environmental effects on minority or low-income communities. 	2.2.3
<ul style="list-style-type: none"> • List any significant adverse environmental effects and what project features will mitigate such effects. 	4.2, 4.3
FEDERAL FLOOD RISK MANAGEMENT STANDARD	
<ul style="list-style-type: none"> • Determination whether the proposed project is a "substantial improvement" (i.e. the project is worth more than 50% of the market value or replacement cost of the facility) 	3.3.4
<ul style="list-style-type: none"> • Maps and/or justification to determine if the project is in a floodplain 	2.1.4
PUBLIC PARTICIPATION	

CWSRF PLANNING DOCUMENT REQUIREMENT	SECTION
<ul style="list-style-type: none"> Evidence that a public meeting was held to explain the proposed project, the capital cost and the long-term financial impact on the customers, including a discussion whether the public participated in evaluating the project alternatives. 	6.1
<ul style="list-style-type: none"> Copies of the public meeting Notice that was provided at least 14 days in advance of the meeting (or greater as required by local rules) and the minutes of that public meeting. 	6.1
<ul style="list-style-type: none"> Evidence that the public meeting addressed the alternative analysis and selection, environmental impact, monetary cost to the public/user, and floodplain mitigation actions (if applicable). 	6.1
FINANCIAL FEASIBILITY	
<ul style="list-style-type: none"> Demonstration of the ability to repay the loan including the 1.15 coverage factor. 	6.3
<ul style="list-style-type: none"> A completed capital financing plan worksheet signed by the chief financial officer or the authorized representative. 	6.3
<ul style="list-style-type: none"> The proposed system of charges, rates, fees, and other collections that will generate the revenues to be dedicated to loan repayment (e.g. user charge rates). 	6.3
<ul style="list-style-type: none"> A Fiscal Sustainability Plan or Asset Management Plan or certification that a fiscal sustainability plan was developed and is being implemented. 	6.3
UPDATED REQUEST FOR INCLUSION	
<ul style="list-style-type: none"> Updated request for inclusion that includes an updated schedule and project costs. 	N/A
<ul style="list-style-type: none"> Detailed maps of the local area to confirm the service area census tract. 	1.1, 1.2, 2.1
<ul style="list-style-type: none"> If the planning period exceeds 5 years, consider project phasing and an implementation schedule for each phase of the planning period. 	6.4
PROJECT AUTHORIZATION	
<ul style="list-style-type: none"> Adopting resolution or other action establishing a commitment to implement the planning recommendations. 	6.1
PROJECT IMPLEMENTATION	

CWSRF PLANNING DOCUMENT REQUIREMENT	SECTION
<ul style="list-style-type: none"> Any engineering, environmental, or financial aspects of the project that require resolution. 	4.1
<ul style="list-style-type: none"> List any proposed service agreements or local contracts necessary to implement the selected alternative and describe the status of each agreement or contract. 	6.4
<ul style="list-style-type: none"> List any DEP permits needed to implement the selected alternative and the status of the permit(s). 	6.2
GREEN PROJECT DESIGNATION	
<ul style="list-style-type: none"> Documentation of how the project is categorically green and determination of what percentage of the project is categorically green. 	4.6

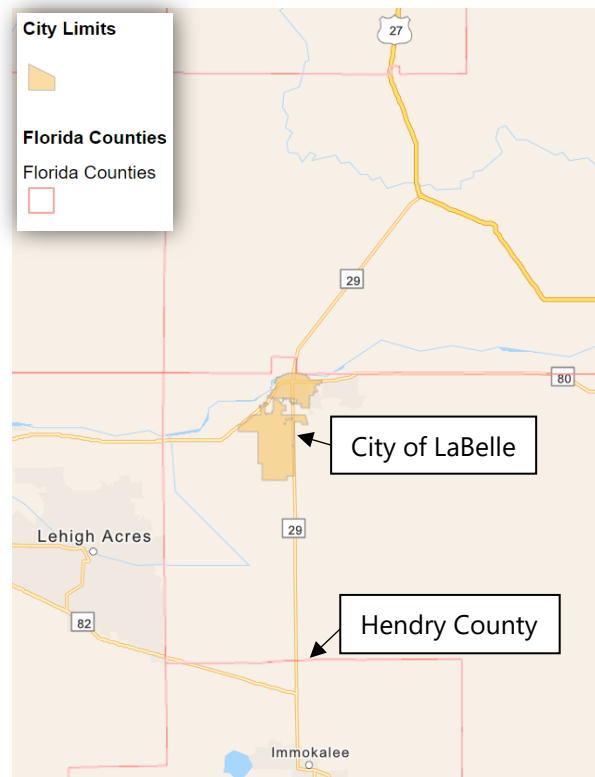
1. INTRODUCTION

The City of LaBelle, Florida (City) intends to take a more comprehensive approach to the City's long-term capital needs to address flooding and water quality concerns. The goal of this Stormwater Facility Plan is to be a dynamic and useful planning and implementation document that focuses on the City's existing stormwater assets and their ability to meet the normal/census-based growth of the City. This document is provided to meet the planning requirements for the Clean Water State Revolving Fund (CWSRF) program for the purpose of obtaining funding for stormwater management improvements within the City.

1.1 Background

Figure 1-1 shows the City of LaBelle located in Hendry County, Florida, approximately 30 miles east of Fort Myers and 90 miles west of West Palm Beach. The City's population is approximately 5,222 people according to the U.S. Census Bureau 2023 census. An average annual population growth rate of 0.9% is expected to occur, per review of LaBelle's population estimates from the U.S. Census Bureau (USCB) (using data from 2000, 2010, and 2020) and the Bureau of Economic and Business Research (BEBR) (using data from 2013 to 2022). This population growth will bring with it new development and stresses on City infrastructure. Additionally, the City is a low-lying area and experiences flooding and stormwater quality issues throughout the year during precipitation events. This Facility Plan is a comprehensive plan developed to address water quantity and quality issues and support the City's growth.

FIGURE 1-1: CITY LOCATION



Source: Florida Geographic Data Library

1.2 Planning Area

The planning area is the City Limits of LaBelle, Florida consisting of approximately 9,270 acres. The City of LaBelle is the county seat of Hendry County and provides urban and commercial amenities for surrounding communities in Hendry and Glades counties. The Caloosahatchee River traverses the northern boundary of the City of LaBelle. The City of LaBelle is within the South Florida Water Management District (SFWMD) and Coastal Heartland National Estuary Program area. Two major state roads, State Road (SR) 80 and State Road 29, divide the City. The planning area is depicted in Figure 1-2.

FIGURE 1-2: PLANNING AREA



Source: Google Earth

1.3 Policy Need

The planning area was primarily developed prior to modern stormwater management regulations. Over time, discrete areas have been retrofitted or redeveloped with stormwater infrastructure to mitigate flooding and erosion. However, the City has recognized the need for stormwater planning to support smart, efficient redevelopment. The City of LaBelle's Economic Development and Disaster Resiliency Plan and Comprehensive Plan were reviewed to understand economic development goals, locate planned growth,

and identify areas where stormwater management investments can support the City's economic development goals.

The City of LaBelle Economic Development and Disaster Resiliency Plan, dated June 15, 2020, presents the community-based vision for economic development and establishes a strategic action plan to achieve the City's goals. The City's economic development strategy outlines goals organized by infrastructure, industry, downtown, recreation and eco-tourism, and workforce housing. Infrastructure goals are focused on planning for and prioritizing the expansion of infrastructure in strategic areas within the City and future capital needs to accommodate projected growth, and leveraging public-private partnerships, grant funding, and partners in the development industry to support and fund infrastructure expansion projects. The City also has a resiliency and disaster preparedness strategy, which outlines focus areas including sea level rise adaptation and hurricane, flooding, and natural disaster preparedness. This strategy identifies the following related action items:

- Enhance stormwater management and flood protection ordinances to update antiquated local requirements and ensure consistency with regulating state agencies;
- Prioritize green infrastructure and low impact development; and
- Examine ways to enhance existing City-owned stormwater systems to be more resilient.

The City of LaBelle Comprehensive Plan, updated June 2023, establishes a set of guidelines and development policies that will guide public and private development within the community. One of the goals of this plan is to ensure that the sanitary sewer, solid waste, drainage, potable water, and natural groundwater aquifer recharge needs of the residents of LaBelle are met and that the natural resources and environmental quality of the City are protected.

This Stormwater Facility Plan fulfills the need to plan for stormwater-related infrastructure improvements, which will support the City's goals of expanding infrastructure to accommodate projected growth and enhancing resiliency.

1.4 Scope of Plan

The objectives of the study include the following:

- Review drainage infrastructure inventory, existing data, and City policies.
- Identify stormwater system deficiencies.
- Identify and evaluate alternative capital improvement and maintenance projects to address deficiencies.
- Recommend effective project solutions based on cost and level of pollutant removal.
- Prioritize projects and present a schedule for implementation.
- Consider project resiliency.

1.5 Facilities Planning Overview

Facilities Planning is the process used to identify the stormwater management needs for the CWSRF for a 20-year planning period. Strategies are developed with the plan to meet those needs and for use as the basis for subsequent design and construction. The plan examines the topographic, hydrologic, and institutional features of the planning area to assess their impact on stormwater management needs.

The planning period begins in the year 2025 and extends through the year 2045. Several alternatives were investigated to identify the most feasible methods for meeting the City's needs as well as anticipated regulatory requirements during the future planning period.

1.6 Reference Standards and Guidelines

This report addresses the CWSRF Planning Document Requirements Checklist items listed in Table ES-1-1. It is organized such that it is compatible with the Florida Department of Environmental Protection (FDEP) Model Facilities Plan published in 2000.

2. EXISTING AND FUTURE CONDITIONS

2.1 Description of Planning Area

The proposed planning area is the City of LaBelle, Florida boundary. LaBelle is located in Hendry County, Florida, with a population of 5,222 according to the U.S. Census Bureau 2023 census. Surface features within the planning area include previously disturbed flat land and land with sparse trees and vegetation with a warm climate for most of the year.

2.1.1 Planning Area

The City of LaBelle is the county seat of Hendry County and provides urban and commercial amenities for surrounding communities in Hendry and Glades counties. The Caloosahatchee River traverses the northern boundary of the City of LaBelle. The City of LaBelle is within the South Florida Water Management District (SFWMD) and Coastal Heartland National Estuary Program area. Two major state roads, State Road (SR) 80 and State Road 29, divide the City.

2.1.2 Climate

Per the South Florida Water Management District, the City is within the East Caloosahatchee rain forecast area, which has a 30-year historical average annual rainfall (1991-2020) of 53.7 inches. NOAA Atlas 14 estimates a 25-year, 3-day storm event in LaBelle generates 9.89 inches of precipitation. Reports for both sources of rainfall data are included in Appendix C. Table 2-1 lists climate averages for the City of LaBelle.

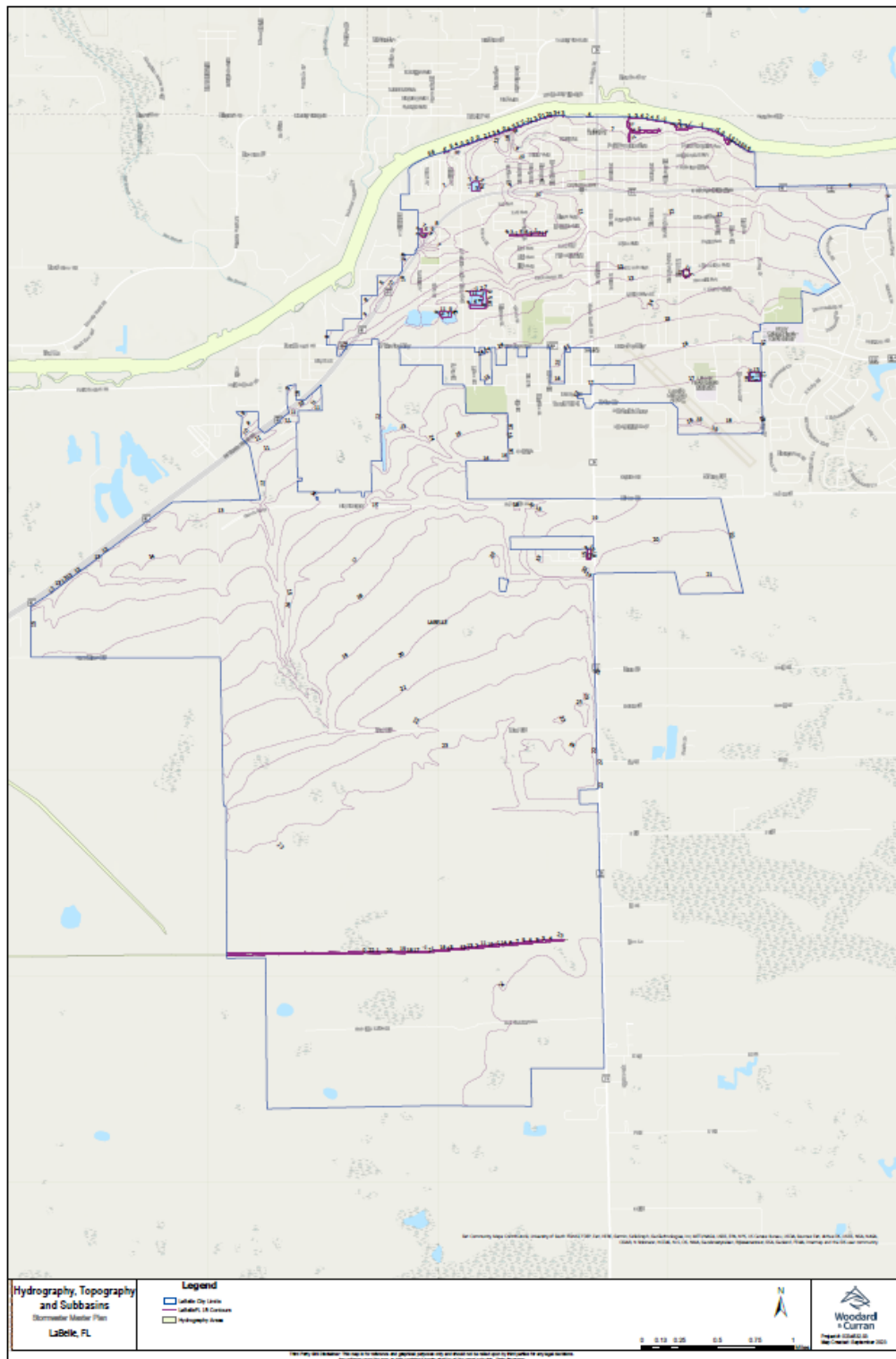
TABLE 2-1: CLIMATE AVERAGES

	LaBelle, Florida	United States
Rainfall (in)	53	38.1
Snowfall (in)	0	27.8
Precipitation (days)	101.8	106.2
Sunny (days)	259	205
Average July High (°F)	91.5	85.8
Average January Low (°F)	48.4	21.7
UV Index	6.1	4.3

2.1.3 Topography and Drainage

The City has many mapped streams, which discharge to drainage canals, ditches, and pipe networks, and ultimately to the Caloosahatchee River. The City generally ranges from elevation 24 in the south to elevation 6 along the Caloosahatchee River in the north. Hydrography, topography, and watershed information are presented in Figure 2-1.

FIGURE 2-1: HYDROGRAPHY, TOPOGRAPHY, AND WATERSHED MAP



Not to scale

2.1.4 Floodplains

Per the National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRMs) for Hendry County (Map Numbers 12051C 0039D, 0043D, 0177D, 0181D, 0180D, and 0190D, effective July 6, 2015), approximately 17.6% of the City is within a mapped Federal Emergency Management Agency (FEMA) flood zone. Much of this flood hazard area is within the northern, developed portion of the City, surrounding drainage ditches which are hydraulically connected to the Caloosahatchee River. The City has a variety of flood hazards, including regulatory floodways, special flood hazard areas with a 1% annual chance of flood hazard, and areas with moderate to low flood hazard risk with a 0.2% annual chance. These areas are summarized in Table 2-2 below and shown in Figure 2-2.

TABLE 2-2: FLOOD HAZARD ZONES

Flood Hazard Zone	Area (ac.)	Percent of City
Zone A, 1% Annual Chance of Flood Hazard	325.5	3.5%
Zone AE, 1% Annual Chance of Flood Hazard	517.8	5.6%
Zone AE, Regulatory Floodway	70.7	0.8%
Zone AH, 1% Annual Chance of Flood Hazard	92.8	1.0%
Zone X, 0.2% Annual Chance of Flood Hazard	622.5	6.7%
Total	1,629.3	17.6%

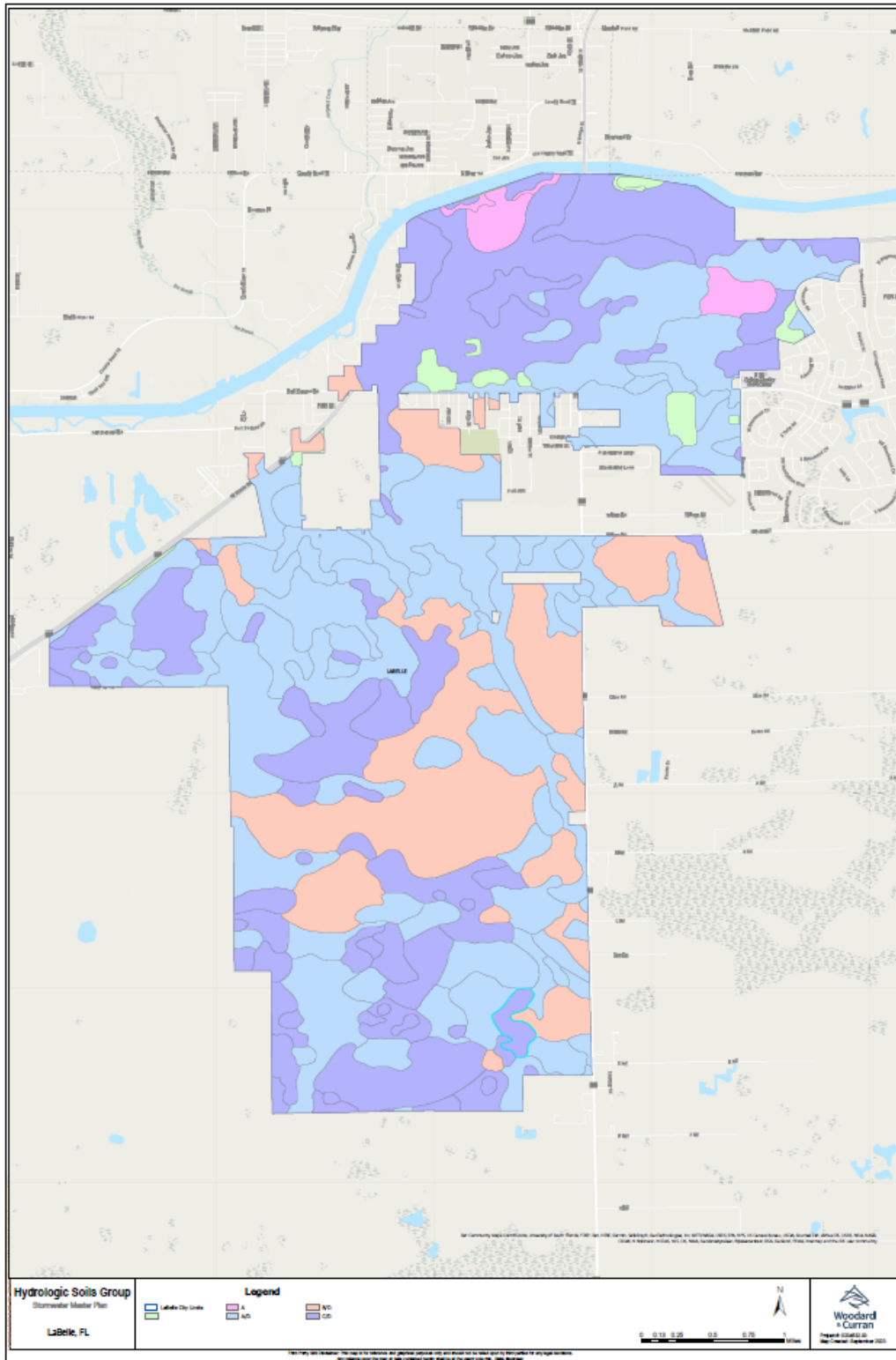
2.1.5 Soils

Soil classification data is used in evaluating the feasibility of stormwater control measures, since stormwater runoff mitigation is more effective on hydrologic soil group (HSG) A and B soils. Based on data from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), the City consists primarily of HSG A/D soils, followed by HSG C/D and B/D soils. The Undefined soil group is typically found in developed areas where soil may consist primarily of human transported material (fill). Table 2-3 below summarizes the soil group areas, and Figure 2-3 illustrates the locations of each hydrologic soil group.

TABLE 2-3: HYDROLOGIC SOIL GROUPS

HSG	Area (ac.)	Percent of City
A	167.3	1.8%
A/D	4,177.5	45.2%
B/D	1,769.4	19.1%
C/D	2,991.4	32.4%
Undefined	138.4	1.5%
Total	9,244	100%

FIGURE 2-3: CITY OF LABELLE SOILS MAP



Not to scale

2.1.6 Hydrology and Hydrogeology

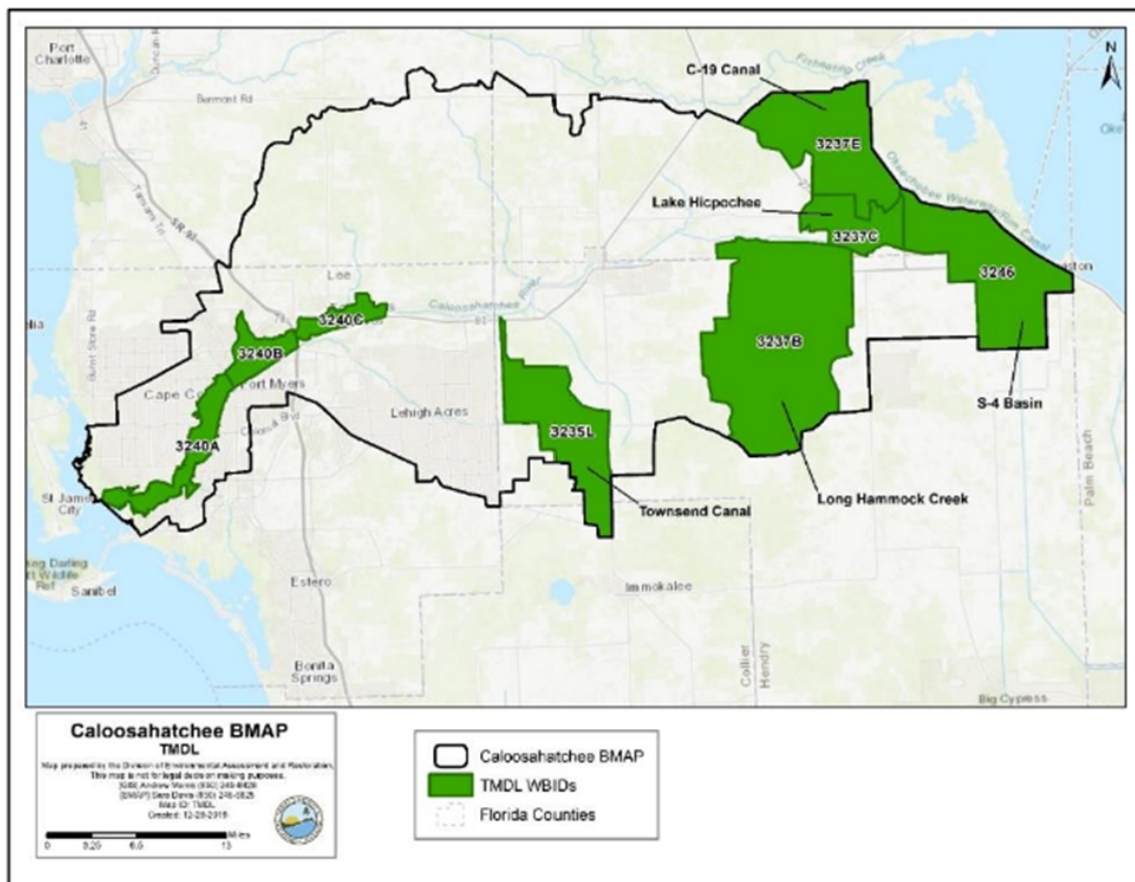
The City is within the West Caloosahatchee watershed and is bounded by the Caloosahatchee River to the north, which ultimately discharges into the Gulf of Mexico. Per the Arc Hydro Enhanced Database (AHED), used in the SFWMD Environmental Monitoring web map, the City is split into two subbasins: the LaBelle East and LaBelle West. Generally, LaBelle East includes the City area east of West Cowboy Way, while LaBelle West includes the predominantly agricultural land to the west.

2.1.7 Surface and Groundwater Quality and Uses

2.1.8 Source Water Protection

The January 2020 Caloosahatchee River and Estuary Basin Management Action Plan (BMAP) discussed impairments to the Caloosahatchee River and Estuary and included total nitrogen, total phosphorus, and biochemical oxygen demand. While the waterbody identification(s) (WBID) containing the City of LaBelle were not identified as impaired and not assigned a total maximum daily load (TMDL) (Figure 2-4 on Page 18 of BMAP and shown below) it is reasonable to assume land uses and septic systems within the City limits are contributing to the overall impairment of the Caloosahatchee River.

FIGURE 2-4: CALOOSAHATCHEE RIVER AND ESTUARY TMDL WBIDS



Not to scale

Alternatives discussed in Section 3 below, will present possible reductions for proposed stormwater improvements. Specifically, LaBelle is located within the Okaloacoochee Branch and Roberts BMAP basins of the West Caloosahatchee subwatershed. The BMAP identifies reduction targets and starting loads to the estuary that will be used in evaluating the alternatives. It should also be noted the BMAP identified the City of LaBelle as only contributing 0.32% of the total nitrogen load (Table 18 on Page 40 of BMAP and shown in Table 2-4 below).

TABLE 2-4: ENTITY CONTRIBUTIONS TO TOTAL TN STARTING LOAD TO THE CALOOSAHATCHEE RIVER ESTUARY

Note: Grey highlighting and boldface type indicate jurisdictions meeting the classification requirements for low priority.

Entity	TN Starting Load (lbs/yr)	% of Total TN Starting Load
Agriculture	2,815,061	77.71
Lee County	235,590	6.50
LA-MSID	162,252	4.48
City of Cape Coral	154,987	4.28
City of Fort Myers	77,536	2.14
Hendry County/Port LaBelle CDD	64,165	1.77
FDOT	25,291	0.70
Glades County	28,437	0.79
Charlotte County	23,132	0.64
City of LaBelle	11,733	0.32
River Hall CDD	6,667	0.18
City of Clewiston	6,482	0.18
Verandah West CDD	3,279	0.09
Verandah East CDD	2,119	0.06
City of Moore Haven	1,796	0.05
Moody River Estates CDD	1,687	0.05
Portico CDD	1,204	0.03
Sail Harbour CDD	505	0.01
Lucaya CDD	350	0.01
Collier County	58	0.002
Natural Lands	333,189	N/A
WCD Canals	3,940	N/A
Total	3,959,461	100.0

According to the FDEP Caloosahatchee River and Estuary BMAP, the 2022 5-Year Review of the Caloosahatchee BMAP specifies a total nitrogen (TN) reduction for the City of 2,950 pounds per year. As of December 31, 2021, the City had not achieved any creditable TN reduction but has two planned projects and three underway projects. These five projects consist of three septic to sewer projects and two wastewater treatment plant system improvements and expansion projects. To further improve water quality, fertilizer ordinances and On-Site Disposal System (OSDS) phase out are recommended. Finally, the 5-Year Review notes that Florida Department of Environmental Protection (FDEP) will continue to evaluate opportunities to incorporate environmental justice (EJ) areas into the BMAP process. Since the City is an EJ community, as discussed in Section 2.2.3, it will be beneficial to review future BMAP updates and their incorporation of EJ areas.

In addition to the BMAP, FDEP has issued their 2022-24 Biennial Assessment. The Draft Verified Lists include those waters that are proposed as additions to the State's Verified List of Impaired Waters and the federal 303(d) list. Roberts Canal (WBID 3235N) basin is listed in the 2022-2024 Draft Study List as a Class 3F waterbody and classified as impaired for not meeting dissolved oxygen standards. Previously listed in the 4C assessment category, Roberts Canal is now listed in the 4d assessment category. From the Draft Study List, "This waterbody is impaired for this parameter based on the number of exceedances for the sample size and is being added to the Study List because a causative pollutant has not been identified. Samples used in this assessment were evaluated against a time-of-day adjustment as described in 62-303.420(9), F.A.C. The department is requesting EPA add this parameter to the 303(d) List".

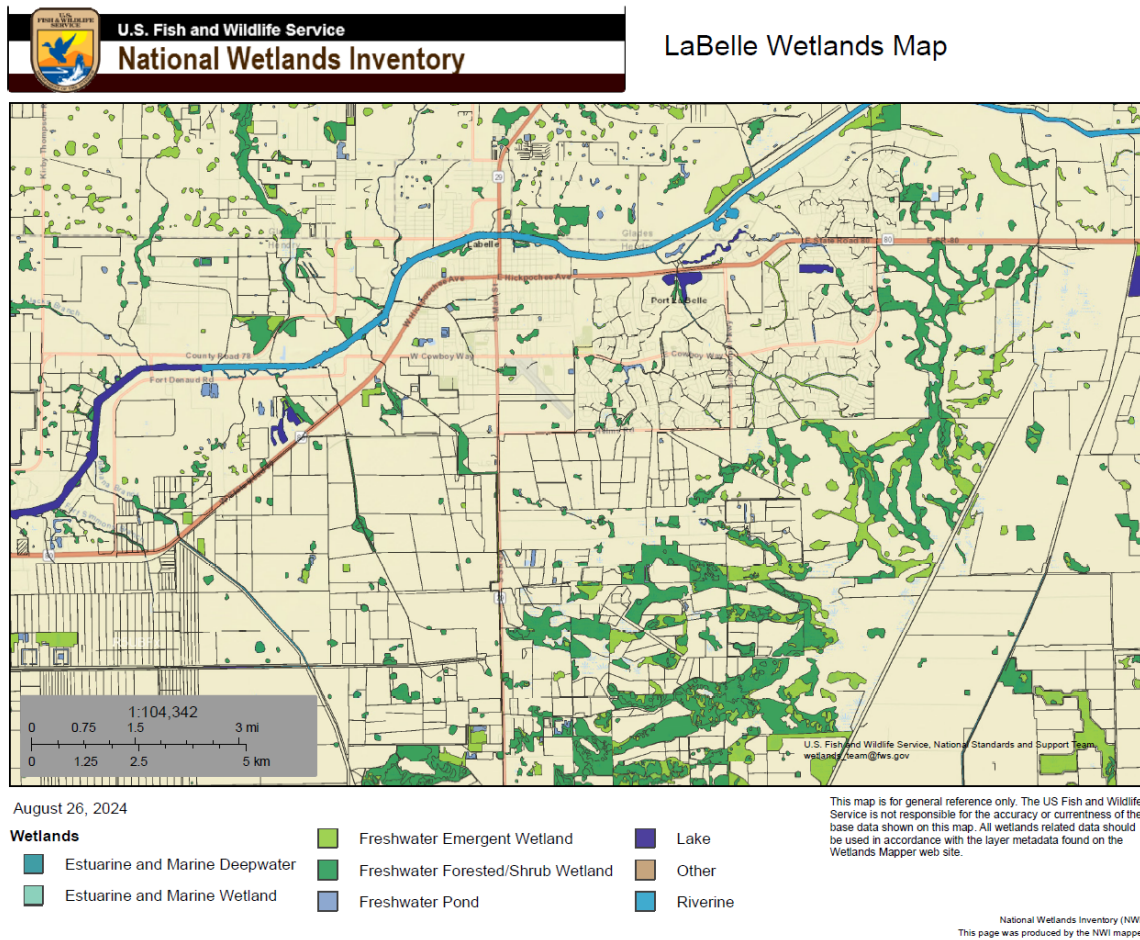
Lastly, a series of surface water samples from open drainage conveyances within the City have been taken and analyzed to further determine stormwater quality impairments within the City. However, given the flow conditions at the time of sampling, the results were deemed not representative of water quality conditions. Given insufficient water quality data for the basins encompassing the City of LaBelle, empirical calculations will be relied upon to determine the impact of best management practices, until further data is available.

2.1.9 Environmental Sensitive Areas or Features

2.1.9.1 Wetlands

According to the US Fish and Wildlife Service Wetlands Inventory Map, wetlands are sparsely located throughout the planning area with the majority of wetlands in the area located on the south side of the City. The classification of wetlands that exist in the planning area are Freshwater Forrest/Shrub Wetlands, Riverine, Freshwater Pond, Freshwater Emergent Wetland and some smaller Lakes. The Caloosahatchee River accounts for the Riverine classification as it traverses the north side of the City and is the natural northern border of the city. The majority of the projects will take place along rights-of-way, easements and previously disturbed lands. Precautions will be taken in or around areas of wetlands to minimize disturbance of pristine lands, and appropriate state and federal approvals will be obtained for any unavoidable impact to wetlands. A map of the wetlands located in and around the City of LaBelle are shown in Figure 2-5.

FIGURE 2-5: US FISH AND WILDLIFE SERVICE WETLANDS MAP OF LABELLE



Not to scale

2.1.9.2 Environmentally Sensitive Lands (Undisturbed Natural Lands)

The project will remain primarily within disturbed roadway rights-of-way and previously disturbed property. In areas where new disturbance is proposed, site investigations will be performed prior to advancing the project designs to verify that adverse impacts to environmentally sensitive lands (undisturbed natural lands) will not occur.

2.1.9.3 Plant and Animal Communities

The US Fish and Wildlife Service Information for Planning and Consultation (IPaC) service identified thirteen (13) threatened, endangered, or candidate species occurring in the planning area. These thirteen species consist of mammals, birds, reptiles, insects and flowering plants and are listed in Table 2-5 below. No critical habitats are located in the planning area.

Table 2-5 below, lists the species and classifies them into one (1) of the following statuses: candidate, proposed threatened, threatened, or endangered. The table also lists the category, species common name and species scientific name as well. The list is based on the assessment of several factors including

population abundance and trends, threats on breeding and non-breeding grounds, breeding habits, and size of breeding and nonbreeding ranges. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

Since the proposed project will take place in neighborhoods, rights-of-way, and previously disturbed areas, there is no significant habitat value that will be diminished. The project is also not likely to adversely affect listed species or associated plant and animal communities. Pertinent approvals will be obtained for work affected listed species that may be identified in the construction areas.

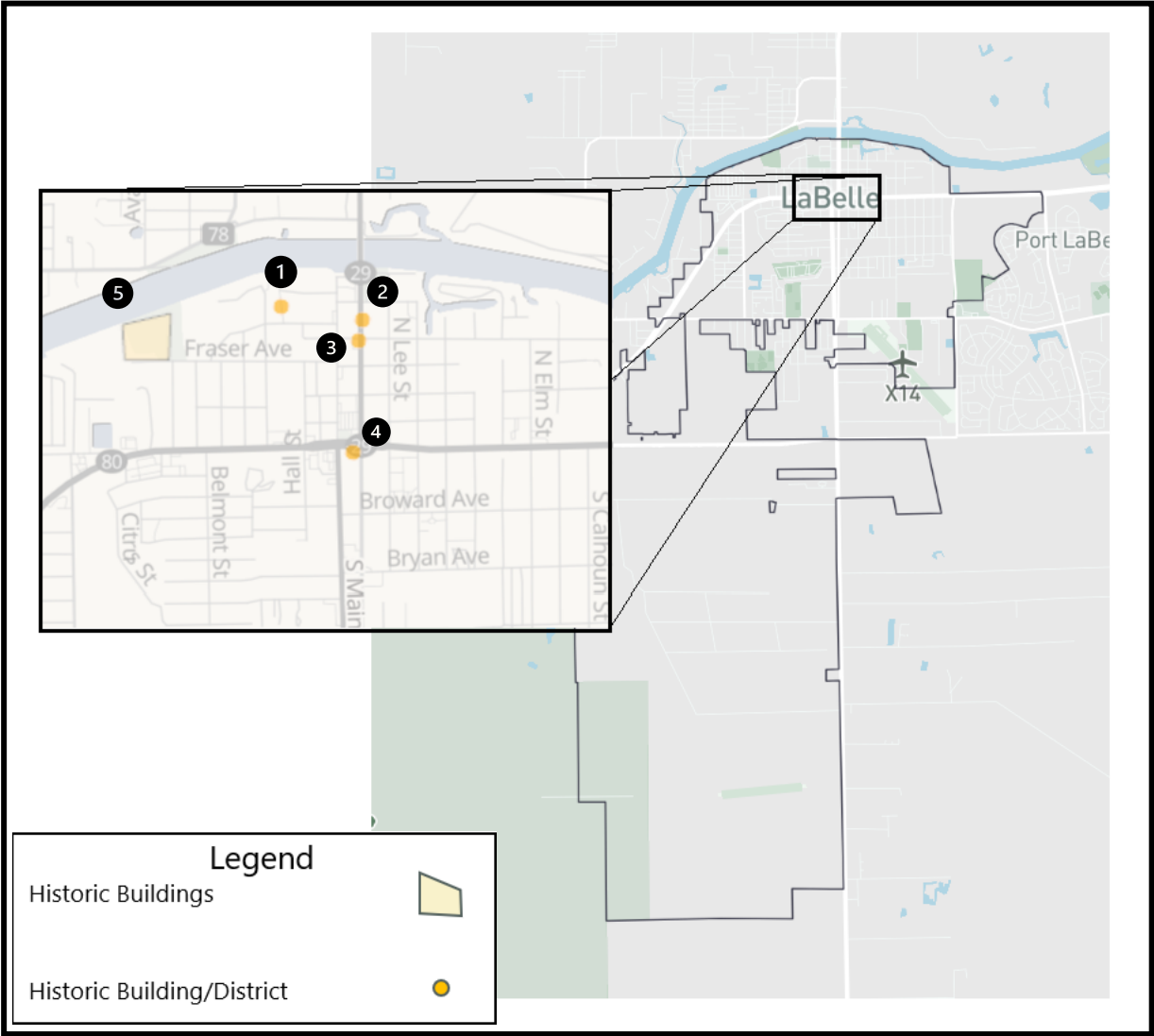
TABLE 2-5: LISTED SPECIES POTENTIALLY OCCURRING WITHIN PLANNING AREA

Category	Species Common Name	Species Scientific Name	Status
Mammals	Florida Bonneted Bat	<i>Eumops floridanus</i>	Endangered
	Florida Panther	<i>Puma concolor coryi</i>	Endangered
	Puma	<i>Pums concolor</i> (all subsp. except <i>coryi</i>)	Threatened
	Tricolored Bat	<i>Perimyotis subflavus</i>	Proposed Endangered
	West Indian Manatee	<i>Trichechus manatus</i>	Threatened
Birds	Crested Caracara	<i>Caracara plancus audubonii</i>	Threatened
	Eastern Black Rail	<i>Laterallus jamaicensis ssp. jamaicensis</i>	Threatened
	Everglade Snail Kite	<i>Rostrhamus sociabilis plumbeus</i>	Endangered
	Florida Scrub-jay	<i>Aphelocoma coerulescens</i>	Threatened
Reptiles	American Alligator	<i>Alligator mississippiensis</i>	Threatened
	Eastern Indigo Snake	<i>Drymarchon couperi</i>	Threatened
Insects	Monarch Butterfly	<i>Danaus plexippus</i>	Candidate
Flowering Plants	Carter's Mustard	<i>Warea carteri</i>	Endangered

2.1.9.4 Archeological and Historical Sites

According to the National Register of Historic Places Catalog, there are four historical buildings and one historical district located within the city limits of LaBelle. All planning, design and construction will not adversely affect the historic buildings and area of the City of LaBelle. The goal of this project will be to safeguard these areas and others from stormwater flooding as a result of extreme weather. The historic buildings and districts of the City of LaBelle are shown in Figure 2-6. Each historic site can be referenced in the map using the Map Reference Number found in the tables below.

FIGURE 2-6: MAP OF HISTORICAL BUILDING AND AREAS OF THE CITY OF LABELLE



Not to scale

Reference #	03000009
Map Reference#	1
Property Name	Caldwell Home Place
State	FLORIDA
County	Hendry
City	LaBelle
Street & Number	160 Curry St.
Area of Significance	ENTERTAINMENT/RECREATION; ARCHITECTURE
Category of Property	BUILDING
Level of Significance - Local	True
Level of Significance - State	False
Level of Significance - National	False

Reference #	99000371
Map Reference#	2
Property Name	Downtown LaBelle Historic District
State	FLORIDA
County	Hendry
City	LaBelle
Street & Number	300 Block of N. Bridge St.
Area of Significance	COMMERCE; COMMUNITY PLANNING AND DEVELOPMENT
Category of Property	DISTRICT
Level of Significance - Local	True
Level of Significance - State	False
Level of Significance - National	False

Reference #	95000914
Map Ref#	3
Property Name	Forrey Building and Annex
State	FLORIDA
County	Hendry
City	LaBelle
Street & Number	264--282 Bridge St.
Area of Significance	COMMERCE; ARCHITECTURE
Category of Property	BUILDING
Level of Significance - Local	True
Level of Significance - State	False
Level of Significance - National	False

Ref#	90001744
Map Ref#	4
Property Name	Hendry County Courthouse, Old
State	FLORIDA
County	Hendry
City	LaBelle
Street & Number	Jct. of Bridge St. and Hickpochee Ave.
Area of Significance	POLITICS/GOVERNMENT; ARCHITECTURE
Category of Property	BUILDING
Level of Significance - Local	True
Level of Significance - State	False
Level of Significance - National	False

Ref#	98000061
Map Ref#	5
Property Name	Hendry, Capt. Francis A., House
State	FLORIDA
County	Hendry
City	LaBelle
Street & Number	512 Fraser St.
Area of Significance	EXPLORATION/SETTLEMENT; ARCHITECTURE
Category of Property	BUILDING
Level of Significance - Local	True
Level of Significance - State	False
Level of Significance - National	False

2.1.10 Air Quality

There are no Ambient Air Monitoring Sites located in the City of LaBelle or Hendry County in which it is located. The nearest, comparable location for air quality monitoring is in Highlands County at the Archbold Biological Station which is located about 34 miles North of the City of LaBelle. According to the EPA, the Highlands County Air Quality Index was rated "Good" for 345 days of the year with only one day measured to be "Unhealthy for Sensitive Groups". Highlands County is classified as "in compliance" with respect to the National Ambient Air Quality Standards for Ozone. The criteria air pollutants Fine Particulate Matter, SO₂, NO₂, and CO are not monitored. There are no active air pollution emission points located within the City of LaBelle.

The City of LaBelle follows Clean Air requirements set by the Florida Department of Environmental Protection. Emissions from small to midsize construction vehicles (backhoe, bulldozer, etc.) is the only anticipated effect on air quality. There are no anticipated long-term air quality consequences.

2.2 Socio-economic Conditions

Environmental justice communities can be disproportionately impacted by polluted air and water and be vulnerable to extreme weather events. Per EPA’s Environmental Justice Screening and Mapping Tool, the City is in the 90th percentile in the nation for low income, flood risk, and wildfire risk; the 91st percentile for residents with less than a high school education; and the 97th percentile for heart disease and lack of health insurance. These risks are important to understand when developing a community stormwater master plan, and they can help inform funding and grant application strategies to improve water quality and flood risk and support economic development within the community. EPA’s Environmental Justice Screening and Mapping Tool report is included in Appendix A.

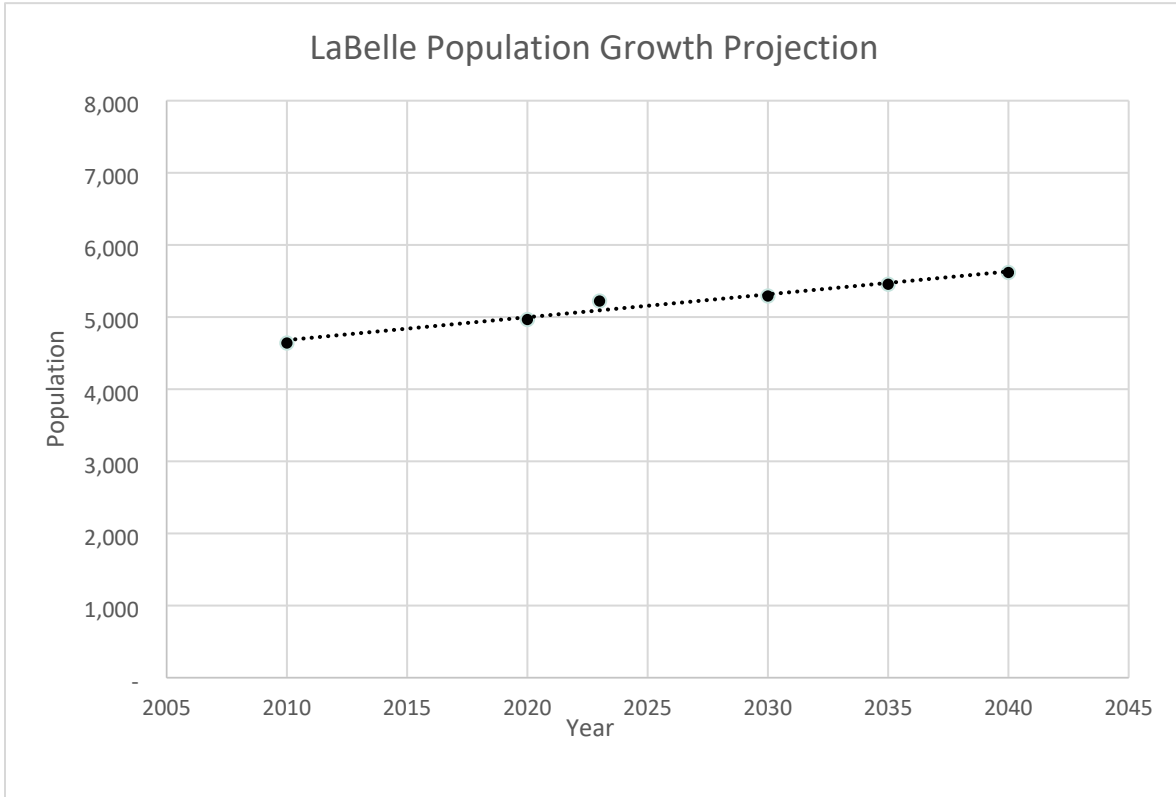
2.2.1 Population

According to the U.S. Census Bureau, the City of LaBelle has a current estimated population of 5,222. The population of LaBelle is concentrated in urban areas with 97% of the population in this setting and 3% of the population residing in rural areas. Urban area is defined as any place with a population of at least 2,500. All territory outside urban areas is considered to be rural. LaBelle, Florida primarily consists of permanent residents with minimal seasonal visitors. According to the U.S. Census American Community Survey (ACS) which is updated annually, it is calculated that 79.4% of houses are owner-occupied. The City of LaBelle maintains a stable community as demonstrated by population growth of 5.2% year-over-year during the past 13 years. Table 2-6 presents the population growth projections for the City of LaBelle based on the U.S. Census Bureau population data. Graph 2-1 depicts the population growth trendline for the City of LaBelle also based on the U.S. Census Bureau data.

TABLE 2-6: POPULATION GROWTH PROJECTIONS

Year	Population
2010	4,640
2020	4,966
2023	5,222
2030	5,292
2035	5,455
2040	5,618

FIGURE 2-7: POPULATION GROWTH TRENDLINE



2.2.2 Land Use and Development

The planning area in its entirety is considered mixed-use. Land development and land use data was collected from the South Florida Water Management District. The data source date is 2017 through 2019. Table 2-7 shows the breakdown of the land development versus area while Table 2-8 shows the breakdown of the land use versus area.

TABLE 2-7: LAND DEVELOPMENT AND COVER

Land Cover	Area (ac.)	Percent of City
Agriculture	6,391.6	69.1%
Barren Land	36.6	0.4%
Transportation, Communication, & Utilities	166.3	1.8%
Upland Forests	299.1	3.2%
Upland Nonforested	30.9	0.3%
Urban and Built Up	1,955.8	21.2%
Water	35.3	0.4%
Wetlands	328.4	3.6%
Total	9,244	100%

TABLE 2-8: LAND USE

Land Use	Area (ac.)	Percent of City
Commercial and Services	373.5	4.1%
Cropland and Pastureland	311.0	3.4%
Disturbed Land	36.6	0.4%
Herbaceous (Dry Prairie)	1.6	0.02%
Industrial	114.7	1.3%
Institutional	105.4	1.1%
Mixed Rangeland	19.4	0.2%
Nurseries and Vineyards	1.7	0.02%
Open Land	298.5	3.2%
Other Open Lands – Rural	241.8	2.6%
Recreational	75.3	0.8%
Reservoirs	12.0	0.1%
High Density Residential	78.5	0.9%
Medium Density Residential	527.1	5.7%
Low Density Residential	382.7	4.1%
Streams and Waterways	23.4	0.3%
Transportation	154.0	1.7%
Tree Crops	5,837.1	63.1%
Upland Forests	299.1	3.2%
Upland Shrub and Brushland	9.9	0.1%
Utilities	12.3	0.1%
Vegetated Non-Forested Wetlands	55.2	0.6%
Wetland Forests	273.2	3.0%
Total	9,244	100%

2.2.3 Environmental Justice

The City of LaBelle’s total population according to the US Census Bureau is 5,222 of which 20.7%, or 1,018 persons, are at or below the poverty line. The persons per household average is 2.92, which equates to approximately 349 households that are at or below the poverty line. The minority population is estimated at 21.4% of the total city population. The data above includes the planning area for the stormwater facilities plan and other areas within the City limits. It is expected that the proposed project will have no adverse effect on poverty demographics or minority individuals located within the planning area. The project will predominantly occur within disturbed rights-of-way and on disturbed property that will have no significant impact. It will also provide stormwater infrastructure to older areas that are not served by modern stormwater management systems. No additional impacts to minorities or low-income households outside of previously disturbed property are expected. The proposed project addresses water quality and flood prevention throughout the planning area. Identified improvements incorporated in this plan address a twenty-year planning period and provide continuous public service without adverse effects on human health.

2.3 Managerial Capacity

The City of LaBelle has the sole responsibility and authority to build, operate, and maintain the City's stormwater system.

2.3.1 Operations and Maintenance Program

City staff is responsible for all operations and maintenance on the City's stormwater system. The Stormwater system is operated and maintained by city employees.

3. DEVELOPMENT OF ALTERNATIVES

3.1 General

The primary goal of the capital improvement alternatives is to improve water quality and flooding within the City. The alternatives evaluated are generally split into two categories: stormwater improvements and on-site disposal. The alternatives evaluated for each category are presented in Table 3-1.

TABLE 3-1: SUMMARY OF ALTERNATIVES

Alternative	Stormwater Improvements	On-Site Disposal
Alternative 1	No Action	No Action
Alternative 2	Small-Scale Dispersed Systems	Conversion to Performance-Based Septic
Alternative 3	Large-Scale Concentrated Systems	Collection System Expansion

These improvements are described further in Section 3.3 below.

3.2 Cost Evaluation Methodology

The Association for the Advancement of Cost Engineering International (ACEI) Class 4 estimates were used to develop cost estimates for the considered alternatives. Class 4 estimates apply to projects that are defined at a level of 1% to 15%. The expected accuracy for Class 4 estimates, and the subsequent cost estimates developed for this Facilities Plan, range from a projected 20% - 40% over the estimate to 20% - 30% under the actual project cost. This methodology is appropriate for a conceptual evaluation like this Facilities Plan and will require further refinement based on factors like site specific conditions and future cost scenarios.

The life cycle cost analysis (LCCA) is the basis for comparison of the alternatives developed in this Facilities Plan. The LCCAs for the viable alternatives incorporated the following considerations:

1. Planning term of 20 years, and a discount rate of 1.35%.
2. Capital costs including but not limited to planning, legal, easement acquisition, engineering, construction, and administrative costs.
3. Capital costs are based on the estimated system sizing calculations included in Appendix D, quantity take-offs identified in Figures 3-1 through 3-11, and Woodard & Curran's internal construction cost database for labor, materials, equipment, and production rates.
4. The construction costs include general site conditions, project implementation, and trade contractor markups for insurance, bonds, overhead, and profit.
5. Salvage values are based on appropriate useful lives of various project components per the U.S. Department of Housing and Urban Development (HUD) Capital Needs Assessment Electronic Tool estimated useful life table.

The HUD Capital Needs Assessment Electronic Tool estimated useful life table and alternative LCCAs are included in Appendix C.

3.3 Evaluation of Alternatives

An evaluation of alternatives was performed for two separate types of solutions to enhance flood protection and improve water quality in the City. A stormwater improvement alternative analysis focuses on mitigating water quality and quantity issues utilizing varying sizes of stormwater control measures (SCMs) throughout the City. An on-site disposal alternative analysis focuses on improving water quality while providing an enhanced level of service to residents and commercial/industrial properties through sanitary sewage management. Both alternatives include a “no action” evaluation, provided to illustrate the consequences of inactivity on the City’s fiscal and environmental well-being.

3.3.1 Stormwater Improvements Alternatives

The identified stormwater improvements include 1) No Action, 2) Construction of Small-Scale Dispersed Systems, and 3) Construction of Large-Scale Dispersed Systems. A description of each alternative and the effects of their implementation are discussed below.

For Alternative 2 and 3, SCM opportunity locations were identified with input from the City. Sites were selected based on City staff’s historical knowledge of areas with inadequate drainage. The SCM sites are shown in Figure 3-1, included at the end of this report section. Conceptual SCM designs were developed for each site using aerial imagery, Google Street view, and available City, county, and state GIS data to maximize the treatment and storage potential. The SCM type for each site was identified based on surrounding land uses and proximity to surface waters; however, additional data collection such as survey, resource area delineation, and subsurface investigations to determine soil infiltration suitability and depth to groundwater and bedrock is needed to verify SCM suitability. The four types of SCMs identified and the citing criterion are as listed below:

- Retention/Infiltration Pond: Selected if there was sufficient available surface space and horizontal and vertical separation from surface waterbodies. It was assumed that adequate separation to groundwater is achievable.
- Wet Pond: Selected if there was sufficient available surface space and proximity to surface waters. It was assumed that groundwater levels are high, and therefore infiltration is not feasible.
- Grass Swale: Selected for conveyance and infiltration in limited and linear surface space locations.
- Subsurface Baffle Box: Selected for right-of-way retrofits if there was no available surface space.

Stormwater improvement concept designs, cost estimates, nitrogen and phosphorus removal potential, and flood storage potential were developed to evaluate Alternatives 2 and 3. SCMs were sized to provide a water quality volume equivalent to the greater treatment volume, either the first 1” of rainfall from the total drainage area or 2.5” from only the impervious areas. In one instance, Site 9b, the SCM was also sized to provide attenuation volume for the 25-year, 3-day storm event, in accordance with the City’s Stormwater Management Regulations, for a proposed increase in impervious area. Drainage areas were estimated using available 1-foot contours from Hendry County GIS, limited drainage infrastructure mapping from the City, and hydrographic features (canals, streams, waterbodies, etc.) from SFWMD.

Concept designs are presented below. Environmental benefits and life cycle cost analyses are presented in Sections 3.3.3 and 3.3.4, respectfully.

3.3.1.1 Alternative 1 – No Action

The No Action alternative assumes that the City does not implement solutions to mitigate the effects of flooding, water quality degradation, and increased development/redevelopment stressors such as the creation of impervious area, which also exacerbates flooding and water quality degradation. The No Action alternative puts the City in compliance jeopardy if it does not undertake actions to reduce nitrogen and phosphorus, which is a requirement within the Basin Management Action Plan (BMAP) for the Caloosahatchee River watershed. High nutrient loads contribute to harmful algal blooms, which significantly impact Florida’s economy, ecology, recreation, and quality of life. The No Action alternative does not support nutrient load reduction to the Caloosahatchee River.

Implementing the No Action alternative will also not alleviate potential flooding stressors. Much of the northern part of the City is located within a FEMA mapped flood zone that is moderately developed. This area is near drainage ditches that are hydraulically connected to the Caloosahatchee Rive, exacerbating the potential for stormwater generated flooding. When flooding occurs, it increases the potential for property damage, infrastructure damage, economic disruption, and social disruption.

Relatedly, costs identified in the LCAA for the No Action alternative (Appendix C) are higher than other proposed alternatives due to these identified impacts.

3.3.1.2 Alternative 2 – Small-Scale Dispersed Stormwater Control Measures

Eight sites were evaluated at a conceptual level for small-scale dispersed stormwater improvement potential. For the purpose of this alternative evaluation, small-scale dispersed SCM locations are defined as locations with a potential contributing drainage area of less than 50-acres. This threshold was selected as there is a clear distinction between the SCM sizes presented in Alternative 2 and 3. Small-scale dispersed SCM site locations and concept designs are presented in Figure 3-2 through Figure 3-9 included at the end of this report section. The stormwater improvements proposed at each of the sites are described below.

3.3.1.2.1 Site 1: Barron Park

Barron Park (parcel ID 2 29 43 01 010 0003-001.0) is located adjacent to De Soto Avenue in the northern part of the City, adjacent to the Caloosahatchee River (Figure 3-2). The site is divided into an eastern and western drainage area based on drainage infrastructure and topography. Pending ownership determination, stormwater runoff from the west side of Barron Park can be treated by retrofitting an existing stone conveyance swale running parallel to N. Bridge Street into a grass swale that will provide stormwater treatment. Utilizing a berm and an outlet control structure or weir, a retention/infiltration pond can be placed at the end of the swale where runoff will collect and infiltrate. This will require a boundary survey to determine the feasibility of this modification based on ownership.

Stormwater runoff from the east side of Barron Park, near North Lee Street and Park Avenue, can be treated by retrofitting the existing catch basin at the intersection of Desota Avenue and North Lee Street, which can be routed to a baffle box to remove pollutants via settling. The pavement at this intersection contains patches and cracks and could be resurfaced as part of the project. The vacant City-owned parcels along North Lee Street in this area were not considered for SCM locations because they are frequently utilized for parking and vendor spaces for various local markets and events. However, these parcels could be evaluated

for underground stormwater storage or a dry detention basin to accommodate additional stormwater runoff generated in this area.

3.3.1.2.2 Site 2: Campbell Street/Hall Street

Campbell Street and Hall Street are located northwest of SR 80 and Main Street in the northern part of the City (Figure 3-3). The area is primarily residential with some mixed commercial uses. An SCM could potentially be installed in an existing drainage ditch that spans between Campbell Street and Hall Street. The ditch is overgrown with trees and vegetation that will require removal and replacement with loam and seed to restore infiltration and conveyance capacity, which will provide treatment and localized storage. Channelized flow to the ditch will require minor modifications at the edge of the roadway. This ditch is on private property, so a drainage easement or land rights acquisition would be required for ongoing maintenance.

The existing drainage ditch adjacent to Hall Street, Oklahoma Avenue, and College Street appears to be in good condition and providing adequate treatment, storage, and conveyance to the east.

The 70 North Hall Street property (parcel ID 2 29 43 05 A00 0019.0000), located on the western side of Hall Street, appears suitable for a small retention/infiltration pond. The pond, which would be slightly set back from the road, would receive stormwater runoff from North Hall Street via two proposed swales connecting to the pond.

3.3.1.2.3 Site 3: Alton “Kid” Jones Recreation Park

The Alton “Kid” Jones Recreational Park is at the intersection of Withlacoochee Avenue and Suwanee Avenue (Figure 3-4). This area is about 0.4 miles from the Caloosahatchee River and is residential development, narrow streets, and no sidewalks. A network of grass drainage conveyance swales is proposed to collect runoff throughout the southern neighborhood and convey north to the City-owned Alton ‘Kid’ Jones Recreation Park (parcel IDs 2 29 43 02 280 0000-075.0 and 2 29 43 02 280 0000-058.0). A retention/infiltration pond is proposed in the southeastern corner of the park for stormwater treatment.

The southeast corner of the park currently has trees that would need to be cut down and picnic tables that would be relocated. This project presents an opportunity to provide new park amenities and educational signage.

3.3.1.2.4 Site 3a: Manatee Avenue, Withlacoochee Avenue, and Caloosahatchee Avenue

Manatee Avenue, Withlacoochee Avenue, and Caloosahatchee Avenue are in the northwest part of the City, slightly southeast of SR 80 and directly north of Site 3 (Figure 3-5). Site 3a is approximately 0.4 miles from the Caloosahatchee River, and the area is residential, with narrow streets and no sidewalks. This street configuration makes the site suitable for installation of a network of grass drainage conveyance swales to convey runoff from the neighborhood to a proposed retention/infiltration pond on the City-owned property at 911 Caloosahatchee Avenue (parcel ID 2 29 43 02 280 0000-037.1). This pond would provide stormwater treatment. Land acquisition of surrounding properties could be considered for future flood storage capacity depending on the City’s projected development/redevelopment plans.

3.3.1.2.5 Site 4: Hall Street, Howe Avenue, and South Main Street

Hall Street, Howe Avenue, and South Main Street are in the northern part of the City, directly south of SR 80 and in the vicinity of Site 2. This Site is approximately 0.5 miles from the Caloosahatchee River, and like other sites, is primarily residential with narrow streets and no sidewalks (Figure 3-6). Grass drainage conveyance swales are proposed along the west side of Hall Street to convey stormwater runoff south to the City-owned property at the southern end of Hall Street (parcel ID 2 29 43 02 270 0000-018.0), which surrounds a large existing channel/stream. A wet pond is proposed to treat stormwater runoff before entering the stream.

In addition to the wet pond, flood storage areas and potential stream restoration is proposed west of the wet pond, on either side of the existing stream (including parcel ID 2 29 43 02 270 0000-022.0). This area is within a FEMA mapped Special Flood Hazard Area Zone AE with a base flood elevation (BFE) and a 1% annual chance of flood hazard. Increasing flood storage would benefit upgradient properties by providing additional flood protection. Additionally, stream restoration and naturalization can be utilized to improve the health of the stream ecosystem.

3.3.1.2.6 Site 5: Jaycee Lions Drive

This site includes Jaycee Lions Drive, a portion of Hendry LaBelle Civic Park, and a City-owned parcel (100 Jaycee Lions Drive, parcel ID 2 29 43 08 A00 0012.0800) (Figure 3-7). The City-owned parcel appears to have an existing drainage swale, which conveys neighborhood runoff from Jaycee Lions Drive to a larger existing drainage channel/stream parallel to and north of the road. The existing swale on the City-owned parcel is overgrown and needs maintenance. Additionally, this area is within a FEMA mapped Special Flood Hazard Area Regulatory Floodway with a BFE.

Drainage improvements are proposed to reduce flood hazard and treat stormwater runoff prior to discharging to the existing drainage channel/stream. Grass swales are proposed for stormwater treatment and conveyance along either side of Jaycee Lions Drive. These grass swales will convey runoff to the City-owned parcel, where a flood storage area is proposed. The eastern portion of the City-owned parcel appears to be a large parking lot; a portion of this lot could be used to expand the flood storage area. Finally, a larger flood storage area is proposed in the northwest corner of the City-owned Hendry LaBelle Civic Park north of the soccer fields.

3.3.1.2.7 Site 6: North Oak Street, East Fort Thomson Avenue, and Oklahoma Avenue

Site 6 is located at the intersection of East Fort Thompson Avenue and North Oak Street and is currently a vacant, vegetated, private residential parcel (parcel ID 2 29 43 01 010 0019-001.0) (Figure 3-8). A wet pond is proposed in the northwest corner of the site. An existing grass drainage swale running along the west side of N Oak Street is proposed to be diverted to the stormwater pond. A wet pond is proposed since the site is within proximity to the Caloosahatchee River and is assumed to have high groundwater. A portion of N Oak Street between East Fort Thompson Avenue and Oklahoma Avenue appears to be an unpaved road. Roadway improvements could be proposed as a part of this project. While not included in this concept design or cost estimate, the City could acquire the entire parcel and create a neighborhood park.

3.3.1.2.8 Site 7: City Park Between 1st and 2nd Avenue

There is an existing drainage ditch within the City-owned park located between 1st Avenue and 2nd Avenue (parcel IDs 2 29 43 02 120 0002-005.0 and 2 29 43 02 120 0002-003.0) (Figure 3-9). This existing ditch is

proposed to be expanded and converted into a retention/infiltration pond to increase treatment capacity. The park is currently vacant open space. This proposed project presents an opportunity for park improvements to better service the surrounding residential neighborhood.

3.3.1.3 Alternative 3 – Large-Scale Concentrated Systems

Three additional properties were evaluated at a high-level for large-scale concentrated stormwater improvement potential. Large-scale concentrated systems are considered here-in as limited locations throughout the planning area managing a large contributing drainage area (greater than 50 acres) with one system providing concentrated improvements. These sites are presented in Figures 3-10 through Figure 3-12 included at the end of this report section. Each site was assessed for SCM retrofit opportunities for total nitrogen and phosphorus removal and flood storage.

3.3.1.3.1 Site 8: State Route 80 and Helms Road West

This site, located south of the intersection of State Road 80 and Helms Road West, is a privately-owned pastureland with reported flooding concerns (parcel ID 2 28 43 24 A00 0001.0000) (Figure 3-10). A wet pond is proposed in the northern, most downgradient corner of the parcel. A wet pond was selected since this area is in close vicinity to wetlands. An existing drainage ditch running along the south side of Helms Road West is proposed to be regraded to convey runoff to the proposed pond. Coordination with the Florida Department of Transportation (FDOT) and Hendry County would be required to evaluate Helms Road West drainage design and culvert capacity.

3.3.1.3.2 Site 9a: Forrey Drive and State Route 80

This site is a municipal parcel, east of Forrey Drive and south of SR 80, used as a wastewater treatment spray field and a municipal park (parcel ID 2 29 43 10 A00 0001.0000) (Figure 3-11). The City is evaluating options to build a new, relocated wastewater treatment facility since the current facility is vulnerable to flooding. The new facility would include a deep injection well for effluent disposal, therefore eliminating the need for the spray field and introducing redevelopment potential for this parcel.

A large stormwater wet pond is proposed in the southwestern portion of the spray field area, north of the Hendry Complex (a municipal park). A drainage ditch west of Forrey Drive conveys a large upstream drainage area past the municipal spray field parcel. A diversion structure and culvert are proposed to divert runoff to the proposed wet pond on the municipal parcel.

3.3.1.3.3 Site 9b: Forrey Drive and State Road 80

Site 9b is very similar to Site 9a; however, it considers potential future development of the spray field property (Figure 3-12). Given the property's location adjacent to SR 80, the City might consider selling the spray field property for private development. Site 9b includes the entire spray field parcel and a slightly larger contributing drainage area compared to Site 9a. The spray field area is assumed to be 85% impervious to account for future commercial or residential development. Note that it is assumed only one option from Site 9 would be constructed. For cost estimates and benefit analyses, Site 9b is assumed to be constructed.

3.3.2 On-Site Disposal Alternatives

The identified on-site disposal improvements include 1) No Action, 2) Conversion to Performance-Based Septic, and 3) Collection System Expansion. A description of each alternative and the effects of their implementation are discussed below.

3.3.2.1 Alternative 1 – No Action

The No Action alternative assumes that the City does not implement solutions to mitigate the water quality and reliability effects of privately owned, low performing on-site sewage treatment and disposal systems (OSTDS). While the No Action alternative has a short-term low cost to the user, and doing nothing is always an option, the City views this as not viable or sustainable. The City is in alignment with the State of Florida on their pursuit to eliminate existing private OSTDS facilities. A private OSTDS is known to cause unacceptable harmful pollutant discharge after a substantial rain occurrence due to a saturated leach field. The effluent from an OSTDS is known to be much lower quality than a performance based OSTDS or a central sewer system and is exacerbated when maintenance of these facilities is neglected. Additionally, the density of housing in LaBelle is high when considering the use of private OSTDS.

3.3.2.2 Alternative 2 – Conversion to Performance-Based Septic

Alternative 2 considers conversion of private OSTDS to performance-based septic. Performance-based septic systems have the potential for lower utility costs; septic systems that treat wastewater onsite do not require owners to pay monthly sewer fees to a municipal utility. Additionally, septic systems are not reliant on municipal sewer systems, which can be an advantage in rural areas where such infrastructure may be unavailable or in poor condition.

The disadvantages of performance-based septic systems include high maintenance and replacement costs, soil challenges and space limitations, limited capacity, risk of system failure, dependence on proper usage, and potential for groundwater contamination. Septic systems require regular maintenance, including periodic pumping of the septic tank and annual inspections by a licensed Florida operator to ensure the system is functioning properly. Additionally, septic systems have a finite lifespan and may require expensive replacement. Field lines are a vital part of septic systems, facilitating the dispersal of treated wastewater into the surrounding soil, which relies heavily on the soil's ability to absorb and filter the effluent. When the soil's percolation rate is inadequate, it may necessitate relocating the field lines to a part of the property with better soil conditions, a move that could substantially impact a growing community by limiting available space for home placements and potentially reducing rental income. Septic systems have a finite capacity and are designed to handle a specific amount of wastewater. Home expansion can require a system upgrade. Like any system, septic systems can fail, particularly if they are not properly maintained. System failures can result in sewage backups into homes, foul odors, and groundwater contamination, all of which can have serious implications for tenant health, property values, and the community's reputation. The effectiveness of a septic system depends in part on how it is used. Flushing non-biodegradable items, excessive use of garbage disposals, or pouring grease down drains can all contribute to system failures. Educating tenants on proper use and ensuring compliance can be challenging. Finally, if a septic system is not properly located, designed, or maintained, there is a risk of contaminating the groundwater, which can have serious implications for local drinking water supplies and result in regulatory fines and legal liability.

3.3.2.3 Alternative 3 – Collection System Expansion

Alternative 3 considers a municipal sewer collection system expansion. The advantages of public sewer systems include reliability and efficiency, less maintenance required from property owners, potential for better tenant satisfaction, higher resale value, and ease of expansion. Public sewer systems are generally reliable and efficient, as they are managed by professionals and subject to regulatory standards. This ensures consistent wastewater treatment and minimizes the risk of system failures. Unlike private sewer systems, the maintenance of the main sewer lines and the treatment facilities is the responsibility of the public entity. This significantly reduces the burden on the property owner in terms of both time and money. Due to their reliability and efficiency, public sewer systems can contribute to a cleaner and more pleasant living environment, which can in turn lead to higher tenant satisfaction. Properties connected to public sewer systems often command higher resale value. Investors and buyers are typically willing to pay a premium for properties that have reliable and efficient waste disposal systems, as this reduces the risk of future complications and potential liabilities associated with private sewer systems. Finally, public sewer systems can typically accommodate additional connections more easily than private systems, providing communities with greater flexibility for property expansion and development.

A disadvantage of public sewer collection systems is potentially higher, ongoing utility costs for tenants or property owners. Users are typically charged a fee based on their usage, and this can result in higher monthly bills for tenants or property owners, depending on how the costs are structured in the lease agreements.

3.3.3 Environmental Benefits

3.3.3.1 Stormwater Improvements

The FDEP Environmental Resource Permit (ERP) Applicant’s Handbook Volume 1 methodology was used to estimate nitrogen and phosphorus loads from the planning area. The FDEP ERP Applicant’s Handbook Volume 1 (Handbook) estimates nutrient load as a function of annual runoff volume and nutrient concentration. Annual runoff volume is a function of the drainage area, the average annual rainfall, and the mean annual runoff coefficients (ROC value). This is summarized in the Handbook Equation 9-1, presented below.

$$\text{Equation 9 – 1: Annual Runoff Volume}(ac - ft) = \text{Area}(\text{acres}) \times \text{Average Annual Rainfall}(\text{inches}) \\ \times \text{ROC Value} \times \left(\frac{1ft}{12in}\right)$$

The ROC value is a function of the DCIA percentage and the non-DCIA curve number. DCIA percentages were estimated using land use and their corresponding SCS TR-55 average percent impervious areas. An assumed, average non-DCIA curve number of 40 was used. This correlates to the TR-55 curve number for fully developed urban area with open space in hydrologic soil group A. Finally, meteorological/rainfall zone 2 was used, and an average annual rainfall value of 52 inches was used.

The total phosphorus (TP) and total nitrogen (TN) loads were then calculated using the annual runoff volume and the standardized statewide stormwater nutrient event mean concentration values from Handbook Table 9.2. This calculation is summarized in the Handbook Equation 9-2, presented below.

$$\text{Equation 9 – 2: Annual Average Mass Loading} = \text{Annual Runoff Volume} \times \text{EMC}$$

Finally, an estimated TP and TN removal efficiency was used based on the anticipated stormwater control measure type to calculate the TP and TN load reductions. Although the grass conveyance swales provide some pollutant reduction, only the primary treatment measure was accounted for in the benefits calculations. The parameters used to estimate nitrogen and phosphorus loads and reductions for each site, for both stormwater improvement alternatives, are included in Appendix D. The estimated annual runoff volume, nutrient loads, and required reductions are summarized in Table 3-2.

TABLE 3-2: WATER QUALITY AND NUTRIENT LOADING SUMMARY

Site		Annual Runoff Volume	Annual TP Load (lb/yr)	Annual TP Load Removed (lb/yr)	Annual TN Load (lb/yr)	Annual TN Load Removed (lb/yr)
ID	Area (ac)					
Alternative 2						
1 (West)	1.8	1.6	0.2	0.2	5.1	3.3
1 (East)	1.1	3.7	1.7	0.3	12.5	2.4
2	0.9	1.3	1.2	0.9	6.4	4.9
3a	7.0	6.3	4.6	2.8	28.1	11.3
3	21.2	19.0	14.0	7.8	85.4	47.8
4	7.6	10.9	9.7	5.8	52.3	20.9
5	8.1	7.2	5.3	1.5	32.5	9.4
6	26.9	24.1	17.7	10.6	108.3	43.3
7	14.5	13.0	9.6	7.2	58.4	43.8
Sum				37.0		187.0
Alternative 3						
8	438.8	89.4	144.1	86.5	736.3	294.5
9a	309.7	547.5	400.0	240.0	2,020.7	808.3
9b	520.9	1,120.4	818.7	491.2	4,135.3	1,654.1
Sum				577.7*		1,948.6*

*Note that it is assumed only one option from Site 9, either 9a or 9b, would be constructed. For calculation purposes, Site 9b is assumed to be constructed.

Additionally, flood storage areas are proposed at Sites 4 and 5, included in Alternative 2. Site 4 is within a FEMA mapped Flood Zone AE with a BFE, and Site 5 is within a FEMA Zone AE Regulatory Floodway with a BFE. The flood storage ponds are separate from and in addition to the SCMs providing water quality benefits. Providing additional flood storage in these areas will support a reduction in flooding in surrounding areas during storm events. The additional storage volume is presented in Table 3-3 below and in Appendix D.

TABLE 3-3: FLOOD STORAGE

Site	Estimated Flood Storage Volume (cf)
4	99,000
5	69,300
Total	168,300

3.3.3.2 On-Site Disposal Improvements

A standard septic tank offers significantly less nutrient reduction compared to a performance-based OSTDS, which is specifically designed to achieve higher levels of nutrient removal, particularly nitrogen and phosphorus, through advanced treatment processes like aeration and filtration. Essentially, a septic tank only removes a basic amount of solids while a performance-based OSTDS can significantly reduce nutrient levels in wastewater before discharge into the environment. Septic tanks primarily remove large solids, with minimal nutrient reduction, making it less effective in protecting water quality, especially in sensitive areas. Performance-based OSTDS utilize advanced technologies like aerobic treatment units or biofilters to achieve substantial nutrient removal, often meeting specific performance standards set by local regulations by using oxygen to break down waste more efficiently than a standard septic system.

Similar to performance-based OSTDS, conversion to public sewer collection systems and treatment at a wastewater treatment facility offers higher levels of nutrient removal through advanced treatment technologies. Wastewater treatment facilities are regulated and required to achieve performance standards. Therefore, both on-site disposal alternatives would support nutrient reduction and improved water quality.

3.3.4 Life Cycle Cost Analysis

A cost comparison of each alternative is presented in Table 3-3 in 2024 dollars. The cost estimates shown have been prepared for guidance in project evaluation and implementation from the information available at the time of the estimate. The final costs of the project and resulting feasibility will depend on actual labor and material costs, competitive market conditions, actual site conditions, final project scope, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from estimates presented here. The life cycle cost analyses for the proposed alternatives, including operation and maintenance costs, are provided in Appendix C.

The stormwater improvement O&M costs include routine inspection and maintenance as well as replacement costs based on average component lifespan. The estimated O&M costs are based on system type, number of systems, typical maintenance activities for that system type, and their associated frequencies. Hourly durations for labor and equipment necessary to execute each activity were estimated. Labor and equipment costs are based on local prevailing wage rates and equipment costs. Personnel full-time equivalents are also accounted for. The on-site disposal O&M costs are estimated based on project components, such as mechanical and electrical systems.

The on-site disposal alternative costs are presented per equivalent residential unit (ERU). The total project cost will depend on the final number of participating properties and would equal the presented ERU life-cycle cost times the number of properties.

Finally, the life cycle nutrient reduction cost-benefit for the stormwater improvements is presented for comparison.

TABLE 3-4: COST COMPARISON

Cost Item	Stormwater Improvements			On-Site Disposal (per ERU)		
	Alt. 1 – No Action	Alt. 2 – Small-Scale Dispersed Systems	Alt. 3 – Large-Scale Concentrated Systems	Alt. 1 – No Action	Alt. 2 – Performance-Based Septic	Alt. 3 – Collection System Expansion
<i>Capital Cost Summary</i>						
Construction Cost		\$2,549,000	\$10,409,000	-	-	-
Planning (2%)	-	\$51,000	\$209,000	-	-	-
Design (10%)	-	\$255,000	\$1,041,000	-	-	-
Field Services (5%)	-	\$128,000	\$521,000	-	-	-
Legal and Administrative (1%)	-	\$26,000	\$105,000	-	-	-
Grant Administration (2%)	-	\$51,000	\$209,000	-	-	-
Land Acquisition	-	\$160,000	\$150,000	-	-	-
Total Capital Cost	-	\$3,220,000	\$12,644,000	-	\$19,750	\$14,500
<i>Annual O&M Cost Summary</i>						
Reoccurring Labor and Equipment	-	\$38,000	\$32,000	-	\$10,687	\$295
Reoccurring Fees and Bills/ Operations	-	\$1,000	\$1,000	-	\$8,845	\$8,845
Total Annual O&M Cost	-	\$39,000	\$33,000	\$1,800	\$19,532	\$9,139
<i>Life Cycle Cost</i>						
Replacement Cost	\$1,200,000	See Appendix C	See Appendix C	-	\$9,489	\$0
Residual Value	-			-	\$-5,430	\$0
Life Cycle Cost	\$20,911,000	\$3,493,000	\$12,576,000	\$26,543	\$43,340	\$23,639
<i>Life Cycle Cost-Benefit</i>						
TN (\$/lb/year)	-	18,679	6,454	-	-	-
TP(\$/lb/year)	-	94,405	21,769	-	-	-

3.3.5 Recommended Alternative

Alternative 3, Large-Scale Concentrated Systems, is the recommended stormwater improvements alternative. Alternative 1, No Action, does not provide environmental protection and therefore was rejected. Alternatives 2 and 3 both provide environmental protection by treating stormwater discharges, which will improve the quality of stormwater runoff. The selection of the recommended alternative is based on a better cost-benefit ratio; Alternative 3 provides more nutrient (TN and TP) removal at a lower cost.

Alternative 3, Collection System Expansion, is the recommended on-site disposal alternative. Alternative 1, No Action, does not provide environmental protection and therefore was rejected. Alternatives 2 and 3 provide similar environmental protection by better treating wastewater. The selection of the recommended alternative was therefore based on the lowest life cycle cost.

SECTION 3 FIGURES

FIGURE 3-1: SITE LOCATION PLAN

Stormwater Improvements Alternative 2

FIGURE 3-2: SITE 1

FIGURE 3-3: SITE 2

FIGURE 3-4: SITE 3

FIGURE 3-5: SITE 3A

FIGURE 3-6: SITE 4

FIGURE 3-7: SITE 5

FIGURE 3-8: SITE 6

FIGURE 3-9: SITE 7

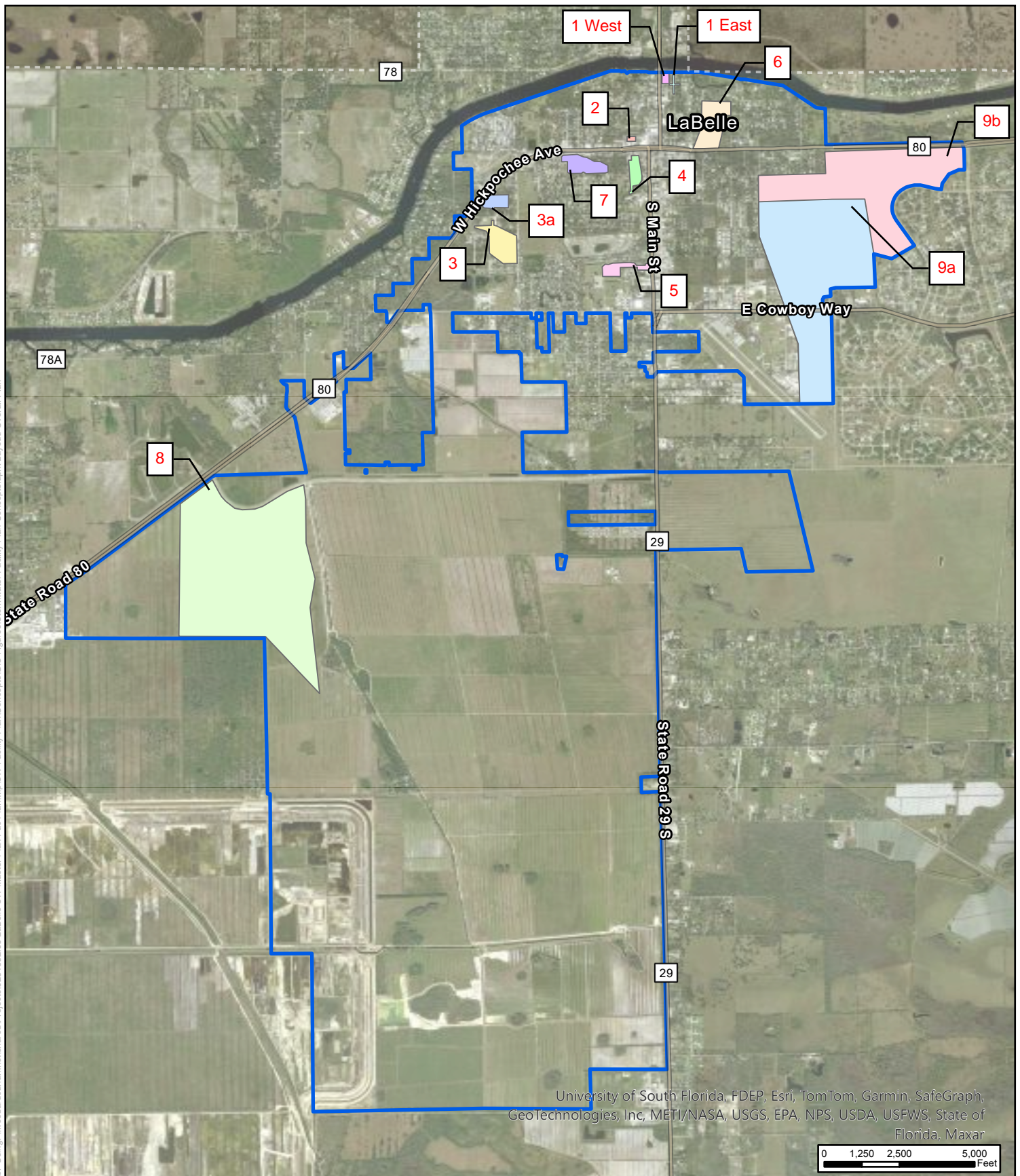
Stormwater Improvements Alternative 3

FIGURE 3-10: SITE 8

FIGURE 3-11: SITE 9A

FIGURE 3-12: SITE 9B

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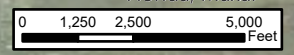


Figure 3-1

Site Location Plan

Stormwater Alternative 2 & 3
Stormwater Facility Plan
LaBelle, FL

Legend

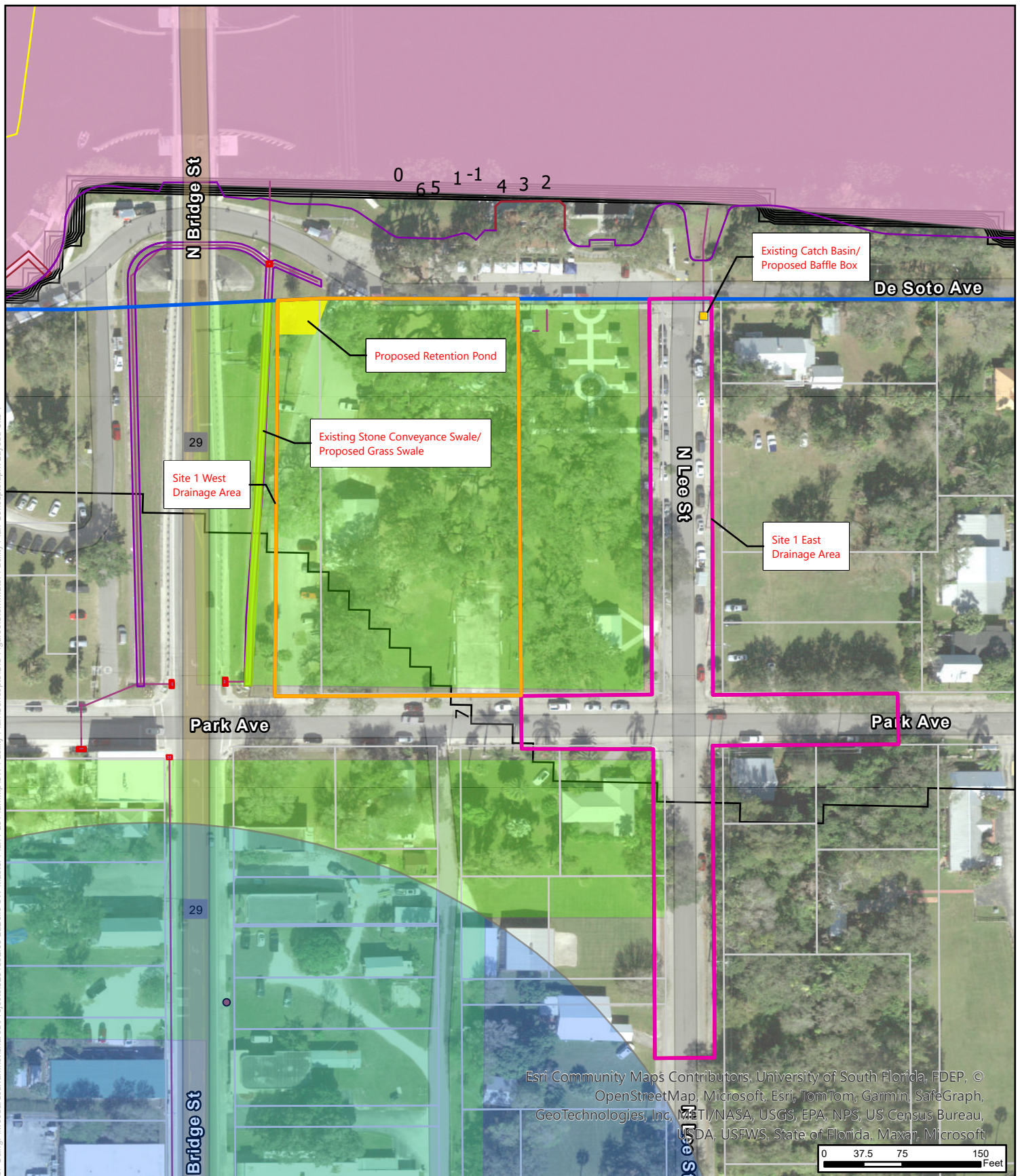
LaBelle City Limit	Site 3a	Site 7
Site 1 East	Site 4	Site 8
Site 1 West	Site 5	Site 9a
Site 2	Site 6	Site 9b
Site 3		



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Figure 3-2

Site 1: Barron Park
 Stormwater Alternative 2
 Stormwater Facility Plan
 LaBelle, FL

Legend	Cultural Resource District	Ditch Flow	Riverine
	1 ft Contours	Drainage Structure	LaBelle City Limit
	Swale	Parcel Boundary	East Drainage Area
	Headwall/Retaining Wall	Cultural Resource District Building - 500ft Buffer	West Drainage Area
Drain Pipe	Historic District		





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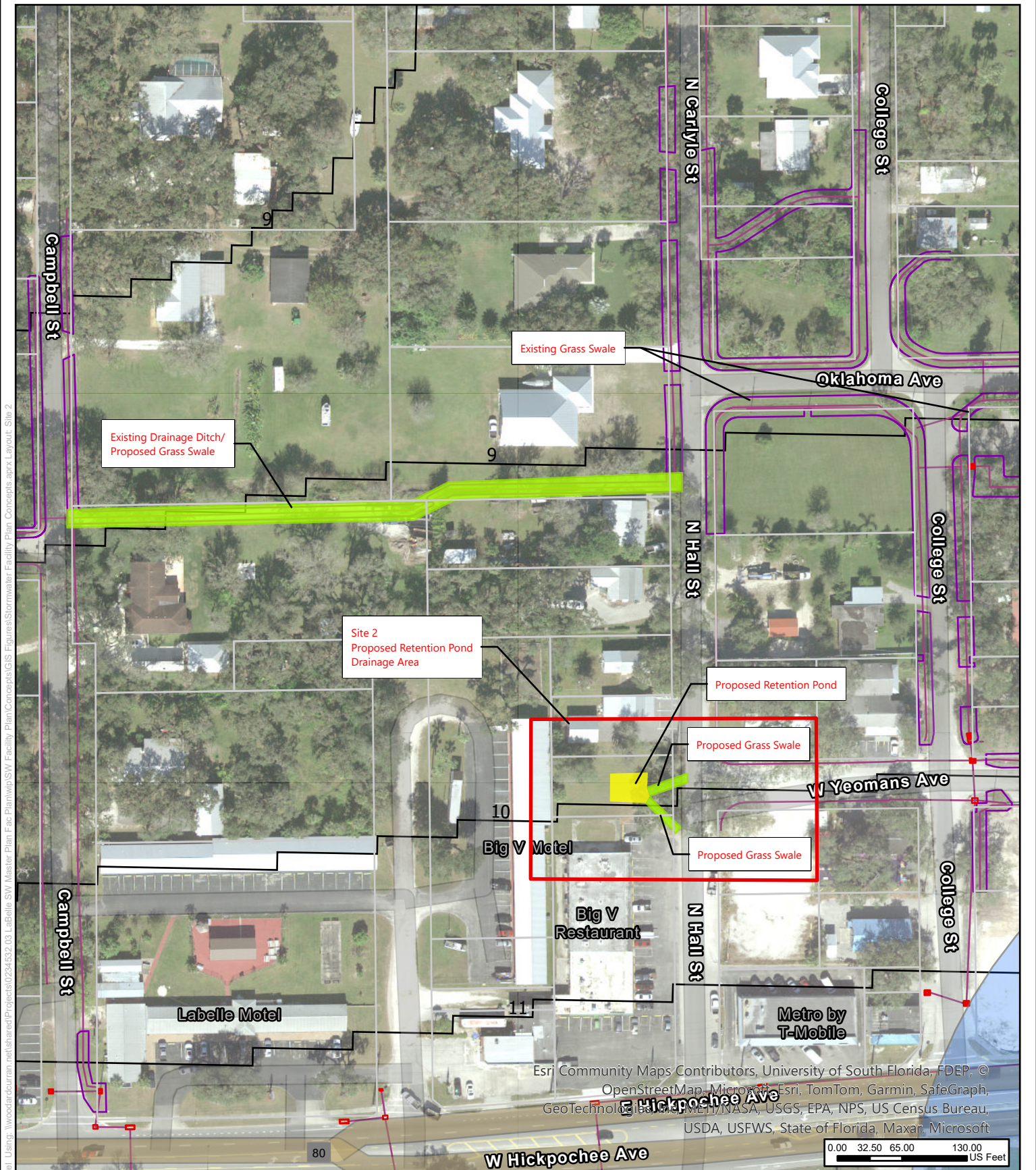



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Figure 3-3
**Site 2: Campbell Street/
 Hall Street**
 Stormwater Alternative 2
 Stormwater Facility Plan
 LaBelle, FL

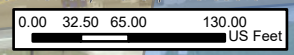
Legend	1 ft Contours	Swale	Parcel Boundary
	Drain Pipe	Cultural Resource District Building - 500ft Buffer	LaBelle City Limit
	Drainage Structure	Drainage Area	



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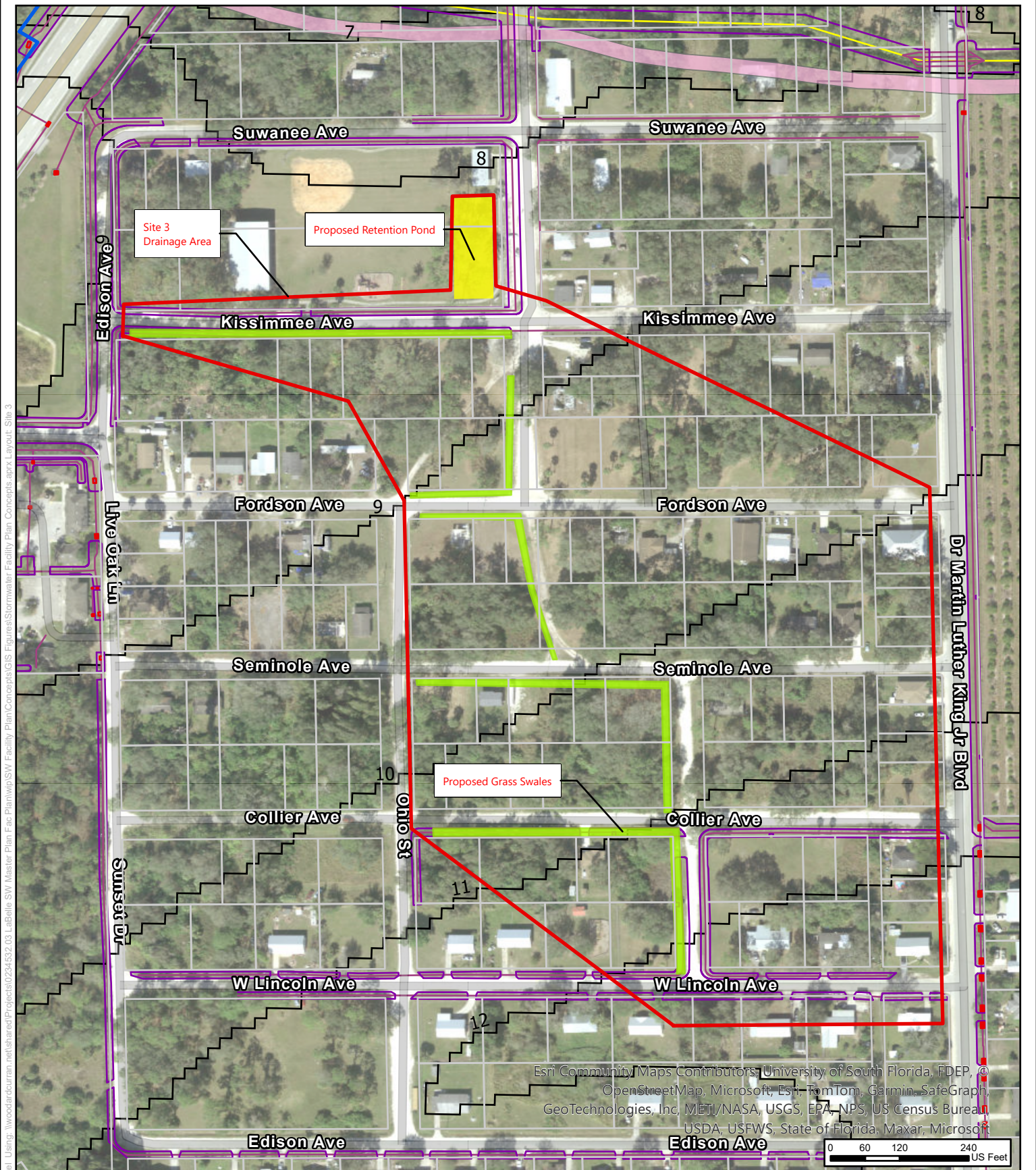



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Figure 3-4
Site 3: Alton "Kid" Jones Recreation Park
 Stormwater Alternative 2
 Stormwater Facility Plan
 LaBelle, FL

— 1 ft Contours	□ Drainage Structure
— Swale	□ Parcel Boundary
— Headwall/Retaining Wall	□ Riverine
— Drain Pipe	□ LaBelle City Limit
— Ditch Flow	□ Drainage Area



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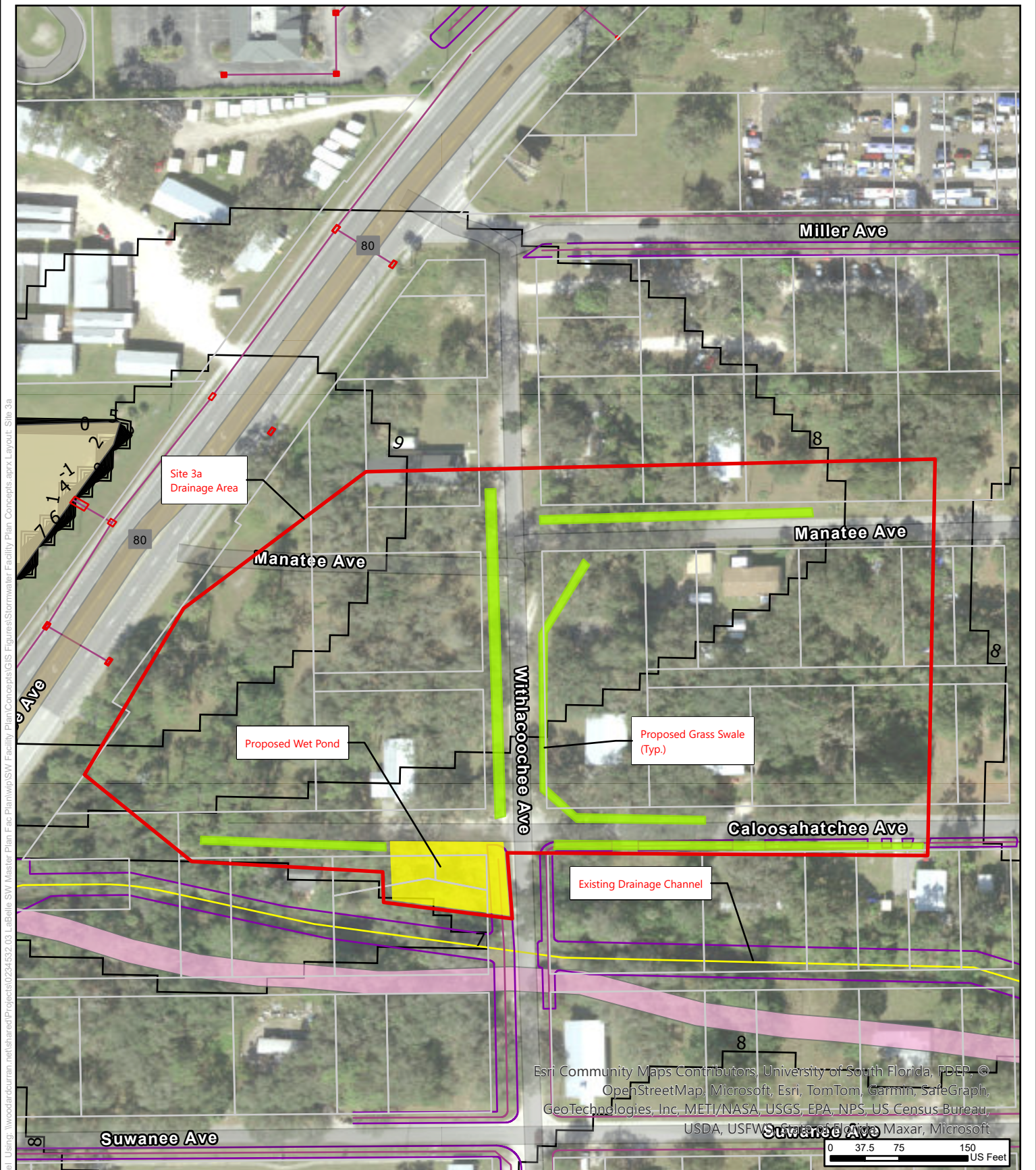


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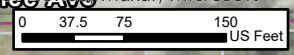
Figure 3-5
Site 3a: Manatee, Withlacoochee, and Caloosahatchee Ave
 Stormwater Alternative 2
 Stormwater Facility Plan
 LaBelle, FL

Legend	
	1 ft Contours
	Swale
	Drain Pipe
	Ditch Flow
	Drainage Structure
	Parcel Boundary
	Freshwater Pond
	Riverine
	LaBelle City Limit
	Drainage Area

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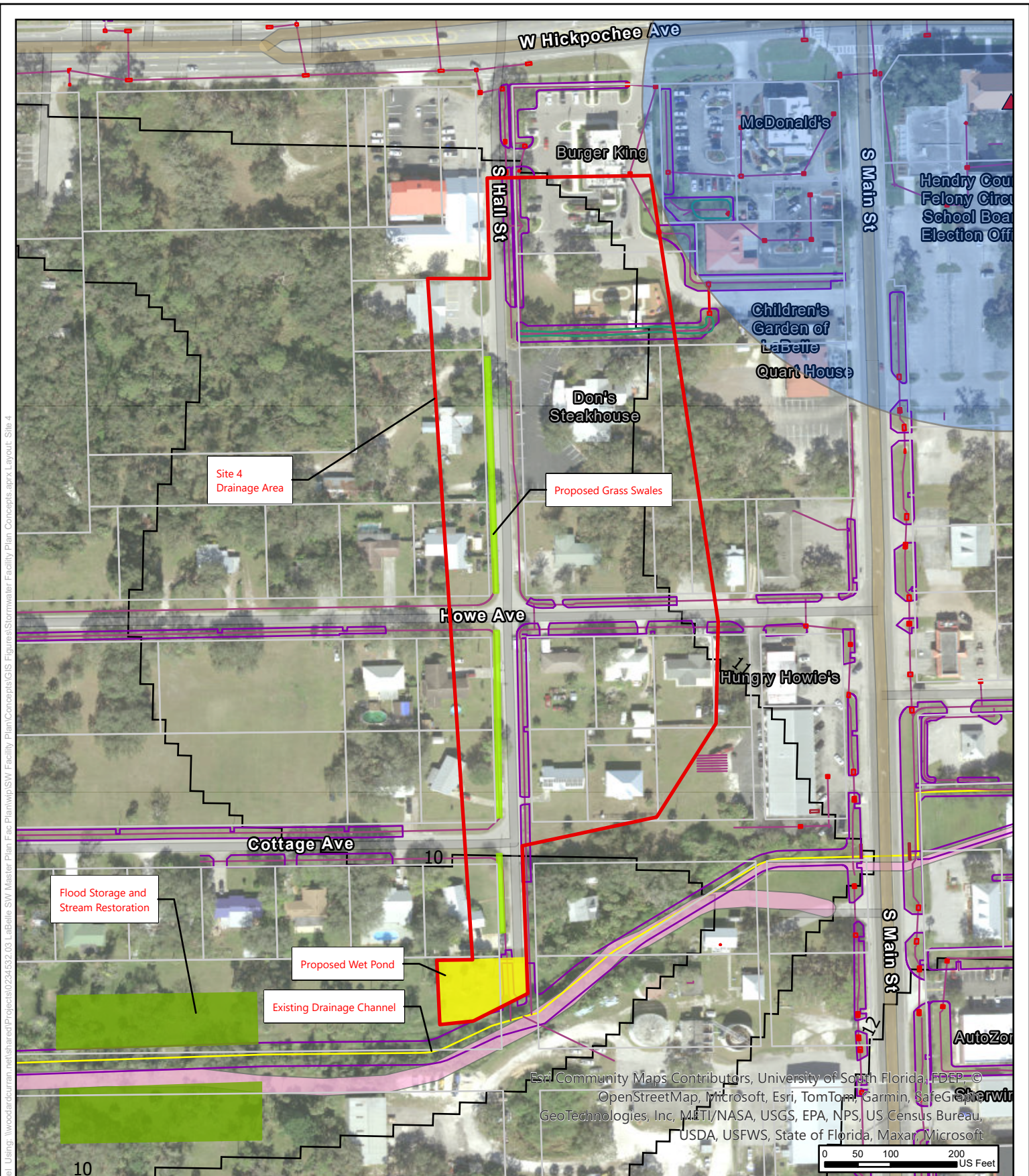



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Figure 3-6
Site 4: Hall Street, Howe Ave,
and South Main Street
Stormwater Alternative 2
 Stormwater Facility Plan
 LaBelle, FL

Legend	Cultural Resource Building	Drain Pipe	Cultural Resource District Building - 500ft Buffer
	1 ft Contours	Ditch Flow	Parcel Boundary
	Headwall/Retaining Wall	Water Body	Riverine
	Swale	Drainage Structure	LaBelle City Limit
			Drainage Area



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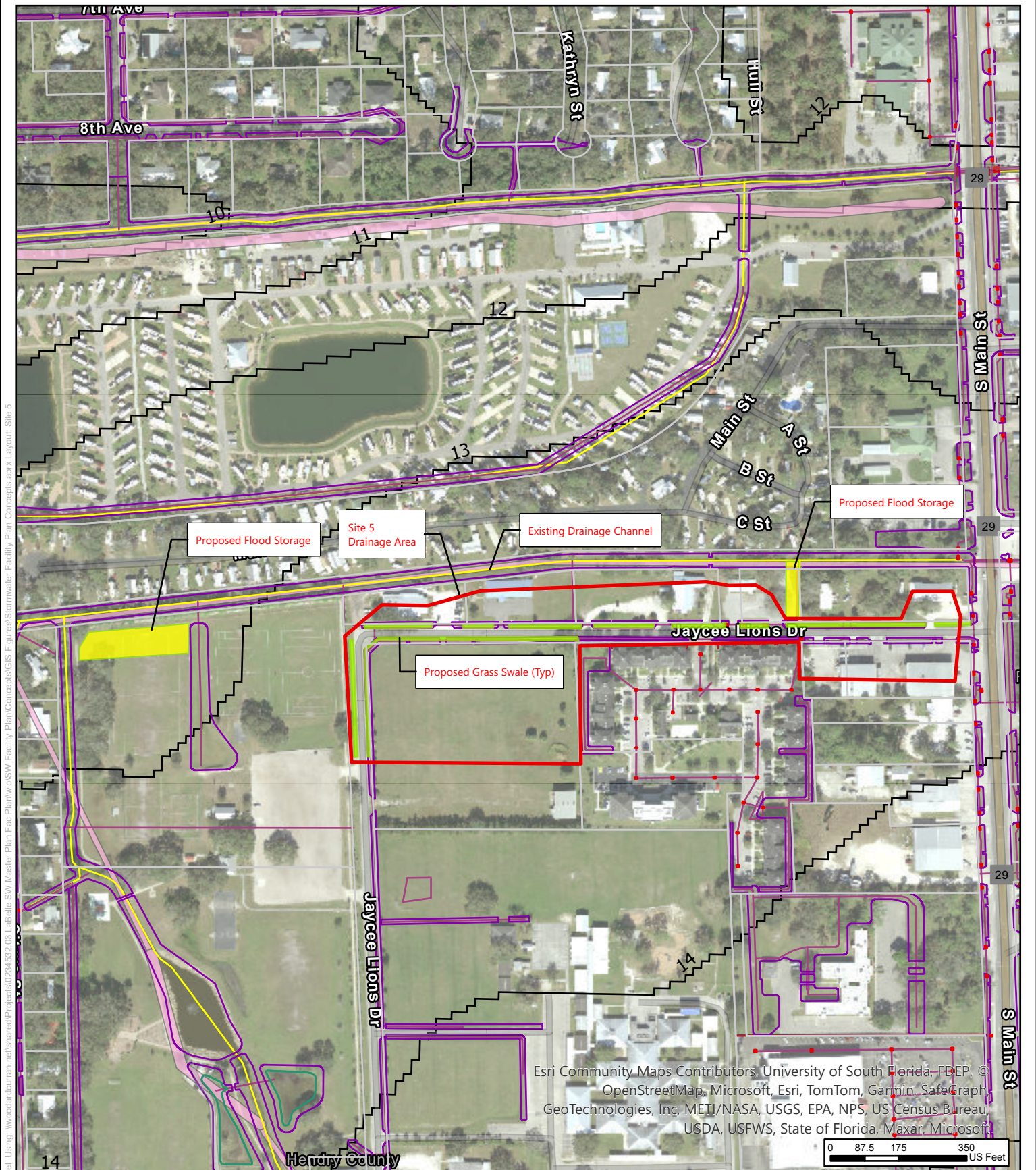


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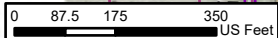


Figure 3-7
Site 5: Jaycee Lions Drive
 Stormwater Alternative 2
 Stormwater Facility Plan
 LaBelle, FL

Legend	1 ft Contours	Drain Pipe	Parcel Boundary
	Swale	Ditch Flow	Riverine
	Headwall/Retaining Wall	Water Body	LaBelle City Limit
		Drainage Structure	Drainage Area

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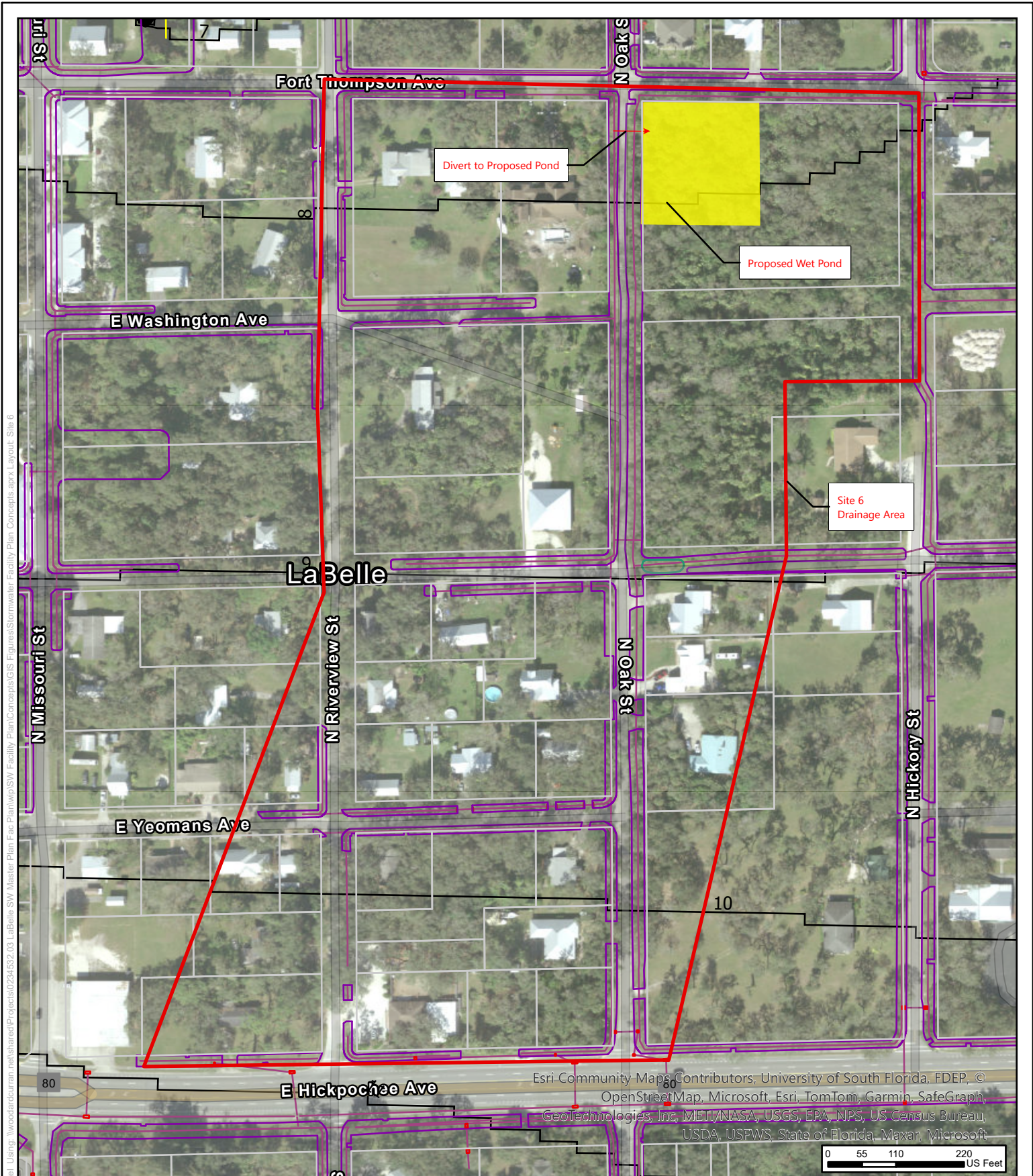


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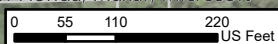


Figure 3-8
Site 6: North Oak St, East Fort Thomson Ave, & Oklahoma Ave
 Stormwater Alternative 2
 Stormwater Facility Plan
 LaBelle, FL

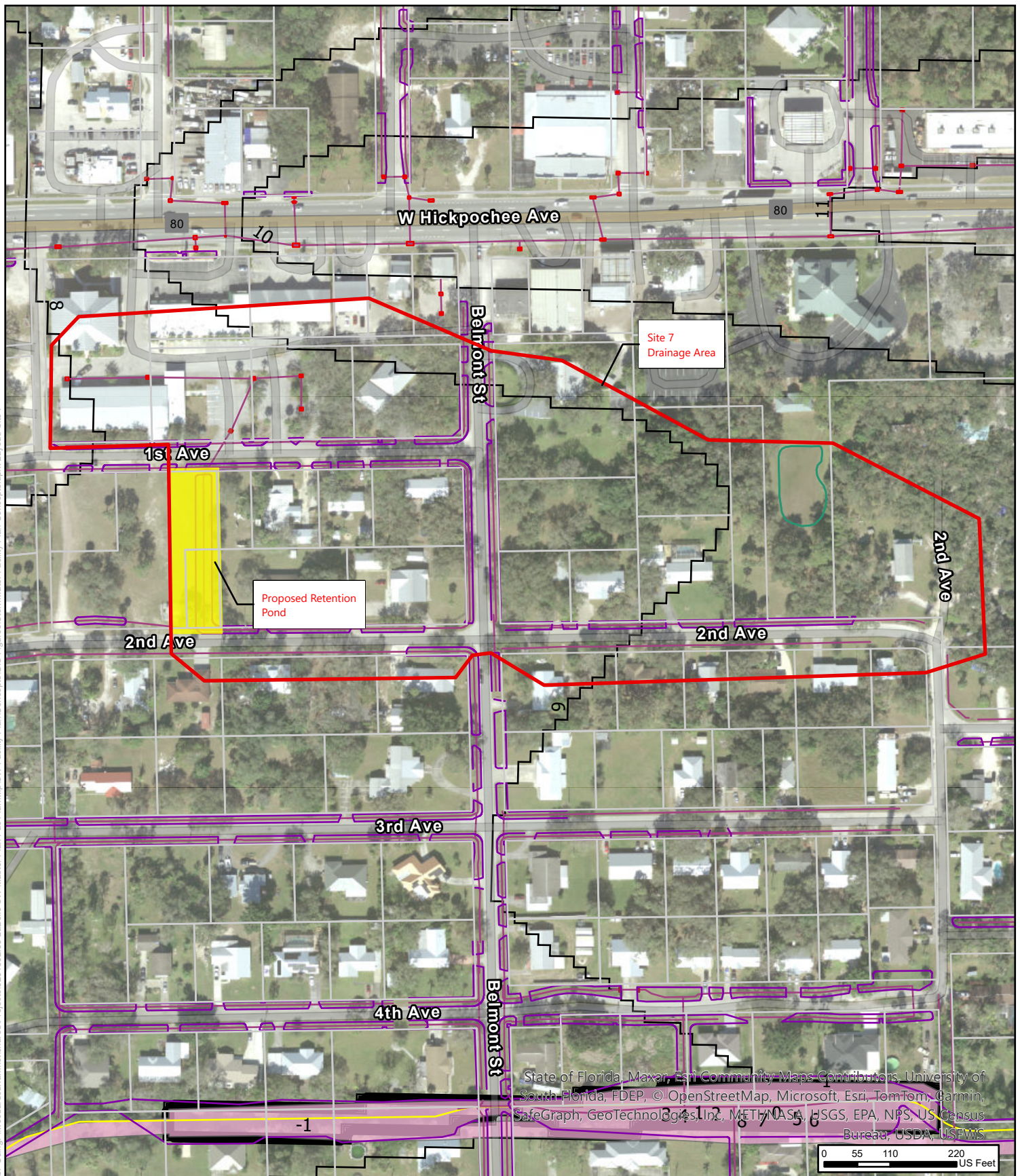
Legend		
1 ft Contours	Drain Pipe	Parcel Boundary
Swale	Ditch Flow	Drainage Arrow
Headwall/Retaining Wall	Water Body	LaBelle City Limit
Drainage Structure	Drainage Structure	Drainage Area

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Figure 3-9
Site 7: City Park Between 1st and 2nd Ave
 Stormwater Alternative 2
 Stormwater Facility Plan
 LaBelle, FL

Legend	
	1 ft Contours
	Swale
	Headwall/Retaining Wall
	Drain Pipe
	Ditch Flow
	Water Body
	Drainage Structure
	Parcel Boundary
	Riverine
	LaBelle City Limit
	Drainage Area





Woodard & Curran

Project #: 0234532.03
 Map Created: October 2024

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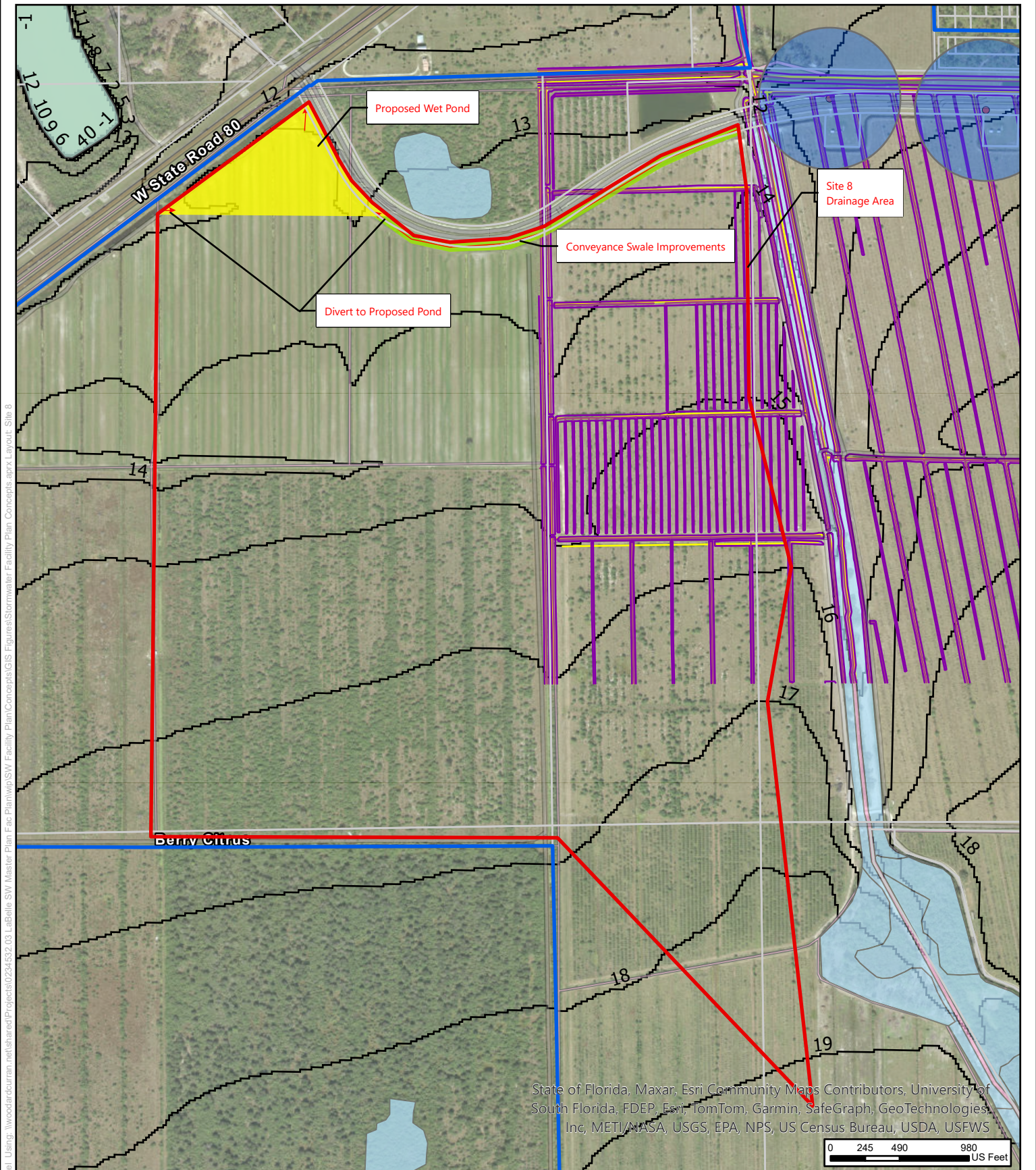


Figure Exporied: 10/01/2024, By: bpatel Using: \woodardcurran.net\shared\Projects\0234532.03 LaBelle SW Master Plan_Facility Plan\SW Facility Plan\Concepts\GIS Figures\Stormwater Facility Plan_Concepts.aprx Layout: Site 8

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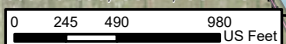


Figure 3-10
Site 8: SR 80 and Helms Road West
 Stormwater Alternative 3
 Stormwater Facility Plan
 LaBelle, FL

Legend	Public Water Supply	Ditch Flow	Lake
	1 ft Contours	Parcel Boundary	Riverine
	Swale	Drainage Arrow	Public Water Well - 500ft Buffer
	Drain Pipe	Freshwater Forested/ Shrub Wetland	LaBelle City Limit
		Drainage Area	

Woodard & Curran

Project #: 0234532.03
 Map Created: October 2024

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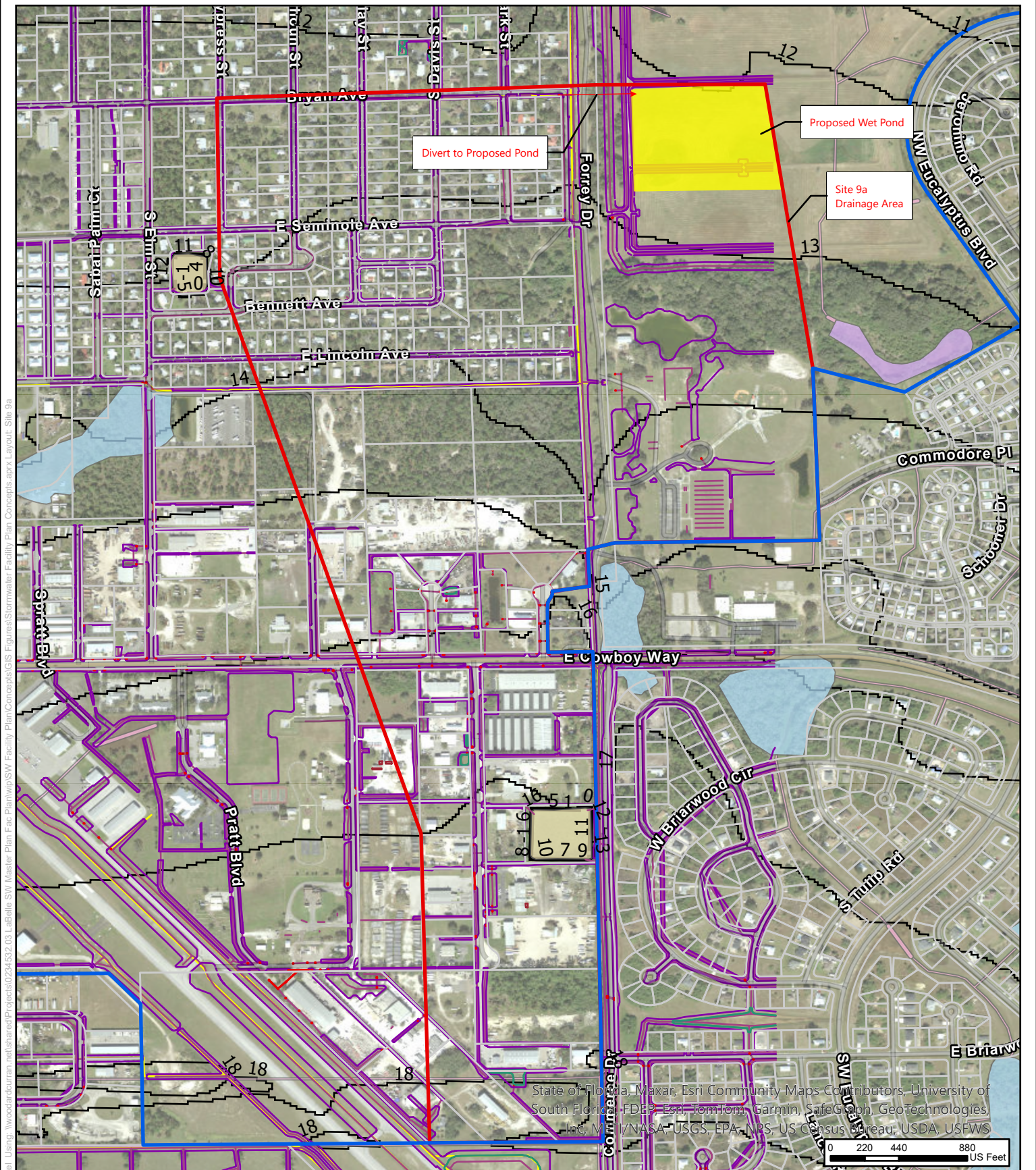



Figure Excerpt: 10/01/2024, By: bpratt, Using: woodardcurran.net\shared\Projects\0234532_03 LaBelle SW Master Plan_Fac Plan\wp\SW Facility Plan\Concepts\GIS Figures\Stormwater\Facility Plan_Concepts.aprx Layout: Site 9a

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Figure 3-11
Site 9a: Forrey Drive and SR 80
 Stormwater Alternative 3
 Stormwater Facility Plan
 LaBelle, FL

Legend	
— 1 ft Contours	— Water Body
— Swale	□ Drainage Structure
— Headwall/Retaining Wall	→ Drainage Arrow
— Drain Pipe	□ Parcel Boundary
— Ditch Flow	□ Freshwater Forested/Shrub Wetland
	□ Freshwater Emergent Wetland
	□ Freshwater Pond
	□ Riverine
	□ LaBelle City Limit
	□ Drainage Area

N



Woodard & Curran
 Project #: 0234532.03
 Map Created: October 2024

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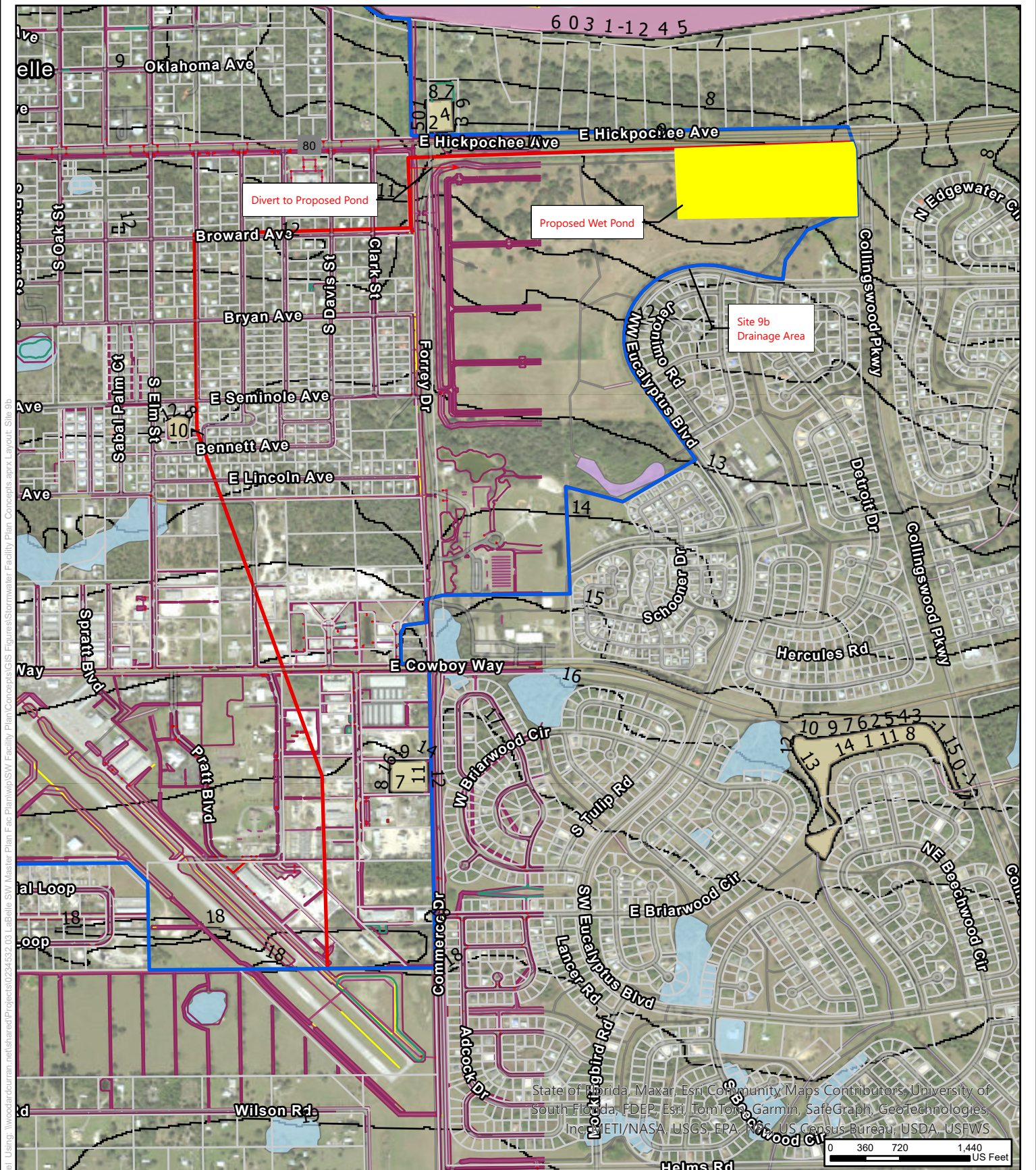


Figure Excerpted: 10/01/2024, By: bpatel, Using: WoodardCurran.net\shared\Projects\0234532_03\LaBelle SW Master Plan_Facility Plan\SW Facility Plan\Concepts\GIS Figures\Stormwater\Facility Plan_Concepts.aprx Layout, Site 9b

State of Florida, Maxar, Esri Community Maps Contributors, University of South Florida, FDEP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NOAA, US Census Bureau, USDA, USFWS

Figure 3-12
Site 9b: Forrey Drive and SR 80
 Stormwater Alternative 3
 Stormwater Facility Plan
 LaBelle, FL

Legend	1 ft Contours	Water Body	Freshwater Emergent Wetland
	Swale	Drainage Structure	Freshwater Pond
	Headwall or Retaining Wall	Drainage Arrow	Riverine
	Drain Pipe	Parcel Boundary	LaBelle City Limit
	Ditch Flow	Freshwater Forested/ Shrub Wetland	Drainage Area

Woodard & Curran

Project #: 0234532.03
 Map Created: October 2024

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

4. SELECTED PLAN

4.1 Introduction

Among the selected plans consisting of Site 8 and Site 9, Site 8 includes designing and constructing a wet pond within a private pastureland that is reported to be flooded. The existing stormwater drainage swale is planned to be regraded to divert discharge to the proposed pond. Site 9 consists of designing and construction of a wet pond on a municipally owned parcel. Potential future development of the spray field property would possibly provide cost benefits to the city which may offset the construction and/or maintenance costs.

Topographic survey and geotechnical data will be gathered during design to determine ground elevations and soil, subsurface geologic, and water table conditions. This site-specific data will be used to select SCMs that best fit the site constraints. SCMs are practical measures that are designed to improve water quality and enhance groundwater recharge while maintaining stormwater conveyance and flood protection. The site-specific SCMs will be incorporated into the plan as practical to remove nutrients, suspended solids, oil and grease, and infiltrate stormwater into the water table prior to surface discharge. SCMs will be deployed using a "treatment train" approach that maximizes the use of different site conditions along the runoff path to achieve multiple goals or needs for the stormwater management system.

Flood relief remedies will be designed to protect roadways and properties from the 25-year, 24-hour storm to the extent practicable.

Adverse environmental effects are not anticipated. Portions of the plan will be constructed in existing disturbed ROWs. Some construction will be performed outside of the public ROWs. An environmental assessment of these areas is necessary prior to advancing design.

4.2 Environmental Benefits

4.2.1 Water Quality

The estimated total nitrogen and phosphorus reductions for the stormwater improvement Alternative 3 are presented in Section 3.3.3.1. The ponds proposed in Alternative 3 treat large contributing drainage areas, and therefore have potential to provide significant nutrient reduction.

Similarly, the on-site disposal improvement Alternative 3 will provide water quality improvements including nutrient reductions. This is discussed in more detail in Section 3.3.3.2.

4.2.2 Groundwater Recharge

The selected stormwater improvement alternative is anticipated to include wet ponds due to proximity to wetlands and anticipated high groundwater table. However, geotechnical data will be gathered through site-specific subsurface investigations to estimate the seasonal high groundwater table elevation and soil infiltration rates. If these sites are suitable for infiltration SCMs, these systems will be prioritized over non-infiltrating systems to provide groundwater recharge. Infiltration SCMs will be coupled with pre-treatment (such as vegetated filter strips or swales) to help protect the groundwater system from surface pollution and reduce clogging of the infiltration system.

4.3 Economic Benefits

The selected plans will provide pollutant removal, including nutrient removal, to benefit the ecology, hydrology, and economic value of LaBelle and surrounding waterbodies (Caloosahatchee River). The selected plan will support the infrastructure improvements necessary to attract private investment, redevelopment, and increased taxable property values within the planning area.

4.4 Water and Energy Efficiency

The stormwater improvement alternative relies on gravity for stormwater flow and does not need energy-intensive pumping systems to operate. Design and construction will be based on FDOT standard plans and specifications that require the use of quality, long-lasting construction materials and methods. A professionally certified asset management/operation and maintenance plan will be developed to provide direction on proper operation and maintenance protocols.

Additionally, a gravity sewer system is highly water and energy efficient because it relies mostly on the natural force of gravity to move wastewater, reducing the need for pumps and therefore consuming minimal energy for transport, resulting in significantly lower operational costs and a reduced environmental impact compared to systems requiring pumps at each service connection. Maintenance reduction is attributed to fewer moving parts, therefore requiring less maintenance and repairs, further reducing operational costs. Gravity service is inherently reliable flow. Gravity sewers contribute to a lower carbon footprint due to the use of gravity as its primary energy source.

4.5 Cost and Effectiveness Analysis

The stormwater improvement project will be a cost-effective use of infrastructure to achieve pollutant removal and volume attenuation. Large-scale stormwater facilities tend to be more cost-effective than small scale SCMs, since they treat and attenuate stormwater runoff from a large area with one facility. This provides economy of scale, and reduced maintenance burden.

SCMs will be selected and designed based on site-specific survey and geotechnical data, acceptability to the SFWMD under the ERP, ability to fit the site constraints, and ability to achieve the project goals of pollutant reduction, flood protection, and groundwater recharge using a treatment train approach. Recognizing that maintaining the SCMs is critical to their ability to achieve the project goals, designs that require the least amount of maintenance effort will be prioritized. SCMs likely to be applicable to the project are discussed in more detail in Section 4.6. The recommended SCMs do not require electricity, mechanical equipment, or City water to operate. Therefore, energy conservation is maximized by selecting SCMs that require a minimal amount of maintenance effort to function properly.

Similarly, conversion to public sewer with a collection system expansion will be a cost-effective use of infrastructure to achieve pollutant removal and system reliability. As discussed in Section 4.4, a gravity sewer system is highly water and energy efficient since it primarily relies on gravity rather than energy-consuming pumps.

The Cost and Effectiveness Certification is provided in Appendix E.

4.6 Stormwater Control Measures

It is anticipated that a treatment train will be needed to meet the FDEP Clean Waterways Act Stormwater Rule, which became effective June 28, 2024, at Site 9b if the spray field parcel is redeveloped. The updated stormwater rule requires the minimum stormwater treatment performance standards summarized in Table 4-1 below. The applicable performance standard is based on the project location’s Hydrologic Unit Code (HUC) 12 subwatershed. The western portion of LaBelle, including Site 9, is located within a HUC 12 that contains an impaired water (the Caloosahatchee River between S-79 and S-78). Therefore, it is anticipated that for total phosphorus and nitrogen the average treatment standard will be 80% reduction. A treatment train utilizing multiple SCMs is anticipated to be needed to achieve these load reduction efficiencies. For cost estimation, the pretreatment/treatment train SCMs are assumed to be included as a minor component of the treatment system.

TABLE 4-1: TREATMENT STANDARDS

Project Scenario	Reduction Efficiency		Additional Criteria
	TP	TN	
All sites	80	55	Or post ≤ pre
OFW	90	80	Or post ≤ pre
Impaired Water	80	80	And post ≤ pre plus net improvement
Impaired + OFW	95	95	And post ≤ pre plus net improvement
Redevelopment	80	45	N/A
Redevelopment + OFW	90	60	N/A
Redevelopment + Impaired	80	45	And net improvement for the pollutant of concern

4.6.1 Pretreatment/Treatment Train

The following SCMs can be used as pretreatment systems or the first system in a treatment train prior to discharging to the proposed regional ponds. These SCMs are typically suitable for small (<1 acre) drainage areas. These SCMs could be selected to provide stormwater improvements within the City ROW or at a redevelopment site, since they typically do not require a lot of space.

- **Bioswales:** Bioswales are open, shallow, grass swales that channelize and convey stormwater runoff. They can be used to reduce stormwater runoff velocity and trap pollutants and trash commonly found in stormwater runoff before they can enter waterbodies or drainage conveyances. Stormwater channeled into swales often infiltrates into the ground. They can also be incorporated into the landscape as a natural feature. Due to their versatility and relatively simple construction and maintenance requirements, vegetated swales are appropriate for a wide range of settings, including residential, roadside, commercial, industrial, and institutional sites.
- **Tree Boxes Filters/Tree Wells:** Tree box filters or suspended pavement systems are small bioretention areas installed beneath trees that control and treat runoff. These systems treat small drainage areas with a small SCM footprint. They also improve the landscape and quality of life in urban areas, as the vegetation adds aesthetic and natural value, including shade.
- **Rain Gardens:** Like tree box filters, rain gardens treat stormwater through biofiltration. Rain gardens are small, depressed areas within the landscape that are typically used to treat and store runoff

from small drainage areas, such as residential roofs and driveways. They can be built into a complete street using roadway bump outs, which also provide traffic calming benefits.

- Pervious Pavement: Pervious pavement or pavers are hardscape surfaces that allow stormwater to flow through it. The benefit of pervious pavement is pollutant reduction and groundwater recharge while still providing sidewalks, parking lots, or other urban surfaces.
- Baffle Boxes: Baffle boxes are subsurface structures that treat stormwater through a series of settling chambers separated by filters or baffles. The benefits of baffle boxes are primarily pollutant reduction in a subsurface system.
- Exfiltration Trenches: Exfiltration trenches are subsurface retention systems consisting of a conduit, such as a perforated pipe, surrounded by aggregate, which temporarily stores and infiltrates stormwater runoff. Exfiltration trenches can provide runoff volume control and water quality benefits.

4.6.2 Ponds

Pond SCMs are used to treat and store large volumes of stormwater runoff. The two pond types that are anticipated to be options for LaBelle include:

- Retention/Infiltration Pond: Retention ponds are designed to permanently hold stormwater runoff, and therefore typically do not have an outlet structure. Stormwater runoff in a retention pond is either infiltrated or evaporated. Retention ponds provide high pollutant removal and can be designed to control peak discharge rates during a storm event. Given LaBelle's well-draining soils, it is anticipated that retention ponds will be suitable SCMs at some of the sites. However, adequate pretreatment is necessary, and geotechnical investigations are needed to confirm a minimum of three feet of unconsolidated soil material exists below the pond to provide adequate treatment of stormwater before it enters the aquifer.
- Wet Pond/Constructed Stormwater Wetland: Constructed wetlands can be designed to provide treatment and peak flow attenuation. They are designed to have a permanent pool of water that settles sediment and other solid pollutants, as well as remove a variety of soluble pollutants such as nitrogen. Shallow pools are also designed to support the growth of wetland plants. Given LaBelle's well-draining soils, it is anticipated that a restricting layer, such as an impermeable HDPE liner or clay layer would need to be installed at the bottom of a constructed wetland to support the shallow and permanent pools.

5. ADDITIONAL RECOMMENDATIONS

5.1 Drainage Infrastructure Inventory

The City should perform an inventory of the existing drainage infrastructure. The inventory should document the size, material, invert elevations, and condition of pipes, structures, and other BMPs. The inventory will support future stormwater assessments, as well as be used for tracking deficiencies and planning maintenance and improvements.

5.2 Asset Management / Operations and Maintenance Plan

A stormwater asset management / operations and maintenance plan will be required to be developed for the selected projects as a condition of CWSRF funding. The operations and maintenance plan should specify maintenance activities and frequencies. This plan is recommended to include City-wide assets, since observations in and around the City indicate that stormwater performance would benefit from more frequent maintenance activities.

5.3 Utility Implementation Coordination

The City may want to consider implementation of a citywide stormwater utility fee. Implementing a stormwater utility fee would provide an equitable and consistent funding source for future stormwater infrastructure planning, design, and construction, as well as operation and maintenance activities. Implementation of a stormwater utility fee provides a dedicated source of funding for the City's stormwater program, which would allow the City to have a proactive and planned program, understanding that a well-functioning stormwater management system is critical to sustainable development and growth in the City. This funding, along with efforts to plan and prioritize stormwater system improvements, would increase the level of service provided to the community, and is integral to accessing outside funding, like grants and loans, for future planning studies and designing and constructing capital stormwater projects.

6. IMPLEMENTATION

6.1 Public Meeting

A public meeting was held on xx/xx/xxxx after advertising in the Okeechobee Newspaper. Resolution xxx to approve this Stormwater Facilities Plan and submit to the FDEP passed at the meeting. A copy of Resolution xxx, the legal advertisement affidavit, certified meeting minutes, and Site Certification are provided in Appendix E.

6.2 Regulatory Agency Review

To qualify for a subsidized loan from the SRF, various government agencies must be satisfied with the way that the City of LaBelle is proposing to address their water quality and quantity challenges. Copies of the Facilities Plan adopted by the City of LaBelle are being sent to the FDEP-SRF for review and comments. The FDEP-SRF staff will distribute this Facilities Plan to State and Federal Agencies via the “State Clearing House Process” for their review and comment. An SFWMD Environmental Resource Permit (ERP) and FDEP Construction Generic Permit (CGP) coverage will be needed to implement the project. The ERP will be obtained during design and CGP coverage will be obtained before construction.

6.3 Financial Planning

The project is anticipated to be funded in conjunction with and as part of the CWSRF financing for the Stormwater Facilities Plan Recommendations. A capital financing plan (CFP) is provided in Appendix A, which describes the projected financial impact on the users of the stormwater system. The CFP identifies funding sources needed for pledge revenue to repay SRF debt service over the life of the note.

This Facilities Plan is not funded by the FDEP-SRF program; however, an RFI will be submitted for Design and Construction activity. The City intends to request design allocation from the SRF program for the xx Hearing. Fiscal sustainability requirements will be met at that time. The City intends to create a Fiscal Sustainability Plan and satisfy the fiscal sustainability requirements during the design phase of the project. The Fiscal Sustainability Plan Certification is provided in Appendix E.

6.4 Project Implementation

The City of LaBelle has the sole responsibility and authority to implement the recommended plan. The implementation schedule is estimated to follow the timeline below:

- TBD start date – Submit draft Facilities Plan to FDEP & other government agencies
- TBD start date – Submit Request for Inclusion (RFI) to FDEP (Tallahassee) for design funding
- Prepare Final Facility Planning documentation to include all comments for the State (TBD start date +2 months ±)
- Hold public meeting on the Facilities Plan and Capital Financing Plan (TBD start date +3 months ±)
- Publication of Department’s environmental information document in the Florida Administrative Weekly (TBD start date +3 months ±)

- End of 30-day comment period for the environmental information document approval of planning documents (TBD start date +4 months ±)
- Submit loan application to FDEP (Tallahassee) for Design Phase (TBD start date +4 months ±)
- Resolution and council approval of FDEP loan agreements for design (TBD start date +5 months ±)
- Complete loan agreements for design phase and release contract for design (TBD start date +7 months ±)
- Project Design (TBD start date +7 months to TBD start date +18 months ±)
- Submit plans and specifications to the FDEP (Tallahassee) and submit the construction permit application to the FDEP (District Office) (TBD start date +19 months ±)
- Notice of intent to permit construction and project added to the priority list (TBD start date +20 months ±)
- Submit Request for Inclusion (RFI) for inclusion construction to FDEP's project priority list (TBD start date +20 months ±)
- Hearing for the Fundable portion of the priority list (TBD start date +21 months ±)
- Submit loan application to FDEP (Tallahassee) for construction activities (TBD start date +21 months ±)
- Resolution and council approval of FDEP loan agreements for construction (TBD start date +22 months ±)
- Complete loan agreements for construction activities (TBD start date +23 months ±)
- Advertise for bids (TBD start date +23 months ±)
- Open construction bids (TBD start date +25 months ±)
- Award contract (TBD start date +27 months ±)
- Issue a notice to proceed (NTP) to Start Phase construction (TBD start date +29 months ±)
- Complete construction of the project (TBD start date +47 months ±)
- Certify operation performance of the project and close out the project (TBD start date +50 months ±)
- Begin SRF loan repayments to FDEP (TBD start date +56 months ±)

APPENDIX A: CAPITAL FINANCING PLAN

CAPITAL FINANCING PLAN

City of LaBelle, FL

(Project Sponsor)

Julie C. Wilkins, Mayor

(Authorized Representative and Title)

LaBelle, FL 33935

(City, State, and Zip Code)

Julie C. Wilkins, Mayor, (863) 673-4529

(Capital Financing Plan Contact, Title and Telephone Number)

481 West Hickpochee Avenue

(Mailing Address)

LaBelle, FL 33935

(City, State, and Zip Code)

The Department needs to know about the financial capabilities of potential State Revolving Fund (SRF) loan applicants. Therefore, a financial capability demonstration (and certification) is required well before the evaluation of the actual loan application.

The sources of revenues being dedicated to repayment of the SRF loan are water & sewer rate revenues

(Note: Projects pledging utility operating revenues should attach a copy of the existing/proposed rate ordinance)

Estimate of Proposed SRF Loan Debt Service

Capital Cost*	<u>\$12,644,000</u>
Loan Service Fee (2% of capital cost)	<u>\$252,880</u>
Subtotal	<u>\$12,896,880</u>
Capitalized Interest**	<u>\$0</u>
Total Cost to be Amortized	<u>\$12,896,880</u>
Interest Rate***	<u>0.68%</u>
Annual Debt Service	<u>\$691,874</u>
Annual Debt Service Including Coverage Factor****	<u>\$795,655</u>

* Capital Cost = Allowance + Construction Cost (including a 10% contingency) + Technical Services after Bid Opening.

** Estimated Capitalized Interest = Subtotal times Interest Rate times construction time in years divided by two.

***20 GO Bond Rate times Affordability Index divided by 200.

**** Coverage Factor is generally 15%. However, it may be higher if other than utility operating revenues are pledged.

SCHEDULE OF PRIOR AND PARITY LIENS

List annual debt service beginning two years before the anticipated loan agreement date and continuing at least fifteen fiscal years. Use additional pages as necessary.

IDENTIFY EACH OBLIGATION

#1 Water & Sewer Revenue Bond Series 2013 Coverage % 15 Insured (Yes/No) Yes	#2 Water & Sewer Revenue Bond Series 2002 Coverage % 15 Insured (Yes/No) Yes	#3 Water & Sewer Revenue Bond Series 2005 Coverage % 15 Insured (Yes/No) Yes
#4 SRF Note Coverage % 15 Insured (Yes/No) Yes	#5 DW SRF - LS260370 Coverage % 15 Insured (Yes/No) Yes	#6 Coverage % Insured (Yes/No)

Fiscal Year	Annual Debt Service (Principal + Interest)						Total Non-SRF Debt Service w/coverage	Total SRF Debt Service w/coverage
	#1	#2	#3	#4	#5	#6		
2022	\$564,085	\$139,696	\$64,226	\$16,544	\$0		\$768,007	\$16,544
2023	\$563,568	\$139,696	\$64,226	\$16,544	\$0		\$767,489	\$16,544
2024	\$563,885	\$139,696	\$64,226	\$16,544	\$0		\$767,807	\$16,544
2025	\$563,010	\$139,696	\$64,226	\$16,544	\$0		\$766,932	\$16,544
2026	\$563,970	\$139,696	\$64,226	\$16,544	\$0		\$767,892	\$16,544
2027	\$563,710	\$139,696	\$64,226	\$16,544	\$0		\$767,632	\$16,544
2028	\$564,258	\$139,696	\$64,226	\$16,544	\$217,770		\$768,179	\$234,314
2029	\$563,585	\$139,696	\$64,226	\$16,544	\$0		\$767,507	\$16,544
2030	\$562,720	\$139,696	\$64,226	\$8,272	\$0		\$766,642	\$8,272
2031	\$563,663	\$139,696	\$64,226	\$0	\$0		\$767,584	\$0
2032	\$563,358	\$139,696	\$64,226	\$0	\$0		\$767,279	\$0
2033	\$562,833	\$139,696	\$64,226	\$0	\$0		\$766,754	\$0
2034	\$564,088	\$139,696	\$64,226	\$0	\$0		\$768,009	\$0
2035	\$563,068	\$139,696	\$64,226	\$0	\$0		\$766,989	\$0
2036	\$563,828	\$139,696	\$64,226	\$0	\$0		\$767,749	\$0
2037	\$563,313	\$139,696	\$64,226	\$0	\$0		\$767,234	\$0
2038	\$563,550	\$139,696	\$64,226	\$0	\$0		\$767,472	\$0
2039	\$564,513	\$139,696	\$64,226	\$0	\$0		\$768,434	\$0
2040	\$564,173	\$139,696	\$64,226	\$0	\$0		\$768,094	\$0

**SCHEDULE OF ACTUAL REVENUES AND DEBT COVERAGE
FOR PLEDGED REVENUE**

(Provide information for the two fiscal years preceding the anticipated date of the SRF loan agreement)

	FY2023	FY2024
(a) Operating Revenues (Identify)		
<u>Water sales/fees</u>	<u>\$2,056,000</u>	<u>\$2,442,430</u>
<u>Sewer sales/fees</u>	<u>\$1,115,000</u>	<u>\$1,115,000</u>
(b) Interest Income	<u>\$4,250</u>	<u>\$4,250</u>
(c) Other Incomes or Revenues (Identify)		
<u>Miscellaneous revenue</u>	<u>\$100,000</u>	<u>\$50,000</u>
<u>Capital Outlay</u>	<u>\$800,000</u>	<u>\$800,000</u>
(d) Total Revenues	<u>\$4,075,250</u>	<u>\$4,618,780</u>
(e) Operating Expenses (excluding interest on debt, depreciation, and other non-cash items)	<u>\$2,852,038</u>	<u>\$3,844,063</u>
(f) Net Revenues (f = d – e)	<u>\$1,223,216</u>	<u>\$774,717</u>
(g) Debt Service (including coverage) Excluding SRF Loans	<u>\$767,489</u>	<u>\$767,807</u>
(h) Debt Service (including coverage) for Outstanding SRF Loans	<u>\$16,544</u>	<u>\$16,544</u>
(i) Net Revenues After Debt Service (i = f – g – h)	<u>\$439,183</u>	<u>(\$,9,316)</u>

Source: Annual Reports, budget files

Notes:

**SCHEDULE OF PROJECTED REVENUES AND DEBT COVERAGE
FOR PLEDGED REVENUE**

(Begin with the fiscal year preceding first anticipated semiannual loan payment)

	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>
(a) Operating Revenues (Identify)					
Water sales/fees	\$3,663,345	\$3,663,345	\$3,883,146	\$3,999,640	\$3,999,640
Sewer sales/fees	\$2,007,000	\$2,007,000	\$2,127,420	\$2,191,243	\$2,191,243
(b) Interest Income	\$4,250	\$4,250	\$4,250	\$4,250	\$4,250
(c) Other Incomes or Revenues (Identify)					
(d) Total Revenues	\$5,674,595	\$5,674,595	\$6,014,816	\$6,195,133	\$6,195,133
(e) Operating Expenses ¹	\$3,959,385	\$4,078,166	\$4,200,511	\$4,326,527	\$4,456,323
(f) Net Revenues (f = d - e)	\$1,715,210	\$1,596,429	\$1,814,304	\$1,868,606	\$1,738,810
(g) Existing Debt Service on Non-SRF Projects (including coverage)	\$766,932	\$767,892	\$767,632	\$768,179	\$767,507
(h) Existing SRF Loan Debt Service (including coverage)	\$16,544	\$16,544	\$16,544	\$234,314	\$16,544
(i) Total Existing Debt Service (i = g + h)	\$783,476	\$784,436	\$784,176	\$1,002,493	\$784,051
(j) Projected Debt Service on Non-SRF Future Projects (including coverage)	0	0	0	0	0
(k) Projected SRF Loan Debt Service (including coverage)	\$0	\$0	\$691,874	\$691,874	\$691,874
(l) Total Debt Service (Existing and Projected) (l = i + j + k)	\$783,476	\$784,436	\$1,476,049	\$1,694,367	\$1,475,924
(m) Net Revenues After Debt Service (m = f - l)	\$931,735	\$811,993	\$338,255	\$174,239	\$262,886

Source: Budget, Annual Reports

Notes: (i.e. rate increases, explanations, etc.)

1. For existing and proposed facilities, excluding interest on debt, depreciation, and other non-cash items.

Financial projections include:

80% rate increase on WW in 2025.

50% rate increase on DW in 2025.

6% rate increase (DW&WW) in 2027.

3% rate increase (DW&WW) in 2028.

CERTIFICATION

I, Julie C. Wilkins, certify that I have reviewed the information
Chief Financial Officer (please print)

included in the preceding capital financing plan worksheets, and to the best of my knowledge, this

information accurately reflects the financial capability
of

The City of LaBelle

Project Sponsor

I further certify that The City of LaBelle has the financial capability to ensure
Project Sponsor

adequate construction, operation, and maintenance of the system, including this SRF project.

Signature

Date

APPENDIX B: ENVIRONMENTAL ASSESSMENT DOCUMENTATION



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Florida Ecological Services Field Office

777 37th St

Suite D-101

Vero Beach, FL 32960-3559

Phone: (352) 448-9151 Fax: (772) 562-4288

Email Address: fw4flesregs@fws.gov

<https://www.fws.gov/office/florida-ecological-services>

In Reply Refer To:

08/26/2024 14:38:53 UTC

Project Code: 2024-0135042

Project Name: LaBelle Stormwater Facility Plan

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Please include your Project Code, listed at the top of this letter, in all subsequent correspondence regarding this project. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Marine Mammals
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Florida Ecological Services Field Office

777 37th St

Suite D-101

Vero Beach, FL 32960-3559

(352) 448-9151

PROJECT SUMMARY

Project Code: 2024-0135042

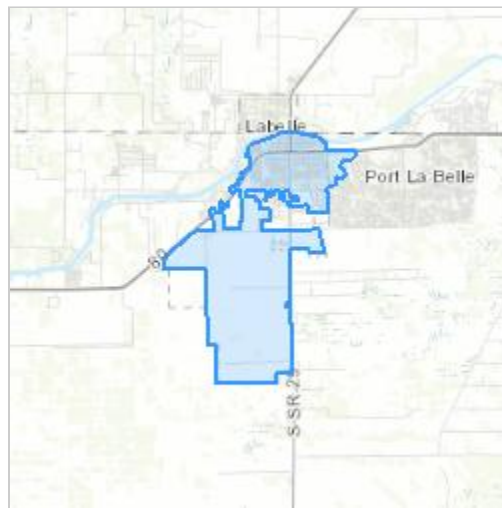
Project Name: LaBelle Stormwater Facility Plan

Project Type: Flooding

Project Description: The City of LaBelle, Florida (City) intends to take a more comprehensive approach to the City's long-term capital needs to address flooding and water quality concerns. The Facility Plan will focus on the City's existing stormwater assets and their ability to meet the normal/census-based growth of the City. This document is provided to meet the planning requirements for the Clean Water State Revolving Fund (CWSRF) program for the purpose of obtaining funding for stormwater management improvements within the City.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@26.71992735,-81.46458275048573,14z>



Counties: Hendry County, Florida

ENDANGERED SPECIES ACT SPECIES

There is a total of 13 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Florida Bonneted Bat <i>Eumops floridanus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8630	Endangered
Florida Panther <i>Puma (=Felis) concolor coryi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1763 General project design guidelines: https://ipac.ecosphere.fws.gov/project/P4DBLN3NGRDSPHARXEYDR7ROLQ/documents/generated/7123.pdf	Endangered
Puma (=mountain Lion) <i>Puma (=Felis) concolor (all subsp. except coryi)</i> Population: FL No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6049	Similarity of Appearance (Threatened)
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered
West Indian Manatee <i>Trichechus manatus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. <i>This species is also protected by the Marine Mammal Protection Act, and may have additional consultation requirements.</i> Species profile: https://ecos.fws.gov/ecp/species/4469 General project design guidelines: https://ipac.ecosphere.fws.gov/project/P4DBLN3NGRDSPHARXEYDR7ROLQ/documents/generated/7281.pdf	Threatened

BIRDS

NAME	STATUS
Crested Caracara (audubon""s) [fl Dps] <i>Caracara plancus audubonii</i> Population: FL DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8250	Threatened
Eastern Black Rail <i>Laterallus jamaicensis ssp. jamaicensis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Everglade Snail Kite <i>Rostrhamus sociabilis plumbeus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7713	Endangered
Florida Scrub-jay <i>Aphelocoma coerulescens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6174	Threatened

REPTILES

NAME	STATUS
American Alligator <i>Alligator mississippiensis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/776	Similarity of Appearance (Threatened)
Eastern Indigo Snake <i>Drymarchon couperi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/646	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

FLOWERING PLANTS

NAME	STATUS
Carter's Mustard <i>Warea carteri</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5583	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Bald and Golden Eagle Protection Act](#) of 1940.
2. The [Migratory Birds Treaty Act](#) of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

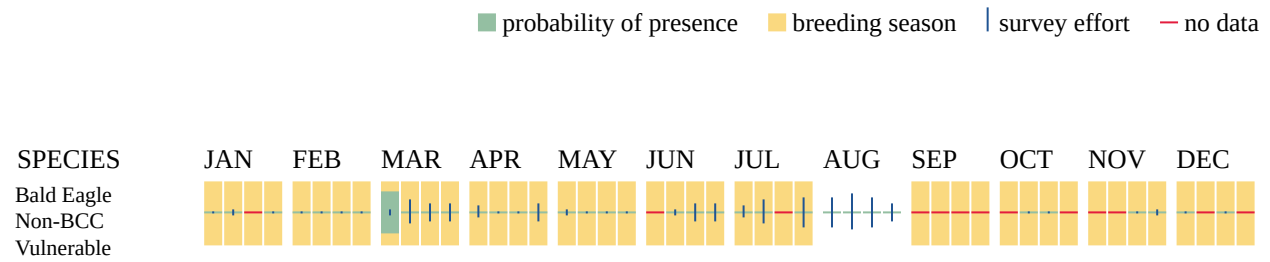
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<p>American Kestrel <i>Falco sparverius paulus</i></p> <p>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p> <p>https://ecos.fws.gov/ecp/species/9587</p>	Breeds Apr 1 to Aug 31
<p>Bachman's Sparrow <i>Peucaea aestivalis</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/6177</p>	Breeds May 1 to Sep 30
<p>Bald Eagle <i>Haliaeetus leucocephalus</i></p> <p>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p> <p>https://ecos.fws.gov/ecp/species/1626</p>	Breeds Sep 1 to Jul 31
<p>Chimney Swift <i>Chaetura pelagica</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9406</p>	Breeds Mar 15 to Aug 25
<p>Great Blue Heron <i>Ardea herodias occidentalis</i></p> <p>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p> <p>https://ecos.fws.gov/ecp/species/10590</p>	Breeds Jan 1 to Dec 31
<p>Painted Bunting <i>Passerina ciris</i></p> <p>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p> <p>https://ecos.fws.gov/ecp/species/9511</p>	Breeds Apr 25 to Aug 15
<p>Prairie Warbler <i>Setophaga discolor</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9513</p>	Breeds May 1 to Jul 31
<p>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9398</p>	Breeds May 10 to Sep 10
<p>Swallow-tailed Kite <i>Elanoides forficatus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/8938</p>	Breeds Mar 10 to Jun 30

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental](#)

[Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

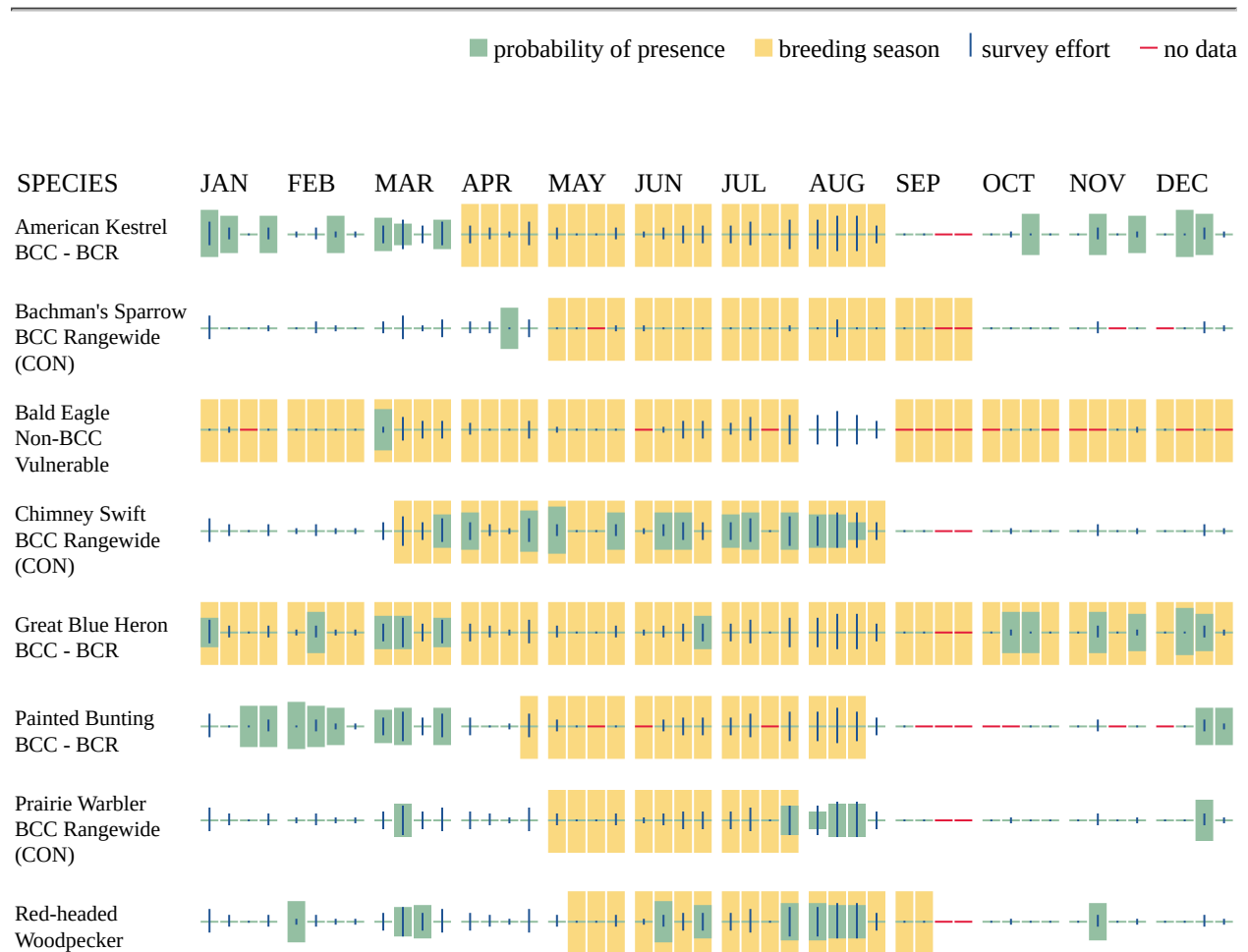
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (-)

A week is marked as having no data if there were no survey events for that week.



BCC Rangewide
(CON)

Swallow-tailed Kite
BCC Rangewide
(CON)



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MARINE MAMMALS

Marine mammals are protected under the [Marine Mammal Protection Act](#). Some are also protected under the Endangered Species Act¹ and the Convention on International Trade in Endangered Species of Wild Fauna and Flora².

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries³ [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the [Marine Mammals](#) page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

-
1. The [Endangered Species Act](#) (ESA) of 1973.
 2. The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
 3. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

NAME

West Indian Manatee *Trichechus manatus*

Species profile: <https://ecos.fws.gov/ecp/species/4469>

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER FORESTED/SHRUB WETLAND

- PFO4Cd
- PFO2/1Fd
- PFO1Fd
- PFO2Cd
- PFO1Cd
- PFO2Fd
- PFO1/3Cd
- PSS1/3Cd
- PFO2Ad
- PSS1Fx

FRESHWATER EMERGENT WETLAND

- PEM1Fx
- PEM1Ax
- PEM1Cx
- PEM1Cd

RIVERINE

- R2UBH
- R2ABHx
- R4SBC
- R5UBFx
- R2UBHx
- R5UBH

FRESHWATER POND

- PUBKx
- PAB4Fx
- PAB4Fd
- PUBHx
- PAB4Hx

IPAC USER CONTACT INFORMATION

Agency: Woodard & Curran
Name: Steven Thrasher
Address: 1496 Hwy. 90
City: Chipley
State: FL
Zip: 32428
Email: sthrasher@woodardcurran.com
Phone: 2075583736



EJScreen Community Report

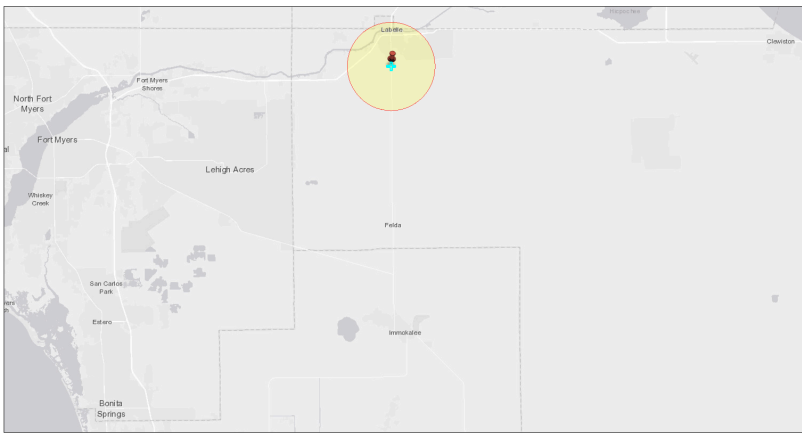
This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

LaBelle, FL

3.5 miles Ring Centered at 26.725557,-81.437637

Population: 13,684

Area in square miles: 38.48



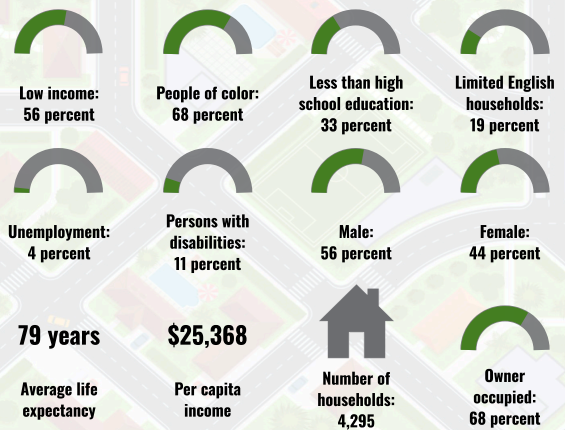
September 12, 2024

Project 1

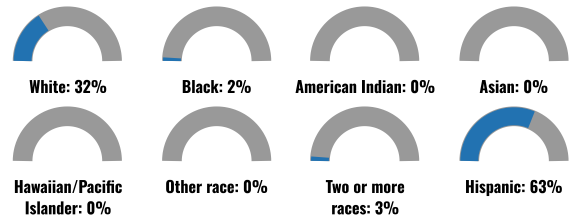


University of South Florida, Esri, HERE, Garmin, USGS, EPA, NPS, Esri, HERE, NPS

COMMUNITY INFORMATION



BREAKDOWN BY RACE



BREAKDOWN BY AGE



LIMITED ENGLISH SPEAKING BREAKDOWN



Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2018-2022. Life expectancy data comes from the Centers for Disease Control.

LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	47%
Spanish	53%
Total Non-English	53%

Report for 3.5 miles Ring Centered at 26.725557,-81.437637

Report produced September 12, 2024 using EJScreen Version 2.3

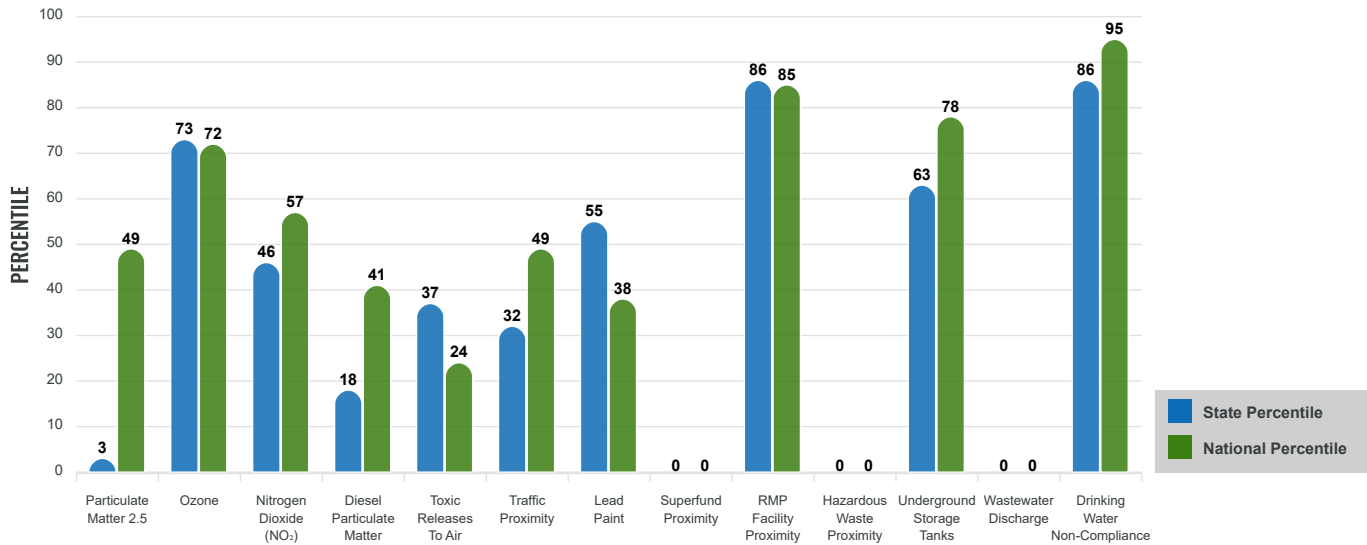
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

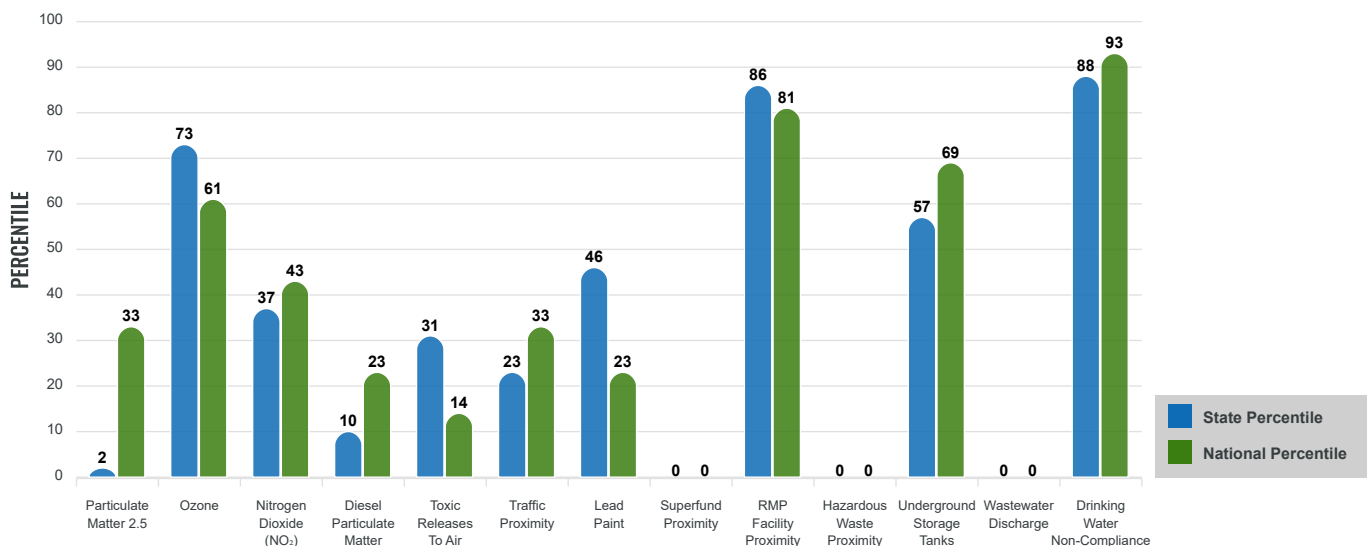
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low income, percent persons with disabilities, percent less than high school education, percent limited English speaking, and percent low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



Report for 3.5 miles Ring Centered at 26.725557,-81.437637

Report produced September 12, 2024 using EJScreen Version 2.3

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
ENVIRONMENTAL BURDEN INDICATORS					
Particulate Matter 2.5 (µg/m ³)	7.05	8.02	1	8.45	19
Ozone (ppb)	58	58	46	61.8	37
Nitrogen Dioxide (NO ₂) (ppbv)	5.2	7.7	19	7.8	25
Diesel Particulate Matter (µg/m ³)	0.0665	0.188	6	0.191	14
Toxic Releases to Air (toxicity-weighted concentration)	12	1,900	20	4,600	9
Traffic Proximity (daily traffic count/distance to road)	130,000	1,100,000	11	1,700,000	20
Lead Paint (% Pre-1960 Housing)	0.038	0.14	51	0.3	24
Superfund Proximity (site count/km distance)	0	0.21	0	0.39	0
RMP Facility Proximity (facility count/km distance)	0.56	0.42	75	0.57	66
Hazardous Waste Proximity (facility count/km distance)	0	0.96	0	3.5	0
Underground Storage Tanks (count/km ²)	1.6	6.8	44	3.6	59
Wastewater Discharge (toxicity-weighted concentration/m distance)	0	4100	0	700000	0
Drinking Water Non-Compliance (points)	3.3	2.9	78	2.2	89
SOCIOECONOMIC INDICATORS					
Demographic Index USA	2.4	N/A	N/A	1.34	86
Supplemental Demographic Index USA	2.29	N/A	N/A	1.64	84
Demographic Index State	2.51	1.54	85	N/A	N/A
Supplemental Demographic Index State	2.02	1.38	84	N/A	N/A
People of Color	68%	46%	72	40%	77
Low Income	56%	32%	86	30%	86
Unemployment Rate	4%	5%	56	6%	54
Limited English Speaking Households	19%	7%	87	5%	92
Less Than High School Education	33%	11%	95	11%	93
Under Age 5	9%	5%	86	5%	83
Over Age 64	13%	23%	33	18%	39

*Diesel particulate matter index is from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	0
Water Dischargers	83
Air Pollution	8
Brownfields	0
Toxic Release Inventory	3

Other community features within defined area:

Schools	9
Hospitals	0
Places of Worship	8

Other environmental data:

Air Non-attainment	No
Impaired Waters	Yes

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community	Yes
Selected location contains an EPA IRA disadvantaged community	Yes

Report for 3.5 miles Ring Centered at 26.725557,-81.437637
 Report produced September 12, 2024 using EJScreen Version 2.3

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	18%	19%	36	20%	35
Heart Disease	8.9	7.2	78	5.8	94
Asthma	9.3	8.7	74	10.3	24
Cancer	6.1	6.9	47	6.4	42
Persons with Disabilities	10.5%	14.1%	30	13.7%	34

CLIMATE INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	30%	26%	72	12%	91
Wildfire Risk	84%	32%	76	14%	89

CRITICAL SERVICE GAPS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	15%	12%	68	13%	65
Lack of Health Insurance	22%	12%	88	9%	93
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access Burden	Yes	N/A	N/A	N/A	N/A
Food Desert	Yes	N/A	N/A	N/A	N/A

Report for 3.5 miles Ring Centered at 26.725557,-81.437637

Report produced September 12, 2024 using EJScreen Version 2.3



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Florida Ecological Services Field Office

777 37th St

Suite D-101

Vero Beach, FL 32960-3559

Phone: (352) 448-9151 Fax: (772) 562-4288

Email Address: fw4flesregs@fws.gov

<https://www.fws.gov/office/florida-ecological-services>

In Reply Refer To:

08/26/2024 14:56:53 UTC

Project code: 2024-0135042

Project Name: LaBelle Stormwater Facility Plan

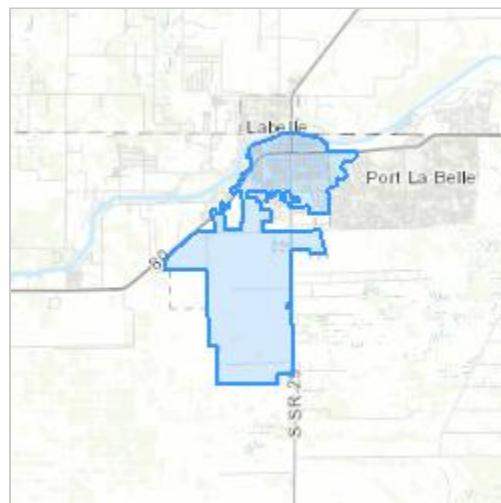
Please provide this document to the Federal agency or their designee with your loan/grant application.

Subject: Consistency letter for the project named 'LaBelle Stormwater Facility Plan' for specified threatened and endangered species that may occur in your proposed project location, pursuant to the IPaC determination key titled 'Clearance to Proceed with Federally-Insured Loan and Grant Project Requests'.

To whom it may concern:

On August 26, 2024, Steven Thrasher used the IPaC determination key 'Clearance to Proceed with Federally-Insured Loan and Grant Project Requests'; dated August 08, 2024, in the U.S. Fish and Wildlife Service's online [IPaC tool](#) to evaluate potential impacts to listed species from a project named 'LaBelle Stormwater Facility Plan' in Hendry County, Florida (shown below):

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@26.71992735,-81.46458275048573,14z>



The following description was provided for the project 'LaBelle Stormwater Facility Plan':

The City of LaBelle, Florida (City) intends to take a more comprehensive approach to the City's long-term capital needs to address flooding and water quality concerns. The Facility Plan will focus on the City's existing stormwater assets and their ability to meet the normal/census-based growth of the City. This document is provided to meet the planning requirements for the Clean Water State Revolving Fund (CWSRF) program for the purpose of obtaining funding for stormwater management improvements within the City.

Based on your answers provided, the proposed project is unlikely to have any detrimental effects to federally-listed species or critical habitat. Therefore, per this guidance, Steven Thrasher has determined that LaBelle Stormwater Facility Plan will have No Effect on the species listed below.

This letter serves as documentation of your consideration of endangered species, bald eagles, and migratory birds. No further coordination with the Service is necessary.

Please be advised that, if later modifications are made to the project that do not meet the criteria described above, if additional information involving potential effects to listed species becomes available, or if a new species is listed, reinitiation of consultation may be necessary.

BIRDS

- Crested Caracara (audubon's) [fl Dps] *Caracara plancus audubonii* Threatened
- Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* Threatened
- Everglade Snail Kite *Rostrhamus sociabilis plumbeus* Endangered
- Florida Scrub-jay *Aphelocoma coerulescens* Threatened

FLOWERING PLANTS

- Carter's Mustard *Warea carteri* Endangered

INSECTS

- Monarch Butterfly *Danaus plexippus* Candidate

MAMMALS

- Florida Bonneted Bat *Eumops floridanus* Endangered
- Florida Panther *Puma (=Felis) concolor coryi* Endangered
- Puma (=mountain Lion) *Puma (=Felis) concolor (all subsp. except coryi)* Similarity of Appearance (Threatened)
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered
- West Indian Manatee *Trichechus manatus* Threatened

REPTILES

- American Alligator *Alligator mississippiensis* Similarity of Appearance (Threatened)
- Eastern Indigo Snake *Drymarchon couperi* Threatened

ADDITIONAL CONSIDERATIONS FOR NON-FEDERALLY LISTED SPECIES

- **Bald Eagle Nest Issues.** If any of the above-referenced activities (rehabilitation, demolition, or rebuilding) are proposed to occur **within 660 feet** of an active or alternate bald eagle (*Haliaeetus leucocephalus*) nest during the nesting season (October 1 through May 15), we recommend the applicant or their designated agent coordinate with the agency responsible for managing wildlife in their state. For additional information, please visit the Service's regional web page: <https://www.fws.gov/service/3-200-71-eagle-take-associated-not-purpose-activity-incidental-take>.
- **Migratory Bird Issues.** If any native birds are using the structures for nesting then actions should be taken so as not to disturb the adults, nests, eggs, or chicks as this could lead to a potential violation of the Migratory Bird Treaty Act. If nests are present or any birds are using the structures regularly for roosting purposes, we recommend the applicant or their designated agent coordinate with the appropriate Service's Field Office and visit the Service's Migratory Bird Program website at <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds> for recommendations on how impacts can be avoided and minimized.

Steven Thrasher answered the determination key questions for this project as follows:

1. Does the project intersect Monroe County, FL?
Automatically answered
No
2. Does the project include federal grant funding, a federally-insured loan, or a federal loan transfer?
Yes, the project includes a federally-insured loan or federal grant funding.
3. Does the project involve a federal loan transfer, where the original lending or mortgage institutions for existing projects are no longer holding the loan and the property is being transferred via a federally-backed loan?
No
4. Is the entire site currently developed/hard-surfaced (i.e., the site consists entirely of existing roads, sidewalks, buildings, driveways, etc., and does not contain any undeveloped and/or vegetated areas)?
No, the site contains some undeveloped and/or vegetated areas.
5. Does the project site overlap designated or proposed critical habitat for any federally listed species?
Automatically answered
No
6. Will the project action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?
No

7. Will completion of this project require clearing or land disturbance of previously **undeveloped** habitat (*e.g.*, native habitat, agricultural areas, pasture, etc.) **beyond the original footprint of the existing project**?

Note: Examples of land disturbance may include, but is not limited to: grading, vegetation removal, excavation, etc.

*No, this project will **not** require clearing of any undeveloped habitat.*

8. Is the federally-insured loan or federal grant funding being used for demolition, rehabilitation, renovation, and/or rebuilding of one or more existing facilities (*e.g.*, residential, commercial and industrial sites, or utilities)?

Yes, the project includes Federal funding for work on existing facilities.

9. Does your project involve structures that are being used by any federally endangered or threatened species (*e.g.*, roosting bonneted bats, denning indigo snakes, etc.) or are there known reports of species using the site?

*No, the site and/or structure(s) are **not** being used by any federally listed species.*

Attachments:

- Project questionnaire
- Determination key description: Clearance to Proceed with Federally-Insured Loan and Grant Project Requests
- U.S. Fish & Wildlife Service contact list

PROJECT INFORMATIONAL QUESTIONNAIRE

As part of completing the determination key, Steven Thrasher provided the following information about their project:

1. Which types of structures this funding will address:

Stormwater Infrastructure

2. Please describe the activity you will be conducting:

The City of LaBelle, Florida (City) intends to take a more comprehensive approach to the City's long-term capital needs to address flooding and water quality concerns. The Stormwater Facility Plan will focus on the City's existing stormwater assets and their ability to meet the normal/census-based growth of the City. This document is provided to meet the planning requirements for the Clean Water State Revolving Fund (CWSRF) program for the purpose of obtaining funding for stormwater management improvements within the City.

3. How many square feet of facilities will be affected by this project?

0

4. Are there bald eagles within 660 feet of the site, or migratory birds or bats using structures on the site?

None of the above

5. Please describe the loan/grant program you are using

Florida FDEP Clean Water SRF

6. Which Federal Agency is the lead agency providing the funding?

U.S. Environmental Protection Agency (EPA)

7. Which types of activities you will be conducting:

Infrastructure

DETERMINATION KEY DESCRIPTION: CLEARANCE TO PROCEED WITH FEDERALLY-INSURED LOAN AND GRANT PROJECT REQUESTS

This key was last updated in IPaC on August 08, 2024. Keys are subject to periodic revision.

This determination key is for all Federally-insured loans, loan transfers, or grant project requests that may be completed without requiring additional clearing of undisturbed habitat beyond the original footprint of the existing project. Projects may include demolition, rehabilitation, renovations, and/or rebuilding of existing structures (*e.g.*, commercial buildings, multi-family housing, single-family housing), and various utility and infrastructure projects such as water and wastewater treatment facilities, sewer or power line repair, telecommunications upgrades, etc. For the purposes of this key, Federal loan transfers are those transfers where the original lending or mortgage institutions for existing projects are no longer holding the loans, and the properties are being transferred via federally-backed loans.

The U.S. Fish and Wildlife Service is the lead Federal agency charged with the protection and conservation of Federal Trust Resources, such as threatened and endangered species and migratory birds, in accordance with section 7 of the [Endangered Species Act of 1973](#), as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 et seq.), the [Bald and Golden Eagle Protection Act](#), (16 U.S.C. 668-668d) (Eagle Act), and the [Migratory Bird Treaty Act](#) (40 Stat. 755; 16 U.S.C. 701 et seq.).

Recently, many Federal agencies have activated programs that have resulted in an increased consumer demand to initiate projects through federally-backed loans and grants, all of which require those same Federal agencies to comply with Section 7 of the Act. Consequently, we have experienced an increase in the number of requests for review of these government-backed loan and grant projects. These include, but are not limited to:

1. U.S. Department of Housing and Urban Development's (HUD) Neighborhood Stabilization and Community Development Block Grant programs;
2. U.S. Department of Energy's (DOE) Energy Efficiency and Renewable Energy program;
3. U.S. Department of Agriculture's (USDA) Housing Assistance and Rural Development Loan and Grant Assistance programs;
4. U.S. Federal Aviation Administration (FAA) regulatory airport and runway modifications;
5. U.S. Federal Emergency Management Agency's (FEMA) Hazard Mitigation Assistance program;
6. U.S. Environmental Protection Agency's (EPA) Clean Water State Revolving Fund; and

7. U.S. Department of Commerce's (DOC) National Telecommunications and Information Administration Broadband Grant programs.

In order to fulfill the Act's statutory obligations in a timely and consistent manner, and to assist Federal agencies, State and local governments, and consultants in addressing Section 7 and National Environmental Policy Act (NEPA) environmental impact review requirements, we provide the following guidance and clearance relative to the criteria stated below for Federally-insured loan and grant project requests.

This guidance is based on the signed letters:

[U.S. Fish and Wildlife Service Clearance to Proceed with Federally-Insured Loan and Grant Project Requests](#) in Florida.

[U.S. Fish and Wildlife Service Clearance to Proceed with Federally-Insured Loan and Grant Project Requests](#) in Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

IPAC USER CONTACT INFORMATION

Agency: Woodard & Curran

Name: Steven Thrasher

Address: 1496 Hwy. 90

City: Chipley

State: FL

Zip: 32428

Email: sthramer@woodardcurran.com

Phone: 2075583736

APPENDIX C: LIFE CYCLE COST ANALYSES

LAND ACQUISITION COST ESTIMATE

OPERATION & MAINTENANCE COST ESTIMATE

HUD ESTIMATED USEFUL LIFE REFERENCE

STORMWATER ALTERNATIVE LIFE CYCLE COST ESTIMATES

ON-SITE DISPOSAL ALTERNATIVE LIFE CYCLE COST ESTIMATES

SITE 7

Parcel Summary

Parcel ID 2 29 43 01 010 0019-001.0
Prop ID 30552
Location Address FT THOMPSON AVE
LABELLE, FL 33935
Neighborhood/Area SINGLE FAMILY NE (200100.00)
Subdivision CITY OF LABELLE
Brief Legal Description* LA BELLE BLK 19
(Note: *The Description above is not to be used on legal documents.)
Property Use Code VACANT RESIDENTIAL (0000)
Sec/Twp/Rng 01-43-29
Tax District City of LaBelle (District 2)
Millage Rate 21.4241
Acreage 2,490
Homestead N

[View Map](#)

Internal Info

Market Area 20

Owner Information

[RIDER LYNDA S TR](#)
4501 SPRINGVIEW CIR
LABELLE, FL 33935

Valuation

	2024 Preliminary Values	2023 Certified Values	2022 Certified Values
Just Market Value	\$157,164	\$157,164	\$157,164
Land Value	\$157,164	\$157,164	\$157,164
Agricultural (Market) Value	\$0	\$0	\$0
Agricultural Classified Value	\$0	\$0	\$0
Improvement Value	\$0	\$0	\$0
Non School Assessed Value	\$99,612	\$90,556	\$82,324
School Assessed Value	\$157,164	\$157,164	\$157,164
Exempt Value	\$0	\$0	\$0
Non School Taxable Value	\$99,612	\$90,556	\$82,324
School Taxable Value	\$157,164	\$157,164	\$157,164
Save Our Homes Deferred	\$0	\$0	\$0
Non Save Our Homes Deferred	\$57,552	\$66,608	\$74,840

"Just (Market) Value" description - This is the value established by the Property Appraiser for ad valorem purposes. This value does not represent anticipated selling price.

Trim Notices

[2024 TRIM Notice \(PDF\)](#)

2023 Property Record Cards

[2023 Property Record Card \(PDF\)](#)

Tax Collector

[Link to Tax Collector](#)

Land Information

Land Use	Land Use Desc	Acres	Square Feet	Eff. Frontage	Depth	Zoning
0002	VACANT RESIDENTIA LABELL	2.49	108464	0	0	

Sales

Sales Date	Sale Price	Instrument	Book/Page	Qualification	Vacant/Improved	Grantor	Grantee
4/8/2020	\$100	IC	0975/0189	Unqualified (U)	Vacant	RIDER LYNDA S TR	**None**
4/8/2020	\$100	IC	0975/0187	Unqualified (U)	Vacant	RIDER LYNDA S TR	**None**

Sales Date	Sale Price	Instrument	Book/Page	Qualification	Vacant/Improved	Grantor	Grantee
2/29/1996	\$100	WD	0533/1421	Qualified (Q)	Vacant	RIDER LYNDA S	**None**
12/18/1995	\$100	WD	0531/1115	Qualified (Q)	Vacant	MORRIS LORAE S	**None**
12/11/1995	\$100	WD	0531/1118	Qualified (Q)	Vacant	SMALL ROBERT DALE	**None**
12/8/1995	\$100	WD	0531/1113	Qualified (Q)	Vacant	SMALL DENNIS G ANN	**None**
12/5/1995	\$100	WD	0531/1110	Qualified (Q)	Vacant	SMALL DENNIS G PER REP OF THE	**None**
12/5/1995	\$0	MS	0531/1107	Qualified (Q)	Vacant	SMALL LUCILLE EST - PER REP RE	**None**
12/5/1995	\$0	MS	0531/0458	Qualified (Q)	Vacant	SMALL LUCILLE EST - PER REP RE	**None**
10/3/1993	\$0	DC	0502/0413	Qualified (Q)	Vacant	SMALL LUCILLE EST +	**None**
10/1/1993	\$0	MS	CA09/3080	Qualified (Q)	Vacant	**None**	**None**
10/1/1967	\$1,500		0107/0010	Qualified (Q)	Vacant	**None**	RIDER LYNDA S TR

Official Public Records information is provided by the Hendry County Clerk's Office. Clicking on the Book/Page links above will direct you to their web site displaying the document details for this specific transaction.

No data available for the following modules: Building Information, Sub Area, Extra Features, Permits, Photos, Sketches.

This information was derived from data which was compiled by the Hendry County Property Appraiser Office solely for the governmental purpose of property assessment. This information should not be relied upon by anyone as a determination of the ownership of property or market value. No warranties, expressed or implied, are provided for the accuracy of the data herein, it's use, or it's interpretation.

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Contact Us



SITE 10

Parcel Summary

Parcel ID 2 28 43 24 A00 0001.0000
Prop ID 30415
Location Address W SR 80
LABELLE, FL 33935
Neighborhood/Area LA BELLE ACREAGE (201529.00)
Subdivision
Brief Legal Description* LABELLE ALL S ST RD EXC E 1312.59 FT ANNEXATION ORD 2006-32 414.73 AC
(Note: *The Description above is not to be used on legal documents.)
Property Use Code PASTURE (6100)
Sec/Twp/Rng 24-43-28
Tax District City of LaBelle (District 2)
Millage Rate 21.4241
Acreage 414.730
Homestead N

[View Map](#)

Internal Info

Market Area 20

Owner Information

[TIPPEN BAY PROPERTIES LLLP](#)
[THE BRYAN W PAUL FAMILY LIMITED PARTNERSHIP](#)
PO BOX 2357
LABELLE, FL 33975

\$4,273,545 for 414.73 acres
Pond footprint = 12.5 acres
Therefore, acquisition = \$150,000 +/-

Valuation

	2024 Preliminary Values	2023 Certified Values	2022 Certified Values
Just Market Value	\$4,273,545	\$4,273,545	\$4,273,545
Land Value	\$202,170	\$202,170	\$202,170
Agricultural (Market) Value	\$4,071,375	\$4,071,375	\$4,071,375
Agricultural Classified Value	\$91,724	\$276,137	\$276,137
Improvement Value	\$0	\$0	\$0
Non School Assessed Value	\$271,116	\$439,221	\$424,395
School Assessed Value	\$293,894	\$478,307	\$478,307
Exempt Value	\$0	\$0	\$0
Non School Taxable Value	\$271,116	\$439,221	\$424,395
School Taxable Value	\$293,894	\$478,307	\$478,307
Save Our Homes Deferred	\$0	\$0	\$0
Non Save Our Homes Deferred	\$22,778	\$39,086	\$53,912

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Trim Notices

[2024 TRIM Notice \(PDF\)](#)

2023 Property Record Cards

[2023 Property Record Card \(PDF\)](#)

Tax Collector

[Link to Tax Collector](#)

Land Information

Land Use	Land Use Desc	Acres	Square Feet	Eff. Frontage	Depth	Zoning
0000	VACANT RESIDENTIAL	18.66	812829.6	0	0	
6000	ROAD & CANAL	14.87	647737.2	0	0	
6100	PI-/Improved Pasture	125.49	5466344.4	0	0	
6100	PI-/Improved Pasture	247.39	10776308.4	0	0	
9600	WASTE LAND	8.32	362419.2	0	0	

Sales

Sales Date	Sale Price	Instrument	Book/Page	Qualification	Vacant/Improved	Grantor	Grantee
5/24/2016	\$4,755,600	WD	0907/0157	Unqualified (U)	Improved	**Multiple Sellers**	TIPPEN BAY PROPERTIES LLLP
6/28/2010	\$0	CR	0820/1833	Unqualified (U)	Vacant	THE BRYAN W PAUL FAM LMTD PT+J	**Multiple Buyers**
4/20/2010	\$0	WD	0817/1157	Unqualified (U)	Vacant	THE BRYAN W PAUL FAMILY LIMITE	**None**
3/8/2010	\$11,313,000	IC	0815/1150	Unqualified (U)	Vacant	BOB PAUL INC (71.37% INT)	**None**
11/15/2007	\$100	CR	0778/1157	Qualified (Q)	Vacant	SOUTH FLORIDA WATER MANAGEMENT	**None**
9/14/2007	\$4,060,000	QC	0774/0743	Qualified (Q)	Vacant	FL WATER MANAGEMENT DIST	**None**
10/6/2000	\$70,521,700	SW	0605/1149	Qualified (Q)	Vacant	BERRY JACK M INC	**None**

Official Public Records information is provided by the Hendry County Clerk's Office. Clicking on the Book/Page links above will direct you to their web site displaying the document details for this specific transaction.

No data available for the following modules: Building Information, Sub Area, Extra Features, Permits, Photos, Sketches.

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Stormwater Improvements Alternative 2
 Section A - Reoccurring Labor and Equipment O&M Costs

SCM Type	Number of Municipal Systems	Activity	Frequency	Annual Multiplier	Labor Duration				Annual Cost	Labor Support		Total Cost by SCM Type		
					Supervisor Hours \$40.00	Operator Hours \$24.00	Laborer Hours \$17.00	Total Hours Per Year		Vehicles and Mechanical Equipment (V&ME, see hourly rates below table)	V&ME Hrs.		Annualized Cost	
Retention Basin	4	Debris Removal	Twice per Year	2			1	2	\$34	Dump Truck, Jet/Vac Truck	1	\$736	\$1,343	
		Plant Maintenance/Mowing	Quarterly	4			1	4	\$68	Pickup Truck, Saws, Weedwhacker	1	\$144		
		Inspection	Twice per Year	2	1			2	\$80	Pickup Truck	1	\$62		
		Repairs and/or Infiltration Restoration	Every Tenth Year	0.1			8	1.6	\$33	Rototiller, Dump-truck, Backhoe	8	\$186		
		Subtotal per System				2.0	0.8	6.8	9.6	\$215		11.0		\$1,128
		Total				8.0	3.2	27.2	38.4	\$859		44.0		\$4,514
Wet Pond & Flood Storage	7	Debris Removal	Twice per Year	2			1	2	\$34	Dump Truck, Jet/Vac Truck	1	\$736	\$1,127	
		Inspection	Twice per Year	2	1			2	\$80	Pickup Truck	1	\$62		
		Repairs	Every Tenth Year	0.1			8	1.6	\$33	Dump-truck, Backhoe	8	\$182		
		Subtotal per System				2.0	0.8	2.8	5.6	\$147		10.0		\$980
		Total				14	5.6	19.6	39.2	\$1,028		70.0		\$6,863
Grass Swale Sites	6	Debris Removal	Twice per Year	2			4	12	\$232	Dump Truck, Jet/Vac Truck	4	\$2,944	\$3,510	
		Plant Maintenance/Mowing	Quarterly	4			1	4	\$68	Pickup Truck, Dump-truck	1	\$124		
		Inspection	Twice per Year	2	1			2	\$80	Pickup Truck	1	\$62		
		Subtotal per System				2.0	4.0	12.0	18.0	\$380		6.0		\$3,130
		Total				12	24	72	108	\$2,280		36.0		\$18,780
Baffle Box	1	Debris Removal	Twice per Year	2			4	12	\$232	Dump Truck, Jet/Vac Truck	4	\$2,944	\$3,645	
		Inspection	Twice per Year	2	1			2	\$80	Pickup Truck	1	\$62		
		Repairs	Every Tenth Year	0.1			8	1.6	\$33	Dump Truck, Jet/Vac Truck	8	\$294		
		Subtotal per System				2.0	4.8	8.8	13.6	\$345		13.0		\$3,300
		Total				2	4.8	8.8	15.6	\$345		13.0		\$3,300
Total SCMs	18												Section A Sum \$37,968	
													Section A Sum Rounded \$38,000	

Section B - Reoccurring Fees and Bills	
Category	Annual Cost
Waste (e.g., sediment) Disposal Cost	\$1,000
Total Cost	
Annual Subtotal (Section A and B Sums)	\$39,000

Section A Reference - Vehicles and Mechanical Equipment Rates	
V&ME	Unit Cost (per Hour)
Pickup Truck	\$31.00
Rototiller	\$5.00
Trailer	\$5.00
Mower	\$5.00
Weedwhacker	\$5.00
Saws	\$5.00
Jet/Vac Truck, CCTV Rig	\$260.00
Dump-truck	\$108.00
Backhoe	\$120.00
Bobcat	\$43.00

Stormwater Improvements Alternative 3

Section A - Reoccurring Labor and Equipment O&M Costs

SCM Type	Number of Municipal Systems	Activity	Frequency	Annual Multiplier	Labor Duration				Labor Support			Total Cost by SCM Type		
					Supervisor Hours	Operator Hours	Laborer Hours	Total Hours Per Year	Annual Cost	Vehicles and Mechanical Equipment (V&ME, see hourly rates below table)	V&ME Hrs.		Annualized Cost	
					\$40.00	\$24.00	\$17.00							
Wet Pond & Flood Storage	3	Debris Removal	Twice per Year	2			10	20	\$340	Dump Truck, Jet/Vac Truck	10	\$7,360		
		Inspection	Twice per Year	2		2		4	\$160	Pickup Truck	2	\$124		
		Repairs	Every Tenth Year	0.1			8	12	2	\$40	Dump-truck, Backhoe	12	\$274	
		Subtotal per System				4.0	0.8	21.2	26	\$540		24.0	\$7,758	\$8,297
		Total			12	2.4	63.6	78	\$1,619		72.0	\$23,273	\$24,892	
Grass Swale Sites	2	Debris Removal	Twice per Year	2			4	12	\$232	Dump Truck, Jet/Vac Truck	4	\$2,944		
		Plant Maintenance/Mowing	Quarterly	4			1	4	\$68	Pickup Truck, Dump-truck	1	\$124		
		Inspection	Twice per Year	2		1		2	\$80	Pickup Truck	1	\$62		
		Subtotal per System				2.0	4.0	12.0	18.0	\$380		6.0	\$3,130	\$3,510
		Total			4	8	24	36	\$760		12.0	\$6,260	\$7,020	
Total SCMs	5												Section A Sum	\$31,912
													Section A Sum Rounded	\$32,000

Section B - Reoccurring Fees and Bills

Category	Annual Cost
Waste (e.g., sediment) Disposal Cost	\$1,000
Total Cost	
Annual Subtotal (Section A and B Sums)	\$33,000

Section A Reference - Vehicles and Mechanical Equipment Rates

V&ME	Unit Cost (per Hour)
Pickup Truck	\$31.00
Rototiller	\$5.00
Trailer	\$5.00
Mower	\$5.00
Weedwhacker	\$5.00
Saws	\$5.00
Jet/Vac Truck, CCTV Rig	\$260.00
Dump-truck	\$108.00
Backhoe	\$120.00
Bobcat	\$43.00

**CNA e-Tool
Estimated Useful Life Table**

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Numbering by ASTM 2018-08 Outline								
	System Description	Overall General Description	Component	Sub-Component	Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type
3					System Description and Observations			
	3.1				Overall General Description			
	3.2				Site Systems			Need Category
		3.2.1			Topography			
		3.2.2			Storm Water Drainage			Need Item
			3.2.2.1		Catch basins, inlets, culverts	50	50	All items not color coded are "Component Type" names.
			3.2.2.2		Marine or stormwater bulkhead	35	35	
			3.2.2.3		Earthwork, swales, drainways, erosion controls	50	50	
			3.2.2.4		Storm drain lines	50	50	
			3.2.2.5		Stormwater mgmt ponds	50	50	
			3.2.2.6		Fountains, pond aerators	15	15	
		3.2.3			Access and Egress			Need Item
			3.2.3.1		Security gate - lift arm	10	10	
			3.2.3.2		Security gate - rolling gate	15	15	
		3.2.4			Paving, Curbing and Parking			Need Item
			3.2.4.1		Asphalt Pavement	25	25	
			3.2.4.2		Asphalt Seal Coat	5	5	
			3.2.4.3		Concrete Pavement	50	50	
			3.2.4.4		Curbing, Asphalt	25	25	
			3.2.4.5		Curbing, Concrete	50	50	
			3.2.4.6		Parking, Gravel Surfaced	15	15	
			3.2.4.7		Permeable Paving Systems (brick, concrete pavers)	30	30	
			3.2.4.8		Striping and Marking	15	15	
			3.2.4.9		Signage, Roadway / Parking	15	15	

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		3.2.4.10		Carports, wood frame	30	30		
		3.2.4.11		Carports, metal frame	40	40		
	3.2.5			Flatwork (walks, plazas, terraces, patios)				Need Item
		3.2.5.1		Asphalt	25	25		
		3.2.5.2		Concrete	50	50		
		3.2.5.3		Gravel	15	15		
		3.2.5.4		Permeable Paving (brick, concrete pavers)	30	30		
	3.2.6			Landscaping and Appurtenances				Need Item
		3.2.6.1		Fencing, chain-link	40	40		
		3.2.6.2		Fencing, wood picket	15	20		
		3.2.6.3		Fencing, wood board (=>1"x 6")	20	25		
		3.2.6.4		Fencing, wrought Iron	60	60		
		3.2.6.5		Fencing, steel or aluminum	20	25		
		3.2.6.6		Fencing, concrete Masonry unit (CMU)	30	30		
		3.2.6.7		Fencing, PVC	15	20		
		3.2.6.8		Signage, Entrance/Monument	25	25		
		3.2.6.9		Mail Kiosk	15	20		
		3.2.6.10		Retaining Walls, heavy block (50-80 lb)	60	60		
		3.2.6.11		Retaining Walls, reinforced concrete masonry unit (CMU)	40	40		
		3.2.6.12		Retaining Walls, treated timber	25	25		
		3.2.6.13		Storage sheds	30	30		
	3.2.7			Recreational Facilities				Need Item
		3.2.7.1		Sport Court- asphalt	25	25		
		3.2.7.2		Sport Court- synthetic	15	20		

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		3.2.7.3		Sport Court-hardwood	50	50		
		3.2.7.4		Tot Lot (playground equipment)	10	15		
		3.2.7.5		Tot Lot- lose ground cover	3	5		
		3.2.7.6		Pool Deck	15	15		
		3.2.7.7		Pool/Spa Plastic Liner	8	8		
		3.2.7.8		Pool/Spa pumps and equipment	10	10		
		3.2.7.9		Decks-treated lumber	20	20		
		3.2.7.10		Decks-composite	50	50		
	3.2.8			Site Utilities				
		3.2.8.1		Site Utilities-Water			Need Item	
			3.2.8.1.1	Water Mains/Valves	50	50		
			3.2.8.1.2	Water Tower	50	50		
			3.2.8.1.3	Irrigation System	25	25		
		3.2.8.2		Site Utilities-Electric			Need Item	
			3.2.8.2.1	Electric distribution center	40	40		
			3.2.8.2.2	Electric distribution lines	40	40		
			3.2.8.2.3	Transformer	30	30		
			3.2.8.2.4	Emergency Generator	25	25		
			3.2.8.2.5	Solar Photovoltaic panels	15	15		
			3.2.8.2.6	Photovoltaic Inverters	10	10		
			3.2.8.2.7	Pole mounted lights	25	25		
			3.2.8.2.8	Ground lighting	10	10		
			3.2.8.2.9	Building Mounted Lighting	10	10		
			3.2.8.2.10	Building Mounted High Intensity Discharge (HID) Lighting	10	20		

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		3.2.8.3		Site Utilities-Gas			Need Item	
			3.2.8.3.1	Gas Main	40	40		
			3.2.8.3.2	Gas Supply Lines	40	40		
			3.2.8.3.3	Site Propane, Storage & Distribution	35	35		
			3.2.8.3.4	Gas lights/fire pits	20	20		
		3.2.8.4		Site Utilities-Sewer			Need Item	
			3.2.8.4.1	Sanitary Sewer lines	50	50		
			3.2.8.4.2	Sanitary waste treatment system	40	40		
			3.2.8.4.3	Lift Station	50	50		
		3.2.8.5		Site Utilities-Trash			Need Item	
			3.2.8.5.1	Dumpsters	15	15		
			3.2.8.5.2	Compactors (exterior, commercial grade)	20	20		
			3.2.8.5.3	Recycling containers/equipment	15	15		
			3.2.8.5.4	Composting, organic recycling equipment	10	10		
3.3				Building Frame & Envelope			Need Category	
	3.3.1			Foundation			Need Item	
		3.3.1.1		Slab, reinforced concrete	100	100		
		3.3.1.2		Slab, post tensioned	100	100		
		3.3.1.3		Continuous reinforced concrete footer and CMU stem wall	100	100		
		3.3.1.4		Piers, reinforced concrete footer and CMU pier	100	100		
		3.3.1.5		Piers, treated timber post/pole	40	40		
		3.3.1.6		Foundation Waterproofing	40	40		
		3.3.1.7		Foundation suction, drainage, groundwater, radon gas controls, pumps, sumps, equip. failure alarms	10	10		

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	3.3.2			Building Frame				
		3.3.2.1		Framing System, Floors & Walls				Need Item
			3.3.2.1.1	Wood, timbers, dimensioned lumber, laminated beams, trusses	100	100		
			3.3.2.1.2	Tie downs, clips, braces, straps, hangers, shear walls/panels	75	75		
			3.3.2.1.3	Steel, beams, trusses	100	100		
			3.3.2.1.4	Reinforced concrete	100	100		
			3.3.2.1.5	Reinforced masonry, concrete masonry units (CMUs)	100	100		
			3.3.2.1.6	Solid Masonry (obsolete)	100	100		
		3.3.2.2		Crawl Spaces, Envelope Penetrations				Need Item
			3.3.2.2.1	Sealed crawl space system	40	40		
			3.3.2.2.2	Vents, screens, covers	30	30		
			3.3.2.2.3	Vapor Barrier (VDR) ground or underfloor	30	30		
			3.3.2.2.4	Penetrations, caulking/sealing	15	15		
			3.3.2.2.5	Crawl space, (de)pressurization, fans, pumps, sumps, equipment failure alarms	10	10		
		3.3.2.3		Roof Frame & Sheathing				Need Item
			3.3.2.3.1	Wood frame and board or plywood sheathing	75	75		
			3.3.2.3.2	Tie downs, clips, braces, straps, hangers	75	75		
			3.3.2.3.3	Steel frame and sheet metal or insulated panel sheathing	100	100		
			3.3.2.3.4	Reinforced concrete deck	100	100		
		3.3.2.4		Flashing & Moisture Protection				Need Item
			3.3.2.4.1	Caulking and Sealing	15	15		
			3.3.2.4.2	Concrete/Masonry Sealants	10	10		
			3.3.2.4.3	Wood waterproofing and sealants	10	10		

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			3.3.2.4.4	Building wraps & moisture resistant barriers	50	50		
			3.3.2.4.5	Paints and stains, exterior	8	8		
		3.3.2.5		Attics & Eaves				Need Item
			3.3.2.5.1	Screened gable end or soffit Vents	30	30		
			3.3.2.5.2	Roof vents, passive	40	40		
			3.3.2.5.3	Roof Vents, powered	20	20		
		3.2.2.6		Insulation				Need Item
			3.3.2.6.1	Loose fill, fiber glass, cellulose, mineral wool	50	50		
			3.3.2.6.2	Batts, blankets, rolls, fiber glass or mineral wool	60	60		
			3.3.2.6.3	Rigid foam board	60	60		
			3.3.2.6.4	Sprayed foam	60	60		
		3.3.2.7		Exterior Stairs, Rails, Balconies/Porches, Canopies				Need Item
			3.3.2.7.1	Exterior Stairs, wood frame/stringer	30	30		
			3.3.2.7.2	Exterior Stair Tread-wood	15	15		
			3.3.2.7.3	Exterior Stairs-steel frame/stringer	40	40		
			3.3.2.7.4	Exterior Stair Tread-metal, concrete filled	20	20		
			3.3.2.7.5	Exterior Stairs, Concrete	50	50		
			3.3.2.7.6	Fire escapes, metal	50	50		
			3.3.2.7.7	Balcony/Porch, wood frame	25	25		
			3.3.2.7.8	Balcony/Porch, steel frame or concrete	40	40		
			3.3.2.7.9	Balcony/Porch, wood decking	20	20		
			3.3.2.7.10	Balcony/Porch, composite decking	50	50		
			3.3.2.7.11	Railings, wood	20	20		
			3.3.2.7.12	Railings, metal	50	50		

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System Description	Overall General Description	Component	Sub-Component	Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type	
			3.3.2.7.13	Railings, composite	50	50		
			3.3.2.7.14	Canopy, Concrete	50	50		
			3.3.2.7.15	Canopy, Wood/Metal	40	40		
		3.3.2.8		Exterior Doors & Entry Systems				Need Item
			3.3.2.8.1	Unit Entry Door, Exterior, solid wood/metal clad	25	30		
			3.3.2.8.2	Common Exterior Door, aluminum and glass	30	30		
			3.3.2.8.3	Common Exterior Door, solid wood /metal clad	25	25		
			3.3.2.8.4	Storm/Screen Doors	5	10		
			3.3.2.8.5	Sliding Glass Doors	25	30		
			3.3.2.8.6	French or Atrium Doors, wood/metal clad	25	30		
			3.3.2.8.7	Automatic Entry Doors	30	30		
			3.3.2.8.8	Commercial Entry Systems	50	50		
			3.3.2.8.9	Overhead Door	30	30		
			3.3.2.8.10	Automatic Opener, overhead door	20	20		
	3.3.3			Façades or Curtainwall				
		3.3.3.1		Sidewall System				Need Item
			3.3.3.1.1	Aluminum Siding	40	40		
			3.3.3.1.2	Vinyl Siding	25	25		
			3.3.3.1.3	Cement Board Siding	45	45		
			3.3.3.1.4	Plywood/Laminated Panels	20	20		
			3.3.3.1.5	Exterior Insulation Finishing System (EIFS)	30	30		
			3.3.3.1.6	Stucco, over wire mesh/lath	50	50		
			3.3.3.1.7	Metal/Glass Curtain Wall	40	40		
			3.3.3.1.8	Precast Concrete Panel (tilt-up)	60	60		

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				3.3.3.1.9	Brick/block veneer	60	60		
				3.3.3.1.10	Stone Veneer	50	50		
				3.3.3.1.11	Glass Block	50	50		
				3.3.3.1.12	Cedar/Redwood shakes, clapboard	50	50		
				3.3.3.1.13	Pine board, clapboard	50	50		
			3.3.3.2		Windows				Need Item
				3.3.3.2.1	Wood, (dbl, sgl hung, casement, awning, sliders)	35	45		
				3.3.3.2.2	Wood, fixed pane, picture	40	45		
				3.3.3.2.3	Aluminum	35	40		
				3.3.3.2.4	Vinyl	30	30		
				3.3.3.2.5	Vinyl/Alum Clad Wood	50	50		
				3.3.3.2.6	Storm/Screen Windows	7	15		
		3.3.4			Roofing and Roof Drainage				
			3.3.4.1		Sloped Roofs				Need Item
				3.3.4.1.1	Asphalt Shingle	20	20		
				3.3.4.1.2	Metal	50	50		
				3.3.4.1.3	Slate shingle	75	75		
				3.3.4.1.4	Clay/cementitious barrel tile	60	60		
				3.3.4.1.5	Wood Shingle, Cedar Shakes/Shingles	25	25		
			3.3.4.2		Low Slope/Flat Roofs				Need Item
				3.3.4.2.1	Low slope-Built-up Roof, with gravel finish	20	20		
				3.3.4.2.2	Low slope-Built-up Roof, no mineral or gravel finish	10	10		
				3.3.4.2.3	Low slope-Adhered rubber membrane, (EPDM)	15	15		
				3.3.4.2.4	Low slope-Thermoplastic membrane, (TPO, vinyl)	15	15		

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Numbering by ASTM 2018-08 Outline								
System Description	Overall General Description	Component	Sub-Component	Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type	
			3.3.4.2.5	Low slope-Rubberized/elastomeric white/cool roof	15	15		
		3.3.4.3		Roof Drainage, Trim & Accessories			Need Item	
			3.3.4.3.1	Gutters/Downspouts, aluminum	20	20		
			3.3.4.3.2	Gutters/Downspouts, copper	50	50		
			3.3.4.3.3	Low slope-roof drains, scuppers	30	30		
			3.3.4.3.4	Soffits, Wood, Vinyl, Metal	20	20		
			3.3.4.3.5	Fascia, Wood, Vinyl	20	20		
			3.3.4.3.6	Roof Hatch	30	30		
			3.3.4.3.7	Service Door	30	30		
			3.3.4.3.8	Roof Skylight	30	30		
3.4				Mech.-Elect.-Plumbing			Need Category	
	3.4.1			Plumbing				
		3.4.1.1		Water Supply and Waste Piping			Need Item	
			3.4.1.1.1	PVC/CPVC pipe, supply and waste	75	75		
			3.4.1.1.2	Copper/brass hard pipe, supply	75	75		
			3.4.1.1.3	Copper Tube, supply	50	50		
			3.4.1.1.4	Galvanized pipe, supply	40	40		
			3.4.1.1.5	Cast iron sanitary waste	75	75		
			3.4.1.1.6	Domestic Cold Water Pumps	20	20		
			3.4.1.1.7	Sewage Ejectors	50	50		
			3.4.1.1.8	Commercial Sump Pump	20	20		
			3.4.1.1.9	Residential Sump Pump	15	15		
			3.4.1.1.10	Water Softener/Filtration	15	15		
		3.4.1.2		Domestic Water Heating			Need Item	

**CNA e-Tool
Estimated Useful Life Table**

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	System Description	Overall General Description	Component	Sub-Component	Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type	
				3.4.1.2.1	DHW circulating pumps	15	15		
				3.4.1.2.2	DHW storage tanks	15	15		
				3.4.1.2.3	Exchanger, in tank or boiler	15	15		
				3.4.1.2.4	External tankless heater, gas or electric	20	20		
				3.4.1.2.5	Solar hot water	20	20		
				3.4.1.2.6	Residential hot water heater, gas or electric	12	15		
				3.4.1.2.7	Flue, gas water heaters	35	35		
				3.4.1.2.8	Boilers, Oil Fired, Sectional	25	25		
				3.4.1.2.9	Boilers, Gas Fired, Sectional	25	25		
				3.4.1.2.10	Boilers, Oil/ Gas/ Dual Fuel, Low MBH	30	30		
				3.4.1.2.11	Boilers, Oil/ Gas/ Dual Fuel, High MBH	40	40		
				3.4.1.2.12	Boilers, Gas Fired Atmospheric	25	25		
				3.4.1.2.13	Boilers, Electric	20	20		
				3.4.1.2.14	Boiler Blowdown and Water Treatment	25	25		
				3.4.1.2.15	Boiler Room Pipe Insulation	25	25		
				3.4.1.2.16	Boiler Room Piping	50	50		
				3.4.1.2.17	Boiler Room Valves	25	25		
				3.4.1.2.18	Boiler Temperature Controls	15	15		
				3.4.1.2.19	Heat Exchanger	35	35		
			3.4.1.3		Fixtures				Need Item
				3.4.1.3.1	Faucets & valves	15	20		
				3.4.1.3.2	Bath tubs & sinks, cast iron	75	75		
				3.4.1.3.3	Bubs tubs & sinks, enameled or stainless steel, fiberglass	40	40		
				3.4.1.3.4	Bath tubs & sinks, porcelain	50	50		

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			3.4.1.3.5	Toilets/bidets/urinals	40	40		
			3.4.1.3.6	Flush valves	10	15		
			3.4.1.3.7	Tub/shower units or integrated assemblies	30	30		
	3.4.2			Centralized HVAC Systems				
		3.4.2.1		Centralized Heating/Cooling Equipment			Need Item	
			3.4.2.1.1	Boilers, Oil Fired, Sectional - Centralized	25	25		
			3.4.2.1.2	Boilers, Gas Fired, Sectional - Centralized	25	25		
			3.4.2.1.3	Boilers, Oil/ Gas/ Dual Fuel, Low MBH - Centralized	30	30		
			3.4.2.1.4	Boilers, Oil/ Gas/ Dual Fuel, High MBH - Centralized	40	40		
			3.4.2.1.5	Boilers, Gas Fired Atmospheric - Centralized	25	25		
			3.4.2.1.6	Boilers, Electric - Centralized	20	20		
			3.4.2.1.7	Boiler Blowdown and Water Treatment - Centralized	25	25		
			3.4.2.1.8	Boiler Room Pipe Insulation - Centralized	25	25		
			3.4.2.1.9	Boiler Room Piping - Centralized	50	50		
			3.4.2.1.10	Boiler Room Valves - Centralized	25	25		
			3.4.2.1.11	Boiler Temperature Controls - Centralized	15	15		
			3.4.2.1.12	Heat Exchanger - Centralized	35	35		
			3.4.2.1.13	Combustion Air, Duct with Fixed Louvers	30	30		
			3.4.2.1.14	Combustion Air, Motor Louvers and Duct	25	25		
			3.4.2.1.15	Combustion Waste Flue	40	40		
			3.4.2.1.16	Cooling tower	25	25		
			3.4.2.1.17	Chilling plant	20	20		
			3.4.2.1.18	Steam supply station	50	50		
			3.4.2.1.19	Free standing chimney	50	50		

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System Description	Overall General Description	Component	Sub-Component	Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type	
		3.4.2.2		Centralized Heat/Air/Fuel Distribution				Need Item
			3.4.2.2.1	Fuel oil/propane storage tanks	40	40		
			3.4.2.2.2	Remediate/remove abandoned tanks/fuel lines	100	100		
			3.4.2.2.3	Fuel transfer system	25	25		
			3.4.2.2.4	Gas/oil distribution lines	50	50		
			3.4.2.2.5	Gas meter	40	40		
			3.4.2.2.6	2 pipe/4 pipe hydronic distribution-above grade	50	50		
			3.4.2.2.7	2 pipe/4 pipe hydronic distribution-in ground	25	25		
			3.4.2.2.8	Hydronic/Water Circulating Pumps	20	20		
			3.4.2.2.9	Hydronic/Water Controller	20	20		
			3.4.2.2.10	Radiation-steam/hydronic (baseboard or freestanding radiator)	50	50		
			3.4.2.2.11	Fan Coil Unit, Hydronic	30	30		
			3.4.2.2.12	Central exhaust fans/blowers	20	20		
	3.4.3			Decentralized and Split HVAC Systems				
		3.4.3.1		Dwelling/Common Area HVAC Equipment				Need Item
			3.4.3.1.1	Electric heat pump, condenser, pad or rooftop	15	15		
			3.4.3.1.2	Electric AC condenser, pad or rooftop	15	15		
			3.4.3.1.3	Electric furnace/air handler	20	20		
			3.4.3.1.4	Gas furnace/air handler	20	20		
			3.4.3.1.5	Hydronic heat/electric AC air handler	25	25		
			3.4.3.1.6	Hydronic feed electric heat pump/air handler	25	25		
			3.4.3.1.7	Wall mounted electric/gas heater	25	25		
			3.4.3.1.8	Electric baseboard heater	30	30		
			3.4.3.1.9	PTAC Thruwall (packaged terminal air conditioning)	15	15		

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			3.4.3.1.10	Window or thru-wall air conditioners	10	10		
			3.4.3.1.11	Package HVAC roof top	15	15		
			3.4.3.1.12	Air filtration/humidity control devices (humidifiers, HRV's)	20	20		
			3.4.3.1.13	Duct, rigid sheet metal, insulated if not in conditioned space	35	35		
			3.4.3.1.14	Duct, flexible, insulated	20	20		
			3.4.3.1.15	Duct, sealing-mastic or UL 181A or 181B tape.	20	20		
			3.4.3.1.16	Diffusers, registers	20	20		
			3.4.3.1.17	Fireplace, masonry & firebrick, masonry chimney	75	75		
			3.4.3.1.18	Fireplace, factory assembled	35	35		
			3.4.3.1.19	Fireplace insert, stove	50	50		
			3.4.3.1.20	Chimneys, metal, and chimney covers	35	35		
			3.4.3.2	HVAC Controls				Need Item
			3.4.3.2.1	Dwelling/common area thermostat	15	20		
			3.4.3.2.2	Heat sensors	15	15		
			3.4.3.2.3	Outdoor temperature sensor	10	10		
	3.4.4			Electrical				
			3.4.4.1	Electric Service & Metering				Need Item
			3.4.4.1.1	Building service panel	50	50		
			3.4.4.1.2	Building meter	40	40		
			3.4.4.1.3	Tenant meters, meter panel	40	40		
			3.4.4.2	Electrical Distribution				Need Item
			3.4.4.2.1	Tenant electrical panel	50	50		
			3.4.4.2.2	Unit/building wiring	50	50		
			3.4.4.3	Electric Lighting & Fixtures				Need Item

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				3.4.4.3.1	Switches & outlets	35	35	
				3.4.4.3.2	Lighting - exterior entry	15	20	
				3.4.4.3.3	Lighting- interior common space	25	30	
				3.4.4.3.4	Lighting - Tenant Spaces	20	25	
				3.4.4.3.5	Door bells, chimes	20	25	
			3.4.4.4		Telecommunications Equipment			Need Item
				3.4.4.4.1	Satellite dishes/antennae	20	20	
				3.4.4.4.2	Telecom panels & controls	20	20	
				3.4.4.4.3	Telecom cabling & outlets	20	20	
	3.5				Vertical Transportation			Need Category
		3.5.1			Elevators/Escalators			Need Item
			3.5.1.1		Electrical switchgear	50	50	
			3.5.1.2		Electrical wiring	30	30	
			3.5.1.3		Elevator controller, call, dispatch, emergency	10	20	
			3.5.1.4		Elevator cab, interior finish	10	20	
			3.5.1.5		Elevator cab, frame	35	50	
			3.5.1.6		Elevator, machinery	20	30	
			3.5.1.7		Elevator, shaftway doors	10	20	
			3.5.1.8		Elevator, shaftway hoist rails, cables, traveling	20	25	
			3.5.1.9		Elevator, shaftway hydraulic piston and leveling	20	25	
			3.5.1.10		Escalators	50	50	
	3.6				Life Safety/Fire Protection			Need Category
		3.6.1			Sprinklers and Standpipes			Need Item
			3.6.1.1		Building fire suppression sprinklers, standpipes	50	50	

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			3.6.1.2		Fire pumps	20	20		
			3.6.1.3		Fire hose stations	50	50		
			3.6.1.4		Fire extinguishers	10	15		
		3.6.2			Alarm, Security & Emergency Systems				Need Item
			3.6.2.1		Tenant space alarm systems	10	15		
			3.6.2.2		Residential smoke detectors	5	7		
			3.6.2.3		Call station	10	15		
			3.6.2.4		Emergency/auxiliary generator	25	25		
			3.6.2.5		Emergency/auxiliary fuel storage tank	25	25		
			3.6.2.6		Emergency lights, illuminated signs	5	10		
			3.6.2.7		Smoke and fire detection system, central panel	15	15		
			3.6.2.8		Buzzer/intercom, central panel	20	20		
			3.6.2.9		Tenant buzzer / intercom /secured entry system	20	20		
		3.6.3			Other Systems				Need Item
			3.6.3.1		Pneumatic Lines and Controls	30	30		
			3.6.3.2		Auto-securing doors/entries/lock down	30	30		
	3.7				Interior Elements				
		3.7.1			Interiors-Common Areas				Need Category
			3.7.1.1		Finished walls, ceilings, floors				Need Item
				3.7.1.1.1	Drywall - Common	35	40		
				3.7.1.1.2	Plaster - Common	50	50		
				3.7.1.1.3	Paints, stains, clear finishes, interior - Common	15	20		
				3.7.1.1.4	Wallpapers - Common	15	20		
				3.7.1.1.5	Wall tile, ceramic, glass, natural stone - Common	35	50		

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			3.7.1.1.6	Floor tile, ceramic, natural stone - Common	40	50		
			3.7.1.1.7	Concrete/Masonry/Terrazzo - Common	75	75		
			3.7.1.1.8	Hardwood floor (3/4" strip or parquet) - Common	50	50		
			3.7.1.1.9	Wood floor, laminated/veneered - Common	20	25		
			3.7.1.1.10	Resilient tile or sheet floor (vinyl, linoleum) - Common	15	20		
			3.7.1.1.11	Carpet - Common	6	10		
			3.7.1.1.12	Acoustic tile/drop ceiling - Common	15	20		
		3.7.1.2		Millwork (doors, trim, cabinets, tops)				Need Item
			3.7.1.2.1	Interior, hollow core doors - Common	20	25		
			3.7.1.2.2	Interior doors, solid core, wood, metal clad, fire rated	30	35		
			3.7.1.2.3	Door trim - Common	20	30		
			3.7.1.2.4	Wall trim (base, chair rail, crown moldings) - Common	30	35		
			3.7.1.2.5	Passage & lock sets - Common	15	20		
			3.7.1.2.6	Bifold & sliding doors - Common	15	20		
			3.7.1.2.7	Cabinets & vanities - Common	20	25		
			3.7.1.2.8	Tops, granite, natural stone, engineered stone - Common	50	50		
			3.7.1.2.9	Tops, solid surface, stainless steel - Common	40	50		
			3.7.1.2.10	Tops, plastic laminates, wood - Common	15	25		
			3.7.1.2.11	Vanity tops, cultured marble, molded acrylic, fiber glass - Common	25	35		
		3.7.1.3		Appliances				Need Item
			3.7.1.3.1	Refrigerator/freezer - Common	15	15		
			3.7.1.3.2	Range, cook top, wall oven - Common	20	25		
			3.7.1.3.3	Range hood - Common	20	25		
			3.7.1.3.4	Microwave - Common	10	10		

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			3.7.1.3.5	Disposal (food waste) - Common	7	10		
			3.7.1.3.6	Compactors (interior, residential grade) - Common	7	10		
			3.7.1.3.7	Dishwasher - Common	10	15		
			3.7.1.3.8	Clothes washer/dryer - Common	10	15		
		3.7.1.4		Specialties				Need Item
			3.7.1.4.1	Interior Mail Facility	20	25		
			3.7.1.4.2	Common area bath accessories (towel bars, grab bars, toilet stalls, etc.)	7	12		
			3.7.1.4.3	Mirrors & medicine cabinets - Common	20	25		
			3.7.1.4.4	Closet/storage specialties, shelving - Common	20	25		
			3.7.1.4.5	Common area interior stairs	50	50		
			3.7.1.4.6	Common area railings	15	25		
			3.7.1.4.7	Bath/kitchen vent/exhaust fans - Common	15	15		
			3.7.1.4.8	Ceiling fans - Common	15	15		
			3.7.1.4.9	Window treatments, drapery rods, shades, blinds, etc. - Common	15	25		
			3.7.1.4.10	Indoor recreation and fitness equipment	10	15		
			3.7.1.4.11	Entertainment centers, theatre projection and seating	15	25		
	3.7.2			Interiors-Dwelling Units				Need Category
		3.7.2.1		Finished walls, ceilings, floors				Need Item
			3.7.2.1.1	Drywall	35	40		
			3.7.2.1.2	Plaster	50	50		
			3.7.2.1.3	Paints, stains, clear finishes, interior	10	15		
			3.7.2.1.4	Wallpapers	10	15		
			3.7.2.1.5	Wall tile, ceramic, glass, natural stone	30	40		
			3.7.2.1.6	Floor tile, ceramic, natural stone	40	50		

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Numbering by ASTM 2018-08 Outline									
	System Description	Overall General Description	Component	Sub-Component	Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type	
				3.7.2.1.7	Concrete/Masonry/Terrazzo	75	75		
				3.7.2.1.8	Hardwood floor (3/4" strip or parquet)	50	50		
				3.7.2.1.9	Wood floor, laminated/veneered	15	20		
				3.7.2.1.10	Resilient tile or sheet floor (vinyl, linoleum)	15	20		
				3.7.2.1.11	Carpet	6	10		
				3.7.2.1.12	Acoustic tile/drop ceiling	15	20		
			3.7.2.2		Millwork (doors, trim, cabinets, tops)				Need Item
				3.7.2.2.1	Interior, hollow core doors	20	25		
				3.7.2.2.2	Interior doors, solid core, wood, metal clad	30	35		
				3.7.2.2.3	Door trim	20	30		
				3.7.2.2.4	Wall trim (base, chair rail, crown moldings)	25	35		
				3.7.2.2.5	Passage & lock sets	12	20		
				3.7.2.2.6	Bifold & sliding doors	12	20		
				3.7.2.2.7	Cabinets & vanities	20	25		
				3.7.2.2.8	Tops, granite, natural stone, engineered stone	50	50		
				3.7.2.2.9	Tops, solid surface, stainless steel	40	50		
				3.7.2.2.10	Tops, plastic laminates, wood	15	25		
				3.7.2.2.11	Vanity tops, cultured marble, molded acrylic, fiber glass	25	35		
			3.7.2.3		Appliances				Need Item
				3.7.2.3.1	Refrigerator/freezer	12	15		
				3.7.2.3.2	Range, cook top, wall oven	15	25		
				3.7.2.3.3	Range hood	15	25		
				3.7.2.3.4	Microwave	10	10		
				3.7.2.3.5	Disposal (food waste)	7	10		

**CNA e-Tool
Estimated Useful Life Table**

This table lists the recommended average useful life of the categories of assets that should be considered in a Capital Needs Assessment. If an observed item is not listed, it should be assigned to the most closely related category. The Standard EUL for a component type is fixed. The user may estimate the Remaining Useful Life of any existing component independent of the Standard EUL by entering the assessed RUL in the appropriate space on the Components tab of the Excel Assessment Tool and by justifying the assessed RUL in the adjacent comment box. When identifying an alternative to an existing component the user may specify an EUL for the alternative which differs from the Standard EUL for that component type but must enter an explanation in the Notes space on the Alternatives tab of the Tool. Each specific component assessed is given a free-form description by the needs assessor and this description is the "component ID" or component name which may be more specific than the "Component Type", e.g (a particular kind, size, etc of refrigerator, not just any refrigerator.)

Numbering by ASTM 2018-08 Outline								
	System Description	Overall General Description	Component	Sub-Component	Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type
				3.7.2.3.6	Compactors (interior, residential grade)	7	10	
				3.7.2.3.7	Dishwasher	10	15	
				3.7.2.3.8	Clothes washer/dryer	10	15	
			3.7.2.4		Specialties			Need Item
				3.7.2.4.1	Bath accessories (towel bars, grab bars, etc.)	7	12	
				3.7.2.4.2	Mirrors & medicine cabinets	15	25	
				3.7.2.4.3	Closet/storage specialties, shelving	15	25	
				3.7.2.4.4	Interior stairs	50	50	
				3.7.2.4.5	Stair and loft railings	20	25	
				3.7.2.4.6	Bath/kitchen vent/exhaust fans	15	15	
				3.7.2.4.7	Ceiling fans	10	15	
				3.7.2.4.8	Window treatments, drapery rods, shades, blinds, etc.	10	20	
4					Additional Considerations			Need Category
	4.1				Environmental Items (not elsewhere defined)			Need Item
		4.1.1			Environmental remediation alarms	5	5	
		4.1.2			Environmental remediation pumps & equipment	5	5	
		4.1.3			Mold-treat-remediate	100	100	
		4.1.4			Pest Control/Integrated Pest Management Plan	1	1	
	4.2				Lead based paint (LBP), asbestos			Need Item
		4.2.1			LBP inspection	100	100	
		4.2.2			Lead based paint abatement			
			4.2.2.1		LBP encapsulation (abatement)	20	20	
			4.2.2.2		LBP removal	100	100	
		4.2.3			Lead based paint interim controls			

**CNA e-Tool
Estimated Useful Life Table**

This table lists the recommended average useful life of the categories of assets that should be considered in a Capital Needs Assessment. If an observed item is not listed, it should be assigned to the most closely related category. The Standard EUL for a component type is fixed. The user may estimate the Remaining Useful Life of any existing component independent of the Standard EUL by entering the assessed RUL in the appropriate space on the Components tab of the Excel Assessment Tool and by justifying the assessed RUL in the adjacent comment box. When identifying an alternative to an existing component the user may specify an EUL for the alternative which differs from the Standard EUL for that component type but must enter an explanation in the Notes space on the Alternatives tab of the Tool. Each specific component assessed is given a free-form description by the needs assessor and this description is the "component ID" or component name which may be more specific than the "Component Type", e.g (a particular kind, size, etc of refrigerator, not just any refrigerator.)

Numbering by ASTM 2018-08 Outline								
	System Description	Overall General Description	Component	Sub-Component	Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type
			4.2.3.1		LBP hazard interim control	6	6	
			4.2.3.2		LBP Encapsulation (interim control)	6	6	
		4.2.4			Asbestos			
			4.2.4.1		Asbestos encapsulation (abatement)	10	10	
			4.2.4.2		Asbestos Removal	100	100	
	4.3				Commercial Tenant Improvements			Need Item
		4.3.1			Owner provided item(s) (specify)	5	5	
		4.3.2			Owner provided \$ allowance (specify)	5	5	



Stormwater Facility Plan
City of LaBelle, FL

1551 North Westshore Boulevard | Suite 420
Tampa, Florida 33607
800.426.4262

Hypothetical Stormwater Alternative 1 (No Action) LCCA

Flooding (loss or damage to one home per year)	\$500,000
Erosion repair to roads and sidewalks	\$200,000
Sedimentation removal from yards and low areas	\$100,000
Development ad valorem tax loss	\$200,000
Loss of jobs	\$200,000
Total	\$1,200,000
Rate	1.35%
Term (years)	20.0
PV LCCA	-\$20,911,000

LIFE CYCLE COST ANALYSES - LABELLE STORMWATER FACILITY PLAN - STORMWATER ALTERNATIVE 2															(+)		(-)		exp. (-), income (+)
Site	Description	Quantity	UM	Lab.Total	Mat.Total	Sub.Total	Eqp.Total	Eqp.Rent.Tot	Tot.UnitCost	TotalCost	Expected Life (HUD)	Years Remain	Salvage Value (\$)	Replacement Cost (\$)	Annual O&M	Life Cycle Cost	Rate		
													(+)	(-)	(-)	(-)			
Site 1	Silt sock - erosion barrier	900	LNFT	\$2,673	\$4,410	\$0	\$0	\$0	\$8	\$7,082	20	0	\$0			-\$7,082.00	1.35%		
	Clear & Grub Site	1	LS	\$2,188	\$436	\$0	\$1,975	\$0	\$4,598	\$4,598	20	0	\$0			-\$4,598.00	Term		
	Strip & Stockpile Topsoil - Ldr, DZR, Trucks	20	CUYD	\$56	\$14	\$0	\$103	\$0	\$9	\$173	20	0	\$0			-\$173.00	20		
	Excavate Stormwater Pond	190	CUYD	\$1,685	\$232	\$0	\$3,578	\$0	\$29	\$5,495	20	0	\$0			-\$5,495.00			
	Haul / Dispose Excavated Material - Assume 30 Minute Cycle	220	CUYD	\$0	\$0	\$1,347	\$0	\$0	\$6	\$1,347	20	0	\$0			-\$1,347.00			
	Tipping Fee for Excavated Material Disposal	220	CUYD	\$0	\$0	\$599	\$0	\$0	\$3	\$599	20	0	\$0			-\$599.00			
	Grading of Pond Area	1	LS	\$677	\$174	\$0	\$546	\$0	\$1,397	\$1,397	20	0	\$0			-\$1,397.00			
	Excavate 4' deep trench for bio swale	370	LNFT	\$6,515	\$416	\$0	\$3,106	\$0	\$27	\$10,038	20	0	\$0			-\$10,038.00			
	Crushed Stone for bio swale	13	CUYD	\$204	\$542	\$0	\$49	\$0	\$61	\$795	20	0	\$0			-\$795.00			
	Bioretention soil for bio swale	70	CUYD	\$1,464	\$1,510	\$0	\$352	\$0	\$48	\$3,326	20	0	\$0			-\$3,326.00			
	Excavation @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			\$0			
	Digging hard Backhoe loader 1 cuyd bucket	112	CUYD	\$605	\$59	\$0	\$249	\$0	\$8	\$912	20	0	\$0			-\$912.00			
	Backfill @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			\$0			
	Native fill w/compaction	87	CUYD	\$1,274	\$88	\$0	\$322	\$0	\$19	\$1,683	20	0	\$0			-\$1,683.00			
	Imported pipe bedding @ trench	9	CUYD	\$109	\$324	\$0	\$27	\$0	\$54	\$461	20	0	\$0			-\$461.00			
	Spread Topsoil from Stockpile	20	CUYD	\$291	\$112	\$0	\$160	\$0	\$28	\$562	20	0	\$0			-\$562.00			
	Shoring and bracing	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			\$0			
	Pull box	110	LNFT	\$0	\$400	\$0	\$0	\$0	\$4	\$400	20	0	\$0			-\$400.00			
	Surface restoration	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			\$0			
	Grass along pipe route	465	SQFT	\$26	\$5	\$0	\$0	\$0	\$0	\$31	20	0	\$0			-\$31.00			
	Grass at bio swale	5550	SQFT	\$308	\$60	\$0	\$0	\$0	\$0	\$368	20	0	\$0			-\$368.00			
	Riprap Apron @ Pipe Inlet	9	CUYD	\$188	\$807	\$0	\$45	\$0	\$116	\$1,040	15	-5	-\$1,272			-\$2,012.56			
	Geotextile for Riprap Apron	200	SQFT	\$148	\$73	\$0	\$0	\$0	\$1	\$222	15	-5	-\$271			-\$429.60			
	Hydroseeding w/fertilizer and mulch	170	SQYD	\$0	\$0	\$486	\$0	\$0	\$3	\$486	20	0	\$0			-\$486.00			
	8" perforated HDPE pipe	370	LNFT	\$2,198	\$4,028	\$0	\$604	\$0	\$18	\$6,830	50	30	\$4,098			-\$3,696.02			
	2' diameter precast manhole (swale overflow)	4	VLF	\$1,321	\$1,789	\$0	\$630	\$0	\$935	\$3,739	50	30	\$2,243			-\$2,023.34			
	5' diameter precast manhole (outlet struct)	4	VLF	\$2,641	\$3,660	\$0	\$1,259	\$0	\$1,890	\$7,561	50	30	\$4,537			-\$4,091.59			
	Oldcastle Baffle Box	1	EACH	\$10,566	\$88,463	\$0	\$5,037	\$0	\$104,066	\$104,066	50	30	\$62,440			-\$56,314.72			
	Grated cover for swale overflow struct.	1	EACH	\$377	\$1,252	\$0	\$180	\$0	\$1,809	\$1,809	50	30	\$1,085			-\$978.93			
	30" Grated Inlet Cover for Outlet Struct.	1	EACH	\$440	\$2,069	\$0	\$210	\$0	\$2,719	\$2,719	50	30	\$1,631			-\$1,471.37			
	Reinforced concrete pipe	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			\$0			
	24" standard pipe	60	LNFT	\$3,522	\$5,308	\$0	\$1,679	\$0	\$175	\$10,509	50	30	\$6,305			-\$5,686.88			
	30" standard pipe	50	LNFT	\$3,302	\$6,124	\$0	\$1,574	\$0	\$220	\$11,000	50	30	\$6,600			-\$5,952.59			
* Total Site 1				\$42,777	\$122,356	\$2,432	\$21,685	\$0		\$189,248						-\$122,411			
Site 2	Silt sock - erosion barrier	1540	LNFT	\$4,573	\$7,545	\$0	\$0	\$0	\$8	\$12,118	20	0	\$0			-\$12,118.00			
	Clear & Grub Site	1	LS	\$2,188	\$436	\$0	\$1,975	\$0	\$4,598	\$4,598	20	0	\$0			-\$4,598.00			
	Strip & Stockpile Topsoil - Ldr, DZR, Trucks	12	CUYD	\$34	\$8	\$0	\$62	\$0	\$9	\$104	20	0	\$0			-\$104.00			
	Excavate Stormwater Pond	130	CUYD	\$1,153	\$159	\$0	\$2,448	\$0	\$29	\$3,760	20	0	\$0			-\$3,760.00			
	Haul / Dispose Excavated Material - Assume 30 Minute Cycle	150	CUYD	\$0	\$0	\$919	\$0	\$0	\$6	\$919	20	0	\$0			-\$919.00			
	Tipping Fee for Excavated Material Disposal	150	CUYD	\$0	\$0	\$408	\$0	\$0	\$3	\$408	20	0	\$0			-\$408.00			
	Grading of Pond Area	1	LS	\$677	\$174	\$0	\$546	\$0	\$1,397	\$1,397	20	0	\$0			-\$1,397.00			
	Excavate 4' deep trench for bio swale	700	LNFT	\$12,326	\$788	\$0	\$5,877	\$0	\$27	\$18,991	20	0	\$0			-\$18,991.00			
	Crushed Stone for bio swale	25	CUYD	\$392	\$1,043	\$0	\$94	\$0	\$61	\$1,529	20	0	\$0			-\$1,529.00			
	Bioretention soil for bio swale	125	CUYD	\$2,614	\$2,697	\$0	\$629	\$0	\$48	\$5,940	20	0	\$0			-\$5,940.00			
	Excavation @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			\$0			
	Digging hard Backhoe loader 1 cuyd bucket	83	CUYD	\$449	\$43	\$0	\$184	\$0	\$8	\$677	20	0	\$0			-\$677.00			
	Backfill @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			\$0			
	Native fill w/compaction	64	CUYD	\$936	\$64	\$0	\$236	\$0	\$19	\$1,236	20	0	\$0			-\$1,236.00			
	Imported pipe bedding @ trench	6	CUYD	\$81	\$241	\$0	\$20	\$0	\$54	\$342	20	0	\$0			-\$342.00			
	Spread Topsoil from Stockpile	12	CUYD	\$174	\$67	\$0	\$96	\$0	\$28	\$337	20	0	\$0			-\$337.00			
	Shoring and bracing	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			\$0			
	Pull box	80	LNFT	\$0	\$291	\$0	\$0	\$0	\$4	\$291	20	0	\$0			-\$291.00			
	Surface restoration	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			\$0			
	Grass along pipe route	345	SQFT	\$19	\$4	\$0	\$0	\$0	\$0	\$23	20	0	\$0			-\$23.00			
	Grass at bio swale	10500	SQFT	\$583	\$114	\$0	\$0	\$0	\$0	\$697	20	0	\$0			-\$697.00			
	Hydroseeding w/fertilizer and mulch	100	SQYD	\$0	\$0	\$286	\$0	\$0	\$3	\$286	20	0	\$0			-\$286.00			
	8" perforated HDPE pipe	700	LNFT	\$4,158	\$7,621	\$0	\$1,143	\$0	\$18	\$12,922	50	30	\$7,753			-\$6,992.67			
	2' diameter precast manhole (swale overflow)	4	VLF	\$1,321	\$1,789	\$0	\$630	\$0	\$935	\$3,739	50	30	\$2,243			-\$2,023.34			
	5' diameter precast manhole (outlet struct)	4	VLF	\$2,641	\$3,660	\$0	\$1,259	\$0	\$1,890	\$7,561	50	30	\$4,537			-\$4,091.59			
	Grated cover for swale overflow struct.	1	EACH	\$377	\$1,252	\$0	\$180	\$0	\$1,809	\$1,809	50	30	\$1,085			-\$978.93			

LIFE CYCLE COST ANALYSES - LABELLE STORMWATER FACILITY PLAN - STORMWATER ALTERNATIVE 2														(+)		(-)		exp. (-), income (+)	
Description	Quantity	UM	Lab.Total	Mat.Total	Sub.Total	Eqp.Total	Eqp.Rent.Tot	Tot.UnitCost	TotalCost	Expected Life (HUD)	Years Remain	Salvage Value (\$ (+) / Replacement Cost (\$) (-)	Annual O&M	Life Cycle Cost					
30" Grated Inlet Cover for Outlet Struct.	1	EACH	\$440	\$2,069	\$0	\$210	\$0	\$2,719	\$2,719	50	30	\$1,631		-\$1,471.37					
Reinforced concrete pipe	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0					
24" standard pipe	30	LNFT	\$1,761	\$2,654	\$0	\$840	\$0	\$175	\$5,254	50	30	\$3,152		-\$2,843.17					
30" standard pipe	50	LNFT	\$3,302	\$6,124	\$0	\$1,574	\$0	\$220	\$11,000	50	30	\$6,600		-\$5,952.59					
* Total Site 2			\$40,199	\$38,844	\$1,613	\$18,003	\$0		\$98,657					-\$78,007					
Site 3																			
Silt sock - erosion barrier	5950	LNFT	\$17,669	\$29,152	\$0	\$0	\$0	\$8	\$46,821	20	0	\$0		-\$46,821.00					
Clear & Grub Site	1	LS	\$4,376	\$871	\$0	\$3,949	\$0	\$9,196	\$9,196	20	0	\$0		-\$9,196.00					
Strip & Stockpile Topsoil - Ldr, DZR, Trucks	130	CUYD	\$365	\$92	\$0	\$666	\$0	\$9	\$1,123	20	0	\$0		-\$1,123.00					
Excavate Stormwater Pond	1300	CUYD	\$5,763	\$793	\$0	\$12,241	\$0	\$14	\$18,798	20	0	\$0		-\$18,798.00					
Haul / Dispose Excavated Material - Assume 30 Minute Cycle	1500	CUYD	\$0	\$0	\$9,187	\$0	\$0	\$6	\$9,187	20	0	\$0		-\$9,187.00					
Tipping Fee for Excavated Material Disposal	1500	CUYD	\$0	\$0	\$4,083	\$0	\$0	\$3	\$4,083	20	0	\$0		-\$4,083.00					
Grading of Pond Area	1	LS	\$1,355	\$348	\$0	\$1,092	\$0	\$2,795	\$2,795	20	0	\$0		-\$2,795.00					
Excavate 4' deep trench for bio swale	2750	LNFT	\$48,425	\$3,094	\$0	\$23,087	\$0	\$27	\$74,606	20	0	\$0		-\$74,606.00					
Crushed Stone for bio swale	96	CUYD	\$1,506	\$4,003	\$0	\$362	\$0	\$61	\$5,871	20	0	\$0		-\$5,871.00					
Bioretention soil for bio swale	490	CUYD	\$10,246	\$10,572	\$0	\$2,466	\$0	\$48	\$23,284	20	0	\$0		-\$23,284.00					
Excavation @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0					
Digging hard Backhoe loader 1 cuyd bucket	410	CUYD	\$2,217	\$215	\$0	\$912	\$0	\$8	\$3,344	20	0	\$0		-\$3,344.00					
Backfill @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0					
Native fill w/compaction	327	CUYD	\$4,771	\$328	\$0	\$1,204	\$0	\$19	\$6,304	20	0	\$0		-\$6,304.00					
Imported pipe bedding @ trench	32	CUYD	\$400	\$1,189	\$0	\$101	\$0	\$54	\$1,690	20	0	\$0		-\$1,690.00					
Spread Topsoil from Stockpile	130	CUYD	\$1,889	\$728	\$0	\$1,037	\$0	\$28	\$3,653	20	0	\$0		-\$3,653.00					
Shoring and bracing	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0					
Pull box	420	LNFT	\$0	\$1,528	\$0	\$0	\$0	\$4	\$1,528	20	0	\$0		-\$1,528.00					
Surface restoration	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0					
Grass along pipe route	1705	SQFT	\$95	\$19	\$0	\$0	\$0	\$0	\$113	20	0	\$0		-\$113.00					
Grass at bio swale	41250	SQFT	\$2,290	\$449	\$0	\$0	\$0	\$0	\$2,739	20	0	\$0		-\$2,739.00					
Riprap Apron @ Pipe Inlet	9	CUYD	\$188	\$807	\$0	\$45	\$0	\$116	\$1,040	15	-5	-\$1,272		-\$2,012.56					
Geotextile for Riprap Apron	200	SQFT	\$148	\$73	\$0	\$0	\$0	\$1	\$222	15	-5	-\$271		-\$429.60					
Hydroseeding w/fertilizer and mulch	1200	SQYD	\$0	\$0	\$3,430	\$0	\$0	\$3	\$3,430	20	0	\$0		-\$3,430.00					
8" perforated HDPE pipe	2750	LNFT	\$16,333	\$29,941	\$0	\$4,491	\$0	\$18	\$50,766	50	30	\$30,460		-\$27,471.73					
2' diameter precast manhole (swale overflow)	20	VLF	\$6,603	\$8,944	\$0	\$3,148	\$0	\$935	\$18,696	50	30	\$11,218		-\$10,117.23					
5' diameter precast manhole (outlet struct)	4	VLF	\$2,641	\$3,660	\$0	\$1,259	\$0	\$1,890	\$7,561	50	30	\$4,537		-\$4,091.59					
Grated cover for swale overflow struct.	5	EACH	\$1,887	\$6,260	\$0	\$900	\$0	\$1,809	\$9,047	50	30	\$5,428		-\$4,895.73					
30" Grated Inlet Cover for Outlet Struct.	1	EACH	\$440	\$2,069	\$0	\$210	\$0	\$2,719	\$2,719	50	30	\$1,631		-\$1,471.37					
Reinforced concrete pipe	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0					
24" standard pipe	370	LNFT	\$21,718	\$32,731	\$0	\$10,354	\$0	\$175	\$64,804	50	30	\$38,882		-\$35,068.31					
30" standard pipe	50	LNFT	\$3,302	\$6,124	\$0	\$1,574	\$0	\$220	\$11,000	50	30	\$6,600		-\$5,952.59					
* Total Site 3			\$154,627	\$143,992	\$16,699	\$69,100	\$0		\$384,420					-\$310,076					
Site 3a																			
Silt sock - erosion barrier	3800	LNFT	\$11,285	\$18,618	\$0	\$0	\$0	\$8	\$29,903	20	0	\$0		-\$29,903.00					
Clear & Grub Site	1	LS	\$4,376	\$871	\$0	\$3,949	\$0	\$9,196	\$9,196	20	0	\$0		-\$9,196.00					
Strip & Stockpile Topsoil - Ldr, DZR, Trucks	105	CUYD	\$295	\$74	\$0	\$538	\$0	\$9	\$907	20	0	\$0		-\$907.00					
Excavate Stormwater Pond	1260	CUYD	\$5,586	\$768	\$0	\$11,865	\$0	\$14	\$18,219	20	0	\$0		-\$18,219.00					
Haul / Dispose Excavated Material - Assume 30 Minute Cycle	1450	CUYD	\$0	\$0	\$8,880	\$0	\$0	\$6	\$8,880	20	0	\$0		-\$8,880.00					
Tipping Fee for Excavated Material Disposal	1450	CUYD	\$0	\$0	\$3,947	\$0	\$0	\$3	\$3,947	20	0	\$0		-\$3,947.00					
Grading of Pond Area	1	LS	\$1,355	\$348	\$0	\$1,092	\$0	\$2,795	\$2,795	20	0	\$0		-\$2,795.00					
Excavate 4' deep trench for bio swale	1700	LNFT	\$29,935	\$1,913	\$0	\$14,272	\$0	\$27	\$46,120	20	0	\$0		-\$46,120.00					
Crushed Stone for bio swale	60	CUYD	\$941	\$2,502	\$0	\$227	\$0	\$61	\$3,669	20	0	\$0		-\$3,669.00					
Bioretention soil for bio swale	305	CUYD	\$6,378	\$6,581	\$0	\$1,535	\$0	\$48	\$14,493	20	0	\$0		-\$14,493.00					
Excavation @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0					
Digging hard Backhoe loader 1 cuyd bucket	318	CUYD	\$1,717	\$166	\$0	\$706	\$0	\$8	\$2,589	20	0	\$0		-\$2,589.00					
Backfill @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0					
Native fill w/compaction	251	CUYD	\$3,663	\$252	\$0	\$924	\$0	\$19	\$4,840	20	0	\$0		-\$4,840.00					
Imported pipe bedding @ trench	24	CUYD	\$309	\$921	\$0	\$78	\$0	\$54	\$1,308	20	0	\$0		-\$1,308.00					
Spread Topsoil from Stockpile	105	CUYD	\$1,525	\$588	\$0	\$838	\$0	\$28	\$2,951	20	0	\$0		-\$2,951.00					
Shoring and bracing	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0					
Pull box	320	LNFT	\$0	\$1,164	\$0	\$0	\$0	\$4	\$1,164	20	0	\$0		-\$1,164.00					
Surface restoration	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0					
Grass along pipe route	1320	SQFT	\$73	\$14	\$0	\$0	\$0	\$0	\$88	20	0	\$0		-\$88.00					
Grass at bio swale	25500	SQFT	\$1,415	\$278	\$0	\$0	\$0	\$0	\$1,693	20	0	\$0		-\$1,693.00					
Riprap Apron @ Pipe Inlet	9	CUYD	\$188	\$807	\$0	\$45	\$0	\$116	\$1,040	15	-5	-\$1,272		-\$2,012.56					

LIFE CYCLE COST ANALYSES - LABELLE STORMWATER FACILITY PLAN - STORMWATER ALTERNATIVE 2																(+)		(-)		exp. (-), income (+)	
Description	Quantity	UM	Lab.Total	Mat.Total	Sub.Total	Eqp.Total	Eqp.Rent.Tot	Tot.UnitCost	TotalCost	Expected Life (HUD)	Years Remain	Salvage Value (\$) (+) / Replacement Cost (\$) (-)	Annual O&M	Life Cycle Cost							
Geotextile for Riprap Apron	200	SQFT	\$148	\$73	\$0	\$0	\$0	\$1	\$222	15	-5	-\$271		-\$429.60							
Hydroseeding w/fertilizer and mulch	950	SQYD	\$0	\$0	\$2,715	\$0	\$0	\$3	\$2,715	20	0	\$0		-\$2,715.00							
8" perforated HDPE pipe	1700	LNFT	\$10,097	\$18,509	\$0	\$2,776	\$0	\$18	\$31,382	50	30	\$18,829		-\$16,982.19							
2' diameter precast manhole (swale overflow)	16	VLF	\$5,283	\$7,156	\$0	\$2,519	\$0	\$935	\$14,957	50	30	\$8,974		-\$8,093.89							
5' diameter precast manhole (outlet struct)	4	VLF	\$2,641	\$3,660	\$0	\$1,259	\$0	\$1,890	\$7,561	50	30	\$4,537		-\$4,091.59							
Grated cover for swale overflow struct.	4	EACH	\$1,509	\$5,008	\$0	\$720	\$0	\$1,809	\$7,237	50	30	\$4,342		-\$3,916.26							
30" Grated Inlet Cover for Outlet Struct.	1	EACH	\$440	\$2,069	\$0	\$210	\$0	\$2,719	\$2,719	50	30	\$1,631		-\$1,471.37							
Reinforced concrete pipe	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	50	30	\$0		\$0							
24" standard pipe	240	LNFT	\$14,087	\$21,231	\$0	\$6,716	\$0	\$175	\$42,035	50	30	\$25,221		-\$22,747.00							
30" standard pipe	85	LNFT	\$5,613	\$10,411	\$0	\$2,676	\$0	\$220	\$18,700	50	30	\$11,220		-\$10,119.40							
* Total Site 3a			\$108,861	\$103,983	\$15,542	\$52,945	\$0		\$281,330					-\$225,341							
Site 4																					
Silt sock - erosion barrier	2900	LNFT	\$8,612	\$14,209	\$0	\$0	\$0	\$8	\$22,821	20	0	\$0		-\$22,821.00							
Clear & Grub Site	1	ACRE	\$3,978	\$792	\$0	\$3,590	\$0	\$8,360	\$8,360	20	0	\$0		-\$8,360.00							
Strip & Stockpile Topsoil - Ldr, DZR, Trucks	485	CUYD	\$1,362	\$343	\$0	\$2,486	\$0	\$9	\$4,191	20	0	\$0		-\$4,191.00							
Grading for Access Road	250	LNFT	\$1,693	\$436	\$0	\$1,365	\$0	\$14	\$3,494	20	0	\$0		-\$3,494.00							
Geotextile Fabric for Access Road	5000	SQFT	\$891	\$1,837	\$0	\$0	\$0	\$1	\$2,728	20	0	\$0		-\$2,728.00							
Gravel / Base Material for Access Road	150	CUYD	\$1,685	\$5,569	\$0	\$1,639	\$0	\$59	\$8,893	20	0	\$0		-\$8,893.00							
Excavate Stormwater Pond	5900	CUYD	\$26,157	\$3,597	\$0	\$55,558	\$0	\$14	\$85,312	20	0	\$0		-\$85,312.00							
Haul / Dispose Excavated Material - Assume 30 Minute Cycle	6785	CUYD	\$0	\$0	\$41,554	\$0	\$0	\$6	\$41,554	20	0	\$0		-\$41,554.00							
Tipping Fee for Excavated Material Disposal	6785	CUYD	\$0	\$0	\$18,468	\$0	\$0	\$3	\$18,468	20	0	\$0		-\$18,468.00							
Grading of Pond Area	1	ACRE	\$1,287	\$331	\$0	\$1,037	\$0	\$2,795	\$2,655	20	0	\$0		-\$2,655.00							
Excavate 4' deep trench for bio swale	760	LNFT	\$13,383	\$855	\$0	\$6,380	\$0	\$27	\$20,618	20	0	\$0		-\$20,618.00							
Crushed Stone for bio swale	27	CUYD	\$423	\$1,126	\$0	\$102	\$0	\$61	\$1,651	20	0	\$0		-\$1,651.00							
Bioretention soil for bio swale	136	CUYD	\$2,844	\$2,934	\$0	\$685	\$0	\$48	\$6,463	20	0	\$0		-\$6,463.00							
Excavation @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	50	30	\$0		\$0							
Digging hard Backhoe loader 1 cuyd bucket	160	CUYD	\$865	\$84	\$0	\$356	\$0	\$8	\$1,304	20	0	\$0		-\$1,304.00							
Backfill @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	50	30	\$0		\$0							
Native fill w/compaction	126	CUYD	\$1,838	\$127	\$0	\$464	\$0	\$19	\$2,429	20	0	\$0		-\$2,429.00							
Imported pipe bedding @ trench	12	CUYD	\$156	\$464	\$0	\$39	\$0	\$54	\$659	20	0	\$0		-\$659.00							
Spread Topsoil from Stockpile	485	CUYD	\$7,046	\$2,714	\$0	\$3,870	\$0	\$28	\$13,630	20	0	\$0		-\$13,630.00							
Shoring and bracing	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	50	30	\$0		\$0							
Pull box	160	LNFT	\$0	\$582	\$0	\$0	\$0	\$4	\$582	20	0	\$0		-\$582.00							
Surface restoration	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	50	30	\$0		\$0							
Grass along pipe route	665	SQFT	\$37	\$7	\$0	\$0	\$0	\$0	\$44	20	0	\$0		-\$44.00							
Grass at bio swale	11400	SQFT	\$633	\$124	\$0	\$0	\$0	\$0	\$757	20	0	\$0		-\$757.00							
Riprap Apron @ Pipe Inlet	9	CUYD	\$188	\$807	\$0	\$45	\$0	\$116	\$1,040	15	-5	-\$1,272		-\$2,012.56							
Geotextile for Riprap Apron	200	SQFT	\$148	\$73	\$0	\$0	\$0	\$1	\$222	15	-5	-\$271		-\$429.60							
Hydroseeding w/fertilizer and mulch	4500	SQYD	\$0	\$0	\$12,861	\$0	\$0	\$3	\$12,861	20	0	\$0		-\$12,861.00							
8" perforated HDPE pipe	760	LNFT	\$4,514	\$8,275	\$0	\$1,241	\$0	\$18	\$14,030	50	30	\$8,418		-\$7,592.25							
2' diameter precast manhole (swale overflow)	4	VLF	\$1,321	\$1,789	\$0	\$630	\$0	\$935	\$3,739	50	30	\$2,243		-\$2,023.34							
5' diameter precast manhole (outlet struct)	4	VLF	\$2,641	\$3,660	\$0	\$1,259	\$0	\$1,890	\$7,561	50	30	\$4,537		-\$4,091.59							
30" Grated Inlet Cover for Outlet Struct.	2	EACH	\$880	\$4,137	\$0	\$420	\$0	\$2,719	\$5,438	50	30	\$3,263		-\$2,942.74							
Reinforced concrete pipe	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	50	30	\$0		\$0							
24" standard pipe	110	LNFT	\$6,457	\$9,731	\$0	\$3,078	\$0	\$175	\$19,266	50	30	\$11,560		-\$10,425.68							
30" standard pipe	50	LNFT	\$3,302	\$6,124	\$0	\$1,574	\$0	\$220	\$11,000	50	30	\$6,600		-\$5,952.59							
* Total Site 4			\$92,342	\$70,728	\$72,883	\$85,817	\$0		\$321,770					-\$294,944							
Site 5																					
Silt sock - erosion barrier	5700	LNFT	\$16,927	\$27,927	\$0	\$0	\$0	\$8	\$44,854	20	0	\$0		-\$44,854.00							
Clear & Grub Site	1	ACRE	\$1,989	\$396	\$0	\$1,795	\$0	\$8,360	\$4,180	20	0	\$0		-\$4,180.00							
Strip & Stockpile Topsoil - Ldr, DZR, Trucks	290	CUYD	\$815	\$205	\$0	\$1,486	\$0	\$9	\$2,506	20	0	\$0		-\$2,506.00							
Grading for Access Road	450	LNFT	\$3,048	\$784	\$0	\$2,456	\$0	\$14	\$6,288	20	0	\$0		-\$6,288.00							
Geotextile Fabric for Access Road	9000	SQFT	\$1,603	\$3,307	\$0	\$0	\$0	\$1	\$4,911	15	-5	-\$6,005		-\$9,503.52							
Gravel / Base Material for Access Road	230	CUYD	\$2,584	\$8,539	\$0	\$2,512	\$0	\$59	\$13,636	15	-5	-\$16,674		-\$26,387.70							
Excavate Stormwater Pond	3430	CUYD	\$15,206	\$2,091	\$0	\$32,299	\$0	\$14	\$49,597	20	0	\$0		-\$49,597.00							
Haul / Dispose Excavated Material - Assume 30 Minute Cycle	3950	CUYD	\$0	\$0	\$24,191	\$0	\$0	\$6	\$24,191	20	0	\$0		-\$24,191.00							
Tipping Fee for Excavated Material Disposal	3950	CUYD	\$0	\$0	\$10,752	\$0	\$0	\$3	\$10,752	20	0	\$0		-\$10,752.00							
Grading of Pond Area	1	ACRE	\$677	\$174	\$0	\$546	\$0	\$2,795	\$1,397	20	0	\$0		-\$1,397.00							
Excavate 4' deep trench for bio swale	2440	LNFT	\$42,966	\$2,745	\$0	\$20,485	\$0	\$27	\$66,196	20	0	\$0		-\$66,196.00							
Crushed Stone for bio swale	85	CUYD	\$1,333	\$3,545	\$0	\$321	\$0	\$61	\$5,198	20	0	\$0		-\$5,198.00							
Bioretention soil for bio swale	440	CUYD	\$9,201	\$9,493	\$0	\$2,215	\$0	\$48	\$20,909	20	0	\$0		-\$20,909.00							
Excavation @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	50	30	\$0		\$0							

LIFE CYCLE COST ANALYSES - LABELLE STORMWATER FACILITY PLAN - STORMWATER ALTERNATIVE 2														(+)	(-) exp. (-), income (+)	
Description	Quantity	UM	Lab.Total	Mat.Total	Sub.Total	Eqp.Total	Eqp.Rent.Tot	Tot.UnitCost	TotalCost	Expected Life (HUD)	Years Remain	Salvage Value (\$ (+) / Replacement Cost (\$) (-)	Annual O&M	Life Cycle Cost		
Digging hard Backhoe loader 1 cuyd bucket	491	CUYD	\$2,653	\$257	\$0	\$1,091	\$0	\$8	\$4,001	20	0	\$0	\$0	-\$4,001.00		
Backfill @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Native fill w/compaction	394	CUYD	\$5,753	\$396	\$0	\$1,452	\$0	\$19	\$7,601	20	0	\$0	\$0	-\$7,601.00		
Imported pipe bedding @ trench	38	CUYD	\$478	\$1,423	\$0	\$121	\$0	\$54	\$2,022	20	0	\$0	\$0	-\$2,022.00		
Spread Topsoil from Stockpile	290	CUYD	\$4,213	\$1,623	\$0	\$2,314	\$0	\$28	\$8,150	20	0	\$0	\$0	-\$8,150.00		
Shoring and bracing	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pull box	510	LNFT	\$0	\$1,855	\$0	\$0	\$0	\$4	\$1,855	20	0	\$0	\$0	-\$1,855.00		
Surface restoration	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Grass along pipe route	2040	SQFT	\$113	\$22	\$0	\$0	\$0	\$0	\$135	20	0	\$0	\$0	-\$135.00		
Grass at bio swale	36600	SQFT	\$2,032	\$398	\$0	\$0	\$0	\$0	\$2,430	20	0	\$0	\$0	-\$2,430.00		
Hydroseeding w/fertilizer and mulch	5800	SQYD	\$0	\$0	\$16,577	\$0	\$0	\$3	\$16,577	20	0	\$0	\$0	-\$16,577.00		
8" perforated HDPE pipe	2440	LNFT	\$14,492	\$26,566	\$0	\$3,985	\$0	\$18	\$45,043	50	30	\$27,026	\$0	-\$24,374.76		
2' diameter precast manhole (swale overflow)	20	VLF	\$6,603	\$8,944	\$0	\$3,148	\$0	\$935	\$18,696	50	30	\$11,218	\$0	-\$10,117.23		
Grated cover for swale overflow struct.	5	EACH	\$1,887	\$6,260	\$0	\$900	\$0	\$1,809	\$9,047	50	30	\$5,428	\$0	-\$4,895.73		
Reinforced concrete pipe	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
24" standard pipe	510	LNFT	\$29,936	\$45,116	\$0	\$14,272	\$0	\$175	\$89,324	50	30	\$53,594	\$0	-\$48,337.17		
* Total Site 5			\$164,510	\$152,070	\$51,520	\$91,397	\$0		\$459,496					-\$402,455		
Site 6																
Silt sock - erosion barrier	730	LNFT	\$2,168	\$3,577	\$0	\$0	\$0	\$8	\$5,744	20	0	\$0	\$0	-\$5,744.00		
Clear & Grub Site	1	ACRE	\$3,381	\$673	\$0	\$3,052	\$0	\$8,360	\$7,106	20	0	\$0	\$0	-\$7,106.00		
Strip & Stockpile Topsoil - Ldr, DZR, Trucks	405	CUYD	\$1,138	\$287	\$0	\$2,076	\$0	\$9	\$3,500	20	0	\$0	\$0	-\$3,500.00		
Grading for Access Road	50	LNFT	\$339	\$87	\$0	\$273	\$0	\$14	\$699	20	0	\$0	\$0	-\$699.00		
Geotextile Fabric for Access Road	1000	SQFT	\$178	\$367	\$0	\$0	\$0	\$1	\$546	15	-5	-\$668	\$0	-\$1,056.59		
Gravel / Base Material for Access Road	30	CUYD	\$337	\$1,114	\$0	\$328	\$0	\$59	\$1,779	15	-5	-\$2,175	\$0	-\$3,442.63		
Excavate Stormwater Pond	4900	CUYD	\$21,724	\$2,988	\$0	\$46,141	\$0	\$14	\$70,852	20	0	\$0	\$0	-\$70,852.00		
Haul / Dispose Excavated Material - Assume 30 Minute Cycle	5635	CUYD	\$0	\$0	\$34,511	\$0	\$0	\$6	\$34,511	20	0	\$0	\$0	-\$34,511.00		
Tipping Fee for Excavated Material Disposal	5635	CUYD	\$0	\$0	\$15,338	\$0	\$0	\$3	\$15,338	20	0	\$0	\$0	-\$15,338.00		
Grading of Pond Area	1	ACRE	\$1,152	\$296	\$0	\$928	\$0	\$2,795	\$2,376	20	0	\$0	\$0	-\$2,376.00		
Excavation @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Digging hard Backhoe loader 1 cuyd bucket	130	CUYD	\$702	\$68	\$0	\$289	\$0	\$8	\$1,059	20	0	\$0	\$0	-\$1,059.00		
Backfill @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Native fill w/compaction	98	CUYD	\$1,434	\$99	\$0	\$362	\$0	\$19	\$1,894	20	0	\$0	\$0	-\$1,894.00		
Imported pipe bedding @ trench	10	CUYD	\$127	\$377	\$0	\$32	\$0	\$54	\$535	20	0	\$0	\$0	-\$535.00		
Spread Topsoil from Stockpile	405	CUYD	\$5,883	\$2,267	\$0	\$3,232	\$0	\$28	\$11,382	20	0	\$0	\$0	-\$11,382.00		
Shoring and bracing	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pull box	120	LNFT	\$0	\$437	\$0	\$0	\$0	\$4	\$437	20	0	\$0	\$0	-\$437.00		
Surface restoration	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Grass along pipe route	540	SQFT	\$30	\$6	\$0	\$0	\$0	\$0	\$36	20	0	\$0	\$0	-\$36.00		
Riprap Apron @ Pipe Inlet	9	CUYD	\$188	\$807	\$0	\$45	\$0	\$116	\$1,040	15	-5	-\$1,272	\$0	-\$2,012.56		
Geotextile for Riprap Apron	200	SQFT	\$148	\$73	\$0	\$0	\$0	\$1	\$222	15	-5	-\$271	\$0	-\$429.60		
Hydroseeding w/fertilizer and mulch	3700	SQYD	\$0	\$0	\$10,575	\$0	\$0	\$3	\$10,575	20	0	\$0	\$0	-\$10,575.00		
5' diameter precast manhole (outlet struct)	4	VLF	\$2,641	\$3,660	\$0	\$1,259	\$0	\$1,890	\$7,561	50	30	\$4,537	\$0	-\$4,091.59		
30" Grated Inlet Cover for Outlet Struct.	1	EACH	\$440	\$2,069	\$0	\$210	\$0	\$2,719	\$2,719	50	30	\$1,631	\$0	-\$1,471.37		
Reinforced concrete pipe	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
30" standard pipe	120	LNFT	\$7,924	\$14,699	\$0	\$3,778	\$0	\$220	\$26,401	50	30	\$15,841	\$0	-\$14,286.75		
* Total Site 6			\$49,934	\$33,949	\$60,424	\$62,004	\$0		\$206,312					-\$192,835		
Site 7																
Silt sock - erosion barrier	460	LNFT	\$1,366	\$2,254	\$0	\$0	\$0	\$8	\$3,620	20	0	\$0	\$0	-\$3,620.00		
Clear & Grub Site	1	LS	\$4,376	\$871	\$0	\$3,949	\$0	\$9,196	\$9,196	20	0	\$0	\$0	-\$9,196.00		
Strip & Stockpile Topsoil - Ldr, DZR, Trucks	170	CUYD	\$478	\$120	\$0	\$871	\$0	\$9	\$1,469	20	0	\$0	\$0	-\$1,469.00		
Excavate Stormwater Pond	1960	CUYD	\$8,689	\$1,195	\$0	\$18,456	\$0	\$14	\$28,341	20	0	\$0	\$0	-\$28,341.00		
Haul / Dispose Excavated Material - Assume 30 Minute Cycle	2250	CUYD	\$0	\$0	\$13,780	\$0	\$0	\$6	\$13,780	20	0	\$0	\$0	-\$13,780.00		
Tipping Fee for Excavated Material Disposal	2250	CUYD	\$0	\$0	\$6,124	\$0	\$0	\$3	\$6,124	20	0	\$0	\$0	-\$6,124.00		
Grading of Pond Area	1	LS	\$1,355	\$348	\$0	\$1,092	\$0	\$2,795	\$2,795	20	0	\$0	\$0	-\$2,795.00		
Excavation @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Digging hard Backhoe loader 1 cuyd bucket	54	CUYD	\$293	\$28	\$0	\$120	\$0	\$8	\$441	20	0	\$0	\$0	-\$441.00		
Backfill @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Native fill w/compaction	41	CUYD	\$597	\$41	\$0	\$151	\$0	\$19	\$789	20	0	\$0	\$0	-\$789.00		
Imported pipe bedding @ trench	4	CUYD	\$53	\$157	\$0	\$13	\$0	\$54	\$223	20	0	\$0	\$0	-\$223.00		
Spread Topsoil from Stockpile	170	CUYD	\$2,470	\$951	\$0	\$1,357	\$0	\$28	\$4,778	20	0	\$0	\$0	-\$4,778.00		
Shoring and bracing	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Pull box	50	LNFT	\$0	\$182	\$0	\$0	\$0	\$4	\$182	20	0	\$0	\$0	-\$182.00		

LIFE CYCLE COST ANALYSES - LABELLE STORMWATER FACILITY PLAN - STORMWATER ALTERNATIVE 2													(+)		(-)		exp. (-), income (+)	
Description	Quantity	UM	Lab.Total	Mat.Total	Sub.Total	Eqp.Total	Eqp.Rent.Tot	Tot.UnitCost	TotalCost	Expected Life (HUD)	Years Remain	Salvage Value (\$) (+) / Replacement Cost (\$) (-)	Annual O&M	Life Cycle Cost				
Surface restoration	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0				
Grass along pipe route	225	SQFT	\$12	\$2	\$0	\$0	\$0	\$0	\$15	20	0	\$0		-\$15.00				
Hydroseeding w/fertilizer and mulch	1500	SQYD	\$0	\$0	\$4,287	\$0	\$0	\$3	\$4,287	20	0	\$0		-\$4,287.00				
5' diameter precast manhole (outlet struct)	4	VLF	\$2,641	\$3,660	\$0	\$1,259	\$0	\$1,890	\$7,561	50	30	\$4,537		-\$4,091.59				
30" Grated Inlet Cover for Outlet Struct.	1	EACH	\$440	\$2,069	\$0	\$210	\$0	\$2,719	\$2,719	50	30	\$1,631		-\$1,471.37				
Reinforced concrete pipe	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0				
30" standard pipe	50	LNFT	\$3,302	\$6,124	\$0	\$1,574	\$0	\$220	\$11,000	50	30	\$6,600		-\$5,952.59				
* Total Site 7			\$26,072	\$18,004	\$24,191	\$29,053	\$0		\$97,320					-\$87,556				
Total Construction Estimate			\$679,321	\$683,926	\$245,304	\$430,004	\$0	\$0	\$2,038,553					-\$1,713,624				
Construction Estimate Contingency (25%)									\$509,638					-\$428,406				
Total Construction Estimate									\$2,548,191					-\$2,142,030				
Annual Operations and Maintenance													\$39,000.00	-\$679,583.37				
Land Acquisition		Acquisition	1	LS					\$160,000					-\$160,000				
		Planning	1	LS	2%				\$51,000					-\$51,000				
		Design	1	LS	10%				\$255,000					-\$255,000				
		Field Ser.	1	LS	5%				\$128,000					-\$128,000				
		Legal & Admin	1	LS	1%				\$26,000					-\$26,000				
		Grant Adm.	1	LS	2%				\$51,000					-\$51,000				
									Project Const. Cost =					2,549,000				
									Total Project Cost =					3,220,000				
													LCCA =	-3,493,000				

LIFE CYCLE COST ANALYSES - LABELLE STORMWATER FACILITY PLAN - STORMWATER ALTERNATIVE 3																										(+)		(-)		exp. (-), income (+)			
	Description	Quantity	UM	Lab.Total	Mat.Total	Sub.Total	Eqp.Total	Eqp.Rent.Tot	Tot.UnitCost	TotalCost		Expected Life (HUD)	Years Remain	Salvage Value (\$) (+) / Replacement Cost (\$) (-)	Annual O&M	Life Cycle Cost																	
Site 8	Silt sock - erosion barrier	8500	LNFT	\$25,242	\$41,646	\$0	\$0	\$0	\$8	\$66,888		20	0	\$0		-\$66,888.00															Rate		
	Clear & Grub Site	13	ACRE	\$49,725	\$9,898	\$0	\$44,879	\$0	\$8,360	\$104,502		20	0	\$0		-\$104,502.00															Term		
	Strip & Stockpile Topsoil - Ldr, DZR, Trucks	6700	CUYD	\$18,821	\$4,742	\$0	\$34,341	\$0	\$9	\$57,903		20	0	\$0		-\$57,903.00															20		
	Grading for Access Road	50	LNFT	\$339	\$87	\$0	\$273	\$0	\$14	\$699		20	0	\$0		-\$699.00																	
	Geotextile Fabric for Access Road	1000	SQFT	\$178	\$367	\$0	\$0	\$0	\$1	\$546		15	-5	-\$668		-\$1,056.59																	
	Gravel / Base Material for Access Road	30	CUYD	\$337	\$1,114	\$0	\$328	\$0	\$59	\$1,779		15	-5	-\$2,175		-\$3,442.63																	
	Excavate Stormwater Pond	80800	CUYD	\$358,217	\$49,265	\$0	\$760,856	\$0	\$14	\$1,168,338		20	0	\$0		-\$1,168,338.00																	
	Haul / Dispose Excavated Material - Assume 30 Minute Cycle	92900	CUYD	\$0	\$0	\$568,954	\$0	\$0	\$6	\$568,954		20	0	\$0		-\$568,954.00																	
	Tipping Fee for Excavated Material Disposal	92900	CUYD	\$0	\$0	\$252,869	\$0	\$0	\$3	\$252,869		20	0	\$0		-\$252,869.00																	
	Grading of Pond Area	13	ACRE	\$16,935	\$4,355	\$0	\$13,646	\$0	\$2,795	\$34,936		20	0	\$0		-\$34,936.00																	
	Excavate 4' deep trench for bio swale	2755	LNFT	\$48,513	\$3,100	\$0	\$23,129	\$0	\$27	\$74,742		20	0	\$0		-\$74,742.00																	
	Crushed Stone for bio swale	100	CUYD	\$1,568	\$4,170	\$0	\$378	\$0	\$61	\$6,116		20	0	\$0		-\$6,116.00																	
	Bioretention soil for bio swale	490	CUYD	\$10,246	\$10,572	\$0	\$2,466	\$0	\$48	\$23,284		20	0	\$0		-\$23,284.00																	
	Excavation @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0		20	0	\$0		\$0																	
	Digging hard Backhoe loader 1 cuyd bucket	112	CUYD	\$605	\$59	\$0	\$249	\$0	\$8	\$912		20	0	\$0		-\$912.00																	
	Backfill @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0		20	0	\$0		\$0																	
	Native fill w/compaction	87	CUYD	\$1,274	\$88	\$0	\$322	\$0	\$19	\$1,683		20	0	\$0		-\$1,683.00																	
	Imported pipe bedding @ trench	9	CUYD	\$109	\$324	\$0	\$27	\$0	\$54	\$461		20	0	\$0		-\$461.00																	
	Spread Topsoil from Stockpile	6700	CUYD	\$97,331	\$37,498	\$0	\$53,464	\$0	\$28	\$188,293		20	0	\$0		-\$188,293.00																	
	Shoring and bracing	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0		20	0	\$0		\$0																	
	Pull box	80	LNFT	\$0	\$291	\$0	\$0	\$0	\$4	\$291		20	0	\$0		-\$291.00																	
	Surface restoration	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0		20	0	\$0		\$0																	
	Grass along pipe route	465	SQFT	\$26	\$5	\$0	\$0	\$0	\$0	\$31		20	0	\$0		-\$31.00																	
	Grass at bio swale	41325	SQFT	\$2,294	\$450	\$0	\$0	\$0	\$0	\$2,744		20	0	\$0		-\$2,744.00																	
	Riprap Apron @ Pipe Inlet	9	CUYD	\$188	\$807	\$0	\$45	\$0	\$116	\$1,040		15	-5	-\$1,272		-\$2,012.56																	
	Geotextile for Riprap Apron	200	SQFT	\$148	\$73	\$0	\$0	\$0	\$1	\$222		15	-5	-\$271		-\$429.60																	
	Hydroseeding w/fertilizer and mulch	60600	SQYD	\$0	\$0	\$173,197	\$0	\$0	\$3	\$173,197		20	0	\$0		-\$173,197.00																	
	8" perforated HDPE pipe	2755	LNFT	\$16,363	\$29,996	\$0	\$4,499	\$0	\$18	\$50,858		50	30	\$30,515		-\$27,521.51																	
	2' diameter precast manhole (swale overflow)	4	VLF	\$1,321	\$1,789	\$0	\$630	\$0	\$935	\$3,739		50	30	\$2,243		-\$2,023.34																	
	5' diameter precast manhole (outlet struct)	4	VLF	\$2,641	\$3,660	\$0	\$1,259	\$0	\$1,890	\$7,561		50	30	\$4,537		-\$4,091.59																	
	Grated cover for swale overflow struct.	1	EACH	\$377	\$1,252	\$0	\$180	\$0	\$1,809	\$1,809		50	30	\$1,085		-\$978.93																	
	30" Grated Inlet Cover for Outlet Struct.	1	EACH	\$440	\$2,069	\$0	\$210	\$0	\$2,719	\$2,719		50	30	\$1,631		-\$1,471.37																	
	Reinforced concrete pipe	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0		20	0	\$0		\$0																	
	24" standard pipe	30	LNFT	\$1,761	\$2,654	\$0	\$840	\$0	\$175	\$5,254		50	30	\$3,152		-\$2,843.17																	
	30" standard pipe	50	LNFT	\$3,302	\$6,124	\$0	\$1,574	\$0	\$220	\$11,000		50	30	\$6,600		-\$5,952.59																	
* Total Site 8				\$658,301	\$216,455	\$995,020	\$943,594	\$0		\$2,813,370						-\$2,778,667																	
Site 9a	*Not included since Site 11b is more expensive																																
	Silt sock - erosion barrier	2930	LNFT	\$8,701	\$14,356	\$0	\$0	\$0	\$8	\$23,057		20	0	\$0		-\$23,057.00																	
	Clear & Grub Site	13	ACRE	\$49,725	\$9,898	\$0	\$44,879	\$0	\$8,360	\$104,502		20	0	\$0		-\$104,502.00																	
	Strip & Stockpile Topsoil - Ldr, DZR, Trucks	320	CUYD	\$899	\$226	\$0	\$1,640	\$0	\$9	\$2,766		20	0	\$0		-\$2,766.00																	
	Grading for Access Road	250	LNFT	\$1,693	\$436	\$0	\$1,365	\$0	\$14	\$3,494		20	0	\$0		-\$3,494.00																	
	Geotextile Fabric for Access Road	5000	SQFT	\$891	\$1,837	\$0	\$0	\$0	\$1	\$2,728		15	-5	-\$3,336		-\$5,279.09																	
	Gravel / Base Material for Access Road	130	CUYD	\$1,461	\$4,827	\$0	\$1,420	\$0	\$59	\$7,707		15	-5	-\$9,424		-\$14,914.20																	
	Excavate Stormwater Pond	51520	CUYD	\$228,408	\$31,413	\$0	\$485,140	\$0	\$14	\$744,979		20	0	\$0		-\$744,979.20																	
	Haul / Dispose Excavated Material - Assume 30 Minute Cycle	59280	CUYD	\$0	\$0	\$363,031	\$0	\$0	\$6	\$363,031		20	0	\$0		-\$363,030.72																	
	Tipping Fee for Excavated Material Disposal	59280	CUYD	\$0	\$0	\$161,360	\$0	\$0	\$3	\$161,360		20	0	\$0		-\$161,360.16																	
	Grading of Pond Area	13	ACRE	\$16,935	\$4,355	\$0	\$13,646	\$0	\$2,795	\$34,936		20	0	\$0		-\$34,936.00																	
	Excavation @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0		20	0	\$0		\$0																	
	Digging hard Backhoe loader 1 cuyd bucket	574	CUYD	\$3,102	\$301	\$0	\$1,275	\$0	\$8	\$4,678		20	0	\$0		-\$4,678.00																	
	Backfill @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0		20	0	\$0		\$0																	
	Native fill w/compaction	434	CUYD	\$6,332	\$436	\$0	\$1,598	\$0	\$19	\$8,366		20	0	\$0		-\$8,366.00																	
	Imported pipe bedding @ trench	44	CUYD	\$559	\$1,664	\$0	\$141	\$0	\$54	\$2,364		20	0	\$0		-\$2,364.00																	
	Spread Topsoil from Stockpile	320	CUYD	\$4,649	\$																												

LIFE CYCLE COST ANALYSES - LABELLE STORMWATER FACILITY PLAN - STORMWATER ALTERNATIVE 3													(+)	(-)	exp. (-), income (+)
Description	Quantity	UM	Lab.Total	Mat.Total	Sub.Total	Eqp.Total	Eqp.Rent.Tot	Tot.UnitCost	TotalCost	Expected Life (HUD)	Years Remain	Salvage Value (\$) (+) / Replacement Cost (\$) (-)	Annual O&M	Life Cycle Cost	
30" Grated Inlet Cover for Outlet Struct.	1	EACH	\$440	\$2,069	\$0	\$210	\$0	\$2,719	\$2,719	50	30	\$1,631		-\$1,471.37	
Reinforced concrete pipe	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	50	0	\$0		\$0	
48" standard pipe	530	LNFT	\$39,998	\$137,050	\$0	\$19,069	\$0	\$370	\$196,117	50	30	\$117,670		-\$106,127.58	
* Total Site 9a			\$366,902	\$217,151	\$694,159	\$574,241	\$0		\$1,852,474					-\$1,768,706	
Site 9b															
Silt sock - erosion barrier	4500	LNFT	\$13,363	\$22,048	\$0	\$0	\$0	\$8	\$35,411	20	0	\$0		-\$35,411.00	
Clear & Grub Site	28	ACRE	\$111,383	\$22,171	\$0	\$100,530	\$0	\$8,360	\$234,084	20	0	\$0		-\$234,084.00	
Strip & Stockpile Topsoil - Ldr, DZR, Trucks	15000	CUYD	\$42,136	\$10,616	\$0	\$76,882	\$0	\$9	\$129,634	20	0	\$0		-\$129,634.00	
Grading for Access Road	50	LNFT	\$339	\$87	\$0	\$273	\$0	\$14	\$699	20	0	\$0		-\$699.00	
Geotextile Fabric for Access Road	1000	SQFT	\$178	\$367	\$0	\$0	\$0	\$1	\$546	15	-5	-\$668		-\$1,056.59	
Gravel / Base Material for Access Road	30	CUYD	\$337	\$1,114	\$0	\$328	\$0	\$59	\$1,779	15	-5	-\$2,175		-\$3,442.63	
Excavate Stormwater Pond	124810	CUYD	\$553,330	\$76,099	\$0	\$1,175,277	\$0	\$14	\$1,804,753	20	0	\$0		-\$1,804,752.60	
Haul / Dispose Excavated Material - Assume 30 Minute Cycle	143590	CUYD	\$0	\$0	\$879,345	\$0	\$0	\$6	\$879,345	20	0	\$0		-\$879,345.16	
Tipping Fee for Excavated Material Disposal	143590	CUYD	\$0	\$0	\$390,852	\$0	\$0	\$3	\$390,852	20	0	\$0		-\$390,851.98	
Grading of Pond Area	28	ACRE	\$37,934	\$9,755	\$0	\$30,567	\$0	\$2,795	\$78,256	20	0	\$0		-\$78,256.00	
Excavation @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	50	0	\$0		\$0	
Digging hard Backhoe loader 1 cuyd bucket	3055	CUYD	\$16,503	\$1,599	\$0	\$6,786	\$0	\$8	\$24,888	20	0	\$0		-\$24,888.00	
Backfill @ pipe trench	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	50	0	\$0		\$0	
Native fill w/compaction	2308	CUYD	\$33,693	\$2,319	\$0	\$8,501	\$0	\$19	\$44,514	20	0	\$0		-\$44,514.00	
Imported pipe bedding @ trench	235	CUYD	\$2,974	\$8,852	\$0	\$750	\$0	\$54	\$12,576	20	0	\$0		-\$12,576.00	
Spread Topsoil from Stockpile	15000	CUYD	\$217,905	\$83,951	\$0	\$119,696	\$0	\$28	\$421,552	20	0	\$0		-\$421,552.00	
Shoring and bracing	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	50	0	\$0		\$0	
Pull box	2820	LNFT	\$0	\$10,259	\$0	\$0	\$0	\$4	\$10,259	20	0	\$0		-\$10,259.00	
Surface restoration	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	50	0	\$0		\$0	
Grass along pipe route	12690	SQFT	\$704	\$138	\$0	\$0	\$0	\$0	\$843	20	0	\$0		-\$843.00	
Riprap Apron @ Pipe Inlet	9	CUYD	\$188	\$807	\$0	\$45	\$0	\$116	\$1,040	15	-5	-\$1,272		-\$2,012.56	
Geotextile for Riprap Apron	200	SQFT	\$148	\$73	\$0	\$0	\$0	\$1	\$222	15	-5	-\$271		-\$429.60	
Hydroseeding w/fertilizer and mulch	136000	SQYD	\$0	\$0	\$388,694	\$0	\$0	\$3	\$388,694	20	0	\$0		-\$388,694.00	
5' diameter precast manhole (outlet struct)	4	VLF	\$2,641	\$3,660	\$0	\$1,259	\$0	\$1,890	\$7,561	50	30	\$4,537		-\$4,091.59	
30" Grated Inlet Cover for Outlet Struct.	1	EACH	\$440	\$2,069	\$0	\$210	\$0	\$2,719	\$2,719	50	30	\$1,631		-\$1,471.37	
Reinforced concrete pipe	0	****	\$0	\$0	\$0	\$0	\$0	\$0	\$0	50	0	\$0		\$0	
48" standard pipe	2820	LNFT	\$212,819	\$729,209	\$0	\$101,463	\$0	\$370	\$1,043,491	50	30	\$626,095		-\$564,679.14	
* Total Site 9b			\$1,247,018	\$985,193	\$1,658,891	\$1,622,568	\$0		\$5,513,718					-\$5,033,543	
Total Construction Estimate			\$1,905,318	\$1,201,648	\$2,653,911	\$2,566,163	\$0	\$0	\$8,327,088					-\$7,812,210	
Construction Estimate Contingency (25%)									\$2,081,772					-\$1,953,053	
Total Construction Estimate									\$10,408,860					-\$9,765,263	
Annual Operations and Maintenance													\$33,000.00	-\$575,032.08	
Land Acquisition		Acquisition	1	LS					\$150,000					-\$150,000.00	
		Planning	1	LS	2%				\$209,000					-\$209,000.00	
		Design	1	LS	10%				\$1,041,000					-\$1,041,000.00	
		Field Ser.	1	LS	5%				\$521,000					-\$521,000.00	
		Legal & Admin	1	LS	1%				\$105,000					-\$105,000.00	
		Grant Adm.	1	LS	2%				\$209,000					-\$209,000.00	
									Project Const. Cost =					10,409,000	
									Total Project Cost =					12,644,000	
													LCCA =	-12,576,000	

Life Cycle Cost Analyses - LaBelle Stormwater Facility Plan - On-Site Disposal Alternative 1

	Quantity	Unit	Unit Cost	Total Cost	Years	Present Value
Initial Expenses						
Initial Investment Cost (one time start-up costs)						
Construction Management	1	LPSM	\$0	\$0	0	\$0
Land Acquisition	1	LPSM	\$0	\$0	0	\$0
Site Investigation	1	LPSM	\$0	\$0	0	\$0
Design Services	1	LPSM	\$0	\$0	0	\$0
Construction	1	LPSM	\$0	\$0	0	\$0
Equipment	1	LPSM	\$0	\$0	0	\$0
Technology	1	LPSM	\$0	\$0	0	\$0
Indirect/Administration	1	LPSM	\$0	\$0	0	\$0
Art	1	LPSM	\$0	\$0	0	\$0
Contingency	1	LPSM	\$0	\$0	0	\$0
Future Expenses						
Operations Cost (annual costs)						
Heating Fuel	1	GALS	\$0.00	\$0	20	\$0
Electricity	1	KWH	\$0.00	\$0	20	\$0
Water and Sewer	1	LPSM	\$0	\$0	20	\$0
Garbage Disposal	1	LPSM	\$0	\$0	20	\$0
Custodial	1	LPSM	\$0	\$0	20	\$0
Grounds	1	LPSM	\$0	\$0	20	\$0
Lease	1	LPSM	\$0	\$0	20	\$0
Insurance	1	LPSM	\$0	\$0	20	\$0
Other	2	LPSM		\$0	20	\$0
Maintenance & Repair Cost (upkeep costs ... estimate on annual basis)						
Site Improvements	1	LPSM	\$0	\$0	20	\$0
Site Utilities	1	LPSM	\$0	\$0	20	\$0
Foundation/Substructure	0	GSF	\$0.00	\$0	20	\$0
Superstructure	0	GSF	\$0.00	\$0	20	\$0
Exterior Wall Systems	1	EWSF	\$0.00	\$0	20	\$0
Exterior Windows	1	GLSF	\$0.00	\$0	20	\$0
Exterior Doors	1	LEAF	\$0.00	\$0	20	\$0
Roof Systems	1	RFSF	\$0.00	\$0	20	\$0
Interior Partitions	1	PTSF	\$0.00	\$0	20	\$0
Interior Doors	1	LEAF	\$0.00	\$0	20	\$0
Interior Floor Finishes	1	FFSF	\$0.00	\$0	20	\$0
Interior Wall Finishes	1	WFSF	\$0.00	\$0	20	\$0
Interior Ceiling Finishes	1	CFSF	\$0.00	\$0	20	\$0
Interior Specialities	0	GSF	\$0.00	\$0	20	\$0
Conveying Systems	1	LPSM	\$0	\$0	20	\$0
Plumbing Piping	0	GSF	\$0.00	\$0	20	\$0
Plumbing Fixtures	1	FIXT	\$0.00	\$0	20	\$0
Fire Protection Systems	0	GSF	\$0.00	\$0	20	\$0
HVAC Distribution	0	GSF	\$0.00	\$0	20	\$0
HVAC Equipment	1	LPSM	\$0	\$0	20	\$0
HVAC Controls	0	GSF	\$0.00	\$0	20	\$0
Special Mechanical Systems	0	GSF	\$0.00	\$0	20	\$0
Electrical Service/Generation	1	LPSM	\$0	\$0	20	\$0
Electrical Distribution	0	GSF	\$0.00	\$0	20	\$0
Electrical Lighting	0	GSF	\$0.00	\$0	20	\$0
Special Electrical Systems	0	GSF	\$0.00	\$0	20	\$0
Equipment & Furnishings	1	LPSM	\$0	\$0	20	\$0

Life Cycle Cost Analyses - LaBelle Stormwater Facility Plan - On-Site Disposal Alternative 1

	Quantity	Unit	Unit Cost	Total Cost	Years	Present Value
Pump OSTED Quarterly	4	EA	\$450	\$1,800	20	\$26,534
Other	1	LPSM	\$0	\$0	20	\$0
Replacement Cost (scheduled replacement of system or component)						
Site Improvements	1	LPSM	\$0	\$0	1	\$0
Site Utilities	1	LPSM	\$0	\$0	1	\$0
Foundation/Substructure	0	GSF	\$0.00	\$0	1	\$0
Superstructure	0	GSF	\$0.00	\$0	1	\$0
Exterior Wall Systems	1	EWSF	\$0.00	\$0	1	\$0
Exterior Windows	1	GLSF	\$0.00	\$0	1	\$0
Exterior Doors	1	LEAF	\$0.00	\$0	1	\$0
Roof Systems	1	RFSF	\$0.00	\$0	1	\$0
Interior Partitions	1	PTSF	\$0.00	\$0	1	\$0
Interior Doors	1	LEAF	\$0.00	\$0	1	\$0
Interior Floor Finishes	1	FFSF	\$0.00	\$0	1	\$0
Interior Wall Finishes	1	WFSF	\$0.00	\$0	1	\$0
Interior Ceiling Finishes	1	CFSF	\$0.00	\$0	1	\$0
Interior Specialities	0	GSF	\$0.00	\$0	1	\$0
Conveying Systems	1	LPSM	\$0	\$0	1	\$0
Plumbing Piping	0	GSF	\$0.00	\$0	1	\$0
Plumbing Fixtures	1	FIXT	\$0.00	\$0	1	\$0
Fire Protection Systems	0	GSF	\$0.00	\$0	1	\$0
HVAC Distribution	0	GSF	\$0.00	\$0	1	\$0
HVAC Equipment	1	LPSM	\$0	\$0	1	\$0
HVAC Controls	0	GSF	\$0.00	\$0	1	\$0
Special Mechanical Systems	0	GSF	\$0.00	\$0	1	\$0
Electrical Service/Generation	1	LPSM	\$0	\$0	1	\$0
Electrical Distribution	0	GSF	\$0.00	\$0	1	\$0
Electrical Lighting	0	GSF	\$0.00	\$0	1	\$0
Special Electrical Systems	0	GSF	\$0.00	\$0	1	\$0
Equipment & Furnishings	1	LPSM	\$0	\$0	1	\$0
Pump OSTED Quarterly	1	LPSM	\$0	\$0	1	\$0
Other	1	LPSM	\$0	\$0	1	\$0
Residual Value (value of facility at end of study period)						
Site Improvements	1	LPSM	\$0	\$0	1	\$0
Site Utilities	1	LPSM	\$0	\$0	1	\$0
Foundation/Substructure	0	GSF	\$0.00	\$0	1	\$0
Superstructure	0	GSF	\$0.00	\$0	1	\$0
Exterior Wall Systems	1	EWSF	\$0.00	\$0	1	\$0
Exterior Windows	1	GLSF	\$0.00	\$0	1	\$0
Exterior Doors	1	LEAF	\$0.00	\$0	1	\$0
Roof Systems	1	RFSF	\$0.00	\$0	1	\$0
Interior Partitions	1	PTSF	\$0.00	\$0	1	\$0
Interior Doors	1	LEAF	\$0.00	\$0	1	\$0
Interior Floor Finishes	1	FFSF	\$0.00	\$0	1	\$0
Interior Wall Finishes	1	WFSF	\$0.00	\$0	1	\$0
Interior Ceiling Finishes	1	CFSF	\$0.00	\$0	1	\$0
Interior Specialities	0	GSF	\$0.00	\$0	1	\$0
Conveying Systems	1	LPSM	\$0	\$0	1	\$0
Plumbing Piping	0	GSF	\$0.00	\$0	1	\$0
Plumbing Fixtures	1	FIXT	\$0.00	\$0	1	\$0
Fire Protection Systems	0	GSF	\$0.00	\$0	1	\$0

Life Cycle Cost Analyses - LaBelle Stormwater Facility Plan - On-Site Disposal Alternative 1

	Quantity	Unit	Unit Cost	Total Cost	Years	Present Value
HVAC Distribution	0	GSF	\$0.00	\$0	1	\$0
HVAC Equipment	1	LPSM	\$0	\$0	1	\$0
HVAC Controls	0	GSF	\$0.00	\$0	1	\$0
Special Mechanical Systems	0	GSF	\$0.00	\$0	1	\$0
Electrical Service/Generation	1	LPSM	\$0	\$0	1	\$0
Electrical Distribution	0	GSF	\$0.00	\$0	1	\$0
Electrical Lighting	0	GSF	\$0.00	\$0	1	\$0
Special Electrical Systems	0	GSF	\$0.00	\$0	1	\$0
Equipment & Furnishings	1	LPSM	\$0	\$0	1	\$0
Pump OSTED Quarterly	1	LPSM	\$0	\$0	1	\$0
Other	1	LPSM	\$0	\$0	1	\$0
Total Life Cycle of Alternate #1						\$26,534

Life Cycle Cost Analyses - LaBelle Stormwater Facility Plan - On-Site Disposal Alternative 2

	Quantity	Unit	Unit Cost	Total Cost	Years	Present Value
Initial Expenses						
Initial Investment Cost (one time start-up costs)						
OSTDS (performance based)	1	LPSM	\$0	\$0	0	\$0
Land Acquisition	1	LPSM	\$0	\$0	0	\$0
Site Investigation	1	LPSM	\$750	\$750	0	\$750
Design Services	1	LPSM	\$500	\$500	0	\$1,000
Construction	1	LPSM	\$10,000	\$10,000	0	\$10,000
Equipment	1	LPSM	\$6,000	\$6,000	0	\$6,000
Technology	1	LPSM	\$1,000	\$1,000	0	\$1,000
Indirect/Administration	1	LPSM	\$500	\$500	0	\$500
	1	LPSM	\$0	\$0	0	\$0
Contingency	1	LPSM	\$500	\$500	0	\$500
Future Expenses						
Operations Cost (annual costs)						
	1	GALS		\$0	20	\$0
Electricity	1	KWH	\$0.00	\$0	20	\$0
Water and Sewer	1	LPSM	\$0	\$0	20	\$0
Class A Operator	1	LPSM	\$500	\$500	20	\$7,370
	1	LPSM	\$0	\$0	20	\$0
	1	LPSM	\$0	\$0	20	\$0
	1	LPSM	\$0	\$0	20	\$0
Insurance	1	LPSM	\$100	\$100	20	\$1,474
Other	1	LPSM	\$0	\$0	20	\$0
Maintenance & Repair Cost (upkeep costs ... estimate on annual basis)						
Site Improvements	1	LPSM	\$100	\$100	20	\$1,474
Site Utilities	1	LPSM	\$200	\$200	20	\$2,948
Foundation/Substructure	1	GSF	\$25.00	\$25	20	\$369
Superstructure	0	GSF	\$0.00	\$0	20	\$0
	1	EWSF	\$0.00	\$0	20	\$0
	1	GLSF	\$0.00	\$0	20	\$0
	1	LEAF	\$0.00	\$0	20	\$0
	1	RFSF	\$0.00	\$0	20	\$0
	1	PTSF	\$0.00	\$0	20	\$0
	1	LEAF	\$0.00	\$0	20	\$0
	1	FFSF	\$0.00	\$0	20	\$0
	1	WFSF	\$0.00	\$0	20	\$0
	1	CFSF	\$0.00	\$0	20	\$0
	0	GSF	\$0.00	\$0	20	\$0
	1	LPSM	\$0	\$0	20	\$0
Plumbing Piping	0	GSF	\$0.00	\$0	20	\$0
Plumbing Fixtures	1	FIXT	\$0.00	\$0	20	\$0
	0	GSF	\$0.00	\$0	20	\$0
	0	GSF	\$0.00	\$0	20	\$0
	1	LPSM	\$0	\$0	20	\$0
	0	GSF	\$0.00	\$0	20	\$0
Special Mechanical Systems	1	GSF	\$200.00	\$200	20	\$2,948
Electrical Service/Generation	1	LPSM	\$0	\$0	20	\$0

Life Cycle Cost Analyses - LaBelle Stormwater Facility Plan - On-Site Disposal Alternative 2

	Quantity	Unit	Unit Cost	Total Cost	Years	Present Value
Electrical Distribution	0	GSF	\$0.00	\$0	20	\$0
Electrical Lighting	0	GSF	\$0.00	\$0	20	\$0
Special Electrical Systems	1	GSF	\$200.00	\$200	20	\$2,948
Equipment & Furnishings	1	LPSM	\$0	\$0	20	\$0
Other	1	LPSM	\$0	\$0	20	\$0
Other	1	LPSM	\$0	\$0	20	\$0

Replacement Cost (scheduled replacement of system or component)

Site Improvements	1	LPSM	\$0	\$0	1	\$0
Site Utilities	1	LPSM	\$0	\$0	1	\$0
Foundation/Substructure	0	GSF	\$0	\$0	1	\$0
Superstructure	0	GSF	\$0.00	\$0	1	\$0
	1	EWSF	\$0.00	\$0	1	\$0
	1	GLSF	\$0.00	\$0	1	\$0
	1	LEAF	\$0.00	\$0	1	\$0
	1	RFSF	\$0.00	\$0	1	\$0
	1	PTSF	\$0.00	\$0	1	\$0
	1	LEAF	\$0.00	\$0	1	\$0
	1	FFSF	\$0.00	\$0	1	\$0
	1	WFSF	\$0.00	\$0	1	\$0
	1	CFSF	\$0.00	\$0	1	\$0
	0	GSF	\$0.00	\$0	1	\$0
	1	LPSM	\$0	\$0	1	\$0
Plumbing Piping	0	GSF	\$0.00	\$0	1	\$0
Plumbing Fixtures	1	FIXT	\$0.00	\$0	1	\$0
Fire Protection Systems	0	GSF	\$0.00	\$0	1	\$0
	0	GSF	\$0.00	\$0	1	\$0
	1	LPSM	\$0	\$0	1	\$0
	0	GSF	\$0.00	\$0	1	\$0
Special Mechanical Systems	1	GSF	\$7,000.00	\$7,000	15	\$4,428
Electrical Service/Generation	1	LPSM	\$0	\$0	1	\$0
Electrical Distribution	0	GSF	\$0.00	\$0	1	\$0
Electrical Lighting	0	GSF	\$0.00	\$0	1	\$0
Special Electrical Systems	1	GSF	\$8,000.00	\$8,000	15	\$5,061
Equipment & Furnishings	1	LPSM	\$0	\$0	1	\$0
Other	1	LPSM	\$0	\$0	1	\$0
Other	1	LPSM	\$0	\$0	1	\$0

Residual Value (value of facility at end of study period)

Site Improvements	1	LPSM	\$0	\$0	1	\$0
Site Utilities	1	LPSM	\$0	\$0	1	\$0
Foundation/Substructure	0	GSF	\$0	\$0	1	\$0
Superstructure	0	GSF	\$0.00	\$0	1	\$0
Exterior Wall Systems	1	EWSF	\$0.00	\$0	1	\$0
Exterior Windows	1	GLSF	\$0.00	\$0	1	\$0
Exterior Doors	1	LEAF	\$0.00	\$0	1	\$0
Roof Systems	1	RFSF	\$0.00	\$0	1	\$0
Interior Partitions	1	PTSF	\$0.00	\$0	1	\$0
Interior Doors	1	LEAF	\$0.00	\$0	1	\$0
Interior Floor Finishes	1	FFSF	\$0.00	\$0	1	\$0
Interior Wall Finishes	1	WFSF	\$0.00	\$0	1	\$0

Life Cycle Cost Analyses - LaBelle Stormwater Facility Plan - On-Site Disposal Alternative 2

	Quantity	Unit	Unit Cost	Total Cost	Years	Present Value
Interior Ceiling Finishes	1	CFSF	\$0.00	\$0	1	\$0
Interior Specialities	0	GSF	\$0.00	\$0	1	\$0
Conveying Systems	1	LPSM	\$0	\$0	1	\$0
Plumbing Piping	0	GSF	\$0.00	\$0	1	\$0
Plumbing Fixtures	1	FIXT	\$0.00	\$0	1	\$0
Fire Protection Systems	0	GSF	\$0.00	\$0	1	\$0
HVAC Distribution	0	GSF	\$0.00	\$0	1	\$0
HVAC Equipment	1	LPSM	\$0	\$0	1	\$0
HVAC Controls	0	GSF	\$0.00	\$0	1	\$0
Special Mechanical Systems	1	GSF	\$7,000.00	\$7,000	15	-\$2,534
Electrical Service/Generation	1	LPSM	\$0	\$0	1	\$0
Electrical Distribution	0	GSF	\$0.00	\$0	1	\$0
Electrical Lighting	0	GSF	\$0.00	\$0	1	\$0
Special Electrical Systems	1	GSF	\$8,000.00	\$8,000	15	-\$2,896
Equipment & Furnishings	1	LPSM	\$0	\$0	1	\$0
Other	1	LPSM	\$0	\$0	1	\$0
Other	1	LPSM	\$0	\$0	1	\$0

Total Life Cycle of Alternate #2

\$43,340

Life Cycle Cost Analyses - LaBelle Stormwater Facility Plan - On-Site Disposal Alternative 3

	Quantity	Unit	Unit Cost	Total Cost	Years	Present Value
Initial Expenses						
Initial Investment Cost (one time start-up costs)						
Sewer Impact Fee	1	LPSM	\$14,500	\$14,500	1	\$14,500
Land Acquisition	1	LPSM	\$0	\$0	0	\$0
Site Investigation	1	LPSM	\$0	\$0	0	\$0
Design Services	1	LPSM	\$0	\$0	0	\$0
Construction	1	LPSM	\$0	\$0	0	\$0
Equipment	1	LPSM	\$0	\$0	0	\$0
Technology	1	LPSM	\$0	\$0	0	\$0
Indirect/Administration	1	LPSM	\$0	\$0	0	\$0
	1	LPSM	\$0	\$0	0	\$0
Contingency	1	LPSM	\$0	\$0	0	\$0
Future Expenses						
Operations Cost (annual costs)						
Monthly Rate	1	GALS	\$50.00	\$600	20	\$8,845
Electricity	1	KWH	\$0.00	\$0	20	\$0
Water and Sewer	1	LPSM	\$0	\$0	20	\$0
	1	LPSM	\$0	\$0	20	\$0
Custodial	1	LPSM	\$0	\$0	20	\$0
Grounds	1	LPSM	\$0	\$0	20	\$0
Lease	1	LPSM	\$0	\$0	20	\$0
Insurance	1	LPSM	\$0	\$0	20	\$0
Other	1	LPSM	\$0	\$0	20	\$0
Maintenance & Repair Cost (upkeep costs ... estimate on annual basis)						
Site Improvements	1	LPSM	\$0	\$0	20	\$0
Site Utilities (clean lateral)	1	LPSM	\$20	\$20	20	\$295
Foundation/Substructure	0	GSF	\$0.00	\$0	20	\$0
Superstructure	0	GSF	\$0.00	\$0	20	\$0
	1	EWSF	\$0.00	\$0	20	\$0
	1	GLSF	\$0.00	\$0	20	\$0
	1	LEAF	\$0.00	\$0	20	\$0
	1	RFSF	\$0.00	\$0	20	\$0
	1	PTSF	\$0.00	\$0	20	\$0
	1	LEAF	\$0.00	\$0	20	\$0
	1	FFSF	\$0.00	\$0	20	\$0
	1	WFSF	\$0.00	\$0	20	\$0
	1	CFSF	\$0.00	\$0	20	\$0
	0	GSF	\$0.00	\$0	20	\$0
	1	LPSM	\$0	\$0	20	\$0
Plumbing Piping	0	GSF	\$0.00	\$0	20	\$0
Plumbing Fixtures	1	FIXT	\$0.00	\$0	20	\$0
	0	GSF	\$0.00	\$0	20	\$0
	0	GSF	\$0.00	\$0	20	\$0
	1	LPSM	\$0	\$0	20	\$0
	0	GSF	\$0.00	\$0	20	\$0
Special Mechanical Systems	0	GSF	\$0.00	\$0	20	\$0
Electrical Service/Generation	1	LPSM	\$0	\$0	20	\$0

Life Cycle Cost Analyses - LaBelle Stormwater Facility Plan - On-Site Disposal Alternative 3

	Quantity	Unit	Unit Cost	Total Cost	Years	Present Value
Electrical Distribution	0	GSF	\$0.00	\$0	20	\$0
Electrical Lighting	0	GSF	\$0.00	\$0	20	\$0
Special Electrical Systems	0	GSF	\$0.00	\$0	20	\$0
Equipment & Furnishings	1	LPSM	\$0	\$0	20	\$0
Other	1	LPSM	\$0	\$0	20	\$0
Other	1	LPSM	\$0	\$0	20	\$0

Replacement Cost (scheduled replacement of system or component)

Site Improvements	1	LPSM	\$0	\$0	1	\$0
Site Utilities	1	LPSM	\$0	\$0	1	\$0
Foundation/Substructure	0	GSF	\$0.00	\$0	1	\$0
Superstructure	0	GSF	\$0.00	\$0	1	\$0
	1	EWSF	\$0.00	\$0	1	\$0
	1	GLSF	\$0.00	\$0	1	\$0
	1	LEAF	\$0.00	\$0	1	\$0
	1	RFSF	\$0.00	\$0	1	\$0
	1	PTSF	\$0.00	\$0	1	\$0
	1	LEAF	\$0.00	\$0	1	\$0
	1	FFSF	\$0.00	\$0	1	\$0
	1	WFSF	\$0.00	\$0	1	\$0
	1	CFSF	\$0.00	\$0	1	\$0
	0	GSF	\$0.00	\$0	1	\$0
	1	LPSM	\$0	\$0	1	\$0
Plumbing Piping	0	GSF	\$0.00	\$0	1	\$0
Plumbing Fixtures	1	FIXT	\$0.00	\$0	1	\$0
	0	GSF	\$0.00	\$0	1	\$0
	0	GSF	\$0.00	\$0	1	\$0
	1	LPSM	\$0	\$0	1	\$0
	0	GSF	\$0.00	\$0	1	\$0
Special Mechanical Systems	0	GSF	\$0.00	\$0	1	\$0
Electrical Service/Generation	1	LPSM	\$0	\$0	1	\$0
Electrical Distribution	0	GSF	\$0.00	\$0	1	\$0
Electrical Lighting	0	GSF	\$0.00	\$0	1	\$0
Special Electrical Systems	0	GSF	\$0.00	\$0	1	\$0
Equipment & Furnishings	1	LPSM	\$0	\$0	1	\$0
Other	1	LPSM	\$0	\$0	1	\$0
Other	1	LPSM	\$0	\$0	1	\$0

Residual Value (value of facility at end of study period)

Site Improvements	1	LPSM	\$0	\$0	1	\$0
Site Utilities	1	LPSM	\$0	\$0	1	\$0
Foundation/Substructure	0	GSF	\$0.00	\$0	1	\$0
Superstructure	0	GSF	\$0.00	\$0	1	\$0
	1	EWSF	\$0.00	\$0	1	\$0
	1	GLSF	\$0.00	\$0	1	\$0
	1	LEAF	\$0.00	\$0	1	\$0
	1	RFSF	\$0.00	\$0	1	\$0
	1	PTSF	\$0.00	\$0	1	\$0
	1	LEAF	\$0.00	\$0	1	\$0
	1	FFSF	\$0.00	\$0	1	\$0
	1	WFSF	\$0.00	\$0	1	\$0

Life Cycle Cost Analyses - LaBelle Stormwater Facility Plan - On-Site Disposal Alternative 3

	Quantity	Unit	Unit Cost	Total Cost	Years	Present Value
	1	CFSF	\$0.00	\$0	1	\$0
	0	GSF	\$0.00	\$0	1	\$0
	1	LPSM	\$0	\$0	1	\$0
Plumbing Piping	0	GSF	\$0.00	\$0	1	\$0
Plumbing Fixtures	1	FIXT	\$0.00	\$0	1	\$0
	0	GSF	\$0.00	\$0	1	\$0
	0	GSF	\$0.00	\$0	1	\$0
	1	LPSM	\$0	\$0	1	\$0
	0	GSF	\$0.00	\$0	1	\$0
Special Mechanical Systems	0	GSF	\$0.00	\$0	1	\$0
Electrical Service/Generation	1	LPSM	\$0	\$0	1	\$0
Electrical Distribution	0	GSF	\$0.00	\$0	1	\$0
Electrical Lighting	0	GSF	\$0.00	\$0	1	\$0
Special Electrical Systems	0	GSF	\$0.00	\$0	1	\$0
Equipment & Furnishings	1	LPSM	\$0	\$0	1	\$0
Other	1	LPSM	\$0	\$0	1	\$0
Other	1	LPSM	\$0	\$0	1	\$0

Total Life Cycle of Alternate #3

\$23,639

APPENDIX D: CALCULATIONS

NUTRIENT REDUCTION CALCULATIONS

FDEP ERP NUTRIENT REDUCTION CALCULATION REFERENCES



Location	Total Catchment Area (ac)	Land Use	Land Cover	% DCIA ¹	ROC Value ²	DCIA (ac)	Water Quality Volume (CF)			SCM Type	Surface Area (SF)	SCM Volume (CF) ^{4,12}	Resulting WQV Runoff Depth (in)	Annual Runoff Volume (ac-ft)	Total Nitrogen (TN)				Total Phosphorous (TP)				Flood Attenuation ^{9,10}	
							1" Overall	2.5" IA	Required ³						EMC TN (mg/l)	Annual TN Load (lb/yr) ^{5,6}	TN Reduction Efficiency ^{7,8}	Annual TN Load Reduction (lb/yr)	EMC TP (mg/l)	Annual TP Load (lb/yr) ^{5,6}	TP Reduction Efficiency ^{7,8}	Annual TP Load Reduction (lb/yr)	Surface Area (SF)	Volume (CF)
1 (West)	1.8	Open Space (Parks)	Grass cover 50-75%	25%	0.207	0.5	6,587	4,117	6,587	Retention Basin	1,234	3,702	0.6	1.6	1.15	5.1	66%	3.3	0.055	0.2	66%	0.2	--	--
1 (East)	1.1	Roadway	Paved road w/ curbs	100%	0.809	1.1	3,812	9,531	9,531	Baffle Box	N/A	Size varies ¹¹	2.5	3.7	1.25	12.5	19%	2.4	0.173	1.7	16%	0.3	--	--
2	0.9	Residential	1/4 acre lots	40%	0.328	0.4	3,415	3,415	3,415	Retention Basin	875	2,625	0.8	1.3	1.77	6.4	76%	4.9	0.327	1.2	76%	0.9	--	--
3a	7.0	Residential	1/2 acre lots	25%	0.207	1.7	25,386	15,866	25,386	Wet Pond	8,500	25,500	1.0	6.3	1.65	28.1	40%	11.3	0.270	4.6	60%	2.8	--	--
3	21.2	Residential	1/2 acre lots	25%	0.207	5.3	77,062	48,164	77,062	Retention Basin	10,600	31,800	0.4	19.0	1.65	85.4	56%	47.8	0.270	14.0	56%	7.8	--	--
4	7.6	Residential	1/4 acre lots	40%	0.328	3.1	27,743	27,743	27,743	Wet Pond	6,700	20,100	0.7	10.9	1.77	52.3	40%	20.9	0.327	9.7	60%	5.8	33,000	99,000
5	8.1	Residential	1/2 acre lots	25%	0.207	2.0	29,277	18,298	29,277	Grass Swale	8,790	17,580	0.6	7.2	1.65	32.5	29%	9.4	0.270	5.3	29%	1.5	23,100	69,300
6	26.9	Residential	1/2 acre lots	25%	0.207	6.7	97,702	61,064	97,702	Wet Pond	33,054	99,162	1.0	24.1	1.65	108.3	40%	43.3	0.270	17.7	60%	10.6	--	--
7	14.5	Residential	1/2 acre lots	25%	0.207	3.6	52,701	32,938	52,701	Retention Basin	13,200	39,600	0.8	13.0	1.65	58.4	75%	43.8	0.270	9.6	75%	7.2	--	--
														Sum	187.0				Sum	37.0				

Notes

1. Impervious area percentage are ballpark estimates using aerial imagery and the land use/land cover data from the USDA TR-55 Urban Hydrology for Small Watersheds. Refined area takeoffs should be performed when design is advanced.
2. The mean annual runoff coefficient (ROC) is a function of DCIA percentage and non-DCIA curve number. An assumed non-DCIA curve number of 40 was used, correlating to fully developed urban areas, open space, good condition (grass cover > 75%) HSG A.
3. The design water quality volume is to be the larger of either 1" of runoff over the entire watershed or 2.5" of runoff over the impervious area per the City's stormwater standards.
4. Average vertical storage depths were assumed across the surface area to calculate the volume of each SCM: 3 feet for retention basins, 2 feet for grass swales, and 3 feet for wet ponds.
5. Annual nitrogen and phosphorus loading calculated using the FDEP ERP Applicant's Handbook Volume I, Section 9 methodology and 52 inches of annual rainfall in LaBelle, Rainfall Zone 2.
6. Event mean concentration (EMC) values sourced from FDEP ERP Applicant's Handbook Volume 1, effective June 25, 2024.
7. Reduction efficiencies sourced from the 2021 Draft Statewide Best Management Practice (BMP) Efficiencies for Crediting Projects in Basin Management Action Plans (BMAPs) and Alternative Restoration Plans.
8. Assumed a maximum treatment efficiency of 84% and 37% for retention basins and grass swales respectively corresponding to 1" of runoff depth treated.
9. Flood storage basins are separate from and in addition to the SCMs and water quality benefits presented above.
10. Flood storage volumes are based on a 3 foot vertical storage depth across the surface area.



Location	Total Catchment Area (ac)	Land Use	Land Cover	% DCIA ¹	ROC Value ²	DCIA (ac)	Water Quality Volume (CF)			Peak Rate Attenuation (CF) ⁴	SCM Type	Surface Area (SF)	SCM Volume (CF) ^{5,11}	Resulting WQV Runoff Depth (in)	Annual Runoff Volume (ac-ft)	Total Nitrogen (TN)				Total Phosphorous (TP)							
							1" Overall	2.5" IA	Required ³							EMC TN (mg/l)	Annual TN Load (lb/yr) ^{5,6}	TN Reduction Efficiency ^{7,8}	Annual TN Load Reduction (lb/yr)	EMC TP (mg/l)	Annual TP Load (lb/yr) ^{5,6}	TP Reduction Efficiency ^{7,8}	Annual TP Load Reduction (lb/yr)				
8	438.8	Open Space (Pasture) 1/2 acre residential	Grass Cover >75%	5%	0.047	21.9	1,592,917	199,115	1,592,917	-	Wet Pond	545,273	1,635,819	1.0	89.37	3.03	736.3	40%	294.5	0.593	144.1	60%	86.5				
9a	309.7	+Commercial+Industrial +Open Space (50-75%) 1/2 acre residential	Mixed	50%	0.408	153.3	1,124,073	1,391,040	1,391,040	-	Wet Pond	463,680	1,391,040	2.5	547.48	1.36	2020.7	40%	808.3	0.269	400.0	60%	240.0				
9b	357.1	+Commercial+Industrial +Open Space (50-75%) 1/2 acre residential	Mixed	50%	0.408	178.5	1,296,217	1,620,271	1,620,271	-	Wet Pond	1,123,269	3,369,806	2.9	1120.40	1.36	4135.3	40%	1,654.1	0.269	818.7	60%	491.2				
	163.8	Commercial + High Density Residential	Mixed	85%	0.689	139.2	594,620	1,263,567	1,263,567	1,749,535																	
						Site 9b proposed increase in DCIA	48.7							Sum 8 + 9b	1,209.8					Sum 8 + 9b	1,948.6					Sum 10+11b	577.7

Notes

1. Impervious area percentages are ballpark estimates using aerial imagery and the land use/land cover data from the USDA TR-55 Urban Hydrology for Small Watersheds. Refined area takeoffs should be performed when design is advanced.
2. The mean annual runoff coefficient (ROC) is a function of DCIA percentage and non-DCIA curve number. An assumed non-DCIA curve number of 40 was used, correlating to fully developed urban areas, open space, good condition (grass cover > 75%) HSG A.
3. The design water quality volume is to be the larger of either 1" of runoff over the entire watershed or 2.5" of runoff over the impervious area per the City's stormwater standards.
4. The Site 9b peak rate attenuation volume is equal to the 25-year, 3-day storm event (9.89 inches, Atlas 14) over the proposed increase in DCIA (increase from 50% to 85% DCIA).
5. Average vertical storage depths were assumed across the surface area to calculate the volume of each SCM: 3 feet for retention basins, 2 feet for grass swales, and 3 feet for wet ponds.
6. Annual nitrogen and phosphorus loading calculated using the FDEP ERP Applicant's Handbook Volume I, Section 9 methodology and 52 inches of annual rainfall in LaBelle, Rainfall Zone 2.
7. Event mean concentration (EMC) values sourced from FDEP ERP Applicant's Handbook Volume 1, effective June 25, 2024.
8. Reduction efficiencies sourced from the 2021 Draft Statewide Best Management Practice (BMP) Efficiencies for Crediting Projects in Basin Management Action Plans (BMAPs) and Alternative Restoration Plans.
9. Assumed a maximum treatment efficiency of 84% and 37% for retention basins and grass swales respectively corresponding to 1" of runoff depth treated.
10. Impervious area percentage for site 9 is an average of the four different land covers.

Appendix M
Rainfall Criteria

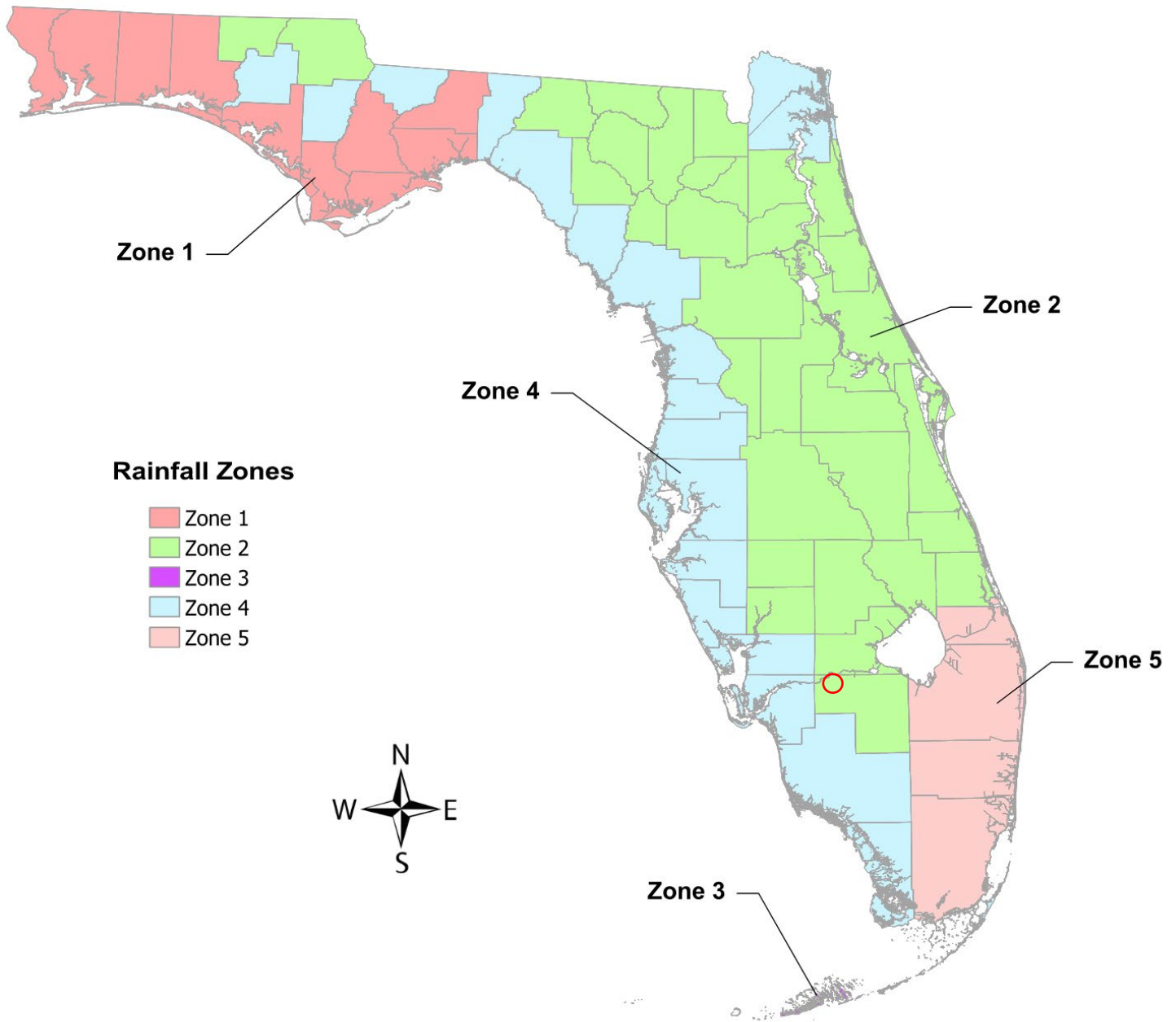
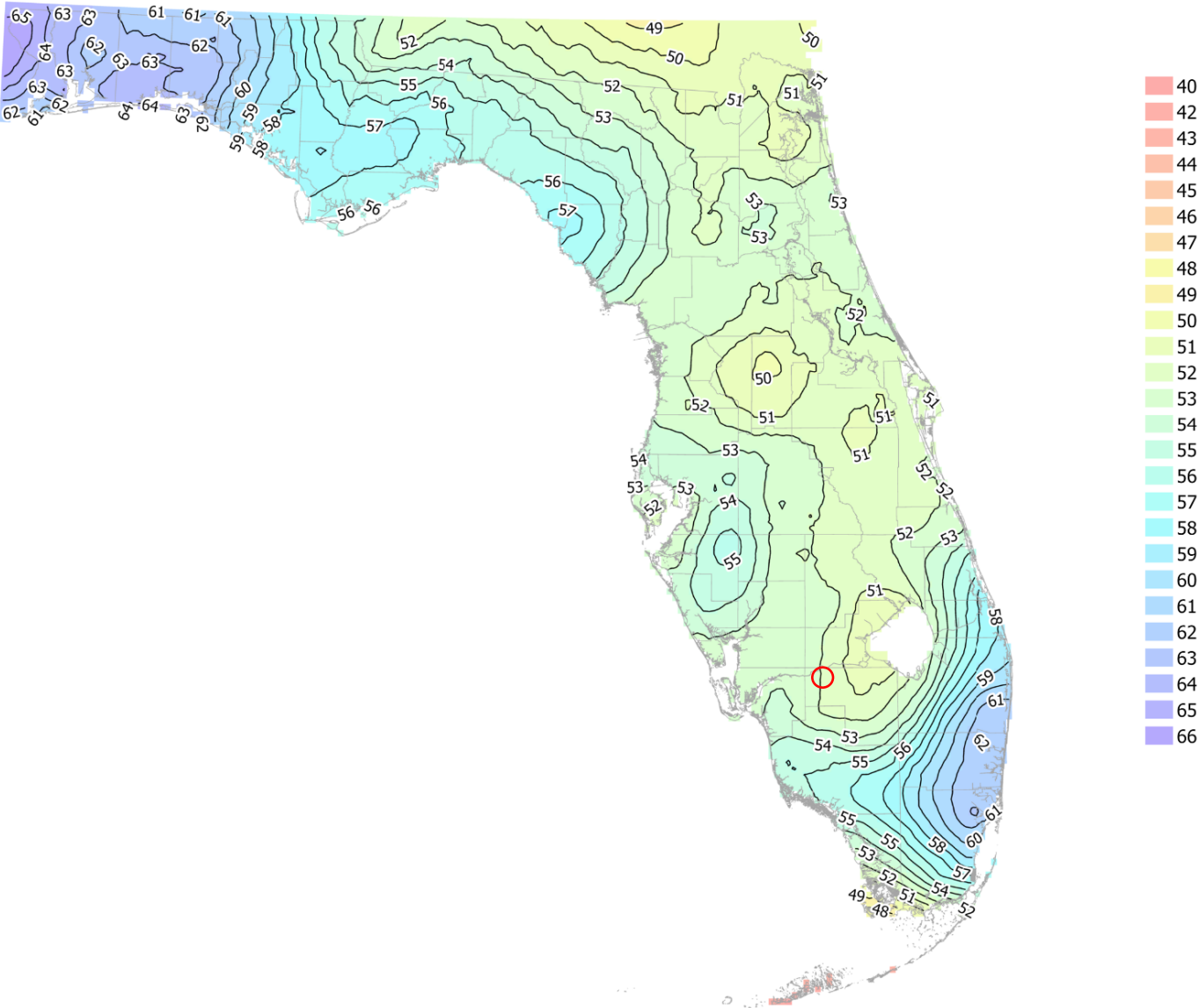


Figure 1: Designated Meteorological Regions (Zones) in Florida

Figure 2: Average Annual Rainfall Isopleth Map for Florida



ZONE 2
Mean Annual Runoff Coefficients (ROC Value) as a Function
of DCIA Percentage and Non-DCIA Curve Number

NDCIA CN	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
	0.002	0.043	0.083	0.123	0.164	0.204	0.244	0.285	0.325	0.366	0.406	0.446	0.487	0.527	0.567	0.608	0.648	0.688	0.729	0.769	0.809
35	0.004	0.044	0.085	0.125	0.165	0.205	0.246	0.286	0.326	0.366	0.407	0.447	0.487	0.528	0.568	0.608	0.648	0.689	0.729	0.769	0.809
40	0.007	0.047	0.087	0.127	0.167	0.207	0.248	0.288	0.328	0.368	0.408	0.448	0.488	0.528	0.569	0.609	0.649	0.689	0.729	0.769	0.809
45	0.010	0.050	0.090	0.130	0.170	0.210	0.250	0.290	0.330	0.370	0.410	0.450	0.490	0.530	0.570	0.610	0.650	0.690	0.729	0.769	0.809
50	0.015	0.055	0.095	0.134	0.174	0.214	0.254	0.293	0.333	0.373	0.412	0.452	0.492	0.531	0.571	0.611	0.651	0.690	0.730	0.770	0.809
55	0.022	0.061	0.101	0.140	0.179	0.219	0.258	0.298	0.337	0.376	0.416	0.455	0.494	0.534	0.573	0.613	0.652	0.691	0.731	0.770	0.809
60	0.030	0.069	0.108	0.147	0.186	0.225	0.264	0.303	0.342	0.381	0.420	0.459	0.498	0.537	0.576	0.615	0.654	0.693	0.731	0.770	0.809
65	0.042	0.080	0.119	0.157	0.195	0.234	0.272	0.311	0.349	0.387	0.426	0.464	0.502	0.541	0.579	0.618	0.656	0.694	0.733	0.771	0.809
70	0.057	0.095	0.133	0.170	0.208	0.245	0.283	0.321	0.358	0.396	0.433	0.471	0.509	0.546	0.584	0.621	0.659	0.697	0.734	0.772	0.809
75	0.079	0.116	0.152	0.189	0.225	0.262	0.298	0.335	0.371	0.408	0.444	0.481	0.517	0.554	0.590	0.627	0.663	0.700	0.736	0.773	0.809
80	0.111	0.146	0.181	0.216	0.251	0.285	0.320	0.355	0.390	0.425	0.460	0.495	0.530	0.565	0.600	0.635	0.670	0.705	0.740	0.774	0.809
85	0.160	0.192	0.225	0.257	0.290	0.322	0.355	0.387	0.420	0.452	0.485	0.517	0.550	0.582	0.614	0.647	0.679	0.712	0.744	0.777	0.809
90	0.242	0.270	0.299	0.327	0.355	0.384	0.412	0.440	0.469	0.497	0.526	0.554	0.582	0.611	0.639	0.667	0.696	0.724	0.753	0.781	0.809
95	0.404	0.424	0.444	0.464	0.485	0.505	0.525	0.546	0.566	0.586	0.606	0.627	0.647	0.667	0.688	0.708	0.728	0.749	0.769	0.789	0.809
98	0.595	0.605	0.616	0.627	0.638	0.648	0.659	0.670	0.680	0.691	0.702	0.713	0.723	0.734	0.745	0.756	0.766	0.777	0.788	0.799	0.809

APPENDIX E: DOCUMENTATION

COST AND EFFECTIVENESS CERTIFICATION

LEGAL ADVERTISEMENT AFFIDAVIT

RESOLUTION

CERTIFIED MEETING MINUTES

SITE CERTIFICATION

FISCAL SUSTAINABILITY CERTIFICATION

**STATE OF FLORIDA STATE REVOLVING FUND (SRF)
PROJECT SPONSOR'S COST AND EFFECTIVENESS CERTIFICATION
AND WATER/ENERGY CONSERVATION CERTIFICATION**

Project Sponsor: The City of LaBelle
Project Name: The City of LaBelle Storm Water Facility Plan
Project Number: LPA0312

On June 10, 2014, the Water Resources Reform and Development Act of 2014 (WRRDA) was signed into law. Among its provisions are amendments to Titles I, II, V, and VI of the Federal Water Pollution Control Act (FWPCA). Sections 602(b)(13)(A) and (B) of the FWPCA requires that the loan recipient:

(A) has studied and evaluated the cost and effectiveness of the processes, materials, techniques, and technologies for carrying out the proposed project or activity for which assistance is sought under this title; and

(B) has selected, to the maximum extent practicable, a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation, taking into account –

- (i) the cost of constructing the project or activity;*
- (ii) the cost of operating and maintaining the project or activity over the life of the project or activity; and*
- (iii) the cost of replacing the project or activity;*

We certify that the above referenced project meets the requirements set for in Sections 602(b)(13)(A) and (B) of the FWPCA. We also certify that the documentation justifying this certification will be made available upon request.

We understand that falsifying information on this certification may be grounds for termination of the SRF loan agreement.

Project Authorized Representative

Professional Engineer

Print Name: Julie C. Wilkins

Print Name: Amanda Boone

Signature: _____

Signature: _____

Date: _____

Date: _____

**STATE OF FLORIDA STATE REVOLVING FUND (SRF)
PROJECT SPONSOR'S FISCAL SUSTAINABILITY PLAN CERTIFICATION**

Project Sponsor: The City of LaBelle
Project Name: The City of LaBelle Storm Water Facility Plan
Project Number: LPA0312

On June 10, 2014, the Water Resources Reform and Development Act of 2014 (WRRDA) was signed into law. Among its provisions are amendments to Titles I, II, V, and VI of the Federal Water Pollution Control Act (FWPCA). Section 603(d)(1)(E) of the FWPCA requires a loan recipient to certify regarding the development and implementation of a fiscal sustainability plan.

(E) for a treatment works proposed for repair, replacement, or expansion, and eligible for assistance under subsection (c)(1), the recipient of a loan shall –

- (i) develop and implement a fiscal sustainability plan that includes –
 - (I) an inventory of critical assets that are a part of the treatment works;*
 - (II) an evaluation of the condition and performance of inventoried assets or asset groupings;*
 - (III) a certification that the recipient has evaluated and will be implementing water and energy conservation efforts as part of the plan;*and
 - (IV) a plan for maintaining, repairing, and, as necessary, replacing the treatment works and a plan for funding such activities; or**
- (ii) certify that the recipient has developed and implemented a plan that meets the requirements under clause (i);*


I understand that a fiscal sustainability plan must be developed and implemented for the above referenced project, and certify that the developed plan meets the requirements set forth with Section 603(d)(1)(E) of the FWPCA.

I also certify that this fiscal sustainability plan will be implemented prior to the final loan disbursement.

I understand that falsifying information on this certification may be grounds for termination of the SRF loan agreement.

Julie C. Wilkins

Typed Name and Title of the Sponsor's Authorized Representative



Signature of the Sponsor's Authorized Representative

10-16-2024

Date

AUTHORIZED REPRESENTATIVE'S SITE CERTIFICATION

Project Number LPA0312


Project Description To provide condition assessments and simulations
to identify existing deficiencies and needed improvements via a 20 year Facility Plan Study.

These findings will be used in the city's Capital Improvement Plan to address any issues.

I do hereby certify as to the following:

1. The City of LaBelle has acquired all real property or real property rights that are or will be, required for the construction, operation and maintenance of the Project described above.
2. All real property and real property rights required for the entire Project were acquired in accordance with the State and local requirements.

Dated this 14th day of October, 20 24


Signature of Authorized Representative

Julie C. Wilkins
Name (print)

Mayor
Title



**Woodard
& Curran**

woodardcurran.com