CITY OF NAPLES
PURCHASING DIVISION
CITY HALL, 735 8TH STREET SOUTH
NAPLES, FLORIDA 34102
PH: 239-213-7100 FX: 239-213-7105

ADDENDUM NUMBER 3

NOTIFICATION DATE:	BID TITLE:	BID NUMBER:	BID OPENING DATE & TIME:
10/14/2013	Lake Manor Restoration Project	059-13	10/22/2013 2:00PM

THE FOLLOWING INFORMATION IS HEREBY INCORPORATED INTO, AND MADE AN OFFICIAL PART OF THE ABOVE REFERENCED BID.

The following clarifications are issued as an addendum identifying the following changes for the referenced solicitation:

1) It appears that the exhibits described in the SFWMD permit are either not attached and/or illegible. It is not possible to determine the permitted project's relationship to Lake Manor from the documents attached. Please provide legible map or text describing those elements of the SFWMD that are pertinent to this project. For example, is Lake Manor any of the lake's discussed in permitted projects 10E (Lake E1), 12F (Lake F1), or 14G (Lake G1)?

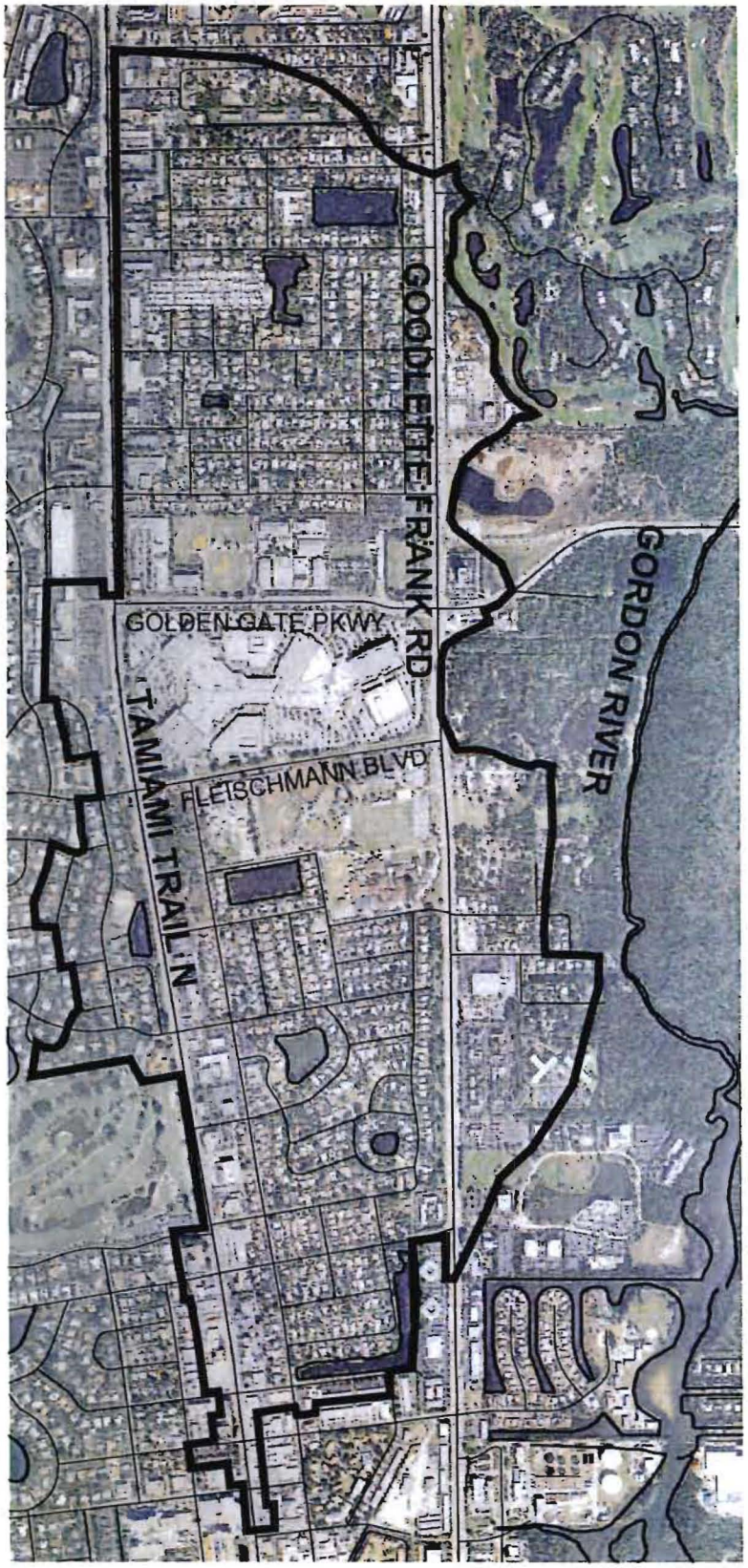
Answer: 1) Legible location map of Basin V is attached. EXHIBIT A 2) SFWMD Permit # 11-03068-P describes Lake Manor as Lake G1. Project 14G describes the applicable stormwater improvements for Lake Manor under that Permit.

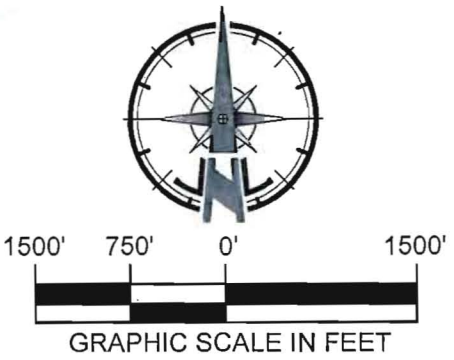
2) Can you provide Exhibit 2.0 by reference in the permit (only Exhibit 1.0 was included in the pdf of the permit)?

Answer: Attached EXHIBIT B contains two elements; 1) the Construction Pollution Prevention Plan (page 6), and 2) Urban Stormwater Management Plan (page 17).

Below please find Addendum 3 EXHIBIT A and EXHIBIT B

EXHIBIT A





LEGEND

BASIN V DRAINAGE BASIN BOUNDARY

City of Naples Florida

NOTE: THIS INSTRUMENT IS NOT A SURVEY. ILLUSTRATIONS AND DATA SHOWN ARE INTENDED FOR CONCEPTUAL PLANNING USE ONLY.

GULFSHORE ENGINEERING, INC.
2375 Tamiami Trl. N.,
Suite 207,
Naples, FL 34103
Tel : (239) 261-2290
Fax : (239) 261-6530

PROJECT NAME:

BASIN V DRAINAGE

SHEET TITLE:

LOCATION MAP SCHEMATIC

DRN BY: C.M.	GULFSHORE PROJECT NO. 253	SHEET NO. 2 OF 1	1
SCALE: AS SHOWN			
EDITION DATE: 10-14-08			

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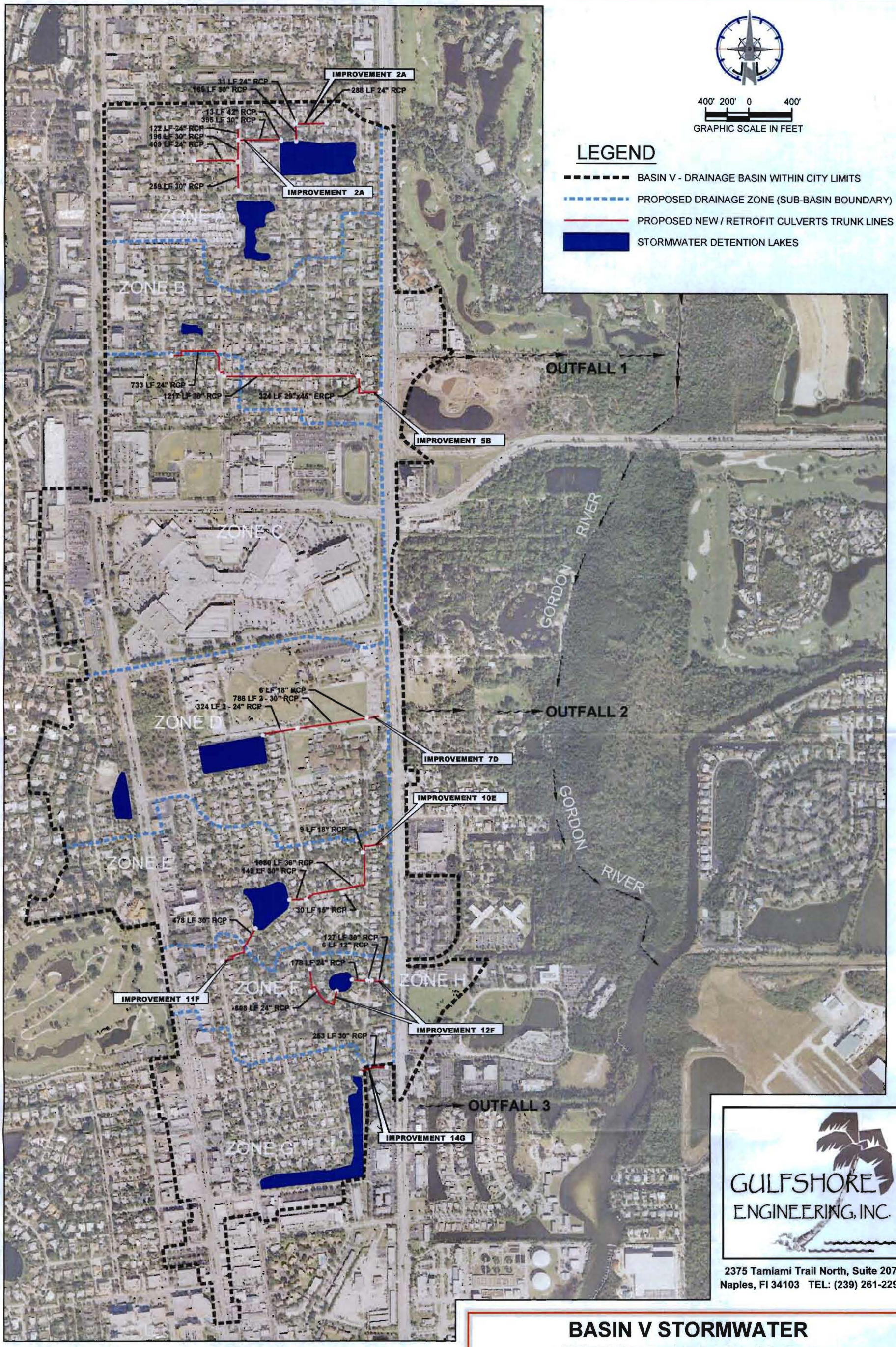

GULFSHORE ENGINEERING, INC.
2375 Tamiami Trail North, Suite 207,
Naples, Fl 34103 TEL: (239) 261-2290

City of Naples Florida

BASIN V STORMWATER IMPROVEMENT GROUP 2 PROJECT LOCATIONS

EDITION DATE : 2010-09-03

NOTE: DATA SHOWN IS INTENDED FOR CONCEPTUAL PLANNING USE ONLY.

EXHIBIT #1

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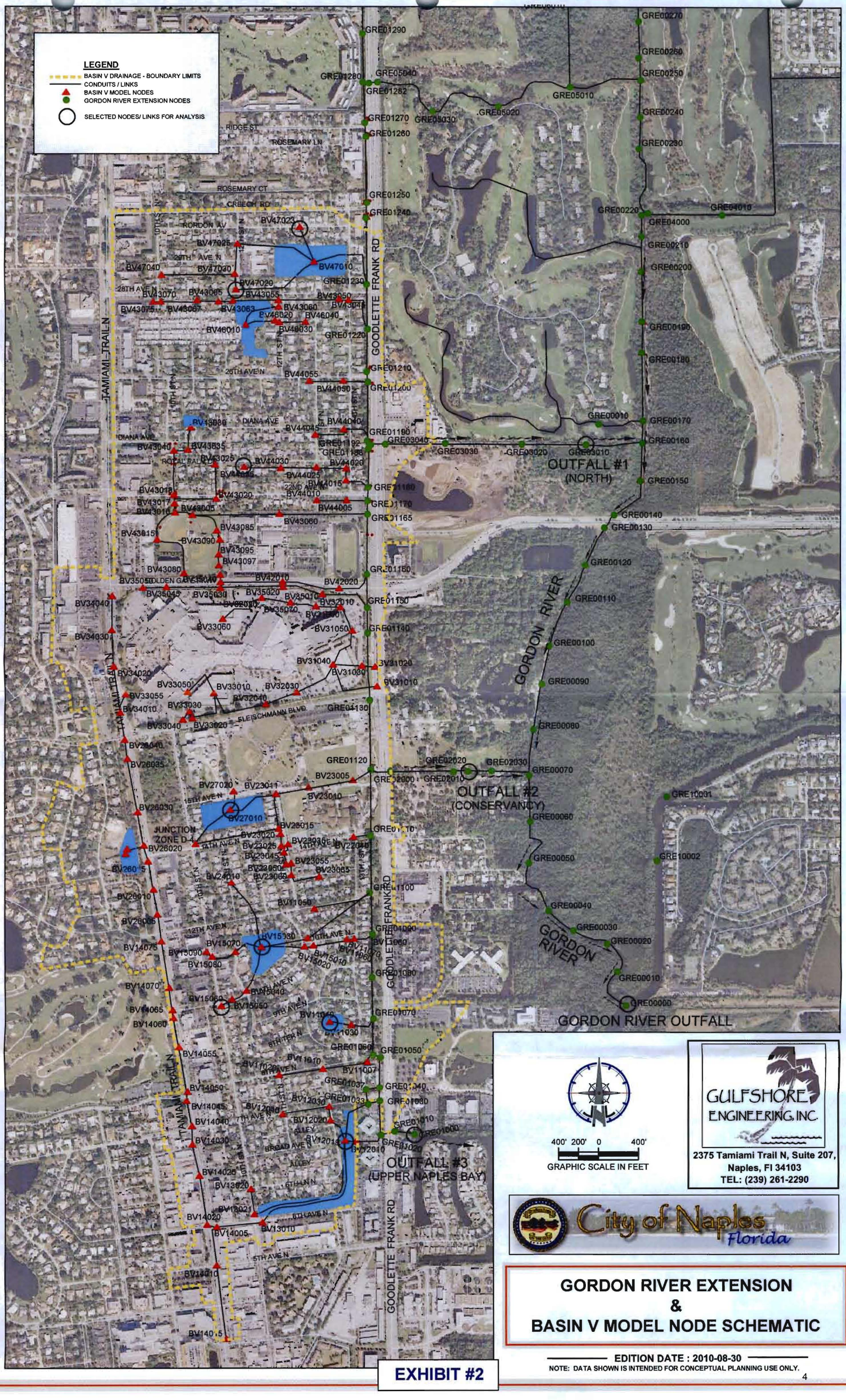
LEGEND
BASIN V DRAINAGE - BOUNDARY LIMITS
CONDUITS / LINKS
BASIN V MODEL NODES
GORDON RIVER EXTENSION NODES
SELECTED NODES/ LINKS FOR ANALYSIS
GOODLETTE FRANK RD
TAMIAMI TRAIL N
GORDON RIVER
JUNCTION ZONE D-4
OUTFALL #1 (NORTH)
OUTFALL #2 (CONSERVANCY)
OUTFALL #3 (UPPER NAPLES BAY)
GORDON RIVER OUTFALL
RIDGE ST
ROSEMARY LN
ROSEMARY CT
CREECH RD
GORDON AV
29TH AVE N
28TH AVE N
26TH AVE N
DIANA AVE
ROYAL PALM DR
22ND AVE N
15TH AVE N
14TH AVE N
12TH AVE N
10TH AVE N
9TH AVE N
8TH TER N
8TH AVE N
7TH AVE N
6TH LN N
5TH AVE N
ALLEY
BROAD AVE N
ELEISCHMANN BLVD
GOLDEN GATE CANAL
10TH ST N
12TH ST N
13TH ST N
400' 200' 0 400'
GRAPHIC SCALE IN FEET
GULFSHORE ENGINEERING, INC.
2375 Tamiami Trail N, Suite 207,
Naples, Fl 34103
TEL: (239) 261-2290
City of Naples
Florida
GORDON RIVER EXTENSION
&
BASIN V MODEL NODE SCHEMATIC
EDITION DATE : 2010-08-30
NOTE: DATA SHOWN IS INTENDED FOR CONCEPTUAL PLANNING USE ONLY.
EXHIBIT #2
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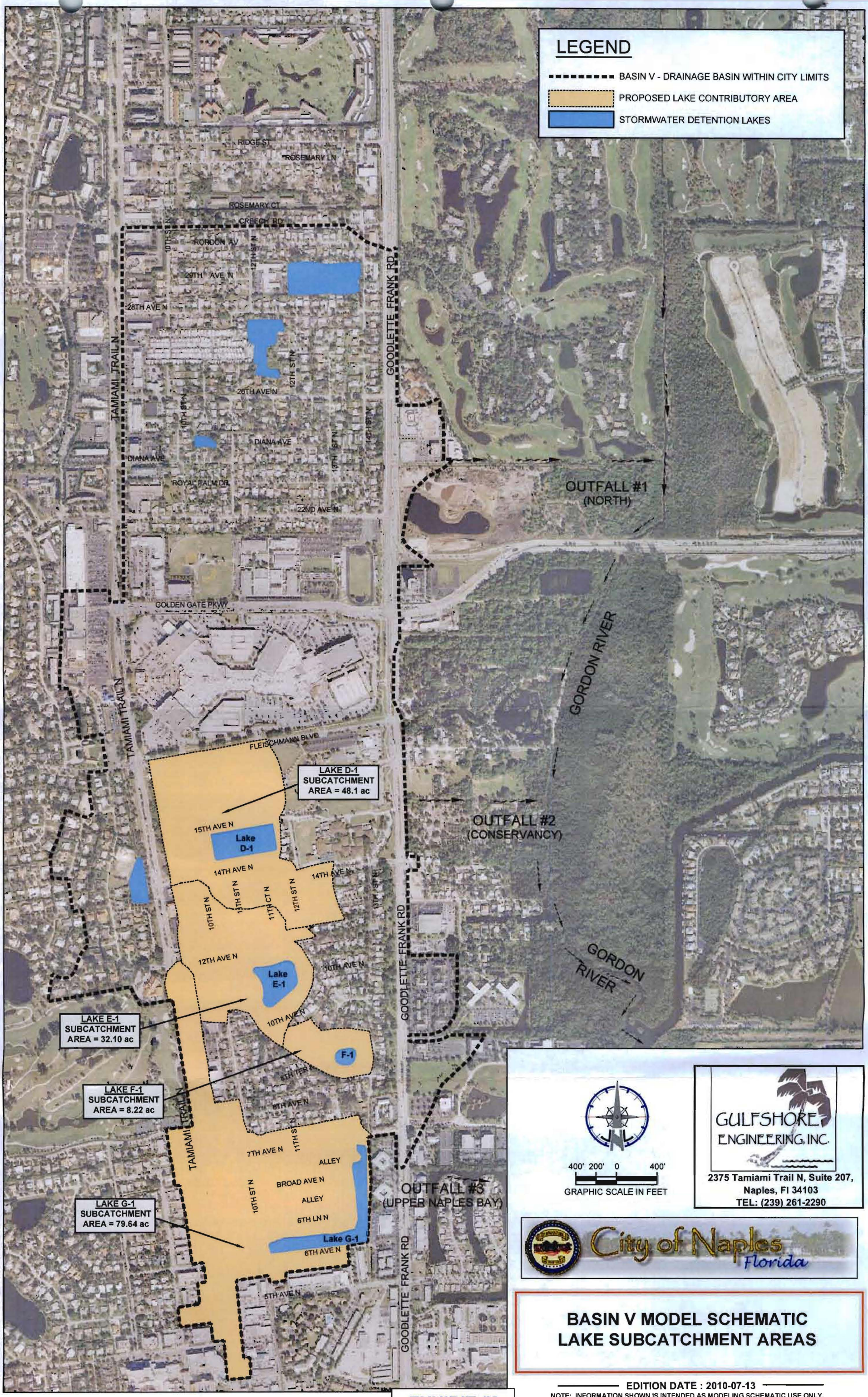
LEGEND
BASIN V - DRAINAGE BASIN WITHIN CITY LIMITS
PROPOSED LAKE CONTRIBUTORY AREA
STORMWATER DETENTION LAKES
RIDGE ST
ROSEMARY LN
ROSEMARY CT
CREECH RD
GORDON AV
29TH AVE N
28TH AVE N
26TH AVE N
DIANA AVE
ROYAL PALM DR
22ND AVE N
GOLDEN GATE PKWY
FLEISCHMANN BLVD
15TH AVE N
14TH AVE N
12TH AVE N
10TH AVE N
7TH AVE N
6TH AVE N
5TH AVE N
ALLEY
BROAD AVE N
6TH LN N
8TH TER
10TH ST N
11TH ST N
11TH CT N
12TH ST N
13TH ST N
14TH ST N
TAMIAMI TRAIL N
GOODLETTE FRANK RD
GORDON RIVER
OUTFALL #1
(NORTH)
OUTFALL #2
(CONSERVANCY)
OUTFALL #3
(UPPER NAPLES BAY)
LAKE D-1
SUBCATCHMENT
AREA = 48.1 ac
Lake
D-1
LAKE E-1
SUBCATCHMENT
AREA = 32.10 ac
Lake
E-1
F-1
LAKE F-1
SUBCATCHMENT
AREA = 8.22 ac
LAKE G-1
SUBCATCHMENT
AREA = 79.64 ac
Lake G-1
400' 200' 0 400'
GRAPHIC SCALE IN FEET
GULFSHORE
ENGINEERING, INC.
2375 Tamiami Trail N, Suite 207,
Naples, Fl 34103
TEL: (239) 261-2290
City of Naples
Florida
BASIN V MODEL SCHEMATIC
LAKE SUBCATCHMENT AREAS
EDITION DATE : 2010-07-13
NOTE: INFORMATION SHOWN IS INTENDED AS MODELING SCHEMATIC USE ONLY.
EXHIBIT #3
P:\NEW PROJECT-LIST\253-CITY OF NAPLES BASIN V\DWGS\OUT\MODELING\Basin V MODEL SCHEMATIC-2010-07-13.dwg, 9/8/2010 9:53:27 PM

Exhibit B

Basin V Stormwater Management

Improvement Group 2

City of Naples RFQ No. 017-08

ERP MOD APPLICATION No: 100910-24

CONSTRUCTION BMP'S

PREPARED FOR:

City of Naples

PREPARED BY:

GULFSHORE ENGINEERING, INC.

2375 Tamiami Trail N. Suite 207
Naples, FL 34103
Phone (239) 261- 2290
Fax (239) 261- 6530

GEI PN: 253

Date: Sep, 2010

Revised: Oct, 2010

SECTION: 3.1

Surface Water Pollution Prevention Plan SWP3

SITE DESCRIPTION			
Project Name and Location: (Latitude, Longitude, or Address)	Drainage Improvements to Basin V Basin V coverage includes the area bounded by US 41 and Goodlette-Frank Road and from Creech Road south to 5th Avenue North in the City of Naples **Lat: : 26° 3' 47.54"N To 26° 13' 51.54"N** **Long : 81°36'24.69"W To 81°30' 50.16"W**	Owner Name and Address:	City of Naples Streets and Stormwater 295 Riverside Circle Naples, Florida 34102
Description: (Purpose and Types of Soil Disturbing Activities)	A total of seven (7) projects are proposed for GROUP 2 construction improvements:		

Project 2A: Replacement of existing 12" diameter pipes on Rordon Avenue with 24" culverts, with improved 30" RCP connection into Lake A1. Project will also upgrade the existing 12" and 18" RCP tertiary pipe and inlet roadway drainage from 12th Street North into Lake A1. These lines will be replaced by 24" and 30" RCP connections . Re-grading of roadside swales to generate water quality retention volume.

Project 5B: This project will improve existing 12" and 18" RCP trunk lines along Royal Palm Avenue with 24" and 30" RCP. Changes also include replacement of the final drainage link into the Goodlette-Frank ditch from an 18" to a 29"x 45" ERCP • Roadside swale improvements are also planeed along the roadway right of way.

Project 7D: Upgrade and install a new outfall connection for Lake D1 (lake Park) into the Goodlette-Frank ditch. Replace the existing line with sequenced links of twin 24" RCP and twin 30" RCP •Improvements will also include replacement of the existing weir structure to provide wet detention water quality volume for the project.

Project 10E: Upgrade and install an outfall connection for Lake E1 (Forrest lake) into the Goodlette-Frank drainage trunk line. A proposed control structure will be installed with discharge via a single 30" RCP.

Project 11F: Improve roadway drainage collection along 10th Avenue into Forest Lake (E1) via a new 30" RCP link • Improvements will also include re-grading of roadside swales to generate water quality retention volume.

Project 12F: Replace existing existing piped outfall from Lake F1 with a new control structure discharging via a single 24" RCP. Connection into the Goodlette-Frank drainage trunk line will be maintained at current location. Install new roadway drainage connections and inlets into Lake F1 via 24" RCP culverts• Project also includes dry retention from re-grading of roadside swales.

Project 14G: Install a second control structure serving Lake G1, with independent 30" RCP connection into the Goodlette-Frank trunk line.

Runoff Coefficient:	Final runoff coefficient will be estimated at : CN 80
Site Area:	Total project construction site area = 31.2 acres

Sequence of Major Activities:

The order of activities will be as follows:

1. Install perimeter silt fences with straw bale barrier(s) and inlet protection for downstream control structures and catch basins.
2. Clearing, grubbing along pipe alignment.
3. Excavate topsoil and stockpile.
4. Trench for pipe placement and expose existing pipes as required.
5. Install new drainage structures and storm lines. Complete cross-over of any utility line
6. Close trenches and backfill with final topsoil layer.
7. Re-grade and compact as required
8. Re-sod the construction area including swales.
9. Complete all landscaping and repair any fencing.
10. When all construction activity is complete and the site is stabilized, remove temporary barriers, berms, straw bale barriers and filter fences and re-seed any transition areas disturbed by their removal.

Name of Receiving	Receiving Waters are Goodlette-Frank Roadside Ditch. Ultimate outfall is to the Gordon river and Naples Bay.

Waters:

CONTROLS

Erosion and Sediment Controls

Stabilization Practices

Temporary Stabilization: Any top soil stock piles and disturbed portions of the site will be stabilized with temporary seed and mulch if stock piles are not re-distributed 14 days from the last construction activity in that area. This stockpiles will also be surrounded by sediment filter fabric to prevent erosion and sediment entry into storm sewer system. The seed shall be Bahia, millet, rye, or other fast-growing grasses. Areas of the site which will be paved will be temporarily stabilized by applying lime rock sub-grade until bituminous pavement can be applied.

Permanent Stabilization: Disturbed portions of the site, such as swale areas, where construction activities permanently cease, shall be stabilized with sod, seed and mulch, landscaping, and / or other equivalent stabilization measures (e.g., rip-rap, geo-textiles) no later than 14 days after the date of the last construction activity.

CONTROLS (Continued)

Structural Practices

Straw Bale Drop Inlet Sediment Filter - will be placed around all constructed storm drain inlets immediately upon completion of construction and shall remain in-place until the contributing drainage area is stabilized. Alternatively, grate inlets can be covered with filter fabric material until stabilization.

Storm Water Management

Runoff from the project site will be prevented from direct entry into the storm sewer system by use of sediment filters, silt fences and turbidity barriers at inlets. Turbidity barricades are to be installed at all ditch and lake outfall locations and maintained until end of construction.

OTHER CONTROLS

Waste disposal:

Waste Materials:

All waste materials will be collected and stored in a trash dumpster which will meet all local and State solid waste management regulations. All trash and construction debris from the site will be deposited in this dumpster. The dumpster will be emptied as required due to use and/or State and local regulations, with the trash disposed of at the appropriate landfill operation. No construction waste materials will be buried onsite. All personnel will be instructed regarding the correct procedure for waste disposal. Notices stating these practices will be posted in the construction office trailer.

Hazardous Waste:

All hazardous waste materials will be disposed of in the manner specified by local or State regulation or by the manufacturer. Site personnel will be instructed in these practices.

Sanitary Waste:

All sanitary waste will be collected from the portable units by a local, licensed, sanitary waste management contractor, as required by local regulation.

Offsite Vehicle Tracking:

Please refer to Enclosed Construction Plans (**Erosion Control and Inlet Protection Plan**)

Provide stabilized construction entrances for transition into unpaved areas of roadway right of ways, to prevent excessive tracking of sediments into the roadway. As they are completed, repaired and repaved streets will be swept as needed to remove any excess muck, dirt, or rock tracked from the site. Dump trucks hauling material **to** and **from** the construction site will be covered with a tarpaulin.

TIMING OF CONTROLS/MEASURES

Installation of hay bale / silt fence barriers (around wetlands) and stabilized construction entrance will be constructed prior to extensive clearing or grading of any other portions of the site. Areas where construction activity temporarily ceases for more than 21

days will be stabilized with a temporary seed and mulch within 14 days of the last disturbance. Once construction activity ceases permanently in an area, that area will be stabilized with permanent sod, seed and mulch, landscaping, and/or other equivalent stabilization measures (e.g., rip-rap, geo-textiles). After the entire site is stabilized, the silt fence / straw bale barriers can be removed.

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

The storm water pollution prevention plan reflects the United States Environmental Protection Agency and the South Florida Water Management District (SFWMD) requirements for stormwater management erosion and sediment control, as established in Chapter 40E-4 FAC and Chapter 373 FS.

MAINTENANCE/INSPECTION PROCEDURES

Erosion and Sediment Control Inspection and Maintenance Practices

These are the inspection and maintenance practices that will be used to maintain erosion and sediment controls.

- All control measures will be inspected at least once each week and following any storm event of 0.5 inches or greater.
- All measures will be maintained in good working order; if a repair is necessary, it shall be corrected as soon as possible, but in no case later than 7 days after the inspection.
- Built up sediment will be removed from silt fence when it has reached one-half the height of the fence.
- Silt fence will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- Temporary seeding and permanent sodding and planting will be inspected for bare spots, washouts, and healthy growth.
- A maintenance inspection report will be made after each inspection. A copy of the report form to be completed by the inspector is attached.
- The Owner will appoint one individual who will be responsible for inspections, maintenance and repair activities, and for completing the inspection and maintenance reports.
- Personnel selected for inspection and maintenance responsibilities will receive training from the site superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

Non-Storm Water Discharge

It is expected that the following non-storm water discharges will occur from the site during the construction period:

- Water from water line flushings.
- Pavement wash waters (when no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated groundwater (from dewatering excavation).
- All non-storm water discharges will be directed to the storm water management facilities prior to discharge.

INVENTORY FOR POLLUTION PREVENTION PLAN

The materials or substances listed below are expected to be present onsite during construction:

- Concrete
- Detergents
- Paints (enamel and latex)
- Metal Studs
- Asphalt
- Roofing Shingles
- Fertilizers
- Petroleum Based Products
- Cleaning Solvents
- Wood
- Masonry Block
- Clay or concrete bricks

SPILL PREVENTION

Material Management Practices

The following are the materials management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff.

Good Housekeeping:

The following good housekeeping practices will be followed onsite during the construction project:

- An effort will be made to store only enough products required to do the job.
- All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers, and if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposing of the container.
- Manufacturers' recommendations for proper use and disposal will be followed.
- The site superintendent will inspect to ensure proper use and disposal of materials onsite.

Hazardous Products:

These practices are used to reduce the risks associated with hazardous materials:

- Products will be kept in original containers unless they are not re-sealable.
- Original labels and material safety data will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

Product Specific Practices

The following produce specific practices will be followed onsite:

Petroleum Products:

All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which will be clearly labeled. Any asphalt substances used onsite will be applied in accordance with the manufacturer's recommendations and standard construction practices.

Fertilizers:

Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be properly disposed of according to manufacturers' instructions and/or state and local regulations.

SPILL PREVENTION (Continued)

Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup.

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include--but not be limited to--rags, gloves, goggles, kitty litter, sand, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up as soon as possible after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size.
- The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
- The Contractor's site superintendent will be responsible for the day-to-day site operations and will be the spill prevention and cleanup coordinator. He will designate at least two other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the office trailer onsite.

POLLUTION PREVENTION PLAN CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____

Print Name: _____

Title: _____

Date: _____

CONTRACTOR'S CERTIFICATION

I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signature	For	Responsible for
_____ Date: _____ _____ Date: _____ _____ Date: _____ _____ Date: _____		

CONSTRUCTION POLLUTION PREVENTION PLAN
Drainage Improvements Basin V
Inspection and Maintenance Report Form

(To be completed every 7 days and within 24 hours of a rainfall event of 0.5 inches or more)

INSPECTOR: _____ DATE: _____

INSPECTOR'S QUALIFICATIONS:

_____

Days since last rainfall: _____ Amount of last rainfall _____ inches

STABILIZATION MEASURES

Area	Date Since Last Disturbed	Date of Next Disturbance	Stabilized? (yes / no)	Stabilized With	Condition

Stabilized required:

_____

To be performed by: _____ on or before: _____

CONSTRUCTION POLLUTION PREVENTION PLAN
For
Drainage Improvements Basin V
Inspection and Maintenance Report Form - *Structural Controls*

DATE: _____

SILT FENCE / STRAW BALE BARRIER

From	To	Is Silt Fence / Straw Bale Barrier in place?	Is there evidence of washout or over-topping?

Maintenance required for silt fence / straw bale barrier:

_____

_____

To be performed by: _____ on or before: _____

CONSTRUCTION POLLUTION PREVENTION PLAN
For
Drainage Improvements Basin V
Inspection and Maintenance Report Form
Structural Controls

DATE: _____

EARTHEN PERIMETER BERM

From	To	Is berm stabilized?	Is there evidence of washout or over-topping?

Maintenance required for perimeter berm:

_____

To be performed by: _____ on or before: _____

CONSTRUCTION POLLUTION PREVENTION PLAN
For
Drainage Improvements Basin V
Inspection and Maintenance Report Form

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:

REASONS FOR CHANGES:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature Date

SECTION: 3.2

URBAN STORMWATER MANAGEMENT PROGRAM

Sep, 2010

1.0 Introduction

This document provides details of the Urban Stormwater Management Program for the **Drainage Improvements Basin V**. This Plan discusses non-structural controls, intended to improve the quality of stormwater runoff by reducing the generation and accumulation of potential stormwater runoff contaminants at or near the respective sources for each constituent, along with significant structural components of the primary stormwater treatment system.

Although many of the methodologies and procedures outlined in this document are general Best Management Practices (BMP's) which can be useful in attenuating pollutants in many types of settings, the implementation of these practices has been optimized.

Pollution prevention guidelines are provided for the areas of (1) nutrient and pesticide management; (2) street sweeping; (3) solid waste management; (4) operation and maintenance of the stormwater management and treatment system; and (5) construction activities. A discussion of each of these activities is given in the following sections.

2.0 Nutrient and Pesticide Management

Nutrient and pesticide management consists of a series of practices designed to manage the use of fertilizers and pesticides so as to minimize loss of these compounds into stormwater runoff and the resulting water quality impacts on adjacent water bodies. Implementation of a management plan will also maximize the effectiveness of the nutrients and pesticides that are applied.

The guidelines included in this section are intended to help make educated environmental choices regarding the maintenance of yards. These maintenance and management guidelines are meant to promote an attractive site that preserves the health of adjacent waterways and environmental features.

2.1 General Requirements

Only registered commercial applicators and the Contractors **sanctioned by the City of Naples** are permitted to apply chemicals within the project site. All chemical products must be used in accordance with the manufacturer's recommendations. The application of any chemical product within five (5) feet of any surface water including but not limited to ponds, lakes, drainage ditches or canals, is prohibited. The use of any chemical product in a manner that will allow airborne or waterborne entry of such products into

surface water is prohibited. This rule shall not apply to the use of chemical agents, by certified lake management specialists, for the control of algae and vegetation within the Stormwater lakes or ponds.

2.2 Nutrient Management Program

Management and application of nutrients and fertilizers in the **Drainage Improvements Basin V** will adhere to the following guidelines:

A. All fertilizers shall be stored in a dry storage area protected from rainfall and ponding.
B. No fertilizer containing in excess of 2% phosphate/phosphorus (P_2O_5) per guaranteed analysis label (as defined by Chapter 576, Florida Statutes) shall be applied to turf grass unless justified by a soil test.
C. Fertilizer containing in excess of 2% phosphate/phosphorus (P_2O_5) per guaranteed analysis label shall not be applied within 5 feet of the edge of water or within 5 feet of a drainage facility.
D. All fertilizer shall be applied such that spreading of fertilizer on all impervious surfaces is minimized.
E. Liquid fertilizers containing in excess of 2% phosphate/phosphorus (P_2O_5) per guaranteed analysis label shall not be applied thorough an irrigation system within 10 feet of the edge of water or within 10 feet of a drainage facility.
F. Liquid fertilizers containing in excess of 2% phosphate/phosphorus (P_2O_5) per guaranteed analysis label shall not be applied through high or medium mist application or directed spray application within 10 feet of the edge of water or within 10 feet of a drainage facility.

2.3 Pest Management Program

Proper maintenance of plants and turf areas will minimize the ability of pests to successfully attack landscaping. Several general guidelines follow:

A. Apply fertilizer and water only when needed and in moderate amounts. Excessive amounts of either can cause rapid growth that is attractive to insects and disease.
B. Mow St. Augustine grass to a height of 3-4 inches. If cut shorter, the plants may become stressed and more vulnerable to pest infestation. Each mowing should remove no more than one-third of the leaf blade, and those cuttings should remain on the lawn to decompose.
C. It is recommended that pesticides, fungicides, and herbicides be used only in response to a specific problem and in the manner and amount recommended by the manufacturer to address the specific problem. Broad application of pesticides, fungicides and herbicides as a preventative measure is strongly discouraged.

The use of pesticides, fungicides, or herbicides is limited to products that meet the following criteria:

A. Must be consistent with the USDA-NRCS Soil Rating for Selecting Pesticides
B. Must have the minimum potential for leaching into groundwater or loss from runoff
C. Products must be EPA-approved
D. The half-life of products used shall not exceed seventy (70) days

3.0 Street Sweeping

Street sweeping operations will not be conducted for the **Drainage Improvements Basin V**

4.0 Solid Waste Management

In general, solid waste management involves issues related to the management and handling of urban refuse, litter and leaves that will minimize the impact of these constituents as water pollutants.
Maintenance of adequate sanitary facilities for temporarily storing refuse on private premises prior to collection is considered the responsibility of the owner. Fallen tree leaves and other vegetation, along with grass clippings, may become direct water pollutants when they are allowed to accumulate in swales and street gutters. This task will be handled by the City of Naples.

5.0 Stormwater Management and Treatment System

The stormwater management system for the **Drainage Improvements Basin V** is designed to maximize the attenuation of stormwater generated pollutants prior to off-site discharge. Operational details and maintenance requirements of the various system components are given in the following sections.

5.1 Dry Detention / Retention and Interconnect Pipes

The basic element of the stormwater management system consists of a series of interconnected dry detention and retention ponds that provide stormwater treatment through a variety of physical, biological, and chemical processes. A dry detention pond acts by temporarily detaining stormwater runoff, allowing opportunities for treatment processes to occur, prior to slow controlled discharge of the treated water through the outfall structure. Retention systems act by capturing a preset volume of runoff and allowing it to infiltrate onsite. Pollutant removal processes in dry retention/ detention systems occur during the quiescent period between storm events. Significant removal processes include infiltration, gravity settling of particulate matter; biological uptake of nutrients and other ions by aquatic plants, algae and microorganisms; along with natural chemical flocculation and complexation processes.

Maintenance of the dry ponds and swales will consist of an annual inspection. During each annual inspection, the following items will be reviewed and corrected as necessary:

A. Inspect the outfall structure and orifices to ensure free-flowing conditions and overall engineering stability of the outfall system.
B. Review the banks of the lakes and canals to ensure proper side slope stabilization and inspect for signs of excessive seepage that may indicate areas of excessive groundwater flow and possible subsurface channeling.

At the completion of the inspections, a written inspection report will be prepared, listing any deficiencies that need to be addressed or corrected by the City of Naples Stormwater Maintenance Staff.

5.2 Stormwater Inlets, Pipes and Culverts

The grates should be unobstructed and the bottom, inside the inlet, should be clean. Check for any accumulation of sediment, trash such as garbage bags, or debris in the culverts connecting these inlets. Flushing out with a high-pressure hose may clean some sediment. Any noted blockage (due to a possible obstruction, or broken pipe, etc.) should prompt further investigation. Crushed or corroded culverts should be replaced with new ones of the same size.

5.3 Swales and Grassed Water Storage Areas

These provide for conveyance and/or above-ground (or surface) storage of storm-water. With age, these areas usually fill in with vegetation and sediment. Swales may need to be re-graded and/or re-vegetated. It is a good idea to compare the existing slope and dimensions of the swale with the permitted design plans prior to the removal of excess sediment or re-grading. Areas that show erosion should be stabilized with appropriate material such as sod, planting, rock, sand bags, or other synthetic geo-textile material.

Regular mowing of grass swales is essential. These areas also improve water quality by catching sediment and assimilating nutrients, and recharge the underground water table. Remove any undesirable exotic vegetation. Culverts underneath driveways should be checked for blockage, and, if necessary, flushed with a high-pressure hose. After a storm, swales may remain wet for an extended period of time. This is normal and the water will recede gradually.

5.4 Ditches or Canals

Fill material, yard waste, clippings and vegetation, sediment, trash, appliances, garbage bags, shopping carts, tires, cars, etc. should be completely removed. Also check to make sure there are no dead trees or any type of obstructions which could block the drainage.

Maintenance cleaning/excavation must be limited to the same depth, width and side slope as approved in the current permit. Making a ditch deeper or wider may trigger a need for

a permit modification. Provisions must also be made to prevent any downstream silting or turbidity *(Contact the SFWMD Resource Compliance staff if you are unsure or need clarification.)* Be sure to dispose of all removed material properly so it won't affect any other water storage or conveyance system, environmental area, or another owner's property.

5.5 Outfall Structures (also called the Discharged Control Structure or Weir)

The outfall structures should be routinely inspected to determine if any obstructions are present or repairs are needed. Trash or vegetation impeding water flow through the structure should be removed. The structure should have a "baffle" or trash collector to prevent flow blockage and also hold back any floating oils from moving downstream. Elevations and dimensions should be verified annually with all current permit information. Periodic inspections should then be regularly conducted to make sure these structures maintain the proper water levels and the ability to discharge.

5.6 Earthen Embankments (Dikes and Berms)

No earthen embankments are proposed for the Drainage Improvements Basin V project.

6.0 Water Quality Testing

Water Quality Testing will not be conducted at the Drainage Improvements Basin V project.

7.0 Construction Activities

A Stormwater Pollution Prevention Plan (SWPPP) has been prepared for construction activities to minimize contamination that may be caused by erosion and sedimentation during the construction process. The plan includes provisions related to soil stabilization, structural erosion controls, waste collection disposal, offsite vehicle tracking, spill prevention and maintenance and inspection procedures. A copy of the SWPPP is attached hereto and made a part of hereof.