



ENHANCE \* PROTECT \* CONSERVE

# GOMESA PHASE II PROJECT FUNDING

## Request for Funding FY2023

**Official Use Only**

Project Number: \_\_\_\_\_

Requesting Agency: \_\_\_\_\_

### PROJECT SUMMARY

**1. Title of Project:**

*red outlines indicate required fields*

Diamondhead Drainage, Flood Prevention & Water Quality Improvement Project Phase II

**2. Location of Project:**

- Kome Project coordinates: 30° 23'418"N,89° 22'37"W
- Anahalo Project coordinates: 30° 23'42"N,89° 20'40"W
- Fairway Drive Project coordinates: 30°23'16"N, 89°22'12"W

**3. Requesting Organization:**

City of Diamondhead

**4. Requesting Organization Representative:**

a. Name: Jon McCraw

e. Address: 5000 Diamondhead Drive Circle  
Diamondhead, MS 39525

b. Position: City Manager

c. Phone: 228-222-4626

f. Email: JMcCraw@diamondhead.ms.gov

d. Fax: \_\_\_\_\_

**5. Funding Requested:**

\$1,999,839.00

**6. Have any other State or Federal funding sources been identified for the project?**

Yes

No

**7. If yes, enter amount and source of additional funds:**

Amount: \_\_\_\_\_

Source of Additional Funds: \_\_\_\_\_

**8. Total Project Funds**

\$1,999,839.00



# GOMESA PHASE II PROJECT FUNDING

## Request for Funding FY2023

### PROJECT SUMMARY

#### 9. Provide Brief Project Description/Overview:

The City of Diamondhead is seeking GOMESA funding from the Mississippi Department of Marine Resources for the Diamondhead Drainage, Flood Prevention & Water Quality Improvement Project Phase II. Phase I of the project was funded during the 2022 cycle and the proposed projects identified in Phase II include one of the subprojects that were not funded in Phase I due to budgetary constraints. Additionally, two subprojects have been identified as critical components to Diamondhead's drainage and water quality program specific to Watershed A (the largest watershed in the City of Diamondhead). The project consists of three subprojects that will provide drainage infrastructure improvements, wetland restoration and improve detention facilities to reduce flooding, improve water quality and preserve downstream wetland and estuarine habitats. The subprojects that are associated will improve water flow characteristics, reduce the future possibility of flooding of roadways and homes in the area, improve water quality downstream and extend runoff times.

As part of a county-wide effort, Waggoner Engineering produced the Hancock County Watershed-Based Stormwater Assessment and Management Plan in December 2019 that included a step-by-step plan for implementation. The plan created by Waggoner Engineering provided Hancock County a storm management plan for the long-term future of the County that was realistic and manageable. The county-wide effort by Waggoner Engineering resulted in a detailed project description for the three subprojects of the Diamondhead Drainage, Flood Prevention & Water Quality Improvement Project. The following pages contain the full project descriptions from the Waggoner Engineering produced plan for Kome Drive, Anahalo and Fairway Drive.

#### 10. LIST Project Goals/Objectives:

- Kome Drive: Goals and objectives of this subproject are to improve flow characteristics, reduce possibility of flooding of roadway and homes in the area. The objectives include re-establishing ditch sections, ditch armoring to prevent erosion and replacing inadequate infrastructure with properly sized channels and culverts. The project will also investigate detention possibilities and establishing riparian buffers along streams in the Watershed.
- Anahalo: Goals and objectives of this subproject are to improve flow characteristics, reduce possibility of flooding of roadways and homes in the area, improved water quality downstream and extended runoff times. As documented by Waggoner Engineering, the reported problems are water over the road in a typical storm event and houses flooding in the area multiple times. Site is the singular out fall for watershed with no detention facility. Previous methods for the handling storm water are causing expedited runoff times. Open ditches have been eliminated in places where they are needed. The recommended solutions for this subproject are to: re-establish open ditch sections where water is being forced onto the roadways; incorporate LID drainage measures in the channel (step pool) that increase runoff times to mitigate immediate problems and aid in addressing those downstream; build inline and offline detention within the watershed.
- Fairway Drive: Goals and objects of this subproject are to improve flow characteristics, reduce possibility of flooding of roadways and homes in the area, extend future runoff times and improve water quality downstream. When documenting the reported problems with this subproject, Waggoner Engineering stated, "Ditch sections along Fairway drive and thru the easement are not large enough to accommodate the current volumes and there is potential for further development within the basins." The recommended solutions to remediate the problems associated with this subproject are to: Construct additional detention facilities, enlarge hydrologic section along Fairway Drive, remove, replace, install additional drainage structures under the roadway.



# GOMESA PHASE II PROJECT FUNDING

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### PROJECT SUMMARY

**11. Which of the following authorized uses set forth in the GOMESA Act does this project fall under? Check all that apply. Explain SPECIFICALLY and in detail how the project meets the required criteria.**

- (A) *Projects and activities for the purposes of coastal protection, including conservation, coastal restoration, hurricane protection, and infrastructure directly affected by coastal wetland losses*

The proposed drainage improvements identified in this project will have a direct positive impact on coastal wetland losses by reducing stream bank and wetland erosion along the major drainageways within diamondhead. Additionally, the reduction in sedimentation will improve water quality in receiving streams and estuaries.

- (B) *Mitigation of damage to fish, wildlife, or natural resources.*

The city of Diamondhead drains into Rotton Bayou, the Jordan River and tributaries to St. Louis Bay. These drainage projects will reduce erosion and improve water quality downstream which directly impacts natural resources in our bays and estuaries.

- (C) *Implementation of a federally-approved marine, coastal, or conservation management plan.*

The proposed project is implementing recommendations made from the Hancock County Watershed-Based Stormwater Assessment and Management Plan, a comprehensive conservation management plan for Hancock County.

- (D) *Mitigation of the impact of activities through funding of onshore infrastructure projects.*

The city of Diamondhead drains into Rotton Bayou, the Jordan River and tributaries to St. Louis Bay. These drainage projects will reduce erosion and improve water quality downstream which directly impacts natural resources in our bays and estuaries.



# GOMESA PHASE II PROJECT FUNDING

## Request for Funding FY2023

### PROJECT SUMMARY

#### 12. Project Timetable/Milestones:

- Kome Drive
  - o Implementation Period: 1.5 Years
    - Study: Completed
    - Design and Permitting: Six Months
    - Construction: One Year
  - o Estimated Schedule: July 1, 2023 – December 30, 2024
  
- Anahalo
  - o Implementation Period: Two Years
    - Study: Six Months
    - Design and Permitting: Six Months
    - Construction: One Year
  - o Estimated Schedule: July 1, 2023 – June 30, 2025
  
- Fairway Drive
  - o Implementation Period: 1.5 Years
    - Study: Complete
    - Design: Six Months
    - Construction: One Year
  - o Estimated Schedule: July 1, 2023 – December 30, 2024

#### 13. Project Timing



Short-term (3 year or less)



Deferred/long-term (3-5 years)



## GOMESA PHASE II PROJECT FUNDING Request for Funding FY2023

### APPLICATION SUMMARY

**14. Current status of architectural/engineering plans & specifications for this project (if applicable):** *Check one from each group.*

- Group 1:**  Completed  
 In Progress  
 Ready to Bid  
 Other (identify)

H&H Modeling underway

- Group 2:**  Paid for  
 Funds budgeted  
 Funds not budgeted

**15. In what way does this project meet the goals and objectives of the Department of Marine Resources, which includes enhancing, protecting and conserving the marine interest of Mississippi for present and future generations.?**

Diamondhead Drainage, Flood Prevention & Water Quality Improvement Project Phase II in Hancock County is primarily a drainage infrastructure improvement project that meets the following Mississippi Department of Marine Resources criteria: activities for the purposes of coastal protection, including conservation, coastal restoration, hurricane protection and infrastructure directly affected by coastal wetland losses; and implementation of a federally-approved marine, coastal or comprehensive conservation management plan. The Diamondhead Drainage, Flood Prevention & Water Quality Improvement Project will provide significant drainage infrastructure improvements that will provide future hurricane protection and infrastructure directly affected by coastal wetland losses. The project consists of three subprojects that will provide drainage infrastructure improvements, wetland restoration and improve detention facilities for future watershed events. The proposed project is also implementing recommendations made from the Hancock County Watershed-Based Stormwater Assessment and Management Plan, a comprehensive conservation management plan for Hancock County.



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## GOMESA PHASE II PROJECT FUNDING Request for Funding FY2023

### APPLICATION SUMMARY

16. Estimated number of years to completion: 2
17. Estimated Completion Date: June 2025
18. Prioritize if your agency has submitted multiple projects:

1

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### SIGNATURES

Requesting Agency Representative:

  
Signature

7/1/2022  
Date

Attach a detailed project description, project schematics, drawings, or any regulatory permits as appropriate.

\*Progress notes must be submitted quarterly on all projects funded by GOMESA.

**\*\*Before submitting application, please make sure to complete the Budget form on page 7.**



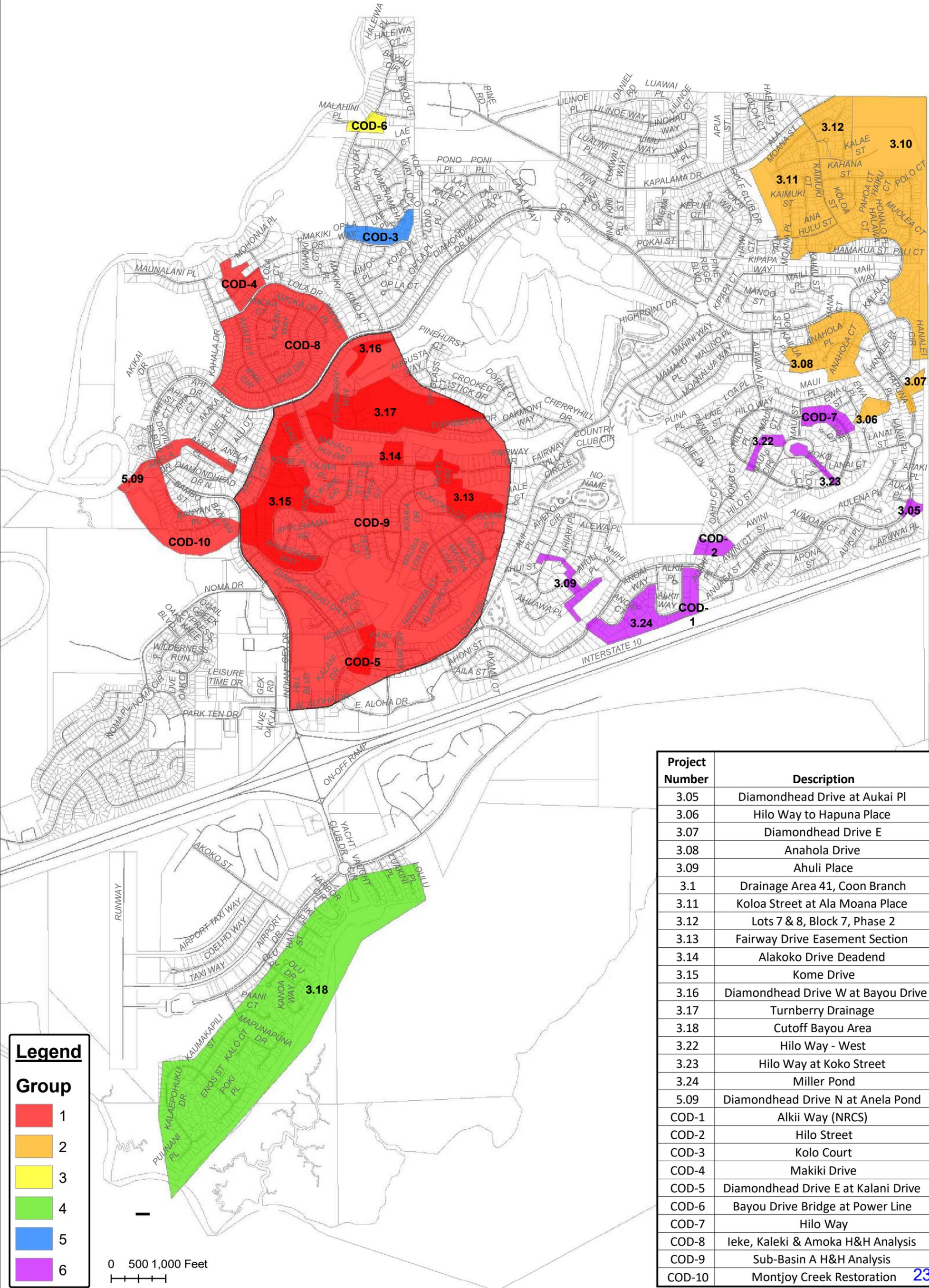
ENHANCE \* PROTECT \* CONSERVE

## GOMESA PHASE II PROJECT FUNDING Request for Funding FY2023

### BUDGET

Category	Total
Salaries, wages, Fringe	
Travel	
Architecture & Engineering	\$ 210,154.50
Legal	\$ 22,500.00
Consulting	\$ 61,000.00
Construction	\$ 1,401,030.00
Site Work	
Equipment	
Indirects	
Other	\$ 305,154.00
<b>Total</b>	<b>\$ 1,999,838.50</b>

# DRAINAGE PROJECTS



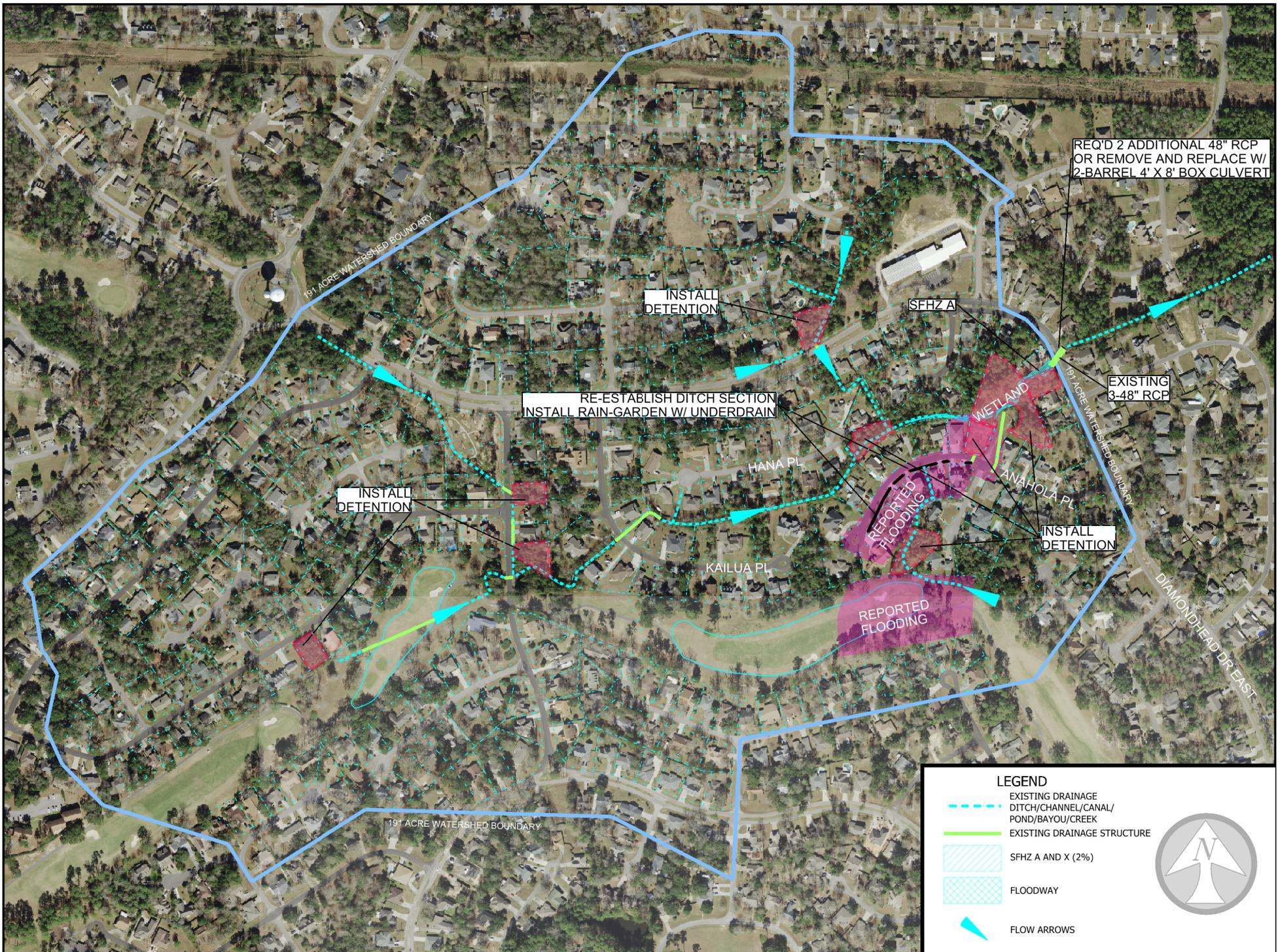
## Legend

- Group**
- 1
  - 2
  - 3
  - 4
  - 5
  - 6

0 500 1,000 Feet

Project Number	Description
3.05	Diamondhead Drive at Aukai Pl
3.06	Hilo Way to Hapuna Place
3.07	Diamondhead Drive E
3.08	Anahola Drive
3.09	Ahuli Place
3.1	Drainage Area 41, Coon Branch
3.11	Koloa Street at Ala Moana Place
3.12	Lots 7 & 8, Block 7, Phase 2
3.13	Fairway Drive Easement Section
3.14	Alakoko Drive Deadend
3.15	Kome Drive
3.16	Diamondhead Drive W at Bayou Drive
3.17	Turnberry Drainage
3.18	Cutoff Bayou Area
3.22	Hilo Way - West
3.23	Hilo Way at Koko Street
3.24	Miller Pond
5.09	Diamondhead Drive N at Anela Pond
COD-1	Alkii Way (NRCS)
COD-2	Hilo Street
COD-3	Kolo Court
COD-4	Makiki Drive
COD-5	Diamondhead Drive E at Kalani Drive
COD-6	Bayou Drive Bridge at Power Line
COD-7	Hilo Way
COD-8	Ieke, Kaleki & Amoka H&H Analysis
COD-9	Sub-Basin A H&H Analysis
COD-10	Montjoy Creek Restoration

<b>Project Number</b>	3.08
<b>Project Name</b>	Anahola Draw
<b>Location Description</b>	Site is a natural draw in the East-central portion of Diamondhead located in the lower section of Watershed F as identified in the 2014 Master Drainage Plan map produced by Seymour Engineering. The structures under Diamondhead Drive East at this location drain the entirety of Watershed F. This portion of the city is 95% built out in addition to a significant portion of fairway within the watershed.
<b>Project Coordinates</b>	30°23'42"N, 89°20'40"W
<b>HUC12</b>	031700091303 – Rotten Bayou
<b>Project Type</b>	Detention, Drainage Infrastructure Improvements.
<b>Number of residences or businesses benefitted</b>	76-100
<b>Anticipated Project Benefits</b>	Improve Flow Characteristics Reduced possibility of flooding of roadways and homes in the area Improved water quality downstream Extended Runoff times
<b>Implementation Period</b>	Study: 6 months Design: 6 months Permits: Wetland 404, SWPPP Land Acquisition: Probable Implementation: 2 Yr
<b>Flood Zone</b>	No
<b>Estimated Project Cost</b>	<b>\$777,187.00</b>
<b>Location Problems</b>	 <p>Reported problems are water over the road in a typical storm event. Site is the singular out fall for watershed with no detention facility. Previous methods for handling Stormwater are causing expedited runoff times. Open ditches have been eliminated in places where they are needed</p>
<b>Recommended Solution</b>	Re-establishing open ditch sections where water is being forced onto the roadways. Incorporate LID drainage measures in the channel (step pool) that increase runoff times to mitigate immediate problems and aid in addressing those downstream. Build inline and offline detention within the watershed. Information from this project should be incorporated as contributing data for projects downstream along Diamondhead Drive East.



**LEGEND**

- - - - - EXISTING DRAINAGE  
DITCH/CHANNEL/CANAL/  
POND/BAYOU/CREEK
- EXISTING DRAINAGE STRUCTURE
- SFHZ A AND X (2%)
- FLOODWAY
- ▶ FLOW ARROWS



PROJECT: 0018081.000  
 DATE: AUG - 2019  
 SCALE: 1 IN = 475 FT



HANCOCK CO BOARD OF SUPERVISORS  
 COMPREHENSIVE WATERSHED BASED STORMWATER  
 MANAGEMENT PROGRAM

SHEET NAME: ANAHOLA PLACE AND DIAMONDHEAD DRIVE EAST

SHEET NUMBER: 3.08

## Opinion of Probable Cost

### 3.08 Anahola

Pay Item	Unit	Quantity	Unit Cost	Total Cost
Mobilization	LS	1	\$ 60,000.00	\$ 60,000.00
Clearing and Grubbing	LS	1	\$ 18,000.00	\$ 18,000.00
Remove Excess Sediment From Road Ditch	LF	600	\$ 18.00	\$ 10,800.00
Removal of Debris & Vegetation from Ditch	LF	150	\$ 24.00	\$ 3,600.00
Removal of Existing Asphalt	SY	200	\$ 24.00	\$ 4,800.00
Removal of Culvert (All Sizes)	LF	250	\$ 48.00	\$ 12,000.00
Removal of Drainage Structure	EA	2	\$ 3,000.00	\$ 6,000.00
Removal of Sediment from Culverts	EA	10	\$ 120.00	\$ 1,200.00
Unclassified Excavation	CY	300	\$ 18.00	\$ 5,400.00
Excess Excavation	CY	100	\$ 18.00	\$ 1,800.00
Crushed Limestone	CY	75	\$ 240.00	\$ 18,000.00
Select Fill	CY	50	\$ 36.00	\$ 1,800.00
Select Bedding Material	CY	25	\$ 36.00	\$ 900.00
Roadway Repair	EA	4	\$ 3,000.00	\$ 12,000.00
Headwalls	EA	6	\$ 1,800.00	\$ 10,800.00
Rip Rap	Tons	50	\$ 90.00	\$ 4,500.00
Filter Fabric	SY	25	\$ 6.00	\$ 150.00
Silt Fencing	LF	1000	\$ 6.00	\$ 6,000.00
Wattles	EA	10	\$ 240.00	\$ 2,400.00
Excelsior Blankets	SY	10	\$ 24.00	\$ 240.00
Seeding and Mulch	LS	1	\$ 6,000.00	\$ 6,000.00
Solid Sodding	SY	50	\$ 12.00	\$ 600.00
Traffic Control (includes Temp. Signage)	LS	1	\$ 12,000.00	\$ 12,000.00
Stormwater Detention Facility	LS	4	\$ 42,000.00	\$ 168,000.00
Culvert Replacement (Conceptual)	LS	1	\$150,000.00	\$ 150,000.00
Topographic Survey	LS	1	\$ 30,000.00	\$ 30,000.00
H & H Analysis - Drainage Study	LS	1	\$ 12,000.00	\$ 12,000.00
			<i>Estimated Construction Costs</i>	\$ 558,990.00
			<i>Engineering Costs (Design, Inspection, Construction Testing, etc..)</i>	\$ 83,848.50
			<i>Right-of-Way/Easement Acquisition</i>	\$ 25,000.00
			<i>Legal</i>	\$ 7,500.00
			<i>Permitting</i>	\$ 18,000.00
			<i>15% Contingency</i>	\$ 83,848.50

**Total Estimated Project Cost** **\$ 777,187.00**

<b>Project Number</b>	3.13
<b>Project Name</b>	Fairway Drive Easement Section
<b>Location Description</b>	This site is picking up drainage from Area 15 within Watershed A as designated on the Diamondhead Master Drainage plan map and serving as outfall for all of Area 16 within Watershed A. The two basins are about 70% built out with two fairways contributing to stormwater volumes. Area 15 is smaller and immediate to the area lying North of Fairway Drive. Area 16 is a larger area with steeper grades and two detention ponds on a fairway. Drainage through the area flows generally Westward exiting through the ditch sections on Fairway Drive then under Alakoko Drive into a constricted bulkhead section.
<b>Project Coordinates</b>	30°23'16"N, 89°22'12"W
<b>HUC12</b>	031700091303 –Rotten Bayou
<b>Project Type</b>	H&H Study, Install Detention, Enlarge Hydrologic Section
<b>Number of residences or businesses benefitted</b>	>100
<b>Anticipated Project Benefits</b>	Improve Flow Characteristics Reduced possibility of flooding of roadways and homes in the area Extend Runoff Times Improve Water Quality downstream
<b>Implementation Period</b>	Study: Complete Design: 12 months Permits: SWPPP, NWP 41 Land Acquisition: Probable Implementation: 2 Yr
<b>Flood Zone</b>	No
<b>Estimated Project Cost</b>	<b>\$378,412.00</b>
<b>Location Problems</b>	 <p>Large portion of these watershed basins are impervious. Area 15, which is immediate to the outfall area includes a lot of hardscaped drainage section that decrease runoff times while increasing volumes. Ditch sections along Fairway drive and thru the easement are not large enough to accommodate the current volumes and there is potential for further development within the basins. Roadway pipes under Alakoko Drive are constricting flow but that may be preventing downstream flooding as the drainage way leaving the pipes appears to be near capacity and in imminent danger of failing structurally.</p>
<b>Recommended Solution</b>	H & H study of the basins for determining full development volumes. Construct additional detention facilities, enlarge hydrologic section along Fairway Drive, remove, replace, install additional drainage structures under the roadway and remove/replace bulkheads with LID options.



**LEGEND**

-  EXISTING DRAINAGE DITCH/CHANNEL/CANAL/ POND/BAYOU/CREEK
-  EXISTING DRAINAGE STRUCTURE
-  SFHZ A AND X (2%)
-  FLOODWAY
-  FLOW ARROWS



PROJECT: 0018081.000  
 DATE: AUG - 2019  
 SCALE: 1 IN = 325 FT

SCALE: 1 IN = 325 FT



**HANCOCK CO BOARD OF SUPERVISORS**  
 COMPREHENSIVE WATERSHED BASED STORMWATER  
 MANAGEMENT PROGRAM

SHEET NAME: FAIRWAY DRIVE

SHEET NUMBER: 3.13

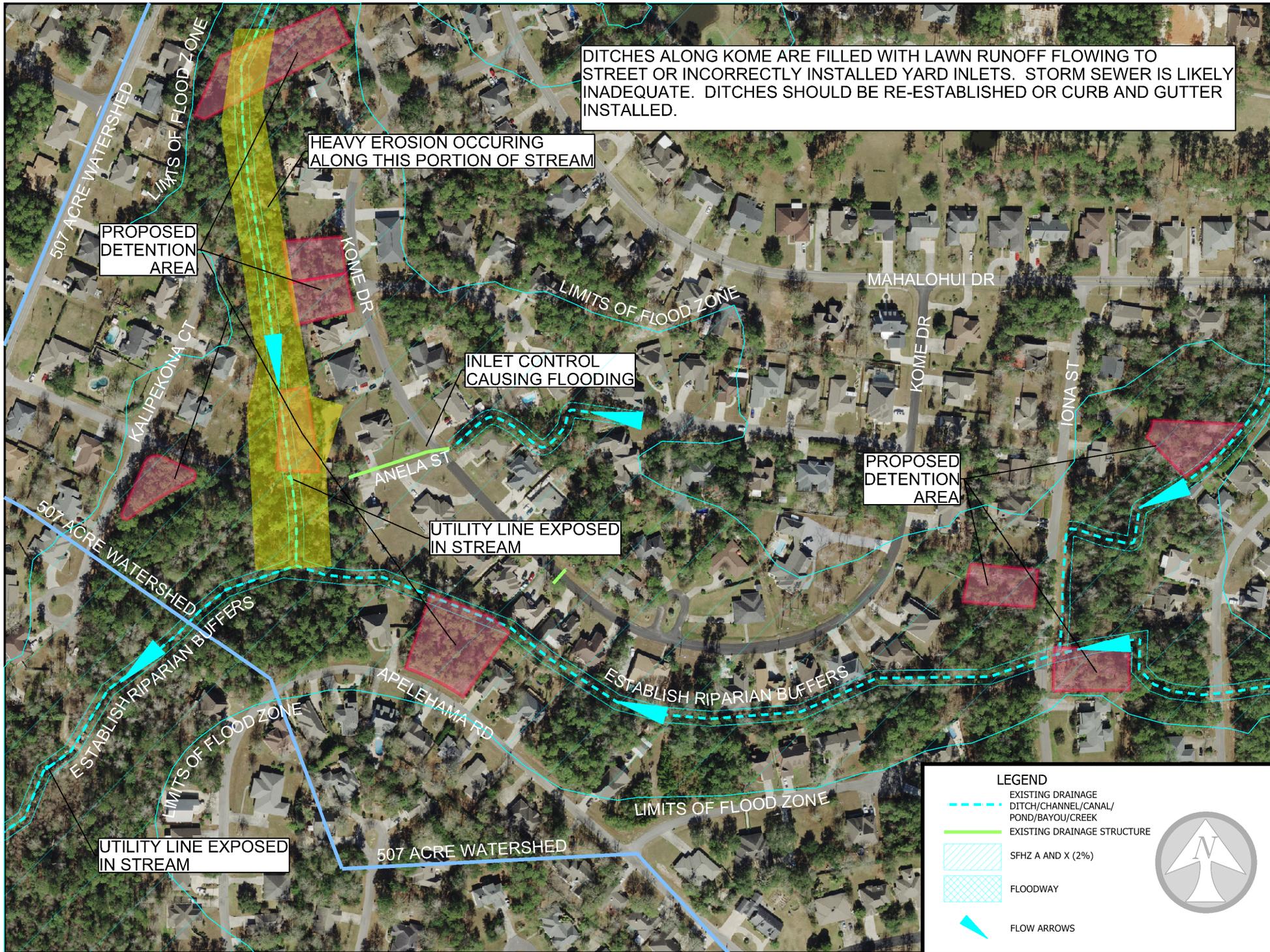
## Opinion of Probable Cost

### 3.12 Block 7 Phase 2

Pay Item	Unit	Quantity	Unit Cost	Total Cost
Mobilization	LS	1	\$ 24,000.00	\$ 24,000.00
Clearing and Grubbing	LS	1	\$ 6,000.00	\$ 6,000.00
Remove Excess Sediment From Road Ditch	LF	1600	\$ 18.00	\$ 28,800.00
Removal of Existing Asphalt	SY	50	\$ 24.00	\$ 1,200.00
Removal of Sediment from Culverts	EA	10	\$ 240.00	\$ 2,400.00
Crushed Limestone	CY	25	\$ 240.00	\$ 6,000.00
Select Fill	CY	25	\$ 36.00	\$ 900.00
Select Bedding Material	CY	25	\$ 36.00	\$ 900.00
Roadway Repair	EA	1	\$ 3,000.00	\$ 3,000.00
29x18 RCAP	LF	100	\$ 84.00	\$ 8,400.00
Headwalls	EA	2	\$ 1,800.00	\$ 3,600.00
Rip Rap	Tons	650	\$ 90.00	\$ 58,500.00
Filter Fabric	SY	1200	\$ 6.00	\$ 7,200.00
Silt Fencing	LF	250	\$ 6.00	\$ 1,500.00
Wattles	EA	2	\$ 240.00	\$ 480.00
Excelsior Blankets	SY	600	\$ 24.00	\$ 14,400.00
Seeding and Mulch	LS	1	\$ 6,000.00	\$ 6,000.00
Traffic Control (includes Temp. Signage)	LS	1	\$ 12,000.00	\$ 12,000.00
Stormwater Detention Facility	LS	1	\$ 30,000.00	\$ 30,000.00
Topographic Survey	LS	1	\$ 30,000.00	\$ 30,000.00
H & H Analysis - Drainage Study	LS	1	\$ 8,400.00	\$ 8,400.00
<i>Estimated Construction Costs</i>				\$ 253,680.00
<i>Engineering Costs (Design, Inspection, Construction Testing, etc..)</i>				\$ 38,052.00
<i>Right-of-Way/Easement Acquisition</i>				\$ 25,000.00
<i>Legal</i>				\$ 5,000.00
<i>Permitting</i>				\$ 18,000.00
<i>15% Contingency</i>				\$ 38,052.00

**Total Estimated Project Cost** **\$ 377,784.00**

<b>Project Number</b>	3.15
<b>Project Name</b>	Kome Drive
<b>Location Description</b>	Site is a low area where runoff is collected and transferred off the surface to underground infrastructure. Flow collected at the site is local, but feeds into to a sizeable arterial drainage ditch. The stream exiting the area drains 500 plus heavily developed hilly acres.
<b>Project Coordinates</b>	30°23'18"N, 89°22'37"W
<b>HUC12</b>	031700091303 –Rotten Bayou
<b>Project Type</b>	H&H Study, Remove Inlet control, Re-establish Hydrologic section, Erosion Control, Detention
<b>Number of residences or businesses benefitted</b>	51-75
<b>Anticipated Project Benefits</b>	Improve Flow Characteristics Reduced possibility of flooding of roadways and homes in the area
<b>Implementation Period</b>	Study: Complete Design: 12 months Permits: SWPPP, NWP 41 Land Acquisition: Probable Implementation: 2 Yr
<b>Flood Zone</b>	Yes
<b>Estimated Project Cost</b>	<b>\$844,240.00</b>
<b>Location Problems</b>	 <p>Water has been reported on the roadway during storm events. Underground drainage system was not investigated to determine adequacy. Inlet control issues are likely the cause of back up, due to the local nature of the reported problems.</p>
<b>Recommended Solution</b>	Topographic survey of the immediate area to determine the storm sewer infrastructure and where inlet control is constricting flow. Re-establish ditch sections where feasible and armor to prevent erosion. Replace inadequate infrastructure with properly sized channels and culverts. Investigate detention possibilities and alternate ways of removing surface drainage. Establish riparian buffers along all streams in the area.



DITCHES ALONG KOME ARE FILLED WITH LAWN RUNOFF FLOWING TO STREET OR INCORRECTLY INSTALLED YARD INLETS. STORM SEWER IS LIKELY INADEQUATE. DITCHES SHOULD BE RE-ESTABLISHED OR CURB AND GUTTER INSTALLED.

HEAVY EROSION OCCURRING ALONG THIS PORTION OF STREAM

PROPOSED DETENTION AREA

INLET CONTROL CAUSING FLOODING

PROPOSED DETENTION AREA

UTILITY LINE EXPOSED IN STREAM

UTILITY LINE EXPOSED IN STREAM

**LEGEND**

- - - EXISTING DRAINAGE DITCH/CHANNEL/CANAL/ POND/BAYOU/CREEK
- EXISTING DRAINAGE STRUCTURE
- SFHZ A AND X (2%)
- FLOODWAY
- ▶ FLOW ARROWS



PROJECT: 0018081.000  
 DATE: AUG - 2019  
 SCALE: 1 IN = 250 FT



HANCOCK CO BOARD OF SUPERVISORS  
 COMPREHENSIVE WATERSHED BASED STORMWATER  
 MANAGEMENT PROGRAM

SHEET NAME: KOME DRIVE - DIAMONDHEAD

SHEET NUMBER: 3.15

## Opinion of Probable Cost

### 3.15 Kome Drive

Pay Item	Unit	Quantity	Unit Cost	Total Cost
Mobilization	LS	1	\$ 60,000.00	\$ 60,000.00
Clearing and Grubbing	LS	2	\$ 18,000.00	\$ 36,000.00
Remove Excess Sediment From Road Ditch	LF	300	\$ 18.00	\$ 5,400.00
Removal of Debris & Vegetation from Ditch	LF	1200	\$ 18.00	\$ 21,600.00
Removal of Sediment from Culverts	EA	7	\$ 600.00	\$ 4,200.00
Modified Inlets	EA	4	\$ 3,000.00	\$ 12,000.00
Headwalls	EA	2	\$ 1,800.00	\$ 3,600.00
Gabion	Tons	900	\$ 90.00	\$ 81,000.00
Filter Fabric	SY	1200	\$ 6.00	\$ 7,200.00
Silt Fencing	LF	1000	\$ 6.00	\$ 6,000.00
Seeding and Mulch	LS	2	\$ 6,000.00	\$ 12,000.00
Solid Sodding	SY	200	\$ 12.00	\$ 2,400.00
Traffic Control (includes Temp. Signage)	LS	1	\$ 12,000.00	\$ 12,000.00
Stormwater Detention Facility	LS	8	\$ 30,000.00	\$ 240,000.00
Utility Relocation	LS	1	\$ 30,000.00	\$ 30,000.00
Topographic Survey	LS	1	\$ 42,000.00	\$ 42,000.00
H & H Analysis - Drainage Study	LS	1	\$ 14,400.00	\$ 14,400.00
<i>Estimated Construction Costs</i>				\$ 589,800.00
<i>Engineering Costs (Design, Inspection, Construction Testing, etc..)</i>				\$ 88,470.00
<i>Right-of-Way/Easement Acquisition</i>				\$ 45,000.00
<i>Legal</i>				\$ 7,500.00
<i>Permitting</i>				\$ 25,000.00
<i>15% Contingency</i>				\$ 88,470.00

**Total Estimated Project Cost** **\$844,240.00**