



STATE OF MISSISSIPPI

Tate Reeves Governor

MISSISSIPPI DEPARTMENT OF MARINE RESOURCES

Joe Spraggins, Executive Director

MEMORANDUM OF UNDERSTANDING BETWEEN THE MISSISSIPPI DEPARTMENT OF MARINE RESOURCES AND THE CITY OF DIAMONDHEAD

This Memorandum of Understanding (the "MOU") is entered into between the Mississippi Department of Marine Resources (hereinafter "MDMR") and the City of Diamondhead (hereinafter "CODH") for the purpose of establishing the agreed upon conditions under which MDMR may allocate funds to CODH for the Drainage, Flood Prevention and Water Quality Improvements ("the Project") pursuant to the Gulf of Mexico Energy Security Act of 2006, Public Law 109-432 (hereinafter "GOMESA"). This MOU is entered into pursuant to and subject to the terms of GOMESA and relates to MDMR funds obtained through GOMESA, in the amount of One Million One Hundred Ninety-Three Thousand Four Hundred Forty-Seven Dollars and No/100 (\$1,193,447.00). The CODH will use some or all of the funds, which will be provided on a reimbursement basis, to advance the Project.

RECITALS

WHEREAS, GOMESA authorizes the disbursement of funds for projects and activities for the purposes of coastal protection, including conservation, coastal restoration, hurricane protection, infrastructure directly affected by coastal wetland losses, as well as mitigation of damage to fish, wildlife, or natural resources; and,

WHEREAS, funding for GOMESA is directed to the State of Mississippi through the Bureau of Ocean Energy Management within the Department of Interior; and,

WHEREAS, the Governor of the State of Mississippi has directed that MDMR will administer GOMESA funding for the State; and,

WHEREAS, MDMR is authorized to allocate and disburse GOMESA funds in accordance with GOMESA in a manner as determined by the MDMR; and,

WHEREAS, GOMESA funds are federal funds and cannot be used to match any other federal funds unless those programs specifically state that such funds can be used for matching; and,

WHEREAS, the primary goals of the Project consists of three subprojects that will provide drainage infrastructure improvements, wetland restoration and improve detention facilities for

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future watershed events; and,

WHEREAS, CODH proposes that the subprojects that are associated with the Phase 1: Diamondhead Drainage, Flood Prevention & Water Quality Improvement Project 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; and,

WHEREAS, the MDMR requests CODH maintain on file all documentation related to the receipt, investment and expenditure of the funds provided for the Project, and furnish any such documentation to the MDMR upon request; and,

WHEREAS, CODH agrees to expend the funds in accordance with the purposes as outlined in GOMESA; and,

WHEREAS, CODH agrees to provide quarterly and final reports to MDMR that summarize the expenditure of the funds reimbursed by MDMR and the status of the Project until such time as the final expenditure of these funds has been made; and,

WHEREAS, MDMR finds, consistent with GOMESA, that it is in the best interest of the State of Mississippi that funds made available from GOMESA should be allocated to CODH, on a reimbursement basis, for the Project.

NOW THEREFORE, IT IS MUTUALLY AGREED BY THE MISSISSIPPI DEPARTMENT OF MARINE RESOURCES AND THE CITY OF DIAMONDHEAD, AS FOLLOWS:

SECTION 1. Each and all of the facts and findings set forth in the preamble clauses of this memorandum are hereby found and determined to be true and accurate and are incorporated herein by this reference thereto as though set forth again in words and figures.

SECTION 2. This MOU shall be effective upon execution by both parties and shall remain in effect for a term of three years (36 months) with one optional one-year (12 months) renewal, for a total of four (4) years, unless terminated earlier. The term may be extended prior to expiration upon the written agreement of both parties.

SECTION 3. MDMR, pursuant to GOMESA, shall provide funds received from Mississippi's allocation of GOMESA funding in an amount up to One Million One Hundred Ninety-Three Thousand Four Hundred Forty-Seven Dollars and No/100 (\$1,193,447.00) to CODH, on a reimbursement basis, for the purpose of providing funds to accomplish the Project as described herein.

SECTION 4. CODH shall request payment of funds hereunder for Project costs on a reimbursement basis (such requests, "Reimbursement Requests"), unless otherwise directed by MDMR. CODH shall submit written Reimbursement Requests no more frequently than monthly and no less frequently than quarterly. Each Reimbursement Request must be accompanied by detailed supporting documentation of costs incurred as required by MDMR. All Reimbursement Requests for time periods ending June 30 of any year during the term of this MOU shall be submitted no later than July 31 of that same year. MDMR will pay all properly documented Reimbursement Requests within forty-five (45) days after MDMR's receipt of same, except for

any amounts disputed by MDMR in good faith. Reimbursement Requests shall be sent to Russell Weatherly, Project Manager – Office of Tidelands/GOMESA, Mississippi Department of Marine Resources, 1141 Bayview Avenue, Biloxi, MS 39530, russell.weatherly@dmr.ms.gov.

SECTION 5. CODH agrees to use all funds received from MDMR as allocated from GOMESA funding **solely** for the purposes set forth herein and authorized by GOMESA and upon the terms and provisions of this MOU; and further, by execution of this MOU, CODH does hereby certify that all GOMESA funds it receives from the MDMR shall be used exclusively for the Project. CODH understands that failure on its part to adhere to any provision within this MOU may result in termination of this MOU by the MDMR and in immediate action by the State to recover any improperly expended funds.

SECTION 6. CODH agrees to comply with all applicable provisions of CFR 2 §200, *et seq.*, including §200.501which states that a non-Federal entity that expends Seven Hundred Fifty Thousand Dollars and No/100 (\$750,000.00) or more during the non-Federal entity's fiscal year in Federal awards must have a single or program-specific audit conducted for that year.

SECTION 7. CODH agrees to maintain on file all documentation in accordance with the recitals of this MOU and to submit such documentation to MDMR upon request.

SECTION 8. CODH agrees to provide MDMR quarterly reports summarizing expenditure of GOMESA funds received from MDMR for the Project and the status of the Project until such time as the final expenditure or final investment of the funds has been made. The first quarterly report shall be provided within ninety (90) days of the effective date of this MOU, and thereafter within thirty (30) days of each calendar quarter end. CODH shall also provide MDMR with a final report summarizing the expenditures and use of the funds upon completion of the Project and final expenditure. Failure to timely submit reports may result in delay of payment of Reimbursement Requests. Reports shall be sent to Russell Weatherly, Project Manager – Office of Tidelands/GOMESA, Mississippi Department of Marine Resources, 1141 Bayview Avenue, Biloxi, MS 39530, russell.weatherly@dmr.ms.gov.

SECTION 9. CODH agrees to maintain copies of all invoices and documentation related to the funds allocated by MDMR for the Project sufficient to satisfy and confirm, to MDMR's satisfaction, that such funds have been expended **solely** for the purposes provided in GOMESA.

SECTION 10. CODH shall comply with and all activities under this MOU shall be subject to all applicable Federal, State, and local laws and regulations, as now existing and as may be amended or modified.

SECTION 11. CODH understands and acknowledges that if the Mississippi State Legislature fails to pass an appropriation bill for the MDMR and the prior year's appropriation bill expires, or if the Legislature fails to give MDMR the authority to expend funds, or if funds are otherwise unavailable, then the MDMR may, in its sole discretion, terminate this agreement or issue a Stop Work Order to CODH in lieu of termination. If a Stop Work Order is issued, CODH agrees to adhere to its terms.

SECTION 12. This MOU shall be governed by and construed in accordance with the laws

of the State of Mississippi, excluding its conflict of laws provisions, and any litigation with respect thereto shall be brought in the state courts of Harrison County, Mississippi.

SECTION 13. Attached hereto as <u>Attachment A</u> and incorporated herein by reference is the document supporting the request for GOMESA funding submitted by CODH. This document outlines the scope of work to be completed for the Project. Any change in the scope of work is subject to approval by the MDMR in writing and may require an amendment to this MOU and written approval of the GOMESA Committee and others.

SECTION 14. Attached hereto as <u>Attachment B</u> and incorporated herein by reference is the budget for the Project submitted by CODH.

SECTION 15. Attached hereto as <u>Attachment C</u> and incorporated herein by reference is the Project Selection Form approved and executed by the GOMESA Committee. In the event of a discrepancy between Attachment A and Attachment C, Attachment C will govern.

SECTION 16. All notices or information required or permitted to be given pursuant to this MOU shall be in writing and personally delivered or sent by Certified United States mail, postage prepaid, return receipt requested, to the party to whom the notice should be given at the address set forth below. Notice shall be deemed given when actually received or when refused. The parties agree to promptly notify each other in writing of any change of address.

For CODH:

City of Diamondhead
Attention: Jon McCraw, Interim City Manager
5000 Diamondhead Circle
Diamondhead, Mississippi 39525
mreso@diamondhead.ms.gov

For MDMR:

Mississippi Department of Marine Resources Attention: Joe Spraggins, Executive Director 1141 Bayview Ave. Biloxi, Mississippi 39530 Email: crystal.matta@dmr.ms.gov IN WITNESS WHEREOF, the parties have affixed their signatures on the dates indicated below.

MISSISSIPPI DEPARTMENT OF MARINE RESOURCES

By:	
-	oe Spraggins, Executive Director
Date:	
CITY	OF DIAMONDHEAD
Ву: _	
Jo	n McCraw, Interim City Manager
Date:	

Attachment A



City of Diamondhead

GOMESA Grant Application 2022

Submitted to: Mississippi Department of Marine Resources Program: Gulf of Mexico Energy Securities Act (GOMESA)

Submittal Date: December 2021

Submitted by: City of Diamondhead

City Manager: Michael Reso 5000 Diamondhead Circle Diamondhead, MS 39525

(228) 222-4626

City of Diamondhead - GOMESA Grant Application 2022

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Project Name

Diamondhead Drainage, Flood Prevention & Water Quality Improvement Project

Point of Contact Information

City Manager, Michael Reso

Address: 5000 Diamondhead Circle, Diamondhead, MS 39525

Phone: 228-222-4626

Email: mreso@diamondhead.ms.gov

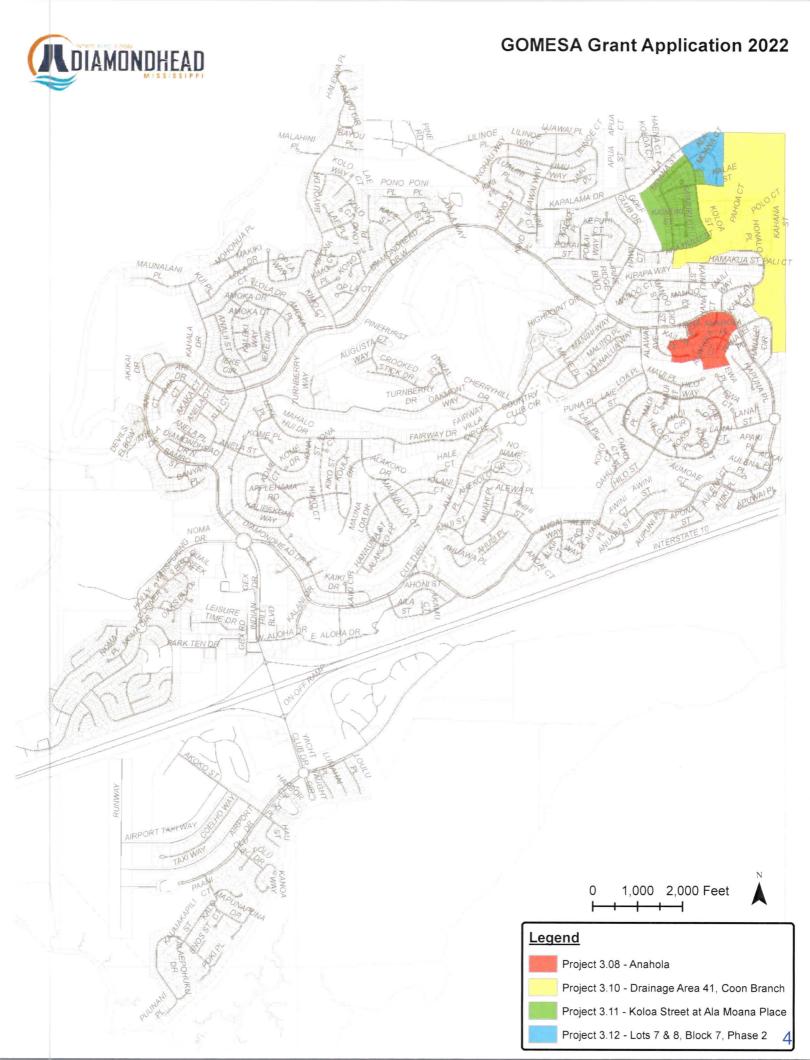
Project Location

Diamondhead Drainage, Flood Prevention & Water Quality Improvement Project consists of four subprojects. The subprojects and their locations are below:

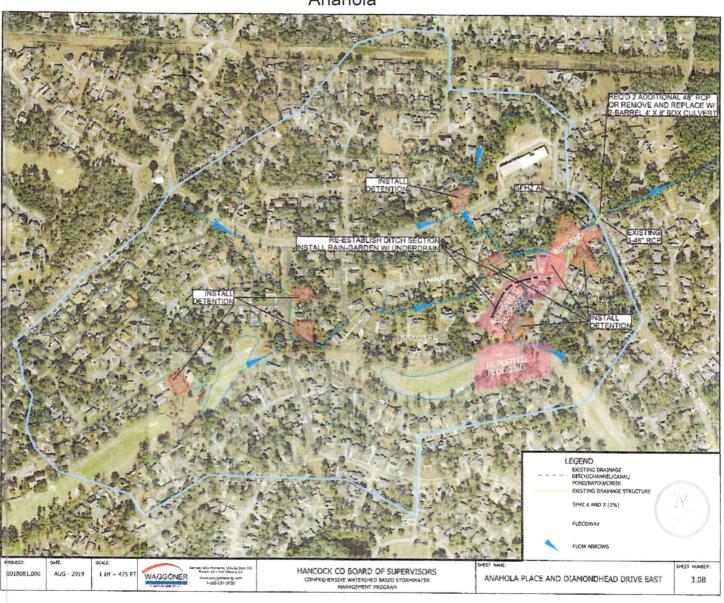
- Anahalo
 - o Project coordinates: 30° 23′42″N,89° 20′40″W
 - Location Description: Site is a natural draw in the East-central portion of Diamondhead located in the lower section of Watershed F as identified in the 2014 Master Drainage Plan map produced Seymour Engineering. The structures under Diamondhead 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.
 - Please see the map titled Anahalo on the following pages for the exact location.
- Drainage Area 41 Coon Branch
 - o Project coordinates: 30°24′9″N, 89°20′29″W
 - Location description: Site is the outfall of Drainage area 41 (as identified in the 2014 Seymour Engineering Master Drainage Plan Map) into Coon Branch. Drainage area 41 is a draw that extends westward from the confluence. A significant number of parcels in this watershed remain undeveloped.
 - Please see the map titled Coon Branch on the following pages for exact location.
- Koloa Street at Ala Moana Place
 - Project coordinates: 30°24′12″N, 89°20′51″W
 - Location description: Site is at the intersection of Koloa Street and Ala Moana Place. Ala Moana Place runs East and West along the toe of the hill section to the South. Runoff travels Northward along Koloa Street which has a significant crossing with Ala Moana into a section with less grade.
 - See the map titled Kalae Court on the ensuing pages for exact location.

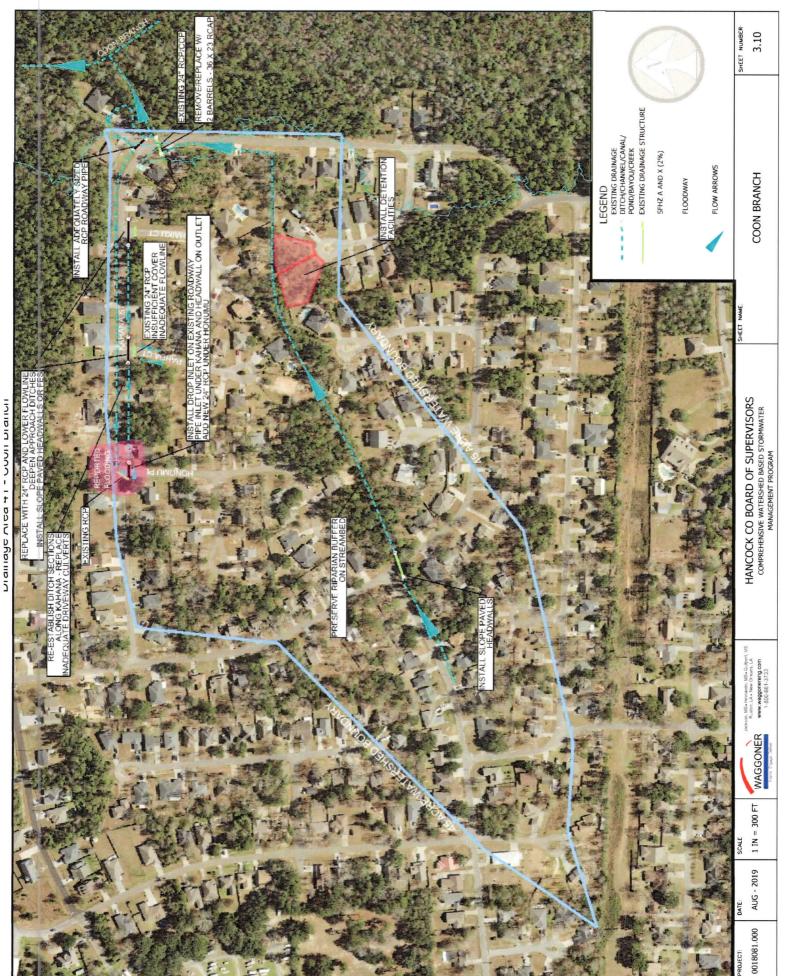
City of Diamondhead - GOMESA Grant Application 2022

- Lots 7 & 8 Block 7 Phase 2
 - o Project coordinates: 30°24′21″N, 89°20′49″W
 - Location description: These lots appear to have been artificially filled in an old drainage way in an area with very little grade effectively making the lots a basin with no outlet. Runoff enters the lots from a westward direction along Ala Moana Street. Hydric soils and vegetation indicate wetland characteristics on the site.
 - Please see the map titled Block 7 Phase 2 on the following pages for exact location.

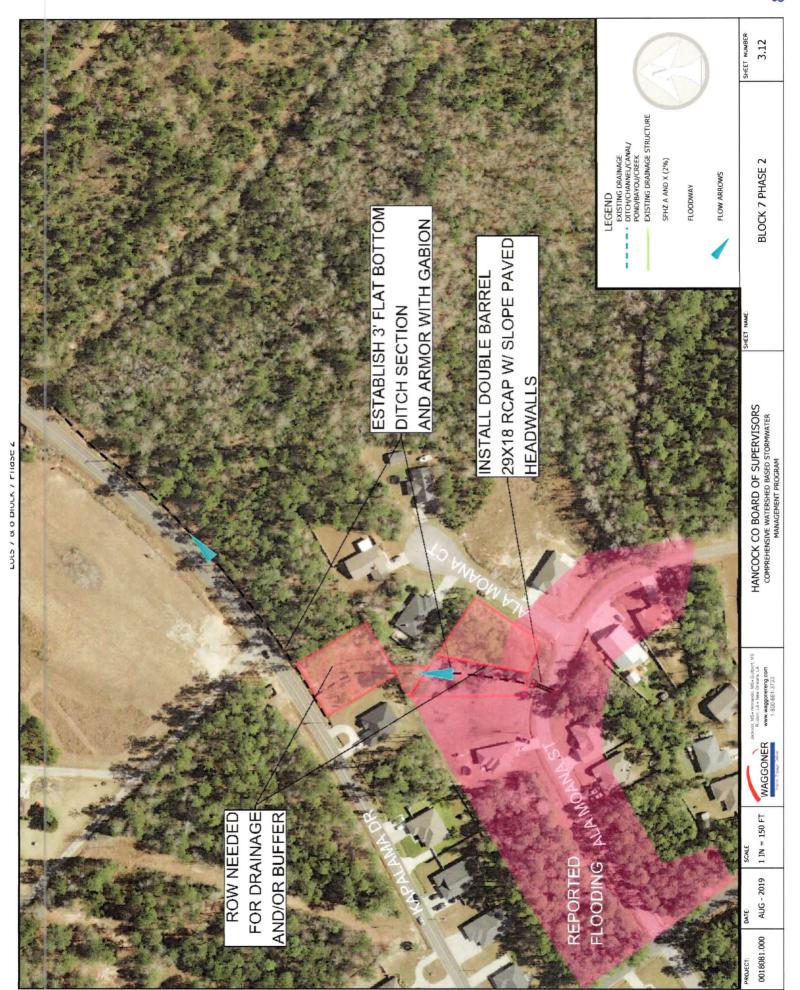


Anahola





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Project Description

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. The project consists of four subprojects that will provide drainage infrastructure improvements, wetland restoration and improve detention facilities for future watershed events. 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 four 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 Anahalo, Drainage Area 41-Coon Branch, Koloa Street at Ala Moana Place and Lots 7 & 8 Block 7 Phase 2.

Project Number	3.08				
Project Name	Anahola				
Location Description	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.				
Project Coordinates	30°23′42″N, 89°20′40″W				
HUC12	031700091303 – Rotten Bayou				
Project Type	Detention, Drainage Infrastructure Improvements.				
Number of residences or businesses benefitted	76-100				
Anticipated Project Benefits	Improve Flow Characteristics Reduced possibility of flooding of roadways and homes in the area Improved water quality downstream Extended Runoff times				
Implementation Period	Study: 6 months Design: 6 months Permits: Wetland 404, SWPPP Land Acquisition: Probable Implementation: 2 Yr				
Flood Zone	No				
Estimated Project Cost	\$651,416				
Location Problems	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				
Recommended Solution	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.				

Project Number	3.10						
Project Name	Drainage Area 41 - Coon Branch						
Location Description	increase capacity are evident in the form of enlarging the hydrologic section at Coon Branch.						
Project Coordinates	30°24′9″N, 89°20′29″W						
HUC12	031700091303 – Rotten Bayou						
Project Type	Detention, Drainage Infrastructure Improvements, Planning/Ordinance.						
Number of residences or businesses benefitted	>100						
Anticipated Project Benefits	Improve Flow Characteristics Reduced possibility of flooding of roadways and homes in the area Improved water quality downstream Extended Runoff times						
Implementation Period	Study: 6 months Design: 6 months Permits: SWPPP, NWP 41 Land Acquisition: Possible Implementation: 1 Yr						
Flood Zone	Yes						
Estimated Project Cost	\$462,199						
Location Problems	Reported problems are water over the road in a typical storm event. Site is the singular out fall for watershed with no detention facility and likely to see an increase in impervious surface. Some siltation is present in ditches, and drainage infrastructure is currently inadequate, so increased development will cause more issues. Runoff from almost the entire Eastern portion of Diamondhead passes thru Coon Branch before this outfall causing it to overtop banks and backup flooding to this low lying area.						
Recommended Solution	Expand on Seymour study to investigate a build out expected runoff volume. Remove and replace roadway pipes to accommodate expected runoff. Acquire lots for detention implementation. Closely monitor building activity and strictly enforce BMP measures. Limit clearing activity.						

Project Number	3.11						
Project Name	Koloa Street at Ala Moana Place						
Location Description	Site is at the intersection of Koloa Street and Ala Moana Place. Ala Moana Place runs East and West along the toe of the hill section to the South Runoff travels Northward along Koloa Street which has a significant crossin Ala Moana into a section with less grade.						
Project Coordinates	30°24′12″N, 89°20′51″W						
HUC12	031700091303 – Rotten Bayou						
Project Type	Drainage Infrastructure Improvements						
Number of residences or businesses benefitted	76-100						
Anticipated Project	Improve Flow Characteristics						
Benefits	Reduced possibility of flooding of roadways and homes in the area						
Implementation Period	Study: None Design: 6 months Permits: SWPPP Land Acquisition: No Implementation: 1 Yr						
Flood Zone	No						
Estimated Project Cost	Cost \$422,921						
Location Problems	Reported problems are water over the road in a typical storm event. Runoff travels with good velocity down the steep grades of Koloa where it encounters the flatter grades at this intersection. The pipe at the intersection is out of alignment with flow down Koloa. Siltation has occurred downstream of the pipe causing water to pond and cover the roadway. The existing pipe has minimal cover as it exists, so re-establishing hydrologic section downstream of it is necessary.						
Recommended Solution	Topographic survey of the area for redesign and replacement of roadway pipe.						

Project Number	3.12					
Project Name	Lots 7 & 8 Block 7 Phase 2, Diamondhead					
Location Description	These lots appear to have been artificially filled in an old drainage way in an area with very little grade effectively making the lots a basin with no outlet. Runoff enters the lots from a westward direction along Ala Moana Street Hydric soils and vegetation indicate wetland characteristics on the site.					
Project Coordinates	30°24′21″N, 89°20′49″W					
HUC12	031700091303 – Rotten Bayou					
Project Type	Land acquisition, Wetland restoration, LID BMP construction					
Number of residences or businesses benefitted	51-75					
Anticipated Project Benefits	Improve Flow Characteristics Reduced possibility of flooding of roadways and homes in the area Extend Runoff Times Improve Water Quality downstream					
Implementation Period	Study: 6 months Design: 6 months Period Period Permits: SWPPP, NWP 41 Land Acquisition: Probable Implementation: 1 Yr					
Flood Zone	No					
Estimated Project Cost	st \$308,327					
Location Problems	The site is obviously holding water as an attempt to force drainage into a nearby ditch was not properly engineered. Filling the lots to an elevation that will bring them out of the soggy conditions will almost certainly flood surrounding lots. This portion of the city has a lot of developable property that will exacerbate the issues once construction increases.					
Recommended Solution	Purchase the lots or enter agreement with owner in perpetuity to re- establish the natural drainage course and install an extended dry detention basin to restore the wetland characteristics, as well as, serve as detention for future development in the area.					

Justification

Diamondhead Drainage, Flood Prevention & Water Quality Improvement Project 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 four 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.

Estimated Cost and Detailed Budget

As part of the Hancock County Watershed-Based Stormwater Assessment and Management Plan produced by Waggoner Engineering, a detailed budget was created for each recommended project in the conservation management plan. The opinion of probably cost from Waggoner Engineering for each subproject can be found on the following pages. The estimated total cost for the subprojects of the Diamondhead Drainage, Flood Prevention & Water Quality Improvement Project are found below.

Anahalo: \$651,416.06

• Drain Area 41-Coon Branch: \$462,199.38

• Koloa Street at Ala Moana Place: \$422,921.13

• Lots 7 & 8 Block 7 Phase 2: \$308,326.50

Total Estimated Cost: \$1,844,863.07



Opinion of Probable Cost

Oct 2019

3.08 Anahola

Pay Item	Unit	Quantity	Unit Cost	Total Cost
Mobilization	LS	1	\$ 50,000.00	\$ 50,000.00
Clearing and Grubbing	LS	1	\$ 15,000.00	\$ 15,000.00
Remove Excess Sediment From Road Ditch	LF	600	\$ 15.00	\$ 9,000.00
Removal of Debris & Vegetation from Ditch	LF	150	\$ 20.00	\$ 3,000.00
Removal of Existing Asphalt	SY	200	\$ 20.00	\$ 4,000.00
Removal of Culvert (All Sizes)	LF	250	\$ 40.00	\$ 10,000.00
Removal of Drainage Structure	EA	2	\$ 2,500.00	\$ 5,000.00
Removal of sediment from culverts	EA	10	\$ 100.00	\$ 1,000.00
Unclassified Excavation	CY	300	\$ 15.00	\$ 4,500.00
Excess Excavation	CY	100	\$ 15.00	\$ 1,500.00
Crushed Limestone	CY	75	\$ 200.00	\$ 15,000.00
Select Fill	CY	50	\$ 30.00	\$ 1,500.00
Select Bedding Material	CY	25	\$ 30.00	\$ 750.00
Roadway Repair	EA	4	\$ 2,500.00	\$ 10,000.00
Headwalls	EA	6	\$ 1,500.00	\$ 9,000.00
Rip Rap	Tons	50	\$ 75.00	\$ 3,750.00
Filter Fabric	SY	25	\$ 5.00	\$ 125.00
Silt Fencing	LF	1,000	\$ 5.00	\$ 5,000.00
Wattles	EA	10	\$ 200.00	\$ 2,000.00
Excelsior Blankets	SY	10	\$ 20.00	\$ 200.00
Seeding and Mulch	LS	1	\$ 5,000.00	\$ 5,000.00
Solid Sodding	SY	50	\$ 10.00	\$ 500.00
Traffic Control (includes Temp. Signage)	LS	1	\$ 10,000.00	\$ 10,000.00
Stormwater Detention Facility	LS	4	\$ 35,000.00	\$ 140,000.00
Culvert Replacement (Conceptual)	LS	1	\$ 125,000.00	\$ 125,000.00
Topographic Survey	LS	1	\$ 25,000.00	\$ 25,000.00
H & H Analysis - Drainage Study	LS	1	\$ 15,000.00	\$ 15,000.00

Estimated Construction Costs \$ 470,825.00 Engineering Costs (Design, Inspection, Construction Testing, etc.) \$ 70,623.75

Right-of-Way/Easement Acquisition \$ 15,000.00 10,000.00 Permitting \$ 15% Contingency \$ 84,967.31

Total Estimated Project Cost \$ 651,416.06

^{*}This amount is not included in the awarded GOMESA funds.



Opinion of Probable Cost 3.10 Coon Branch

Oct 2019

Pay Item	Unit	Quantity	Unit Cost	Total Cost
Mobilization	LS	1	\$ 35,000.00	\$ 35,000.00
Clearing and Grubbing	LS	1	\$ 15,000.00	\$ 15,000.00
Remove Excess Sediment From Road Ditch	LF	2,500	\$ 10.00	\$ 25,000.00
Removal of Existing Asphalt	SY	200	\$ 20.00	\$ 4,000.00
Removal of Culvert (All Sizes)	LF	100	\$ 40.00	\$ 4,000.00
Removal of Drainage Structure	EA	2	\$ 2,500.00	\$ 5,000.00
Removal of sediment from culverts	EA	2	\$ 400.00	\$ 800.00
Crushed Limestone	CY	25	\$ 200.00	\$ 5,000.00
Select Fill	CY	200	\$ 30.00	\$ 6,000.00
Select Bedding Material	CY	75	\$ 30.00	\$ 2,250.00
Roadway Repair	EA	7	\$ 2,500.00	\$ 17,500.00
Modified Inlets	EA	1	\$ 1,800.00	\$ 1,800.00
24" RCP	LF	300	\$ 70.00	\$ 21,000.00
36 X 23 RCAP	LF	100	\$ 175.00	\$ 17,500.00
Headwalls	EA	12	\$ 1,500.00	\$ 18,000.00
Rip Rap	Tons	200	\$ 75.00	\$ 15,000.00
Filter Fabric	SY	300	\$ 5.00	\$ 1,500.00
Silt Fencing	LF	500	\$ 5.00	\$ 2,500.00
Wattles	EA	2	\$ 200.00	\$ 400.00
Excelsior Blankets	SY	2,500	\$ 20.00	\$ 50,000.00
Seeding and Mulch	LS	1	\$ 5,000.00	\$ 5,000.00
Solid Sodding	SY	50	\$ 10.00	\$ 500.00
Traffic Control (includes Temp. Signage)	LS	1	\$ 5,000.00	\$ 5,000.00
Stormwater Detention Facility	LS	1	\$ 35,000.00	\$ 35,000.00
Topographic Survey	LS	1	\$ 35,000.00	\$ 35,000.00

Estimated Construction Costs \$ 327,750.00 Engineering Costs (Design, Inspection, Construction Testing, etc.) \$ 49,162.50 Right-of-Way/Easement Acquisition \$ 15,000.00

Permitting \$ 10,000.00 60,286.88 15% Contingency \$

Total Estimated Project Cost \$ 462,199.38

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Opinion of Probable Cost

Oct 2019

3.11 Kalae

Pay Item Pay Item	Unit	Quantity	Unit Cost	Total Cost
Mobilization	LS	1	\$ 30,000.00	\$ 30,000.00
Clearing and Grubbing	LS	1	\$ 15,000.00	\$ 15,000.00
Remove Excess Sediment From Road Ditch	LF	1,000	\$ 15.00	\$ 15,000.00
Removal of Existing Asphalt	SY	200	\$ 20.00	\$ 4,000.00
Removal of Culvert (All Sizes)	LF	300	\$ 40.00	\$ 12,000.00
Abandon Culvert in place (flowable fill)	LF	50	\$ 10.00	\$ 500.00
Removal of sediment from culverts	EA	25	\$ 200.00	\$ 5,000.00
Crushed Limestone	CY	50	\$ 200.00	\$ 10,000.00
Select Fill	CY	200	\$ 30.00	\$ 6,000.00
Select Bedding Material	CY	75	\$ 30.00	\$ 2,250.00
Roadway Repair	EA	4	\$ 2,500.00	\$ 10,000.00
Modified Inlets	EA	1	\$ 1,800.00	\$ 1,800.00
29x18 RCAP	LF	150	\$ 70.00	\$ 10,500.00
36 X 23 RCAP	LF	100	\$ 125.00	\$ 12,500.00
Headwalls	EA	10	\$ 1,500.00	\$ 15,000.00
Rip Rap	Tons	75	\$ 75.00	\$ 5,625.00
Filter Fabric	SY	125	\$ 5.00	\$ 625.00
Silt Fencing	LF	250	\$ 5.00	\$ 1,250.00
Wattles	EA	5	\$ 200.00	\$ 1,000.00
Seeding and Mulch	LS	1	\$ 5,000.00	\$ 5,000.00
Solid Sodding	SY	500	\$ 10.00	\$ 5,000.00
Traffic Control (includes Temp. Signage)	LS	1	\$ 5,000.00	\$ 5,000.00
Stormwater Detention Facility	LS	3	\$ 25,000.00	\$ 75,000.00
Topographic Survey	LS	1	\$ 35,000.00	\$ 35,000.00
H & H Analysis - Drainage Study	LS	1	\$ 15,000.00	\$ 15,000.00

Estimated Construction Costs \$ 298,050.00 on, Construction Testing, etc.) \$ 44,707.50

Engineering Costs (Design, Inspection, Construction Testing, etc.) \$ 44,707.50

Right-of-Way/Easement Acquisition \$ 15,000.00

Permitting \$ 10,000.00

15% Contingency \$

Total Estimated Project Cost \$ 422,921.13

55,163.63

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Opinion of Probable Cost

Oct 2019

3.12 Block 7 Phase 2

Pay Item	Unit	Quantity		Unit Cost		Total Cost
Mobilization	LS	1	\$	20,000.00	\$	20,000.00
Clearing and Grubbing	LS	1	\$	5,000.00	\$	5,000.00
Remove Excess Sediment From Road Ditch	LF	1,600	\$	15.00	\$	24,000.00
Removal of Existing Asphalt	SY	50	\$	20.00	\$	1,000.00
Removal of sediment from culverts	EA	10	\$	200.00	\$	2,000.00
Crushed Limestone	CY	25	\$	200.00	\$	5,000.00
Select Fill	CY	25	\$	30.00	\$	750.00
Select Bedding Material	CY	25	\$	30.00	\$	750.00
Roadway Repair	EA	1	\$	2,500.00	\$	2,500.00
29x18 RCAP	LF	100	\$	70.00	\$	7,000.00
Headwalls	EA	2	\$	1,500.00	\$	3,000.00
Rip Rap	Tons	650	\$	75.00	\$	48,750.00
Filter Fabric	SY	1,200	\$	5.00	\$	6,000.00
Silt Fencing	LF	250	\$	5.00	\$	1,250.00
Wattles	EA	2	\$	200.00	\$	400.00
Excelsior Blankets	SY	600	\$	20.00	\$	12,000.00
Seeding and Mulch	LS	1	\$	5,000.00	\$	5,000.00
Traffic Control (includes Temp. Signage)	LS	1	\$	10,000.00	\$	10,000.00
Stormwater Detention Facility	LS	1	\$	25,000.00	\$	25,000.00
Topographic Survey	LS	1	\$	25,000.00	\$	25,000.00
H & H Analysis - Drainage Study	LS	1	\$	7,000.00	\$	7,000.00
		Estimated (ons	truction Costs	\$	211,400.00
Engineering Costs	(Design, Inspec	tion, Construc	tion	Testing, etc.)	\$	31,710.00
Second				15,000.00		
Searing and Grubbing				10,000.00		

Total Estimated Project Cost \$ 308,326.50

15% Contingency \$

40,216.50

Goals and Objectives of the Project

The Diamondhead Drainage, Flood Prevention & Water Quality Improvement Project consists of four subprojects that will provide drainage infrastructure improvements, wetland restoration and improve detention facilities for future watershed events. The goals and objectives of each subproject are listed below.

- 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. Information from this project should be incorporated as contributing data for projects downstream along Diamondhead Drive East.
- Drainage Area 41-Coon Branch: Goals and objectives of this subproject are to improve flow characteristics, reduce the possibility of flooding of roadways and homes in the area, improve water quality downstream and extend runoff times for the area. As documented by Waggoner Engineering, the reported problems are water over the road in a typical storm event; houses flooding in the area multiple times; site is the singular out fall for watershed with no detention facility and likely to see an increase in impervious surface; some siltation is present in ditches; drainage infrastructure is currently inadequate; increased development will cause more issues; and runoff from almost the entire Eastern portion of Diamondhead passes thru Coon Branch before this outfall causing it to overtop banks and backup flooding to this low lying area. The recommended solutions of this subproject are to: expand on Seymour study to investigate a build out expected runoff volume; remove and replace roadway pipes to accommodate expected runoff; acquire lots for detention implementation; closely monitor building activity; strictly enforce BMP measures; and limit clearing activity.

- Koloa Street at Ala Moana Place: Goals and objects of this subproject are to improve flow characteristics and to reduce possibility of flooding of roadways and homes in the area. Waggoner Engineering documents the reported problems of this subproject as, "water over the road in a typical storm event. Runoff travels with good velocity down the steep grades of Koloa where it encounters the flatter grades at this intersection. The pipe at the intersection is out of alignment with flow down Koloa. Siltation has occurred downstream of the pipe causing water to pond and cover the roadway. The existing pipe has minimal cover as it exists, so re-establishing hydrologic section downstream of it is necessary." The recommended solution of reported problems for this subproject is to complete a topographic survey of the area for redesign and replacement of the existing roadway pipe.
- Lots 7 & 8 Block 7 Phase 2: 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, "The site is obviously holding water as an attempt to force drainage into a nearby ditch that was not properly engineered. Filling the lots to an elevation that will bring them out of the soggy conditions will almost certainly flood surrounding lots. This portion of the city has a lot of developable property that will exacerbate the issues once construction increases." The recommended solutions to remediate the problems associated with this subproject are to: purchase the lots or enter agreement with the owner in perpetuity to re-establish the natural drainage course, install and extend dry detention basin to restore the wetland characteristics, and serve as detention for future development in the area.

Project Timeline/Schedule

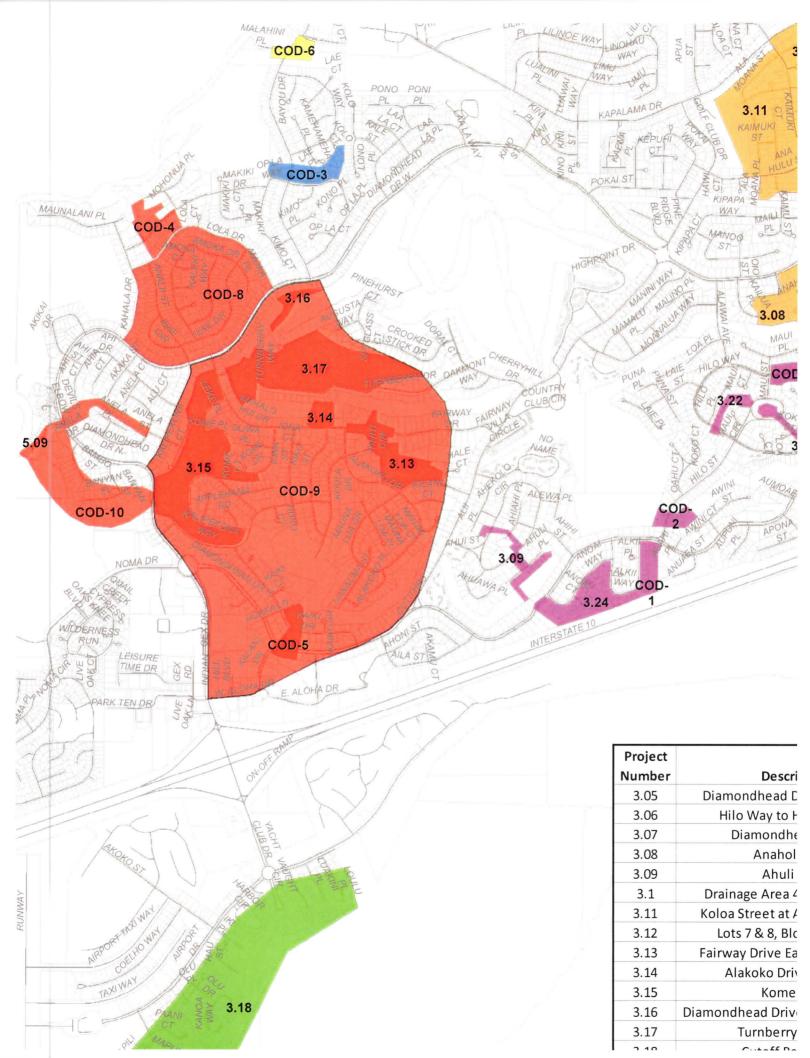
The City will be able to start the implementation of the project once it has the necessary funding for the Diamondhead Drainage, Flood Prevention & Water Quality Improvement Project. The timeline for each subproject is listed below.

- Anahalo
 - o Implementation Period: Two Years
 - Study: Six Months
 - Design and Permitting: Six Months
 - Construction: One Year

City of Diamondhead - GOMESA Grant Application 2022

- o Estimated Schedule: July 1, 2022 June 30, 2024
- Drainage Area 41-Coon Branch
 - o Implementation Period: Two Years
 - Study: Six Months
 - Design and Permitting: Six Months
 - Construction: One Year
 - o Estimated Schedule: July 1, 2022 June 30, 2024
- Koloa Street at Ala Moana Place
 - o Implementation Period: Two Years
 - Study: Six Months
 - Design and Permitting: Six Months
 - Construction: One Year
 - o Estimated Schedule: July 1, 2022 June 30, 2024
- Lots 7 & 8 Block 7 Phase 2
 - o Implementation Period: Two Years
 - Study: Six Months
 - Design: Six Months
 - Construction: One Year
 - o Estimated Schedule: July 1, 2022 June 30, 2024

		,	1			
ed Culverts under Roads (maintenance)	N/A	· •	100,000 \$	1,138,159	In Progress	
	ш	\$	180,000 \$	538,159	In Progress	
		\$	250,000 \$	788,159	In Progress	
		\$	250,000 \$	1,038,159	In Progress	
	O	\$	1,659,723 \$	2,797,882	In progress	
	O	\$	521,150 \$	3,319,032	In Progress	
at Anela Pond ("Lilly Pond")	Ξ	\$	325,850 \$	3,644,882	In progress	
	∢	\$	1,000,000 \$	4,644,882	In progress	
	4	\$	100,000 \$	4,744,882	In Progress	
	g	\$	\$ 000'05	4,794,882	In Progress	
	N/A	\$	\$ -	4,794,882	In Progress	
	L	\$	651,416 \$	7,055,921		GOMESA GRANT APP
to the state of th		\$	462,199 \$	7,518,120		GOMESA GRANT APP
Place		\$	422,921 \$	7,941,041		GOMESA GRANT APP
ndhead		\$	308,327 \$	8,249,368		GOMESA GRANT APP
Is (maintenance)	N/A	\$	250,000 \$	5,044,882		
hroughout City (maintenance)	N/A	\$	150,000 \$	5,194,882		
ı H&H Analysis	N/A	\$	\$ 000,000	5,494,882		
.ots	N/A	\$	300,000 \$	5,794,882		
Il for city)	N/A	\$	\$	5,794,882		
the city (stablization)	N/A		\$ 0	5,794,882		
age lines in ditches	N/A	\$	\$	5,794,882		
	۷	\$	\$	5,794,882		
vile)	۷	\$	\$ -	5,794,882		
/er Lines		\$	\$	5,794,882		
ıear Aukai Place	Ш	\$	285,847 \$	6,080,729		
Nay to Hapuna Place	9	\$	323,776 \$	6,404,505		
ection	A	\$	256,131 \$	8,505,499		
3olf Course	A	\$	204,024 \$	8,709,523		
	A	\$	688,476 \$	666'268'6		
at Bayou Drive	A	\$	90,153 \$	9,488,152		
		\$	4,809,549 \$	14,297,701		
	Ш	\$	311,368 \$	14,609,069		
	L	ų.	220 610 6	11 030 600		



Attachment B



Hancock Co. Conceptual Drainage and Dredging Assessment

Opinion of Probable Cost

Oct 2019

3.10 Coon Branch

Pay Item	Unit	Quantity	Unit Cost	Total Cost
Mobilization	LS	1	\$ 35,000.00	\$ 35,000.00
Clearing and Grubbing	LS	1	\$ 15,000.00	\$ 15,000.00
Remove Excess Sediment From Road Ditch	LF	2,500	\$ 10.00	\$ 25,000.00
Removal of Existing Asphalt	SY	200	\$ 20.00	\$ 4,000.00
Removal of Culvert (All Sizes)	LF	100	\$ 40.00	\$ 4,000.00
Removal of Drainage Structure	EA	2	\$ 2,500.00	\$ 5,000.00
Removal of sediment from culverts	EA	2	\$ 400.00	\$ 800.00
Crushed Limestone	CY	25	\$ 200.00	\$ 5,000.00
Select Fill	CY	200	\$ 30.00	\$ 6,000.00
Select Bedding Material	CY	75	\$ 30.00	\$ 2,250.00
Roadway Repair	EA	7	\$ 2,500.00	\$ 17,500.00
Modified Inlets	EA	1	\$ 1,800.00	\$ 1,800.00
24" RCP	LF	300	\$ 70.00	\$ 21,000.00
36 X 23 RCAP	LF	100	\$ 175.00	\$ 17,500.00
Headwalls	EA	12	\$ 1,500.00	\$ 18,000.00
Rip Rap	Tons	200	\$ 75.00	\$ 15,000.00
Filter Fabric	SY	300	\$ 5.00	\$ 1,500.00
Silt Fencing	LF	500	\$ 5.00	\$ 2,500.00
Wattles	EA	2	\$ 200.00	\$ 400.00
Excelsior Blankets	SY	2,500	\$ 20.00	\$ 50,000.00
Seeding and Mulch	LS	1	\$ 5,000.00	\$ 5,000.00
Solid Sodding	SY	50	\$ 10.00	\$ 500.00
Traffic Control (includes Temp. Signage)	LS	1	\$ 5,000.00	\$ 5,000.00
Stormwater Detention Facility	LS	1	\$ 35,000.00	\$ 35,000.00
Topographic Survey	LS	1	\$ 35,000.00	\$ 35,000.00

327,750.00 Estimated Construction Costs \$ Engineering Costs (Design, Inspection, Construction Testing, etc.) \$ 49,162.50 15,000.00 Right-of-Way/Easement Acquisition \$

Permitting \$ 10,000.00 15% Contingency \$ 60,286.88

Total Estimated Project Cost \$ 462,199.38



Opinion of Probable Cost

Oct 2019

3.11 Kalae

Mobilization LS 1 \$ 30,000.00 \$ 30,000.00 Clearing and Grubbing LS 1 \$ 15,000.00 \$ 15,000.00 Remove Excess Sediment From Road Ditch LF 1,000 \$ 15,000 \$ 15,000.00 Removal of Existing Asphalt SY 200 \$ 20.00 \$ 12,000.00 Removal of Culvert (All Sizes) LF 300 \$ 40.00 \$ 12,000.00 Abandon Culvert in place (flowable fill) LF 50 \$ 10.00 \$ 500.00 Removal of sediment from culverts EA 25 \$ 200.00 \$ 5,000.00 Crushed Limestone CY 50 \$ 200.00 \$ 10,000.00 Select Bedding Material CY 50 \$ 200.00 \$ 2,250.00 Select Bedding Material CY 75 \$ 30.00 \$ 2,250.00 Select Bedding Material EA 4 \$ 2,500.00 \$ 1,000.00 Modified Inlets EA 4 \$ 1,800.00 \$ 1,800.00 Select Bedding Material EA 1 \$ 1,800.00 \$ 1,800.00	Pay Item	Unit	Quantity	Unit Cost	Total Cost
Remove Excess Sediment From Road Ditch LF 1,000 \$ 15,00 \$ 15,000.00 Removal of Existing Asphalt SY 200 \$ 20.00 \$ 4,000.00 Removal of Culvert (All Sizes) LF 300 \$ 40.00 \$ 12,000.00 Abandon Culvert In place (flowable fill) LF 50 \$ 10.00 \$ 500.00 Removal of sediment from culverts EA 25 \$ 200.00 \$ 5,000.00 Crushed Limestone CY 50 \$ 200.00 \$ 10,000.00 Select Fill CY 200 \$ 30.00 \$ 6,000.00 Select Bedding Material CY 75 \$ 30.00 \$ 2,250.00 Roadway Repair EA 4 \$ 2,500.00 \$ 10,000.00 Modified Inlets EA 1 \$ 1,800.00 \$ 1,800.00 29x18 RCAP LF 150 \$ 70.00 \$ 10,500.00 Headwalls EA 10 \$ 1,500.00 \$ 12,500.00 Rip Rap Tons 75 \$ 75.00 \$ 625.00 Silt Fencing LF	Mobilization	LS	1	\$ 30,000.00	\$ 30,000.00
Removal of Existing Asphalt SY 200 \$ 20.00 \$ 4,000.00 Removal of Culvert (All Sizes) LF 300 \$ 40.00 \$ 12,000.00 Abandon Culvert in place (flowable fill) LF 50 \$ 10.00 \$ 500.00 Removal of sediment from culverts EA 25 \$ 200.00 \$ 5,000.00 Crushed Limestone CY 50 \$ 200.00 \$ 10,000.00 Select Fill CY 200 \$ 30.00 \$ 6,000.00 Select Bedding Material CY 75 \$ 30.00 \$ 2,250.00 Roadway Repair EA 4 \$ 2,500.00 \$ 10,000.00 Modified Inlets EA 1 \$ 1,800.00 \$ 1,800.00 29x18 RCAP LF 150 \$ 70.00 \$ 10,500.00 36 X 23 RCAP LF 100 \$ 1,250.00 \$ 15,000.00 Headwalls EA 10 \$ 1,500.00 \$ 5,625.00 Rip Rap Tons 75 \$ 75.00 \$ 625.00 Silf Fencing LF 250	Clearing and Grubbing	LS	1	\$ 15,000.00	\$ 15,000.00
Removal of Culvert (All Sizes) LF 300 \$ 40.00 \$ 12,000.00 Abandon Culvert in place (flowable fill) LF 50 \$ 10.00 \$ 500.00 Removal of sediment from culverts EA 25 \$ 200.00 \$ 5,000.00 Crushed Limestone CY 50 \$ 200.00 \$ 10,000.00 Select Bedding Material CY 75 \$ 30.00 \$ 2,500.00 Roadway Repair EA 4 \$ 2,500.00 \$ 10,000.00 Modified Inlets EA 1 \$ 1,800.00 \$ 1,800.00 29x18 RCAP LF 150 \$ 70.00 \$ 10,500.00 36 X 23 RCAP LF 100 \$ 125.00 \$ 12,500.00 Headwalls EA 10 \$ 15,000.00 \$ 5,625.00 Rip Rap Tons 75 \$ 5.00 \$ 625.00 Silt Fencing LF 250 \$ 5.00 \$ 625.00 Wattles EA 5 \$ 200.00 \$ 1,250.00 Wattles EA 5 \$ 200.00	Remove Excess Sediment From Road Ditch	LF	1,000	\$ 15.00	\$ 15,000.00
Abandon Culvert in place (flowable fill) LF 50 \$ 10.00 \$ 500.00 Removal of sediment from culverts EA 25 \$ 200.00 \$ 5,000.00 Crushed Limestone CY 50 \$ 200.00 \$ 10,000.00 Select Fill CY 200 \$ 30.00 \$ 6,000.00 Select Bedding Material CY 75 \$ 30.00 \$ 2,250.00 Roadway Repair EA 4 \$ 2,500.00 \$ 10,000.00 Modified Inlets EA 1 \$ 1,800.00 \$ 1,800.00 29x18 RCAP LF 150 \$ 70.00 \$ 10,500.00 36 X 23 RCAP LF 100 \$ 125.00 \$ 12,500.00 Headwalls EA 10 \$ 1,500.00 \$ 15,000.00 Rip Rap Tons 75 \$ 75.00 \$ 5,625.00 Silt Fencing LF 250 \$ 5.00 \$ 625.00 Silt Fencing LF 250 \$ 5.00 \$ 1,250.00 Wattles EA 5 200.00 \$ 5,000.00 <td>Removal of Existing Asphalt</td> <td>SY</td> <td>200</td> <td>\$ 20.00</td> <td>\$ 4,000.00</td>	Removal of Existing Asphalt	SY	200	\$ 20.00	\$ 4,000.00
Removal of sediment from culverts EA 25 \$ 200.00 \$ 5,000.00 Crushed Limestone CY 50 \$ 200.00 \$ 10,000.00 Select Fill CY 200 \$ 30.00 \$ 6,000.00 Select Bedding Material CY 75 \$ 30.00 \$ 2,250.00 Roadway Repair EA 4 \$ 2,500.00 \$ 10,000.00 Modified Inlets EA 1 \$ 1,800.00 \$ 1,800.00 29x18 RCAP LF 150 \$ 70.00 \$ 10,500.00 36 X 23 RCAP LF 100 \$ 125.00 \$ 12,500.00 Headwalls EA 10 \$ 1,500.00 \$ 15,000.00 Rip Rap Tons 75 \$ 75.00 \$ 625.00 Silt Fencing LF 250 \$ 5.00 \$ 1,250.00 Wattles EA 5 \$ 200.00 \$ 1,250.00 Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Solid Sodding SY 500 \$ 10.00 \$ 5,000.00	Removal of Culvert (All Sizes)	LF	300	\$ 40.00	\$ 12,000.00
Crushed Limestone CY 50 \$ 200.00 \$ 10,000.00 Select Fill CY 200 \$ 30.00 \$ 6,000.00 Select Bedding Material CY 75 \$ 30.00 \$ 2,250.00 Roadway Repair EA 4 \$ 2,500.00 \$ 10,000.00 Modified Inlets EA 1 \$ 1,800.00 \$ 1,800.00 29x18 RCAP LF 150 \$ 70.00 \$ 10,500.00 36 X 23 RCAP LF 100 \$ 125.00 \$ 12,500.00 Headwalls EA 10 \$ 1,500.00 \$ 15,000.00 Rip Rap Tons 75 \$ 75.00 \$ 5,625.00 Filter Fabric SY 125 \$ 5.00 \$ 625.00 Silt Fencing LF 250 \$ 5.00 \$ 1,250.00 Wattles EA 5 \$ 200.00 \$ 1,000.00 Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Solid Sodding SY 500 \$ 10.00 \$ 5,000.00 Tra	Abandon Culvert in place (flowable fill)	LF	50	\$ 10.00	\$ 500.00
Select Fill CY 200 \$ 30.00 \$ 6,000.00 Select Bedding Material CY 75 \$ 30.00 \$ 2,250.00 Roadway Repair EA 4 \$ 2,500.00 \$ 10,000.00 Modified Inlets EA 1 \$ 1,800.00 \$ 1,800.00 29x18 RCAP LF 150 \$ 70.00 \$ 10,500.00 36 X 23 RCAP LF 100 \$ 125.00 \$ 12,500.00 Headwalls EA 10 \$ 1,500.00 \$ 15,000.00 Rip Rap Tons 75 \$ 75.00 \$ 5,625.00 Filter Fabric SY 125 \$ 5.00 \$ 625.00 Silt Fencing LF 250 \$ 5.00 \$ 1,250.00 Wattles EA 5 \$ 200.00 \$ 1,000.00 Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Traffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 5,000.00 Stormwater Detention Facility LS 1 \$ 35,000.00 \$ 5,000.0	Removal of sediment from culverts	EA	25	\$ 200.00	\$ 5,000.00
Select Bedding Material CY 75 \$ 30.00 \$ 2,250.00 Roadway Repair EA 4 \$ 2,500.00 \$ 10,000.00 Modified Inlets EA 1 \$ 1,800.00 \$ 1,800.00 29x18 RCAP LF 150 \$ 70.00 \$ 10,500.00 36 X 23 RCAP LF 100 \$ 125.00 \$ 12,500.00 Headwalls EA 10 \$ 1,500.00 \$ 15,000.00 Rip Rap Tons 75 \$ 75.00 \$ 625.00 Filter Fabric SY 125 \$ 5.00 \$ 625.00 Silt Fencing LF 250 \$ 5.00 \$ 1,250.00 Wattles EA 5 \$ 200.00 \$ 1,000.00 Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Solid Sodding SY 500 \$ 10.00 \$ 5,000.00 Traffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 75,000.00 Stormwater Detention Facility LS 1 \$ 35,000.00 \$ 75,000	Crushed Limestone	CY	50	\$ 200.00	\$ 10,000.00
Roadway Repair EA 4 \$ 2,500.00 \$ 10,000.00 Modified Inlets EA 1 \$ 1,800.00 \$ 1,800.00 29x18 RCAP LF 150 \$ 70.00 \$ 10,500.00 36 X 23 RCAP LF 100 \$ 125.00 \$ 12,500.00 Headwalls EA 10 \$ 1,500.00 \$ 15,000.00 Rip Rap Tons 75 \$ 75.00 \$ 5,625.00 Filter Fabric SY 125 \$ 5.00 \$ 625.00 Silt Fencing LF 250 \$ 5.00 \$ 1,250.00 Wattles EA 5 \$ 200.00 \$ 1,000.00 Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Solid Sodding SY 500 \$ 10.00 \$ 5,000.00 Taffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 75,000.00 Stormwater Detention Facility LS 1 \$ 35,000.00 \$ 75,000.00 Topographic Survey LS 1 \$ 35,000.00 \$ 35,000	Select Fill	CY	200	\$ 30.00	\$ 6,000.00
Modified Inlets EA 1 \$ 1,800.00 \$ 1,800.00 29x18 RCAP LF 150 \$ 70.00 \$ 10,500.00 36 X 23 RCAP LF 100 \$ 125.00 \$ 12,500.00 Headwalls EA 10 \$ 1,500.00 \$ 15,000.00 Rip Rap Tons 75 \$ 75.00 \$ 5,625.00 Filter Fabric SY 125 \$ 5.00 \$ 625.00 Silt Fencing LF 250 \$ 5.00 \$ 1,250.00 Wattles EA 5 \$ 200.00 \$ 1,000.00 Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Solid Sodding SY 500 \$ 10.00 \$ 5,000.00 Traffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 75,000.00 Stormwater Detention Facility LS 1 \$ 35,000.00 \$ 75,000.00 Topographic Survey LS 1 \$ 35,000.00 \$ 35,000.00	Select Bedding Material	CY	75	\$ 30.00	\$ 2,250.00
29x18 RCAP LF 150 \$ 70.00 \$ 10,500.00 36 X 23 RCAP LF 100 \$ 125.00 \$ 12,500.00 Headwalls EA 10 \$ 1,500.00 \$ 15,000.00 Rip Rap Tons 75 \$ 75.00 \$ 5,625.00 Filter Fabric SY 125 \$ 5.00 \$ 625.00 Silt Fencing LF 250 \$ 5.00 \$ 1,250.00 Wattles EA 5 \$ 200.00 \$ 1,000.00 Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Solid Sodding SY 500 \$ 10.00 \$ 5,000.00 Traffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 5,000.00 Stormwater Detention Facility LS 1 \$ 35,000.00 \$ 75,000.00 Topographic Survey LS 1 \$ 35,000.00 \$ 35,000.00	Roadway Repair	EA	4	\$ 2,500.00	\$ 10,000.00
36 X 23 RCAP LF 100 \$ 125.00 \$ 12,500.00 Headwalls EA 10 \$ 1,500.00 \$ 15,000.00 Rip Rap Tons 75 \$ 75.00 \$ 5,625.00 Filter Fabric SY 125 \$ 5.00 \$ 625.00 Silt Fencing LF 250 \$ 5.00 \$ 1,250.00 Wattles EA 5 \$ 200.00 \$ 1,000.00 Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Solid Sodding SY 500 \$ 10.00 \$ 5,000.00 Traffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 5,000.00 Stormwater Detention Facility LS 3 \$ 25,000.00 \$ 75,000.00 Topographic Survey LS 1 \$ 35,000.00 \$ 35,000.00	Modified Inlets	EA	1	\$ 1,800.00	\$ 1,800.00
Headwalls EA 10 \$ 1,500.00 \$ 15,000.00 Rip Rap Tons 75 \$ 75.00 \$ 5,625.00 Filter Fabric SY 125 \$ 5.00 \$ 625.00 Silt Fencing LF 250 \$ 5.00 \$ 1,250.00 Wattles EA 5 \$ 200.00 \$ 1,000.00 Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Solid Sodding SY 500 \$ 10.00 \$ 5,000.00 Traffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 5,000.00 Stormwater Detention Facility LS 3 \$ 25,000.00 \$ 75,000.00 Topographic Survey LS 1 \$ 35,000.00 \$ 35,000.00	29x18 RCAP	LF	150	\$ 70.00	\$ 10,500.00
Rip Rap Tons 75 \$ 75.00 \$ 5,625.00 Filter Fabric SY 125 \$ 5.00 \$ 625.00 Silt Fencing LF 250 \$ 5.00 \$ 1,250.00 Wattles EA 5 \$ 200.00 \$ 1,000.00 Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Solid Sodding SY 500 \$ 10.00 \$ 5,000.00 Traffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 5,000.00 Stormwater Detention Facility LS 3 \$ 25,000.00 \$ 75,000.00 Topographic Survey LS 1 \$ 35,000.00 \$ 35,000.00	36 X 23 RCAP	LF	100	\$ 125.00	\$ 12,500.00
Filter Fabric SY 125 \$ 5.00 \$ 625.00 Silt Fencing LF 250 \$ 5.00 \$ 1,250.00 Wattles EA 5 \$ 200.00 \$ 1,000.00 Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Solid Sodding SY 500 \$ 10.00 \$ 5,000.00 Traffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 5,000.00 Stormwater Detention Facility LS 3 \$ 25,000.00 \$ 75,000.00 Topographic Survey LS 1 \$ 35,000.00 \$ 35,000.00	Headwalls	EA	10	\$ 1,500.00	\$ 15,000.00
Silt Fencing LF 250 \$ 5.00 \$ 1,250.00 Wattles EA 5 \$ 200.00 \$ 1,000.00 Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Solid Sodding SY 500 \$ 10.00 \$ 5,000.00 Traffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 5,000.00 Stormwater Detention Facility LS 3 \$ 25,000.00 \$ 75,000.00 Topographic Survey LS 1 \$ 35,000.00 \$ 35,000.00	Rip Rap	Tons	75	\$ 75.00	\$ 5,625.00
Wattles EA 5 \$ 200.00 \$ 1,000.00 Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Solid Sodding SY 500 \$ 10.00 \$ 5,000.00 Traffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 5,000.00 Stormwater Detention Facility LS 3 \$ 25,000.00 \$ 75,000.00 Topographic Survey LS 1 \$ 35,000.00 \$ 35,000.00	Filter Fabric	SY	125	\$ 5.00	\$ 625.00
Seeding and Mulch LS 1 \$ 5,000.00 \$ 5,000.00 Solid Sodding SY 500 \$ 10.00 \$ 5,000.00 Traffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 5,000.00 Stormwater Detention Facility LS 3 \$ 25,000.00 \$ 75,000.00 Topographic Survey LS 1 \$ 35,000.00 \$ 35,000.00	Silt Fencing	LF	250	\$ 5.00	\$ 1,250.00
Solid Sodding SY 500 \$ 10.00 \$ 5,000.00 Traffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 5,000.00 Stormwater Detention Facility LS 3 \$ 25,000.00 \$ 75,000.00 Topographic Survey LS 1 \$ 35,000.00 \$ 35,000.00	Wattles	EA	5	\$ 200.00	\$ 1,000.00
Traffic Control (includes Temp. Signage) LS 1 \$ 5,000.00 \$ 5,000.00 Stormwater Detention Facility LS 3 \$ 25,000.00 \$ 75,000.00 Topographic Survey LS 1 \$ 35,000.00 \$ 35,000.00	Seeding and Mulch	LS	1	\$ 5,000.00	\$ 5,000.00
Stormwater Detention Facility LS 3 \$ 25,000.00 \$ 75,000.00 Topographic Survey LS 1 \$ 35,000.00 \$ 35,000.00	Solid Sodding	SY	500	\$ 10.00	\$ 5,000.00
Topographic Survey LS 1 \$ 35,000.00 \$ 35,000.00	Traffic Control (includes Temp. Signage)	LS	1	\$ 5,000.00	\$ 5,000.00
	Stormwater Detention Facility	LS	3	\$ 25,000.00	\$ 75,000.00
H & H Analysis - Drainage Study LS 1 \$ 15,000.00 \$ 15,000.00	Topographic Survey	LS	1	\$ 35,000.00	\$ 35,000.00
	H & H Analysis - Drainage Study	LS	1	\$ 15,000.00	\$ 15,000.00

298,050.00 Estimated Construction Costs \$

44,707.50 Engineering Costs (Design, Inspection, Construction Testing, etc.) \$ Right-of-Way/Easement Acquisition \$ 15,000.00

Permitting \$ 10,000.00 15% Contingency \$ 55,163.63

Total Estimated Project Cost \$ 422,921.13



Opinion of Probable Cost

Oct 2019

3.12 Block 7 Phase 2

Pay Item	Unit	Quantity		Unit Cost	Total Cost
Mobilization	LS	1	\$	20,000.00	\$ 20,000.00
Clearing and Grubbing	LS	1	\$	5,000.00	\$ 5,000.00
Remove Excess Sediment From Road Ditch	LF	1,600	\$	15.00	\$ 24,000.00
Removal of Existing Asphalt	SY	50	\$	20.00	\$ 1,000.00
Removal of sediment from culverts	EA	10	\$	200.00	\$ 2,000.00
Crushed Limestone	CY	25	\$	200.00	\$ 5,000.00
Select Fill	CY	25	\$	30.00	\$ 750.00
Select Bedding Material	CY	25	\$	30.00	\$ 750.00
Roadway Repair	EA	1	\$	2,500.00	\$ 2,500.00
29x18 RCAP	LF	100	\$	70.00	\$ 7,000.00
Headwalls	EA	2	\$	1,500.00	\$ 3,000.00
Rip Rap	Tons	650	\$	75.00	\$ 48,750.00
Filter Fabric	SY	1,200	\$	5.00	\$ 6,000.00
Silt Fencing	LF	250	\$	5.00	\$ 1,250.00
Wattles	EA	2	\$	200.00	\$ 400.00
Excelsior Blankets	SY	600	\$	20.00	\$ 12,000.00
Seeding and Mulch	LS	1	\$	5,000.00	\$ 5,000.00
Traffic Control (includes Temp. Signage)	LS	1	\$	10,000.00	\$ 10,000.00
Stormwater Detention Facility	LS	1	\$	25,000.00	\$ 25,000.00
Topographic Survey	LS	1	\$	25,000.00	\$ 25,000.00
H & H Analysis - Drainage Study	LS	1	\$	7,000.00	\$ 7,000.00
Estimated Construction Costs					\$ 211,400.00

Engineering Costs (Design, Inspection, Construction Testing, etc.)

31,710.00 Right-of-Way/Easement Acquisition \$ 15,000.00 10,000.00

Permitting \$

15% Contingency \$ 40,216.50

Total Estimated Project Cost \$ 308,326.50



Attachment C

GOMESA Phase II Funding Project Selection Form

Applicant:	Michael Reso									
Applicant.	First Name	Last Name								
Business/Agency:	City of Diamondhead									
Address:	5000 Diamond Circle - Diamondhead, MS 39525									
Phone:	2282224626	Email: mreso@diamondhead.n	ns.gov							
Project Name:	Orainage, Flood Prevention and Water Quality Improvements									
Anticipated Budget	: 1193447.00	Anticipated Timeline: 7/1/2022	to 06/30/2025							
	eet at least <u>one</u> of the GOMESA criteria listed ication may be requested.	l below. Please check all that apply.								
Column A		Column B								
	on of natural resources	Coastal restoration and resilience	cy efforts							
_	igation of natural or marine resources									
	nservation management									
Unshore infrast	ructure projects resulting from coastal damage	Quality of life improvements								
PROPOSED PI	ROJECT NARRATIVE									
the Phase 1: Dia consists of three improve detention Diamondhead Diamondhead D	mondhead is seeking GOMESA funding from amondhead Drainage, Flood Prevention & Was subprojects that will provide drainage infrastion facilities for future watershed events. The solution are prainage, Flood Prevention & Water Quality Ir reduce the future possibility of flooding of road extend runoff times.	ater Quality Improvement Project. T tructure improvements, wetland res subprojects that are associated with mprovement Project will improve wa	he project toration and hithe Phase 1: hiter flow							
REQUIRED SI	GNATURES									
GOMESA Comm	ittee:									
MDMR Committee	Representative Joe S Laggin 2 12, 2022 09 19 CDT Signature	Executive Director	4/12/2022							
MDA Committee R	Jamie M. Miller	Chief Operations Officer	4/12/2022							
MDEQ Committee	Chris Wolls	Executive Director	4/12/2022							
The Committee	Signature	Title	Date							