

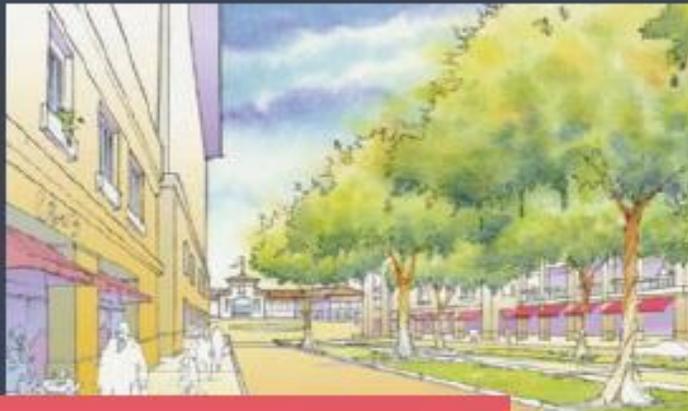


DIAMONDHEAD COMMERCIAL DISTRICT TRANSFORMATION PROJECT

UNITED STATES DEPARTMENT OF TRANSPORTATION

Rebuilding American Infrastructure with Sustainability and Equity

GRANT APPLICATION



Funding Opportunity Number: DTOS59-21-RA-
Funding Opportunity Title: FY 2021 National Infrastructure
Investments

**CFDA #20.933 – NATIONAL INFRASTRUCTURE
INVESTMENTS**

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I. PROJECT DESCRIPTION

While the Federal Highway Act of 1956 helped create Diamondhead and led to its growth, it has also isolated it from neighboring cities and contributed to persistent poverty in those communities. This project aims to correct that problem through an environmentally conscious approach. Diamondhead was founded on the vision to weave diverse neighborhoods together to make a community. It has evolved into a rich tapestry of modern life consisting of residents who enjoy a sense of place, active living, and sustainability. Diamondhead wants to grow while honoring sustainable principles and connecting its citizens.

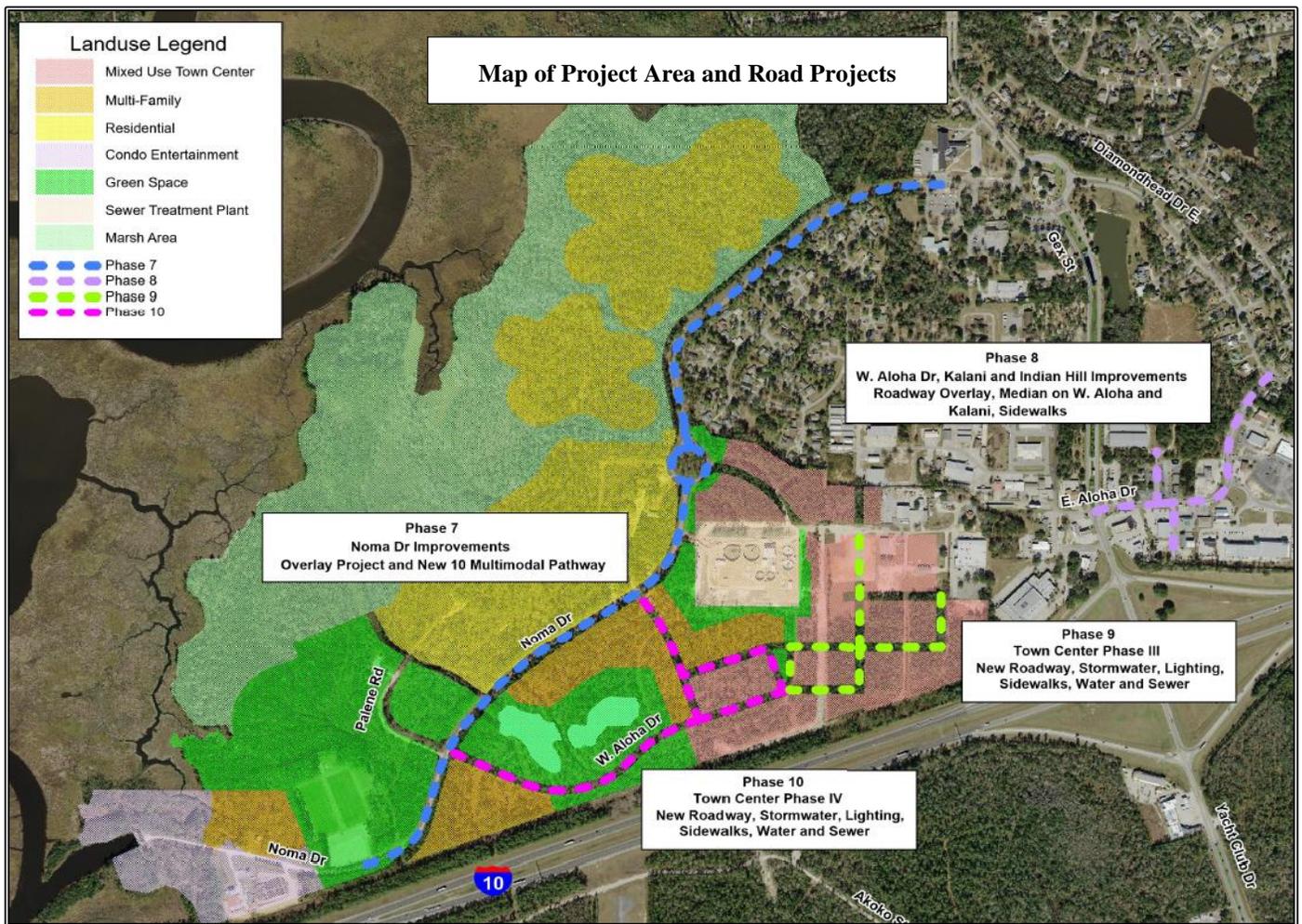
The city is pleased to submit its "**Commercial District Transformation Project**" for funding to the U.S. Department of Transportation (USDOT) for the FY 2021 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant program. Diamondhead is a rural community that has long supported the aerospace industry, and growth in that sector is driving the city's expansion.

HIGHLIGHTS

- ✓ Promotes sustainability by reducing VMT and VHT
- ✓ Creates good paying jobs near an area of persistent poverty
- ✓ Outstanding BCA, crash reductions, and emissions Reductions
- ✓ Implements regional project consistent with HUD sustainability goals

Diamondhead is requesting \$10M in federal funding through the RAISE grant program and will provide a local share to match \$1M. The city has already invested in infrastructure and has projects totaling over \$14M either completed or underway. This federal funding is the final amount needed to transform Diamondhead and includes building a mixed-use commercial corridor that accommodates multimodal transportation options. The overall economic impact of this project is an increase in Gross Regional Product by \$84M and the creation of 1,168 jobs with five percent (5%) of those having above-average wages. Diamondhead is financially stable and can provide the local match from surplus funds in its General Fund.

This project is considered a rural project under the RAISE grant as it is designated an **Urban Cluster (# 24040)** for the Gulfport-Biloxi, Mississippi Metropolitan Statistical Area. The federal funding would provide the final funding needed to complete this project.



Roadway	Treatment	Lane Configuration
Noma Drive Improvements	Overlay and Multimodal Pathway	Two 10' lanes with a 10' Multiuse path, 2' of shoulders
West Aloha Drive, Kalani, and Indian Hill Improvements	Overlay, median improvements on West Aloha and Kalani, Sidewalks	Two 10' lanes, medians, and sidewalks
Town Center Phase III	New roadway, stormwater, lighting, sidewalks, water and sewer	Two 10' lanes, parallel parking on both sides, 5' planted shoulder with 7' sidewalks on both sides.
Town Center Phase IV	New roadway, lighting, sidewalks, water and sewer	Two 10' lanes, parallel parking on both sides, 5' planted shoulder with 7' sidewalks on both sides. 10' multiuse path from Town Center to Noma Dr.

Over the last year, Diamondhead has completed its twenty-year Comprehensive Plan called “Envision Diamondhead 2040,” which addresses its need for strategic growth. **C-Spire**, the local telecommunications and internet provider, completed a \$10M project that installed one gigabyte (1G) fiber optic internet for all residents and businesses. This project expands broadband coverage to attain five (5) gigabyte (5G) speeds. As shown during the COVID-19, this type of broadband internet connectivity is essential for a rural community. When this project is

complete, residents would have remote work capabilities to enhance the area's attractiveness, make it more resilient, and further reduce vehicle miles traveled (VMT) and vehicle hours traveled (VHT). The city has experience delivering large capital improvement projects. Diamondhead has completed over \$3.43M in infrastructure improvements including:

COMPLETED INFRASTRUCTURE PROJECTS

Project	Status	Funding Source	Funding Amount
Trails and Blueways	Completed	State Tidelands	\$400,000
Veterans Boulevard – new roadways	Completed	US HUD	\$410,000
I-10 Exit 16 Gateway Lighting	Completed	FHWA	\$870,000
Ahoni Street – new roadway	Completed 2017	Diamondhead	\$101,000
Pavement Management	Completed; yearly since 2018	Diamondhead	\$1.4M then \$500K/year
East Aloha Drive Widening	Completed 2018	FHWA	\$250,000
		Total of Capital Projects	\$3,431,000

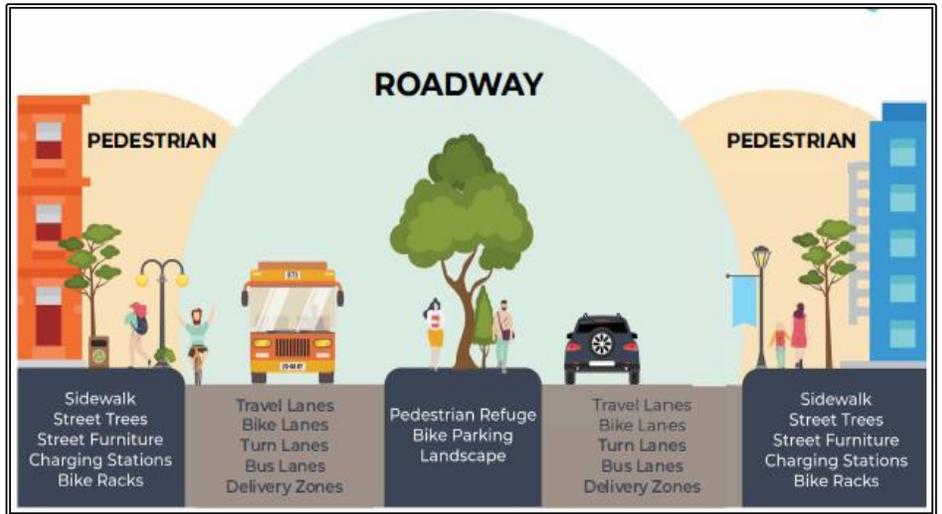
The project addresses the city's need to expand. As evidence of this, Diamondhead has four new subdivisions that will add over four hundred (400) new homes. Memorial Hospital has started construction on a new 20,000 ft² medical clinic, and Dollar General has opened a new store. The Mississippi DOT has recognized this growth and is building two roundabouts at the interstate exit ramps to improve safety.

Improvements to Quality of Life

Located between New Orleans, Louisiana, and Mobile, Alabama, the project has significant benefits to the tri-state region. This project provides a regional solution for housing, helps reduce travel burdens for commuters, and promotes the quality of life by:

- ✓ *Reducing extensive commute times*
- ✓ *Reducing travel for life services such as medical and groceries*
- ✓ *Reducing travel for those in an adjacent area of persistent poverty*

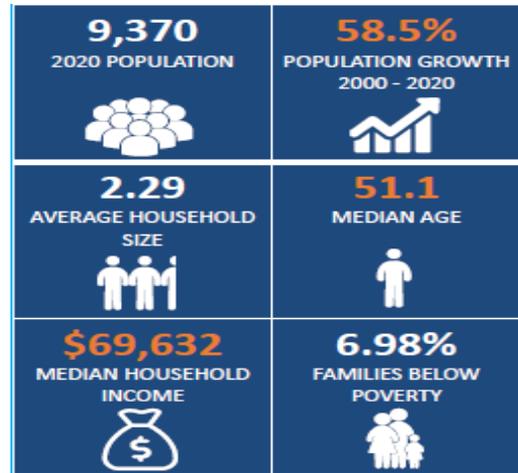
The city currently has two dead-end roads in its commercial district. The roadway projects will connect these two roads to help improve the traffic flow and increase visibility to our existing businesses. Safe pedestrian and bike accommodations are also much needed in this area. In addition to walking and biking, many residents have electric golf carts and use them for internal city travel. Electric golf carts have become popular because they are environmentally conscious, and residents believe their efforts support the more significant environmental cause.



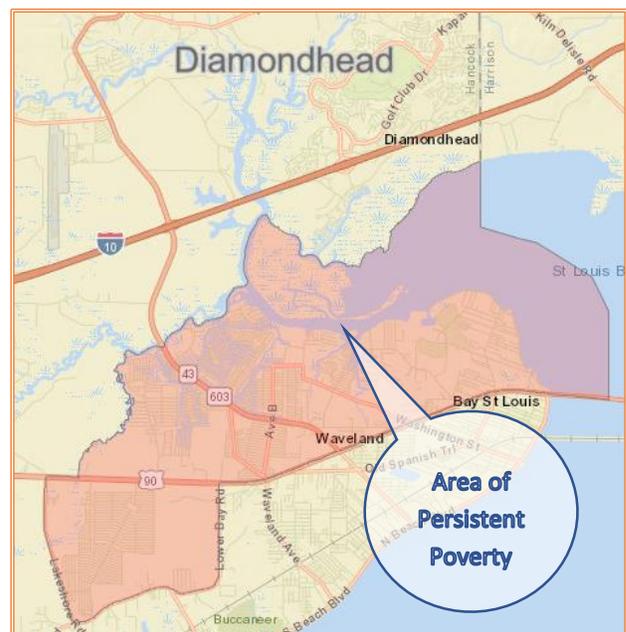
Upon receiving the RAISE award, the project would immediately start. Diamondhead will administer the grant. A detailed project estimate is complete, and a landscape architectural firm has completed renderings. The funding for the project is in place, community support for the project is secure, and there is demand for the project.

II. PROJECT LOCATION

The city of Diamondhead is located on the eastern border of Hancock County, Mississippi, and is in the **Gulfport-Biloxi Metropolitan Statistical Area**, according to the 2020 U.S. Census. It is within an hour's drive of the New Orleans, LA metropolitan area. Distances to major cities include:



Soon after the start of the construction of I-10 in Mississippi, investors purchased 6,000 acres of land that became the community of Diamondhead. The growth of Diamondhead was made possible by the Federal Highway Act of 1956 and brought industry and commerce to the area. After years of continuous development, Diamondhead pursued and became a city in 2012. Its unofficial population is 9,370 and is categorized as an Urban Cluster, #24040. *However, I-10 has divided residents from the neighboring towns of Waveland and Bay St. Louis.* This division has resulted in persistent poverty in the adjacent communities of Waveland and Bay St. Louis, as shown in the dark regions of the map.



American Community Survey estimates show an available workforce in persistent poverty that would benefit from transportation cost savings with the addition of job opportunities closer to their residence. The travel distance from the persistent poverty areas of Waveland (**Census Tract 303**) to Diamondhead would be five miles and not the current twenty miles it is now to Gulfport have similar job opportunities. This project will reduce the dependence on automobiles by providing goods and services, including jobs, within the city and therefore reduce the need to travel as far as the Coast.

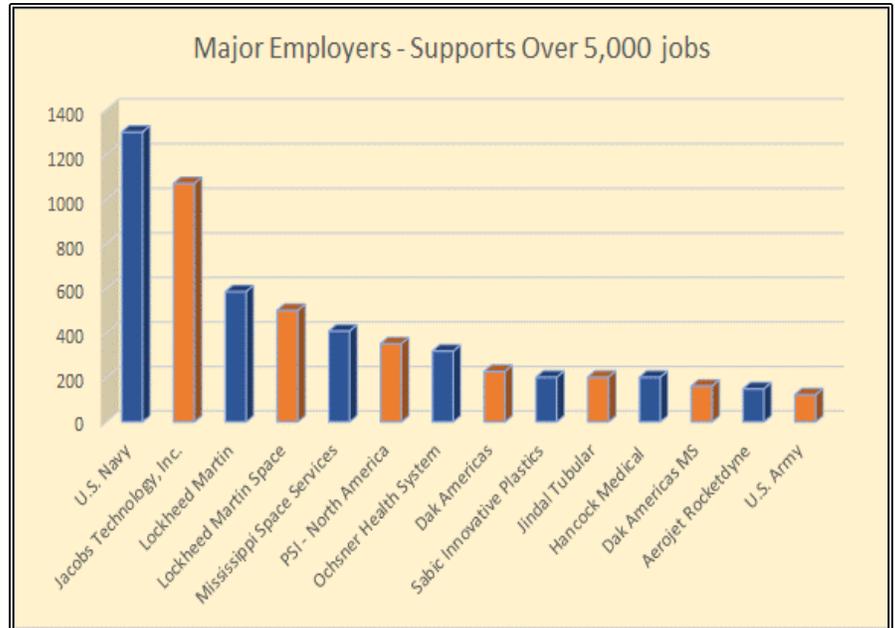
The project will benefit the entire region as it will affect the surrounding communities and benefit the growth of industries. Hancock County has seen nearly a five percent (5%) increase in population in the last five years due to Stennis Space Center (SSC) recently awarded contracts. SSC flight-certified the spacecraft that landed Americans on the moon and has supported the Apollo and the Space shuttle programs. It is currently serving Space X's planned colonization of Mars with craft powered by the Raptor engine. SSC has more than thirty (30) resident agencies and employs over 5,000 workers in disciplines that range from geospatial, earth sciences, data centers, rocket assembly, and jet engine testing. The workforce within a forty-five-minute drive is over half a million workers.

EMPLOYMENT IMPACTS:

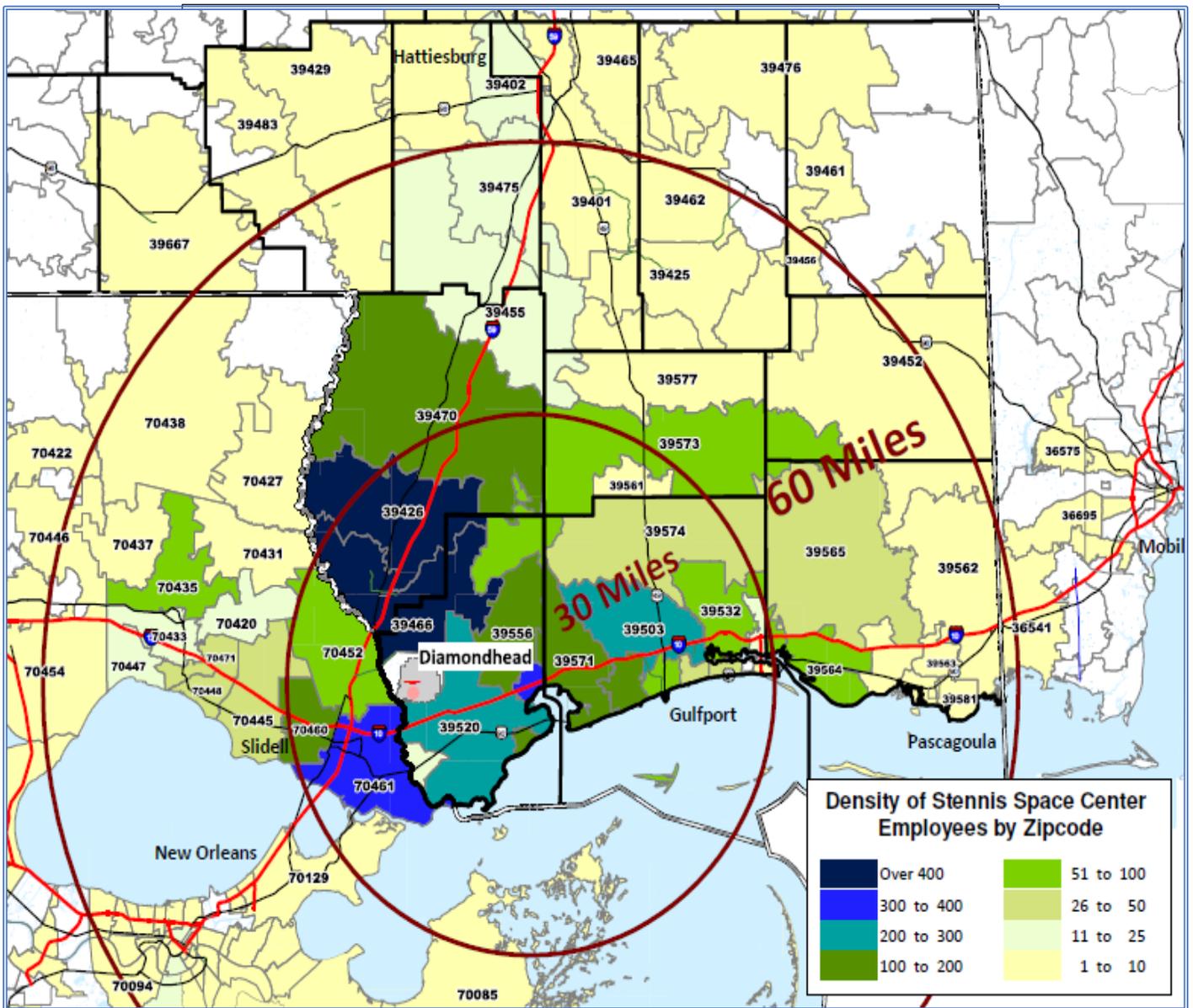
Stennis Space Center provides a direct annual economic impact of \$654 million and over 5,000 jobs within a fifty-mile radius. The Diamondhead project will support the following major industries shown to the right:

The Gulf Coast region has grown at an annual rate of approximately one percent (1%), exceeding the national growth rate. It also exceeds the statewide growth rate, which shows a negative growth rate due to a population decline. The military presence has expanded, which has fueled the population growth. An example of this growth is the number of military vessel construction contracts that are now confirmed to be constructed on the Gulf Coast. Huntington Ingalls Industries shipbuilding has been awarded the following major contracts:

- ✓ \$5.1B contract for the construction of six (6) Arleigh Burke-class destroyers
- ✓ \$1.4B contract to build a new amphibious warship
- ✓ \$48.5M for repairs on the guided-missile destroyer USS Fitzgerald
- ✓ \$11.8M add-on to an existing agreement to accelerate the design of the LPD 17 Flight II
- ✓ \$9.2M for post-shakedown work on USS Paul Ignatius, a guided-missile destroyer
- ✓ \$746M to VT Halter Marine for the construction of U.S. Coast Guard Icebreakers



With this growth, housing competition increases vehicle traffic and increases vehicle miles traveled (VMT) and vehicle hours traveled (VHT). Therefore, living closer to work and services is an attractive option. The chart shows the current location of workers and how far they commute within the region. Yellow areas indicate a further travel distance.



This map shows the regional impacts this project would have as a significant amount of the employees at Stennis Space Center commute over sixty miles each way.

III. GRANT FUNDS, SOURCES, AND USES OF ALL PROJECT FUNDING

Diamondhead requests RAISE grant funds of \$10M to construct the Commercial District Transformation Project. This amount represents 91% of the estimated total project cost of \$11M. The city will pay for the remaining balance of \$1M through funds in its operating account.

Table of Project Funds

Funding Source	Amount	Percent of Project	Responsible Party
RAISE FY 2021 Funds	\$10,000,00	91%	Federal Share
City of Diamondhead	\$1,000,000	9%	Local Share
RAISE Project Cost	\$11,000,000		
Total Project Investments	\$11,000,000	100%	

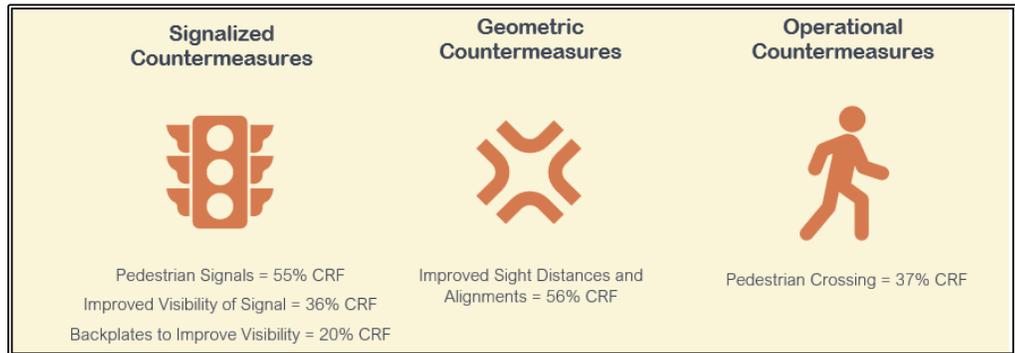
Expenditures by Project Phase and Fiscal Year

Phase	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Totals
PE / Design	\$875,000					\$875,000
ROW Survey	\$25,000					\$25,000
ROW Acqs.		\$865,000				\$865,000
Environmental	\$100,000					\$100,000
Construction		\$1,506,063	\$2,379,192	\$2,379,192	\$2,379,192	\$8,287,941
Inspection		\$139,563	\$250,000	\$250,000	\$250,000	\$889,563
Totals	\$1,000,000	\$2,510,626	\$2,629,192	\$2,629,192	\$2,629,192	\$11,000,000

IV. PRIMARY SELECTION CRITERIA

SAFETY

The current traffic pattern causes crashes within the city and on the Interstate. This project will reduce travel for residents and result in a safety savings of **over \$76M** from vehicle crashes of all types. It will also address the current traffic circulation issues within the City. Residents will be able to avoid the regional area for essential life services. There have been many crashes on or approaching the exit ramps from I-10 at the Diamondhead exit in both the east and west directions. Included in these crashes *are five (5) fatalities* in the last three years. While MDOT has a project in the current TIP to address the crashes at



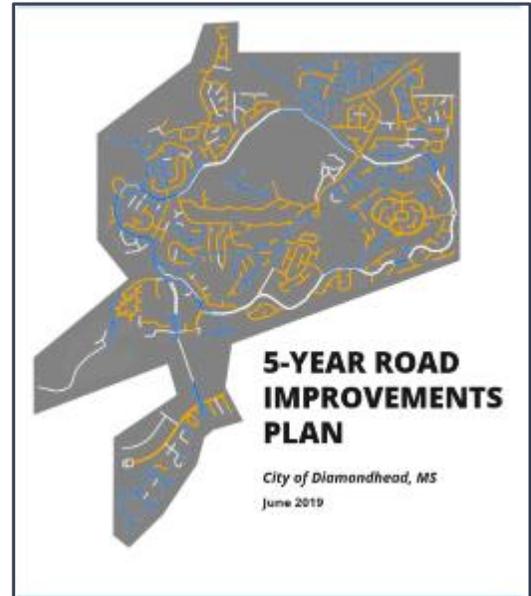
the I-10 exit ramps to Diamondhead, this project will allow citizens to stay within the city for essential life services and not use the Interstate. This project has incorporated safety features at the beginning of the project so that the city is safer once it is complete. The project will include adding shoulders to roadways that do not already have shoulder, back-in angle parking, and protected multiuse pathways. *All of these are known as safety countermeasures.*

This project will provide a choice to residents so they can avoid those locations that have more crashes. With the new additions proposed within this project, travelers will stay within the city for everyday items and experiences, so they will not have to use the interchange and Interstate. Also, to connect from the parts of the city currently separated by the Interstate, the residents will do this through their local road network and not use the interstate system. Connecting the two divided sections is convenient to the traveling public, but it also allows emergency vehicles to respond quickly and safely to inevitable incidents. In total, there were **258 accidents** in the three years reviewed. One fatality did occur, on Noma Drive, in the Project area.

STATE OF GOOD REPAIR

Diamondhead has an **asset management program** in existence for its roadways and their maintenance. The city contracted with the engineering firm "Civil-Link" to video, inventory, and rate their roadways in 2018. Based on this program, the City now has an asset management program that allows them to determine when and how to treat the roads to stay in proper condition. In 2019, Diamondhead spent over \$900K to pave its streets to bring them to standard. The Asset Management Program enables them to adequately program funding to be allocated to their roadways at the right time and the right amount. The city also has a maintenance department that handles repairs to the roads and their appurtenances.

Diamondhead has budgeted \$500K annually to preserve its pavement infrastructure. This asset and pavement management effort demonstrates a high level of funding commitment for a rural community to have a working transportation network.



ECONOMIC COMPETITIVENESS

The overall economic impact of this project is an increase *in Gross Regional Product by \$84M and the creation of 1,168 jobs, with 5% of those having above-average wages over the life of the project.* The significant benefits of this project are all based on the degree of economic competitiveness that this project provides to the region as it provides substantial economic impact. The project will allow for the significant development of commercial and retail businesses in Hancock County. There is currently a shortage of housing for professionals in the area. Elliot Homes, Structures of Diamondhead, and other developers are *adding four hundred (400) homes in four new subdivisions that are driving infrastructure needs.* Other developers are doing in-fill projects that will also increase the residential units. These new housing developments are much needed to attract and retain new industries. NASA has plans to invest over \$21B in the next ten years in its space program. Stennis Space Center will receive a considerable amount and has already started to see investments from private space industry-related businesses in the area. For example, Space X recently announced that it was investing \$91M into a new facility at Stennis Space Center, which will add two hundred (200) new employees. The aerospace company "Relativity" has invested \$56M into its facilities and is hiring an additional two hundred (200) employees.

Upon completion of the project, developers will have the opportunity to take advantage of Hancock County's **Commercial Development Incentive Program** established by the County Board of Supervisors in 2017. The city has agreed to match the county tax abatement program. This means that potential businesses could decrease both the city and county property taxes. The tax exemption policy and redevelopment zones were established to promote private investment throughout Hancock County. If qualified, the exemption will allow for up to 100% reduction of county ad valorem taxes (excluding school taxes, road and bridge taxes, and community college taxes) for businesses, including new structures in any proposed commercial development zones.

The land involved in this project is classified as agricultural, and the property taxes are minimal. For example, 14 acres on the north side of I-10 are currently paying \$403/year in property taxes. However, afterward, the property taxes would significantly increase. Diamondhead levies a tax on the real and personal property based on a property's assessed value as compiled by the information extracted from the city assessment tax rolls. The taxes on real estate attach as an enforceable lien on the property by the Mississippi Code of 1972, as amended. The rates are expressed in terms of mills (i.e., ten mills equal one cent). The combined tax rate to finance general governmental services, including principal and interest payment on the long-term debt but exclusive of school bond and interest income for the year ended September 30, 2017, was 29.5 mills or \$29.50 per \$1,000 of assessed valuation. Thus, the city has 29.5 mills for property taxes.

Increase in value of existing houses

This project is expected to have a significant impact on the value of existing properties in Diamondhead. Based on a walkability study conducted by the Gulf Regional Planning Commission, the walkability score will increase after the project, and houses with above-average levels of walkability sell from \$4,000 to \$34,000 more than houses with average levels of walkability.



"...houses with above-average levels of walkability can sell

\$4,000 - \$34,000

more than houses with average walkability."

ENVIRONMENTAL SUSTAINABILITY

Mississippi's coastal area has long been a leader in environmental issues and creating a sustainable and livable area. The Gulf Coast has endured significant ecological catastrophes, including the current **Bonnet Carre Spillway Salinity Crisis 2019**, which has caused a natural disaster to the marine environment and economy of the Coast. In addition, the 2010 British Petroleum (B.P.) oil spill disaster greatly affected the area. Given these incidents, environmental issues are at the forefront of development on the Coast. This project will be a leader on environmental issues such as water runoff and the design of surfaces. It will include state-of-the-art techniques to minimize and help mitigate environmental issues and incorporate best practices for stormwater mitigation per the MDOT Highway Design Manual.

	Public Safety: Reduces number and severity of crashes
	Active Community: Complete Streets, E/V Charging stations, and Decorative lighting
	Sustainable: Greenspace, Stormwater treatments, Broadband, and green infrastructure

One of the most critical environmental concerns on the Coast is stormwater runoff and contamination of waterways. The design will mitigate the effects of stormwater runoff and, in doing so, will incorporate state-of-the-art technologies and materials. For example, the permeable pavement will be included, and catch basin techniques will be used to collect and filter the water. [This environmentally friendly approach will be a model for future development on the Coast to preserve the ecosystem.](#)

This project will directly address the **regional sustainability** goal of reducing vehicle miles traveled, as identified in the U. S. Department of Housing and Urban Development (HUD) sustainability plan. The entire Plan document can be found at <http://www.grpc.com/wp-content/uploads/2018/04/FINAL-Plan-for-Opportunity-Small.pdf>. As noted on page 57 of the Plan, the recommendations called for enhancing the quality of life by providing more transportation choices. The number of commuters that choose to walk, bike, or take transit would improve the quality of life issues.

QUALITY OF LIFE

As noted in the **TIP Strategies** document commissioned for the region by the Gulf Coast Business Council, “Quality of Place” is a guiding principle for growth for the area. This project includes three of the recommended priorities:

- ✓ (1) Broadband high-speed internet fiber optic connections provided through a \$10M investment by C-spire
- ✓ (2) Mixed-use commercial developments as the town center created through this effort
- ✓ (3) The “Blue economy” centered on maritime and water activities featuring high-tech businesses.

The document can be found at: <https://irpcdn.multiscreensite.com/1446ff30/files/uploaded/2019-11-19%20MS%20Gulf%20Coast%20Plan%20FINAL.pdf>



This project will preserve the environment by lowering the number of pollutants emitted into the air and reducing daily VMT per capita. The results in the BCA show that this project will have an **environmental benefit of over \$5.32M**. This amount includes significant reductions in nitric oxide,

particular matter, and carbon dioxide. This project provides a substantial reduction in these environmental containments. This project decreases the adverse effects on air quality created by high VMT amounts. Improved air quality can also reduce respiratory issues and promote better public health.

Diamondhead's Comprehensive Plan emphasizes active living

Walkable/Bikeable/Cartable City Benefits

- Accessible to all ages
- Healthy lifestyle
- Access to beautiful, natural areas
- City amenity
- Tourism/economic draw
- Increased property values
- Lessened environmental impact
- Safety/slower car speeds
- Community identity and relationships
- Reduced car dependency
- Easier access to POA amenities

KEY

- Trailhead
- Golf/Marsh Launch
- Community Facility
- Bicycle
- Multinodal Lane
- Unimodal Street
- Existing Street
- Trail
- Multinodal Road
- Wetlands

EQUITY

Designing communities and transportation systems for cars excludes citizens that do not have regular access to personal vehicles. Walking and biking are sometimes the only available and affordable transportation choices. Vulnerable populations, such as low-income households, minorities, children, persons with disabilities, and older adults, typically own fewer vehicles and a longer commute. They are more likely to be exposed to unsafe routes for pedestrians and bicycles without adequate facilities because they have no other choice. As stated earlier, this project is adjacent to a community considered in "persistent poverty." This project will allow those residents in the adjoining community an opportunity to find employment closer to their households than what exists today. The jobs and opportunities that this project will create closely match the skills and education levels of those living in an area of persistent poverty.

RETAIL LEAKAGE ANALYSIS

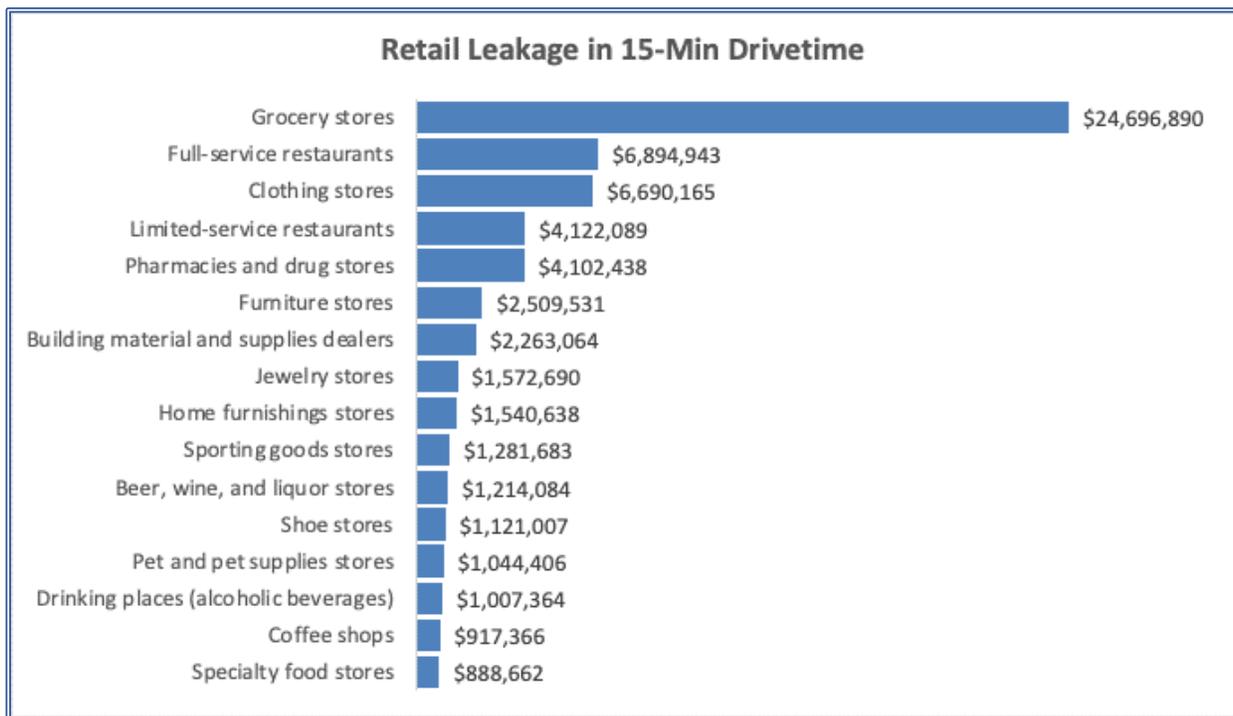
"Retail Leakage" refers to the difference between the retail expenditures by residents living in a particular area and the retail sales produced by the stores located in the same area. If desired products are not available within that area, consumers will travel to other places or use different methods to obtain those products. Consequently, the dollars spent outside of the site are said to be "leaking."

The data presented below comes from Nielsen Claritas, Inc., a national retail marketing service used by town planners, retail and restaurant site planners, and national chains for their market research. Claritas gets its data from several sources, including Census of Retail Trade; Annual Survey of Retail Trade; Claritas Business Facts; Census of Employment and Wages; Sales Tax Reports; and various Trade Associations.

	Diamondhead	15-Minute Drivetime	Gulfport MSA	30-Minute Drivetime
Consumer Expenditures	\$204,946,102	\$308,087,951	\$1,143,545,703	\$3,444,405,036
Retail Sales	\$69,496,979	\$172,093,540	\$1,903,078,488	\$4,204,953,376
Retail Leakage (Gain)	\$135,149,123	\$135,994,411	(\$759,532,785)	(\$760,548,340)

The retail leakage analysis indicates that both Diamondhead and the 15-minute drivetime primary trade area *leaked approximately \$135 million in retail sales over the past year.*

The chart below provides retail leakage in select categories experienced in the 15-minute drivetime. **This leakage translates into opportunities to capture existing market demand.** Key options include grocery stores, restaurants (both full-service and limited-service), clothing stores, and pharmacies and drug stores.

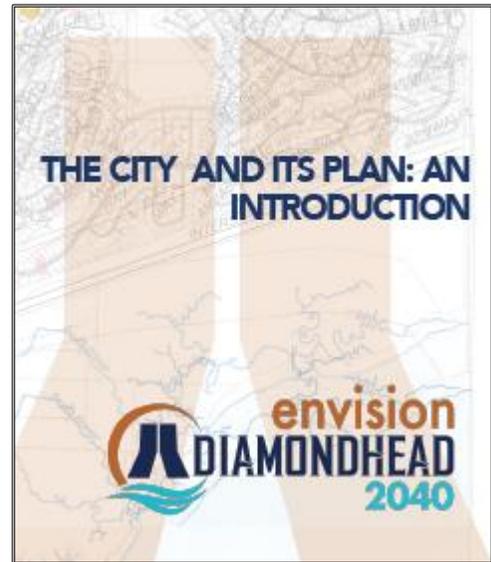


DESIRABLE COMMUNITY

Many people believe it is essential to living "within an easy walk" of shops, cafes, schools, and other community places. Smaller cities are having trouble keeping and attracting businesses that require a millennial workforce. This "brain drain" is adversely affecting smaller towns. Many millennials want a lifestyle where they can live in compact, walkable, bikeable communities. Evidence exists that the baby boomer generation shares a similar desire for more compact, walkable communities. If smaller cities expect to attract or retain millennials and boomers, planning for denser, walkable, and bikeable neighborhoods would be an effective formula.

QUALITY OF PLACE

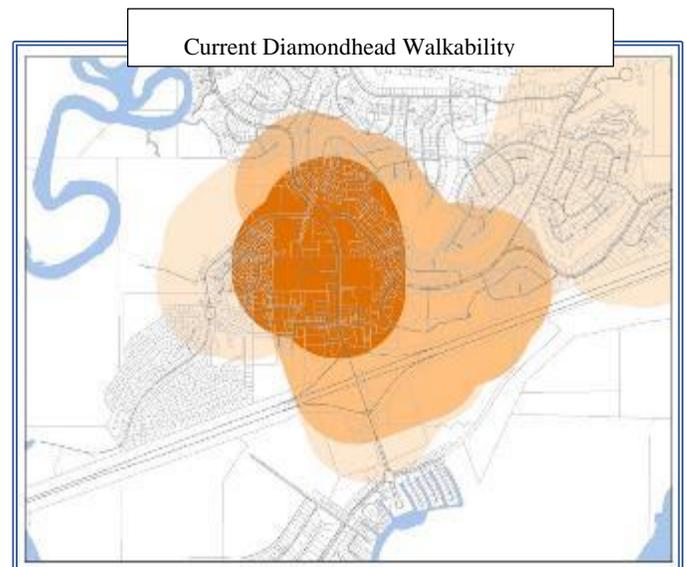
Active transportation provides the opportunity to increase the quality of place for individual residents and the community. Dynamic transportation networks create complete streets that make walking or biking more enjoyable, increase social interactions, improve health, and reduce driving for short trips. This project would add to the quality of life of residents in Diamondhead as they would be better able to connect to the more significant part of Hancock County. Given this excellent quality of place, Diamondhead would provide better livability features.



The opportunities for this development would allow for more residents to telecommute per government policy and, therefore, would be able to spend more of their disposable time and money within the City. The residents would also have more services within their community, so they would not have to leave to go to a restaurant or visit a doctor's office. This project creates public health benefits by encouraging walking and biking. It also helps seniors to "age-in-place" by providing services near where they live and have a better quality of life as they age.

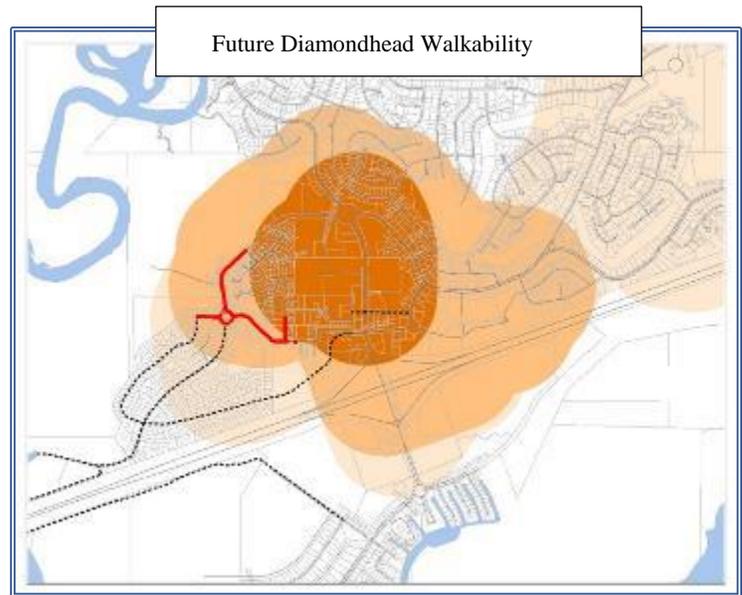
EXISTING DEMAND

The map shows the results of the existing walkability demand score analysis. The analysis indicates that the most significant potential bicycle and pedestrian demand is expected in Diamondhead's city center. This is where doctor's offices, hair salons, banks, restaurants, pharmacies, and retail establishments are located. Just outside of this area is considered medium demand. This includes a few destinations and comprises many residences within walking distance of the city center. The last area shown on the map is considered to have some pedestrian and bike demand.



FUTURE DEMAND

The area in red, including Park Ten Drive, Alapa Drive, and Noma Drive, has the highest potential to impact the synergy of the financial district. This area's current demand index is just below the threshold used to identify the area "Medium Ped/Bike Demand." The additional generators from the project would improve this area from being rated as "Some Ped/Bike Demand" to an area considered to have "Medium Ped/Bike Demand." New mixed-use development adding residential population combined with simply one or two other destinations combined with the already high pedestrian and bicycle demand area nearby would substantially impact activity. Overall, there will be much more demand and activity.



V. SECONDARY SELECTION CRITERIA

PARTNERSHIP

If awarded this funding, the Diamondhead will partner with the Gulf Regional Planning Commission (GRPC) on the project's design phase. GRPC is the federally designated Metropolitan Planning Organization (MPO) for the Gulf Coast. GRPC would be the Local Public Agency (LPA) for the design and environmental phases of the project. GRPC is certified with the Mississippi Department of Transportation (MDOT) as an LPA. Having different LPAs for the Design and Construction phase is a benefit in that it allows the parties to focus on their efforts, anticipate future steps, and move quickly when the next stage is authorized.

This partnership will expedite these phases of the Project as GRPC will proactively be involved in the project. The administrative steps will be coordinated more efficiently between the MPO, the MDOT, and the Federal Highway Administration (FHWA). Once the project has completed the initial phases, the Construction Phase will be managed by the city. The Local Public Agency (LPA) will administer the Federal-Aid process for the construction phases.

The city is now embarking on implementing the Plan so that the benefits can be realized. In addition to the close partnership that the city has with the citizens, a robust public partnership lead by GRPC and its federally required Public Participation Plan (PPP) will enhance the public outreach and ensure that the outreach is significant and meets federally mandated requirements for inclusion of disadvantaged populations. The unique partnership with GRPC will allow for an extensive planning process and result in a comprehensive vision for Diamondhead with a regional perspective that GRPC brings to the project. Design charrettes will occur with the Community Associations within Diamondhead and local organizations such as the Chambers of Commerce, the Gulf Coast Business Council, and Partners for Stennis. The project will be developed to meet the needs of incoming residents and to enhance community interests.

INNOVATION

Diamondhead will create a state-of-the-art corridor for multimodal use and emerging technologies such as solar installations and electric vehicle charging stations through this project's construction. The interchanges at the Diamondhead exit on I-10 are being updated to efficient roundabouts of a modernization project. Access management techniques such as raised medians along the new roadways and permeable pavements to effectively control stormwater runoff will be incorporated where appropriate. The roads will be designed and built as complete streets and incorporate new traffic calming techniques to create a "sense of place." The project would help senior citizens live more active and involved lives. The design will include treatments that promote an "age-in-place" community, such as accessible shopping and health care facilities and local providers of specialized medical services. The roadways include amenities such as:

- ✓ *Larger traffic light signal heads and backboards so that they are more recognizable*
- ✓ *Safer to an aging population*
- ✓ *More significant street signs with larger font sizes to be more visible*
- ✓ *Advanced Pavement Markings, Pavement Colors, and flashing warning lights*

By designing with an age-in-place approach, the project will meet and exceed federal ADA requirements. The project will use a sustainable design to help them realize the numerous long-term benefits for the city. The project will incorporate best practices for low-impact development to improve the ecosystem and environment that already exists.

INNOVATIVE TECHNOLOGIES

Upon completing the roadways, the City will keep track of future maintenance needs on the new roads and establish prioritized improvements. This effort will include an innovative pavement management technology system and managed by the consulting engineering firm of Civil-Link. They use a GIS-based video and web interface tool that captures the road conditions and recommends pavement treatments and estimated costs using a life-cycle approach. Diamondhead intends to incorporate solar technologies on the lighting and signals of this project, where feasible and practical. As previously mentioned, the newly developed area will also receive broadband services from C-spire, a full-service provider of transport, internet, and telecom services.

INNOVATIVE PROJECT DELIVERY

The project will use the best practices in construction management and include a construction supervisor as early as possible. However, given the relative simplicity of the project and its straightforward nature, the project will be constructed using known best practices. The project will examine the road reconstruction portion on Noma Drive and operate a recycling method such as hot-in-place recycling if warranted. This will be dependent on the boring samples that will be attained during the design phase.

INNOVATIVE FINANCING

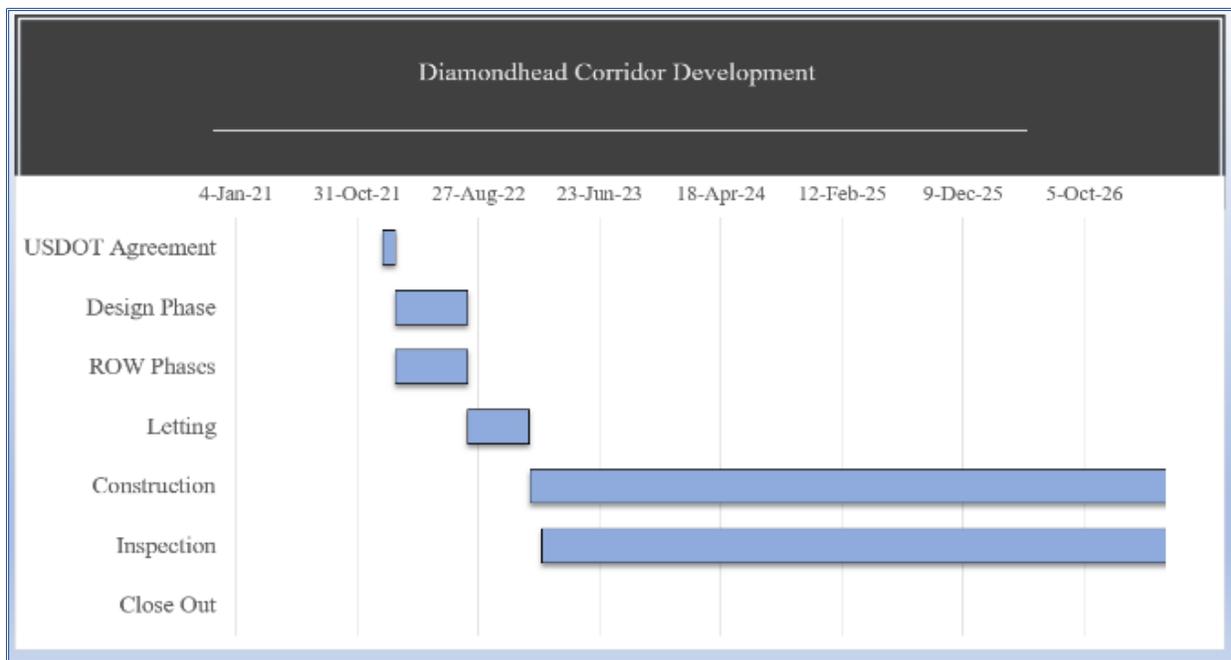
The project will be funded through the RAISE grant and a cash match to the Federal funds from the City of Diamondhead. Diamondhead has excess funds in its general ledger and has enough money to first instance the funding needed. Therefore, the city will not need to finance any

financing for this project and has cash reserves if they are required. Due to its strong leadership, forward-thinking, and search for excellence in management, the city has grown and is in an excellent financial position.

VI. ENVIRONMENTAL RISK

PROJECT SCHEDULE

The project will take approximately two years to complete. The Engineering Design phase (i.e., PE) starts immediately after an agreement with USDOT and should take almost six to eight months to complete. The construction phase will take approximately two years to complete. The mill and overlay portions of the Project on Noma Drive would be done at the start and should only take three months to complete.

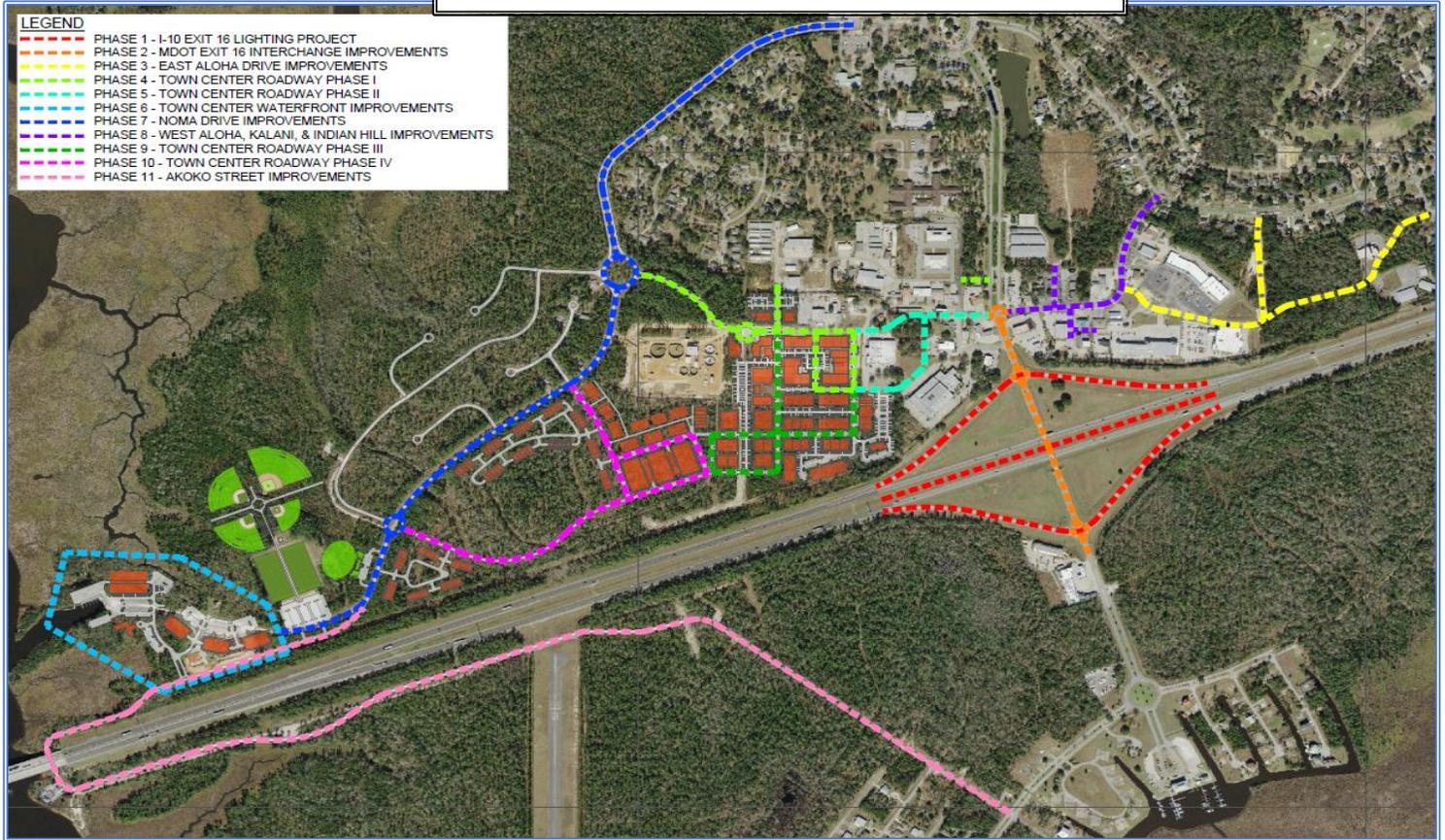


TECHNICAL FEASIBILITY

This project is a road construction project through vacant land and a reconstruction project on an existing roadway. The project will need to go through a NEPA process as an Environmental Assessment (EA). There are no condemnations, and no properties need to be relocated, condemned, or contaminated. The city has already completed wetlands delineation for the project area and is currently coordinating with MDEQ and the US Army Corps of Engineers on next steps. The project is less complex than other EAs', and the timeframe for completing the EA is much less than more complex projects. There is nothing that presents a risk to this project from a construction standpoint. The city has worked on numerous public works projects that demonstrate its ability to work with federal and state agencies, fund sources and regulations, and engineering complexities. The city has a highly competent staff and resources that have helped them completed these projects and develop future development projects. The below map shows

the entire transformation plan for the city. As stated earlier, the city has already completed several of these projects and, in doing so, demonstrated the technical capacity to deliver large scale infrastructure projects funded by state and federal programs. The city also has over \$13.9M in the project delivery stage that are progressing successfully.

Plan of Commercial District Infrastructure Projects



Projects Underway in Commercial District Transformation Project						
Roadway Project	Description	Status	Cost	Local Match	Funding	Funding Source
Wayfinding	Updated transportation enhancements signage throughout city	Design and Engineering	\$200,000	\$50,000	Funded	MDOT LPA and Diamondhead
I-10 Exit 16 Interchange Improvements	Installation of 3 roundabouts for traffic control	Design and Engineering, ROW Acquisition	\$6,900,000		Funded	MDOT
E. Aloha Drive	Updated roadway, adding parallel parking, 10' sidewalks (both sides), street lighting	Design and Engineering	\$767,839	\$153,568	Funded	MDA, MDOT TA Funds and Diamondhead
Town center Roadway Phase I	Upgraded roadway, sidewalks, decorative lighting, Median, Water and Sewer	Design and Engineering	\$1,800,000	\$360,000	Funded	MDA GCRF and Diamondhead
Town center Roadway Phase II	Upgraded roadway, sidewalks, decorative lighting, Median, Water and Sewer	Design and Engineering	\$2,400,000	\$480,000	Funded	MDA GCRF and Diamondhead
Town center Waterfront Improvements	New Boat launch, kayak launch, public boardwalk	Design and Engineering	\$800,000	\$0	Funded	MS Tidelands
Total			\$13,911,407			

REQUIRED APPROVALS

There are few, if any, required approvals necessary for this project to progress because the area is already zoned for commercial development. The Right of Way (ROW) Acquisition phase is expected to be completed on schedule. There are only five property owners in the area, and they have expressed interest in selling or donating their property. There are no existing structures on the properties, so there are no homeowners that would be displaced. The approvals necessary would be completed through the NEPA process and follow the Uniform Act. While this phase needs to be completed, the project is expected to progress on a straightforward process of an Environmental Assessment and not an Environmental Impact Statement (EIS) because the project is not complex and takes place in a known environment.

REQUIRED PLANNING DOCUMENTS

If awarded funding, the project would be added to the Gulf Regional Planning Commission's Transportation Improvement Program (TIP), the Statewide Transportation Improvement Program (STIP), and the Long-Range Transportation Plan (LRTP). A letter of support from the MPO states this is included with this application.

ASSESSMENTS OF PROJECT RISKS AND MITIGATION STRATEGIES

Diamondhead will progress this project using a Risk Management approach. That means that at every phase of this project, the city will identify and assess the best method for advancing to the next phase and identify the critical paths needed to move the project forward. While using the Risk Management Approach, the Diamondhead believes that this project has minimal risk and is a straightforward roadway construction project.

Table of Risks and Mitigation

Risk	Impact	Likelihood	Mitigation
Loss of Public Funding	High	Low	Diamondhead has significant cash reserves
Environmental compliance	Low	Low	Site assessments and the NEPA process will be complete before construction; the city closely coordinates with MDOT and MDEQ.
Construction Delays	Low	Low	The schedule includes contingency times and costs; site conditions accessed through a thorough process.
Staffing	Low	Low	Diamondhead has considerable experience and staff; consultants brought on as needed.
Right of Way	Low	Low	The city has maintained ongoing communication with property owners.

VI. BENEFIT-COST ANALYSIS

METHODOLOGY - BENEFITS

The benefits of this project are derived from a reduction in travel so that overall VMT and VHT are reduced. This is because residents will be closer to goods and services. An example of this would be in a medical office where remote medical diagnostics could occur in real-time, reducing the need to travel to a medical complex in a large city to receive specialized care. Safety will be improved due to the reduction in VMT and VHT as well. It should also be noted that private investment for the water and sewer connections and 5G broadband internet would be realized through this project.

Benefits were calculated by comparing travel times and vehicle hours traveled with those who would experience after the project is completed. Currently, residents in the city have the longest travel time to work and travel longer than any other city in the region for shopping, medical appointments, and other life services. After completion, the travel time for these activities is expected to decrease. The table below shows the current travel times for the coastal communities:

Average Travel Times (Minutes)

County	City	Travel Time
Hancock County		29
	Bay St. Louis	24.1
	Diamondhead	33.9
	Waveland	29.7
Harrison County		22.7
	Pass Christian	24.5
	Long Beach	22
	Gulfport	21.2
	Biloxi	19.4
	D'Iberville	21.3
Jackson County		24.5
	Ocean Springs	23.7
	Gautier	26
	Pascagoula	17.4
	Moss Point	19.9

Sources: U.S. Census Bureau, American Community Survey (ACS) and Puerto Rico Community Survey (PRCS), 5-Year Estimates. July 1, 2018

The mean travel time to work for the other cities in 22.6 minutes, and the average for all three coastal counties is 25.5 minutes. This data shows that people that live in the City of

Diamondhead have over 30% longer travel times than others in the region. This project grant would enable Diamondhead's mean travel time to be more comparable to the rest of the area and reduced to an estimated 29 minutes. This is because the project would spur new development providing Diamondhead residents with more job opportunities closer to their residence. The project would also reduce travel time for essential life services such as medical facilities, entertainment, and shopping. *After the project, travel for these services would be significantly reduced as those needs would be fulfilled within the city.*

A base number of Average Daily Traffic (ADT) was determined and compared to the future ADT after the project was completed to determine the benefits of a change in travel time and travel patterns. This was also done for Vehicle Hours Traveled (VHT), and Vehicle Miles Traveled (VMT). The project's construction phase was assumed to be completed at the end of F.Y. 2026. The full build-out of the commercial district would occur in 2029, and that is when benefits for the project were assumed to start. The methodology for this is presented in the Benefit-Cost Appendix.

The benefits from avoiding costs over the life of this project include:

Category	Amount	Description
Vehicle Operating Costs	\$76M	Benefits derived from less shorter commutes and more activity within the city. Includes savings in VMT and VHT
Business Time and Reliability	\$35M	Benefits from less congestion and more productivity
Value of Personal time	\$47M	Benefits derived from shorter distances to goods and service to provide more personal time
Social and Environmental Costs	\$53M	Benefits from less pollution due to less use of automobiles
Total Benefits	\$211M	Over the life of the project

The project also avoids automobile dependence and reduces vehicle emissions. The table below shows the quantities of particulate matter that will be saved by implementing the project.

Environmental Benefits:

	VOC	NOx	CO2	Total Emissions Avoided
Quantity of Emissions Avoided	99,617.87	674,262.73	4,552,369.03	5,326,249.63

Broader economic benefits were calculated based on the new and improved roadway stimulating corridor development and by providing new access to vacant parcels of land. Based on the city's

understanding of the potential for economic growth for the area, the expected complete build-out by 2045 would produce the following economic development:

Projected New Developments by type and number:

Type	Unit Square Foot	Units	Jobs Per Unit	Total Square Foot	Total Jobs	Daily Trips*
Restaurant	5,500	4	25	22,000	100	1,979
Hotel	15,000	1	12	15,000	12	490
Shopping Center	10,000	4	30	40,000	60	1,718
Offices	1,500	40	8	60,000	160	661
Fast Food	3,000	8	16	24,000	64	11,907
Large Office	20,000	2	200	40,000	200	319
Dwelling Units		265				2,536
Totals	55,000	324	291	201,000	596	19,610

*8th edition ITE Trip Generation Report

COSTS

Based on a planning level estimate done that is included in the Appendix as provided by Digital Engineering, Inc., the table below shows the project costs:

Project Estimates:

Project	Description	Total Project Cost	Federal Share	Local Share
1	Noma Drive Improvements	\$1,200,000	\$1,080,000	\$120,000
2	West Aloha Drive, Kalani and Indian Hill	\$800,000	\$720,000	\$80,000
4	Town Center Phase III	\$4,500,000	\$4,050,000	\$450,000
5	Town Center Phase IV	\$4,500,000	\$4,050,000	\$450,000
Totals		\$11,000,000	\$10,000,000	\$1,000,000

Costs were also estimated for maintenance on the roadway at years seven and fourteen after completing the road using an asset management approach. The estimated cost for a minor overlay at those times was approximated at \$500K.

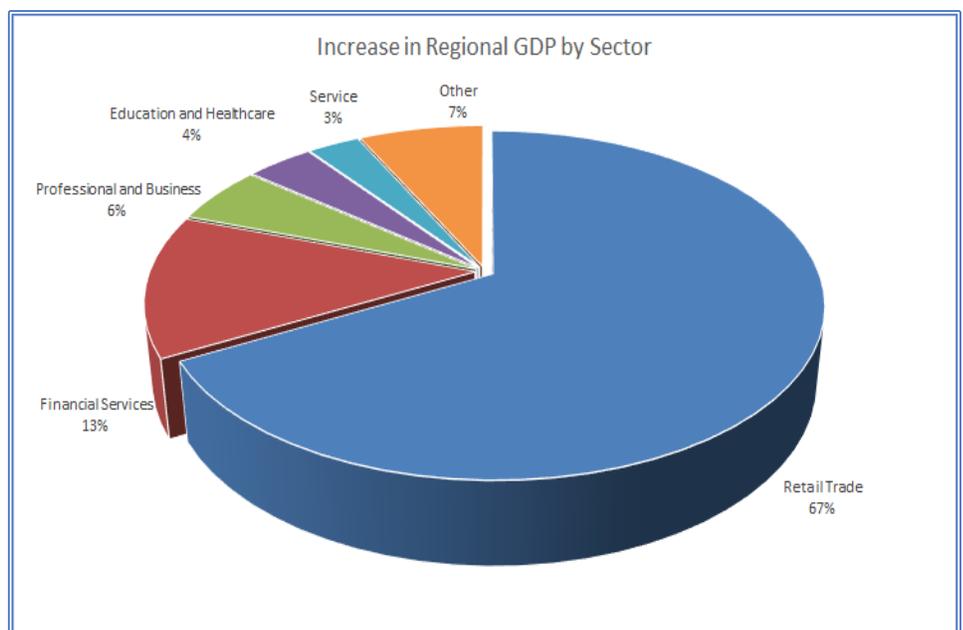
RESULTS -BENEFIT AND COSTS

The following Benefit to Cost Ratio (B/C) was calculated using a 3% and 7% Discount rate, shown respectively in the table below:

Benefit	Compare 'Project' vs. 'Base'	
	7% discount rate (\$M)	3% discount rate (\$M)
Vehicle Operating Costs	76.28	121.25
Value of Business Time	33.87	52.87
Value of Personal Time	45.82	71.53
Reliability	1.96	3.06
Safety	76.12	120.99
Logistics/Freight Costs	0.00	0.00
Productivity from Access/Connectivity	0.00	0.00
Environmental Factors	5.32	8.66
Consumer Surplus and other Social Welfare	0.00	0.00
Total Benefits	239.38	378.36
Costs	Compare 'Project' vs. 'Base'	
	7% discount rate (\$M)	3% discount rate (\$M)
Capital Investment Costs	7.88	9.50
Operation and Maintenance Costs	0.06	0.12
Residual Value of Capital Spending	0.00	0.00
Total Costs	7.94	9.63
Benefit/Cost Ratio	30.14	39.31

OVERALL ECONOMIC IMPACT AND BENEFITS

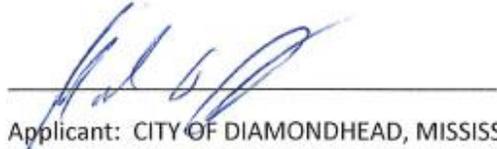
Based on an over \$11M investment from the RAISE Grant program and the city, the total economic impact over twenty (20) years for the region would increase Gross Regional Product by \$84M. The project would increase societal benefits from traveler savings, environmental benefits, and broader economic benefits of \$109.4M over the project's life. The project would create 1,168 jobs, with 5% of those having above-average wages.



VII. FEDERAL WAGE CERTIFICATE

Federal Wage Certificate

I, Mr. Michael Reso, on behalf of the city of Diamondhead, Mississippi the sponsoring agency for the Department of Transportation's RAISE grant, hereby certify that the City of Diamondhead, Mississippi will comply with the requirements of Subchapter IV of Chapter 31 of Title 40, United States Code (Federal Wage Rate Requirements), if awarded a USDOT RAISE Grant for funding for this Project.



Applicant: CITY OF DIAMONDHEAD, MISSISSIPPI

Title: CITY MANAGER