

BEATLINE PARKWAY

FY 2019 BUILD GRANT APPLICATION



FROM THE SOUTH



GRANT APPLICATION

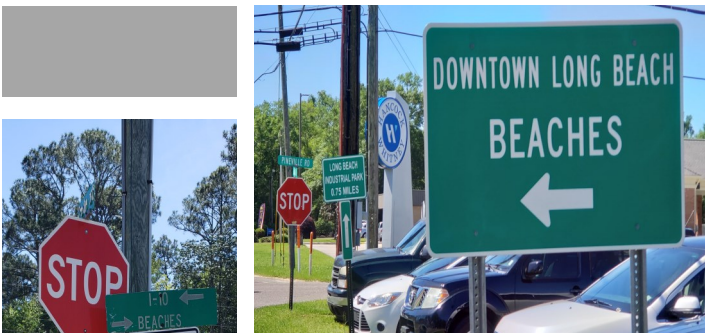
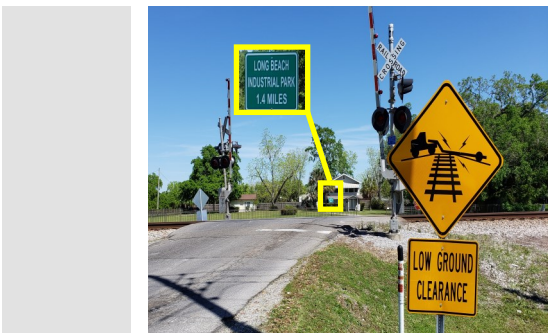
USDOT NATIONAL INFRASTRUCTURE
INVESTMENTS—BUILD
DISCRETIONARY GRANTS (FY 2019)

Submitted by:

MAYOR GEORGE BASS
CITY OF LONG BEACH MS

IN PARTNERSHIP WITH:

MAYOR CHIPPER McDERMOTT
CITY OF PASS CHRISTIAN
AND
SUPERVISOR MARLIN LADNER
PRESIDENT OF THE BOARD
HARRISON COUNTY



FROM THE NORTH



On the Mississippi Gulf Coast



Multi-Jurisdictional Economic Development Collaborative to Create an Increased Capacity, Multi-Modal North-South Connector, that will Improve Traffic Control, Access to Essential Services and Stormwater Management, while Providing Emergency Evacuation and Elevate the Overall Quality of Life for the Citizens and Visitors.

PROJECT INFORMATION SHEET

PROJECT SUMMARY

Project Title	Beatline Parkway: Multi-jurisdictional Transportation and Economic Development Project
Project Location	Long Beach, Pass Christian and Harrison County, MS
Project Description	Beatline Parkway, a 6.4mi, Increased-Capacity, North–South Connector (I-10 to Hwy 90) in West Harrison County, MS, replacing the current 2-lane, which has no shoulders and deep open drainage ditches. Included: underground utilities, upgraded infrastructure, turning bays, buffered multi-modal paths, urban park access. Primary functions: reduce commercial/commuter transit time, improve safety, emergency evacuation for west Harrison County. The FY2019 BUILD Discretionary funds will provide the Phase 1 engineering and construction of the southern 1.3mi from Hwy 90 to Johnson Road, including upgraded CSX crossing and truck access to the Long Beach Industrial Park.
Project Website	https://www.cityoflongbeachms.info/beatlineparkway
Project Length	Phase 1: 1.3 miles (Full Project: 6.4 miles)
Total Project Budget	Phase 1: \$22,700,000
BUILD Funding Request	Phase 1: \$17,025,000
Est. Pre-Construction Date	Phase 1: December 2023
Est. Construction Completion Date	Phase 1: October 2025

APPLICANT

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ECONOMIC DEVELOPMENT ~ QUALITY OF LIFE

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REDUCED COMMUTER AND FREIGHT TRAFFIC CONGESTION

PROJECT DESCRIPTION

BACKGROUND

In excess of 20 years the City of Long Beach, Pass Christian and Harrison County has discussed the Beatline Extension, Expansion, Increased Capacity, etc. In addition, it has been identified, prioritized, studied, and listed in numerous Master Plans, Transportation Plans, Charrettes, etc. It is now being considered a priority to the City of Long Beach, Pass Christian and Harrison County because of the forward thinking leadership and their plans for the recovery and growth of the communities they were elected to represent.

As the two cities have grown, as well as the communities around them, County Farm/Beatline / White Harbor Road (Beatline) is the primary artery that connects I-10 to Highway 90 in West Harrison County, and to these flourishing towns. The Beatline corridor is the “Front Door” to the unique atmosphere of Long Beach and Pass Christian. These two communities radiate Small Town Familiarity on the edge of a growing Metropolitan Area. It is the friendliness and welcoming ambience that keeps the citizens happy and the visitors returning.

Many of the citizens commute to the surrounding area to work. NASA Stennis Space Center, Relativity, Gulfport-Biloxi International Airport, Huntington-Ingalls Shipyard, Chevron Refinery, Mississippi Aquarium, Hancock Whitney Corporate Office, Keesler Airforce Base, and the many coast casinos and hotels are just a few of the area employers that require the residents to endure excessive commuting times during peak travel. Often the 6.4 mile stretch of road takes 40-45 minutes to complete.

Over the 6.4 mile length of the Beatline Corridor between I-10 to the north and Highway 90 to the south, there are 4 stop signs (the only traffic control); 2 hard 90 degree turns; a CSX rail crossing that is too steep for trucks and only has a single car-length storage on the north side; has no shoulder the entire length; is flanked on both sides for 80% of the route by deep, open drainage ditches (Some are over 6’ deep). Travel at any time is dangerous, day or night, wet or dry. In fact, while it is a designated Hurricane Evacuation Route, it is usually the first road closed to automobiles during inclement weather. After Hurricane Katrina, nearly the entire route was completely blocked with debris, making the influx of emergency services and supplies impossible.

INBOUND AND LOCAL COMMUTING

In addition to the need for residents to commute outside of the area, there is a contra-flow of people entering the towns to attend classes at the University of Southern Mississippi Gulf Coast in Long Beach and Mississippi Gulf Coast Community College West Harrison Campus. Employees are traveling to Triton Industries and various companies in the Long Beach and Pass Christian Industrial Parks. Visitors to the residents of the South Mississippi Regional Center, which is administered by the Mississippi Department of Mental Health Bureau of Intellectual and Developmental Disabilities, find the center located on the route. Children commute to the various elementary, middle and high schools. Visitors attempt to locate many of the tourism attractions including the approximately 12 miles of white sand beaches, Pass Christian and Long Beach Harbors (the only Handicap Accessible Beach Access in Mississippi), and the many locally owned shops, restaurants and landmarks. The connectivity to and from the surrounding area is essential to the economy and quality of life for the Citizens and Visitors.

PROJECT DESCRIPTION

OPINIONS

The **2015 Mississippi Gulf Coast Area Transportation Study** summarized the need and benefit of this project. The study found that the north-south (N/S) mobility between two primary east-west (E/W) high volume corridors—Interstate 10 and US Highway 90 – is critical to the Mississippi Gulf Coast. Efficient, resilient N/S mobility between these two E/W corridors is essential for **Hurricane Evacuation, daily work commutes, freight transportation and access to essential public services** and amenities. Currently there are no 4-lane N/S connector or evacuation route west of Highway 49 in Harrison County to serve the approximately 25,000 residents in West Harrison County, the city of Long Beach and the city of Pass Christian.

Further the study noted that the N/S corridors quickly establish travel patterns and become the primary routes of choice for daily commercial and commuter travel needs. Most relatively long distance trips within the Gulf Coast Region include the use of major arterial corridors and interstate routes. The N/S corridors have higher design standards and provide more direct, higher speed travel between locations. Specifically these corridors:

- Serve activity centers with highest volume/longest commuter and freight trip demands
- Carry a high proportion of total urban travel on limited route mileage
- Interconnect/provide continuity for major rural corridors to accommodate trips to/from urban areas and movements through urban areas
- Service demand for intra-area travel between central business districts / outlying rural areas

In 2018 MDOT deployed a **Planning and Environmental Linkage Study (PEL)** of County Farm/Beatline/White Harbor Road. The results of that study, the most recent data to date on the project, coincided with the historical studies of the area. In particular the summary stated:

The Beatline Road PEL Study was conducted to identify the issues that exist or are anticipated to develop within the project corridor and to propose a solution that is in line with the project goals and local development plans. Issues were identified based on an evaluation of the infrastructure conditions, existing and future traffic operations, and historical crashes within the study area. Traffic projections through the study design year, 2040, were developed to assist in defining the key traffic issues, as described in the Beatline Road PEL Traffic and Safety Report.

Based on analysis of the project, the following needs were identified. The first need identified is the capacity and operations of the corridor. The existing traffic conditions demonstrate a lack of capacity for future growth and traffic operations are anticipated to deteriorate in the future, with heavily congested traffic expected along Beatline Road/County Farm Road and at multiple intersections along this project corridor.

Crash Patterns:

The crashes were plotted by location and crash type as shown in **Figure 1** in order to identify any patterns which may exist. The majority of crashes along Beatline Road were intersection related rear-end crashes followed by intersection related angle crashes. The greatest concentration of crashes within the study area occurred at the all-way stop controlled intersection of Beatline Rd at Pineville Rd. Other intersections with notable crash clusters were County Farm Rd at the I-10 Westbound ramps, County Farm Road at the I-10 Eastbound ramps, Beatline Rd at 28th St, Beatline Rd at Daugherty Rd, and White Harbor Rd at Railroad St, which are all stop-controlled intersections.

PROJECT DESCRIPTION

DATA CONFIRMS OPINIONS

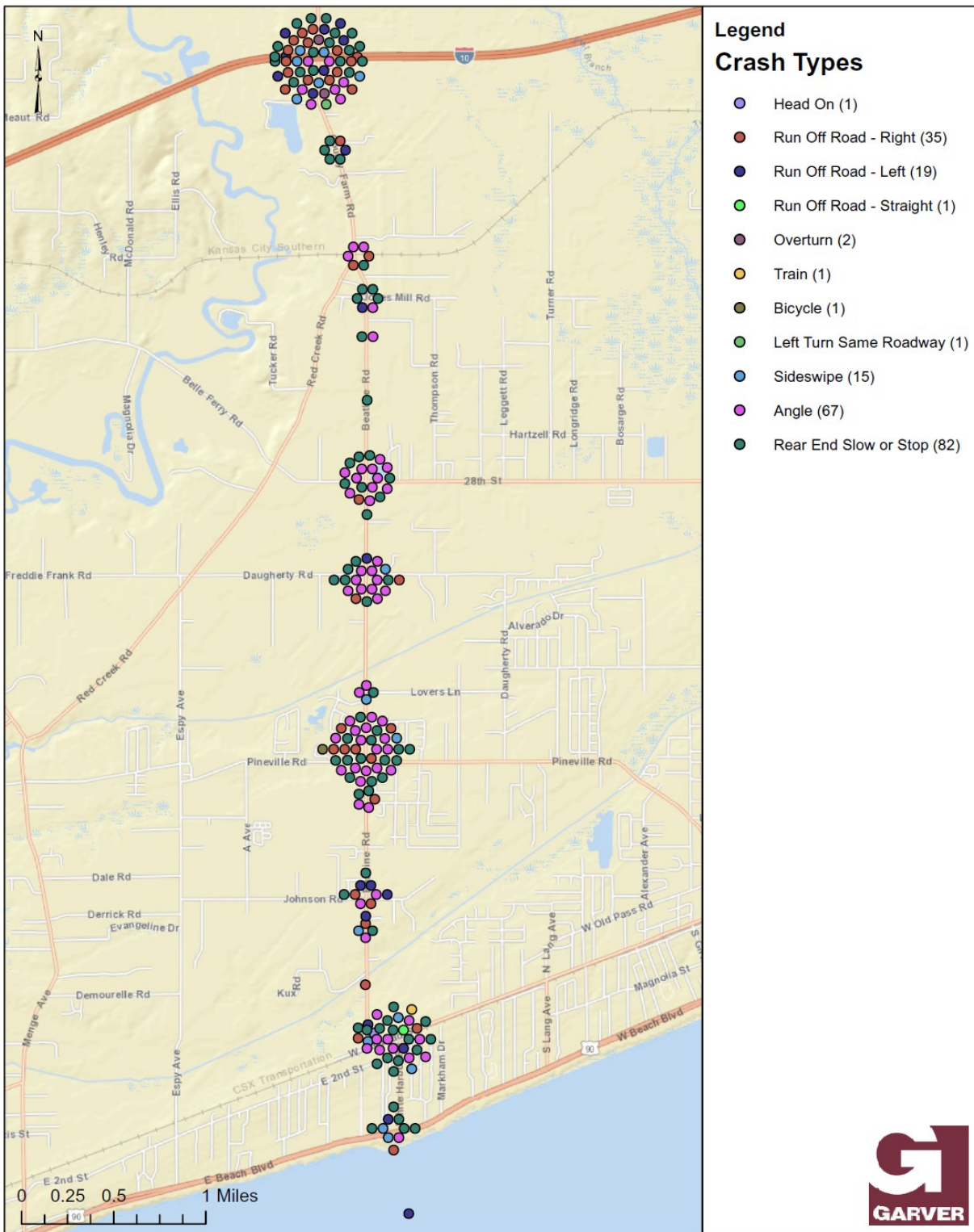


Figure 1: Beatline Road Crash Clusters and Crash Types

PROJECT DESCRIPTION

PROPOSED IMPROVEMENTS BENEFITS

Harrison County, the city of Long Beach and the city of Pass Christian entered into a formal Memorandum of Understanding to aggressively seek funding to for the Beatline Parkway Project. With the intent to accelerate the design, permitting and construction of Beatline Parkway, the partnership has the administrative, technical capacity and strong desire to cooperate with MDOT and other partners to rapidly begin construction of the project. This partnership requested and initiated the MDOT PEL Study to objectively validate and quantify the need for, and benefits of the proposed Parkway. The study was finalized in January 2019 with substantial data and analysis that confirms the Beatline Parkway meets ALL the BUILD criteria and has a significant Cost-Benefit Multiplier. The Completed Project will provide West Harrison County, Long Beach and Pass Christian with:

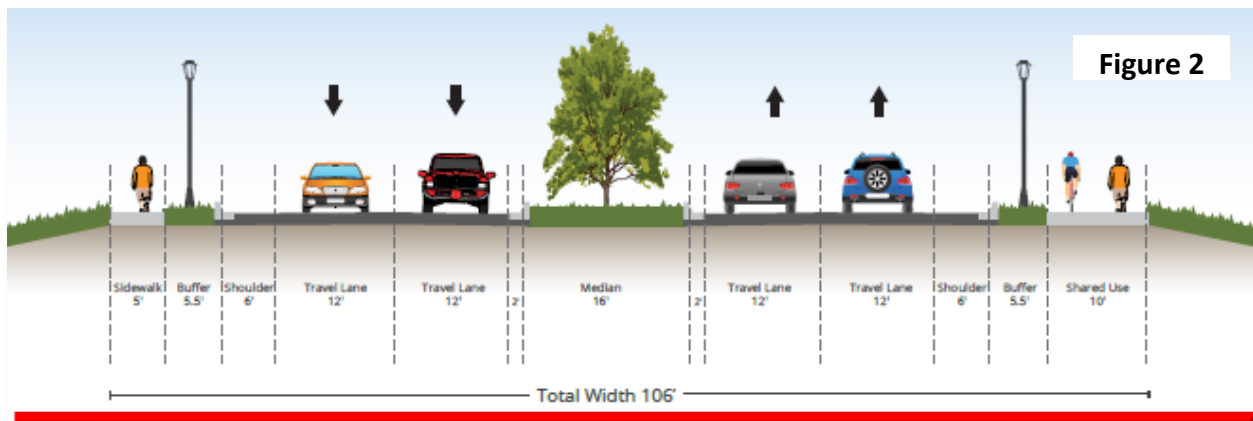
- Reduced commuter traffic congestion and improve freight mobility
- Regional Economic Development Opportunities
- A Safe, Multi-modal, Transportation Corridor
- An Efficient and Attractive N/S Connector
- Increased Capacity and Safe Emergency Evacuation Route
- Enhanced Quality of Life
- Access to Essential Services

PROPOSED IMPROVEMENTS DESCRIPTION (Figures 3,4 on following pages)

Beatline Parkway will follow the current path of County Farm Road and Beatline Road from I-10 to Railroad St (the current terminus of Beatline Road). At that point it will relocate the White Harbor CSX Crossing to the West, North of Holiday Lane, and follow the path of the existing Holiday Lane south to Highway 90.

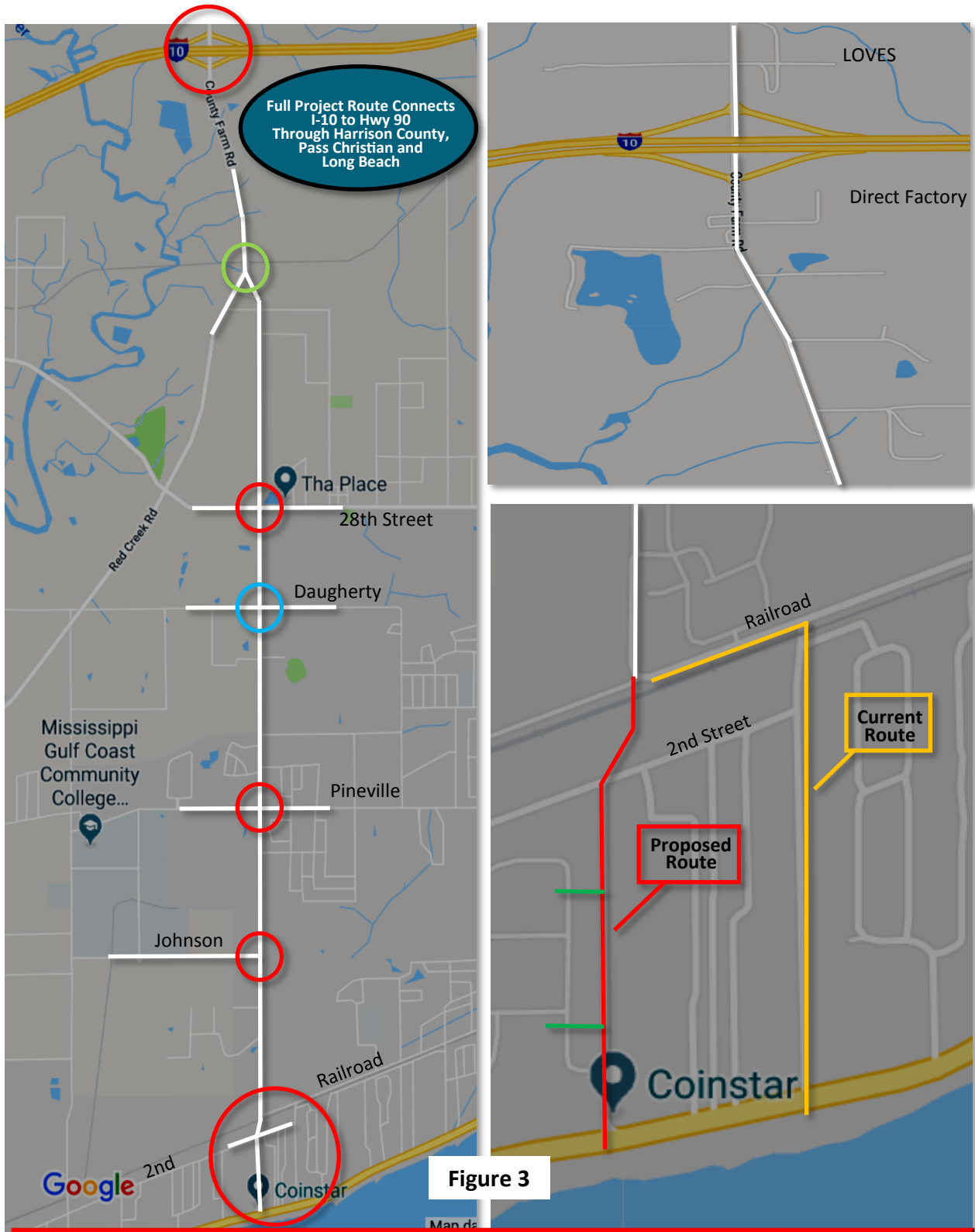
The new Beatline Parkway will be a 4-lane Boulevard with: **Figure 2**

- | | |
|------------------------------------|----------------------------------|
| Intermittent turning bays | Subterranean utilities |
| Buffered pedestrian sidewalk | Buffered multi-use path |
| Landscaping and signage continuity | Energy efficient lighting |
| Improved stormwater management | Safe CSX Crossing |
| Increased Storage at Intersections | Improved Traffic Control Devices |
| Emergency Evacuation Route | Complete Truck Route |
| Access to Essential Services | Superior Economic Development |



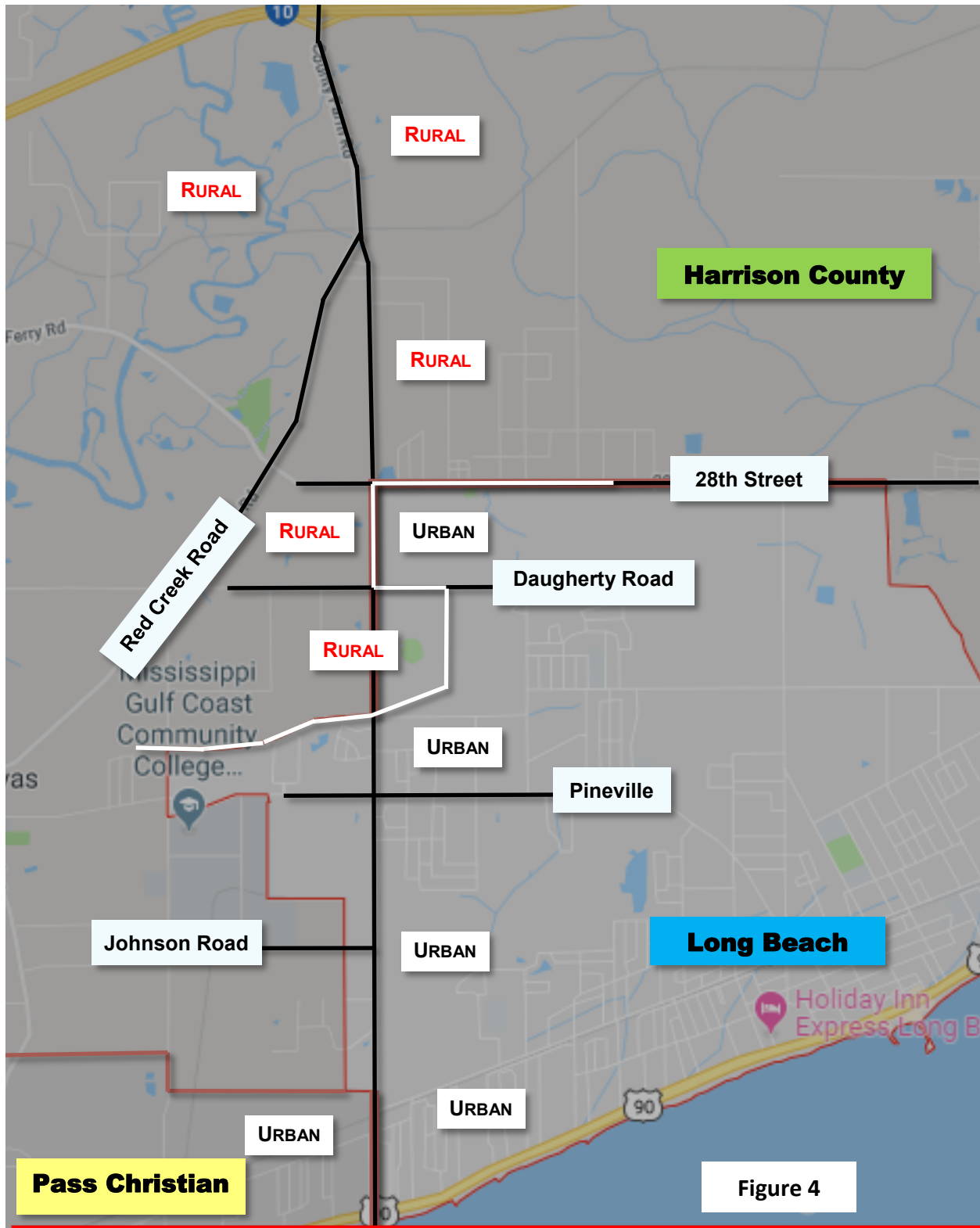
PROJECT DESCRIPTION

PROPOSED IMPROVEMENTS DESCRIPTION



PROJECT DESCRIPTION

PROPOSED IMPROVEMENTS DESCRIPTION - URBAN VS. RURAL



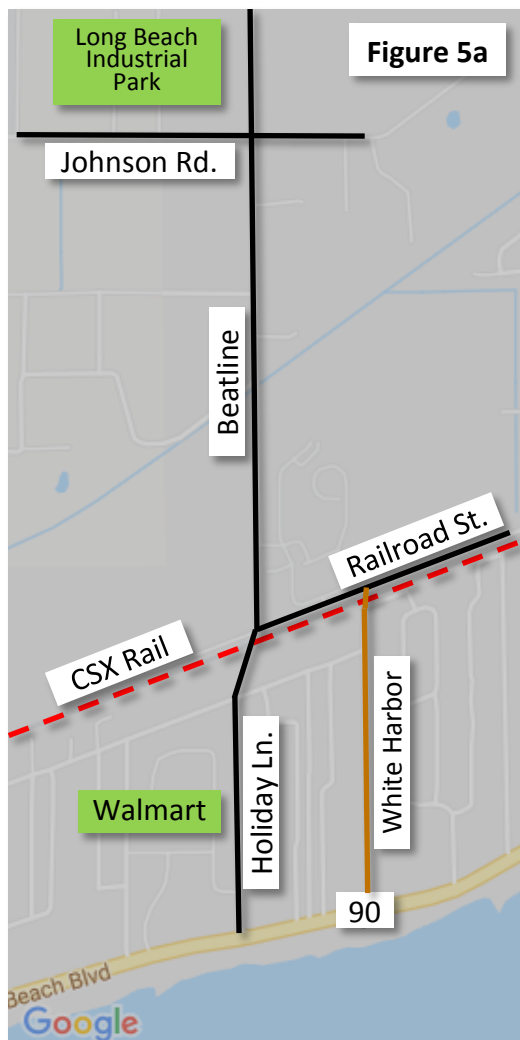
PROJECT DESCRIPTION

PROPOSED IMPROVEMENTS DESCRIPTION—CONSTRUCTION PHASES

FY 2019 Better Utilizing Investments to Leverage Development (BUILD) Discretionary Grant Funding will provide a long awaited avenue to realize the project construction. The request of \$17,025,000 will provide a substantial beginning with Phase 1 (**Figure 5a**) to the overall project. In order to minimized disruptions to the already stressed community we have broken the overall project into 3 phases (**Figure 6**). Phase 1, the current request for funding, will begin at Hwy. 90 on the southern most end of the project and continue north to Johnson Road.

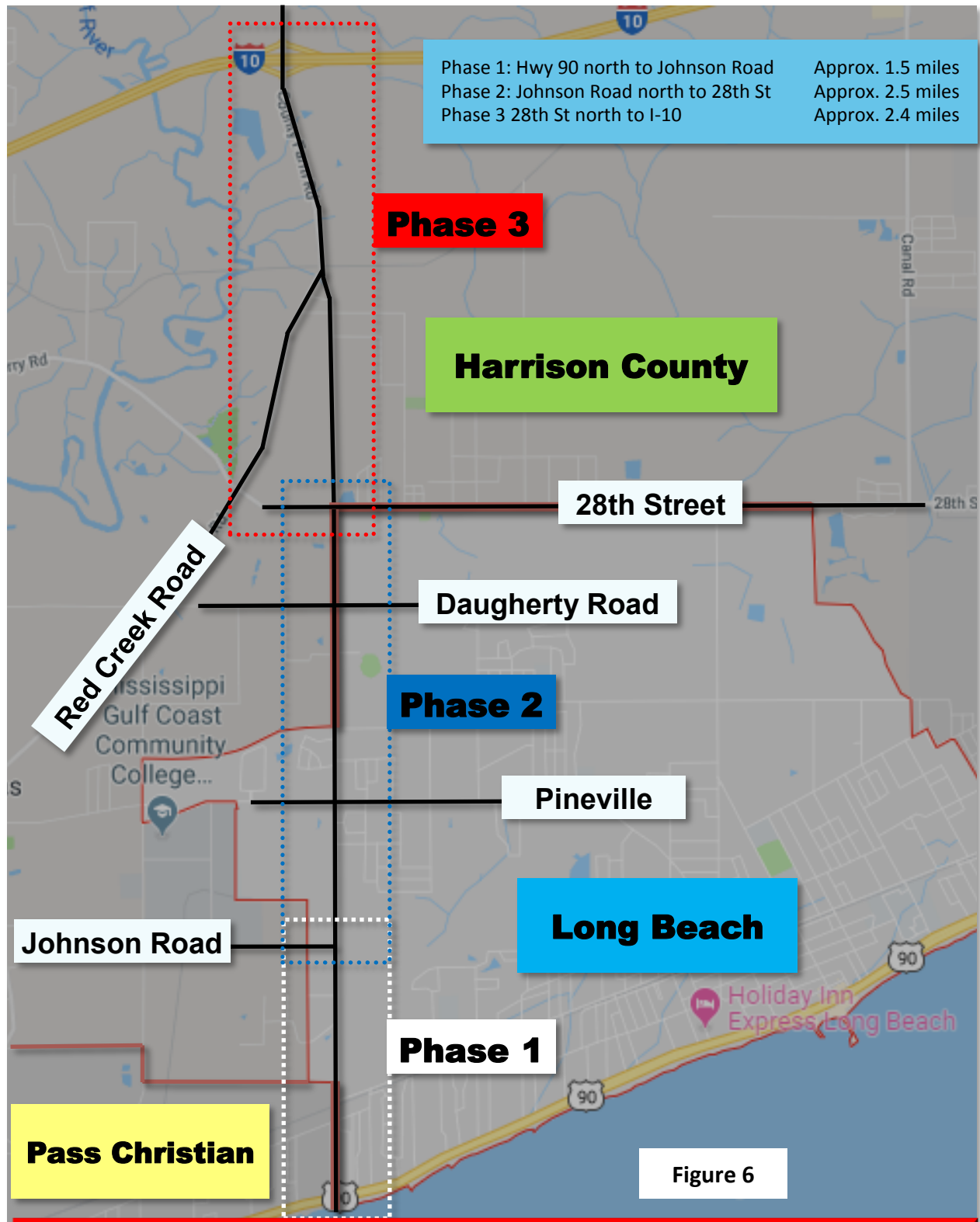
Phase 1 is a logical starting point. This phase will solve a substantial number of the existing problems with the current configuration. The completion of a Truck Route from I-10 to Hwy. 90 will be achieved in this scenario. Currently the County Farm/Beatline Road Truck Route terminates at Railroad St at which point freight transportation is diverted to Jeff Davis Ave., the “Main Street” of Long Beach with brick pavers, landscaping, quaint shops, restaurants and the Town Green. This is the most walkable part of Long Beach and the least desirable path to move commercial traffic. In addition, the phase one construction plan includes the relocation of the CSX crossing from White Harbor to Beatline Parkway. The current White Harbor RR

crossing is extremely dangerous for commuter as well as commercial traffic. It is steep, which prevents commercial vehicles from legally crossing, has only a single car length of storage on the north side, and 2 “T” intersections in the first 400’ of the south side of the crossing (**Figure 5b**). Often the confusion of the termination of the Truck Route prompts drivers to attempt crossing at points that have signage stating to not cross at that location. (**Figure 5c**).



PROJECT DESCRIPTION

PROPOSED IMPROVEMENTS DESCRIPTION—CONSTRUCTION PHASES



PROJECT LOCATION

PROPOSED NORTH/SOUTH CONNECTION

The Beatline Parkway project area and focus of the MDOT PEL Study is shown in **Figure 7** below. As previously stated in the project description, the location traverses both Rural and Urban Areas through Harrison County, Pass Christian and Long Beach MS, (Central Southern Coastal). The completed project will create a N/S Connector Route in West Harrison County from I-10 south to Hwy 90, the two most heavily traveled E/W corridors in South Mississippi.

I-10 is a key interstate corridor serving regional commuter traffic, light to heavy freight movement, as well as the primary tourism artery in the southern 3 counties of Mississippi. The interstate is 4-6 lanes through Harrison county and carries approximately 47,000 vehicles per day (vpd) to the west of County Farm Road interchange 28 (4 lanes). East of County Farm Road interchange 28 (6 lanes) the volume increases to 62,000 vpd. Currently the interchange is going through an MDOT sponsored increased capacity construction upgrade that includes multi-lane exit ramps, signalization at the foot of the ramps as they enter County Farm Road, and a center turning lane being added under the by-pass between the signals.

US Highway 90 is a principal route running parallel and adjacent to the Mississippi Sound Coastal Beaches. This historic highway is a featured tourism driver for the cities, counties, and businesses along the southern coast. This road is also a primary functioning commuter route, high end residential area, as well as carrying commercial movement of freight. It is one of only 2 total access points for the Pass Christian and Long Beach Industrial Parks, harbors and emergency services roadways.

The Beatline Parkway project area is zoned for both residential and business. Fully developed residential neighborhoods and business complexes are located intermittently along both sides of the route. In addition, the Long Beach Industrial Park main entrance is located at the intersection of Johnson and Beatline Roads.

The South Mississippi Regional Center, administered by the Mississippi Department of Mental Health's Bureau of Intellectual and Developmental Disabilities, is located at the northeast corner of Beatline Road and Railroad St. It provides residential and in-home and community services to citizens with intellectual and other developmental disabilities residing in Hancock, Harrison, Jackson, George, Pearl River and Stone Counties. Another major traffic generator, WalMart, is located to the west between 2nd St and US 90 in Pass Christian. At the north end of County Farm road is a major Truck Stop and Service Facility. The project area serves as a major connector between I-10 and US-90 moving a high percentage of heavy vehicles.

This is a direct testament to show that a completed project will serve a diverse local, regional and visiting population for Business, Pleasure, and Quality of Life.



GRANT FUNDS, SOURCES AND USES

PROPOSED FUNDING MENU

The Following tables (**Figures 8.1, 8.2**) present the amount of BUILD Grant funding requested, the commitment to Local Cost Share, total project cost of Phase 1, Percentage of project costs to be paid for with the BUILD Grant Funds, and the percentage of Local Cost Share. All values presented below are in nominal dollars:
(anticipated costs inflated based on projected year of expenditure)

Activity	Project Budget	Percent of Project Budget
Engineering Fees	\$1,940,000	9.3%
R.O.W. Acquisition	4,350,000	20.9%
Environmental Permitting	530,000	2.5%
Construction Costs	13,970,000	67.2%
Total	\$20,790,000	100%

Figure 8.1 Breakdown of Project Budget

Funding Source	Total Funding Amount	Percent of Project Budget
Local Project Cost Share	\$ 4,158,000	20%
FY 2019 BUILD Discretionary Funds	16,632,000	80%
Total	\$20,790,000	100%

Figure 8.2 Project Funding Breakdown

Note: Values for Right-of-Way (R.O.W.) and Environmental Permitting listed above are estimates based on previous experience in the area and are subject to change based on final appraisals and final design.



GRANT FUNDS, SOURCES AND USES

COST SHARE RESOURCES

The applicants are already aggressively seeking a Mississippi State General Obligation Bond from the 2020 Mississippi Legislature and subsequent legislative sessions. Additionally, there are two (2) funding opportunities via the Gulf Coast Natural Resources Restoration and Economic Recovery Act (RESTORE) 33 USC Sec. 1321 Note (Public Law 112-141 Sec. 1603 (July 6, 212)) which was enacted with an emphasis to restore impacted coastal areas in the Northern Gulf of Mexico from the impacts of the Deepwater Horizon Oil Spill. The RESTORE Act created numerous funding streams but the state funding allocation explicitly allows a state to use RESTORE funding for infrastructure projects benefiting the economy. There are also State "Formula Funds" that can be used for infrastructure projects. Finally, the Mississippi set aside a portion of their RESTORE funding in a Gulf Coast Restoration fund (SB 2002, 2018 Special session (Sept. 5, 2018) which is dedicated to projects that have the potential to generate increased economic activity in the Mississippi Gulf Coast. Of special interest, the RESTORE Act law specifically allows that a coastal political subdivision (e.g. Harrison County, or the City of Long Beach or Pass Christian) may use, in whole or in part, amounts made available to satisfy the non-federal share of any project or program that is authorized by Federal law for an eligible activity such as infrastructure under this law (126 Stat 603 (3)(F). The applicants will consider a Metropolitan Planning Organization bond issue, if necessary, to cover any cost share that cannot be obtained from sources described above.

CONSTRUCTION ESTIMATES DETAIL

The Following table (**Figure 8.3**) is a detailed representation of the Phase 1, Beatline Parkway project Estimates. This is an estimate derived from like projects and preliminary design references.

Item Number	Pay Items	Unit	Qty	Unit Cost		Total Cost per item	
				2019 Cost @ 50 % Level	2025 Cost @ 50 % Level	2019 Cost @ 50 % Level	2025 Cost @ 50 % Level
202-B005	Removal of Asphalt Pavement, All Depths	SY	4,550	\$10.49	\$12.53	\$47,729.21	\$56,991.17
203-A003	Unclassified Excavation, FM	CY	180,250	\$3.21	\$3.94	\$578,159.42	\$710,705.55
203-EX017	Borrow Excavation, FME	CY	467,250	\$4.80	\$5.90	\$2,243,996.20	\$2,758,444.28
203-G003	Excess Excavation, FM	CY	68,250	\$6.79	\$8.34	\$463,171.80	\$569,356.40
213-C001	Superphosphate	TN	53	\$696.04	\$831.11	\$36,542.12	\$43,633.20
215-A001	Vegetative Materials for Mulch	TN	175	\$194.25	\$231.94	\$33,993.75	\$40,590.32
225-A001	Grassing	AC	131	\$768.97	\$918.19	\$100,927.75	\$120,513.02
234-A001	Temporary Silt Fence	LF	17,500	\$3.16	\$3.78	\$55,370.00	\$66,114.68
304-C005	Subbase Granular Material (Class 9)	CY	20,631	\$10.59	\$12.64	\$218,399.35	\$260,780.24
304-C023	Shoulder GM Thickness Below HMA (Class 5)	CY	4,867	\$27.27	\$32.57	\$132,731.62	\$158,488.49
307-A002	Soil Lime-Water Mixing	SY	73,920	\$1.76	\$2.10	\$130,092.58	\$155,337.28
307-D001	Hydrated Lime	TN	998	\$187.68	\$224.11	\$187,215.54	\$223,545.14
308-A001	Portland Cement	TN	765	\$130.59	\$155.93	\$99,869.28	\$119,249.14
308-B001	Soil-Cement-Water Mixing	SY	65,707	\$1.42	\$1.69	\$93,028.06	\$111,080.37
403-A006	HMA (12.5mm) MT	TN	6,325	\$80.68	\$99.18	\$510,287.18	\$627,273.24
403-A007	HMA (19mm) MT	TN	14,229	\$73.90	\$90.84	\$1,051,524.78	\$1,292,592.44
403-A010	HMA (9.5mm) MT	TN	4,743	\$86.10	\$105.84	\$408,337.42	\$501,950.95
403-A011	HMA (12.5mm) ST	TN	2,926	\$80.72	\$99.22	\$236,185.53	\$290,332.32
403-A012	HMA (19mm) ST	TN	3,292	\$75.30	\$92.57	\$247,901.92	\$304,734.76
403-A015	HMA (9.5mm) ST	TN	1,097	\$81.84	\$100.60	\$89,774.34	\$110,355.58
601-A003	Class "B" Structural Concrete	CY	1,465	\$495.80	\$592.01	\$726,102.72	\$867,004.62
601-B004	Class "C" Structural Concrete, Minor Structures	CY	70	\$1,196.44	\$1,428.61	\$83,750.87	\$100,002.68
602-A001	Reinforcing Steel	LB	200,780	\$1.01	\$1.20	\$202,579.21	\$241,883.00
603-CA002	18" Reinforced Concrete Pipe, Class III	LF	4,025	\$32.95	\$39.34	\$132,609.32	\$158,342.47
603-CA104	60" Reinforced Concrete Pipe, Class III	LF	193	\$188.81	\$225.45	\$36,346.34	\$43,399.42
604-A001	Castings	LB	14,430	\$2.86	\$3.41	\$41,262.59	\$49,269.68
609-D004	Type 3A Curb & Gutter	LF	53,760	\$13.45	\$16.06	\$723,017.92	\$863,321.20
616-A001	Concrete Median and/or Island Pavement, 4-inch	SY	5,880	\$27.60	\$32.96	\$162,288.00	\$193,780.36
616-A003	Concrete Median and/or Island Pavement, 10-inch	SY	1,213	\$72.00	\$85.97	\$87,360.00	\$104,312.41
Scope:				Listed Pay Item Total			
Route/Termit:				\$9,160,548.56			
Status:				\$1,303,750.00			
Confidence:				\$0.00			
County:				\$0.00			
Date:				\$4,033,931.00			
Letting Date:				\$14,498,229.56			
				\$17,602,450.98			
				\$1,739,787.55			
				\$2,112,294.12			
				\$16,238,017.10			
				\$19,714,745.10			
				\$2,435,702.57			
				\$2,957,211.77			
				\$18,700,000.00			
				\$22,700,000.00			

Figure 8.3

PRIMARY SELECTION CRITERIA

SAFETY—FULL PROJECT

The MDOT PEL study reviewed and plotted crash data from 2013 to 2017 (the latest five years of available data) for Beatline Rd/County Farm Rd from I-10 to Railroad St and for White Harbor Rd from Railroad St to US 90. This analysis found that the majority of crashes along Beatline Rd were intersection related rear-end crashes. The location and type of crashes along the mainline and cross roads throughout the study area are shown on **Page 5, Figure 1.**

SAFETY—PHASE 1

At the intersection of White Harbor Rd and Railroad St, crashes occurred due to traffic stopped at the railroad crossing located approximately 50 feet south of Railroad St. Southbound traffic on White Harbor Rd would backup onto Railroad St, blocking the eastbound traffic.

For commercial freight MDOT's PEL analysis found:

Based on police reports, lack of lateral clearance for the heavy trailer truck traffic and lack of sight distance were major contributing factors for these crashes. Utility poles and other objects are located close within the intersection area at many of the study intersections. Trailer trucks were reported to cause problems at the intersections, striking utility poles when maneuvering turns. Vehicles stopped at the intersection were reported to back up to accommodate trucks turning at intersections, causing rear end crashes. Intersection crashes also occurred due to drivers running the stop signs and inattention.

Intermodal transportation MDOT's PEL analysis found:

At the intersection of White Harbor Rd and Railroad St, crashes occur due to the close proximity of the railroad crossing to the south. Southbound traffic at the railroad crossing does not have adequate storage, and the queue backs up through the intersection of White Harbor Rd and Railroad St which results in unexpected blocking of the heavy eastbound and westbound traffic along Railroad St that is supposed to flow freely.

In addition, there are no sidewalks or defined bicycle lanes throughout the entire route.

Briefly, the majority of crashes experienced along the current route occurred at the major intersections, all of which are stop-controlled. The existing facility has only a single, narrow lane in each direction of travel, with no shoulders and no turning bays. Utility poles and other objects are commonly located very near to the roadway within intersections. The turning radii, lateral clearances, and sight distances are inadequate, especially for the many trailer trucks that use these facilities. Congestion and lengthy queues also contribute to the occurrences of crashes. **Emergency disaster evacuations would worsen these crash patterns and justify an immediate improvement.**

The proposed Beatline Parkway would provide a holistic, integrated response to improve public safety during normal and emergency situations. A four (4) lane Parkway would ease congestion, modern traffic control systems would enhance commercial and commuter traffic flow, redesign and placement of utility poles and lighting would also ease traffic flow. Enhanced curb and gutter with pervious pavement where practicable would eliminate or substantially reduce flooding and potential hydroplaning. In addition an enhanced drainage plan could reduce residential and commercial flooding and provide environmental benefits. Finally, the Parkway would eliminate two 90⁰ turns on the existing route and modernize the CSX railroad crossing.

PRIMARY SELECTION CRITERIA

STATE OF GOOD REPAIR—FULL PROJECT

It truly takes no more than a drive down County Farm/Beatline/White Harbor Road during peak commuter traffic times to find that the Level of Service (LOS) is severely inadequate. Long que times, lack of efficient, modern traffic control devices and no safety consideration are just a few of the major flaws in the route that contribute to the high rate of accidents at intersections. In **Figure 9** it is obvious that this situation will only become worse over time.

Concept	Total Cost (Millions)	Mobility		Optimize Economic Development	Environmental Impacts			Railroad Crossing	Freight Mobility
		2040 Traffic Operations (LOS)	PM Peak Delay per Vehicle (Seconds)		Natural and Physical Environmental Impacts	Displacements			
						Properties Impacted	Severity		
No-Build	\$0	F	225	Very Poor	None	0	None	Very Poor	Very Poor
Proposed	\$131.4	B	81	Excellent	Moderate	78	Moderate	Good	Excellent

Figure 9

STATE OF GOOD REPAIR—PHASE 1

The most immediate need to reduce traffic congestion, increase safety measures, improve quality of life and provide an avenue for economic growth to the area is to complete the improvements in Phase 1 of the Beatline Project. The new design will reflect:

- Increased Capacity to 4 lanes
- Raised, landscaped median
- Adequate, Efficient Lighting
- Intermittent Turning Bays
- Complete Truck Route that connects I-10 to Hwy 90
- Efficient Traffic Control Devices at High Volume Intersections
(Signalization/Round-a-bouts)
- Increased Queue Capacity at major Traffic Control areas
- Improved Drainage to reduce weather related accidents
- Buffered Bike/Pedestrian paths—Active and Healthy Travel Options
- Underground Utilities
- Improved CSX Rail Crossing with safe inclines for Commuter and Commercial Vehicles
- Safe, Modern Rail Crossing Gates and Signals
- Increased Capacity Evacuation Route
- Replacement of Open Drainage Ditches with Sufficient Drainage Mechanics to serve the area
- Emergency Landing Areas (Shoulders)
- Diversion of residential subdivision traffic to east/west corridors
- Safe Routes to School, Vision Zero for Youth, and Get to B control friendly designs
- Welcoming entrance to Pass Christian, Long Beach and the Urban Recreational Areas
- Connectivity to Essential Services for Underserved Populations

HEALTH, SAFETY, AND WELFARE OF CITIZENS AND VISITORS

PRIMARY SELECTION CRITERIA

ECONOMIC COMPETITIVENESS

Providing an interconnected transportation avenue that will increase the productivity of the commercial freight and employee movement will create a business friendly atmosphere that has long been overlooked in west Harrison County, Pass Christian and Long Beach.

The existing Pass Christian and Long Beach Industrial Parks are still suffering with massive vacancies resulting from the effects of Hurricane Katrina (2005) and the BP Oil Spill (2010) underscored with a recession. This area was severely overlooked for economic reparations as a result of these disasters.

The Long Beach Harbor has exhausted over \$2.7m in repairs in the last 5 years alone, suffering from a lack of commercial investments to justify upgrades and expansions because there is no N/S Connector Route between I-10 and Hwy 90.

A New Commercial Development, within 3 mi. of Beatline Parkway /Hwy 90 intersection, that will create approx. 800 new jobs to the community is waiting for a N/S Connector Route between I-10 and Hwy 90. Private business, both large and small, hesitate to locate in the area because of the burden of commuting, traffic safety issues, unattractiveness and overall quality of place deficiencies.

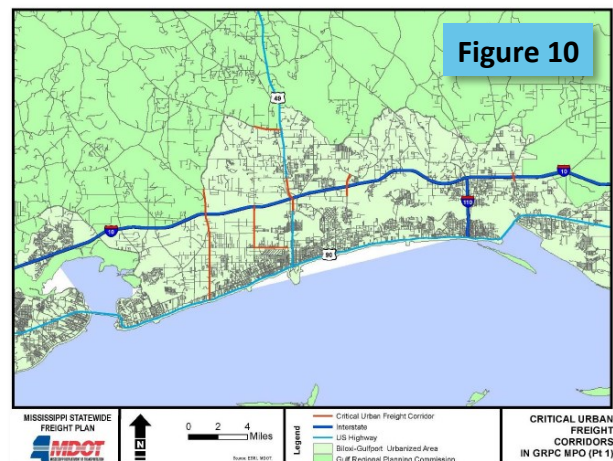
The Beatline Parkway will bridge service gaps in western Harrison County's rural areas to allow residents to more easily commute to work and access key public services. The multifaceted transportation project will benefit both local and regional commuters, freight movement, and pedestrians to significantly increase the economic productivity of land, capital and labor assets. It will provide the foundation for long term, livable wage job creation and private sector economic development projects.

"Improvements along the corridor are anticipated to spur economic development; accordingly, the [preliminary concepts] were considered Excellent...(PEL Study)"

MDOT's 2015 Statewide Freight Plan identified the Beatline Corridor as the longest, critical freight corridor in the Mississippi Gulf Region and the Gulf Coast region (**Figure 10**). The enhanced freight corridor will help the United States, Mississippi, and the Gulf Coast region compete in the new global economy.

Potential Economic Development:

- Harbor Improvements
- Small Business Development
- Increased Tourism and Recreation
- Manufacturing Recruitment
- Research and Development
- Post Secondary Education, Advanced Degrees
- Residential Developments
- Retail Developments
- Blue Economy Developments
- Essential Services for Underserved Populations
- Healthcare Advancements and Access
- Mass Transit Opportunity



PRIMARY SELECTION CRITERIA

ENVIRONMENTAL SUSTAINABILITY

Preliminary Data was gathered during the MDOT PEL Study. The evaluation of this and alternative routes were considered to avoid or minimize adverse environmental impacts. Improved traffic flows will reduce energy use and improve air quality by reducing commuter times and congestion. Flooding and drainage are major concerns in the project area. The planning process has already identified drainage and stormwater mitigation as important issues. The project will be integrated with an emerging regional flood reduction/drainage project to identify and implement the least environmentally damaging and practical alternative to a long-term solution of flooding and drainage while avoiding adverse water quality impacts. Similarly, innovative approaches to direct and store stormwater could provide benefits to sensitive habitats and threatened endangered species.

The applicants plan to use Executive Order 13807 (August 15, 2017) Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure to significantly accelerate federal environmental review and permitting. In addition, the applicants are closely tracking ongoing Congressional efforts to enact provisions of Executive Order 13807 into law. We anticipate the State of Mississippi and local environmental reviews and permits will closely follow the federal timeline.

In comparison to alternate routes with increased capacity potential in an area saturated with wetlands and endangered species identification of habitat, Beatline Parkway is literally believed to be the path of least resistance to environmental adverse affects. During the PEL Study, Environmental Responsibility was a significant element of consideration. The most economical and ecologically responsible route is the primary choice for evolving from preliminary study/ engineering to final design.



“Being good stewards of the environment and quality of life for the residents is a priority.”

~Mayor Bass

NATURE ~ NURTURE ~ NECESSARY RESPONSIBILITY

PRIMARY SELECTION CRITERIA

QUALITY OF LIFE

Primary thoroughfares like Beatline Parkway are good candidates to improve healthy, alternative transportation options, like walking and cycling. It is a priority in the Long Beach, Pass Christian and Harrison County Comprehensive (Master) Plans to provide sidewalks and bike lanes on all arterials. Implementing bicycle and pedestrian facilities on Beatline Parkway would improve linkages within and between neighborhoods and the beach. Such improvements coincide with the city/county desire to build trails and pathways along the coast to connect to the larger established trails in the Harrison County Network. Likewise, creating multimodal opportunities for this N/S connector will serve to reduce the dependence on automobiles and aid in the development of more mixed-use neighborhoods as a spark to economic opportunity and reduce the brain drain the region is currently suffering.

Beatline Parkway is an aggressive approach designed to provide numerous important quality of life opportunities and solutions. Some of the immediate benefits include, but are not limited to:

- Provide a safe CSX Crossing with the opportunity for a “Quiet Zone”
- Increased transportation options for individuals, families, and visitors
- Fluid transportation movement without compromising safety
- Unprecedented recreational opportunities that are Eco-Tourism Friendly
- Bring about connectivity to essential services and opportunities for local and rural residents
- Remove disconnects to access for jobs, health care and critical destinations
- Move commercial and freight traffic without inhibiting local commuter traffic
- Provide an opportunity for improved regional infrastructure, including integrating an ongoing Mississippi Gulf Coast high-speed Fiber Optic Conduit

QUALITY OF PLACE

From 2010—2016 Mississippi lost over 35,000 residents to migration. From 2011—2015 the “Brain Drain” resulted in the loss of \$1.5 Billion in total income (<https://mississippitoday.org/2018/05/02/ole-miss-brain-drain-event/>).

Having direct access to the necessities that define happiness, to multiple generations, creates the anchor of our economy.

THE DIMENSIONS OF QUALITY OF PLACE:

- Education Opportunities
- Employment Options
- Mixed Use Clusters
- Commercial and Eco Recreation
- Healthcare
- Transit Choices
- Commerce Availability
- Cultural Activities and Events
- Safety and Crime Statistics



PRIMARY SELECTION CRITERIA

INNOVATION

The City of Gulfport's Opportunity Zone is adjacent the proposed Beatline Parkway (**Figure 11**). Because of this proximity to the Opportunity Zone, Beatline Parkway is eligible for New Market Tax Credits (NMTC). Gulfport's Opportunity Zone is focused on expanding the region's Maritime "Blue" Economy which already includes the Port of Gulfport, a new University of Southern Mississippi (USM) Marine Research Center and Long Beach Campus, Mississippi Aquarium, the Naval Construction Battalion (Seabees) Base and proximity to the federal agencies such as the Naval Oceanography and the National Oceanographic and Atmospheric Administration at Stennis Space Center in Hancock County, MS. The Mississippi Enterprise for Technology is also located at Stennis Space Center to leverage the Center's resources to foster private oceanographic and data collection and analysis businesses at the Space Center.

USM's Long Beach campus, offers several undergraduate and graduate degrees programs which provide a pipeline of talent and concentration of knowledge for the new Blue Economy from degree programs in Marine Biology, Marine Science, Geography, Hydrography, Ocean Engineering, Computer Science, and Coastal Sciences. Further the Pearl River Community College serves the western most coastal county of Hancock County, and Mississippi Gulf Coast Community College (MGCCC) serves Harrison, Jackson, Stone, and George Counties along the Gulf Coast Region. These community colleges provide career technical pathways for an advanced workforce supporting needs of STEM oriented companies.

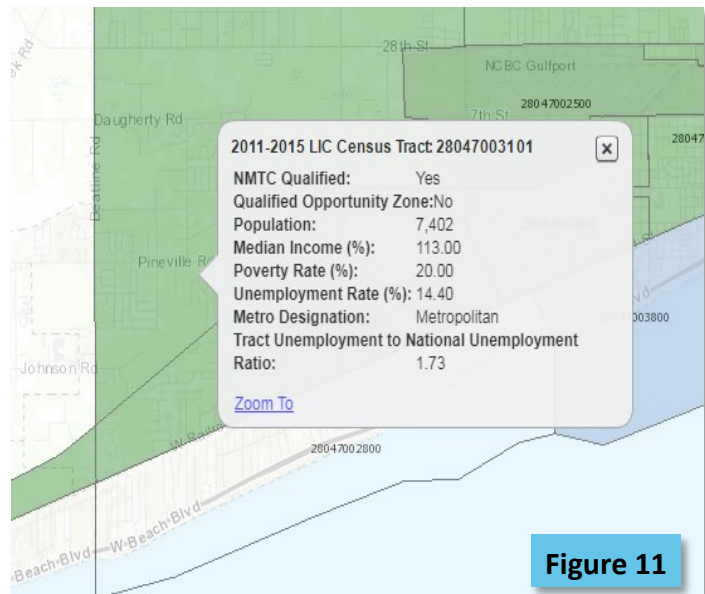


Figure 11

Beatline Parkway would directly and indirectly support the Gulfport Opportunity Zone's Blue Economy goals by enhancing multimodal transportation options for the region. It will improve access to the Long Beach Industrial park for new business locations and provide a much needed emergency evacuation route for the expanded workforce drawn by the Blue Economy.

TECHNOLOGY FOR THE FUTURE

The Mississippi coast is lagging in the speed of technology. Gov. Bryant committed \$5,000,000 of the BP Restore Funds through MDEQ to upgrade the Fiber Optic Infrastructure on the Mississippi Coast. The program has capitalized on active infrastructure construction projects to lay the much needed technology highway around the coast. I-10 is nearly completely connected, Hwy 90 is moving in the same direction. The North-South Connections between the two East-West Corridors is considerably lacking. The Beatline Parkway will give West Harrison County the Connectivity for Business and Residents to "Bring them up to Speed."

PRIMARY SELECTION CRITERIA

PARTNERSHIPS

The first order of business in creating the Beatline Parkway—A Pathway to Prosperity, was to determine who needed it, who wanted it and who is willing to work for it. The three founding entities: Harrison County, City of Pass Christian and City of Long Beach inked the first draft of the Memorandum of Understanding in 2016. The project has continued to build momentum at an unprecedented rate since then. **Attached to the BUILD Grant Application are Letters of Support from the many partners** in the community, across the state and across the country that recognize the comprehensive positive impact of the project to the surrounding region. These letters show the recognition of the true value of a project that results in regional benefits to various populations, businesses and potential opportunities. Some of the supporting entities include:

Gulf Regional Planning Commission
Harrison County Board of Supervisors
Long Beach Board of Aldermen
Commercial Developers
University of Southern Mississippi
Southern District Road Commissioner
Mississippi Public Service Commissioner
Senator Roger Wicker
Congressman Steven Palazzo

Harrison County Emergency Management Agency
Harrison County Development Commission
Pass Christian Board of Aldermen
Local Business Owners
Mississippi Gulf Coast Community College
South Mississippi Contract Procurement Center
South Mississippi Planning & Development Dist.
Senator Cindy Hyde-Smith
Mississippi Department of Transportation



Long Beach Harbor Resorts, LLC



AN INNOVATIVE REGIONAL PARTNERSHIP

PROJECT READINESS

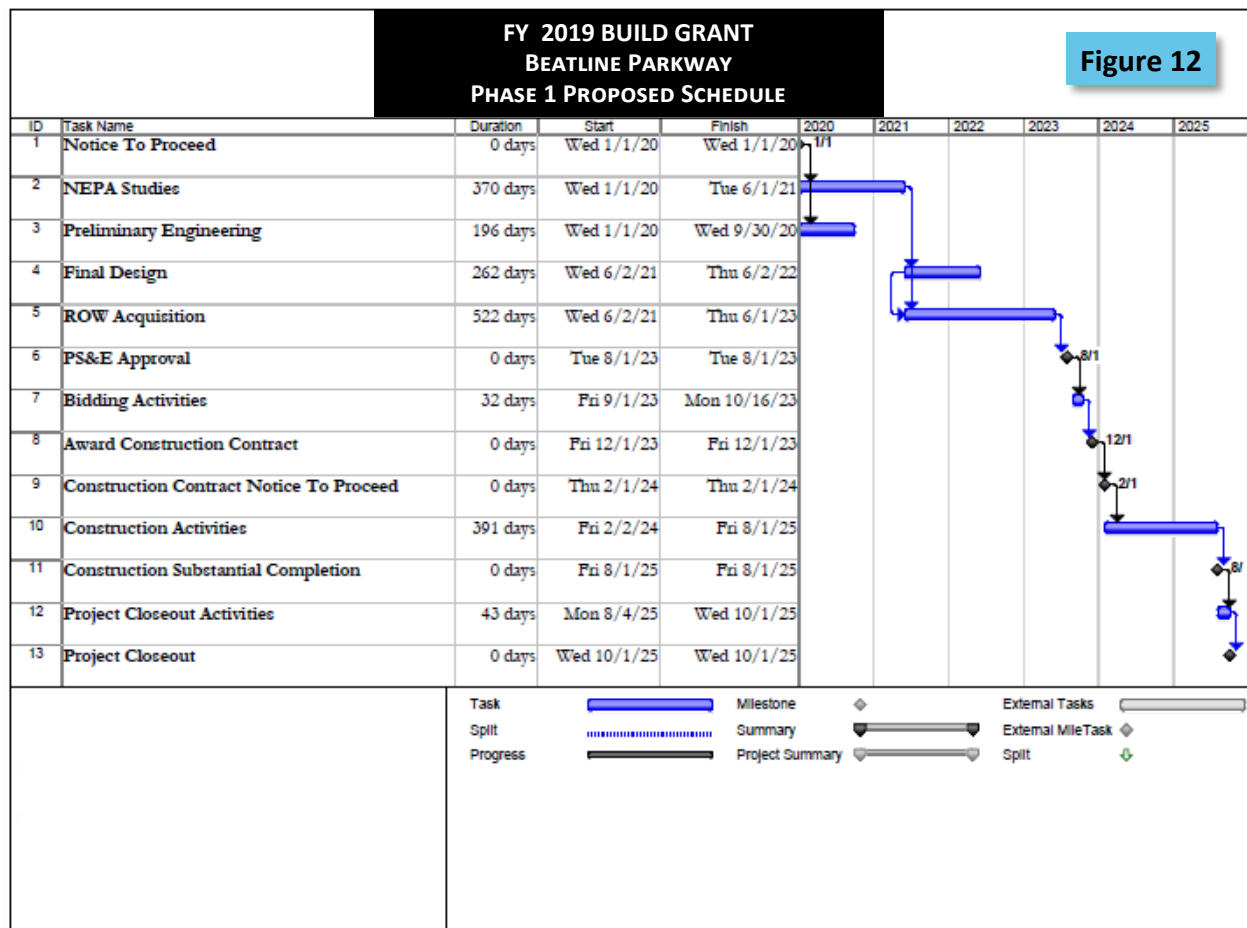
TECHNICAL FEASIBILITY

The Memorandum of Understanding between Harrison County, Pass Christian and Long Beach was the launch to begin the preliminary studies and concept considerations for Beatline Parkway. In January of 2019 MDOT received the final documentation of the Planning and Environmental Linkage Study (PEL). The PEL initiated the preliminary engineering considerations, environmental evaluations, traffic study and feasibility for the full project. The PEL Study is attached to this application.

The data collected and analyzed fully supports the feasibility of the project and quantifies the need to begin Phase 1, Hwy 90 to Johnson Road. The study supports the anticipated regional and local benefits. It also validates the urgency to upgrade needed innovative technology that is demonstrated to be commercially viable, critical to public safety and will create an enhanced quality of life.

PROJECT SCHEDULE

The projected schedule for Phase 1 (**Figure 12**) is based on preliminary studies and conceptual drawings. An accurate schedule will be developed after engineering designs are complete.



MODERN, ATTRACTIVE, SAFE TRAFFIC CONTROL

PROJECT READINESS

REQUIRED APPROVALS

The Beatline Parkway project has been evaluated and recommended in numerous Transportation and Economic Development studies (i.e., MDOT's FY 2017-2020 STIP and 2015 Mississippi Statewide Freight Plan) None of these reports identified any unique or unduly difficult environmental or permitting issues. The Applicants have not initiated any federal or state environmental review/permitting applications. Neither have they submitted any permit applications for specific phases of the project to any other federal, state or local agencies for review. The applicants are unaware of any environmental studies or reports for the project area.

Based on past experience with similar scale transportation infrastructure projects, the applicants anticipate a two (2) phase NEPA/permitting process. The process will start with consultation with DOT and MDOT to agree on a National Environmental Policy Act (NEPA) process. The accompanying table (**Figure 13**) shows the breadth of the NEPA analysis and consultation; however, an Environmental Assessment does not require an in depth analysis of every topic. The Fixing America's Surface Transportation (FAST Act) provides statutory authority to accelerate the environmental review process for surface transportation projects by institutionalizing best practices and accelerating complex infrastructure projects, such as the Beatline Parkway without undermining critical environmental laws or opportunities for public engagement (<https://www.environment.fhwa.dot.gov/legislation/authorizations/FASTact.aspx>). In addition to the FAST Act, Ex. Order 13766 (Jan. 24, 2017) should expedite Federal agency review and comments on NEPA documents. Further, Ex. Order 13807 (Aug. 15, 2017) strongly encourages Federal agencies to exercise "Discipline and Accountability" in the environmental review and permitting process for infrastructure projects such as Beatline. Based on recent experience with similar transportation infrastructure NEPA processes in Mississippi the applicants believe that the NEPA process for the entire Parkway can be completed in 12 months from receiving the Notice to Proceed with a Record of Decision for a "Finding of No Significant Impact" (FONSI).

MDOT's recent PEL Beatline Parkway Report was prepared to "jump start" the NEPA process and included a preliminary NEPA evaluation of the proposed Parkway which makes the 12 month timeframe realistic. The PEL delineated the project area and provides one (1) alternative route evaluation. It also included a detailed Purpose and Need Statement for the project. In addition, the PEL did a desk top evaluation of required environmental reviews and permitting requirements and did not find any major environmental problems.

Upon publication of the Record of Decision and FONSI the applicants will immediately proceed to actually permitting Phase I. Permitting will require more detailed, site work to delineate wetlands, consultation on cultural resources, Threatened and Endangered Species, and Stormwater Prevention Planning. Mississippi's Coastal Counties have a Joint Application and Notification Process for USACOE, MDMR and MDEQ which coordinates and can expedite much of this permitting. The applicants believe that the necessary federal and state permits can be obtained in six (6) months. Completion of the federal environmental review/permitting process should largely satisfy the Harrison County and Long Beach and Pass Christian's permitting requirements. It is anticipated that the entire NEPA and permitting process will take eighteen (18) months from the receipt of a Notice to Proceed and will keep the project on track to allow DOT to obligate construction funds within the required statutory timeframe.

PROJECT READINESS

ASSESSMENT OF PROJECT RISKS AND MITIGATION STRATEGIES

Some risk is unavoidable in any major infrastructure project; however the needs and benefits of this project are well known and are currently being documented and quantified. The Applicants are building a broad, active partnership to engage in the project process to quickly identify emerging risks and collectively identify and evaluate viable, cost effective mitigation strategies to allow Beatline Parkway to stay on a FAST TRACK to construction.

Figure 13a

Beatline Parkway NEPA Process (12 Months)			
https://www.environment.fhwa.dot.gov/legislation/authorizations/FASTact.aspx			
Task/Milestone	Duration	Target Date	Notes
Notice to Proceed		1/1/2020	
Kick-Off Meeting	1 Day	1/10/2020	
Purpose and Need	1 Week	1/10/2020	Revise/Update from PEL Report
MDOT Meeting/Alignments	1/Day	1/16/2020	Review from PEL Report
Base Mapping/Alignments	4 Weeks	2/7/2020	Obtain/refine environmental GIS data sets from PEL report
Scoping/Resource Agencies	4 Weeks	3/12/2020	Expand on PEL Report Issues
Validate/Revise Alternatives	2 Weeks	4/2/2020	Started in PEL Report
Public Meetings	2X1 Day	4/20/2020	Will work with resource agencies and sponsors to schedule public meeting/s
Environmental Studies	4 Months	5/5/2020	Will run concurrently with other activities
Submit Draft EA	6 Months	6/11/2020	Benchmark
Draft EA Agency Review	1 Month	7/10/2020	Ex. Order 13766 (Jan. 24, 2017) should expedite Federal Agency Reviews; and Ex. Order 13807 (Aug. 15, 2017). Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects, issued on August 15, 2017.
Public Hearing	1 Day	7/31/2020	Will coordinate with regulatory agency to schedule/conduct
Submit Final EA	2 Weeks	8/14/2020	Internal/incorporate Public Hearing
Review by Resource Agencies	3 Months	11/16/2020	Ex. Orders 13766 (Jan. 24, 2017) and 13807 (Aug. 15, 2017) should expedite Federal Agency Reviews
Revisions to Final EA (FONSI)	3 Weeks	12/7/2020	Internal Work/Respond to Agency Comments
Submit Final EA (FONSI)		12/7/2020	
Agency Record of Decision	2 Weeks	1/8/2021	Ex. Orders 13766 (Jan. 24, 2017) and 13807 (Aug. 15, 2017) should expedite Federal Agency Decision.

PROJECT READINESS

Figure 13b

Beatline Parkway-Phase 1 Permitting Process/Timeline			
Task/Milestone	Duration	Target Date	Comments
Initiate Permitting	6 Months	1/11/2021	
Stormwater Pollution Prevention Plan (SWPPP) and WPDES General Permit Notice of Intent	4 Months	5/11/2021	MS Dept. of Environmental Quality
Wetland Delineation	1 Month	2/8/2021	
Cultural Resources Consultation	6 Weeks	2/22/2021	Consulting with Mississippi State Historic Preservation Office (SHPO) National Historic Preservation Act § 106
Threatened and Endangered Species Act Consultation	2 Months	4/12/2021	Consulting with the U.S. Fish and Wildlife Service (USFWS) and MS Dept. of Wildlife, Fisheries and Parks and the MS Museum of Natural Science under the Endangered Species Act § 7
Coastal Zone Management			MS Dept. of Marine Resources
Wetland Permitting	3 Months after Wetlands Delineation	5/10/2021	Joint Application and Notification Process for U.S. Army Corps of Engineers, MS Dept. of Marine Resources and MS Dept. of Environmental Quality
Wetlands Permit Issued		5/17/2021	
Stormwater Pollution Prevention Plan (SWPPP) and WPDES General Permit-Approved/Issued		5/17/2021	
Mitigate Unavoidable Wetland Impacts			

CRITICAL SAFE INFRASTRUCTURE IN A LOGICAL LOCATION

PROJECT READINESS

NEPA STATUTORY COMPLIANCE AND PERMITTING CHECKLIST

<u>NEPA Statutory and Permitting Check List e</u>	Yes	No	Applied For	N/A
Federal				
National Marine Sanctuaries Act (NMSA)				XX
Coastal Zone Management Act (CZMA)				
Fish and Wildlife Coordination Act				
Farmland Protection Policy Act (FPPA)				
NEPA – Categorical Exclusion				
NEPA – Environmental Assessment				
NEPA – Environmental Impact Statement				
Clean Water Act – 404 – Individual Permit (USACOE)				
Clean Water Act – 404 – General Permit(USACOE)				
Clean Water Act – 404 – Letters of Permission(USACOE)				
Clean Water Act – 401 – Water Quality certification				
Clean Water Act – 402 – NPDES				
Rivers and Harbors Act – Section 10 (USACOE)				
Endangered Species Act – Section 7 – Informal/Formal Consultation (NMFS, USFWS)				
Endangered Species Act – Section 7 - Biological Assessment				
Endangered Species Act – Section 7 – Biological Opinion (NMFS, USFWS)				
Endangered Species Act – Section 7 – Permit for Take (NMFS, USFWS)				XX
Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat (EFH) – Consultation (NMFS)				XX
Marine Mammal Protection Act – Incidental Take Permit (106) (NMFS, USFWS)				XX
Migratory Bird Treaty Act (USFWS)				
Bald and Golden Eagle Protection Act – Consultation and Planning (USFWS)				
Marine Protection, Research and Sanctuaries Act – Section 103 permit (NMFS)				XX
BOEM Outer Continental Shelf Lands Act – Section 8 OCS Lands Sand permit				XX
NHPA Section 106 – Consultation and Planning ACHP, SHPO(s), and/or THPO(s)				
NHPA Section 106 – Memorandum of Agreement/Programmatic Agreement				
Tribal Consultation (Government to Government)				XX
Coastal Barriers Resource Act – CBRS (Consultation)				XX
State				
Wetlands, Water Quality, Stormwater, Cultural Resources, Threatened & Endangered Species, etc.				
Regional/Local				XX

Figure 14

MINIMUM DISRUPTION, MINIMUM IMPACT

BENEFIT COST ANALYSIS

CALCULATION DETAILS

A detailed Benefit-Cost Analysis (BCA) was performed for this grant application. The BCA was prepared in accordance with the guidelines described in the NOFO for the Department of Transportation’s National Infrastructure Investments Under the Consolidated Appropriations Act, 2019” and in line with the recommendations of the “Benefit-Cost Analysis Guidance for Discretionary Grant Programs.” These worksheets for this BCA are included (**Attached**). All calculations for benefits and for costs are in nominal (year-of-expenditure) dollars and assume construction will be completed at the end of the 3rd quarter of 2025 and assume benefits and costs continuing for an additional 20 years (i.e. all anticipated project benefits and costs were analyzed through 2045).

On the Benefits side, in-depth calculations were limited to Value of Travel Time and Vehicle Operating Costs, for both existing users and new users (assuming an Annual Average Daily Traffic (AADT) growth of 3.00% per year).

Regarding the Costs for the BCA, a holistic project cost was represented; this included R.O.W. acquisition, engineering fees, permit fees, and construction costs. Construction Costs are based on construction estimation software developed specifically by MDOT; these estimates are included in Appendix A, attached to this report.

The overall project costs also included the expected increase in routine maintenance over the next twenty years. The yearly costs are based on expected routine maintenance values for a 4-lane urban road as defined by a 2003 Florida DOT report entitled “Transportation Costs.”

Per the requirements in the NOFO, both benefits and costs were discounted to the first year considered by the grant project’s schedule, 2020; a discount rate of 7% was considered (as suggested by the BCA Resource Guide).

As shown in the chart (**Figure 15**), an overall benefit-cost ratio of 2.72 was obtained and a benefit-cost ratio of 1.24 is obtained at the 7% discount rate; a benefit to cost ratio greater than 1.00 supports the worthwhile nature of this project.

	Total	Discounted 7%
Total Travel Time Benefits	\$42,149,881	\$14,112,359
Total Vehicle Operating Benefits	22,365,794	7,488,375
Total All Benefits	\$64,515,675	\$21,600,733
Total Project Costs (20 year)	\$ 23,747,023	\$17,385,699
Benefit / Cost Ratio	2.72	1.24

Figure 15 Benefit—Cost Ratio

BENEFIT COST ANALYSIS

VALUE OF TRAVEL TIME SAVINGS

Included in the “Benefit-Cost Analysis Guidance,” DOT has several categories of “Recommended Hourly Values of Travel Time Savings” based on location, type, and means of travel and on occupation of the traveler. For simplicity, U.S. DOT allows an “all-purpose” value of \$16.10 per person-hour (2017\$) based on a pro-rated value determined from a 2001 National Household Travel Survey.

Beginning with the base \$16.10 (2017\$) all-purpose per person-hour value of travel time, this number was then inflated by 2.5% per year to determine a per person-hour value of travel time for subsequent years. These per year unit values were multiplied by the total yearly time saved by all vehicles (as determined above) to estimate a total value for yearly travel time saved. Finally, a discount rate of 7% was applied per the BCA Resource Guide.

*Based on Travel time from intersection of Hwy 90 and Holiday Lane
(what will become 90 and Beatline) to intersection of Beatline and Johnson Rd.
Includes reduction in travel time associated with less distance and intersection improvements
AADT based on values provided by local MPO.*

AADT grows at 3.0% per year; this is likely conservatively low for the first several years after construction as there will likely be a large shifting of traffic that will bump those first years up.
2.5% dollar inflation per year. 7% discount rate.
Assumes benefits unrealized until January 1, 2026 (post-construction).

VALUE OF VEHICLE COSTS SAVINGS

Based on reduced distance from intersection of 90 and Holiday Lane (what will become 90 and Beatline) to intersection of Beatline and Johnson Rd. Distance reduced by approximately ½ mile. \$0.40 per mile savings per vehicle (2018\$) based on inflating the \$0.39 (2017\$) in BCA resource guide. Conservatively only considers passenger cars’ costs savings; does not make separate cost savings for commercial vehicles. AADT based on values provided by local MPO. AADT grows at 3.0% per year; this is likely conservatively low for the first several years after construction as there will likely be a large shifting of traffic that will bump those first years up. 2.5% dollar inflation per year. 7% discount rate. Assumes benefits unrealized until January 1, 2026 (post-construction).

RESIDUAL VALUE

We projected benefits and costs for 20 years following construction completion. We assumed a conservative 35 year life span of the asset. Value of the asset at year one (2026) is based on total construction dollars spent. At the end of the 20 year analysis period the road will still have a 15 years useful life. Its residual value at 20 year’s end, is 15 (years remaining) / 35 year (life span) times original value (total construction).

EFFICIENT MOVEMENT = FINANCIAL ACCELERATION

BENEFIT COST ANALYSIS

SAFETY BENEFIT

The PEL study presented actual crash data for this route at the four intersections to be touched: Johnson Road, Railroad St, 2nd St, and US 90. Crash rates were found to be upwards of 17 times the national average at these intersections. We compared the observed crashes to what the national average crashes would be. We assumed implementing this project will reduce the observed crashes to the national average. The BCA Resource Guide says explicitly “broad assumptions about effectiveness (such as assuming safety improvements will result in a facility crash rate dropping to the statewide average crash rate) are generally discouraged.” However, since this project is not a safety-only project but includes a rerouted road and capacity upgrades, application of crash modification factors be highly subject to interpretation and likely even less effective than assuming crash rates dropping to national average.

Because our values are based on a “broad assumption about effectiveness” we made three assumptions to ensure conservative safety benefits:

We only considered intersection crashes; corridor crashes were excluded.

We assumed that every crash was a property damage only crash.

The resource guide says this is \$4,300 per vehicle per crash. To put how conservative this is, a “possible injury” takes that crash value to \$63,900 (2017\$). An incapacitating injury would take a single crash to \$459,100. A fatality is \$9,600,000.

We assumed that only every other crash involved 2 cars (1.5 cars are involved in each).

We then multiplied the expected crash reduction per year by the value of each crash, inflated by 2.5%, and discounted by 7%.

OTHER BENEFIT CONSIDERATIONS

Major benefits for this project focus on the Economic Development, Health and Safety, Improved Quality of Life, Increased Tourism, Improved Infrastructure, Efficient Traffic Control, Connectivity to Rural and adjacent Communities, Increased Property Values. These Unqualified Benefits are evidence that the true benefit-to-cost ratio is anticipated to be much higher than the value in this report.

ATTACHMENTS

Files are also available on the Project Website:
<https://www.cityoflongbeachms.info/beatlineparkway>

File Name	Report Name	File Name	Report Name
1PEL	PEL Final Report	P1Const	Phase 1 Construction Costs
2PEL	PEL Traffic and Safety	P1ConstS	Phase 1 Construction Schedule
3PEL	PEL Purpose and Need	P1BCA	Phase 1 Benefit Cost Analysis
4PEL	PEL Constraints Report	P1NepaS	Phase 1 NEPA Schedule
5PEL	PEL Relocation Impact	Mou1	Harrison County MOU
6PEL	PEL Relocation Impact Short	Mou2	Long Beach MOU
7PEL	PEL Concepts Analysis	Mou3	Pass Christian MOU
8PEL	PEL Questionnaire	Map1	Gulfport Urban Rural Map
TTCALC	Travel Time Calculations	Map2	MPO Urban Area Map
P1NEPACL	NEPA Checklist	LOS	Letters of Support
		MDOT2017	MDOT Freight Plan 2017

REGIONAL APPROACH—REGIONAL BENEFITS