



## Beatline Road

## Planning and Environmental Linkage (PEL) Study

## Attachment F – PEL Questionnaire



Prepared For:

**Mississippi Department of Transportation**

January 2019





**1. Background:**

**a. Who is the sponsor of the PEL study? (state DOT, Local Agency, Other)**

Sponsor: Mississippi Department of Transportation (MDOT)  
 The study was requested by the City of Long Beach and conducted on their behalf.

**b. What is the name of the PEL study document and other identifying project information (e.g. sub-account or STIP numbers, long-range plan, or transportation improvement program years)?**

PEL Study Name: Beatline Road PEL Study  
 Project Number: SPR-1(102)/107322-110000  
 Work Assignment No. GAR-P/E 2016-02

The following projects, which include parts of the study corridor, are listed in the 2040 Gulf Regional Planning Commission (GRPC) Long Range Plan:

Stage 2 (2021-2030)

Beatline Road Extension from Railroad Street to US 90  
 Improve I-10 at County Farm Road Interchange

Stage 3 (2031-2040)

Widen County Farm Road from I-10 to Red Creek Road

These projects are not listed in the current GRPC Transportation Improvement Program (TIP).

**c. Who was included on the study team (Name and title of agency representatives, consultants, etc.)?**

Federal Highway Administration  
 100 West Capitol Street  
 Suite 1062  
 Jackson, MS 39269  
 Phone: (601) 965-4215

| Contact      | Title                        |
|--------------|------------------------------|
| Randy Jansen | Project Development Engineer |

City of Long Beach  
 201 Jeff Davis Avenue  
 Long Beach, MS 39560  
 Phone: (228) 863-1556

| Contact     | Title          |
|-------------|----------------|
| George Bass | Mayor          |
| Cindy Lamb  | Pickering Firm |

Mississippi Department of Transportation  
 401 North West Street  
 Jackson, MS 39201  
 Phone: (601) 359-7001

| Contact           | Title                            |
|-------------------|----------------------------------|
| Jeff Ely          | State Planning Engineer          |
| Kim Thurman       | Environmental Division Director  |
| Kelly Castleberry | District 6 Engineer              |
| Sammy Holcomb     | Statewide Planning Manager       |
| Jessica Dilley    | Engineer (Planning)              |
| Spencer Robinson  | EIT (Planning)                   |
| Adam Johnson      | Engineer (Environmental)         |
| Gabe Faggard      | District 6 Construction Engineer |
| Adam Boggan       | Roadway Design                   |
| Nathan Green      | Roadway Design                   |
| Jacob Renick      | Traffic Engineering              |
| Mark Thomas       | Traffic Engineering              |
| Tony Byrd         | Traffic Engineering              |

Gulf Regional Planning Commission  
 1635 Popp's Ferry Road Suite G  
 Biloxi, MS 39532  
 Phone (228) 864-1167

| Contact        | Title             |
|----------------|-------------------|
| Paul Gavin     | Executive Manager |
| Kenneth Yarrow | Planning Manager  |

Garver  
 6360 I-55 North  
 Jackson, MS 39211  
 (601) 825-3633

| Contact         | Title                         |
|-----------------|-------------------------------|
| Jeff Pierce     | Senior Project Manager        |
| Nicci Tiner     | Senior Traffic Manager        |
| Bill McAbee     | Senior Environmental Manager  |
| Wayne Black     | Roadway Engineer              |
| Annette Smalley | Traffic Engineer              |
| April English   | Environmental Project Manager |

- d. Provide a description of the existing transportation facility within the corridor, including project limits, modes, functional classification, number of lanes, shoulder width, access control and type of surrounding environment (urban vs. rural, residential vs. commercial, etc.)

The Beatline Road PEL Study area stretches approximately 6 miles along Beatline Road/County Farm Road from just north of I-10 on the north end to US 90 on the south end. I-10 is a key east-west corridor serving commuter traffic and heavy freight movement, including through freight trips traveling across the state. I-10 has four lanes carrying approximately 47,000 vehicles per day (vpd) to the west of the County Farm Road interchange, and six lanes carrying approximately 62,000 vpd to the east of the interchange. US 90 is a four-lane principal arterial running parallel to the Mississippi coastline in the City of Long Beach and carrying 16,000 vpd. Beatline Road is a two-lane minor arterial that serves as a main connecting route between I-10 and the City of Long Beach, and it carries a high percentage of heavy vehicles as a result. The existing facility has narrow or no shoulders throughout much of the corridor and does not have bicycle/pedestrian accommodations. A major problem for freight traffic and connectivity in the area is that Beatline Road dead ends into Railroad Street about one half mile north of US 90, and therefore local roads must be used to make the connection. This study examines concepts to improve that connection. The characteristics of Beatline Road, I-10, and US 90 are summarized in **Table 1**.

**Table 1: Roadway Characteristics**

| Route                         | Functional Class | Lanes | Lane Width (feet) | Shoulder Type | Shoulder Width (feet) |
|-------------------------------|------------------|-------|-------------------|---------------|-----------------------|
| Beatline Road                 | Minor Arterial   | 2     | 10-11             | Grass         | 0-10                  |
| I-10 West of County Farm Road | Interstate       | 4     | 12                | Paved         | 12                    |
| I-10 East of County Farm Road | Interstate       | 6     | 12                | Paved         | 12                    |
| US 90                         | Primary Arterial | 4     | 11                | Curb          | -                     |

The study area is located in a metropolitan area and includes residential and business development. Highly developed residential neighborhoods and some businesses exist along both sides of Beatline Road throughout the majority of the study area. The South Mississippi Regional Center, an agency 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 Street. It provides residential, 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 Railroad Street and US 90. With Beatline Road serving as a major connector between I-10 and US-90 and a busy truck stop to the north of the I-10 interchange, this corridor experiences a high percentage of heavy vehicles. The study area is shown in **Figure 1**.

Figure 1: Study Area



**e. Provide a brief chronology of the planning activities (PEL study) including the year(s) the studies were completed.**

|                               |               |
|-------------------------------|---------------|
| Notice to Proceed             | February 2018 |
| Purpose and Need              | April 2018    |
| Purpose and Need (Revised)    | August 2018   |
| Preliminary Cost Estimates    | November 2018 |
| Concept Screening Methodology | December 2018 |
| Final Report                  | January 2019  |

**f. Are there recent, current, or near future planning studies or projects in the vicinity? What is the relationship of this project to those studies/projects?**

The unsignalized intersections along County Farm Road at the I-10 interchange ramps are in need of immediate improvements due to the number of trucks traveling to the truck stop north of I-10. MDOT is moving forward with plans to install temporary signals at the ramp intersections with County Farm Road in the spring of 2019. MDOT is also in the planning stages for permanent improvements to the interchange.

MDOT completed a PEL Study at the I-10/US 49 interchange in 2016. Immediate and long-term solutions were recommended, though no funding sources have been identified.

MDOT has an approved environmental document to construct a new route, State Route 601/Canal Road, which would be an access controlled facility from the Port of Gulfport to I-10. The decision to move forward with the construction of this route has not been made.

The I-10/US 49 PEL Study and the Canal Road/State Route 601 project are both located between three and six miles to the east of the Beatline Road study area. Each project could draw some traffic from Beatline Road if they were to be constructed, but neither project is expected to have a significant impact on the traffic volumes along Beatline Road.

**2. Methodology used:**

**a. What was the scope of the PEL study and the reason for completing it?**

The City of Long Beach asked MDOT to evaluate the Beatline Road/County Farm Road corridor to identify solutions that would:

- Reduce congestion and improve mobility along the project corridor;
- Provide bicycle and pedestrian facilities along the project corridor;
- Enhance driver safety along the project corridor; and
- Provide a consistent north/south connection of Beatline Road/County Farm Road between I-10 and US 90.

**Did you use NEPA-like language? Why or why not?**

Yes, NEPA terminology was used throughout the Beatline Road PEL Study in order to further establish the link between NEPA and planning. These terms are consistent with those used in NEPA. The planning-level process used was designed to inform and provide products that could be readily incorporated into NEPA, such as the *Beatline Road PEL Purpose and Need Report*.

**b. What were the actual terms used and how did you define them? (Provide examples or list)**

NEPA language was used throughout much of the study as shown in the terms below.

Study Area – As shown in Figure 1 above.

Purpose and Need – The purpose and need statement was developed through the review of data and analysis, assessing current and future conditions to define the key transportation issues within the study area.

Minority Population – Any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons who would be similarly affected by a proposed FHWA program, policy and/or activity. A minority is a person who is Black, Hispanic, Asian American/Pacific Islander or American Indian/Alaskan Native.

Low-income Population – Any readily identifiable groups of low-income persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers) who would be similarly affected by a proposed FHWA program, policy, and/or activity.

Regulatory Terms - Various other NEPA regulatory terms, such as Section 404 of the Clean Water Act, Coastal Management Zones, and Threatened and Endangered Habitat, were used to describe the environmental conditions within the study area.

At the request of FHWA, the word *concept* was used to describe the potential solutions instead of the word *alternative*.

**c. How do you see these terms being used in NEPA documents?**

Other than the word *concept*, the terms are consistent with NEPA terminology and therefore could be seamlessly incorporated into future NEPA documents. This is based on the fact the methodologies used to arrive at decisions, such as the purpose and need statement and concept screening processes, were based on sound data analysis.

**d. What were the key steps and coordination points in the PEL decision-making process? Who were the decision-makers and who else participated in those key steps? For example, for the corridor vision, the decision was made by state DOT and the local agency, with buy-in from FHWA, the USACE, and USFWS and other resource/regulatory agencies.**

The City of Long Beach requested assistance from the MDOT Planning Division in determining needs of and identifying potential solutions to the mobility and safety issues along the Beatline Road/County Farm Road corridor. Members of the study team, as listed in Section 1c, were heavily involved in decisions throughout the study. Status calls were conducted every two weeks throughout the study, and all relevant issues were discussed with the group before decisions were made. Early in the scoping process, the study team decided to keep public participation to a minimum in order to prevent expectations for solutions that had no funding source. The proposed concepts represent possible solutions to the connectivity, mobility and safety issues along Beatline Road, but could not be implemented until funding sources were identified. The final report would be sent to the relevant resource agencies for their information, review, and to make them aware that if any project(s) were to advance, environmental studies would be required, and they would have an opportunity to review and comment.

**e. How should the PEL information be presented in NEPA?**

PEL Study products may be incorporated as appendices, referenced in text and included in the project record of the NEPA analysis, as warranted. The information produced and decisions made in the PEL Study will serve as a starting point for more detailed analyses in NEPA.

**3. Agency coordination:**

**a. Provide a synopsis of coordination with Federal, tribal, state and local environmental, regulatory and resource agencies. Describe their level of participation and how you coordinated with them.**

The United States Fish and Wildlife Service (USFWS), the Mississippi Department of Archives and History (MDAH), and the Mississippi Department of Marine Resources (MDR) were contacted for early coordination for this project. The USFWS and MDR were contacted via email in which a synopsis of the project and a location map were provided for review and comment. An architectural cultural resources report was prepared for the project and submitted to MDAH for review and concurrence.

The final report will be sent to these and other relevant resource agencies for their information, review, and to make them aware that if any project(s) were to advance, environmental studies would be required, and they would have an opportunity to review and comment.

**b. What transportation agencies (e.g. for adjacent jurisdictions) did you coordinate with or were involved during the PEL study?**

- FHWA
- MDOT
- City of Long Beach, MS
- City of Pass Christian, MS
- Harrison County Board of Supervisors
- Gulf Regional Planning Commission
- Mississippi Department of Marine Resources

- U.S. Fish and Wildlife Service
- Mississippi Department of Archives and History

**c. What steps will need to be taken with each agency during NEPA scoping?**

Once funding sources are identified, it is anticipated that agencies will be more engaged during the NEPA process in accordance with the regulatory jurisdiction of each agency. Agencies will be notified of the PEL Study’s completion and the final Beatline Road PEL Study Report will be available for review.

**4. Public coordination:**

**a. Provide a synopsis of your coordination efforts with the public and stakeholders.**

**Stakeholders**

GRPC staff provided travel demand model runs and population growth data, and also participated in the bi-weekly status calls throughout the study.

The Harrison County Development Commission provided key input on the anticipated population and industry growth for the study area and adjacent sites, which were used in the development of future traffic volumes and truck percentages.

**Public**

Because no funding sources are currently available for the recommended concepts, the study team did not present the study or its results to the public. The PEL Study identified potential solutions to the transportation issues in the study area from a technical standpoint, and the results of the PEL analysis should be presented to the public during the early stages of any future NEPA studies should funding become available.

**5. Purpose and Need for the PEL study:**

**a. What was the scope of the PEL study and the reason for completing it?**

The City of Long Beach asked MDOT to evaluate the Beatline Road/County Farm Road corridor to identify solutions that would:

- Reduce congestion and improve mobility along the project corridor;
- Provide bicycle and pedestrian facilities along the project corridor;
- Enhance driver safety along the project corridor; and
- Provide a consistent north/south connection of Beatline Road/County Farm Road between I-10 and US 90.

**b. Provide the purpose and need statement, or the corridor vision and transportation goals and objectives to realize that vision.**

The Beatline Road PEL Study was conducted in order 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.

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. The second need identified in the project corridor is the lack sidewalks and/or bike lanes/multi-use lanes needed to improve bicyclist and pedestrian connectivity and safety. The third need found is in reference to the safety of the corridor. A majority of crashes along Beatline/County Farm Road occur at major intersections within the study area due to functional deficiencies of the facility, congestion and lengthy queues. The fourth need identified is in reference to connectivity in the area. Beatline Road/County Farm Road currently terminates at Railroad Street north of US 90. A consistent and improved connection between I-10 and US 90 is needed to serve as a hurricane evacuation route to ensure that the roadway can remain open and traffic can move smoothly during and after an evacuation. It is also needed to facilitate connectivity between the city and waterfront and better handle heavy trucks traveling along Beatline Road to/from I-10 and US 90. Each of these needs also supports the recommendations and strategies outlined in the GRPC Long Range Plan and the City of Long Beach Comprehensive Plan.

Based on these needs the project purpose is to reduce congestion and improve mobility along the project corridor, provide bicycle and pedestrian facilities along the project corridor, enhance driver safety along the project corridor, and provide a consistent north/south connection of Beatline Road/County Farm Road between I-10 and US 90.

The study goals/objectives are shown below.

- Enhance mobility through the study area;
- Optimize opportunities for economic development;
- Avoid and/or minimize impacts to the human and natural environment, including historic and archeological resources;
- Minimize conflicts with the CSX Railroad; and
- Enhance freight mobility.

**c. What steps will need to be taken during the NEPA process to make this a project-level purpose and need statement?**

The purpose and need statement was developed in accordance with 23 CFR 450 – Linking the Transportation Planning and NEPA Processes (23 USC 139), which details how information, analyses and products from transportation planning can be incorporated seamlessly into the NEPA process at the project level. In addition, detailed technical information was provided with regard to major traffic generators, historic and future traffic projections, and roadway and bridge design and safety conditions, all of which support the

need for improvements within the study area. It is the intent to utilize this purpose and need statement to easily enter into the NEPA process without duplication of efforts. It should be noted that the purpose and need statement could be tweaked and refined as more information becomes available during the NEPA process.

6. **Range of concepts: Planning teams need to be cautious during the concept screening process; concept screening should focus on purpose and need/corridor vision, fatal flaw analysis, and possibly mode selection. This may help minimize problems during discussions with resource agencies. Concepts that have fatal flaws or do not meet the purpose and need/corridor vision will not be considered reasonable concepts, even if they reduce impacts to a particular resource. Detail the range of concepts considered, screening criteria, and screening process, including:**

- a. **What types of concepts were looked at? (Provide a one or two sentence summary and reference document.)**

The PEL scope of work called for the development and screening of the No-Build Concept and two build concepts (designated West and East Concepts).

**No-Build Concept** – The No Build Concept would include the preservation of the existing transportation network and any programmed transportation improvements that are reasonably expected to occur regardless of the outcome of the Beatline Road PEL Study.

Both build concepts include the widening of County Farm Road/Beatline Road from a two-lane road to a four-lane divided boulevard with raised medians and bicycle and pedestrian accommodations. The limits for both build concepts are US 90 to the south and I-10 to the north. The differences between the West and East Concepts include intersection treatments along the project corridor and how the proposed improvements extend Beatline Road southward beyond its current terminus at Railroad Street to US 90. The concepts are described in more detail below.

**West Concept:** The West Concept would extend Beatline Road to US 90 using a western alignment along Holiday Avenue. The West Concept includes signalized intersections at the major cross streets along County Farm Road/Beatline Road. The West Concept is located in Long Beach, MS, except for the proposed extension of Beatline Road along Holiday Avenue, which would be located in Pass Christian, MS.

**East Concept:** The East Concept would extend Beatline Road to US 90 using an eastern alignment that ties into US 90 along Pelican Cove Lane (just west of White Harbor Road). The East Concept includes roundabouts for intersections along Beatline Road where right-of-way and traffic operations allow for this type of intersection control. Roundabouts are proposed where Beatline Road intersects (from south to north) Johnson Road, Pineville Road, Daugherty Road, 28<sup>th</sup> Street, and Jones Mill Road/Red Creek Road. Other major intersections along the County Farm Road/Beatline Road project corridor are proposed to be signalized as part of the East Concept. The entirety of the East Concept alignment would be located in Long Beach, MS.

Several other preliminary build concepts were considered and eliminated early in the PEL process before the final two build concepts were established. Full details of the concepts

considered during the PEL Study are included in the *Beatline Road PEL Concepts Analysis Report*.

**b. How did you select the screening criteria and screening process?**

Concept evaluation criteria and measures for the Beatline Road PEL Study were based upon both the purpose and need of the project and the study goals. The *Beatline Road PEL Concept Analysis Report* was developed to provide the decision-making framework to determine how well each concept met the purpose and need and study goals.

The two screening levels of the CSM include:

- **Level 1, Fatal Flaw Screening** - Fatal flaw criteria were utilized to evaluate and screen the concepts against the purpose and need. In the Level 1 Screening, concepts were given a *pass* or *fail* rating for each of the screening criteria. The concepts that met the purpose and need were advanced to Level 2.
- **Level 2, Detailed Evaluation** – Level 2 employed qualitative and quantitative analyses to compare the concepts against measures associated with the study goals. The Level 2 Screening process was established to identify the concept(s) that best addressed the transportation needs in the Beatline Road study area while minimizing the negative impacts to the surrounding area.

**c. For concept(s) that were screened out, briefly summarize the reasons for eliminating the concept(s). (During the initial screenings, this generally will focus on fatal flaws.)**

Several preliminary concepts were eliminated early in the process as detailed in the *Beatline Road PEL Concepts Analysis Report*.

**Level 1**

Both build concepts (West and East Concepts) met the fatal flaw criteria and were advanced to Level 2 Screening along with the No-Build Concept, which was advanced to provide a baseline for comparison for the build concepts. Therefore, no concepts were eliminated in Level 1.

**Level 2**

Level 2 Screening was established to select the concept that best met the study goals. During the screening process, it became apparent that elements of each build concept were successful in meeting the various measures associated with the study goals. Therefore, neither build concept was completely eliminated.

**d. Which concepts should be brought forward into NEPA and why?**

A new concept, combining parts of the East and West Concepts, should be advanced to NEPA.

The West Concept included an alignment that completely avoided the South Mississippi Regional Center and had fewer total displacements than the East Concept. The roundabout intersection treatments that were evaluated as part of the East Concept delivered less vehicle

delay than the signalized intersection treatments included with the West Concept. Therefore, a western alignment with roundabout intersections should be advanced to NEPA when funding is available.

**e. Did the public, stakeholders, and agencies have an opportunity to comment during this process?**

The City of Long Beach was an active participant and was included in all meetings and decisions throughout the study. GRPC also participated throughout the study.

The final report will be sent to the relevant resource agencies for their information, review, and to make them aware that if any project(s) were to advance, environmental studies would be required, and they would have an opportunity to review and comment.

The results of the study were not presented to the public because the study team did not want the public to anticipate improvements to the current conditions when no funding sources had been identified.

**f. Were there unresolved issues with the public, stakeholders, and/or agencies?**

Each build concept introduces a new at-grade rail crossing. For each new at-grade crossing, the CSX Railroad requires closing three existing public at-grade rail crossings. This City of Long Beach is aware of this requirement and is working to secure locations that can be closed in Long Beach and adjacent jurisdictions.

A request for information has been sent to the U.S. Fish and Wildlife Service (USFWS) and the Department of Marine Resources (DMR). Return comments will be added to the final documentation when they are received. Additionally, the Historic Resources Report has been sent to the State Historic Preservation Officer (SHPO) for their review and approval. The SHPO response will also be added to the final documentation.

There were no unresolved issues with the public or other resource agencies because they were not involved throughout the planning study process due to no identified funding source. The final report will be sent to the relevant resource agencies for their information, review, and to make them aware that if any project(s) were to advance, environmental studies would be required, and they would have an opportunity to review and comment. The public will be introduced to the results of the PEL Study during any future NEPA studies, after funding is available.

**7. Planning assumptions and analytical methods:**

**a. What is the forecast year used in the PEL study?**

Forecast Year - 2040

**b. What method was used for forecasting traffic volumes?**

In order to develop future No-Build traffic volumes, a background growth rate and additional trips were determined based on historic growth as well as anticipated future developments.

Exponential growth rates provided by MDOT were applied to the adjusted (for seasonal and day of the week variations) 2018 volumes in order to develop 2040 background growth volumes. An exponential growth rate of 1.5% was applied to volumes from Pineville Road to the north, and an exponential growth rate of 2.0% was applied to volumes south of Pineville Road.

Future development trips were added to the 2040 background growth volumes to account for two future developments: an RV park which will be located along US 90 to the east of the study area, and a 1,700 acre development located between County Farm Road, Landon Road, and Canal Road to the north of the study area. These trips were added to the 2040 background growth volumes to determine the 2040 No-Build Design Volumes.

To calculate the Build volumes, traffic volume changes resulting from the implementation of the concepts were considered.

Once the County Farm Road/ Beatline Road corridor is widened to four lanes and is continuous from north of I-10 to US 90, additional traffic from outside of the study area will be attracted to use the facility. Based on the relative increases in volumes along the County Farm Road/ Beatline Road corridor from the 2040 No Build Travel Demand Model versus the 2040 4-Lane Build Travel Demand Model, which were provided by MDOT, the following additional volumes were assumed along the study corridor for the 2018 Build Volumes:

- 25% increase from existing volumes to the north of Red Creek Road
- 55% increase from existing volumes between Red Creek Road/Jones Mill Road and Pineville Road
- 112% increase from existing volumes between Pineville Road and US 90

The 2040 Build volumes were developed by growing the 2018 Build volumes using the same exponential growth rate as was used for No Build conditions. The same future development trips which were added to 2040 No Build volumes were also added to 2040 Build volumes. Full details of the traffic forecasting process are included in the *Beatline Road PEL Traffic and Safety Report*.

**c. Are the planning assumptions and the corridor vision/purpose and need statement consistent with each other and with the long-range transportation plan? Are the assumptions still valid?**

The Beatline Road PEL Study purpose and need statement supports many goals/objectives from the 2040 GRPC Metropolitan Transportation Plan (MTP), which are shown in **Table 2** below.

**Table 2: GRPC MTP Goals and Objectives**

| Goal     | Objective | GRPC MTP Goals  |
|----------|-----------|---|
| <b>1</b> |           | <b>Strategically Enhance Corridors</b>  |
|          | 1a        | Maximize transportation system efficiency by promoting alternatives to adding general-purpose traffic lanes.  |
|          | 1b        | Reduce Roadway Congestion.  |
|          | 1c        | Improve the mobility of freight trucks.   |
|          | 1d        | Enhance Mobility by improving the connectivity of the existing transportation network.  |
|          | 1e        | Improve the form and function of transportation corridors in order to contribute to the “sense of place”.   |
|          | 1f        | Improve the economic vitality of the region with transportation decisions.  |
| <b>2</b> |           | <b>Improve and Expand Transportation Choices</b>  |
|          | 2a        | Make public transportation a choice mode of transportation on the Mississippi Gulf Coast.   |
|          | 2b        | Improve marketing and promotion of transportation options to increase awareness on the Mississippi Gulf Coast.  |
|          | 2c        | Promote rail transportation opportunities.  |
| <b>3</b> |           | <b>Increase Safe Transportation</b>   |
|          | 3a        | Make all Mississippi Gulf Coast urban area roadways suitable for bicycles, pedestrians and transit.   |
|          | 3b        | Improve safety at intersections.  |
|          | 3c        | Promote safety through public education, enforcement and engineering.   |
|          | 3d        | Reduce lane departure accidents.  |
| <b>4</b> |           | <b>Manage the Relationship between Transportation, community and Environment</b>  |
|          | 4a        | Promote land use patterns and development policies that support transportation mobility.  |
|          | 4b        | Consider climate variability when making transportation project decisions.  |
|          | 4c        | Coordinate transportation decisions to preserve existing communities.   |
|          | 4d        | Provide public involvement processes to engage the general public, minority and low-income populations in transportation decision making.   |
|          | 4e        | Promote the development of a transportation system and programs that maintain or improve air quality and reduce greenhouse gases, ozone, particulate matter and other pollutants. |

The Beatline Road PEL purpose and need and the study goals are shown in **Table 3**, along with references to the MTP goals/objectives they support from **Table 2**.

**Table 3: Consistency of the Beatline Road PEL with the GRPC MTP**

| Beatline Road PEL Purpose and Need   | MTP Goals/Objectives Supported |                         |
|--|--------------------------------|-------------------------|
|  | Goals                          | Objectives              |
| <p><b>Purpose:</b> To reduce congestion and improve mobility along the project corridor.</p> <p><b>Need:</b> 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.</p>   | 1<br>3                         | 1a,1b,1c<br>3b          |
| <p><b>Purpose:</b> To provide bicycle and pedestrian facilities along the project corridor</p> <p><b>Need:</b> The project corridor lacks sidewalks and/or bike lanes/multi-use lanes needed to improve bicyclist and pedestrian connectivity and safety.</p>  | 1<br>2<br>3                    | 1a,1d,1e,1f<br>2b<br>3a |
| <p><b>Purpose:</b> To enhance driver safety along the project corridor.</p> <p><b>Need:</b> The majority of crashes along Beatline/County Farm Road occur at major intersections within the study area due to functional deficiencies of the facility, congestion and lengthy queues.</p>  | 3                              | 3a,3b                   |
| <p><b>Purpose:</b> To provide a consistent north/south connection of Beatline Road/County Farm Road between I-10 and US 90.</p> <p><b>Need:</b> Beatline Road/County Farm Road currently terminates at Railroad Street north of US 90. A consistent and improved connection between I-10 and US 90 is needed to serve as a hurricane evacuation route to ensure that the roadway can remain open and traffic can move smoothly during and after an evacuation. It is also needed to facilitate connectivity between the city and waterfront and better handle heavy trucks traveling along Beatline Road to/from I-10 and US 90.</p> | 1<br>4                         | 1c,1d,1f<br>4c          |
| Study Goals  | MTP Goals/Objectives Supported |                         |
|  | Goals                          | Objectives              |
| Enhance mobility through the study area.   | 1                              | 1c,1d,1f                |
| Optimize opportunities for economic development.   | 1,4                            | 1f,4a                   |
| Avoid and/or minimize impacts to the human and natural environment, including historic and archeological resources.  | 4                              | 4b,4c,, 4e              |
| Minimize conflicts with the CSX Railroad.  | 3                              | 3c                      |
| Enhance freight mobility.  | 1                              | 1c,1d                   |

**d. What were the future year policy and/or data assumptions used in the transportation planning process related to land use, economic development, transportation costs, and network expansion?**

Future year policy and/or data assumptions used in the Beatline Road PEL Study process are described in detail in the *Beatline Road PEL Traffic and Safety Report*. The following summarizes the land use, economic development, transportation costs and network expansion assumptions.

**Land Use**

Land use assumptions for the Beatline Road PEL Study were from the 2040 GRPC MTP. These assumptions were the foundation for the GRPC Travel Demand Model, which was used along with historical counts to estimate 2040 travel in the study area.

**Economic Development**

Economic development within the study area was assumed to improve as mobility improved as a result of the reduced delay incurred on each trip through the corridor.

**Transportation Costs**

Future transportation costs were not included in the Beatline Road PEL analysis.

**Network Expansion**

The transportation network was expected to expand as detailed in the GRPC MTP and the TIP.

- 8. Environmental resources (wetlands, cultural, etc.) reviewed. For each resource or group of resources reviewed, provide the following:**
- a. In the PEL study, at what level of detail was the resource reviewed and what was the method of review?**
  - b. Is this resource present in the area and what is the existing environmental condition for this resource?**
  - c. What are the issues that need to be considered during NEPA, including potential resource impacts and potential mitigation requirements (if known)?**
  - d. How will the planning data provided need to be supplemented during NEPA?**

Resources were investigated and mapped as part of the environmental review process. The primary method of investigation for all resources described below was gathering Geographic Information System (GIS) database information on known environmental constraints. Mapped constraints were confirmed to the extent possible through a windshield survey.

**Residential and Business Impacts:** Numerous residences and businesses align the project corridor. Structure impacts were identified by overlaying the West and East Concept alignment footprints over 2018 aerial photography for the Long Beach and Pass Christian areas. The West Concept would result in 52 residential and 26 business displacements; the East Concept would result in 50 residential, 29 business, and 2 public facility displacements. Details related to the potential displacements, including displacement housing and business characteristics,

a replacement housing survey, estimated business displacement costs, a business relocation analysis, and an employee impact analysis are presented in the *Beatline Road Relocation Report*. Acquisitions and relocations would proceed in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policy of 1970, as amended. The number and type of displacements resulting from the project would be further analyzed as the project alignment is further refined and as the project progresses through the NEPA process.

**Environmental Justice:** The EPA tool *EJ Screen* and the Census Bureau's *American Fact Finder* were used to identify the demographic characteristics of the project area. The demographic analysis study area was generally a half-mile buffer around the project corridor. The percent minority for the area was identified as approximately 16 percent and percent Hispanic population as approximately 4 percent. Approximately 15 percent of the area's population were reported as aged 65 or older and approximately 4 percent of the area's population speak English "less than very well". A windshield survey of the project area identified no building signage or billboards in anything other than English and no minorities were noted. Of the ten (10) Census block groups encompassing the study area, approximately 21 percent identified a median household income of less than \$24,999. The Department of Health and Human Services 2018 poverty guideline for a family of four is \$25,100. More information on the estimated property values for potentially impacted homes can be found in the *Beatline Road Relocation Report*. During NEPA, potential direct and indirect impacts to this community should be fully considered and the community should be engaged in the NEPA process.

**Coastal Management Zones:** The entire corridor is located within the Coastal Management Zone. The DMR is the point of contact in Mississippi. Implementation of the Mississippi Coastal Program is the primary responsibility of the DMR Office of Coastal Resources. Coordination with the DMR has been initiated to identify any potential issues of concern related to the implementation of this project. Wetlands falling within the Coastal Management Zone would require permitting under the DMR and the USACE. This information would be further studied and permitting would occur as part of the NEPA process.

**Wetlands and Streams:** A review of USFWS National Wetland Inventory (NWI) maps for the area identified scattered wetlands occurring throughout the project area, including bottomland hardwood and herbaceous wetlands. Avoidance and minimization alternatives would be required as NEPA studies are completed. Regardless of the alternative selected, wetland impacts are not anticipated to be significant. If after avoidance and minimization there are still wetland impacts, compensatory mitigation would be required for those impacts in excess of 0.10 acre.

Both West and East Concepts include bridges over Canal Nos. 1 and 3. Any fill impacts to streams would require a Section 404 permit from the USACE. Preliminary design concepts indicate that minimal impact is anticipated and limited to reinforced concrete box culvert (RCB) installation which will be for the minimum necessary to construct the crossings. During NEPA, formal delineations would be required to define the true wetland boundaries, the quality and quantities of impacts and for finalizing any required mitigation.

**Floodplains:** Federal Emergency Management Agency (FEMA) floodplain maps were reviewed to identify potential floodplain impacts. The West Concept would impact approximately 19.4 acres and the East Concept would impact approximately 18.5 acres in the

100-year floodplain. Harrison County, the City of Long Beach, and the City of Pass Christian participate in the National Flood Insurance Program. All of the floodplain/floodway encroachments within this roadway construction project would be designed to comply with the applicable community's local flood damage prevention ordinance. The project crosses the Zone AE Special Flood Hazard Area with Regulatory Floodway. The project would be designed to cause no rise to existing base flood elevations and no impact to the existing Regulatory Floodway. Adjacent properties would not be impacted nor have a greater flood risk than existed before construction of the project. No-rise/no-impact certifications sealed by a licensed Professional Engineer would be provided to the participating communities for their records. No coordination with FEMA would be required for the project.

**Threatened and Endangered (T&E) Habitat:** T&E species data was gathered from applicable USFWS T&E species lists and the USFWS Information for Planning and Consultation (IPAC) Trust Resources Report for Threatened and Endangered species. There are fifteen (15) federally-listed threatened or endangered species identified by the USFWS for the project area. Additionally, designated critical habitat for the Piping Plover (*Charadrius melodus*) is located within the vicinity of the road improvements for US 90. Critical habitat is also located just off-shore for the Atlantic Sturgeon (*Acipenser oxyrinchus*). Preferred habitat of listed species could occur within the project area, most notably the contiguous forested habitat and wetland areas. Field studies documenting important habitats would be required during NEPA. Official consultation with the USFWS should also be completed during NEPA to determine if any biological survey for T&E species are required. Formal concurrence from the USFWS would be required to finalize any NEPA document.

**Cultural and Historic Resources:** A review of known archeological and historic sites was completed through a literature file review at the Mississippi Department of Archives and History (MDAH). All pertinent reports were reviewed to determine archeological or historical context of the project area. While there have been quite a few studies completed in and near the project area, no properties listed on or determined eligible for the National Register of Historic Places are located in the study area. During NEPA, a Phase I Cultural Resource Survey (CRS) will likely be required for any previously undisturbed areas as well as updated file review at MDAH.

**Hazmat Sites:** Databases from Mississippi Department of Environmental Quality (MDEQ), U.S. Environmental Protection Agency (EPA) and Environmental Data Resources (EDR) were reviewed and some high risk hazardous sites were identified within and/or adjacent to the project area. High-risk hazardous sites include Leaking Underground Storage Tank (LUST) and Underground Storage Tank (UST) sites that may be impacted as a result of the project. Portions of several gas stations may be impacted by the project. One reported release was documented as occurring along US 90 adjacent to the project. An auto salvage yard is also located along the project, which would be impacted by the project. The *Beatline Road Environmental Constraints Report* summarizes the hazardous materials sites identified within the proposed right-of-way for both West and East Concepts and their relative risk to the project. When future NEPA studies are completed, a current review of MDEQ and EPA databases should be completed to ascertain the current risk associated with hazardous materials.

**9. List environmental resources you are aware of that were not reviewed in the PEL study and why. Indicate whether or not they will need to be reviewed in NEPA and explain why.**

Air quality and noise were not evaluated as part of the PEL Study. The proposed project is located in Harrison County, Mississippi, an area in attainment for all national ambient air quality standards (NAAQS); therefore, the transportation conformity rules do not apply. Attainment status and other air quality analysis requirements would be reassessed during NEPA and the appropriate analyses conducted accordingly. Schematic design and project details necessary to adequately assess noise impacts were not developed at the PEL level. During NEPA, the schematic design would be completed and project level details would be researched and evaluated.

**10. Were cumulative impacts considered in the PEL study? If yes, provide the information or reference where the analysis can be found.**

Cumulative impacts, as well as indirect impacts, were not considered for this planning study. The planning effort in this PEL Study was utilized to determine possible viable concepts for a long-term solution and recommend a concept for further evaluation. Schematic design and project details necessary to adequately assess indirect and cumulative impacts were not developed at the PEL level. During NEPA, the schematic design would be completed and project level details would be researched and evaluated.

**11. Describe any mitigation strategies discussed at the planning level that should be analyzed during NEPA.**

The project is anticipated to result in residential and business displacements. Acquisitions and relocations would proceed in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policy of 1970, as amended. Should the project result in wetland impacts, compensatory mitigation would be required for those impacts in excess of 0.10 acre. During NEPA, mitigation strategies to avoid or minimize any adverse impacts would be determined through more intensive and detailed studies for all resources.

**12. What needs to be done during NEPA to make information from the PEL study available to the agencies and the public? Are there PEL study products which can be used or provided to agencies or the public during the NEPA scoping process?**

Information gathered during the PEL Study should initially be used to help outline or guide the NEPA process and that information should also be included in the NEPA document as part of the document text or as a reference to report materials located in the appendices. The purpose behind making the planning study more NEPA like in terms of processes and terminology is to help mesh the preliminary planning study information with the future NEPA documentation to become part of the ultimate study findings.

**13. Are there any other issues a future project team should be aware of?**

Future NEPA studies related to this PEL Study should consider the traffic and right-of-way impacts of replacing the signals initially incorporated in the West Concept with roundabouts as described in Section 6d. A high-level assessment was provided in the PEL analysis, but more detailed evaluation would be required.

