
FY 2022

RAISE GRANT APPLICATION

# PEARL-RICHLAND CONNECTOR PHASE II

## USDOT REBUILDING AMERICAN INFRASTRUCTURE WITH SUSTAINABILITY & EQUITY

SUBMITTED BY:

MAYOR JAKE WINDHAM

CITY OF PEARL, MS

Pearl
MISSISSIPPI

IN PARTNERSHIP WITH:

CITY OF RICHLAND, MS

CITY OF RICHLAND

APRIL 14, 2022

**TABLE OF CONTENTS**

## TABLE OF CONTENTS

APPENDIX MATERIAL at http://pearlrichlandconnector.com

- ✔ Central MS Planning and Development District
  - ◊ 2045 Metropolitan Transportation Plan
  - ◊ Annual Listing of Obligated Projects (FY 2017-2021)
- ✔ City Comprehensive Plans
  - ◊ Pearl Comprehensive Plan 2019
  - ◊ Richland Comprehensive Plan 2019
- ✔ FONSI Links (NEPA)
  - ◊ Environmental Assessment and FONSI 2012
  - ◊ FONSI Reassessment 2017
  - ◊ FONSI Reassessment 2020
- ✔ Map Link
  - ◊ Vicinity Map – Phase I
  - ◊ Vicinity Map – Phase II
- ✔ Statewide Freight Plan Link
  - ◊ MDOT Statewide Freight Plan (2017)
  - ◊ Pearl Richland Intermodal Connector Commission
  - ◊ Interlocal Agreement
- ✔ Letters of Support as of 4/14/2022
  1. US Senator Wicker
  2. Congressman Guest
  3. State Senator Kirby
  4. State Representative
  5. MS Development Authority
  6. MS Department of Transportation
  7. SPATCO Energy
  8. Kansas City Southern Railroad
  9. Rankin First
  10. Helmerich and Payne, Inc.
  11. MDOT Letter of Support

FIGURES



TABLES

## PROJECT AT A GLANCE

In close cooperation with the Mississippi Department of Transportation (MDOT), the City of Pearl, Mississippi is requesting a $5,000,000 FY 2022 RAISE Urban Planning Grant for the Pearl-Richland Intermodal Connector Phase II. The Pearl-Richland Intermodal Connector has been a federal, State, regional and local priority for twenty years. The project's goal is to provide a safe, efficient and effective intermodal road/rail freight linkage between the Interstate 20, US Highway 49 and the Kansas City Southern Rail Road corridors. The Cities of Pearl and Richland entered into an interlocal agreement in 2006 to form the Pearl-Richland Intermodal Connector Commission with the City of Pearl administering project funds.

Congress authorized the Pearl-Richland Intermodal Connector as a High Priority Highway Project in the Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2005 § 1704(4400) (PL 109-59; Aug. 10, 2005). The project was also in the Jackson Metropolitan Planning Organization's (MPO) 2012-2015 Transportation Improvement Program (STIP/TIP Project 540060). MDOT's 2017 Statewide Freight Plan identified the Pearl-Richland Intermodal Connector as a Critical Urban Freight Corridor because of the connectivity of public roads in urbanized areas to a Primary Highway Freight System and Interstate, and intermodal freight facilities.

Work to prepare the Pearl-Richland Intermodal Connector Environmental Assessment (EA) and design and build Phase I was funded by various sources, including approximately, $8,408,198-Federal; $2,650,000 State appropriations, $1,300,000 of MDOT funds, $1,784,654 of local funds and $500,000 of private funds from Kansas City Southern (KCS). The EA resulted in a Finding of No Significant Impact (FONSI) in May 2012 and was reissued in 2017 and 2020. The $16.18M Phase I project is currently under construction, with completion expected in late Summer of 2023. The project location is South Pearson Road from north of Richland Creek to SR 468, as well as connecting roads. The work includes widening the roadway to 5 lanes and constructing an overpass bridge over the Kansas City Southern Railroad.

Phase II was included as a separate element in the Jackson MPO's 2045 Metropolitan Transportation Plan (Project #210). This Phase II Planning Grant will provide the funding necessary to complete the following activities:

1. Revise the EA to reevaluate alternative routes for the Connector's remaining approximately 2.37 miles to its terminus at US-49
2. Complete the special studies required before construction can begin
3. Design the new 4-lane connector, including the widening of South Pearson Road across Richland Creek and the new 4-lane road to connect to US-49
4. Design bridges across Squirrel Branch and Richland Creek

The MPO's Plan and six (6) Technical Reports provide baseline data to clearly quantify the project's relevance to the 2022 RAISE Program's merit criteria the Planning grant will allow us to quantify the construction benefits. Briefly:

**a.** **Safety**: The project will significantly ease traffic congestion by rerouting freight traffic to improve safety for motorists and access for first responders. These and other actions will provide significant benefits to eliminate and/or mitigate systemic safety issues between commuter and freight traffic at key intersections on congested interstates and highways.

**b.** **Environmental Sustainability**: provide significant benefits to reduce transportation related air pollution/greenhouse gas emissions; reduce vehicle miles travelled and travel time; support fiscally responsible integrated land use and transportation design, and evaluate electrification and/or zero emission vehicle infrastructure. MDOT's 2012 Commitments to Environmental Excellence pointed out the need for a hydrologic study of the two (2) bridges to ensure that they will not negatively impact flood storage or existing floodplains.

**c.** **Quality of Life**: The project will create a bridge of opportunity for access to jobs for two (2) Low Income Community Opportunity Zones; 1) Pearl (#2812102701) and 2) Richland (#281210220401) and two (2) Historically Disadvantaged Communities. The planning process will identify opportunities to significantly increase accessibility for underserved, overburdened or disadvantaged communities; remove individual and community transportation barriers for access to jobs and business opportunities; proactively address racial equity or other disparities.

**d.** **Improves Mobility and Community Connectivity**: The highest truck traffic volumes within the Jackson MPO area are on I-55, I-20, US 49 and MS 25. Existing connections between US-49 and South Pearson Road are constrained but Phase II will significantly improve multimodal freight movement and movement of supply chains. The NEPA effort and special studies will include a robust community outreach and engagement effort that evaluate opportunities to integrate affordable transportation choices for underserved or disadvantaged communities.

**e.** **Economic Competitiveness and Opportunity**: The Cities of Pearl and Richland both have proposed land use plans that anticipate industrial/light industrial development adjacent to the Connector. Phase II will provide significant benefits for local access to these new jobs. Better travel time reliability, velocity of goods movement, and multimodal freight mobility—especially for supply chain bottlenecks— will encourage private industry to expand operations, which will provide economic strength and help revitalize underserved, overburdened and historically-disadvantaged communities.

**f.** **State of Good Repair**: Provide significant benefits to restore, expand and modernize core intermodal infrastructure assets and maintain these assets in a state of good repair.

**g.** **Partnership and Collaboration**: The project has and will continue with strong partnership from the State of Mississippi, MDOT, the Cities of Pearl and Richland and the private sector. This collaboration will be expanded to include other entities and outreach to Disadvantaged Business Enterprises.

**h. Innovation**: Provide significant benefits by actively evaluating and incorporating innovative transportation technologies in project planning and design to enhance interstate freight movements, public safety and environmental sustainability; identifying and evaluating innovative project delivery approaches and to the extent practicable explore innovative project funding and financing mechanisms.

| PROPOSED PLANNING GRANT BUDGET | | | | | |
|---|---|---|---|---|---|
| | **NEPA** | **Permitting** | **Special Studies[1]** | **Design** | **Total** |
| Non-Federal (20%) | 120,000 | 80,000 | 200,000 | 850,000 | **1,250,000** |
| RAISE (80%) | 480,000 | 320,000 | 800,000 | 3,400,000 | **5,000,000** |
| Total | 600,000 | 400,000 | 1,000,000 | 4,250,000 | **6,250,000** |
| [1]1. Regional Equity Impact Analysis, 2. Regional Climate Action Plan, 3. Regional Equitable Development Plan, 4. Regional Energy Baseline Study, 5. Regional Climate Change Study; and 6. Environmental Justice Study. | | | | | |

| KEY PROJECT INFORMATION | |
|---|---|
| Project Type | Road-New Capacity |
| Project Location | MS-Rankin County/Cities of Pearl and Richland |
| Urban/Rural | Urban |
| Areas of Persistent Poverty | Project creates a bridge of opportunity for two (2) identified as Historically Disadvantaged Communities |
| Project Length | 2.37 miles |
| Project Website | http://pearlrichlandconnector.com/ |

| APPLICANT CONTACT INFORMATION | |
|---|---|
| Jake Windham, Mayor City of Pearl | 2420 Old Brandon Rd PO Box 5948, Pearl MS 39208 |
| Kathy Bourgeois | 601/932-2262<br>kbourgeois@cityofpearl.com |

## I. PROJECT DESCRIPTION

The Pearl-Richland Intermodal Connector has been a federal, State, regional and local fright corridor priority for twenty years. The project's goal is to provide a safe, efficient and effective intermodal road/rail freight linkage between the Interstate 20, US Highway 49 and the Kansas City Southern Rail Road corridors. The Cities of Pearl and Richland entered into an interlocal agreement in 2006 to form the Pearl-Richland Intermodal Connector Commission with the City of Pearl administering project funds.

a. Transportation Challenges

The Pearl-Richland Connector project's Environmental Assessment (EA) and Find of No Significant Impact (FONSI) for Alternative D" summarizes the area's transportation challenges (Federal Aid Project No. STPD-7040-00(001) LPA/105068-811000). The project is located in a busy area in that it serves traffic from the Jackson, Mississippi Metropolitan Area. The project's southern terminus is at U.S. Highway 49, and northern at Mississippi Highway 468. The Cities of Pearl and Richland are a part of the greater Jackson metro area in Rankin County, and are directly connected by South Pearson Road on the eastern side of the City of Richland, and U.S. Highway 49 on the west. The City of Florence, to the south of the City of Richland, is connected to both Richland and Pearl by both of these roadways. Similarly, the southeastern portion of Rankin County can be reached from the City of Pearl by traveling South Pearson Road. Interstate 20, traversing east and west, is located just to the north of the project area and within the City of Pearl. Currently South Pearson Road does not provide direct access to U.S. Highway 49, or the developing adjacent industrial and commercial areas in the City of Richland. Kansas City Southern (KCS) Railroad has a large switching yard located in the City of Pearl within the project area. An at-grade crossing currently exists at the intersection of South Pearson Road and the KCS Railroad.

The replacement of the KCS at-grade railroad crossing at South Pearson Road and the development of a four-lane divided roadway will provide better access between the Interstate 20 corridor in the City of Pearl and the developing areas along U.S. Highway 49 in Richland. A rail road overpass would eliminate traffic congestion at the KCS switching yard at the railroad and South Pearson Road crossing. Traffic delays for commercial traffic between the industrial complexes along U.S. Highway 49 and Interstate 20 and commuter traffic to places of employment in the metro area will be substantially reduced.

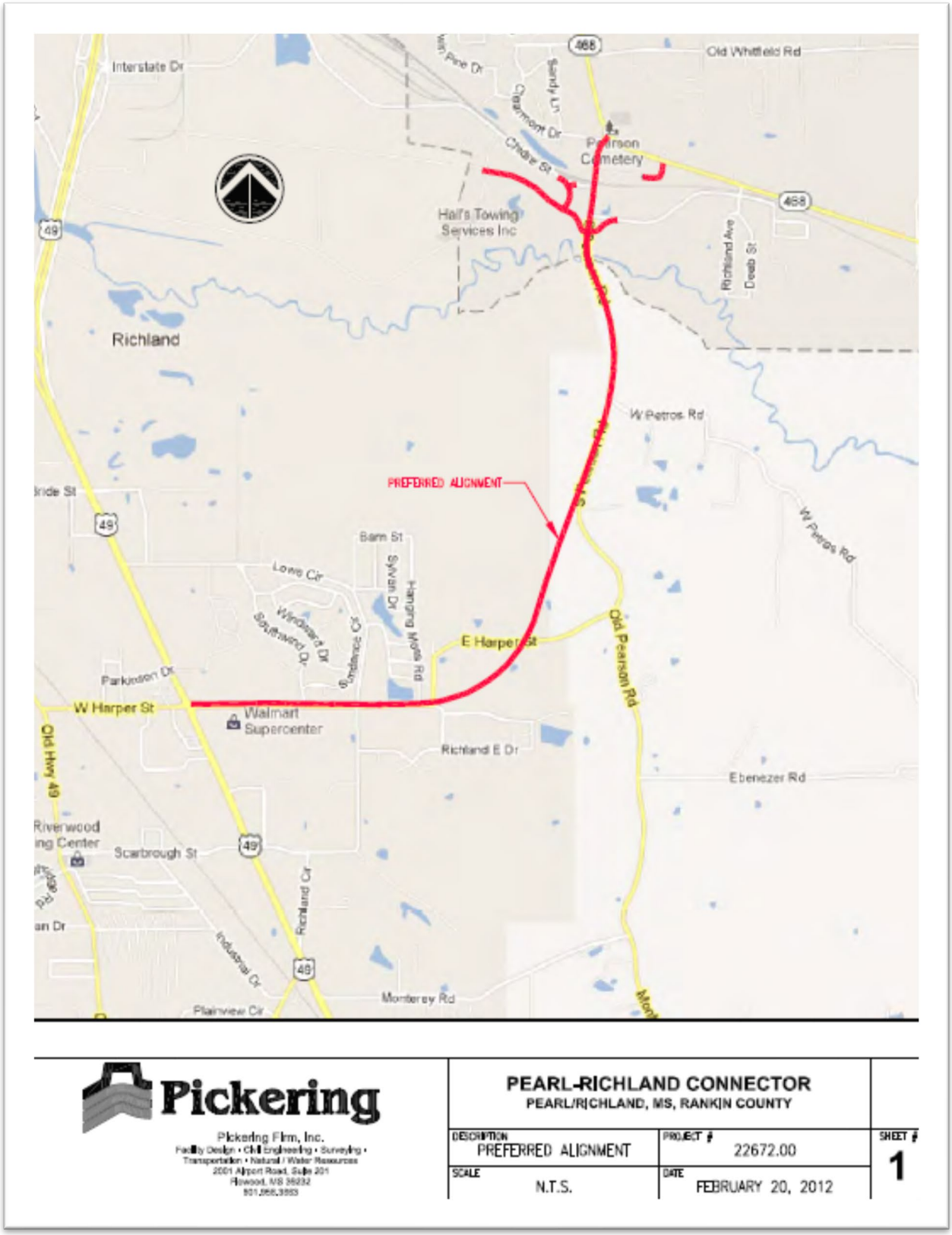



Figure 1: 2012-Pearl-Richland Connector (EA-Appx J-pg1)

b. Project History

The project as a whole has made considerable progress since being started 20+ years ago. Congress authorized the Pearl-Richland Intermodal Connector as a High Priority Highway Project in the Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2005 § 1704(4400) (PL 109-59; Aug. 10, 2005). Major milestones and accompanying funding amounts and sources include:

Environmental: An Environmental Assessment was started on April 27, 2009 and was completed with the approval of a Finding of No Significant Impact by FHWA on May 3, 2012. Total cost $404,296 paid for using a 100% Federal funds.

Preliminary Engineering: Started on September 6, 2012 and was completed with the advertising authority letter on September 20, 2019. Total cost of the Preliminary Engineering Phase was $1,014, 834 paid for using 100% Federal funds.

ROW Acquisition: Started on April 30, 2013 and completed with the issuance of the ROW Certification on August 9, 2019. Total cost $4,635,280 was paid for using 80% Federal funds with a 20% local match.

Utility Relocations: Started on May 31, 2013 and was completed with the issuance of the Utility Certification on August 9, 2019. Total cost of private utility relocation was $640,885 paid for using 80% Federal funds with a 20% local match.

Total Environmental, Preliminary Engineering, ROW Acquisition and Utility Relocation Costs: A total of $6,695,295, Federal funds-$5,640,062, and Local funds- $1,055,233.

The project was included in the Jackson Metropolitan Planning Organization's (MPO) 2012-2015 Transportation Improvement Program (STIP/TIP Project 540060). MDOT's 2017 Statewide Freight Plan identified the Pearl-Richland Intermodal Connector as a Critical Urban Freight Corridor because of the connectivity of public roads in urbanized areas to a Primary Highway Freight System and Interstate, and intermodal freight facilities. Subsequently, the FONSI was reissued in 2017 and 2020.

Most recently, funding was secured to allow Phase I of the Connector to proceed to construction with completion expected in early Summer 2023. Phase I will widen South Pearson Road to 5-lanes from north of Richland Creek to SR 468 including connecting roads and construct an overpass bridge over the KCS Railway. Again, a variety of sources contributed funds for Phase I construction; Federal- $7,000,000, State appropriations 2,650,000, MDOT funds-$1,200,000, Local funds-$1,700,000, and private KCS funds-$500,000.

c. Statement of Work

Phase II was included as a separate element in the Jackson MPO's 2045 Metropolitan Transportation Plan (Project #210). This Phase II Planning Grant will provide funding to transform Phase II into a shovel ready project. The major elements of this planning scope of work are;

1. NEPA/Revised EA: Recent residential development has made it necessary to revise the EA to reevaluate alternative options to connect South Pearson Rd. to US-49. It will be

necessary to reevaluate previous alternatives to identify the current Least Environmentally Damaging Practicable Alternative. The final preferred route should be approximately 2.37 miles. In addition, as pointed out in the MDOT Commitments to Environmental Excellence requirements, the EA process will include, every effort to notify the public, specifically the residents located in the mobile home park at the corner of South Pearson Rd and Saint Augustine Rod of the proposed project and provide these residents with a forum to express their concerns and ask questions. Announcements required announcements and notices will also be made in English and Spanish

2. Permitting: Immediately following conclusion of the NEPA process, permitting will begin to ensure that all specific federal, state, county and local environmental permits are acquired. Permitting includes mitigating any and all unavoidable adverse environmental impacts to aquatic resources. Again, MDOT's Environmental Excellence report identifies the need for a hydraulic study to be conducted prior to final bridge designs regardless of whether existing bridges are rehabilitated or new bridges required, to avoid any increase in flood levels during base flood discharge.

3. Special Studies: The 2022 RAISE NOFO identified several special studies some of which are required to be completed before a RAISE Construction grant can be awarded. These special studies include a variety of environmental and socio-economic studies that will warrant additional data collection and analysis outside the usual NEPA process. These special studies include at a minimum; 1. Regional Equity Impact Analysis, 2. Regional Climate Action Plan, 3. Regional Equitable Development Plan, 4. Regional Energy Baseline Study, 5. Regional Climate Change Study; and 6. Environmental Justice.

4. Design: This includes but is not limited to; a) widening South Pearson Road to 4-lane, and designing the rehabilitation or new construction of two (2) bridges; and, c) the design of a new minimum new 4-lane road from the end of South Pearson Rd to connect to US-49 along the preferred route identified by the EA. MDOT's Environmental Excellence requirements draws special attention to environmental justice concerns pertaining to the right of way acquisition and/or relocation procedures to provide decent, safe and sanitary (DSS) housing.

## II. PROJECT LOCATION

The Pearl-Richland Connector is a vital element to the continued growth and vitality of the key national Dallas to Atlanta freight corridor via Interstate 20.


Figure 2: DOT FHWA, Freight Management Operations, Freight Mobility Trends Tool, National Commodity Corridors

Likewise, the Connector literally connects KCS's rail road network to Interstate 20 and south to Gulfport and Mobile.

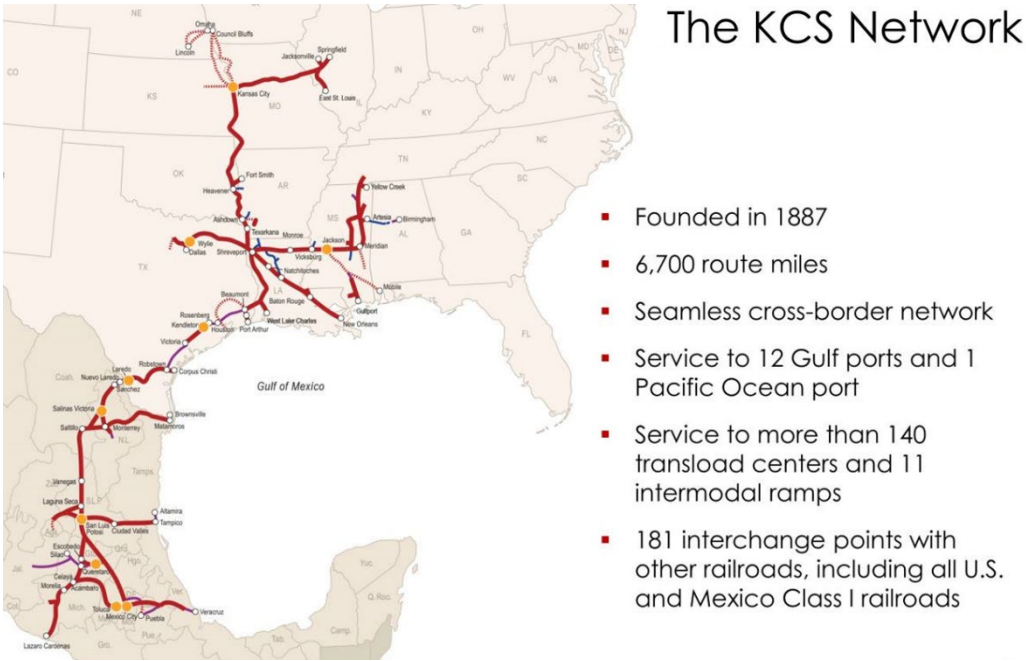



Figure 3: KCS Network and Intermodal Ramps

The intersection of these national road and rail road freight corridors resulted in a dynamic and robust intermodal freight hub.

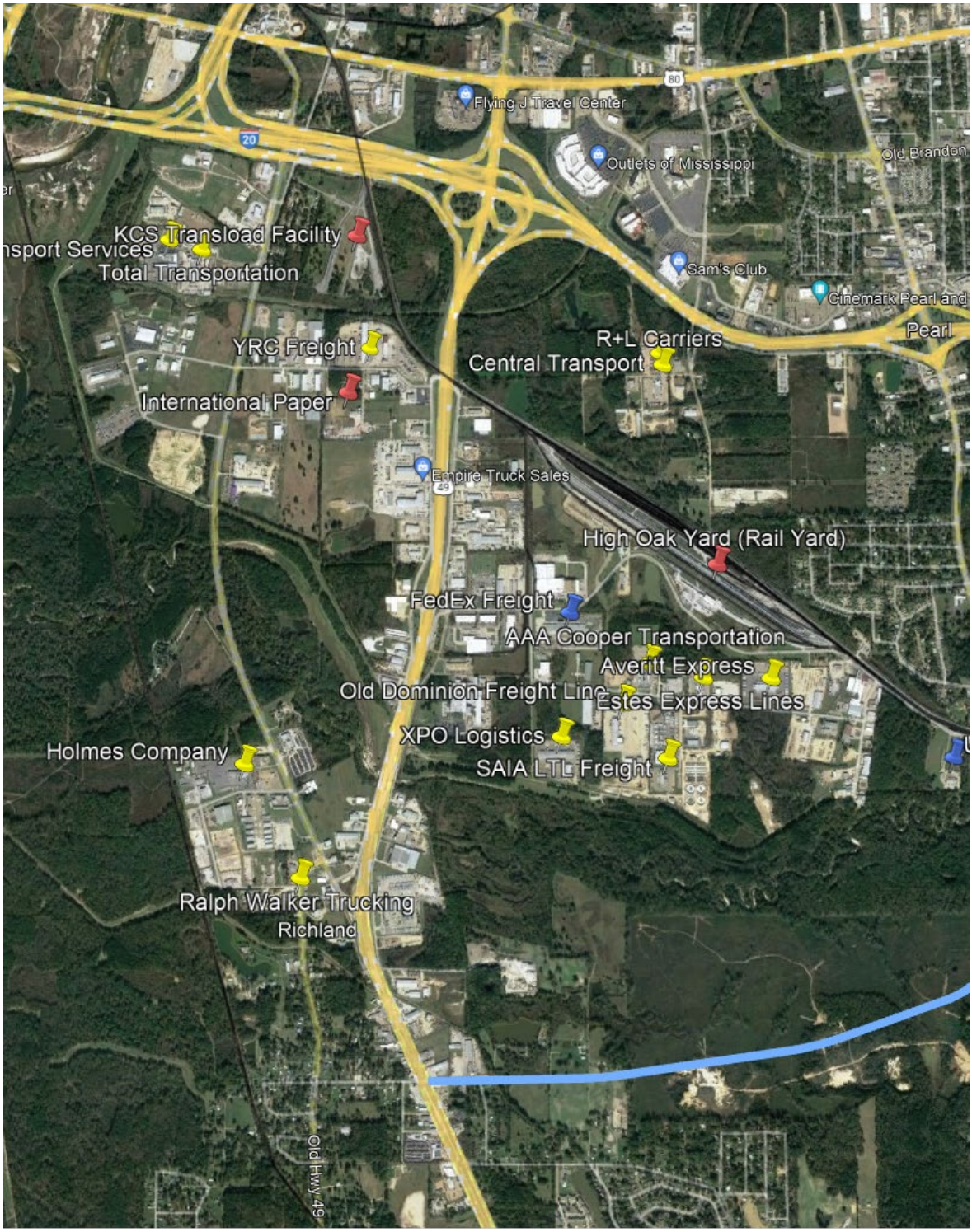



Figure 4: Richland Intermodal Rail Yard & Associated Industries

A larger scale map of the project location shows the choke points that have constrained the effective and efficient operation of these freight corridors within the confines of the major Jackson metro area. The Pearl-Richland Intermodal Connector is intended to overcome these constraints.

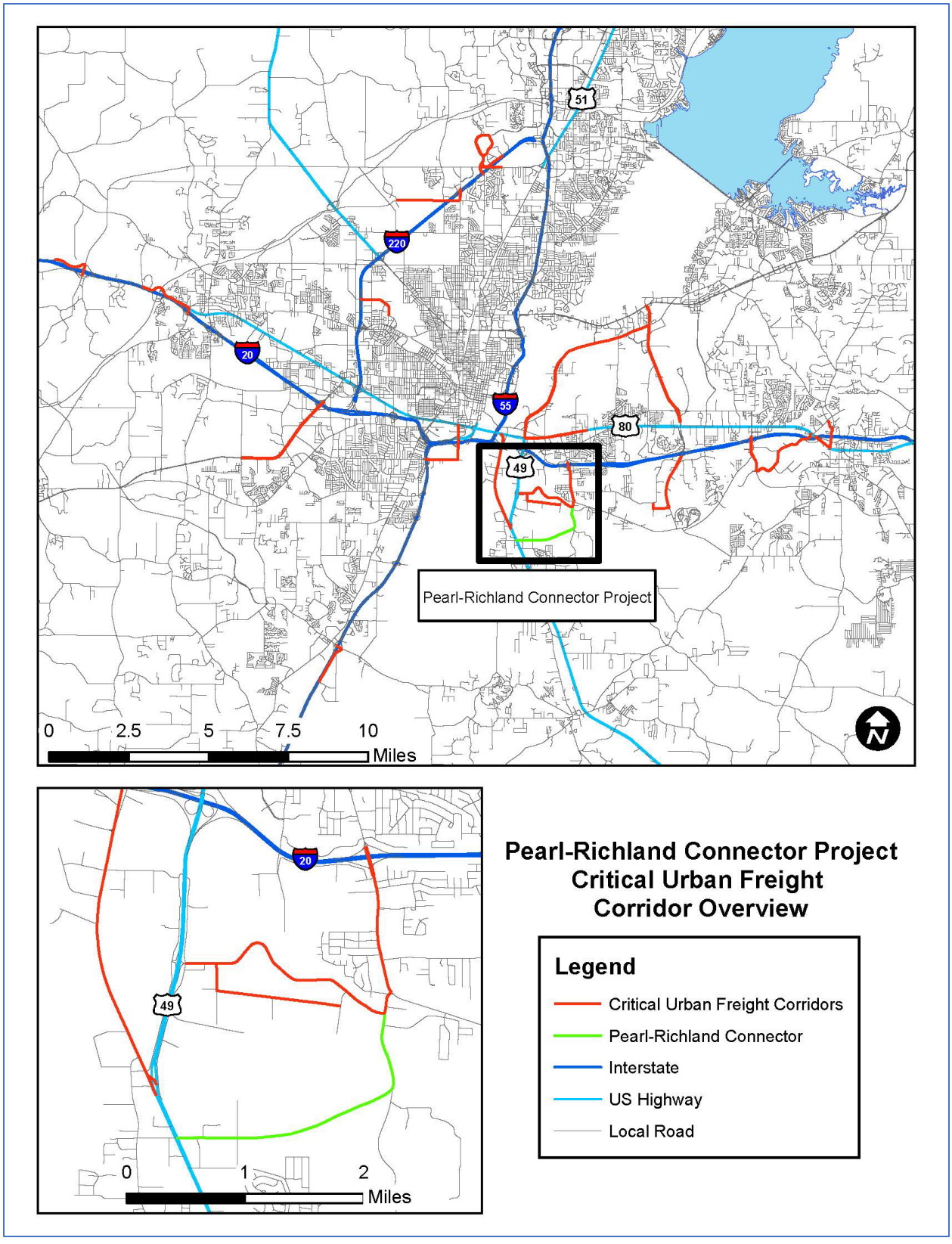



Figure 5: Pearl-Richland Connector and Critical Urban Freight Corridor

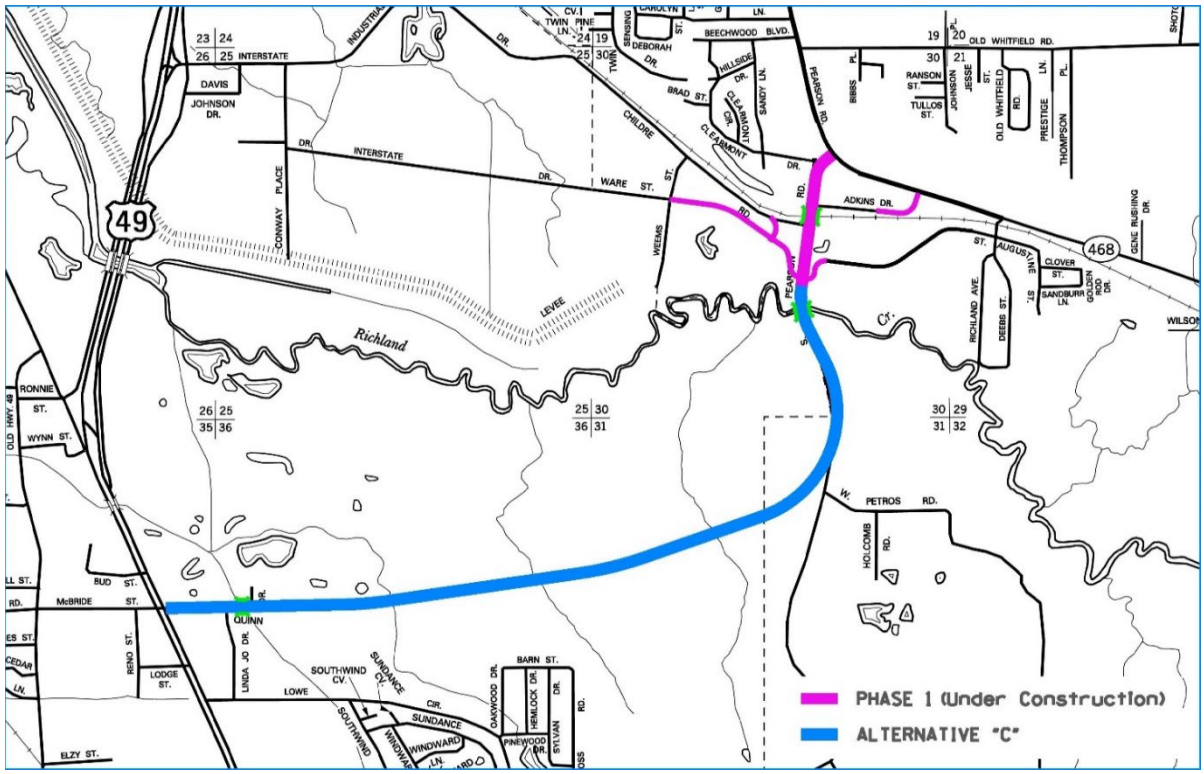


Figure 6: Pearl-Richland Intermodal Connector Phase I and Alternative "C"

At the intrastate, regional and local scale, recall that MDOT designated the Pearl-Richland Connector as a Critical Urban Freight; but in reality, the Connector is a critical bridge for Areas of Persistent Poverty, Historically Disadvantaged Communities and Federally Designated Opportunity Zones that are located adjacent to and literally all around the project area.

As shown in the maps that follow (figures 7 and 8), the existing intermodal hub and its associated jobs is essentially an island in Census Tract 204.02 that abuts Areas of Persistent Poverty, Historically Disadvantaged Communities and Opportunity Zones. So, while not located within those designated areas, the Pearl-Richland Intermodal Connector is indented facilitate more efficient and effective intermodal freight movement and provide a bridge to enhance these communities' access to these job opportunities.

a. Area of Persistent Poverty

The project area is literally surrounded by Areas of Persistent Poverty to the south, and west.

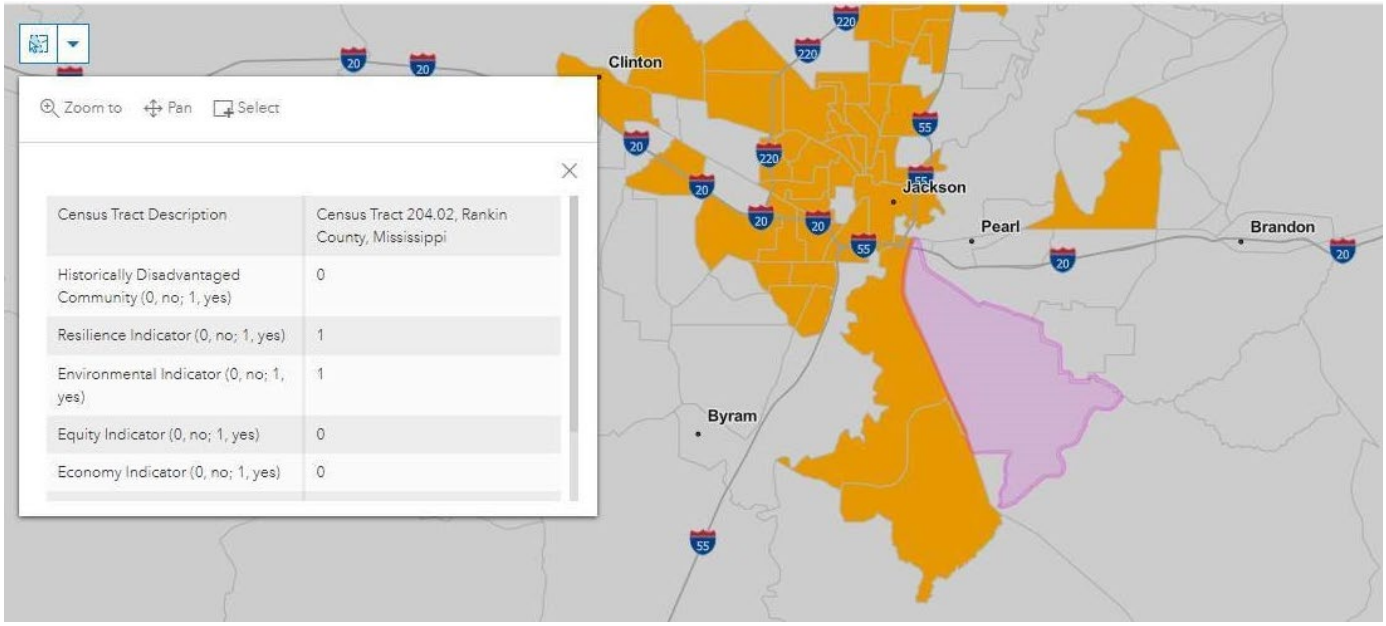



Figure 7: Historically Disadvantaged Communities (https://usdot.maps.arcgis.com/apps/dashboards/d6f90dfcc8b44525b04c7ce748a3674a)

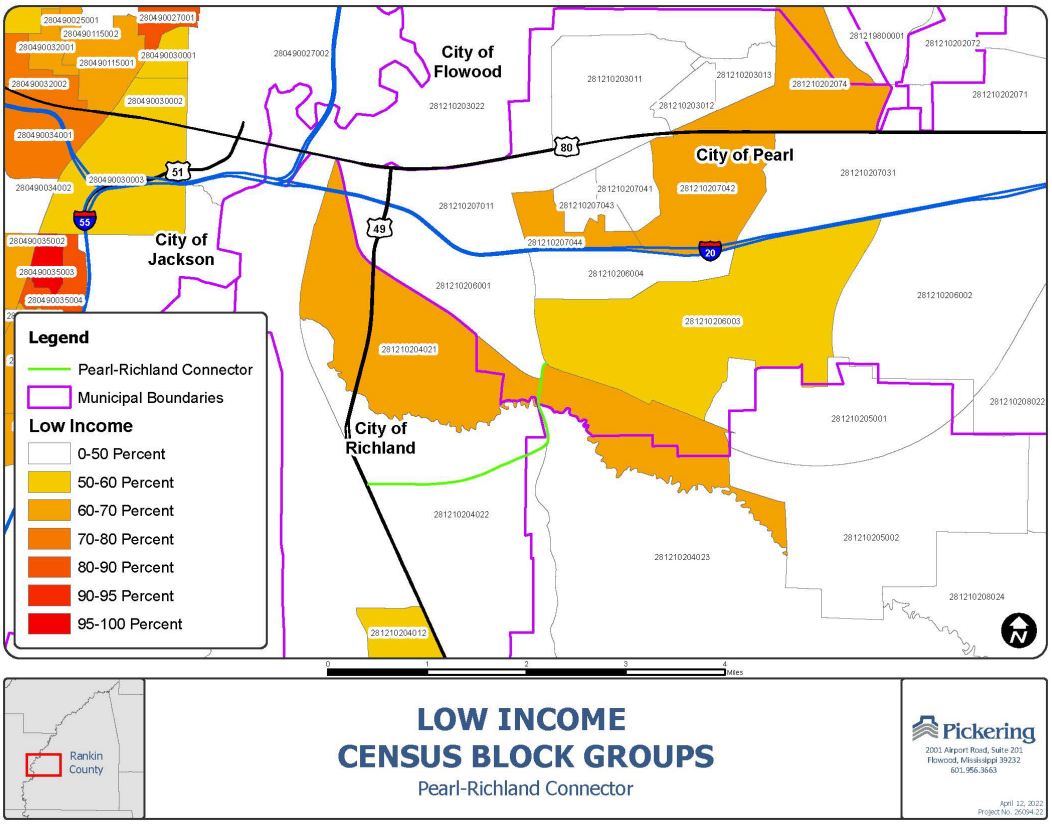



Figure 8: Low Income Census Block Groups (Pickering Firm, Inc.)

b. Census Tracts and Historically Disadvantaged Communities

The two (2) Census Tracts west of US-49 are Historically Disadvantaged Communities as is a third near the Jackson Medgar Evans International Airport.

c. Census-Designated Urbanized/Rural

The project area and the Cities of Pearl and Richland are all located will within the Jackson MPO 2013 smoothed Urbanized Area Boundary. A majority of the proposed route of Phase 2 is within an area of undeveloped "rural" land along and south of Richland Creek that separates most of the city of Richland from the city of Pearl.

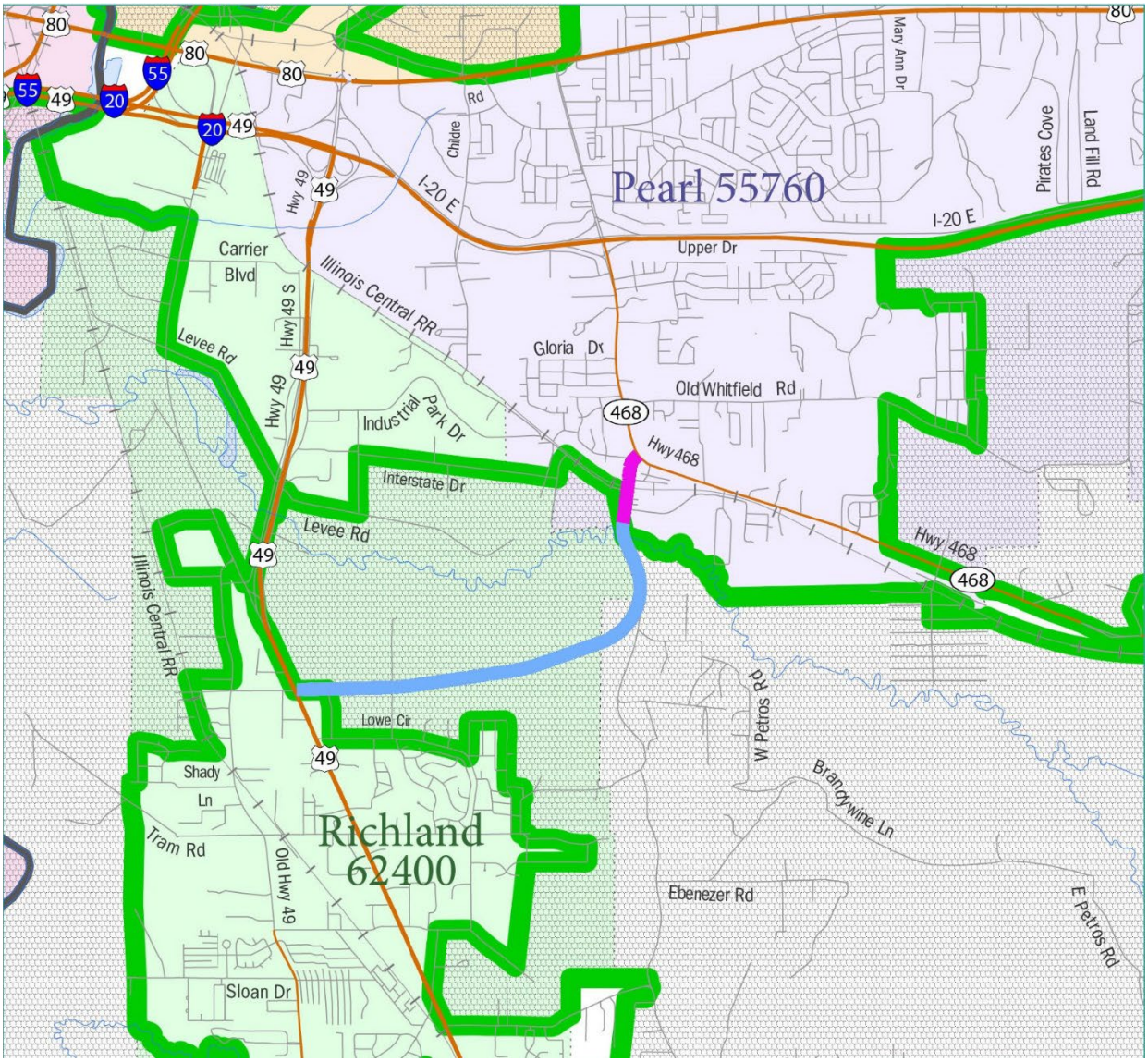


Figure 9: 2010 Census-Urbanized Area Reference Map: Jackson, MS

d. Federally-Designated Community Development Zones

The project will link two (2) Opportunity Zones (1) in the City of Pearl (2812102071); and (2) the other in the City of Richland (28121020401). The City of Pearl's Opportunity Zone has a 31% poverty rate and is a designated Historically Disadvantaged Community. The City of Richland's Opportunity Zone has a 19% poverty rate.

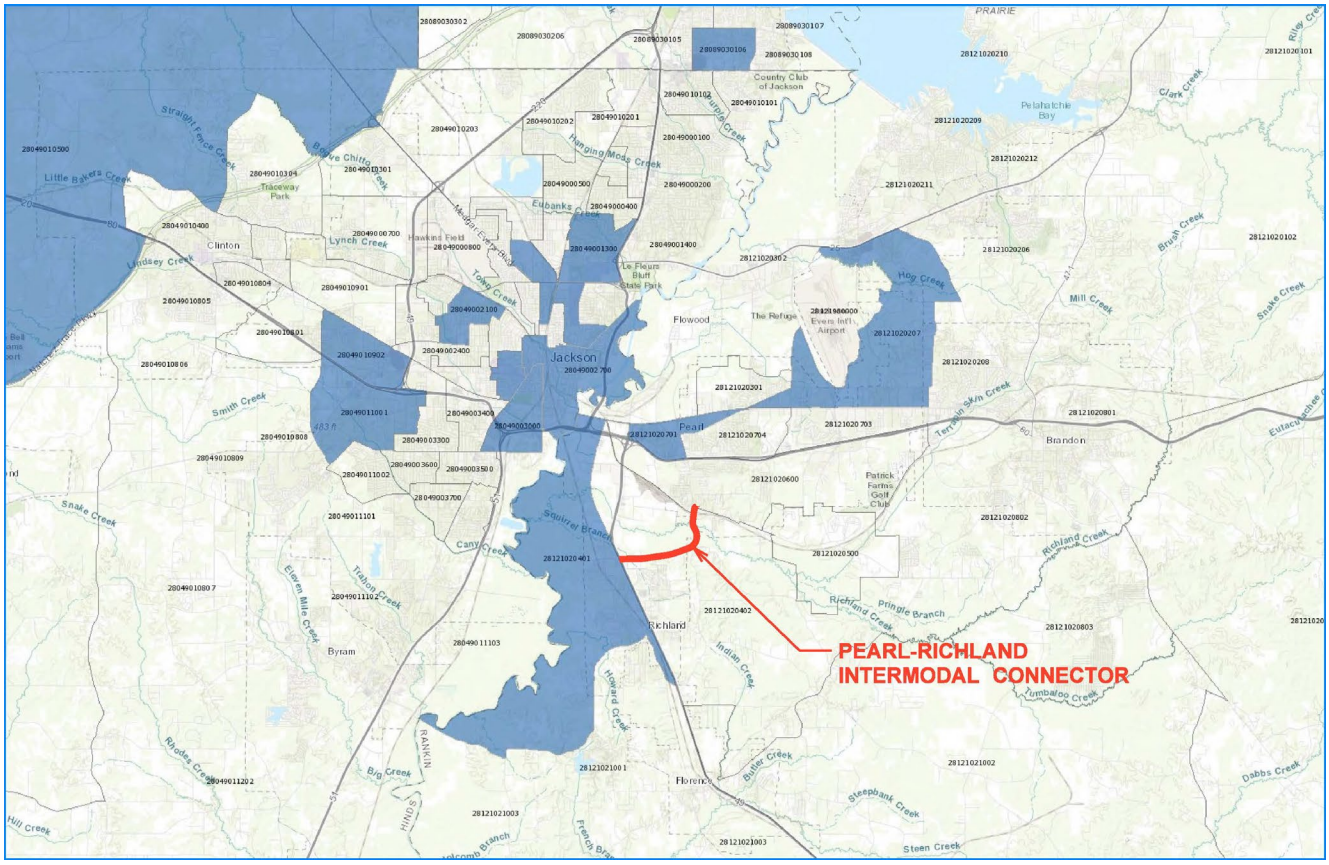



Figure 10: Opportunity Zones Near Project

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

The proposed budget tracks the Scope of Work detailed in Section I. Major Tasks are:

1. NEPA/Revised EA: Prepare a Supplemental EA to account for recent residential development that has made it necessary to reevaluate alternative options to connect South Pearson Rd. to US-49. The Supplemental EA will reevaluate route alternatives to identify the Least Environmentally Damaging Practicable Alternative and seek a new FONSI.

2. Permitting: Immediately following conclusion of the NEPA process, permitting will begin to ensure that all specific federal, state, county and local environmental permits are acquired. Permitting includes mitigating any and all unavoidable adverse environmental

impacts to aquatic resources. All unavoidable impacts will be mitigated and necessary permits obtained

3. Special Studies: Required and recommended Special Studies will be completed to ensure that the project is shovel ready at the conclusion of this Planning Grant. These special studies include at a minimum:
    a. Regional Equity Impact Analysis
    b. Regional Climate Action Plan
    c. Regional Equitable Development Plan
    d. Regional Energy Baseline Study
    e. Regional Climate Change Study
    f. Environmental Justice

4. Design: Funds are budgeted for 100% design to; a) widen South Pearson Road to 4-lane, and rehabilitate or construct of two (2) bridges; and, c) create a new minimum 4-lane road from the end of South Pearson Rd to connect to US-49 following the preferred route identified by the EA. In conjunction with design, special attention will be paid to environmental justice concerns pertaining to future right of way acquisition and/or relocation procedures to provide decent, safe and sanitary (DSS) housing.

| **PROPOSED PLANNING GRANT BUDGET** | | | | | |
|---|---|---|---|---|---|
| | **NEPA** | **Permitting** | **Special Studies[1]** | **Design** | **Total** |
| Non-Federal (20%) | 120,000 | 80,000 | 200,000 | 850,000 | **1,250,000** |
| RAISE (80%) | 480,000 | 320,000 | 800,000 | 3,400,000 | **5,000,000** |
| Total | 600,000 | 400,000 | 1,000,000 | 4,250,000 | **6,250,000** |
| [1]1. Regional Equity Impact Analysis, 2. Regional Climate Action Plan, 3. Regional Equitable Development Plan, 4. Regional Energy Baseline Study, 5. Regional Climate Change Study; and 6. Environmental Justice Study. | | | | | |

This is a stand-alone Planning Project. No non-reimbursable expenses are anticipated to be incurred between the time of award and obligation. The Proposed Budget clearly identifies and quantifies the necessary 20% non-federal match of $1,250,000. Furthermore, the applicant has demonstrated the ability to work closely with the Mississippi State Legislature, MDOT and the private sector to secure non-federal funds to match federal funds. In addition, the applicant has demonstrated the ability to successfully manage and administer complex projects and has fiscal management policies in place to allocate and document expenses between federal and non-federal sources. The applicant is unaware of any potential restrictions on potential non-federal matching funds that are subject to a condition precedent or time restricted.

## IV. MERIT CRITERIA

In applying the merit criteria to this application, it is important to remember that the Pearl-Richland Intermodal Connector Phase II is a Critical Urban Freight Corridor. The project's 2012 EA and FONSI and the December 2020 Jackson MPO's 2045 Metropolitan Transportation Plan both provide abundant data to address DOT's merit criteria for the Phase II Planning grant. In particular, the MPO's 2045 Plan's seven (7) Technical Reports provide considerable recent data vis-à-vis the individual merit criteria. Still, given that this is a planning grant application it is impossible to provide "clear, direct, data-driven information" on the specific benefits which will be provided beyond common practice for planning, designing or building intermodal transportation infrastructure as called for in the NOFO Table on pages 41-47. Nonetheless, to the maximum extent possible the narrative summarizes baseline data on existing conditions, needs assessment and forecasts. Of special overall relevance, MDOT's Commitments to Environmental Excellence from the 2012 EA, demonstrates a proactive response to several key merit criteria.

# MDOT Commitments to Environmental Excellence

**Project No:** STPD-7040-00(001)LPA -105068-811000 **Highway:** Pearl-Richland Intermodal Connector **Revision Date:** 1-24-12
**Preliminary Environmental Assessment** **County:** Rankin County **Total pages:** 1
***Value Engineering Study Recommended** ☐ Yes X No

| Commitments/Requirements | Source of Commitment | Responsible Office | Place on Plans | Requires A Special Provision | Status of Commitment/Requirement |
|---|---|---|---|---|---|
| **Flood Storage/Floodplain:** A Hydraulic Study will be performed prior to final design to determine whether existing bridges along South Pearson Road will be rehabbed to meet current design criteria or new bridges will be constructed. The most economically feasible option will be chosen. Proper drainage and relief structures will be implemented and certification provided by a registered professional engineer demonstrating that the encroachments within the Richland Creek flood plain shall not result in any increase in flood levels during occurrence of the base flood discharge. | EA Section 4.14 | Pearl-Richland Intermodal Connector Commission | Yes | No | To be addressed during the Design Phase |
| **Multi-use Path:** Proposed multi-use path to be constructed along Harper Street near the existing City of Richland's Community Complex. | EA Section 4.7 | Pearl-Richland Intermodal Connector Commission | Yes | No | To take place during construction phase of the project |
| **Environmental Justice:** Through compliance with CFR 49.24 (normal right of way acquisition and/or relocation procedures) decent, safe, and sanitary (DSS) housing will be provided. | EA Section 4.3.3 | Pearl-Richland Intermodal Connector Commission | No | No | To take place during row acquisition phase of the project |
| **Outreach:** Every effort will be made to notify the public, specifically the residents located in the mobile home park located at the corner of South Pearson Road and Saint Augustine Road, of the proposed project and to provide them with a forum to express their concerns and ask questions. Flyers in both English and Spanish will be posted on each of the mobile homes to provide information regarding the public hearing. The postings will be made in conjunction with the timing of the legal ads. | EA Section 4.3.3 | Pearl-Richland Intermodal Connector Commission | No | No | To take place during the environmental phase of the project |

**All practical and standard procedures and measures, including Best Management practices will be implemented to avoid or minimize impacts.**

- These commitments should be carried throughout each phase of the project development including Design, Right of Way, Construction, and Maintenance.

*Value Engineering (VE) Studies are recommended for projects on the NHS System and/or an Intermodal Connector with estimated project costs approaching $25 Million

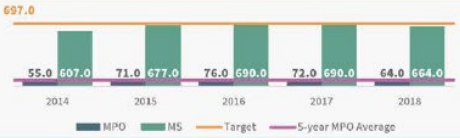
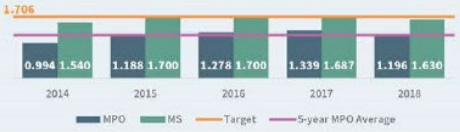
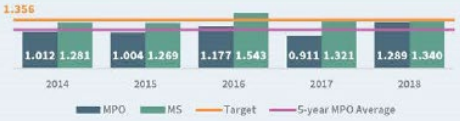
1

Figure 11: Environmental Assessment, Proposed Pearl-Richland Intermodal Connector (Federal Aid Project No. STPD-7040-00(001)LPA\105068-811000) pg. 3

a. Safety

The Jackson MPO has had solid Safety Performance Measures from 2014 to 2018 (figure 1).

**Safety Performance Measures (PM1)**

| Measure | MDOT Calendar Year 2019 Target | 5-Year MPO Average | 2014-2018 Trends/Results | Score | Analysis |
|---|---|---|---|---|---|
| Number of Fatalities | 697.0 | 67.6 |  |  | The number of fatalities within the MPA have been steady from 2014 to 2018. |
| Rate of Fatalities (per 100 million Vehicle Miles Traveled) | 1.706 | 1.199 |  |  | The rate of fatalities within the MPA remains steady. |
| Number of Serious Injuries | 556.0 | 60.8 |  |  | The number of serious injury crashes within the MPA has been steady between 2014 and 2018. |
| Rate of Serious Injuries (per 100 million Vehicle Miles Traveled) | 1.356 | 1.079 |  |  | The rate of serious injuries within the MPA remains relatively steady. |
| Number of Non-motorized fatalities and serious injuries | 131.4 | 20.8 |  |  | The number of non-motorized fatalities and serious injuries within the MPA remains relatively steady. |

**Source:** Fatality Analysis Reporting System (FARS); Safety Analysis Management System (SAMS); Mississippi Department of Transportation (MDOT)

Figure 12: Jackson MPO, Technical Report #3 pg. 2

However, several road segments and especially intersections with US-49 within the Phase II project area have a disproportionate number of high crash frequency (figure 2).

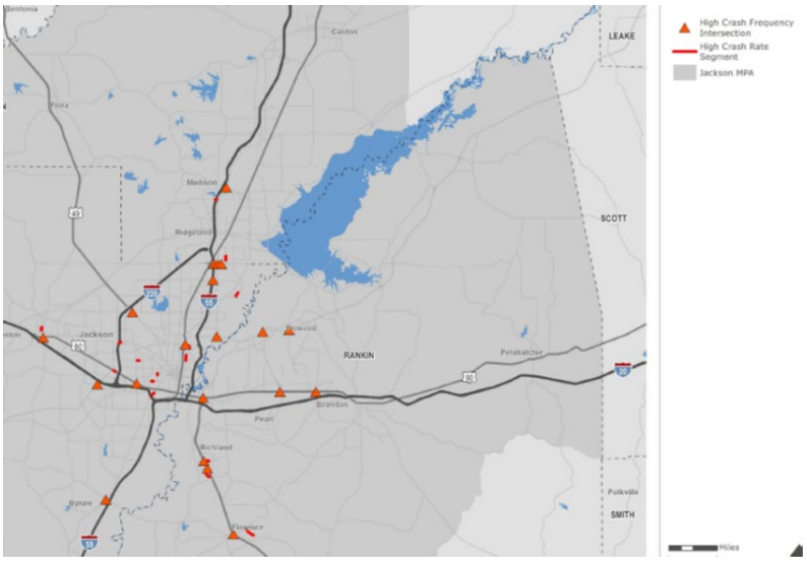



Figure 13: Jackson MPO Technical Report #2 pg. 32

Three of the MPO's top twenty Intersections with High Crash Frequency by Severity from 2014-2018 are within the project area (table 3).

| Route | Location | Total Crashes | Average Annual Crash Frequency[1] | Fatal | Life Threatening | Moderate Injury | Complaint of Pain | Property Damage Only |
|---|---|---|---|---|---|---|---|---|
| MS 25 (Lakeland Dr) | 0.35 miles east of Ridgewood Rd to 0.23 miles west of Treetops Blvd | 363 | 72.6 | 0 | 0 | 10 | 60 | 293 |
| MS 25 (Lakeland Dr) | 0.39 miles west of Old Fannin Rd to Old Fannin Rd | 199 | 39.8 | 0 | 1 | 3 | 26 | 169 |
| MS 25 (Lakeland Dr) | Old Fannin Rd to 0.42 miles east of Old Fannin Rd | 152 | 30.4 | 0 | 1 | 5 | 31 | 115 |
| I-20 WB | Gallatin St Off Ramp (Exit 45A) to S State St On Ramp | 151 | 30.2 | 1 | 0 | 6 | 37 | 107 |
| MS 18 (Crossgates Blvd) | US 80 to 0.19 miles south of US 80 | 151 | 30.2 | 0 | 0 | 7 | 19 | 125 |
| E County Line Rd | I-55 Service Rd to 0.11 miles west of Ridgewood Rd | 142 | 28.4 | 0 | 0 | 2 | 19 | 121 |
| W Woodrow Wilson Ave | Livingston Rd to 0.16 miles east of Livingston Rd | 131 | 26.2 | 0 | 1 | 4 | 27 | 99 |
| I-55 SB | E Woodrow Wilson Ave On Ramp to 0.14 miles south of E Woodrow Wilson Ave On Ramp | 130 | 26.0 | 0 | 0 | 2 | 20 | 108 |
| I-55 SB | E Fortification St Off Ramp (Exit 96C) to E Fortification St On Ramp | 122 | 24.4 | 1 | 0 | 2 | 22 | 97 |
| Hwy 463 | 0.13 miles east of Grandview Blvd to 0.10 miles west of Crawford St | 122 | 24.4 | 0 | 0 | 9 | 18 | 95 |
| Grandview Blvd | Hwy 463 to 0.28 miles south of MS 463 | 121 | 24.2 | 0 | 0 | 3 | 13 | 105 |
| US 80 | 0.16 miles east of MS 18 (Robinson Rd) to 0.05 miles west of I-220 SB on ramp | 119 | 23.8 | 0 | 0 | 3 | 32 | 84 |
| I-55 SB | I-20 EB Off Ramp (Exit 94) to Merge with I-20 WB | 118 | 23.6 | 1 | 0 | 6 | 21 | 90 |
| US 49 | Cleary Rd / Richland Cir to Wilson Dr | 117 | 23.4 | 0 | 1 | 2 | 28 | 86 |
| US 80 | Springridge Rd to 0.34 miles east of Springridge Rd | 116 | 23.2 | 0 | 0 | 5 | 18 | 93 |
| US 49 | Wilson Dr to 0.27 miles north of Wilson Dr | 114 | 22.8 | 0 | 0 | 1 | 24 | 89 |
| I-55 NB | 0.22 miles south of E Woodrow Wilson Ave Off Ramp (Exit 98A) to E Woodrow Wilson Ave Off Ramp (Exit 98A) | 113 | 22.6 | 0 | 0 | 1 | 21 | 91 |
| I-55 NB | E McDowell Rd On Ramp to S State St Off Ramp (Exit 92B) | 108 | 21.6 | 0 | 0 | 1 | 23 | 84 |
| US 49 | E Main St to 0.63 miles north of E Main St | 108 | 21.6 | 0 | 0 | 3 | 21 | 84 |
| MS 25 (Lakeland Dr) | Museum Blvd to 0.30 miles east of Museum Blvd | 107 | 21.4 | 0 | 0 | 1 | 16 | 90 |
| Total | | 2,804 | 560.8 | 3 | 4 | 76 | 496 | 2,225 |

Source: SAMS, 2019; NSI, 2019
[1] The average annual crash frequency is the average number of reported crashes per year between 2014 and 2018.

Table 1: Jackson MPO Technical Report #2 pg. 29

Also, three of the MPO's top twenty (20) intersections with high crash frequency by severity from 2014-2018 are within the project area (table 4)

| Intersection | Total Crashes | Average Annual Crash Frequency[1] | Fatal | Life-Threatening | Moderate Injury | Complaint of Pain | Property Damage Only |
|---|---|---|---|---|---|---|---|
| County Line Rd at I-55 E Frontage Rd | 616 | 123.2 | 0 | 0 | 7 | 97 | 512 |
| US 80 at Crossgates Blvd | 351 | 70.2 | 0 | 0 | 3 | 47 | 301 |
| MS 18 at Greenway Dr | 307 | 61.4 | 0 | 0 | 11 | 66 | 230 |
| US 80 at Springridge Rd / Clinton Pkwy | 299 | 59.8 | 0 | 0 | 2 | 60 | 237 |
| State St at Woodrow Wilson Ave | 283 | 56.6 | 0 | 0 | 4 | 51 | 228 |
| US 49 at MS 469 | 281 | 56.2 | 1 | 0 | 5 | 41 | 234 |
| MS 25 (Lakeland Dr) at MS 475 | 254 | 50.8 | 0 | 0 | 6 | 35 | 213 |
| Medgar Evers Blvd at Northside Dr | 243 | 48.6 | 0 | 2 | 7 | 60 | 174 |
| US 80 at MS 475 | 241 | 48.2 | 0 | 1 | 8 | 41 | 191 |
| US 49 at Harper St | 239 | 47.8 | 0 | 1 | 5 | 37 | 196 |
| MS 25 (Lakeland Dr) at Old Fannin Rd | 227 | 45.4 | 0 | 0 | 1 | 39 | 187 |
| MS 463 at Grandview Blvd | 212 | 42.4 | 0 | 0 | 2 | 22 | 188 |
| US 49 at Scarbrough St / Wilson Dr | 209 | 41.8 | 1 | 1 | 8 | 40 | 159 |
| MS 25 (Lakeland Dr) at Ridgewood Rd | 207 | 41.4 | 0 | 0 | 4 | 37 | 166 |
| Siwell Rd at Terry Rd | 205 | 41.0 | 0 | 0 | 5 | 32 | 168 |
| County Line Rd at Ridgewood Rd | 205 | 41.0 | 1 | 0 | | 26 | 178 |
| US 80 at Ellis Ave | 204 | 40.8 | 2 | 0 | 7 | 52 | 143 |
| US 80 at US 49 | 197 | 39.4 | 0 | 1 | 8 | 38 | 150 |
| Beasley Rd / Adkins Blvd at I-55 E Frontage Rd | 196 | 39.2 | 0 | 0 | 9 | 37 | 150 |
| County Line Rd at Ridgewood Ct / Centre St | 196 | 39.2 | 0 | 1 | 3 | 29 | 163 |
| Total | 5,172 | 1,034.4 | 5 | 7 | 105 | 887 | 4,168 |

Source: SAMS, 2019; NSI, 2019
[1] The average annual crash frequency is the average number of reported crashes per year between 2014 and 2018.

Table 2: Jackson MPO Technical Report #2 pg. 34

Finally, three (3) of the MPO's top twenty (20) intersections with high crash frequency by collision type (2014-2018) are within the project area (figure 5).

| Intersection | Total Crashes | Average Annual Crash Frequency[1] | Angle | Bicycle | Deer | Fell from Vehicle | Fixed Object | Head On | Hit and Run | Jackknife | Left Turn Cross Traffic | Left Turn Same Roadway | Other | Other in Road | Other Object | Overturn | Parked Vehicle | Pedestrian | Rear End Slow or Stop | Rear End Turn | Right Turn Cross Traffic | Run Off Road - Left | Run Off Road - Right | Run Off Road - Straight | Sideswipe | Unknown |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| County Line Rd at I-55 N. Frontage Rd | 616 | 123.2 | 57 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 12 | 0 | 0 | 0 | 0 | 0 | 1 | 492 | 17 | 0 | 0 | 1 | 32 | 0 | 0 |
| US 80 at Crossgates Blvd | 351 | 70.2 | 22 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 1 | 12 | 0 | 0 | 0 | 0 | 1 | 0 | 265 | 19 | 0 | 1 | 1 | 25 | 0 | 0 |
| MS 18 at Greenway Dr | 307 | 61.4 | 20 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 2 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 210 | 3 | 2 | 1 | 2 | 29 | 0 | 1 |
| US 80 at Springridge Rd / Clinton Pkwy. | 299 | 59.8 | 26 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 48 | 0 | 0 | 1 | 0 | 0 | 0 | 201 | 1 | 0 | 0 | 0 | 19 | 0 | 0 |
| State St. at Woodrow Wilson Ave | 283 | 56.6 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 36 | 0 | 0 | 0 | 0 | 0 | 1 | 188 | 0 | 0 | 0 | 0 | 40 | 0 | 0 |
| US 49 at MS 469 | 281 | 56.2 | 16 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 1 | 0 | 1 | 204 | 2 | 1 | 1 | 0 | 36 | 1 | 0 |
| MS 25 (Lakeland Dr) at MS 475 | 254 | 50.8 | 15 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 173 | 3 | 0 | 2 | 6 | 32 | 0 | 0 |
| Medgar Evers Blvd at Northside Dr | 243 | 48.6 | 13 | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 2 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 172 | 6 | 0 | 1 | 0 | 22 | 0 | 0 |
| US 80 at MS 475 | 241 | 48.2 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 188 | 10 | 0 | 1 | 2 | 18 | 0 | 0 |
| US 49 at Harper St. | 239 | 47.8 | 25 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 3 | 0 | 146 | 4 | 0 | 2 | 1 | 43 | 0 | 0 |
| MS 25 (Lakeland Dr) at Old Fannin Rd | 227 | 45.4 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 0 | 0 | 0 | 0 | 0 | 1 | 172 | 5 | 0 | 0 | 0 | 25 | 0 | 0 |
| MS 463 at Grandview Blvd | 212 | 42.4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 1 | 0 | 110 | 7 | 0 | 1 | 1 | 51 | 0 | 0 |
| US 49 at Scarbrough St. / Wilson Dr | 209 | 41.8 | 13 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 2 | 23 | 1 | 1 | 0 | 0 | 2 | 1 | 140 | 6 | 0 | 0 | 0 | 16 | 0 | 0 |
| MS 25 (Lakeland Dr) at Ridgewood Rd | 207 | 41.4 | 14 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 147 | 2 | 1 | 3 | 1 | 28 | 0 | 0 |
| Siwell Rd at Terry Rd | 205 | 41.0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 26 | 0 | 0 | 0 | 0 | 0 | 1 | 117 | 4 | 0 | 0 | 1 | 15 | 0 | 0 |
| County Line Rd at Ridgewood Rd | 205 | 41.0 | 36 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 1 | 0 | 0 | 0 | 1 | 108 | 2 | 0 | 1 | 2 | 32 | 0 | 0 |
| US 80 at Ellis Ave | 204 | 40.8 | 36 | 0 | 0 | 0 | 1 | 1 | 5 | 0 | 6 | 22 | 0 | 1 | 0 | 0 | 0 | 0 | 95 | 1 | 0 | 0 | 1 | 35 | 0 | 0 |
| US 80 at US 49 | 197 | 39.4 | 13 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 111 | 4 | 0 | 1 | 2 | 27 | 0 | 0 |
| Beasley Rd / Adkins Blvd at I-55 N. Frontage Rd | 196 | 39.2 | 51 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 84 | 4 | 0 | 0 | 0 | 50 | 0 | 0 |
| County Line Rd at Ridgewood Ct. / Centre St. | 196 | 39.2 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 144 | 1 | 0 | 0 | 0 | 33 | 0 | 0 |
| Total | 5,172 | 1,034.4 | 472 | 1 | 2 | 3 | 9 | 7 | 18 | 1 | 30 | 391 | 1 | 3 | 1 | 1 | 7 | 8 | 3,467 | 101 | 4 | 15 | 21 | 608 | 1 | 1 |

Table 3: Jackson MPO Technical Report #2 pg. 35

The proposed project will significantly ease traffic congestion and resulting accidents by rerouting freight traffic to improve safety for motorists and access for first responders. These and other actions will provide significant benefits to eliminate and/or mitigate systemic safety issues between commuter and freight traffic at key intersections identified above. Reduced congestion and more effective signage and signaling will protect non-motorized travelers or communities from health and safety risks and mitigate systemic safety issues

Pertaining to congestion as a precondition to accidents, the 2012 EA found that traffic congestion along South Pearson Road due to backed-up vehicular traffic at the KCS at-grade railroad crossing just south of the intersection with Mississippi Highway 468 is a major problem for commuter access between Pearl and Richland, Mississippi. The 2008 Average Daily Traffic (ADT) counts indicate an average of 8,500 vehicles at this rail crossing daily. When asked about traffic along South Pearson Road, most local residents complained about the traffic back-ups at the railroad tracks and reported the frequent use of alternate routes to commute between Pearl and Richland to avoid these backups. KCS rail lines and traffic at this crossing has increased over the years as a result of the increase of industrial facilities in the Pearl and Richland areas. With the increase in traffic, it is becoming difficult for KCS to adhere to the local ordinances which limit the time a train can block traffic.

There is documented need for better access for commercial and industrial truck traffic between Pearl and Richland, which currently has to enter the "stack" (the complex Interstate Highways 55 and 20, and U.S. Highway 49 interchange) and to use U.S. Highway 49. The Pearl-Richland Intermodal Connector's primary purpose/need is to reduce traffic congestion and traffic back-ups at the KCS railroad crossing and increase capacity along South Pearson Road between Pearl and Richland, which is a critical concern for both residential and commercial vehicular traffic.

Traffic Models produced for the Jackson MPO *Transportation Plan*, and updated to reflect the Pearl-Richland Intermodal Connector indicate that the traffic volume traveling along U.S. Highway 49 between the intersections of Old Pearson Road and U.S. Highway 20 will increase by approximately 43 percent, or nearly 20,000 vehicles by 2035. The model indicates that the proposed project would provide a route for approximately 38,000 vehicles along the current tract of South Pearson Road, between U.S. Highway 49 and the intersection of South Pearson Road and Mississippi Highway 468. This represents over 50 percent of the vehicles that are projected to travel on U.S. Highway 49. Current data suggests that approximately 8,500 vehicles travel along South Pearson Road daily, which represents approximately 18 percent of the traffic along the same stretch of U.S. Highway 49. This comparison suggests that a substantial amount of vehicular traffic would utilize the proposed project as an alternative to U.S. Highway 49 to access residential, commercial, and industrial properties in the area, as well as access to U.S. Highway 20.

b. Environmental Sustainability

Neither the 2012 EA nor the Jackson MPO Study include detailed baseline studies of specific air pollution and greenhouse gas emissions. EPA's EJSCREEN (https://ejscreen.epa.gov/mapper) was reviewed and did not report any major environmental sustainability baseline date. The planning grant will allow the collection and analysis of baseline data and provide quantified benefits. Still, the project will provide significant benefits to reduce transportation related air pollution/greenhouse gas emissions; reduce vehicle miles travelled and travel time; support fiscally responsible integrated land use and transportation design, and evaluate electrification and/or zero emission vehicle infrastructure. MDOT's 2012 Commitments to Environmental Excellence pointed out the need for a hydrologic study of the two (2) bridges to ensure that they will not negatively impact flood storage or existing floodplains. The Jackson MPO Plan supports the growing interest and investment in alternative fuel vehicle technologies especially electric vehicles to drastically reduce automobile related emissions and encourages the long-term need for public investment in vehicle charging stations.

The recommendations in the MDOT Commitment to Environmental Excellence require a proactive outreach and environmental justice component in the NEPA process. In addition to the Area of Persistent Poverty and Historically Disadvantaged Community maps in Section II, EPA's EJSCREEN reenforces the project's position as an essential bridge to provide new transportation routes for underserved, overburdened or disadvantaged communities' transportation to the industrial jobs located within the project area.

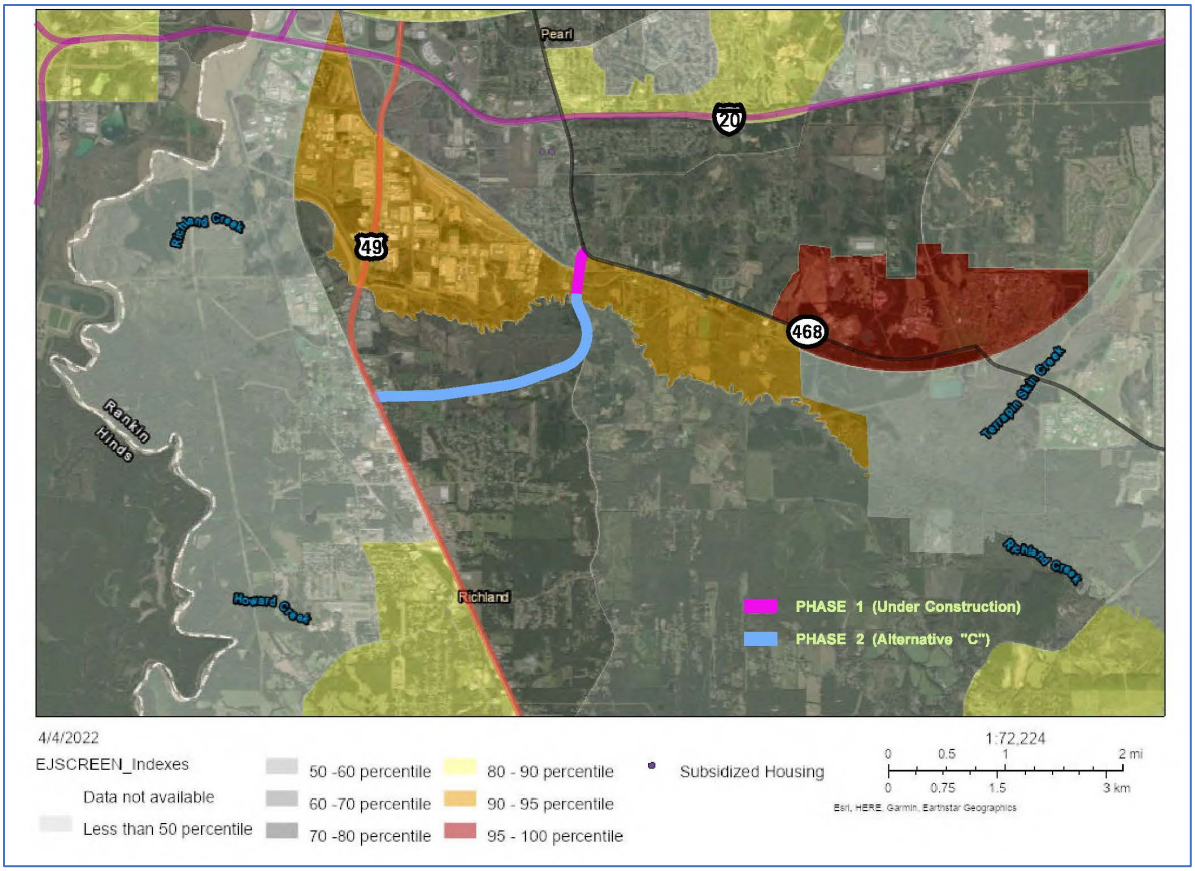



Figure 14: EPA's EJSCREEN Low Income Populations

c. Quality of Life

Continuing on the environmental sustainability and environmental justice discussion above, the maps in Section II show that the project will create a bridge of opportunity for access to jobs for two (2) Low Income Community Opportunity Zones; 1) Pearl (#2812102701) and 2) Richland (#281210220401) and at least two (2) Historically Disadvantaged Communities. The planning process will identify opportunities to significantly increase accessibility for underserved, overburdened or disadvantaged communities; remove individual and community transportation barriers for access to jobs and business opportunities; proactively address racial equity or other disparities. MDOT's 2012 Commitments to Environmental Excellence specifically emphasizes Environmental Justice concerns in right of way acquisition and/or relocation procedures to ensure that "decent, safe, and sanitary housing will be provided". DOT also observes the need for a robust outreach effort for economically disadvantaged communities and for notices of public hearings to be printed in both English and Spanish. The proposed Phase II project will increase accessibility for travelers specifically for underserved, overburdened, or disadvantaged communities and remove barriers for individuals and communities to transportation, jobs, and business opportunities. In addition; the City of Richland's 2019 Comprehensive Plan incorporates the completion of the Pearl-Richland Intermodal Connector in development plans to reduce transportation and housing cost burdens, including commercial and mixed-income residential development. Phase II's Supplemental EA and design can evaluate the new route's potential role to provide new transportation options for the area's medically underserved population (Figure 7).

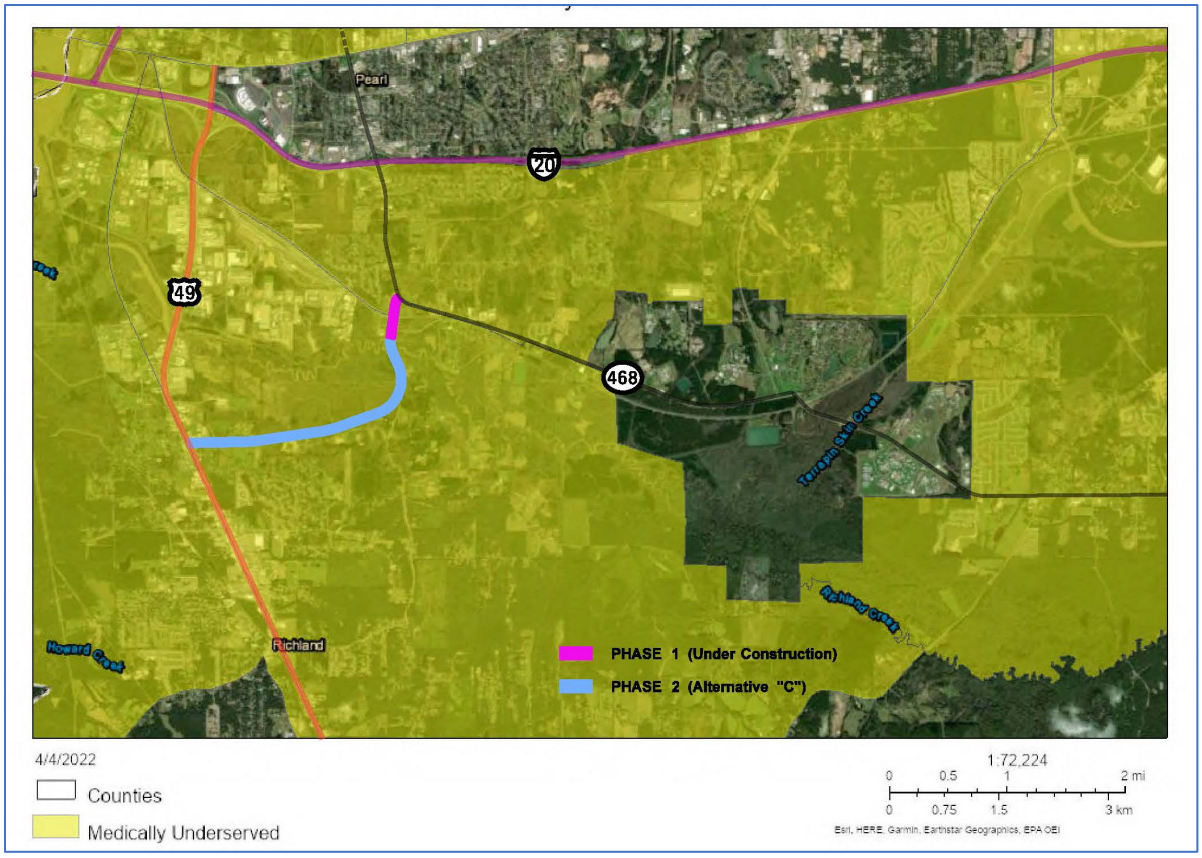


Figure 15: EPA's EJSCREEN Medically Underserved Population

d. Improves Mobility and Community Connectivity

The highest truck traffic volumes within the Jackson MPO area are on I-55, I-20, US 49 and MS 25. Existing connections between US-49 and South Pearson Road are constrained but Phase II will significantly improve intermodal freight movement and movement of supply chains. The NEPA effort and special studies will include a robust community outreach and engagement effort to evaluate opportunities to integrate affordable transportation choices for underserved or disadvantaged communities. MDOT's 2012 Commitments to Environmental Excellence added a multi-use path for Phase II along Harper St. near the City of Richland's Community Complex.

The project is intended to improve access to and through the intermodal industrial businesses. None of the referenced documents including the City of Pearl and City of Richland Comprehensive Plans propose extending public transit or multi-use non-motorized traveler paths in the project area. However, the 2012 EA and MDOT's Commitment to Environmental Excellence both highlight multi-use paths in conjunction with Phase II's connection with US-49. The supplemental EA and design work on the new route from the end of South Pearson Road to U.S.-49 will proactively evaluate and attempt to integrate viable affordable transportation choices for the underserved, overburdened and/or disadvantaged communities adjacent to the project area. In short, the planning project will work with the City of Pearl and Richland to encourage thriving communities for individuals to work; live, and play by creating transportation choices for

individuals to move freely with or without a car to, from or through the jobs in the project's industrial hubs. Despite its proximity to low-income populations and areas of persistent poverty, the project area does not have a major concentration of the Jackson MPO's households with no vehicle (Figure 8)

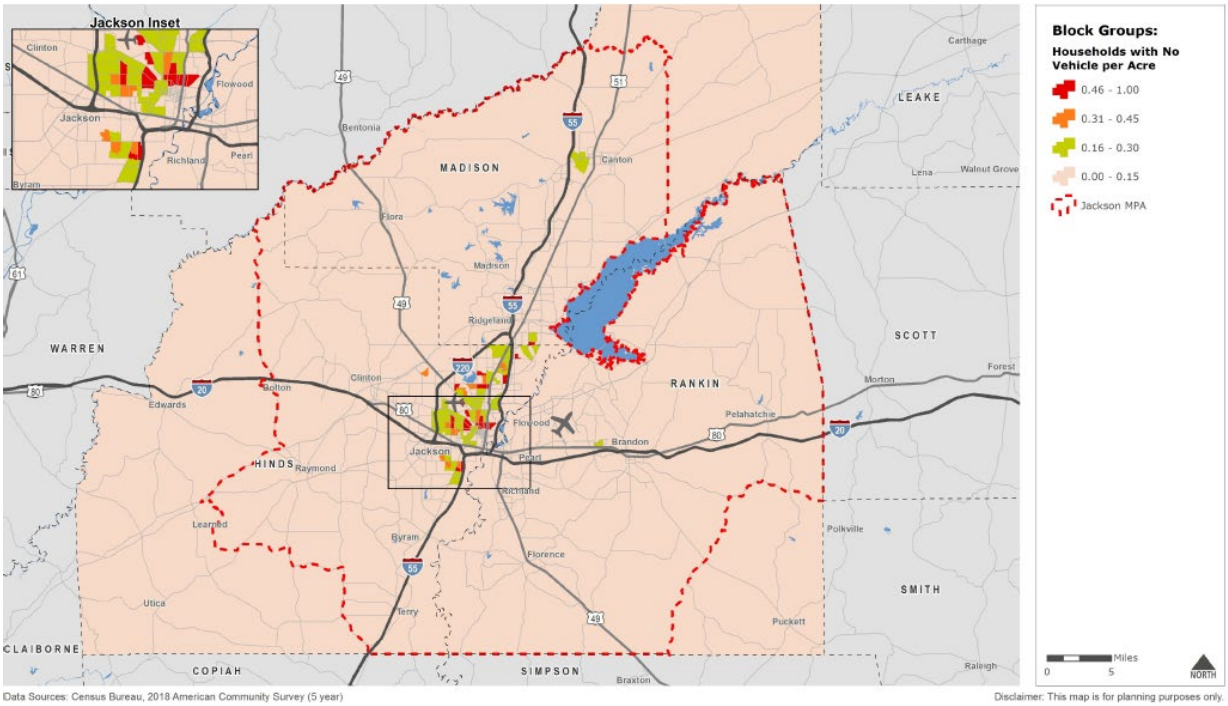


Figure 16: Households with No Vehicle per Acre (Jackson MPO #2 pg. 107)

e. Economic Competitiveness and Opportunity

Economic competitiveness to improve freight system operations to increase travel time reliability, velocity of goods movement, and multimodal freight mobility, especially for supply chain bottlenecks is a primary project purpose and need. The Jackson MPO Plan projects a dramatic increase in the project area's freight truck growth from 2018-2025 (figures 9 and 10).

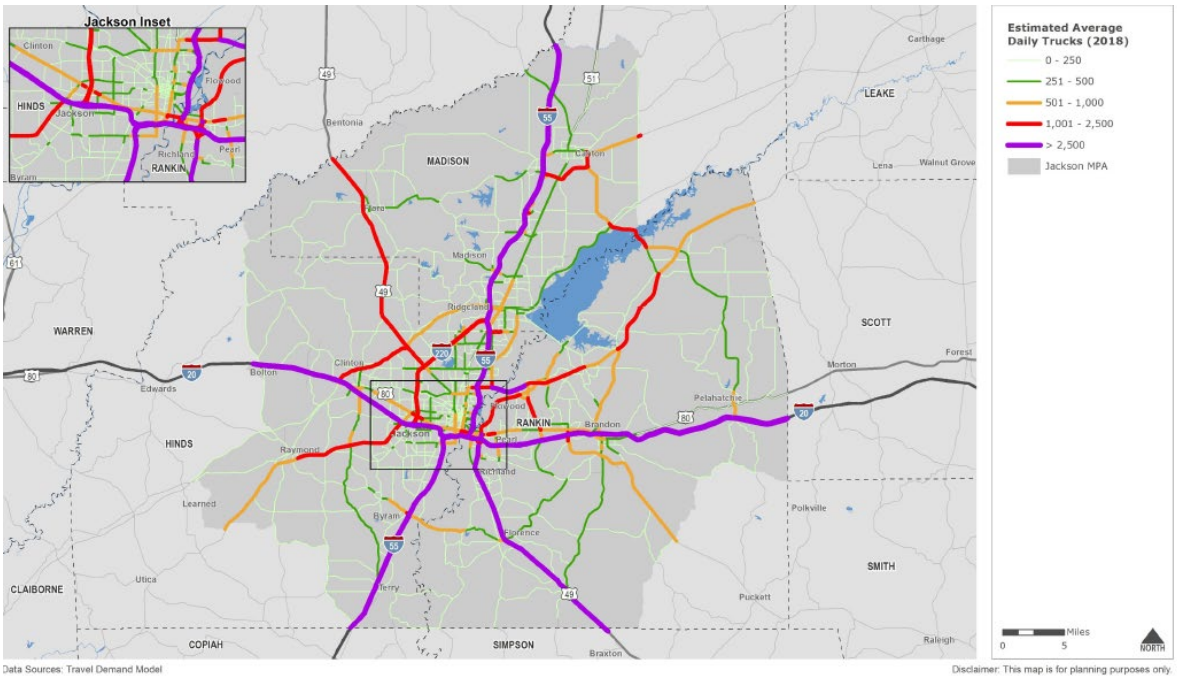


Figure 17: Modeled Regional Freight Truck Traffic, 2019 (Jackson MPO #2 pg. 44)

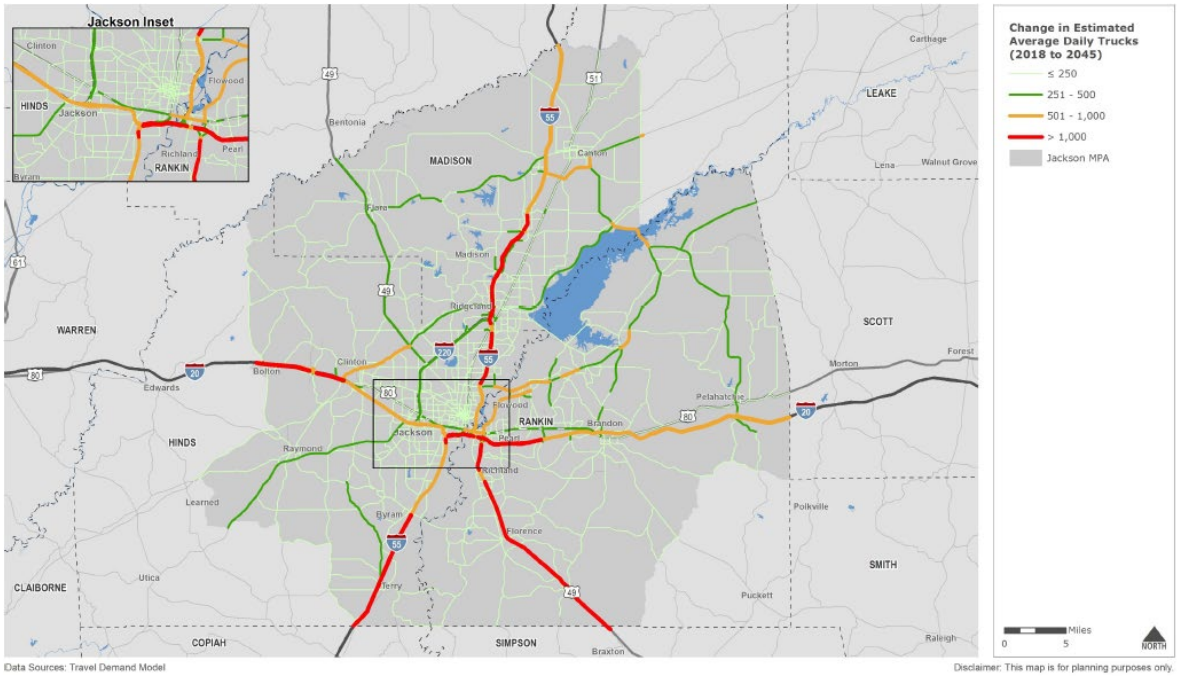


Figure 2 Projected Freight Truck Growth, 2018-2045 (Jackson MPO #4 pg. 64)

Similarly, the project area is estimated to have among the Jackson MPO's highest freight truck traffic in 2045 (Figure 11)

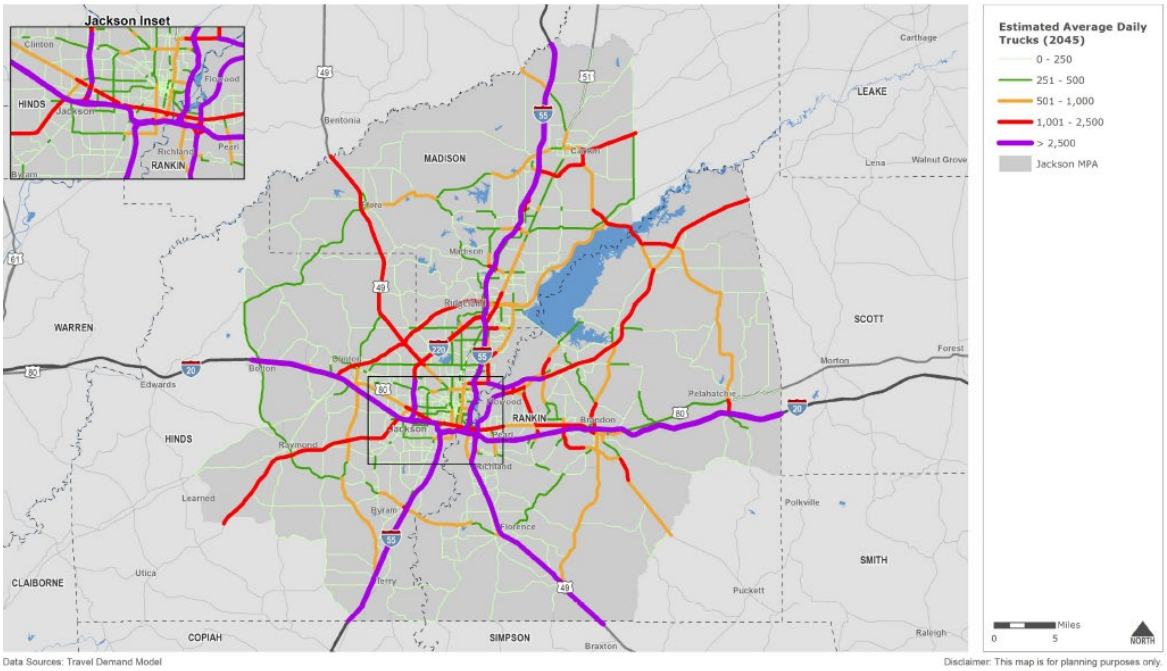



Figure 19: Freight Truck Traffic, 2045 (Jackson MPO #4 pg. 65)

This truck/freight traffic was already impacting truck travel time reliability in 2018 (figure 12).

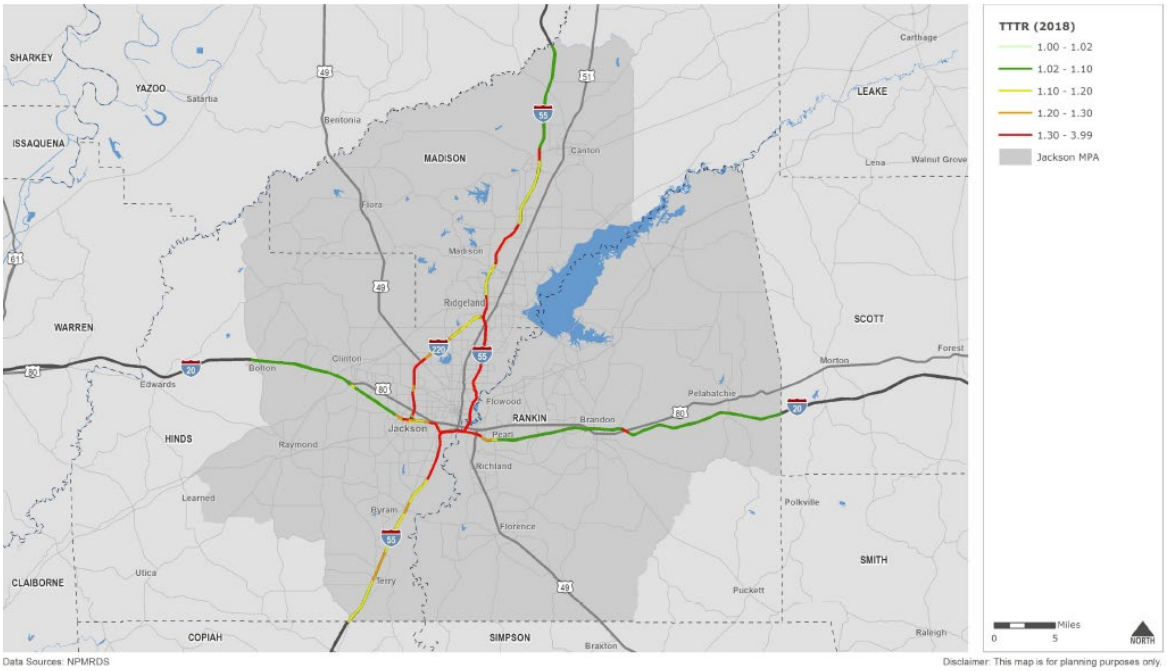



Figure 20: Truck Travel Time Reliability, 2018 (Jackson MPO #2 pg. 50)

The Cities of Pearl and Richland both have proposed land use plans that anticipate industrial/light industrial development adjacent to the Connector. Phase II will provide significant benefits for

local access to these new jobs. Better travel time reliability, velocity of goods movement, and multimodal freight mobility, especially for supply chain bottlenecks will encourage private industry to expand operations will provide economic strength and revitalize underserved, overburdened historically disadvantaged communities.

f. State of Good Repair

The Jackson MPO Plan explicitly emphasizes and incorporates maintenance and good repair in its long-term transportation plans. Maintaining good repair, or sufficient pavement conditions, ensures that roads can safely operate at full capacity and minimize vehicle wear and tear. The MPO's public participation survey showed that maintaining roadways and bridges was the public's top transportation priority (Technical Report #2 pg. 14). Using data from the Highway Performance Monitoring System (HPMS) the Jackson MPO reported that 77.2% of Interstate pavement in the MPO was "good", 22.8% "fair" and 0% 'poor", for non-interstate pavement, 36.1% was "good", 58.9% "fair", and 5% "poor" (id at pg. 15). Figure 13 shows the pavement conditions of the project's major connector roads. While US-49 was identified in 2018 has having fair and poor pavement conditions, since then a major improvement project has begun along the entire length of US-49. Accordingly, these pavement deficiencies on US-49 have been or will be corrected in the very near future. In cooperation with project collaborators and partners, the design will incorporate a proactive maintenance program to ensure that the entire project is maintained in a state of good repair for the long-term.

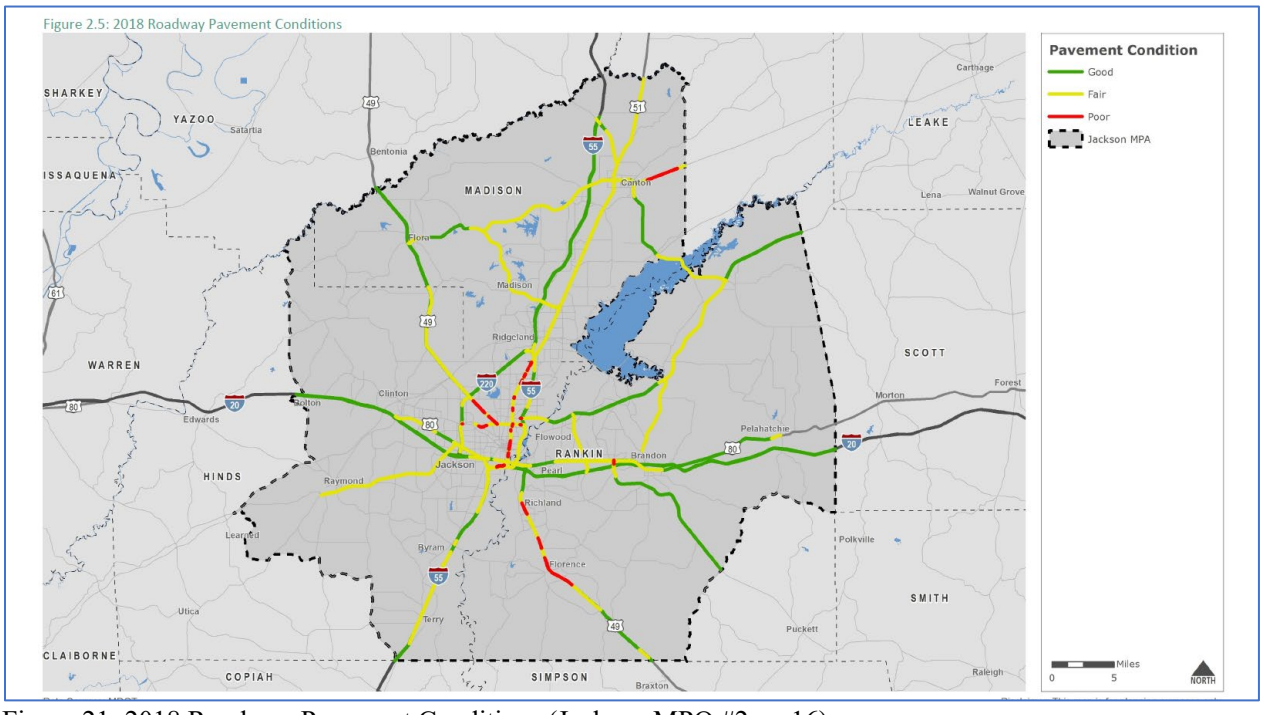


Figure 21: 2018 Roadway Pavement Conditions (Jackson MPO #2 pg.16)

g. Partnership and Collaboration

The Pearl-Richland Intermodal Connector project has and will continue with strong partnership between the State of Mississippi, MDOT, the Cities of Pearl and Richland and the private sector. This collaboration will be expanded to include other entities and outreach to Disadvantaged Business Enterprises. The collaboration will seek to grow by engaging diverse people and communities beyond common practice. The NEPA and design processes will proactively seek ensure that equity considerations for underserved, overburdened, or disadvantaged communities are meaningfully integrated into planning, development, and implementation of transportation investment. Mississippi is a Right to Work state so certain efforts to incorporate worker representatives and incorporating workforce strategy into project development are beyond the authority of the existing partners and beyond the scope of the existing collaboration. Still, the applicant will work to incorporate diverse private sector entities, particularly Disadvantaged, Minority and Woman Owned Business Enterprises (DBE) in transportation infrastructure planning, design, and construction.

h. Innovation

The applicants have identified several innovations that are proven to improve safety that will be incorporated into the final design. These innovations include but are not limited to:

- ✓ Safety Edge: Safety Edge is an innovation technique from the first round of FHWA's Every Day Counts (EDC) Program. The edges of the pavement are angled to eliminate vertical drop-off. Safety Edge will be used as a safety measure to mitigate pavement edge related crashes. This treatment has been shown to reduce run-off crashes by up to 25%.

- ✓ Rumble Striping: Rumble stripes will be incorporated into project design. Rumble striping uses audible rumble strips with a raised profile, reflective pavement marker to increase nighttime visibility and alert drivers and reduce roadway departure crashes.

- ✓ Warm Mix Asphalt: Warm Mix Asphalt (WMA), also an innovation element from the first round of FHWA's EDC Program, will also be incorporated into project design as part of a broader environmental sustainability measure. WMA is produced at lower temperature than conventional asphalt and results in lower emissions and less fuel consumption during its production, and improved compaction and portability during construction.

- ✓ Traveler Alert Systems: The design will evaluate the benefits of large message boards to notify drivers of accidents, emergencies and changing traffic patterns

Jackson MPO's 2045 Plan also identified and discussed and adoption of emerging **Innovative or *smart* Technologies**. The design will build on that interest by evaluating Traffic Management Center "backbone" infrastructure to include "vaults" at key intersections to expedite the installation of future technologies when they become economically viable. The design and Supplemental EA will consider future technologies to support Connected and Autonomous Vehicles (CAV). Connected Vehicles use various communications technologies to exchange information with other vehicles, roadside infrastructure and the Cloud and can use Vehicle to

Infrastructure (V2I) communications. Alternatively, Autonomous or "self-driving" vehicles will operate with limited, if and, direct driver input. The design will evaluate and prepare for future emergency of CAVs and their technology requirements.

Turning to **Innovative Project Delivery**, the Pearl-Richland Intermodal Connector Commission was at least partially created and operates to provide seamless continuity between all public and private partners for fiscal and administrative project delivery and long-term planning. This innovative project delivery approach helps coordinate state, county, city, Jackson MPO and private development planning. This innovative project delivery approach has proven much more efficient that the usual ad hoc informal arrangements for large, long-term transportation infrastructure projects.

Finally, the applicant has proven experience and success with **Innovative Project Financing** while maintaining fiscal oversight and accountability. Past project activities have combined federal, state, MDOT, local and private funds to produce results in project delivery.

## V. PROJECT READINESS

As detailed above, the overall Pearl-Richland Intermodal Connector project has completed the technical, financial and environmental risk assessments. This has set the stage for a successful Phase II planning grant to maintain momentum towards construction.

a. Environmental Risk

Neither the 2012 EA and FONSI nor the 2020 Jackson MPO Plan identified any environmental risks. The FONSI was reissued in 2017 and most recently in 2020. Phase I is currently under construction. Furthermore, MDOT's Commitments to Environmental Excellence which was included in the 2012 EA clearly identifies items for special emphasis to avoid environmental risks for Phase II. Briefly, those items were:

1. Flood Storage/Flood Plain
2. Multi-Use Path
3. Environmental Justice
4. Outreach

These are all identified above as points of emphasis in the Phase II planning grant's NEPA process, permitting, and design as appropriate. The preparation of a supplemental EA will focus on identifying a new preferred route to tie in to US-49 that is the Least Environmentally Damaging Practicable Alternative based on the most recent data and a robust, proactive community outreach effort.

b. Project Schedule

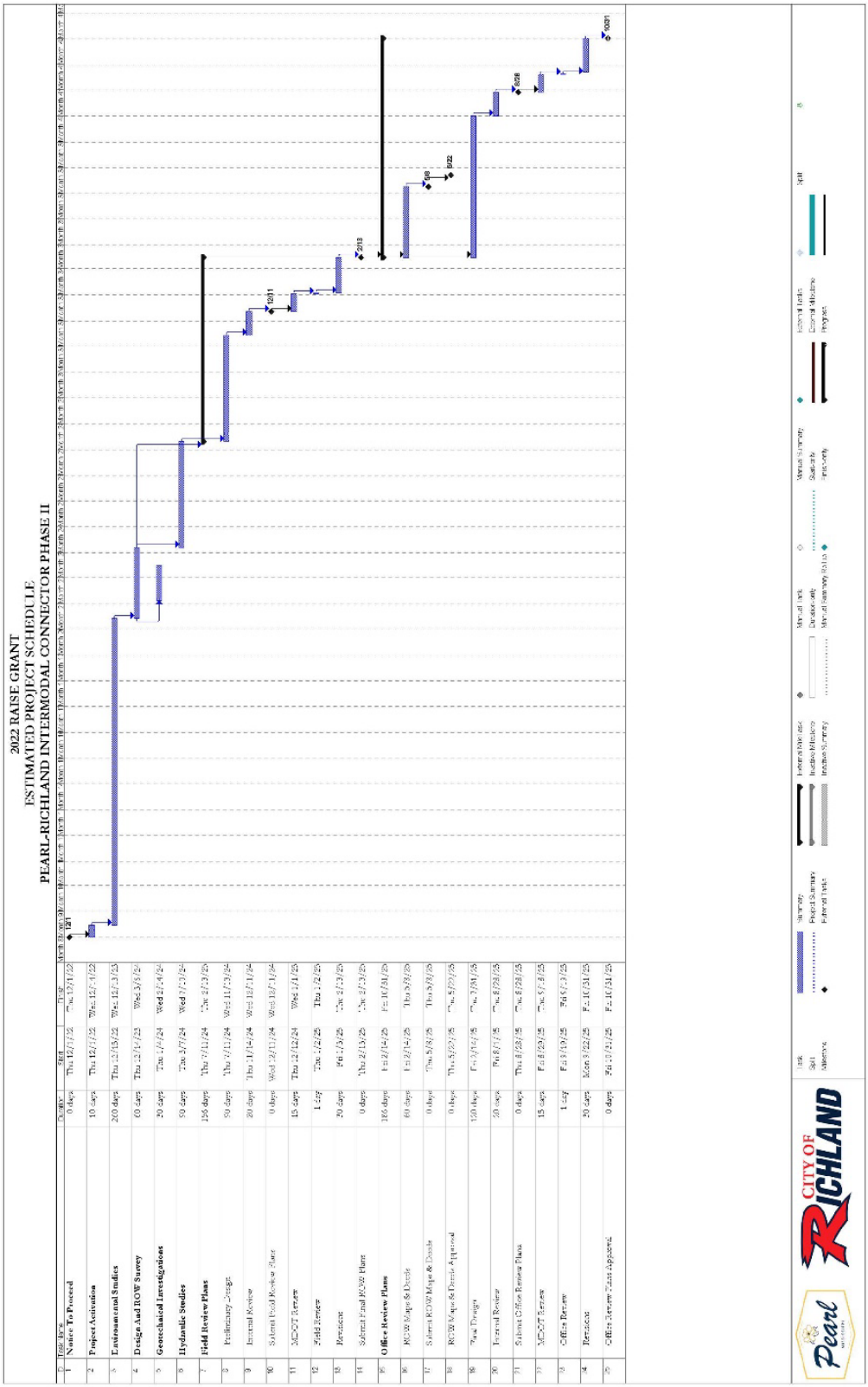



Figure 22: 2022 RAISE Grant Estimated Project Schedule
(https://www.cityofpearl.com/wp-content/uploads/2022/04/Pearl-Richland-Schedule.pdf)

c. Required Federal Approvals

The 2012 EA did not identify any unavoidable, complex federal permitting requirements/approvals. A Clean Water Act Section 404 wetlands/aquatic resources permit is the only known federal permit required. The U.S. Army Corps of Engineers (Vicksburg District) (COE) has jurisdiction to issue these permits. As per MDOT's guidance in the Commitments to Environmental Excellence the EA will make every effort to avoid and minimize adverse impacts to aquatic resources (Waters of the United States). Any unavoidable impacts must be mitigated to the COE's satisfaction prior to construction.

d. Required State and Local Approvals

The Cities of Pearl and Richland have been cooperating closely with MDOT in pursuing the Pearl-Richland Intermodal Connector for over twenty (20) years. Accordingly, the project as a whole has been planned to comply with all relevant state and local approvals. At least three (3) Mississippi State permits/approvals will be required; 1) National Pollutant Discharge Elimination (NPDES) Construction Stormwater Permit, 2) NPDES General Stormwater Permit, and 3) Certain Facilities State Highway Right of Way Permit. The Mississippi Department of Environmental Quality (MDEQ) has jurisdiction over the two (2) NPDES permits and MDOT has jurisdiction over the Right of Way Permit. The two (2) NPDES permit applications will be completed promptly and submitted to MDEQ for action. Likewise, throughout the planning/permitting process, the applicant will continue coordinating closely with MDOT to obtain the State Highway Right of Way Permit.

The Pearl-Richland Intermodal Connector Phase II is located outside the incorporated areas of the Pearl or Richland. However, the project will need to comply with the County's stormwater runoff management program.

e. Federal Transportation Requirements Affecting State and Local Planning

In addition to a letter of support for the project from the Mississippi Department of Transportation (MDOT) their most recent Mississippi Statewide Freight Plan (Feb. 2015 Amended Oct. 2017) includes the Pearl-Richland Connector as a Critical Urban Freight Corridor.

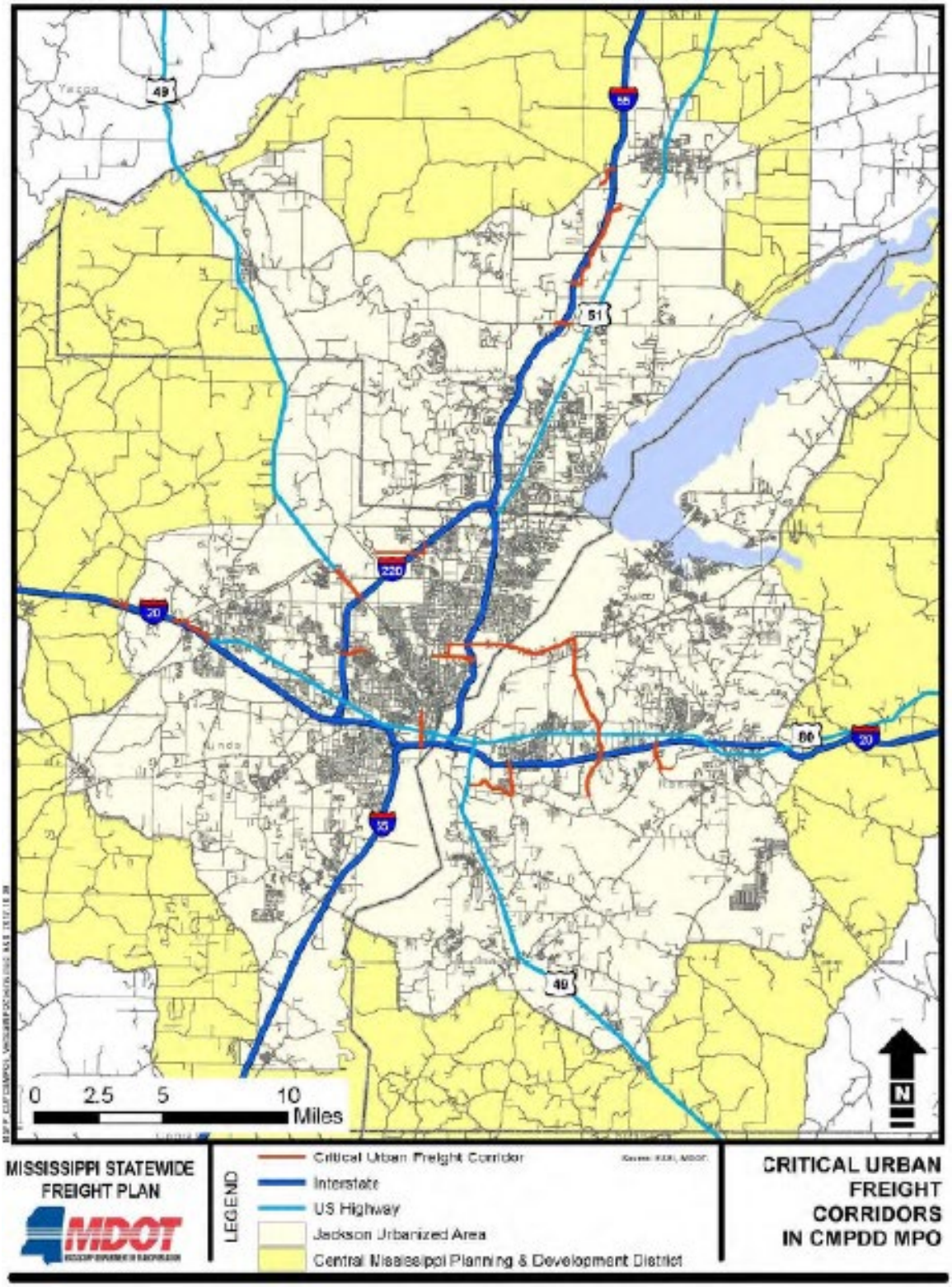


Figure 23: MDOT Mississippi Statewide Freight Plan Final Report (Feb. 2015; Amended Oct. 2017)

f. Assessment of Project Risks and Mitigation Strategies

The recent international covid pandemic and associated disruption in supply chains and spike in inflation demonstrate the unexpected risks projects can encounter. However, from the beginning, the Pearl-Richland Intermodal Connector Project has been well thought out and planned to successfully avoid and mitigate risks. This planning grant is the next logical step in efficiently proceeding to construction of Phase II.

As best as can be ascertained, currently, the project's major risks in proceeding to construction are:

1. Dramatic increases in right of way acquisition and construction costs due to inflation
2. Possible complications in identifying a preferred route alternative from South Pearson Rd. to US-49 because of the City of Richland's rapid residential and commercial expansion

Notwithstanding these few potential risks, the project's dynamic, open collaboration has repeatedly demonstrated the ability to anticipate potential risks and the flexibility to avoid or mitigate risks as they arise.