Route N Corridor Study

St. Charles County, Missouri

Planning and Environmental Linkages Questionnaire

Final

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Prepared For:
Missouri Department of Transportation

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Acronyms and Abbreviations

ADT	average daily traffic
BMP	best management practice
CAG	Community Advisory Group
CFR	*Code of Federal Regulations*
DHP	David Hoekel Parkway
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
EWG	East-West Gateway Council of Governments
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
HOA	homeowners' association
I	Interstate
LOMR	letter of map revision
LOS	Level of Service
LWCF	Land and Water Conservation Fund
MDC	Missouri Department of Conservation
MDNR	Missouri Department of Natural Resources
MoDOT	Missouri Department of Transportation
MPO	metropolitan planning organization
MSA	Metropolitan Statistical Area
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NLCD	National Land Cover Database
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OATS	Operating Above the Standard
PA	Programmatic Agreement
PEL	Planning and Environmental Linkages
SEMA	State Emergency Management Agency

SHPO	State Historic Preservation Office
SOS	Shoulders for Safety
STAR	Senior Transportation and Rides
TAG	Technical Advisory Group
TAZ	traffic analysis zone
TCIG	Transportation Corridor Improvement Group
TDM	Travel Demand Management
TIP	Transportation Improvement Plan
TMP	Transportation Management Plan
TNM	Traffic Noise Model
TSM	Transportation System Management
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
US	U.S. Highway
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

Introduction to the Route N PEL

This document represents a new phase in the investigation of the transportation needs of the Route N corridor in St. Charles County, Missouri. The Missouri Department of Transportation's (MoDOT's) St. Louis District, in cooperation with the Federal Highway Administration (FHWA) and St. Charles County, has been studying improvements to Route N in western St. Charles County since 2018. In 2020, a draft Environmental Assessment (EA) was completed.

After substantial investigation, it was determined that it was not possible to fund construction of the entire corridor. As such, the project could not be included in its entirety in the fiscally constrained portion of the East-West Gateway Council of Governments' long-range transportation plan. Because of this, in 2021, MoDOT, FHWA, and St. Charles County agreed upon the next best course of action by undertaking a Planning and Environmental Linkages (PEL) study to complete the analysis that had begun under the National Environmental Policy Act (NEPA).

MoDOT authorized the preparation of this PEL study after taking into account the extensive engineering and environmental studies, and the numerous community and stakeholder outreach efforts that were completed during the course of the EA study. This PEL study uses the required PEL questionnaire, and it incorporates the Purpose and Need for the Route N corridor and the range of alternatives that had been fully examined during the course of the EA. The PEL study will now also identify sections within the corridor that have logical termini and independent utility that can be constructed as funding is identified, after NEPA is completed.

Based on the PEL study's analysis (and the funding estimated to be available over the next 20 years or so), the project team has concluded that the improvements on the Route N corridor can best be accomplished in three independent but fully operational sections:

- Section 1 (East): From Interstate 64 to Hopewell/Duello Road, a distance of 2.6 miles
- Section 2 (Center): From Hopewell/Duello Road to Route Z, a distance of 2.3 miles
- Section 3 (West): From Route Z to Jackson Road (along Buckner Road), a distance of 3.6 miles

Based on the probable impacts, MoDOT proposes that each of these sections be processed, under NEPA, as a documented Categorical Exclusion 2. FHWA concurred with this approach in December 2021. A Categorical Exclusion classification indicates that expected environmental impacts would not be considered significant.

Funding is available for Section 1 (East) and Section 3 (West), and they will be proposed for inclusion during the next long-range transportation plan update. Refer to **Figure 1**.

The completed PEL questionnaire begins on page 1-1.

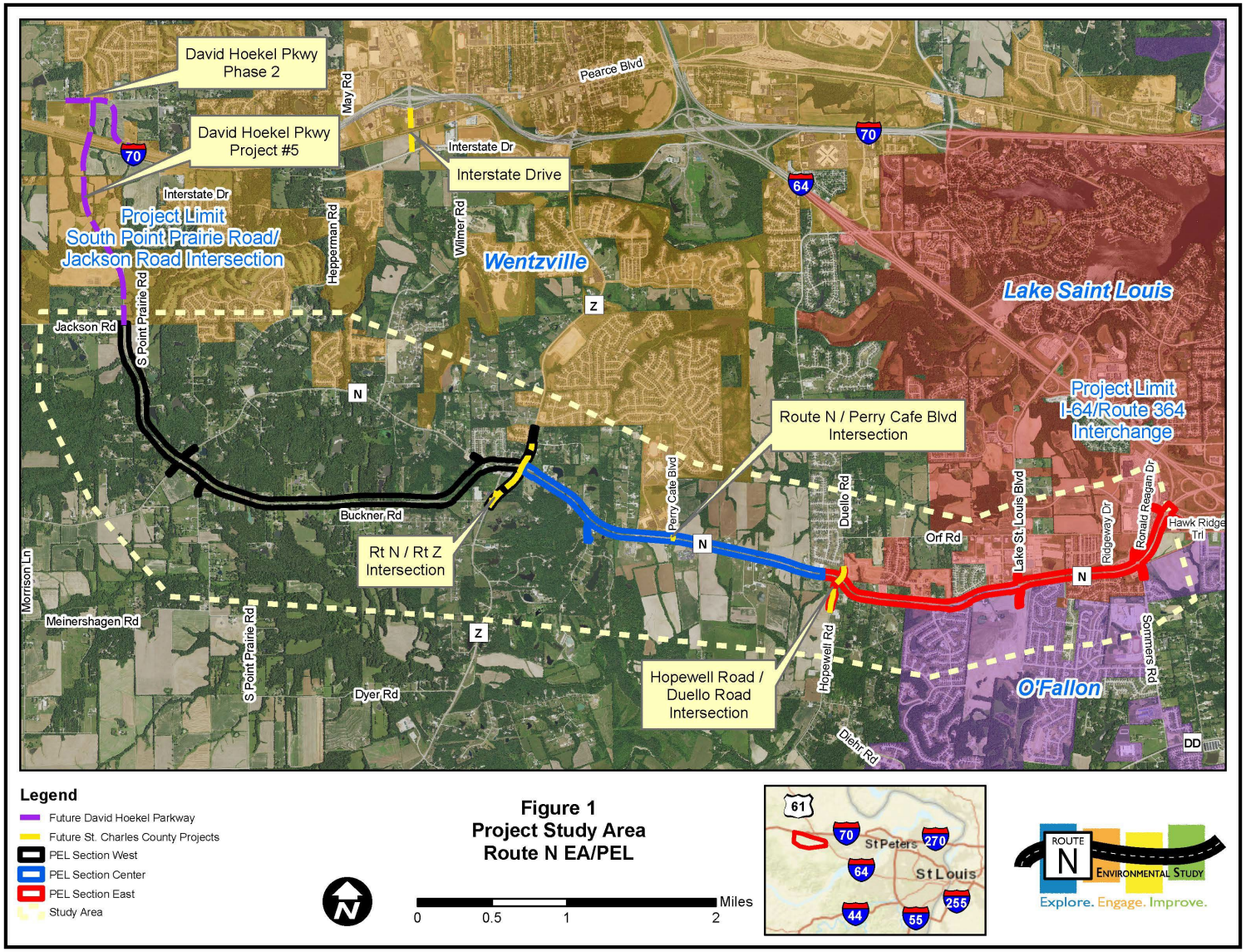

Figure 1. Project Study Area

1. Question 1 – Project Background

a. Who is the sponsor of the PEL study?

The Missouri Department of Transportation's (MoDOT's) St. Louis District, in cooperation with the Federal Highway Administration (FHWA) and St. Charles County, is conducting evaluations regarding the conditions and needs along Route N in western St. Charles County, Missouri. This area is known locally as the Route N study corridor, depicted on **Figure 1**. The two studies undertaken were intended to assess the problems and needs of the Route N study corridor and determine the best approaches to addressing them. The study area is outlined in red and shown on **Figure 2**. The study area is generally located between the South Point Prairie Road/Jackson Road intersection and the existing Interstate (I-) 64/Route 364 interchange.

b. What is the name of the PEL study document and other identifying project information?

Route N Corridor Planning and Environmental Linkages Study

- MoDOT ID: Route N Improvements, St. Charles County, Missouri
- MoDOT Job Number: J6S3342

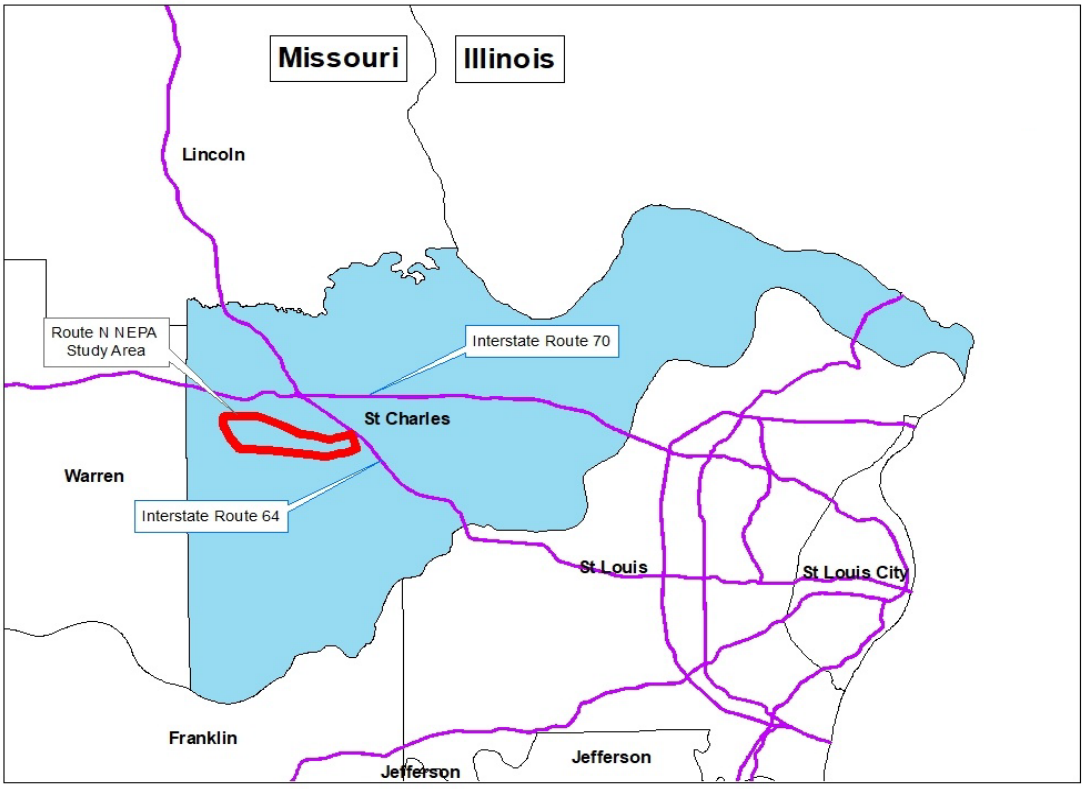

Figure 2. Route N Study Area

c. Who was included on the study team?

The key personnel associated with the investigation of the Route N corridor include the following:

- FHWA
  - Division Administrator—Kevin Ward
  - Program Development Team Lead—Raegan Ball
  - Environmental Specialist—Taylor Peters
- MoDOT
  - District Planning Manager—Wesley Stephen
  - Project Manager—Shaun Tooley
  - Environmental and Historic Preservation Manager—Melissa Scheperle
  - Senior Traffic Studies Specialist—Eddie Watkins
  - Area Engineer—Andrew Tuerck
- St. Charles County
  - Manager of Roads and Traffic—Amanda Brauer
  - Highway Engineer—John Lyons
  - Assistant Director of Administration—John Greifzu
- East-West Gateway Council of Governments:
  - Director of Transportation Planning—Marcie Meystrik
  - Senior Manager of Corridor & Long-Range Planning—Paul Hubbman
- Jacobs
  - Project Principal—Jeff Frantz
  - Project Manager—James Ritter
  - Environmental Lead—Rob Miller
- Archaeological Research Center of St. Louis
  - Project Manager—Joe Harl
  - Principal Investigator—Robin Jorcke-Harl
- HNTB Corporation
  - Traffic Lead—Joseph Blasi
- Vector Communications
  - Public Involvement Project Manager—Laurna Godwin
  - Public Involvement Lead—Chandra Taylor
- HG Consult
  - Project Manager—Stephen Wells
  - Lead—Buddy Desai

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?

The functional classification varies along the study corridor. Route N is a minor arterial from the I-64/Route 364 interchange to Route Z. West of Route Z, Route N is a major collector. South Point Prairie

Road from Route N the Jackson Road intersection is classified as a minor collector. Route N is a Minor Route in MoDOT's highway system and South Point Prairie Road is a county road. Most of the corridor has an open drainage system.

At the far eastern end of the corridor, Route N is a four-lane divided roadway with signalized intersections at Hawk Ridge Trail and Sommers Road/Ronald Reagan Drive. West of this location, Route N transitions to a three-lane roadway, one lane in each direction with a center turn lane, a two-way stop-controlled intersection at Ridgeway Drive, and a signalized intersection at Lake St. Louis Boulevard. This segment of the corridor generally has shoulders of varying widths.

West of Lake St. Louis Boulevard, Route N transitions to a two-lane roadway, with minimal (frequently 2' or less) shoulders. One additional signalized intersection is at Perry Cate Boulevard. The intersection of Route N with Route Z is a highly skewed intersection with an X-type configuration rather than a traditional right-angle intersection (**Figure 3**). Right turns occur via turn-offs prior to the main intersection, minimizing the number of turning movements at the four-way stop sign at the main intersection. The primary intersections west of Route Z include Wilmer Road, Hepperman Road, and South Point Prairie Road. The distance between the I-64/Route 364 interchange and the South Point Prairie Road/Jackson Road intersection is approximately 8 miles. **Exhibits 1a through 1c** in **Attachment 1** show the locations of these crossroads.

Other key roadways affecting the Route N corridor include other interstate highways and major intersections. Interstates near the study area include I-64 to the east and I-70 to the north. Major roadways that intersect with Route N within the study area, from east to west, include Hawk Ridge Trail, Sommers Road/Ronald Reagan Drive, Lake St. Louis Boulevard, Hopewell/Duello Roads,[1] Perry Cate Boulevard, Route Z, Wilmer Road, Hepperman Road, and South Point Prairie Road. Key intersections in or near the Route N study area are listed in **Table 1**.

Table 1. Key Intersections

Location		Type
1	Route N at Hawk Ridge Trail	Signalized
2	Route N at Sommers Road	Signalized
3	Route N at Red Baron Drive/Ridgeway Avenue	Two-Way Stop
4	Route N at Lake St. Louis Boulevard	Signalized
5	Route N at Wyndgate Ridge Drive	Two-Way Stop
6	Route N at Hopewell/Duello Roads	Two-Way Stop
7	Route N at Perry Cate Boulevard	Signalized
8	Route N at Route Z	Four-Way Stop
9	Route N at Wilmer Road	Two-Way Stop
10	Route N at Hepperman Road	Two-Way Stop
11	Route N at South Point Prairie Road	Two-Way Stop
12	South Point Prairie Road at Jackson Road	Two-Way Stop

[1] As of early 2022, improvements to realign the Hopewell/Duello Road intersection (a St. Charles County project) has been substantially completed.

Table 1. Key Intersections

Location		Type
13	Buckner Road at Route Z	Two-Way Stop
14	Buckner Road at South Point Prairie Road	Two-Way Stop

Existing land use and future land use policies are also directly linked to accommodating traffic streams. Currently, the primary land use type within the study area is low-density residential. This land use category allows for single-family residences at a density of one to four dwelling units per acre. The single-family residences are normally detached units and have central water distribution and sanitary sewers. Lot sizes in these areas can vary from approximately 10,000 square feet to 43,000 square feet. Clustering of development is encouraged. Supporting and complementary uses, including open space and recreation, schools, places of worship, and other public or civic uses, are also appropriate in this category. Senior housing is appropriate if compatible with the surrounding area.

Population and employment growth are expected to continue in St. Charles County. Using population projections from the East-West Gateway Council of Governments (EWG), the region's metropolitan planning organization (MPO), economic and demographic variables were estimated for St. Charles County between 2016 and 2045. By 2045, the population of St. Charles County is expected to increase by 12.4 percent, which is estimated as 48,388 additional people. The total projected population in 2045 is estimated at 439,298 people. This population growth will further stress the existing transportation system, including Route N.

Employment is also expected to increase. Between 2016 and 2045, total employment in St. Charles County is expected to increase by 9.4 percent to 219,441 jobs. Trips related to these 18,889 additional jobs will also stress the existing transportation system, including Route N.

Based on St. Charles County's Master Plan and Future Land Use Plan, the development of the County will largely be complete in the next decade. It is expected that approximately two-thirds of the Future Land Use Plan's residential stock will be in place by 2030. Commercial land uses are expected to be 90 percent in place by 2030, and 33 percent of industrial land uses will be in place by 2030.

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

As described in **Question 1.f**, St. Charles County had been actively studying the transportation network associated with Route N. In order to be comprehensive, in 2018, St. Charles County began coordination with MoDOT and FHWA on a comprehensive investigation of Route N, known as the Route N Environmental Assessment (EA) (MoDOT Job Number J6S3342). In 2020, a draft National Environmental Policy Act (NEPA) document was reviewed by the FHWA. The latest version of the Route N draft EA is contained in **Attachment 2**.

The Route N EA was being processed under the provisions of NEPA. NEPA establishes a national environmental policy and provides a framework for environmental planning and decision-making by federal agencies. NEPA directs federal agencies, when planning projects or issuing permits, to conduct environmental reviews to consider the potential impacts on the environment by their proposed actions. Federal actions are typically defined as funding or permitting.

As the EA progressed, it became clear that the Route N corridor could not be included in full in the fiscally constrained portion of the long-range transportation plan administered by the EWG (the region's MPO). It

was thus concluded that the PEL framework would be the best approach to document the planning activities already completed and prepare for corridor planning and project development to proceed based on available funding and the needs of each of three independently operable roadway sections within the corridor.

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?

In response to the growth occurring in St. Charles County, numerous transportation projects are underway. These improvements include the following:

- Route N/Route Z Intersection—This St. Charles County project involves a reconfiguration of the intersection of Route Z at Route N. The original plan was to replace the unconventional split dual intersections with a pair of roundabouts in a "dog bone" configuration. The final configuration realigns Route Z from the south of Route N to align with Route Z to the north of Route N, creating a more traditional intersection configuration by eliminating the split dual intersection. The intersection will also be signalized. Work is anticipated to begin in fall 2022 and expected to be completed in 2023. Refer to **Figure 3** for the existing configuration and to **Exhibit 1** (in **Attachment 1**) for an approximation of the realignment.
- Hopewell Road/Duello Road Intersection—The project was meant to widen, straighten, and otherwise improve the existing Duello and Hopewell Roads intersection and intersection approaches. Curb and gutter, enclosed drainage, and a sidewalk were included as part of the project. Hopewell Road has been realigned to connect with Duello Road at a new intersection, with Route N widened at this location to provide for separate right-turn and left-turn lanes in both directions.
- Route N/Perry Cate Boulevard Intersection—This intersection was signalized in 2018 as a St. Charles County project.
- Interstate Drive—When completed, Interstate Drive will serve as a south outer road along I-70 from I-64 to the David Hoekel Parkway (DHP). It is being constructed in several sections. According to the St. Charles County website, "Right-of-way plans have been approved by MoDOT. Notice to proceed with right-of-way acquisition recently was granted. Property appraisal work is underway with offers to follow by early 2022. Acquisition is anticipated to take most of 2022."[2]
- David Hoekel Parkway Phase 2—This City of Wentzville project consists of the construction of a relocated northern I-70 outer road and the new DHP interchange at I-70. David Hoekel Parkway Phase 2 is now complete and open to traffic.
- David Hoekel Parkway Corridor Preservation—To the north, this portion of the DHP would provide a new connection between I-70 and U.S. Highway (US) 61, in Wentzville.
- David Hoekel Parkway Project #5—The southern DHP interchange connection to South Point Prairie Road (and the Route N western terminus) is a St. Charles County project. This project is known as David Hoekel Parkway Project #5. The project extends Interstate Drive west and South Point Prairie Road north to meet the City of Wentzville's new DHP interchange at I-70. David Hoekel Parkway Project #5 is now complete and open to traffic.

Refer to **Exhibit 1** (in **Attachment 1**).

[2] St. Charles County. 2022. "Interstate Drive - Phase 1." January 4. https://www.sccmo.org/2164/Interstate-Drive---Phase-1.

Figure 3. Route N/Z Intersection

2. Question 2 – Methodology

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

This PEL study resulted from a determination that the full limits of the Route N corridor improvements, as identified in the Route N EA, could not be included in the EWG (the region's MPO) fiscally constrained long-range transportation plan. After consultation with FHWA, it was concluded that the study would be continued as a PEL study. This approach would allow for the documentation of the planning activities already completed and prepare for corridor planning and project development, and allow independent, self-functioning sections of the corridor to proceed based on available funding and the needs of each section of the corridor.

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

Since the evaluation of the Route N corridor began as the Route N EA, both NEPA language and methodology were used in the drafting of this PEL document.

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

The latest draft version of the Route N EA is contained in **Attachment 2**. An extensive acronym and abbreviation section is contained therein.

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

Because of the extensive amount of planning efforts conducted in St. Charles County (**Question 7**) and the number of agencies with jurisdiction, a wide variety of terms were used in the draft EA (**Attachment 2**). Such usage is carried into the PEL document. Because of the prior NEPA analysis and coordination with regulatory agencies during the EA study, MoDOT expects to continue using those terms in future NEPA updates.

e. 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.

As previously noted, this PEL study was initiated as a NEPA study by MoDOT. As such, it followed a coordination process with FHWA, resource and regulatory agencies, local agencies, and public stakeholders that (1) identified and validated transportation problems in the area to create a Purpose and Need statement; (2) identified a range of alternatives to address the problems; (3) disclosed potential impacts of the alternatives and evaluated their impacts versus ability to meet the Purpose and Need; and (4) identified a Tentative Preferred Alternative, with agency and public input.

The key steps and decision makers are discussed throughout this PEL document. For instance, the project's agency collaboration is further described in **Question 3**, the public involvement process is described in **Question 4**, and the decision-making process is described in **Question 6**. **Question 13** lists the substantive comments and a summary of the study's responses.

f. How should the PEL information be presented in NEPA?

This PEL study will be used to determine whether any components of a Route N improvement project could be included in the long-range plan and implemented under NEPA. As this PEL study is based on a NEPA study that progressed to identifying a Tentative Preferred Alternative in the draft EA (**Attachment 2**), this PEL study would form the basis of defining the Purpose and Need and range of alternatives for future NEPA actions in each section of the corridor. Further, public and stakeholder engagement activities that were previously conducted (and those that remain to be conducted) will be documented in the EA.

The Tentative Preferred Alternative is the Buckner Road Reasonable Alternative, which would improve Route N along its existing alignment between the eastern terminus and a point approximately 800 feet west of Route Z. From this point, the alignment travels south and connects to Buckner Road. To complete the Route N/Route Z intersection, a connection would be constructed behind the existing Westlake Church of Christ and a recreational vehicle storage lot. The alignment would then use an improved version of Buckner Road to reach South Point Prairie Road. This connection would remove the existing right-angle curves on Buckner Road and the sharp turn on South Point Prairie Road. From there, the alignment would use an improved version of South Point Prairie Road north to Jackson Road. Refer to **Figure 1**.

If the lead agency implementing any section of the project changes, such as processing by St. Charles County using only local funds, the type of environmental compliance and environmental commitments are also subject to change. For example, if no federal funds are used and no federal permits are required, review under NEPA may not be required.

3. Question 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.

An Agency Collaboration Plan was developed for the Route N EA. It defined the process by which the study team would communicate information about the project to the interested federal and non-federal governmental agencies (**Question 3.b**).

Three collaboration points were included in the plan. Collaboration packages containing current project materials were distributed electronically at each collaboration point. Interested agencies were provided 30 days to review and comment. It was assumed that those agencies that did not respond had no comments that required further consideration.

Collaboration Point 1 focused on Purpose and Need and Conceptual Alternatives, including the following:

- Description of core objectives of the proposed action, and any secondary objectives
- Demonstration of the project's logical termini and independent utility
- Public and key stakeholder comments regarding the project's objectives
- Purpose and Need

Collaboration Point 2 focused on Reasonable Alternatives and Environmental Resources, including the following:

- Revised Purpose and Need document
- Description of the evaluation criteria that will be used to evaluate the effectiveness of an alternative in meeting the Purpose and Need of the project and explanation of how those evaluation criteria will be used
- Description of any other factors, besides Purpose and Need, that were considered in the screening of alternatives, such as engineering and environmental factors
- Methodologies to be used and level of detail required in the analysis of each alternative
- A summary table of all project alternatives to be evaluated and their effectiveness in addressing the Purpose and Need of the project, as well as a map showing the location of the project alternatives
- Discussion of the No-Build Alternative

Collaboration Point 3 focused on the emerging Preferred Alternative.

The Agency Collaboration Plan and input received through Collaboration Point 3 are discussed in Section 4 of the EA (**Attachment 2**).

Collaboration Point 4 focused on the conversion of the project to a PEL study and the implications for future project work. This included providing a link to electronic copies of the PEL Questionnaire, attached exhibits, and draft EA. Collaboration letters and responses are included in **Attachment 3**.

In addition to the collaboration points, MoDOT coordinated directly with the agencies that have jurisdiction under the law on resources of concern to them, including study methodologies and findings. Direct coordination was also conducted with a regional consortium, the Transportation Corridor Improvement Group (TCIG). This group includes MoDOT, EWG (the MPO), and St. Charles County. The role

of the TCIG is to inform MoDOT and the study team of each agency's priorities as they relate to Route N and to collaborate at key milestones during the study.

Coordination with Native American Tribes is conducted by the FHWA. A letter of invitation to be a Section 106 consulting party was sent to 17 tribes that have previously expressed interest in MoDOT projects in this area. Early identification of tribal concerns will allow FHWA and MoDOT to consider ways to avoid and minimize potential impacts to tribal resources and/or cultural practices as study planning and alternatives are developed and refined. As of December 2019, three tribal responses had been received including responses from the Sac and Fox Nation of Missouri in Kansas and Nebraska, the Miami Tribe of Oklahoma, and the Ponca Tribe of Oklahoma. The Sac and Fox Nation of Missouri in Kansas and Nebraska and Miami Tribe of Oklahoma did not have any substantive comments/concerns. The Ponca Tribe of Oklahoma stated that "The Ponca Tribe of Oklahoma anticipates reviewing and commenting on the planned Route N Improvements in St. Charles County, MO; MoDOT Job No. J6S3342." MoDOT, through FHWA, has provided and will continue during subsequent project phases to provide the Ponca Tribe of Oklahoma with an opportunity to review project studies. To date, they have not expressed any specific concerns with the project.

In May 2022, FHWA issued a letter to Tribal Consultation Letter focused on the conversion of the project to a PEL study and the implications for future project work. This included providing a link to electronic copies of the PEL Questionnaire, attached exhibits, and draft EA. The consultation letter and response from the Iowa Tribe of Kansas and Nebraska requesting to be added as an Interested Party are included in **Attachment 3**.

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

Coordination with adjacent transportation agencies was conducted primarily through a group of regional gatekeepers and project funding agencies identified as the TCIG. The following agencies participated in the TCIG:

- St. Charles County
- East-West Gateway Council of Governments

In addition to assisting in the procurement of the Route N EA study, the role of the TCIG has been to inform MoDOT and the study team of their agency's priorities related to Route N and to provide feedback at key milestones in the study. To date, the TCIG has played an active role in review and comment on the following:

- Public Involvement Plan
- Regional travel demand model revisions
- Study Purpose and Need
- Conceptual Alternatives
- Screening of the Conceptual Alternatives
- Identification of the Tentative Preferred Alternative

The TCIG participated in two public open house meetings during the preparation of the EA and invited MoDOT participation in the public hearing for the Route Z/Route N intersection improvements. As the study progresses, the TCIG will continue to play an active role in advising study team through review and comment on this PEL document and through participation at the project's remaining public involvement events.

Representatives of the local municipalities of Wentzville, Lake St. Louis, and O'Fallon were engaged through a Technical Advisory Group (TAG) that also included staff from MoDOT and St. Charles County. The TAG was engaged via scheduled meetings mirroring the key study milestones listed previously for the TCIG. The role of the TAG is discussed in more detail in **Question 4.a**.

Figure 4 shows the location of St. Charles County within the EWG service area. **Figure 4** also depicts the urbanization of St. Charles County.

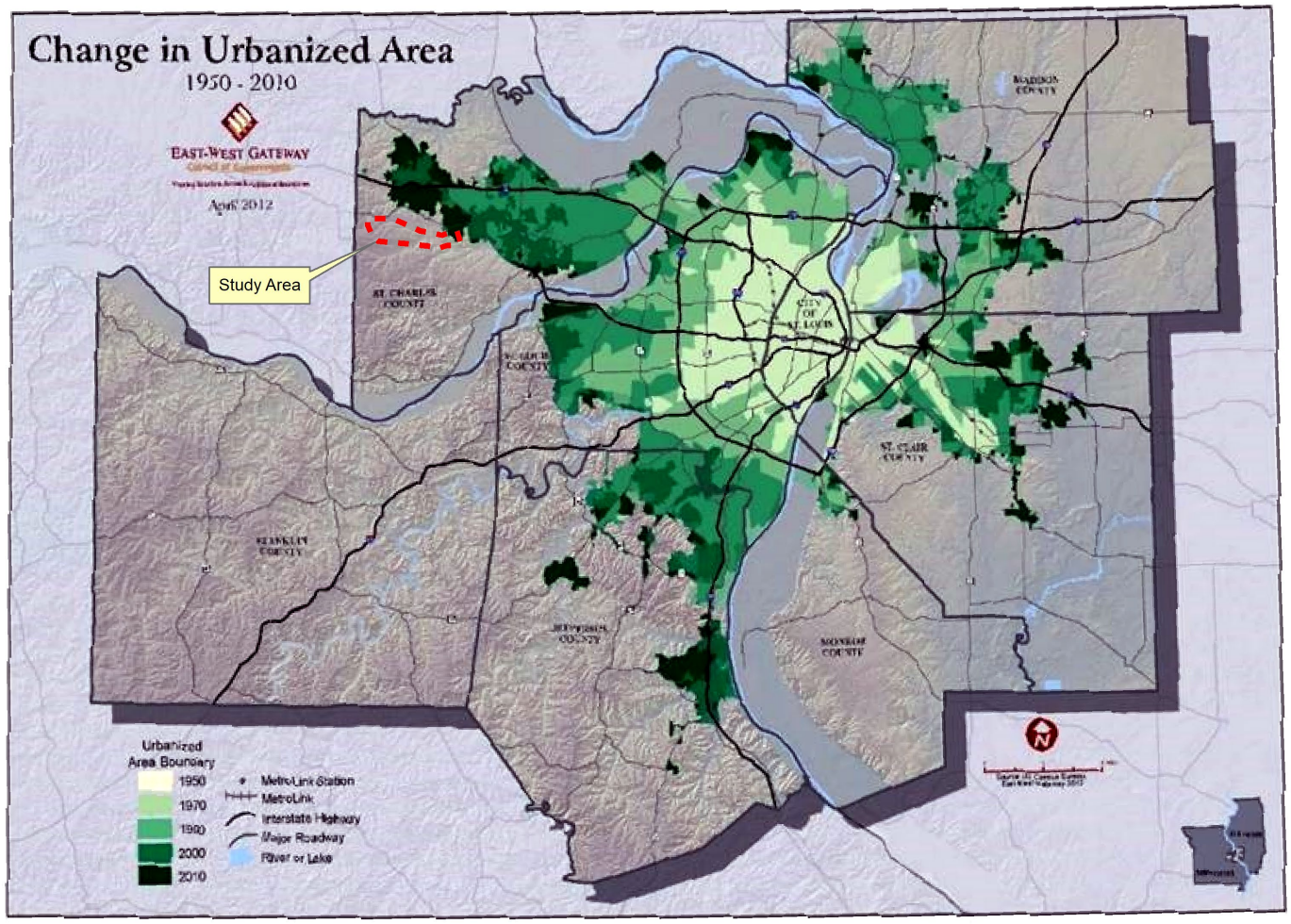

Figure 4. Change in Urbanized Area

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

The Agency Collaboration Plan described in **Question 3.a** will be continued and modified as necessary. The Agency Collaboration Plan identified two types of agencies:

1) Cooperating agencies, which are those federal agencies that the lead agency specifically requests to participate in the environmental evaluation process for the study. FHWA's NEPA regulations (23 *Code of Federal Regulations* [CFR] 771.111(d)) require that federal agencies with jurisdiction by law (such as permitting or land transfer authority) be invited to be cooperating agencies for an EA. U.S. Army Corps of Engineers (USACE) St. Louis District agreed to be a Cooperating Agency for the Route N EA study.

2) NEPA, in 23 *United States Code* 139(d), establishes the concept of a participating agency (an agency with an interest in the project, but not necessarily a regulatory role). The roles and responsibilities of cooperating and participating agencies are similar. However, NEPA projects processed with an EA do not use participating agencies. As the participation of as many agencies as possible will allow for the best possible project, the Route N study will use the term "interested agencies." An interested agency is loosely defined as a federal or non-federal agency that has an interest in the project, special expertise, local knowledge, and/or statewide interest. The definition of "governmental" was broadened to include an organization with an official mandate. Based on these criteria, the study team identified 17 interested agencies. Any organization that could not satisfy the criteria as an agency but is interested in the study, is included in the study as a general stakeholder. Collaboration with these groups has been coordinated through information packages that coincide with study milestones. The U.S. Environmental Protection Agency (EPA), the Missouri Department of Natural Resources (MDNR), and the Missouri Department of Conservation (MDC) agreed to be interested agencies for the Route N EA. The Federal Aviation Administration, while not formally agreeing to be an interested agency, did provide comments related to airspace impacts. The following agencies were contacted to participate in the Route N NEPA study as interested agencies:

   - Federal Aviation Administration
   - City of O'Fallon, Missouri
   - City of Lake St. Louis, Missouri
   - City of Wentzville, Missouri
   - City of Dardenne Prairie, Missouri
   - Great Rivers Greenway District
   - Trailnet
   - Metro
   - East-West Gateway Council of Governments
   - Federal Emergency Management Agency
   - State Emergency Management Agency—Missouri Department of Public Safety
   - State Emergency Management Agency—Floodplain Engineering and Mapping Section
   - U.S. Coast Guard
   - U.S. Army Corps of Engineers
   - U.S. Environmental Protection Agency
   - U.S. Department of Agriculture, Natural Resource Conservation Service
   - U.S. Department of the Interior
   - U.S. Fish and Wildlife Service
   - St. Charles County
   - Missouri Department of Natural Resources
   - St. Louis County Parks and Recreation
   - Missouri Federal Assistance Clearinghouse
   - Missouri Department of Conservation
   - Missouri State Historic Preservation Office

As part of the Route N Environmental Study, MoDOT proposed a phasing plan to minimize disruption during construction. The end points for each phase connect to roadways that collect and distribute traffic within and adjacent to the corridor. Based on available funding, St. Charles County proposes to combine phases and proposes that the Route N corridor be advanced in three sections:

- Section 1 (East): From I-64 to Hopewell/Duello Road, approximately 2.6 miles in length
- Section 2 (Center): From Hopewell/Duello Road to Route Z, approximately 2.3 miles in length
- Section 3 (West): From Route Z to Jackson Road, approximately 3.6 miles in length

Each section has logical termini and independent utility. To have logical termini, a project must provide rational end points for a transportation improvement and those end points must serve as geographical boundaries for a review of environmental impacts. To have independent utility, the proposed improvements must be a reasonable expenditure even if no other transportation improvements are made.

During the development of the pre-final EA for the Route N Environmental Study, MoDOT gathered extensive published data and completed field studies for natural and socioeconomic resources. These studies were informed by input from resource and regulatory agencies with jurisdiction. MoDOT then considered the affected environment during alternatives development to integrate avoidance and minimization of impacts.

Consistent with the requirements of 23 CFR 771.117 and based on the potential impacts, agency coordination, and public engagement, MoDOT proposes that each of the three sections or projects within the Route N corridor be processed, under NEPA, as a documented Categorical Exclusion 2. To this end, the study team submitted a memorandum to FHWA in November 2021. In December 2021, FHWA provided concurrence on these initial environmental classifications.

4. Question 4 – Public Involvement

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

A Public Involvement Plan was developed for the Route N project. It defined the process by which the study team would communicate information about the project to the interested and affected community. Recognizing the value that stakeholders bring to the transportation planning process, the study team employed several tools to ensure a variety of opportunities for public involvement were available throughout the development of the project. Additionally, the Public Involvement Plan was guided by both NEPA requirements for public involvement and MoDOT's public involvement policies. This section outlines the techniques and tools used to exchange information and gather feedback. Public involvement activities are summarized in Section 4 of the EA in **Attachment 2**. The complete Public Involvement Plan is available upon request to MoDOT.

The Public Involvement Plan was update for the transition to the PEL study and a PEL Public Involvement Summary was prepared to summarize additional public involvement activities. The updated plan is available upon request to MoDOT and the PEL public involvement summary is included in **Attachment 4**.

Stakeholder Interviews/Briefings—At the onset of the Route N EA, the public involvement team scheduled and conducted interviews with key stakeholders to seek input on how they use Route N, how they wish to be engaged, and what outreach methods would be successful.

The stakeholders interviewed included homeowners' associations (HOAs), emergency responders, school officials, chambers of commerce, parks departments, and business owners. A total of 19 one-on-one interviews were conducted in person or via phone. The issues most cited by the interviewees included the following:

- Lack of roadway shoulders
- Lack of left-turn lanes
- Bottleneck and configuration issues
- Lengthy traffic backups during rush hours
- Rapid residential growth
- Desire to maintain a rural feel
- Bends in the road creating blind spots

Community Advisory Group (CAG)—To further engage the public in the development of the Purpose and Need and, eventually, study alternatives, a CAG was established. CAG members represented various study area constituencies including residents, chambers of commerce, emergency responders, schools, and other community stakeholders.

All four EA CAG meetings were conducted in, or near, the Route N corridor. Conducting meetings in the Route N corridor was strategically planned to give the CAG convenient access to attend. Each CAG meeting had a formal agenda with goals and objectives. Meeting notes were prepared and circulated to the CAG members after each meeting. All CAG meetings included key MoDOT staff to assist in answering questions. The meetings were facilitated by the consultant project manager.

In April 2022, an additional CAG meeting was held to recap a brief history of the study, explain about the PEL transition, and communicate the next steps for the corridor.

Technical Advisory Group (TAG)—The TAG was organized around the affected jurisdictions, support agencies, and regional partners. The TAG included staff from various divisions within MoDOT such as

traffic, construction, and maintenance, and staff of St. Charles County, City of Lake St. Louis, City of Wentzville, and City of O'Fallon. The purpose of the TAG was to coordinate with technical staff on the development of the study's Purpose and Need, development of alternatives, and screening of alternatives. Three EA TAG meetings were conducted near the Route N corridor during the study. Study team members facilitated the meetings and provided meeting agendas, presentations, and supporting materials.

In March 2022, an additional TAG meeting was held to recap a brief history of the study, explain about the PEL transition, and communicate the next steps for the corridor.

Elected Officials Briefings—Early coordination and continuous communication with elected officials was accomplished through two EA briefings. The briefings were conducted prior to Public Information Meetings 1 and 2. An additional elected officials briefing was completed immediately prior to the PEL transition public meeting in April 2022.

Public Involvement Meetings—Public meetings are an important opportunity for direct involvement with a broader audience. At these meetings, study team members were available to discuss, explain, and help participants understand the information presented. Two EA public informational meetings were conducted to date for the study.

The first public meeting was conducted on November 13, 2018, from 4:00 p.m. to 6:00 p.m., at the Liberty High School lobby in Lake St. Louis. The meeting was publicized on the Route N EA website at www.routenstudy.com and was promoted on MoDOT's social media pages and website. MoDOT sent a press advisory to all regional media outlets, and St. Charles County promoted the meeting in their email newsletter. A newsletter announcing the meeting was sent to more than 240 individuals who live or work near the study corridor or subscribed online to be part of the study master mailing list. A flyer announcement was distributed via email to more than 400 area residents. More than 70 people attended the meeting.

The second public meeting for the Route N study was held on Thursday, February 21, 2019, from 4:00 p.m. to 6:00 p.m., at the Liberty High School lobby, in Lake St. Louis, Missouri. More than 130 people attended the meeting. The meeting provided a study overview, presented Conceptual Alternatives, presented Reasonable Alternatives, and discussed the evaluation and screening process. Informational display boards and aerial maps were available for review throughout the meeting and posted to the study website following the meeting.

An additional public meeting for the PEL transition was held on Tuesday, April 12, 2022, at the National Equestrian Center along Route N at 6880 Lake St. Louis Blvd. The meeting was publicized on the Route N EA website at www.routenstudy.com and was promoted on MoDOT's social media pages and website. MoDOT sent a press advisory to all regional media outlets. The study emailed over 2,000 electronic meeting notifications and mailed an addition 422 printed notices. Nearly 200 people attended the meeting.

Presentations—Over the course of the study, presentations to community and civic groups, business groups, and other interested groups or organizations were used to introduce the study, provide study updates, and obtain public input. Such presentations were given upon request. Among the groups requesting presentations were the nearby HOAs, including Heritage Hawk Ridge, Hawk Ridge on the Green, Estates of Hawk Ridge, Mason Glen, Summers Landing, Oak Bluff Preserve and the New Melle Lakes HOAs.

Outreach and Informational Materials—Informational materials have been developed throughout the study and were updated as needed. These include the following:

- A project fact sheet

- Two newsletters, one provided before each of the two public meetings
- A study website, located at www.routenstudy.com
- The study mailing list, which includes residents, business owners, the general public, CAG members, elected officials, and coordinating agencies
- MoDOT's customer service telephone number was used to provide the public an opportunity to comment and ask questions: 1-888-ASK-MODOT (1-888-275-6636)
- Press advisories, which were provided to media outlets to announce the informational public meetings and the public hearing
- Study information, which was made available on MoDOT's Facebook page and Twitter account and emailed using a mass email service

MetroQuest Survey—The study team conducted a survey using MetroQuest software to obtain input from stakeholders, residents, motorists, and others on improvements they want to see along the corridor. This public involvement software guided participants through the process of learning about the study and providing feedback. The survey obtained public input on why they use the route, when they use it, and prioritizing the issues with the roadway they would like the study team to address. It also asked respondents which trade-offs they most valued, and to rate the Reasonable Alternatives. This survey provided valuable information to the study team and helped in the evaluation of alternatives.

More than 3,000 respondents completed the MetroQuest survey. Based on the survey, stakeholders tended to favor the following:

- Wider shoulders and sidewalks were more favorable than lower right-of-way impacts.
- Open drainage and a rural feel were more favorable than enclosed drainage and lower right-of-way impacts.
- Direct access to all driveways (no raised medians) was more favorable than reducing vehicle conflicts.

5. Question 5 – Purpose and Need

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

MoDOT's scope/intent for this PEL study is to investigate a safe and efficient corridor. Route N is functionally classified as a Major Collector and Minor Arterial. The growth of St. Charles County has caused an increase in local traffic[3] on Route N and has also increased the extent that regional traffic uses Route N. The goal of the Route N PEL study is to investigate how to accommodate these traffic streams. The research conducted to investigate the Purpose and Need of the Route N corridor included the following:

- Traffic operations were analyzed during the morning and evening peak hours of traffic. These results were compared to existing 2018 and 2045 future no-build conditions. The existing analysis showed several intersections operating at Level of Service (LOS) E or F in both the a.m. and p.m. peak hours. Operations are predicted to get worse as traffic volumes increase between the existing and 2045 future no-build scenarios. In the future no-build scenario, many intersections are predicted to fail with an LOS of F in both peak hours, clearly identifying a need for improvements.
- Crash data for the 5-year period between 2013 and 2017 was obtained from MoDOT's Traffic Management System and analyzed to provide insight into the current safety performance of the Route N study corridor.
- An access management assessment was conducted to consider business access, residential driveways, and minor roads in between the major intersections.

The various planning, traffic, and crash investigations were used to identify the elements that affect the safe and efficient operation of the Route N corridor. This ultimately led to the Purpose and Need for the project. The complete planning, traffic, and crash investigation technical memorandums are contained in **Appendix C** of **Attachment 2**.

To determine the efficacy of alternatives, a screening based on the project's Purpose and Need was conducted. The evaluation criteria presented in **Table 2** were used to determine how well alternatives would satisfy the Purpose and Need. For example, in evaluating whether key intersections can operate adequately, peak-hour LOS was used as a benchmark. The project's LOS analysis was used to determine the efficacy of alternatives. The evaluation methodology is further discussed in **Question 6**.

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

The purpose or goal of the Route N study is to investigate and identify improvements intended to develop a safe and efficient corridor between the South Point Prairie Road/Jackson Road intersection and the I-64/Route 364 interchange.

Within the context of this purpose, two specific transportation problems, or Need Elements, have been identified. The specific transportation problems affecting the portion of St. Charles County that includes Route N are as follows:

Need to Improve Access and Connectivity—The Route N corridor continues to handle higher volumes of traffic desiring access to important study area resources and efficient travel through the corridor. In this portion of St. Charles County, non-interstate travel between I-64 and I-70 requires using minor collectors

[3] Meant colloquially, local traffic/users denote those trips to/from final destinations in the immediate vicinity of Route N (such as residences and businesses). Regional traffic/users denote those longer trips that use Route N to access other portions of the roadway network (such as I-70 or Page Avenue).

or local roads. These roadways do not meet current design standards for the high volumes of traffic they carry. Roadway curvature (sharp turns) and profile (rolling hills) inhibit mobility, and narrow lanes and minimal shoulders offer little margin for error. As traffic volumes continue to increase, providing safe and efficient access to important local resources is a priority. Providing for travel through the study corridor on a roadway that meets modern design standards for the traffic they carry is also a priority.

Need to Reduce Congestion and Delays—The number of vehicles on the Route N corridor exceeds the capacity of the existing roadway. Congestion and mobility is worsened by the number and spacing of uncontrolled and over-capacity intersections and driveways. Route N was not designed and constructed to accommodate the high volumes of traffic currently on the roadway. Congestion and delays along Route N are worsened by the number and spacing of access points, including numerous intersections and driveways that operate over capacity. Of the 14 main intersections along Route N and Buckner Road, 6 operated at LOS F in 2018. Under the no-build scenario, 8 of these intersections will operate at LOS F by the design year of 2045.

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

To create a project-level Purpose and Need statement for each of the three sections emerging from this PEL study, the needs identified in the draft EA's Purpose and Need (summarized previously) may require updated data, analyses, or additional stakeholder input. Whether this is necessary will depend on the amount of time elapsed since the completion of this PEL study and whether conditions along the corridor have changed from those described in the EA. The reinvestigation may include the following:

- Consideration of whether the overall corridor Purpose and Need applies to an individual segment
- Examination of the data used to support the EA Purpose and Need and update as necessary
- Evaluation of whether any other changes in the corridor might introduce additional needs
- Coordination with the public and agencies, as needed

For the transportation need Improved Access and Connectivity within the Route N study area, the re-evaluation might include the following:

- Providing Safe and Efficient Access to/from Important Study Area Resources—Existing Route N serves many important study area resources including schools, churches, subdivisions, and businesses that generate high volumes of traffic. The eastern portion of the study area is dominated by businesses and subdivisions. The western portion of the study area contains several churches and schools in addition to large subdivisions and businesses. As growth continues along the Route N corridor, providing safe and efficient access to these important resources is important.
- Providing Roadway Design and Features That Meet Appropriate Standards—In the western portion of the Route N study area, South Point Prairie Road and Route N are narrow, two-lane roadways with minimal shoulders. This provides drivers and bicyclists with little margin for error. Worsening this situation are segments of roadway with challenging curvature (sharp turns) and profile (rolling hills). Further safety concerns include lack of sight distance for drivers to perceive conflicts on the roadway ahead, which may include oncoming vehicles or vehicles slowing or stopped waiting to complete a turn onto another roadway or driveway. In the eastern portion of the study area, these conditions are magnified by higher traffic volumes and more frequent roadway intersections and driveway entrances. As development continues along the Route N corridor east of Route Z, vehicle and user demand continues to grow with corresponding increases in traffic volumes. The design and features of the roadway have not been upgraded or improved to meet modern standards that would be consistent with the higher current and future traffic volumes along the corridor.
- Improving Connectivity in the Study Area—The ability to connect to everyday destinations is critical. A connected transportation network plays an important role in ensuring that travelers can reach these

destinations efficiently. At the regional level, efficient roadway networks affect access to jobs, education, and healthcare opportunities. Numerous crossroads intersect with existing Route N, creating a network that requires many traffic streams to use Route N to reach their destinations. The traffic streams associated with Route N include the broadest spectrum of vehicles and users, including multimodal connections, municipal services, bicyclists and pedestrians, and commuters. Key roadways that add traffic to Route N include Hawk Ridge Trail, Lake St. Louis Boulevard, Hopewell Road, Duello Road, Perry Cate Boulevard, Route Z, Wilmer Road, Hepperman Road, and South Point Prairie Road. Many of the crossroads mentioned also provide access to large residential subdivisions that concentrate access onto Route N. Maintaining access to Route N is critically important in providing these residents a connected network to access their homes, jobs, schools, and churches. Additionally, emergency medical service, police, and other municipal service providers have been strong supporters of greater connectivity. Without a connected network of crossroads, an emergency that closes Route N or an intersection with Route N greatly affects travelers' ability to reach their destinations.

For the transportation need Reduce Congestion and Delays within the Route N study area, the re-evaluation might include the following:

- Accounting for Existing and Future Traffic Volumes Along Route N—Currently, Route Z serves as the nominal boundary between the rural and suburban portions of St. Charles County. As such, the portion of Route N between I-64 and Route Z is classified as a Minor Arterial. Minor Arterials are projected to handle a higher traffic load—an average daily traffic (ADT) of 7,500 to 20,000 vehicles. West of Route Z, Route N is classified as a Rural Major Collector, projected to handle between 2,500 to 7,500 ADT. According to the St. Charles County Master Plan, Envision 2030, much of the growth in the County can be attributed to its being located in a path of westward development within the I-70 and I-64 corridors. The plan states: "Residential development has been supported by an abundance of relatively inexpensive land, expanding utilities, the availability of relatively inexpensive gasoline and a good roadway network. St. Charles County's population has seen slight growth as far fewer undeveloped tracts of land are available." As a result, safe and efficient access is needed to and from a number of major employment and activity centers to housing located in western St. Charles County. The change in urbanized area is shown on **Figure 4**.
- Providing Adequate Operation at the Study's Key Intersections and Major Driveways—Route N was not designed and constructed to accommodate the high volumes of traffic currently on the roadway. Congestion and mobility are worsened by the number and spacing of access points. The MoDOT Engineering Policy Guide (Category 232 Facility Selection) stipulates typical LOS targets. Rural roadways typically target LOS D or better during peak periods and LOS C or better during off-peak periods. In urban areas, roadways typically target LOS E or better during peak periods and LOS D or better during off-peak periods.
- Providing Access Management Opportunities Along Route N—Conflict points are locations where vehicle paths cross. Traffic conflict points along a roadway include where turning vehicle pathways merge, diverge, or cross due to turning movements and other movements along the roadway. Primary conflict points are at intersections and driveway entrances. The number and spacing of access points also impacts traffic operations and safety on the roadway. As the area adjacent to and nearby Route N develops, traffic volumes and access points will continue to increase, especially at the eastern portion of the study area.

6. Question 6 – Range of Alternatives

a. What types of alternatives were looked at?

At the heart of the alternative selection process is the establishment of study limits. FHWA issues guidelines to assist transportation planners in designating study limits for an evaluation. In addition to establishing rational end points for a transportation improvement, the study limits should also serve as general geographical boundaries for a review of environmental impacts. Based on these criteria, the following study limits for the Route N study were established:

- Western terminus: South Point Prairie Road/Jackson Road intersection—This intersection also serves as the southern terminus of the DHP. The DHP is a project sponsored by the City of Wentzville. It will be a new roadway in western Wentzville and will provide a new connection between I-70 and US 61. Beginning just south of I-70 at South Point Prairie Road and Jackson Road, the DHP travels north with a new interchange at I-70. From I-70, the DHP extends east through parts of Wentzville and ends near Mette Road and Route P in Flint Hill. The southern terminus of the DHP serves as the western terminus of the Route N study.
- Eastern terminus: I-64/Route 364 interchange—Route 364, also known as the Page Avenue Extension, is a 20-mile divided highway between I-270 in Maryland Heights and I-64 in Lake St. Louis. Phase 1 of the Page Avenue Extension opened in 2003. The last segment, Phase III, was completed in 2014. At I-64, Route 364 transitions from a divided, four-lane highway to Route N. The eastern terminus of the Route N study is the I-64/Route 364 interchange.

These limits connect the essential movements associated with the roadways of western St. Charles County. Multiple transportation improvements can be considered as individual projects as long as the improvements have independent utility. A project that has independent utility is considered usable and reasonable even if no additional transportation improvements in the area are made. This will allow for a schedule that does not restrict or otherwise alter planning and construction of adjacent projects. Finally, these termini neither restrict nor prevent consideration of other reasonably foreseeable transportation improvements.

Based on the study's Purpose and Need, logical termini, and study area, a range of Conceptual Alternatives were developed. The Conceptual Alternatives represent the initial alternatives that could potentially address the transportation needs established by the study. These alternatives are depicted on **Exhibits 2 through 7** in **Attachment 1**.

- No-Build Alternative (No New Build Elements)—The No-Build Alternative is always carried through NEPA evaluations. If no alternatives can be found that minimally satisfy a study's Purpose and Need, the Selected Alternative would be the No-Build Alternative. The No-Build Alternative assumes no improvements outside of routine maintenance.
- Transportation System Management (TSM)/Travel Demand Management (TDM) Alternative (No Additional Capacity)—TSM strategies are generally used to maximize the efficiency of operations of the existing roadway system rather than increasing capacity. Examples of TSM strategies include ramp metering, implementing Intelligent Transportation Systems, and enhanced transit service.
  TDM measures are implemented to manage the travel demand component of the transportation system. The main focus is to reduce or maintain the level of vehicular traffic occurring during peak periods and to reduce the use of single occupant automobiles. Examples of TDM measures include reduction of the use of motor vehicles, shifting the use of motor vehicles to off-peak periods, encouraging ride-share and transit use, and telecommuting.

- Improve Existing Alternative (Improve Along Existing Corridor)—This configuration would improve Route N following its existing alignment, except between Hepperman Road and South Point Prairie Road (**Exhibit 2** in **Attachment 1**). Along most of the corridor, the improvements would be constructed adjacent to the existing roadway, typically constructing the roadway either to the north or south of existing Route N. It is important to note that due to upgrading the alignment to a 45-mile-per-hour design speed, it will not be possible to reuse most of the existing Route N pavement. However, portions of the existing Route N right-of-way can be used. The transition segment from Route N to South Point Prairie Road will use a new alignment starting at Hepperman Road. At this point, the alternative travels on new alignment westward through open terrain. It will cross Penny Royal Lane and transition to South Point Prairie Road, and then north to Jackson Road.
- Buckner Road Alternative (Improve Corridor Using Buckner Road)—This configuration would improve Route N along its existing alignment between the eastern termini and a point approximately 800 feet west of Route Z. From this point, the alignment travels south and connects to Buckner Road (**Exhibit 3** in **Attachment 1**). To complete the Route N/Route Z intersection, a connection will be constructed behind the existing Westlake Church of Christ and a recreational vehicle storage lot. The alignment will then use an improved version of Buckner Road to South Point Prairie Road. This connection will remove the existing right-angle curves on Buckner Road and the sharp turn on South Point Prairie. From this point, the alignment will use an improved version of South Point Prairie Road north to Jackson Road.
- Near South Alternative (New Alignment to the Near South of the Existing Alignment)—This configuration would improve Route N along its existing alignment between the eastern terminus to approximately the Hopewell Road/Duello Road intersection (**Exhibit 4** in **Attachment 1**). From this point, the alignment travels south and approximately parallel to existing Route N (approximately 1,000 to 1,500 feet south of Route N). It then travels north along South Point Prairie Road from the intersection of existing Route N at South Prairie Road to Jackson Road.
- Far South Alternative (New Alignment to the Far South of the Existing Alignment)—This configuration would improve Route N along its existing alignment between the eastern terminus to approximately the Hopewell Road/Duello Road intersection (**Exhibit 5** in **Attachment 1**). From this point, the alignment travels south of existing Route N. The alignment will be approximately 1 mile (5,280 feet) south of Route N at its intersection with Route Z. It then travels north along South Point Prairie Road to Jackson Road.
- Wilmer/Interstate Alternative (Realign Corridor using Wilmer Road and Interstate Drive)—This configuration would improve Route N along its existing alignment to the Wilmer Road intersection. From there, it will follow/improve Wilmer Road to Interstate Drive (**Exhibit 6** in **Attachment 1**). It will then follow Interstate Drive to the DHP.
- Route Z/Interstate Alternative (Realign Corridor using Route Z and Interstate Drive)—This configuration would improve Route N along its existing alignment until the Route Z intersection. From there, it will follow/improve Route Z to Interstate Drive (**Exhibit 7** in **Attachment 1**). It will then follow Interstate Drive to the DHP.

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

To determine which Conceptual Alternatives to advance for further study, a screening based on the project's Purpose and Need was conducted. (Refer to **Question 5** for a discussion of the project's Purpose and Need.) The evaluation criteria presented in **Table 2** were used to determine how well each Conceptual Alternative satisfies the Purpose and Need. Only those Conceptual Alternatives that substantially satisfy each element of the Purpose and Need moved forward to the next phase of screening, Reasonable Alternatives.

To further differentiate among alternatives, *Standards* were defined for each evaluation criterion. The standards help measure the degree to which an alternative achieves the goals of the evaluation criteria.

Finally, a *Decision Key* is developed. The Decision Key asks, in yes/no format, whether the alternative meets the Standards and Evaluation Criteria for each of the Purpose and Need elements.

The progression is as follows:

PURPOSE AND NEED ELEMENT → EVALUATION CRITERIA → STANDARDS → DECISION KEY

In this case, a yes/no format was used to document the performance measures that define how well an alternative succeeds at accomplishing the Evaluation Criteria. **Table 2** presents a summary of the major elements of the Purpose and Need, the Evaluation Criteria, Standards, and Decision Keys.

In the draft EA, the Tentative Preferred Alternative was later identified based not only on how well it satisfied the study's Purpose and Need, but also considered other factors including environmental, engineering, resource agency input, and stakeholder input.

Table 2. Draft Conceptual Alternatives Evaluation Matrix

Purpose and Need Element	Evaluation Criteria	Standards	Decision Key (Yes/No)	Conceptual Alternatives							
				No-Build	TSM/TDM	Improve Existing	Buckner Road	Near South	Far South	Wilmer Road/Interstate Drive	Route Z/ Interstate Drive
Purpose and Need Element #1—Need to Improve Access and Connectivity	A) Provide safe and efficient access to/from important study area resources	Can the alternative provide improved access to/from key Route N destinations and major traffic generators?	Yes—Alternative provides improved access to key destinations and major Route N traffic generators No—Alternative does not provide improved access to key destinations and/or underserves major Route N traffic generators	No	No (Improvements limited to existing access points)	Yes	Yes	No (Does not provide improved access to destinations west of Hopewell/Duello)	No (Does not provide improved access to destinations west of Hopewell/ Duello and underserves traffic generators north of Route N)	No (Underserves traffic generators west of Wilmer Road and south of Route N)	No (Does not provide improved access to destinations west of Route Z and underserves traffic generators west of Route Z and south of Route N)
	B) Provide roadway design and features that meet appropriate standards	Can the alternative meet design standards for the appropriate roadway classification(s)?	Yes—Alternative can be designed to be consistent with future Route N roadway type and traffic volumes consistent with planned land uses No—Alternative would result in future Route N traffic on incompatible roadways/roadway types and/or through existing or planned land uses that are not intended for future Route N traffic	No	No (Broad roadway improvement is not proposed)	Yes	Yes	Yes	Yes	No (Interstate Drive and Wilmer Road design, roadway type, and planned land uses are not consistent with Route N traffic)	No (Interstate Drive and Route Z design, roadway type, and planned land uses are not consistent with carrying Route N traffic)
	C) Improve connectivity in the study area	Can the alternative improve connectivity in the Route N corridor?	Yes—Alternative accommodates trips between study termini and focuses connectivity improvements near to the existing corridor. No—Alternative results in inefficient movement of traffic between study termini and/or does not improve connectivity for trips remaining on existing Route N	No	No (Improvements limited to existing access points)	Yes	Yes	Yes	No (Distance from existing Route N results in inefficient operations on existing Route N)	No (Inefficient movement of traffic between study termini due to required turns)	No (Inefficient movement of traffic between study termini due to required turns)
Purpose and Need Element #2—Need to Reduce Congestion and Delays	A) Provide adequate capacity along Route N	Does the alternative provide capacity that exceeds the forecasted traffic demand along Route N?	Yes—Alternative provides sufficient capacity for traffic using existing and future Route N and does not adversely affect other area roadways No—Alternative does not provide sufficient capacity for traffic using existing Route N and/or adversely affects other area roadways	No	No (Broad roadway improvement is not proposed)	Yes	Yes	Yes	No (Does not improve traffic flow on existing Route N given distance from existing)	No (Adversely affects Interstate Drive and Wilmer Road)	No (Adversely affects Interstate Drive and Route Z)
	B) Provide adequate operation at the study's key intersections and major driveways	Does the alternative offer the opportunity to provide peak-hour LOS D (rural sections) or LOS E (urban sections) or better at key Route N intersections and improved operations at major driveways?	Yes—Alternative improves/accommodates efficient operation at existing and future Route N key intersections and major driveways No—Alternative does not improve/accommodate efficient operations at existing and future Route N key intersections and major driveways	No	Yes	Yes	Yes	Yes	No (Does not improve operations for existing intersections and driveways given distance from existing)	Yes	No (Does not improve key intersections and driveways west of Route Z)
	C) Provide access management opportunities along Route N	Does the alternative offer the opportunity to manage the number and spacing of access points along Route N?	Yes—Alternative provides opportunities to manage the number and spacing of access points along Route N No—Alternative provides limited, if any, opportunities to manage the number and spacing of access points along Route N	No	Yes	No (Limited opportunities for access management)	No (Limited opportunities for access management)	Yes (assuming that MoDOT will purchase access rights when acquiring right-of-way)	Yes (assuming that MoDOT will purchase access rights when acquiring right-of-way)	No (Limited opportunities for access management)	No (Limited opportunities for access management)
Number (%) of Purpose and Need Elements Met				**0/6**	**2/6 (33%)**	**5/6 (83%)**	**5/6 (83%)**	**5/6 (83%)**	**2/6 (33%)**	**1/6(17%)**	**0/6 (0%)**
Reasonable Alternative?				**Yes**	**No**	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

c. For alternative(s) that were screened out, briefly summarize the reasons for eliminating the alternative(s).

Based on the evaluation documented in **Table 2**, the following Conceptual Alternatives were screened out due to meeting none or minimal Evaluation Criteria:

- TSM/TDM Alternative: Yes on 2 out of 6 Evaluation Criteria (33 percent)
- Far South Alternative: Yes on 2 out of 6 Evaluation Criteria (33 percent)
- Wilmer/Interstate Drive Alternative: Yes on 1 out of 6 Evaluation Criteria (17 percent)
- Route Z/Interstate Drive Alternative: Yes on 0 out of 6 Evaluation Criteria (0 percent)

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

The decision key for advancing an alternative was that it met all or a majority of the six Evaluation Criteria and satisfied a majority of Purpose and Need elements. The alternatives that were advanced are summarized as follows:

- Improve Existing Alternative: Yes on 5 out of 6 Evaluation Criteria (83 percent)
- Buckner Road Alternative: Yes on 5 out of 6 Evaluation Criteria (83 percent)
- Near South Alternative Yes on 5 out of 6 Evaluation Criteria (83 percent)

The No-Build Alternative was also brought forward to provide a basis for comparison.

The Reasonable Alternatives are shown on **Figure 5**. It is recommended that these alternatives be carried forward into subsequent NEPA evaluation for each section of the corridor.

Because this PEL study is based on a NEPA study that was paused prior to completion, it should be noted that a Tentative Preferred Alternative had been identified in the draft EA document in collaboration with key stakeholders (**Attachment 2**). The Tentative Preferred Alternative is the Buckner Road Reasonable Alternative, which would improve Route N along its existing alignment between the eastern terminus and a point approximately 800 feet west of Route Z. From this point, the alignment travels south and connects to Buckner Road. To complete the Route N/Route Z intersection, a connection would be constructed behind the existing Westlake Church of Christ and a recreational vehicle storage lot. The alignment would then use an improved version of Buckner Road to reach South Point Prairie Road. This connection would remove the existing right-angle curves on Buckner Road and the sharp turn on South Point Prairie Road. From here, the alignment would use an improved version of South Point Prairie Road north to Jackson Road. Refer to **Figure 1**.

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

Yes. As discussed in **Question 4**, an extensive public outreach, stakeholder, and agency coordination process was conducted for the improvement of the Route N study. As part of this process, all stakeholder groups had the opportunity to provide input on the alternatives development process and to make direct suggestions about alternatives to be considered. The alternatives recommended to move forward into NEPA will be presented at a public meeting prior to concluding the PEL process.

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

Yes. The Route N EA study identified several issues that will require ongoing coordination during subsequent phases of work. These include concerns about right-of-way impacts and displacements of

homes, the relationship of this project to other local transportation projects, and further coordination required for potential effects to natural resources. Throughout the public involvement process, substantive comments were collected and addressed, as appropriate to the nature and format of the comments. **Question 13** lists the substantive comments and a summary of the study's responses.

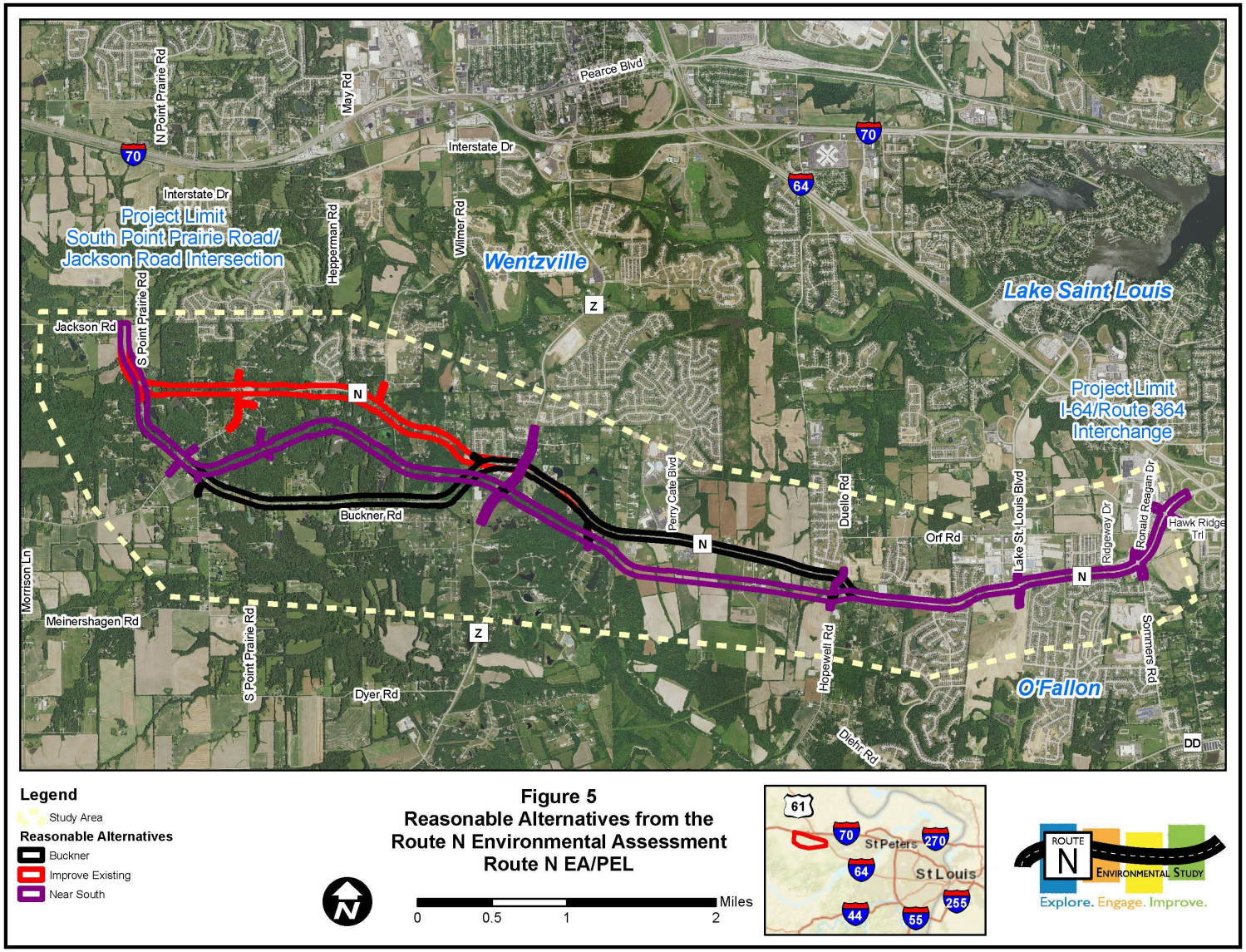

Figure 5. Reasonable Alternatives from the Route N Environmental Assessment

7. Question 7 – Planning Assumptions

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

Appendix C of the draft Route N EA (within **Attachment 2** of this PEL document) contains documentation of the numerous planning studies conducted. These include the following:

- Traffic Demand Studies (existing counts, future volumes, intersection operation)
- Safety Studies (*Highway Safety Manual* crash analysis)
- Access Management (consequences of two-way left-turn lane or a raised median)
- Phasing Analysis (logical implementation of construction along corridor)
- Transportation Planning (existing local/regional goals)
- Traffic Analysis Zone (TAZ) Trip Service Analysis (TAZ using the EWG regional travel demand model)

All of these studies used a base year of 2018 and a future year of 2045. The future no-build volumes for the year 2045 were developed based on the EWG travel demand model using the EWG model's roadway network and land use assumptions, assuming Route N remained unimproved.

b. What method was used for forecasting traffic volumes?

The important methods associated with the studies listed in **Question 7.a** include the following:

- Existing turning movement counts were collected at 10 intersections in October of 2018 during both the a.m. and p.m. peak periods.
- Previous turning movement counts and 24-hour counts at various locations in the study area were provided by MoDOT and St. Charles County.
- Future no-build volumes for the year 2045 were developed based on the EWG travel demand model.
- The EWG models were used to calculate a growth rate for each intersection in the study area.
- All traffic analyses were completed using Synchro version 10 traffic modeling software.
- Intersection LOS was determined using the *Highway Capacity Manual*.
- The traffic analyses completed two separate 2045 peak-hour traffic forecasts using EWG's model and a four-lane Route N configuration in the study area. Scenario 1 used EWG's land use assumptions and included St. Charles County committed (fiscally constrained) projects. Scenario 2, which was undertaken as a sensitivity analysis and reference point for the study team and planning partners, used St. Charles County's land use assumptions and priority projects.
- The traffic forecast was completed for both the a.m. and p.m. peak hours. An estimated annual average daily traffic was calculated using the rule of thumb assumption that peak-hour traffic is 10 percent of daily volumes.
- The TAZ analysis (from the EWG regional travel demand model) examined trip serviceability by alternative. The zones that could not be serviced by an alternative were summed together to find the total daily trips served/unserved by that route. By continuing to use the current alignment or near-current alignment (including the No-Build, Improve Existing, Buckner Road, or Near South Alternatives), a total of 61,000 daily trips could be serviced. Alternatives that used more circuitous alignments (such as the Far South Alternative) serve fewer trips. For example, the Interstate Drive/Wilmer Road Alternative serves the most daily trips of the outer alignment alternatives; 46,460

daily trips, or 76.1 percent, are served by this alternative. This is lower than the 61,000 daily trips served by the current and near-current alignment alternatives.

- The Phasing Analysis was based on the current operational needs and constructability taking into consideration the improvement of Route N and other currently funded regional projects.
- Crash data for the 5-year period between 2013 and 2017 was obtained from MoDOT's Traffic Management System and analyzed to provide insight into the current safety performance of the Route N study corridor.

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?

Yes. The planning assumptions used for the project and the project's Purpose and Need statement are consistent with each other and with the long-range transportation plan. **Appendix C** of the latest draft Route N EA (within **Attachment 2** of this PEL document) contains documentation of the many planning studies affecting the Route N. The Route N corridor is covered by several layers of transportation planning, such as the following:

- MoDOT Transportation Planning
- MoDOT's State System Classification
- MoDOT Transportation Asset Management Plan
- EWG Planning
- St. Charles County Transportation Improvement Plan
- Gateway Bike Plan
- Great Rivers Greenway River Ring Plan
- St. Charles County Planning
- St. Charles County's *Master Plan Envision 2030*
- City of Wentzville Planning
- St. Charles County Future Land Use Plan
- Wentzville Comprehensive Plan

Together, these plans contain assumptions about land use changes and transportation access needs that supported and are consistent with the project's Purpose and Need.

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?

Relative to the transportation planning process, the Route N corridor is included in the St. Charles County's *Master Plan Envision 2030*. The transportation element of the County's Master Plan identifies the following:

- In many areas, cars are the only option for getting around the County.
- Land use planning and transportation planning are not always well coordinated.
- Improving the transportation system is expensive.

Route Z serves as an approximate boundary between the rural and suburban portions of the Route N corridor. For example, the portion of Route N between I-64 and Route Z is classified as a Minor Arterial. Minor arterials are projected to handle a higher traffic load—an average of 7,500 to 20,000 vehicles per day (ADT). West of Route Z, Route N is classified as a Rural Major Collector, projected to handle between

2,500 to 7,500 ADT. Based on 2018 traffic counts, daily traffic on Route N ranges from 3,000 vehicles west of Route Z to more than 24,000 east of Route Z. In addition to traffic volumes, roadway classifications exist along a graduated scale for spacing, length, connectivity, and adjacent land uses.

Transit usage in this portion of St. Charles County is extremely low. Transit services within the Route N corridor is limited to Operating Above the Standard (OATS) Transit, which offers a shared-ride, demand-response, and door-to-door service. Some OATS routes have a set fare, whereas some routes are donation based as they may be covered by agencies like the Area Agency on Aging. The City of O'Fallon also operates the Senior Transportation and Rides (STAR) Program. Because these services are very limited, transit services are not a notable element of this study.

There is a freight railroad in the vicinity of the Route N study area. The Norfolk Southern Railway essentially parallels I-70 from St. Charles to Foristell. This railway serves companies and facilities within the industrialized areas of St. Peters, O'Fallon, and Wentzville. This railway is included into the study area of the DHP and supports the existing and future land use in that portion of the study area. Relative to the improvement of Route N, the St. Charles County Transportation Improvement Plan (TIP) focuses on the DHP. The overall DHP corridor will provide a direct connection to I-70 (with the City of Wentzville's interchange project) and to Route 364 at Route N, thereby serving as an extension of Route 364 in the western parts of the County. This project will be built to anticipate future DHP widening.

8. Question 8 – Environmental Resources Reviewed

a. In the PEL study, at what level of detail was the resource reviewed and what was the method of review?

This section identifies the affected resources investigated during the Route N EA study:

- Environmental/Pollution Impacts
  - Air Quality
  - Hazardous Materials
  - Noise
  - Visual Resources
- Natural Habitat Impacts
  - Terrestrial Habitats
  - Geological Resources
  - Endangered and Threatened Species
- Community/Socioeconomic Impacts
  - Demographics
  - Environmental Justice
  - Land Use
  - Secondary and Cumulative Impacts
- Aquatic Habitat Impacts
  - Floodplains
  - Streams and Watersheds
  - Wetlands
  - Water Quality and Stormwater Management
  - Groundwater and Drinking Water
  - Hydraulics
- Impacts to the Human Environment
  - Cultural Resources
  - Section 6(f)
  - Section 4(f)
  - Farmland
  - Right-of-Way/Property Acquisition

The methodologies used during the resource investigations are consistent with FHWA's *Guidance for Preparing and Processing Environmental and Section 4(f) Documents*[4] and MoDOT's Engineering Policy Guide[5] as of the time of preparation of the draft EA. Within the latest draft of the Route N EA (**Attachment 2**), the methodologies and level of the level of detail used during the resource investigations are further explained.

b. Are these resources present in the area and what is the existing environmental condition for these resources?

This section summarizes the resource assessments conducted for the Route N EA project. **Attachment 2** contains the latest draft version of the EA.

Air Quality Impacts—The Conceptual Alternatives are expected to have traffic volumes approximately 30 percent higher than the No-Build Alternative. This corresponds to approximately 6,400 vehicles per day. The differences related to air quality among the Conceptual Alternatives are minimal. Consequently, the Conceptual Alternatives are not expected to contribute to substantially increased emissions that would lower air quality. Moreover, EPA regulations for vehicle engines and fuels will cause emissions to decline over the next several decades. Construction activities may result in short-term impacts on air quality, including direct emissions from construction equipment and trucks, fugitive dust emissions from site demolition and earthwork, and increased emissions from motor vehicles and haul trucks on local streets.

[4] Federal Highway Administration (FHWA). 1987. *Guidance for Preparing and Processing Environmental and Section 4(f) Documents.* TA 6640.8A. October 30.

[5] Missouri Department of Transportation (MoDOT). 2021. Engineering Policy Guide. December 28. https://epg.modot.org/index.php/Main_Page.

Hazardous Materials—Based on database searches and field reconnaissance, two sites were recommended for further assessment. Both are located in the southwestern quadrant of the Route N/Route Z intersection. The Mobile On the Run #1619 gas station is located at 42 Highway N West (Site #3 on **Exhibit 8** in **Attachment 1**). A portion of the property identified as the MFA Exchange in the regulatory databases is shown as adjacent to the Mobile On the Run #1619 gas station (Site #4). These sites have a high risk for a release to soil or groundwater.

Traffic and Construction Noise—Due to the relatively low volumes and speeds, few locations approach or exceed the Noise Abatement Criteria (NAC). The noise levels predicted for the Conceptual Alternatives are similar. **Exhibit 9** in **Attachment 1** depicts the location of the impacted noise receptors. Noise conditions were modeled with the Traffic Noise Model (TNM) to determine future conditions. A total of 602 modeling receptors were included in the model. Between 10 and 14 residences are expected to approach or exceed the NAC (in 2045).

Barriers in the vicinity of the affected receptors were able to achieve the minimum feasibility requirements. Therefore, a barrier optimization process was undertaken. The results of the effort concluded that no noise barriers were reasonable. None could achieve the cost-effectiveness standards.

Visual Resources—Overall, the impacts to the visual environment are expected to be limited and site specific. The most common and persistent view changes can be summarized as follows:

- Improve Existing Alternative: Largely maintains existing views
- Buckner Road Alternative: Changes a rural/low-volume/uncluttered road to a more suburban/high-volume/cluttered configuration
- Near South Alternative: Places a suburban/high-volume/cluttered configuration in an area where roads do not exist

Terrestrial Habitat—The size of the area needed to build and maintain the alternatives (not including the area already within the existing roadway right-of-way) varies from 221 acres for the Improve Existing Alternative, 226 acres for the Buckner Road Alternative, and 272 acres for the Near South Alternative. For decision-making purposes, the following should be noted:

- Improve Existing and Buckner Road Alternatives will impact approximately 50 percent developed (artificial) areas. The Near South Alternative has a larger portion of an off-alignment footprint. Consequently, only about one-third is developed.
- Improve Existing Alternative impacts the highest concentration of developed areas along the Route N corridor. Additionally, a relatively large woodland area is bisected where the alignment connects to South Point Prairie Road. The Improve Existing Alternative bisects only one farmstead.
- Buckner Road Alternative impacts the least total woodlands. Farmstead bisection (two) and forest bisection are minimal.
- Near South Alternative impacts substantially more high-quality woodlands and farmland. It was estimated that the Near South Alternative will bisect many more farmsteads (eight) identified in the St. Charles County Future Land Use Plan.
- **Exhibit 10** in **Attachment 1** depicts the terrestrial habitats based on the Multi-Resolution Land Characteristics Consortium's National Land Cover Database (NLCD).[6] The NLCD provides nationwide land cover data based on a modified Anderson Level II classification system.

[6] Multi-Resolution Land Characteristics Consortium. 2019. National Land Cover Database. https://www.mrlc.gov/.

Geological Resources—The geotechnical data available for the Route N study are summarized from the available data from the MDNR, the Natural Resources Conservation Service (NRCS), and Missouri Geological Survey. Based on the evaluation of available data, no substantial differences relative to geological resources are expected between the EA's Reasonable Alternatives.

Endangered Species—Agency coordination yielded no records of state or federally listed endangered species within 1 mile of the study area. The MDC Natural Heritage Database (April 2019)[7] and Missouri Speleological Survey's Missouri Cave Database (April 2019)[8] were also used to screen for potential impact to federal and state listed species as well as caves and mines. The MDC Natural Heritage Database shows a record for the Indiana bat approximately 0.8 mile south of the study area near the eastern terminus (mist net, summer record). Field investigations did not identify the presence of state or federally listed species.

Although there are no known nearby caves (Missouri Cave Database, April 2019) and no nearby records for gray bat (MDC Natural Heritage Database, October 2019), a determination of "may affect, not likely to adversely affect" determination for the gray bat is anticipated due to the clearing of mature trees along riparian corridors within the project area. Gray bats are known to forage along wooded riparian corridors miles from their cave roosts.

Demographics—St. Charles County is the third-largest county in the State of Missouri. St. Charles County is in the western portion of the St. Louis Metropolitan Statistical Area (MSA). This MSA has an estimated 2020 population of 2,820,253. The population of St. Charles County has eclipsed the population of St. Louis City. St. Charles County has been the fastest-growing county in the metropolitan area for three decades. Development is predicted to continue at a substantial pace within St. Charles County for the foreseeable future. While the St. Louis MSA increased by 9 percent in population between 1990 and 2010, St. Charles County population increased by 69 percent during the same time period. Due to slow growth in the St. Louis area, the St. Louis MSA fell out of the top 20 largest MSAs in the United States for the first time since 1840. The County had an official 2020 population of 405,262.

The improvement of Route N is included in regional and County planning. Consequently, changes to predicted demographic trends are not expected. On the other hand, achieving the County's goals for development and community health may be hindered without improvements to the Route N corridor.

Environmental Justice—Executive Order (EO) 12898, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations," signed on February 11, 1994, requires federal agencies to take appropriate and necessary steps to identify and address disproportionately high and adverse human health or environmental effects of their actions on minority and low-income communities or populations.

The percentage of minorities in the vicinity of the study area is small. No concentrations or communities of minority populations within the footprint of the Reasonable Alternatives have been uncovered. No disproportionate impacts are expected.

Relative to low-income populations, the Castlegate Estates Mobile Home Park is potentially a low-income community. Given that the existing units can be relocated onsite and the overall environment will be improved, a disproportionate impact is not expected. Refer to **Figure 6**.

Land Use—The Route N corridor, and St. Charles County as a whole, is undergoing substantial development as agricultural land transitions to residential and other uses. According to the land use designations contained in the St. Charles County Tax Map Parcel dataset, most of the affected land is in

[7] Missouri Department of Conservation (MDC). 2019. Missouri Natural Heritage Review. https://naturalheritagereview.mdc.mo.gov/.
[8] Missouri Speleological Survey. 2019. Missouri Cave Database. https://www.mospeleo.org/cave-files.

residential and agricultural use. **Exhibit 11** in **Attachment 1** depicts many of the important land uses discussed in the text, including the distribution of residential subdivisions.

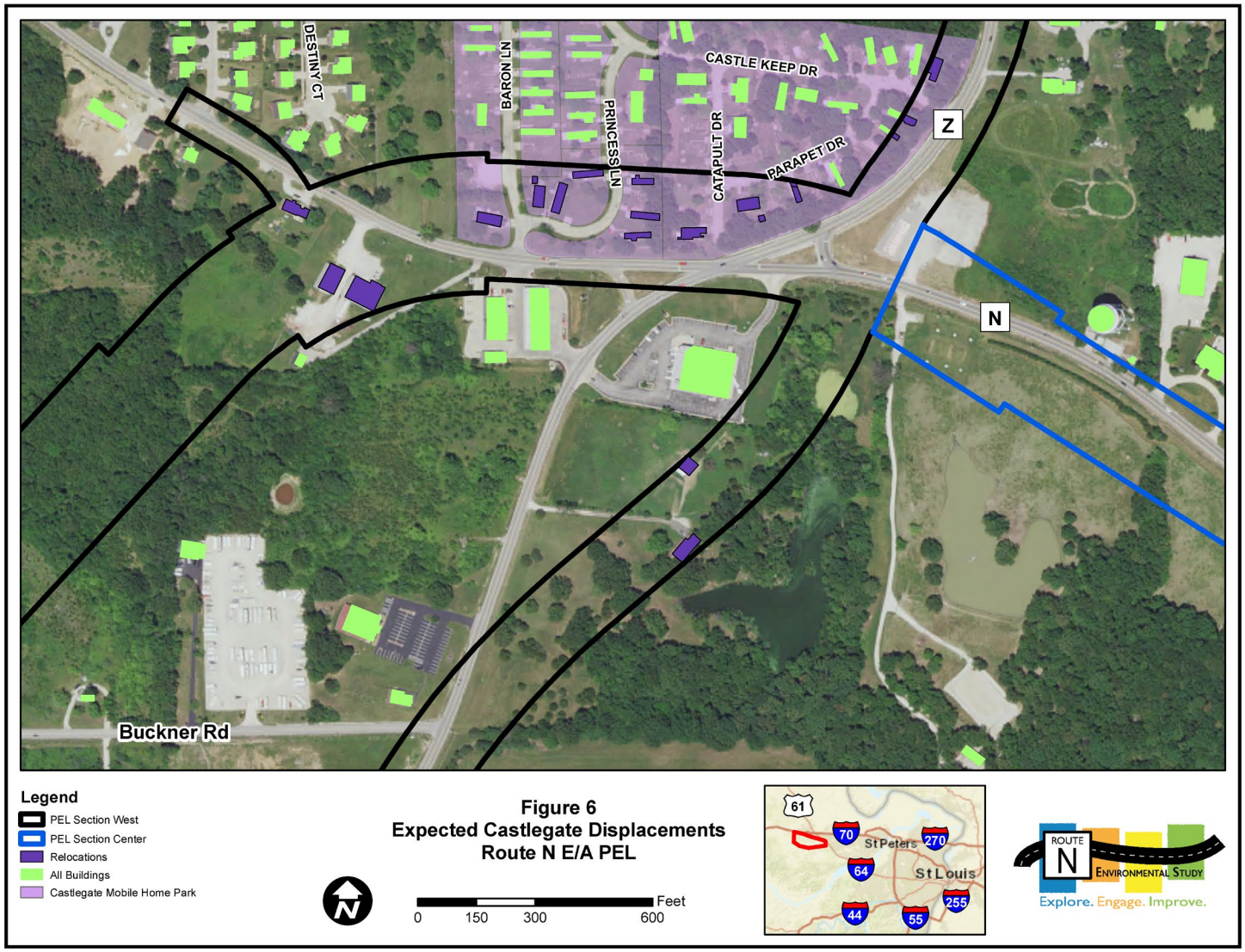

Figure 6. Expected Castlegate Displacements

An analysis was conducted to evaluate how the alternatives may affect the St. Charles County Future Land Use Plan. The evaluation focused on how well the alternatives provide for efficient movements, adequate roads, and reductions in traffic in residential areas. The Reasonable Alternatives are expected to have the following impacts:

- The size of the area needed to build and maintain the alternatives, not including the area already within the existing road right-of-way, ranges from 221 acres for the Improve Existing Alternative, to 226 for the Buckner Road Alternative, to 272 acres for the Near South Alternative.
- All of the Reasonable Alternatives are expected to displace the Wentzville Church of God.
- Near South Alternative will displace the St. Charles County Ambulance District facility and the cell tower located at the Route N/Hopewell Road intersection.
- Improve Existing Alternative will largely maintain existing movements, roadways, and traffic in residential areas.
- Buckner Road Alternative is expected to provide for efficient movements and adequate roadways. It will also relocate traffic to the low-density residential areas along Buckner Road.
- Near South Alternative is expected to provide for efficient movements and adequate roadways. It will also relocate traffic to the agricultural and low-density residential areas, where a road does not exist.
- Since the reconfiguration of the Route N corridor is incorporated into the regional and County planning documents, the No-Build Alternative may hinder the achievement of the underlying goals for development and community health.

Secondary and Cumulative Impacts—Direct effects are caused by a project and occur at the same time and place. Indirect (secondary) effects are caused by a project but occur later in time or are farther removed in distance than direct effects. A cumulative impact, according to 40 CFR 1580.7, is defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions."

- The first step in the process for evaluating secondary and cumulative impacts is to identify the sensitive resources to be analyzed for effects. These resources include those that are directly affected by the improvement of Route N, those affected by the secondary development that is associated with the study, and those resources that are particularly susceptible to cumulative effects. Not all impacts tend to "accumulate"—that is, similar impacts from more than one project do not always add together and create a greater impact. Other resources may experience a minimal impact from each individual action, but when impacts from several actions are summed cumulatively, they may experience greater effects.
- Sensitive resources were identified using the environmental information collected during the study, as well as public and agency scoping comments received. These interrelated resources include the following:
- Induced Development of Greenfields—Many stakeholders have expressed the concern that a reasonably foreseeable consequence of the improvement of the existing roadway will be the nonrural development in the corridor. As discussed previously, the stated purpose of the study is not the development of the corridor.
- Degradation of Desirable Rurality—Throughout the public involvement process, the rural nature of the existing corridor was cited as a community asset worthy of protection. Beyond the direct impacts, degradation could possibly occur elsewhere.

- Reduction of Farmland—Within the study area, agriculture is diminishing. It is anticipated that there will be some direct, but manageable, impacts. It is reasonable to investigate whether areas in the Area of Influence might also be affected.
- The Area of Influence is the spatial coverage within which to investigate secondary and cumulative impacts. Using the National Cooperative Highway Research Program Report 466, the analysis for indirect effects uses a 1-mile Area of Influence. The northern and eastern boundaries are formed by I-70 and I-64; refer to **Figure 7**.
- Overall, no significant negative secondary or cumulative effects are anticipated as a result of the implementation of the Route N study. This conclusion was based on evaluating how the alternatives conform to the region's planning process. This includes the evaluation of the St. Charles County Future Land Use Plan; the St. Charles County Thoroughfare Plan (a component of the St. Charles County Master Plan); the EWG's regional long-range transportation plan, Connected2045; and the St. Charles County TIP. An overview of the transportation planning affecting the study area is presented in the draft EA contained in **Attachment 2**.

Floodplains—**Figure 8** shows the Federal Emergency Management Agency (FEMA) 100-year floodplain for the Route N study area. The proposed alignment for Route N transversely impacts two FEMA stream crossings: Sams Creek and Oday Creek. Sams Creek is a tributary to Peruque Creek, and Oday Creek is a tributary to Dardenne Creek. These two streams are included in the FEMA Flood Insurance Study Number 29183CV001B, dated January 20, 2016. Both creek crossings are located within the FEMA-mapped floodway and flood zone AE. All of the Reasonable Alternative alignments are identical at the stream crossings. Thus, the hydraulic impacts will be identical.

Streams and Watersheds—The study area lies within two watersheds. None of the waterways are listed as Outstanding National or State Resource Waters. Peruque Creek and Dardenne Creek are identified on the 303(d) Impaired Waters list. Direct stream impacts will be limited to a tributary of the Peruque Creek. The existing Sams Creek crossing will need to be replaced or improved. South Point Prairie Road currently has a perpendicular crossing of the 1,000-foot-wide floodplain. The Reasonable Alternatives will transversely cross the floodplain in the same location. The stream is 16 feet wide at the crossing. The footprint of the Reasonable Alternatives is 330 feet at this location.

Wetlands—Initial wetland investigations began with a review of County soil survey maps and National Wetland Inventory maps to determine the locations of potential wetland sites. Then the study area was surveyed to determine the presence of plant species, the soil type, and the presence of water at or near the surface. Methodologies used follow protocols outlined by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)*[9] and the *Corps of Engineers Wetland Delineation Manual*.[10] Using the impact footprints for the Reasonable Alternatives, the expected wetland impacts are estimated to be 0.7 acre for the Improve Existing Alternative, 1.1 acres for the Buckner Road Alternative, and 1.4 acres for the Near South Alternative.

Water Quality and Stormwater Management—Existing surface water conditions would continue under the No-Build Alternative. For all of the Build Alternatives, sediment generation is the impact of concern for surface water quality. Sediment loads in rivers, streams, and wetlands can have an impact on drinking water quality and on aquatic animals by limiting oxygen absorption and covering eggs. Thus, erosion and the resulting sediment are regulated and involve best management practices (BMPs) to control adverse impacts.

[9] U.S. Army Corps of Engineers (USACE). 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)*. August.

[10] Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual.* Wetlands Research Program Technical Report Y-87-1. January.

MoDOT's BMPs reduce impacts to the aquatic environment to minimal levels. BMPs cover most activities needed to restore the construction area to an acceptable condition. This would include cleanup, shaping, replacing topsoil, and establishing vegetative cover on all disturbed bare areas, as appropriate. The methods for stormwater management, during and after construction, will be in accordance with the MoDOT's *Missouri Standard Specifications for Highway Construction*[11] and the study's National Pollutant Discharge Elimination System (NPDES) permit.

Any project that involves discharge of dredge or fill into waters of the U.S. requires a Section 404/401 permit from USACE and EPA. MoDOT will obtain authorization prior to construction.

[11] Missouri Department of Transportation (MoDOT). 2018. *Missouri Standard Specifications for Highway Construction.* Missouri Highways and Transportation Commission.

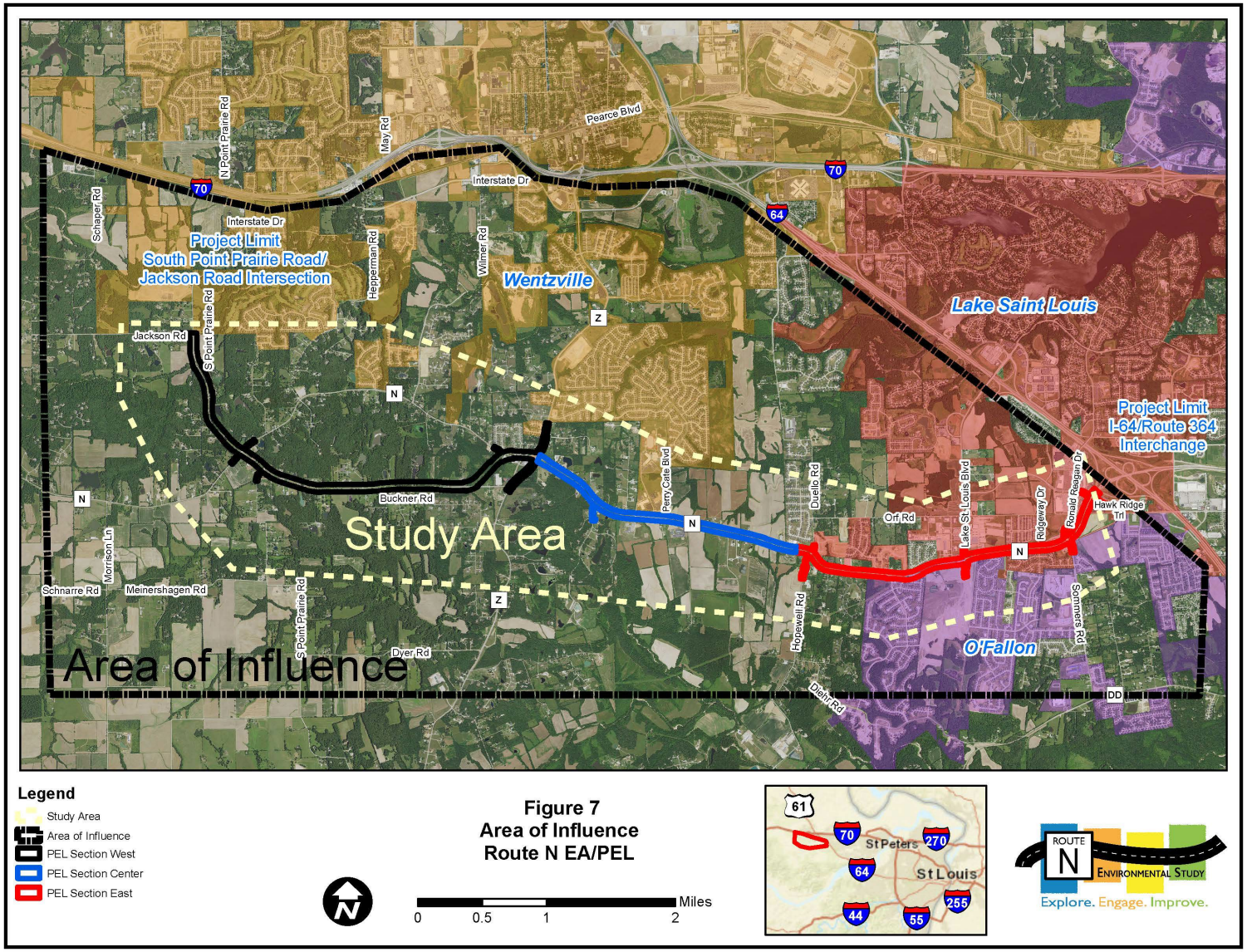

Figure 7. Area of Influence

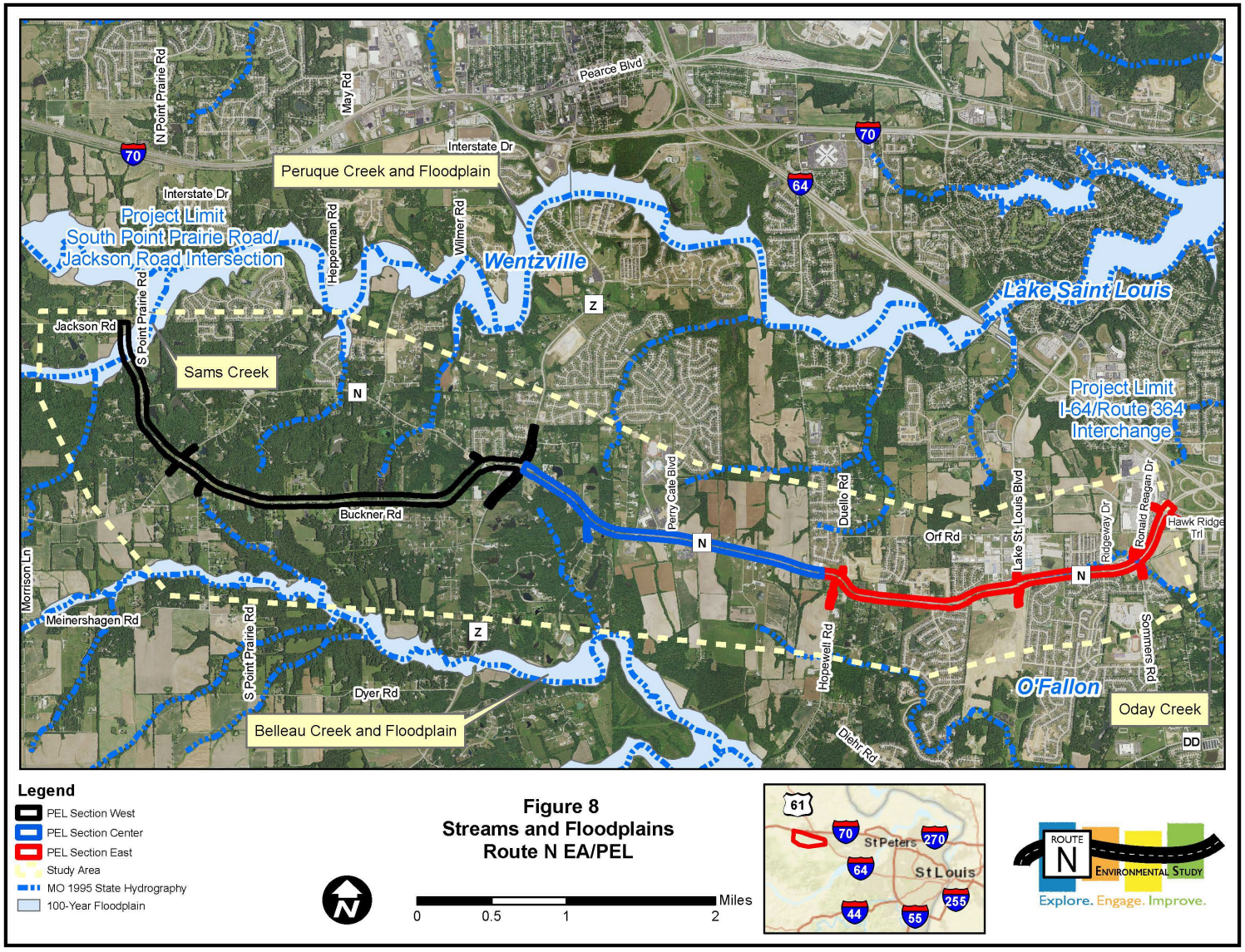

Figure 8. Streams and Floodplains

Groundwater and Drinking Water—The study area is resting on glacial drift consisting of sands, silts, and clays. A prevailing generally east-west–trending ridge runs through the center of the study area with drainages sloping down to the north toward Peruque Creek and south toward the Little Dardenne and Dardenne Creeks. Groundwater in the area is reported to be between 80 to 130 feet below the existing grade; however, perched water tables are known to exist at or above the soil-rock interface.

No known sinkholes or sole-source aquifers are expected to be encountered.

Nearly all the study area is served by Public Water Supply District 2, which claims to be "the largest water district in the State of Missouri serving a population of about 75,000 people." Their service area "encompass[es] over 400 square miles" and "includes the communities of Lake St. Louis, Defiance, New Melle, Augusta, Dardenne Prairie, Dutzow and parts of O'Fallon, Weldon Spring, Foristell, Innsbrook, and unincorporated St. Charles and Warren Counties."[12] The source of drinking water is from 10 underground wells. Water is also purchased from the St. Louis City Public Water System.

Hydraulics—The National Flood Insurance Program and FEMA are tasked with minimizing construction impacts in the floodway and floodplain and reducing disturbances to the Waters of the United States. The construction of Route N will need to comply with the Missouri State Emergency Management Agency (SEMA) no-rise requirement. This prohibits any measurable rise in water surface elevations for the 100-year flood condition. The FHWA policies and procedures for the location and hydraulic design of highway encroachments on floodplains (23 CFR 650A) will also need to be completed prior to construction authorization. The proposed alignment for Route N directly impacts two FEMA stream crossings: Sams Creek and Oday Creek. The Reasonable Alternatives are identical in these locations; consequently, the impacts will be identical and limited.

No FEMA buyout properties are within the study limits.

Cultural Resources—Federal approvals associated with the Route N EA are subject to compliance with the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR 800). NHPA Section 106 requires that the federal agency responsible for an undertaking, the FHWA for this study, consider the effects of its actions on historic properties eligible for the National Register of Historic Places (NRHP).

The only NRHP resources within the area of potential effects are two cemeteries. All of the Conceptual Alternatives had the potential to impact the cemetery associated with the Hopewell Missionary Baptist Church of Wentzville (1140 East Route N). The Buckner and Near South Alternatives had the potential to impact the cemetery at 2030 South Point Prairie Road. All of the Reasonable Alternatives were modified to avoid impacts to these cemeteries.

Section 6(f)—The Section 6(f) park conversion process applies to those state, county, or local recreational resources that have received funding through the Land and Water Conservation Fund (LWCF) Act. The National Park Service makes the ultimate decision on whether to approve a conversion of land that has received funding under the LWCF Act. No LWCF grants were used in the vicinity of the Route N.

Section 4(f)—A Section 4(f) property is any publicly owned land of a public park, recreational area, or wildlife and waterfowl refuge of national, state, or local significance or land of a historic site of national, state, or local significance. No Section 4(f) resources are expected to be affected by the Reasonable Alternatives; therefore, there are no specific Section 4(f) environmental commitments for the Route N study.

[12] Public Water Supply District No. 2. 2022. "About Us." https://www.waterdistrict2.com/m/main-menu/1068.

Farmland—The NRCS classifies farmland that is prime or of statewide importance. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is available for these uses.

To evaluate impacts, the Farmland Conversion Impact Rating (under the Farmland Protection Policy Act) was completed. For project sites where the total points equal or exceed 160, the NRCS will require the consideration of actions that would reduce adverse impacts. These would include alternative sites, modifications, or other mitigation. With the low scores obtained in the first part of the assessment, it is extremely unlikely that an adverse effect to farmland would occur under the Farmland Protection Policy Act.

Right-of-Way/Property Acquisition—The size of the area needed to build and maintain the alternatives, not including the area already within the existing roadway right-of-way, varies from 221 to 272 acres. According to the St. Charles County tax parcel data, most of the affected land is in residential and agricultural use.

The Reasonable Alternatives will also require the acquisition of structures. Using St. Charles County building data and MoDOT right-of-way staff's quality assurance checking, the number of building acquisitions needed to build the alternatives was estimated. Refer to **Exhibit 12** in **Attachment 1**.

The Improve Existing Alternative is expected to displace 138 structures. Residences are expected to represent 76 of these structures; 58 are secondary buildings (such as sheds, barns, or garages). Commercial and institutional uses are expected (three commercial building displacements and one institutional displacement). These include the following:

- Bright Start Academy, a private educational facility for children at 1000 Wyndgate Ridge Drive
- Plaza Tire Service located at 8625 Route N, Lake St. Louis
- Carter Pet Hospital at 9925 Route N, Lake St. Louis
- Wentzville Church of God at 9970 Route N, Lake St. Louis

The Buckner Road Alternative is expected to displace 108 structures. Residences are expected to represent 58 of these structures; 46 are secondary buildings (such as sheds, barns, or garages), 4 are commercial buildings, and 1 is an institutional use:

- Bright Start Academy, a private educational facility for children at 1000 Wyndgate Ridge Drive
- Plaza Tire Service located at 8625 Route N, Lake St. Louis
- Carter Pet Hospital at 9925 Route N, Lake St. Louis
- Wentzville Church of God at 9970 Route N, Lake St. Louis
- Stanley Warehouses at 58 West Route N, near the Route Z intersection

The Near South Alternative is expected to displace 80 structures. Residences are expected to represent 46 of these structures; 28 are secondary buildings (such as sheds, barns, or garages). Commercial and institutional uses are expected (four commercial building displacements and two institutional displacements), in addition to a cell tower on Hopewell Road:

- Bright Start Academy, a private educational facility for children at 1000 Wyndgate Ridge Drive
- Plaza Tire Service located at 8625 Route N, Lake St. Louis
- Carter Pet Hospital at 9925 Route N, Lake St. Louis
- Wentzville Church of God at 9970 Route N, Lake St. Louis
- St. Charles County Ambulance District facility at the Hopewell Road intersection (9978 Route N)
- Cell tower on Hopewell Road

c. What are the issues that need to be considered during NEPA, including potential resource impacts and potential mitigation requirements (if known)?

To provide context, potential impacts to resources and mitigation were discussed along with the affected environment in the response to Question 8.b. Depending on the timing of NEPA being initiated, additional/revised mitigation requirements may be needed.

d. How will the planning data provided need to be supplemented during NEPA?

Supplementary data is not expected, given the prior development of the Route N EA. However, depending on the timing of NEPA being initiated, some data may need to be updated.

9. Question 9 – Unevaluated Environmental Resources

a. 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.

As discussed in **Question 8**, extensive environmental investigations were conducted for the Route N EA project. Additionally, **Question 11** addresses the environmental commitments proposed during the EA study. This question will address those topics that fall outside of those parameters and will potentially require additional review during NEPA:

Archaeological Fieldwork—On-the-ground archaeological surveys were conducted on the properties within 300 feet of the Buckner Road Alternative. This represents a total of 237 tax map parcels. After two rounds of permission letters, 125 parcels were available for survey. This encompassed a majority of the land area associated with the Buckner Road Alternative.

No NRHP resources were identified within 300 feet of the Buckner Road Alternative footprint.

MoDOT ultimately concluded that additional properties need to be surveyed to have a good coverage of the study area. Consequently, future NEPA work will need to revisit this issue.

Traffic Noise Analysis—Noise conditions were modeled with TNM to determine future conditions. A total of 602 receptors were included in the model. Barriers in the vicinity of the Route N/Route Z intersection were able to achieve the minimum feasibility requirements. Therefore, a barrier optimization process was undertaken. The results of the effort concluded that no noise barriers were reasonable.

Due to the rapid development occurring within the study area, the number of residential displacements, and the multiple transportation projects being implemented, future NEPA work will need to revisit this issue.

Construction Costs—A 2019 planning-level cost estimate was prepared for each of the Conceptual Alternatives and is presented in **Table 3**.

Table 3. Route N Cost Estimate Summary (Conceptual Alternatives, in 2019 Dollars)

Alternative	Right-of-Way	Construction	Total
Improve Existing	$74,200,000	$93,000,000	$167,200,000
Buckner Road	$68,500,000	$84,000,000	$152,500,000
Near South	$58,500,000	$88,000,000	$146,500,000

Construction costs associated with the Improve Existing Alternative are noteworthy. In order to satisfy the horizontal and vertical alignment limitations, the Improve Existing Alternative cannot simply widen the existing road, but would also require changing the horizontal and vertical profiles, impacting additional properties. This creates a much wider cross section and increases the impacts and costs.

These cost estimates will need to be updated as the alternatives are further refined in the NEPA process.

Flood Permits—The National Flood Insurance Program and FEMA are tasked with minimizing construction impacts in the floodway and floodplain and reducing disturbances to the Waters of the United States. The

construction of Route N will need to comply with the Missouri SEMA no-rise requirement. This prohibits any measurable rise in water surface elevations for the 100-year flood condition. The FHWA policies and procedures for the location and hydraulic design of highway encroachments on floodplains (23 CFR 650A) will also need to be completed prior to construction authorization. The proposed alignment for Route N directly impacts two FEMA stream crossings: Sams Creek and Oday Creek. It was concluded that Reasonable Alternatives would not be expected to result in incompatible floodplain development.

Future NEPA work will need to revisit this issue. MoDOT will conduct an engineering analysis for the floodplain development permit application to the Missouri SEMA. The contractor will obtain a floodplain development permit and "no-rise" certification for Sams Creek. MoDOT will prepare a letter of map revision (LOMR) for the culvert extension for Oday Creek within 6 months of the project completion.

Endangered Species Coordination—A Not Likely to Adversely Affect determination is expected for the Indiana and northern long-eared bats. All of the EA's Reasonable Alternatives will result in the removal of trees. There has been no habitat assessment to address suitable summer bat roost trees in the study area. However, removal of suitable summer bat roost habitat, if present, could affect the Indiana bat and the northern long-eared bat. All of the EA's Reasonable Alternatives have areas of tree clearing that may be beyond the scope of the Range-wide Programmatic Consultation for Indiana and Northern Long-eared Bat (Programmatic Agreement [PA]).

Instead of attempting to consult under the PA for bats and separately for other species, MoDOT proposes to submit one Biological Assessment for all species. There will be a complete habitat assessment for suitability of summer bat roost trees prior to future Section 7 consultation. The Missouri Ecological Services Office will take the lead for Section 7 consultation.

Tribal Coordination—Coordination with Native American Tribes is conducted by the FHWA. A letter of invitation to be a Section 106 consulting party was sent to 17 tribes that have previously expressed interest in MoDOT projects in this area. Early identification of tribal concerns will allow FHWA and MoDOT to consider ways to avoid and minimize potential impacts to tribal resources and/or cultural practices as study planning and alternatives are developed and refined.

As of December 2019, three tribal responses have been received. Future NEPA work shall provide the Ponca Tribe of Oklahoma the opportunity to comment on the Route N improvements.

Public Involvement—**Question 4** summarized the Public Involvement Plan for the Route N project. Future NEPA work will require the completion of the specified public involvement tasks.

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

Cumulative impacts were considered in the PEL study.

A cumulative impact, according to 40 CFR 1580.7, is defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions." According to FHWA, a cumulative impact includes the total effect on a natural resource, ecosystem, or human community, and the total of all impacts to a particular resource that have occurred, are occurring, and would likely occur as a result of past, present, and future activities or actions of federal, non-federal, public, and private entities.

Cumulative Resources (Affected Environment)—The first step in the process for evaluating secondary and cumulative impacts is to identify the sensitive resources to be analyzed for effects. These resources include those that are directly affected by the improvement of Route N, those affected by the secondary development that is associated with the study, and those resources that are particularly susceptible to cumulative effects. Not all impacts tend to "accumulate"—that is, similar impacts from more than one project do not always add together and create a greater impact. Other resources may experience a minimal impact from each individual action, but when impacts from several actions are summed cumulatively, they may experience greater effects.

Sensitive resources were identified using the environmental information collected during the study, as well as public and agency scoping comments received. These interrelated resources include the following:

- Induced Development of Greenfields—Many stakeholders have expressed the concern that a reasonably foreseeable consequence of the improvement of the existing roadway will be the nonrural development in the corridor. As discussed previously, the stated purpose of the study is not the development of the corridor.
- Degradation of Desirable Rurality—Throughout the public involvement process, the rural nature of the existing corridor was cited as a community asset worthy of protection. Beyond the direct impacts, degradation could possibly occur elsewhere.
- Reduction of Farmland—Within the study area, agriculture is diminishing. It is anticipated that there will be some direct, but manageable, impacts. It is reasonable to investigate further to better assess impacts within the Area of Influence.

The Area of Influence is the spatial coverage within which to investigate secondary and cumulative impacts. Using the National Cooperative Highway Research Program Report 466, the analysis for indirect effects uses a 1-mile Area of Influence. The northern and eastern boundaries are formed by I-70 and I-64; refer to **Figure 7**.

Cumulative Impacts (Impacts)—Overall, no significant negative secondary or cumulative effects are anticipated as a result of the implementation of the improvement of the Route N corridor. This conclusion was based on evaluating how potential alternatives might conform to the region's planning process. This section will focus on the impacts associated with the St. Charles County Future Land Use Plan; the St. Charles County Thoroughfare Plan (a component of the St. Charles County Master Plan); and the EWG's regional long-range transportation plan, Connected2045.

An important component of the St. Charles Future Land Use Plan is the preservation of agriculture. The development of St. Charles County with nonrural land uses may be reasonably assumed to reduce the extent of farmland, induce the development of greenfields and degrade the desirable nature of the visual environment. The incorporated portions within the Area of Influence are already completely developed. The unincorporated portions are under the jurisdiction of St. Charles County. The St. Charles County Future Land Use Plan recommends residential uses adjacent to the Reasonable Alternatives; refer to **Figure 9**. However, land south of Meinershagen Road is proposed to remain agricultural, including agritourism.

St. Charles County designates agriculture for the area in the southwestern and western portions of the planning area outside of the Urban Service Area. The vast majority of this land is dedicated to farming and agriculture. Agricultural operations typically require large parcels of land. Scattered areas of residences on large lots are also located here. These residences rely on individual wells and septic systems, and open space usually is owned privately. Agriculture depends on soil capabilities and requires some basic utility services. Agricultural operations should have access to minor county roads. Agriculture is permitted in floodplains and geologic hazard areas, subject to state and County regulations. Residential uses not associated with agricultural or farming operations should have minimum lot sizes of 5 acres. However, this type of development is not encouraged.

Relative to secondary and cumulative impacts, most reasonably foreseeable alternatives will facilitate the residential components of the Future Land Use Plan. This will be confined to the immediate vicinity of the Route N corridor. As shown on **Figure 9**, Route N is the primary east-west thoroughfare through the residential area planned for south of I-70. Impacts to the agricultural areas south of Meinershagen Road will be protected by the land use measures implemented by St. Charles County. In the short term, southern off-alignment would likely directly bisect or convert the most farmsteads. This will make the eventual conversion of the adjoining lands to residential and other nonrural land uses more likely. In addition to coherence with the Future Land Use Plan, other planning initiatives affect the secondary and cumulative impacts.

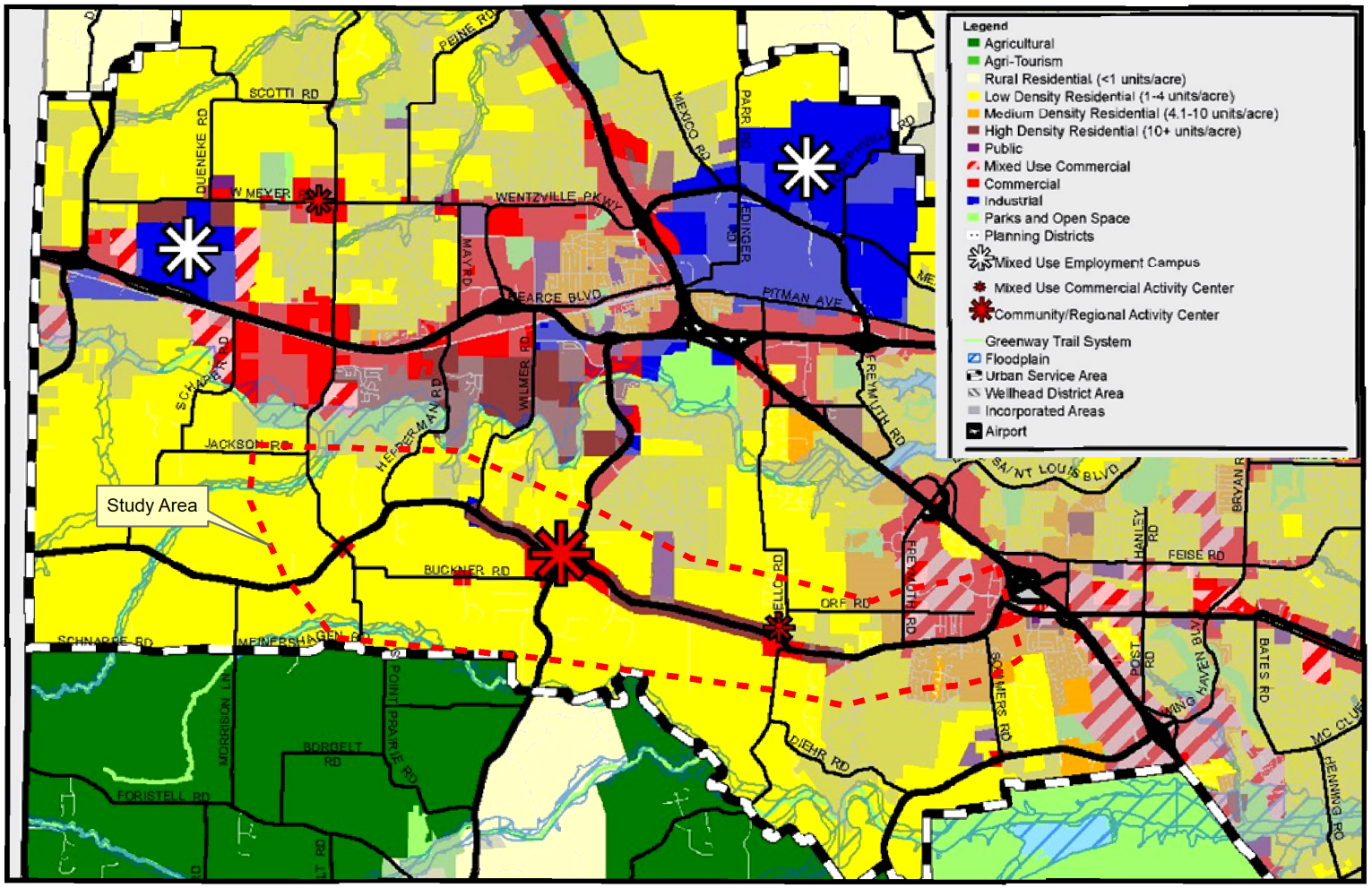

Figure 9. Land Use Plan for St. Charles County

The purpose of the St. Charles County Thoroughfare Plan (a component of the St. Charles County Master Plan) is to guide both the public and private sectors of the County and the various municipalities in future decisions involving thoroughfares. The secondary/cumulative evaluation focused on how well the alternatives provide for efficient movements, adequate roads, and reductions in traffic in residential areas:

- Improving the existing alignment will largely maintain existing movements, roadways, and traffic in residential areas.
- Alignments that use Buckner Road are expected to provide for efficient movements and adequate roadways. They will also relocate traffic to the low-density residential areas along Buckner Road. The need to improve Buckner Road is depicted in the St. Charles County Thoroughfare Plan.
- Southern realignments are expected to provide for efficient movements and adequate roadways. They will also relocate traffic to the agricultural and low-density residential areas, where a road does not exist.

Connected2045 is the long-range transportation plan for the St. Louis region. It guides transportation decision-making in the region over a 30-year time horizon. Based on the EWG's Connected2045 transportation plan, the secondary/cumulative evaluation focused on compliance with the plan's Investment Plan:

- Improving the existing configuration will maintain the existing Regional Roadway Network.
- Alternatives using Buckner Road will modify the land use development pattern of Buckner Road and Route N but will fundamentally maintain the network configuration.
- Alternatives using an off-alignment configuration will fundamentally change the roadway network by changing the development potential of existing agricultural land.

11. Question 11 – Mitigation Strategies

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

During the many investigations, agency collaboration points, and stakeholder and public involvement activities held throughout the study, numerous potential/draft mitigation strategies were developed. These are summarized here (and in the draft EA, Section 5, Environmental Commitments).

As the lead agency for this study, MoDOT is responsible for all regulatory commitments.[13] Federal authorization for construction shall not be granted until the necessary regulatory obligations (for example permits) have been satisfactorily completed.

1) MoDOT shall ensure that if there are changes in the project scope, project limits, existing conditions, pertinent regulations, or environmental commitments, MoDOT must re-evaluate potential impacts prior to implementation. Environmental commitments are not subject to change without prior written approval from FHWA.
2) MoDOT shall ensure that, prior to construction, additional Environmental Site Assessments are conducted, as appropriate, at the following locations:
   - The Mobile On the Run #1619 gas station at 42 Highway N West
   - The feed store building at 58 Highway N West

   Additionally, MoDOT will coordinate with FHWA for potential impacts at any high-risk sites, if impacted.
3) MoDOT shall ensure that its construction inspector has access to the complete Hazardous Material Site Inventory, including the categorization of the risks associated with these sites. The construction inspector shall direct the contractor to cease work at the suspect site if regulated solid or hazardous wastes are found during construction. The construction inspector shall contact the appropriate environmental specialist to discuss options for remediation. The environmental specialist, the construction office, and the contractor shall develop a plan for sampling, remediation, and continuation of project construction. Independent consulting, analytical, and remediation services will be contracted if necessary. MDNR and EPA shall be contacted for coordination and approval of required activities.
4) MoDOT shall ensure that all needed demolition notices, abatements notices, and project notifications to MDNR will be submitted, prior to beginning demolition activities. Asbestos-containing material and demolition debris will be disposed of according to state and federal regulations.
5) FHWA is the lead federal agency for this project. MoDOT is the designated non-federal representative for FHWA for completing coordination for compliance with Section 7 of the Endangered Species Act (ESA) and with the Missouri Endangered Species Act. Consultation will be complete prior to construction or before any federal funds are obligated. Prior to construction, MoDOT shall conduct a presence/absence survey for federally listed bat species for the Tentative Preferred Alternative. MoDOT will use the results of the survey to make final effects determinations and consult with U.S. Fish and Wildlife Service (USFWS) and MDC. Tree clearing will not occur prior to the completion of consultation with USFWS and MDC.

[13] Environmental commitments from the draft EA will need to be revisited and revalidated during the NEPA for section of the corridor. If the lead agency implementing any section of the project changes, such as processing by St. Charles County using only local funds, the type of environmental compliance and environmental commitments are also subject to change.

6) MoDOT shall ensure that the project will operate under the provisions of the current Missouri State Operating Permit. This general permit is issued by MDNR for MoDOT construction and maintenance projects statewide.

7) MoDOT shall adhere to the transportation separate storm sewer system permit applicable at the time of construction.

8) MoDOT shall ensure that, should a floodplain encroachment occur, a floodplain development permit will be acquired. The FHWA policies and procedures for the location and hydraulic design of highway encroachments on floodplains (23 CFR 650A) will also need to be completed prior to construction authorization.

9) MoDOT shall ensure that, should impacts to streams or wetlands occur with this project, the appropriate Section 401/404 permits would be acquired prior to construction.

10) MoDOT shall ensure that, in accordance with the NPDES requirements of the Clean Water Act, the provisions of the current Missouri State Operating Permit will be complied with.

11) MoDOT shall ensure that appropriate erosion and sediment control BMPs will be implemented. Selection and incorporation of these BMPs will consider the type of work activity undertaken and site conditions, such as soils, topography, and seasonal rainfall. MoDOT will ensure that its stormwater pollution prevention plan is implemented to prevent or minimize adverse impacts to streams, watercourses, lakes, ponds, or other impoundments within and adjacent to the study area.

12) MoDOT shall conduct an engineering analysis for the Tentative Preferred Alternative prior to submission of the floodplain development permit application to SEMA. The contractor will obtain a floodplain development permit and "no-rise" certification for Sams Creek. MoDOT will prepare a LOMR for the culvert extension for Oday Creek within 6 months of the project completion.

13) MoDOT shall ensure that details of utility disposition are determined during project design. Agreements with utilities shall be negotiated and executed prior to seeking project federal authorization for construction. MoDOT's utility engineers and representatives of the various utilities shall plan the details of individual utility adjustments on a case-by-case basis.

14) MoDOT shall ensure that contractors control fugitive dust to prevent it from migrating off the limits of the project corridor.

15) MoDOT shall include standard specifications in the construction contract requiring all contractors to comply with every applicable local, state, and federal law and regulation relating to noise levels permissible within and adjacent to the project construction site.

16) MoDOT shall ensure that careful refueling practices are employed to limit spills of gasoline and diesel fuels.

17) MoDOT will, prior to construction, develop a Transportation Management Plan (TMP) to create a set of strategies for managing the work zone of the project during construction. The TMP will balance the mobility and safety needs of the motoring public, construction workers, businesses, and the community. Further, it must be reviewed within the context of this NEPA document and its Environmental Commitments. As referenced in Environmental Commitment #1, MoDOT shall ensure that if there are changes in the construction impacts used in the EA, prior written approval from FHWA will be required. Further, the distribution of appropriate public information will be required.

18) MoDOT shall ensure that the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended, will be carried out without discrimination based on race, color, national origin, religion, and age and in compliance with Title VI (the Civil Rights Act of 1964), the President's EO on Environmental Justice, and the Americans with Disabilities Act. In accordance with

the Uniform Act and the states' relocation programs, fair market compensation shall be provided to property owners who are affected by this project.

19) MoDOT will complete the Section 106 process using the "Phased" Section 106 process. During the during future NEPA studies, the State Historic Preservation Office (SHPO) review comments will be addressed along with any decision-making changes that the SHPO review precipitates. During the Right-of-Way acquisition stage of project development, the completion of the archaeological survey (for the areas where property owner permission was not obtainable) will be conducted.

20) MoDOT shall provide the Ponca Tribe of Oklahoma the opportunity to review Section 106 surveys and to comment on the Route N improvements during future Agency Collaboration Points.

12. Question 12 – Future Public Involvement and Agency Collaboration

a. 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?

As discussed in **Question 4**, extensive outreach was conducted for the Route N project. Materials from the PEL study will be made available on MoDOT's website and can be distributed to or made available for review during the following additional outreach activities expected during future NEPA scoping and evaluation. The draft EA (**Attachment 2**) contains more detailed information than is often available during scoping activities, which should aid in stakeholders' feedback on proposed future improvements. Depending on the timing of subsequent NEPA actions, some of the PEL study materials may need to be updated to reflect future project conditions. The expected outreach activities are as follows:

- Community Advisory Group (CAG)—At least one additional CAG meeting will be needed during NEPA.
- Technical Advisory Group (TAG)—At least one additional TAG meeting will be needed during NEPA.
- Elected Officials Briefings—These briefings were helpful to frame the Route N study. Continuous communication with elected officials will be helpful during NEPA.
- Public Involvement Meetings—Depending on the NEPA class of action, there is the potential for additional public meetings and a public hearing may be required.
- Presentations to Interested Parties and Stakeholders—Over the course of the study, presentations to community and civic groups, business groups, and other interested groups or organizations were used to introduce the study, provide study updates, and obtain public input. Additional presentations may be needed during NEPA.

13. Question 13 – Other Controversies

a. Are there any other issues a future project team should be aware of? Examples: Controversy, utility problems, access or ROW issues, encroachments into ROW, problematic landowners and/or groups, contact information for stakeholders, special or unique resources in the area, etc.

As discussed in **Questions 6 and 8**, the extensive outreach has resulted in numerous interactions with local governments, stakeholders, and property owners. The following is a summary of various controversies that the PEL project team is aware of:

General Right-of-Way Impacts—The size of the area needed to build and maintain the alternatives, not including the area already within the existing roadway right-of-way, varies from 221 to 272 acres. According to the St. Charles County tax parcel data, most of the affected land is in residential and agricultural use.

The Reasonable Alternatives will also require the acquisition of structures. Using St. Charles County building data and MoDOT right-of-way staff's quality assurance checking, the number of building acquisitions needed to build the alternatives was estimated.

Depending on the alternative, most displacements are residences and secondary structures (sheds, barns, and garages). Commercial and institutional displacements are more limited. Refer to **Question 8**.

Impacts to Ambulance Station and Cell Tower—Of particular note are the St. Charles County Ambulance District station and the cell tower located at the Hopewell Road intersection (9978 Route N). Those alternatives that use a southern new alternative alignment will displace these facilities. These will be expensive and controversial displacements.

Local Projects—As discussed in **Question 1**, there are numerous transportation projects underway or recently completed in this portion of St. Charles County. It will be important for future project teams to consider these projects:

- Route N/Route Z Intersection—This project involves a reconfiguration of the intersection of Route Z at Route N. The final configuration realigns Route Z from the south of Route N to align with Route Z to the north of Route N, creating a more traditional intersection configuration by eliminating the split dual intersection. The intersection will also be signalized.
- Hopewell Road/Duello Road Intersection—The project was meant to widen, straighten, and otherwise improve the existing Duello and Hopewell Roads. Curb and gutter, enclosed drainage, and a sidewalk were included as part of the project.
- Route N/Perry Cate Boulevard Intersection—This intersection was signalized in 2018 as a St. Charles County project.
- Interstate Drive—When completed, Interstate Drive will serve as a south outer road along I-70 from I-64 to the DHP. It is being constructed in several sections.
- David Hoekel Parkway Phase 2—This City of Wentzville project began in 2018. This portion of the DHP project consists of the construction of a relocated northern I-70 outer road and the new DHP interchange at I-70.
- David Hoekel Parkway Corridor Preservation—To the north, the DHP would provide a new connection between I-70 and US 61 in Wentzville. The DHP EA and Access Justification Report are complete, and

the Access Justification Report is in the final stages of approval. Funding has been identified to begin corridor preservation activities.

- David Hoekel Parkway Project #5—The southern DHP interchange connection to South Point Prairie Road (and the Route N western terminus) is a St. Charles County project. This project is known as David Hoekel Parkway Project #5. The project extends Interstate Drive west and South Point Prairie Road north to meet the City of Wentzville's new DHP interchange at I-70.

Substantive Project Comments—Throughout the public involvement process, substantive comments were collected and addressed, as appropriate to the nature and format of the comments. This section lists the substantive comments and a summary of the study's responses:

a) Desire to maintain rural context of the roadway—*This common desire was included into the project development process through the secondary project objectives of accommodating bikes/pedestrians and taking existing planning goals into consideration*.

b) Route N is used as an alternative route if there are issues on I-70—*This is a common observation that was acknowledged in the project approach. The Route N traffic studies were inconclusive on the magnitude of this phenomenon*.

c) Hopewell/Duello intersection is a major issue along the existing corridor—*The realignment of this intersection is a recently completed project sponsored by St. Charles County*.

d) Existing Route N is not wide enough for the traffic—*Agreed, modern MoDOT typical cross sections are a component of the project development process*.

e) The Route N/Route Z intersection is a major concern—*The reconfiguration and signalization of this intersection is a current project being sponsored by St. Charles County.*

f) Large subdivisions have been built along Route N and the infrastructure has not kept up—*Acknowledged, Purpose and Need element #1 is the need to improve access and connectivity*.

g) Traffic during the school hours is heavy—*This observation is a component of the study's traffic analysis*.

h) Consideration of roundabouts on Route N—*Although not a component of existing or future projects, the final design of the Route N project can evaluate alternatives based on MoDOT's Value Engineering processes*.

i) Access is a concern for emergency responses—*Access to residences and businesses was a strongly expressed concern that was reflected in the project's Purpose and Need and evaluation criteria.*

j) Desire for bike/pedestrian facilities and landscaping separate from the roadway—*This relatively common desire was included into the project development process through the secondary project objective of accommodating bikes/pedestrians*.

k) Concern that the Route N project is linked to a plan to extend Route 364—*The Route N alternatives are fundamentally different from the Route 364 extension. There will be no interchanges and no frontage roads to prevent direct access to Route N, and major intersections will be controlled with signals.*

l) The use of the EWG traffic model and the St. Charles County model needs proper coordination—*The technical analysis completed two separate 2045 peak-hour traffic forecasts using EWG's model and a four-lane Route N in the study area. Scenario 1 used EWG's land use assumptions and included St. Charles County committed (fiscally constrained) projects. Scenario 2 used St. Charles County's land use assumptions and priority projects (more than just the committed projects included in Scenario 1). Scenario 2 generally resulted in greater traffic volumes*.

m) Coordination with Shoulders for Safety (SOS) organization—*The SOS was included in the study's CAG*.

n) Effect on the St. Charles County Ambulance District Building—*The Near South Alternative will require the displacement of the existing building and the nearby cell tower.*

o) Shelf life of this NEPA documents—*After 3 years, a re-evaluation may be required.*

p) Time frame to start construction—*There is not sufficient funding currently programmed for construction of all of the Route N corridor, and it is expected to be built in phases. It will most likely take at least 2 years to design and a minimum of 4 to 5 years for construction.*

q) Relationship between EA and EWG long-range plan—*The Route N project needs to be in the fiscally constrained long-range plan prior to NEPA approval. Because funding is not currently available for all of the Route N project, only a portion of the project can be included in the EWG long-range plan at this time.*

r) Naming of new roads—*There was general concern about future road naming. For example, Route N could move to a new alignment and "Old Route N" could go back to St. Charles County*.

s) Concerns about existing and future traffic—*This common concern is a central element of the project development plan*.

t) Concerns about existing and future residential development – *This common concern about accommodating future development is a central element of the project development plan.*

u) Concerns regarding future meeting format – *Missouri citizens expect and demand an active voice in the location and design of transportation facilities. They recognize the important role transportation has in their life as well as the life of their community. Existing transportation facilities and, in particular, transportation improvements have a direct impact on the social, economic, and environmental resources of the community. As a result, MoDOT values the input the public provides on transportation improvements and has established various methods to gather it.*

v) Land acquisition concerns—*MoDOT will ensure that the Uniform Act, as amended, will be carried out without discrimination based on race, color, national origin, religion, and age and in compliance with Title VI (the Civil Rights Act of 1964), the President's EO on Environmental Justice, and the Americans with Disabilities Act. In accordance with the Uniform Act and the states' relocation programs, fair market compensation will be provided to property owners who are affected by this project*.

w) The EPA provided the following comments during the Agency Collaboration Process:

- Overall, the Improve Existing Alternative appears to represent an overall positive except for the off-alignment section. Have roundabouts been considered.
- Overall, the Buckner Road Alternative appears to represent the least environmental impact. However, the transition of the existing land uses along Buckner were mentioned.
- The Near South Alternative is the most impactful and should not be considered the Least Environmentally Damaging Practicable Alternative.

x) The USACE provided the following comments during the Agency Collaboration Process:

- Noted the applicability of Section 404 of the Clean Water Act, as well as the Water Quality Certification provisions of Section 401, to the project.
- Appearance that the Near South Alternative will have the greatest amount of potential impacts to waters of the U.S.

- Noted the applicability of the Threatened and Endangered Species provisions of Section 7 of the ESA as well as Section 106 of the NHPA to the project.

y) The Missouri Federal Assistance Clearing House, during the Agency Collaboration Process, noted that they had no comments or recommendations.

Attachment 1
PEL Exhibits

Attachment 2
Draft Environmental Assessment and Appendices

Attachment 3
Agency Collaboration and Tribal Consultation During PEL Study

Agency Collaboration Letters

Agency Responses

Tribal Consultant Letter

Tribal Consultation Response

Attachment 4
Public Involvement During PEL Study

PEL Public Involvement Summary

PEL Public Involvement Meeting Comments with Responses