Federal Highway Administration
Planning and Environmental Linkages Questionnaire

This Questionnaire is intended to act as a summary of the Planning process and ease the transition from planning to a National Environmental Policy Act (NEPA) analysis. Often, there is little overlap in personnel between the planning and NEPA phases of a project, so consequently, much (or all) of the history of decisions made in the planning phase is lost. Different planning processes take projects through analysis at different levels of detail. NEPA project teams may not be aware of relevant planning information and may re-do work that has already been done. This Questionnaire is consistent with the 23 CFR 450 (Planning regulations), Title 23 of the US Code, Part 168 and other FHWA policy on Planning and Environmental Linkage (PEL) process.

1. Background:

A. Who is the sponsor of the PEL Study? (state DOT, Local Agency, Other)

The Missouri Department of Transportation (MoDOT), in cooperation with the Federal Highway Administration (FHWA), conducted the Planning and Environmental Linkages Study.

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

- PEL Study Name: Future64 Kingshighway to Jefferson Planning and Environmental Linkages Study
- Project Number: 6I3585

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

MoDOT formed a Steering Committee that included representatives from the City of St. Louis, the Metro Transit (Metro), Great Rivers Greenway (GRG), and the East-West Gateway Council of Governments (EWGCOG). The project also formed a Core Team, including FHWA and MoDOT representatives from the City of St. Louis-area team operations and maintenance, construction, right-of-way, traffic, and District leadership. These groups met regularly throughout the study to provide direction and oversight, build consensus, work through challenges, and provide input to the decision-making process. For a full list of collaborative agencies, please see Attachment A at the end of this document.

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

The Tier 1 study area refers only to the portion of the I-64 corridor from the western limit of Kingshighway Blvd. to the eastern limit of Jefferson Ave., a distance of 2.7 miles, and is specific to the interstate system contained within MoDOT right-of-way. Tier 2 extends north and south of the Tier 1 limits to include the cross streets and multimodal facilities

that are part of the transportation system between Forest Park Ave. to the north and Route 100 (Chouteau Ave./Manchester Ave.) to the south.

The existing transportation system within the Tier 1 and Tier 2 study areas consists of the I-64 mainline, local roadways, bridges, interchanges, and intersections, along with rail, transit, bicycle, and pedestrian facilities. The typical section for I-64 is generally four travel lanes with auxiliary lanes in each direction on the west end and three travel lanes with an auxiliary lane in each direction in the central and eastern end of the study area. The area approximately between Vandeventer Ave. and Theresa Ave. is configured as a double-deck highway with westbound traffic above the eastbound traffic. The Tier 1 and Tier 2 study areas include six interchanges, 52 intersections included for analysis, 16 facilities crossing I-64, existing and planned bicycle and pedestrian facilities such as the Brickline Greenway, three Metrolink stations and two Metrolink routes, and 64 Metrobus stops and 11 Metrobus routes. I-64 is adjacent to the Midtown neighborhood, which is experiencing rapid development, as well as adjacent or near several other residential, commercial, and institutional neighborhoods in the City of St. Louis.

The PEL Study includes six interchanges:

- Kingshighway Blvd
- Tower Grove Ave./Boyle Ave./Papin St.
- Vandeventer Ave.
- Grand Blvd./Forest Park Ave.
- Bernard St./Compton Ave./Market St.
- Jefferson Ave.

For additional information, see Section 2.1, Existing Transportation System, in the PEL Study and Appendix K, Existing Conditions Report.

E. Provide a brief chronology of the planning activities (PEL Study), including the year(s) the studies were completed.

- Public Open House #1 – May 2022
- Community Assessment Baseline Technical Memorandum – May 2022
- Existing Conditions Technical Memorandum – May 2022
- Environmental Constraints Technical Report – June 2022
- Existing Traffic, Safety & Multimodal Conditions Technical Report – June 2022
- Review of Existing Planning Efforts Technical Report – July 2022
- Purpose and Need Statement – August 2022
- Level 1 Alternatives Screening – October 2022
- Public Open House #2 – January 2023
- Level 2 Alternatives Screening – February 2023
- Future64 Planning and Environmental Linkages Study Publication – Summer 2023

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

The study team reviewed 32 existing planning documents, including reports, plans, and studies, to assess the area's existing and ongoing planning efforts. Efforts include

improvements to corridor infrastructure and operations, not just for vehicles but also for bicyclists, pedestrians, and transit. Plans accommodate and encourage urban and economic growth to ensure social and environmental equity in implementing new projects. These planning efforts are divided into the following categories: environmental and social, urban development, economic development and land use, multimodal systems, and infrastructure. A list of these planning efforts is provided in Table 1. The Review of Existing Planning Efforts Report in Appendix M of the PEL Study contains more information on the goals, objectives, and key recommendations.

Table 1. Existing Planning Efforts Review

Efforts	Existing Planning Documents
Environmental and Social	Ecological Approach to Infrastructure Development For The East-West Gateway, 2019
	Environmental Racism in St. Louis, 2019
	Forest Park Southeast Revitalization Plan, 1999
	I-64 – Route 40 Corridor, City of St. Louis And St. Louis County, Final Environmental Impact Statement, 2005
Urban Development, Economic Development, and Land Use	Cortex West Redevelopment Plan, 2005
	Design Downtown Stl Master Plan, 2020
	St. Louis Midtown 353 Redevelopment Plan, 2016
	2020 Vision: An Equitable Economic Development Framework For St. Louis, Fall 2020
	Strategic Land Use Plan Of The St. Louis Comprehensive Plan, 2005
	Stl 2030 Jobs Plan, 2021
	Cortex 353 & Cortex Tif Ordinances, 2005 & 2010
	Central West End Form-Based District, 2012
	Forest Park Southeast Form-Based District, 2018:
	Parks And Open Space Plan, 2004
	St. Louis Midtown 353 Redevelopment Plan, 2016

Efforts	Existing Planning Documents
Multimodal Systems	Gateway Bike Plan, 2011
	Gateway Bike Plan Update For The City Of St. Louis, 2021
	Brickline Greenway Framework Plan, 2019
	Grand Metrolink Station Technical Assistance Report, 2012
	Downtown St. Louis Transportation Study, 2018
	City Of St. Louis Americans with Disabilities Act Transition Plan, 2020 (Draft)
	Trailnet 2020 Crash Report, 2021
	Grand Metrolink Station, Connecting People To Transit And Development Opportunities, 2021
	Metro Reimagined, 2018
	St. Louis Rapid Connector Transit Study, 2014
	Central Corridor Transit Access Study, 2014
	Moving Transit Forward: St. Louis' Long Range Transit Plan, 2008
Infrastructure	Transportation Improvement Program Fiscal Years 2022-2025, 2021
	Connected2045 Update, 2019
	Access Justification Report, Interstate 64 Access Modifications At Jefferson Ave., 2018
	I-64 Access Justification Report – Addendum No. 3, 2010
	Northside-Southside Metrolink Corridor Study, 2018

MoDOT's 2024-2028 Statewide Transportation Improvement Plan (STIP) was recently released and included several projects within the PEL's project limits on I-64. This includes several projects that include funding only for project scoping and design, as well as two projects that include funding for construction and are included in the Highway and Bridge Construction Schedule. Some of these planned projects are directly related to identified projects from the PEL.

Projects that are funded only for scoping and design include:

- Project 6I3440 is scoping bridge rehabilitations and replacements for I-64 over Market Street and on the Market Street ramps. Project involves bridges A3636, A0835, A3741 and A0832.
- Project 6I3441 is scoping bridge rehabilitations on I-64 between Boyle Avenue and Clayton Avenue. Project involves bridges A3893, A3651, and L0669.
- Project 6I3502 is scoping bridge re-decking on bridge L0667 on I-64 from east of North Sarah Street to east of Vandeventer Avenue.
- Project 6I3503 is scoping to modify the interchange configuration at I-64 and Grand Boulevard. Project involves bridges A0549 and A3740.
- Project SL0129 is scoping for pavement repairs and preservation from McCausland Avenue to Sarah Street on I-64.
- Project 6I3574 is scoping bridge rehabilitation and painting from west of Compton Avenue to west of Clayton Avenue on I-64. Project involves bridge A3594.

Projects that are funded for construction and included in the Highway and Bridge Construction schedule include:

- Project Number SL0064 includes pavement resurfacing, upgrade of guardrail, and upgrade of pedestrian facilities to comply with the ADA Transition Plan on I-64 from Sarah Street to 21st Street. This project is funded at $1.044M for construction in Fiscal Year (FY) 2025.
- Project Number SL0087 includes bridge rehabilitation and reconfiguration of ramps on I-64 from Kingshighway to Jefferson and involves Bridge A3651 (I-64 WB over Sarah St.). The project is only partially funded at $18.4M for construction in FY 2027.

2. Methodology Used:

A. What was the scope of the PEL Study and the reason for completing it?

The corridor is a rapidly developing, dense urban environment where major stakeholders are actively planning for new employment centers, housing units, retail, and entertainment. Additionally, the corridor features significant existing and planned multimodal investments by local agencies. While MoDOT has immediate asset management needs on bridges in the corridor, the PEL study was conducted to holistically examine the existing conditions and issues and needs of the corridor in the urban context to determine if there are improvements that benefit the region and accomplish MoDOT's asset management goals.

The scope of this PEL Study included the following:

- Collection of existing conditions along the corridor, including roadways facility operations and safety, bicycle and pedestrian facility operations and safety, transit facilities, planned projects and development, and a community assessment
- Stakeholder and public engagement and agency coordination
- Development of the Purpose and Need, and goals
- Collection of environmental and social resource existing conditions and NEPA considerations
- Development of a broad range of reasonable improvements
- Evaluation of the potential improvements
- Development of an implementation plan to outline the next steps to identify individual projects based on the recommendations of this PEL

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

NEPA-like language was used in this PEL Study to help bridge the results and recommendations into the subsequent project development phases, which may include NEPA. The PEL Study did not develop a single Preferred Alternative or Action Alternative, and those NEPA-like terms are not used.

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

- **Purpose and Need Statement**. Defined the project intent and the problems to be addressed.
- **Goals**. Broad criteria that further informed the evaluation framework.
- **Concept**. Level 1 improvement options were limited to specific locations and referred to as concepts. The location-specific concepts were used to develop three distinct corridor-wide alternatives for more detailed evaluation in the Level 2 Alternative Screening Process. During NEPA, concepts are referred to as conceptual alternatives.
- **Evaluation Criteria**. Performance measures were derived to assess an alternative's ability to address the Purpose and Need, and Goals of the project.
- **Carry Forward**. This determination indicates that the concept or alternative should move forward to be further evaluated.
- **Do Not Carry Forward**. Indicates that that a concept or alternative was "reasonable but not recommended."
- **Recommendations**. The Level 2 Alternatives analysis and screening results show that the three corridor alternatives evaluated all met the Purpose and Need and were considered reasonable alternatives to advance towards NEPA for further study and refinement. However, each alternative's strengths and weaknesses were discovered through the analysis performed and public engagement efforts that informed the screening of these alternatives.
- **Potential Projects**. Includes both early actions to improve the condition of the bridges in the corridor, and recommendations for elements from the three No Build Alternatives that have independent utility, meaning they: address an identified project need, connect logical termini, and stand alone without forcing other improvements or restricting consideration of other reasonably foreseeable transportation improvements.
- **Early Action**. There are 13 bridges within the study area scheduled for repair or replacement within the next 20 years. As part of the study, bridge rehabilitation and replacement scope and costs were evaluated with MoDOT to extend the life of the existing bridges past the year 2050. While some of the bridges within the corridor would no longer be needed when at least one alternative is implemented, there are five bridges that are unaffected regardless of which alternative is advanced towards implementation. These bridges are considered Early Actions and can undergo scheduled maintenance or replacement without being affected by the advancement of the alternatives.
- **No Build Alternative (Maintenance Only)**. The alternative does not include any transportation improvements outside of maintenance activities to maintain I-64 in a state of good repair other than completing the Jefferson Ave./22nd St. interchange improvements (reflected in the Existing Conditions) and Compton Ave. Bridge replacement by the City of St. Louis.
- **Build Alternatives**. In addition to the No Build Alternative, three alternatives were analyzed against the criteria to understand how well they achieve the project's needs and goals. While some alternatives performed better than others in certain areas, all three alternatives met the Purpose and Need and are considered reasonable alternatives to advance toward subsequent project development steps.

- **Eliminated**. No concepts or alternatives were eliminated based on reasonableness and feasibility. The term is used to discuss choosing projects from one of the remaining three build alternatives that may eliminate the need to implement other projects, such as bridge maintenance or replacement.
- **Programmatic Categorical Exclusion (PCE).** A categorial exclusion is a NEPA class of action completed for projects that will not have significant social, economic, or environmental impacts. MoDOT environmental staff can approve certain types of projects as categorial exclusions, called PCEs, provided they meet the thresholds set forth in Section IV(A)(1)(b) of the PCE agreement executed by FHWA and MoDOT on September 22, 2021 (https://epg.modot.org/files/f/f4/2023_PCE_Agreement.pdf).
- **Categorical Exclusion (CE2).** A categorial exclusion is a NEPA class of action completed for projects that will not have significant social, economic, or environmental impacts. Projects that exceed the thresholds set forth in the PCE agreement executed by FHWA and MoDOT on September 22, 2021, must be documented as a CE2 and must be approved by FHWA.

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

These terms will be used in NEPA documents as defined in the PEL Study Report, except for the Recommendations and Potential Projects. Instead, the NEPA process will result in a single Preferred Alternative. Projects will likely be implemented incrementally along the corridor rather than as a single corridor-wide project. Therefore, during the NEPA phase, Build Alternatives will refer not to the full corridor-wide build alternative but to the elements from that corridor-wide alternative included in the individual project descriptions. Projects will be implemented with logical termini and independent utility.

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 the state DOT and the local agency, with buy-in from FHWA, the USACE, USFWS, and other resource/regulatory agencies.

Decisions during the study were made through a process that involved the Project Management Team, Project Steering Committee, and Core Team but also included guidance from FHWA and input from public and stakeholder engagement. These groups each had opportunities to help inform and endorse the development, analysis, decisions, and documentation at these three steps in the decision-making process:

- Determined Reason for PEL Study and Desired Outcomes (August 2021)
- Purpose and Need and Goals (May 2022)
- Level 1 Evaluation Results (July 2022)
- Level 2 Evaluations Results (January 2023)
- FHWA Review of PEL Study and PEL Questionnaire (August 2023)

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

The information should be presented in NEPA similarly to what's shown in Section 7, Implementation Plan, in the Future 64 PEL Study, and Appendix N, Project Sheets. Additional detail will be developed as the data collection and analyses occur during future NEPA and design for individual projects.

3. Agency Coordination:

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

The study team coordinated with interested federal and state resource agencies and tribes twice during the project to provide input and solicit feedback. Two collaboration letters were sent to the following agencies and tribes:

- Federal Agencies
  - Federal Emergency Management Agency
  - Federal Transit Administration
  - National Park Service
  - U.S. Army Corps of Engineers, St. Louis District
  - U.S. Department of Agriculture, Natural Resources Conservation Service
  - U.S. Fish and Wildlife Service
  - U.S. Environmental Protection Agency
- State Agencies
  - Department of Economic Development
  - Department of Health and Senior Services
  - Federal Assistance Clearinghouse
  - State Historic Preservation Officer
  - State Emergency Management Agency
  - Department of Natural Resources
  - Department of Conservation
- North American Tribes
  - Kickapoo Tribe of Oklahoma
  - Absentee Shawnee Tribe of Oklahoma
  - Eastern Shawnee Tribe of Oklahoma
  - Iowa Tribe of Kansas & Nebraska
  - Kaw Nation
  - Kickapoo Tribe in Kansas
  - Kickapoo Tribe in Oklahoma
  - Miami Tribe of Oklahoma
  - Osage Nation
  - Ponca Tribe of Nebraska
  - Ponca Tribe of Indians of Oklahoma
  - Sac and Fox Nation of Missouri
  - Sac and Fox Nation
  - Quapaw Nation
  - Sac and Fox Tribe of the Mississippi in Iowa

Collaboration Letter #1. In August 2022, the study team sent a collaboration letter to federal and state agencies and tribes. The letter's purpose was to provide a study overview and request input or feedback from the recipients regarding the project in general, the Purpose and Need, or the five technical reports and memoranda made available for review. The agencies and tribes were asked for input, comments, or feedback. The U.S. Department of Agriculture responded that they had no comments at that time, and no other input was received from the agencies or tribes. Materials provided in the August 2022 letter included the following:

- Future64 StoryMap (online interactive map tool). https://experience.arcgis.com/experience/edb3d59d651b42a4bfae5127d6abe544
- Project Website. http://future64.com
- Future64 Technical Memorandum - Existing Conditions
- Future64 Technical Report - Existing Traffic, Safety & Multimodal Conditions
- Future64 Technical Memorandum - Community Assessment Baseline
- Future64 Technical Report – Environmental Constraints
- Future64 Technical Memorandum – Review of Existing Planning Efforts

Collaboration Letter #2. In February 2023, a second letter was sent to the same list of agencies and tribes to provide a project update, the alternatives screening process, attachments of the alternatives considered, alternatives screening documentation reports, and a summary of the results of the environmental screen. Five agencies replied. Their responses are summarized in Table 2. Materials provided in the February 2023 letter included the following:

- Future64 StoryMap (online interactive map tool). https://experience.arcgis.com/experience/edb3d59d651b42a4bfae5127d6abe544
- Project Website. http://future64.com
- Future64 Final Level 1 Alternatives Screening Report
- Future64 Draft Level 2 Alternatives Screening Report
- Available upon request: Traffic, Safety, & Multimodal Analysis for Alternatives; and Community Benefits Analysis for Alternatives
- Documents available online. http://future64.com/documents

It is recommended that subsequent NEPA projects coordinate with the federal and state resources agencies and tribes listed above. Additional information for input received from agencies can be found in Section 5.3, Agency Coordination, in the Future64 PEL Study, and the materials sent to agencies are listed in Appendix B, Agency Coordination Summary Report.

Table 2. Summary of Agency Responses from Alternatives Considered and Environmental Screen

Agency Name	Summary of Response
National Park Service	If any LWCF-encumbered sites within Missouri will be impacted by MoDOT projects, the Missouri DNR should be consulted and provided the opportunity to comment.
Federal Assistance Clearinghouse	None of the agencies involved in the review had comments or recommendations to offer at this time.
Department of Health and Senior Services	General Comments · Need for all elements to be heavily scrutinized with accessibility in mind. · The desire for the safety of vulnerable road users is the primary measurement of success. · Need for additional treatments and crossings at the Grand MetroLink connection. · The desire for the Grand Bus Lanes to be included in all alternatives. · It is good to see many elements that aim to make it safer and easier for vulnerable road users in the alternatives. · Need to size vulnerable road user infrastructure for safety. · The desire for intersection safety with vulnerable road users. · Should Grand Blvd. and Forest Park Ave. be brought to an at-grade intersection, specific consideration and design are needed. · Comments on Specific Alternatives. · Alternative #1: The western interchange best balances the overall project costs with automobile capacity and pedestrian and bicycle traffic needs. A parallel bike facility on Tower Grove Ave. is a great idea regardless of the alternative selected. · Alternative #2: The Grand Blvd. bus lanes and double shared-use paths in the east interchange area are top priorities, as well as the overall traffic calming of the roundabout and Theresa Ave. traffic lights. · Alternative #3: Bicycle and pedestrian improvements on Tower Grove Ave. are not as beneficial as those for Alternatives #1 and #2. Pedestrian safety should be a focus at the Theresa Ave. roundabout. The proposed signal at Theresa Ave. and Forest Park Ave. will help to calm traffic before it gets to a potential at-grade intersection at Forest Park Ave. and Grand Blvd.
Department of Natural Resources	The department provided input on the following topics: Karst Topography, Wells, Public Land, Conservation Opportunity Areas, Water Protection, Sensitive Waters, Permitting Obligations, Land Disturbance Requirements, Demolition and Construction Waste Management, Air Pollution, and Historic Preservation.
State Historic Preservation Officer	Concurs with the description of the undertaking's potential impacts and recommended actions for future project stages.

B. What transportation agencies (e.g., for adjacent jurisdictions) did you coordinate with or were involved in during the PEL Study?

- FHWA
- MoDOT
- City of St. Louis
- Metro Transit (Metro)
- Great Rivers Greenway (GRG)
- East-West Gateway Council of Governments (EWGCOG)

For a full list of collaborative agencies, please see Attachment A at the end of this document.

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

- **FHWA**: will be the lead agency when an FHWA action is related to an individual project.
- **MoDOT**: will be the lead agency for individual projects developed along I-64.
- **City of St. Louis**: will assist MoDOT as a technical or financial partner, or both, on projects impacting the City of St. Louis infrastructure. May lead local projects using local funding.
- **Metro**: will assist MoDOT as a technical or financial partner, or both, on projects impacting Metro assets.
- **GRG**: will assist MoDOT as a technical or financial partner, or both, on projects impacting GRG assets.
- **EWGCOG**: may facilitate the financing of certain projects, depending on how regional funding is awarded.

4. Public Coordination:

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

A Public Involvement Plan was developed for the PEL study. 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 project's development. Additionally, the Public Involvement Plan was guided by both NEPA requirements for public involvement and MoDOT's public involvement policies. The tables below outline the activities used to exchange information and gather feedback. Public and stakeholder engagement activities are summarized in Section 5, Public and Stakeholder Engagement and Agency Coordination, of the PEL Study and Appendix B. The complete Public Involvement Plan is available upon request to MoDOT.

Project Website (http://future64.com): A project website was maintained during the PEL process. The project website included the following:

- Overview of the project, fact sheet, study area map, and aerial footage
- Materials from January 18, 2023, Open House and online materials

- Corridor Improvement Options Video
- Information about Steinberg Rink Open House
- Purpose and Need Statement
- Information about the Groovin' on the Brickline Greenway Event
- Materials from May 18, 2022, Open House and online materials
- PEL Process Video
- Project Schedule
- Document Library
    - Community Assessment Baseline Technical Memo
    - Environmental Constraints Technical Report
    - Existing Conditions Technical Memo
    - Existing Traffic, Safety, & Multimodal Conditions Technical Report
    - Review of Exiting Planning Efforts Technical Report
- Interactive Map Tool
- CAT and TAG Advisory Group agendas and presentation materials
- Contact Information, phone number for project hotline, and link to provide a comment
- The Future64 PEL Study and appendices will be uploaded and made available when finalized

General Public: the general public was engaged in the following activities:

Table 3. General Public Activities

Activity	Description
Commuter Survey	A commuter study was developed and administered to learn respondents' commuting patterns to destinations, their reasons for traveling to the corridor, and how they navigate the study area; 1,307 people took the commuter survey.
May 2022 Public Meetings	The in-person event featured technical informational boards, a study video, a feedback activity focused on Purpose and Need, a mapping exercise, and a comment area. A total of 70 people attended the in-person meeting. A virtual public meeting was created that mirrored the information from the in-person meeting to encourage additional participation. The virtual public meeting generated 1,007 total views and 593 unique visits.

Activity	Description
January 2023 Public Meetings	The in-person event featured informational boards focused on alternatives, a study video, strip maps of the study area, and a comment area. A total of 158 people attended the in-person meeting. There was also a virtual meeting with visuals, graphics, and information similar to what was shown at the in-person meeting. The virtual public meeting generated 3,485 total views and 2,875 unique views.
Neighborhood Meetings	The study team attended eight neighborhood meetings in and around the project footprint. These meetings provided an opportunity to introduce the Future64 study and process.
Youth Engagement	Partnering with the St. Louis Science Center and their Youth Exploring Science program participants, the team conducted a presentation related to information examined in the study as well as engineering and urban planning careers.
Pop-up Events	The study team held 12 pop-up events at different stages of the study at community events.
Groovin' on the Greenway	The study team co-hosted an open house with the GRG to provide information on the Brickline Greenway development and the Future64 PEL Study.
Steinberg Open House	The study team had a table to distribute information at the "Steinberg Reimagined" open house event that attracted more than 750 attendees.
Business Meet and Greet	The study team invited 302 businesses within the study area to a Meet and Greet event to better understand how they and their customers interact with transportation infrastructure in the study area.

Stakeholders: the study involved stakeholders through the following activities:

Table 4. Stakeholder Activities

Activity	Description
Community and Technical Advisory Groups	Each group was created to solicit feedback from community leaders, relevant stakeholders, and technical experts. Three CAG and TAG meetings were conducted during the PEL Study: • Meeting #1. Familiarize members with the study and receive their feedback on the Draft Purpose and Need • Meeting #2. Attendees viewed Level 1 concepts and provided feedback • Meeting #3. Attendees viewed Level 2 corridor-wide alternatives and provided feedback
Elected Officials Briefings	Elected officials' briefings were held before each round of public engagement. Invitations were emailed to representatives of the St. Louis Board of Aldermen, whose wards are adjacent to the study area, and to state and federal government officials whose districts or representation covers the Future64 study area.
City of St. Louis Mayor Briefings	Two meetings were held with St. Louis Mayor Tishaura Jones' staff. The purpose of these meetings was to share project updates and obtain feedback.

Activity	Description
Stakeholder Interviews	Virtual and phone interviews occurred during the first three months of the study. During this period, 29 stakeholders were interviewed individually or in groups.
Extended Business Outreach	Additional business stakeholder interviews took place virtually. Eight stakeholder interviews were completed.
Additional Stakeholder Engagement	Study team members met with representatives from SSM Health, Saint Louis University Hospital, and Saint Louis University.

5. Purpose and Need for the PEL Study:

A. What was the scope of the PEL Study and the reason for completing it?

The corridor is a rapidly developing, dense, urban environment where major stakeholders are actively planning for new employment centers, housing units, retail, and entertainment. Additionally, the corridor features significant existing and planned multimodal investments by local agencies. While MoDOT has immediate asset management needs on bridges in the corridor, the PEL study was conducted to holistically examine the existing conditions and issues and needs of the corridor in the urban context to determine if there are improvements that benefit the region and accomplish MoDOT's asset management goals.

The scope of this PEL Study included the following:

- Collection of existing conditions along the corridor, including roadways facility operations and safety, bicycle and pedestrian facility operations and safety, transit facilities, planned projects and development, and a community assessment
- Stakeholder and public engagement and agency coordination
- Development of the Purpose and Need, and goals
- Collection of environmental and social resource existing conditions and NEPA considerations
- Development of a broad range of reasonable improvements
- Evaluation of the potential improvements
- Development of an implementation plan to outline the next steps to identify individual projects based on the recommendations of this PEL Study

B. Provide the Purpose and Need statement, or the corridor vision and transportation goals and objectives to realize that vision.

Based on the corridor's existing conditions, the study team developed a Purpose and Need statement for the project. The stakeholders and public provided additional input to develop additional project goals.

Purpose Statement: The purpose of reasonable transportation improvements on I-64 between Kingshighway Blvd. and Jefferson Ave. is to renew and modify the transportation system to have safe and reliable facilities for all users, improving access to destinations and supporting community vitality for the long term.

The corridor needs are summarized here:

- Increase Safety for All Users
  - Provide safe regional vehicular movements
  - Accommodate safe and comfortable trips for pedestrians, cyclists, and other road users across the I-64 corridor
- Improve transportation system with intuitive navigation to, from, and across I-64
  - Accommodate access to current and future regional employment and entertainment destinations
  - Improve connections from interstate to the local network providing easier navigation
- Reduce the barrier effect of I-64 for bicycle, pedestrian, and transit users
  - Support by stakeholders
  - Support implementation of bicycle and pedestrian network improvements, including GRG's Brickline Greenway, St. Louis City network, and other system linkages
  - Support convenient access to transit and other community destinations
- Optimize bridge maintenance by improving structural conditions to maintain a good state of repair
  - Structure repair and maintenance
  - Best use of public investment
- Maintain interstate function, operations, and capacity for the future
  - Maintain capacity
  - Support freight movements

Project outcomes beyond the transportation issues identified are included as project goals. The goals help balance environmental, transportation, and other community values.

- Right-size I-64 to reuse available space to benefit the community
- Support improved land use near transit stations and trails
- Improve equitable outcomes for disadvantaged communities
- Coordinate with regional partners to enhance the local transportation network
- Integrate bicycle and pedestrian facility design best practices into project designs
- Consolidate access points from interstate to local system
- Invest in projects that provide good cost-benefit improvement
- Integrate ecology best practices into project designs and right-of-way use
- Integrate improved aesthetics and visual environment into project designs

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

A Purpose and Need statement will be developed for each project MoDOT advances through NEPA, design, and construction. Projects will begin with the corridor-wide Purpose and Need statement and add or subtract from it as applicable based on the project context, including the type and location of the project. MoDOT will work with stakeholders to develop a project-specific Purpose and Need for each project.

6. Range of Alternatives:

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

A. What types of alternatives were looked at?

The PEL Study process used a two-step alternatives evaluation process. Level 1 included concepts, including a No Build (Maintenance Only) and location-specific solutions. Level 2 included a corridor-wide No Build Alternative and three corridor-wide Build Alternatives designed to assess how logical combinations of improvements would operate as a system along the corridor. A text description of the alternative is located in the PEL Study, and figures showing the full corridor for each alternative are in Appendix D (Alternatives Screening Process and Results Technical Report) of the PEL Study

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

The process included developing evaluation criteria based on the Purpose and Need and other project goals, developing a range of improvements, and evaluating the concepts and alternatives through a two-level process. The Implementation Plan recommends the next steps in the process.

Level 1, the Brainstorming Phase, included workshops with local and statewide MoDOT leaders, national design experts, community partners, and stakeholders. The design options were screened through the study's Purpose and Need and on "Other Challenges to Implementation" criteria.

Level 2, the Analysis Phase, included the remaining ideas from Level 1, as well as new ideas developed during Level 2, assembled into three corridor-wide alternatives designed to represent various options. A full safety and traffic analysis was conducted for each alternative to determine how the ideas would work together as a system and to find the strengths and weaknesses of the different elements. A community assessment was also conducted to address possible benefits and opportunities for the new road layout.

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

During the Level 1 screening, 10 of the 17 concepts were determined as "Do Not Carry Forward" as they scored low for the Purpose and Need criteria. The determination "Do Not Carry Forward" indicates that a concept or alternative was "reasonable but not recommended" so it would not be further analyzed in the PEL process. However, that concept or alternative could still be revisited during the NEPA phase if there were changes to regulatory requirements, physical changes in the corridor, changes to the Purpose and Need or project goals or other changes that would suggest the concept or alternative might add value to a preferred alternative. These "reasonable but not recommended" concepts and alternatives will be made available for public comment

during the NEPA scoping phase to help determine if they require additional analysis. No Concepts were eliminated. Table 5 and Table 6 provide the rationale for why each alternative was determined as "Do Not Carry Forward" or "Carry Forward."

Table 5. West Interchange Area Concept Rationale

Concept	Determination	Rationale
BTGP Concept 1	Do Not Carry Forward	Scored low for the Purpose and Need criteria: ▪ Improve Transportation System with Intuitive Navigation To, From, and Across I-64 (I-64 Access) ▪ Maintain Interstate Function, Operations, and Capacity for the Future (Capacity And Freight)
BTGP Concept 2	Do Not Carry Forward	Scored low for the Purpose and Need criteria: ▪ Increase Safety for All Users (Regional Vehicular Through Movements) In Level 2 evaluation, consider the existing configuration of the Vandeventer Ave. and Boyle Ave./Tower Grove Ave. ramps as part of an alternative.
BTGP Concept 3	Do Not Carry Forward	Scored Low for the Purpose and Need criteria: ▪ Increase Safety for All Users (Regional Vehicular Through Movements) ▪ Improve Transportation System with Intuitive Navigation To, From, and Across I-64 (I-64 Access) ▪ Maintain Interstate Function, Operations, and Capacity for the Future (Capacity and Freight) In Level 2, elements to consider carrying forward include: ▪ Extended westbound exit ramp ▪ Relocation of eastbound on-ramp from Papin St. to Boyle Ave
BTGP Concept 4	Carry Forward	Scored High for the Purpose and Need criteria: ▪ Improve Transportation System with Intuitive Navigation To, From, and Across I-64 (I-64 Access and Interstate/Local Network Interface) ▪ Maintain Interstate Function, Operations, and Capacity for the Future (Freight) In Level 2, consider additional bicycle and pedestrian enhancements for crossings at Sarah St. and Tower Grove Ave.

Concept	Determination	Rationale
BTGP Concept 5	Carry Forward	Scored High for the Purpose and Need criteria: ▪ Increase Safety for All Users (Bike/Ped) ▪ Reduce the Barrier Effect of I-64 for Bicycle, Pedestrian, and Transit Users (Support Other Entities Bicycle/Pedestrian Plans and Transit Access/Effectiveness) ▪ Maintain Interstate Function, Operations, and Capacity for the Future (Capacity and Freight) In Level 2 evaluation, concerns to be addressed may include: ▪ Modifications to allow for additional turn lane(s) on Boyle Ave ▪ Grade separation or signalization for bicycle and pedestrian crossing of eastbound ramp traffic south of I-64
BTGP Concept 6	Do Not Carry Forward	Scored Low for the criterion: ▪ Other Challenges to Implementation; and Medium for several Purpose and Need criteria In Level 2 evaluation, consider a Clayton Ave. to Sarpy Ave. bicycle and pedestrian connection with an alternative that does not require a new I-64 mainline bridge.

BTGP = Boyle Ave., Tower Grove Ave., and Papin St./Vandeventer Ave.

Table 6. East Interchange Area Concept Rationale

Concept Name	Determination	Rationale
MG Concept 1	Do Not Carry Forward	Scored low for the Purpose and Need criteria: ▪ Improve Transportation System With Intuitive Navigation To, From, and Across I-64 (Interstate/Local Network Interface) ▪ Maintain Interstate Function, Operations, and Capacity for the Future (Freight) In Level 2 evaluation, consider an alternative with the conversion to an at-grade intersection at Forest Park Ave. and Grand Blvd.
MG Concept 2	Do Not Carry Forward	Scored Low for the Purpose and Need criteria: ▪ Improve Transportation System with Intuitive Navigation To, From, and Across I-64 (I-64 Access and Interstate/Local Network Interface) ▪ Maintain Interstate Function, Operations, and Capacity for the Future (Freight)

Concept Name	Determination	Rationale
MG Concept 3	Carry forward and combine Concepts 3, 5, and 9	Scored High for the Purpose and Need criterion: ▪ Increase Safety For All Users (Bike/Ped). Scored low for the Purpose and Need criterion: ▪ Improve Transportation System With Intuitive Navigation To, From, and Across I-64 (I-64 Access); and Medium for the others In Level 2 evaluation, concerns to be addressed with a combined concept include: ▪ Introduces an eastbound on-ramp in closer proximity to Jefferson Ave. interchange ▪ Possibility to extend Theresa Ave. connection over or under the railroad to the south
MG Concept 4	Do Not Carry Forward	Scored Low for the Purpose and Need criterion: ▪ Improve Transportation System with Intuitive Navigation To, From, and Across I-64 (I-64 Access)
MG Concept 5	Carry forward and combine Concepts 3, 5, and 9	Scored High for the Purpose and Need criteria: ▪ Increase Safety for All Users (Regional Vehicular Through Movements and Bike/Ped) ▪ Improve Transportation System with Intuitive Navigation To, From, and Across I-64 (I-64 Access) ▪ Reduce Barrier Effect of I-64 for Bicycle, Pedestrian, and Transit Users (Support Other Entities Bike/Ped Plans) ▪ Maintain Interstate Function, Operations, and Capacity for the Future (Capacity) In Level 2 evaluation, concerns to be addressed with combined concept include: ▪ Reconfigure westbound I-64 off-ramp to Forest Park Ave ▪ Intersection spacing on Theresa Ave. between Spruce St. and eastbound I-64 on-ramp
MG Concept 6	Do Not Carry Forward	Scored Low for the Purpose and Need criteria: ▪ Increase Safety For All Users (Regional Vehicular Through Movements) ▪ Improve Transportation System with Intuitive Navigation To, From, and Across I-64 (I-64 Access and Interstate/Local Network Interface)
MG Concept 7	Carry Forward	Scored High for the Purpose and Need criteria: ▪ Reduce the Barrier Effect of I-64 for Bicycle, Pedestrian, and Transit Users (Support Other Entities Bike/Ped Plans) ▪ Maintain Interstate Function, Operations, and Capacity for the Future (Freight)

Concept Name	Determination	Rationale
MG Concept 8	Carry Forward	Scored High for the Purpose and Need criteria: ▪ Improve Transportation System with Intuitive Navigation To, From, and Across I-64 (I-64 Access and Interstate/Local Network Interface) ▪ Maintain Interstate Function, Operations, and Capacity for the Future (Freight) In Level 2 evaluation, concerns to be addressed may include: ▪ Consider adding a new north-south connection from Theresa Ave. to and across Forest Park Ave ▪ Reconfiguration of the eastbound I-64 off-ramp at Grand Blvd Market St. west of Grand Blvd. would need to be vacated to accommodate the eastbound I-64 off-ramp substructure to Grand Blvd., which was determined not to be a viable solution. Consider revising concept to carry forward the ramp configuration in the northern quadrants. The southern quadrants could be revised to a non-typical folded diamond configuration where both ramps are placed in the southeast quadrant and have access to Grand Blvd. via a local road. Potentially conflicts with planned improvements by GRG for a new greenway crossing at Spring St.
MG Concept 9	Carry forward and Combine Concepts 3, 5, and 9	Scored Medium for most of the Purpose and Need criteria. Scored low for the Purpose and Need criterion: ▪ Improve Transportation System with Intuitive Navigation To, From, and Across I-64 (Interstate/Local Network Interface). In Level 2 evaluation, concerns to be addressed may include: ▪ Bringing westbound ramp to grade at Market St. reduces space for queueing and reduces bicycle/pedestrian comfort on Compton Ave ▪ Introduces an eastbound on-ramp in closer proximity to Jefferson Ave. interchange ▪ Introduces local street crossing of Theresa Ave. over railroad tracks to the south of the corridor
MG Concept 10	Do Not Carry Forward	Scored Low for the criteria: ▪ Increase Safety for All Users (Regional Vehicular Through Movements) ▪ Improve Transportation System with Intuitive Navigation To, From, and Across I-64 (Interstate/Local Network Interface)
MG Concept 11	Do Not Carry Forward	Scored Low for the Purpose and Need criterion: ▪ Improve Transportation System with Intuitive Navigation To, From, and Across I-64 (I-64 Access)

MG = Market St., Grand Blvd., and Compton Ave.

All three Build Alternatives were carried forward during the Level 2 Alternatives evaluation.

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

The Level 2 Alternatives analysis and screening results show that the three corridor alternatives evaluated all met the Purpose and Need and were considered reasonable alternatives to advance towards NEPA for further study and refinement. However, each alternative's strengths and weaknesses were discovered through the analysis performed and public engagement efforts that informed the screening of these alternatives. The following bullets describe the key features from each of the Level 2 alternatives:

Alternative 1 is shown in Figure 47 and Figure 48 in the PEL Study. Key features of this alternative are the following:

- Consolidates access at Grand Blvd.
- Lengthens auxiliary ramps on I-64
- Creates a new north-south connection on Theresa Ave.

Alternative 2 is shown in Figure 49 and Figure 50 in the PEL Study. Key features of this alternative are the following:

- Creates a new eastbound on-ramp from Boyle Ave.
- Creates bus-only lanes on Grand Blvd. between Choteau Ave. and Forest Park Ave.
- Builds a new Theresa Ave. bridge over railroad tracks

Alternative 3 is shown in Figure 51 and Figure 52 in the PEL Study. Key features of this alternative are the following:

- Consolidates the Vandeventer Ave. and Tower Grove Ave. off-ramps from I-64
- Creates a new eastbound on-ramp to I-64 from Vandeventer Ave.
- Removes left-hand entrance ramps at Boyle Ave./Papin Ave./Tower Grove Ave. and Grand Blvd./Market St./Bernard St. interchanges

The **No Build (Maintenance Only) Alternative** was also included in the Level 2 analysis. The No Build incorporates an estimated 12 miles of bike and pedestrian facilities that are either committed or likely to happen. However, it would not address any of the four needs identified in the study. MoDOT would still need to invest approximately $100M in bridge repairs. Section 6.2 in the PEL Study provides additional detail about the No Build Alternative.

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

The public, stakeholders, and agencies had an opportunity to comment during the process. Sections 3 and 4 of this Questionnaire highlight the public stakeholder and agency engagement. Section 5 of the PEL Study describes public and stakeholder engagement and agency coordination.

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

Outside of the further development of alternatives towards NEPA, design, and construction, below are the unresolved issues that need further coordination.

There are improvements to the local roadway network owned by the City of St. Louis that will require coordination and funding partnerships to advance into a NEPA study. These improvements, particularly at intersections, will require coordination to determine the measures of effectiveness that the City desires to utilize. These may be less stringent than the MoDOT requirements used as part of the PEL, resulting in smaller facility footprints that result in less impact.

Bus-only lanes were included as an element of Alternative #2 along Grand Avenue between Forest Park Ave. and Route 100/Chouteau Ave. This improvement requires a wider Grand Ave. Bridge over I-64, and the existing bicycle and pedestrian facilities present on the Grand Ave. viaduct to be placed on new separated bridge facilities that run parallel to allow space for the bus-only lanes. While this improvement showed some benefits, they cannot be fully evaluated without a regional study of this improvement that extends outside the limits of this study. A study and/or a decision by these local partners to fund these improvements will need to be completed.

7. Planning Assumptions and Analytical Methods:

A. What is the forecast year used in the PEL Study?

The forecast year used in this PEL Study was 2050.

B. What method was used for forecasting traffic volumes?

Traffic volume forecasts for the Year 2050 were developed per the methodology outlined in Section 6.0 Traffic Forecast of the approved *Methods and Assumptions Report for Traffic, Safety & Multimodal Analysis*, finalized on June 24, 2022. The traffic forecasts were calculated based on existing traffic volume counts, historic traffic volume trends (trend line analysis), and outputs from East-West Gateway's (EWG) regional travel demand model.

C. Are the planning assumptions and the corridor vision/Purpose and Need statement consistent with each other and with the long-range transportation plan? Are the assumptions still valid?

The Purpose and Need statement and planning assumptions are consistent with the metropolitan planning organization's long-range plan. Although the Purpose and Need for the project was not developed based on the EWG's long-range planning goals, the Purpose and Need is compatible and in alignment with the Connected 2050 Long-Range Transportation Plan's (2023) guiding principles. For example, the Purpose and Need includes increased safety for all users; Improved transportation system with intuitive navigation; Reduced barrier effects for bicyclists, pedestrians, and transit users; Improvement of bridge conditions to maintain a good state of repair; and Maintaining interstate function, operation, and capacity for the future. Additionally, the Purpose and Need is not in conflict with these guiding principles, and the project goals include additional areas of alignment, including equity and sustainability.

The Connected 2050 guiding principles are the following:

- Our Communities and Region
    - Economic Vitality

    - Thriving Neighborhoods and Communities
    - A Vibrant Downtown and Central Core
    - A Healthy and Sustainable Environment
- Our Transportation System
    - Safe and Secure
    - Choices and Access for All
    - Seamless, Efficient, and Reliable
    - Well-Maintained and Resilient
- Our Process
    - Collaborative
    - Equitable
    - Innovative
    - Performance Based

Connected 2050 includes three projects in the investment plan (Tiers I and II) identified from the PEL. Below is a listing of the projects and the top Guiding Principles to which they aligned. The I-64 interchange projects listed in the plan are two of only five projects that align with more than three Guiding Principles out of a total of 46 projects included in the fiscally constrained project list.

Tier I Connected 2050 Investment Priorities (2024-2030)

- I-64 interchange and corridor improvements at the east interchange with an estimated cost of $82M. Top guiding principles include Thriving Neighborhoods and Communities, A Vibrant Downtown and Central Core, Choices and Access for All, and Equitable.
- I-64 bridge rehabilitation and replacements on I-64 between Kingshighway and Jefferson Avenue with an estimated cost of $106M. The top guiding principle is well-Maintained and Resilient.

Tier II Connected 2050 Investment Priorities (2031-2040)

- I-64 interchange and corridor improvements at the west interchange with an estimated cost of $133M. Top guiding principles include Thriving Neighborhoods and Communities, A Vibrant Downtown and Central Core, Choices and Access for All, and Equitable.

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?

The PEL Study assessed assumptions made under the No Build Alternative (Maintenance Only) and the EWG regional travel demand model. EWG's travel demand model provides data for the base year (2019) as well as the MPO's horizon year (2045) transportation network, the latter of which assumes that all the fiscally constrained projects listed in the EWG Long-Range Transportation Plan: Connected 2045 were added to the model's

transportation network. Annual Growth rates obtained from the EWG's regional travel model by analyzing the MPO's base year (2019) and horizon year (2045) traffic volumes were then applied to the PEL's existing traffic volumes to ultimately generate forecasted 2050 traffic volumes for the major roadways within the study area that would be utilized to analyze the No Build and Build alternative scenarios.

Extensive coordination took place throughout the duration of the PEL to ensure that land use plans and socioeconomic data reflect the future Study Area. The PEL's Steering Committee provided input with regard to committed, likely, and possible future developments. In addition, input was sought from several stakeholders within the Study Area, such as Saint Louis University and Washington University Medical Campus. Based on this coordination, EWG included 35 of the potential land use development in the regional travel demand model. As a result, the total population within and in proximity to the Study Area increased by 4,748 persons, and the total employment increased by 7,522 persons. Additional information for travel demand assumptions is included in Appendix F, Traffic Safety and Multimodal Alternatives Analysis Memorandum.

8. Environmental Resources (Wetlands, Cultural, etc.) Reviewed:

For each resource or group of resources reviewed, provide the following:

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

Most resources were studied via desktop survey or data collected from resource-agency-specific websites. Some records research was done for historic resources with the State Historic Preservation Officer. See Table 7 at the end of Question 8 for a list of the resources assessed during the PEL Study. Right-of-way is not listed in the table as no recommendations were made explicitly made for right-of-way, although the memo does discuss the state and federal regulatory requirements for the acquisition of right-of-way.

B. Is this resource present in the area, and what is the existing environmental condition for this resource?

All resources listed in the table at the end of Question 8 are present within the environmental study area defined around this corridor, except for floodplains.

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

The table at the end of Question 8 includes general recommendations for assessing impacts during the NEPA phase for individual projects.

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

The PEL Study includes a summary of existing environmental and social resource conditions and a discussion of NEPA considerations. Additionally, Appendix K: Existing Conditions Report of the PEL Study Report provides a baseline of existing conditions for consideration during scoping for future phases and at the onset of the NEPA phase of individual projects. The table below summarizes how environmental resources will need to be supplemented for future NEPA processes.

Table 7. Resource Recommendations

Resource	Recommendations
Land Use and Zoning	Local government and private stakeholders are investing heavily in the Future64 study area, which speaks to the necessity for public engagement during the PEL study process. As this area continues to develop, MoDOT should identify changes to the City of St. Louis zoning districts and SLUP plans, especially where land use is underutilized, as more residential and commercial properties are established.
Air Quality	The study area is in a nonattainment area for ozone. Therefore, the conformity requirements of the CAA apply. This means that any improvements that result from this PEL study process are subject to regional and local conformity requirements. Future transportation improvements must be included in a fiscally constrained metropolitan transportation plan and in a Transportation Improvement Program. During future NEPA processes, local air quality analysis is needed to assess whether future ozone conditions may cause an exceedance of the NAAQS. If so, mitigation will be required.
Hazardous Materials	With four active underground storage tanks and nine active or long-term hazardous sites in the study area, MoDOT must consider the potential impacts on these sites and any associated remedial action at the sites that could result from the construction of future projects in the study area.
Visual Environment	Currently, the viewshed of I-64 has a moderate to high visual impact on the public within the environmental study area. The raised highway and bridges along the I-64 corridor represent the highest impact. The older bridges in the study area were built primarily for function and do not have visually appealing elements. The 21st-century bridges incorporate various architectural styles that add unique character. These newer bridges epitomize the opportunity MoDOT could take as the older structures are reconstructed. I-64 also offers a particular viewshed of the cityscape that is not found elsewhere, which should be considered in future projects with elevation changes on the existing alignment. Noise walls may also be considered in areas where the viewshed to the highway is determined to have a negative impact.
Socioeconomics and Environmental Justice	As future transportation projects transition to the NEPA phase, MoDOT should consider the modality of future projects and how they can improve connectivity across communities, specifically in disadvantaged areas, which is most of the CA area. Bike/ped routes play an important role as the data shows a prevalence of zero-car households. Covenant Blu-Grand Center and Jeff-Vander-Lou are two key communities with high percentages of low-income and minority populations and should be a primary audience for focused outreach, such as pop-up events and local meetings, as well as the commercial areas that may experience impacts.
Historic Architectural	Most of the study area has historic resources, including eight NHRP-listed sites, 262 potentially historic buildings, and three historic districts. As projects move forward to NEPA, individual Section 106 studies and consultation with the Missouri SHPO will be necessary. Dependent upon the SHPO's determination, any direct or indirect visual impacts to unevaluated, eligible, or listed NRHP sites may require further survey and potential mitigation. The probability of impacts on these resources is high because they can be directly and visually affected. Therefore, it is recommended that MoDOT keeps this resource under high consideration.
Archaeology	MoDOT and FHWA will require an archaeological survey that includes subsurface investigations during a future NEPA process. If previously recorded sites, including those impacted by previous projects or will be impacted, additional Phase II testing may be required.

Resource	Recommendations
Terrestrial Habitat and Ecological Significance	Because of the current land uses and high levels of development present in the study area with less than 1 percent open spaces throughout, impacts to natural habitat communities associated with any future projects in the study area would be relatively minor. During future NEPA analysis, local agencies should consider ways to improve this resource in future projects through native landscaping, creating new parks, or other methods of adding ecological benefit.
Threatened and Endangered Species	Coordination should take place with USFWS and MDC on potential impacts on threatened and endangered species. It is unlikely that any mitigation will be required because of the lack of habitat for the species listed in Table 7 of Appendix J, Environmental Constrains Memo. It is recommended that MoDOT look for signs of bats roosting on bridges that are within 1,000 feet of suitable summer habitat.
Floodplains	Because there are no floodways in the study area, no agency coordination or permitting would be required for future transportation projects. MoDOT should not need to consider any impacts on this resource.
Water Quality	Because stormwater will reach the Mississippi River, an impaired waterway, it is recommended that during future NEPA processes, MoDOT implement a SWPPP to meet regulatory requirements and water quality concerns for the Mississippi River.
Wetlands and WOUS	Google Earth imagery indicates several roadside ditches and swales that have the potential to host wetlands, and that may be WOUS. As future projects are outlined, MoDOT should conduct a field survey to delineate the identified features and any other unidentified wetlands not present on NHD or NWI mapping.
Parks and Recreation	MoDOT should coordinate with Great Rivers Greenway on the Brickline Greenway, which crosses I-64 at several locations. There are three parks, three school facilities, and a public trail system in the environmental study area. Furthermore, parks and school facilities should be identified with additional information during future NEPA projects. Forest Park is subject to Section 6(f); impacts to all park and recreation properties should be avoided if possible.
Traffic Noise	Noise from I-64 impacts 21 identified noise-sensitive receptors in the study area. If future projects qualify as Type 1 work, a noise analysis will be required. Alternatively, if projects do not qualify as Type 1, it is recommended MoDOT includes the public in discussions on noise in case third-party stakeholders wish to fund noise abatement projects.

9. List Environmental Resources You Are Aware of That Were Not Reviewed in the PEL Study and Why.

Indicate whether or not they will need to be reviewed in NEPA and explain why.

Transportation Resources, including transit, bicycle, and pedestrian facilities: Although transportation resources were not evaluated as a stand-alone resource, the existing transportation system was documented in Appendix K: Existing Conditions Report of the PEL Study Report. Transportation resources will be impacted by build alternatives and should be assessed in NEPA, and the existing transportation system, with applicable updates, should serve as the baseline for that assessment.

Greenhouse gases: In January 2023, the Council on Environmental Quality issued guidance to assist agencies in analyzing greenhouse gases and climate change effects of

their proposed actions under NEPA review (NEPA Guidance on Greenhouse Gas Emissions). An assessment of greenhouse gases was not completed due to a range of build alternatives being carried forward. Whether greenhouse gases are assessed during NEPA will be determined during scoping for each project based on the project's scale and the anticipated impact level.

Geologic and Soils: An assessment of geologic resources, hazards, and soils typically occurs when more design detail is committed to, and the geotechnical assessment takes place based on that design. If an assessment during NEPA reveals geotechnical or soil resources that could affect or be affected by a project, then that resource will be included in NEPA, as appropriate.

Utilities: Although utilities were not evaluated as a stand-alone resource, existing utilities are discussed in Appendix K: Existing Conditions Report of the PEL Study Report. Surveys for existing utilities and identification of conflicts typically occur at a project-level scale where specific and detailed conflicts can be identified. Utility surveys and assessments should occur for each individual project during the NEPA phase.

Railroad Facilities: Although railroad facilities were not evaluated as a stand-alone resource, existing railroad facilities are discussed in Appendix K: Existing Conditions Report of the PEL Study Report. An assessment of railroad facilities and documentation of coordination with railroad-related companies should occur during NEPA.

Farmlands: It has been assumed that no farmlands occur within the environmental study area. An assessment of farmlands is not anticipated during NEPA. If an assessment of land use during NEPA reveals farmland, then that farmland resource will be assessed for that project, as appropriate.

Paleontology: An assessment of paleontological resources was not completed due to the range of build alternatives being carried forward. Whether paleontology is assessed during NEPA will be determined during scoping for each project, based on the scale of the project and the likelihood of encountering paleontological resources.

Energy: An energy assessment was not completed due to a range of build alternatives being carried forward. Whether energy is assessed during NEPA will be determined during scoping for each project, based on the scale of the project and anticipated contribution to energy consultation.

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 not considered during the PEL Alternatives Analysis since a range of build alternatives are being carried forward. Although cumulative impacts were not explicitly assessed, information collected during the PEL process could aid in cumulative impact assessment for future NEPA projects. This information includes:

- Appendix F, Traffic Safety and Multimodal Alternatives Analysis Memorandum, which includes development assumptions in the travel demand model

- Appendix G, Community Assessment Baseline, which includes an assessment of socioeconomic factors and development potential for the Level 2 alternatives, including impacts and benefits
- Appendix J, Environmental Constraints Memorandum, which includes existing conditions for applicable environmental resources and provides a baseline for calculating impacts

11. Describe any Mitigation Strategies Discussed at the Planning Level That Should be Analyzed During NEPA.

The PEL Study did not describe mitigation strategies other than NEPA considerations. The discussion of NEPA considerations will inform scoping and schedule-making activities at the onset of NEPA for individual projects.

12. What Needs to be Done During NEPA to Make Information From the PEL Study Available to the Agencies and the Public? Are There PEL Study Products Which Can Be Used or Provided to Agencies or the Public During the NEPA Scoping Process?

This Study was intended to provide the framework for the long-term implementation of improvements along the corridor as funding is available and to be used as a resource for future NEPA documentation. Published documentation from the PEL Study process, such as Purpose and Need, alternatives screening, NEPA considerations, public and agency coordination, Implementation Plan, and Project Sheets, can be used during future NEPA scoping processes. The project website (http://future64.com) includes all published PEL materials. The response to Question 4A includes a list of published materials.

The information in Section 7, Implementation Plan, in the PEL Study, and Appendix N, Project Sheets, forms the basis for decision-making at a project level, including NEPA, as project funding becomes available.

13. 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 land owners and/or groups, contact information for stakeholders, special or unique resources in the area, etc.

There are improvements to the local roadway network owned by the City of St. Louis that will require coordination and funding partnerships to advance into a NEPA study. These improvements, particularly at intersections, will require coordination to determine the measures of effectiveness that the City desires to utilize. These measures of effectiveness may be less stringent than the MoDOT requirements used as part of the PEL and result in smaller facility footprints that result in less impact. Additionally, the intersection of Grand Ave. and Forest Park Ave. will require coordination with St. Louis University on the improvements.

Several bridges in the corridor require rehabilitation or replacement to maintain a good state of repair. While there are five early action bridge projects which have been identified that can be addressed immediately, there are eight additional bridges that need maintenance prior to 2040 should the alternatives from the PEL study not advance. Additionally, a significant investment for rehabilitation starts to occur in 2029 if the alternatives have not moved forward into implementation by then.

As projects move into NEPA phases, continued coordination with the Technical and Community advisory groups is recommended.

Attachment A: Agency Collaboration

The Future64 PEL Study was prepared with contributions from many agencies and individuals.

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