Appendix A

Alternative Analysis

I-70 Environmental Assessment: I-435 to I-470 Alternatives Analysis

April 2025

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1.0 Introduction and Background History

The purpose of this technical report is to describe the alternatives for screening, screening criteria, and to document the results of the screening process for the I-70 Environmental Assessment (EA): I-435 to I-470.

1.1. Project Background

Since its original construction more than 50 years ago, I-70 has been a vital lifeline for moving people and goods across Missouri and beyond. This project is one of several which would modernize the I-70 corridor across the state. I-70 from I-435 to I-470 provides a critical link to the central region of the United States, particularly for freight traffic, and is a key access point for the Kansas City region.

In compliance with the National Environmental Policy Act (NEPA), the I-70 environmental study followed a tiered environmental documentation process. Tiering complies with NEPA requirements and other environmental regulations. A Tier I Environmental Impact Statement (EIS) was completed for the I-70 corridor in 2011. The Tier 1 study identified several segments for further review in Tier II. The EA process for this portion of I-70 began in the spring of 2024. Initial steps include efforts to understand the traffic volumes and safety conditions throughout the study area.

NEPA requires the Federal Highway Administration (FHWA) to assess the environmental effects of projects that include federal funding or require a federal action. The NEPA process allows transportation officials to make project decisions that balance engineering and transportation needs with social, economic, and natural environmental factors. At the direction of FHWA, an EA is being prepared for the Project Area to determine whether the proposed action has the potential to cause significant environmental effects to the natural or man-made environment. Within the EA, FHWA and MoDOT are evaluating a ‘No Action’ or ‘No-Build’ alternative and two alternatives identified in the Tier 1 EIS for further consideration, the Fix Key Bottlenecks Strategy and the Add General Capacity Strategy.

1.2. Project Description

The I-70 Environmental Assessment: I-435 to I-470 Project Area (Project Area) is located entirely in Jackson County, Missouri and includes all land within 250 feet of the existing highway right-of-way (ROW) along the corridor. The Project Area extends from U.S. 40 on the west end to the east end of the I-70/I-470 interchange. For most of this length, I-70 is a six-lane divided and fully access-controlled interstate facility.

The proposed project is needed to address existing and future conditions along the I-70 corridor from I-435 to I-470.The corridor no longer meets the current and future mobility needs, resulting in reduced safety, reliability, and congestion.

2.0 Overview of I-70 Alternatives Development Process

The alternatives development process entailed screening of the alternatives to determine which warrant further consideration for the project. The Alternatives Screening was qualitative and quantitative in nature to determine their potential impacts in comparison to the No-Build Alternative and each other.

Through the alternatives screening a Preferred Alternative, or Proposed Action, was selected. The Preferred Alternative meets the Purpose and Need for the project, while avoiding, minimizing, or mitigating impacts to both the natural and human environment, and considers engineering, costs, and public and stakeholder input.

The Preferred Alternative is carried forward and evaluated alongside the No-Build alternative as part of the EA. The process of screening alternatives with an ascending level of detail assures decision-makers of the fulfillment of the improvement's goals, while fostering informed consent with reviewing agencies, stakeholders, and the public.

3.0 Alternatives Development and Screening

Since the Tier I EIS received a Record of Decision, significant changes have been made to the study area configuration and the needs of the study area have changed. Three different alternatives were carried over from the Tier I EIS and considered in this study for further analysis.

Alternatives Considered

As part of the environmental clearance process, a No-Build Alternative is used as a benchmark for comparison against the other improvement alternatives, or "build alternatives" being evaluated. The potential alternatives include the following:

- No-Build
- Fix Key Bottlenecks
- Add General Capacity

3.1. No-Build

As part of the environmental clearance process, a No-Build Alternative is used as a benchmark for comparison against other alternatives being evaluated to improve a project. The No-Build Alternative means that no roadway and/or bridge reconstruction or capacity improvements would be constructed on the I-70: I-435 to I-470 corridor. This alternative would include ongoing maintenance of the corridor and bridge, along with minor pavement and bridge rehabilitation. This alternative also includes all future projects that are currently planned and already committed within the corridor's project

area and noted in state, regional, and local transportation improvement plans through the 2060 design year of the project.

The following improvements are committed within the corridor:

- Truman Connect - East U.S. Highway 40 between Sterling Avenue and Blue Ridge Cutoff and on Sterling Avenue from East U.S. Highway 40 to Winner Road (MARC TIP)
- Project 4I1486D: Improve I-70: Kansas City I-70 - improvements in downtown Kansas City from Paseo Boulevard to East U.S. Highway 40/31st Street (MoDOT 2025-2029 STIP)
- Project ST0019: Improve I-70: Blue Springs to Odessa - I-70 improvements from Blue Springs to Odessa (MoDOT Improve I-70 Program)
- Project 4P3323B: I-70 Median barrier safety improvements from Manchester Trafficway to Chrysler St. (MoDOT 2025-2029 STIP)
- Project KU0114: I-70 Bridge Replacements over US-40 and Sterling Avenue (MoDOT 2025-2029 STIP)

3.2. Fix Key Bottlenecks

This alternative includes improvements to key bottleneck areas where congestion and safety deficiencies are highest within the corridor. This alternative would maintain the current 3-lane design of I-70, each direction, between I-435 and I-470, but would add shoulder improvements and select ramp/auxillary lane improvements.

Fixing key bottleneck improvements include:

- Reconstruct all existing lane pavement for improved reliability and longevity;
- Widening existing inside and outside shoulders from 7 feet to 8 feet up to 12 feet;
- Building additional auxiliary lanes;
- Ramp improvements; and
- Considerations for future interchange improvements to the US-40 and I-470 interchanges.

If this alternative is selected, improvements likely would be constructed in phases. Decisions on phasing would be based on funding availability and when traffic congestion and safety needs warrant the improvements along the corridor. For this analysis, the full buildout of the alternative prior to the project design year is considered when rating against the screening criteria. A map series showing the Fix Key Bottlenecks Alternative is attached in **Appendix B**.

3.3. Add General Capacity

This alternative considers the reconstruction of pavement and bridges along the corridor and constructing additional through lanes. The alternative also incorporates additional

capacity to improve connections to and from ramps along the corridor, such as auxiliary lanes, which provide a continuous lane of travel between closely spaced interchange entrance ramps and exit ramps.

Geometric and condition improvements include:

- Updating the corridor to four through lanes in each direction;
- Select ramp and safety improvements;
- Widening existing inside and outside shoulders from 7 feet to 8 feet up to 12 feet;
- Evaluation of capacity improvements for an eastbound barrier-separated collector-distributor roadway between Manchester trafficway and I-435;
- Evaluation of capacity improvements for a westbound barrier-separated collector-distributor roadway between Blue Ridge Cutoff and Manchester Trafficway; and
- Considerations for future interchange improvements to the US-40 and I-470 interchanges.

If this alternative is selected, improvements likely would be constructed in phases. Decisions on phasing would be based on funding availability and when traffic congestion and safety needs warrant the improvements along the corridor. For this analysis, the full buildout of the alternative prior to the project design year is considered when rating against the screening criteria. A map series showing the Add General Capacity Alternative is attached in **Appendix C**.

4.0 Screening Criteria

Screening Criteria were developed across three broad categories covering various aspects of the project.

Screening Criteria Categories:

- Project Purpose and Need
- Natural and Human Environment
- Engineering Considerations

Each category contains several criteria, discussed below. Ratings for each alternative are summarized in the Screening Matrix.

4.1. Purpose and Need Screening Criteria

The purpose of the proposed project is to determine improvements for future capacity, safety, and mode choices in order to address the need elements.

The proposed project is needed to:

- ***Improve Safety*** to reduce the potential for crashes at high crash locations.

- ***Reduce Congestion*** through removing key bottlenecks to reduce the potential for ramp back-up on the freeway and improve multi-modal travel times in coordination with local and regional agencies' plans.
- ***Restore and Maintain Existing Infrastructure*** by improving bridge and pavement conditions on I-70 and implement cost-effective investment strategies.
- ***Improve Accessibility and Goods Movement*** by providing travel options for all residents, increasing safe access across I-70 for non-motorized travel, supporting local and regional land use plans, and improving the efficiency of freight movement on I-70.

The screening criteria to evaluate meeting the Purpose and Need are defined as:

- **Improve Safety** – This screening criteria evaluates the extent to which each alternative addresses reducing the potential for crashes at high crash locations.
    - **Evaluate the reduction in crash rate and crash severity** – This screening criteria evaluates the extent to which an alternative potentially reduces the number and severity of crashes at locations with crash rates above the statewide average.
- **Reduce Congestion** – This screening criteria evaluates the extent to which each alternative reduces congestion.
    - **Evaluate the effectiveness of the strategy on traffic operations** – This screening criteria evaluates the extent to which an alternative removes key bottlenecks, reduces the potential for ramp back-ups, and improves multi-modal travel times.
- **Restore and Maintain Existing Infrastructure** – This screening criteria evaluates the extent to which each alternative addresses improvements to bridge and pavement conditions in the corridor.
    - **Evaluate how well the strategy improves existing infrastructure** – This screening criteria evaluates the level of improvement to bridge pavement conditions within the corridor and the implementation of cost-effective investment strategies.
- **Improve Accessibility and Goods Management** – This group of screening criteria evaluates the extent to which the alternative improves accessibility with and across neighborhoods, supports local and regional lane use, and improves the efficiency of freight movement in the corridor.
    - **Evaluate how well the strategy improves neighborhood and community accessibility** – This measure evaluates each alternative's ability to improve bicycle and/or pedestrian access as well as the number of interchange and overpass reconfigurations.

- **Evaluate the potential to support local and regional land use plans within the corridor** – This measure evaluates each alternative's ability to support local and MARC's land use plans and the ability to integrate MARC's "Smart Moves Transit Plan".
- **Evaluate how well the strategy serves the freight movement in the corridor** – This measure evaluates the level of improvement to freight movement for each alternative.

4.2. Natural and Human Environment Screening Criteria

All alternatives are additionally evaluated for quantitative and qualitative analysis against Natural and Human Environment criteria.

The natural environmental impacts are related to physical features of the landscape. The human environmental impacts include any community, neighborhood, and business resources that may be affected by the proposed project alternatives.

- **Park and Recreational Impacts** – This measure includes the number and extent of parks or designated recreational areas as well as bicycle and pedestrian facilities impacted by each alternative.
- **Community Facility Impacts** – This measure includes the number of community facilities impacted by each alternative.
- **Title VI and LEP Impacts** – This measure ensures that no person is excluded from participation in, denied the benefit of, or subjected to the discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, disability, or religion and considers disproportional impacts to identified Limited English Proficiency (LEP) populations.
- **Natural Resource Impacts** – This measure assesses impacts to natural resources including wetlands, streams, floodplains (100-year floodplain and floodway), forested, farmland, critical habitat, and threatened and endangered (T&E) species and habitat.
- **Stormwater –** This measure assesses the measure of impact(s) to stormwater drainage as a result of each alternative.
- **Residential or Business Displacements** – This is a high-level assessment of potential displacements to residences and/or businesses for each alternative. A more comprehensive, quantifiable assessment will be made as the study progresses.

- **Hazardous Material Impacts** – This screening measure includes a relative rating based on the number of hazardous materials and contaminated sites potentially impacted by each alternative.
- **Cultural and Historical Site Impacts** – This screening measure indicates impacts to archeological, cultural, and historic sites including those listed or eligible for listing on the state or national register of historic places.
- **Noise Impacts** – This screening measure assesses if an alternative moves traffic closer to noise sensitive receptors and whether it would allow for the opportunity to analyze noise abatement measures such as noise walls.
- **Land Use Impacts** – This screening measure indicates an alternative's impact on land use within and surrounding the corridor.

4.3. Engineering and Cost Screening Criteria

The study team is evaluating each alternative for potential engineering and cost considerations including roadway and interchange geometrics, right-of-way and displacement impacts, project construction timeline, phasing, maintenance of traffic and constructability, as well as the ability to address project costs and funding needs.

- **Right-of-Way Impacts** – This is a high-level assessment of ROW needs from private property for each alternative. A more comprehensive, quantifiable assessment will be made as the study progresses.
- **Timing of Construction and Emergency Routes** – This criterion is a high-level assessment to determine which alternative(s) can be advanced through the project development pipeline and constructed under the fastest timeline.
- **Maintenance of Traffic and Constructability** – This high-level measure is intended to determine the ease or complexity of project phasing, staging and anticipated lane closures during construction.
- **Utilities Impacts** – This measure indicates the impacts an alternative may have on existing utilities within the corridor.
- **Estimated Construction and Life-Cycle Costs** – This screening measure evaluates the relative level of anticipated construction costs for implementing each alternative and anticipated costs of operating and maintaining each alternative over its expected life-cycle.

4.4. Public and Stakeholder Input Screening Criteria

The project team is evaluating each alternative based on public and stakeholder input received on the alternatives. This input is obtained through numerous sources and includes a broad cross section of interested stakeholders and the general public. Input received from public and stakeholder activities, such as stakeholder interviews and

presentations, Advisory Group meetings, public information meetings, statistically valid community surveys, community focus group sessions, and social media outreach is incorporated into the alternative's screening using public comment tools on the website, at meetings, and through social media channels to document public and stakeholder feedback on the project.

- **Public and Stakeholder Input** - screening measure indicates positive, neutral, or negative reactions from stakeholders and the public on each alternative and is captured via the project team's public and stakeholder outreach activities.

4.5. Screening Rating System

The alternatives are rated qualitatively using a screening criteria rating system shown in **Figure 4-1**. Where applicable, quantifiable data on the criteria is included in the environmental consequences and impact analysis for the EA for the No-Build and any proposed actions being carried forward from the screening of alternatives.

Alternatives have been compared against the No-Build Alternative and each other for each criterion. Differences or similarities in ratings indicate differences or similarities between the alternatives at achieving the criteria.

Figure 4-1: Screening Criteria Rating System

- **High Achievement/High Positive Impact** – This rating indicates the highest level of success at meeting achievement-based criteria and goals. Achievement-based criteria are fully met under this rating. This rating can also indicate that there are approximately zero or very low impacts for environmental and engineering/cost criteria.
- **Moderate Achievement/Moderately Positive Impact** – This rating indicates increasing success at addressing achievement-based criteria and goals, or lower levels of environmental or engineering/cost related impacts. Achievement based criteria might be met under this rating, however an alternative could be rated as substantial achievement if another alternative exceeds it at addressing the criteria.
- **No Change/Neutral Impact** – This rating indicates no success at addressing achievement-based criteria and goals but without any negative impacts, or there are no changes or impacts to environmental and engineering/cost criteria.
- **Negative Impact** – This rating denotes that achievement-based criteria and goals are not met (or very negligible), or there are negative environmental or engineering/cost impacts.

5.0 Screening of Alternatives

A detailed quantifiable analysis as well as a qualitative analysis was done for select environmental and engineering criteria. The two Reasonable Alternatives performed similarly as a result of the screening as shown in the Alternatives Screening Matrix located in **Appendix A**, this section discusses impacts from and any differences between the two Reasonable Alternatives.

Screening Criteria Categories:

- Project Purpose and Need
- Natural and Human Environment
- Engineering and Cost
- Public and Stakeholder Input

5.1. Purpose and Need Screening

Each alternative was evaluated across several criteria under each element of the Purpose and Need.

Improve Safety – While both build alternatives have the potential to improve safety along the corridor, the Add General Capacity alternative has the greatest impact to improve the safety of the corridor as it will better address crashes caused by stop and go traffic and includes improvements to roadway, ramp, and interchange geometrics along the entire corridor. The Fix Key Bottlenecks Alternative will also address these issues, but only in key bottleneck locations throughout the corridor.

Reduce Congestion – The Add General Capacity Alternative has a higher rating for improving traffic operations and reducing congestion along the corridor than the Fix Key Bottlenecks Alternative. Although they would both improve the bottlenecks and the potential for ramp back-ups within the corridor, the traffic demand still exceeds the capacity of the corridor in the Fix Key Bottlenecks Alternative which leads to severe congestion during peak periods. The additional through traffic lane in the Add General Capacity Alternative allows for much improved traffic operations.

Restore and Maintain Existing Infrastructure – Both build alternatives would improve bridge and pavement condition throughout the corridor. However, the Add General Capacity Alternative scored higher as this alternative will provide one additional through lane throughout the entire corridor, have improvements to the eastbound C-D road at I-435, and add a new westbound C-D road between Blue Ridge Cutoff and I-435 to accommodate larger traffic volumes rather than only in key bottleneck areas.

Improve Accessibility and Goods Movement – Both build alternatives would improve accessibility across communities and neighborhoods as well as improve the efficiency of freight movement throughout the corridor. The Add General Capacity Alternative scored slightly better in the widening of the entire corridor would better improve accessibility and movement as a whole rather than only in key bottleneck areas.

5.2. Natural and Human Environment Screening

The Natural and Human Environment Screening of the alternatives was conducted using qualitative data and quantifiable data where appropriate. The No-Build Alternative generally has more favorable ratings since it is a “no action” strategy and does not cause physical impacts to the natural or manmade environment. **Appendix B** and **Appendix C**, respectively, show the extent of potential natural and human environment impacts for the Fix Key Bottlenecks and Add General Capacity Alternatives.

Parks and Recreational Areas and Community Facilities – There are anticipated to be minor impacts from each alternative to one locally owned park, Little Creek Park. Both alternatives would impact approximately 0.2 acres of Little Creek Park. Little Creek Park is not a Section 4(f) park and is owned by the local homeowner’s association. The area impacted does not include any park facilities, only greenspace. Any impacts to the park would be minor and replaced in-kind to restore access following construction. Impacts are not anticipated to any trails, bike lanes, Section 4(f), or Section 6(f) facilities. Impacts are related to grading and construction activities and would not impact the functional use of the park.

Title VI and Limited English Proficiency (LEP) – All Federal agencies must comply with Title VI of the 1964 Civil Rights Act (Title VI). Under Title VI and related statutes, each Federal agency is required to ensure that no person is excluded from participation in, denied the benefit of, or subjected to the discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, disability, or religion.

FHWA administers its governing statutes to identify and avoid discrimination by:

1. Identifying and evaluating environmental, public health, and interrelated social and economic effects of FHWA programs, policies, and activities;
2. Considering alternatives to proposed programs, policies, and activities where such alternatives would result in avoiding; and
3. Providing public involvement opportunities and considering the results thereof, including providing meaningful access to public information concerning the human health or environmental impacts and soliciting input from affected populations in considering alternatives during the planning and development of alternatives and decisions.”

In addition to the above, LEP percentage of the block groups within the study area were measured to ensure all populations were provided opportunities for input in considering the alternatives of the project. The LEP percentage is defined as the percentage of all individuals over five years of age who speak a language other than English and speak English less than “very well.”

All populations were and will be presented with the opportunity for input during the various public meetings and will not be disproportionately impacted by the project.

Noise – The Add General Capacity Alternative generally has a wider ROW footprint than the Fix Key Bottlenecks Alternative, shifting traffic closer to sensitive noise receptors such as residences, schools, churches, and other community facilities. A

noise analysis was not completed for this Tier 2 Screening. Upon selection of the Preferred Alternative, a noise study will be completed to evaluate if any areas of the corridor qualify for noise abatement measures based on feasibility and reasonableness requirements in the MoDOT Traffic Noise Policy. A general assessment of potential receptors was conducted and determined similar impacts from both alternatives.

Natural Resources – This category evaluates potential impacts to water resources such as wetlands, streams, and floodplains, as well as critical plant and animal habitat and designated T&E Species. There will be some impacts under both alternatives to habitat (forested areas, migratory birds, and T&E Species habitat), streams, wetlands, and floodplains crossing the corridor, however, these impacts are not expected to be substantial and will be mitigated. Additionally, there will not be any impacts to critical habitat for T&E Species under either alternative. These impacts are the same or less under the Fix Key Bottlenecks Alternative than the Add General Capacity Alternative..

According to the National Wetland Inventory, approximately 2.87 acres of wetlands are anticipated to be impacted as a result of the Add General Capacity Alternative and approximately 2.62 acres of wetlands are anticipated to be impacted by the Fix Key Bottlenecks Alternative. Additionally, a desktop survey indicated that the Add General Capacity Alternative will impact approximately 4,990 feet of streams, 6.28 acres of floodway, and 3.03 acres of 100-year floodplains; the Fix Key Bottlenecks Alternative will have a slightly lower impact with 4,479 feet of stream impacts, 5.94 acres of floodway, and 3.04 acres of 100-year floodplains. Field surveys completed in July 2024 and April 2025 verified the streams crossing I-70. One potentially jurisdictional wetland was found during the field surveys which was approximately 0.11 acres. The project team will obtain all necessary permits and use best management practices for construction and ongoing maintenance to provide for long-term corridor resiliency and environmental stewardship.

Hazardous Materials – Both alternatives are anticipated to have similar impacts to locations with identified hazardous materials. Both alternatives are shown to impact two previous NPDES permit locations, these sites are considered a level 3 impact, which is none-to-low probability of contamination. Any impacts are expected to be minor in nature and remediation will be completed as necessary.

Cultural and Historic Sites – Impacts to cultural and historic sites are not known at this time, however both alternatives would have similar impacts due to similar footprints. Review of the Missouri Historic Districts and Sites does not show any listed properties within the construction limits of either alternative. The Preferred Alternative will be analyzed as part of the EA for impacts to cultural and historic sites.

Air Quality and Energy Impacts – Both build alternatives alleviate stop and go traffic congestion along the corridor to varying degrees, and therefore will have positive impacts on the region’s air quality. However, the Fix Key Bottlenecks Alternative only alleviates traffic congestion in key bottleneck areas, whereas the Add General Capacity

Alternative will alleviate congestion throughout the entire corridor. Therefore, the Add General Capacity Alternative is expected to have greater impacts to air quality and energy issues throughout the corridor.

Reasonably Foreseeable Impacts – Both build alternatives are expected to have reasonably foreseeable impacts from their construction and operation. The Add General Capacity Alternative, having a larger footprint, is expected to have slightly greater impacts than the Fix Key Bottlenecks Alternative.

5.3. Engineering and Cost Screening

Both alternatives were evaluated against the Engineering and Cost Criteria. The No-Build Alternative was also carried forward as a benchmark for comparison.

Generally, the Fix Key Bottlenecks Alternative has a smaller ROW footprint than the Add General Capacity Alternative, therefore fewer impacts are expected to engineering and cost factors.

Roadway and Interchange Geometrics – Both build alternatives would address current roadway, ramp, and interchange deficiencies.

Right-of-Way Impacts and Residential or Business Displacements – The smaller footprint of the Fix Key Bottlenecks Alternative requires an estimated 2.9 acres less of additional ROW than the Add General Capacity Alternative. Neither alternative will require residential property displacements, however the Add General Capacity Alternative will impact approximately 1.79 acres of residential property; 0.94 acres is zoned as vacant residential property. The Fix Key Bottlenecks Alternative will impact approximately 0.98 acres of residential property; 0.25 acres of which is zoned as vacant residential property.

There would be no business displacements, however, multiple businesses would be indirectly impacted due to construction of either alternative. Multiple community facilities including a church, business centers, and shopping centers will have partial property impacts due to construction requiring additional ROW.

Timing of Construction and Emergency Routes – Both alternatives will require similar construction phases and timing. The Fix Key Bottlenecks Alternative may require less phases due to the smaller over all footprint. Additionally, emergency routes would be the same for either Alternative. Therefore, the alternatives rated equally for this screening criteria.

Maintenance of Traffic and Constructability – The Fix Key Bottlenecks Alternative requires the same amount of construction phases as the Add General Capacity Alternative, although it has a smaller total footprint since it is focused on specific bottle neck areas of the corridor. Due to this the alternatives were rated the same for this screening criteria.

Construction Cost – The Fix Key Bottlenecks Alternative is expected to cost an estimated $50 million (in 2028 dollars) less to build than the Add General Capacity Alternative because it requires a smaller footprint and does not require the addition of C-D road improvements that the Add General Capacity Alternative does.

Life-Cycle Costs – Life-Cycle costs for both alternatives are anticipated to be similar, with the Fix Key Bottlenecks Alternative to have slightly lower life-cycle costs than the Add General Capacity Alternative. This is because the Add General Capacity Alternative requires additional life-cycle costs for wider pavement and additional infrastructure to accommodate for the larger footprint. This additional infrastructure would need to be maintained over the life of the facility and, therefore, contribute to increased life-cycle costs. All other life-cycle costs are expected to be the same for both facilities.

5.4. Public and Stakeholder Screening

Input received from public and stakeholder activities such as stakeholder interviews and presentations, Advisory Group meetings, public information meetings, community surveys, community focus groups, and social media outreach is incorporated into the screening process for the alternatives using public comment tools on the website, at meetings and through social media channels to document public and stakeholder feedback on the project. Overall, the project received positive feedback from the public and stakeholders. Specific comments regarding the alternatives received during the public meeting included:

- 75% of respondents voted that the Add General Capacity Alternative would improve I-70; 71% of the respondents said improving interchanges would improve I-70;
- One comment stated they approved and supported Alternative 2 (Add General Capacity) because it “will improve safety, reduce congestion, and improve freight mobility on I-70 from I-435 to I-470;
- “This needs to be repaired as soon as possible. It has been terrible for decades. The ramps number of lanes need to be increased.”

6.0. Recommended Preferred Alternative (Proposed Action)

6.1. Recommended Preferred Alternative (Proposed Action)

Description

The Add General Capacity Alternative was selected as the Recommended Preferred Alternative, designated as the Proposed Action for the I-70 EA: I-435 to I-470 Project. The Add General Capacity Alternative was recommended by the project team due to its ability to meet the Purpose and Need of the project and to better address congestion and traffic safety concerns within the corridor at a similar cost amount to the Fix Key Bottlenecks Alternative. A map series showing the Add General Capacity Alternative can be found in **Appendix C**.

The Add General Capacity Alternative met the Purpose and Need of the project by:

- **Improving Safety** – The implementation of the Add General Capacity Alternative will enhance safety performance through adding new lanes of travel capacity which will address crashes caused by stop and go traffic and include improvements to roadway, ramp, and interchange geometrics along the corridor.
- **Reducing Congestion** – The Add General Capacity Alternative had the highest ratings for improving traffic operations; this Alternative would provide more capacity options for all vehicles. Additional lanes would also increase the overall corridor's travel speed and increase the corridor's throughput.
- **Restore and Maintain Existing Infrastructure** – Adding additional capacity has the highest rating to improve the infrastructure condition through the replacement of pavement and bridges along the corridor. The addition of through lanes would impact long-term travel reliability and life-cycle costs through additional capacity in the corridor.
- **Improve Accessibility and Goods Movement** – The Add General Capacity Alternative offers improved additional capacity through the addition of lanes for other modes of transportation and larger transportation vehicles, by alleviating roadway congestion. In addition, as a result of construction, there will be improved access to transit, bicycle, and pedestrian connections in the project area.

Both alternatives are shown to have similar impacts to the natural and human environments. The Fix Key Bottlenecks Alternative will take less over-all right-of-way than the Add General Capacity Alternative. The wetlands and forested area impacts are slightly different for the two alternatives. The alternatives rated the same for other natural and human environmental impacts.

From an engineering and cost standpoint the Fix Key Bottlenecks Alternative has an overall lower construction cost of $300-350 million, which is about $50 million lower than the Add General Capacity Alternative, which is estimated to cost $350-400 million.

The No-Build Alternative, while not a Reasonable Alternative, was carried forward for evaluation as a point of comparison against the Build Alternatives. The No-Build Alternative does not meet the Purpose and Need for the project and was not selected as the Recommended Preferred Alternative due to the presence of a constructible, fundable, and viable Build Alternative that met the Purpose and Need for the project. The No-Build Alternative, however, will be carried through to the EA to serve as the basis of comparison.

Appendix A

Alternatives Screening Matrix

Appendix A: Screening Matrix

Screening Criteria Definitions	
Achieved / Highly Positive Impacts	▲
Moderately Achieved / Moderately Positive Impacts	◊
No Change / Neutral Impacts	■
Negative Impacts	●

Criterion	Description	Indicator	Strategy		
			No-Build Alternative	Fix Key Bottlenecks	Add General Capacity
Purpose and Need Elements					
Improve Safety					
Reduce the potential for crashes at high crash locations	Evaluate the reduction in crash rate and crash severity	Does the strategy address locations with crash rates above the statewide average?	●	▲	▲
Reduce Congestion					
Traffic operations / congestion relief	Evaluate the effectiveness of the strategy on traffic operations	Does the strategy remove key bottlenecks?	■	◊	▲
		Does the strategy reduce the potential for ramp back-ups on the freeway?	■	◊	▲
		Does the strategy improve multi-modal travel times?	■	◊	▲
Restore and Maintain Existing Infrastructure					
Improve bridge and pavement conditions in the corridor	Evaluate how well the strategy improves existing infrastructure	Level of improvement to bridge conditions within the corridor	■	▲	▲
		Does the strategy implement cost effective investment strategies?	■	▲	▲
Improve Accessibility and Goods Management					
Improve accessibility within and across neighborhoods	Evaluate how well the strategy improves neighborhood and community accessibility	Number of interchange and overpass reconfigurations	0	8	8
		Bicycle and/or pedestrian improvements proposed	0	0	0
Support local and regional land use	Evaluate the potential to support local and regional land use plans within the corridor	Does the strategy support local land use patterns?	■	■	■
		Does the strategy support MARC land use plans?	■	■	■
		Does the strategy integrate MARC "Smart Moves Transit Plan"?	■	■	■
Improve the efficiency of freight movement in the corridor	Evaluate how well the strategy serves the freight movement in the corridor	Level of improvement to freight movement	■	▲	▲
Other Performance Criteria - Environmental					
Natural Resources	Evaluate the potential impacts to water resources	Encroachment on the Blue River (fatal flaw, large, moderate, minor, or none)	▲	▲	▲
		Number of streams / tributaries crossed (each)	NA	13	13
		Area of floodplains impacted (acres)	0	8.98	9.31
		Area of wetlands impacted (acres)	0	2.62	2.87
	Evaluate the potential impacts to forested areas	Area of forest/shrub impacted (acres)	0	80.8	81.1
	Evaluate the potential impacts to threatened and endangered (T&E) species and habitat	Level of impact to T&E species and habitat	■	■	■
	Evaluate the potential impacts to migratory birds	Level of impact to migratory birds	■	●	●
Parks and recreational resources	Evaluate the potential impacts to parks and recreational lands	Number of parks / recreational lands impacted (each)	0	1	1
Public facilities and services	Evaluate the potential impacts to facilities and services used for public uses	Number of public facilities impacted (each)	0	0	0
Hazardous materials	Evaluate the potential impacts to known hazardous waste sites	Number of hazardous waste sites impacted (each)	0	2	2
Stormwater	Evaluate the potential impacts to stormwater drainage	Level of impact to stormwater drainage	■	◊	◊
Relocations	Evaluate the potential impacts on residences and businesses to be displaced	Residential - single-family (each)	0	0	0
		Residential - multi-family (each)	0	0	0
		Commercial / industrial (each)	0	0	0
		Places of worship (each)	0	0	0
		Schools (each)	0	0	0
Noise	Evaluate the potential impacts on existing sensitive noise receptors such as residences, schools, churches, and parks	Does the strategy move traffic closer to noise sensitive receptors?	■	●	●
		Does the strategy allow for the opportunity to analyze the feasibility and reasonableness of noise abatement?	■	▲	▲
Cultural Resources	Evaluate the potential impacts on historic architectural and archaeological properties	Number of historic properties impacted (buildings on or eligible for the National Register for Historic Places) (each)	0	0	0
		Number of historic districts impacted (each)	0	0	0
		Number of archaeological locations impacted (each)	0	0	0
Land use	Evaluate the potential impacts on land use within and surrounding the corridor	What is the potential for changes in land use?	■	■	■
Other Performance Criteria - Engineering					
Cost	Opinion on the probable cost for the project	Right-of-way (ROW) acquisition cost (millions)	0	$0-$1 M	$1-$2 M
		Total construction cost (millions)	0	$300-$350 M	$350-$400 M
		Life-cycle costs	■	◊	◊
Maintenance of traffic / temporary traffic control	Evaluate the construction requirements of lane closures and/or detours	Predicted lane closures of long duration and/or detours during construction	0	●	●
Utilities	Evaluate the impacts on existing utilities and the ability to accommodate future utilities	Does the strategy accomodate utilities within right of way?	Yes	Yes	Yes
		Are significant utility corridors impacted?	No	No	No
ROW / Acquisitions	Evaluate the impacts on permanent ROW, property, and/or easement acquisitions within the corridor	Total acquisitions (acres)	0	2.17	5.09

Appendix B

Fix Key Bottlenecks Alternative

Fix Key Bottlenecks Proposed Alignment

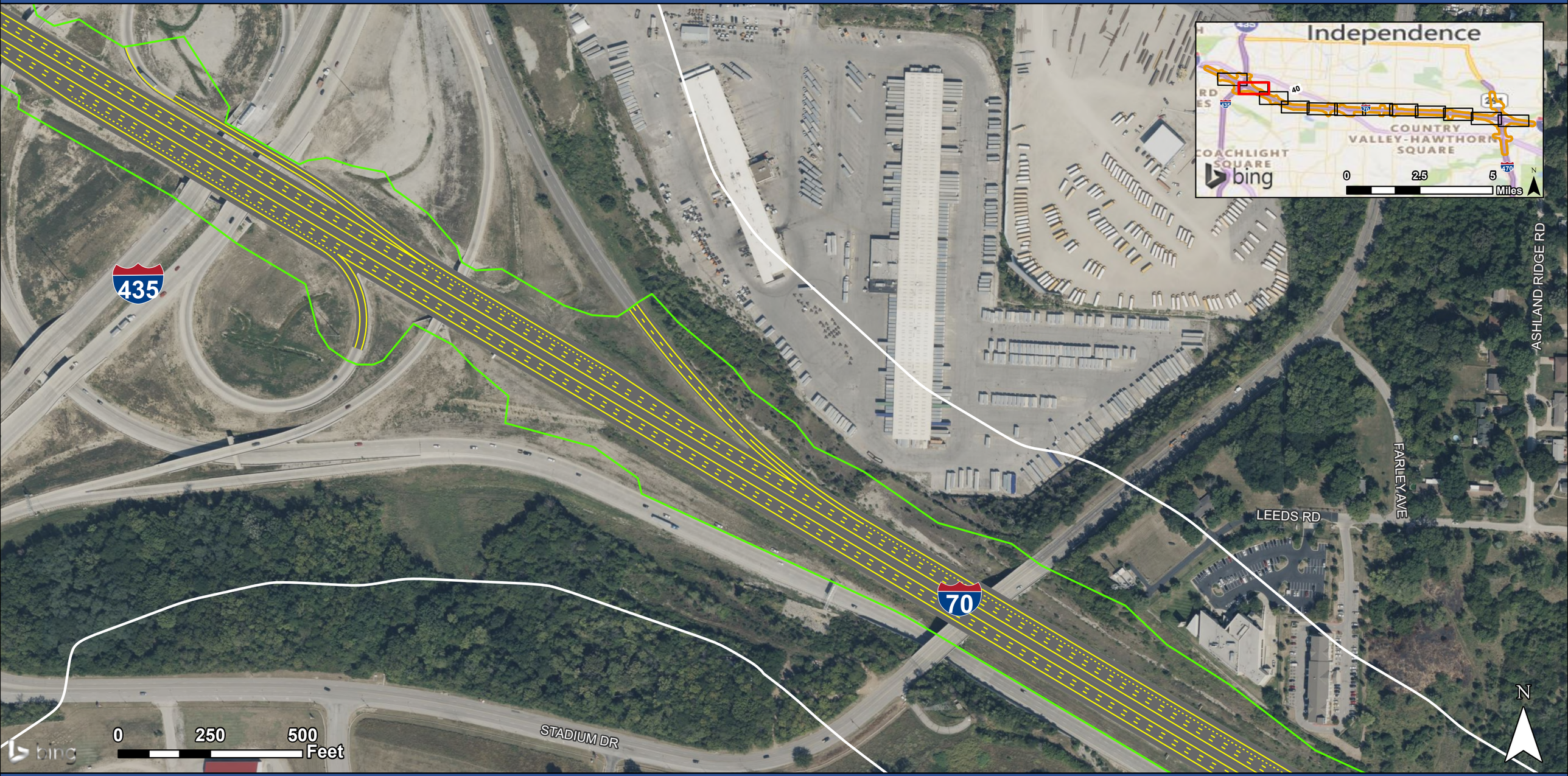
Appendix B

- Study Area
- Construction Limits
- Improvements

I-70 Environmental Assessment: I-435 to I-470

Fix Key Bottlenecks Proposed Alignment

Appendix B



Study Area

Construction Limits

Improvements

I-70 Environmental Assessment: I-435 to I-470

Fix Key Bottlenecks Proposed Alignment

Appendix B

Study Area

Construction Limits

Improvements

I-70 Environmental Assessment: I-435 to I-470

Fix Key Bottlenecks Proposed Alignment

Study Area
Construction Limits
Improvements

I-70 Environmental Assessment: I-435 to I-470

Fix Key Bottlenecks Proposed Alignment

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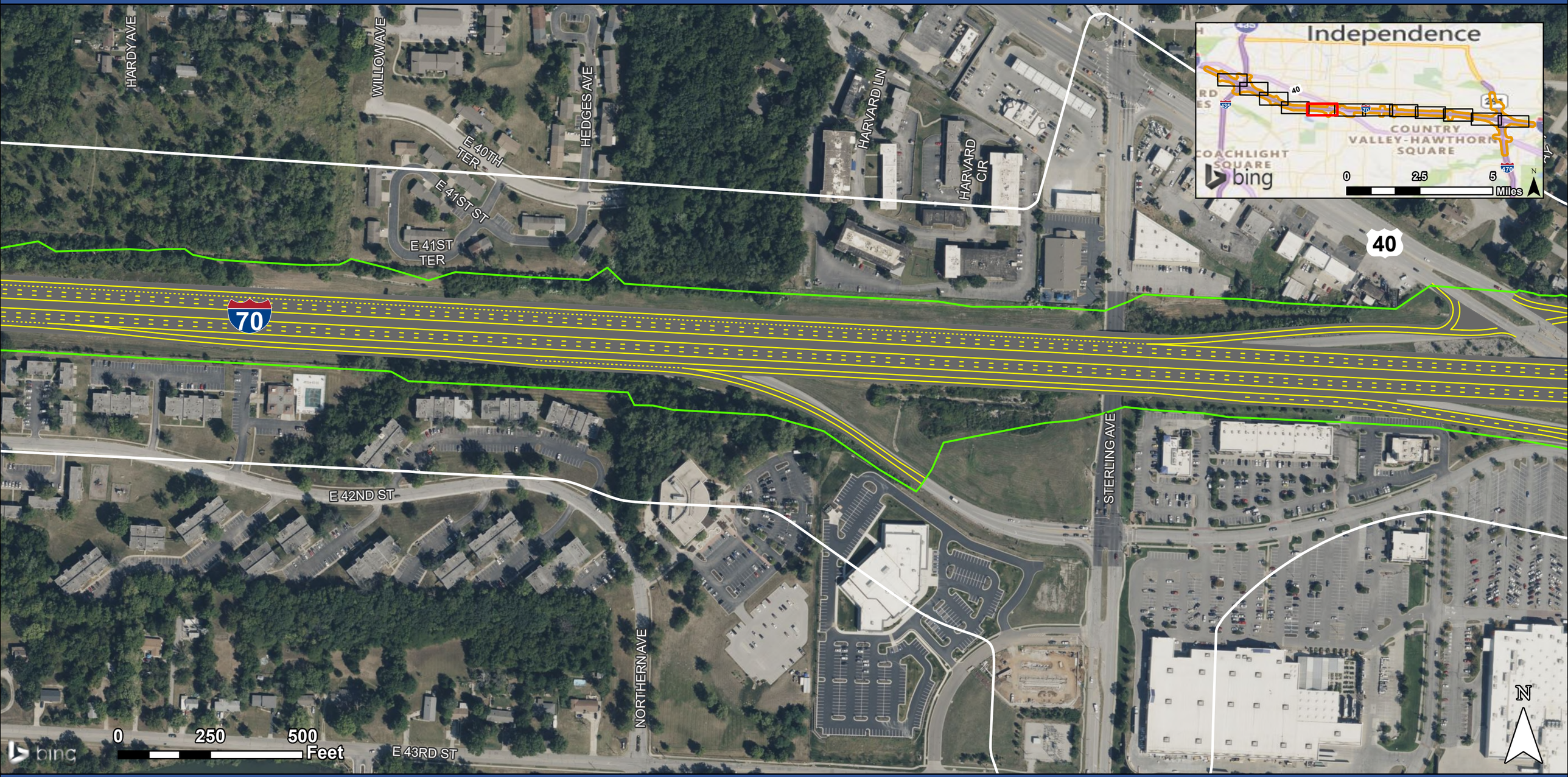

Study Area

Construction Limits

Improvements

I-70 Environmental Assessment: I-435 to I-470

Fix Key Bottlenecks Proposed Alignment

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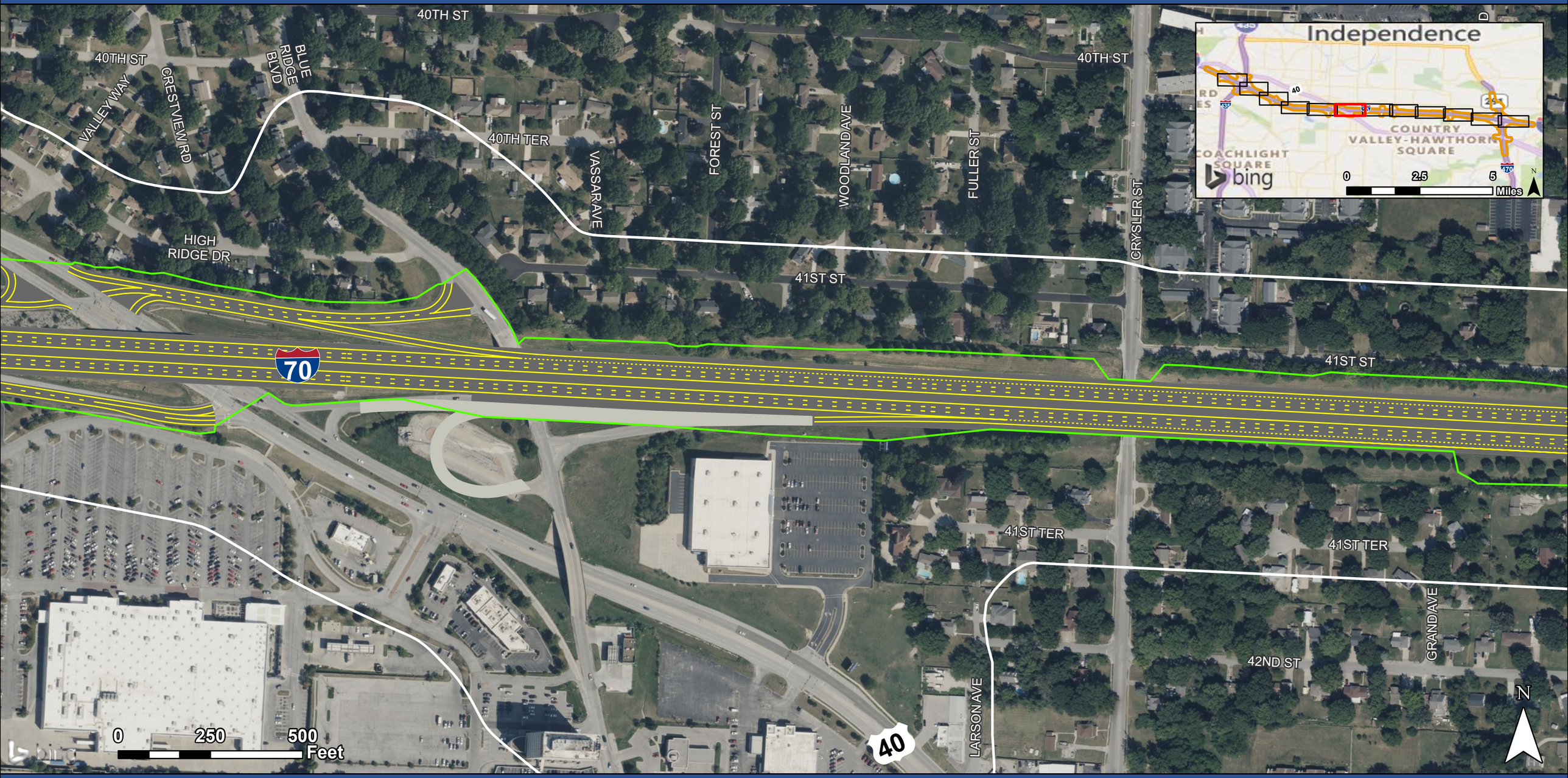
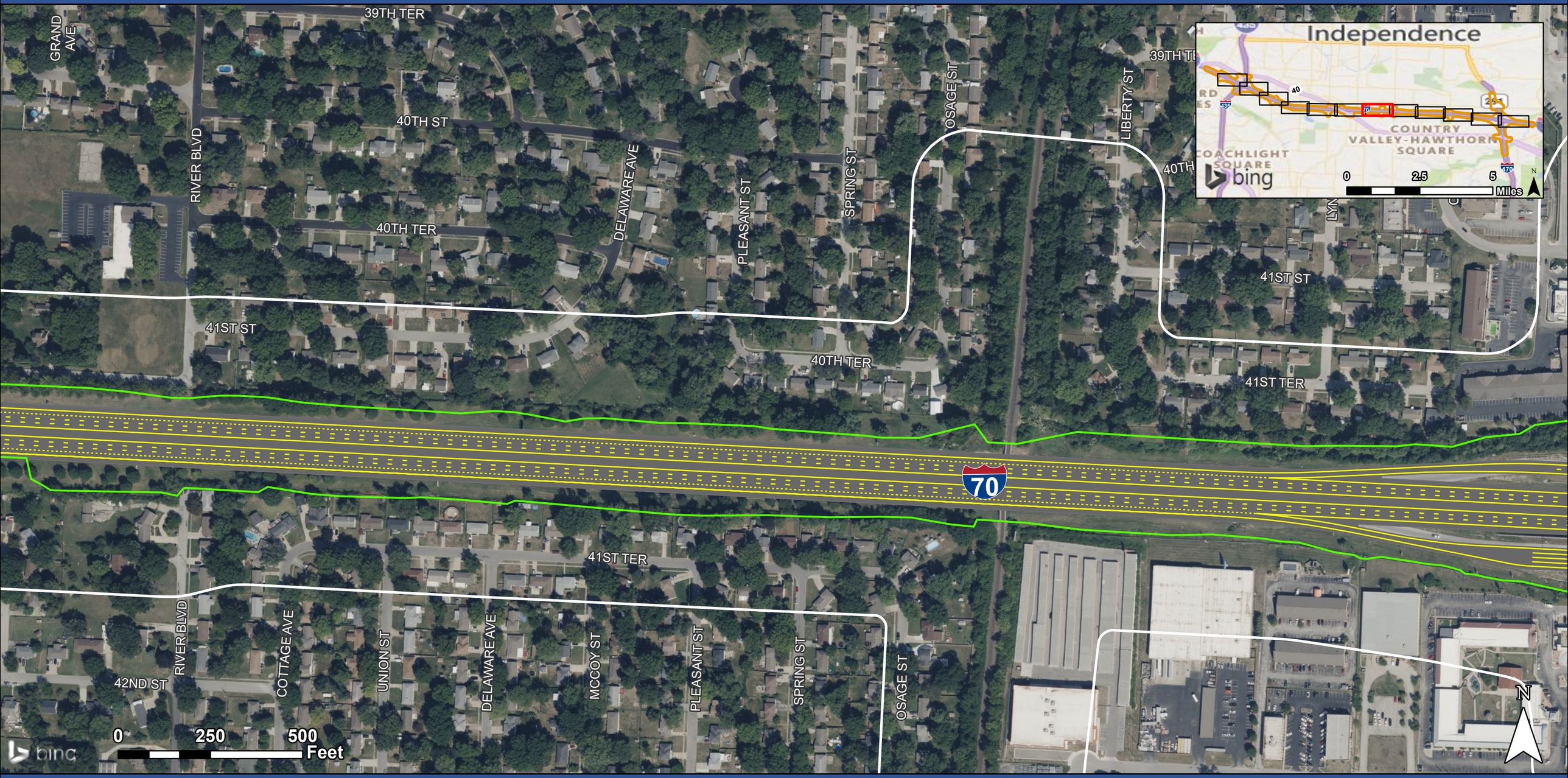


Study Area
Construction Limits
Improvements

I-70 Environmental Assessment: I-435 to I-470

Fix Key Bottlenecks Proposed Alignment

Appendix B



Study Area
Construction Limits
Improvements

I-70 Environmental Assessment: I-435 to I-470

Fix Key Bottlenecks Proposed Alignment

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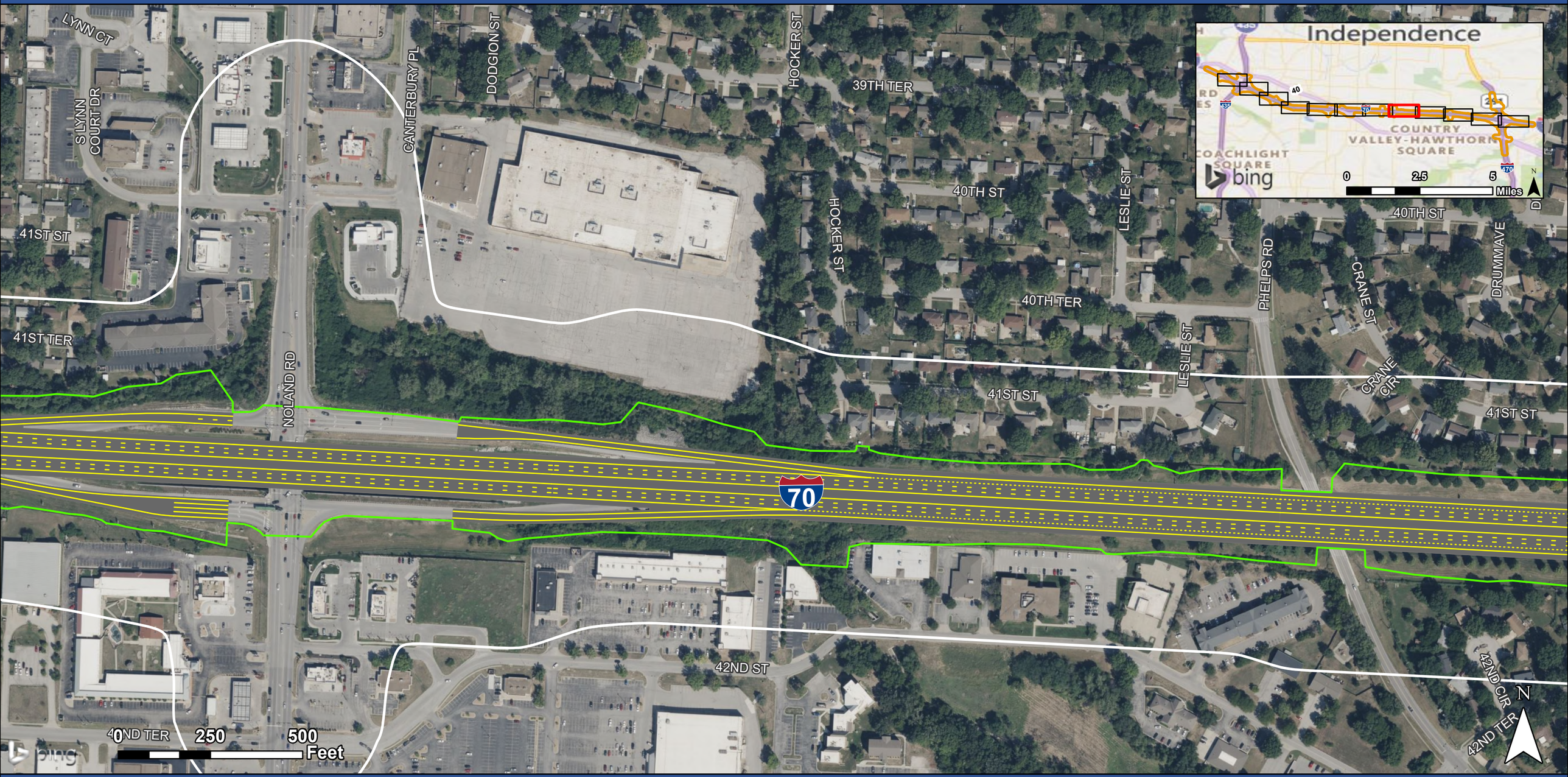

Study Area
Construction Limits
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I-70 Environmental Assessment: I-435 to I-470

Fix Key Bottlenecks Proposed Alignment

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Construction Limits

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I-70 Environmental Assessment: I-435 to I-470

Fix Key Bottlenecks Proposed Alignment

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I-70 Environmental Assessment: I-435 to I-470

Fix Key Bottlenecks Proposed Alignment

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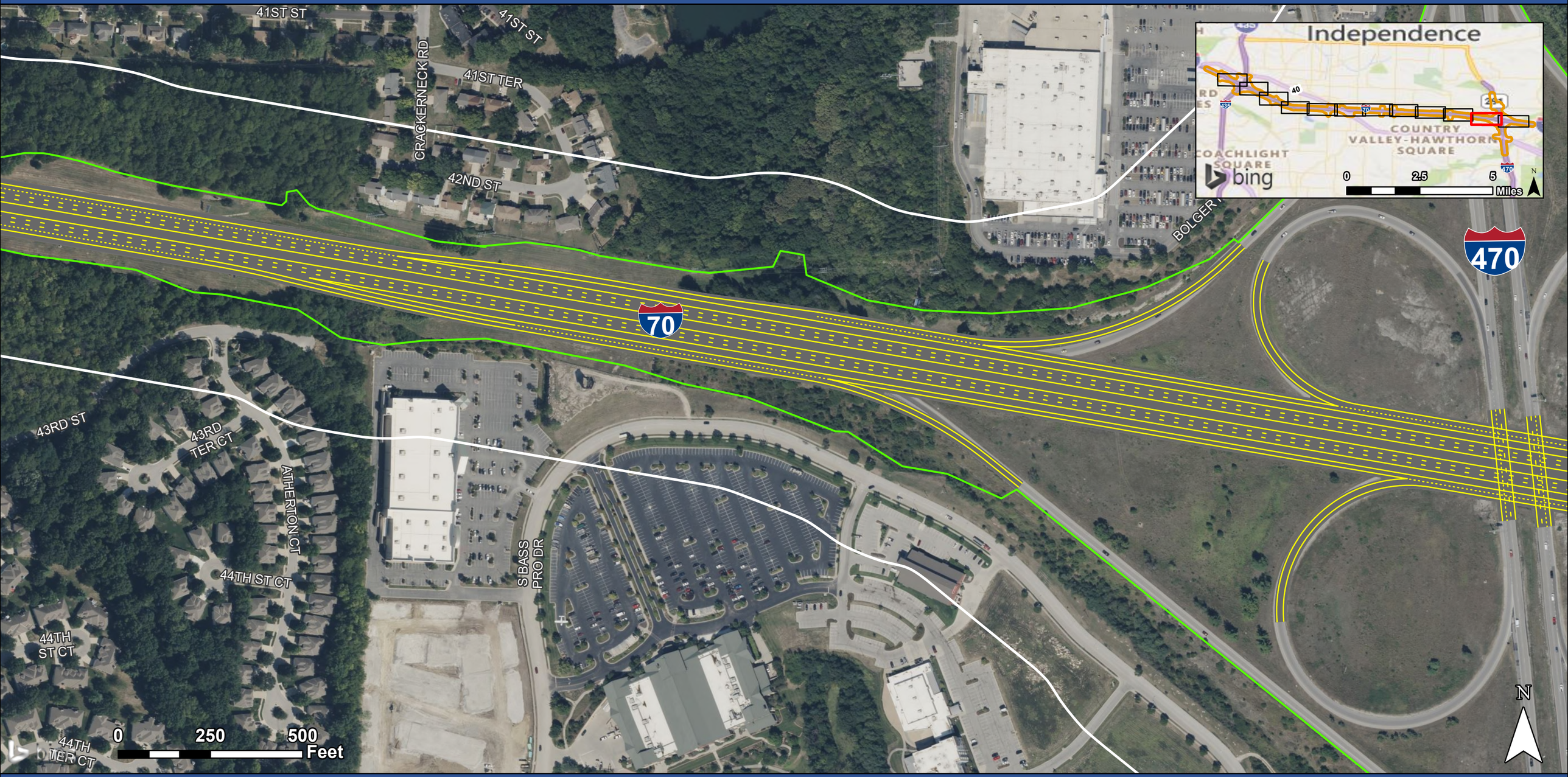

Study Area

Construction Limits

Improvements

I-70 Environmental Assessment:
I-435 to I-470

Fix Key Bottlenecks Proposed Alignment

Appendix B

Study Area

Construction Limits

Improvements

I-70 Environmental Assessment: I-435 to I-470

Appendix C

Add General Capacity Alternative

Add General Capacity Proposed Alignment

Appendix C

Study Area
Improvements
Construction Limits

I-70 Environmental Assessment: I-435 to I-470

Add General Capacity Proposed Alignment

Appendix C

Study Area
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I-70 Environmental Assessment: I-435 to I-470

Add General Capacity Proposed Alignment

Appendix C

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I-70 Environmental Assessment: I-435 to I-470

Add General Capacity Proposed Alignment

Appendix C

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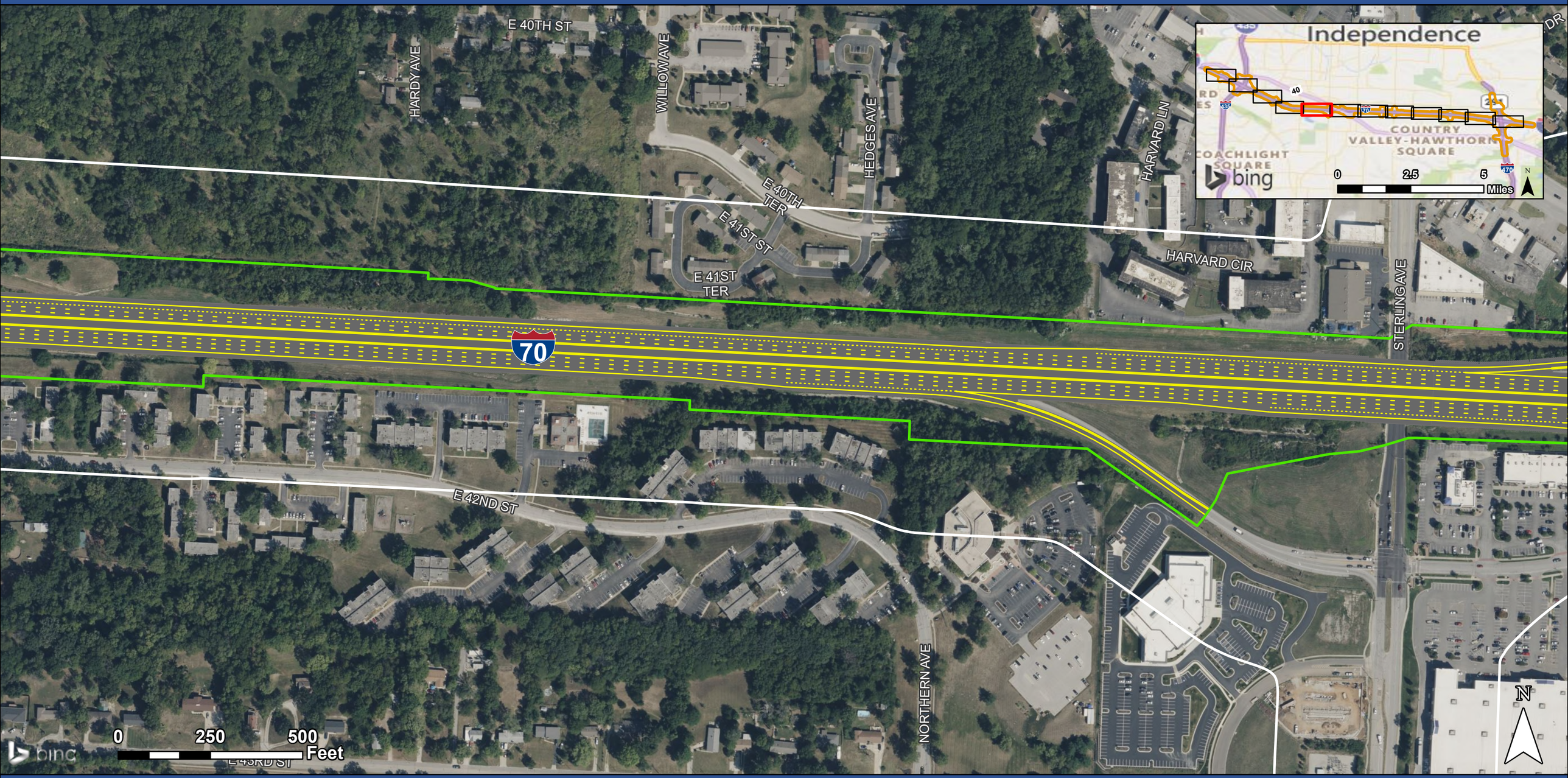
I-70 Environmental Assessment: I-435 to I-470

Add General Capacity Proposed Alignment

Appendix C



Study Area

Improvements

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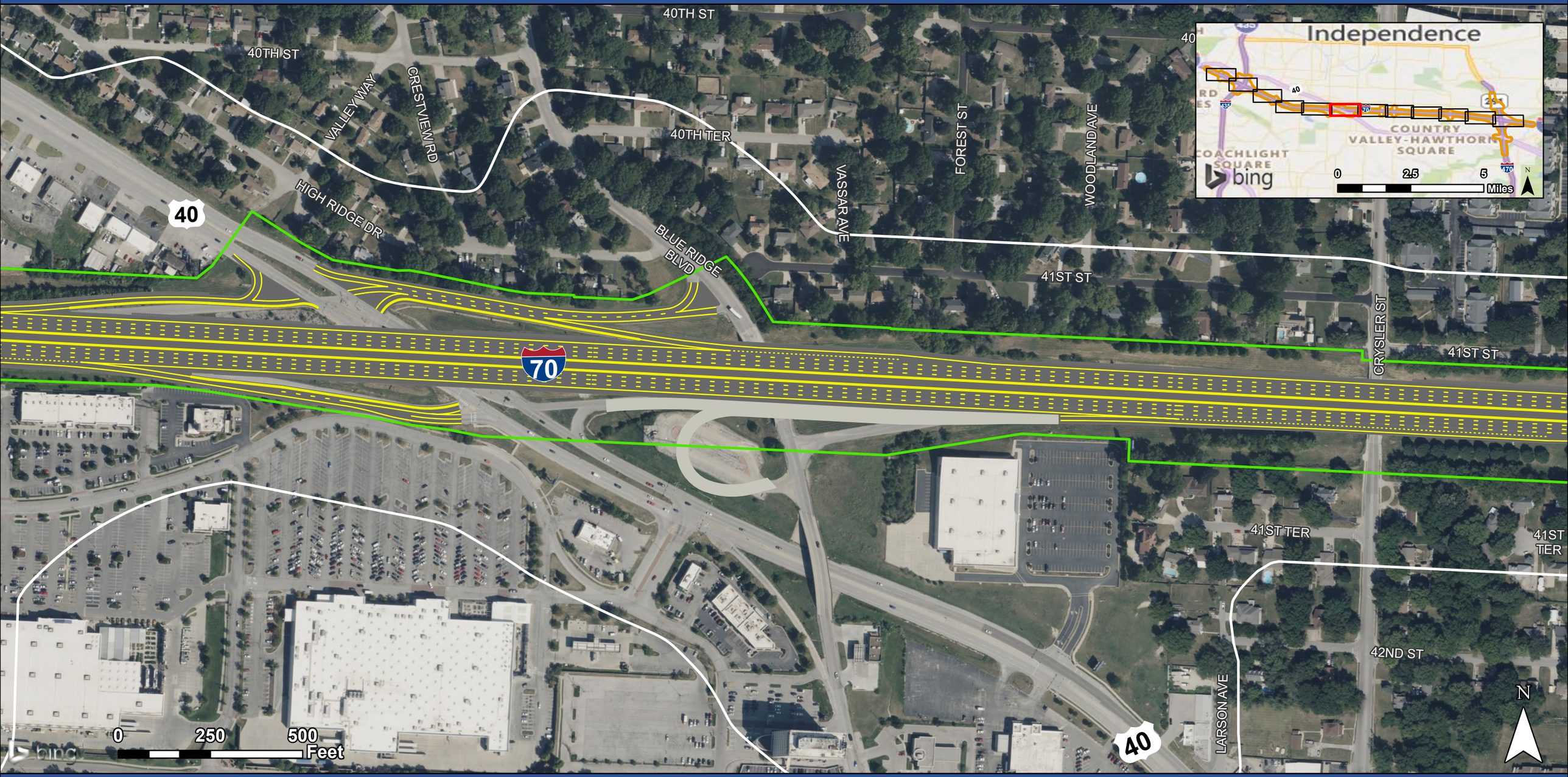
I-70 Environmental Assessment: I-435 to I-470

Add General Capacity Proposed Alignment

Appendix C



Study Area

Improvements

Construction Limits

I-70 Environmental Assessment: I-435 to I-470

Add General Capacity Proposed Alignment

Appendix C

Study Area

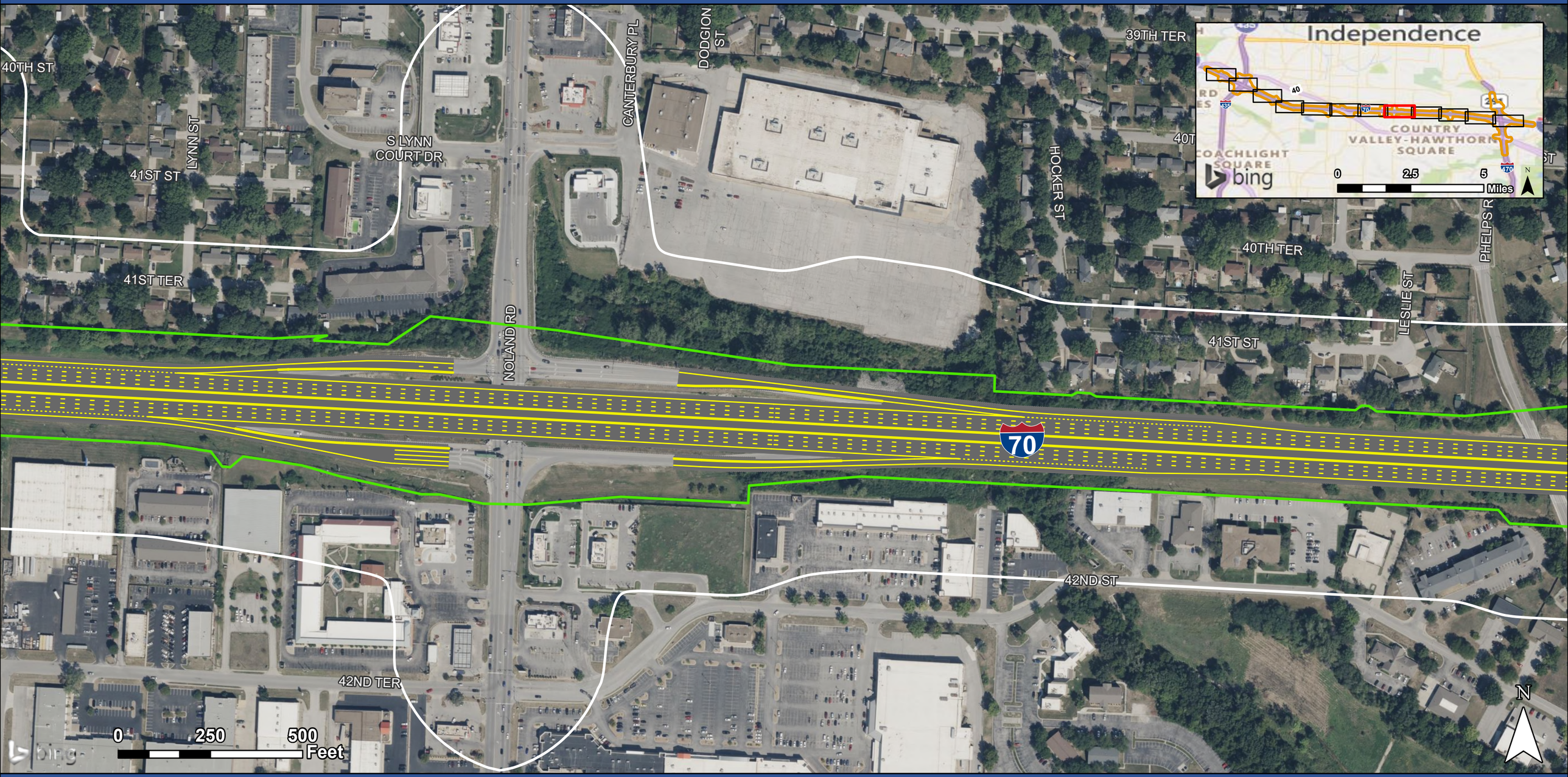
Improvements

Construction Limits

I-70 Environmental Assessment: I-435 to I-470

Add General Capacity Proposed Alignment

Appendix C



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Improvements
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I-70 Environmental Assessment:
I-435 to I-470

Add General Capacity Proposed Alignment

Appendix C

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Add General Capacity Proposed Alignment

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I-70 Environmental Assessment: I-435 to I-470

Appendix B

Wetland Delineation and Stream Assessment Report

I-70 Environmental Assessment: I-435 to I-470 Wetland Delineation and Stream Assessment Report

April 2025

In Partnership:

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1.0 Introduction

The Missouri Department of Transportation (MoDOT) is proposing to modernize the I-70 corridor across the state. The proposed project, I-70 from I-435 to I-470, provides a critical link to the central region of the United States, particularly for freight traffic, and is a key access point for the Kansas City region. The field survey was completed within MoDOT right of way (ROW) using an approximate 150-foot buffer from the alignment centerline. The following report provides a brief project description, summary of the field investigations performed to assess Waters of the U.S. (WOTUS) located in the field study area and documents the occurrence of any potentially jurisdictional wetlands and water resources that could be impacted by the project. HNTB Corporation environmental personnel conducted the field investigations on July 22-23, 2024 and April 1, 2025.

2.0 Project Description

The I-70 Environmental Assessment: I-435 to I-470 Project Area (Project Area) is located entirely in Jackson County, Missouri and includes all land within 250 feet of the existing highway right-of-way (ROW) along the corridor. The Project Area extends from U.S. 40 on the west end to the east end of the I-70/I-470 interchange. For most of this length, I-70 is a four or six-lane divided and fully access-controlled interstate facility. A Project Area map is included as **Exhibit 1**.

The proposed project is needed to address existing and future conditions along the I-70 corridor from I-435 to I-470.The corridor no longer meets the current and future mobility needs, resulting in reduced safety, reliability, and congestion.

In compliance with the National Environmental Policy Act (NEPA), the I-70 environmental study followed a tiered environmental documentation process. Tiering complies with NEPA requirements and other environmental regulations. A Tier I Environmental Impact Statement (EIS) was completed for the I-70 corridor in 2011. The Tier I study identified several segments for further review in Tier II. The Federal Highway Administration (FHWA) has determined the NEPA class of action for this project is an Environmental Assessment (EA). An EA is a document required by NEPA for certain federal actions. Under NEPA, an EA is required to determine whether a federal action has the potential to cause significant environmental effects. If the FHWA determines that the proposed action will not have a significant environmental impact, a Finding of No Significant Impact (FONSI) will be issued. If the EA determines the environmental impacts of a proposed Federal action will have significant impacts, an EIS must then be prepared.

The field study area encompasses the areas within the larger Project Area that will likely be impacted by the project. The field study area, shown in **Exhibit 1**, is the approximate extent of MoDOT ROW and was used as the survey limits for this report.

3.0 Regulatory Background

Wetlands, waterways, lakes, natural ponds, and impoundments are regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), which requires a permit to authorize the discharge of dredged or filled material into WOTUS (33 U.S. Code § 1344). Executive Order 11990, Protection of Wetlands, directs federal agencies to implement

"no net loss" measures for wetlands (42 Federal Register 26951). These no net loss measures include a phased approach to wetland avoidance, then minimization of impacts if wetlands cannot be avoided, and finally mitigation of unavoidable impacts. The Kansas City District USACE maintains jurisdiction over the water resources in the area where the project is located.

4.0 Methodology

Prior to field investigations, a desktop survey was performed to identify locations of streams and potential wetlands within the field study area. References used included the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) map (**Exhibit 2**), the Natural Resources Conservation Service (NRCS) soil survey maps (**Exhibit 3**), U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) maps, and aerial imagery (ESRI).

Aerial imagery and NWI maps were reviewed to determine locations of potential wetlands within the field study area. A field survey was conducted to identify any wetlands within the field study area, except in any areas where unsafe conditions were present. If wetlands were found, field delineations were conducted in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (USACE, 2010). At the initial time of field investigation, a majority of the NWI wetland sites were inaccessible due to safety issues, as described in more detail in Section 6. These areas were surveyed in April 2025, when vegetation was beginning to sprout but allowed for better visibility in areas that were too difficult to access in July. If the NWI wetland was accessible and surface conditions observed indicated the likelihood of wetland conditions (i.e. presence of wetland vegetation), a "Wetland Determination Data Form" for the Midwest Region was completed to determine which wetland criteria (hydric soils, hydrophytic vegetation, and wetland hydrology), if any, were met. If a wetland point was determined during field review, a minimum of two data collection point evaluations were conducted at least one at the inside edge of the wetland boundary and one in the upland area adjacent to the wetland. If there were locations where a data collection point was evaluated but not all three wetland criteria were met (non-wetland area), a second data collection point evaluation was not conducted. Evaluation sites were photographed, and the location and extent of potential wetland boundaries were determined in the field using GPS, in conjunction with aerial photography analysis where applicable. The ArcGIS Pro program was used to determine the surface area of the wetlands located within the field study area and to create maps for visualization of data collected in the field.

The NHD data was used to determine the approximate locations where rivers and streams cross through the field study area. A stream assessment was completed for each accessible stream indicated during the desktop survey. **Exhibit 4** shows the locations of each stream assessment and the streams within the field study area. The stream assessment data sheets are included in **Attachment A**.

5.0 Existing Data

Prior to field investigations, existing data sources were reviewed to assess the field study area and assist in identification of wetland and stream locations.

5.1 National Wetlands Inventory

The NWI map was reviewed for the field study area to determine potential wetland sites. The NWI map showed a total of 18 potential wetlands, seven of which were considered emergent, four were forested/shrub, one freshwater pond, and eight riverine. **Exhibit 2** shows the NWI wetlands

and each wetland type within the field study area. NWI features were checked during the field surveys. Field data sheets and wetland area photographs are included in **Attachment B**.

5.2 NRCS Web Soil Survey

The Web Soil Survey's Soil Map was used to determine the presence or absence of hydric soils within the field study area. The Web Soil Survey's Soil Map and Unit Descriptions are included in **Attachment C**. According to the Web Soil Survey the area contains 17 different soil types as shown in **Table 1**. **Table 1** explains the soil type, hydrologic soil group, hydric rating, and percentage of the field study area.

Table 1: NRCS Soil Types within Field Study Area

Soil Type	Hydrologic Soil Group	Hydric Rating	% Field Study Area
Knox-Urban land complex, 5 to 9 percent slopes	C	No	6.3 %
Knox-Urban land complex, 9 to 14 percent slopes	C	No	1.1%
Oska silty clay loam, 5 to 9 percent slopes, eroded	D	No	0.1%
Sibley-Urban land complex, 2 to 5 percent slopes	C	No	7.4%
Sibley-Urban land complex, 5 to 9 percent slopes	C	No	4.4%
Snead-Urban land complex, 9 to 30 percent slopes	D	No	29.8%
Udarents-Urban land-Oska complex, 5 to 9 percent slopes	C, D	No	1.3%
Wiota silt loam, 1 to 4 percent slopes, rarely flooded	C	No*	0.1%
Kennebec silt loam, 0 to 2 percent slopes, occasionally flooded	C	No*	0.6%
Kennebec silt loam, 1 to 4 percent slopes, occasionally flooded	C	No*	2.1%
Snead-Rock outcrop complex, warm, 5 to 14 percent slopes	D	No*	1.2%
Snead-Rock outcrop complex, warm, 14 to 30 percent slopes	D	No*	0.4%

Soil Type	Hydrologic Soil Group	Hydric Rating	% Field Study Area
Urban land-Harvester complex, 2 to 9 percent slopes	C	No*	1.4%
Harvester-Urban land complex, 9 to 14 percent slopes	C	No	0.8%
Urban land, upland, 5 to 9 percent slopes	None	Unranked	35.5%
Urban land, bottomland, 0 to 3 percent slopes, rarely flooded	None	Unranked	1.5%
Udarents-Urban land complex, 2 to 9 percent slopes	C	No	5.9%

* - Some minor components contain a hydric soil rating.

Hydrological Group C soils consist of soils with slow water infiltration and transmission rates when thoroughly wet. These soils consist moderately of fine textured soils that have a high shrink-swell potential and generally a layer impeding the downward movement of water.

Hydrological Group D soils have a very slow infiltration rate when thoroughly wet. These soils consist mostly of clays that have a high shrink-swell potential, soils with a high water table, soils with a clay layer at or near the surface, and soils that are shallow over nearly impervious material.

Urban land does not have a hydrological soils group or hydric rating. A majority of the field study area has Urban Land or Snead-Urban Land Complex soils.

5.3 Aerial Imagery

Recent aerial imagery was used to assess the general field study area and determine the presence of streams and/or wetlands that were unable to be accessed during the field survey due to safety access issues. Based on recent aerials, the field study area consists of primarily urban land along the I-70 corridor.

6.0 Investigation Findings and Results

The water resources that were investigated within the field study area included 13 stream crossings and 10 wetland sites. In addition, field data was collected at two other potential wetland sites based on field observations. Stream crossings were investigated and a stream assessment was completed if the stream was accessible and water was observed. Some wetland areas were inaccessible due to steep slopes and safety concerns. These areas were then further reviewed using desktop analysis and field observations of the general area that was accessible. Further detail for each site is included in Sections 6.1 and 6.2.

6.1 Stream Assessment

12 of the 13 stream crossings had stream assessments performed. Upon field reconnaissance, a dry streambed was observed at the S11 location, therefore a stream assessment was unable to be performed Streams and stream assessment locations are shown in **Exhibit 4**.

The Big Blue River, Little Blue River, and Camp Creek are the named waterways within the field study area. Other streams are tributaries off of these water ways, with the exception of one tributary of Round Grove Creek. Potential stream assessment locations and determinations are shown in **Table 2**.

Table 2: Stream Sites Investigated

Stream ID	Name	Stream Assessment	Type	Length	Notes
S1	Big Blue River	Yes	Perennial	240 ft	Located where the river passes under the I-70 bridge. See stream assessment datasheet S1.
S2	Camp Creek	Yes	Perennial	401 ft	Located where Camp Creek passes under I-70 through a culvert west of Lee's Summit Road. See stream assessment datasheet S2.
S3	Camp Creek	Yes	Perennial	668 ft	Located in ROW about 200 feet west of I-470. See stream assessment datasheet S3.
S4	Little Blue River	Yes	Perennial	324 ft	Located where the river passes under I-470 bridge. Also, noted culvert drainage from the north that runs underground along I-470. Drainage channel was dry. See stream assessment datasheet S4.
S5	Little Blue River	Yes	Perennial	337 ft	Located where the river passes under I-70 bridge. See stream assessment datasheet S5.
S6	Round Grove Creek Tributary	Yes	Intermittent	416 ft	Located in the ROW, tributary shown to go under I-70. Historical imagery indicates the tributary was likely culverted under I-70. Little water was noted during July; therefore, the stream is likely intermittent. See stream assessment datasheet S6.
S7	Blue River Tributary	Yes	Intermittent	89 ft	Located between an office park and the I-70/I-435 interchange. Area was investigated during the April 2025 field event and a stream was observed from the field. Historical imagery indicated a culverted stream from the west and ending within the field study area. This was verified in the field and the stream was measured within the field study area using GPS. See stream assessment datasheet S7.

Stream ID	Name	Stream Assessment	Type	Length	Notes
S8	Camp Creek Tributary	Yes	Ephemeral/ Ditch	1,000 ft	Located northwest of the I-70/S. Noland Road intersection and runs along I-70 to the west of S. Noland Road. Area was steep with thick vegetation that prevented direct access to the stream area near the intersection, however the stream was observed running parallel to I-70 west of S. Noland Road. Very little water was observed flowing along the stream bed, many stagnant shallow pools were observed. When water is present at times, it is likely due to being within a ditch and ephemeral. See stream assessment datasheet S8.
S9	Camp Creek Tributary	Yes	Perennial	487 ft	Located south and north of I-70, the stream was accessed to the south and attempted to walk. Noted a large culvert and pond at the S9 location. The stream channel was too deep to continue surveying and the bank was too steep to walk along, however a stream assessment was able to be completed based on the field observations. See Stream Assessment S9.
S10	Camp Creek Tributary	Yes	Intermittent	452 ft	Located north and south of I-70. The stream area was densely forested with a slope too steep to safely access, south of I-70, although water was visible. Stream access was obtained north of I-70 and a stream assessment taken at this location. See Stream Assessment datasheet S10.
S11	Camp Creek Tributary	No	Ephemeral	Dry streambed, ephemeral stream About 440 ft long in NHD	Located north and south of I-70, the stream was unable to be observed south of the interstate due to steep terrain and dense shrub. A dry streambed was observed north at the S11 point. A stream assessment was not completed as there was no water observed. Aerial imagery and topography indicates a stream could be present at times, therefore it was assumed to be a dry ephemeral stream and NHD data was used to predict the approximate length.

Stream ID	Name	Stream Assessment	Type	Length	Notes
S12	Camp Creek Tributary	No	Intermittent	102 ft	Located north and south of I-70, the stream was unable to be observed south of the interstate due to a steep slope and thick vegetation cover preventing safe access to the stream location. North of I-70 the stream was observed during the April 2025 field event and a stream assessment was completed. See Stream Assessment datasheet S12. It was noted that south of the field study area and the NHD data indicates the stream leads directly into a parking lot and small commercial area. There was no stream observed in this area, it was determined to have likely been culverted under the commercial area and connects to a pond approximately 850 feet south of the field study area limit. The length within the field study area was estimated based on NHD data.
S13	NA	Yes	Ephemeral	88 ft	Located southwest of the I-435/I-70 interchange, approximately 100 feet from the I-70 eastbound off ramp onto I-435. This stream was not shown in the NHD data but was field located during the field survey, it runs outside of the field study area boundary and likely connects to the Blue River tributary located approximately 380 feet south. The stream runs from a ponded water drainage area resulting from a culvert under the interchange and stormwater runoff. A stream assessment was completed in the field as S13.

6.2 Wetlands

Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adopted for life in saturated soil conditions. These include swamps, marshes, bogs, and similar areas.

There were several wetlands noted in the NWI map (**Exhibit 2**) within the field study area. NWI wetlands noted were investigated. According to the USFWS NWI mapper, NWI data in this area was approximated based on infrared imagery from 1983. Field observations did not find signs of wetland vegetation at any NWI wetland site with the exception of one; therefore, no delineation points were taken at the remaining NWI sites. Two additional sites, that were not on the NWI maps, were investigated due to the presence of dominant hydrophytic vegetation. Each wetland site and determination are described further in **Table 3** and **Section 6.2.1**.

Table 3: Potential Wetland Sites Investigated

Site ID	NWI Designation	Size (acres)	Jurisdictional Opinion	Notes
W1	Freshwater Emergent	0.04	Not Jurisdictional	Located approximately 80 feet southwest of the I-70/I-470 interchange. Soil maps did not indicate hydric soil ratings, however historical aerial imagery showed potential ponding of water. This site was re-evaluated since desktop analysis was unclear. Upon field investigation, a culvert under I-70 with pooled water and a small stream running from the pool was observed approximately 60 feet southeast of the W1 location. No wetland vegetation or hydrology was observed at the W1 location at the time of the field survey; therefore, a delineation point was not taken. The ponding area southeast of W1 was measured and noted and the stream was assessed (S13) as noted in this report.
W2	Freshwater Emergent	0.11	Potentially Jurisdictional	Located approximately 175 feet southwest of the I-70/I-470 interchange. A previous wetland report for the I-435 interchange indicated the presence of a 0.11-acre wetland near this location. Field survey indicated the presence of a wetland, therefore delineation pints were taken. Two points were taken, one inside and one outside of the wetland boundary and the boundary was estimated in the field using GPS. Additional detail is located in Section 6.2.1.
W3	Freshwater Emergent	0.10	Not Jurisdictional	Located inside the northwest corner of the I-70/I-435 interchange. Prior to reconstruction of the I-435 interchange in 2019/2020, a wetland was found at this location. Further analysis was completed as a desktop review and field analysis. Desktop review did not indicate the presence of standing water or hydric soils. Additionally, field analysis confirmed there was no presence of wetland vegetation or hydrology at the site. A drainage channel was noted approximately 200 feet east of the W3 location. Field observations noted there was no presence of hydrophytic vegetation. Therefore, it was determined that wetland conditions no longer are present at the W3 location.

Site ID	NWI Designation	Size (acres)	Jurisdictional Opinion	Notes
W4	Freshwater Emergent / Forested / Shrub	0.82	Not Jurisdictional	Located north and south of I-70 approximately 950 feet east of the I-70/Noland Road intersection. Desktop analysis of historical and current aerial imagery did not indicate presence of ponding and there are no hydric soils located within the area. Additionally, imagery and topography indicate the likelihood that a stream was, at one point, diverted underground during interstate and/or commercial construction. Any wetlands that may have been present were likely drained as a result of past construction. Field observations indicated a culverted stream under I-70 with no presence of hydrophytic vegetation. Based on these observations, there were no wetlands observed at the W4 location.
W5	Freshwater Emergent	0.45	Not Jurisdictional	Located north and south of I-70 approximately 1,800 feet west of the I-70/Lee's Summit Road intersection. The site was inaccessible due to steep terrain and thick vegetation. Desktop review indicated a potential stream based on historical aerial imagery and a minor component of the soil profile included a hydric rating. Field observations indicated a flowing stream (S2) culverted under I-70 and no indications of hydrophytic vegetation or hydrology. Based on the upland location and outside observations, there were no wetlands at the W5 location.
W6	Freshwater Emergent	0.21	Not Jurisdictional	Located approximately 90 feet northeast of the I-70/Lee's Summit Road intersection. Upon field investigation, a dry culvert was observed and the area was dominated by upland vegetation. Therefore, there was no wetland observed at the W6 location.

Site ID	NWI Designation	Size (acres)	Jurisdictional Opinion	Notes
W7	Freshwater Forested / Shrub	1.25	Not Jurisdictional	Located southeast of the I-70/I-470 interchange approximately 80 feet south of I-70. The site was inaccessible due to steep terrain and thick vegetation from I-70. Attempts were made from outside of ROW and were blocked by a chain link fence, additional observations made of the area through desktop analysis. Desktop analysis indicated from historical aerial photography that the area likely acts as a stormwater drain under the paved parking lot located south of the W7 location. A culvert was noted on historical imagery and topography also shows a drainage pattern in this area. Observations made from outside the project area were unable to observe the culvert, but the steep topography was noted. Vegetation observed was upland dominant. Furthermore, soils indicated in desktop analysis did not contain any hydric inclusions. Therefore, although the area likely drains stormwater, the lack of wetland vegetation observed near the area makes it unlikely that water is present at a sufficient enough time to maintain wetland conditions. As a result it was determined that wetlands were not present at the W7 location.
W8	Freshwater Forested / Shrub	1.91	Not Jurisdictional	Located northeast of the I-70/I-470 interchange approximately 70 feet north of I-70. The site was inaccessible due to steep terrain and thick vegetation. Desktop analysis indicated a potential stream located another 70 feet north of the edge of the field study area and low topography at the W8 location. Soil data did not show any hydric indicators at this site. Therefore, wetland conditions were unable to be determined, and the site was re-evaluated. The field survey found the presence of a small ephemeral stream within the NWI wetland area. No hydrophytic vegetation was observed; therefore, there was no wetland observed at the W8 location.

Site ID	NWI Designation	Size (acres)	Jurisdictional Opinion	Notes
W9	Freshwater Forested / Shrub	0.03	Not Jurisdictional	Located south of I-70 approximately 1,600 feet west of the I-70/Little Blue Parkway intersection. Upon field investigation, the area was dominated with upland vegetation and there was no indication of hydrology. Therefore, there was no wetland observed at the W9 location.
W10	None	0.04	Not Jurisdictional	Located south of I-70 approximately 1,700 feet west of the I-70/Little Blue Parkway intersection. This potential wetland area was investigated due to presence of obligatory wetland vegetation observed during the field survey. Additional detail is included in Section 6.2.1.
W11	Freshwater Forested / Shrub	8.64	Not Jurisdictional	Located southeast of the I-70/I-470 interchange. Desktop analysis showed low topography and hydric inclusions within the soil in the W11 area. Additionally, the wetland area is located just north of Camp Creek. Field observations indicated the presence of a culvert under I-70 with pooled water which connects to Camp Creek (S3). Hydric soils or hydrology were not present at the time of field survey in the NWI wetland area; therefore, no wetland was observed at the W11 location.
W12	None	0.35	Not Jurisdictional	Located within the northwest clover leaf of the I-70/I-435 interchange. This potential wetland area was investigated due to presence of obligatory wetland vegetation observed during the field survey. Additional detail is included in Section 6.2.1.

There were three wetland delineation points (W2, W10, and W12) taken in areas observed to have dominant wetland vegetation. These wetland delineation points are detailed in **Section 6.2.1** and in the Wetland Determination field data forms in **Attachment B**. Site photographs are also located in **Attachment B**. Wetland sites are shown in **Exhibit 5** and delineated wetland areas are shown in **Exhibit 6** and **Exhibit 7**.

6.2.1 Investigation Findings and Results

Four field samples were obtained from the field study area to assess the current status of wetland vegetation, hydrology, and existence of hydric soils.

Field Samples 1 and 2

Two samples were taken at the W2 location, one within the wetland boundary and one outside to verify the change in dominant vegetation as the wetland boundary. This sample is located

southwest of the I-435 and I-70 interchange, approximately 100 feet west of the I-435 South off ramp from I-70. According to the NWI map, the NWI wetland at the W2 location is approximately 25 feet northwest of where the sample was taken. The delineated wetland area does cross over into the NWI area. It should be noted that NWI wetland areas were estimated based on historical data as noted in Section 6.2.

Field sample 1 exhibited dominant hydrophytic vegetation, hydric soils, and hydrology at the time of the field assessment. Dominant vegetation observed at the sample site included Reed Canary Grass (*Phalaris arundinacea*), eastern cottonwood (*Populus deltoides*), and gray dogwood (*Cornus racemosa*). A soil check indicated the presence of hydric soil indicator F6 (Redox Dark Surface) and potentially F8 (Redox Depressions). Additionally, the ground was saturated and the water table was observed at about one and a half inches, which are both primary hydrology indicators. Based on the observation of all three wetland indicators, field sample 1 was considered to be within a wetland area. The wetland area was observed in the field and another point, field sample 2, was taken where the dominant vegetation was no longer hydrophytic in order to determine the wetland boundary. Field sample 2 did not exhibit dominant hydrophytic vegetation, hydric soils, or any hydrology indicators at the time of the field survey. Therefore, the change in vegetation was used as the wetland boundary indicator and the boundary was delineated in the field using GPS. The wetland area was found to be approximately 0.11 acres, similar to the previous study's findings. Immediately adjacent to the wetland area, to the north, was a stream and ponding leading to a culvert under the I-70/I-435 interchange. The noted stream is likely a tributary to the Blue River. As a result of the field investigations, this wetland area is considered to be potentially jurisdictional.

Field Sample 3

Field sample 3 was taken at the W10 wetland location as noted in Table 2. This sample is located in the eastern stretch of the field study area, approximately 1,700 feet west of the I-70/Little Blue Parkway intersection. The sample exhibited dominant hydrophytic vegetation and hydric soils, but did not exhibit sufficient hydrology indicators at the time of field assessment. Dominant vegetation observed at the sample site included giant cattail (*Typha angustifolia*), black willow (*Salix nigra*), reed canary grass (*Phalaris arundinacea*), and roughleaf dogwood (*Cornus drummondii).* A soil check indicated the presence of three different hydric soil indicators (A11, F3, and F8) as shown in the field data sheet in **Attachment B**. The sample site did not show any primary hydrology indicators, but was positive for the FAC-Neutral test, which is a secondary hydrology indicator. A site must contain a minimum of two secondary indicators of hydrology in order to be considered to have a positive hydrology test. Given the absence of another secondary hydrology indicator, or one primary hydrology indicator, the W10 sample is not considered within a wetland area.

Although the site did not meet enough hydrology indicators at the time of field survey, the dominant presence of wetland vegetation was still noted and mapped during the field survey. In addition, the timing of the sample in July could affect the presence of hydrology at the site. However, if additional hydrology indicators were present, the site would not be considered jurisdictional due to the location within a pre-constructed ditch and no connection to a WOTUS.

Field Sample 4

Field sample 4 was taken at the W12 location within the northwest cloverleaf of the I-435/I-70 interchange. The area exhibited the presence of dominant hydrophytic vegetation and a sparsely vegetated concave surface during the field survey. However, the ground consisted of all gravel

and a soil sample was unable to be obtained during the field survey. The area topography created a bowl like shape and holds storm water runoff as a result of the interchange construction, leading to the ability to support hydrophytic vegetation and abundance of gravel deposits. The area was mapped based on the presence of dominant hydrophytic vegetation; however, based on the location within an interstate ditch and no connection to a WOTUS the site would not be considered jurisdictional.

Delineated wetlands at each field sample location are shown in **Exhibit 6** and **Exhibit 7**.

7.0 Conclusions

As part of this study, HNTB conducted field surveys in July 2024 and April 2025. The purpose of these investigations was to identify the location and extent of jurisdictional WOTUS, including wetlands, within the field study area.

Streams and tributaries noted were surveyed in the field and further reviewed via desktop analysis. A stream assessment was completed for all streams except for one that did not have water present at the time of the field survey, the stream assessment data sheets are included in **Attachment A**. Photos of each stream assessment location are also included in **Attachment A**.

NWI wetlands and any other areas observed during the field survey to inhabit wetland characteristics were surveyed in the field and further reviewed via desktop analysis. Twelve wetland sites were surveyed through field and desktop review, three of which contained hydrophytic vegetation and were further surveyed in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (USACE, 2010). Field photographs and the wetland determination datasheets are located in **Attachment B**.

The USACE has jurisdiction over all WOTUS and is the regulatory authority for all decisions regarding the occurrence of wetlands and other WOTUS within the field study area. The observations presented in this report were based upon data obtained from desktop and field observations made at the site and from information sources discussed within this report. This report provides a snapshot in time of conditions present during the field surveys. Discharges of dredged or fill materials in WOTUS, including wetlands, requires prior authorization from the USACE under Section 404 of the Clean Water Act. Based on these findings, it is the professional opinion of HNTB that the field study area contains one potentially jurisdictional wetland. The actual limits of jurisdictional waters for permitting purposes must be verified by the USACE. Final authorization for activities in WOTUS areas must be authorized by the Corps' District Engineer.

8.0 References

U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0). https://www.mvp.usace.army.mil/Portals/57/docs/regulatory/Website%20Organization/Midwest%20Regional%20Supplement%20(Version%202).pdf.

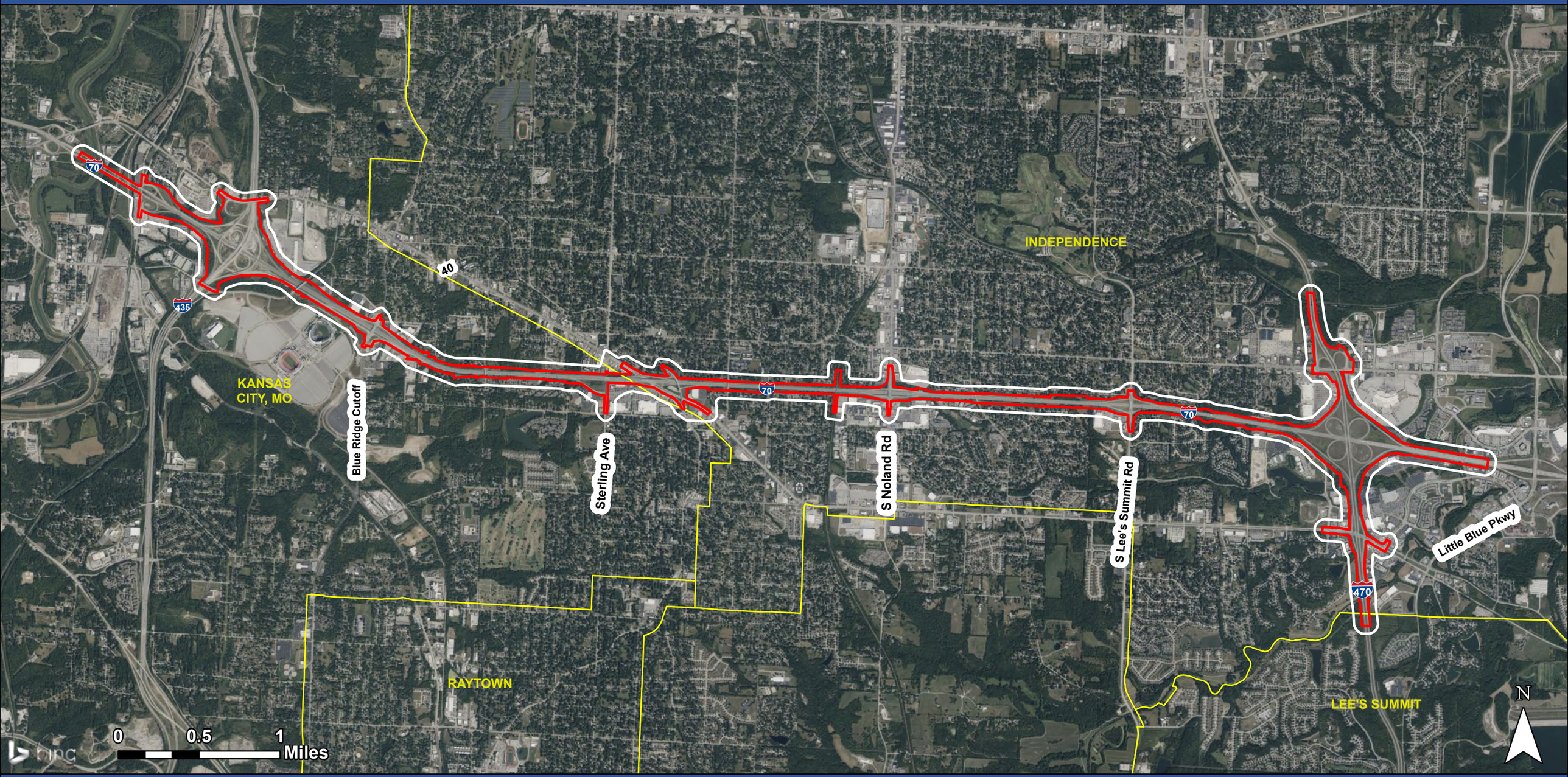
U.S. Department of Agriculture Natural Resources Conservation Service. n.d. Hydric Soils. https://www.nrcs.usda.gov/conservation-basics/natural-resource-concerns/soil/hydric-soils.

U.S. Fish and Wildlife Service. n.d. Wetlands Mapper. https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper.

U.S. Geological Survey. n.d. National Hydrography Dataset. https://www.usgs.gov/national-hydrography/access-national-hydrography-products.

Project Area

Exhibit 1

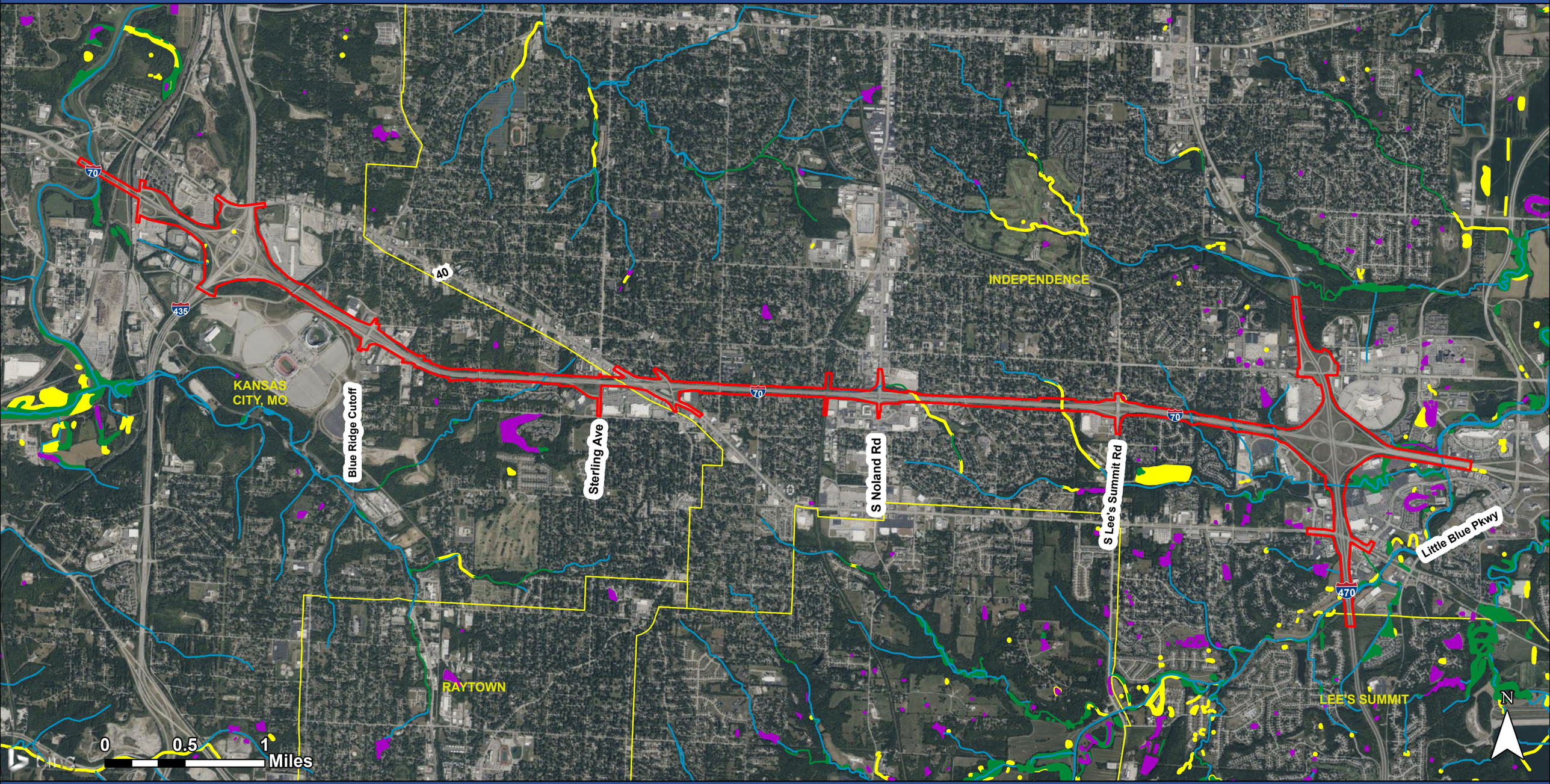


Project Area
Field Work Study Area
City Boundary

I-70 Environmental Assessment: I-435 to I-470

USFWS National Wetlands Inventory

Exhibit 2

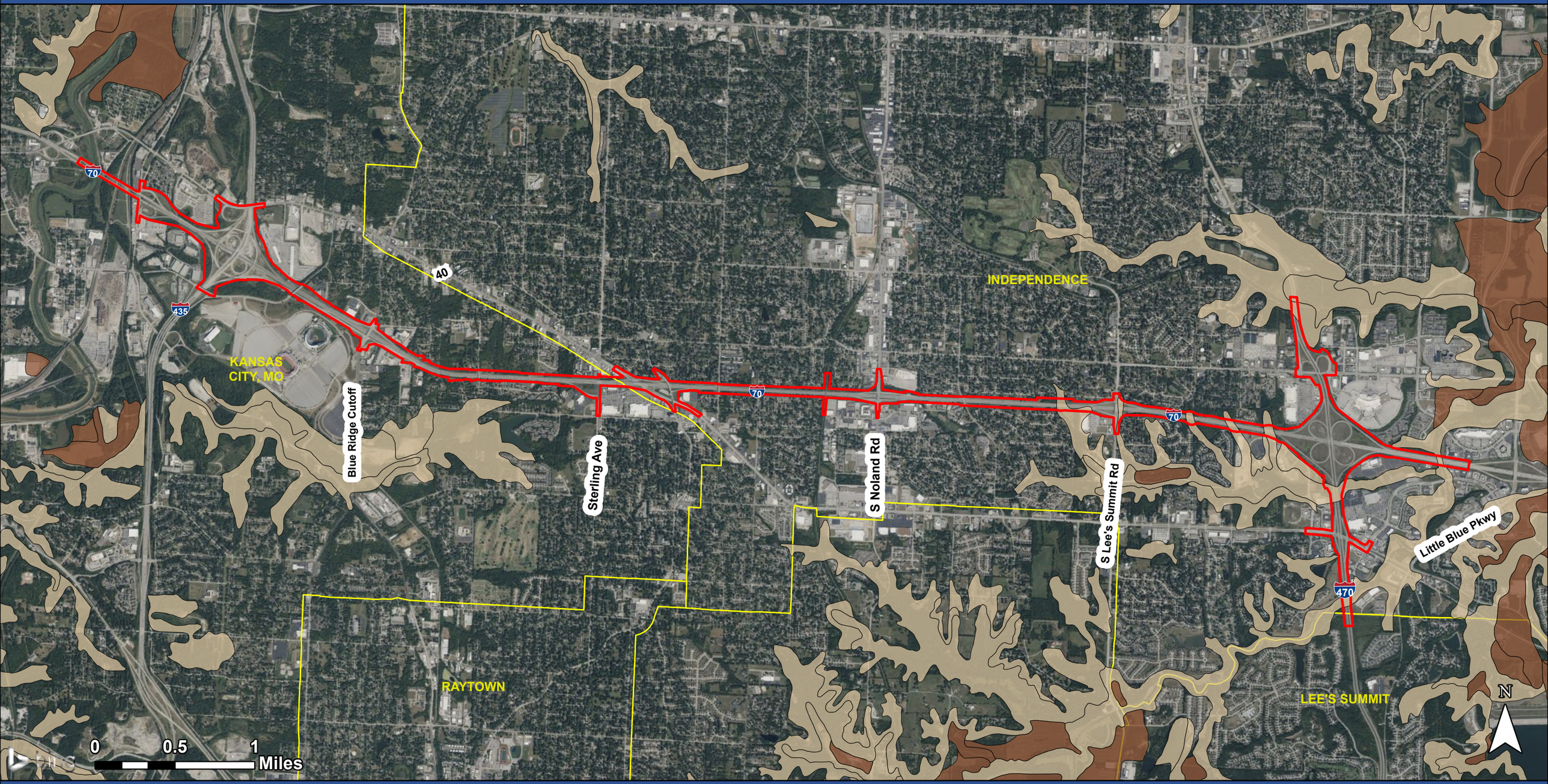


Field Work Study Area
Emergent Wetland
Forested/Shrub Wetland
Pond
Riverine
City Boundary

I-70 Environmental Assessment: I-435 to I-470

NRCS Soil Survey

Exhibit 3

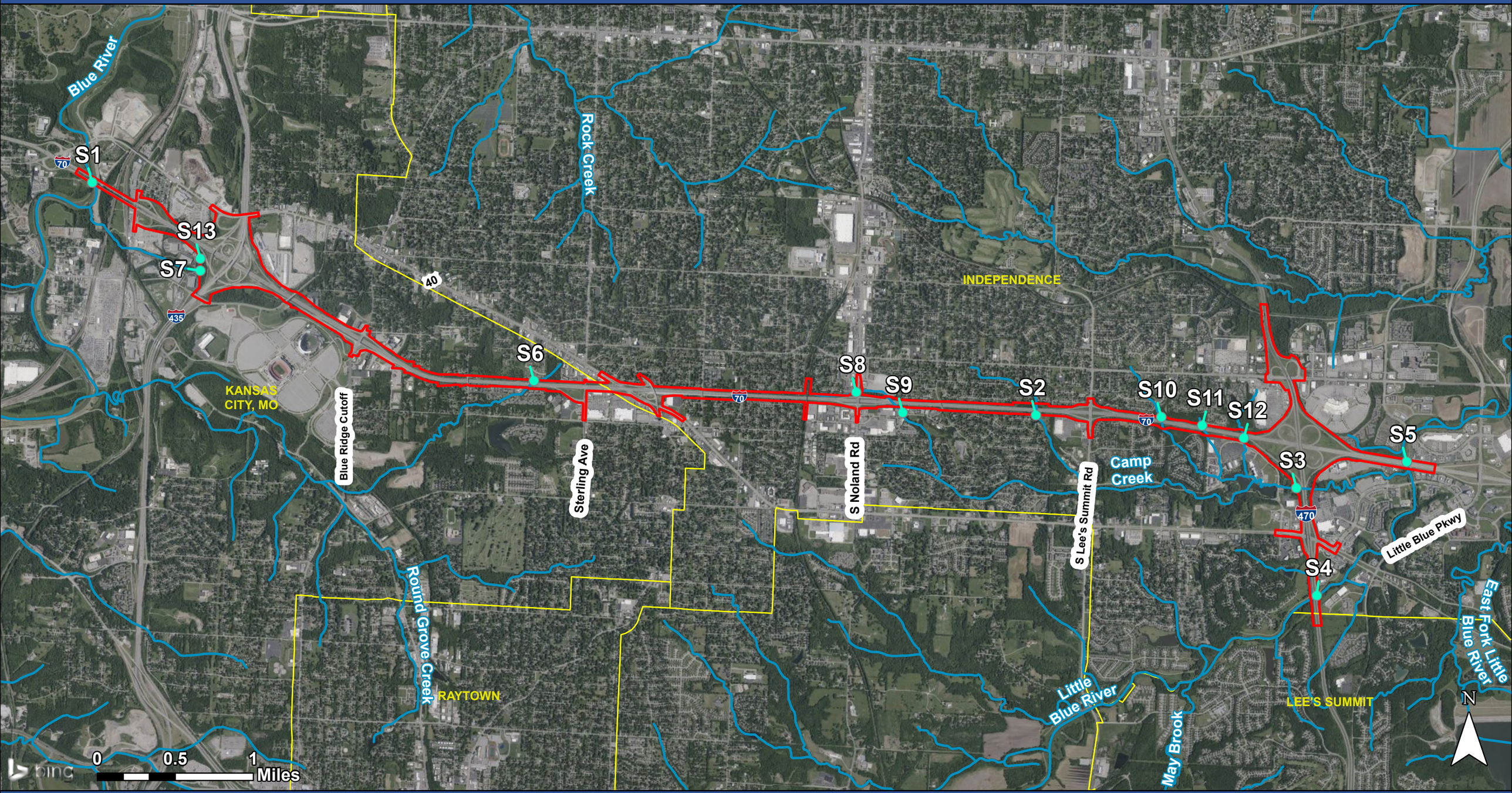


Field Work Study Area
City Boundary
Hydric Soils
Soils with Hydric Inclusions

I-70 Environmental Assessment: I-435 to I-470

Stream Assessment Locations

Exhibit 4



Field Work Study Area

City Boundary

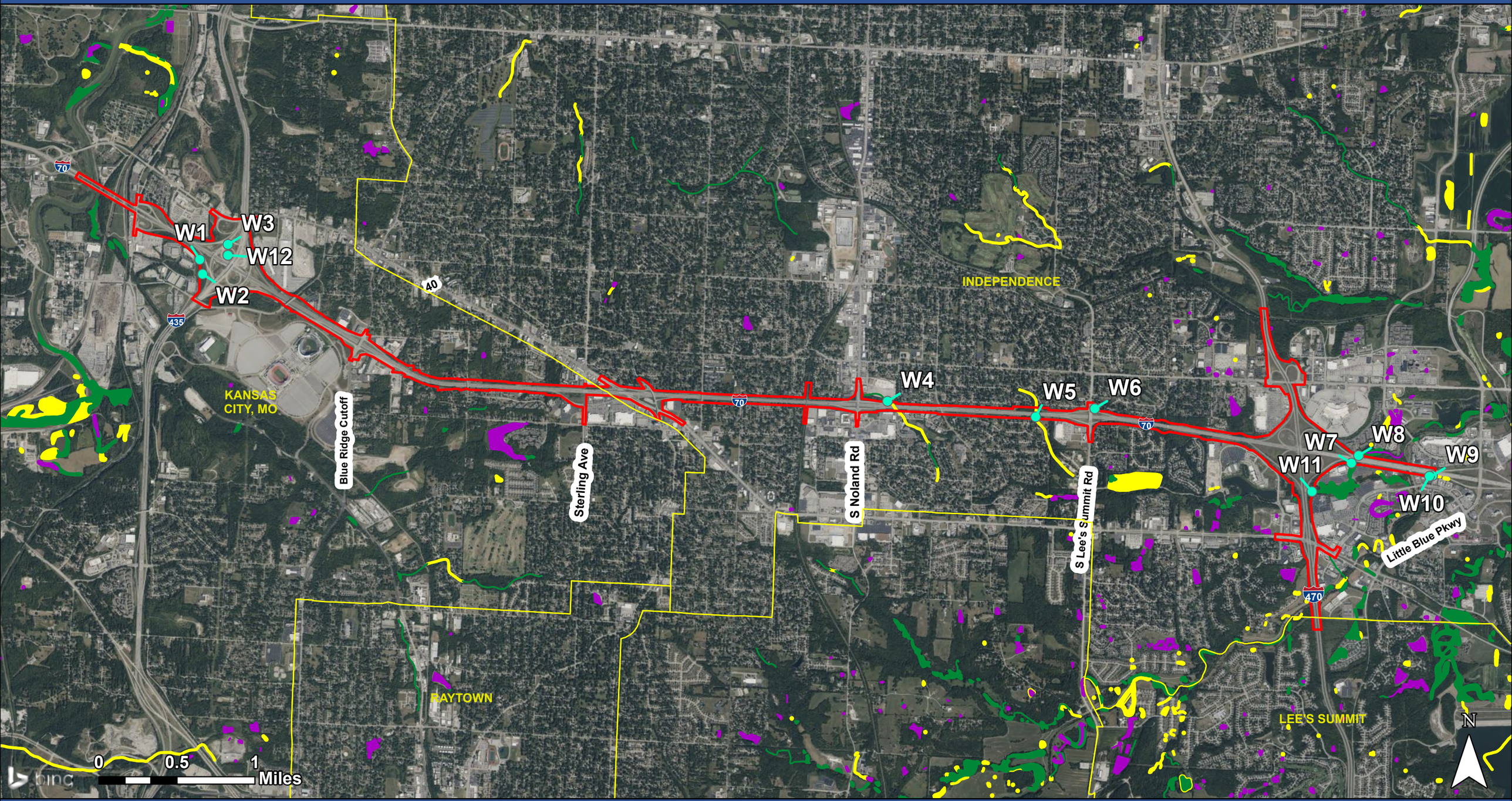
Streams

Stream Assessment Locations

I-70 Environmental Assessment: I-435 to I-470

Wetland Assessment Locations

Exhibit 5



Field Work Study Area

City Boundary

Wetland Assessment Locations

Emergent Wetland

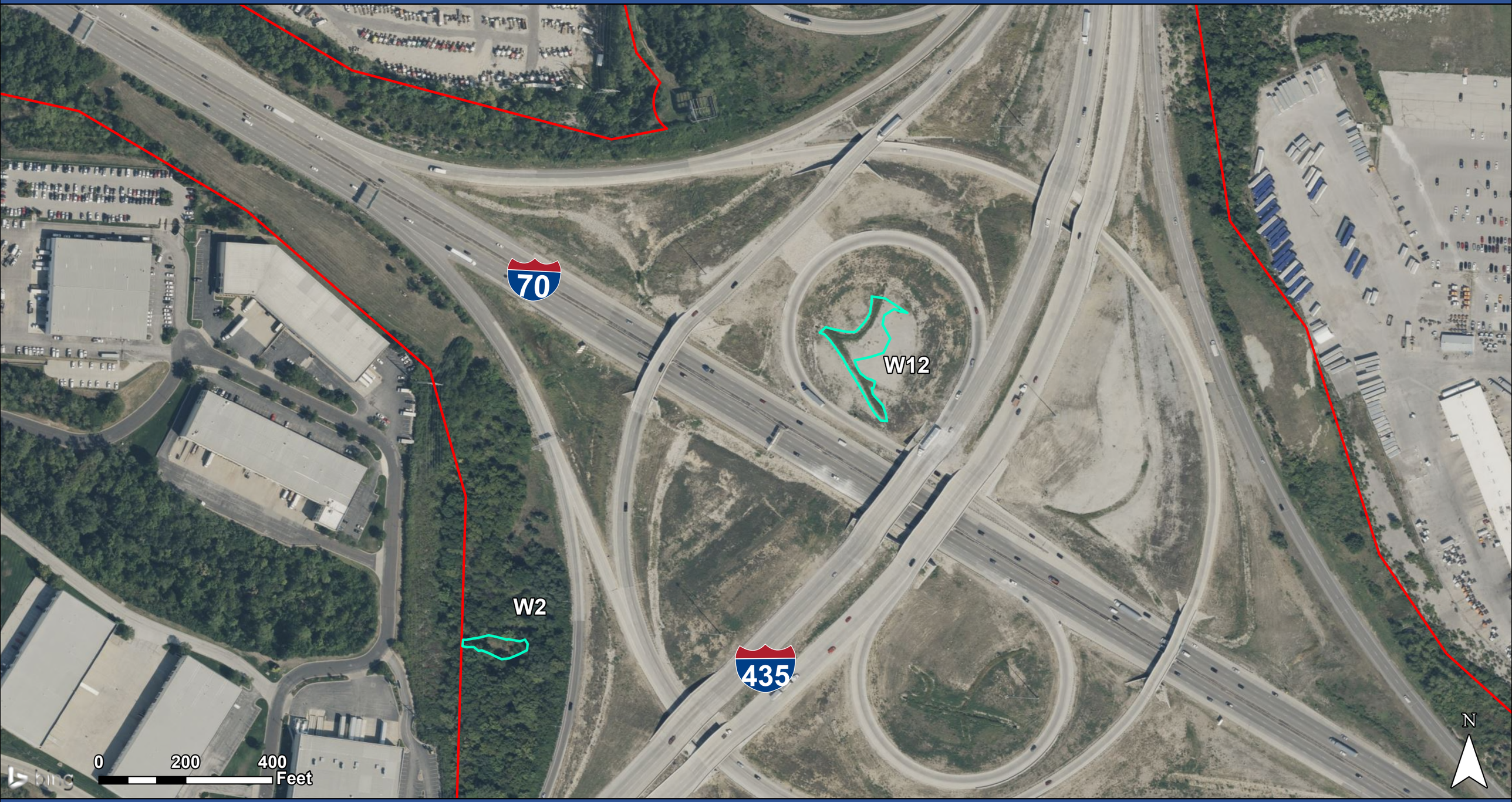
Forested/Shrub Wetland

Pond

I-70 Environmental Assessment: I-435 to I-470

Delineated Wetlands W2 and W12

Exhibit 6



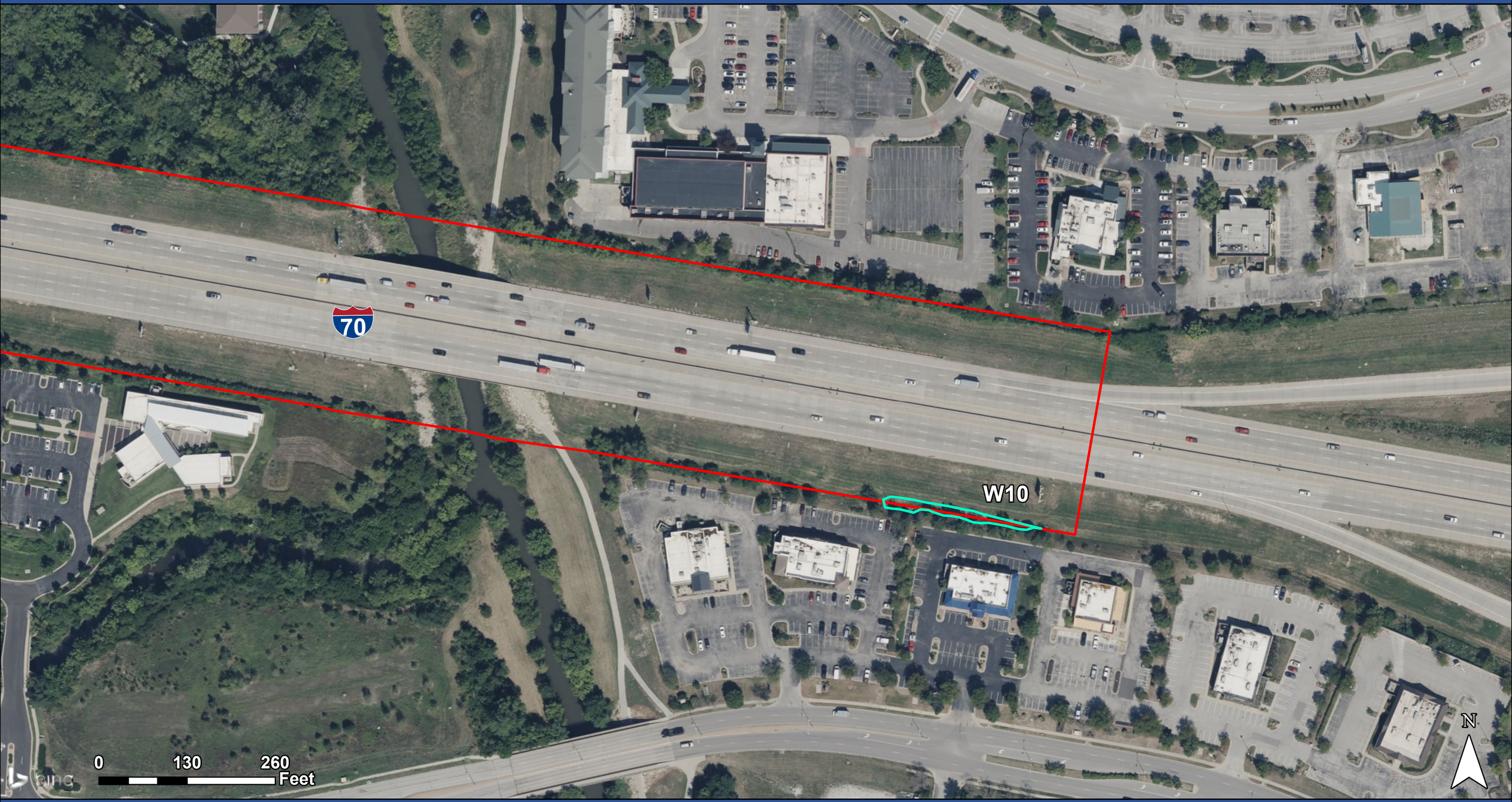
Field Work Study Area

Delineated Wetland Area

I-70 Environmental Assessment: I-435 to I-470

Delineated Wetland W10

Exhibit 7



Field Work Study Area

Delineated Wetland Area

I-70 Environmental Assessment: I-435 to I-470

Attachment A

Stream Assessment Data Sheets & Photo Log

Ordinary High Water Mark Data Form

Stream Name: Big Blue River	Stream No: S1	
Assoc Wetland No: N/A	Date: 2024-07-22	County/State: Kansas City MO

Investigator: JG, EV	Team No.: N/A	Landowner/Tract No.: N/A

STREAM DRAWING:

Stream Flow	Fast ___		Moderate **X**		Slow ___		Very Slow ___		None	
	Perennial: **X**		Intermittent		Ephemeral:					
Stream Depth (in.)	0-3 __	3-6 ___	6-12 ___	12-18 ___	18-24 ___	24-36 **X**	36-48 ___	48-60 ___	60+ __	
Stream Width (ft.)	Top of Banks: 90				Water Surface: 65					
Stream Substrate %	Bedrock _____		Gravel _____		Sand: **45%**___		Clay _____		Organic _____	
	Boulder _____		Cobble **5%**		Silt: **50%**		Artificial			
Bank Height (ft.)	Left	0-2 ___	2-4 ___		4-6 **X**		6-8 ___		8+ ___	
	Right	0-2 ___	2-4 ___		4-6 ___		6-8 **X**		8+ ___	
Bank Slope (°)	Left	0-20	20-40		40-60 **X**		60-80		80+	
	Right	0-20	20-40		40-60		60-80		80+ **X**	
Water Clarity	Clear ___		Slightly Turbid ___		Turbid **X**		Very Turbid ___		Color: _	
Aquatic Habitat	Sand Bar ___		Gravel Bar ___		Mud Bar ___		Gravel Riffles **X**		Deep Pools ___	
	Overhanging trees/shrubs		In-stream emergent plants		In-stream submergent plants		Bank root systems **X**		Fringing Wetlands	
Aquatic Organisms	Waterfowl ___		Fish (adult) **X**		Fish (juvenile)		Frogs **X**		Turtles	
	Snakes ___		Invertebrates ___		Other:					

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
Stream does not provide suitable habitat for TE species. Swallow nests were observed on the bridge spanning the waterway.

RIPARIAN VEGETATION DESCRIPTION
Mostly herbaceous vegetation.

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Branches and debris along west bank with rock riprap on east bank.

STREAM QUALITY	(indicate)	High ___	Moderate **X**	Low __

Rationale for selected rank (explain): Stream is channelized with turbid water with a lot of silt on the bottom. There is also not a lot of shade cover over the stream.

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Ordinary High Water Mark Data Form

Stream Name: Camp Creek	Stream No: S2	
Assoc Wetland No: N/A	Date: 2024-07-22	County/State: Kansas City MO

Investigator: JG, EV	Team No.: N/A	Landowner/Tract No.: N/A

STREAM DRAWING:

Stream Flow	Fast ___	Moderate ___	Slow ___	Very Slow **X**	None	
	Perennial: **X**	Intermittent	Ephemeral:			

Stream Depth (in.)	0-3 __	3-6 ___	6-12 **X**	12-18 ___	18-24 ___	24-36 __	36-48 ___	48-60 ___	60+ __

Stream Width (ft.)	Top of Banks: 35 / Water Surface: 15

Stream Substrate %	Bedrock **90%**	Gravel **5%**	Sand: _____	Clay _____	Organic _____
	Boulder _____	Cobble	Silt: **5%**	Artificial	

Bank Height (ft.)	Left	0-2 ___	2-4 **X**	4-6 ___	6-8 ___	8+ ___
	Right	0-2 ___	2-4 ___	4-6 **X**	6-8 __	8+ ___

Bank Slope (°)	Left	0-20	20-40 **X**	40-60	60-80	80+
	Right	0-20	20-40	40-60	60-80 **X**	80+

Water Clarity	Clear ___	Slightly Turbid **X**	Turbid __	Very Turbid ___	Color: _

Aquatic Habitat	Sand Bar ___	Gravel Bar **X**	Mud Bar ___	Gravel Riffles __	Deep Pools ___
	Overhanging trees/shrubs **X**	In-stream emergent plants	In-stream submergent plants	Bank root systems **X**	Fringing Wetlands

Aquatic Organisms	Waterfowl ___	Fish (adult) __	Fish (juvenile)	Frogs __	Turtles
	Snakes ___	Invertebrates **X**	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
Culvert could provide suitable roosting habitat for gray bats, however, there were no bats or signs of bats present.

RIPARIAN VEGETATION DESCRIPTION
Honeysuckle, grapevine, and ash trees.

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
There is a concrete-lined stormwater drainage coming in from the west.

STREAM QUALITY	(indicate)	High ___	Moderate __	Low **X**

Rationale for selected rank (explain): The stream has low flow, there were no signs of fish or amphibians, and the stormwater drainage channel that empties into the stream could impact water quality.

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Ordinary High Water Mark Data Form

Stream Name: Camp Creek	Stream No: S3	
Assoc Wetland No: N/A	Date: 2024-07-22	County/State: Kansas City MO

Investigator: JG, EV	Team No.: N/A	Landowner/Tract No.: N/A

STREAM DRAWING:

Stream Flow	Fast **X**		Moderate ___		Slow ___		Very Slow __		None		
	Perennial: **X**		Intermittent		Ephemeral:						
Stream Depth (in.)	0-3 __	3-6 ___	6-12 __	12-18 ___	18-24 **X**	24-36 __	36-48 ___	48-60 ___	60+ __		
Stream Width (ft.)	Top of Banks: 30				Water Surface: 25						
Stream Substrate %	Bedrock _____ Boulder _____		Gravel _____ Cobble **20%**		Sand: _____ Silt: **80%**		Clay _____ Artificial		Organic _____		
Bank Height (ft.)	Left	0-2 ___	2-4 __		4-6 **X**		6-8 ___		8+ ___		
	Right	0-2 ___	2-4 ___		4-6 **X**		6-8 __		8+ ___		
Bank Slope (°)	Left	0-20	20-40		40-60		60-80		80+ **X**		
	Right	0-20	20-40		40-60		60-80		80+ **X**		
Water Clarity	Clear ___		Slightly Turbid **X**		Turbid __		Very Turbid ___		Color: _		
Aquatic Habitat	Sand Bar ___		Gravel Bar ___		Mud Bar ___		Gravel Riffles __		Deep Pools **X**		
	Overhanging trees/shrubs **X**		In-stream emergent plants		In-stream submergent plants **X**		Bank root systems **X**		Fringing Wetlands		
Aquatic Organisms	Waterfowl ___		Fish (adult) **X**		Fish (juvenile)		Frogs __		Turtles **X**		
	Snakes ___		Invertebrates **X**		Other:						

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
Trees around the stream provide suitable bat habitat.

RIPARIAN VEGETATION DESCRIPTION
Black Walnut, honeylocust, common ragweed, virginia creeper, coralberry, oak trees.

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Stream flows through a large culvert.

STREAM QUALITY	(indicate)	High ___	Moderate **X**	Low __

Rationale for selected rank (explain): The stream segment is within right-of-way and provides fair fish and wildlife habitat.

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Ordinary High Water Mark Data Form

Stream Name: Little Blue River	Stream No: S4	
Assoc Wetland No: N/A	Date: 2024-07-22	County/State: Kansas City MO

Investigator: JG, EV	Team No.: N/A	Landowner/Tract No.: N/A

STREAM DRAWING:

Stream Flow	Fast ___		Moderate **X**		Slow ___		Very Slow __	None
	Perennial: **X**		Intermittent		Ephemeral:			
Stream Depth (in.)	0-3 __	3-6 ___	6-12 __	12-18 ___	18-24 **X**	24-36 __	36-48 ___	48-60 ___	60+ __
Stream Width (ft.)	Top of Banks: 40-50				Water Surface: 25				
Stream Substrate %	Bedrock _____		Gravel _____		Sand: _____		Clay _____	Organic **5%**____
	Boulder _____		Cobble **20%**		Silt: **75%**		Artificial	
Bank Height (ft.)	Left **(S)**	0-2 ___	2-4 __		4-6 ___		6-8 **X**	8+ ___
	Right **(N)**	0-2 ___	2-4 ___		4-6 **X**		6-8 __	8+ ___
Bank Slope (°)	Left **(S)**	0-20	20-40		40-60		60-80	80+ **X**
	Right **(N)**	0-20	20-40		40-60		60-80	80+ **X**
Water Clarity	Clear ___		Slightly Turbid ___		Turbid **X**		Very Turbid ___	Color: _
Aquatic Habitat	Sand Bar ___		Gravel Bar ___		Mud Bar ___		Gravel Riffles **X**	Deep Pools ___
	Overhanging trees/shrubs **X**		In-stream emergent plants		In-stream submergent plants		Bank root systems **X**	Fringing Wetlands
Aquatic Organisms	Waterfowl ___		Fish (adult) **X**		Fish (juvenile)		Frogs __	Turtles
	Snakes ___		Invertebrates **X**		Other:			

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
Suitable foraging habitat for bats but not suitableroosting bat habitat.

RIPARIAN VEGETATION DESCRIPTION
Maple, cottonwood saplings, sycamore. No trees showed signs of cracks, holes, or loose bark. There were no dead trees or snags present.

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Roadside drainage channel empties into the Little Blue River on the north bank, west of the I-470 southbound bridge. The drainage channel was dry.

STREAM QUALITY	(indicate)	High ___	Moderate **X**	Low __

Rationale for selected rank (explain): The stream segment is within right-of-way and provides fair fish and wildlife habitat.

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Ordinary High Water Mark Data Form

Stream Name: Little Blue River	Stream No: S5	
Assoc Wetland No: N/A	Date: 2024-07-22	County/State: Kansas City MO

Investigator: JG, EV	Team No.: N/A	Landowner/Tract No.: N/A

STREAM DRAWING:

Stream Flow	Fast ___		Moderate ___		Slow _X_		Very Slow __		None		
	Perennial: **X**		Intermittent		Ephemeral:						
Stream Depth (in.)	0-3 __	3-6 ___	6-12 __	12-18 ___	18-24 ___	24-36 _X_	36-48 ___	48-60 ___	60+ __		
Stream Width (ft.)	Top of Banks: 35				Water Surface: 25						
Stream Substrate % *Substrate not visible*	Bedrock _____ Boulder _____		Gravel _____ Cobble		Sand: _____ Silt:		Clay _____ Artificial		Organic _____		
Bank Height (ft.)	Left **(S)**	0-2 ___	2-4 _X_		4-6 ___		6-8 ___		8+ ___		
	Right **(N)**	0-2 ___	2-4 ___		4-6 _X_		6-8 __		8+ ___		
Bank Slope (°)	Left **(S)**	0-20	20-40 **X**		40-60		60-80		80+		
	Right **(N)**	0-20	20-40 **X**		40-60		60-80		80+		
Water Clarity	Clear ___		Slightly Turbid ___		Turbid __		Very Turbid _X_		Color: _		
Aquatic Habitat	Sand Bar ___		Gravel Bar ___		Mud Bar ___		Gravel Riffles __		Deep Pools ___		
	Overhanging trees/shrubs		In-stream emergent plants		In-stream submergent plants		Bank root systems		Fringing Wetlands		
Aquatic Organisms	Waterfowl ___		Fish (adult) _X_		Fish (juvenile) **X**		Frogs __		Turtles		
	Snakes ___		Invertebrates _X_		Other:						

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No bats observed under the bridge and no signs of bat usage were observed.

RIPARIAN VEGETATION DESCRIPTION
Johnson grass.

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Gars and minnows observed, but the stream was too turbid to see the bottom.

STREAM QUALITY (indicate)		High ___	Moderate _X_	Low __

Rationale for selected rank (explain): The stream segment is within right-of-way and provides fair fish habitat due to the presence of larger fish (gars).

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Ordinary High Water Mark Data Form

Stream Name: Round Grove Creek Tributary	Stream No: S6	
Assoc Wetland No: N/A	Date: 2024-07-22	County/State: Kansas City, MO

Investigator: JG, EV	Team No.: N/A	Landowner/Tract No.: N/A

STREAM DRAWING:

Stream Flow	Fast ___		Moderate ___		Slow ___		Very Slow X	None			
	Perennial:		Intermittent: **X**		Ephemeral:						
Stream Depth (in.)	0-3 __	3-6 ___	6-12 X	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ __		
Stream Width (ft.)	Top of Banks: 15				Water Surface: 5						
Stream Substrate % *Substrate not visible*	Bedrock _____ Boulder _____		Gravel 20 Cobble		Sand: 70 Silt: 10		Clay _____ Artificial	Organic _____			
Bank Height (ft.)	Left **(S)**	0-2 ___	2-4 **X**		4-6 ___		6-8 ___	8+ ___			
	Right **(N)**	0-2 ___	2-4 X		4-6 ___		6-8 __	8+ ___			
Bank Slope (°)	Left **(S)**	0-20	20-40 **X**		40-60		60-80	80+			
	Right **(N)**	0-20	20-40 **X**		40-60		60-80	80+			
Water Clarity	Clear ___		Slightly Turbid X		Turbid __		Very Turbid ___	Color: _			
Aquatic Habitat	Sand Bar ___		Gravel Bar X		Mud Bar ___		Gravel Riffles __	Deep Pools ___			
	Overhanging trees/shrubs		In-stream emergent plants		In-stream submergent plants		Bank root systems	Fringing Wetlands			
Aquatic Organisms	Waterfowl ___		Fish (adult) __		Fish (juvenile)		Frogs __	Turtles			
	Snakes ___		Invertebrates ___		Other:						

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No bats observed and no signs of bat usage were observed.

RIPARIAN VEGETATION DESCRIPTION
Honeysuckle.

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)

STREAM QUALITY	(indicate)	High ___	Moderate X	Low __

Rationale for selected rank (explain): The stream segment is within right-of-way and provides fair wildlife habitat due to the presence of trees and sedges along the bank.

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization
Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation
Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Ordinary High Water Mark Data Form

Stream Name: Blue River Tributary	Stream No: S7	
Assoc Wetland No: N/A	Date: 2024-07-22	County/State: Kansas City, MO

Investigator: JG, EV	Team No.: N/A	Landowner/Tract No.: N/A

STREAM DRAWING:

Stream Flow	Fast ___		Moderate ___		Slow _X_		Very Slow ___	None
	Perennial		Intermittent X		Ephemeral:			
Stream Depth (in.)	0-3 __	3-6 _X_	6-12 ___	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___
Stream Width (ft.)	Top of Banks: 5				Water Surface: 4				
Stream Substrate %	Bedrock _____ Boulder _____		Gravel 40 Cobble 10		Sand 50 Silt		Clay _____ Artificial	Organic _____
Bank Height (ft.)	Left	0-2 ___	2-4 _X__		4-6 ___		6-8 ___	8+ ___
	Right	0-2 ___	2-4 _X_		4-6 ___		6-8 ___	8+ ___
Bank Slope (°)	Left	0-20	20-40 X		40-60		60-80	80+
	Right	0-20	20-40 X		40-60		60-80	80+
Water Clarity	Clear ___		Slightly Turbid _X__		Turbid _		Very Turbid ___	Color: _
Aquatic Habitat	Sand Bar ___		Gravel Bar _X__		Mud Bar ___		Gravel Riffles ___	Deep Pools ___
	Overhanging trees/shrubs		In-stream emergent plants		In-stream submergent plants		Bank root systems	Fringing Wetlands
Aquatic Organisms	Waterfowl ___		Fish (adult) ___		Fish (juvenile)		Frogs ___	Turtles
	Snakes ___		Invertebrates ___		Other:			

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
Stream does not provide suitable habitat for TE species. TE species were not observed during field surveys.

RIPARIAN VEGETATION DESCRIPTION
Honeysuckle, reed canary grass.

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Flows into pool that culverts under interstate. Wetland located adjacent to the southeast.

STREAM QUALITY	(indicate)	High ___	Moderate _X__	Low _

Rationale for selected rank (explain): The stream segment is within right-of-way and provides fair wildlife habitat due to the presence of trees and grass along the bank.

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Ordinary High Water Mark Data Form

Stream Name: Camp Creek Tributary	Stream No: S8	
Assoc Wetland No: N/A	Date: 2025-04-01	County/State: Kansas City, MO

Investigator: JG, EV	Team No.: N/A	Landowner/Tract No.: N/A

STREAM DRAWING:

Stream Flow	Fast ___		Moderate ___		Slow _X_		Very Slow ___	None			
	Perennial		Intermittent		Ephemeral: X						
Stream Depth (in.)	0-3 _X_	3-6 ___	6-12 ___	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___		
Stream Width (ft.)	Top of Banks: 3				Water Surface: 2						
Stream Substrate %	Bedrock ____		Gravel ____		Sand 90____		Clay ____	Organic ____			
	Boulder ____		Cobble 10		Silt		Artificial				
Bank Height (ft.)	Left	0-2 ___	2-4 _X__		4-6 ___		6-8 ___	8+ ___			
	Right	0-2 ___	2-4 _X_		4-6 ___		6-8 ___	8+ ___			
Bank Slope (°)	Left	0-20	20-40		40-60		60-80	80+ X			
	Right	0-20	20-40		40-60		60-80	80+ X			
Water Clarity	Clear _X__		Slightly Turbid ___		Turbid _		Very Turbid ___	Color: _			
Aquatic Habitat	Sand Bar _X__		Gravel Bar ___		Mud Bar ___		Gravel Riffles ___	Deep Pools ___			
	Overhanging trees/shrubs		In-stream emergent plants		In-stream submergent plants		Bank root systems	Fringing Wetlands			
Aquatic Organisms	Waterfowl ___		Fish (adult) ___		Fish (juvenile)		Frogs ___	Turtles			
	Snakes ___		Invertebrates ___		Other:						

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
Stream does not provide suitable habitat for TE species. TE species were not observed during field surveys.

RIPARIAN VEGETATION DESCRIPTION
Annual ragweed, oak species, common elderberry.

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Ditch stream running adjacent to I-70.

STREAM QUALITY (indicate)	High ___	Moderate ___	Low _X_

Rationale for selected rank (explain): Stream located within ditch of ROW of interstate. High erosion potential, low flow and depth except likely during stormwater events. Grass and forbes dominate banks.

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization
Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation
Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Ordinary High Water Mark Data Form

Stream Name: Camp Creek Tributary	Stream No: S9	
Assoc Wetland No: N/A	Date: 2024-07-22	County/State:Kansas City, MO

Investigator: JG, EV	Team No.: N/A	Landowner/Tract No.: N/A

STREAM DRAWING:

Stream Flow	Fast ___		Moderate ___		Slow _X_		Very Slow ___		None	
	Perennial X		Intermittent		Ephemeral:					
Stream Depth (in.)	0-3 __	3-6 _X_	6-12 ___	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___	
Stream Width (ft.)	Top of Banks: 10				Water Surface: 8					
Stream Substrate %	Bedrock _____		Gravel _____		Sand 95_____		Clay _____		Organic _____	
	Boulder ___5__		Cobble		Silt		Artificial			
Bank Height (ft.)	Left	0-2 ___	2-4 __X_		4-6 ___		6-8 ___		8+ ___	
	Right	0-2 ___	2-4 _X_		4-6 ___		6-8 ___		8+ ___	
Bank Slope (°)	Left	0-20	20-40		40-60		60-80 X		80+	
	Right	0-20	20-40		40-60		60-80 X		80+	
Water Clarity	Clear ___		Slightly Turbid ___		Turbid _X		Very Turbid ___		Color: _	
Aquatic Habitat	Sand Bar ___		Gravel Bar ___		Mud Bar ___		Gravel Riffles ___		Deep Pools ___	
	Overhanging trees/shrubs X		In-stream emergent plants		In-stream submergent plants		Bank root systems		Fringing Wetlands	
Aquatic Organisms	Waterfowl ___		Fish (adult) ___		Fish (juvenile)		Frogs ___		Turtles	
	Snakes ___		Invertebrates ___		Other:					

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No bats observed and no signs of bat usage were observed.

RIPARIAN VEGETATION DESCRIPTION
Honeysuckle

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Channelized.

STREAM QUALITY	(indicate)	High ___	Moderate _X_	Low _

Rationale for selected rank (explain): Channelized stream within ROW. Fair fish and wildlife habitat due to the stream depth and amount of vegetation along the banks.

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Ordinary High Water Mark Data Form

Stream Name: Camp Creek Tributary	Stream No: S10	
Assoc Wetland No: N/A	Date: 2025-04-01	County/State Kansas City, MO

Investigator: JG, EV	Team No.: N/A	Landowner/Tract No.L N/A

STREAM DRAWING:

Stream Flow	Fast ___		Moderate _X_		Slow ___		Very Slow ___		None	
	Perennial		Intermittent X		Ephemeral:					
Stream Depth (in.)	0-3 _X_	3-6 ___	6-12 ___	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___	
Stream Width (ft.)	Top of Banks: 8				Water Surface: 8					
Stream Substrate %	Bedrock _____ Boulder _____		Gravel 15 Cobble 15		Sand 70 Silt		Clay _____ Artificial		Organic _____	
Bank Height (ft.)	Left	0-2 _X_	2-4 ___		4-6 ___		6-8 ___		8+ ___	
	Right	0-2 _X_	2-4 ___		4-6 ___		6-8 ___		8+ ___	
Bank Slope (°)	Left	0-20 X	20-40		40-60		60-80		80+	
	Right	0-20 X	20-40		40-60		60-80		80+	
Water Clarity	Clear _X_		Slightly Turbid ___		Turbid _		Very Turbid ___		Color: _	
Aquatic Habitat	Sand Bar _X_		Gravel Bar _X_		Mud Bar ___		Gravel Riffles _X_		Deep Pools ___	
	Overhanging trees/shrubs X		In-stream emergent plants		In-stream submergent plants		Bank root systems		Fringing Wetlands	
Aquatic Organisms	Waterfowl ___		Fish (adult) ___		Fish (juvenile)		Frogs ___		Turtles	
	Snakes ___		Invertebrates ___		Other:					

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No TE species were observed and no signs of bat usage were observed.

RIPARIAN VEGETATION DESCRIPTION
Honeysuckle.

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Concrete line from the west, culvert going under interstate.

STREAM QUALITY	(indicate)	High ___	Moderate _X_	Low _

Rationale for selected rank (explain): Stream located within ROW and culverted under the interstate. Low habitat diversity, but provides fair habitat for fish and wildlife with the amount of vegetation and stream depth.

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization
Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation
Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Ordinary High Water Mark Data Form

Stream Name: Camp Creek Tributary	Stream No: S12	
Assoc Wetland No:	Date: 2024-07-22	County/State: Kansas City, MO

Investigator: JG, EV	Team No.: N/A	Landowner/Tract No.: N/A

STREAM DRAWING:

Stream Flow	Fast ___		Moderate __X__		Slow ___		Very Slow ___		None	
	Perennial		Intermittent X		Ephemeral:					
Stream Depth (in.)	0-3 __	3-6 __X__	6-12 ___	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___	
Stream Width (ft.)	Top of Banks:12				Water Surface: 10					
Stream Substrate %	Bedrock _____		Gravel 40		Sand 25		Clay _____		Organic _____	
	Boulder __15___		Cobble 20		Silt		Artificial			
Bank Height (ft.)	Left	0-2 ___	2-4 _X__		4-6 ___		6-8 ___		8+ ___	
	Right	0-2 ___	2-4 __X__		4-6 ___		6-8 ___		8+ ___	
Bank Slope (°)	Left	0-20	20-40 X		40-60		60-80		80+	
	Right	0-20	20-40 X		40-60		60-80		80+	
Water Clarity	Clear __X__		Slightly Turbid ___		Turbid _		Very Turbid ___		Color: _	
Aquatic Habitat	Sand Bar ___		Gravel Bar __X__		Mud Bar ___		Gravel Riffles __X__		Deep Pools ___	
	Overhanging trees/shrubs X		In-stream emergent plants		In-stream submergent plants		Bank root systems		Fringing Wetlands	
Aquatic Organisms	Waterfowl ___		Fish (adult) ___		Fish (juvenile)		Frogs ___		Turtles	
	Snakes ___		Invertebrates ___		Other:					

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
Stream does not provide suitable habitat for TE species. TE species were not observed during field surveys

RIPARIAN VEGETATION DESCRIPTION
Honeysuckle.

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Culvert noted under the interstate. Stream is within ROW.

STREAM QUALITY	(indicate)	High ___	Moderate __X__	Low __

Rationale for selected rank (explain): Stream within ROW with sufficient vegetation to support wildlife, but not much variety. Provides fair habitat for wildlife and small fish/invertebrates due to the shallowness of the stream and presence of boulders within the streambed.

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization
Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation
Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Ordinary High Water Mark Data Form

Stream Name: NA- Possibly Blue River Tributary	Stream No: S13	
Assoc Wetland No: N/A	Date: 2025-04-01	County/State: Kansas City, MO

Investigator: JG, EV	Team No.: N/A	Landowner/Tract No.: N/A

STREAM DRAWING:

Stream Flow	Fast ___		Moderate ___		Slow _X_		Very Slow ___		None	
	Perennial		Intermittent X		Ephemeral:					
Stream Depth (in.)	0-3 _X_	3-6 ___	6-12 ___	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___	
Stream Width (ft.)	Top of Banks: 6				Water Surface: 4					
Stream Substrate %	Bedrock ____		Gravel ____		Sand 50		Clay ____		Organic ____	
	Boulder ____		Cobble 10		Silt 40		Artificial			
Bank Height (ft.)	Left	0-2 _X_	2-4 ___		4-6 ___		6-8 ___		8+ ___	
	Right	0-2 _X_	2-4 ___		4-6 ___		6-8 ___		8+ ___	
Bank Slope (°)	Left	0-20	20-40 X		40-60		60-80		80+	
	Right	0-20	20-40 X		40-60		60-80		80+	
Water Clarity	Clear ___		Slightly Turbid _X_		Turbid _		Very Turbid ___		Color: _	
Aquatic Habitat	Sand Bar _X_		Gravel Bar ___		Mud Bar ___		Gravel Riffles _X_		Deep Pools ___	
	Overhanging trees/shrubs X		In-stream emergent plants		In-stream submergent plants		Bank root systems		Fringing Wetlands	
Aquatic Organisms	Waterfowl ___		Fish (adult) ___		Fish (juvenile)		Frogs ___		Turtles	
	Snakes ___		Invertebrates ___		Other:					

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
Stream does not provide suitable habitat for TE species. TE species were not observed during field surveys.

RIPARIAN VEGETATION DESCRIPTION
Honeysuckle, sedges/grasses.

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Culvert noted under insterstate with pool prior, stream runs from pool. Stream flows outside of ROW/project area and likely connects to stream S7 to the south,

STREAM QUALITY	(indicate)	High ___	Moderate _X_	Low _

Rationale for selected rank (explain): Stream is within the ROW, with pleanty of cover from shrubs and some trees. Provides fair habitat for wildlife and possibly small fish/invertebrates due to the shallowness of the stream and presence of cobble within the stream bed.

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization
Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation
Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Photo 1: Stream Site S1, Big Blue River, facing southeast (upstream). Associated with Stream Assessment Sheet S1.

Photo 2: Stream Site S2, Camp Creek, facing north (upstream). Associated with Stream Assessment Sheet S2.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 3: Stream Site S3, Camp Creek, facing southeast (downstream). Associated with Stream Assessment Sheet S3.

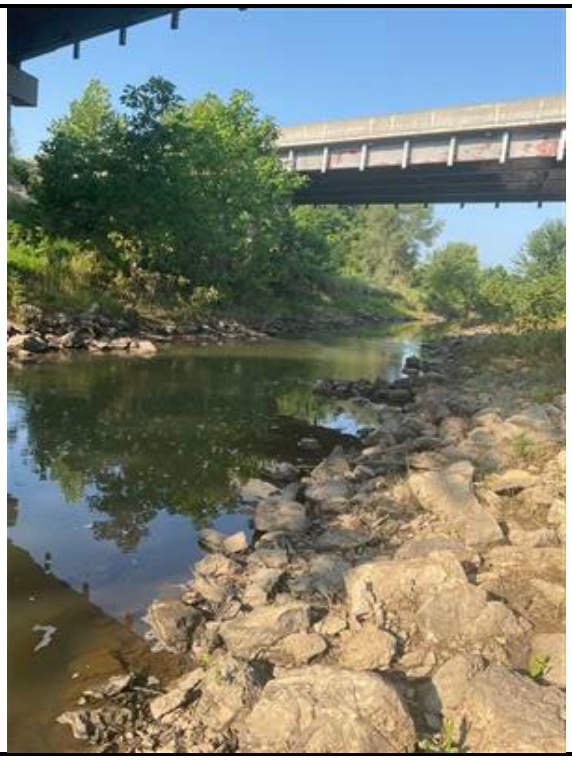


Photo 4: Stream Site S4, Little Blue River, facing southwest (upstream). Associated with Stream Assessment Sheet S4.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 5: Stream Site S5, Little Blue River, facing northwest (downstream). Associated with Stream Assessment Sheet S5.

Photo 6: Stream Site S6, Round Grove Creek Tributary, facing northeast (upstream). Associated with Stream Assessment Sheet S6.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 7: Stream Site S7, Camp Creek Tributary, facing west (downstream). Associated with Stream Assessment Sheet S7. Located adjacent to the W2 wetland area.

Photo 8: Stream Site S8, Camp Creek Tributary, facing east (downstream). Associated with Stream Assessment Sheet S8.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 9: Stream Site S9, Camp Creek Tributary, facing south (downstream). Associated with Stream Assessment Sheet S9.

Photo 10: Stream Site S10, Camp Creek Tributary. Associated with Stream Assessment Sheet S10.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 11: Stream Site S11, Camp Creek Tributary, facing north (upstream). A dry streambed was observed north of I-70. A stream assessment was not completed as no water was observed.

Photo 12: Stream Site S12, Camp Creek Tributary north of I-70. Associated with Stream Assessment Datasheet S12.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 13: Stream Site S13, likely Blue River Tributary, facing north (upstream). The stream was not shown in the NHD data and was observed in the field. Stream was walked within field study area, likely connects to the S7 stream assessment location.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Attachment B

Wetland Determination Data Sheets & Photo Log

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 9/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: MoDOT I-70: I-435 to I-470 Project City/County: KC and Independence/Johnson Sampling Date: 4/1/2025
Applicant/Owner: MoDOT State: MO Sampling Point: FS1
Investigator(s): Eric Viera, Jamie Gregory Section, Township, Range: S28 T49N R31W
Landform (hillside, terrace, etc.): lowland Local relief (concave, convex, none): Concave
Slope (%): 0 Lat: 39.0580839 N Long: 94.4931655 W Datum: NAD83
Soil Map Unit Name: Snead-Urban land complex, 9 to 30 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	5	Yes	FAC
2.			
3.			
4.			
5.			
	5	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Cornus racemosa*	25	Yes	FAC
2.			
3.			
4.			
5.			
	25	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Phalaris arundinacea*	70	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	70	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		230 (B)

Prevalence Index = B/A = 2.30

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: FS1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/1	90	7.5YR 5/4	10	C	PL	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ? Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 12

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes X	No ___	Depth (inches): 1.5
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 9/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: MoDOT I-70: I-435 to I-470 Project City/County: KC and Independence/Johnson Sampling Date: 4/1/2025
Applicant/Owner: MoDOT State: MO Sampling Point: FS2
Investigator(s): Eric Viera, Jamie Gregory Section, Township, Range: S28 T49N R31W
Landform (hillside, terrace, etc.): lowland Local relief (concave, convex, none): slope
Slope (%): 2 Lat: 39.0579992 N Long: 94.4932109 W Datum: NAD83
Soil Map Unit Name: Snead-Urban land complex, 9 to 30 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	5	Yes	FAC
2.			
3.			
4.			
5.			
	5	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Lonicera tatarica*	35	Yes	FACU
2. *Symphoricarpos orbiculatus*	15	Yes	FACU
3.			
4.			
5.			
	50	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Lonicera japonica*	15	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	15	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	65	x 4 =	260
UPL species	0	x 5 =	0
Column Totals:	70 (A)		275 (B)

Prevalence Index = B/A = 3.93

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: FS2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/3	100					Loamy/Clayey	
7-16	10YR 4/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: MoDOT 1-70: I-435 to I-470 Project City/County: KC and Independence/Johnson Sampling Date: 7/23/2024
Applicant/Owner: MoDOT State: MO Sampling Point: FS3
Investigator(s): Eric Viera, Jamie Gregory Section, Township, Range: S28 T49N R31W
Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Concave
Slope (%): 0 Lat: 39.0393148 N Long: 94.3469749 W Datum: NAD 83
Soil Map Unit Name: Udanents - Urban land complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil X , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes No X

Is the Sampled Area within a Wetland? **Yes** **No** X

Remarks:
Soil was historically disturbed as the location is in ROW and was previously constructed. Soil unit is considered urban land.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Salix nigra*	30	Yes	OBL
2. *Cornus drummondii*	20	Yes	FAC
3.			
4.			
5.			
	50 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Typha angustifolia*	80	Yes	OBL
2. *Phalaris arundinacea*	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30)			
1. *Toxicodendron radicans*	5	Yes	FAC
2.			
	5 =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	110	x 1 =	110
FACW species	20	x 2 =	40
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	155 (A)		225 (B)

Prevalence Index = B/A = 1.45

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: FS3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	100					Loamy/Clayey	
4-12	10YR 4/1	95	10YR 3/6	5	C	M	Loamy/Clayey	Prominent redox concentrations
12-18	10YR 4/1	95	10YR 3/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Turns back to loam at 18", everything else the same. No saturation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Photo 1: Overview of wetland area W10 based on observed dominant wetland vegetation, facing west.

Photo 2: Overview of wetland area W10 based on observed dominant wetland vegetation, facing east.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 3: Overview of grass area near wetland area W10, facing east. Area designed for water to flow away from interstate (I-70) and parking lots, allowing to pool around the W10 location.

Photo 4: Overview of wetland area W2 facing west.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 5: Culvert/ponded area adjacent to wetland area W2.

Photo 6: Upland delineation point taken just outside of the wetland W2 location as the vegetation changes to upland dominant and topography increases.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 7: Example of wetland edge at wetland area W2.

Photo 8: Overview of wetland area W12, facing southwest. Area is located within the I-435/I-70 northwest loop.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 9: Overview of wetland area W12, facing west.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Attachment C

NRCS Soil Map and Unit Descriptions

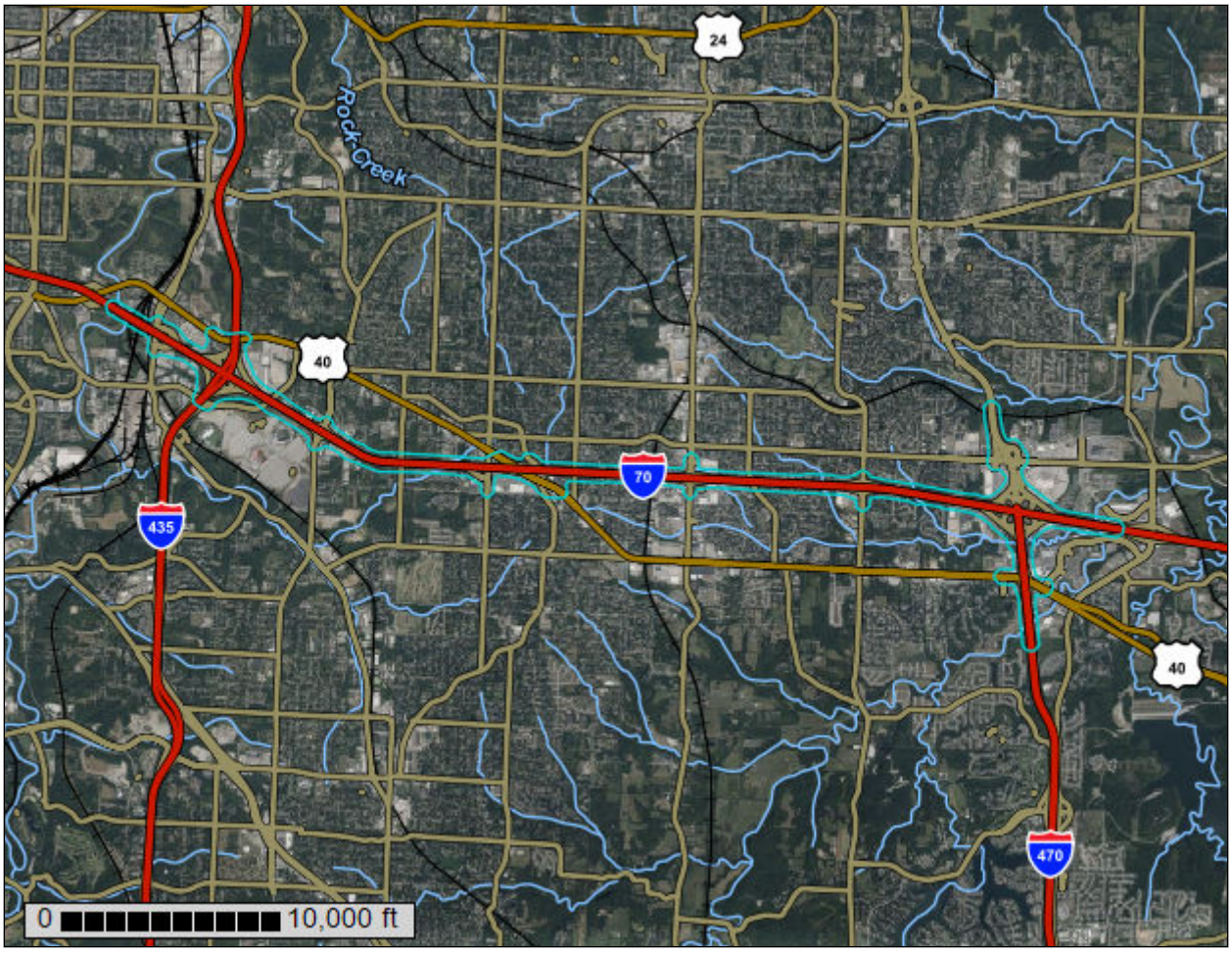
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Jackson County, Missouri



June 20, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

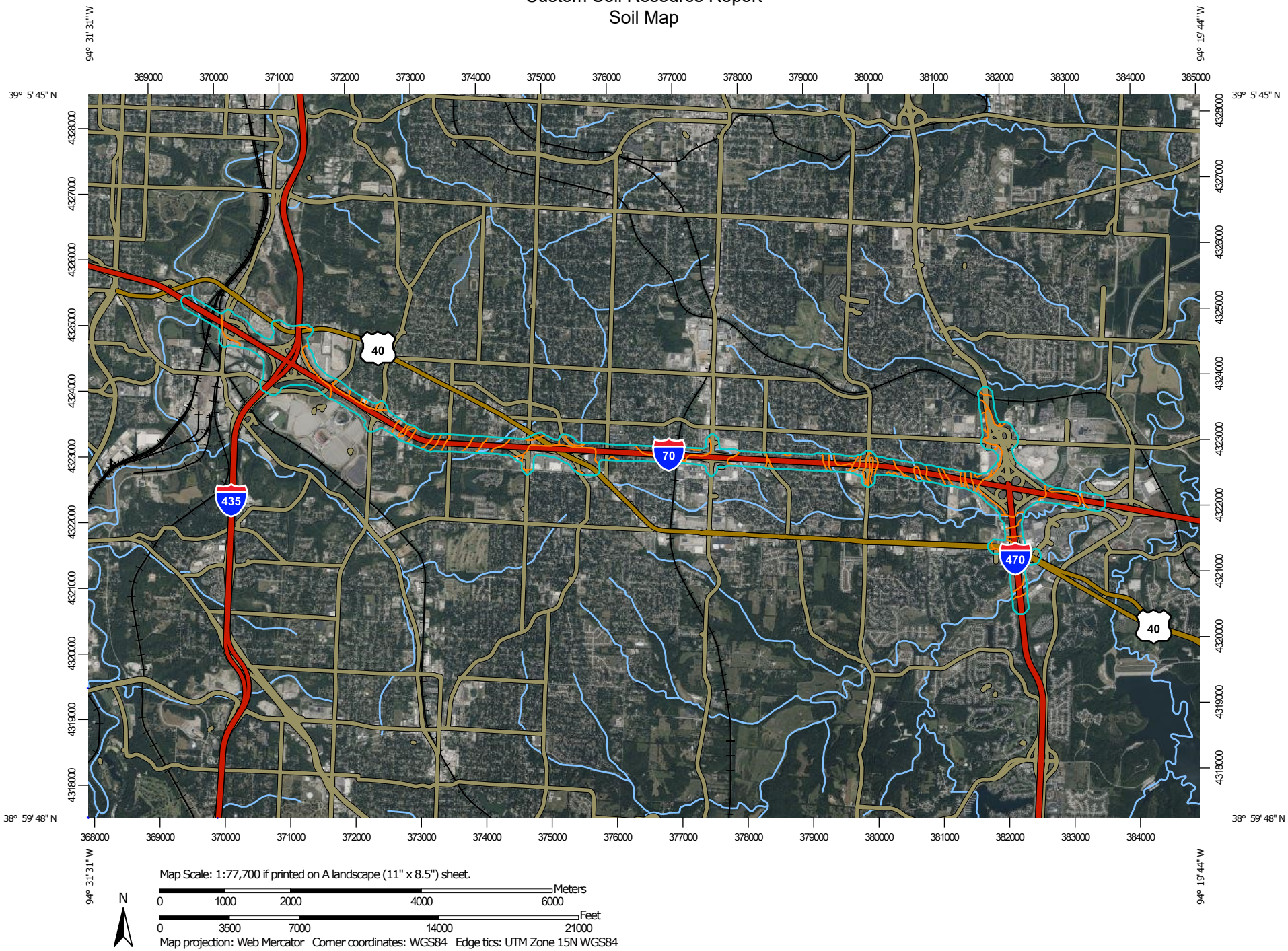
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jackson County, Missouri
Survey Area Data: Version 25, Aug 22, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 30, 2022—Sep 16, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
10066	Knox-Urban land complex, 5 to 9 percent slopes	118.7	8.1%
10067	Knox-Urban land complex, 9 to 14 percent slopes	23.8	1.6%
10113	Oska silty clay loam, 5 to 9 percent slopes, eroded	4.5	0.3%
10136	Sibley-Urban land complex, 2 to 5 percent slopes	156.8	10.7%
10137	Sibley-Urban land complex, 5 to 9 percent slopes	74.3	5.1%
10143	Snead-Urban land complex, 9 to 30 percent slopes	359.1	24.5%
10179	Udarents-Urban land-Oska complex, 5 to 9 percent slopes	34.6	2.4%
12510	Wiota silt loam, 1 to 4 percent slopes, rarely flooded	15.0	1.0%
36020	Kennebec silt loam, 0 to 2 percent slopes, occasionally flooded	18.2	1.2%
36083	Kennebec silt loam, 1 to 4 percent slopes, occasionally flooded	31.5	2.2%
40107	Snead-Rock outcrop complex, warm, 5 to 14 percent slopes	18.3	1.3%
40108	Snead-Rock outcrop complex, warm, 14 to 30 percent slopes	14.1	1.0%
60025	Urban land-Harvester complex, 2 to 9 percent slopes	20.1	1.4%
60125	Harvester-Urban land complex, 9 to 14 percent slopes	19.3	1.3%
99012	Urban land, upland, 5 to 9 percent slopes	397.7	27.2%
99017	Urban land, bottomland, 0 to 3 percent slopes, rarely flooded	46.0	3.1%
99033	Udarents-Urban land complex, 2 to 9 percent slopes	111.2	7.6%
Totals for Area of Interest		**1,463.3**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas

shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Jackson County, Missouri

10066—Knox-Urban land complex, 5 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2qkyx
Elevation: 700 to 1,000 feet
Mean annual precipitation: 33 to 41 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 177 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Knox and similar soils: 65 percent
Urban land: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Knox

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silt loam
Bt - 6 to 46 inches: silty clay loam
C - 46 to 80 inches: silt loam

Properties and qualities

Slope: 5 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R107XB002MO - Deep Loess Upland Prairie
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

10067—Knox-Urban land complex, 9 to 14 percent slopes

Map Unit Setting

National map unit symbol: 2qkyy
Elevation: 700 to 1,000 feet
Mean annual precipitation: 33 to 41 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 177 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Knox and similar soils: 65 percent
Urban land: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Knox

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silt loam
Bt - 6 to 46 inches: silty clay loam
C - 46 to 80 inches: silt loam

Properties and qualities

Slope: 9 to 14 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R107XB002MO - Deep Loess Upland Prairie
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

10113—Oska silty clay loam, 5 to 9 percent slopes, eroded

Map Unit Setting

National map unit symbol: yrm7
Elevation: 600 to 1,200 feet
Mean annual precipitation: 33 to 43 inches
Mean annual air temperature: 50 to 57 degrees F
Frost-free period: 177 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Oska and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Oska

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum

Typical profile

A - 0 to 7 inches: silty clay loam
Bt - 7 to 34 inches: silty clay loam
R - 34 to 80 inches: bedrock

Properties and qualities

Slope: 5 to 9 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R106XY015KS - Loamy Upland (PE 30-37)
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: No

Minor Components

Sampsel

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Concave
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: No

Snead, eroded, warm

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Hydric soil rating: No

10136—Sibley-Urban land complex, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ql0j
Elevation: 720 to 1,440 feet
Mean annual precipitation: 33 to 41 inches
Mean annual air temperature: 49 to 55 degrees F
Frost-free period: 155 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Sibley and similar soils: 60 percent
Urban land: 35 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sibley

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess

Typical profile

A - 0 to 17 inches: silt loam
Bt - 17 to 65 inches: silty clay loam
C - 65 to 80 inches: silt loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: R107XB002MO - Deep Loess Upland Prairie
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)

Hydric soil rating: No

Description of Urban Land

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Across-slope shape: Convex

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Macksburg

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R108XD860IA - Loess Upland Prairie
Hydric soil rating: No

10137—Sibley-Urban land complex, 5 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2ql0k
Elevation: 640 to 1,300 feet
Mean annual precipitation: 33 to 41 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 177 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Sibley and similar soils: 60 percent
Urban land: 35 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sibley

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex

Across-slope shape: Convex
Parent material: Loess

Typical profile

A - 0 to 26 inches: silt loam
Bt - 26 to 65 inches: silty clay loam
C - 65 to 80 inches: silt loam

Properties and qualities

Slope: 5 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R107XB002MO - Deep Loess Upland Prairie
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Higginsville, eroded

Percent of map unit: 3 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R109XY002MO - Loess Upland Prairie
Hydric soil rating: No

Polo, eroded

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope

Down-slope shape: Concave
Across-slope shape: Convex
Ecological site: R107XB007MO - Loess Upland Prairie
Hydric soil rating: No

10143—Snead-Urban land complex, 9 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2ql0r
Elevation: 700 to 1,200 feet
Mean annual precipitation: 33 to 45 inches
Mean annual air temperature: 50 to 57 degrees F
Frost-free period: 177 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Snead and similar soils: 65 percent
Urban land: 25 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Snead

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from calcareous shale

Typical profile

A - 0 to 12 inches: flaggy silty clay loam
Bw - 12 to 40 inches: silty clay
Cr - 40 to 80 inches: bedrock

Properties and qualities

Slope: 9 to 30 percent
Depth to restrictive feature: 39 to 50 inches to paralithic bedrock
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: R109XY012MO - Interbedded Sedimentary Backslope Savanna
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Hills
Landform position (two-dimensional): Backslope

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Greenton

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R109XY002MO - Loess Upland Prairie
Hydric soil rating: No

Oska

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R106XY015KS - Loamy Upland (PE 30-37)
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: No

10179—Udarents-Urban land-Oska complex, 5 to 9 percent slopes

Map Unit Setting

National map unit symbol: 1n85j
Elevation: 700 to 1,200 feet
Mean annual precipitation: 33 to 43 inches
Mean annual air temperature: 50 to 57 degrees F

Frost-free period: 175 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Udarents and similar soils: 46 percent
Urban land: 39 percent
Oska and similar soils: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udarents

Setting

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Mine spoil or earthy fill

Typical profile

C1 - 0 to 5 inches: silt loam
C2 - 5 to 80 inches: silty clay loam

Properties and qualities

Slope: 5 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: R107XB002MO - Deep Loess Upland Prairie
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Across-slope shape: Convex

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Description of Oska

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum

Typical profile

A - 0 to 7 inches: silty clay loam
Bt - 7 to 34 inches: silty clay loam
R - 34 to 80 inches: bedrock

Properties and qualities

Slope: 5 to 9 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R106XY015KS - Loamy Upland (PE 30-37)
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: No

12510—Wiota silt loam, 1 to 4 percent slopes, rarely flooded

Map Unit Setting

National map unit symbol: 2qs0z
Elevation: 600 to 1,200 feet
Mean annual precipitation: 33 to 41 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 177 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Wiota and similar soils: 90 percent
Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wiota

Setting

Landform: Drainageways
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

A - 0 to 29 inches: silt loam
Bt - 29 to 48 inches: silty clay loam
C - 48 to 80 inches: silt loam

Properties and qualities

Slope: 1 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C
Ecological site: R109XY028MO - Loamy Upland Drainageway Savanna
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: No

Minor Components

Kennebec

Percent of map unit: 4 percent
Landform: Drainageways
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R109XY028MO - Loamy Upland Drainageway Savanna
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: No

Bremer

Percent of map unit: 3 percent
Landform: Drainageways
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R109XY029MO - Wet Upland Drainageway Prairie
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: Yes

Knox

Percent of map unit: 3 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R107XB002MO - Deep Loess Upland Prairie
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)
Hydric soil rating: No

36020—Kennebec silt loam, 0 to 2 percent slopes, occasionally flooded

Map Unit Setting

National map unit symbol: 2qnvq
Elevation: 500 to 1,400 feet
Mean annual precipitation: 35 to 41 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 177 to 209 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Kennebec and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kennebec

Setting

Landform: Flood-plain steps
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

A - 0 to 19 inches: silt loam
AC - 19 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: R109XY005MO - Loamy Floodplain Prairie
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: No

Minor Components

Colo

Percent of map unit: 5 percent
Landform: Flood-plain steps
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R107XB019MO - Wet Floodplain Prairie
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: Yes

Nodaway, frequently flooded

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F107XB016MO - Loamy Floodplain Forest
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)
Hydric soil rating: Yes

36083—Kennebec silt loam, 1 to 4 percent slopes, occasionally flooded

Map Unit Setting

National map unit symbol: 2qs26
Elevation: 600 to 1,300 feet
Mean annual precipitation: 35 to 41 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 177 to 209 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Kennebec and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kennebec

Setting

Landform: Drainageways
Landform position (three-dimensional): Talf
Down-slope shape: Linear

Across-slope shape: Linear
Parent material: Alluvium

Typical profile

A - 0 to 19 inches: silt loam
AC - 19 to 60 inches: silty clay loam

Properties and qualities

Slope: 1 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: R109XY028MO - Loamy Upland Drainageway Savanna
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: No

Minor Components

Colo

Percent of map unit: 4 percent
Landform: Drainageways
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R109XY029MO - Wet Upland Drainageway Prairie
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: Yes

Nodaway, frequently flooded

Percent of map unit: 3 percent
Landform: Drainageways
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F109XY004MO - Loamy Upland Drainageway Woodland
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)
Hydric soil rating: Yes

Nevin

Percent of map unit: 3 percent
Landform: Drainageways
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R109XY029MO - Wet Upland Drainageway Prairie

Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: No

40107—Snead-Rock outcrop complex, warm, 5 to 14 percent slopes

Map Unit Setting

National map unit symbol: 2zccr
Elevation: 660 to 1,130 feet
Mean annual precipitation: 39 to 43 inches
Mean annual air temperature: 54 to 57 degrees F
Frost-free period: 185 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Snead, warm, and similar soils: 70 percent
Rock outcrop: 20 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Snead, Warm

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone and shale

Typical profile

A - 0 to 10 inches: silty clay loam
Bw - 10 to 20 inches: silty clay
BC - 20 to 24 inches: silty clay
C - 24 to 35 inches: silty clay
Cr - 35 to 45 inches: bedrock

Properties and qualities

Slope: 5 to 14 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Hydric soil rating: No

Description of Rock Outcrop

Typical profile

R - 0 to 79 inches: bedrock

Properties and qualities

Slope: 5 to 14 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Minor Components

Oska

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R106XY015KS - Loamy Upland (PE 30-37)
Hydric soil rating: No

Sampsel

Percent of map unit: 3 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Concave
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Hydric soil rating: Yes

Kennebec, occasionally flooded

Percent of map unit: 3 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R109XY028MO - Loamy Upland Drainageway Savanna
Hydric soil rating: No

40108—Snead-Rock outcrop complex, warm, 14 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2zccp
Elevation: 670 to 1,130 feet
Mean annual precipitation: 39 to 43 inches
Mean annual air temperature: 54 to 57 degrees F
Frost-free period: 185 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Snead, warm, and similar soils: 65 percent
Rock outcrop: 20 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Snead, Warm

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone and shale

Typical profile

A - 0 to 10 inches: silty clay loam
Bw - 10 to 20 inches: silty clay
BC - 20 to 24 inches: silty clay
C - 24 to 35 inches: silty clay
Cr - 35 to 45 inches: bedrock

Properties and qualities

Slope: 14 to 30 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: D
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Hydric soil rating: No

Description of Rock Outcrop

Typical profile

R - 0 to 79 inches: bedrock

Properties and qualities

Slope: 14 to 30 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Minor Components

Norris

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, convex
Across-slope shape: Convex
Ecological site: F109XY025MO - Interbedded Sedimentary Exposed Backslope Woodland
Hydric soil rating: No

Sampsel

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Concave
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Hydric soil rating: Yes

Oska

Percent of map unit: 3 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R106XY015KS - Loamy Upland (PE 30-37)
Hydric soil rating: No

Kennebec, occasionally flooded

Percent of map unit: 2 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf

Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R109XY028MO - Loamy Upland Drainageway Savanna
Hydric soil rating: No

60025—Urban land-Harvester complex, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: 30yy2
Elevation: 390 to 820 feet
Mean annual precipitation: 36 to 47 inches
Mean annual air temperature: 52 to 57 degrees F
Frost-free period: 184 to 228 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 55 percent
Harvester and similar soils: 40 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Description of Harvester

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Human-transported material over loess

Typical profile

^Au - 0 to 4 inches: silt loam
^Cu - 4 to 32 inches: silty clay loam
2Bb - 32 to 79 inches: silty clay loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 30 to 40 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: F115XB061MO - Anthropic Deep Loess Upland
Hydric soil rating: No

Minor Components

Winfield

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F115XB001MO - Deep Loess Upland Woodland
Hydric soil rating: No

60125—Harvester-Urban land complex, 9 to 14 percent slopes

Map Unit Setting

National map unit symbol: 2qp5n
Elevation: 440 to 970 feet
Mean annual precipitation: 37 to 47 inches
Mean annual air temperature: 52 to 57 degrees F
Frost-free period: 184 to 228 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Harvester and similar soils: 70 percent
Urban land: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Harvester

Setting

Landform: Ridges, hillslopes
Landform position (two-dimensional): Summit, backslope, footslope

Landform position (three-dimensional): Crest, side slope, base slope
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Loess

Typical profile

C1 - 0 to 5 inches: silt loam
C2 - 5 to 80 inches: silty clay loam

Properties and qualities

Slope: 9 to 14 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)
Depth to water table: About 30 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F115XB061MO - Anthropic Deep Loess Upland
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

Description of Urban Land

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

99012—Urban land, upland, 5 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2q0qh
Mean annual precipitation: 36 to 43 inches
Frost-free period: 170 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: Unranked

Minor Components

Udorthents

Percent of map unit: 5 percent
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Concave
Ecological site: R107XB002MO - Deep Loess Upland Prairie
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)
Hydric soil rating: No

Harvester

Percent of map unit: 5 percent
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F115XB061MO - Anthropic Deep Loess Upland
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

99017—Urban land, bottomland, 0 to 3 percent slopes, rarely flooded

Map Unit Setting

National map unit symbol: 2pzxp
Mean annual precipitation: 37 to 47 inches
Mean annual air temperature: 52 to 57 degrees F
Frost-free period: 184 to 228 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve

Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 0 to 3 percent
Runoff class: Very high
Frequency of flooding: Rare

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: Unranked

99033—Udarents-Urban land complex, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: 1n85n
Elevation: 710 to 1,470 feet
Mean annual precipitation: 31 to 47 inches
Mean annual air temperature: 46 to 57 degrees F
Frost-free period: 170 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Udarents and similar soils: 50 percent
Urban land: 45 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udarents

Setting

Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Mine spoil or earthy fill

Typical profile

C1 - 0 to 5 inches: silt loam
C2 - 5 to 80 inches: silty clay loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)
Hydric soil rating: No

Description of Urban Land

Setting

Landform position (two-dimensional): Backslope
Across-slope shape: Convex

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Knox

Percent of map unit: 3 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F107XB004MO - Deep Loess Protected Backslope Woodland, R107XB003MO - Deep Loess Exposed Backslope Savanna
Hydric soil rating: No

Sibley

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R109XY002MO - Loess Upland Prairie
Hydric soil rating: No

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Appendix C

Floodplains Technical Memorandum

I-70 Environmental Assessment: I-435 to I-470 Floodplains Technical Memorandum

April 2025

In Partnership:

U.S. Department of Transportation Federal Highway Administration

KANSAS CITY MISSOURI

MARC Mid-America Regional Council

INDEPENDENCE MISSOURI A GREAT AMERICAN STORY

23CFR Section 650 Subpart A Technical Memorandum

23 CFR Section 650.111 (c) Location studies shall include discussion of the following items, commensurate with the significance of the risk or environmental impact, for all alternatives containing encroachments and for those actions which would support base floodplain development.

1) **The risks associated with implementation of the action are as follows:**
   The project area is located entirely in Jackson County, Missouri and includes all land within 250 feet of the existing highway right-of-way (ROW) along the corridor. The project area extends from Manchester Trafficway on the west end to the east end of the I-70/I-470 interchange. For most of this length, I-70 is a four or six-lane divided and fully access-controlled interstate facility. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) and National Flood Hazard Layer (NFHL) showing mapped 100-year floodplains were available for Jackson County and were reviewed for identifying 100-year floodplains and regulatory floodways. There were 100-year floodplains and regulatory floodways found within the project area. A floodplains map of the project area using data from FEMA is shown below in **Figure 1**. A map series showing the potential floodplain impact locations in more detail is attached as **Attachment A**.

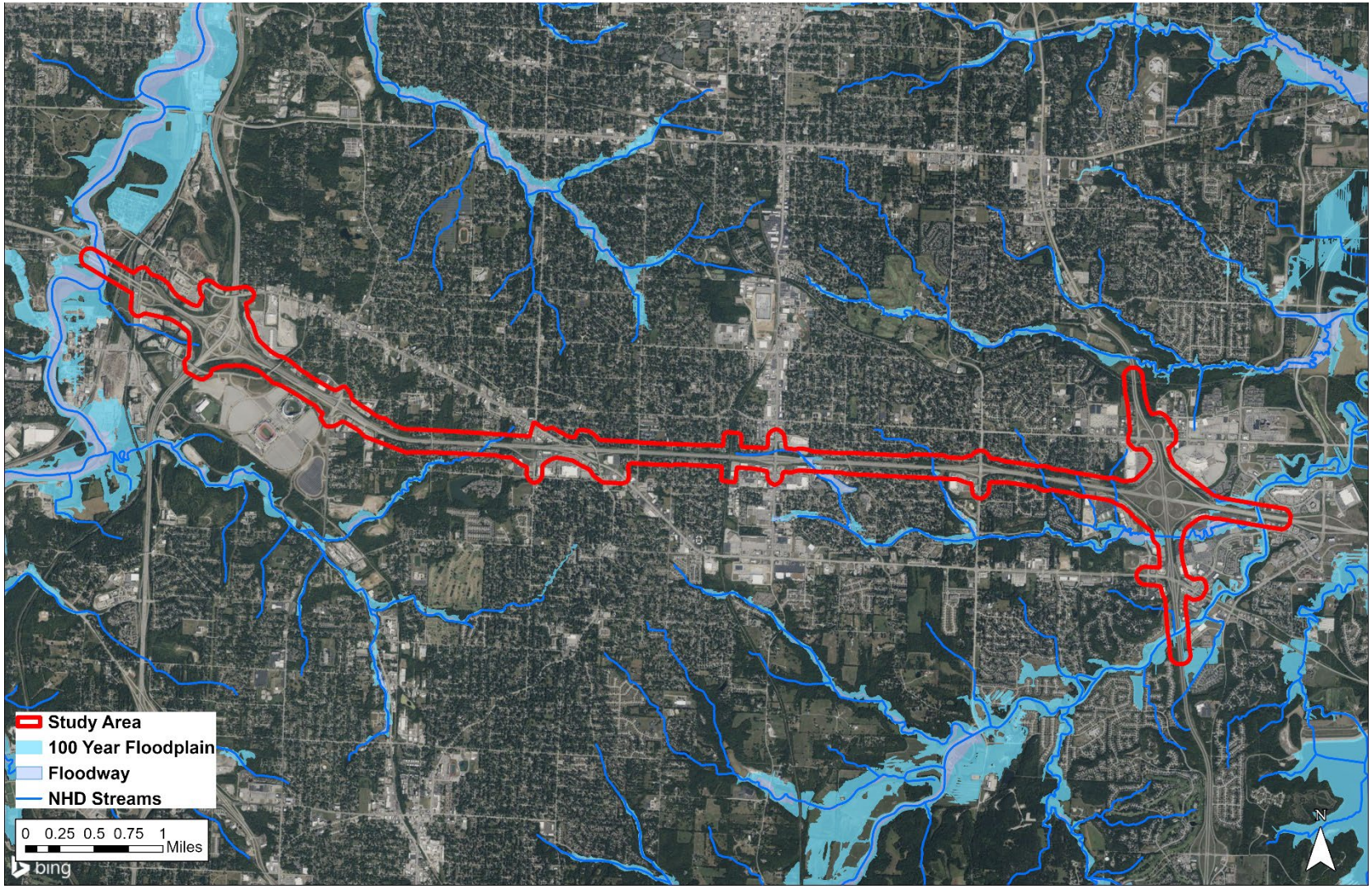


Figure 1 – I-70 (I-435 to I-470) Project Floodplains

2) Impacts on natural and beneficial flood-plain values:

Natural and beneficial floodplain values include, but are not limited to, fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, forestry, natural moderation of floods, water quality maintenance, and groundwater.

The project limits were surveyed using aerial imagery and topographic information. Impacts to floodplains would include those associated with widening the current I-70 footprint and lengthening acceleration lanes.

No significant encroachments are expected with this project and proposed improvements would have limited impacts on the natural and beneficial floodplain values.

MoDOT will ensure modifications to the functions of the natural floodplain environment are avoided or maintained as closely as practicable in its natural state.

3) Support of probable incompatible floodplain development:

As defined by FHWA, the support of incompatible base floodplain development encourages, allows, serves, or otherwise facilitates incompatible base floodplain development, such as commercial development or urban growth.

MoDOT will ensure local and regional access to existing rural and urban areas and facilities are maintained during construction. This project would not support incompatible floodplain development.

4) Measures to minimize floodplain impacts associated with the action:

MoDOT will avoid modification to the functions of the natural floodplain environment or will maintain it as closely as practicable in its natural state. MoDOT will ensure the floodplain analysis and certifications comply with floodplain regulations and demonstrate minimal impacts to the floodplains within the project limits. MoDOT, on behalf of the design build contractor, will obtain floodplain development permits from SEMA prior to FHWA authorization for construction.
MoDOT will ensure sediment and erosion control best management practices are implemented during construction and disturbed areas are seeded following construction for restoring and preserving natural and beneficial floodplain values.

5) Measures to restore and preserve the natural and beneficial flood-plain values impacted by the action:

There will be limited impacts to the natural and beneficial floodplain values of the floodplains within the project area. Because there would be temporary soil disturbance during construction activities, MoDOT will ensure sediment and erosion control best management practices are implemented during construction and disturbed areas seeded following construction.

6) **23 CFR Section 650.111 (d) Location studies shall include evaluation and discussion of the practicability of alternatives to any significant encroachments or any support of incompatible flood-plain development.**

As defined in 23 CFR 650.105, a significant encroachment involves a significant potential for interruption or termination of a transportation facility, which is needed for emergency vehicles or provides a community's only evacuation route, a significant risk meaning potential for loss of life or property, or a significant adverse impact on natural and beneficial flood-plain values.

This project would not result in a significant potential for interruption or termination of this transportation facility, which is needed for emergency vehicles or a community's only evacuation route. It would also not result in a significant risk or potential for loss of life or property. This project would not result in a substantial adverse impact on natural and beneficial floodplain values. This highway improvement project would maintain local and regional access to existing rural and agricultural areas and would not support any incompatible floodplain development.

There would be no significant encroachments from this project, and it would not support incompatible floodplain development.

This project would not cause a greater risk within a floodplain that potentially impacts an adjacent structure.

Commitments:

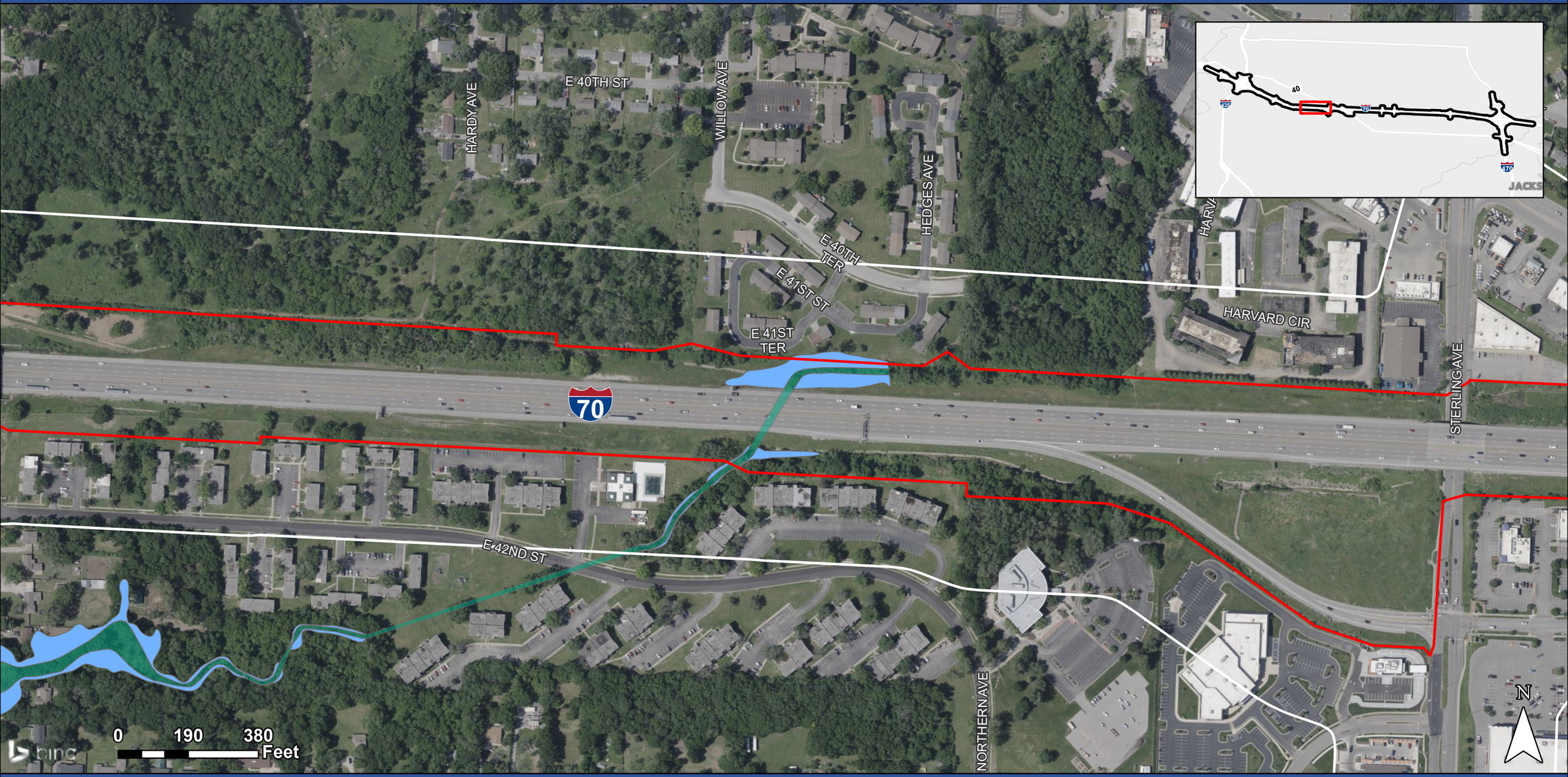
1. *MoDOT will ensure modifications to the functions of the natural floodplain environment are avoided or are maintained as closely as practicable in its natural state.*
2. *MoDOT will ensure local and regional access to existing rural and urban areas and facilities are maintained during construction.*
3. *MoDOT will ensure the floodplain analysis and o-rise certifications comply with floodplain regulations and demonstrate minimal impacts to the floodplains within the project area.*
4. *MoDOT will assist the contractor in obtaining floodplain development permits from SEMA prior to FHWA authorization for construction.*
5. *MoDOT will ensure sediment and erosion control best management practices are implemented during construction.*

Attachment A

100-Year Floodplain & Regulatory Floodway Encroachments							
Site #	**River/Stream**	**Location**	**Proposed Work**	**Floodplain Encroachment (Acres)**	**Regulatory Floodway Encroachment (Acres)**	**No-Rise Certificate Required**	**Floodplain Development Permit from SEMA Required**
1	Round Grove Creek Tributary	West of I-70 off ramp to Sterling Avenue	Widening of I-70 corridor and lengthen eastbound acceleration lane.	0.57	0.23	X	X
2	Camp Creek Tributary	East of the Noland Road exit on I-70	Widening of I-70 corridor and lengthen eastbound and westbound acceleration lanes.	1.02	2.35	X	X
3	Camp Creek Tributary	West of Lees Summit Road exit on I-70	Widening of I-70 corridor and lengthen eastbound and westbound acceleration lanes.	0.2	0.23	X	X
4	Little Blue River Tributary	East of the I-70/I-470 interchange	Widening of I-70 corridor and lengthen eastbound and westbound acceleration lanes.	0.72	0		X

Floodplain Impacts

Site No: 01



Study Area

Approximate Impact Limits

100-Year Floodplain

Floodway

I-70 Environmental Assessment: I-435 to I-470

Floodplain Impacts

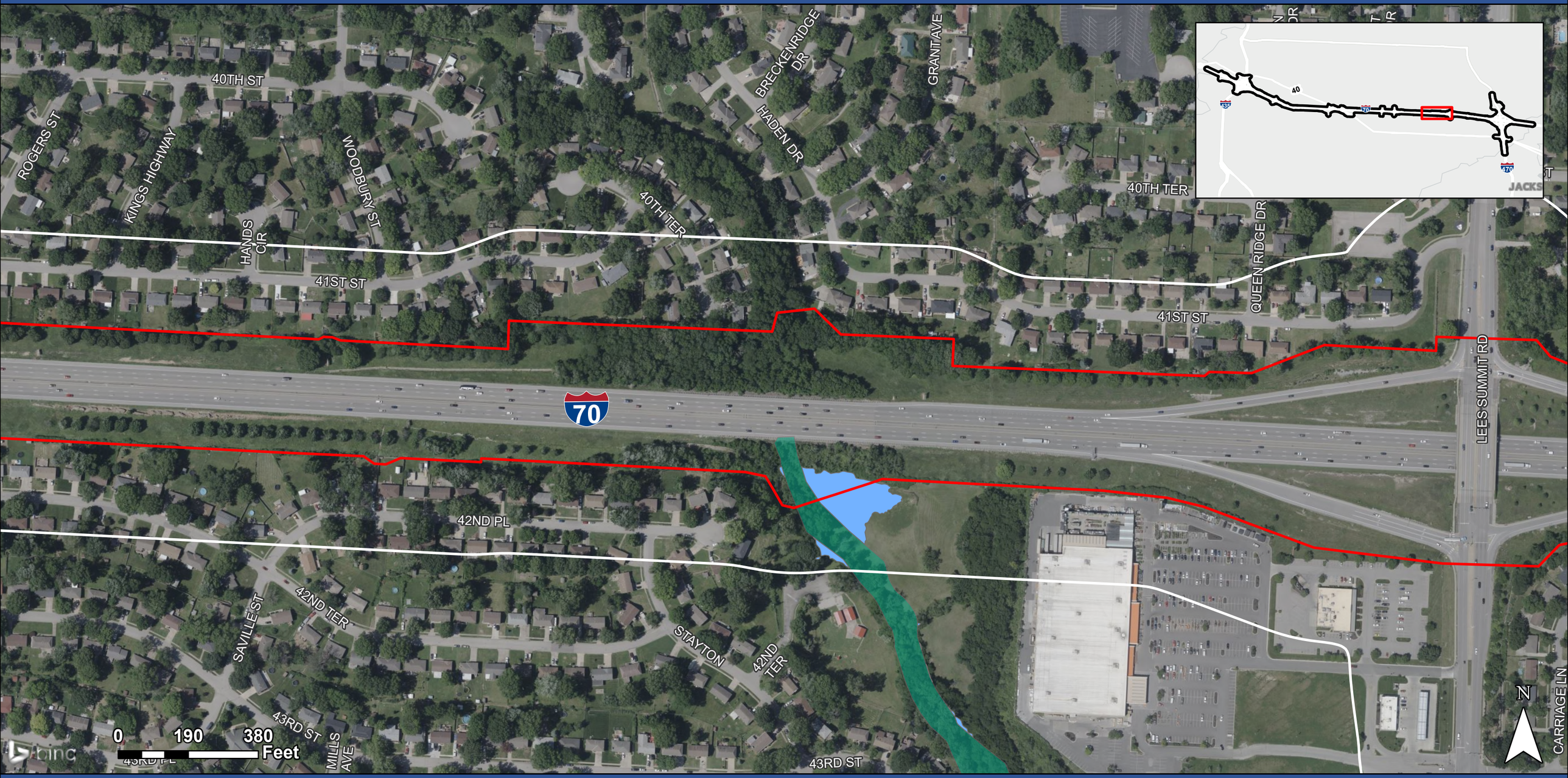
Site No: 02

- Study Area
- Approximate Impact Limits
- 100-Year Floodplain
- Floodway

I-70 Environmental Assessment: I-435 to I-470

Floodplain Impacts

Site No: 03

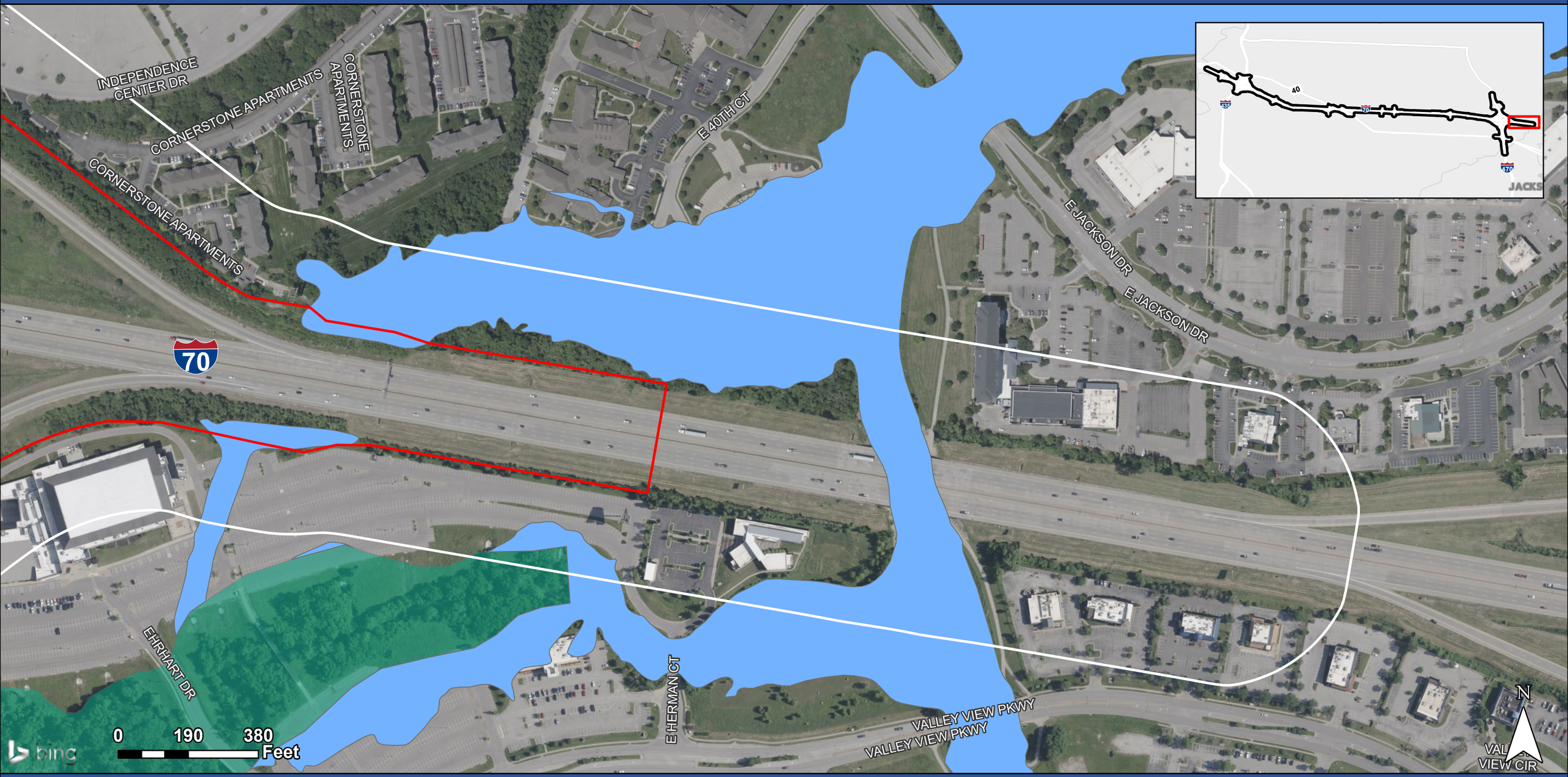


- Study Area
- Approximate Impact Limits
- 100-Year Floodplain
- Floodway

I-70 Environmental Assessment: I-435 to I-470

Floodplain Impacts

Site No: 04



Study Area

Approximate Impact Limits

100-Year Floodplain

Floodway

I-70 Environmental Assessment: I-435 to I-470

Appendix D

Habitat Assessment Report

I-70 Environmental Assessment: I-435 to I-470 Habitat Assessment Report

April 2025

In Partnership:

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3.0 Habitat Assessment 2

List of Exhibits

Exhibit 1: Project Area Map
Exhibit 2: Potential Bat Habitat Location Map

List of Attachments

Attachment A: Habitat Assessment Data Sheets and Photo Log
Attachment B: IPaC and USFWS Consultation

1.0 Introduction

The Missouri Department of Transportation (MoDOT) is proposing to modernize the I-70 corridor across the state. The proposed project, I-70 from I-435 to I-470, provides a critical link to the central region of the United States, particularly for freight traffic, and is a key access point for the Kansas City region.

The field survey was completed within MoDOT right of way (ROW) using an approximate 150-foot buffer from the alignment centerline. This alignment, the field study area, lines up approximately with the existing ROW limits of I-435, I-70, and I-470. The following report provides a brief project description, summary of field investigations performed to assess the potential presence or absence of listed bat species, and documents the potential impact(s) of the project on any listed bat species HNTB Corporation environmental personnel conducted the field investigations on July 22-23, 2024 and April 1, 2025.

2.0 Project Description

The I-70 Environmental Assessment: I-435 to I-470 Project Area (Project Area) is located entirely in Jackson County, Missouri and includes all land within 250 feet of the existing highway right-of-way (ROW) along the corridor. The Project Area extends from U.S. 40 on the west end to the east end of the I-70/I-470 interchange. For most of this length, I-70 is a four or six-lane divided and fully access-controlled interstate facility. A Project Area map is included as **Exhibit 1**.

The proposed project is needed to address existing and future conditions along the I-70 corridor from I-435 to I-470.The corridor no longer meets the current and future mobility needs, resulting in reduced safety, reliability, and congestion.

In compliance with the National Environmental Protection Act (NEPA), the I-70 environmental study followed a tiered environmental documentation process. Tiering complies with NEPA requirements and other environmental regulations. A Tier I Environmental Impact Statement (EIS) was completed for the I-70 corridor in 2011. The Tier I study identified several segments for further review in Tier II. The Federal Highway Administration (FHWA) has determined the NEPA class of action for this project is an Environmental Assessment (EA). An EA is a document required by NEPA for certain federal actions. Under NEPA, an EA is required to determine whether a federal action has the potential to cause significant environmental effects. If the FHWA determines that the proposed action will not have a significant environmental impact, a Finding of No Significant Impact (FONSI) will be issued. If the EA determines the environmental impacts of a proposed Federal action will have significant impacts, an EIS must then be prepared. The study timeline is approximately 14 months and scheduled to conclude in Fall of 2025.

The field study area encompasses the areas within the larger Project Area that will likely be impacted by the project. The field study area, shown in **Exhibit 1**, is the approximate extent of MoDOT ROW and was used as the survey limits for this report.

3.0 Habitat Assessment

The field study area is located within the cities of Kansas City and Independence, Missouri. The corridor is mostly a mix of urban, suburban, and greenspace. The vegetation or natural wildlife habitat present include open undeveloped space, shrub and forested areas near and around the Blue River, the Little Blue River, and Camp Creek, plus their tributaries and a tributary of Round Grove Creek. Based on the limited vegetation present and general urban environment, the wildlife present would be limited to common urban/suburban wildlife. A Habitat Assessment was completed utilizing the field study area, Habitat Assessment sheets are located in **Attachment A**.

Federally listed Threatened and Endangered Species (TES) are subject to the protection afforded under Section 7 of the Endangered Species Act of 1973, as amended (ESA) (16USC 1531 et seq.). The ESA provides protection of animal and plant species that are in population decline and in jeopardy of becoming extinct.

A desktop survey was completed utilizing the U.S. Fish and Wildlife Service (USFWS) IPaC tool and the Missouri Department of Conservation (MDC) Natural Heritage Database in July 2024 and updated in December 2025. USFWS and IPaC consultation documentation is included in **Attachment B**. The following species of concern were listed based on the above reviews.

Table 1: Federal and State Listed Threatened and Endangered Species

Common Name	Scientific Name	Federal Status[1][2]	State Status[2]	Critical Habitat in Project Study Area	Effects[3] Determination
Monarch Butterfly	*Danaus plexippus*	Proposed Threatened	Not Listed	None	NLJ
Western Regal Fritillary	*Argynnis idalia occidentalis*	Proposed Threatened	Not Listed	None	No Effect
Pallid Sturgeon	*Scaphirhynchus albus*	Endangered	Endangered	None	No Effect
Tricolored Bat	*Perimyotis subflavus*	Proposed Endangered	Not Listed	None	NLJ
Gray Bat	*Myotis grisescens*	Endangered	Endangered	None	No Effect
Indiana Bat	*Myotis sodalis*	Endangered	Endangered	None	NLAA
Northern Long-Eared Bat	*Myotis septentrionalis*	Endangered	Endangered	None	NLAA

(1) USFWS IPaC tool, December 2025
(2) MDC Natural Heritage Database, December 2025
(3) NLJ –Not Likely to Jeopardize the Existence of the Species
(4) NLAA – May Affect, Not Likely to Adversely Affect

A Habitat Assessment was completed to determine the likelihood or the presence of any of the above listed species within the field study area as well as migratory birds and bald or golden eagles in accordance with the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA).

Monarch Butterfly

Two Monarch butterfly populations exist in North America—east and west of the Rocky Mountains. The western population migrates to overwintering sites in California, and the eastern population migrates to the country of Mexico. Both populations are in serious decline, but the western population has been nearly extinct in recent years. Under the

ESA, if the USFWS determines that the western population should be protected and listed, the eastern population must receive the same protections and listing status. Milkweed is an obligate host plant for eggs and larvae, and adult butterflies need a variety of blooming nectar sources during breeding and migration. There were no milkweed species observed during the field investigations; however, impact to the greenspace within the I-70 ROW could affect monarch butterfly habitat. As a result, this project will not jeopardize the existence of the monarch butterfly.

Western Regal Fritillary Butterfly

The regal fritillary is a non-immigratory butterfly found in grassland habitat from Indiana to Colorado and from North Dakota to Oklahoma. There is one generation each year and they only have one larval food source, violets. The western regal fritillary requires large, intact grasslands at a landscape level, generally more than 3.96 square miles, with diverse plant species, including violets and nectar sources for adults and be maintained by periodic disturbances in order to control the encroachment of woody vegetation. According to the USFWS, the regal fritillary is unable to survive in any sort of altered habitat. The greenspace within the I-70 ROW does not meet the habitat requirements for the western regal fritillary. Therefore, the project will have no effect on this species

Pallid Sturgeon

Pallid sturgeon are found in the Missouri and Mississippi Rivers and some of their major tributaries in Missouri. Their preferred habitat has a diversity of depths and velocities formed by braided channels, sand bars, sand flats, and gravel bars. There will be no impact to the Mississippi or Missouri Rivers or their major tributaries; therefore, the project will have no effect on the pallid sturgeon or its habitat.

Gray, Indiana, Northern Long-Eared Bats

Gray bats are cave obligate species which congregate in maternity or bachelor colonies in the summer using dome cave and mine habitats, and during winter hibernation congregate in mixed colonies in vertical or pit-type caves and mines. They use mainly stream corridors for foraging spring through fall. Gray bats have been recorded statewide except for northwest Missouri. It is possible for gray bats to roost in small clusters temporarily on a bridge or inside large culverts.

Indiana and northern long-eared bats hibernate in caves during winter and spend the breeding season in forested areas of the state where they may use suitable summer roost trees. Roosting and maternity habitats consist primarily of live or dead hardwood trees with shingle-like bark, providing space for bats to roost underneath the bark. Summer habitats for these species include minimum diameter, measured at breast height (dbh), five-inch trees for Indiana bats (IB) and three-inch trees for northern long-eared bats (NLEB) with suitable characteristics of exfoliating bark, splits, crevices, hollow sections, and other damage. These two bat species could occur anywhere in Missouri where suitable habitat exists. Removal of suitable summer roost trees at any time of the year may affect both species.

A search of the Missouri Department of Natural Resources (MoDNR) Geosciences Technical Resource Assessment Tool (GeoSTRAT) did not show any mines or karst features (sinkholes, caves, losing streams, or springs) within the field study area and no mines, quarries, or karst features were observed during the field investigations on July 22-23, 2024, and April 1, 2025. Bridges and culverts were checked for the presence of bats, however, there were no indications of use by bats and no bats were observed during the field investigations. Thirteen stream locations were investigated resulting in

the confirmation of six perennial streams, four intermittent streams, and three ephemeral drainages. The forested habitat and streams provide foraging habitat for gray bats but not suitable roosting habitat. Since no mines, quarries, or karst features were observed during the field investigations, and no bridges or culverts showed signs of being used by bats, the proposed project will have No Effect on the gray bat or its habitat.

Habitat and roosting requirements for the remaining bat species include mature trees with exfoliating bark or snags present for roosting, or trees that are at least three inches dbh for NLEB or five inches dbh for IB with exfoliating bark, cracks, crevices, and/or hollows. The field study area is completely within ROW with some forested habitat or riparian areas. A field investigation was conducted to determine the presence or absence of suitable forested habitat within the field study area. Suitable bat habitat was found in three locations throughout the field study area.

Tricolored Bats

In September 2022, Tricolored bats (TCB) were federally proposed as endangered. They mainly roost in foliage of live and dead trees in the spring, summer, and fall, and hibernate in caves and other subterranean habitats during the winter. According to the USFWS 2024 *Range-wide Indiana bat and Northern Long-eared Bat Survey Guidelines*, updated to include the tricolored bat, tricolored bats will roost in a variety of tree species, especially oaks, often selecting roosts in tall, large diameter trees. However, tricolored bats will roost in smaller diameter trees (4-inch diameter) when potential roost substrate, such as live/dead leaf clusters, Spanish moss, recently dead deciduous trees, and beard lichen, is present. These bats can occasionally be found roosting on bridges and in culverts. The primary threat to this species is white nose syndrome (WNS), which typically afflicts bats during hibernation. Given the extreme losses from WNS and impact of wind industry related mortality- loss of roosting, foraging, and commuting habitat (forested habitat) between summer and winter can have a large impact, depending on timing, location, and extent of removal. A field survey was conducted to verify the potential roosting habitats for the TCB. Suitable TCB habitat was found in four locations throughout the field study area. The proposed project is not likely to jeopardize the existence of the TCB.

Due to requirements for additional protections of the Bald and Golden Eagle as well as migratory birds, further discussion is included below regarding the bald eagle and migratory birds.

Bald Eagle

The bald eagle is not a listed threatened or endangered species; however, it is still afforded protection by the federal government under the Bald and Golden Eagle Protection Act (BGEPA) and the MBTA. The BGEPA provides for the protection of bald and golden eagles by prohibiting the taking, possession, and commerce of such birds, except under certain specified conditions. There is no nesting habitat for bald or golden eagles within the Project Area. According to the USFWS, bald eagles generally select the tops of the tallest trees to build nests, with limbs strong enough to support them. Nests are four to five feet wide and two to four feet deep, but can reach 10 feet across. Eagles tend to use the same nest each year, adding additional material. Additionally, eagles tend to choose nesting spots within clear view of a water body capable of foraging. The closest area with the potential for nesting trees is the Missouri River, which is approximately 4.6 miles away from the Project Area at its closest point. Due to the lack of nesting trees within or adjacent to the Project Area, the proposed project would not result in the taking of bald or golden eagles.

Migratory Birds

The MBTA makes it unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture, or kill; possess, offer to sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product, manufactured or not. Under the MBTA, "migratory birds" includes all birds native to the U.S. and the regulations pertain to any time of the year, not just during migration. Various bird species could be using existing structures within the Project Area for nesting. To comply with the MBTA, nests of protected species cannot be disturbed when active (eggs or young are present). Nests were observed on some bridges during the field survey, although none were noted as being active at the time. Prior to construction, bridges will also be checked again for potential active nests. If migratory birds are found to be nesting, then a protective Job Special Provision (JSP) will be put in place to avoid conflict with the MBTA and follow up with the MDC will be initiated. In addition, construction will need to be conducted outside of nesting season which is considered April 1st to July 31st in Missouri. Based on the above conservation measures, impacts to migratory birds would be minimal.

A field survey was conducted in July 2024 and April 2025 to determine the presence or absence of suitable habitat for TES and the presence of nesting for migratory birds on structures in the field study area. Structures were observed and photographed, if able to safely obtain a photograph along the interstate, to determine if nesting was or had occurred for migratory birds. Structures not photographed due to not being close enough for detailed photos, were observed through binoculars and viewed in street view on Google Earth. Interstate bridge photos in the attached photo log are representative of the bridges throughout the project corridor. The locations of the structures photographed are included in **Exhibit 2** and photographs of any observed nests are included in **Attachment A**. All nests observed were not active at the time of the field survey.

A suitable habitat assessment for the three listed endangered and one proposed endangered bat species was completed during the field survey. Habitat was considered suitable based on the USFWS definition of suitable habitat which can include forests, woodlots, and linear features like fencerows and riparian forests with live or dead trees that are at least three inches in diameter at breast height (dbh) and have cracks, crevices, cavities, or exfoliating bark. Additionally, individual trees can also be considered suitable habitat if they are within 1,000 feet of other forested areas with similar characteristics. Four areas within the field study area were observed and considered as potential summer habitat for the listed bat species during the field survey. Other areas with trees throughout the field study area were not considered suitable due to the absence of deciduous trees over 3 inches in diameter and no trees with snags or exfoliating bark. A Phase I Habitat Assessment was completed at each of these areas and summarized below. Each potential habitat location is shown on **Exhibit 2**. Photographs and field data sheets for each area are located in **Attachment A**. All four sites are considered suitable habitat for the TCB. The below discussion is describing the habitat in relation to suitability for the NLEB and IB.

Sample Site S1

Sample Site S1 is located in the wooded area along the exit ramp of I-70 onto I-435 south (Exit 8A). The sample area point was taken outside of the field study area as there was no safe access into the field study area due to steep slopes and a very thick understory of shrubs and trees. Observations and photographs were taken of the edge of the field study area from approximately 75 feet with the use of binoculars. The

closure/density of the canopy (trees >50 feet) was approximately 25 percent, midstory (trees 20-50 feet tall) closure/density was approximately 50 percent, and the understory (trees < 20 feet tall) closure/density was 100 percent which limits the available flying space for bats. The estimated composition of trees was approximately 80 percent of small trees (3 to 8 inches dbh), 15 percent medium trees (9 to 15 inches dbh), and five percent large trees (>15 inches dbh). There were no suitable roosting trees or snags noted. Therefore, the area was not considered suitable summer bat roosting habitat for the NLEB or IB.

Sample Site S2
Sample Site S2 is located along the off ramp of I-70 onto Manchester Trafficway (Exit 7B). The closure/density of the canopy was approximately 70 percent, midstory closure/density was approximately 80 percent, and the understory closure/density was 100 percent. The high closures/densities do not provide adequate space for bats to fly through much of the wooded area and no obvious flyways, or obvious flight paths, through the area were observed. The percentage of trees with exfoliating bark was estimated to be less than five percent for small trees and less than five percent for medium trees. No large trees with exfoliating bark were observed. The estimated composition of trees was 30 percent of small trees, 60 percent of medium trees, and five percent of large trees. One suitable snag was observed in this area. Because of the small percentage of suitable trees/snags within Sample Site S2 the area contains suitable summer NLEB and IB roosting habitat. However, due to the high percentages of closures/densities limiting flying space with no observed flyways, Site S2 provides relatively low-quality habitat.

Sample Site S3
Sample Site S3 is located along the off ramp of I-470 onto I-70 (Exit 16B). The closure/density of the canopy was approximately 60 percent, midstory closure/density was approximately 80 percent, and the understory closure/density was 100 percent. The high closure density created limited flying space for the bats and no obvious flyway was observed. The percentage of trees with exfoliating bark was estimated to be less than five percent for small trees. No medium or large trees with exfoliating bark were observed. The estimated composition of trees was 50 percent of small trees, 30 percent of medium trees, and ten percent of large trees. The area contained one suitable snag, some suitable live trees with exfoliating bark, therefore, the area contains suitable summer NLEB and IB roosting habitat. However, due to the high percentages of closures/densities limiting flying space with no observed flyways, Site S3 provides relatively low-quality habitat.

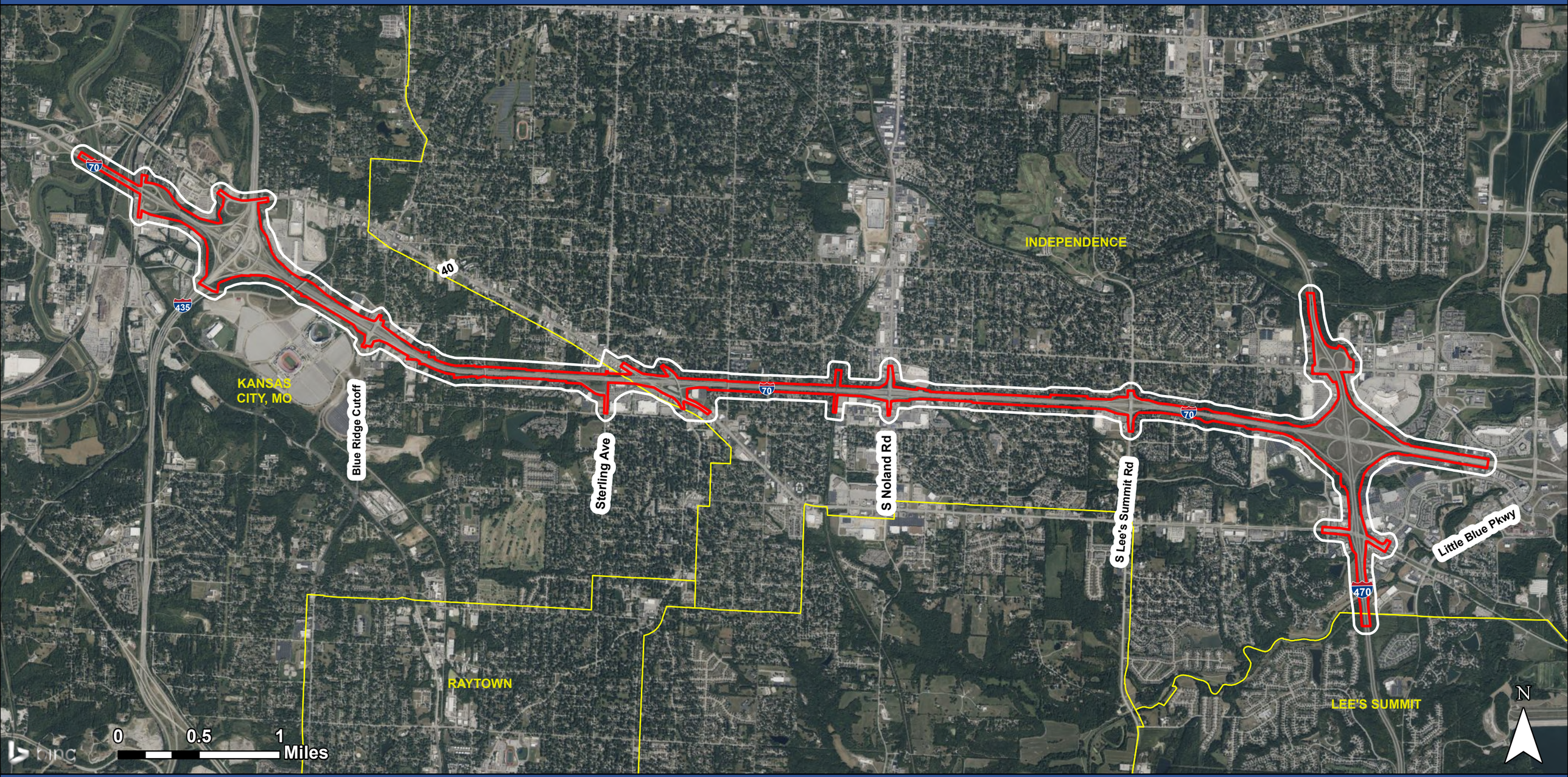
Sample Site S4
Sample Site S4 is located west the off ramp of I-470 onto I-70 west (Exit 16C). The closure/density of the canopy was approximately 10 percent, midstory closure/density was approximately 60 percent, and the understory closure/density was 80 percent. No live trees with exfoliating bark and one suitable snag were observed. The estimated composition of trees was 60 percent of small trees, 20 percent of medium trees, and less than five percent of large trees. Due to the presence of one snag, the area contains suitable NLEB and IB summer roosting habitat. However, due to the presence of only one snag and no live trees with exfoliating bark, Site S4 is considered to be low quality roosting habitat.

In addition, bridges and culverts were observed during the field survey for signs of bat roosting evidence. Bridges and culverts were viewed and photographed, when able to safely obtain a photograph. There were no signs of bat roosting behavior on any structures within the field study area. Locations and photographs of structures are located in **Exhibit B** and **Attachment A**, respectively.

Due to the presence of suitable habitat, it is recommended to incorporate a winter tree clearing JSP limiting clearing of suitable habitat to between October 15th and March 31st. With the tree clearing limited to the winter months and the small percentage of suitable habitat, the Project is considered to have a jay affect, not Likely to adversely affect determination for the NLEB and IB and is not likely to jeopardize the existence of the TCB.

Project Area

Exhibit 1

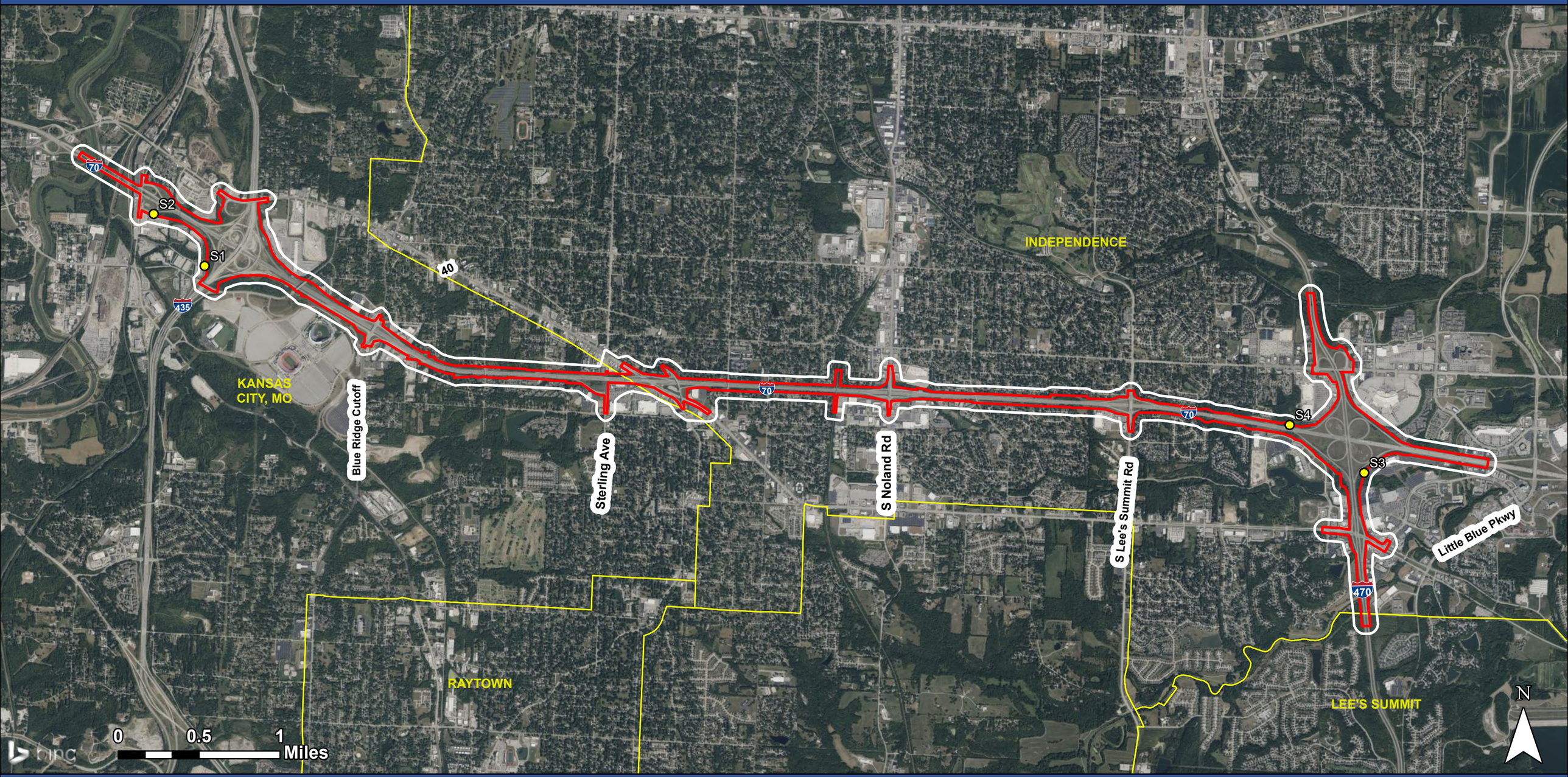


Project Area
Field Work Study Area
City Boundary

I-70 Environmental Assessment: I-435 to I-470

Potential Bat Habitat Locations

Exhibit 2



- Project Area
- Field Work Study Area
- City Boundary
- Habitat Assessment Location

I-70 Environmental Assessment: I-435 to I-470

Attachment A

Habitat Assessment Data Sheets & Photo Log

Use additional sheets to assess discrete habitat types at multiple sites in a project area

Include a map depicting locations of sample sites if assessing discrete habitats at multiple sites in a project area

A single sheet can be used for multiple sample sites if habitat is the same

Sample Site Description
Sample Site No.(s): _____

Water Resources at Sample Site				
Stream Type (# and length)	Ephemeral	Intermittent	Perennial	Describe existing condition of water sources:
	N/A	N/A	N/A	dry
Pools/Ponds (# and size)	N/A	Open and accessible to bats?		
Wetlands (approx. ac.) N/A	Permanent	Seasonal		

Forest Resources at Sample Site				
Closure/Density	Canopy (> 50')	Midstory (20-50')	Understory (<20')	1=1-10%, 2=11-20%, 3=21-40%, 4=41-60%, 5=61-80%, 6=81-100%
	25%	50	100%	
Dominant Species of Mature Trees	cottonwood			
% Trees w/ Exfoliating Bark	0%			
Size Composition of Live Trees (%)	Small (3-8 in)	Med (9-15 in)	Large (>15 in)	
	80	15%	5%	
No. of Suitable Snags		0		

Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.

IS THE HABITAT SUITABLE FOR INDIANA BATS? N

IS THE HABITAT SUITABLE FOR NORTHERN LONG-EARED BATS? N

Additional Comments:

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees, water sources

Use additional sheets to assess discrete habitat types at multiple sites in a project area

Include a map depicting locations of sample sites if assessing discrete habitats at multiple sites in a project area
A single sheet can be used for multiple sample sites if habitat is the same

Sample Site Description

Sample Site No.(s): 2

Water Resources at Sample Site

Stream Type (# and length)	Ephemeral	Intermittent	Perennial	Describe existing condition of water sources
	x			dry
Pools/Ponds (# and size)	N/A	Open and accessible to bats?		
Wetlands (approx. ac.)	Permanent	Seasonal		
	N/A	N/A		

Forest Resources at Sample Site

Closure/Density	Canopy (> 50')	Midstory (20-50')	Understory (<20')	1=1-10%, 2=11-20%, 3=21-40%, 4=41-60%, 5=61-80%, 6=81-100%
	70%	80%	100%	
Dominant Species of Mature Trees	walnut, cottonwood			
% Trees w/ Exfoliating Bark	5%	5%	0	
Size Composition of Live Trees (%)	Small (3-8 in)	Med (9-15 in)	Large (>15 in)	
	30	60%	5%	
No. of Suitable Snags	0	1		

Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.

IS THE HABITAT SUITABLE FOR INDIANA BATS? N

IS THE HABITAT SUITABLE FOR NORTHERN LONG-EARED BATS? N

Additional Comments:

dense understory, lack of suitable trees w/ exfoliating bark, ephemeral stream dry shortly after rain

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees; water sources

Use additional sheets to assess discrete habitat types at multiple sites in a project area
Include a map depicting locations of sample sites if assessing discrete habitats at multiple sites in a project area
A single sheet can be used for multiple sample sites if habitat is the same

Sample Site Description
Sample Site No.(s) 3

Water Resources at Sample Site				
Stream Type (# and length)	Ephemeral	Intermittent	Perennial	Describe existing condition of water sources: N/A
Pools/Ponds (# and size)		Open and accessible to bats?		
Wetlands (approx. ac.)	Permanent	Seasonal		

Forest Resources at Sample Site				
Closure/Density	Canopy (> 50')	Midstory (20-50')	Understory (<20')	1=1-10%, 2=11-20%, 3=21-40%, 4=41-60%, 5=61-80%, 6=81-100%
			100%	
Dominant Species of Mature Trees	Honey Locust, cotton wood			
% Trees w/ Exfoliating Bark	5%	0%	0%	
Size Composition of Live Trees (%)	Small (3-8 in)	Med (9-15 in)	Large (>15 in)	
	50	30	10	
No. of Suitable Snags		1		

Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.

IS THE HABITAT SUITABLE FOR INDIANA BATS? N

IS THE HABITAT SUITABLE FOR NORTHERN LONG-EARED BATS? N

Additional Comments:

No water source, not enough qualifying trees

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees, water sources

Use additional sheets to assess discrete habitat types at multiple sites in a project area
Include a map depicting locations of sample sites if assessing discrete habitats at multiple sites in a project area
A single sheet can be used for multiple sample sites if habitat is the same

Sample Site Description
Sample Site No.(s): 4

Water Resources at Sample Site				
Stream Type (# and length)	Ephemeral: 1	Intermittent:	Perennial:	Describe existing condition of water sources: dry Not accessible to bats
Pools/Ponds (# and size)	N/A	Open and accessible to bats? N		
Wetlands (approx. ac.)	Permanent: N	Seasonal: N		

Forest Resources at Sample Site				
Closure/Density	Canopy (> 50'): 10	Midstory (20-50'): 60	Understory (<20'): 80	1=1-10%, 2=11-20%, 3=21-40%, 4=41-60%, 5=61-80%, 6=81-100%
Dominant Species of Mature Trees	Walnut, Honey Locust			
% Trees w/ Exfoliating Bark	0	0	0	
Size Composition of Live Trees (%)	Small (3-8 in): 0	Med (9-15 in): 1	Large (>15 in): 0	
No. of Suitable Snags				

Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.

IS THE HABITAT SUITABLE FOR INDIANA BATS? N

IS THE HABITAT SUITABLE FOR NORTHERN LONG-EARED BATS? N

Additional Comments:
Not enough snags/suitable trees or permanent water source

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees, water sources

Photo 1: Sample Site S1 location facing NE, view of tree line from outside of Project Area.

Photo 2: Sample Site S2 location facing N, view of the tree line and steep slope covered in thick vegetation.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 3: Sample Site S2 facing NE, view of large trees that could be considered suitable habitat.

Photo 4: Sample Site S2 location facing E, view of tree line along I-70.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 5: Sample Site S3 location facing W, view of the tree line along I-470. Suitable snags spotted from outside the Project Area.

Photo 6: Sample Site S3, view within the Project Area and wooded area. Wooded area noted to have a dense cover and lack of mature trees.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 7: Sample Site S4 location facing W, view of tree line and larger trees present in the area.

Photo 8: Sample Site S4, potential suitable snag.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 9: Culvert located along I-70.

Photo 10: Culvert along I-70, noted as wetland area in NWI maps. Observed dry and without wetland or TES habitat indicators.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 11: I-70 bridge overview in the western portion of the Project Area.

Photo 12: I-70 bridge overview in the central portion of the Project Area.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Photo 13: I-70 bridge overview in the eastern portion of the Project Area.

Photo 14: Swallow nests noted on western most bridge, crossing the Blue River. Nests were not active during field observation.

Project: I-70 (I-435 to I-470) Project
County: Jackson
State: Missouri
City: Kansas City

Attachment B

IPaC and USFWS Consultation

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
Phone: (573) 234-2132 Fax: (573) 234-2181

In Reply Refer To: 12/18/2025 16:10:40 UTC
Project Code: 2026-0028725
Project Name: I-70: I-435 to I-470 Environmental Assessment

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Threatened and Endangered Species

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and may be affected by your proposed project. The species list fulfills the requirement for obtaining a Technical Assistance Letter from the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).
New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. **Note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days.** The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

Consultation Technical Assistance

Refer to the Midwest Region S7 Technical Assistance website for step-by-step instructions for making species determinations and for specific guidance on the following types of projects: projects in developed areas, HUD, pipelines, buried utilities, telecommunications, and requests

for a Conditional Letter of Map Revision (CLOMR) from FEMA. Please contact the appropriate POC at Missouri Ecological Services for any additional consultation needs.

Federally Listed Bat Species

Indiana bats, gray bats, and northern long-eared bats occur throughout Missouri and the information below may help in determining if your project may affect these species.

Gray bats - Gray bats roost in caves or mines year-round and use water features and forested riparian corridors for foraging and travel. If your project will impact caves, mines, associated riparian areas, or will involve tree removal around these features – particularly within stream corridors, riparian areas, or associated upland woodlots –gray bats could be affected.
Indiana and northern long-eared bats - These species hibernate in caves or mines only during the winter. In Missouri the inactive season is considered to be October 15 to March 31 unless the project is located within a 1/2 mile of a hibernacula. During the active season in Missouri they roost in forest and woodland habitats. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥5 inches diameter at breast height (dbh) for Indiana bat, and ≥3 inches dbh for northern long-eared bat, that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Tree species often include, but are not limited to, shellbark or shagbark hickory, white oak, cottonwood, and maple. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, Indiana bats or northern long-eared bats could be affected.
Examples of unsuitable habitat include:

- Individual trees that are greater than 1,000 feet from forested or wooded areas;
- Trees found in highly-developed urban areas (e.g., street trees, downtown areas);
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees; and
- A stand of eastern red cedar shrubby vegetation with no potential roost trees.

Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species

1. If IPaC returns a result of “There are no listed species found within the vicinity of the project,” then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example "No Effect" document also can be found on the S7 Technical Assistance website.

2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project – other than bats (see #3 below) – then project proponents can conclude the proposed activities **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain Life History Information for Listed and Candidate Species through the Species website.
3. If IPac returns a result that one or more federally listed bat species (Indiana bat, northern long-eared bat, or gray bat) are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** these bat species **IF** one or more of the following activities are proposed:
    a. Clearing or disturbing suitable roosting habitat, as defined above, at any time of year;
    b. Any activity in or near the entrance to a cave or mine;
    c. Mining, deep excavation, or underground work within 0.5 miles of a cave or mine;
    d. Construction of one or more wind turbines; or
    e. Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on listed bat species. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example "No Effect" document also can be found on the S7 Technical Assistance website.
If any of the above activities are proposed in areas where one or more bat species may be present, project proponents can conclude the proposed activities **may affect** one or more bat species. We recommend coordinating with the Service as early as possible during project planning. If your project will involve removal of over 5 acres of suitable forest or woodland habitat, we recommend you complete a Summer Habitat Assessment prior to contacting our office to expedite the consultation process. The Summer Habitat Assessment Form is available in Appendix A of the most recent version of the Range-wide Indiana Bat Summer Survey Guidelines.

Other Trust Resources and Activities

Bald and Golden Eagles - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. Should bald or golden eagles occur within or near the project area please contact our office for further coordination. For communication and wind energy projects, please refer to additional guidelines below.

Migratory Birds - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA

to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

Communication Towers - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed voluntary guidelines for minimizing impacts.

Transmission Lines - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to guidelines developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

Wind Energy - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's Wind Energy Guidelines. In addition, please refer to the Service's Eagle Conservation Plan Guidance, which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

Next Steps

Should you determine that project activities **may affect** any federally listed species or trust resources described herein, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

If you have not already done so, please contact the Missouri Department of Conservation (Policy Coordination, P. O. Box 180, Jefferson City, MO 65102) for information concerning Missouri Natural Communities and Species of Conservation Concern.
We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

John Weber

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
(573) 234-2132

PROJECT SUMMARY

Project Code: 2026-0028725
Project Name: I-70: I-435 to I-470 Environmental Assessment
Project Type: Road/Hwy - Maintenance/Modification
Project Description: Environmental review for the expansion project on I-70: I-435 to I-470.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.0463313,-94.42226992508301,14z

Counties: Jackson County, Missouri

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329 General project design guidelines: https://ipac.ecosphere.fws.gov/project/S2FXIFVI7VCGVIVPCHOPBS625E/documents/generated/9456.pdf	Endangered
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 General project design guidelines: https://ipac.ecosphere.fws.gov/project/S2FXIFVI7VCGVIVPCHOPBS625E/documents/generated/9456.pdf	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 General project design guidelines: https://ipac.ecosphere.fws.gov/project/S2FXIFVI7VCGVIVPCHOPBS625E/documents/generated/9456.pdf	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515 General project design guidelines: https://ipac.ecosphere.fws.gov/project/S2FXIFVI7VCGVIVPCHOPBS625E/documents/generated/9456.pdf	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Western Regal Fritillary *Argynnis idalia occidentalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Jamie Gregory
Address: 601 E Locust St
City: Des Moines
State: IA
Zip: 50309
Email jagregory@hntb.com
Phone: 5152598400

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

Attachment C

Jackson County Natural Heritage Review

Missouri Department of Conservation

Missouri Department of Conservation's Mission is to protect and manage the forest, fish, and wildlife resources of the state and to facilitate and provide opportunities for all citizens to use, enjoy and learn about these resources.

Natural Heritage Review Level Three Report: Species Listed Under the Federal Endangered Species Act

There are records of species listed under the Federal Endangered Species Act, and possibly also records for species listed Endangered by the state, or Missouri Species and/or Natural Communities of Conservation Concern within or near the the defined Project Area. Please contact the U.S. Fish and Wildlife Service and the Missouri Department of Conservation for further coordination.

Foreword: Thank you for accessing the Missouri Natural Heritage Review Website developed by the Missouri Department of Conservation with assistance from the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, Missouri Department of Transportation and NatureServe. The purpose of this report is to provide information to federal, state and local agencies, organizations, municipalities, corporations, and consultants regarding sensitive fish, wildlife, plants, natural communities, and habitats to assist in planning, designing, and permitting stages of projects.

PROJECT INFORMATION

Project Name and ID Number: I-435/I-470 EA #18720
Project Description: The proposed project will address existing and future conditions along the I-70 corridor from I-435 to I-470.
Project Type: Transportation, Roads
Project Size (acres): 394,270.87
Contact Person: Sami Sawyer
Contact Information: ssawyer@hntb.com or 6366220712
Counties: Cass; Clay; Jackson; Johnson; Lafayette; Ray
Township/Range/Sections: Landgrant02839; Landgrant02868; Landgrant02887; Landgrant02889; T46NR29WS03; T46NR29WS04; T46NR29WS05; T46NR29WS06; T46NR30WS01; T46NR30WS02; T46NR30WS03; T46NR30WS04 +

PRELIMINARY REPORT

Disclaimer: This NATURAL HERITAGE REVIEW REPORT identifies if a species or natural community tracked by the Natural Heritage Program is known to occur within or near the project area submitted, and shares recommendations to avoid or minimize project impacts to sensitive species or natural habitats. Incorporating information from the Natural Heritage Program into project plans is an important step in reducing impacts to Missouri's sensitive natural resources. If an occurrence record is present, or the proposed project might affect federally listed species, the user must contact the Department of Conservation or U.S. Fish and Wildlife Service for more information.

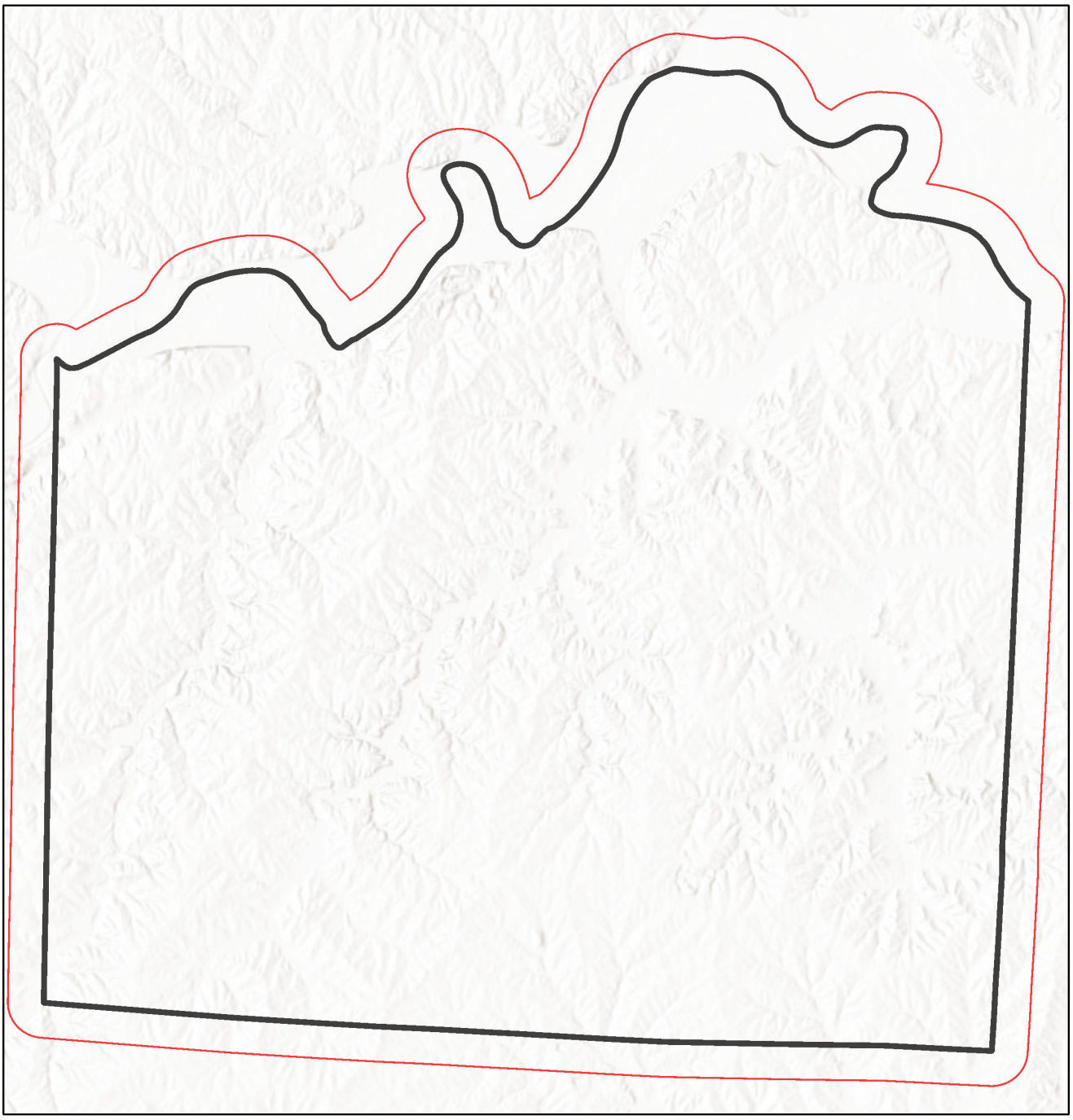
This Natural Heritage Review Report is not a site clearance letter for the project. Rather, it identifies public lands and records of sensitive resources located close to and/or potentially affected by the proposed project. If project plans or location change, this report may no longer be valid. Because land use conditions change and animals move, the existence of an occurrence record does not mean the species/habitat is still present. Therefore, reports include information about records near but not necessarily on the project site. Lack of an occurrence record does not mean that a sensitive species or natural community is not present on or near the project area. On-site verification is the responsibility of the project. However, the Natural Heritage Program is only one reference that should be used to evaluate potential adverse project impacts and additional information (e.g. wetland or soils maps, on-site inspections or surveys) should be considered. Reviewing current landscape and habitat information, and species' biological characteristics would additionally ensure that Missouri Species of Conservation Concern are appropriately identified and addressed in planning efforts.

U.S. Fish and Wildlife Service – Endangered Species Act (ESA) Coordination: Lack of a Natural Heritage Program occurrence record for federally listed species in your project area does not mean the species is not present, as the area may never have been surveyed. Presence of a Natural Heritage Program occurrence record does not mean the project will result in negative impacts. This report does not fulfill Endangered Species Act consultation with the U.S. Fish and Wildlife Service (USFWS) for listed species. Direct contact with the USFWS may be necessary to complete consultation and it is required for actions with a federal connection, such as federal funding or a federal permit; direct contact is also required if ESA concurrence is necessary. Visit IPaC: Home (fws.gov) to initiate USFWS Information for Planning and Conservation (IPaC) consultation. Contact the Columbia Missouri Ecological Field Services Office (573-234-2132, or by mail at 101 Park Deville Drive, Suite A, Columbia, MO 65203) for more information.

Transportation Projects: If the project involves the use of Federal Highway Administration transportation funds, these recommendations may not fulfill all contract requirements. Please contact the Missouri Department of Transportation at 573-526-4778 or visit Home Page | Missouri Department of Transportation (modot.org) for additional information on recommendations.

PRELIMINARY REPORT

I-435/I-470 EA



December 16, 2025

1:250,361

Buffered Project Boundary

Project Boundary

0 2 4 8 mi

0 3.25 6.5 13 km

Sources: Esri, Vantor, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community

Species or Communities of Conservation Concern within the Area:

There are records of species listed under the Federal Endangered Species Act, and possibly also records for species listed Endangered by the state, or Missouri Species and/or Natural Communities of Conservation Concern within or near the defined Project Area. Please contact the U.S. Fish and Wildlife Service and the Missouri Department of Conservation for further coordination.

Email (preferred): NaturalHeritageReview@mdc.mo.gov
MDC Natural Heritage Review
Science Branch
P.O. Box 180
Jefferson City, MO
65102-0180
Phone: 573-522-4115 ext. 3182

U.S. Fish and Wildlife Service
Ecological Service
101 Park Deville Drive
Suite A
Columbia, MO
65203-0007
Phone: 573-234-2132

Other Special Search Results:

The project occurs on or near public land, Blue Springs (Lake Remembrance), Bridger (Jim) Urban CA, Burr Oak Woods CA, Cooley Lake CA, Gorman (The Anita B) Conservation Discovery Center, Harry S Truman National Historic Site, Independence, Jackass Bend, Jackson County (Alex George Lake), Jackson County (Bergan Lake), Jackson County (Blue Springs Lake), Jackson County (Bowlin Pond), Jackson County (Brown Athletic Field Access), Jackson County (Fort Osage County Park), Jackson County (Lake Jacomo), Jackson County (Prairie Lee Lake), Jackson County (Scherer Lake), Jackson County (Tarsney Lake), Jackson County (Wood Lake), Jackson County (Wyatt Lake), Kansas City, Kansas City (Blue Valley Lake), Kansas City (Lake of the Woods), Kansas City (Migliazzo Lake), Kansas City (North Terrace Lake), Kansas City (Penn Valley Lake), Kansas City (Smith Lake), Kansas City (Troost Lake), Kansas City Riverfront Park Access, LONGVIEW LAKE, Lake City AAP, Lake City Range, Liberty (Fountain Bluff Park Pond 1), Liberty (Fountain Bluff Park Pond 2), Liberty (Fountain Bluff Park Pond 3), Liberty (Fountain Bluff Park Pond 4), Liberty (Fountain Bluff Park Pond 5), Liberty (Fountain Bluff Park Pond 6), Liberty (Fountain Bluff Park Pond 7), Liberty (Fountain Bluff Park Pond 8), Liberty Bend CA, Lipton CA, Lone Jack Lake CA, NOSC Kansas City, Pigg's Landing Access, Raytown, Reed (James A) Mem WA, Saeger Woods CA, Sni-A-Bar CA, Sugar Creek (LaBenite Park), Thomas Hart Benton Home and Studio State Historic*, please contact MDC, NPS, MOARNG, USFWS, COE, US Milita*, DNR.

Your project is near a designated Natural Area . Please contact Missouri Department of Conservation (NaturalHeritageReview@mdc.mo.gov) for further coordination.

Project Type Recommendations:
Transportation - Roads: New and Maintenance projects typically change the plants and animals that live on the right-of-way or in the vicinity. Minimize erosion and sedimentation/runoff to nearby streams and lakes by carefully adhering to any Clean Water Act permit conditions; and include design elements to manage stormwater so that present water discharge rates from the site to streams during heavy rain events are not increased. Revegetation of disturbed areas is recommended to minimize erosion, as is restoration with native plant species compatible with the local landscape and wildlife needs. Annuals like ryegrass may be combined with native perennials for quicker green-up. Avoid aggressive exotic perennials such as crown vetch and sericea lespedeza.
Maintenance of ground cover in utility corridors can have significant implications for sensitive resources. Native plant species typically require low maintenance over the long term, and provide more benefits to native wildlife. Use silt fences and/or vegetative filter strips to buffer streams and drainages, and monitor those after rain events and until a well-rooted ground cover is reestablished. Please see Best Management Practices for Construction and Development Projects Affecting Missouri Rivers and Streams (mo.gov).

Project Location and/or Species Recommendations:

Endangered Species Act Coordination - If this project has the potential to alter habitat (e.g. tree removal, projects in karst habitat) or cause direct mortality of bats, please coordinate directly with U.S. Fish and Wildlife Service (Ecological Services, 101 Park Deville Drive, Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132 Ext. 100 for Ecological Services) for further coordination under the Endangered Species Act. Indiana bats *(Myotis sodalis*, federal- and state-listed endangered) and **Northern long-eared bats** (*Myotis septentrionalis,* federal-listed endangered) may occur near the project area. Both of these species of bats hibernate during winter months in caves and mines. During the summer months, they roost and raise young under the bark of trees in wooded areas, often riparian forests and upland forests near perennial streams. During project activities, avoid degrading stream quality and where possible leave snags standing and preserve mature forest canopy. Do not enter caves known to harbor Indiana bats or Northern long-eared bats, especially from September to April.

Bald Eagle: The project location submitted and evaluated is within the geographic range of nesting Bald Eagles in Missouri. Bald Eagles (*Haliaeetus leucocephalus*) may nest near streams or water bodies in the project area. Nests are large and fairly easy to identify. Adults begin nesting activity in late December and January and young birds leave the nest in late spring to early summer. While no longer listed as endangered, eagles continue to be protected by the federal government under the Bald and Golden Eagle Protection Act. Work managers should be alert for nesting areas within 1500 meters of project activities, and follow federal guidelines at: Do I need an eagle take permit? | U.S. Fish & Wildlife Service (fws.gov) if eagle nests are seen.

Karst: This county has known karst geologic features (e.g., caves, springs, and sinkholes, all characterized by subterranean water movement). Few karst features are recorded in Natural Heritage records, and ones not noted here may be encountered at the project site or affected by the project. Cave fauna (many of which are Species of Conservation Concern) are influenced by changes to water quality; please check your project site for any karst features and make every effort to protect groundwater in the project area. Additional information and specific recommendations are available at Management Recommendations for Construction and Development Projects Affecting Missouri Karst Habitat (mo.gov).

Pallid Sturgeon: The project location submitted and evaluated is located within or adjacent to the Mississippi or Missouri rivers. Pallid Sturgeons (*Scaphirhynchus albus*, federal- and state-listed endangered) are big river fish that range widely in the Mississippi and Missouri River system (including parts of some major tributaries). Any project that modifies big river habitat or impacts water quality should consider the possible impact to pallid sturgeon populations. See Pallid Sturgeon Best Management Practices (mo.gov) for Best Management Practices. Additional coordination with the U.S. Fish and Wildlife Service under the Endangered Species Act may be necessary (U.S. Fish and Wildlife Service, Ecological Services, 101 Park DeVille Drive, Suite A, Columbia, Missouri 65203-0007; phone 573-234-2132.)

PRELIMINARY REPORT

Invasive exotic species are a significant issue for fish, wildlife and agriculture in Missouri. Seeds, eggs, and larvae may be moved to new sites on boats or construction equipment. Please inspect and clean equipment thoroughly before moving between project sites. See Managing Invasive Species in Your Community | Missouri Department of Conservation (mo.gov) for more information.

- Remove any mud, soil, trash, plants or animals from equipment before leaving any water body or work area.
- Drain water from boats and machinery that have operated in water, checking motor cavities, live-well, bilge and transom wells, tracks, buckets, and any other water reservoirs.
- When possible, wash and rinse equipment thoroughly with hard spray or HOT water (>140° F, typically available at do-it-yourself car wash sites), and dry in the hot sun before using again.

Streams and Wetlands – Clean Water Act Permits: Streams and wetlands in the project area should be protected from activities that degrade habitat conditions. For example, soil erosion, water pollution, placement of fill, dredging, in-stream activities, and riparian corridor removal, can modify or diminish aquatic habitats. Streams and wetlands may be protected under the Clean Water Act and require a permit for any activities that result in fill or other modifications to the site. Conditions provided within the U.S. Army Corps of Engineers (USACE) Clean Water Act Section 404 permit (Kansas City District Regulatory Branch (army.mil)) and the Missouri Department of Natural Resources (DNR) issued Clean Water Act Section 401 Water Quality Certification (Section 401 Water Quality Certification | Missouri Department of Natural Resources (mo.gov)), if required, should help minimize impacts to the aquatic organisms and aquatic habitat within the area. Depending on your project type, additional permits may be required by the Missouri Department of Natural Resources, such as permits for stormwater, wastewater treatment facilities, and confined animal feeding operations. Visit Wastewater Permits | Missouri Department of Natural Resources (mo.gov) for more information on DNR permits. Visit both the USACE and DNR for more information on Clean Water Act permitting.

For further coordination with the Missouri Department of Conservation and the U.S. Fish and Wildlife Services, please see the contact information below:

Email (preferred): NaturalHeritageReview@mdc.mo.gov
MDC Natural Heritage Review
Science Branch
P.O. Box 180
Jefferson City, MO
65102-0180
Phone: 573-522-4115 ext. 3182

U.S. Fish and Wildlife Service
Ecological Service
101 Park Deville Drive
Suite A
Columbia, MO
65203-0007
Phone: 573-234-2132

PRELIMINARY REPORT

Miscellaneous Information

FEDERAL Concerns are species/habitats protected under the Federal Endangered Species Act and that have been known near enough to the project site to warrant consideration. For these, project managers must contact the U.S. Fish and Wildlife Service Ecological Services (101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132; Fax 573-234-2181) for consultation.

STATE Concerns are species/habitats known to exist near enough to the project site to warrant concern and that are protected under the Wildlife Code of Missouri (RSMo 3 CSR 1 0). "State Endangered Status" is determined by the Missouri Conservation Commission under constitutional authority, with requirements expressed in the Missouri Wildlife Code, rule 3CSR 1 0-4.111. Species tracked by the Natural Heritage Program have a "State Rank" which is a numeric rank of relative rarity. Species tracked by this program and all native Missouri wildlife are protected under rule 3CSR 10-4.110 General Provisions of the Wildlife Code.

See Missouri Species and Communities of Conservation Concern Checklist (mo.gov) for a complete list of species and communities of conservation concern, and visit mdc.mo.gov/your-property/responsible-construction/species-impact-best-practices for all species-specific Best Management Practices. Detailed information about the animals and some plants mentioned may be accessed at Missouri Fish and Wildlife Information System (MOFWIS) and MDC Field Guides . Please contact the Missouri Department of Conservation to request printed copies of any materials linked in this document.

PRELIMINARY REPORT

Appendix E

Traffic Noise Report

J4I3195
I-70: I-435 to I-470
Jackson County, MO

TRAFFIC NOISE REPORT

Prepared for:
Missouri Department of Transportation

Prepared by:

715 Kirk Drive
Kansas City, MO 64105

September 2025

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1.0 Executive Summary

The I-70 corridor from I-435 to I-470 within Jackson County, MO, provides a critical link to the central region of the United States, particularly for freight traffic, and is a key access point for the Kansas City region. The Missouri Department of Transportation (MoDOT) is studying multiple alternatives to address the corridor needs in order to improve safety, reduce congestion, restore and maintain existing infrastructure, and improve accessibility and goods movement. Through the evaluation, a Preferred Alternative was identified, which includes the reconstruction of pavement and bridges along the corridor and construction of additional through travel lanes in both directions. This alternative was selected because it best meets the project's purpose and need.

For all "Type I" federal, state, or federal-aid highway projects in the State of Missouri, traffic and construction noise impact analysis and abatement assessment is dictated by the United States Code of Federal Regulations Part 772 (23 CFR 772), *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, and the MoDOT Traffic Noise Policy, located in the Engineering Policy Guide Section 127.13.

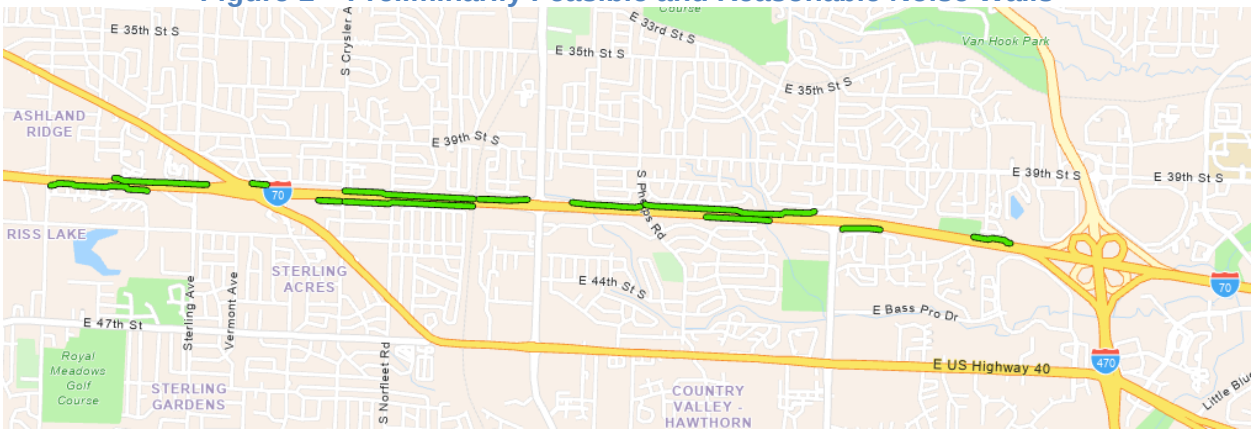
The project was determined to be a Type I project due to the additional through traffic lanes, and a comprehensive traffic noise analysis was completed to identify impacts and evaluate abatement where impacts occur. Nineteen different Noise Sensitive Areas (NSAs) were analyzed, which included 2,578 noise-sensitive receptors. In the 2050 Ultimate Build scenario, 755 total noise impacts were identified, with impacts located in 17 different NSAs. All noise impacts were a result of approaching or exceeding the Federal Highway Administration's (FHWA) Noise Abatement Criteria (NAC). No locations had future noise levels that were predicted to significantly exceed existing noise levels. On average, 2050 Ultimate Build noise levels are expected to exceed 2023 Existing noise levels by 1.7 decibels and 2050 No-Build noise levels by 1.4 decibels. A summary of noise impacts is shown in **Table 1** by individual NSA.

Table 1 – Summary of 2050 Ultimate Build Alternative Noise Impacts

NSA	Total Receptors	Impacted Receptors
1	114	8
2	4	0
3	63	20
4	31	3
5	288	117
6	262	118
7	62	32
8	88	2
9	245	52
10	85	40
11	17	4
12	211	54
13	13	4
14	88	44
15	284	83
16	4	0
17	201	65
18	331	64
19	187	45
Total	**2,578**	**755**

Noise abatement was evaluated in each NSA that contained traffic noise impacts. In all, 19 noise barriers were evaluated. In order to be considered for construction, noise barriers must be found to be both feasible and reasonable as defined in the FHWA and MoDOT traffic noise policies. Of the 19 noise barriers evaluated, 12 preliminarily meet FHWA and MoDOT's feasibility and reasonableness criteria. These noise barrier locations are illustrated in **Figure 1**. A more detailed view of these noise barriers can be found in **Exhibit 3** at the end of the document.

Figure 1 – Preliminarily Feasible and Reasonable Noise Walls



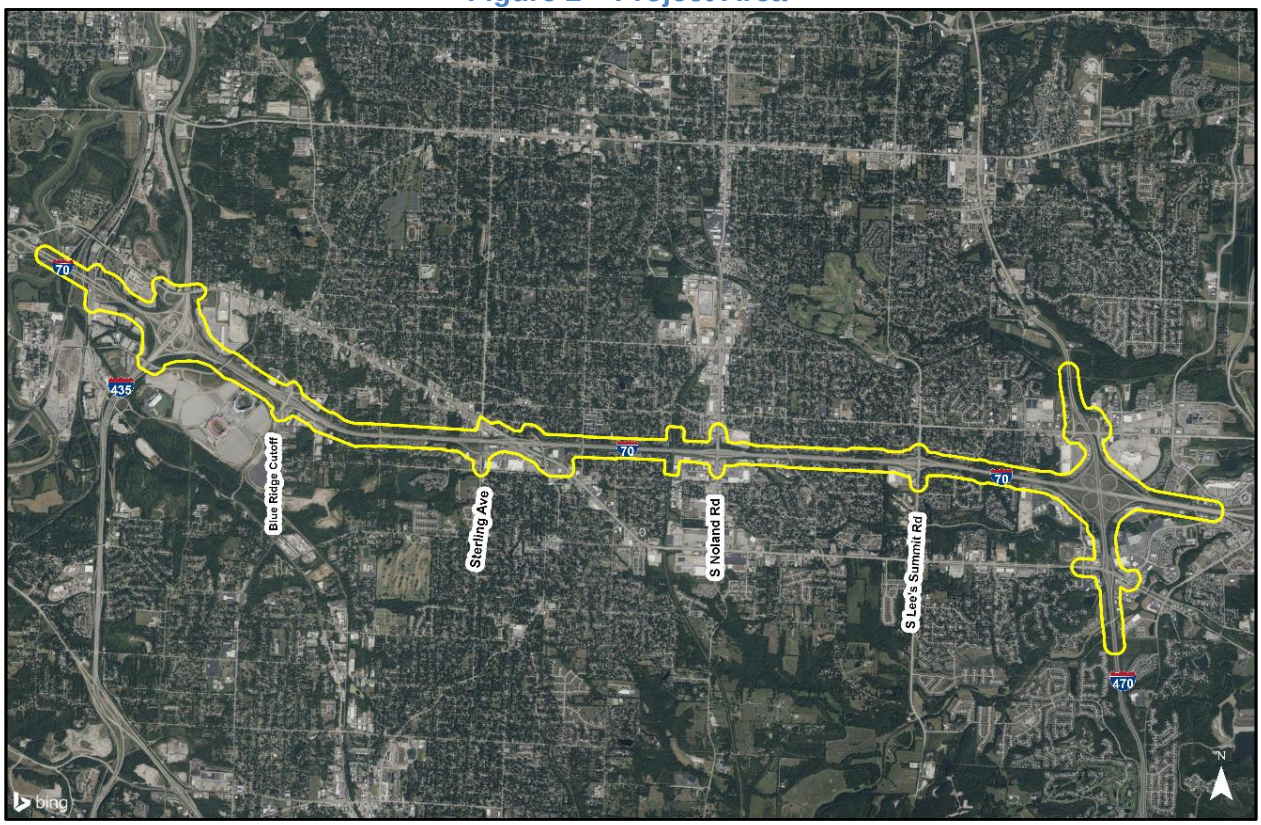
The noise analysis was completed based on the Preferred Alternative design, including the additional through traffic lanes and widened shoulders in both directions of I-70. If any modifications are made to the configuration as the project progresses further into design, the feasibility and reasonableness of any noise barriers may also change. Additionally, individual walls may face constructability challenges due to issues like utilities, drainage, safety, etc., that could affect their feasibility. Final recommendations for any noise barrier construction will be made after final design and the public involvement process is complete.

2.0 Project Description

Since its original construction more than 50 years ago, I-70 has served as a vital corridor for moving people and goods across Missouri and beyond. This project is one of several initiatives aimed at modernizing the I-70 corridor statewide. I-70 from I-435 to I-470 provides a critical link to the central region of the United States, particularly for freight traffic, and is a key access point for the Kansas City region.

The I-70 Environmental Assessment: I-435 to I-470 Project Area (Project Area) is located entirely within Jackson County, Missouri and extends from U.S. 40 on the west end to the east end of the I-70/I-470 interchange. The Project Area is shown in **Figure 2**.

Figure 2 – Project Area



The Project Area includes approximately nine miles of I-70. In the Project Area, I-70 is a six-lane, barrier-divided, fully access-controlled interstate facility. From the western project boundary to the I-70/I-435 Interchange, the posted speed limit is 55 miles per hour (mph). From the I-70/I-435 Interchange to the eastern project boundary, the speed limit is 65 mph. This section of I-70 was designed and constructed in the 1950s, originally with two lanes in each direction. In the late 1970s to 1980s, a third lane was added in each direction, converting the grass median to a closed concrete median.

There are 31 existing bridges within the Project Area, including four mainline I-70 bridges, 14 roadway bridges over I-70, one railroad bridge over I-70, five bridges on I-435, one bridge over I-435, one bridge over East U.S. Highway 40, and five bridges on I-470. As of 2024, all bridges over I-70 can accommodate the potential widening of one additional lane in each direction except for the Union Pacific Railroad (UPRR) bridge. Multiple bridges have been reconstructed over the past decade, but some older bridges remain, requiring frequent maintenance.

Several of the ramps within the Project Area do not meet current minimum engineering design criteria due to their geometry. As of 2023, the I-70 corridor serves over 100,000 vehicles per day (vpd) near the eastern end of the Project Area (I-470). The corridor serves approximately 125,000 vpd near the western end (I-435).

The proposed project would address existing and future conditions along the I-70 corridor from I-435 to I-470. The corridor no longer meets the current and future mobility needs, resulting in reduced safety and reliability and increased congestion.

The proposed project is needed to:

- **Improve Safety**: Reduce the potential for crashes at high crash locations;
- **Reduce Congestion**: Remove key bottlenecks, reduce the potential for ramp backups onto the freeway, and improve multimodal travel times in coordination with local and regional agencies' plans;
- **Restore and Maintain Existing Infrastructure**: Improve bridge and pavement conditions on I-70 and implement cost-effective investment strategies;
- **Improve Accessibility and Goods Movement**: Provide travel options for all residents, increase safe access across I-70 for non-motorized travel, support local and regional land use plans, and improve the efficiency of freight movement on I-70.

The purpose of the proposed project is to determine an improvement strategy for the I-70 corridor, including future capacity and mode choices.

Multiple alternatives were evaluated for the project area and are described in detail in the project's environmental documentation. The "Add General Capacity" alternative was identified as the Preferred Alternative and was used for all noise analysis. This alternative includes the reconstruction of pavement and bridges along the corridor and construction of additional through travel lanes in both directions. The alternative also incorporates additional capacity to improve connections to and from ramps along the corridor, such as auxiliary lanes, which provide a continuous lane of travel between closely spaced interchange entrance ramps and exit ramps.

Geometric and condition improvements include:

- Updating the corridor to four through lanes in each direction;
- Select ramp and safety improvements;
- Widening existing inside and outside shoulders from 7 feet to 8 feet up to 12 feet;
- Evaluation of capacity improvements for an eastbound barrier-separated collector-distributor (C-D) roadway between Manchester Trafficway and I-435;
- Evaluation of capacity improvements for a westbound barrier-separated collector-distributor roadway between Blue Ridge Cutoff and Manchester Trafficway; and
- Considerations for future interchange improvements to the east U.S. Highway 40 and I-470 interchanges.

A map series showing the Preferred Alternative is attached in **Exhibit 1** at the end of the document.

3.0 Criteria for Determining Impacts

3.1. Traffic Noise Terminology

Noise is defined as unwanted sound. It is emitted from many natural and man-made sources. Highway traffic noise is usually a composite of noises from engine exhaust, drive train, and tire-roadway interaction.

The magnitude of noise is usually described by a ratio of its sound pressure to a reference sound pressure, typically twenty micro-Pascals (20μPa). Since the range of sound pressure ratios varies greatly over many orders of magnitude, a base-10 logarithmic scale is used to express sound levels in dimensionless units of decibels (dB). The commonly accepted limits of detectable human hearing sound magnitudes are between the threshold of hearing at 0 decibels and the threshold of pain at 140 decibels.

Sound frequencies are reported in units of Hertz (Hz), which correspond to the number of vibrations per second of a given tone. A cumulative 'sound level' is equivalent to ten times the base-10 logarithm of the ratio of the sum of the sound pressures of all frequencies to the reference sound pressure. To simplify the mathematical process of determining sound levels, sound frequencies are grouped into ranges, or 'bands.' Sound levels are then calculated by adding the cumulative sound pressure levels within each band – which are typically defined as one 'octave' or '1/3 octave' of the sound frequency spectrum.

The commonly accepted limitation of human hearing to detect sound frequencies is between 20 Hz and 20,000 Hz, and human hearing is most sensitive to the frequencies between 1,000 Hz – 6,000 Hz. Although people are generally not as sensitive to lower-frequency sounds as they are to higher frequencies, most people lose the ability to hear high-frequency sounds as they age. To accommodate varying receptor sensitivities, frequency sound levels are commonly adjusted, or 'filtered', before being logarithmically added and reported as a single 'sound level' magnitude of that filtering scale. The 'A-weighted' decibel filtering scale applies numerical adjustments to sound frequencies to emphasize the frequencies at which human hearing is sensitive and to minimize the frequencies to which human hearing is not as sensitive. The A-weighted scale is commonly used in highway traffic noise studies because the typical frequency spectrum of traffic noise is higher in magnitude at the frequencies at which human hearing is noise sensitive (1,000 Hz to 6,000 Hz). A-weighted decibels are indicated by the use of the term "dBA".

Because highway traffic noise fluctuates over time, a single equivalent sound level is used to represent the varying traffic sound levels. This equivalent or steady-state sound level is referred to by the term L_{eq}, which represents the steady-state sound level over an hourly period that represents the same acoustic energy as the time-varying sound level during an hour. All traffic noise levels referenced in this report are expressed using hourly values of A-weighted decibels, or $L_{eq(h)}$ dBA.

3.2. Noise Abatement Criteria

The purpose of 23 CFR 772 is, "To provide procedures for noise studies and noise abatement measures to help protect the public's health, welfare and livability, to supply noise abatement

criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways approved pursuant to title 23 U.S.C." FHWA has developed Noise Abatement Criteria (NAC) and procedures to be used in the planning and design of highways and to define when noise impacts occur.

The abatement criteria and procedures are set forth in Title 23 CFR 772, which also states, "In abating traffic noise impacts, a highway agency shall give primary consideration to exterior areas where frequent human use occurs." A summary of the NAC for various land uses is presented in **Table 2**.

Table 2 – Noise Abatement Criteria

Hourly Equivalent A-Weighted Sound Level (decibels (dBA))			
Activity Category	**Activity Criteria[1] $L_{eq(h)}$[2]**	**Evaluation Location**	**Activity Description**
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[3]	67	Exterior	Residential
C[3]	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section4(f) sites, schools, television studios, trails, and trail crossings
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios
E[3]	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F
F	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	--	--	Undeveloped lands that are not permitted

1. The $L_{eq(h)}$ Activity Criteria values are for impact determination only and are not design standards for noise abatement measures.
2. The equivalent steady-state sound level which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period, with $L_{eq(h)}$ being the hourly value of L_{eq}.
3. Includes undeveloped lands permitted for this activity category.

4.0 Identification of Noise-Sensitive Land Uses and Noise Study Areas

The land use in the project area is primarily residential, classified as NAC Category B. In specific locations of the corridor, commercial zones and light industrial areas are the predominant land uses. Other noise sensitive receptors along the corridor include hotels, daycares, churches, restaurants, parks, and a hospital.

The noise study included all areas within approximately 800 feet of I-70 to ensure all potential noise impacts and benefits were identified. The noise study was divided into 19 separate NSAs. The boundaries and land use characteristics of each NSA are described below and illustrated in **Exhibit 2** at the end of the document.

Noise receptors were placed approximately 10 feet from the residence at single-family homes, on the side of the property oriented towards I-70. At multi-family dwellings with private patios or balconies, receptors were modeled at the patio or balcony and at the appropriate story level (e.g. second-story units were modeled at the second story, not at ground level).

For NAC Activity Categories C, D, and E, the number of benefited receptors is based on a residential equivalent frontage-based method. An equivalent number of residences is calculated based on the average of the residential frontages in the project area, and the frontage of the property being analyzed is divided by this number to determine the number of equivalent receptors.

For NAC Activity Category D receptors, interior hourly-equivalent noise levels are determined by applying building noise reduction factors based on building type and window treatment that can be found in FHWA publication *Highway Traffic Noise: Analysis and Abatement Guidance*.

A more detailed view of all receptors analyzed is provided in **Exhibit 3** at the end of the document.

4.1. NSA 1

NSA 1 is the area east of Manchester Trafficway and north of I-70, encompassing a mobile home and RV park. A total of 114 single-family homes within the park were included in the noise analysis.

4.2. NSA 2

NSA 2 is the area east of Stadium Drive and north of I-70. A total of four single-family homes were included in the noise analysis

4.3. NSA 3

NSA 3 encompasses the area north of I-70, beginning just west of Blue Ridge Cutoff and extending to just east of the Pittman Road bridge. A total of 59 single-family homes within this area were included in the noise analysis. Additionally, a hotel with four equivalent receptors was evaluated, for a total of 63 receptors.

4.4. NSA 4

NSA 4 is located south of I-70 and west of the Pittman Road bridge. A total of 31 single-family homes within this area were included in the noise analysis.

4.5. NSA 5

NSA 5 is located north of I-70, between Pittman Road and Sterling Road. The noise analysis included a residential neighborhood with single-family homes and two apartment complexes, totaling 285 NAC Category B receptors. Additionally, a daycare with three equivalent receptors was evaluated, for a total of 288 receptors.

4.6. NSA 6

NSA 6 is located south of I-70, between Pittman Road and Sterling Road. The noise analysis included a residential neighborhood consisting of single-family homes and one large apartment complex, totaling 245 NAC Category B receptors. Additionally, a hospital and a church – both without exterior areas of frequent human use – were evaluated under NAC Category D with a total of 17 equivalent receptors, resulting in 262 receptors within this area.

4.7. NSA 7

NSA 7 is located north of I-70, between US-40 and Blue Ridge Boulevard. The noise analysis included 62 single-family homes within this area.

4.8. NSA 8

NSA 8 is located north of I-70, between Blue Ridge Boulevard and Crysler Avenue. The noise analysis included 88 single-family homes within this area.

A noise wall constructed in 2023 currently separates I-70 from the neighborhood. This existing wall was incorporated into all noise models to reflect the mitigation it provides.

4.9. NSA 9

NSA 9 is located north of I-70, between Crysler Avenue and the UPRR bridge. The noise analysis included an apartment complex and several single-family neighborhoods, totaling 235 NAC Category B receptors. Additionally, a church within NSA 9 representing an equivalent 10 NAC Category C receptors was evaluated, resulting in 245 receptors in this area.

4.10. NSA 10

NSA 10 is located north of I-70, between the UPRR bridge and Noland Road. The noise analysis included 74 single-family homes within this area. Additionally, two hotels with 11 equivalent receptors were evaluated, for a total of 85 receptors.

4.11. NSA 11

NSA 11 is located south of I-70, between Blue Ridge Boulevard and Crysler Avenue. The noise analysis included 17 single-family homes within this area.

4.12. NSA 12

NSA 12 is located south of I-70, between Crysler Avenue and the UPRR bridge. The noise analysis included 211 single-family homes within this area.

4.13. NSA 13

NSA 13 is located south of I-70, between the UPRR bridge and Noland Road. The noise analysis included two hotels and a restaurant, totaling 13 equivalent NAC Category E receptors.

4.14. NSA 14

NSA 14 is located north of I-70, between Noland Road and Phelps Road. The noise analysis included 85 single-family homes within this area. Additionally, one restaurant was evaluated, representing three total equivalent NAC Category E receptors, resulting in 88 receptors in this area.

4.15. NSA 15

NSA 15 is located north of I-70, between Phelps Road and Lee's Summit Road. The noise analysis included 283 single-family homes within this area. Additionally, a church within NSA 15 representing one NAC Category C receptor was evaluated, resulting in 284 receptors in this area.

4.16. NSA 16

NSA 16 is located south of I-70, between Noland Road and Phelps Road. The noise analysis included a church without an exterior human use area, which was represented by three NAC Category D receptors. Additionally, a daycare facility was evaluated, accounting for one equivalent NAC Category C receptor, resulting in four receptors in this area.

4.17. NSA 17

NSA 17 is located south of I-70, between Phelps Road and Lee's Summit Road. The noise analysis included 192 single-family homes within this area. Additionally, one park was evaluated, representing nine total equivalent NAC Category C receptors, resulting in 201 receptors in this area.

4.18. NSA 18

NSA 18 is located north of I-70, between Lee's Summit Road and I-470. The noise analysis included a mix of single-family and multi-family residences, totaling 319 NAC Category B receptors. Additionally, one park within the area was evaluated, representing 12 total equivalent NAC Category C receptors, resulting in 331 receptors in this area.

4.19. NSA 19

NSA 19 is located south of I-70, between Lee's Summit Road and I-470. The noise analysis included 187 single-family homes within this area.

5.0 Determination of Existing Sound Levels

Existing worst hourly noise levels were determined through a combination of computer modeling and field measurements. FHWA's Traffic Noise Model (TNM) version 2.5 was used in accordance with 23 CFR Part 772 to model the existing conditions. The TNM models included all relevant receptors, roadways, terrain lines, building rows, barriers, and ground zones.

When a model is built of the project area, noise measurements and field work are conducted to develop a comparison between noise levels measured in the field at locations where traffic noise is the dominant noise source and the predicted hourly-equivalent traffic noise levels obtained from TNM. This exercise is performed to validate the model to local conditions so that it can be used with confidence to predict the loudest-hour equivalent noise levels at all individual receptors and to assess future potential traffic noise impacts.

Noise measurement data was collected concurrently over a 15-minute period at nine sites along the project corridor using sound level meters meeting ANSI and IEC Type 2 specifications. During the 15-minute measurement periods, video was recorded of the heavily traveled, high speed I-70 due to the difficulty of counting traffic manually in real time and inability to place a traffic counting device on the interstate. Following the measurement, the video was used to count the traffic and separate it by lane and category (Autos, Medium Trucks, Heavy Trucks, Buses). The field measured L_{eq} and concurrent traffic counts, extrapolated to represent an hourly count, were then put into the TNM model to compare the $L_{eq(h)}$ predicted by TNM.

Models are considered validated if measured and predicted noise levels are within 3 decibels. The results of the field measurements are shown in **Table 3**. The actual measurement sites are shown on **Exhibit 3** at the end of the document. More details on the measuring sites, concurrent traffic counts, weather information, etc. is included in **Appendix A**. All measurement sites were less than three decibels different from the TNM predicted noise levels, thus validating the model. Plan views of the TNM models are shown in **Appendix E**.

Table 3 – Validation Results

Date	Time (15 minute measurement)	Validation Measurement	TNM-Predicted Leq(h) dBA	Measured Leq dBA	Validation Delta (Pred. – Meas.)
10/16/2024	1:45pm	FM-1	68.6	68.3	0.32
9/16/2024	11:35am	FM-2	64.1	65.6	-1.46
9/16/2024	11:35am	FM-3	68.4	71.0	-2.59
9/16/2024	10:30am	FM-4	70.1	68.5	1.63
9/16/2024	10:30am	FM-5	76.6	78.8	-2.23
9/25/2024	11:30am	FM-6	76.3	75.8	0.50
11/1/2024	9:10am	FM-7	76.6	75.8	0.85
9/16/2024	9:35am	FM-8	64.5	62.3	2.21
9/16/2024	9:35am	FM-9	62.7	60.6	2.09

Once the existing TNM model is validated, it can be used to predict worst hourly noise levels at all 2,578 receptors identified as noise sensitive.

A long-term (14-hour) noise measurement was conducted on both sides of I-70, just east of Phelps Road, to help identify the loudest noise hour. Based on the results of this measurement and a review of traffic projections, the PM peak hour is predicted to be the loudest hour on both sides of I-70 in the year 2050. The long-term measurement data showed that the PM peak hour is already the loudest hour in neighborhoods south of I-70. In neighborhoods on the north side, the PM peak hour was also louder than the AM peak hour, despite significant congestion on eastbound I-70 upstream (west) of the measurement location where I-435 traffic merges in, which limits the volume of traffic entering the area. The loudest hour in neighborhoods south of I-70 occurred slightly after the AM peak, beginning closer to 9:00am. However, this hour was only marginally louder than the PM peak traffic hour—by less than 1 dBA. Because the Preferred Alternative is expected to remove the bottleneck near I-435 and alleviate most of the existing congestion—and since total traffic volumes are higher during the PM peak—it was assumed that the PM peak will remain the loudest hour in the future. The results of the long-term measurements are shown in **Figure 3** and **Figure 4**. The locations of the long-term measurements are illustrated in **Exhibit 3** at the end of the document.

Figure 3 – Long-Term Noise Measurement (South of I-70)

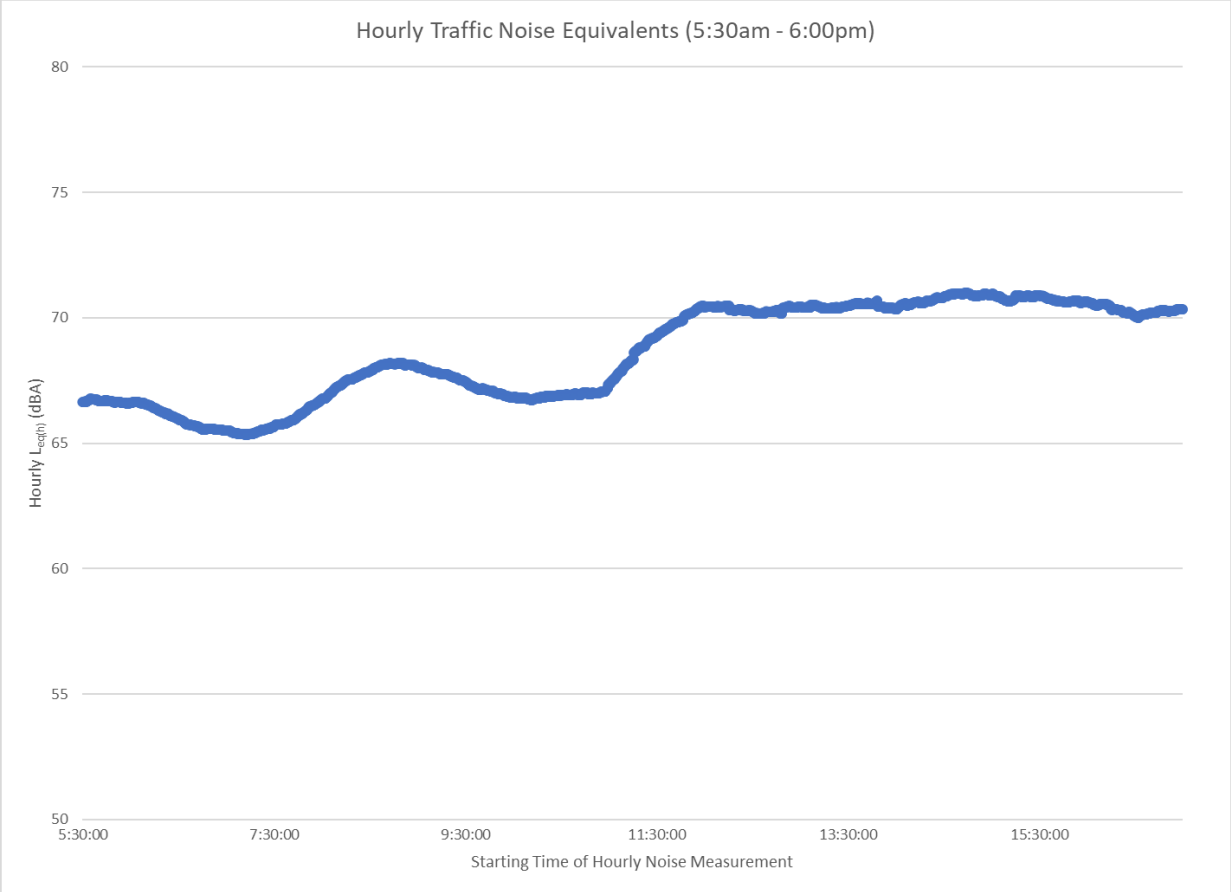
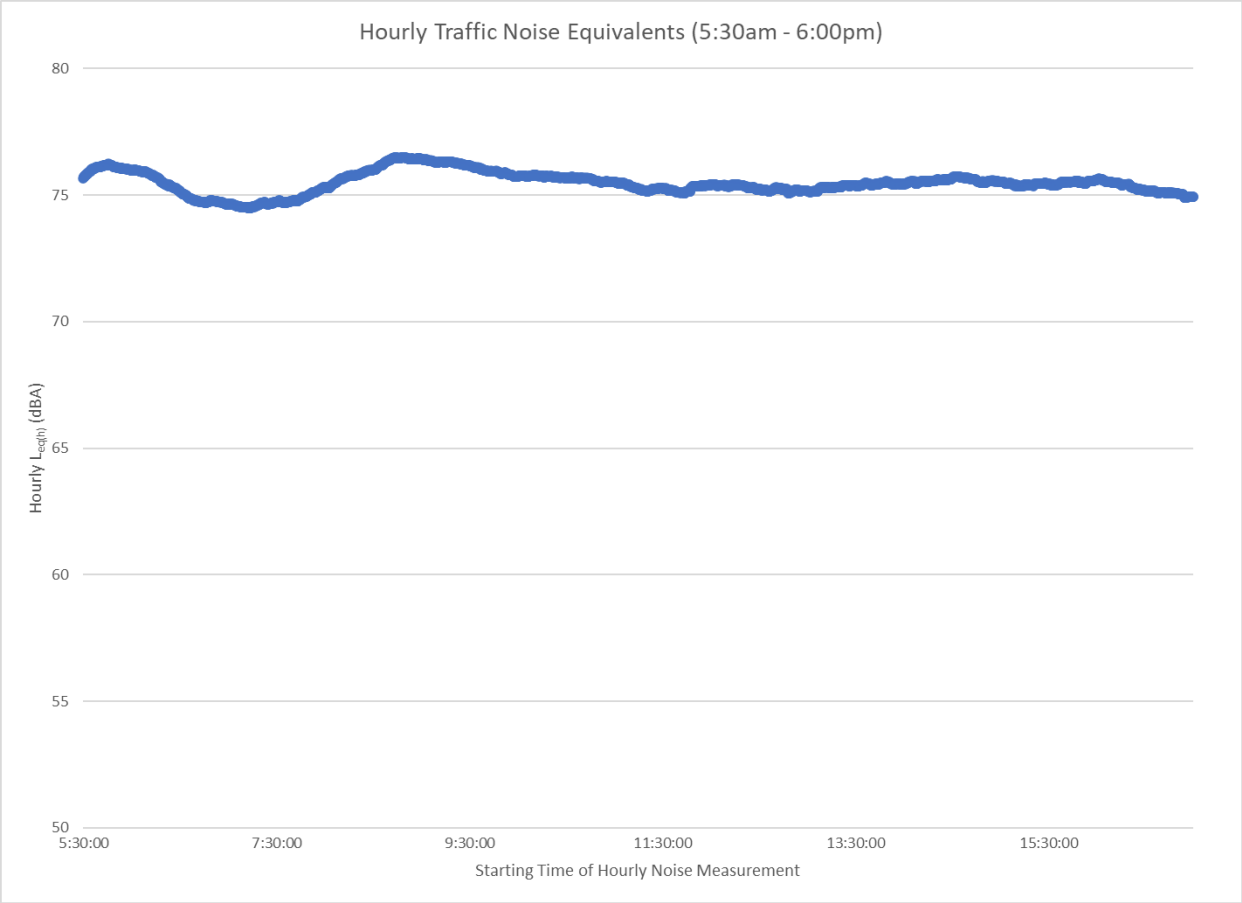


Figure 4 – Long-Term Noise Measurement (North of I-70)



Existing 2023 PM peak hour traffic volumes and truck percentages from the project traffic analysis were then input into the TNM models. All traffic volumes are shown in **Appendix D**. On I-70, the peak traffic hour may sometimes result in reduced speeds, which would in turn result in reduced noise emissions. In order to better identify the loudest hour, volumes were capped at the Level of Service (LOS) C/D threshold (i.e. the maximum density of traffic that is defined as LOS C), which represents 26 passenger cars/mile/lane. Using Equations 12-9 through Equation 12-11 from the Highway Capacity Manual (HCM) 7th Edition, defined below, this was calculated as a maximum of 1,780 vehicles per hour per lane.

$$Volume\ per\ lane = \frac{D\ \times PHF\ \times S}{1 + P_T\ (E_T - 1)}$$

D = Density (26 pc/mi/ln)
PHF = Peak Hour Factor
S = Speed
P_T = Proportion of Trucks in Traffic Stream
E_T = Passenger Car Equivalent of One Heavy Vehicle in the Traffic Stream

6.0 Determination of Future Sound Levels

6.1. 2050 No-Build Alternative

To determine the worst hourly noise levels in the 2050 No-Build scenario, the existing TNM models were again used. Traffic volumes were increased to match the future 2050 traffic projections. All 2050 No-Build worst hourly noise levels are shown in **Appendix B**.

6.2. 2050 Ultimate Build Alternative

To determine the worst hourly noise levels in the 2050 Ultimate Build scenario, the existing TNM models were modified to represent the Preferred Alternative, including the additional through lanes in each direction of I-70, ramp improvements, eastbound C-D road approaching I-435, widened shoulders, new concrete safety barriers, and extended acceleration/deceleration lanes.

The 2050 Ultimate Build traffic volumes were obtained from the project traffic study. All 2050 Ultimate Build worst hourly noise levels are shown in **Appendix B**.

7.0 Impact Determination Analysis

Traffic noise impacts occur when the predicted hourly-equivalent traffic noise levels either approach or exceed the FHWA NAC (with "approach" defined in the MoDOT Traffic Noise Policy as reaching one decibel less than the NAC values listed in **Table 2**) or substantially exceed the existing noise levels, defined as a 15 decibel increase. For residential areas, this means an $L_{eq(h)}$ of 66 dBA during the worst hourly noise level is considered a traffic noise impact.

A summary of all traffic noise impacts is shown in **Table 4**. All impacts were due to approaching or exceeding NAC criteria; in no instances were future levels predicted to substantially exceed existing noise levels. On average, 2050 Ultimate Build noise levels are expected to exceed Existing noise levels by 1.7 decibels and 2050 No-Build noise levels by 1.4 decibels.

Table 4 – Number of Receptors Approaching or Exceeding NAC Criteria

NSA	Total Receptors	Receptors Approaching or Exceeding NAC Criteria		
		2023 Existing	2050 No-Build	2050 Ultimate Build
1	114	5	6	8
2	4	0	0	0
3	63	18	18	20
4	31	2	2	3
5	288	97	101	117
6	262	94	98	118
7	62	24	28	32
8	88	1	1	2
9	245	32	35	52
10	85	37	37	40
11	17	4	4	4
12	211	36	36	54
13	13	4	4	4
14	88	34	37	44

NSA	Total Receptors	Receptors Approaching or Exceeding NAC Criteria		
		2023 Existing	2050 No-Build	2050 Ultimate Build
15	284	55	57	83
16	4	0	0	0
17	201	34	36	65
18	331	46	48	64
19	187	30	31	45
Total	**2,578**	**553**	**579**	**755**

8.0 Noise Abatement Evaluation

23 CFR Part 772 and MoDOT's Traffic Noise Policy require that noise abatement measures must be considered when traffic noise impacts are identified for Type I projects. Noise abatement measures must be both feasible and reasonable to be eligible for construction. Seventeen of the 19 NSAs contained traffic noise impacts, and noise abatement was considered for all 17 NSAs with traffic noise impacts. The noise abatement measures considered include traffic management measures, alignment modifications, land-use controls, and the construction of noise barriers within the highway project's right-of-way.

8.1. Traffic Management System

Traffic management systems that limit vehicle type, speed, volume, and time of operations were considered as possible traffic noise abatement measures. However, these types of measures are not considered appropriate for this project due to their diminishing effect on the capacity and level of service of the proposed alternatives and the fact that they would not meet the purpose and need for the proposed project. Furthermore, the implementation of traffic systems management measures would not be reasonable as they would not provide a minimum noise reduction of 7 dBA as required by MoDOT policy.

8.2. Alignment Modifications

Alignment modifications generally involve orienting the roadway sufficient distances from noise sensitive areas to minimize noise impacts. This project is being built on available right-of-way, through an existing corridor, with little to no room for alignment modifications on either side. Therefore, additional alignment modifications are not considered a feasible or reasonable measure.

8.3. Buffer Zones

In areas of impacted receptors where other abatement measures were considered and found to be not reasonable, a vegetative barrier could be considered for psychological and aesthetic screening. Vegetation that is high enough, wide enough, and dense enough so it cannot be seen through, can decrease highway traffic noise. Studies have shown that a 200-foot width of dense vegetation can reduce noise levels by about 5 dBA.

The development of buffer zones to provide noise mitigation was not considered appropriate as a noise abatement measure for this project. The amount of additional right-of-way required to create effective buffer zones would negatively impact existing adjacent urban land uses.

8.4. Noise Barriers

Noise barriers reduce noise levels by blocking the sound path between a roadway and noise sensitive area. A noise barrier evaluation was performed for this project following the MoDOT Traffic Noise Policy to determine whether feasible and reasonable barriers could be constructed at the noise receptor sites predicted to approach or exceed the NAC as a result of the Build Alternative. Noise barrier feasibility and reasonableness requirements are defined below.

8.4.1. Noise Barrier Feasibility

Feasibility refers to the combination of acoustical and engineering factors considered in the evaluation of a noise abatement measure. It generally deals with whether it is possible to build an abatement measure given site constraints and whether the abatement measure provides a minimum reduction in noise levels. MoDOT's policy requires at least a 5 dBA insertion loss for a minimum of two first-row, impacted receptors for noise abatement to be considered feasible. Engineering feasibility can be limited by topography, access requirements, other noise sources, drainage, utilities, maintenance, and more. In general, if these factors are too extreme or cannot be accommodated in providing the minimum noise reduction, noise abatement will be deemed infeasible. For safety reasons, a noise wall's height is limited to 20 feet.

8.4.2. Noise Barrier Reasonableness

Reasonableness refers to the combination of social, economic, and environmental factors considered in the evaluation of a noise abatement measure. 23 CFR Part 772 requires three specific reasonableness criteria. MoDOT's Traffic Noise Policy defines these three criteria which must be met in order for noise abatement to be considered reasonable.

1. Viewpoints of owners and residents of the benefitted receptors will be obtained. These will usually be obtained by ballot through mailings or at a public forum;
2. Noise abatement measures shall not exceed 1,300 square feet per benefitted receptor, in the case of noise walls. Where noise walls are not options, other noise abatement techniques may be considered, but cannot exceed $46,000 per benefitted receptor. MoDOT does not allow cost averaging; and
3. Noise abatement measures must provide a minimum reduction of 7 dBA for 100 percent of benefitted, first-row receptors.

8.4.3. Noise Barrier Evaluation

Details on the noise abatement evaluated are described below. A summary of the noise barriers is included in **Table 5**. Further details on the abatement analysis are included in **Appendix C**.

Table 5 – Summary of Noise Barrier Analysis

Noise Barrier	Length (feet)	Avg. Height (feet)	Number of First-Row Impacted Receptors[1]	Feasibility	Reasonableness					Is Noise Barrier Preliminarily Feasible and Reasonable?
				≥ 5 dBA Insertion Loss for a Minimum of Two First-Row Impacted Receptors[1]	Number of First-Row Benefited Receptors with a ≥7 dBA Noise Reduction	Percent of First-Row Benefited Receptors with a 7 dBA Noise Reduction[2]	Total Benefits	Square Feet of Barrier	Square Feet per Benefited Receptor[3]	
NW1	1,048	13	7	Yes	6	100%	6	13,190	2,198	No
NW3	2,232	12	10	Yes	8	100%	19	27,602	1,453	No
NW4	1,341	20	2	No	-[4]	-[4]	-[4]	-[4]	-[4]	-[4]
NW5	2,500	14	32	Yes	32	100%	46	35,253	766	Yes
NW6	2,678	12	58	Yes	58	100%	70	32,835	469	Yes
NW7	401	11	7	Yes	6	100%	6	4,287	715	Yes
NW9	3,463	14	31	Yes	21	100%	76	49,982	658	Yes
NW10	1,302	14	15	Yes	14	100%	23	18,238	793	Yes
NW11 & NW12	4,046	12	4	Yes	1	100%	37	48,103	1,300	Yes
NW13	401	18	4	Yes	4	100%	4	7,018	1,755	No
NW14	1,852	11	15	Yes	15	100%	16	20,654	1,291	Yes
NW15	4,594	15	50	Yes	47	100%	75	69,842	931	Yes
NW17a	3,400	16	34	Yes	28	100%	36	54,098	1,503	No
NW17b	1,700	15	18	Yes	18	100%	23	25,502	1,109	Yes
NW18a	718	12	7	Yes	5	100%	5	8,815	1,763	No
NW18b	1,037	13	16	Yes	16	100%	16	13,757	860	Yes
NW19a	1,021	12	11	Yes	10	100%	10	12,009	1,201	Yes
NW19b	1,697	15	10	Yes	8	100%	8	25,117	3,140	No

[1]MoDOT requires at least a 5 dBA insertion loss for a minimum of two first-row, impacted receivers.

[2]Noise abatement measures must provide a minimum noise reduction of 7 dBA for 100% of first-row benefited receptors.

[3]Noise abatement measures shall not exceed 1,300 square feet per benefited receptor in the case of noise walls.

[4]Per MoDOT policy, if a noise abatement measure is deemed infeasible, a reasonableness analysis will not be performed.

Noise Wall 1 (NW1)

NW1 provides abatement for NSA 1. Eight total impacted receptors were identified in this NSA. NW1 benefits six receptors and was found to be feasible. However, the wall requires 2,198 square feet of noise barrier per benefited receptor, exceeding the maximum allowed of 1,300; therefore, NW1 is not reasonable.

Noise Wall 2 (NW2)

No impacted receptors were identified in NSA 2; therefore, noise abatement was not evaluated.

Noise Wall 3 (NW3)

NW3 provides abatement for NSA 3. Twenty (20) total impacted receptors were identified in this NSA. NW3 benefits 19 receptors and was found to be feasible. However, the wall requires 1,453 square feet of noise barrier per benefited receptor, exceeding the maximum allowed of 1,300; therefore, NW3 is not reasonable.

Noise Wall 4 (NW4)

NW4 provides abatement for NSA 4. Three total impacted receptors were identified in this NSA. NW4 only benefits one receptor and only provides a 5 dBA reduction for one first-row impacted receptor; therefore, NW4 is not considered feasible.

Noise Wall 5 (NW5)

NW5 provides abatement for NSA 5. One-hundred seventeen (117) total impacted receptors were identified in this NSA. NW5 benefits 46 receptors and was found to be feasible. The wall requires 766 square feet of noise barrier per benefited receptor, less than the maximum allowed of 1,300; therefore, NW3 is preliminarily reasonable.

Further investigation of this noise barrier will be necessary as any project proceeds into design if changes to the Preferred Alternative are made or if the full Ultimate Build is not constructed at once. The modeled NW5 includes a portion on top of the I-70 West bridge over Sterling Avenue. It may not be feasible to construct a wall on top of the bridge. A more detailed structural analysis will be required, and modifications to the wall's length/height and number of benefited receptors may be necessary. Steep terrain in the area may also prohibit a noise barrier from being constructed without the addition of a retaining wall, which may affect the barrier's feasibility. Additionally, a large apartment complex benefiting from this wall was completely closed and not accessible to the public during this study. Confirmation on the number and location of receptors may be necessary to optimize the wall. A parallel barrier analysis may be necessary to determine if any feasible and reasonable noise barriers will require absorptive materials.

Noise Wall 6 (NW6)

NW6 provides abatement for NSA 6. One-hundred eighteen (118) total impacted receptors were identified in this NSA. NW6 benefits 70 receptors and was found to be feasible. The wall requires

469 square feet of noise barrier per benefited receptor, less than the maximum allowed of 1,300; therefore, NW6 is preliminarily reasonable.

Further investigation of this noise barrier will be necessary as any project proceeds into design if changes to the Preferred Alternative are made or if the full Ultimate Build is not constructed at once. Alternate alignments and/or overlapping noise barriers may be necessary to maintain proper drainage through the area. A parallel barrier analysis may be necessary to determine if any feasible and reasonable noise barriers will require absorptive materials.

Noise Wall 7 (NW7)

NW7 provides abatement for NSA 7. Thirty-two (32) total impacted receptors were identified in this NSA. NW7 benefits 6 receptors and was found to be feasible. The wall requires 715 square feet of noise barrier per benefited receptor, less than the maximum allowed of 1,300; therefore, NW7 is preliminarily reasonable.

Further investigation of this noise barrier will be necessary as any project proceeds into design if changes to the Preferred Alternative are made or if the full Ultimate Build is not constructed at once. The barrier alignment was only evaluated at a conceptual stage for this study. Due to the slope of the narrow ground between the I-70 off ramp and the right-of-way line, NW7 will likely have some constructability challenges that will need to be evaluated in more detail during design to determine if it is in fact feasible.

Noise Wall 8 (NW8)

While two impacted receptors were identified in NSA 8, these are both behind an existing noise barrier constructed in 2023. Therefore, a new noise barrier would not be feasible, and noise abatement was not evaluated in NSA 8.

Noise Wall 9 (NW9)

NW9 provides abatement for NSA 9. Fifty-two (52) total impacted receptors were identified in this NSA. NW9 benefits 76 receptors and was found to be feasible. The wall requires 658 square feet of noise barrier per benefited receptor, less than the maximum allowed of 1,300; therefore, NW9 is preliminarily reasonable.

Further investigation of this noise barrier will be necessary as any project proceeds into design if changes to the Preferred Alternative are made or if the full Ultimate Build is not constructed at once. A parallel barrier analysis may be necessary to determine if any feasible and reasonable noise barriers will require absorptive materials.

Noise Wall 10 (NW10)

NW10 provides abatement for NSA 10. Forty (40) total impacted receptors were identified in this NSA. NW10 benefits 23 receptors and was found to be feasible. The wall requires 793 square feet of noise barrier per benefited receptor, less than the maximum allowed of 1,300; therefore, NW10 is preliminarily reasonable.

Further investigation of this noise barrier will be necessary as any project proceeds into design if changes to the Preferred Alternative are made or if the full Ultimate Build is not constructed at once.

Noise Wall 11 (NW11) and Noise Wall 12 (NW12)

NW11 and NW12 provide abatement for NSA 11 and NSA 12. Originally, NW11 was not found to be feasible or reasonable but was then evaluated in combination with NW12 and viewed as a noise barrier system due to their proximity and similar noise environments.

Fifty-eight (58) total impacted receptors were identified in these NSAs. The noise barrier system benefits 23 receptors and was found to be feasible. The system requires 1,300 square feet of noise barrier per benefited receptor, not exceeding the maximum allowed of 1,300; therefore, the NW11 and NW12 noise barrier system is preliminarily reasonable.

Further investigation of this noise barrier system will be necessary as any project proceeds into design if changes to the Preferred Alternative are made or if the full Ultimate Build is not constructed at once. A parallel barrier analysis may be necessary to determine if any feasible and reasonable noise barriers will require absorptive materials.

Noise Wall 13 (NW13)

NW13 provides abatement for NSA 13. Four total impacted receptors were identified in this NSA. NW13 benefits all 4 receptors and was found to be feasible. However, the wall requires 1,755 square feet of noise barrier per benefited receptor, exceeding the maximum allowed of 1,300; therefore, NW13 is not reasonable.

Noise Wall 14 (NW14)

NW14 provides abatement for NSA 14. Forty-four (44) total impacted receptors were identified in this NSA. NW14 benefits 16 receptors and was found to be feasible. The wall requires 1,291 square feet of noise barrier per benefited receptor, less than the maximum allowed of 1,300; therefore, NW14 is preliminarily reasonable.

Further investigation of this noise barrier will be necessary as any project proceeds into design if changes to the Preferred Alternative are made or if the full Ultimate Build is not constructed at once. Steep terrain in the area may also prohibit a noise barrier from being constructed without the addition of a retaining wall, which may affect the barrier’s feasibility.

Noise Wall 15 (NW15)

NW15 provides abatement for NSA 15. Eighty-three (83) total impacted receptors were identified in this NSA. NW15 benefits 75 receptors and was found to be feasible. The wall requires 931 square feet of noise barrier per benefited receptor, less than the maximum allowed of 1,300; therefore, NW15 is preliminarily reasonable.

Further investigation of this noise barrier will be necessary as any project proceeds into design if changes to the Preferred Alternative are made or if the full Ultimate Build is not constructed at

once. A parallel barrier analysis may be necessary to determine if any feasible and reasonable noise barriers will require absorptive materials.

Noise Wall 16 (NW16)

No impacted receptors were identified in NSA 16; therefore, noise abatement was not evaluated.

Noise Wall 17a (NW17a)

NW17a provides abatement for NSA 17. Sixty-five (65) total impacted receptors were identified in this NSA. NW17 was designed to benefit all receptors within NSA 17, from Phelps Road to Lee's Summit Road. NW17a benefits 36 receptors and was found to be feasible. However, the wall requires 1,503 square feet of noise barrier per benefited receptor, exceeding the maximum allowed of 1,300; therefore, NW17a is not reasonable.

Noise Wall 17b (NW17b)

Due to the terrain differences within NSA 17, a separate noise barrier was analyzed for the eastern portion of the NSA. Noise abatement was found to be much more effective on the eastern portion of the NSA than the western, which is in a cut section.

NW17b benefits 23 receptors and was found to be feasible. The wall requires 1,109 square feet of noise barrier per benefited receptor, less than the maximum allowed of 1,300; therefore, NW17 is preliminarily reasonable.

Further investigation of this noise barrier will be necessary as any project proceeds into design if changes to the Preferred Alternative are made or if the full Ultimate Build is not constructed at once. A parallel barrier analysis may be necessary to determine if any feasible and reasonable noise barriers will require absorptive materials. Steep terrain in the area may also prohibit a noise barrier from being constructed without the addition of a retaining wall, which may affect the barrier's feasibility.

Noise Wall 18a (NW18a)

Two separate noise barriers were evaluated for NSA 18 due to the large gap between residential neighborhoods. NW18a provides abatement for the western portion of NSA 18. Nine total impacted receptors were identified in this area of the NSA. NW18a benefits five receptors and was found to be feasible. The wall requires 1,763 square feet of noise barrier per benefited receptor, exceeding the maximum allowed of 1,300; therefore, NW18a is not reasonable.

Noise Wall 18b (NW18b)

NW18b provides abatement for the eastern portion of NSA 18. Forty-six (46) total impacted receptors were identified in this area of the NSA. NW18b benefits 16 receptors and was found to be feasible. The wall requires 860 square feet of noise barrier per benefited receptor, less than the maximum allowed of 1,300; therefore, NW18b is preliminarily reasonable.

Further investigation of this noise barrier will be necessary as any project proceeds into design if changes to the Preferred Alternative are made or if the full Ultimate Build is not constructed at once.

Noise Wall 19a (NW19a)

NW19a provides abatement for the western subdivision in NSA 19. Eleven (11) total impacted receptors were identified in this subdivision. NW19a benefits 10 receptors and was found to be feasible. The wall requires 1,201 square feet of noise barrier per benefited receptor, less than the maximum allowed of 1,300; therefore, NW19a is preliminarily reasonable.

Noise Wall 19b (NW19ba)

NW19b provides abatement for the eastern subdivision of NSA 19. Thirty-four (34) total impacted receptors were identified in this area of the NSA. NW19b benefits eight receptors and was found to be feasible. The wall requires 3,140 square feet of noise barrier per benefited receptor, exceeding the maximum allowed of 1,300; therefore, NW19b is not reasonable.

NW19a and NW19b were also evaluated together as a single wall system. However, the system was not found to be reasonable. Due to the large undeveloped land between the two subdivisions, it was determined NW19a could be evaluated independently, as it preliminarily meets the feasibility and reasonableness criteria. Additionally, a noise barrier was not evaluated for the impacted receptors on the far east portion of NSA 19. All impacted receptors are in the second-row or beyond, and MoDOT requires at least two first-row impacted receptors in order for a noise barrier to be considered feasible.

9.0 Construction Noise

The predominant construction activities associated with this project are expected to be earth removal, hauling, grading, and paving. Temporary and localized construction noise impacts may occur as a result of these activities. For information on typical noise level emissions of common construction equipment, refer to **Figure 5**. During daytime hours, the predicted effects of these impacts could be temporary speech interference for passers-by and those individuals living or working near the project. During evening and nighttime hours, steady-state construction noise emissions, such as those from paving operations, could be audible and may cause impacts to activities such as sleep. Sporadic evening and nighttime construction equipment noise emissions, such as from backup alarms, lift gate closures (“slamming” of dump truck gates), etc., will be perceived as distinctly louder than the steady-state acoustic environment, and could impact the general peace and usage of noise-sensitive areas – particularly residences.

Extremely loud construction noise activities such as usage of pile-drivers and impact-hammers (jack hammer, hoe-ram) will provide sporadic and temporary construction noise impacts in the vicinity of those activities. Construction noise from widening activities along I-70 as well as bridge construction could impact residences adjacent to the roadways.

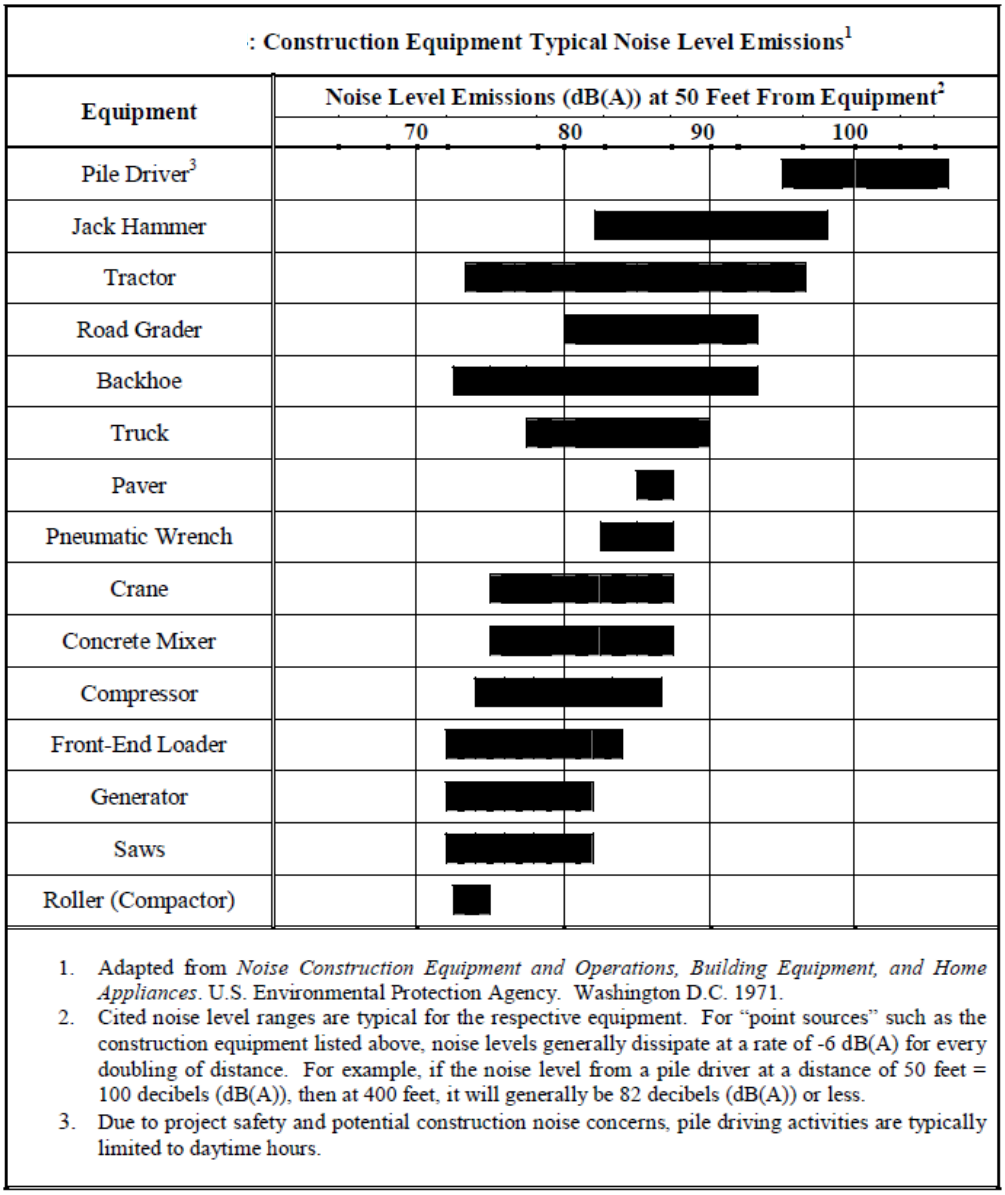
Construction activities that will produce extremely loud noises should be scheduled during times of the day when such noises will create as minimal disturbance as possible, specifically weekday daytime hours, since the primary land use expected to be temporarily impacted by construction noise for the project is residential.

Generally, low-cost and easily implemented construction noise control measures should be incorporated into the project plans and specifications to the extent possible. These measures include, but are not limited to, work-hour limits, equipment exhaust muffler requirements, haul-road locations, elimination of “tail gate banging”, ambient-sensitive backup alarms, construction noise complaint mechanisms, and consistent and transparent community communication.

While construction noise level prediction is difficult for a particular receptor or group of receptors, it can be assessed in a general capacity with respect to distance from known or likely project activities. For this project, earth removal, grading, hauling, and paving are anticipated to occur in the vicinity of noise-sensitive receptors. Although construction noise impact abatement should not place an undue burden on the financial cost of the project or the project construction schedule, pursuant to the requirements of Title 23 CFR 772.19, it is the recommendation of this traffic noise report to:

- Inform the public in advance on construction activities that might generate particularly high noise levels.
- Construct feasible and reasonable noise barriers as early in the project construction as practical.

Figure 5 – Construction Equipment Typical Noise Level Emissions



Source: U.S. Environmental Protection Agency. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*. Prepared by Bolt, Beranek and Newman under Contract 68-04-0047. Washington, D.C., December 31, 1971.

10.0 Information for Local Officials

MoDOT encourages local governments with jurisdiction over undeveloped lands, as well as potential developers of these lands, to practice noise compatibility planning to avoid future noise impacts. In the vicinity of the I-70: I-435 to I-470 project, no land is currently undeveloped. For this reason, traffic noise contours were not developed, as noise levels were modeled at all noise sensitive properties. Should redevelopment or re-zoning ever occur, it can be noted from the traffic noise analysis that virtually all first-row receptors are impacted by noise. In some instances, noise impacts extend to the second or even third row of receptors. For individual locations, the distance at which traffic noise impacts will occur can vary greatly depending on several factors including, but not limited to, traffic volumes, nearby topography, shielding from nearby structures, etc.

11.0 Conclusion

Traffic noise and temporary construction noise can be a consequence of transportation projects, especially in areas in close proximity to high-volume and high-speed existing steady-state traffic noise sources. The I-70: I-435 to I-470 project is considered a Type I project; therefore, a comprehensive traffic noise analysis was conducted in accordance with FHWA regulations and MoDOT's Traffic Noise Policy.

An analysis was conducted to evaluate the potential noise impacts associated with the proposed improvements along the existing I-70 corridor from I-435 to I-470. Computer models were created with the FHWA's TNM version 2.5 to predict existing and future noise levels and define impacted receptors within the project study area.

Within the project study area, 2,578 noise-sensitive receptors were identified, divided amongst 19 noise sensitive areas, and evaluated for traffic noise impacts. In the 2050 Ultimate Build scenario, 755 noise impacts were identified. Noise abatement was considered for all impacted receptors. Of 19 noise barriers evaluated, 12 preliminarily meet FHWA and MoDOT's feasibility and reasonableness criteria.

The noise analysis was completed based on the Preferred Alternative design, including additional through traffic lanes and widened shoulders in both directions of I-70. If any modifications are made to the configuration as the project progresses further into design, the feasibility and reasonableness of any noise barriers may also change. Additionally, individual walls may face constructability challenges due to issues like utilities, drainage, safety, etc. that could affect the feasibility. Any walls that still meet the feasibility and reasonableness criteria upon more detailed design will be taken to a vote of the benefited receptors. Final recommendations for any noise barrier construction will be made after final design and the public involvement process is complete.

12.0 References

Electronic Code of Federal Regulations (e-CFR). 2018. Webpage. 23 CFR Part 772. https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-772

Federal Highway Administration. December, 2011. Highway Traffic Noise: Analysis and Abatement Guidance. FHWA-HEP-10-025. https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf

Missouri Department of Transportation. 2024. 127.13 Noise. Webpage http://epg.modot.org/index.php?title=127.13_Noise

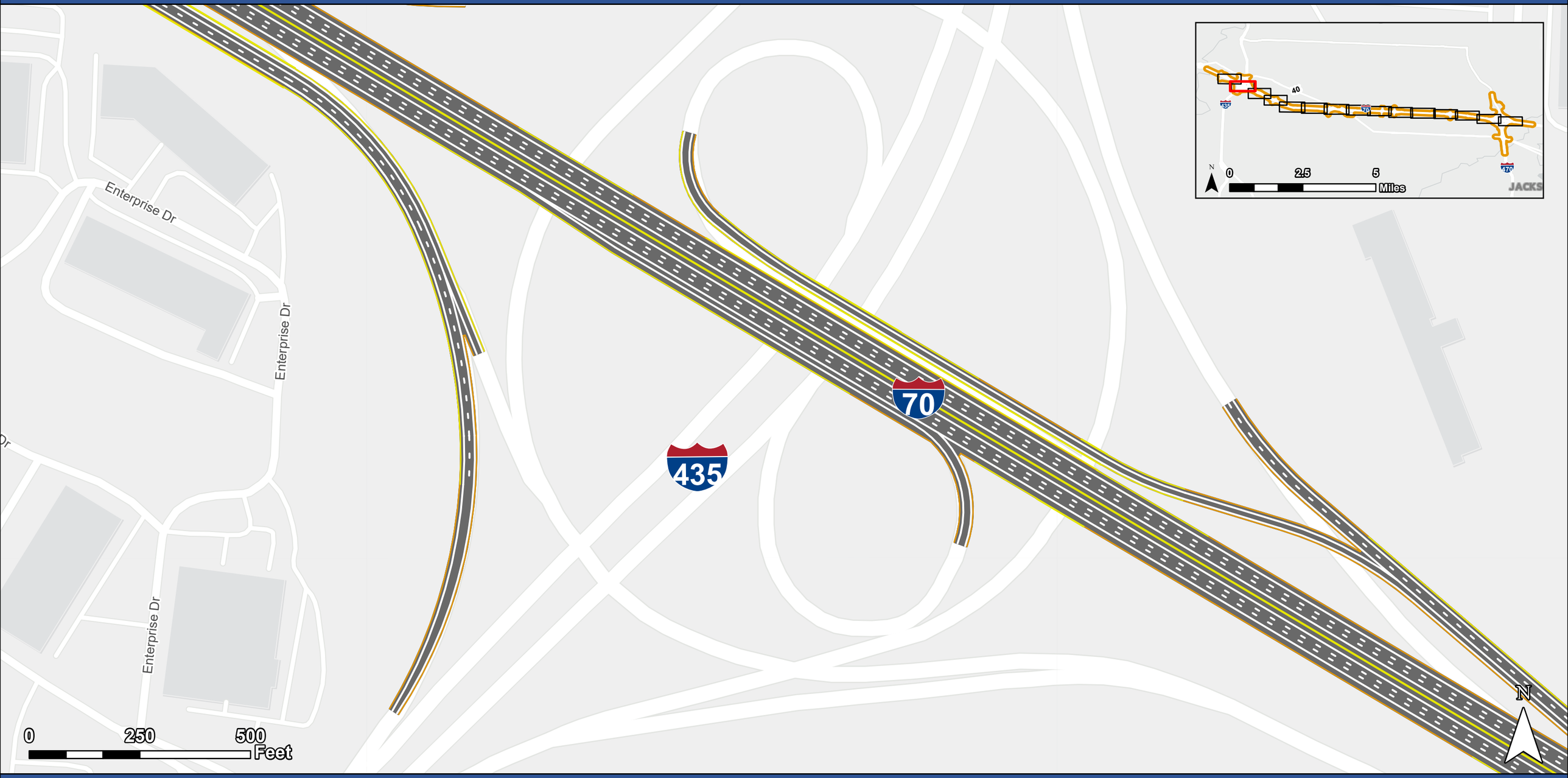
Preferred Alternative Design

Exhibit 1

I-70 Noise Study: I-435 to I-470

Preferred Alternative Design

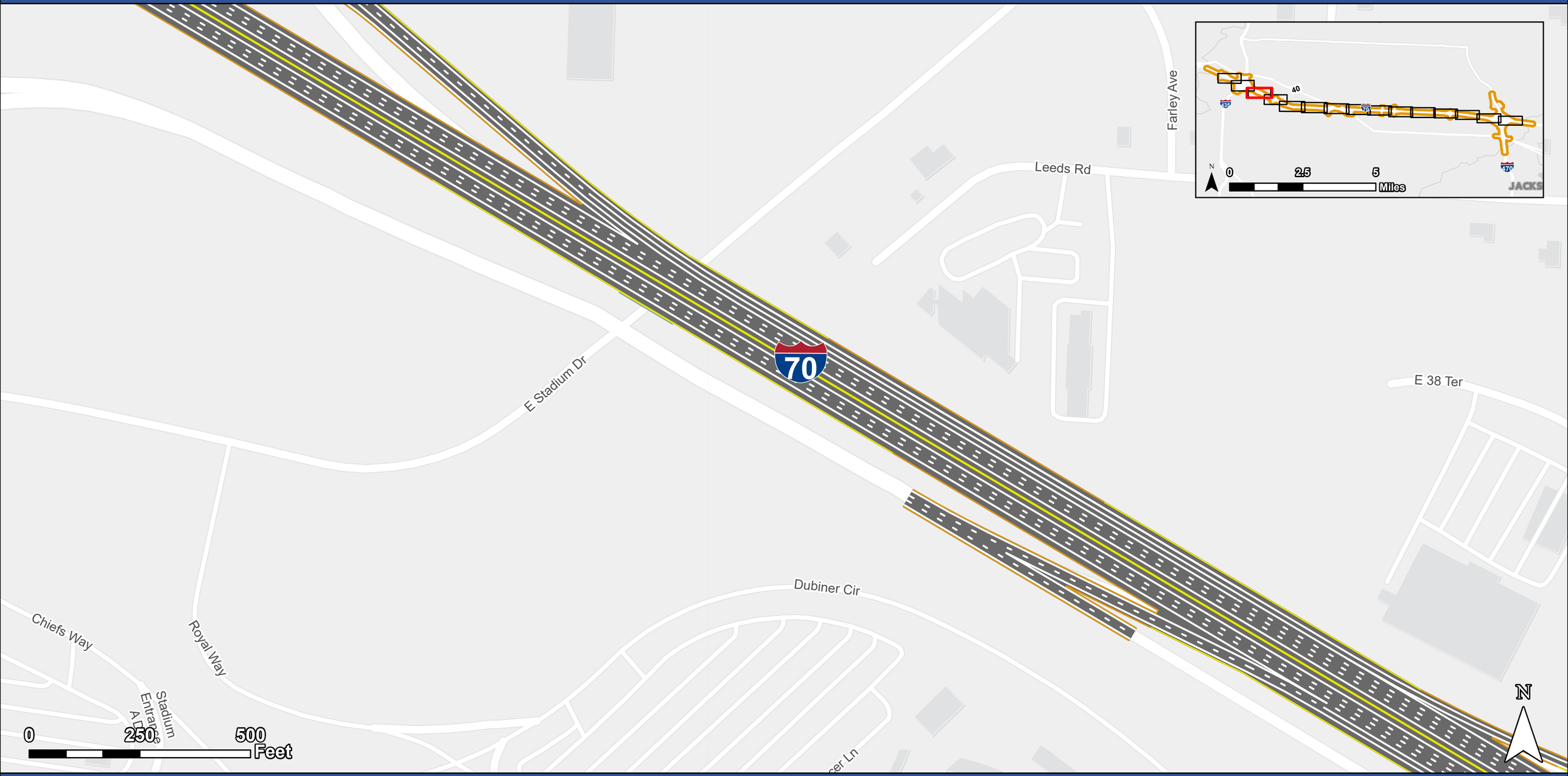
Exhibit 1



I-70 Noise Study: I-435 to I-470

Preferred Alternative Design

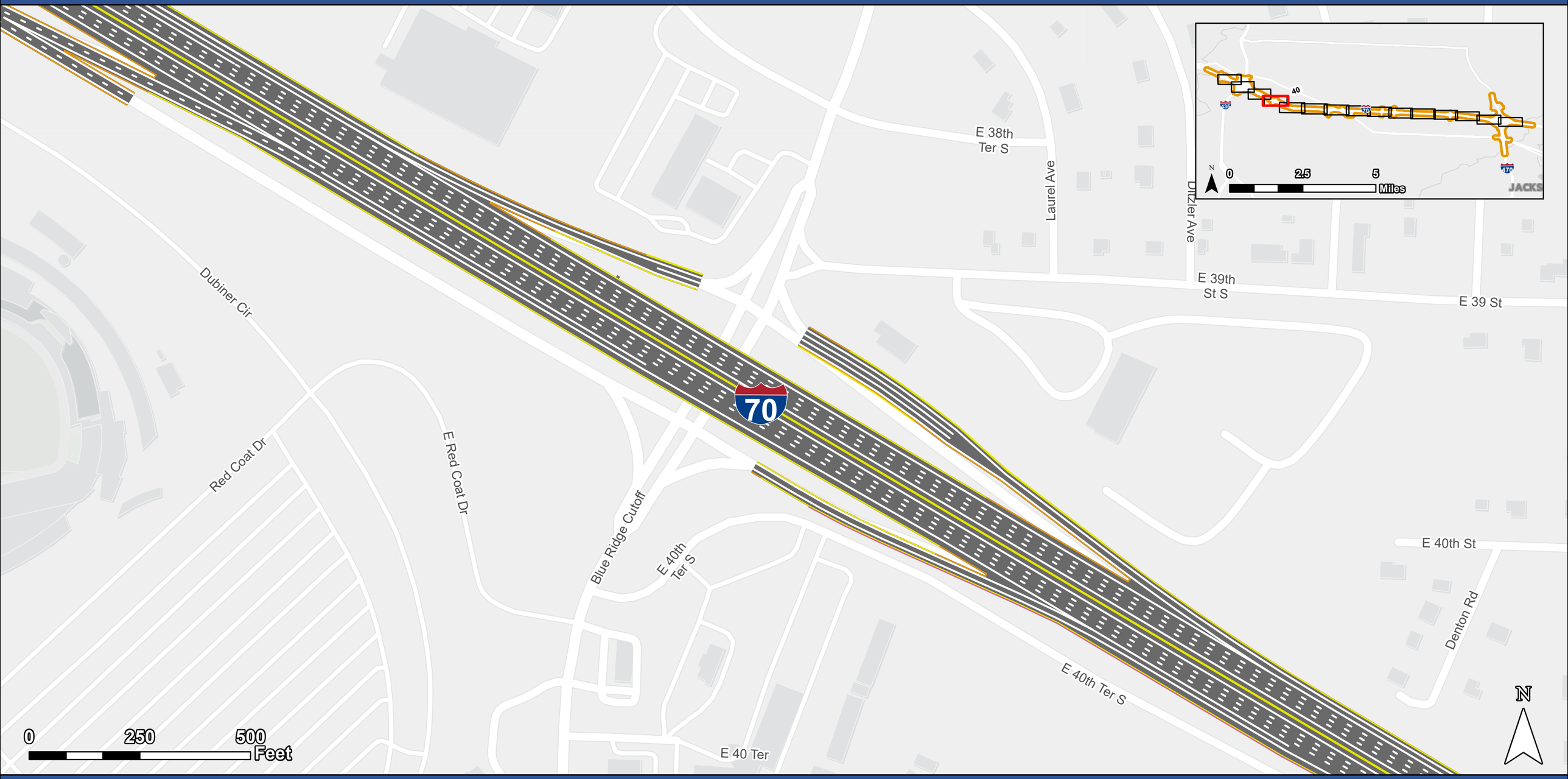
Exhibit 1



I-70 Noise Study: I-435 to I-470

Preferred Alternative Design

Exhibit 1



I-70 Noise Study: I-435 to I-470

Preferred Alternative Design

Exhibit 1

I-70 Noise Study:
I-435 to I-470

Preferred Alternative Design

Exhibit 1

I-70 Noise Study: I-435 to I-470

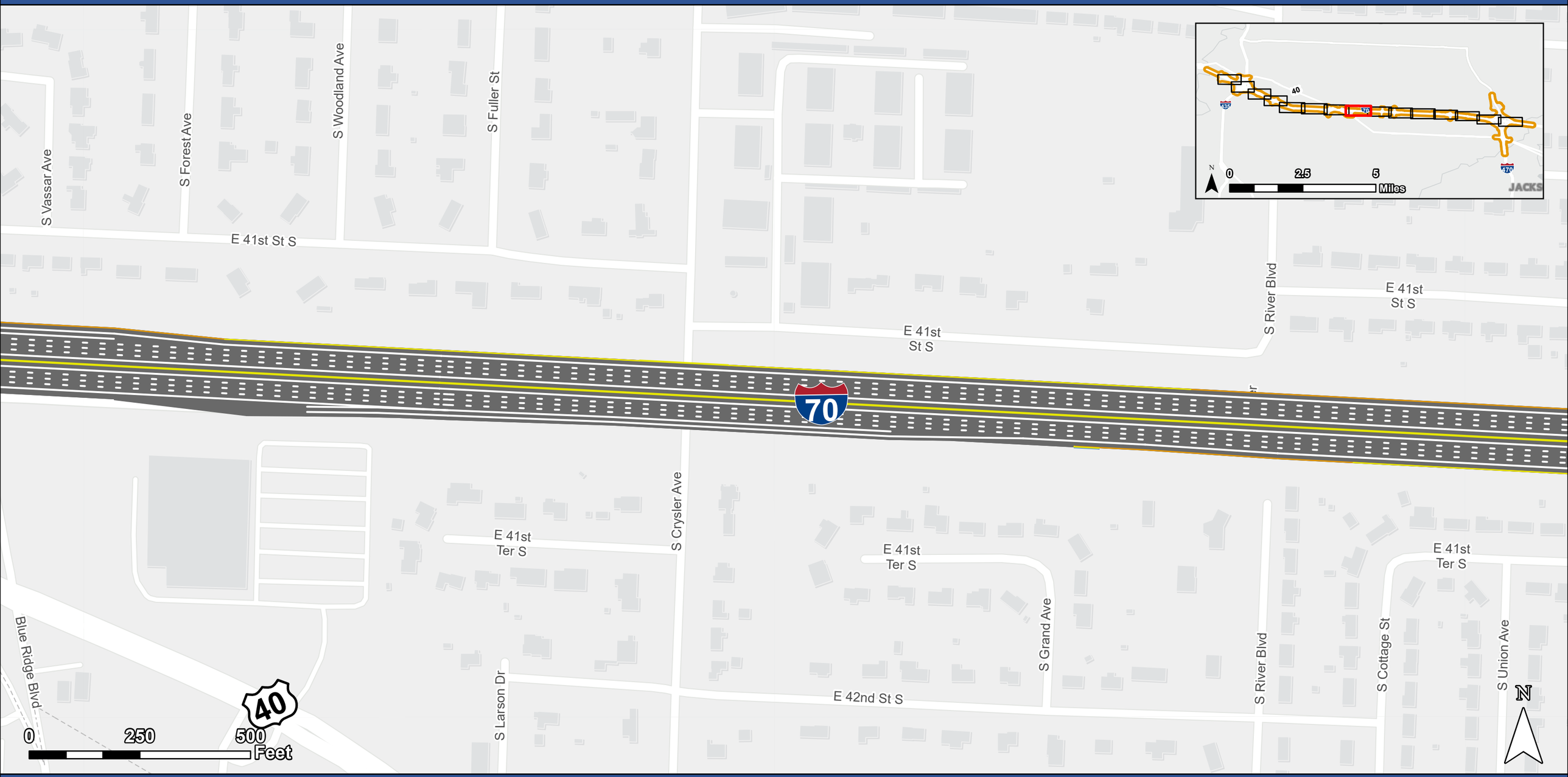
Preferred Alternative Design

Exhibit 1

I-70 Noise Study: I-435 to I-470

Preferred Alternative Design

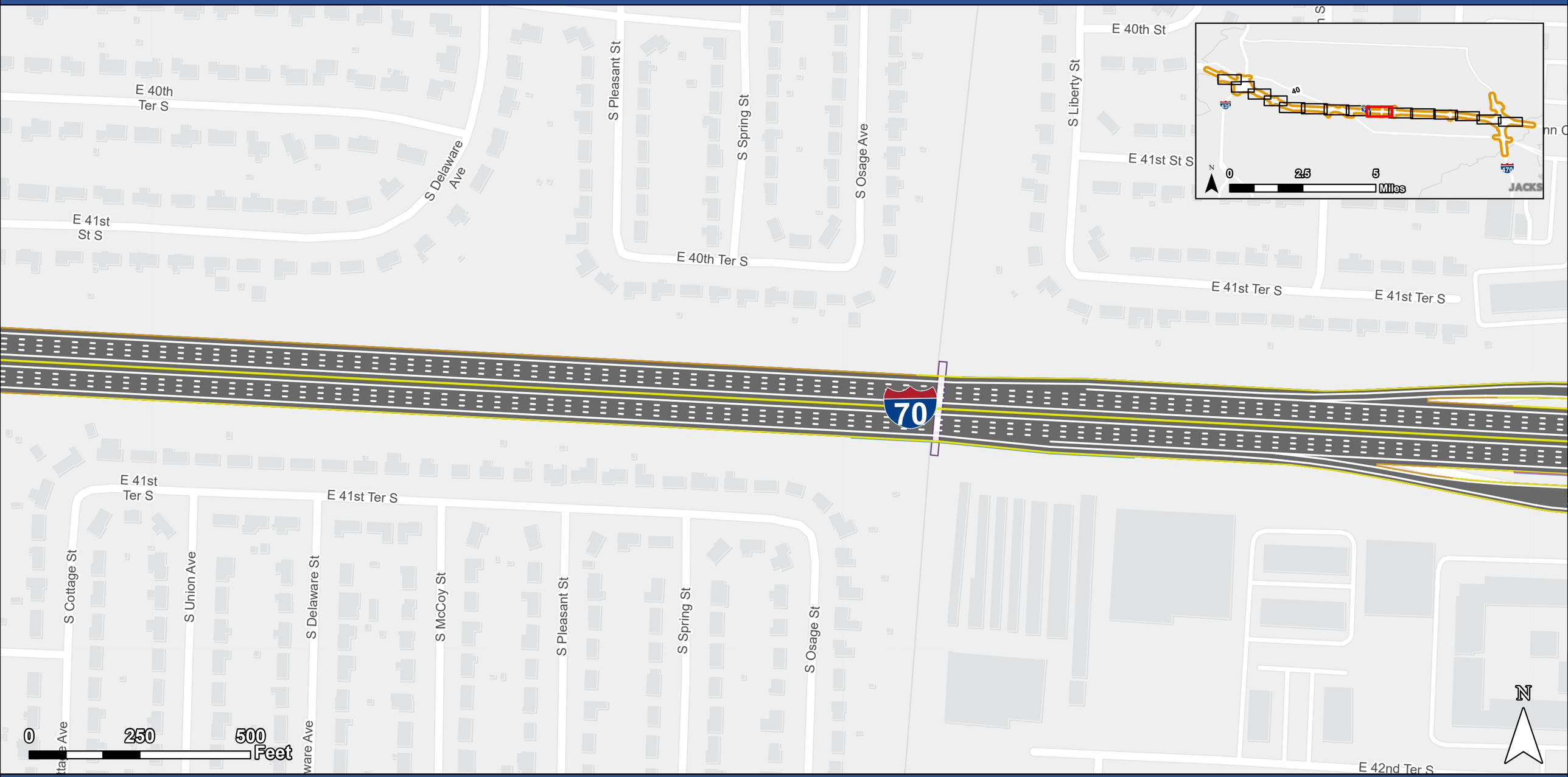
Exhibit 1



I-70 Noise Study: I-435 to I-470

Preferred Alternative Design

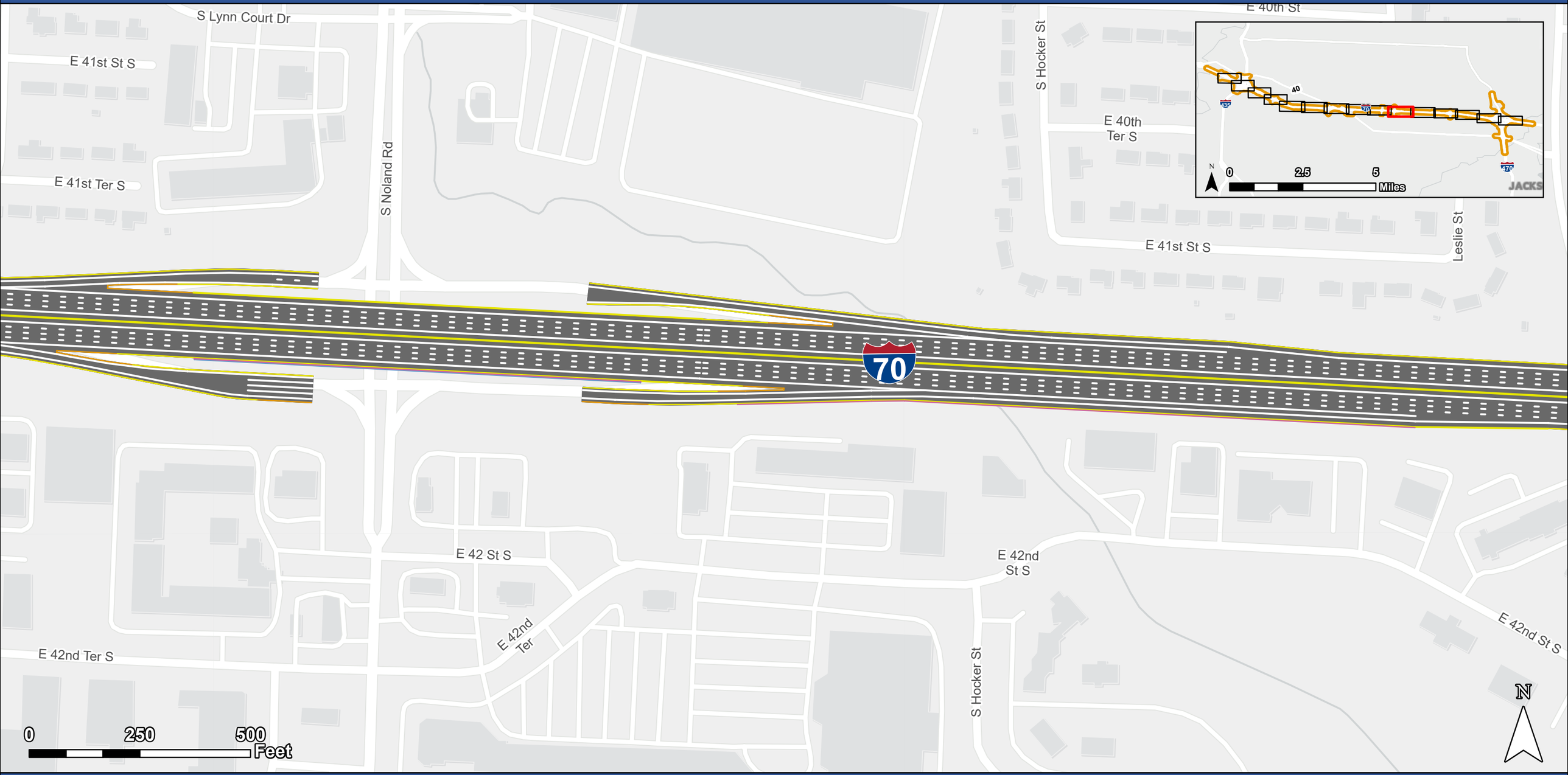
Exhibit 1



I-70 Noise Study: I-435 to I-470

Preferred Alternative Design

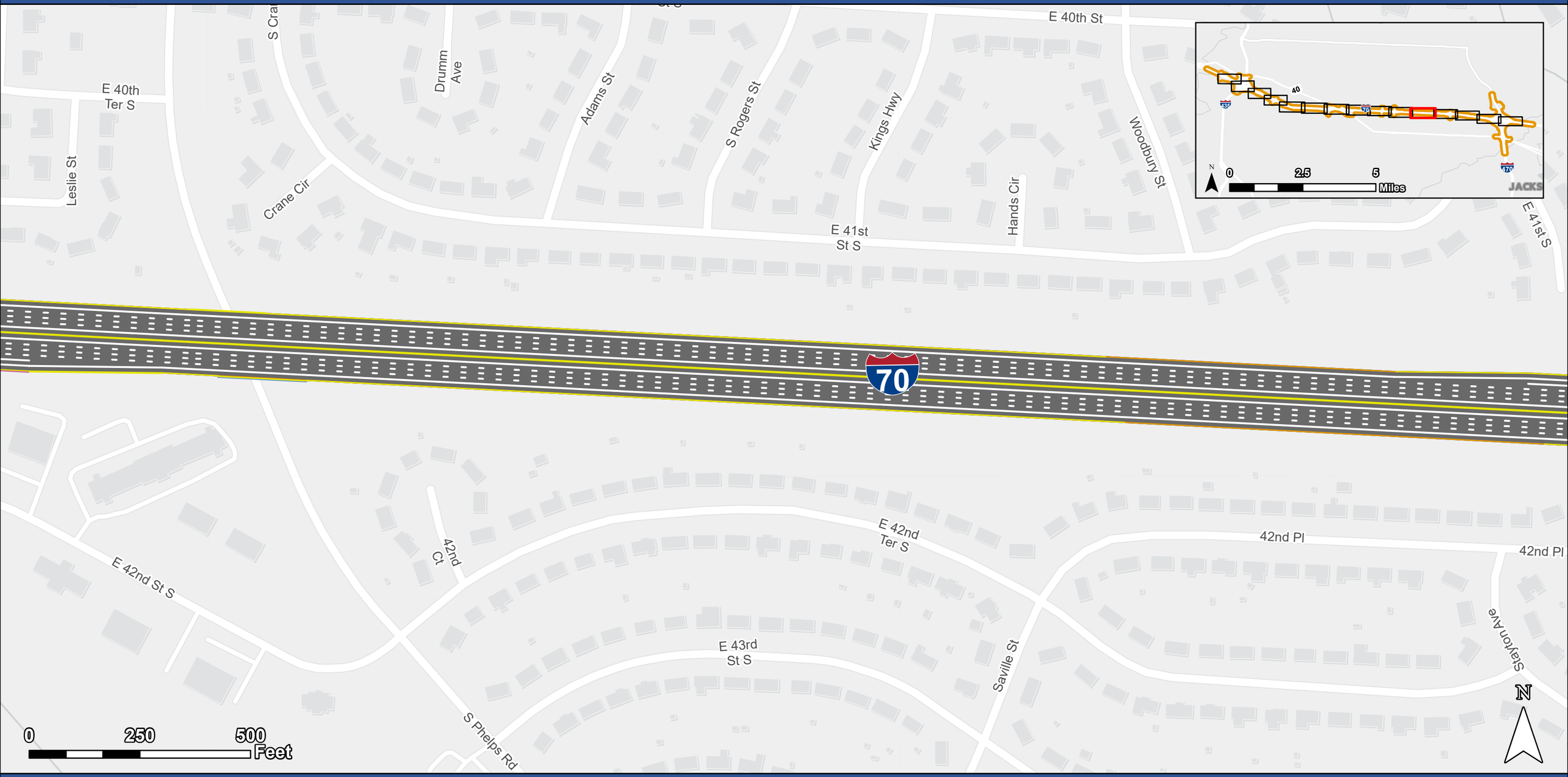
Exhibit 1



I-70 Noise Study:
I-435 to I-470

Preferred Alternative Design

Exhibit 1



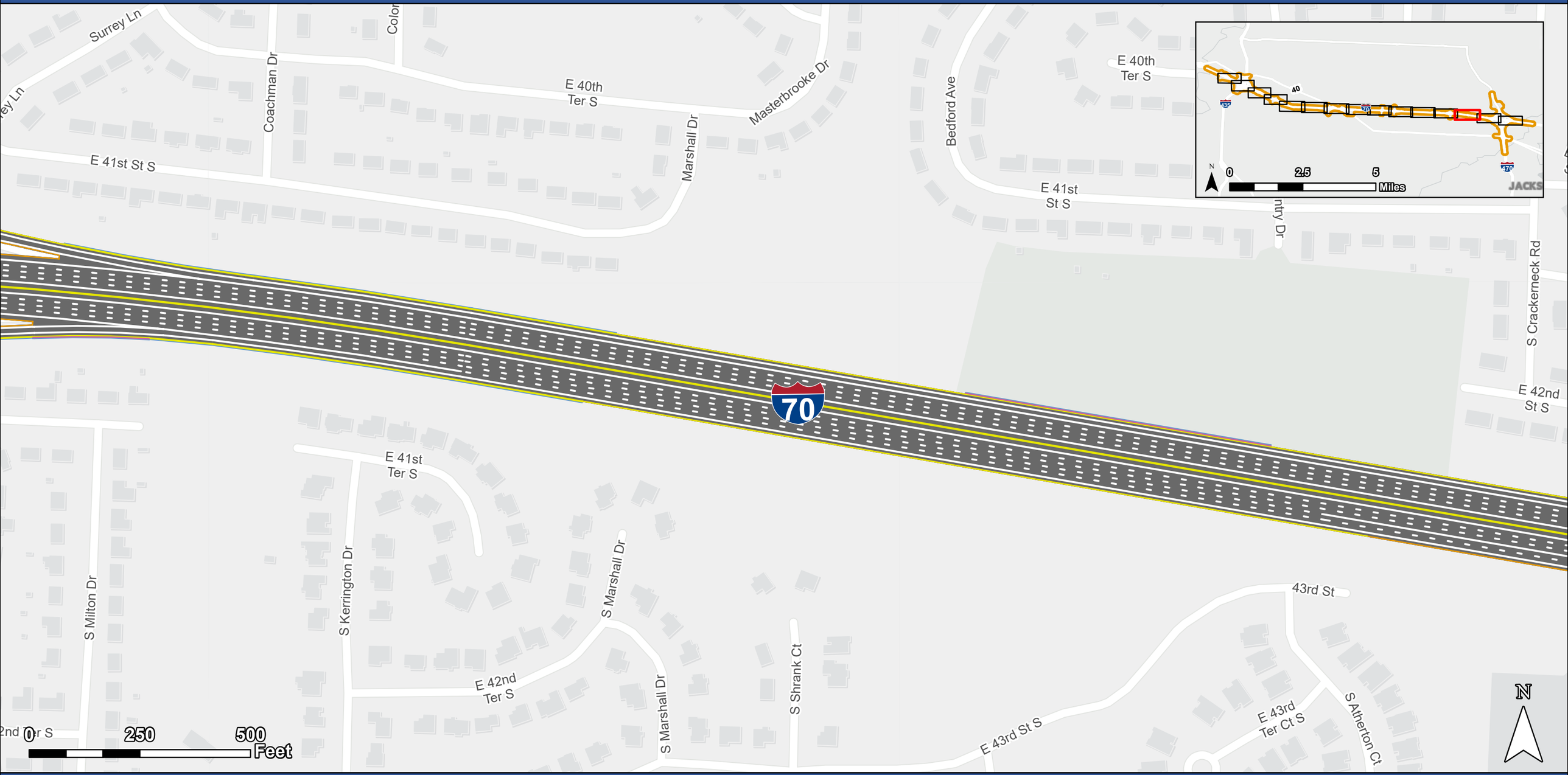
I-70 Noise Study: I-435 to I-470

Preferred Alternative Design

Exhibit 1

Preferred Alternative Design

Exhibit 1



I-70 Noise Study: I-435 to I-470

Preferred Alternative Design

Exhibit 1

I-70 Noise Study: I-435 to I-470

Preferred Alternative Design

Exhibit 1

I-70 Noise Study: I-435 to I-470

Noise Sensitive Areas

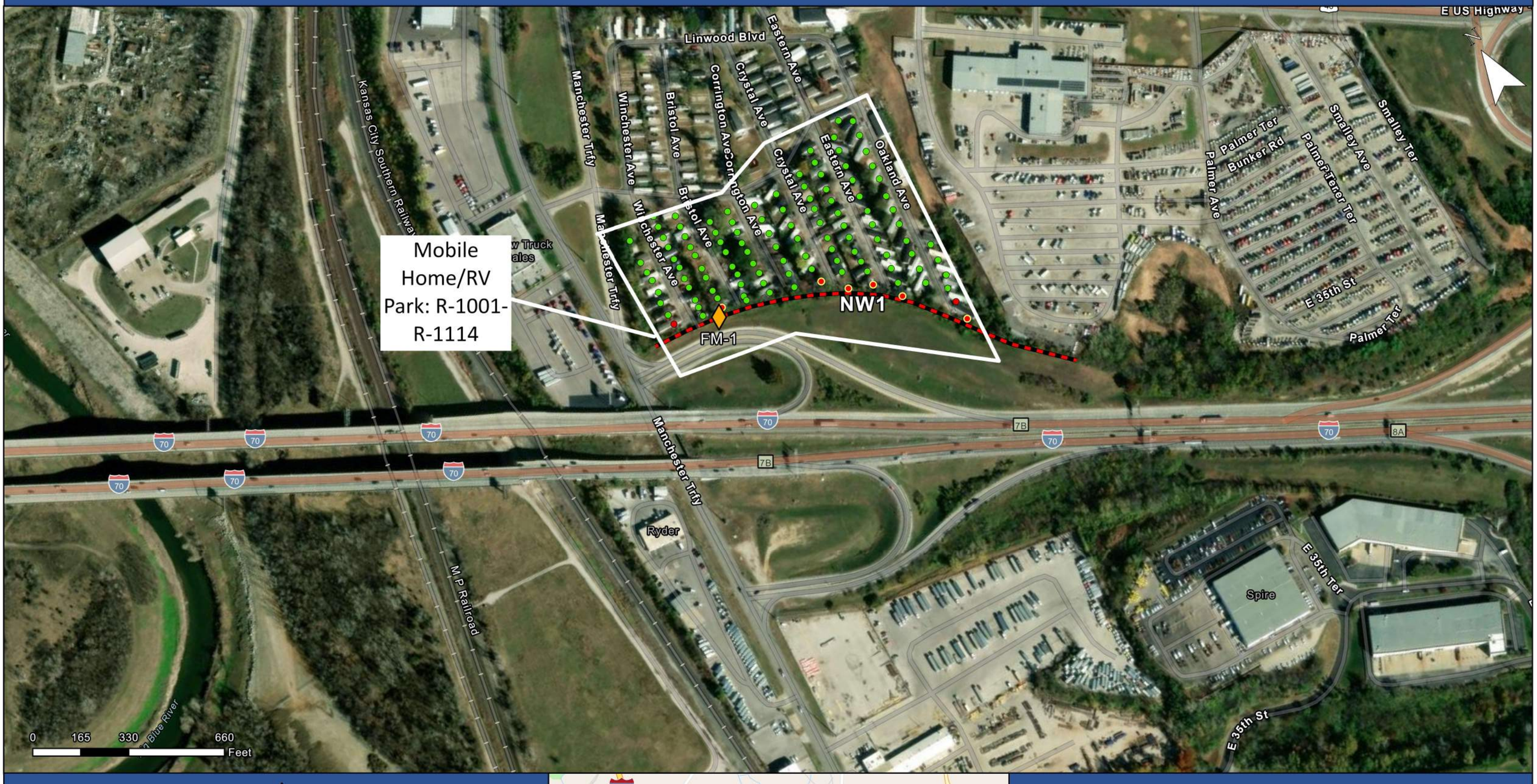
Exhibit 2

— Noise Sensitive Area Boundaries

I-70 Noise Study
I-435 to I-470

Noise Analysis Results

Exhibit 3



Noise Receptors

- Impacted, Benefited
- Impacted, Not Benefited
- Not Impacted, Benefited
- Not Impacted, Not Benefited
- Multistory Dwelling*

*See Appendix C for multistory dwelling noise analysis results

- Field Measurement Location

Noise Walls

- Not Feasible and/or Not Reasonable
- Preliminarily Feasible and Reasonable

I-70 Noise Study
I-435 to I-470

Noise Analysis Results

Exhibit 3

Noise Receptors

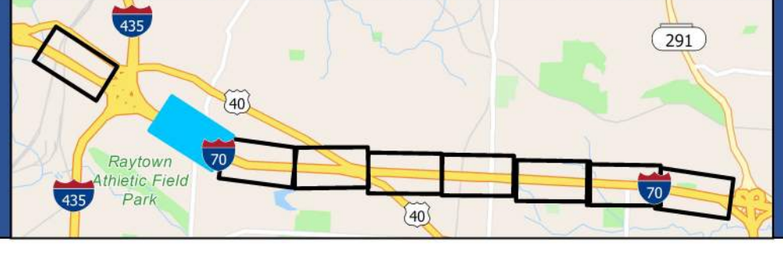
- Impacted, Benefited
- Impacted, Not Benefited
- Not Impacted, Benefited
- Not Impacted, Not Benefited
- Multistory Dwelling*

*See Appendix C for multistory dwelling noise analysis results

Field Measurement Location

Noise Walls

- Not Feasible and/or Not Reasonable
- Preliminarily Feasible and Reasonable



I-70 Noise Study
I-435 to I-470

Noise Analysis Results

Exhibit 3

Noise Receptors

- Impacted, Benefited
- Impacted, Not Benefited
- Not Impacted, Benefited
- Not Impacted, Not Benefited
- Multistory Dwelling*

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- Field Measurement Location

Noise Walls

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- Preliminarily Feasible and Reasonable

I-70 Noise Study
I-435 to I-470

Noise Analysis Results

Exhibit 3

Apartment Complex:
R-5014 - R-5027

Apartment Complex:
R-5098 - R-5211

Apartment Complex:
R-6001 - R-6010 & R-6016 - R-6125

N

0 150 300 600 Feet

Noise Receptors

- Impacted, Benefited
- Impacted, Not Benefited
- Not Impacted, Benefited
- Not Impacted, Not Benefited
- Multistory Dwelling*

*See Appendix C for multistory dwelling noise analysis results

- Field Measurement Location

Noise Walls

- Not Feasible and/or Not Reasonable
- Preliminarily Feasible and Reasonable

I-70 Noise Study
I-435 to I-470

Noise Analysis Results

Exhibit 3

Apartment Complex:
R-9001 - R-9092

NW9
NW11
NW12
NW12

FM-4
FM-5

E 40th St S
E 41st St S
E 43rd St S
E 39th Ter S
E 41st Ter S
S Crysler Ave
S Forest Ave
S Fuller Ave
S Woodland Ave
S Vassar Ave
S River Blvd
S Grand Ave
S Larson Dr
S Delaware Ave
S Cottage Ave
S Union St
S McCoy St
NE 40th St
E US Highway 40
Burlington
Blue Ridge Tower
Raytown Athletic Field Park

0 155 310 620 Feet

Noise Receptors

- Impacted, Benefited
- Impacted, Not Benefited
- Not Impacted, Benefited
- Not Impacted, Not Benefited
- Multistory Dwelling*

*See Appendix C for multistory dwelling noise analysis results

Field Measurement Location

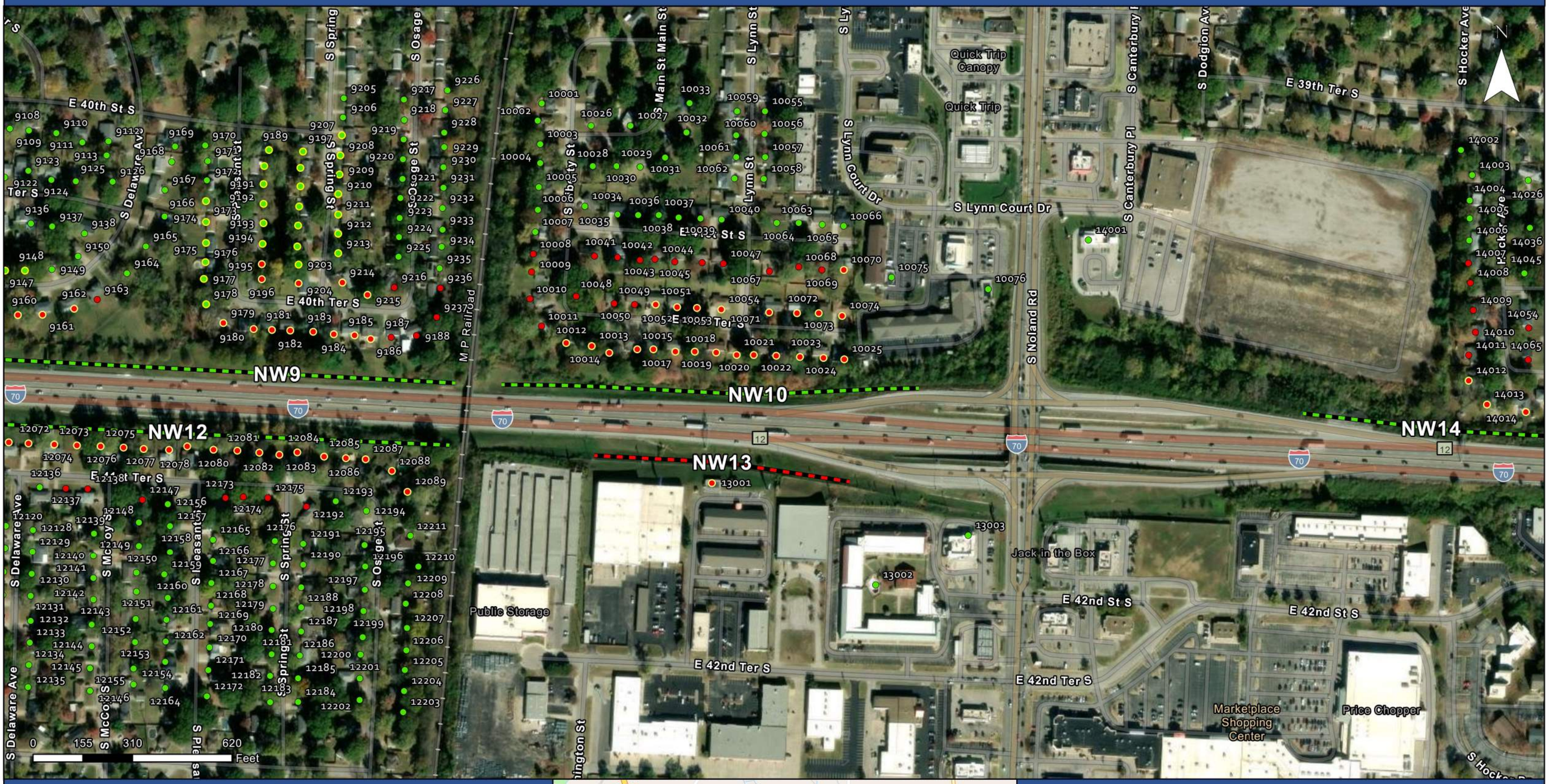
Noise Walls

- Not Feasible and/or Not Reasonable
- Preliminarily Feasible and Reasonable

I-70 Noise Study
I-435 to I-470

Noise Analysis Results

Exhibit 3



Noise Receptors

- Impacted, Benefited
- Impacted, Not Benefited
- Not Impacted, Benefited
- Not Impacted, Not Benefited
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I-70 Noise Study
I-435 to I-470

Noise Analysis Results

Exhibit 3

Noise Receptors

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- Impacted, Not Benefited
- Not Impacted, Benefited
- Not Impacted, Not Benefited
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Field Measurement Location

Noise Walls

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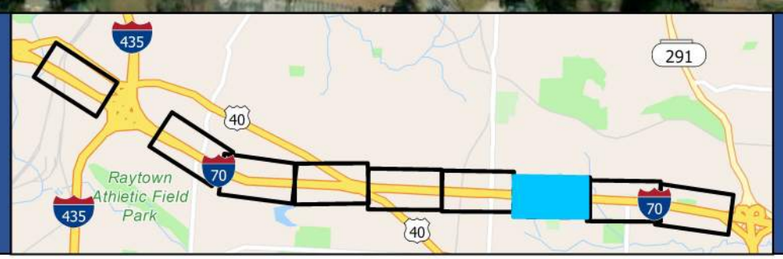
- Preliminarily Feasible and Reasonable



I-70 Noise Study
I-435 to I-470

Noise Analysis Results

Exhibit 3

NW15
NW17b
NW18a
NW19a
NW19b
FM-8
FM-9
St Michaels Episcopal Chruch
Home Depot
Crackerbarrell
C-Store
S Lees Summit Rd
E 40th St S
E 40th Ter S
E 41st St S
E 41st Ter S
E 42nd St S
E 42nd Ter S
E 43rd St S
E 43rd Ter S
S Stayton Ave
S Grant Ave
S Carriage Ln
S Bryant Dr
S Milton Dr
Surrey Ln
S Conway Dr
Kerrington Dr
0 155 310 620 Feet
N

Noise Receptors

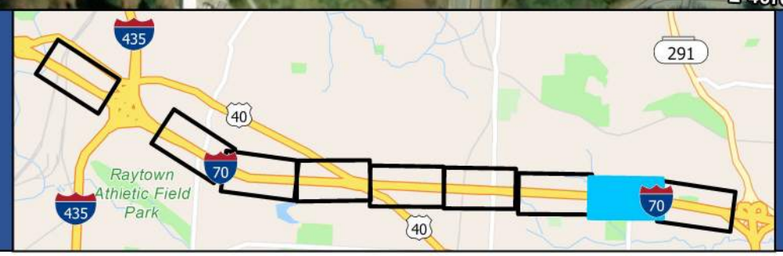
- Impacted, Benefited
- Impacted, Not Benefited
- Not Impacted, Benefited
- Not Impacted, Not Benefited
- Multistory Dwelling*

*See Appendix C for multistory dwelling noise analysis results

Field Measurement Location

Noise Walls

- Not Feasible and/or Not Reasonable
- Preliminarily Feasible and Reasonable



I-70 Noise Study
I-435 to I-470

Noise Analysis Results

Exhibit 3

Apartment Complex: R-18255 - R-18287

NW18b

NW19b

NW19b

FM-8

Carriage Hills Park

PetSmart

Sams Club

S Bolger Ct

S Bolger Ct

E 40th Ter S

E 41st St S

E 42nd St S

E 43rd St S

43rd St

S Bass Pro Dr

S Bass Pro Dr

S Bass Pro Dr

Duluth Trading Company

Bass Pro Shops

Stoney Creek Hotel

Harbaugh Dr

S Bedford

S Davidson Dr

Shrank Ct

0 160 320 640 Feet

Noise Receptors

- Impacted, Benefited
- Impacted, Not Benefited
- Not Impacted, Benefited
- Not Impacted, Not Benefited
- Multistory Dwelling*

*See Appendix C for multistory dwelling noise analysis results

Field Measurement Location

Noise Walls

- Not Feasible and/or Not Reasonable
- Preliminarily Feasible and Reasonable

I-70 Noise Study
I-435 to I-470

Appendix A
Noise Measurement Data Sheets

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-70 EA (Manchester to I-470) JOB #: MoDOT J4I3195

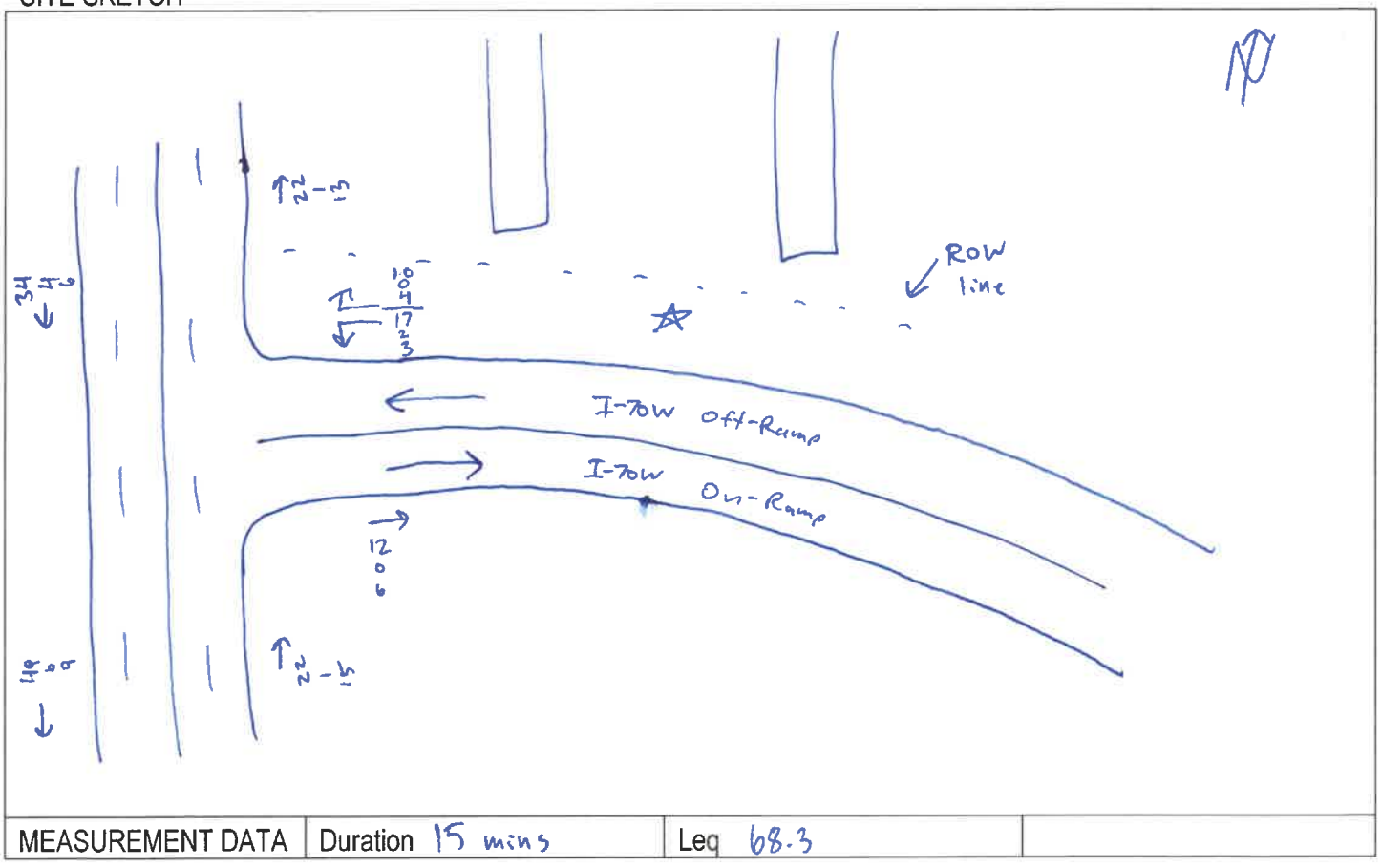
SITE: FM - 1 DATE: 10/16/24 TIME: 1:45 PM

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

	TRAFFIC DATA (via KC SCOUT)	
ROAD (Name/Dir)	I-70 West	I-70 East
AUTOS	696	563
MED TRKS	26	33
HVY TRKS	74	64
BUS	0	0
MOTORCYCLE	1	1
SPEED	65 mph	65 mph

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	ExTech
SLM MODEL	SDL600
SLM	S / N Z372646
CALIBRATOR – 40744	S / N Z372652

SITE SKETCH



MEASUREMENT DATA	Duration 15 mins	Leq 68.3	

WEATHER DATA WIND SPEED (MPH) 8 DIR. SE TEMP. 60 HUMIDITY 27 CLOUD COVER Sunny

BACKGROUND NOISE

MAJOR SOURCES

UNUSUAL EVENTS

OTHER NOTES

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-70 EA (Manchester to I-470) JOB #: MoDOT J4I3195

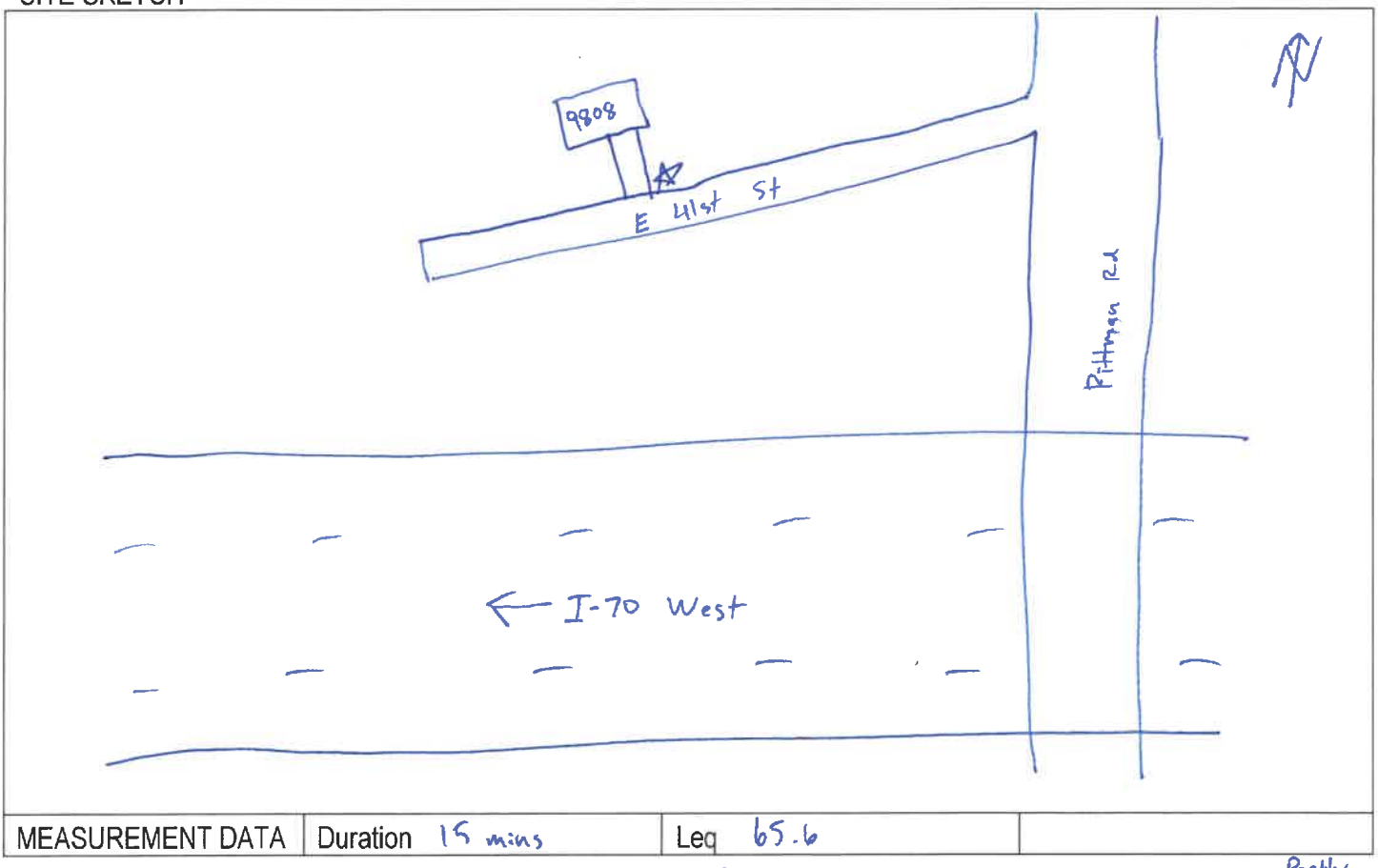
SITE: FM - 2 DATE: 9/16/24 TIME: 11:35 AM

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

TRAFFIC DATA		
ROAD (Name/Dir)	I-70 West	I-70 East
AUTOS	719	718
MED TRKS	45	33
HVY TRKS	68	75
BUS	6	5
MOTORCYCLE	3	5
SPEED	65	65

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	ExTech
SLM MODEL	SDL600
SLM	S / N 2372649
CALIBRATOR – 40744	S / N Z372652

SITE SKETCH



MEASUREMENT DATA	Duration 15 mins	Leq 65.6	

WEATHER DATA WIND SPEED (MPH) 3 DIR. SE TEMP. 83° HUMIDITY 59 CLOUD COVER Partly Cloudy

BACKGROUND NOISE

MAJOR SOURCES

UNUSUAL EVENTS 11:42 - neighbors truck started, 11:44 - Jake brake

OTHER NOTES

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-70 EA (Manchester to I-470) JOB #: MoDOT J4I3195

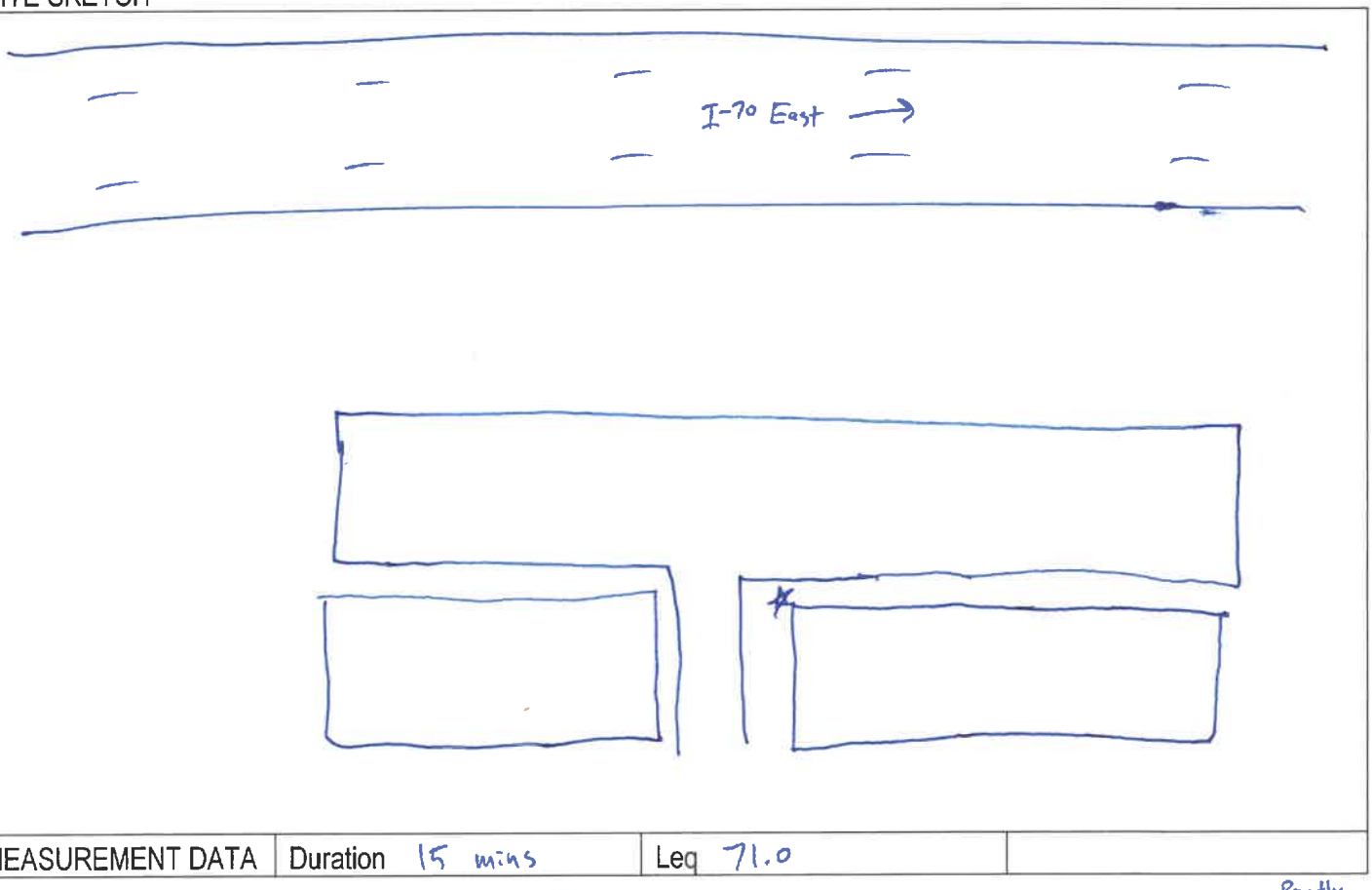
SITE: FM - 3 DATE: 9/16/14 TIME: 11:35 AM

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

TRAFFIC DATA		
ROAD (Name/Dir)	I-70 West	I-70 East
AUTOS	719	718
MED TRKS	45	33
HVY TRKS	68	75
BUS	6	5
MOTORCYCLE	3	5
SPEED	65	65

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	ExTech
SLM MODEL	SDL600
SLM	S / N Z372046
CALIBRATOR – 40744	S / N Z372652

SITE SKETCH



MEASUREMENT DATA	Duration 15 mins	Leq 71.0	

WEATHER DATA WIND SPEED (MPH) 3 DIR. SE TEMP. 83° HUMIDITY 59 CLOUD COVER Partly Cloudy

BACKGROUND NOISE

MAJOR SOURCES

UNUSUAL EVENTS 11:44 - Jake brake

OTHER NOTES

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-70 EA (Manchester to I-470) JOB #: MoDOT J4I3195

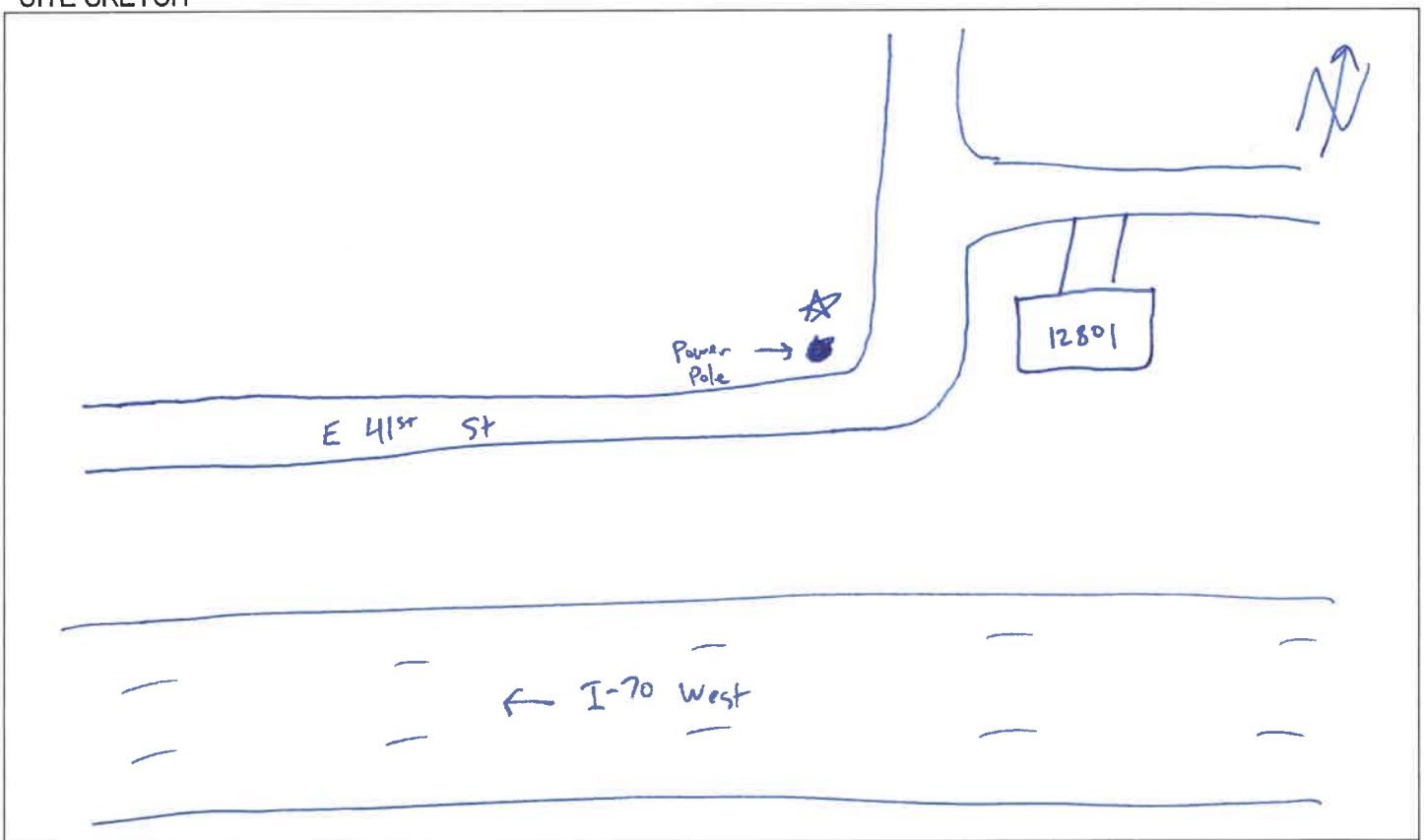
SITE: FM - 4 DATE: 9/16/24 TIME: 10:30 AM

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

TRAFFIC DATA		
ROAD (Name/Dir)	I-70 West	I-70 East
AUTOS	693	692
MED TRKS	47	41
HVY TRKS	67	83
BUS	4	3
MOTORCYCLE	3	1
SPEED	65	65

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	ExTech
SLM MODEL	SDL600
SLM	S / N Z372649
CALIBRATOR – 40744	S / N Z372652

SITE SKETCH



MEASUREMENT DATA	Duration 15 mins	Leq 68.5	

WEATHER DATA WIND SPEED (MPH) 7 DIR. SE TEMP. 79 HUMIDITY 62 CLOUD COVER Sunny

BACKGROUND NOISE

MAJOR SOURCES

UNUSUAL EVENTS 10:35 - garbage truck on 41st, 10:39 - motorcycle radio

OTHER NOTES

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-70 EA (Manchester to I-470) JOB #: MoDOT J4I3195

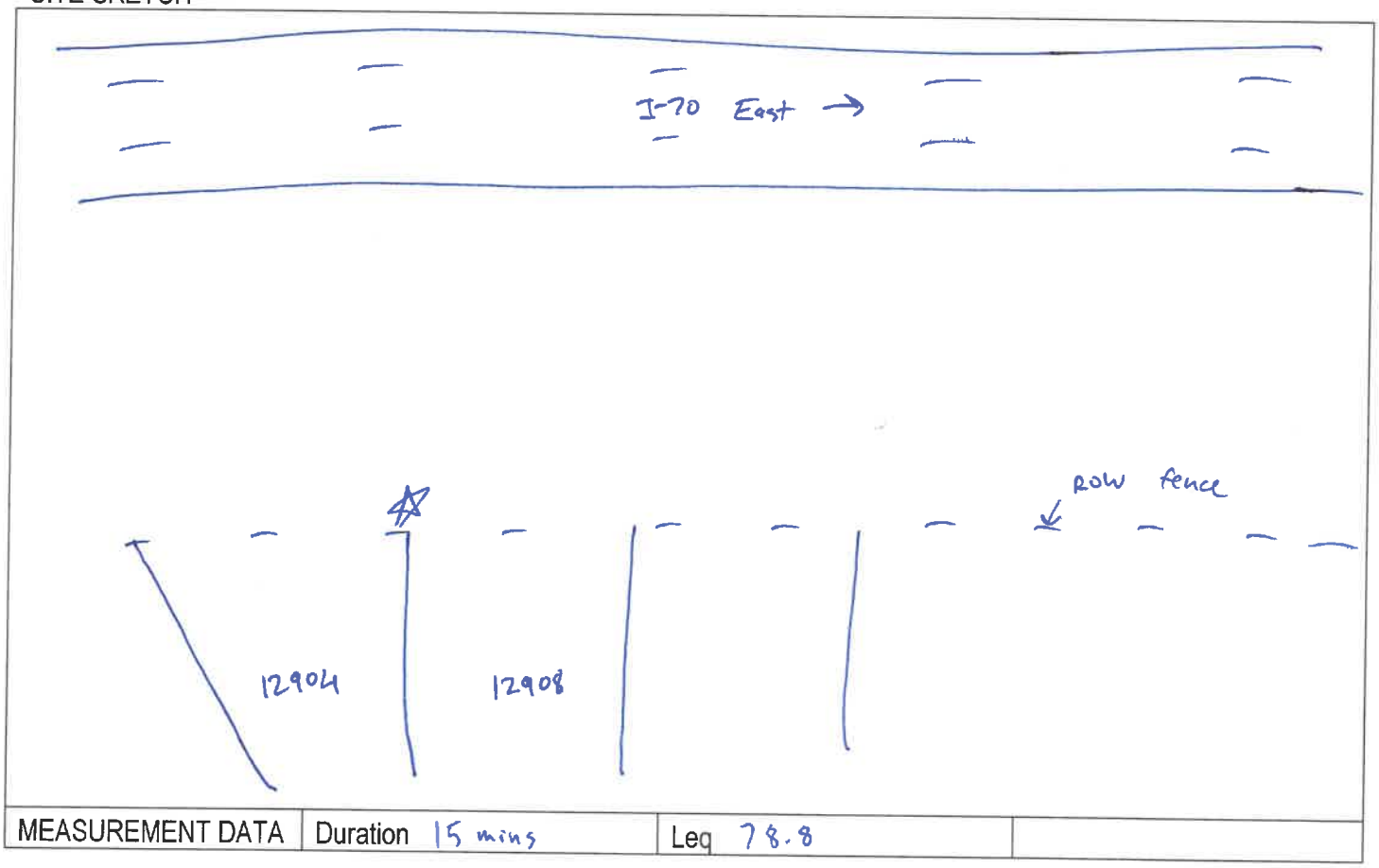
SITE: FM - 5 DATE: 9/16/24 TIME: 10:30 AM

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

TRAFFIC DATA		
ROAD (Name/Dir)	I-70 West	I-70 East
AUTOS	693	692
MED TRKS	47	41
HVY TRKS	67	83
BUS	4	3
MOTORCYCLE	3	1
SPEED	65	65

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	ExTech
SLM MODEL	SDL600
SLM	S / N Z372646
CALIBRATOR – 40744	S / N Z372652

SITE SKETCH



MEASUREMENT DATA	Duration 15 mins	Leq 78.8	

WEATHER DATA WIND SPEED (MPH) 7 DIR. SE TEMP. 79 HUMIDITY 62 CLOUD COVER Sunny

BACKGROUND NOISE

MAJOR SOURCES

UNUSUAL EVENTS 10:33 - Jake brake

OTHER NOTES

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-70 EA (Manchester to I-470) JOB #: MoDOT J4I3195

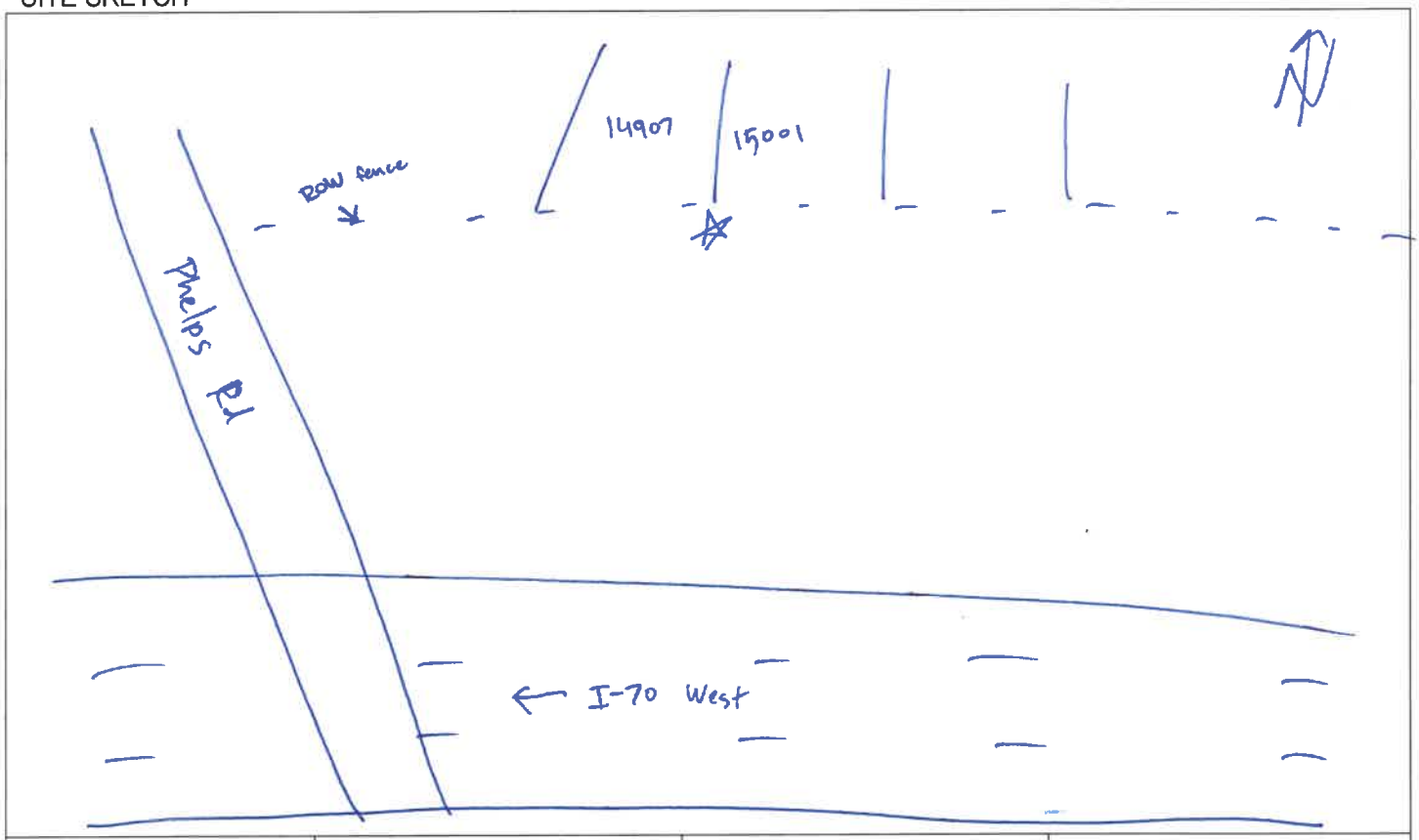
SITE: FM - 6 DATE: 9/25/24 TIME: 11:30 AM

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

TRAFFIC DATA		
ROAD (Name/Dir)	I-70 West	I-70 East
AUTOS	668	714
MED TRKS	39	33
HVY TRKS	78	83
BUS	7	3
MOTORCYCLE	2	1
SPEED	65	65

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	ExTech
SLM MODEL	SDL600
SLM	S / N Z372649
CALIBRATOR – 40744	S / N Z372652

SITE SKETCH



MEASUREMENT DATA	Duration 15 mins	Leq 75.8	

WEATHER DATA WIND SPEED (MPH) 6 DIR. SE TEMP 75 HUMIDITY 48 CLOUD COVER Sunny

BACKGROUND NOISE

MAJOR SOURCES

UNUSUAL EVENTS

OTHER NOTES

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-70 EA (Manchester to I-470) JOB #: MoDOT J4I3195

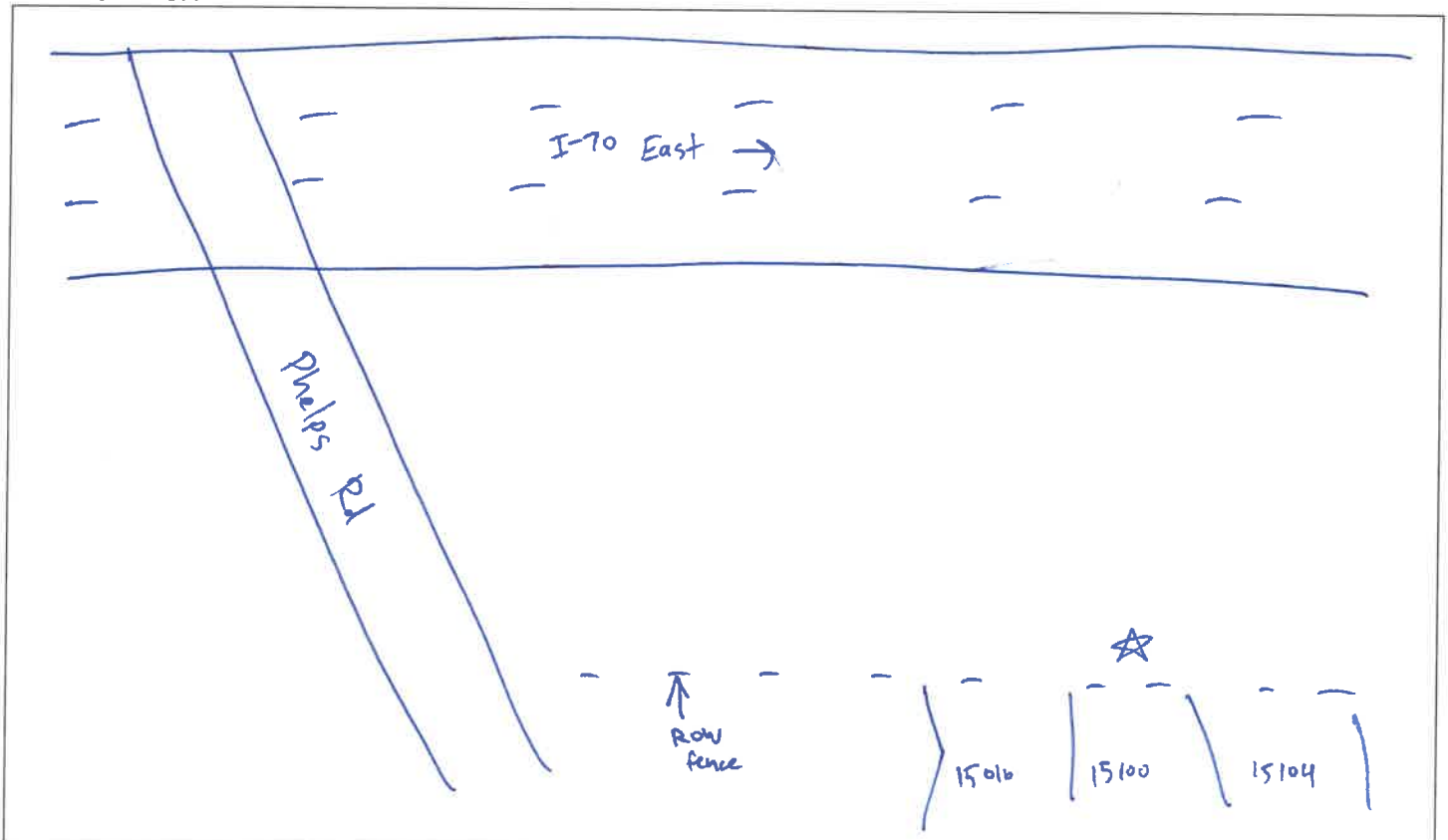
SITE: FM - 7 DATE: 11/1/24 TIME: 9:10 AM

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

TRAFFIC DATA		
ROAD (Name/Dir)	I-70 West	I-70 East
AUTOS	704	628
MED TRKS	21	28
HVY TRKS	68	82
BUS	0	0
MOTORCYCLE	0	2
SPEED	65	65

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	ExTech
SLM MODEL	SDL600
SLM	S / N Z372646
CALIBRATOR – 40744	S / N Z372652

SITE SKETCH



MEASUREMENT DATA	Duration 15 mins	Leq 75.8	

WEATHER DATA WIND SPEED (MPH) 8 DIR. SSE TEMP. 53 HUMIDITY 64 CLOUD COVER Sunny

BACKGROUND NOISE

MAJOR SOURCES

UNUSUAL EVENTS

OTHER NOTES

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-70 EA (Manchester to I-470) JOB #: MoDOT J4I3195

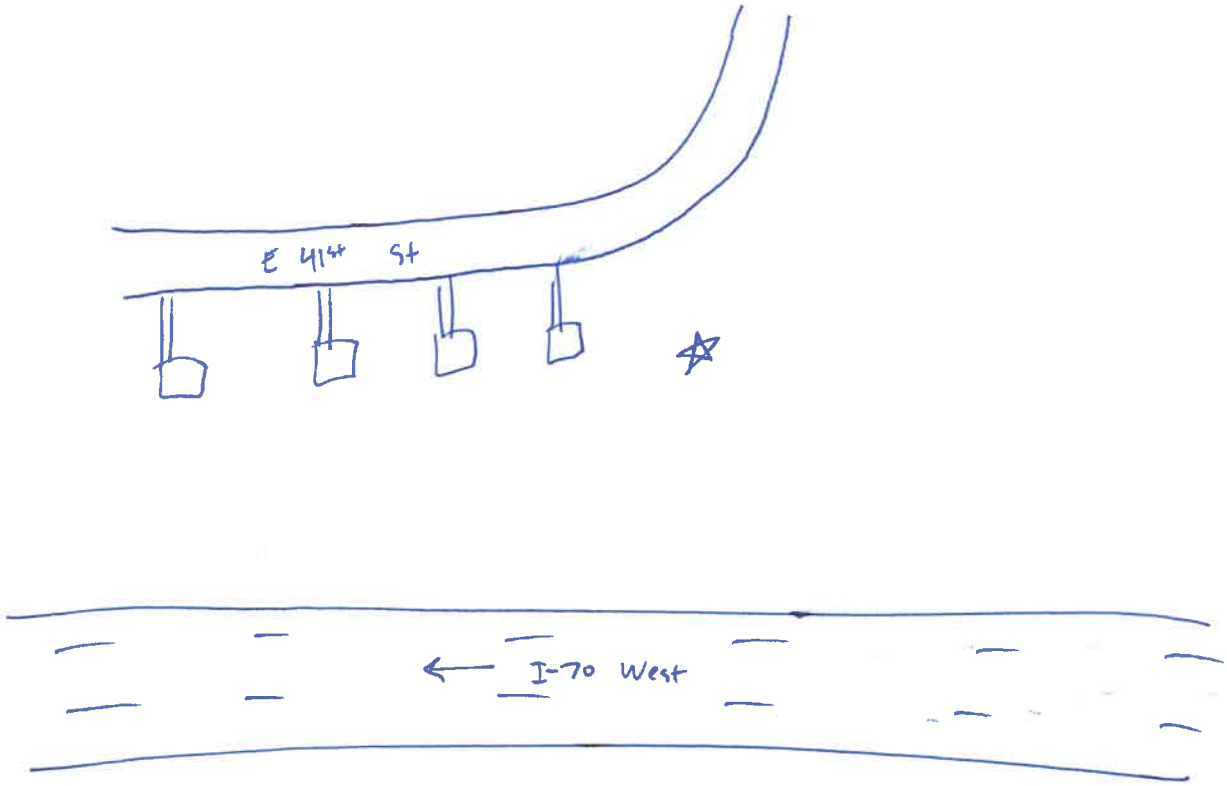
SITE: FM - 8 DATE: 9/16/24 TIME: 9:35 AM

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

TRAFFIC DATA		
ROAD (Name/Dir)	I-70 West	I-70 East
AUTOS	676	637
MED TRKS	31	43
HVY TRKS	66	55
BUS	4	0
MOTORCYCLE	4	1
SPEED	65	65

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	ExTech
SLM MODEL	SDL600
SLM	S / N Z372649
CALIBRATOR – 40744	S / N Z372652

SITE SKETCH



MEASUREMENT DATA	Duration 15 mins	Leq 62.3	

WEATHER DATA WIND SPEED (MPH) 2 DIR. SE TEMP. 78 HUMIDITY 67 CLOUD COVER Sunny

BACKGROUND NOISE

MAJOR SOURCES

UNUSUAL EVENTS 9:41 - Jake brake

OTHER NOTES

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-70 EA (Manchester to I-470) JOB #: MoDOT J4I3195

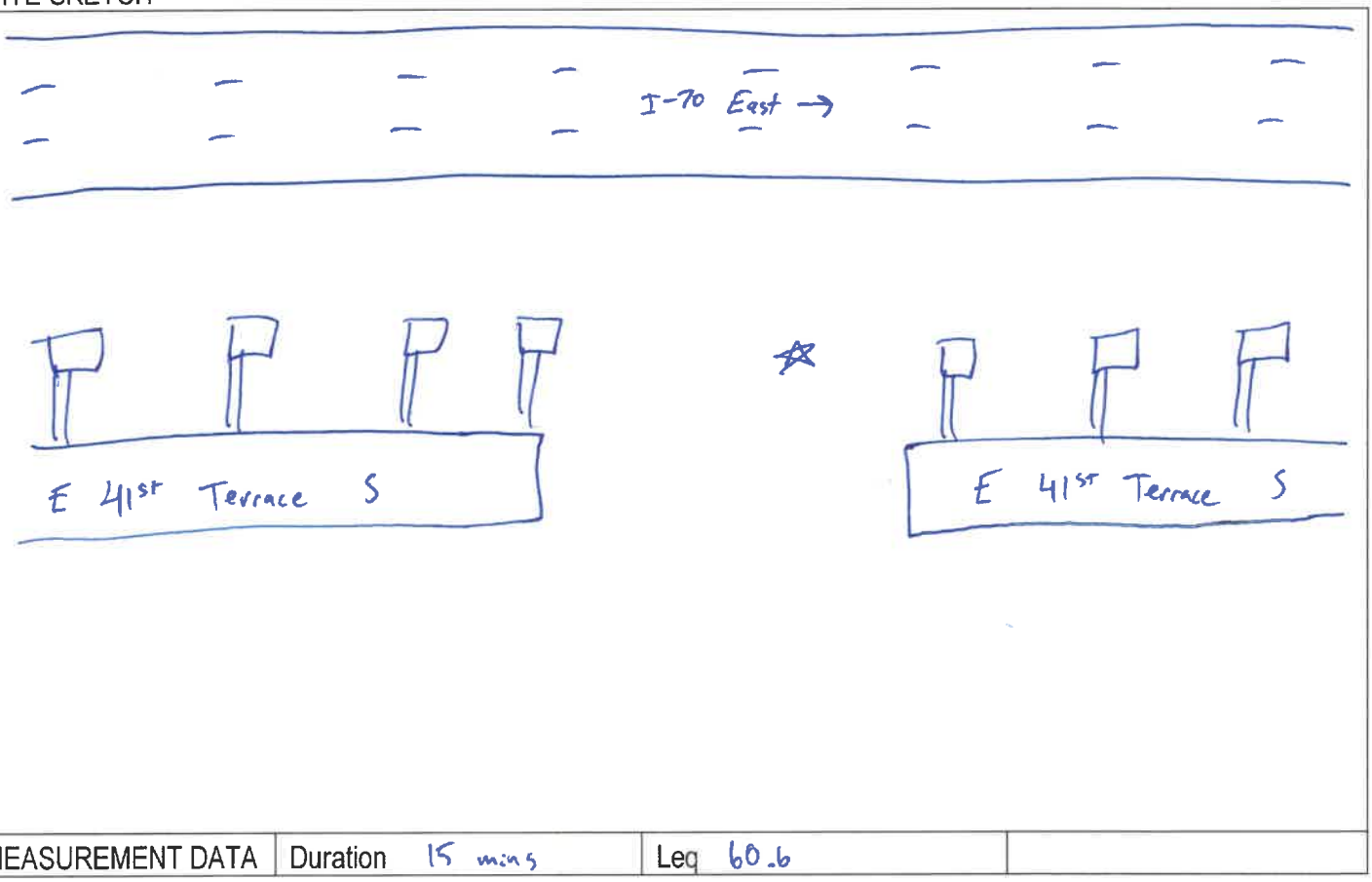
SITE: FM - 9 DATE: 9/16/24 TIME: 9:35 AM

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

TRAFFIC DATA		
ROAD (Name/Dir)	I-70 West	I-70 East
AUTOS	676	637
MED TRKS	31	43
HVY TRKS	66	55
BUS	4	0
MOTORCYCLE	4	1
SPEED	65	65

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	ExTech
SLM MODEL	SDL600
SLM	S / N 237 2646
CALIBRATOR – 40744	S / N Z372652

SITE SKETCH



MEASUREMENT DATA	Duration 15 mins	Leq 60.6	

WEATHER DATA WIND SPEED (MPH) 2 DIR. SE TEMP. 78 HUMIDITY 67 CLOUD COVER Sunny

BACKGROUND NOISE

MAJOR SOURCES

UNUSUAL EVENTS 9:41 – Jake brake

OTHER NOTES

Teledyne FLIR Commercial Systems, Inc. • 110 Lowell Road • Hudson, NH 03051

Certificate of Calibration

Certificate Number: 293174
Document Number: 177157

Customer Details:

Customer Name: HNTB

Instrument Details:

Manufacturer:	EXTECH INSTRUMENTS	**Calibration Date:**	May 1, 2024
Description:	SOUND LEVEL METER W/ SD CARD	**Calibration Due:**	May 1, 2025
Model Number:	SDL600	**Cal. Interval:**	12 MONTHS
Serial Number:	Z372646	**As Received:**	IN TOLERANCE
Equip. ID Number:	N/A		

Environmental Details:

Temperature: 21 Deg. +/- 5 C **Relative Humidity:** 40 %+/- 15 %

Procedures Used:

Calibration Procedure: EICMSDL600-CP

Certification

Extech certifies that the instrument listed above meets the specifications of the manufacturer at the completion of its calibration. Standards used are traceable to the National Institute of Standards and Technology (NIST). Methods used are in accordance with ISO 10012 and ANSI/NCSL Z540-1-1994 and have been derived from accepted values, natural physical constants, or through the use of self-calibration techniques.
This certificate is not to be reproduced other than in full, except with prior written approval of Extech.

Technicians Notes:

Technician: ALAN WILSON **Approved By:** Bernard Deignan

For calibration service, https://customer.flir.com

EXTECH

ISO 9001 Certified

Teledyne FLIR Commercial Systems, Inc. • 110 Lowell Road • Hudson, NH 03051

Certificate of Calibration

Certificate Number: 293175
Document Number: 177158

Customer Details:

Customer Name: HNTB

Instrument Details:

Manufacturer:	EXTECH INSTRUMENTS	**Calibration Date:**	May 1, 2024
Description:	SOUND LEVEL METER W/ SD CARD	**Calibration Due:**	May 1, 2025
Model Number:	SDL600	**Cal. Interval:**	12 MONTHS
Serial Number:	Z372649	**As Received:**	IN TOLERANCE
Equip. ID Number:	N/A		

Environmental Details:

Temperature: 21 Deg. +/- 5 C **Relative Humidity:** 40 %+/- 15 %

Procedures Used:

Calibration Procedure: EICMSDL600-CP

Certification

Extech certifies that the instrument listed above meets the specifications of the manufacturer at the completion of its calibration. Standards used are traceable to the National Institute of Standards and Technology (NIST). Methods used are in accordance with ISO 10012 and ANSI/NCSL Z540-1-1994 and have been derived from accepted values, natural physical constants, or through the use of self-calibration techniques.
This certificate is not to be reproduced other than in full, except with prior written approval of Extech.

Technicians Notes:

Technician: ALAN WILSON

Approved By: Bernard Deignan

EXTECH

ISO 9001 Certified

Teledyne FLIR Commercial Systems, Inc. • 110 Lowell Road • Hudson, NH 03051

Certificate of Calibration

Certificate Number: 293176
Document Number: 200768

Customer Details:

Customer Name: HNTB

Instrument Details:

Manufacturer:	EXTECH INSTRUMENTS	**Calibration Date:**	May 1, 2024
Description:	SOUND LEVEL CALIBRATOR	**Calibration Due:**	May 1, 2025
Model Number:	407744	**Cal. Interval:**	12 MONTHS
Serial Number:	Z372652	**As Received:**	IN TOLERANCE
Equip. ID Number:	N/A		

Environmental Details:

Temperature: 21 Deg. +/- 5 C **Relative Humidity:** 40 %+/- 15 %

Procedures Used:

Calibration Procedure: EICM407744-CP

Certification

Extech certifies that the instrument listed above meets the specifications of the manufacturer at the completion of its calibration. Standards used are traceable to the National Institute of Standards and Technology (NIST). Methods used are in accordance with ISO 10012 and ANSI/NCSL Z540-1-1994 and have been derived from accepted values, natural physical constants, or through the use of self-calibration techniques.
This certificate is not to be reproduced other than in full, except with prior written approval of Extech.

Technicians Notes:

Technician: ALAN WILSON

Approved By: Bernard Deignan

For calibration service, https://customer.flir.com

Appendix B
Noise Levels and Impacts

Table B-1: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 1										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-1001	Res.	B	67	1	3304 WINCHESTER AVE	No	59.3	59.5	60.1	0.8
R-1002	Res.	B	67	1	3306 WINCHESTER AVE	No	56.7	57.0	57.5	0.8
R-1003	Res.	B	67	1	3308 WINCHESTER AVE	No	55.7	56.0	56.7	1.0
R-1004	Res.	B	67	1	3310 WINCHESTER AVE	No	58.8	59.1	59.7	0.9
R-1005	Res.	B	67	1	3312 WINCHESTER AVE	No	56.5	56.8	57.4	0.9
R-1006	Res.	B	67	1	3314 WINCHESTER AVE	No	60.8	61.1	62.0	1.2
R-1007	Res.	B	67	1	3316 WINCHESTER AVE	No	58.2	58.5	59.6	1.4
R-1008	Res.	B	67	1	3318 WINCHESTER AVE	Yes	65.2	65.6	66.8	1.6
R-1009	Res.	B	67	1	3301 WINCHESTER AVE	No	50.0	50.0	50.0	0.0
R-1010	Res.	B	67	1	3303 WINCHESTER AVE	No	50.0	50.0	50.0	0.0
R-1011	Res.	B	67	1	3305 WINCHESTER AVE	No	50.8	51.0	51.3	0.5
R-1012	Res.	B	67	1	3307 WINCHESTER AVE	No	53.6	53.8	53.9	0.3
R-1013	Res.	B	67	1	3309 WINCHESTER AVE	No	50.6	50.9	51.1	0.5
R-1014	Res.	B	67	1	3311 WINCHESTER AVE	No	53.5	53.8	54.0	0.5
R-1015	Res.	B	67	1	3313 WINCHESTER AVE	No	52.6	52.8	53.2	0.6
R-1016	Res.	B	67	1	3315 WINCHESTER AVE	No	57.9	58.3	59.3	1.4
R-1017	Res.	B	67	1	3317 WINCHESTER AVE	No	53.0	53.3	54.1	1.1
R-1018	Res.	B	67	1	3319 WINCHESTER AVE	No	54.1	54.4	55.3	1.2
R-1019	Res.	B	67	1	3321 WINCHESTER AVE	Yes	64.6	65.0	65.8	1.2
R-1020	Res.	B	67	1	3300 BRISTOL AVE	No	50.0	50.0	50.0	0.0
R-1021	Res.	B	67	1	3302 BRISTOL AVE	No	50.2	50.5	50.7	0.5
R-1022	Res.	B	67	1	3304 BRISTOL AVE	No	52.7	53.0	53.3	0.6
R-1023	Res.	B	67	1	3306 BRISTOL AVE	No	50.3	50.5	51.0	0.7
R-1024	Res.	B	67	1	3308 BRISTOL AVE	No	54.7	54.9	55.3	0.6
R-1025	Res.	B	67	1	3310 BRISTOL AVE	No	55.7	56.0	56.6	0.9
R-1026	Res.	B	67	1	3312 BRISTOL AVE	No	56.5	56.7	57.3	0.8
R-1027	Res.	B	67	1	3314 BRISTOL AVE	No	54.3	54.6	55.1	0.8
R-1028	Res.	B	67	1	3316 BRISTOL AVE	No	55.1	55.4	55.9	0.8
R-1029	Res.	B	67	1	3318 BRISTOL AVE	Yes	65.8	66.2	66.8	1.0
R-1030	Res.	B	67	1	3305 BRISTOL AVE	No	51.7	52.0	52.1	0.4
R-1031	Res.	B	67	1	3307 BRISTOL AVE	No	50.0	50.0	50.1	0.1
R-1032	Res.	B	67	1	3309 BRISTOL AVE	No	51.4	51.7	51.8	0.4
R-1033	Res.	B	67	1	3311 BRISTOL AVE	No	54.4	54.6	55.0	0.6
R-1034	Res.	B	67	1	3313 BRISTOL AVE	No	52.3	52.6	53.0	0.7
R-1035	Res.	B	67	1	3315 BRISTOL AVE	No	52.2	52.5	52.7	0.5
R-1036	Res.	B	67	1	3317 BRISTOL AVE	No	53.2	53.5	53.8	0.6
R-1037	Res.	B	67	1	3319 BRISTOL AVE	No	58.4	58.8	59.5	1.1
R-1038	Res.	B	67	1	3321 BRISTOL AVE	Yes	56.0	56.4	56.9	0.9
R-1039	Res.	B	67	1	3300 CORRINGTON AVE	No	54.4	54.7	55.1	0.7
R-1040	Res.	B	67	1	3302 CORRINGTON AVE	No	54.0	54.3	54.7	0.7
R-1041	Res.	B	67	1	3304 CORRINGTON AVE	No	53.5	53.8	54.0	0.5
R-1042	Res.	B	67	1	3306 CORRINGTON AVE	No	53.9	54.2	54.5	0.6
R-1043	Res.	B	67	1	3308 CORRINGTON AVE	No	52.7	52.9	53.0	0.3
R-1044	Res.	B	67	1	3310 CORRINGTON AVE	No	53.9	54.1	54.5	0.6
R-1045	Res.	B	67	1	3312 CORRINGTON AVE	No	54.1	54.3	54.8	0.7
R-1046	Res.	B	67	1	3314 CORRINGTON AVE	No	55.2	55.5	55.9	0.7
R-1047	Res.	B	67	1	3316 CORRINGTON AVE	Yes	64.9	65.3	65.5	0.6
R-1048	Res.	B	67	1	3301 CORRINGTON AVE	No	53.4	53.6	53.9	0.5
R-1049	Res.	B	67	1	3303 CORRINGTON AVE	No	52.2	52.4	52.7	0.5
R-1050	Res.	B	67	1	3305 CORRINGTON AVE	No	51.2	51.5	51.5	0.3
R-1051	Res.	B	67	1	3307 CORRINGTON AVE	No	53.1	53.3	53.5	0.4
R-1052	Res.	B	67	1	3309 CORRINGTON AVE	No	53.8	54.1	54.3	0.5
R-1053	Res.	B	67	1	3311 CORRINGTON AVE	No	55.5	55.8	56.3	0.8
R-1054	Res.	B	67	1	3313 CORRINGTON AVE	Yes	63.4	63.8	64.0	0.6
R-1055	Res.	B	67	1	3300 CRYSTAL AVE	No	58.2	58.5	59.0	0.8
R-1056	Res.	B	67	1	3302 CRYSTAL AVE	No	59.8	60.0	60.6	0.8
R-1057	Res.	B	67	1	3304 CRYSTAL AVE	No	58.8	59.1	59.6	0.8
R-1058	Res.	B	67	1	3306 CRYSTAL AVE	No	61.1	61.4	62.1	1.0
R-1059	Res.	B	67	1	3308 CRYSTAL AVE	No	60.4	60.8	61.4	1.0
R-1060	Res.	B	67	1	3310 CRYSTAL AVE	No	63.3	63.6	64.4	1.1
R-1061	Res.	B	67	1	3312 CRYSTAL AVE	Yes	65.4	65.7	66.1	0.7
R-1062	Res.	B	67	1	3301 CRYSTAL AVE	No	54.1	54.4	54.7	0.6
R-1063	Res.	B	67	1	3303 CRYSTAL AVE	No	54.2	54.4	54.7	0.5
R-1064	Res.	B	67	1	3305 CRYSTAL AVE	No	53.2	53.4	53.6	0.4
R-1065	Res.	B	67	1	3307 CRYSTAL AVE	No	55.7	56.0	56.6	0.9
R-1066	Res.	B	67	1	3309 CRYSTAL AVE	No	56.5	56.8	57.2	0.7
R-1067	Res.	B	67	1	3311 CRYSTAL AVE	No	54.0	54.3	54.7	0.7

Table B-1: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 1										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-1068	Res.	B	67	1	3313 CRYSTAL AVE	No	56.0	56.3	57.1	1.1
R-1069	Res.	B	67	1	3315 CRYSTAL AVE	No	55.5	55.8	56.4	0.9
R-1070	Res.	B	67	1	3317 CRYSTAL AVE	No	62.6	62.9	63.7	1.1
R-1071	Res.	B	67	1	3319 CRYSTAL AVE	Yes	66.0	66.4	66.7	0.7
R-1072	Res.	B	67	1	3302 EASTERN AVE	No	55.1	55.3	55.7	0.6
R-1073	Res.	B	67	1	3304 EASTERN AVE	No	54.1	54.4	54.8	0.7
R-1074	Res.	B	67	1	3306 EASTERN AVE	No	54.1	54.4	54.8	0.7
R-1075	Res.	B	67	1	3308 EASTERN AVE	No	54.2	54.5	54.9	0.7
R-1076	Res.	B	67	1	3310 EASTERN AVE	No	58.0	58.3	58.8	0.8
R-1077	Res.	B	67	1	3312 EASTERN AVE	No	57.6	57.9	58.5	0.9
R-1078	Res.	B	67	1	3314 EASTERN AVE	No	57.4	57.7	58.2	0.8
R-1079	Res.	B	67	1	3316 EASTERN AVE	No	59.5	59.8	60.4	0.9
R-1080	Res.	B	67	1	3318 EASTERN AVE	No	59.3	59.6	60.2	0.9
R-1081	Res.	B	67	1	3320 EASTERN AVE	No	61.0	61.3	61.9	0.9
R-1082	Res.	B	67	1	3322 EASTERN AVE	No	62.2	62.5	63.2	1.0
R-1083	Res.	B	67	1	3324 EASTERN AVE	Yes	66.5	66.8	67.1	0.6
R-1084	Res.	B	67	1	7401 E 33RD ST	No	50.8	51.0	51.5	0.7
R-1085	Res.	B	67	1	3301 EASTERN AVE	No	50.8	51.1	51.1	0.3
R-1086	Res.	B	67	1	3303 EASTERN AVE	No	50.3	50.5	50.8	0.5
R-1087	Res.	B	67	1	3305 EASTERN AVE	No	50.0	50.0	50.0	0.0
R-1088	Res.	B	67	1	3307 EASTERN AVE	No	52.8	53.1	53.4	0.6
R-1089	Res.	B	67	1	3309 EASTERN AVE	No	52.2	52.5	52.7	0.5
R-1090	Res.	B	67	1	3311 EASTERN AVE	No	51.7	51.9	52.1	0.4
R-1091	Res.	B	67	1	3313 EASTERN AVE	No	53.3	53.6	54.0	0.7
R-1092	Res.	B	67	1	3315 EASTERN AVE	No	55.6	55.9	56.4	0.8
R-1093	Res.	B	67	1	3317 EASTERN AVE	No	56.4	56.7	57.1	0.7
R-1094	Res.	B	67	1	3319 EASTERN AVE	No	62.1	62.5	63.1	1.0
R-1095	Res.	B	67	1	3321 EASTERN AVE	No	63.4	63.7	64.3	0.9
R-1096	Res.	B	67	1	3323 EASTERN AVE	Yes	66.3	66.6	66.7	0.4
R-1097	Res.	B	67	1	3300 OAKLAND AVE	No	50.0	50.0	50.0	0.0
R-1098	Res.	B	67	1	3302 OAKLAND AVE	No	50.7	51.0	51.5	0.8
R-1099	Res.	B	67	1	3304 OAKLAND AVE	No	52.7	52.9	53.6	0.9
R-1100	Res.	B	67	1	3306 OAKLAND AVE	No	52.4	52.6	53.2	0.8
R-1101	Res.	B	67	1	3308 OAKLAND AVE	No	52.9	53.2	53.7	0.8
R-1102	Res.	B	67	1	3310 OAKLAND AVE	No	51.3	51.6	52.3	1.0
R-1103	Res.	B	67	1	3312 OAKLAND AVE	No	52.7	53.0	53.6	0.9
R-1104	Res.	B	67	1	3314 OAKLAND AVE	No	52.6	52.9	53.5	0.9
R-1105	Res.	B	67	1	3316 OAKLAND AVE	No	54.9	55.1	55.9	1.0
R-1106	Res.	B	67	1	3318 OAKLAND AVE	No	57.1	57.4	58.0	0.9
R-1107	Res.	B	67	1	3320 OAKLAND AVE	No	59.1	59.3	59.9	0.8
R-1108	Res.	B	67	1	3322 OAKLAND AVE	No	65.5	65.8	65.9	0.4
R-1109	Res.	B	67	1	3319 OAKLAND AVE	No	54.0	54.3	54.8	0.8
R-1110	Res.	B	67	1	3321 OAKLAND AVE	No	55.8	56.1	56.9	1.1
R-1111	Res.	B	67	1	3323 OAKLAND AVE	No	58.5	58.8	59.2	0.7
R-1112	Res.	B	67	1	3325 OAKLAND AVE	No	65.4	65.7	65.8	0.4
R-1113	Res.	B	67	1	3327 OAKLAND AVE	No	66.1	66.5	66.3	0.2
R-1114	Res.	B	67	1	3329 OAKLAND AVE	Yes	68.4	68.8	68.9	0.5
Predicted NSA 1 Traffic Noise Impacts									8	

Table B-2: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 2										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-2001	Res.	B	67	1	8722 LEEDS RD	No	61.5	62.1	62.5	1.0
R-2002	Res.	B	67	1	8806 LEEDS RD	No	56.4	57.1	57.5	1.1
R-2003	Res.	B	67	1	8816 LEEDS RD	No	55.7	56.4	57.0	1.3
R-2004	Res.	B	67	1	8822 LEEDS RD	No	56.2	56.9	57.5	1.3
Predicted NSA 2 Traffic Noise Impacts									**0**	

Table B-3: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 3										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-3001	Hotel	E	72	4	3830 BLUE RIDGE CUT OFF	Yes	58.0	58.2	58.3	0.3
R-3002	Res.	B	67	1	3810 LAUREL AVE	No	60.2	60.7	60.7	0.5
R-3003	Res.	B	67	1	9110 E 38TH TER	No	62.4	62.9	62.9	0.5
R-3004	Res.	B	67	1	9130 E 38TH TER	No	60.7	61.2	61.3	0.6
R-3005	Res.	B	67	1	9119 E 38TH TER	No	62.0	62.5	62.1	0.1
R-3006	Res.	B	67	1	9018 E 39TH ST	No	63.5	64.0	63.2	-0.3
R-3007	Res.	B	67	1	9022 E 39TH ST	No	63.0	63.5	63.0	0.0
R-3008	Res.	B	67	1	3829 LAUREL AVE	No	57.1	57.6	57.7	0.6
R-3009	Res.	B	67	1	3837 LAUREL AVE	No	60.5	61.0	60.9	0.4
R-3010	Res.	B	67	1	3834 DITZLER AVE	No	53.3	53.8	53.9	0.6
R-3011	Res.	B	67	1	3836 DITZLER AVE	No	56.3	56.8	56.7	0.4
R-3012	Res.	B	67	1	9114 E 39TH ST	No	61.3	61.8	61.0	-0.3
R-3013	Res.	B	67	1	9120 E 39TH ST	No	59.5	60.0	59.0	-0.5
R-3014	Res.	B	67	1	9200 E 39TH ST	No	56.7	57.2	56.7	0.0
R-3015	Res.	B	67	1	9210 E 39TH ST	No	53.3	53.8	53.4	0.1
R-3016	Res.	B	67	1	9220 E 39TH ST	No	53.0	53.5	53.5	0.5
R-3017	Res.	B	67	1	3908 CRESCENT AVE	No	62.2	62.7	62.7	0.5
R-3018	Res.	B	67	1	3910 CRESCENT AVE	No	63.3	63.8	63.8	0.5
R-3019	Res.	B	67	1	9412 E 40TH ST	No	65.2	65.7	65.8	0.6
R-3020	Res.	B	67	1	9414 E 40TH ST	No	65.4	65.9	**66.1**	0.7
R-3021	Res.	B	67	1	9420 E 40TH ST	No	65.0	65.5	65.7	0.7
R-3022	Res.	B	67	1	9321 E 40TH ST	No	68.0	68.5	**69.1**	1.1
R-3023	Res.	B	67	1	4000 DENTON RD	No	67.9	68.4	**68.7**	0.8
R-3024	Res.	B	67	1	4002 DENTON RD	No	69.7	70.2	**70.6**	0.9
R-3025	Res.	B	67	1	4004 DENTON RD	Yes	71.3	71.8	**72.2**	0.9
R-3026	Res.	B	67	1	4006 DENTON RD	Yes	74.9	75.4	**76.1**	1.2
R-3027	Res.	B	67	1	4003 DENTON RD	No	67.1	67.5	**68.1**	1.0
R-3028	Res.	B	67	1	4005 DENTON RD	Yes	71.1	71.6	**72.4**	1.3
R-3029	Res.	B	67	1	4000 CRESCENT AVE	No	63.4	63.9	64.5	1.1
R-3030	Res.	B	67	1	4008 CRESCENT AVE	No	64.8	65.2	65.9	1.1
R-3031	Res.	B	67	1	4102 CRESCENT AVE	No	67.6	68.1	**68.9**	1.3
R-3032	Res.	B	67	1	4106 CRESCENT AVE	Yes	71.6	72.0	**70.6**	-1.0
R-3033	Res.	B	67	1	3907 CRESCENT AVE	No	61.8	62.3	62.5	0.7
R-3034	Res.	B	67	1	3937 CRESCENT AVE	No	60.9	61.4	61.7	0.8
R-3035	Res.	B	67	1	3941 CRESCENT AVE	No	62.6	63.1	63.6	1.0
R-3036	Res.	B	67	1	4005 CRESCENT AVE	No	62.6	63.0	63.6	1.0
R-3037	Res.	B	67	1	4013 CRESCENT AVE	No	72.1	72.6	**72.8**	0.7
R-3038	Res.	B	67	1	4017 CRESCENT AVE	Yes	74.8	75.3	**75.6**	0.8
R-3039	Res.	B	67	1	3916 ARLINGTON AVE	No	58.8	59.3	59.5	0.7
R-3040	Res.	B	67	1	4000 ARLINGTON AVE	No	62.2	62.7	63.3	1.1
R-3041	Res.	B	67	1	4004 ARLINGTON AVE	No	63.3	63.8	64.3	1.0
R-3042	Res.	B	67	1	4008 ARLINGTON AVE	No	69.1	69.6	**69.9**	0.8
R-3043	Res.	B	67	1	4012 ARLINGTON AVE	No	71.5	72.0	**72.3**	0.8
R-3044	Res.	B	67	1	4100 ARLINGTON AVE	Yes	74.8	75.3	**75.5**	0.7
R-3045	Res.	B	67	1	4011 ARLINGTON AVE	Yes	70.4	70.8	**71.1**	0.7
R-3046	Res.	B	67	1	4009 ARLINGTON AVE	No	66.7	67.2	**67.8**	1.1
R-3047	Res.	B	67	1	4000 PITTMAN RD	No	56.1	56.4	57.4	1.3
R-3048	Res.	B	67	1	4008 PITTMAN RD	No	57.1	57.5	58.6	1.5
R-3049	Res.	B	67	1	4012 PITTMAN RD	No	57.6	57.9	59.2	1.6
R-3050	Res.	B	67	1	4014 PITTMAN RD	No	58.8	59.2	60.4	1.6
R-3051	Res.	B	67	1	4018 PITTMAN RD	No	61.9	62.2	63.6	1.7
R-3052	Res.	B	67	1	9800 E 41ST ST	Yes	73.8	74.2	**74.9**	1.1
R-3053	Res.	B	67	1	9804 E 41ST ST	Yes	65.3	65.7	**66.3**	1.0
R-3054	Res.	B	67	1	9808 E 41ST ST	Yes	64.4	64.8	65.5	1.1
R-3055	Res.	B	67	1	9812 E 41ST ST	Yes	62.6	63.0	63.8	1.2
R-3056	Res.	B	67	1	9816 E 41ST ST	No	61.7	62.0	63.2	1.5
R-3057	Res.	B	67	1	9840 E 41ST ST	No	63.5	63.8	64.9	1.4
R-3058	Res.	B	67	1	4100 PITTMAN RD	Yes	73.7	74.0	**74.8**	1.1
R-3059	Res.	B	67	1	4005 PITTMAN RD	No	55.2	55.5	57.8	2.6
R-3060	Res.	B	67	1	4009 PITTMAN RD	No	56.0	56.3	58.7	2.7
Predicted NSA 3 Traffic Noise Impacts									**20**	

Table B-4: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 4										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-4001	Res.	B	67	1	4136 ARLINGTON AVE	No	63.6	64.0	64.6	1.0
R-4002	Res.	B	67	1	4120 ARLINGTON AVE	Yes	64.5	65.0	65.9	1.4
R-4003	Res.	B	67	1	4121 ARLINGTON AVE	Yes	67.9	68.3	69.0	1.1
R-4004	Res.	B	67	1	4135 ARLINGTON AVE	No	60.0	60.4	61.1	1.1
R-4005	Res.	B	67	1	4139 ARLINGTON AVE	No	56.9	57.4	57.6	0.7
R-4006	Res.	B	67	1	4201 ARLINGTON AVE	No	56.9	57.4	57.7	0.8
R-4007	Res.	B	67	1	4203 ARLINGTON AVE	No	52.2	52.7	53.3	1.1
R-4008	Res.	B	67	1	4205 ARLINGTON AVE	No	50.0	50.0	50.0	0.0
R-4009	Res.	B	67	1	4209 ARLINGTON AVE	No	50.3	50.8	51.0	0.7
R-4010	Res.	B	67	1	4215 ARLINGTON AVE	No	51.6	52.1	51.4	-0.2
R-4011	Res.	B	67	1	4112 HAWTHORNE AVE	Yes	58.3	58.7	59.8	1.5
R-4012	Res.	B	67	1	4116 HAWTHORNE AVE	No	50.0	50.0	50.3	0.3
R-4013	Res.	B	67	1	4120 HAWTHORNE AVE	No	50.0	50.0	50.0	0.0
R-4014	Res.	B	67	1	4200 HAWTHORNE AVE	No	50.0	50.0	50.0	0.0
R-4015	Res.	B	67	1	4204 HAWTHORNE AVE	No	50.0	50.0	50.0	0.0
R-4016	Res.	B	67	1	4214 HAWTHORNE AVE	No	50.0	50.0	50.0	0.0
R-4017	Res.	B	67	1	4224 HAWTHORNE AVE	No	50.0	50.0	50.0	0.0
R-4018	Res.	B	67	1	4115 HAWTHORNE AVE	Yes	67.1	67.6	69.3	2.2
R-4019	Res.	B	67	1	4119 HAWTHORNE AVE	No	63.5	63.9	66.1	2.6
R-4020	Res.	B	67	1	4123 HAWTHORNE AVE	No	60.8	61.2	62.5	1.7
R-4021	Res.	B	67	1	4127 HAWTHORNE AVE	No	58.0	58.4	59.9	1.9
R-4022	Res.	B	67	1	4201 HAWTHORNE AVE	No	56.4	56.7	58.6	2.2
R-4023	Res.	B	67	1	4205 HAWTHORNE AVE	No	55.3	55.6	57.3	2.0
R-4024	Res.	B	67	1	4209 HAWTHORNE AVE	No	53.4	53.8	55.1	1.7
R-4025	Res.	B	67	1	4225 HAWTHORNE AVE	No	51.6	51.9	53.2	1.6
R-4026	Res.	B	67	1	4227 HAWTHORNE AVE	No	50.0	50.1	51.5	1.5
R-4027	Res.	B	67	1	4112 PITTMAN RD	Yes	63.0	63.4	65.0	2.0
R-4028	Res.	B	67	1	4120 PITTMAN RD	No	58.8	59.2	60.9	2.1
R-4029	Res.	B	67	1	4124 PITTMAN RD	No	55.2	55.6	57.4	2.2
R-4030	Res.	B	67	1	4200 PITTMAN RD	No	52.9	53.2	54.6	1.7
R-4031	Res.	B	67	1	4210 PITTMAN RD	No	52.0	52.3	53.8	1.8
Predicted NSA 4 Traffic Noise Impacts									3	

Table B-5: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 5										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-5001	Res.	B	67	1	4000 HARDY AVE	No	54.1	54.4	55.7	1.6
R-5002	Res.	B	67	1	4002 HARDY AVE	No	55.0	55.3	56.7	1.7
R-5003	Res.	B	67	1	4004 HARDY AVE	No	56.2	56.5	58.1	1.9
R-5004	Res.	B	67	1	10401 E 40TH ST	No	56.6	56.9	58.7	2.1
R-5005	Res.	B	67	1	10403 E 40TH ST	No	57.0	57.3	59.3	2.3
R-5006	Res.	B	67	1	10405 E 40TH ST	No	57.9	58.2	60.2	2.3
R-5007	Res.	B	67	1	10407 E 40TH ST	No	59.2	59.5	61.4	2.2
R-5008	Res.	B	67	1	10409 E 40TH ST	No	60.2	60.5	62.3	2.1
R-5009	Res.	B	67	1	10505 E 40TH ST	No	61.0	61.3	63.0	2.0
R-5010	Res.	B	67	1	10509 E 40TH ST	No	61.2	61.5	63.2	2.0
R-5011	Res.	B	67	1	10511 E 40TH ST	No	60.5	60.7	62.7	2.2
R-5012	Res.	B	67	1	4005 HARDY AVE	No	57.0	57.3	59.5	2.5
R-5013	Res.	B	67	1	10402 E 40TH TER	No	57.5	57.8	60.2	2.7
R-5014	Res.	B	67	2	4009/4011 WILLOW AVE 4	No	55.9	56.1	57.7	1.8
R-5015	Res.	B	67	2	4009/4011 WILLOW AVE 5	No	58.6	58.9	60.8	2.2
R-5016	Res.	B	67	2	4009/4011 WILLOW AVE 1	No	59.3	59.5	60.9	1.6
R-5017	Res.	B	67	2	4009/4011 WILLOW AVE 2	No	63.0	63.3	65.0	2.0
R-5018	Res.	B	67	2	4009/4011 WILLOW AVE 3	No	65.1	65.4	**66.8**	1.7
R-5019	Res.	B	67	2	4009/4011 WILLOW AVE 6	No	60.0	60.3	61.6	1.6
R-5020	Res.	B	67	2	4009/4011 WILLOW AVE 7	No	63.7	64.0	65.3	1.6
R-5021	Res.	B	67	2	4001/4003 WILLOW AVE 6	No	50.0	50.0	50.0	0.0
R-5022	Res.	B	67	2	4001/4003 WILLOW AVE 7	No	50.0	50.0	50.0	0.0
R-5023	Res.	B	67	2	4001/4003 WILLOW AVE 4	No	59.6	59.9	61.6	2.0
R-5024	Res.	B	67	2	4001/4003 WILLOW AVE 5	No	61.6	61.9	63.1	1.5
R-5025	Res.	B	67	2	4001/4003 WILLOW AVE 1	No	59.1	59.4	61.1	2.0
R-5026	Res.	B	67	2	4001/4003 WILLOW AVE 2	No	63.1	63.4	65.1	2.0
R-5027	Res.	B	67	2	4001/4003 WILLOW AVE 3	No	64.9	65.2	**66.7**	1.8
R-5028	Res.	B	67	1	10510 E 40TH TER	No	57.6	57.9	58.9	1.3
R-5029	Res.	B	67	1	10512 E 40TH TER	No	59.0	59.3	60.2	1.2
R-5030	Res.	B	67	1	10514 E 40TH TER	No	59.1	59.4	60.3	1.2
R-5031	Res.	B	67	1	10516 E 40TH TER	No	60.6	60.9	61.9	1.3
R-5032	Res.	B	67	1	10518 E 40TH TER	No	61.6	61.9	63.0	1.4
R-5033	Res.	B	67	1	10520 E 40TH TER	No	63.6	64.0	64.8	1.2
R-5034	Res.	B	67	1	4000 HEDGES AVE	No	52.2	52.4	54.3	2.1
R-5035	Res.	B	67	1	4002 HEDGES AVE	No	53.0	53.2	55.1	2.1
R-5036	Res.	B	67	1	4004 HEDGES AVE	No	53.6	53.8	55.6	2.0
R-5037	Res.	B	67	1	4006 HEDGES AVE	No	55.2	55.5	57.1	1.9
R-5038	Res.	B	67	1	4001 HEDGES AVE	No	51.8	52.1	53.2	1.4
R-5039	Res.	B	67	1	4003 HEDGES AVE	No	51.8	52.0	53.3	1.5
R-5040	Res.	B	67	1	4005 HEDGES AVE	No	50.0	50.0	50.9	0.9
R-5041	Res.	B	67	1	4007 HEDGES AVE	No	50.0	50.0	50.8	0.8
R-5042	Res.	B	67	1	4008 HEDGES AVE	No	53.9	54.2	55.4	1.5
R-5043	Res.	B	67	1	4010 HEDGES AVE	No	54.8	55.1	56.3	1.5
R-5044	Res.	B	67	1	4012 HEDGES AVE	No	55.4	55.7	56.9	1.5
R-5045	Res.	B	67	1	4014 HEDGES AVE	No	55.9	56.2	57.5	1.6
R-5046	Res.	B	67	1	4016 HEDGES AVE	No	57.1	57.4	58.8	1.7
R-5047	Res.	B	67	1	4018 HEDGES AVE	No	56.1	56.4	57.6	1.5
R-5048	Res.	B	67	1	4020 HEDGES AVE	No	59.1	59.4	60.6	1.5
R-5049	Res.	B	67	1	4022 HEDGES AVE	No	59.6	59.9	61.1	1.5
R-5050	Res.	B	67	1	4024 HEDGES AVE	No	59.1	59.4	60.7	1.6
R-5051	Res.	B	67	1	4026 HEDGES AVE	No	60.1	60.5	61.7	1.6
R-5052	Res.	B	67	1	4009 HEDGES AVE	No	56.8	57.1	58.5	1.7
R-5053	Res.	B	67	1	4011 HEDGES AVE	No	57.2	57.5	59.0	1.8
R-5054	Res.	B	67	1	4013 HEDGES AVE	No	57.6	57.9	59.4	1.8
R-5055	Res.	B	67	1	4015 HEDGES AVE	No	57.9	58.2	59.6	1.7
R-5056	Res.	B	67	1	4017 HEDGES AVE	No	52.1	52.3	53.3	1.2
R-5057	Res.	B	67	1	4019 HEDGES AVE	No	53.1	53.3	54.3	1.2
R-5058	Res.	B	67	1	4021 HEDGES AVE	No	53.2	53.5	54.5	1.3
R-5059	Res.	B	67	1	4023 HEDGES AVE	No	55.1	55.4	56.6	1.5
R-5060	Res.	B	67	1	4025 HEDGES AVE	No	61.8	62.1	63.5	1.7
R-5061	Res.	B	67	1	4027 HEDGES AVE	No	62.2	62.5	63.9	1.7
R-5062	Res.	B	67	1	4029 HEDGES AVE	No	63.0	63.4	64.7	1.7
R-5063	Res.	B	67	1	4031 HEDGES AVE	No	63.9	64.2	65.5	1.6
R-5064	Res.	B	67	1	4033 HEDGES AVE	No	65.0	65.4	**66.5**	1.5
R-5065	Res.	B	67	1	4035 HEDGES AVE	No	66.7	67.1	**68.1**	1.4
R-5066	Res.	B	67	1	10442 E 41ST ST	No	58.9	59.1	62.4	3.5
R-5067	Res.	B	67	1	10440 E 41ST ST	No	60.1	60.3	63.5	3.4

Table B-5: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 5										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-5068	Res.	B	67	1	10438 E 41ST ST	No	61.3	61.5	64.8	3.5
R-5069	Res.	B	67	1	10436 E 41ST ST	No	63.2	63.4	66.5	3.3
R-5070	Res.	B	67	1	10432 E 41ST ST	No	65.7	66.0	69.0	3.3
R-5071	Res.	B	67	1	10430 E 41ST ST	Yes	70.3	70.6	72.7	2.4
R-5072	Res.	B	67	1	10506 E 41ST ST	No	60.5	60.7	62.0	1.5
R-5073	Res.	B	67	1	10508 E 41ST ST	No	60.4	60.7	62.1	1.7
R-5074	Res.	B	67	1	10510 E 41ST ST	No	60.1	60.4	61.4	1.3
R-5075	Res.	B	67	1	10512 E 41ST ST	No	60.8	61.1	62.0	1.2
R-5076	Res.	B	67	1	10514 E 41ST ST	No	62.3	62.6	63.5	1.2
R-5077	Res.	B	67	1	10516 E 41ST ST	No	64.7	65.0	66.0	1.3
R-5078	Res.	B	67	1	10518 E 41ST ST	No	65.0	65.4	66.5	1.5
R-5079	Res.	B	67	1	10520 E 41ST ST	No	66.4	66.7	67.5	1.1
R-5080	Res.	B	67	1	10511 E 41ST ST	No	61.0	61.3	63.8	2.8
R-5081	Res.	B	67	1	10513 E 41ST ST	No	59.1	59.4	61.4	2.3
R-5082	Res.	B	67	1	10515 E 41ST ST	No	57.6	57.9	58.4	0.8
R-5083	Res.	B	67	1	10517 E 41ST ST	No	61.5	61.9	62.5	1.0
R-5084	Res.	B	67	1	10512 E 41ST TER	Yes	72.7	73.0	74.3	1.6
R-5085	Res.	B	67	1	10514 E 41ST TER	Yes	73.0	73.3	74.5	1.5
R-5086	Res.	B	67	1	10516 E 41ST TER	Yes	72.6	73.0	74.2	1.6
R-5087	Res.	B	67	1	10518 E 41ST TER	Yes	72.9	73.3	74.3	1.4
R-5088	Res.	B	67	1	10521 E 41ST TER	Yes	74.5	74.8	75.8	1.3
R-5089	Res.	B	67	1	10523 E 41ST TER	Yes	73.9	74.3	75.1	1.2
R-5090	Res.	B	67	1	10600 E 41ST TER	Yes	71.0	71.3	72.5	1.5
R-5091	Res.	B	67	1	10602 E 41ST TER	Yes	70.6	71.0	72.4	1.8
R-5092	Res.	B	67	1	10604 E 41ST TER	Yes	70.3	70.6	72.1	1.8
R-5093	Res.	B	67	1	10606 E 41ST TER	Yes	68.9	69.3	71.1	2.2
R-5094	Res.	B	67	1	10609 E 41ST ST	Yes	74.0	74.4	75.2	1.2
R-5095	Res.	B	67	1	10611 E 41ST ST	Yes	72.8	73.2	73.9	1.1
R-5096	Res.	B	67	1	10613 E 41ST ST	Yes	72.0	72.4	73.1	1.1
R-5097	Res.	B	67	1	10615 E 41ST ST	Yes	71.3	71.7	72.4	1.1
R-5098	Res.	B	67	2	4000 HARVARD CIR 1	No	50.0	50.0	50.0	0.0
R-5099	Res.	B	67	2	4000 HARVARD CIR 2	No	50.0	50.0	50.0	0.0
R-5100	Res.	B	67	2	4004 HARVARD CIR 1	No	50.0	50.0	50.0	0.0
R-5101	Res.	B	67	2	4004 HARVARD CIR 2	No	50.0	50.0	50.0	0.0
R-5102	Res.	B	67	1	4018 HARVARD CIR 13	No	63.9	64.2	65.3	1.4
R-5103	Res.	B	67	1	4018 HARVARD CIR 14	No	65.1	65.4	66.0	0.9
R-5104	Res.	B	67	1	4018 HARVARD CIR 15	No	65.4	65.8	66.6	1.2
R-5105	Res.	B	67	2	4018 HARVARD CIR 10	No	64.8	65.1	66.0	1.2
R-5106	Res.	B	67	2	4018 HARVARD CIR 11	No	65.7	66.1	66.7	1.0
R-5107	Res.	B	67	2	4018 HARVARD CIR 12	No	66.1	66.4	67.4	1.3
R-5108	Res.	B	67	1	4018 HARVARD CIR 7	No	65.7	66.0	66.8	1.1
R-5109	Res.	B	67	1	4018 HARVARD CIR 8	No	66.4	66.8	67.4	1.0
R-5110	Res.	B	67	1	4018 HARVARD CIR 9	No	66.9	67.2	68.3	1.4
R-5111	Res.	B	67	2	4018 HARVARD CIR 4	No	66.4	66.8	67.4	1.0
R-5112	Res.	B	67	2	4018 HARVARD CIR 5	No	67.0	67.4	68.0	1.0
R-5113	Res.	B	67	2	4018 HARVARD CIR 6	No	67.5	67.9	69.0	1.5
R-5114	Res.	B	67	1	4018 HARVARD CIR 1	No	67.5	67.8	68.4	0.9
R-5115	Res.	B	67	1	4018 HARVARD CIR 2	No	67.9	68.3	69.1	1.2
R-5116	Res.	B	67	1	4018 HARVARD CIR 3	No	68.5	68.9	70.2	1.7
R-5117	Res.	B	67	1	4018 HARVARD CIR 28	No	50.0	50.0	50.0	0.0
R-5118	Res.	B	67	1	4018 HARVARD CIR 29	No	50.0	50.2	50.5	0.5
R-5119	Res.	B	67	1	4018 HARVARD CIR 30	No	55.6	55.9	57.1	1.5
R-5120	Res.	B	67	2	4018 HARVARD CIR 25	No	50.0	50.0	50.0	0.0
R-5121	Res.	B	67	2	4018 HARVARD CIR 26	No	50.1	50.4	50.9	0.8
R-5122	Res.	B	67	2	4018 HARVARD CIR 27	No	56.9	57.3	58.0	1.1
R-5123	Res.	B	67	1	4018 HARVARD CIR 22	No	53.6	54.0	54.8	1.2
R-5124	Res.	B	67	1	4018 HARVARD CIR 23	No	54.8	55.2	55.7	0.9
R-5125	Res.	B	67	1	4018 HARVARD CIR 24	No	56.8	57.2	58.0	1.2
R-5126	Res.	B	67	2	4018 HARVARD CIR 19	No	54.5	54.9	55.5	1.0
R-5127	Res.	B	67	2	4018 HARVARD CIR 20	No	55.4	55.8	56.2	0.8
R-5128	Res.	B	67	2	4018 HARVARD CIR 21	No	56.7	57.1	58.0	1.3
R-5129	Res.	B	67	1	4018 HARVARD CIR 16	No	52.5	52.9	53.3	0.8
R-5130	Res.	B	67	1	4018 HARVARD CIR 17	No	54.4	54.8	55.3	0.9
R-5131	Res.	B	67	1	4018 HARVARD CIR 18	No	56.3	56.6	57.0	0.7
R-5132	Res.	B	67	2	4003 HARVARD CIR 1	No	50.0	50.0	50.0	0.0
R-5133	Res.	B	67	2	4003 HARVARD CIR 2	No	50.0	50.0	50.0	0.0
R-5134	Res.	B	67	2	4007 HARVARD CIR 1	No	50.0	50.0	50.0	0.0

Table B-5: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 5										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-5135	Res.	B	67	2	4007 HARVARD CIR 2	No	50.0	50.0	50.0	0.0
R-5136	Res.	B	67	2	4015 HARVARD CIR 1	No	52.6	52.9	54.2	1.6
R-5137	Res.	B	67	2	4015 HARVARD CIR 2	No	54.2	54.6	55.0	0.8
R-5138	Res.	B	67	2	4019 HARVARD CIR 1	No	56.0	56.3	57.2	1.2
R-5139	Res.	B	67	2	4019 HARVARD CIR 2	No	57.9	58.3	58.7	0.8
R-5140	Res.	B	67	2	4023 HARVARD CIR 1	No	57.9	58.2	59.8	1.9
R-5141	Res.	B	67	2	4023 HARVARD CIR 2	No	60.5	60.9	62.0	1.5
R-5142	Res.	B	67	2	4048 HARVARD CIR 1	No	66.2	66.6	67.4	1.2
R-5143	Res.	B	67	2	4048 HARVARD CIR 2	No	67.0	67.4	68.9	1.9
R-5144	Res.	B	67	2	4044 HARVARD CIR 1	No	63.4	63.8	64.8	1.4
R-5145	Res.	B	67	2	4044 HARVARD CIR 2	No	64.7	65.1	66.2	1.5
R-5146	Res.	B	67	2	4008 HARVARD CIR 1	No	53.5	53.8	53.9	0.4
R-5147	Res.	B	67	2	4008 HARVARD CIR 2	No	54.5	54.7	54.7	0.2
R-5148	Res.	B	67	2	4012 HARVARD CIR 1	No	50.6	50.9	50.7	0.1
R-5149	Res.	B	67	2	4012 HARVARD CIR 2	No	51.2	51.4	51.4	0.2
R-5150	Res.	B	67	2	4016 HARVARD CIR 1	No	50.0	50.0	50.0	0.0
R-5151	Res.	B	67	2	4016 HARVARD CIR 2	No	50.0	50.0	50.0	0.0
R-5152	Res.	B	67	1	4023 HARVARD CIR 15	No	50.0	50.0	50.0	0.0
R-5153	Res.	B	67	1	4023 HARVARD CIR 16	No	56.9	57.2	58.2	1.3
R-5154	Res.	B	67	1	4023 HARVARD CIR 17	No	59.4	59.7	60.9	1.5
R-5155	Res.	B	67	2	4023 HARVARD CIR 12	No	50.0	50.0	50.0	0.0
R-5156	Res.	B	67	2	4023 HARVARD CIR 13	No	56.8	57.1	58.2	1.4
R-5157	Res.	B	67	2	4023 HARVARD CIR 14	No	60.4	60.7	62.1	1.7
R-5158	Res.	B	67	1	4023 HARVARD CIR 9	No	53.0	53.3	54.6	1.6
R-5159	Res.	B	67	1	4023 HARVARD CIR 10	No	56.9	57.2	58.5	1.6
R-5160	Res.	B	67	1	4023 HARVARD CIR 11	No	61.1	61.4	62.4	1.3
R-5161	Res.	B	67	2	4023 HARVARD CIR 6	No	53.7	54.0	54.3	0.6
R-5162	Res.	B	67	2	4023 HARVARD CIR 7	No	56.6	56.9	58.0	1.4
R-5163	Res.	B	67	2	4023 HARVARD CIR 8	No	60.0	60.3	61.4	1.4
R-5164	Res.	B	67	1	4023 HARVARD CIR 3	No	51.3	51.6	52.4	1.1
R-5165	Res.	B	67	1	4023 HARVARD CIR 4	No	53.3	53.6	54.4	1.1
R-5166	Res.	B	67	1	4023 HARVARD CIR 5	No	58.4	58.6	59.7	1.3
R-5167	Res.	B	67	1	4023 HARVARD CIR 30	No	63.9	64.3	65.0	1.1
R-5168	Res.	B	67	1	4023 HARVARD CIR 31	No	66.2	66.6	67.3	1.1
R-5169	Res.	B	67	1	4023 HARVARD CIR 32	No	67.5	67.8	68.5	1.0
R-5170	Res.	B	67	2	4023 HARVARD CIR 27	No	65.1	65.5	66.3	1.2
R-5171	Res.	B	67	2	4023 HARVARD CIR 28	No	66.8	67.1	67.9	1.1
R-5172	Res.	B	67	2	4023 HARVARD CIR 29	No	68.1	68.4	69.0	0.9
R-5173	Res.	B	67	1	4023 HARVARD CIR 24	No	66.5	66.9	67.6	1.1
R-5174	Res.	B	67	1	4023 HARVARD CIR 25	No	67.8	68.2	69.1	1.3
R-5175	Res.	B	67	1	4023 HARVARD CIR 26	No	69.0	69.3	69.8	0.8
R-5176	Res.	B	67	2	4023 HARVARD CIR 21	No	67.3	67.7	68.3	1.0
R-5177	Res.	B	67	2	4023 HARVARD CIR 22	No	68.8	69.2	69.9	1.1
R-5178	Res.	B	67	2	4023 HARVARD CIR 23	No	69.6	70.0	70.6	1.0
R-5179	Res.	B	67	1	4023 HARVARD CIR 18	No	67.9	68.3	69.3	1.4
R-5180	Res.	B	67	1	4023 HARVARD CIR 19	No	69.6	70.0	70.6	1.0
R-5181	Res.	B	67	1	4023 HARVARD CIR 20	No	70.2	70.6	71.2	1.0
R-5182	Res.	B	67	1	4032 HARVARD CIR 1	Yes	73.3	73.7	74.8	1.5
R-5183	Res.	B	67	1	4032 HARVARD CIR 2	No	74.2	74.6	75.7	1.5
R-5184	Res.	B	67	1	4032 HARVARD CIR 3	No	74.7	75.0	75.9	1.2
R-5185	Res.	B	67	2	4032 HARVARD CIR 4	Yes	73.6	74.0	74.9	1.3
R-5186	Res.	B	67	2	4032 HARVARD CIR 5	No	74.5	74.8	75.9	1.4
R-5187	Res.	B	67	2	4032 HARVARD CIR 6	No	75.0	75.3	76.2	1.2
R-5188	Res.	B	67	1	4032 HARVARD CIR 7	Yes	74.0	74.4	75.5	1.5
R-5189	Res.	B	67	1	4032 HARVARD CIR 8	No	74.9	75.2	76.2	1.3
R-5190	Res.	B	67	1	4032 HARVARD CIR 9	No	75.3	75.7	76.5	1.2
R-5191	Res.	B	67	2	4032 HARVARD CIR 10	Yes	74.4	74.8	75.7	1.3
R-5192	Res.	B	67	2	4032 HARVARD CIR 11	No	75.2	75.5	76.6	1.4
R-5193	Res.	B	67	2	4032 HARVARD CIR 12	No	75.6	76.0	76.9	1.3
R-5194	Res.	B	67	1	4032 HARVARD CIR 13	Yes	74.9	75.3	76.2	1.3
R-5195	Res.	B	67	1	4032 HARVARD CIR 14	No	75.7	76.0	77.0	1.3
R-5196	Res.	B	67	1	4032 HARVARD CIR 15	No	76.1	76.5	77.3	1.2
R-5197	Res.	B	67	1	4035 HARVARD CIR 1	Yes	75.2	75.6	76.6	1.4
R-5198	Res.	B	67	1	4035 HARVARD CIR 2	No	76.0	76.3	77.4	1.4
R-5199	Res.	B	67	1	4035 HARVARD CIR 3	No	76.3	76.6	77.4	1.1
R-5200	Res.	B	67	2	4035 HARVARD CIR 4	Yes	75.1	75.5	76.3	1.2
R-5201	Res.	B	67	2	4035 HARVARD CIR 5	No	75.9	76.3	77.3	1.4

Table B-5: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 5										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-5202	Res.	B	67	2	4035 HARVARD CIR 6	No	76.2	76.6	77.4	1.2
R-5203	Res.	B	67	1	4035 HARVARD CIR 7	Yes	75.1	75.6	76.3	1.2
R-5204	Res.	B	67	1	4035 HARVARD CIR 8	No	75.9	76.3	77.1	1.2
R-5205	Res.	B	67	1	4035 HARVARD CIR 9	No	76.2	76.6	77.3	1.1
R-5206	Res.	B	67	2	4035 HARVARD CIR 10	Yes	75.1	75.5	76.2	1.1
R-5207	Res.	B	67	2	4035 HARVARD CIR 11	No	75.8	76.2	77.0	1.2
R-5208	Res.	B	67	2	4035 HARVARD CIR 12	No	76.2	76.5	77.3	1.1
R-5209	Res.	B	67	1	4035 HARVARD CIR 13	Yes	75.1	75.5	76.2	1.1
R-5210	Res.	B	67	1	4035 HARVARD CIR 14	No	75.7	76.1	77.0	1.3
R-5211	Res.	B	67	1	4035 HARVARD CIR 15	No	76.1	76.5	77.2	1.1
R-5212	Daycare	C	67	3	4010 STERLING AVE	Yes	72.4	72.7	72.7	0.3
Predicted NSA 5 Traffic Noise Impacts									**117**	

Table B-6: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 6										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-6001	Res.	B	67	2	10012_10014 E 42ND ST	Yes	70.8	71.0	74.8	4.0
R-6002	Res.	B	67	2	10016_10018 E 42ND ST	Yes	71.2	71.4	75.0	3.8
R-6003	Res.	B	67	2	10020_10022 E 42ND ST	Yes	71.6	71.8	74.6	3.0
R-6004	Res.	B	67	2	10008_10010 E 42ND ST	Yes	59.4	59.7	63.1	3.7
R-6005	Res.	B	67	2	10004_10006 E 42ND ST	Yes	57.5	57.8	61.5	4.0
R-6006	Res.	B	67	2	10000_10002 E 42ND ST	No	57.4	57.7	60.8	3.4
R-6007	Res.	B	67	2	10024_10026 E 42ND ST	Yes	67.0	67.2	68.1	1.1
R-6008	Res.	B	67	2	10028_10030 E 42ND ST	Yes	65.8	66.0	66.8	1.0
R-6009	Res.	B	67	2	10032_10034 E 42ND ST	No	62.3	62.5	63.5	1.2
R-6010	Res.	B	67	2	10036_10038 E 42ND ST	No	61.4	61.6	62.8	1.4
R-6011	Res.	B	67	1	4119 PITTMAN RD	No	52.9	53.1	53.9	1.0
R-6012	Res.	B	67	1	4201 PITTMAN RD	No	54.5	54.8	55.8	1.3
R-6013	Res.	B	67	1	4205 PITTMAN RD	No	53.4	53.7	55.1	1.7
R-6014	Res.	B	67	1	4207 PITTMAN RD	No	52.6	52.9	54.2	1.6
R-6015	Res.	B	67	1	4211 PITTMAN RD	No	53.2	53.5	55.0	1.8
R-6016	Res.	B	67	2	10108_10110 E 42ND ST	Yes	64.6	64.8	65.5	0.9
R-6017	Res.	B	67	2	10104_10106 E 42ND ST	No	62.9	63.1	64.4	1.5
R-6018	Res.	B	67	2	10100_10102 E 42ND ST	No	61.7	61.9	63.2	1.5
R-6019	Res.	B	67	2	10112_10114 E 42ND ST	Yes	70.1	70.3	71.0	0.9
R-6020	Res.	B	67	2	10116_10118 E 42ND ST	Yes	69.1	69.3	70.1	1.0
R-6021	Res.	B	67	2	10120_10122 E 42ND ST	Yes	63.0	63.2	67.3	4.3
R-6022	Res.	B	67	2	10124_10126 E 42ND ST	No	60.5	60.7	63.2	2.7
R-6023	Res.	B	67	2	10128_10130 E 42ND ST	No	58.4	58.6	60.4	2.0
R-6024	Res.	B	67	2	10212_10214 E 42ND ST	Yes	69.5	69.7	72.5	3.0
R-6025	Res.	B	67	2	10208_10210 E 42ND ST	Yes	66.8	67.0	70.6	3.8
R-6026	Res.	B	67	2	10216_10218 E 42ND ST	Yes	74.9	75.1	76.6	1.7
R-6027	Res.	B	67	2	10220_10222 E 42ND ST	Yes	73.0	73.2	75.3	2.3
R-6028	Res.	B	67	2	10224_10226 E 42ND ST	Yes	60.0	60.2	63.6	3.6
R-6029	Res.	B	67	2	10228_10230 E 42ND ST	Yes	56.9	57.1	60.5	3.6
R-6030	Res.	B	67	2	10232_10234 E 42ND ST	No	52.5	52.7	55.6	3.1
R-6031	Res.	B	67	2	10236_10238 E 42ND ST	No	50.6	50.9	53.7	3.1
R-6032	Res.	B	67	2	10312_10314 E 42ND ST	Yes	64.1	64.3	67.4	3.3
R-6033	Res.	B	67	2	10308_10310 E 42ND ST	Yes	58.6	58.9	62.4	3.8
R-6034	Res.	B	67	2	10304_10306 E 42ND ST	No	54.0	54.3	56.7	2.7
R-6035	Res.	B	67	2	10300_10302 E 42ND ST	No	51.8	52.0	54.4	2.6
R-6036	Res.	B	67	2	10316_10318 E 42ND ST	Yes	71.4	71.6	74.2	2.8
R-6037	Res.	B	67	2	10320_10322 E 42ND ST	Yes	72.1	72.3	75.1	3.0
R-6038	Res.	B	67	2	10324_10326 E 42ND ST	Yes	69.7	69.8	72.1	2.4
R-6039	Res.	B	67	2	10328_10330 E 42ND ST	Yes	67.2	67.4	69.8	2.6
R-6040	Res.	B	67	2	10332_10334 E 42ND ST	No	58.5	58.7	61.3	2.8
R-6041	Res.	B	67	2	10336_10338 E 42ND ST	No	55.4	55.7	57.3	1.9
R-6042	Res.	B	67	2	10201_10203 E 42ND ST	No	56.1	56.4	57.6	1.5
R-6043	Res.	B	67	2	10205_10207 E 42ND ST	No	54.5	54.7	56.0	1.5
R-6044	Res.	B	67	2	10209_10211 E 42ND ST	No	54.3	54.6	55.8	1.5
R-6045	Res.	B	67	2	10229_10231 E 42ND ST	No	50.0	50.0	50.8	0.8
R-6046	Res.	B	67	2	10225_10227 E 42ND ST	No	50.0	50.0	50.0	0.0
R-6047	Res.	B	67	2	10221_10223 E 42ND ST	No	50.0	50.0	50.0	0.0
R-6048	Res.	B	67	2	10301_10303 E 42ND ST	No	55.5	55.8	58.4	2.9
R-6049	Res.	B	67	2	10305_10307 E 42ND ST	No	54.4	54.7	57.4	3.0
R-6050	Res.	B	67	2	10333_10335 E 42ND ST	No	52.8	53.0	54.8	2.0
R-6051	Res.	B	67	2	10329_10331 E 42ND ST	No	52.7	53.0	54.9	2.2
R-6052	Res.	B	67	2	10400 E 42ND ST FL1	Yes	67.3	67.5	69.6	2.3
R-6053	Res.	B	67	2	10400 E 42ND ST FL2	No	70.6	70.8	73.2	2.6
R-6054	Res.	B	67	2	10404 E 42ND ST FL1	Yes	68.3	68.5	70.9	2.6
R-6055	Res.	B	67	2	10404 E 42ND ST FL2	No	71.3	71.5	74.3	3.0
R-6056	Res.	B	67	2	10408 E 42ND ST FL1	Yes	69.6	69.8	72.6	3.0
R-6057	Res.	B	67	2	10408 E 42ND ST FL2	No	72.7	72.8	75.0	2.3
R-6058	Res.	B	67	2	10412 E 42ND ST FL1	Yes	70.4	70.5	73.3	2.9
R-6059	Res.	B	67	2	10412 E 42ND ST FL2	No	73.2	73.4	75.3	2.1
R-6060	Res.	B	67	2	10401 E 42ND ST FL1	No	54.2	54.5	56.6	2.4
R-6061	Res.	B	67	2	10401 E 42ND ST FL2	No	58.1	58.3	60.2	2.1
R-6062	Res.	B	67	2	10401 E 42ND ST FL3	No	60.2	60.5	62.3	2.1
R-6063	Res.	B	67	2	10405 E 42ND ST FL1	No	54.4	54.7	56.9	2.5
R-6064	Res.	B	67	2	10405 E 42ND ST FL2	No	58.0	58.3	60.3	2.3
R-6065	Res.	B	67	2	10405 E 42ND ST FL3	No	60.4	60.6	62.5	2.1
R-6066	Res.	B	67	2	10409 E 42ND ST FL1	No	58.5	58.7	61.5	3.0
R-6067	Res.	B	67	2	10409 E 42ND ST FL2	No	61.3	61.5	63.4	2.1

Table B-6: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 6										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-6068	Res.	B	67	2	10409 E 42ND ST FL3	No	63.1	63.3	65.0	1.9
R-6069	Res.	B	67	2	10413 E 42ND ST FL1	No	59.3	59.5	62.4	3.1
R-6070	Res.	B	67	2	10413 E 42ND ST FL2	No	61.7	61.9	63.9	2.2
R-6071	Res.	B	67	2	10413 E 42ND ST FL3	No	63.4	63.6	65.4	2.0
R-6072	Res.	B	67	2	10417 E 42ND ST FL1	No	60.8	61.0	63.6	2.8
R-6073	Res.	B	67	2	10417 E 42ND ST FL2	No	63.1	63.3	65.1	2.0
R-6074	Res.	B	67	2	10417 E 42ND ST FL3	No	64.7	64.8	66.6	1.9
R-6075	Res.	B	67	2	10501 E 42ND ST FL1	No	62.6	62.8	64.7	2.1
R-6076	Res.	B	67	2	10501 E 42ND ST FL2	No	64.0	64.2	65.7	1.7
R-6077	Res.	B	67	2	10501 E 42ND ST FL3	No	65.3	65.5	67.2	1.9
R-6078	Res.	B	67	2	10505 E 42ND ST FL1	No	64.6	64.7	66.6	2.0
R-6079	Res.	B	67	2	10505 E 42ND ST FL2	No	65.8	66.0	67.6	1.8
R-6080	Res.	B	67	2	10505 E 42ND ST FL3	No	66.8	67.0	68.7	1.9
R-6081	Res.	B	67	2	10509 E 42ND ST FL1	No	62.7	62.9	64.6	1.9
R-6082	Res.	B	67	2	10509 E 42ND ST FL2	No	63.9	64.1	65.9	2.0
R-6083	Res.	B	67	2	10509 E 42ND ST FL3	No	65.1	65.3	67.1	2.0
R-6084	Res.	B	67	2	10513 E 42ND ST FL1	No	62.6	62.8	64.5	1.9
R-6085	Res.	B	67	2	10513 E 42ND ST FL2	No	63.7	63.9	65.7	2.0
R-6086	Res.	B	67	2	10513 E 42ND ST FL3	No	65.2	65.4	67.1	1.9
R-6087	Res.	B	67	2	10508 E 42ND ST FL1	Yes	69.2	69.3	71.1	1.9
R-6088	Res.	B	67	2	10508 E 42ND ST FL2	No	70.4	70.5	72.1	1.7
R-6089	Res.	B	67	2	10508 E 42ND ST FL3	No	71.1	71.3	73.1	2.0
R-6090	Res.	B	67	2	10512 E 42ND ST FL1	Yes	70.6	70.7	72.4	1.8
R-6091	Res.	B	67	2	10512 E 42ND ST FL2	No	71.7	71.8	73.4	1.7
R-6092	Res.	B	67	2	10512 E 42ND ST FL3	No	72.4	72.5	74.2	1.8
R-6093	Res.	B	67	2	10600 E 42ND ST FL1	Yes	74.7	74.8	76.5	1.8
R-6094	Res.	B	67	2	10600 E 42ND ST FL2	No	75.7	75.8	77.5	1.8
R-6095	Res.	B	67	2	10600 E 42ND ST FL3	No	76.3	76.5	77.8	1.5
R-6096	Res.	B	67	2	10604 E 42ND ST FL1	Yes	74.9	75.0	76.7	1.8
R-6097	Res.	B	67	2	10604 E 42ND ST FL2	No	76.0	76.1	77.7	1.7
R-6098	Res.	B	67	2	10604 E 42ND ST FL3	No	76.5	76.7	77.9	1.4
R-6099	Res.	B	67	2	10608 E 42ND ST FL1	Yes	75.1	75.2	76.9	1.8
R-6100	Res.	B	67	2	10608 E 42ND ST FL2	No	76.3	76.4	77.8	1.5
R-6101	Res.	B	67	2	10608 E 42ND ST FL3	No	76.7	76.9	78.0	1.3
R-6102	Res.	B	67	2	10612 E 42ND ST FL1	Yes	75.4	75.5	77.3	1.9
R-6103	Res.	B	67	2	10612 E 42ND ST FL2	No	76.6	76.8	78.1	1.5
R-6104	Res.	B	67	2	10612 E 42ND ST FL3	No	76.9	77.1	78.2	1.3
R-6105	Res.	B	67	2	10616 E 42ND ST FL1	Yes	75.0	75.1	76.8	1.8
R-6106	Res.	B	67	2	10616 E 42ND ST FL2	No	76.2	76.4	77.6	1.4
R-6107	Res.	B	67	2	10616 E 42ND ST FL3	No	76.6	76.7	77.8	1.2
R-6108	Res.	B	67	2	10620 E 42ND ST FL1	Yes	74.4	74.5	76.2	1.8
R-6109	Res.	B	67	2	10620 E 42ND ST FL2	No	75.6	75.8	77.0	1.4
R-6110	Res.	B	67	2	10620 E 42ND ST FL3	No	76.0	76.2	77.2	1.2
R-6111	Res.	B	67	2	10601 E 42ND ST FL1	No	60.2	60.4	62.2	2.0
R-6112	Res.	B	67	2	10601 E 42ND ST FL2	No	62.0	62.2	64.0	2.0
R-6113	Res.	B	67	2	10601 E 42ND ST FL3	No	63.9	64.1	65.6	1.7
R-6114	Res.	B	67	2	10605 E 42ND ST FL1	No	60.6	60.9	62.6	2.0
R-6115	Res.	B	67	2	10605 E 42ND ST FL2	No	62.9	63.1	64.7	1.8
R-6116	Res.	B	67	2	10605 E 42ND ST FL3	No	64.5	64.8	66.3	1.8
R-6117	Res.	B	67	2	10609 E 42ND ST FL1	No	61.0	61.2	62.9	1.9
R-6118	Res.	B	67	2	10609 E 42ND ST FL2	No	63.1	63.3	64.9	1.8
R-6119	Res.	B	67	2	10609 E 42ND ST FL3	No	64.7	65.0	66.4	1.7
R-6120	Res.	B	67	2	10613 E 42ND ST FL1	No	58.9	59.1	60.9	2.0
R-6121	Res.	B	67	2	10613 E 42ND ST FL2	No	62.1	62.3	63.6	1.5
R-6122	Res.	B	67	2	10613 E 42ND ST FL3	No	63.5	63.7	65.1	1.6
R-6123	Res.	B	67	2	10617 E 42ND ST FL1	No	61.9	62.1	63.9	2.0
R-6124	Res.	B	67	2	10617 E 42ND ST FL2	No	64.3	64.5	65.9	1.6
R-6125	Res.	B	67	2	10617 E 42ND ST FL3	No	65.4	65.6	66.9	1.5
R-6126	Hospital	D	77	8	4251 NORTHERN AVE	Yes	72.7	72.9	74.3	1.6
R-6127	Church	D	77	9	11100 E 43RD ST	Yes	68.7	68.9	70.3	1.6
Predicted NSA 6 Traffic Noise Impacts									**118**	

Table B-7: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 7										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-7001	Res.	B	67	1	11201 E 40TH ST S	No	66.8	67.0	67.5	0.7
R-7002	Res.	B	67	1	11205 E 40TH ST S	No	66.1	66.4	66.9	0.8
R-7003	Res.	B	67	1	11209 E HIGHRIDGE DR	No	66.7	67.0	67.5	0.8
R-7004	Res.	B	67	1	11215 E HIGHRIDGE DR	No	67.0	67.3	67.9	0.9
R-7005	Res.	B	67	1	11221 E HIGHRIDGE DR	No	67.6	67.8	68.4	0.8
R-7006	Res.	B	67	1	11231 E HIGHRIDGE DR	No	67.7	68.0	68.5	0.8
R-7007	Res.	B	67	1	11237 E HIGHRIDGE DR	No	67.7	67.9	68.6	0.9
R-7008	Res.	B	67	1	11241 E HIGHRIDGE DR	No	67.9	68.2	68.7	0.8
R-7009	Res.	B	67	1	11247 E HIGHRIDGE DR	No	68.4	68.7	69.2	0.8
R-7010	Res.	B	67	1	11309 E HIGHRIDGE DR	No	68.6	68.9	69.4	0.8
R-7011	Res.	B	67	1	11311 E HIGHRIDGE DR	No	68.9	69.2	69.7	0.8
R-7012	Res.	B	67	1	11315 E HIGHRIDGE DR	No	69.0	69.3	69.6	0.6
R-7013	Res.	B	67	1	11319 E HIGHRIDGE DR	No	69.0	69.4	69.1	0.1
R-7014	Res.	B	67	1	11325 E HIGHRIDGE DR	No	68.6	68.9	68.2	-0.4
R-7015	Res.	B	67	1	11335 E HIGHRIDGE DR	No	70.5	70.8	69.7	-0.8
R-7016	Res.	B	67	1	11339 E HIGHRIDGE DR	No	72.5	72.8	71.2	-1.3
R-7017	Res.	B	67	1	11343 E HIGHRIDGE DR	Yes	73.8	74.2	72.4	-1.4
R-7019	Res.	B	67	1	11407 E HIGHRIDGE DR	Yes	73.9	74.3	73.0	-0.9
R-7020	Res.	B	67	1	11417 E HIGHRIDGE DR	Yes	73.9	74.3	74.2	0.3
R-7021	Res.	B	67	1	11419 E HIGHRIDGE DR	Yes	73.2	73.6	74.2	1.0
R-7022	Res.	B	67	1	11425 E HIGHRIDGE DR	Yes	74.0	74.4	74.4	0.4
R-7023	Res.	B	67	1	11431 E HIGHRIDGE DR	Yes	74.0	74.4	74.5	0.5
R-7024	Res.	B	67	1	11435 E HIGHRIDGE DR	Yes	74.7	75.1	75.5	0.8
R-7025	Res.	B	67	1	11308 E HIGHRIDGE DR	No	64.9	65.2	66.1	1.2
R-7026	Res.	B	67	1	11312 E HIGHRIDGE DR	No	65.2	65.6	66.3	1.1
R-7027	Res.	B	67	1	11316 E HIGHRIDGE DR	No	65.5	65.9	66.4	0.9
R-7028	Res.	B	67	1	11320 E HIGHRIDGE DR	No	65.8	66.2	66.2	0.4
R-7029	Res.	B	67	1	11324 E HIGHRIDGE DR	No	65.9	66.3	65.9	0.0
R-7030	Res.	B	67	1	11328 E HIGHRIDGE DR	No	65.7	66.0	65.5	-0.2
R-7031	Res.	B	67	1	11220 E 40TH ST S	No	60.9	61.3	62.1	1.2
R-7032	Res.	B	67	1	11300 E 40TH ST S	No	61.9	62.2	63.2	1.3
R-7033	Res.	B	67	1	11302 E 40TH ST S	No	62.1	62.5	63.4	1.3
R-7034	Res.	B	67	1	11304 E 40TH ST S	No	62.0	62.4	63.3	1.3
R-7035	Res.	B	67	1	11308 E 40TH ST S	No	61.8	62.1	63.0	1.2
R-7036	Res.	B	67	1	11312 E 40TH ST S	No	61.7	62.1	62.9	1.2
R-7037	Res.	B	67	1	11316 E 40TH ST S	No	61.9	62.2	63.0	1.1
R-7038	Res.	B	67	1	11320 E 40TH ST S	No	61.7	62.0	62.7	1.0
R-7039	Res.	B	67	1	11324 E 40TH ST S	No	61.0	61.4	61.9	0.9
R-7040	Res.	B	67	1	11328 E 40TH ST S	No	61.8	62.1	62.7	0.9
R-7041	Res.	B	67	1	11332 E 40TH ST S	No	61.4	61.8	62.3	0.9
R-7042	Res.	B	67	1	3924 S CRESTVIEW RD	No	60.8	61.2	61.6	0.8
R-7043	Res.	B	67	1	3927 S CRESTVIEW RD	No	60.7	61.1	61.3	0.6
R-7044	Res.	B	67	1	3924 S BLUE RIDGE BLVD	No	62.0	62.3	62.6	0.6
R-7045	Res.	B	67	1	11321 E 40TH ST S	No	63.9	64.3	64.8	0.9
R-7046	Res.	B	67	1	11325 E 40TH ST S	No	63.8	64.2	64.6	0.8
R-7047	Res.	B	67	1	11333 E 40TH ST S	No	62.2	62.6	62.4	0.2
R-7048	Res.	B	67	1	4012 S VALLEY WAY	No	63.3	63.6	63.2	-0.1
R-7049	Res.	B	67	1	4007 S CRESTVIEW RD	No	62.4	62.8	63.1	0.7
R-7050	Res.	B	67	1	4013 S CRESTVIEW RD	No	63.1	63.5	63.7	0.6
R-7051	Res.	B	67	1	4019 S CRESTVIEW RD	No	64.0	64.3	64.5	0.5
R-7052	Res.	B	67	1	4025 S CRESTVIEW RD	No	64.6	65.0	65.2	0.6
R-7053	Res.	B	67	1	4031 S CRESTVIEW RD	No	65.5	65.8	66.0	0.5
R-7054	Res.	B	67	1	4037 S CRESTVIEW RD	No	65.8	66.2	66.4	0.6
R-7055	Res.	B	67	1	4043 S CRESTVIEW RD	No	66.3	66.6	66.8	0.5
R-7056	Res.	B	67	1	11414 E HIGHRIDGE DR	No	65.5	65.9	66.5	1.0
R-7057	Res.	B	67	1	4000 S BLUE RIDGE BLVD	No	61.7	62.0	62.6	0.9
R-7058	Res.	B	67	1	4008 S BLUE RIDGE BLVD	No	62.0	62.3	62.9	0.9
R-7059	Res.	B	67	1	4016 S BLUE RIDGE BLVD	No	62.4	62.8	63.3	0.9
R-7060	Res.	B	67	1	4020 S BLUE RIDGE BLVD	No	63.1	63.4	63.9	0.8
R-7061	Res.	B	67	1	4026 S BLUE RIDGE BLVD	No	63.7	64.1	64.6	0.9
R-7062	Res.	B	67	1	4030 S BLUE RIDGE BLVD	No	63.7	64.1	65.0	1.3
R-7063	Res.	B	67	1	4032 S BLUE RIDGE BLVD	No	65.1	65.5	66.0	0.9
Predicted NSA 7 Traffic Noise Impacts									32	

Table B-8: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 8										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-8001	Res.	B	67	1	11715 E 40TH ST S	No	51.5	51.9	53.3	1.8
R-8002	Res.	B	67	1	11711 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-8003	Res.	B	67	1	11701 E 40TH ST S	No	50.0	50.0	50.9	0.9
R-8004	Res.	B	67	1	11519 E 40TH ST S	No	52.2	52.5	53.9	1.7
R-8005	Res.	B	67	1	11511 E 40TH ST S	No	53.4	53.7	54.9	1.5
R-8006	Res.	B	67	1	11507 E 40TH ST S	No	55.5	55.8	56.7	1.2
R-8007	Res.	B	67	1	11503 E 40TH ST S	No	57.1	57.4	58.5	1.4
R-8008	Res.	B	67	1	4007 S BLUE RIDGE BLVD	No	58.6	58.9	59.8	1.2
R-8009	Res.	B	67	1	11712 E 40TH TER S	No	56.5	56.9	58.0	1.5
R-8010	Res.	B	67	1	11800 E 40TH TER S	No	54.5	54.8	56.1	1.6
R-8011	Res.	B	67	1	11804 E 40TH TER S	No	53.7	54.0	55.1	1.4
R-8012	Res.	B	67	1	11812 E 40TH TER S	No	53.3	53.6	54.9	1.6
R-8013	Res.	B	67	1	11900 E 40TH TER S	No	53.2	53.5	55.1	1.9
R-8014	Res.	B	67	1	11904 E 40TH TER S	No	53.1	53.5	54.9	1.8
R-8015	Res.	B	67	1	11908 E 40TH TER S	No	53.1	53.5	55.0	1.9
R-8016	Res.	B	67	1	11912 E 40TH TER S	No	52.1	52.5	53.7	1.6
R-8017	Res.	B	67	1	4015 S BLUE RIDGE BLVD	No	62.9	63.1	63.5	0.6
R-8018	Res.	B	67	1	4009 S BLUE RIDGE BLVD	No	61.6	61.9	62.6	1.0
R-8019	Res.	B	67	1	4009 S BLUE RIDGE BLVD 1/2	No	58.6	58.9	60.0	1.4
R-8020	Res.	B	67	1	11801 E 40TH TERRACE S	No	56.3	56.6	58.1	1.8
R-8021	Res.	B	67	1	11807 E 40TH TERRACE S	No	55.9	56.2	57.4	1.5
R-8022	Res.	B	67	1	11811 E 40TH TERRACE S	No	55.0	55.3	56.5	1.5
R-8023	Res.	B	67	1	11901 E 40TH TERRACE S	No	55.1	55.4	56.8	1.7
R-8024	Res.	B	67	1	11905 E 40TH TERRACE S	No	55.4	55.7	57.1	1.7
R-8025	Res.	B	67	1	4025 S BLUE RIDGE BLVD	No	57.6	57.9	58.6	1.0
R-8026	Res.	B	67	1	11700 E 41ST ST S	No	60.6	60.9	62.4	1.8
R-8027	Res.	B	67	1	11704 E 41ST ST S	No	60.2	60.6	62.0	1.8
R-8028	Res.	B	67	1	11708 E 41ST ST S	No	59.9	60.3	61.8	1.9
R-8029	Res.	B	67	1	4022 S VASSAR AVE	No	58.5	58.8	60.1	1.6
R-8030	Res.	B	67	1	4023 S VASSAR AVE	No	57.2	57.6	58.8	1.6
R-8031	Res.	B	67	1	4017 S VASSAR AVE	No	55.3	55.7	56.8	1.5
R-8032	Res.	B	67	1	4013 S VASSAR AVE	No	54.3	54.7	55.7	1.4
R-8033	Res.	B	67	1	4027 S VASSAR AVE	No	58.7	59.0	60.0	1.3
R-8034	Res.	B	67	1	4008 S FOREST AVE	No	52.3	52.7	53.8	1.5
R-8035	Res.	B	67	1	4004 S FOREST AVE	No	51.0	51.4	52.6	1.6
R-8036	Res.	B	67	1	4000 S FOREST AVE	No	50.1	50.5	51.7	1.6
R-8037	Res.	B	67	1	4014 S FOREST AVE	No	53.5	53.9	55.0	1.5
R-8038	Res.	B	67	1	4022 S FOREST AVE	No	57.9	58.2	59.3	1.4
R-8039	Res.	B	67	1	4018 S FOREST AVE	No	54.7	55.1	56.1	1.4
R-8040	Res.	B	67	1	4001 S FOREST AVE	No	50.0	50.2	51.4	1.4
R-8041	Res.	B	67	1	4005 S FOREST AVE	No	51.4	51.7	52.9	1.5
R-8042	Res.	B	67	1	4009 S FOREST AVE	No	53.0	53.3	54.8	1.8
R-8043	Res.	B	67	1	4019 S FOREST AVE	No	55.1	55.5	56.8	1.7
R-8044	Res.	B	67	1	4015 S FOREST AVE	No	53.8	54.2	55.5	1.7
R-8045	Res.	B	67	1	4023 S FOREST AVE	No	58.8	59.1	60.4	1.6
R-8046	Res.	B	67	1	4010 S WOODLAND AVE	No	54.2	54.6	56.3	2.1
R-8047	Res.	B	67	1	4006 S WOODLAND AVE	No	52.6	52.9	54.6	2.0
R-8048	Res.	B	67	1	4000 S WOODLAND AVE	No	50.6	51.0	52.3	1.7
R-8049	Res.	B	67	1	4022 S WOODLAND AVE	No	59.7	60.1	61.6	1.9
R-8050	Res.	B	67	1	4018 S WOODLAND AVE	No	56.8	57.1	58.8	2.0
R-8051	Res.	B	67	1	4014 S WOODLAND AVE	No	55.0	55.4	57.2	2.2
R-8052	Res.	B	67	1	4009 S WOODLAND AVE	No	52.3	52.7	53.1	0.8
R-8053	Res.	B	67	1	4005 S WOODLAND AVE	No	50.0	50.0	50.5	0.5
R-8054	Res.	B	67	1	4001 S WOODLAND AVE	No	50.0	50.0	50.2	0.2
R-8055	Res.	B	67	1	4023 S WOODLAND AVE	No	59.4	59.7	60.9	1.5
R-8056	Res.	B	67	1	4019 S WOODLAND AVE	No	55.3	55.6	56.8	1.5
R-8057	Res.	B	67	1	4015 S WOODLAND AVE	No	53.2	53.6	54.8	1.6
R-8058	Res.	B	67	1	4000 S FULLER AVE	No	50.0	50.0	50.0	0.0
R-8059	Res.	B	67	1	4004 S FULLER AVE	No	50.0	50.0	50.0	0.0
R-8060	Res.	B	67	1	4008 S FULLER AVE	No	50.0	50.0	50.0	0.0
R-8061	Res.	B	67	1	4022 S FULLER AVE	No	58.7	59.1	60.2	1.5
R-8062	Res.	B	67	1	4018 S FULLER AVE	No	55.6	55.9	57.2	1.6
R-8063	Res.	B	67	1	4014 S FULLER AVE	No	52.3	52.7	54.0	1.7
R-8064	Res.	B	67	1	4009 S FULLER AVE	No	51.7	52.0	52.9	1.2
R-8065	Res.	B	67	1	4003 S FULLER AVE	No	50.7	50.9	51.8	1.1
R-8066	Res.	B	67	1	4001 S FULLER AVE	No	51.1	51.4	52.6	1.5
R-8067	Res.	B	67	1	4023 S FULLER AVE	No	57.9	58.3	59.5	1.6

Table B-8: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 8										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-8068	Res.	B	67	1	4019 S FULLER AVE	No	53.3	53.6	54.4	1.1
R-8069	Res.	B	67	1	4015 S FULLER AVE	No	52.2	52.5	53.3	1.1
R-8070	Res.	B	67	1	12102 E 41ST ST S	No	59.1	59.4	60.8	1.7
R-8071	Res.	B	67	1	4040 S CRYSLER AVE	No	59.9	60.2	62.1	2.2
R-8072	Res.	B	67	1	4020 S CRYSLER AVE	No	55.0	55.3	56.3	1.3
R-8073	Res.	B	67	1	4000 S CRYSLER AVE	No	54.8	55.1	56.0	1.2
R-8074	Res.	B	67	1	11705 E 41ST ST S	Yes	65.2	65.6	67.1	1.9
R-8075	Res.	B	67	1	11709 E 41ST ST S	Yes	63.3	63.7	64.9	1.6
R-8076	Res.	B	67	1	11801 E 41ST ST S	Yes	62.2	62.6	63.9	1.7
R-8077	Res.	B	67	1	11805 E 41ST ST S	Yes	61.9	62.3	63.4	1.5
R-8078	Res.	B	67	1	11809 E 41ST ST S	Yes	61.7	62.1	63.1	1.4
R-8079	Res.	B	67	1	11901 E 41ST ST S	Yes	61.2	61.6	62.4	1.2
R-8080	Res.	B	67	1	11905 E 41ST ST S	Yes	61.5	61.8	62.7	1.2
R-8081	Res.	B	67	1	11909 E 41ST ST S	Yes	62.8	63.1	64.1	1.3
R-8082	Res.	B	67	1	12001 E 41ST ST S	Yes	63.1	63.4	64.3	1.2
R-8083	Res.	B	67	1	12005 E 41ST ST S	Yes	62.9	63.3	64.1	1.2
R-8084	Res.	B	67	1	12009 E 41ST ST S	Yes	63.0	63.4	64.2	1.2
R-8085	Res.	B	67	1	12015 E 41ST ST S	Yes	61.9	62.3	63.1	1.2
R-8086	Res.	B	67	1	12101 E 41ST ST S	Yes	61.8	62.2	63.0	1.2
R-8087	Res.	B	67	1	12105 E 41ST ST S	Yes	62.8	63.2	64.0	1.2
R-8088	Res.	B	67	1	4100 S CRYSLER AVE	Yes	66.2	66.6	68.5	2.3
Predicted NSA 8 Traffic Noise Impacts									2	

Table B-9: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 9										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-9001	Res.	B	67	1	4003 S CRYSLER AVE APT 1	No	50.0	50.0	50.7	0.7
R-9002	Res.	B	67	1	4003 S CRYSLER AVE APT 2	No	57.8	57.8	58.0	0.2
R-9003	Res.	B	67	1	4003 S CRYSLER AVE APT 3	No	57.8	57.9	58.0	0.2
R-9004	Res.	B	67	1	4003 S CRYSLER AVE APT 4	No	50.0	50.0	50.5	0.5
R-9005	Res.	B	67	1	4003 S CRYSLER AVE APT 5	No	50.6	50.9	52.1	1.5
R-9006	Res.	B	67	1	4003 S CRYSLER AVE APT 6	No	59.0	59.1	59.3	0.3
R-9007	Res.	B	67	1	4003 S CRYSLER AVE APT 7	No	59.0	59.1	59.2	0.2
R-9008	Res.	B	67	1	4003 S CRYSLER AVE APT 8	No	50.2	50.6	51.8	1.6
R-9009	Res.	B	67	1	4017 S CRYSLER AVE APT 1	No	52.4	52.7	54.3	1.9
R-9010	Res.	B	67	1	4017 S CRYSLER AVE APT 2	No	57.8	57.9	58.1	0.3
R-9011	Res.	B	67	1	4017 S CRYSLER AVE APT 3	No	57.8	57.9	58.1	0.3
R-9012	Res.	B	67	1	4017 S CRYSLER AVE APT 4	No	51.8	52.1	54.0	2.2
R-9013	Res.	B	67	1	4017 S CRYSLER AVE APT 5	No	55.4	55.8	58.2	2.8
R-9014	Res.	B	67	1	4017 S CRYSLER AVE APT 6	No	59.2	59.3	59.5	0.3
R-9015	Res.	B	67	1	4017 S CRYSLER AVE APT 7	No	59.2	59.3	59.5	0.3
R-9016	Res.	B	67	1	4017 S CRYSLER AVE APT 8	No	54.1	54.4	57.3	3.2
R-9017	Res.	B	67	1	4025 S CRYSLER AVE APT 1	No	60.8	61.1	62.9	2.1
R-9018	Res.	B	67	1	4025 S CRYSLER AVE APT 2	No	52.7	52.8	52.6	-0.1
R-9019	Res.	B	67	1	4025 S CRYSLER AVE APT 3	No	50.9	51.0	50.8	-0.1
R-9020	Res.	B	67	1	4025 S CRYSLER AVE APT 4	No	60.7	61.1	62.9	2.2
R-9021	Res.	B	67	1	4025 S CRYSLER AVE APT 5	No	63.5	63.8	66.5	3.0
R-9022	Res.	B	67	1	4025 S CRYSLER AVE APT 6	No	54.2	54.3	54.0	-0.2
R-9023	Res.	B	67	1	4025 S CRYSLER AVE APT 7	No	52.7	52.8	52.5	-0.2
R-9024	Res.	B	67	1	4025 S CRYSLER AVE APT 8	No	63.2	63.6	66.4	3.2
R-9025	Res.	B	67	1	4005 S CRYSLER AVE APT 1	No	52.0	52.3	53.6	1.6
R-9026	Res.	B	67	1	4005 S CRYSLER AVE APT 2	No	50.6	50.9	51.9	1.3
R-9027	Res.	B	67	1	4005 S CRYSLER AVE APT 3	No	50.1	50.4	51.2	1.1
R-9028	Res.	B	67	1	4005 S CRYSLER AVE APT 4	No	51.5	51.9	53.4	1.9
R-9029	Res.	B	67	1	4005 S CRYSLER AVE APT 5	No	54.7	55.0	57.2	2.5
R-9030	Res.	B	67	1	4005 S CRYSLER AVE APT 6	No	53.4	53.7	55.0	1.6
R-9031	Res.	B	67	1	4005 S CRYSLER AVE APT 7	No	52.9	53.2	54.8	1.9
R-9032	Res.	B	67	1	4005 S CRYSLER AVE APT 8	No	54.2	54.5	56.7	2.5
R-9033	Res.	B	67	1	4015 S CRYSLER AVE APT 1	No	54.2	54.5	56.1	1.9
R-9034	Res.	B	67	1	4015 S CRYSLER AVE APT 2	No	54.7	55.1	56.9	2.2
R-9035	Res.	B	67	1	4015 S CRYSLER AVE APT 3	No	51.1	51.4	54.0	2.9
R-9036	Res.	B	67	1	4015 S CRYSLER AVE APT 4	No	57.3	57.6	60.5	3.2
R-9037	Res.	B	67	1	4015 S CRYSLER AVE APT 5	No	58.2	58.6	61.5	3.3
R-9038	Res.	B	67	1	4015 S CRYSLER AVE APT 6	No	51.7	52.0	54.8	3.1
R-9039	Res.	B	67	1	4015 S CRYSLER AVE APT 7	No	53.3	53.6	56.4	3.1
R-9040	Res.	B	67	1	4015 S CRYSLER AVE APT 8	No	60.2	60.5	63.0	2.8
R-9041	Res.	B	67	1	4015 S CRYSLER AVE APT 9	No	61.4	61.7	64.2	2.8
R-9042	Res.	B	67	1	4015 S CRYSLER AVE APT 10	No	53.8	54.1	57.1	3.3
R-9043	Res.	B	67	1	4027 S CRYSLER AVE APT 1	No	56.2	56.5	59.6	3.4
R-9044	Res.	B	67	1	4027 S CRYSLER AVE APT 2	No	59.7	60.1	62.1	2.4
R-9045	Res.	B	67	1	4027 S CRYSLER AVE APT 3	No	60.4	60.7	62.8	2.4
R-9046	Res.	B	67	1	4027 S CRYSLER AVE APT 4	No	57.4	57.8	60.4	3.0
R-9047	Res.	B	67	1	4027 S CRYSLER AVE APT 5	No	59.3	59.7	62.5	3.2
R-9048	Res.	B	67	1	4027 S CRYSLER AVE APT 6	No	63.2	63.6	66.4	3.2
R-9049	Res.	B	67	1	4027 S CRYSLER AVE APT 7	No	63.7	64.0	66.8	3.1
R-9050	Res.	B	67	1	4027 S CRYSLER AVE APT 8	No	60.3	60.6	63.4	3.1
R-9051	Res.	B	67	1	4029 S CRYSLER AVE APT 1	No	61.4	61.8	65.5	4.1
R-9052	Res.	B	67	1	4029 S CRYSLER AVE APT 2	No	63.6	63.9	67.1	3.5
R-9053	Res.	B	67	1	4029 S CRYSLER AVE APT 3	Yes	64.3	64.7	67.9	3.6
R-9054	Res.	B	67	1	4029 S CRYSLER AVE APT 4	Yes	62.4	62.7	66.6	4.2
R-9055	Res.	B	67	1	4029 S CRYSLER AVE APT 5	No	64.7	65.1	69.6	4.9
R-9056	Res.	B	67	1	4029 S CRYSLER AVE APT 6	No	67.5	67.9	70.7	3.2
R-9057	Res.	B	67	1	4029 S CRYSLER AVE APT 7	Yes	68.2	68.6	71.4	3.2
R-9058	Res.	B	67	1	4029 S CRYSLER AVE APT 8	Yes	65.8	66.1	70.6	4.8
R-9059	Res.	B	67	1	4007 S CRYSLER AVE APT 1	No	52.3	52.6	54.3	2.0
R-9060	Res.	B	67	1	4007 S CRYSLER AVE APT 2	No	50.0	50.0	50.0	0.0
R-9061	Res.	B	67	1	4007 S CRYSLER AVE APT 3	No	50.0	50.0	50.0	0.0
R-9062	Res.	B	67	1	4007 S CRYSLER AVE APT 4	No	51.7	52.1	53.6	1.9
R-9063	Res.	B	67	1	4007 S CRYSLER AVE APT 5	No	54.6	54.9	58.0	3.4
R-9064	Res.	B	67	1	4007 S CRYSLER AVE APT 6	No	51.4	51.8	52.6	1.2
R-9065	Res.	B	67	1	4007 S CRYSLER AVE APT 7	No	51.1	51.4	52.2	1.1
R-9066	Res.	B	67	1	4007 S CRYSLER AVE APT 8	No	54.0	54.3	57.2	3.2
R-9067	Res.	B	67	1	4013 S CRYSLER AVE APT 1	No	54.6	55.0	56.8	2.2

Table B-9: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 9										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-9068	Res.	B	67	1	4013 S CRYSLER AVE APT 2	No	50.0	50.3	52.7	2.7
R-9069	Res.	B	67	1	4013 S CRYSLER AVE APT 3	No	50.0	50.1	52.1	2.1
R-9070	Res.	B	67	1	4013 S CRYSLER AVE APT 4	No	53.9	54.2	56.5	2.6
R-9071	Res.	B	67	1	4013 S CRYSLER AVE APT 5	No	58.6	58.9	62.2	3.6
R-9072	Res.	B	67	1	4013 S CRYSLER AVE APT 6	No	53.2	53.6	55.3	2.1
R-9073	Res.	B	67	1	4013 S CRYSLER AVE APT 7	No	52.5	52.8	54.5	2.0
R-9074	Res.	B	67	1	4013 S CRYSLER AVE APT 8	No	57.6	57.9	61.3	3.7
R-9075	Res.	B	67	1	4009 S CRYSLER AVE APT 1	No	53.1	53.4	55.1	2.0
R-9076	Res.	B	67	1	4009 S CRYSLER AVE APT 2	No	52.1	52.5	54.5	2.4
R-9077	Res.	B	67	1	4009 S CRYSLER AVE APT 3	No	51.6	52.0	54.0	2.4
R-9078	Res.	B	67	1	4009 S CRYSLER AVE APT 4	No	53.0	53.3	54.9	1.9
R-9079	Res.	B	67	1	4009 S CRYSLER AVE APT 5	No	56.7	57.0	59.2	2.5
R-9080	Res.	B	67	1	4009 S CRYSLER AVE APT 6	No	54.2	54.5	56.4	2.2
R-9081	Res.	B	67	1	4009 S CRYSLER AVE APT 7	No	53.7	54.1	55.8	2.1
R-9082	Res.	B	67	1	4009 S CRYSLER AVE APT 8	No	56.5	56.8	58.9	2.4
R-9083	Res.	B	67	1	4011 S CRYSLER AVE APT 1	No	54.2	54.5	55.9	1.7
R-9084	Res.	B	67	1	4011 S CRYSLER AVE APT 2	No	54.6	54.9	55.9	1.3
R-9085	Res.	B	67	1	4011 S CRYSLER AVE APT 3	No	51.4	51.8	54.7	3.3
R-9086	Res.	B	67	1	4011 S CRYSLER AVE APT 4	No	57.8	58.1	60.3	2.5
R-9087	Res.	B	67	1	4011 S CRYSLER AVE APT 5	No	58.1	58.4	60.6	2.5
R-9088	Res.	B	67	1	4011 S CRYSLER AVE APT 6	No	51.9	52.2	55.0	3.1
R-9089	Res.	B	67	1	4011 S CRYSLER AVE APT 7	No	55.8	56.1	58.5	2.7
R-9090	Res.	B	67	1	4011 S CRYSLER AVE APT 8	No	60.4	60.7	64.6	4.2
R-9091	Res.	B	67	1	4011 S CRYSLER AVE APT 9	No	61.0	61.2	65.1	4.1
R-9092	Res.	B	67	1	4011 S CRYSLER AVE APT 10	No	56.5	56.9	59.3	2.8
R-9093	Res.	B	67	1	12402 E 41ST ST S	Yes	66.6	67.0	**70.2**	3.6
R-9094	Res.	B	67	1	12404 E 41ST ST S	Yes	67.3	67.6	**71.1**	3.8
R-9095	Res.	B	67	1	12406 E 41ST ST S	Yes	65.2	65.5	**69.1**	3.9
R-9096	Res.	B	67	1	12408 E 41ST ST S	Yes	67.5	67.8	**72.1**	4.6
R-9097	Res.	B	67	1	12412 E 41ST ST S	Yes	68.4	68.8	**73.0**	4.6
R-9098	Church	C	67	5	4010 S RIVER BLVD 1	No	59.0	59.3	61.1	2.1
R-9099	Church	C	67	5	4010 S RIVER BLVD 2	No	56.6	56.9	58.8	2.2
R-9100	Res.	B	67	1	12801 E 40TH ST S	No	59.2	59.5	61.2	2.0
R-9101	Res.	B	67	1	12805 E 40TH ST S	No	59.5	59.8	61.5	2.0
R-9102	Res.	B	67	1	12809 E 40TH ST S	No	60.0	60.3	61.9	1.9
R-9103	Res.	B	67	1	12901 E 40TH ST S	No	59.0	59.3	60.8	1.8
R-9104	Res.	B	67	1	12905 E 40TH ST S	No	60.0	60.3	61.6	1.6
R-9105	Res.	B	67	1	12909 E 40TH ST S	No	59.5	59.8	61.1	1.6
R-9106	Res.	B	67	1	12913 E 40TH ST S	No	59.3	59.6	60.9	1.6
R-9107	Res.	B	67	1	13001 E 40TH ST S	No	58.6	58.9	60.2	1.6
R-9108	Res.	B	67	1	13005 E 40TH ST S	No	58.0	58.3	59.8	1.8
R-9109	Res.	B	67	1	13009 E 40TH ST S	No	58.0	58.3	59.8	1.8
R-9110	Res.	B	67	1	13013 E 40TH ST S	No	58.2	58.4	59.9	1.7
R-9111	Res.	B	67	1	13017 E 40TH ST S	No	57.8	58.1	59.5	1.7
R-9112	Res.	B	67	1	13021 E 40TH ST S	No	58.2	58.5	59.9	1.7
R-9113	Res.	B	67	1	4000 S DELAWARE AVE	No	57.9	58.2	59.6	1.7
R-9114	Res.	B	67	1	12800 E 40TH TER S	No	61.2	61.5	62.9	1.7
R-9115	Res.	B	67	1	12804 E 40TH TER S	No	60.3	60.6	61.9	1.6
R-9116	Res.	B	67	1	12808 E 40TH TER S	No	58.5	58.8	60.0	1.5
R-9117	Res.	B	67	1	12900 E 40TH TER S	No	59.1	59.4	60.6	1.5
R-9118	Res.	B	67	1	12904 E 40TH TER S	No	58.9	59.2	60.5	1.6
R-9119	Res.	B	67	1	12908 E 40TH TER S	No	57.7	58.1	59.2	1.5
R-9120	Res.	B	67	1	12912 E 40TH TER S	No	58.4	58.7	59.9	1.5
R-9121	Res.	B	67	1	13000 E 40TH TER S	No	58.0	58.3	59.6	1.6
R-9122	Res.	B	67	1	13004 E 40TH TER S	No	58.2	58.5	59.9	1.7
R-9123	Res.	B	67	1	13008 E 40TH TER S	No	58.8	59.1	60.5	1.7
R-9124	Res.	B	67	1	13012 E 40TH TER S	No	58.5	58.8	60.3	1.8
R-9125	Res.	B	67	1	13016 E 40TH TER S	No	58.9	59.2	60.7	1.8
R-9126	Res.	B	67	1	13100 E 40TH TER S	No	59.6	59.9	61.2	1.6
R-9127	Res.	B	67	1	12801 E 40TH TER S	No	60.9	61.2	62.3	1.4
R-9128	Res.	B	67	1	12805 E 40TH TER S	No	61.0	61.3	62.6	1.6
R-9129	Res.	B	67	1	12809 E 40TH TER S	No	61.1	61.5	62.6	1.5
R-9130	Res.	B	67	1	12901 E 40TH TER S	No	61.2	61.6	62.6	1.4
R-9131	Res.	B	67	1	12905 E 40TH TER S	No	61.2	61.5	62.7	1.5
R-9132	Res.	B	67	1	12909 E 40TH TER S	No	61.3	61.6	62.7	1.4
R-9133	Res.	B	67	1	12913 E 40TH TER S	No	60.2	60.5	61.3	1.1
R-9134	Res.	B	67	1	13001 E 40TH TER S	No	60.2	60.5	61.4	1.2

Table B-9: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 9										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-9135	Res.	B	67	1	13005 E 40TH TER S	No	60.2	60.5	61.3	1.1
R-9136	Res.	B	67	1	13009 E 40TH TER S	No	60.4	60.8	61.9	1.5
R-9137	Res.	B	67	1	13013 E 40TH TER S	No	60.3	60.6	61.7	1.4
R-9138	Res.	B	67	1	13021 E 40TH TER S	No	60.3	60.6	61.9	1.6
R-9139	Res.	B	67	1	12800 E 41ST ST S	No	66.0	66.3	67.3	1.3
R-9140	Res.	B	67	1	12804 E 41ST ST S	No	65.9	66.2	67.0	1.1
R-9141	Res.	B	67	1	12808 E 41ST ST S	No	64.9	65.2	65.8	0.9
R-9142	Res.	B	67	1	12900 E 41ST ST S	No	64.2	64.5	65.0	0.8
R-9143	Res.	B	67	1	12904 E 41ST ST S	No	65.4	65.7	66.3	0.9
R-9144	Res.	B	67	1	12908 E 41ST ST S	No	66.0	66.3	67.0	1.0
R-9145	Res.	B	67	1	12912 E 41ST ST S	No	64.4	64.7	65.4	1.0
R-9146	Res.	B	67	1	13000 E 41ST ST S	No	65.6	65.9	66.7	1.1
R-9147	Res.	B	67	1	13004 E 41ST ST S	No	64.5	64.9	65.4	0.9
R-9148	Res.	B	67	1	13008 E 41ST ST S	No	63.6	63.9	64.5	0.9
R-9149	Res.	B	67	1	13012 E 41ST ST S	No	62.8	63.2	63.8	1.0
R-9150	Res.	B	67	1	4014 S DELAWARE AVE	No	62.8	63.1	64.0	1.2
R-9151	Res.	B	67	1	12801 E 41ST ST S	Yes	69.9	70.3	70.4	0.5
R-9152	Res.	B	67	1	12805 E 41ST ST S	Yes	68.6	69.0	69.0	0.4
R-9153	Res.	B	67	1	12809 E 41ST ST ST	Yes	68.0	68.3	68.2	0.2
R-9154	Res.	B	67	1	12901 E 41ST ST S	Yes	67.9	68.2	68.1	0.2
R-9155	Res.	B	67	1	12905 E 41ST ST S	Yes	67.6	68.0	67.9	0.3
R-9156	Res.	B	67	1	12909 E 41ST ST S	Yes	66.7	67.1	68.5	1.8
R-9157	Res.	B	67	1	12913 E 41ST ST S	Yes	67.1	67.4	68.5	1.4
R-9158	Res.	B	67	1	13001 E 41ST ST S	Yes	67.4	67.7	68.2	0.8
R-9159	Res.	B	67	1	13005 E 41ST ST S	Yes	68.6	68.9	68.8	0.2
R-9160	Res.	B	67	1	13009 E 41ST ST S	Yes	67.9	68.2	68.4	0.5
R-9161	Res.	B	67	1	13013 E 41ST ST S	Yes	67.5	67.8	68.2	0.7
R-9162	Res.	B	67	1	13017 E 41ST ST S	Yes	66.6	66.9	67.4	0.8
R-9163	Res.	B	67	1	4019 S DELAWARE AVE	No	65.1	65.4	66.5	1.4
R-9164	Res.	B	67	1	4015 S DELAWARE AVE	No	63.5	63.8	65.5	2.0
R-9165	Res.	B	67	1	4011 S DELAWARE AVE	No	61.6	61.9	63.9	2.3
R-9166	Res.	B	67	1	4009 S DELAWARE AVE	No	59.4	59.7	61.8	2.4
R-9167	Res.	B	67	1	4005 S DELAWARE AVE	No	58.5	58.8	60.6	2.1
R-9168	Res.	B	67	1	4001 S DELAWARE AVE	No	58.7	59.0	60.7	2.0
R-9169	Res.	B	67	1	13101 E 40TH ST S	No	58.6	58.9	60.5	1.9
R-9170	Res.	B	67	1	4000 S PLEASANT ST	No	59.3	59.6	61.5	2.2
R-9171	Res.	B	67	1	4004 S PLEASANT ST	No	58.7	59.0	60.7	2.0
R-9172	Res.	B	67	1	4008 S PLEASANT ST	No	59.2	59.6	61.2	2.0
R-9173	Res.	B	67	1	4012 S PLEASANT ST	No	59.0	59.3	61.3	2.3
R-9174	Res.	B	67	1	4016 S PLEASANT ST	No	59.6	59.9	61.8	2.2
R-9175	Res.	B	67	1	4020 S PLEASANT ST	No	60.1	60.4	62.4	2.3
R-9176	Res.	B	67	1	4024 S PLEASANT ST	No	61.1	61.5	63.6	2.5
R-9177	Res.	B	67	1	4028 S PLEASANT ST	No	62.3	62.7	64.9	2.6
R-9178	Res.	B	67	1	4032 S PLEASANT ST	Yes	62.7	63.1	65.0	2.3
R-9179	Res.	B	67	1	13201 E 40TH TER S	Yes	66.0	66.3	68.3	2.3
R-9180	Res.	B	67	1	13205 E 40TH TER S	Yes	65.4	65.8	67.7	2.3
R-9181	Res.	B	67	1	13209 E 40TH TER S	Yes	67.0	67.4	69.7	2.7
R-9182	Res.	B	67	1	13213 E 40TH TER S	Yes	66.7	67.0	69.2	2.5
R-9183	Res.	B	67	1	13217 E 40TH TER S	Yes	67.4	67.8	69.6	2.2
R-9184	Res.	B	67	1	13301 E 40TH TER S	Yes	68.0	68.4	69.8	1.8
R-9185	Res.	B	67	1	13305 E 40TH TER S	Yes	69.7	70.0	70.6	0.9
R-9186	Res.	B	67	1	13309 E 40TH TER S	Yes	70.5	70.8	71.2	0.7
R-9187	Res.	B	67	1	13313 E 40TH TER S	Yes	71.1	71.5	71.3	0.2
R-9188	Res.	B	67	1	13317 E 40TH TER S	Yes	71.4	71.8	73.0	1.6
R-9189	Res.	B	67	1	4001 S PLEASANT ST	No	61.6	61.9	64.7	3.1
R-9190	Res.	B	67	1	4005 S PLEASANT ST	No	61.3	61.6	64.6	3.3
R-9191	Res.	B	67	1	4009 S PLEASANT ST	No	61.5	61.8	64.6	3.1
R-9192	Res.	B	67	1	4013 S PLEASANT ST	No	61.2	61.5	63.5	2.3
R-9193	Res.	B	67	1	4017 S PLEASANT ST	No	62.2	62.5	64.5	2.3
R-9194	Res.	B	67	1	4021 S PLEASANT ST	No	62.7	63.1	64.8	2.1
R-9195	Res.	B	67	1	4025 S PLEASANT ST	No	63.9	64.2	66.0	2.1
R-9196	Res.	B	67	1	4029 S PLEASANT ST	No	64.2	64.5	66.5	2.3
R-9197	Res.	B	67	1	4000 S SPRING ST	No	60.9	61.2	63.9	3.0
R-9198	Res.	B	67	1	4004 S SPRING ST	No	61.2	61.5	64.3	3.1
R-9199	Res.	B	67	1	4008 S SPRING ST	No	61.3	61.6	64.3	3.0
R-9200	Res.	B	67	1	4012 S SPRING ST	No	61.3	61.6	63.7	2.4
R-9201	Res.	B	67	1	4016 S SPRING ST	No	62.4	62.7	64.8	2.4

Table B-9: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 9										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-9202	Res.	B	67	1	4020 S SPRING ST	No	63.0	63.3	65.3	2.3
R-9203	Res.	B	67	1	4024 S SPRING ST	No	62.9	63.2	65.3	2.4
R-9204	Res.	B	67	1	4028 S SPRING ST	No	63.6	63.9	66.3	2.7
R-9205	Res.	B	67	1	3933 S SPRING ST	No	59.8	61.4	63.5	3.7
R-9206	Res.	B	67	1	3937 S SPRING ST	No	61.5	61.8	64.1	2.6
R-9207	Res.	B	67	1	4001 S SPRING ST	No	60.0	60.3	62.7	2.7
R-9208	Res.	B	67	1	4005 S SPRING ST	No	61.3	61.6	64.0	2.7
R-9209	Res.	B	67	1	4009 S SPRING ST	No	61.2	61.5	64.1	2.9
R-9210	Res.	B	67	1	4013 S SPRING ST	No	61.4	61.7	64.4	3.0
R-9211	Res.	B	67	1	4017 S SPRING ST	No	62.4	62.7	65.4	3.0
R-9212	Res.	B	67	1	4021 S SPRING ST	No	62.4	62.8	64.8	2.4
R-9213	Res.	B	67	1	4025 S SPRING ST	No	63.4	63.7	65.0	1.6
R-9214	Res.	B	67	1	13304 E 40TH TER S	No	66.4	66.8	68.3	1.9
R-9215	Res.	B	67	1	13308 E 40TH TER S	No	65.9	66.2	67.7	1.8
R-9216	Res.	B	67	1	13312 E 40TH TER S	No	66.3	66.7	68.0	1.7
R-9217	Res.	B	67	1	3932 S OSAGE ST	No	58.2	58.5	61.0	2.8
R-9218	Res.	B	67	1	3936 S OSAGE ST	No	57.4	57.7	60.1	2.7
R-9219	Res.	B	67	1	4000 S OSAGE ST	No	58.4	58.7	61.1	2.7
R-9220	Res.	B	67	1	4004 S OSAGE ST	No	58.7	59.0	61.4	2.7
R-9221	Res.	B	67	1	4008 S OSAGE ST	No	60.4	60.7	63.0	2.6
R-9222	Res.	B	67	1	4012 S OSAGE ST	No	60.5	60.8	63.1	2.6
R-9223	Res.	B	67	1	4016 S OSAGE ST	No	61.6	62.0	64.3	2.7
R-9224	Res.	B	67	1	4020 S OSAGE ST	No	61.4	61.7	64.1	2.7
R-9225	Res.	B	67	1	4024 S OSAGE ST	No	63.5	63.9	65.9	2.4
R-9226	Res.	B	67	1	3929 S OSAGE ST	No	57.9	58.2	60.4	2.5
R-9227	Res.	B	67	1	3933 S OSAGE ST	No	57.1	57.4	59.6	2.5
R-9228	Res.	B	67	1	3937 S OSAGE ST	No	57.1	57.4	59.7	2.6
R-9229	Res.	B	67	1	4001 S OSAGE ST	No	56.9	57.2	59.5	2.6
R-9230	Res.	B	67	1	4005 S OSAGE ST	No	56.7	57.1	59.3	2.6
R-9231	Res.	B	67	1	4009 S OSAGE ST	No	58.4	58.7	60.9	2.5
R-9232	Res.	B	67	1	4013 S OSAGE ST	No	59.6	59.9	62.3	2.7
R-9233	Res.	B	67	1	4017 S OSAGE ST	No	60.4	60.7	63.1	2.7
R-9234	Res.	B	67	1	4021 S OSAGE ST	No	61.3	61.7	64.0	2.7
R-9235	Res.	B	67	1	4025 S OSAGE ST	No	62.5	62.8	65.1	2.6
R-9236	Res.	B	67	1	4029 S OSAGE ST	No	64.8	65.2	67.2	2.4
R-9237	Res.	B	67	1	4033 S OSAGE ST	No	67.3	67.7	68.6	1.3
Predicted NSA 9 Traffic Noise Impacts									52	

Table B-10: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 10										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-10001	Res.	B	67	1	3926 S LIBERTY ST	No	60.7	61.0	62.8	2.1
R-10002	Res.	B	67	1	3930 S LIBERTY ST	No	61.0	61.3	63.2	2.2
R-10003	Res.	B	67	1	4000 S LIBERTY ST	No	61.8	62.1	64.0	2.2
R-10004	Res.	B	67	1	4004 S LIBERTY ST	No	62.9	63.2	64.9	2.0
R-10005	Res.	B	67	1	4008 S LIBERTY ST	No	61.0	61.3	63.2	2.2
R-10006	Res.	B	67	1	4012 S LIBERTY ST	No	61.5	61.8	63.7	2.2
R-10007	Res.	B	67	1	4016 S LIBERTY ST	No	63.0	63.3	65.1	2.1
R-10008	Res.	B	67	1	4020 S LIBERTY ST	No	64.1	64.5	66.3	2.2
R-10009	Res.	B	67	1	4024 S LIBERTY ST	No	65.2	65.5	67.3	2.1
R-10010	Res.	B	67	1	4028 S LIBERTY ST	No	68.1	68.5	70.4	2.3
R-10011	Res.	B	67	1	4032 S LIBERTY ST	Yes	70.8	71.2	73.2	2.4
R-10012	Res.	B	67	1	13507 E 41ST TER S	Yes	71.4	71.7	74.9	3.5
R-10013	Res.	B	67	1	13511 E 41ST TER S	Yes	71.6	71.9	74.8	3.2
R-10014	Res.	B	67	1	13601 E 41ST TER S	Yes	72.4	72.8	75.8	3.4
R-10015	Res.	B	67	1	13605 E 41ST TER S	Yes	72.5	72.9	75.3	2.8
R-10016	Res.	B	67	1	13609 E 41ST TER S	Yes	72.0	72.3	75.1	3.1
R-10017	Res.	B	67	1	13613 E 41ST TER S	Yes	72.8	73.2	75.3	2.5
R-10018	Res.	B	67	1	13617 E 41ST TER S	Yes	72.5	72.9	75.2	2.7
R-10019	Res.	B	67	1	13621 E 41ST TER S	Yes	73.0	73.4	75.1	2.1
R-10020	Res.	B	67	1	13625 E 41ST TER S	Yes	72.8	73.2	75.2	2.4
R-10021	Res.	B	67	1	13701 E 41ST TER S	Yes	72.4	72.7	75.0	2.6
R-10022	Res.	B	67	1	13705 E 41ST TER S	Yes	71.9	72.2	73.8	1.9
R-10023	Res.	B	67	1	13709 E 41ST TER S	Yes	70.1	70.4	69.6	-0.5
R-10024	Res.	B	67	1	13713 E 41ST TER S	Yes	69.7	70.0	69.7	0.0
R-10025	Res.	B	67	1	13717 E 41ST TER S	Yes	68.4	68.7	68.0	-0.4
R-10026	Res.	B	67	1	3927 S LIBERTY ST	No	60.9	61.2	63.1	2.2
R-10027	Res.	B	67	1	13516 E 40TH ST S	No	59.8	60.1	61.7	1.9
R-10028	Res.	B	67	1	13511 E 40TH ST S	No	63.1	63.4	65.2	2.1
R-10029	Res.	B	67	1	13515 E 40TH ST S	No	62.7	63.0	64.7	2.0
R-10030	Res.	B	67	1	13519 E 40TH ST S	No	62.7	63.0	64.6	1.9
R-10031	Res.	B	67	1	13601 E 40TH ST S	No	61.4	61.8	63.5	2.1
R-10032	Res.	B	67	1	3929 S MAIN ST	No	57.6	57.9	59.8	2.2
R-10033	Res.	B	67	1	3925 S MAIN ST	No	55.1	55.4	57.1	2.0
R-10034	Res.	B	67	1	13510 E 41ST ST S	No	63.7	64.0	65.8	2.1
R-10035	Res.	B	67	1	13600 E 41ST ST S	No	63.8	64.1	65.8	2.0
R-10036	Res.	B	67	1	13604 E 41ST ST S	No	63.7	64.1	65.8	2.1
R-10037	Res.	B	67	1	13608 E 41ST ST S	No	63.6	63.9	65.6	2.0
R-10038	Res.	B	67	1	13612 E 41ST ST S	No	63.5	63.8	65.4	1.9
R-10039	Res.	B	67	1	13616 E 41ST ST S	No	63.8	64.2	65.7	1.9
R-10040	Res.	B	67	1	13620 E 41ST ST S	No	63.1	63.5	65.0	1.9
R-10041	Res.	B	67	1	13511 E 41ST ST S	No	66.6	66.9	68.3	1.7
R-10042	Res.	B	67	1	13601 E 41ST ST S	No	67.2	67.5	68.9	1.7
R-10043	Res.	B	67	1	13605 E 41ST ST S	No	67.4	67.8	69.1	1.7
R-10044	Res.	B	67	1	13609 E 41ST ST S	No	67.4	67.7	69.0	1.6
R-10045	Res.	B	67	1	13613 E 41ST ST S	No	67.3	67.6	68.9	1.6
R-10046	Res.	B	67	1	13617 E 41ST ST S	No	67.3	67.6	68.9	1.6
R-10047	Res.	B	67	1	13621 E 41ST ST S	No	66.5	66.8	68.2	1.7
R-10048	Res.	B	67	1	13510 E 41ST TER S	No	68.6	68.9	70.9	2.3
R-10049	Res.	B	67	1	13600 E 41ST TER S	No	69.3	69.7	71.4	2.1
R-10050	Res.	B	67	1	13604 E 41ST TER S	No	69.8	70.2	71.6	1.8
R-10051	Res.	B	67	1	13608 E 41ST TER S	No	69.6	70.0	71.5	1.9
R-10052	Res.	B	67	1	13612 E 41ST TER S	No	69.9	70.3	71.7	1.8
R-10053	Res.	B	67	1	13616 E 41ST TER S	No	69.9	70.3	71.6	1.7
R-10054	Res.	B	67	1	13620 E 41ST TER S	No	69.9	70.3	71.6	1.7
R-10055	Res.	B	67	1	4007 S LYNN ST	No	54.1	54.4	56.1	2.0
R-10056	Res.	B	67	1	4013 S LYNN ST	No	56.0	56.3	57.9	1.9
R-10057	Res.	B	67	1	4019 S LYNN ST	No	58.1	58.4	60.1	2.0
R-10058	Res.	B	67	1	4025 S LYNN ST	No	60.4	60.8	62.5	2.1
R-10059	Res.	B	67	1	4006 S LYNN ST	No	54.9	55.2	56.6	1.7
R-10060	Res.	B	67	1	4012 S LYNN ST	No	57.0	57.3	58.9	1.9
R-10061	Res.	B	67	1	4018 S LYNN ST	No	58.2	58.5	60.1	1.9
R-10062	Res.	B	67	1	4024 S LYNN ST	No	60.2	60.5	62.0	1.8
R-10063	Res.	B	67	1	13700 E 41ST ST S	No	63.4	63.7	65.4	2.0
R-10064	Res.	B	67	1	13704 E 41ST ST S	No	62.4	62.8	64.6	2.2
R-10065	Res.	B	67	1	13708 E 41ST ST S	No	62.2	62.6	64.3	2.1
R-10066	Res.	B	67	1	13712 E 41ST ST S	No	61.2	61.6	63.4	2.2
R-10067	Res.	B	67	1	13701 E 41ST ST S	No	67.2	67.5	68.9	1.7

Table B-10: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 10										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-10068	Res.	B	67	1	13705 E 41ST ST S	No	66.5	66.9	68.3	1.8
R-10069	Res.	B	67	1	13709 E 41ST ST S	No	66.1	66.5	68.0	1.9
R-10070	Res.	B	67	1	13713 E 41ST ST S	No	65.1	65.5	67.1	2.0
R-10071	Res.	B	67	1	13700 E 41ST TER S	No	69.3	69.7	71.2	1.9
R-10072	Res.	B	67	1	13704 E 41ST TER S	No	69.2	69.5	71.1	1.9
R-10073	Res.	B	67	1	13708 E 41ST TER S	No	68.5	68.8	70.8	2.3
R-10074	Res.	B	67	1	13712 E 41ST TER S	No	67.9	68.3	70.5	2.6
R-10075	Hotel	E	72	4	4032 S LYNN COURT DR	No	59.6	59.9	61.4	1.8
R-10076	Hotel	E	72	7	4048 S LYNN COURT DR	Yes	62.1	62.3	62.6	0.5
Predicted NSA 10 Traffic Noise Impacts									**40**	

Table B-11: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 11										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-11001	Res.	B	67	1	12300 E 41ST TER S	Yes	67.5	67.9	69.5	2.0
R-11002	Res.	B	67	1	12304 E 41ST TER S	Yes	71.8	72.2	73.5	1.7
R-11003	Res.	B	67	1	12308 E 41ST TER S	Yes	67.3	67.7	69.7	2.4
R-11004	Res.	B	67	1	12310 E 41ST TER S	Yes	66.1	66.5	68.0	1.9
R-11005	Res.	B	67	1	4114 S CRYSLER AVE	Yes	64.1	64.4	65.7	1.6
R-11006	Res.	B	67	1	12301 E 41ST TER S	No	61.0	61.3	62.7	1.7
R-11007	Res.	B	67	1	12303 E 41ST TER S	No	60.2	60.5	61.9	1.7
R-11008	Res.	B	67	1	12307 E 41ST TER S	No	59.1	59.4	60.7	1.6
R-11009	Res.	B	67	1	12311 E 41ST TER S	No	59.0	59.4	60.6	1.6
R-11010	Res.	B	67	1	12313 E 41ST TER S	No	59.9	60.2	61.7	1.8
R-11011	Res.	B	67	1	4118 S CRYSLER AVE	No	60.1	60.4	61.4	1.3
R-11012	Res.	B	67	1	4200 S LARSON DR	No	57.7	58.0	58.5	0.8
R-11013	Res.	B	67	1	12100 E 42ND ST S	No	56.8	57.1	57.8	1.0
R-11014	Res.	B	67	1	4140 S CRYSLER AVE	No	58.3	58.5	59.2	0.9
R-11015	Res.	B	67	1	4200 S CRYSLER AVE	No	57.9	58.1	58.5	0.6
R-11016	Res.	B	67	1	4206 S CRYSLER AVE	No	57.2	57.4	57.6	0.4
R-11017	Res.	B	67	1	12101 E 42ND ST S	No	56.9	57.1	57.4	0.5
Predicted NSA 11 Traffic Noise Impacts									**4**	

Table B-12: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 12										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-12001	Res.	B	67	1	4111 S CRYSLER AVE	Yes	64.4	64.8	66.3	1.9
R-12002	Res.	B	67	1	4135 S CRYSLER AVE	No	60.4	60.7	62.0	1.6
R-12003	Res.	B	67	1	4137 S CRYSLER AVE	No	58.6	58.9	60.0	1.4
R-12004	Res.	B	67	1	4141 S CRYSLER AVE	No	58.0	58.3	59.2	1.2
R-12005	Res.	B	67	1	4143 S CRYSLER AVE	No	56.8	57.0	58.2	1.4
R-12006	Res.	B	67	1	12522 E 41ST TER S	Yes	64.7	65.0	66.2	1.5
R-12007	Res.	B	67	1	12526 E 41ST TER S	Yes	66.6	67.0	68.2	1.6
R-12008	Res.	B	67	1	12600 E 41ST TER S	Yes	66.4	66.7	68.4	2.0
R-12009	Res.	B	67	1	12606 E 41ST TER S	Yes	67.0	67.3	69.2	2.2
R-12010	Res.	B	67	1	12612 E 41ST TER S	Yes	66.5	66.8	68.8	2.3
R-12011	Res.	B	67	1	12618 E 41ST TER S	Yes	64.5	64.8	66.4	1.9
R-12012	Res.	B	67	1	12624 E 41ST TER S	Yes	66.7	66.9	70.2	3.5
R-12013	Res.	B	67	1	12628 E 41ST TER S	Yes	65.2	65.5	68.6	3.4
R-12014	Res.	B	67	1	12519 E 41ST TER S	No	59.5	59.8	60.8	1.3
R-12015	Res.	B	67	1	12527 E 41ST TER S	No	59.1	59.4	60.7	1.6
R-12016	Res.	B	67	1	12601 E 41ST TER S	No	59.5	59.9	61.2	1.7
R-12017	Res.	B	67	1	12607 E 41ST TER S	No	59.6	59.9	61.2	1.6
R-12018	Res.	B	67	1	12613 E 41ST TER S	No	59.8	60.1	61.7	1.9
R-12019	Res.	B	67	1	12621 E 41ST TER S	No	59.8	60.1	61.5	1.7
R-12020	Res.	B	67	1	4129 S GRAND AVE	No	58.8	59.1	61.8	3.0
R-12021	Res.	B	67	1	4135 S GRAND AVE	No	58.4	58.7	60.9	2.5
R-12022	Res.	B	67	1	12222 E 42ND ST S	No	54.3	54.6	56.1	1.8
R-12023	Res.	B	67	1	12300 E 42ND ST S	No	53.4	53.7	54.6	1.2
R-12024	Res.	B	67	1	12304 E 42ND ST S	No	53.2	53.5	54.5	1.3
R-12025	Res.	B	67	1	12308 E 42ND ST S	No	52.9	53.2	54.6	1.7
R-12026	Res.	B	67	1	12312 E 42ND ST S	No	53.1	53.4	55.7	2.6
R-12027	Res.	B	67	1	12400 E 42ND ST S	No	53.2	53.5	55.5	2.3
R-12028	Res.	B	67	1	12404 E 42ND ST S	No	55.8	56.1	57.9	2.1
R-12029	Res.	B	67	1	4144 S RIVER BLVD	No	59.0	59.3	61.4	2.4
R-12030	Res.	B	67	1	12424 E 42ND ST S	No	58.5	58.7	60.6	2.1
R-12031	Res.	B	67	1	4104 S RIVER BLVD	Yes	70.9	71.0	75.1	4.2
R-12032	Res.	B	67	1	4110 S RIVER BLVD	No	63.5	63.7	66.9	3.4
R-12033	Res.	B	67	1	12507 E 42ND ST S	No	54.8	55.1	57.6	2.8
R-12034	Res.	B	67	1	12501 E 42ND ST S	No	53.9	54.2	57.4	3.5
R-12035	Res.	B	67	1	12315 E 42ND ST S	No	51.8	52.1	53.9	2.1
R-12036	Res.	B	67	1	12313 E 42ND ST S	No	50.7	51.0	53.0	2.3
R-12037	Res.	B	67	1	12309 E 42ND ST S	No	51.0	51.3	53.1	2.1
R-12038	Res.	B	67	1	12305 E 42ND ST S	No	50.9	51.2	52.4	1.5
R-12039	Res.	B	67	1	12301 E 42ND ST S	No	51.4	51.7	52.7	1.3
R-12040	Res.	B	67	1	12221 E 42ND ST S	No	53.2	53.4	54.6	1.4
R-12041	Res.	B	67	1	4203 S CRYSLER AVE	No	57.8	58.0	58.7	0.9
R-12042	Res.	B	67	1	4216 S RIVER BLVD	No	50.0	50.0	50.9	0.9
R-12043	Res.	B	67	1	4214 S RIVER BLVD	No	50.5	50.8	52.2	1.7
R-12044	Res.	B	67	1	4101 S RIVER BLVD	Yes	74.6	74.7	77.1	2.5
R-12045	Res.	B	67	1	4105 S RIVER BLVD	No	69.9	70.0	73.2	3.3
R-12046	Res.	B	67	1	4109 S RIVER BLVD	No	66.0	66.2	69.9	3.9
R-12047	Res.	B	67	1	4113 S RIVER BLVD	No	63.1	63.3	67.2	4.1
R-12048	Res.	B	67	1	4117 S RIVER BLVD	No	61.4	61.7	65.0	3.6
R-12049	Res.	B	67	1	4121 S RIVER BLVD	No	58.9	59.1	62.0	3.1
R-12050	Res.	B	67	1	4125 S RIVER BLVD	No	56.8	57.1	59.8	3.0
R-12051	Res.	B	67	1	4201 S RIVER BLVD	No	55.3	55.6	58.2	2.9
R-12052	Res.	B	67	1	4205 S RIVER BLVD	No	52.6	52.9	55.1	2.5
R-12053	Res.	B	67	1	4209 S RIVER BLVD	No	52.1	52.4	54.0	1.9
R-12054	Res.	B	67	1	4213 S RIVER BLVD	No	50.1	50.4	51.9	1.8
R-12055	Res.	B	67	1	4200 S COTTAGE AVE	No	51.9	52.2	54.9	3.0
R-12056	Res.	B	67	1	4204 S COTTAGE AVE	No	51.0	51.2	53.2	2.2
R-12057	Res.	B	67	1	4208 S COTTAGE AVE	No	50.0	50.0	50.3	0.3
R-12058	Res.	B	67	1	4212 S COTTAGE AVE	No	50.0	50.0	50.0	0.0
R-12059	Res.	B	67	1	4124 S COTTAGE AVE	No	55.2	55.5	58.6	3.4
R-12060	Res.	B	67	1	4120 S COTTAGE AVE	No	57.3	57.5	60.6	3.3
R-12061	Res.	B	67	1	4116 S COTTAGE AVE	No	60.2	60.5	64.1	3.9
R-12062	Res.	B	67	1	4112 S COTTAGE AVE	No	63.1	63.3	67.2	4.1
R-12063	Res.	B	67	1	4108 S COTTAGE AVE	No	69.3	69.4	73.1	3.8
R-12064	Res.	B	67	1	12900 E 41ST TER S	Yes	71.7	71.9	75.3	3.6
R-12065	Res.	B	67	1	12904 E 41ST TER S	Yes	75.3	75.4	77.8	2.5
R-12066	Res.	B	67	1	12908 E 41ST TER S	Yes	74.2	74.3	76.8	2.6
R-12067	Res.	B	67	1	12912 E 41ST TER S	Yes	74.4	74.5	76.9	2.5

Table B-12: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 12										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-12068	Res.	B	67	1	13000 E 41ST TER S	Yes	74.3	74.4	76.9	2.6
R-12069	Res.	B	67	1	13004 E 41ST TER S	Yes	74.2	74.3	76.8	2.6
R-12070	Res.	B	67	1	13008 E 41ST TER S	Yes	74.4	74.5	77.0	2.6
R-12071	Res.	B	67	1	13012 E 41ST TER S	Yes	74.1	74.2	76.9	2.8
R-12072	Res.	B	67	1	13100 E 41ST TER S	Yes	74.2	74.3	77.0	2.8
R-12073	Res.	B	67	1	13104 E 41ST TER S	Yes	73.3	73.4	76.9	3.6
R-12074	Res.	B	67	1	13108 E 41ST TER S	Yes	73.1	73.3	77.2	4.1
R-12075	Res.	B	67	1	13112 E 41ST TER S	Yes	71.8	72.0	77.0	5.2
R-12076	Res.	B	67	1	13200 E 41ST TER S	Yes	73.3	73.5	77.6	4.3
R-12077	Res.	B	67	1	13204 E 41ST TER S	Yes	72.0	72.3	77.4	5.4
R-12078	Res.	B	67	1	13208 E 41ST TER S	Yes	73.1	73.4	77.7	4.6
R-12079	Res.	B	67	1	13212 E 41ST TER S	Yes	75.1	75.3	78.4	3.3
R-12080	Res.	B	67	1	13300 E 41ST TER S	Yes	74.3	74.5	78.1	3.8
R-12081	Res.	B	67	1	13304 E 41ST TER S	Yes	73.9	74.1	77.8	3.9
R-12082	Res.	B	67	1	13308 E 41ST TER S	Yes	73.8	74.0	77.7	3.9
R-12083	Res.	B	67	1	13312 E 41ST TER S	Yes	73.1	73.3	77.3	4.2
R-12084	Res.	B	67	1	13400 E 41ST TER S	Yes	74.9	75.0	78.0	3.1
R-12085	Res.	B	67	1	13402 E 41ST TER S	Yes	74.9	75.1	77.5	2.6
R-12086	Res.	B	67	1	13404 E 41ST TER S	Yes	75.1	75.2	77.5	2.4
R-12087	Res.	B	67	1	13408 E 41ST TER S	Yes	75.2	75.3	77.4	2.2
R-12088	Res.	B	67	1	13412 E 41ST TER S	Yes	73.6	73.8	75.8	2.2
R-12089	Res.	B	67	1	4105 S OSAGE ST	No	68.4	68.6	71.4	3.0
R-12090	Res.	B	67	1	4215 S COTTAGE AVE	No	50.0	50.0	50.4	0.4
R-12091	Res.	B	67	1	4211 S COTTAGE AVE	No	50.0	50.0	51.4	1.4
R-12092	Res.	B	67	1	4209 S COTTAGE AVE	No	50.6	50.9	52.4	1.8
R-12093	Res.	B	67	1	4205 S COTTAGE AVE	No	51.7	52.0	53.5	1.8
R-12094	Res.	B	67	1	4201 S COTTAGE AVE	No	53.4	53.7	56.0	2.6
R-12095	Res.	B	67	1	4123 S COTTAGE AVE	No	54.7	54.9	57.2	2.5
R-12096	Res.	B	67	1	4119 S COTTAGE AVE	No	56.9	57.1	59.0	2.1
R-12097	Res.	B	67	1	4115 S COTTAGE AVE	No	59.2	59.5	61.3	2.1
R-12098	Res.	B	67	1	12901 E 41ST TER S	No	64.2	64.4	66.9	2.7
R-12099	Res.	B	67	1	12905 E 41ST TER S	No	61.7	62.0	64.4	2.7
R-12100	Res.	B	67	1	12909 E 41ST TER S	No	62.0	62.2	64.4	2.4
R-12101	Res.	B	67	1	4116 S UNION AVE	No	58.6	58.9	60.8	2.2
R-12102	Res.	B	67	1	4120 S UNION AVE	No	57.1	57.4	59.1	2.0
R-12103	Res.	B	67	1	4124 S UNION AVE	No	54.3	54.6	56.8	2.5
R-12104	Res.	B	67	1	4200 S UNION AVE	No	53.0	53.3	55.5	2.5
R-12105	Res.	B	67	1	4204 S UNION AVE	No	50.8	51.1	53.5	2.7
R-12106	Res.	B	67	1	4208 S UNION AVE	No	50.0	50.0	51.9	1.9
R-12107	Res.	B	67	1	4212 S UNION AVE	No	50.0	50.0	50.0	0.0
R-12108	Res.	B	67	1	4216 S UNION AVE	No	50.0	50.0	50.0	0.0
R-12109	Res.	B	67	1	4115 S UNION AVE	No	59.6	59.8	61.4	1.8
R-12110	Res.	B	67	1	4119 S UNION AVE	No	57.5	57.8	59.2	1.7
R-12111	Res.	B	67	1	4123 S UNION AVE	No	55.6	55.9	57.4	1.8
R-12112	Res.	B	67	1	4201 S UNION AVE	No	53.7	53.9	55.9	2.2
R-12113	Res.	B	67	1	4205 S UNION AVE	No	51.3	51.5	54.2	2.9
R-12114	Res.	B	67	1	4209 S UNION AVE	No	50.0	50.0	52.2	2.2
R-12115	Res.	B	67	1	4213 S UNION AVE	No	50.0	50.0	50.4	0.4
R-12116	Res.	B	67	1	4217 S UNION AVE	No	50.0	50.0	50.0	0.0
R-12117	Res.	B	67	1	13001 E 41ST TER S	No	64.2	64.4	66.7	2.5
R-12118	Res.	B	67	1	13005 E 41ST TER S	No	65.4	65.6	67.9	2.5
R-12119	Res.	B	67	1	13009 E 41ST TER S	No	65.2	65.5	68.0	2.8
R-12120	Res.	B	67	1	4116 S DELAWARE AVE	No	58.0	58.3	60.6	2.6
R-12121	Res.	B	67	1	4120 S DELAWARE AVE	No	53.7	54.0	55.7	2.0
R-12122	Res.	B	67	1	4124 S DELAWARE AVE	No	52.6	52.8	54.8	2.2
R-12123	Res.	B	67	1	4200 S DELAWARE AVE	No	50.3	50.6	52.4	2.1
R-12124	Res.	B	67	1	4204 S DELAWARE AVE	No	50.0	50.0	50.4	0.4
R-12125	Res.	B	67	1	4208 S DELAWARE AVE	No	50.0	50.0	50.0	0.0
R-12126	Res.	B	67	1	4212 S DELAWARE AVE	No	50.0	50.0	50.0	0.0
R-12127	Res.	B	67	1	4216 S DELAWARE AVE	No	50.0	50.0	50.0	0.0
R-12128	Res.	B	67	1	4115 S DELAWARE AVE	No	58.5	58.7	60.8	2.3
R-12129	Res.	B	67	1	4119 S DELAWARE AVE	No	56.5	56.8	58.8	2.3
R-12130	Res.	B	67	1	4123 S DELAWARE AVE	No	53.0	53.2	55.5	2.5
R-12131	Res.	B	67	1	4201 S DELAWARE AVE	No	50.0	50.3	52.4	2.4
R-12132	Res.	B	67	1	4205 S DELAWARE AVE	No	50.0	50.0	50.0	0.0
R-12133	Res.	B	67	1	4209 S DELAWARE AVE	No	50.0	50.0	50.0	0.0
R-12134	Res.	B	67	1	4213 S DELAWARE AVE	No	50.0	50.0	50.0	0.0

Table B-12: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 12										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-12135	Res.	B	67	1	4217 S DELAWARE AVE	No	50.0	50.0	50.0	0.0
R-12136	Res.	B	67	1	13101 E 41ST TER S	No	63.4	63.6	65.9	2.5
R-12137	Res.	B	67	1	13105 E 41ST TER S	No	63.8	64.1	66.5	2.7
R-12138	Res.	B	67	1	13109 E 41ST TER S	No	64.7	64.9	67.8	3.1
R-12139	Res.	B	67	1	4116 S MCCOY ST	No	56.4	56.7	59.1	2.7
R-12140	Res.	B	67	1	4120 S MCCOY ST	No	54.1	54.4	56.8	2.7
R-12141	Res.	B	67	1	4124 S MCCOY ST	No	51.8	52.1	54.0	2.2
R-12142	Res.	B	67	1	4200 S MCCOY ST	No	50.0	50.0	50.8	0.8
R-12143	Res.	B	67	1	4204 S MCCOY ST	No	50.0	50.0	50.0	0.0
R-12144	Res.	B	67	1	4208 S MCCOY ST	No	50.0	50.0	50.0	0.0
R-12145	Res.	B	67	1	4212 S MCCOY ST	No	50.0	50.0	50.0	0.0
R-12146	Res.	B	67	1	4216 S MCCOY ST	No	50.0	50.0	50.0	0.0
R-12147	Res.	B	67	1	4107 S MCCOY ST	No	62.9	63.2	66.1	3.2
R-12148	Res.	B	67	1	4111 S MCCOY ST	No	57.9	58.2	60.3	2.4
R-12149	Res.	B	67	1	4117 S MCCOY ST	No	54.7	54.9	56.9	2.2
R-12150	Res.	B	67	1	4121 S MCCOY ST	No	52.7	53.0	54.9	2.2
R-12151	Res.	B	67	1	4125 S MCCOY ST	No	50.7	51.0	52.9	2.2
R-12152	Res.	B	67	1	4201 S MCCOY ST	No	50.0	50.0	50.4	0.4
R-12153	Res.	B	67	1	4205 S MCCOY ST	No	50.0	50.0	50.0	0.0
R-12154	Res.	B	67	1	4209 S MCCOY ST	No	50.0	50.0	50.0	0.0
R-12155	Res.	B	67	1	4213 S MCCOY ST	No	50.0	50.0	50.0	0.0
R-12156	Res.	B	67	1	4108 S PLEASANT ST	No	61.8	62.1	64.2	2.4
R-12157	Res.	B	67	1	4112 S PLEASANT ST	No	56.6	56.9	59.5	2.9
R-12158	Res.	B	67	1	4116 S PLEASANT ST	No	53.4	53.6	55.7	2.3
R-12159	Res.	B	67	1	4120 S PLEASANT ST	No	51.7	52.0	53.8	2.1
R-12160	Res.	B	67	1	4124 S PLEASANT ST	No	51.3	51.6	53.5	2.2
R-12161	Res.	B	67	1	4200 S PLEASANT ST	No	50.0	50.0	50.4	0.4
R-12162	Res.	B	67	1	4204 S PLEASANT ST	No	50.0	50.0	50.0	0.0
R-12163	Res.	B	67	1	4208 S PLEASANT ST	No	50.0	50.0	50.0	0.0
R-12164	Res.	B	67	1	4212 S PLEASANT ST	No	50.0	50.0	50.0	0.0
R-12165	Res.	B	67	1	4115 S PLEASANT ST	No	58.2	58.5	60.8	2.6
R-12166	Res.	B	67	1	4119 S PLEASANT ST	No	55.1	55.3	57.8	2.7
R-12167	Res.	B	67	1	4123 S PLEASANT ST	No	52.5	52.8	54.7	2.2
R-12168	Res.	B	67	1	4201 S PLEASANT ST	No	50.8	51.1	52.7	1.9
R-12169	Res.	B	67	1	4205 S PLEASANT ST	No	50.0	50.0	51.6	1.6
R-12170	Res.	B	67	1	4209 S PLEASANT ST	No	50.0	50.0	50.1	0.1
R-12171	Res.	B	67	1	4213 S PLEASANT ST	No	50.0	50.0	50.0	0.0
R-12172	Res.	B	67	1	4217 S PLEASANT ST	No	50.0	50.0	50.0	0.0
R-12173	Res.	B	67	1	13301 E 41ST TER S	No	62.8	63.1	66.0	3.2
R-12174	Res.	B	67	1	13305 E 41ST TER S	No	64.7	65.0	68.0	3.3
R-12175	Res.	B	67	1	13309 E 41ST TER S	No	63.8	64.1	66.5	2.7
R-12176	Res.	B	67	1	4116 S SPRING ST	No	59.6	59.8	61.9	2.3
R-12177	Res.	B	67	1	4120 S SPRING ST	No	57.4	57.7	60.0	2.6
R-12178	Res.	B	67	1	4124 S SPRING ST	No	55.7	56.0	58.3	2.6
R-12179	Res.	B	67	1	4200 S SPRING ST	No	54.4	54.7	56.6	2.2
R-12180	Res.	B	67	1	4204 S SPRING ST	No	53.3	53.6	55.2	1.9
R-12181	Res.	B	67	1	4208 S SPRING ST	No	50.9	51.2	52.5	1.6
R-12182	Res.	B	67	1	4212 S SPRING ST	No	50.0	50.0	50.9	0.9
R-12183	Res.	B	67	1	4216 S SPRING ST	No	50.0	50.0	50.0	0.0
R-12184	Res.	B	67	1	4217 S SPRING ST	No	50.0	50.0	50.0	0.0
R-12185	Res.	B	67	1	4213 S SPRING ST	No	50.0	50.1	51.4	1.4
R-12186	Res.	B	67	1	4209 S SPRING ST	No	51.6	51.9	53.7	2.1
R-12187	Res.	B	67	1	4205 S SPRING ST	No	53.6	53.9	55.8	2.2
R-12188	Res.	B	67	1	4201 S SPRING ST	No	55.0	55.3	57.4	2.4
R-12189	Res.	B	67	1	4123 S SPRING ST	No	56.2	56.5	58.6	2.4
R-12190	Res.	B	67	1	4119 S SPRING ST	No	58.2	58.5	60.6	2.4
R-12191	Res.	B	67	1	4115 S SPRING ST	No	60.7	61.0	63.2	2.5
R-12192	Res.	B	67	1	13401 E 41ST TER S	No	63.7	63.9	66.3	2.6
R-12193	Res.	B	67	1	13405 E 41ST TER S	No	63.1	63.4	65.8	2.7
R-12194	Res.	B	67	1	13409 E 41ST TER S	No	62.7	63.0	65.0	2.3
R-12195	Res.	B	67	1	4116 S OSAGE ST	No	61.2	61.5	63.3	2.1
R-12196	Res.	B	67	1	4120 S OSAGE ST	No	58.5	58.8	60.7	2.2
R-12197	Res.	B	67	1	4124 S OSAGE ST	No	57.0	57.3	59.0	2.0
R-12198	Res.	B	67	1	4200 S OSAGE ST	No	55.3	55.6	57.5	2.2
R-12199	Res.	B	67	1	4204 S OSAGE ST	No	53.4	53.7	55.5	2.1
R-12200	Res.	B	67	1	4208 S OSAGE ST	No	51.2	51.5	52.8	1.6
R-12201	Res.	B	67	1	4212 S OSAGE ST	No	50.6	50.9	52.1	1.5

Table B-12: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 12										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-12202	Res.	B	67	1	4216 S OSAGE ST	No	50.0	50.0	50.6	0.6
R-12203	Res.	B	67	1	4213 S OSAGE ST	No	50.6	50.9	51.9	1.3
R-12204	Res.	B	67	1	4209 S OSAGE ST	No	51.3	51.6	52.8	1.5
R-12205	Res.	B	67	1	4205 S OSAGE ST	No	52.0	52.3	53.7	1.7
R-12206	Res.	B	67	1	4201 S OSAGE ST	No	53.1	53.4	55.0	1.9
R-12207	Res.	B	67	1	4125 S OSAGE ST	No	55.0	55.3	56.9	1.9
R-12208	Res.	B	67	1	4121 S OSAGE ST	No	56.3	56.6	58.4	2.1
R-12209	Res.	B	67	1	4117 S OSAGE ST	No	57.8	58.0	60.0	2.2
R-12210	Res.	B	67	1	4113 S OSAGE ST	No	59.4	59.7	62.3	2.9
R-12211	Res.	B	67	1	4109 S OSAGE ST	No	61.6	61.9	64.9	3.3
Predicted NSA 12 Traffic Noise Impacts									**54**	

Table B-13: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 13										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-13001	Hotel	E	72	4	13712 E 42ND TER S	Yes	75.8	76.0	78.0	2.2
R-13002	Hotel	E	72	6	4142 S NOLAND RD	No	55.1	55.4	57.3	2.2
R-13003	Restaurant	E	72	3	4140 S NOLAND RD	Yes	68.6	68.9	70.7	2.1
Predicted NSA 13 Traffic Noise Impacts									**4**	

Table B-14: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 14										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-14001	Restaurant	E	72	3	4029 S NOLAND RD	No	61.9	62.1	62.7	0.8
R-14002	Res.	B	67	1	3918 S HOCKER AVE	No	58.7	59.0	60.5	1.8
R-14003	Res.	B	67	1	3920 S HOCKER AVE	No	59.6	59.9	61.5	1.9
R-14004	Res.	B	67	1	4000 S HOCKER AVE	No	61.2	61.5	63.2	2.0
R-14005	Res.	B	67	1	4002 S HOCKER AVE	No	62.1	62.5	64.0	1.9
R-14006	Res.	B	67	1	4004 S HOCKER AVE	No	63.2	63.6	65.3	2.1
R-14007	Res.	B	67	1	4006 S HOCKER AVE	No	64.5	64.8	66.5	2.0
R-14008	Res.	B	67	1	4008 S HOCKER AVE	No	65.4	65.7	67.5	2.1
R-14009	Res.	B	67	1	4010 S HOCKER AVE	No	66.6	66.9	68.9	2.3
R-14010	Res.	B	67	1	4012 S HOCKER AVE	No	67.8	68.2	70.1	2.3
R-14011	Res.	B	67	1	4014 S HOCKER AVE	No	69.1	69.4	71.5	2.4
R-14012	Res.	B	67	1	4018 S HOCKER AVE	Yes	70.2	70.5	70.6	0.4
R-14013	Res.	B	67	1	14401 E 41ST ST S	Yes	71.2	71.5	71.0	-0.2
R-14014	Res.	B	67	1	14405 E 41ST ST S	Yes	71.9	72.2	71.0	-0.9
R-14015	Res.	B	67	1	14409 E 41ST ST S	Yes	72.2	72.5	72.7	0.5
R-14016	Res.	B	67	1	14501 E 41ST ST S	Yes	73.1	73.5	74.9	1.8
R-14017	Res.	B	67	1	14505 E 41ST ST S	Yes	73.7	74.1	75.8	2.1
R-14018	Res.	B	67	1	14509 E 41ST ST S	Yes	73.8	74.3	75.8	2.0
R-14019	Res.	B	67	1	14513 E 41ST ST S	Yes	73.9	74.3	75.7	1.8
R-14020	Res.	B	67	1	14605 E 41ST ST S	Yes	74.2	74.5	76.0	1.8
R-14021	Res.	B	67	1	14609 E 41ST ST S	Yes	74.0	74.4	75.7	1.7
R-14022	Res.	B	67	1	14613 E 41ST ST S	Yes	73.4	73.8	75.2	1.8
R-14023	Res.	B	67	1	14617 E 41ST ST S	Yes	73.1	73.5	75.0	1.9
R-14024	Res.	B	67	1	14701 E 41ST ST S	Yes	73.4	73.8	75.4	2.0
R-14025	Res.	B	67	1	14705 E 41ST ST S	Yes	72.8	73.2	75.1	2.3
R-14026	Res.	B	67	1	14400 E 40TH ST S	No	60.0	60.3	61.9	1.9
R-14027	Res.	B	67	1	14404 E 40TH ST S	No	59.6	60.0	61.3	1.7
R-14028	Res.	B	67	1	14500 E 40TH ST S	No	59.1	59.4	60.7	1.6
R-14029	Res.	B	67	1	14502 E 40TH ST S	No	59.4	59.8	60.9	1.5
R-14030	Res.	B	67	1	14504 E 40TH ST S	No	59.1	59.4	60.3	1.2
R-14031	Res.	B	67	1	14506 E 40TH ST S	No	59.5	59.8	60.6	1.1
R-14032	Res.	B	67	1	14600 E 40TH ST S	No	58.8	59.1	59.9	1.1
R-14033	Res.	B	67	1	14602 E 40TH ST S	No	58.9	59.3	60.2	1.3
R-14034	Res.	B	67	1	14606 E 40TH ST S	No	58.8	59.1	60.4	1.6
R-14035	Res.	B	67	1	3920 S LESLIE AVE	No	55.5	55.8	57.1	1.6
R-14036	Res.	B	67	1	14401 E 40TH ST S	No	62.4	62.7	64.2	1.8
R-14037	Res.	B	67	1	14405 E 40TH ST S	No	60.9	61.2	62.8	1.9
R-14038	Res.	B	67	1	14501 E 40TH ST S	No	60.5	60.8	62.3	1.8
R-14039	Res.	B	67	1	14503 E 40TH ST S	No	61.1	61.4	62.7	1.6
R-14040	Res.	B	67	1	14505 E 40TH ST S	No	61.8	62.2	63.2	1.4
R-14041	Res.	B	67	1	14507 E 40TH ST S	No	60.8	61.1	62.0	1.2
R-14042	Res.	B	67	1	14601 E 40TH ST S	No	60.6	60.9	61.8	1.2
R-14043	Res.	B	67	1	14603 E 40TH ST S	No	60.9	61.2	62.4	1.5
R-14044	Res.	B	67	1	14607 E 40TH ST S	No	61.1	61.4	63.1	2.0
R-14045	Res.	B	67	1	4005 S HOCKER AVE	No	62.8	63.1	65.3	2.5
R-14046	Res.	B	67	1	14406 E 40TH TER S	No	62.5	62.8	64.8	2.3
R-14047	Res.	B	67	1	14500 E 40TH TER S	No	62.7	63.1	64.7	2.0
R-14048	Res.	B	67	1	14502 E 40TH TER S	No	63.2	63.5	65.0	1.8
R-14049	Res.	B	67	1	14506 E 40TH TER S	No	63.8	64.1	65.5	1.7
R-14050	Res.	B	67	1	14510 E 40TH TER S	No	63.2	63.5	65.0	1.8
R-14051	Res.	B	67	1	14600 E 40TH TER S	No	64.0	64.4	66.0	2.0
R-14052	Res.	B	67	1	14602 E 40TH TER S	No	63.7	64.0	65.8	2.1
R-14053	Res.	B	67	1	4006 S LESLIE AVE	No	62.2	62.5	64.4	2.2
R-14054	Res.	B	67	1	4009 S HOCKER AVE	No	66.4	66.7	68.9	2.5
R-14055	Res.	B	67	1	14407 E 40TH TER S	No	65.1	65.4	67.4	2.3
R-14056	Res.	B	67	1	14501 E 40TH TER S	No	66.3	66.7	68.1	1.8
R-14057	Res.	B	67	1	14503 E 40TH TER S	No	66.4	66.8	68.2	1.8
R-14058	Res.	B	67	1	14507 E 40TH TER S	No	66.0	66.3	67.9	1.9
R-14059	Res.	B	67	1	14511 E 40TH TER S	No	66.4	66.7	68.5	2.1
R-14060	Res.	B	67	1	14601 E 40TH TER S	No	65.7	66.0	67.8	2.1
R-14061	Res.	B	67	1	14603 E 40TH TER S	No	65.9	66.2	68.2	2.3
R-14062	Res.	B	67	1	14605 E 40TH TER S	No	66.6	66.9	68.7	2.1
R-14063	Res.	B	67	1	14611 E 40TH TER S	No	65.6	65.9	67.9	2.3
R-14064	Res.	B	67	1	4010 S LESLIE AVE	No	63.4	63.8	65.8	2.4
R-14065	Res.	B	67	1	4013 S HOCKER AVE	No	67.9	68.2	69.0	1.1
R-14066	Res.	B	67	1	14404 E 41ST ST S	No	69.0	69.4	71.3	2.3
R-14067	Res.	B	67	1	14500 E 41ST ST S	No	68.8	69.2	70.9	2.1

Table B-14: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 14										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-14068	Res.	B	67	1	14504 E 41ST ST S	No	69.0	69.3	70.9	1.9
R-14069	Res.	B	67	1	14508 E 41ST ST S	No	68.8	69.2	70.9	2.1
R-14070	Res.	B	67	1	14512 E 41ST ST S	No	68.8	69.2	71.0	2.2
R-14071	Res.	B	67	1	14600 E 41ST ST S	No	69.1	69.4	71.3	2.2
R-14072	Res.	B	67	1	14604 E 41ST ST S	No	68.2	68.5	70.5	2.3
R-14073	Res.	B	67	1	14608 E 41ST ST S	No	68.6	69.0	70.8	2.2
R-14074	Res.	B	67	1	14612 E 41ST ST S	No	66.8	67.2	69.2	2.4
R-14075	Res.	B	67	1	4014 S LESLIE AVE	No	65.9	66.2	68.9	3.0
R-14076	Res.	B	67	1	3919 S LESLIE AVE	No	57.6	57.8	59.7	2.1
R-14077	Res.	B	67	1	3921 S LESLIE AVE	No	58.0	58.2	60.3	2.3
R-14078	Res.	B	67	1	4001 S LESLIE AVE	No	59.7	60.0	62.0	2.3
R-14079	Res.	B	67	1	4005 S LESLIE AVE	No	59.9	60.2	62.3	2.4
R-14080	Res.	B	67	1	4007 S LESLIE AVE	No	61.7	62.0	64.0	2.3
R-14081	Res.	B	67	1	4011 S LESLIE AVE	No	62.3	62.6	64.7	2.4
R-14082	Res.	B	67	1	4015 S LESLIE AVE	No	64.2	64.5	66.6	2.4
R-14083	Res.	B	67	1	4019 S LESLIE AVE	No	64.4	64.8	67.0	2.6
R-14084	Res.	B	67	1	4021 S LESLIE AVE	Yes	70.1	70.4	72.4	2.3
R-14085	Res.	B	67	1	3920 S PHELPS RD	No	57.1	57.4	59.1	2.0
R-14086	Res.	B	67	1	4000 S PHELPS RD	No	59.5	59.8	61.6	2.1
Predicted NSA 14 Traffic Noise Impacts									**44**	

Table B-15: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 15										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-15001	Res.	B	67	1	14800 E 40TH ST S	No	56.7	56.9	58.2	1.5
R-15002	Res.	B	67	1	14804 E 40TH ST S	No	54.3	54.5	55.6	1.3
R-15003	Res.	B	67	1	14808 E 40TH ST S	No	51.5	51.8	52.4	0.9
R-15004	Res.	B	67	1	14812 E 40TH ST S	No	50.7	51.0	51.7	1.0
R-15005	Res.	B	67	1	14801 E 40TH ST S	No	59.5	59.8	61.5	2.0
R-15006	Res.	B	67	1	14805 E 40TH ST S	No	58.2	58.5	60.5	2.3
R-15007	Res.	B	67	1	4004 S CRANE ST	No	59.6	59.9	61.7	2.1
R-15008	Res.	B	67	1	4008 S CRANE ST	No	61.2	61.5	63.3	2.1
R-15009	Res.	B	67	1	4012 S CRANE ST	No	61.8	62.1	64.1	2.3
R-15010	Res.	B	67	1	4014 S CRANE CIR	No	60.4	60.7	63.5	3.1
R-15011	Res.	B	67	1	4016 S CRANE CIR	No	60.7	60.9	63.4	2.7
R-15012	Res.	B	67	1	4020 S CRANE CIR	No	66.9	67.1	69.9	3.0
R-15013	Res.	B	67	1	4021 S CRANE CIR	Yes	69.8	70.0	74.8	5.0
R-15014	Res.	B	67	1	4023 S CRANE CIR	Yes	69.7	69.9	74.5	4.8
R-15015	Res.	B	67	1	4025 S CRANE CIR	No	63.9	64.1	68.8	4.9
R-15016	Res.	B	67	1	14901 E 41ST ST S	Yes	67.7	67.9	73.5	5.8
R-15017	Res.	B	67	1	14903 E 41ST ST S	Yes	66.4	66.6	71.6	5.2
R-15018	Res.	B	67	1	14907 E 41ST ST S	Yes	66.5	66.7	71.9	5.4
R-15019	Res.	B	67	1	15001 E 41ST ST S	Yes	67.1	67.3	73.6	6.5
R-15020	Res.	B	67	1	15003 E 41ST ST S	Yes	64.9	65.1	71.1	6.2
R-15021	Res.	B	67	1	15007 E 41ST ST S	Yes	66.7	66.8	73.7	7.0
R-15022	Res.	B	67	1	15011 E 41ST ST S	Yes	64.2	64.4	70.3	6.1
R-15023	Res.	B	67	1	15101 E 41ST ST S	Yes	62.2	62.5	66.0	3.8
R-15024	Res.	B	67	1	15103 E 41ST ST S	Yes	61.8	62.1	65.3	3.5
R-15025	Res.	B	67	1	15107 E 41ST ST S	Yes	60.8	61.1	63.1	2.3
R-15026	Res.	B	67	1	15111 E 41ST ST S	Yes	61.2	61.5	63.5	2.3
R-15027	Res.	B	67	1	15115 E 41ST ST S	Yes	61.3	61.7	63.8	2.5
R-15028	Res.	B	67	1	15201 E 41ST ST S	Yes	62.1	62.4	64.8	2.7
R-15029	Res.	B	67	1	15203 E 41ST ST S	Yes	62.8	63.1	65.9	3.1
R-15030	Res.	B	67	1	15207 E 41ST ST S	Yes	64.3	64.6	69.1	4.8
R-15031	Res.	B	67	1	15211 E 41ST ST S	Yes	67.0	67.2	71.6	4.6
R-15032	Res.	B	67	1	15215 E 41ST ST S	Yes	68.0	68.3	72.3	4.3
R-15033	Res.	B	67	1	15301 E 41ST ST S	Yes	66.6	66.8	68.1	1.5
R-15034	Res.	B	67	1	15303 E 41ST ST S	Yes	68.4	68.7	69.7	1.3
R-15035	Res.	B	67	1	15307 E 41ST ST S	Yes	68.9	69.2	70.5	1.6
R-15036	Res.	B	67	1	15311 E 41ST ST S	Yes	69.4	69.7	72.2	2.8
R-15037	Res.	B	67	1	15315 E 41ST ST S	Yes	70.8	71.1	74.7	3.9
R-15038	Res.	B	67	1	15401 E 41ST ST S	Yes	70.6	70.9	74.3	3.7
R-15039	Res.	B	67	1	15403 E 41ST ST S	Yes	71.5	71.8	74.5	3.0
R-15040	Res.	B	67	1	15407 E 41ST ST S	Yes	72.4	72.7	74.6	2.2
R-15041	Res.	B	67	1	15411 E 41ST ST S	Yes	72.6	73.0	74.6	2.0
R-15042	Res.	B	67	1	15415 E 41ST ST S	Yes	72.9	73.3	74.8	1.9
R-15043	Res.	B	67	1	15501 E 41ST ST S	Yes	72.9	73.3	74.6	1.7
R-15044	Res.	B	67	1	15503 E 41ST ST S	Yes	72.3	72.7	74.0	1.7
R-15045	Res.	B	67	1	15507 E 41ST ST S	Yes	71.1	71.5	72.8	1.7
R-15046	Res.	B	67	1	15511 E 41ST ST S	Yes	70.7	71.1	72.5	1.8
R-15047	Res.	B	67	1	15601 E 41ST ST S	Yes	70.5	70.9	72.5	2.0
R-15048	Res.	B	67	1	15607 E 41ST ST S	Yes	71.1	71.5	72.7	1.6
R-15049	Res.	B	67	1	15613 E 41ST ST S	Yes	70.7	71.0	72.4	1.7
R-15050	Res.	B	67	1	15619 E 41ST ST S	Yes	69.5	69.8	71.3	1.8
R-15051	Res.	B	67	1	15707 E 40TH TER S	No	66.9	67.3	68.9	2.0
R-15052	Res.	B	67	1	15717 E 40TH TER S	No	66.3	66.7	68.6	2.3
R-15053	Res.	B	67	1	15727 E 40TH TER S	No	68.2	68.6	70.0	1.8
R-15054	Res.	B	67	1	15733 E 40TH TER S	Yes	71.6	72.0	72.9	1.3
R-15055	Res.	B	67	1	4001 S CRANE ST	No	52.3	52.6	53.1	0.8
R-15056	Res.	B	67	1	4005 S CRANE ST	No	54.5	54.7	55.8	1.3
R-15057	Res.	B	67	1	4009 S CRANE ST	No	57.4	57.7	59.4	2.0
R-15058	Res.	B	67	1	4013 S CRANE ST	No	58.3	58.6	60.5	2.2
R-15059	Res.	B	67	1	4017 S CRANE ST	No	57.6	57.9	60.0	2.4
R-15060	Res.	B	67	1	14900 E 41ST ST S	No	56.9	57.2	59.5	2.6
R-15061	Res.	B	67	1	14902 E 41ST ST S	No	58.3	58.5	60.7	2.4
R-15062	Res.	B	67	1	14906 E 41ST ST S	No	59.5	59.7	62.1	2.6
R-15063	Res.	B	67	1	15000 E 41ST ST S	No	58.6	58.8	61.4	2.8
R-15064	Res.	B	67	1	15002 E 41ST ST S	No	58.4	58.7	60.3	1.9
R-15065	Res.	B	67	1	15006 E 41ST ST S	No	57.4	57.7	59.3	1.9
R-15066	Res.	B	67	1	14901 E 40TH ST S	No	52.3	52.6	53.2	0.9
R-15067	Res.	B	67	1	14905 E 40TH ST S	No	50.0	50.0	50.0	0.0

Table B-15: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 15										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-15068	Res.	B	67	1	14909 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15069	Res.	B	67	1	4002 S DRUMM AVE	No	50.0	50.0	50.0	0.0
R-15070	Res.	B	67	1	4006 S DRUMM AVE	No	50.0	50.0	50.0	0.0
R-15071	Res.	B	67	1	4010 S DRUMM AVE	No	50.0	50.0	50.0	0.0
R-15072	Res.	B	67	1	4011 S DRUMM AVE	No	51.2	51.5	52.3	1.1
R-15073	Res.	B	67	1	4007 S DRUMM AVE	No	51.3	51.6	52.3	1.0
R-15074	Res.	B	67	1	4003 S DRUMM AVE	No	50.1	50.4	51.0	0.9
R-15075	Res.	B	67	1	14900 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15076	Res.	B	67	1	14904 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15077	Res.	B	67	1	14908 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15078	Res.	B	67	1	15001 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15079	Res.	B	67	1	15005 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15080	Res.	B	67	1	15009 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15081	Res.	B	67	1	15013 E 40TH ST S	No	50.6	51.0	52.1	1.5
R-15082	Res.	B	67	1	15000 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15083	Res.	B	67	1	15004 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15084	Res.	B	67	1	15008 E 40TH ST S	No	50.0	50.0	50.2	0.2
R-15085	Res.	B	67	1	4004 S ADAMS AVE	No	51.2	51.5	52.7	1.5
R-15086	Res.	B	67	1	4008 S ADAMS AVE	No	52.2	52.5	53.6	1.4
R-15087	Res.	B	67	1	4012 S ADAMS AVE	No	52.9	53.2	54.4	1.5
R-15088	Res.	B	67	1	4016 S ADAMS AVE	No	54.0	54.3	55.4	1.4
R-15089	Res.	B	67	1	4001 S ADAMS AVE	No	51.2	51.5	53.3	2.1
R-15090	Res.	B	67	1	4005 S ADAMS AVE	No	52.2	52.5	54.1	1.9
R-15091	Res.	B	67	1	4009 S ADAMS AVE	No	53.1	53.4	55.1	2.0
R-15092	Res.	B	67	1	4013 S ADAMS AVE	No	54.3	54.6	56.2	1.9
R-15093	Res.	B	67	1	4017 S ADAMS AVE	No	55.5	55.8	57.4	1.9
R-15094	Res.	B	67	1	15100 E 41ST ST S	No	57.9	58.2	60.6	2.7
R-15095	Res.	B	67	1	15102 E 41ST ST S	No	56.3	56.6	58.1	1.8
R-15096	Res.	B	67	1	4018 S ROGERS ST	No	56.5	56.8	58.6	2.1
R-15097	Res.	B	67	1	15105 E 40TH ST S	No	50.0	50.1	51.4	1.4
R-15098	Res.	B	67	1	15109 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15099	Res.	B	67	1	4002 S ROGERS ST	No	50.0	50.0	50.4	0.4
R-15100	Res.	B	67	1	4006 S ROGERS ST	No	50.6	50.9	52.3	1.7
R-15101	Res.	B	67	1	4010 S ROGERS ST	No	51.6	51.9	53.3	1.7
R-15102	Res.	B	67	1	4014 S ROGERS ST	No	53.6	53.9	55.6	2.0
R-15103	Res.	B	67	1	15100 E 40TH ST S	No	50.0	50.2	51.7	1.7
R-15104	Res.	B	67	1	15104 E 40TH ST S	No	50.0	50.0	50.5	0.5
R-15105	Res.	B	67	1	15108 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15106	Res.	B	67	1	15112 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15107	Res.	B	67	1	15200 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15108	Res.	B	67	1	15204 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15109	Res.	B	67	1	15208 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15110	Res.	B	67	1	15212 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15111	Res.	B	67	1	15216 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15112	Res.	B	67	1	15300 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15113	Res.	B	67	1	15304 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15114	Res.	B	67	1	15308 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15115	Res.	B	67	1	15312 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15116	Res.	B	67	1	15400 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15117	Res.	B	67	1	15404 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15118	Res.	B	67	1	15201 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15119	Res.	B	67	1	15205 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15120	Res.	B	67	1	15209 E 40TH ST S	No	50.0	50.0	51.0	1.0
R-15121	Res.	B	67	1	4003 S ROGERS ST	No	50.0	50.0	50.0	0.0
R-15122	Res.	B	67	1	4007 S ROGERS ST	No	50.0	50.0	50.6	0.6
R-15123	Res.	B	67	1	4011 S ROGERS ST	No	51.1	51.4	52.3	1.2
R-15124	Res.	B	67	1	4015 S ROGERS ST	No	52.8	53.1	54.1	1.3
R-15125	Res.	B	67	1	15200 E 41ST ST S	No	55.2	55.5	57.4	2.2
R-15126	Res.	B	67	1	15202 E 41ST ST S	No	56.8	57.1	58.8	2.0
R-15127	Res.	B	67	1	4004 S KINGS HWY	No	50.0	50.0	50.6	0.6
R-15128	Res.	B	67	1	4008 S KINGS HWY	No	51.4	51.7	52.6	1.2
R-15129	Res.	B	67	1	4012 S KINGS HWY	No	53.2	53.6	54.8	1.6
R-15130	Res.	B	67	1	4016 S KINGS HWY	No	55.8	56.0	57.6	1.8
R-15131	Res.	B	67	1	4020 S KINGS HWY	No	57.2	57.5	60.0	2.8
R-15132	Res.	B	67	1	4005 S KINGS HWY	No	50.8	51.1	52.7	1.9
R-15133	Res.	B	67	1	4009 S KINGS HWY	No	52.3	52.7	54.2	1.9
R-15134	Res.	B	67	1	4013 S KINGS HWY	No	53.5	53.8	55.3	1.8

Table B-15: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 15										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-15135	Res.	B	67	1	4017 S KINGS HWY	No	55.0	55.3	57.0	2.0
R-15136	Res.	B	67	1	15301 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15137	Res.	B	67	1	15305 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15138	Res.	B	67	1	15309 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15139	Res.	B	67	1	15401 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15140	Res.	B	67	1	15405 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15141	Res.	B	67	1	15300 E 41ST ST S	No	59.1	59.4	61.4	2.3
R-15142	Res.	B	67	1	15302 E 41ST ST S	No	60.3	60.6	62.8	2.5
R-15143	Res.	B	67	1	4022 S HANDS CIR	No	54.6	54.9	57.4	2.8
R-15144	Res.	B	67	1	4018 S HANDS CIR	No	52.5	52.8	54.3	1.8
R-15145	Res.	B	67	1	4014 S HANDS CIR	No	50.0	50.2	51.9	1.9
R-15146	Res.	B	67	1	4010 S HANDS CIR	No	51.2	51.5	53.3	2.1
R-15147	Res.	B	67	1	4015 S HANDS CIR	No	50.9	51.2	52.7	1.8
R-15148	Res.	B	67	1	4019 S HANDS CIR	No	53.6	53.9	55.6	2.0
R-15149	Res.	B	67	1	4023 S HANDS CIR	No	59.2	59.5	62.0	2.8
R-15150	Res.	B	67	1	15402 E 41ST ST S	No	65.3	65.6	67.8	2.5
R-15151	Res.	B	67	1	15406 E 41ST ST S	No	62.6	62.9	64.8	2.2
R-15152	Res.	B	67	1	4014 S WOODBURY ST	No	59.5	59.8	61.9	2.4
R-15153	Res.	B	67	1	4010 S WOODBURY ST	No	52.5	52.8	54.4	1.9
R-15154	Res.	B	67	1	4006 S WOODBURY ST	No	50.2	50.5	51.5	1.3
R-15155	Res.	B	67	1	4002 S WOODBURY ST	No	50.0	50.0	50.0	0.0
R-15156	Res.	B	67	1	4019 S WOODBURY ST	No	66.4	66.7	68.5	2.1
R-15157	Res.	B	67	1	4015 S WOODBURY ST	No	61.9	62.2	64.3	2.4
R-15158	Res.	B	67	1	4011 S WOODBURY ST	No	57.3	57.5	59.2	1.9
R-15159	Res.	B	67	1	4007 S WOODBURY ST	No	50.7	51.0	53.2	2.5
R-15160	Res.	B	67	1	4003 S WOODBURY ST	No	50.0	50.0	50.7	0.7
R-15161	Res.	B	67	1	15409 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15162	Res.	B	67	1	15501 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15163	Res.	B	67	1	15505 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15164	Res.	B	67	1	15509 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15165	Res.	B	67	1	15513 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15166	Res.	B	67	1	15517 E 40TH ST S	No	50.0	50.0	51.4	1.4
R-15167	Res.	B	67	1	15512 E 40TH ST S	No	50.0	50.1	51.4	1.4
R-15168	Res.	B	67	1	15508 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15169	Res.	B	67	1	15504 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15170	Res.	B	67	1	15500 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15171	Res.	B	67	1	15412 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15172	Res.	B	67	1	15408 E 40TH ST S	No	50.0	50.0	50.0	0.0
R-15173	Res.	B	67	1	15502 E 41ST ST S	No	64.4	64.7	66.7	2.3
R-15174	Res.	B	67	1	15506 E 41ST ST S	No	64.1	64.4	66.4	2.3
R-15175	Res.	B	67	1	15510 E 41ST ST S	No	63.6	63.9	65.9	2.3
R-15176	Res.	B	67	1	15600 E 41ST ST S	No	65.4	65.8	67.7	2.3
R-15177	Res.	B	67	1	15608 E 41ST ST S	No	64.9	65.2	67.2	2.3
R-15178	Res.	B	67	1	15618 E 41ST ST S	No	60.8	61.2	63.2	2.4
R-15179	Res.	B	67	1	15628 E 41ST ST S	No	60.3	60.7	62.3	2.0
R-15180	Res.	B	67	1	15601 E 40TH TER S	No	55.0	55.3	56.7	1.7
R-15181	Res.	B	67	1	15610 E 40TH TER S	No	54.9	55.2	56.7	1.8
R-15182	Res.	B	67	1	15618 E 40TH TER S	No	56.8	57.1	58.5	1.7
R-15183	Res.	B	67	1	15626 E 40TH TER S	No	58.7	59.0	60.5	1.8
R-15184	Res.	B	67	1	15634 E 40TH TER S	No	60.5	60.8	62.5	2.0
R-15185	Res.	B	67	1	15700 E 40TH TER S	No	62.2	62.6	64.0	1.8
R-15186	Res.	B	67	1	15706 E 40TH TER S	No	62.6	62.9	64.7	2.1
R-15187	Res.	B	67	1	15712 E 40TH TER S	No	65.0	65.4	66.7	1.7
R-15188	Res.	B	67	1	15718 E 40TH TER S	No	66.4	66.7	68.0	1.6
R-15189	Res.	B	67	1	15724 E 40TH TER S	No	67.5	67.9	69.0	1.5
R-15190	Res.	B	67	1	15730 E 40TH TER S	No	70.3	70.7	71.7	1.4
R-15191	Res.	B	67	1	15736 E 40TH TER S	Yes	72.4	72.8	73.6	1.2
R-15192	Res.	B	67	1	3920 S STONEWALL AVE	No	52.6	52.9	54.1	1.5
R-15193	Res.	B	67	1	3921 S STONEWALL AVE	No	55.7	56.0	56.6	0.9
R-15194	Res.	B	67	1	3924 S SHERMAN DR	No	57.1	57.4	58.0	0.9
R-15195	Res.	B	67	1	3928 S SHERMAN DR	No	58.6	58.9	59.4	0.8
R-15196	Res.	B	67	1	3932 S SHERMAN DR	No	59.2	59.5	60.1	0.9
R-15197	Res.	B	67	1	3936 S SHERMAN DR	No	60.0	60.3	60.9	0.9
R-15198	Res.	B	67	1	3940 S SHERMAN DR	No	61.2	61.6	61.9	0.7
R-15199	Res.	B	67	1	3944 S SHERMAN DR	No	62.4	62.8	62.7	0.3
R-15200	Res.	B	67	1	3948 S SHERMAN DR	No	64.8	65.1	65.0	0.2
R-15201	Res.	B	67	1	3923 S BRECKENRIDGE DR	No	60.1	60.4	61.4	1.3

Table B-15: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 15										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-15202	Res.	B	67	1	3921 S BRECKENRIDGE DR	No	59.4	59.7	61.6	2.2
R-15203	Res.	B	67	1	3920 S GRANT AVE	No	59.4	59.7	61.7	2.3
R-15204	Res.	B	67	1	3924 S GRANT AVE	No	61.0	61.3	63.3	2.3
R-15205	Res.	B	67	1	3928 S GRANT AVE	No	62.0	62.3	64.6	2.6
R-15206	Res.	B	67	1	3932 S GRANT AVE	No	61.6	61.9	62.7	1.1
R-15207	Res.	B	67	1	3921 S GRANT AVE	No	60.4	60.7	62.5	2.1
R-15208	Res.	B	67	1	3923 S GRANT AVE	No	61.5	61.8	63.7	2.2
R-15209	Res.	B	67	1	3927 S GRANT AVE	No	62.7	63.0	64.9	2.2
R-15210	Res.	B	67	1	3931 S GRANT AVE	No	63.5	63.8	66.2	2.7
R-15211	Res.	B	67	1	3935 S GRANT AVE	No	63.5	63.9	64.2	0.7
R-15212	Res.	B	67	1	15908 E 41ST ST S	No	65.3	65.7	66.1	0.8
R-15213	Res.	B	67	1	15901 E 41ST ST S	Yes	67.3	67.6	67.3	0.0
R-15214	Res.	B	67	1	15909 E 41ST ST S	Yes	67.0	67.4	67.1	0.1
R-15215	Res.	B	67	1	15917 E 41ST ST S	Yes	67.5	67.9	68.5	1.0
R-15216	Res.	B	67	1	15925 E 41ST ST S	Yes	67.4	67.7	69.5	2.1
R-15217	Res.	B	67	1	15933 E 41ST ST S	Yes	67.5	67.9	70.1	2.6
R-15218	Res.	B	67	1	16001 E 41ST ST S	Yes	70.1	70.5	72.0	1.9
R-15219	Res.	B	67	1	16009 E 41ST ST S	Yes	71.5	71.9	73.5	2.0
R-15220	Res.	B	67	1	16015 E 41ST ST S	Yes	72.6	72.8	74.5	1.9
R-15221	Res.	B	67	1	16023 E 41ST ST S	Yes	71.1	71.3	73.8	2.7
R-15222	Res.	B	67	1	16029 E 41ST ST S	Yes	72.2	72.5	74.5	2.3
R-15223	Res.	B	67	1	16101 E 41ST ST S	Yes	72.5	72.8	74.6	2.1
R-15224	Res.	B	67	1	16107 E 41ST ST S	Yes	72.6	72.9	74.6	2.0
R-15225	Res.	B	67	1	16115 E 41ST ST S	Yes	73.0	73.3	74.9	1.9
R-15226	Res.	B	67	1	16121 E 41ST ST S	Yes	73.6	73.9	75.2	1.6
R-15227	Res.	B	67	1	16129 E 41ST ST S	Yes	71.5	71.9	73.7	2.2
R-15228	Res.	B	67	1	16201 E 41ST ST S	Yes	73.0	73.3	75.0	2.0
R-15229	Res.	B	67	1	16209 E 41ST ST S	Yes	74.3	74.6	75.9	1.6
R-15230	Res.	B	67	1	15916 E 41ST ST S	No	65.9	66.2	67.9	2.0
R-15231	Res.	B	67	1	15924 E 41ST ST S	No	65.6	65.9	68.3	2.7
R-15232	Res.	B	67	1	15932 E 41ST ST S	No	64.4	64.7	66.9	2.5
R-15233	Res.	B	67	1	16002 E 41ST ST S	No	63.5	63.9	65.6	2.1
R-15234	Res.	B	67	1	16008 E 41ST ST S	No	63.8	64.2	65.7	1.9
R-15235	Res.	B	67	1	16014 E 41ST ST S	No	64.0	64.3	65.7	1.7
R-15236	Res.	B	67	1	16022 E 41ST ST S	No	64.4	64.7	66.2	1.8
R-15237	Res.	B	67	1	16028 E 41ST ST S	No	64.3	64.5	66.4	2.1
R-15238	Res.	B	67	1	16100 E 41ST ST S	No	64.9	65.2	67.1	2.2
R-15239	Res.	B	67	1	16106 E 41ST ST S	No	65.2	65.5	67.7	2.5
R-15240	Res.	B	67	1	16114 E 41ST ST S	No	64.8	65.1	67.2	2.4
R-15241	Res.	B	67	1	16120 E 41ST ST S	No	62.1	62.4	64.0	1.9
R-15242	Res.	B	67	1	16128 E 41ST ST S	No	63.8	64.1	66.0	2.2
R-15243	Res.	B	67	1	16210 E 41ST ST S	No	62.8	63.1	65.1	2.3
R-15244	Res.	B	67	1	16216 E 41ST ST S	No	63.4	63.7	65.6	2.2
R-15245	Res.	B	67	1	16224 E 41ST ST S	No	65.1	65.4	67.1	2.0
R-15246	Res.	B	67	1	16230 E 41ST ST S	No	65.7	66.0	67.6	1.9
R-15247	Res.	B	67	1	16304 E 41ST ST S	No	66.5	66.7	68.4	1.9
R-15248	Res.	B	67	1	16007 E 40TH TER S	No	64.3	64.6	65.8	1.5
R-15249	Res.	B	67	1	16009 E 40TH TER S	No	64.4	64.7	66.1	1.7
R-15250	Res.	B	67	1	16015 E 40TH TER S	No	63.1	63.4	64.7	1.6
R-15251	Res.	B	67	1	16023 E 40TH TER S	No	62.8	63.1	64.5	1.7
R-15252	Res.	B	67	1	16029 E 40TH TER S	No	63.2	63.5	65.0	1.8
R-15253	Res.	B	67	1	16101 E 40TH TER S	No	63.1	63.4	65.1	2.0
R-15254	Res.	B	67	1	16107 E 40TH TER S	No	63.6	63.9	66.1	2.5
R-15255	Res.	B	67	1	16115 E 40TH TER S	No	63.4	63.7	66.0	2.6
R-15256	Res.	B	67	1	16121 E 40TH TER S	No	63.9	64.2	66.4	2.5
R-15257	Res.	B	67	1	16129 E 40TH TER S	No	63.1	63.4	65.7	2.6
R-15258	Res.	B	67	1	16006 E 40TH TER S	No	61.8	62.1	63.5	1.7
R-15259	Res.	B	67	1	16008 E 40TH TER S	No	61.8	62.2	63.6	1.8
R-15260	Res.	B	67	1	16014 E 40TH TER S	No	61.3	61.6	63.1	1.8
R-15261	Res.	B	67	1	16022 E 40TH TER S	No	61.4	61.7	63.3	1.9
R-15262	Res.	B	67	1	16028 E 40TH TER S	No	60.7	61.0	62.6	1.9
R-15263	Res.	B	67	1	16100 E 40TH TER S	No	60.6	60.9	62.4	1.8
R-15264	Res.	B	67	1	16106 E 40TH TER S	No	59.6	59.9	61.5	1.9
R-15265	Res.	B	67	1	16114 E 40TH TER S	No	59.6	59.9	61.4	1.8
R-15266	Res.	B	67	1	16120 E 40TH TER S	No	59.5	59.8	61.4	1.9
R-15267	Res.	B	67	1	16128 E 40TH TER S	No	59.3	59.5	61.3	2.0
R-15268	Res.	B	67	1	4095 S QUEEN RIDGE DR	No	57.1	57.3	59.4	2.3

Table B-15: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 15										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-15269	Res.	B	67	1	4097 S QUEEN RIDGE DR	No	57.7	57.9	59.5	1.8
R-15270	Res.	B	67	1	4099 S QUEEN RIDGE DR	No	61.5	61.7	64.0	2.5
R-15271	Church	C	67	1	4235 S STAYTON AVE	No	57.8	58.0	59.5	1.7
R-15272	Res.	B	67	1	16105 E 40TH ST S	No	59.8	60.1	61.7	1.9
R-15273	Res.	B	67	1	16109 E 40TH ST S	No	60.2	60.5	62.1	1.9
R-15274	Res.	B	67	1	16113 E 40TH ST S	No	59.8	60.1	61.7	1.9
R-15275	Res.	B	67	1	16117 E 40TH ST S	No	59.4	59.7	61.6	2.2
R-15276	Res.	B	67	1	16121 E 40TH ST S	No	59.2	59.5	61.4	2.2
R-15277	Res.	B	67	1	16201 E 40TH ST S	No	58.7	59.0	61.1	2.4
R-15278	Res.	B	67	1	16205 E 40TH ST S	No	59.0	59.3	61.1	2.1
R-15279	Res.	B	67	1	16209 E 40TH ST S	No	58.5	58.8	60.4	1.9
R-15280	Res.	B	67	1	16213 E 40TH ST S	No	58.5	58.7	60.4	1.9
R-15281	Res.	B	67	1	16301 E 40TH ST S	No	58.1	58.2	59.7	1.6
R-15282	Res.	B	67	1	3925 S SUMMIT RIDGE DR	No	57.0	57.2	58.1	1.1
R-15283	Res.	B	67	1	3928 S LEES SUMMIT RD	No	60.0	60.2	61.1	1.1
R-15284	Res.	B	67	1	3924 S LEES SUMMIT RD	No	59.6	59.7	60.6	1.0
Predicted NSA 15 Traffic Noise Impacts									**83**	

Table B-16: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 16										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-16001	Church	D	77	3	14480 E 42ND ST S	Yes	69.8	69.9	70.7	0.9
R-16002	Daycare	C	67	1	14820 E 42ND ST S	No	59.4	59.6	62.5	3.1
Predicted NSA 16 Traffic Noise Impacts									**0**	

Table B-17: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 17										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-17001	Res.	B	67	1	4228 E 42ND CT S	No	56.3	56.5	58.0	1.7
R-17002	Res.	B	67	1	4226 E 42ND CT S	No	58.1	58.3	60.4	2.3
R-17003	Res.	B	67	1	4224 E 42ND CT S	No	60.3	60.6	62.9	2.6
R-17004	Res.	B	67	1	4222 E 42ND CT S	Yes	63.9	64.2	67.6	3.7
R-17005	Res.	B	67	1	4220 E 42ND CT S	Yes	67.5	67.7	73.4	5.9
R-17006	Res.	B	67	1	4221 E 42ND CT S	Yes	68.1	68.3	73.8	5.7
R-17007	Res.	B	67	1	4223 E 42ND CT S	Yes	63.5	63.8	68.7	5.2
R-17008	Res.	B	67	1	4225 E 42ND CT S	No	59.0	59.3	61.4	2.4
R-17009	Res.	B	67	1	4227 E 42ND CT S	No	57.3	57.6	59.4	2.1
R-17010	Res.	B	67	1	15012 E 42ND TER S	No	58.9	59.2	61.8	2.9
R-17011	Res.	B	67	1	15016 E 42ND TER S	Yes	60.0	60.3	63.9	3.9
R-17012	Res.	B	67	1	15100 E 42ND TER S	Yes	60.7	61.1	64.8	4.1
R-17013	Res.	B	67	1	15104 E 42ND TER S	Yes	62.3	62.6	66.0	3.7
R-17014	Res.	B	67	1	15108 E 42ND TER S	Yes	62.3	62.6	65.9	3.6
R-17015	Res.	B	67	1	15112 E 42ND TER S	Yes	64.2	64.5	68.4	4.2
R-17016	Res.	B	67	1	15116 E 42ND TER S	Yes	65.0	65.3	69.1	4.1
R-17017	Res.	B	67	1	15200 E 42ND TER S	Yes	64.8	65.1	68.6	3.8
R-17018	Res.	B	67	1	15204 E 42ND TER S	Yes	65.6	65.9	68.9	3.3
R-17019	Res.	B	67	1	15208 E 42ND TER S	Yes	65.6	66.0	68.5	2.9
R-17020	Res.	B	67	1	15212 E 42ND TER S	Yes	65.8	66.1	68.4	2.6
R-17021	Res.	B	67	1	15216 E 42ND TER S	Yes	63.2	63.5	66.0	2.8
R-17022	Res.	B	67	1	15300 E 42ND TER S	Yes	63.7	64.0	66.5	2.8
R-17023	Res.	B	67	1	15304 E 42ND TER S	Yes	64.1	64.4	67.1	3.0
R-17024	Res.	B	67	1	15308 E 42ND TER S	Yes	64.4	64.6	67.3	2.9
R-17025	Res.	B	67	1	15312 E 42ND TER S	Yes	64.7	65.0	67.8	3.1
R-17026	Res.	B	67	1	15400 E 42ND TER S	No	65.2	65.5	68.4	3.2
R-17027	Res.	B	67	1	15001 E 42ND TER S	No	55.8	56.0	55.7	-0.1
R-17028	Res.	B	67	1	15005 E 42ND TER S	No	54.2	54.4	55.1	0.9
R-17029	Res.	B	67	1	15009 E 42ND TER S	No	52.6	52.9	54.1	1.5
R-17030	Res.	B	67	1	15013 E 42ND TER S	No	52.7	53.0	55.2	2.5
R-17031	Res.	B	67	1	15017 E 42ND TER S	No	53.1	53.3	55.9	2.8
R-17032	Res.	B	67	1	15101 E 42ND TER S	No	54.3	54.6	56.9	2.6
R-17033	Res.	B	67	1	15105 E 42ND TER S	No	56.2	56.5	58.8	2.6
R-17034	Res.	B	67	1	15109 E 42ND TER S	No	56.7	57.0	59.4	2.7
R-17035	Res.	B	67	1	15113 E 42ND TER S	No	57.3	57.6	60.2	2.9
R-17036	Res.	B	67	1	15117 E 42ND TER S	No	57.4	57.7	59.8	2.4
R-17037	Res.	B	67	1	15201 E 42ND TER S	No	57.5	57.8	59.4	1.9
R-17038	Res.	B	67	1	15205 E 42ND TER S	No	57.6	57.9	59.4	1.8
R-17039	Res.	B	67	1	15209 E 42ND TER S	No	56.9	57.2	58.7	1.8
R-17040	Res.	B	67	1	15213 E 42ND TER S	No	57.1	57.4	59.3	2.2
R-17041	Res.	B	67	1	15217 E 42ND TER S	No	57.8	58.1	60.0	2.2
R-17042	Res.	B	67	1	15301 E 42ND TER S	No	58.8	59.1	61.1	2.3
R-17043	Res.	B	67	1	15305 E 42ND TER S	No	58.7	59.0	60.7	2.0
R-17044	Res.	B	67	1	15309 E 42ND TER S	No	56.5	56.7	58.2	1.7
R-17045	Res.	B	67	1	15000 E 43RD ST S	No	53.7	53.8	53.1	-0.6
R-17046	Res.	B	67	1	15004 E 43RD ST S	No	52.5	52.8	51.7	-0.8
R-17047	Res.	B	67	1	15008 E 43RD ST S	No	52.2	52.4	52.3	0.1
R-17048	Res.	B	67	1	15100 E 43RD ST S	No	52.6	52.9	53.3	0.7
R-17049	Res.	B	67	1	15104 E 43RD ST S	No	52.5	52.8	53.5	1.0
R-17050	Res.	B	67	1	15108 E 43RD ST S	No	53.0	53.3	54.3	1.3
R-17051	Res.	B	67	1	15112 E 43RD ST S	No	52.6	52.9	54.1	1.5
R-17052	Res.	B	67	1	15116 E 43RD ST S	No	50.6	50.8	51.1	0.5
R-17053	Res.	B	67	1	15200 E 43RD ST S	No	51.8	52.1	51.7	-0.1
R-17054	Res.	B	67	1	15204 E 43RD ST S	No	51.9	52.2	52.4	0.5
R-17055	Res.	B	67	1	15208 E 43RD ST S	No	52.8	53.1	53.8	1.0
R-17056	Res.	B	67	1	15212 E 43RD ST S	No	52.8	53.1	53.8	1.0
R-17057	Res.	B	67	1	15216 E 43RD ST S	No	52.9	53.2	53.9	1.0
R-17058	Res.	B	67	1	15300 E 43RD ST S	No	52.6	52.9	53.6	1.0
R-17059	Res.	B	67	1	15304 E 43RD ST S	No	52.2	52.4	53.3	1.1
R-17060	Res.	B	67	1	15313 E 42ND TER S	No	54.9	55.2	56.6	1.7
R-17061	Res.	B	67	1	4224 S SAVILLE AVE	No	53.8	54.1	55.5	1.7
R-17062	Res.	B	67	1	15308 E 43RD ST S	No	50.1	50.3	51.2	1.1
R-17063	Res.	B	67	1	15001 E 43RD ST S	No	54.1	54.2	53.5	-0.6
R-17064	Res.	B	67	1	15005 E 43RD ST S	No	52.9	53.1	51.9	-1.0
R-17065	Res.	B	67	1	15101 E 43RD ST S	No	52.0	52.2	51.3	-0.7
R-17066	Res.	B	67	1	15105 E 43RD ST S	No	50.8	51.0	50.4	-0.4
R-17067	Res.	B	67	1	15109 E 43RD ST S	No	50.7	50.9	50.4	-0.3

Table B-17: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 17										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-17068	Res.	B	67	1	15113 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-17069	Res.	B	67	1	15117 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-17070	Res.	B	67	1	15201 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-17071	Res.	B	67	1	15205 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-17072	Res.	B	67	1	15209 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-17073	Res.	B	67	1	15213 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-17074	Res.	B	67	1	15217 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-17075	Res.	B	67	1	15301 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-17076	Res.	B	67	1	15305 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-17077	Res.	B	67	1	15102 E 43RD PL S	No	51.3	51.5	50.1	-1.2
R-17078	Res.	B	67	1	15106 E 43RD PL S	No	50.0	50.0	50.0	0.0
R-17079	Res.	B	67	1	15110 E 43RD PL S	No	50.0	50.0	50.0	0.0
R-17080	Res.	B	67	1	15114 E 43RD PL S	No	50.0	50.0	50.0	0.0
R-17081	Res.	B	67	1	15118 E 43RD PL S	No	50.0	50.0	50.0	0.0
R-17082	Res.	B	67	1	15202 E 43RD PL S	No	50.0	50.0	50.0	0.0
R-17083	Res.	B	67	1	15206 E 43RD PL S	No	50.0	50.0	50.0	0.0
R-17084	Res.	B	67	1	15210 E 43RD PL S	No	50.0	50.0	50.0	0.0
R-17085	Res.	B	67	1	15214 E 43RD PL S	No	50.0	50.0	50.0	0.0
R-17086	Res.	B	67	1	15302 E 43RD PL S	No	50.0	50.0	50.0	0.0
R-17087	Res.	B	67	1	15306 E 43RD PL S	No	50.0	50.0	50.0	0.0
R-17088	Res.	B	67	1	15310 E 43RD PL S	No	50.0	50.0	50.0	0.0
R-17089	Res.	B	67	1	15314 E 43RD PL S	No	50.0	50.0	50.0	0.0
R-17090	Res.	B	67	1	15404 E 42ND PL S	Yes	67.8	68.0	71.1	3.3
R-17091	Res.	B	67	1	15408 E 42ND PL S	Yes	71.5	71.7	74.3	2.8
R-17092	Res.	B	67	1	15412 E 42ND PL S	Yes	72.8	73.0	75.5	2.7
R-17093	Res.	B	67	1	15416 E 42ND PL S	Yes	72.7	72.8	75.3	2.6
R-17094	Res.	B	67	1	15500 E 42ND PL S	Yes	73.0	73.1	75.3	2.3
R-17095	Res.	B	67	1	15504 E 42ND PL S	Yes	72.9	73.0	75.3	2.4
R-17096	Res.	B	67	1	15508 E 42ND PL S	Yes	72.9	73.0	75.2	2.3
R-17097	Res.	B	67	1	15512 E 42ND PL S	Yes	73.3	73.4	75.4	2.1
R-17098	Res.	B	67	1	15516 E 42ND PL S	Yes	73.5	73.6	75.5	2.0
R-17099	Res.	B	67	1	15600 E 42ND PL S	Yes	73.2	73.3	75.4	2.2
R-17100	Res.	B	67	1	15604 E 42ND PL S	Yes	73.7	73.8	75.6	1.9
R-17101	Res.	B	67	1	15608 E 42ND PL S	Yes	73.7	73.8	75.6	1.9
R-17102	Res.	B	67	1	15612 E 42ND PL S	Yes	73.8	73.9	75.6	1.8
R-17103	Res.	B	67	1	15700 E 42ND PL S	Yes	73.6	73.7	75.6	2.0
R-17104	Res.	B	67	1	15704 E 42ND PL S	Yes	74.1	74.2	75.9	1.8
R-17105	Res.	B	67	1	15708 E 42ND PL S	Yes	74.2	74.3	76.0	1.8
R-17106	Res.	B	67	1	15712 E 42ND PL S	Yes	74.8	74.9	76.5	1.7
R-17107	Res.	B	67	1	15800 E 42ND PL S	Yes	74.7	74.8	76.6	1.9
R-17108	Res.	B	67	1	15804 E 42ND PL S	No	72.1	72.3	74.8	2.7
R-17109	Res.	B	67	1	15805 E 42ND PL S	No	68.6	68.8	71.4	2.8
R-17110	Res.	B	67	1	15801 E 42ND PL S	No	69.2	69.4	71.4	2.2
R-17111	Res.	B	67	1	15413 E 42ND PL S	No	65.2	65.4	67.6	2.4
R-17112	Res.	B	67	1	15417 E 42ND PL S	No	67.4	67.6	69.8	2.4
R-17113	Res.	B	67	1	15501 E 42ND PL S	No	68.2	68.4	70.6	2.4
R-17114	Res.	B	67	1	15505 E 42ND PL S	No	67.0	67.1	69.3	2.3
R-17115	Res.	B	67	1	15509 E 42ND PL S	No	66.9	67.1	69.5	2.6
R-17116	Res.	B	67	1	15513 E 42ND PL S	No	67.4	67.5	69.8	2.4
R-17117	Res.	B	67	1	15517 E 42ND PL S	No	69.4	69.5	71.6	2.2
R-17118	Res.	B	67	1	15601 E 42ND PL S	No	69.4	69.6	71.6	2.2
R-17119	Res.	B	67	1	15605 E 42ND PL S	No	69.7	69.8	71.7	2.0
R-17120	Res.	B	67	1	15609 E 42ND PL S	No	70.0	70.1	71.9	1.9
R-17121	Res.	B	67	1	4220 S STAYTON AVE	No	69.6	69.7	71.7	2.1
R-17122	Res.	B	67	1	15406 E 42ND TER S	No	64.2	64.5	67.0	2.8
R-17123	Res.	B	67	1	15410 E 42ND TER S	No	62.4	62.6	64.7	2.3
R-17124	Res.	B	67	1	15414 E 42ND TER S	No	62.4	62.6	64.7	2.3
R-17125	Res.	B	67	1	15502 E 42ND TER S	No	62.8	63.0	65.2	2.4
R-17126	Res.	B	67	1	15506 E 42ND TER S	No	63.6	63.8	65.9	2.3
R-17127	Res.	B	67	1	15510 E 42ND TER S	No	64.3	64.5	66.6	2.3
R-17128	Res.	B	67	1	15514 E 42ND TER S	No	65.0	65.2	67.2	2.2
R-17129	Res.	B	67	1	15518 E 42ND TER S	No	65.6	65.7	67.7	2.1
R-17130	Res.	B	67	1	15602 E 42ND TER S	No	65.6	65.8	67.8	2.2
R-17131	Res.	B	67	1	15606 E 42ND TER S	No	65.1	65.3	67.5	2.4
R-17132	Res.	B	67	1	15610 E 42ND TER S	No	65.0	65.1	67.4	2.4
R-17133	Res.	B	67	1	15614 E 42ND TER S	No	64.5	64.6	66.9	2.4
R-17134	Res.	B	67	1	4224 S STAYTON AVE	No	62.5	62.7	64.8	2.3

Table B-17: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 17										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-17135	Res.	B	67	1	4222 S STAYTON AVE	No	64.1	64.3	66.4	2.3
R-17136	Res.	B	67	1	4221 S STAYTON AVE	No	69.2	69.4	71.4	2.2
R-17137	Res.	B	67	1	4223 S STAYTON AVE	No	65.2	65.3	67.5	2.3
R-17138	Res.	B	67	1	4225 S STAYTON AVE	No	64.8	65.0	67.2	2.4
R-17139	Res.	B	67	1	4227 S STAYTON AVE	No	65.0	65.2	67.5	2.5
R-17140	Res.	B	67	1	4229 S STAYTON AVE	No	65.1	65.3	67.7	2.6
R-17141	Res.	B	67	1	4221 S SAVILLE AVE	No	58.1	58.4	60.3	2.2
R-17142	Res.	B	67	1	4225 S SAVILLE AVE	No	50.7	51.0	52.1	1.4
R-17143	Res.	B	67	1	4229 S SAVILLE AVE	No	50.0	50.0	50.0	0.0
R-17144	Res.	B	67	1	15407 E 42ND TER S	No	53.9	54.2	55.1	1.2
R-17145	Res.	B	67	1	15411 E 42ND TER S	No	56.3	56.5	57.8	1.5
R-17146	Res.	B	67	1	15415 E 42ND TER S	No	57.0	57.3	58.7	1.7
R-17147	Res.	B	67	1	15503 E 42ND TER S	No	57.6	57.9	59.5	1.9
R-17148	Res.	B	67	1	15507 E 42ND TER S	No	58.7	58.9	60.7	2.0
R-17149	Res.	B	67	1	15511 E 42ND TER S	No	59.8	60.0	61.9	2.1
R-17150	Res.	B	67	1	15515 E 42ND TER S	No	60.5	60.7	62.6	2.1
R-17151	Res.	B	67	1	15519 E 42ND TER S	No	61.0	61.2	63.1	2.1
R-17152	Res.	B	67	1	15603 E 42ND TER S	No	60.2	60.4	62.2	2.0
R-17153	Res.	B	67	1	15607 E 42ND TER S	No	60.7	60.9	62.7	2.0
R-17154	Res.	B	67	1	15611 E 42ND TER S	No	60.7	60.8	62.5	1.8
R-17155	Res.	B	67	1	15615 E 42ND TER S	No	61.4	61.6	63.4	2.0
R-17156	Res.	B	67	1	15701 E 42ND TER S	No	62.3	62.4	64.5	2.2
R-17157	Res.	B	67	1	4226 S STAYTON AVE	No	62.6	62.8	64.9	2.3
R-17158	Res.	B	67	1	4228 S STAYTON AVE	No	63.6	63.8	65.7	2.1
R-17159	Res.	B	67	7	4000 S LEES SUMMIT RD	No	63.1	63.3	65.4	2.3
R-17160	Res.	B	67	1	4231 S STAYTON AVE	No	62.1	62.3	64.8	2.7
R-17161	Res.	B	67	1	15404 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-17162	Res.	B	67	1	15408 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-17163	Res.	B	67	1	15412 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-17164	Res.	B	67	1	15416 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-17165	Res.	B	67	1	15500 E 43RD ST S	No	50.3	50.6	51.0	0.7
R-17166	Res.	B	67	1	15504 E 43RD ST S	No	55.4	55.6	56.8	1.4
R-17167	Res.	B	67	1	15508 E 43RD ST S	No	57.2	57.4	58.9	1.7
R-17168	Res.	B	67	1	15512 E 43RD ST S	No	57.9	58.1	59.5	1.6
R-17169	Res.	B	67	1	15600 E 43RD ST S	No	58.7	58.9	60.4	1.7
R-17170	Res.	B	67	1	15604 E 43RD ST S	No	59.3	59.5	61.0	1.7
R-17171	Res.	B	67	1	15608 E 43RD ST S	No	60.0	60.2	61.8	1.8
R-17172	Res.	B	67	1	15612 E 43RD ST S	No	60.4	60.6	62.2	1.8
R-17173	Res.	B	67	1	15616 E 43RD ST S	No	61.0	61.2	62.9	1.9
R-17174	Res.	B	67	1	15700 E 43RD ST S	No	61.0	61.2	63.0	2.0
R-17175	Res.	B	67	1	15704 E 43RD ST S	No	60.9	61.1	63.0	2.1
R-17176	Res.	B	67	1	15708 E 43RD ST S	No	60.6	60.8	62.8	2.2
R-17177	Res.	B	67	1	15712 E 43RD ST S	No	60.8	61.0	63.0	2.2
R-17178	Res.	B	67	1	15800 E 43RD ST S	No	60.7	60.9	63.0	2.3
R-17179	Res.	B	67	1	4233 S STAYTON AVE	No	60.3	60.5	63.2	2.9
R-17180	Park	C	67	9	15901 E 42ND TER S	No	62.6	62.8	64.1	1.5
R-17181	Res.	B	67	1	4230 S STAYTON AVE	No	63.4	63.6	66.8	3.4
R-17182	Res.	B	67	1	4232 S STAYTON AVE	No	62.6	62.8	66.1	3.5
R-17183	Res.	B	67	1	4234 S STAYTON AVE	No	61.8	62.0	65.3	3.5
R-17184	Res.	B	67	1	15900 E 43RD ST S	No	61.0	61.2	62.7	1.7
R-17185	Res.	B	67	1	15904 E 43RD ST S	No	60.5	60.7	62.3	1.8
R-17186	Res.	B	67	1	15908 E 43RD ST S	No	59.9	60.1	61.7	1.8
R-17187	Res.	B	67	1	15912 E 43RD ST S	No	58.4	58.6	60.2	1.8
Predicted NSA 17 Traffic Noise Impacts									65	

Table B-18: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 18										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-18001	Res.	B	67	1	3924 S CARRIAGE LN	No	58.6	58.7	59.7	1.1
R-18002	Res.	B	67	1	16404 E 40TH ST S	No	61.2	61.3	62.2	1.0
R-18003	Res.	B	67	1	16408 E 40TH ST S	No	58.9	59.1	60.3	1.4
R-18004	Res.	B	67	1	3925 S CARRIAGE LN	No	54.9	55.2	56.7	1.8
R-18005	Res.	B	67	1	3924 S BRYANT DR	No	53.2	53.5	55.3	2.1
R-18006	Res.	B	67	1	3929 S CARRIAGE LN	No	56.4	56.6	58.4	2.0
R-18007	Res.	B	67	1	16504 E 40TH ST S	No	56.4	56.6	58.2	1.8
R-18008	Res.	B	67	1	16508 E 40TH ST S	No	55.4	55.7	57.6	2.2
R-18009	Res.	B	67	1	3925 S BRYANT DR	No	53.0	53.3	54.8	1.8
R-18010	Res.	B	67	1	3924 S MILTON DR	No	51.7	52.0	53.4	1.7
R-18011	Res.	B	67	1	16600 E 40TH ST S	No	54.0	54.3	55.8	1.8
R-18012	Res.	B	67	1	16604 E 40TH ST S	No	54.7	55.0	56.5	1.8
R-18013	Res.	B	67	1	16608 E 40TH ST S	No	53.7	53.9	55.3	1.6
R-18014	Res.	B	67	1	16401 E 40TH ST S	No	64.5	64.6	65.1	0.6
R-18015	Res.	B	67	1	16405 E 40TH ST S	No	61.6	61.7	62.7	1.1
R-18016	Res.	B	67	1	16409 E 40TH ST S	No	60.1	60.3	61.6	1.5
R-18017	Res.	B	67	1	16413 E 40TH ST S	No	59.4	59.6	61.2	1.8
R-18018	Res.	B	67	1	16501 E 40TH ST S	No	59.6	59.8	61.3	1.7
R-18019	Res.	B	67	1	16505 E 40TH ST S	No	59.2	59.4	61.0	1.8
R-18020	Res.	B	67	1	16509 E 40TH ST S	No	58.5	58.7	60.7	2.2
R-18021	Res.	B	67	1	16513 E 40TH ST S	No	57.9	58.2	59.6	1.7
R-18022	Res.	B	67	1	16517 E 40TH ST S	No	56.5	56.7	58.3	1.8
R-18023	Res.	B	67	1	16601 E 40TH ST S	No	54.5	54.8	56.2	1.7
R-18024	Res.	B	67	1	4000 S MILTON DR	No	52.3	52.6	53.5	1.2
R-18025	Res.	B	67	1	4019 S LEES SUMMIT RD	No	60.3	60.5	62.1	1.8
R-18026	Res.	B	67	1	4029 S LEES SUMMIT RD	No	61.4	61.7	63.5	2.1
R-18027	Res.	B	67	1	4035 S LEES SUMMIT RD	No	64.5	64.7	66.9	2.4
R-18028	Res.	B	67	1	4020 S SURREY LN	No	52.4	52.7	54.0	1.6
R-18029	Res.	B	67	1	4022 S SURREY LN	No	53.6	53.9	55.5	1.9
R-18030	Res.	B	67	1	4024 S SURREY LN	No	55.5	55.8	57.3	1.8
R-18031	Res.	B	67	1	4028 S SURREY LN	No	57.4	57.7	59.6	2.2
R-18032	Res.	B	67	1	4032 S SURREY LN	No	61.2	61.4	63.8	2.6
R-18033	Res.	B	67	1	4036 S SURREY LN	No	64.2	64.4	66.8	2.6
R-18034	Res.	B	67	1	16509 E 41ST ST S	Yes	65.8	66.0	69.3	3.5
R-18035	Res.	B	67	1	3925 S MILTON DR	No	50.0	50.0	50.7	0.7
R-18036	Res.	B	67	1	3929 S MILTON DR	No	50.5	50.8	51.8	1.3
R-18037	Res.	B	67	1	3933 S MILTON DR	No	51.7	52.0	53.0	1.3
R-18038	Res.	B	67	1	4001 S MILTON DR	No	54.2	54.5	56.0	1.8
R-18039	Res.	B	67	1	4005 S MILTON DR	No	54.4	54.7	56.4	2.0
R-18040	Res.	B	67	1	4009 S MILTON DR	No	54.1	54.4	56.4	2.3
R-18041	Res.	B	67	1	4013 S MILTON DR	No	52.5	52.8	54.8	2.3
R-18042	Res.	B	67	1	3924 S COACHMAN DR	No	50.0	50.0	50.3	0.3
R-18043	Res.	B	67	1	3928 S COACHMAN DR	No	50.9	51.2	52.5	1.6
R-18044	Res.	B	67	1	3932 S COACHMAN DR	No	50.7	51.0	52.1	1.4
R-18045	Res.	B	67	1	3936 S COACHMAN DR	No	52.2	52.5	54.1	1.9
R-18046	Res.	B	67	1	4019 S SURREY LN	No	54.4	54.7	55.9	1.5
R-18047	Res.	B	67	1	4021 S SURREY LN	No	53.9	54.2	55.3	1.4
R-18048	Res.	B	67	1	4023 S SURREY LN	No	56.5	56.8	58.6	2.1
R-18049	Res.	B	67	1	4027 S SURREY LN	No	57.7	58.0	60.2	2.5
R-18050	Res.	B	67	1	4004 S MILTON DR	No	53.6	53.9	54.9	1.3
R-18051	Res.	B	67	1	4006 S MILTON DR	No	54.3	54.6	55.7	1.4
R-18052	Res.	B	67	1	4008 S MILTON DR	No	53.8	54.1	54.7	0.9
R-18053	Res.	B	67	1	4010 S MILTON DR	No	52.6	52.9	53.8	1.2
R-18054	Res.	B	67	1	16604 E 41ST ST S	No	58.3	58.6	60.3	2.0
R-18055	Res.	B	67	1	16608 E 41ST ST S	No	58.4	58.7	60.6	2.2
R-18056	Res.	B	67	1	16700 E 41ST ST S	No	56.8	57.1	58.3	1.5
R-18057	Res.	B	67	1	16704 E 41ST ST S	No	58.4	58.7	60.1	1.7
R-18058	Res.	B	67	1	16708 E 41ST ST S	No	57.9	58.2	59.5	1.6
R-18059	Res.	B	67	1	16712 E 41ST ST S	No	58.1	58.4	59.7	1.6
R-18060	Res.	B	67	1	3925 S COACHMAN DR	No	55.5	55.7	57.7	2.2
R-18061	Res.	B	67	1	3929 S COACHMAN DR	No	56.5	56.8	58.5	2.0
R-18062	Res.	B	67	1	3933 S COACHMAN DR	No	56.5	56.8	58.5	2.0
R-18063	Res.	B	67	1	3937 S COACHMAN DR	No	56.9	57.2	58.9	2.0
R-18064	Res.	B	67	1	3941 S COACHMAN DR	No	56.1	56.4	58.4	2.3
R-18065	Res.	B	67	1	3945 S COACHMAN DR	No	55.6	55.9	58.2	2.6
R-18066	Res.	B	67	1	4001 S COACHMAN DR	No	51.4	51.7	53.7	2.3
R-18067	Res.	B	67	1	4005 S COACHMAN DR	No	54.2	54.5	56.0	1.8

Table B-18: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 18										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-18068	Res.	B	67	1	4009 S COACHMAN DR	No	58.1	58.4	59.7	1.6
R-18069	Res.	B	67	1	16601 E 41ST ST S	Yes	74.6	74.9	76.2	1.6
R-18070	Res.	B	67	1	16605 E 41ST ST S	Yes	72.8	73.0	75.7	2.9
R-18071	Res.	B	67	1	16609 E 41ST ST S	Yes	67.0	67.2	70.3	3.3
R-18072	Res.	B	67	1	16613 E 41ST ST S	Yes	65.2	65.5	69.1	3.9
R-18073	Res.	B	67	1	16701 E 41ST ST S	Yes	63.0	63.3	65.8	2.8
R-18074	Res.	B	67	1	16705 E 41ST ST S	Yes	61.7	62.0	64.3	2.6
R-18075	Res.	B	67	1	16709 E 41ST ST S	Yes	60.4	60.7	61.5	1.1
R-18076	Res.	B	67	1	16713 E 41ST ST S	Yes	61.2	61.5	63.4	2.2
R-18077	Res.	B	67	1	16801 E 41ST ST S	Yes	61.1	61.3	63.6	2.5
R-18078	Res.	B	67	1	16805 E 41ST ST S	Yes	60.4	60.7	63.0	2.6
R-18079	Res.	B	67	1	16809 E 41ST ST S	Yes	61.0	61.2	63.7	2.7
R-18080	Res.	B	67	1	16811 E 41ST ST S	Yes	60.3	60.6	63.6	3.3
R-18081	Res.	B	67	1	16813 E 41ST ST S	Yes	58.7	59.0	62.7	4.0
R-18082	Res.	B	67	1	16815 E 41ST ST S	Yes	58.7	59.0	62.5	3.8
R-18083	Res.	B	67	1	16817 E 41ST ST S	Yes	58.4	58.8	61.7	3.3
R-18084	Res.	B	67	1	16819 E 41ST ST S	Yes	60.0	60.4	63.0	3.0
R-18085	Res.	B	67	1	16821 E 41ST ST S	Yes	61.3	61.6	64.0	2.7
R-18086	Res.	B	67	1	16823 E 41ST ST S	Yes	61.3	61.6	63.6	2.3
R-18087	Res.	B	67	1	16825 E 41ST ST S	Yes	62.7	63.1	64.8	2.1
R-18088	Res.	B	67	1	16827 E 41ST ST S	Yes	62.5	62.8	64.6	2.1
R-18089	Res.	B	67	1	16829 E 41ST ST S	Yes	65.3	65.6	67.7	2.4
R-18090	Res.	B	67	1	16831 E 41ST ST S	Yes	65.2	65.5	67.1	1.9
R-18091	Res.	B	67	1	16812 E 41ST ST S	No	59.6	59.9	61.4	1.8
R-18092	Res.	B	67	1	16814 E 41ST ST S	No	59.2	59.6	61.0	1.8
R-18093	Res.	B	67	1	16816 E 41ST ST S	No	59.9	60.2	61.8	1.9
R-18094	Res.	B	67	1	16818 E 41ST ST S	No	60.3	60.7	62.3	2.0
R-18095	Res.	B	67	1	16820 E 41ST ST S	No	60.9	61.2	63.0	2.1
R-18096	Res.	B	67	1	16822 E 41ST ST S	No	61.3	61.7	63.9	2.6
R-18097	Res.	B	67	1	16824 E 41ST ST S	No	61.3	61.6	64.7	3.4
R-18098	Res.	B	67	1	16826 E 41ST ST S	No	62.2	62.5	65.4	3.2
R-18099	Res.	B	67	1	16828 E 41ST ST S	No	61.9	62.2	63.5	1.6
R-18100	Res.	B	67	1	16830 E 41ST ST S	No	63.3	63.6	64.4	1.1
R-18101	Res.	B	67	1	16811 E 40TH TER S	No	51.0	51.3	53.5	2.5
R-18102	Res.	B	67	1	16815 E 40TH TER S	No	55.4	55.8	58.6	3.2
R-18103	Res.	B	67	1	16817 E 40TH TER S	No	57.1	57.4	60.3	3.2
R-18104	Res.	B	67	1	16819 E 40TH TER S	No	58.4	58.7	61.4	3.0
R-18105	Res.	B	67	1	16821 E 40TH TER S	No	59.4	59.7	62.3	2.9
R-18106	Res.	B	67	1	16823 E 40TH TER S	No	59.9	60.2	62.9	3.0
R-18107	Res.	B	67	1	16825 E 40TH TER S	No	60.0	60.3	62.0	2.0
R-18108	Res.	B	67	1	16827 E 40TH TER S	No	60.2	60.5	61.6	1.4
R-18109	Res.	B	67	1	16829 E 40TH TER S	No	60.4	60.7	61.7	1.3
R-18110	Res.	B	67	1	16831 E 40TH TER S	No	60.6	61.0	61.8	1.2
R-18111	Res.	B	67	1	4010 S COLONIAL DR	No	53.3	53.6	56.1	2.8
R-18112	Res.	B	67	1	4008 S COLONIAL DR	No	54.6	54.9	57.3	2.7
R-18113	Res.	B	67	1	4006 S COLONIAL DR	No	52.8	53.1	55.3	2.5
R-18114	Res.	B	67	1	4004 S COLONIAL DR	No	53.6	53.9	56.3	2.7
R-18115	Res.	B	67	1	4002 S COLONIAL DR	No	53.4	53.7	55.6	2.2
R-18116	Res.	B	67	1	4001 S COLONIAL DR	No	54.8	55.1	57.3	2.5
R-18117	Res.	B	67	1	4003 S COLONIAL DR	No	55.3	55.6	57.9	2.6
R-18118	Res.	B	67	1	4005 S COLONIAL DR	No	55.3	55.6	56.8	1.5
R-18119	Res.	B	67	1	4007 S COLONIAL DR	No	54.7	55.1	56.4	1.7
R-18120	Res.	B	67	1	4009 S COLONIAL DR	No	53.4	53.7	55.0	1.6
R-18121	Res.	B	67	1	4011 S COLONIAL DR	No	53.7	54.0	55.6	1.9
R-18122	Park	C	67	12	16900 E 40TH TER S	No	57.0	57.3	58.4	1.4
R-18123	Res.	B	67	1	4012 S MARSHALL DR	No	58.8	59.1	60.1	1.3
R-18124	Res.	B	67	1	4014 S MARSHALL DR	No	59.4	59.7	60.7	1.3
R-18125	Res.	B	67	1	4016 S MARSHALL DR	No	63.6	63.9	64.5	0.9
R-18126	Res.	B	67	1	3922 S HARBAUGH DR	No	59.6	59.9	61.9	2.3
R-18127	Res.	B	67	1	3924 S HARBAUGH DR	No	60.1	60.4	62.4	2.3
R-18128	Res.	B	67	1	3926 S HARBAUGH DR	No	60.4	60.7	62.8	2.4
R-18129	Res.	B	67	1	3928 S HARBAUGH DR	No	61.0	61.3	63.4	2.4
R-18130	Res.	B	67	1	3930 S HARBAUGH DR	No	61.4	61.7	63.8	2.4
R-18131	Res.	B	67	1	3932 S HARBAUGH DR	No	61.7	62.0	64.2	2.5
R-18132	Res.	B	67	1	4002 S MASTERBROOKE DR	No	61.4	61.7	64.0	2.6
R-18133	Res.	B	67	1	4008 S MASTERBROOKE DR	No	62.3	62.6	64.8	2.5
R-18134	Res.	B	67	1	16905 E 40TH TER S	No	62.5	62.8	63.2	0.7

Table B-18: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 18										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-18135	Res.	B	67	1	16907 E 40TH TER S	No	62.9	63.2	63.9	1.0
R-18136	Res.	B	67	1	16909 E 40TH TER S	No	62.7	63.0	63.8	1.1
R-18137	Res.	B	67	1	4009 S MASTERBROOKE DR	No	62.4	62.7	63.6	1.2
R-18138	Res.	B	67	1	4007 S MASTERBROOKE DR	No	61.9	62.2	63.2	1.3
R-18139	Res.	B	67	1	4005 S MASTERBROOKE DR	No	61.0	61.4	62.6	1.6
R-18140	Res.	B	67	1	4003 S MASTERBROOKE DR	No	60.0	60.3	61.8	1.8
R-18141	Res.	B	67	1	4001 S MASTERBROOKE DR	No	58.9	59.2	60.9	2.0
R-18142	Res.	B	67	1	3923 S MASTERBROOKE DR	No	57.5	57.8	60.0	2.5
R-18143	Res.	B	67	1	3921 S MASTERBROOKE DR	No	57.1	57.4	59.6	2.5
R-18144	Res.	B	67	1	4012 S BEDFORD AVE	No	56.7	57.0	59.4	2.7
R-18145	Res.	B	67	1	4016 S BEDFORD AVE	No	58.5	58.8	61.3	2.8
R-18146	Res.	B	67	1	4020 S BEDFORD AVE	No	59.9	60.2	62.6	2.7
R-18147	Res.	B	67	1	4024 S BEDFORD AVE	No	60.8	61.1	63.6	2.8
R-18148	Res.	B	67	1	4028 S BEDFORD AVE	No	62.9	63.2	65.3	2.4
R-18149	Res.	B	67	1	4032 S BEDFORD AVE	No	64.2	64.6	**66.6**	2.4
R-18150	Res.	B	67	1	4036 S BEDFORD AVE	No	66.0	66.3	**68.2**	2.2
R-18151	Res.	B	67	1	17201 E 41ST ST S	No	66.6	66.9	**68.7**	2.1
R-18152	Res.	B	67	1	17205 E 41ST ST S	No	66.5	66.8	**68.7**	2.2
R-18153	Res.	B	67	1	17209 E 41ST ST S	No	66.1	66.4	**68.6**	2.5
R-18154	Res.	B	67	1	17213 E 41ST ST S	No	65.9	66.2	**68.8**	2.9
R-18155	Res.	B	67	1	17217 E 41ST ST S	No	65.5	65.7	**68.5**	3.0
R-18156	Res.	B	67	1	17221 E 41ST ST S	No	64.5	64.8	**67.5**	3.0
R-18157	Res.	B	67	1	17225 E 41ST ST S	No	63.4	63.8	**66.1**	2.7
R-18158	Res.	B	67	1	17229 E 41ST ST S	No	62.9	63.3	65.7	2.8
R-18159	Res.	B	67	1	17233 E 41ST ST S	No	62.1	62.4	65.1	3.0
R-18160	Res.	B	67	1	4100 S COVENTRY DR	No	61.3	61.6	64.8	3.5
R-18161	Res.	B	67	1	4013 S BEDFORD AVE	No	55.1	55.4	57.6	2.5
R-18162	Res.	B	67	1	4017 S BEDFORD AVE	No	57.6	57.9	60.3	2.7
R-18163	Res.	B	67	1	4021 S BEDFORD AVE	No	57.8	58.1	60.6	2.8
R-18164	Res.	B	67	1	4025 S BEDFORD AVE	No	57.7	58.0	60.1	2.4
R-18165	Res.	B	67	1	4029 S BEDFORD AVE	No	59.1	59.4	61.4	2.3
R-18166	Res.	B	67	1	17204 E 41ST ST S	No	62.2	62.5	65.0	2.8
R-18167	Res.	B	67	1	17208 E 41ST ST S	No	61.3	61.6	64.3	3.0
R-18168	Res.	B	67	1	17212 E 41ST ST S	No	61.2	61.5	64.3	3.1
R-18169	Res.	B	67	1	17216 E 41ST ST S	No	60.0	60.3	63.0	3.0
R-18170	Res.	B	67	1	17222 E 41ST ST S	No	58.9	59.3	61.9	3.0
R-18171	Res.	B	67	1	17226 E 41ST ST S	No	57.6	57.9	61.0	3.4
R-18172	Res.	B	67	1	17230 E 41ST ST S	No	58.6	58.9	62.0	3.4
R-18173	Res.	B	67	1	17234 E 41ST ST S	No	57.3	57.6	60.7	3.4
R-18174	Res.	B	67	1	17230 E 40TH TER S	No	54.6	54.9	58.4	3.8
R-18175	Res.	B	67	1	17226 E 40TH TER S	No	54.9	55.3	58.3	3.4
R-18176	Res.	B	67	1	17222 E 40TH TER S	No	54.6	54.9	57.8	3.2
R-18177	Res.	B	67	1	17218 E 40TH TER S	No	54.1	54.5	57.5	3.4
R-18178	Res.	B	67	1	17214 E 40TH TER S	No	52.2	52.6	55.9	3.7
R-18179	Res.	B	67	1	17213 E 40TH TER S	No	59.0	59.3	61.4	2.4
R-18180	Res.	B	67	1	17217 E 40TH TER S	No	59.7	60.1	62.6	2.9
R-18181	Res.	B	67	1	17221 E 40TH TER S	No	59.1	59.5	61.7	2.6
R-18182	Res.	B	67	1	17225 E 40TH TER S	No	59.4	59.7	61.9	2.5
R-18183	Res.	B	67	1	17229 E 40TH TER S	No	59.0	59.4	61.8	2.8
R-18184	Res.	B	67	1	17233 E 40TH TER S	No	58.5	58.9	61.5	3.0
R-18185	Res.	B	67	1	17237 E 40TH TER S	No	57.3	57.6	60.7	3.4
R-18186	Res.	B	67	1	4017 S COVENTRY DR	No	57.3	57.6	60.9	3.6
R-18187	Res.	B	67	1	17305 E 40TH TER S	No	58.1	58.4	61.1	3.0
R-18188	Res.	B	67	1	17309 E 40TH TER S	No	58.7	59.0	61.1	2.4
R-18189	Res.	B	67	1	4017 S MAYBROOK AVE	No	58.0	58.3	60.3	2.3
R-18190	Res.	B	67	1	4013 S MAYBROOK AVE	No	59.1	59.4	60.9	1.8
R-18191	Res.	B	67	1	4021 S COVENTRY DR	No	59.0	59.3	62.0	3.0
R-18192	Res.	B	67	1	17304 E 41ST ST S	No	58.1	58.4	61.0	2.9
R-18193	Res.	B	67	1	17308 E 41ST ST S	No	58.7	59.1	61.2	2.5
R-18194	Res.	B	67	1	17312 E 41ST ST S	No	59.5	59.9	61.6	2.1
R-18195	Res.	B	67	1	17316 E 41ST ST S	No	60.6	61.0	62.8	2.2
R-18196	Res.	B	67	1	17320 E 41ST ST S	No	61.5	61.9	63.8	2.3
R-18197	Res.	B	67	1	4101 S COVENTRY DR	No	61.2	61.5	64.7	3.5
R-18198	Res.	B	67	1	17305 E 41ST ST S	No	61.8	62.2	65.0	3.2
R-18199	Res.	B	67	1	17309 E 41ST ST S	No	62.2	62.5	64.9	2.7
R-18200	Res.	B	67	1	17313 E 41ST ST S	No	62.5	62.8	65.5	3.0
R-18201	Res.	B	67	1	17317 E 41ST ST S	No	63.1	63.5	65.9	2.8

Table B-18: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 18										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-18202	Res.	B	67	1	17321 E 41ST ST S	No	63.2	63.5	65.9	2.7
R-18203	Res.	B	67	1	17325 E 41ST ST S	No	63.4	63.8	65.9	2.5
R-18204	Res.	B	67	1	4020 S CRACKERNECK RD	No	62.0	62.3	64.2	2.2
R-18205	Res.	B	67	1	4016 S CRACKERNECK RD	No	60.8	61.1	62.8	2.0
R-18206	Res.	B	67	1	4012 S CRACKERNECK RD	No	59.2	59.5	61.3	2.1
R-18207	Res.	B	67	1	4104 S CRACKERNECK RD	No	64.4	64.8	66.7	2.3
R-18208	Res.	B	67	1	4106 S CRACKERNECK RD	No	65.3	65.6	67.4	2.1
R-18209	Res.	B	67	1	4108 S CRACKERNECK RD	No	66.6	66.9	68.6	2.0
R-18210	Res.	B	67	1	4110 S CRACKERNECK RD	No	67.7	68.0	69.4	1.7
R-18211	Res.	B	67	1	17324 E 42ND ST S	No	69.2	69.6	71.4	2.2
R-18212	Res.	B	67	1	17326 E 42ND ST S	No	68.8	69.2	71.1	2.3
R-18213	Res.	B	67	1	17325 E 42ND ST S	Yes	72.5	72.9	75.8	3.3
R-18214	Res.	B	67	1	17327 E 42ND ST S	Yes	72.7	73.0	75.7	3.0
R-18215	Res.	B	67	1	17329 E 42ND ST S	Yes	73.3	73.7	75.8	2.5
R-18216	Res.	B	67	1	17331 E 42ND ST S	Yes	73.3	73.7	75.7	2.4
R-18217	Res.	B	67	1	17401 E 42ND ST S	Yes	73.8	74.2	75.8	2.0
R-18218	Res.	B	67	1	17403 E 42ND ST S	Yes	73.7	74.2	75.7	2.0
R-18219	Res.	B	67	1	17405 E 42ND ST S	Yes	73.5	73.9	75.5	2.0
R-18220	Res.	B	67	1	17407 E 42ND ST S	Yes	73.3	73.7	75.4	2.1
R-18221	Res.	B	67	1	17409 E 42ND ST S	Yes	72.8	73.2	75.0	2.2
R-18222	Res.	B	67	1	17411 E 42ND ST S	Yes	72.4	72.8	74.7	2.3
R-18223	Res.	B	67	1	17413 E 42ND ST S	Yes	73.5	73.9	76.5	3.0
R-18224	Res.	B	67	1	17415 E 42ND ST S	Yes	73.2	73.6	76.3	3.1
R-18225	Res.	B	67	1	17417 E 42ND ST S	Yes	73.4	73.7	76.4	3.0
R-18226	Res.	B	67	1	17419 E 42ND ST S	Yes	72.8	73.1	75.7	2.9
R-18227	Res.	B	67	1	17421 E 42ND ST S	Yes	73.6	73.9	76.8	3.2
R-18228	Res.	B	67	1	17423 E 42ND ST S	Yes	73.0	73.4	76.3	3.3
R-18229	Res.	B	67	1	17425 E 42ND ST S	No	71.0	71.5	73.6	2.6
R-18230	Res.	B	67	1	17427 E 42ND ST S	No	70.4	70.9	72.8	2.4
R-18231	Res.	B	67	1	17400 E 42ND ST S	No	68.8	69.2	70.7	1.9
R-18232	Res.	B	67	1	17402 E 42ND ST S	No	68.1	68.5	70.1	2.0
R-18233	Res.	B	67	1	17404 E 42ND ST S	No	68.2	68.6	70.1	1.9
R-18234	Res.	B	67	1	17406 E 42ND ST S	No	68.4	68.8	70.7	2.3
R-18235	Res.	B	67	1	17408 E 42ND ST S	No	67.3	67.6	69.6	2.3
R-18236	Res.	B	67	1	17410 E 42ND ST S	No	66.8	67.2	69.2	2.4
R-18237	Res.	B	67	1	17412 E 42ND ST S	No	66.7	67.1	69.4	2.7
R-18238	Res.	B	67	1	17414 E 42ND ST S	No	66.5	66.9	69.2	2.7
R-18239	Res.	B	67	1	4105 S CRACKERNECK RD	No	66.5	66.9	69.0	2.5
R-18240	Res.	B	67	1	4107 S CRACKERNECK RD	No	67.0	67.3	69.4	2.4
R-18241	Res.	B	67	1	17405 E 41ST TER S	No	66.9	67.3	69.3	2.4
R-18242	Res.	B	67	1	17407 E 41ST TER S	No	66.6	67.0	69.0	2.4
R-18243	Res.	B	67	1	17409 E 41ST TER S	No	66.1	66.5	68.6	2.5
R-18244	Res.	B	67	1	17411 E 41ST TER S	No	66.0	66.4	68.5	2.5
R-18245	Res.	B	67	1	17413 E 41ST TER S	No	64.0	64.4	66.6	2.6
R-18246	Res.	B	67	1	17415 E 41ST TER S	No	64.4	64.8	67.0	2.6
R-18247	Res.	B	67	1	17420 E 41ST TER S	No	62.7	63.2	64.9	2.2
R-18248	Res.	B	67	1	17422 E 41ST TER S	No	62.3	62.9	64.2	1.9
R-18249	Res.	B	67	1	17424 E 41ST TER S	No	63.7	64.2	66.0	2.3
R-18250	Res.	B	67	1	17426 E 41ST TER S	No	64.4	64.9	66.8	2.4
R-18251	Res.	B	67	1	17428 E 41ST TER S	No	65.4	65.8	67.8	2.4
R-18252	Res.	B	67	1	17430 E 41ST TER S	No	66.2	66.6	68.5	2.3
R-18253	Res.	B	67	1	17432 E 41ST TER S	No	66.4	66.8	69.0	2.6
R-18254	Res.	B	67	1	17434 E 41ST TER S	No	67.1	67.5	69.7	2.6
R-18255	Res.	B	67	2	4009 S CRACKERNECK RD UNITS A_F	No	50.0	50.0	50.0	0.0
R-18256	Res.	B	67	2	4009 S CRACKERNECK RD UNITS B_E	No	50.0	50.0	50.0	0.0
R-18257	Res.	B	67	2	4009 S CRACKERNECK RD UNITS C_D	No	52.5	53.0	54.2	1.7
R-18258	Res.	B	67	2	4015 S CRACKERNECK RD UNITS A_F	No	50.7	51.2	53.9	3.2
R-18259	Res.	B	67	2	4015 S CRACKERNECK RD UNITS B_E	No	54.0	54.5	55.9	1.9
R-18260	Res.	B	67	2	4015 S CRACKERNECK RD UNITS C_D	No	56.2	56.7	57.9	1.7
R-18261	Res.	B	67	2	4021 S CRACKERNECK RD UNITS A_F	No	54.0	54.5	56.3	2.3
R-18262	Res.	B	67	2	4021 S CRACKERNECK RD UNITS B_E	No	56.9	57.5	58.9	2.0
R-18263	Res.	B	67	2	4021 S CRACKERNECK RD UNITS C_D	No	58.7	59.2	60.4	1.7
R-18264	Res.	B	67	2	17401 E 41ST ST S UNTIS A_F	No	50.0	50.0	50.0	0.0
R-18265	Res.	B	67	2	17401 E 41ST ST S UNITS B_E	No	50.0	50.5	50.0	0.0
R-18266	Res.	B	67	2	17401 E 41ST ST S UNITS C_D	No	51.5	52.0	50.1	-1.4
R-18267	Res.	B	67	2	17409 E 41ST ST S UNITS A_F	No	50.0	50.0	50.0	0.0
R-18268	Res.	B	67	2	17409 E 41ST ST S UNITS B_E	No	50.0	50.0	50.0	0.0

Table B-18: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 18										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-18269	Res.	B	67	2	17409 E 41ST ST S UNITS C_D	No	50.0	50.0	50.0	0.0
R-18270	Res.	B	67	2	17415 E 41ST ST S UNITS A_F	No	50.0	50.0	50.0	0.0
R-18271	Res.	B	67	2	17415 E 41ST ST S UNITS B_E	No	50.0	50.0	50.0	0.0
R-18272	Res.	B	67	2	17415 E 41ST ST S UNITS C_D	No	50.0	50.0	50.0	0.0
R-18273	Res.	B	67	2	4008 S REDWOOD DR UNITS A_F	No	55.3	55.8	57.6	2.3
R-18274	Res.	B	67	2	4008 S REDWOOD DR UNITS B_E	No	58.1	58.7	60.0	1.9
R-18275	Res.	B	67	2	4008 S REDWOOD DR UNITS C_D	No	59.2	59.7	60.7	1.5
R-18276	Res.	B	67	2	4016 S REDWOOD DR UNITS A_F	No	56.1	56.5	58.0	1.9
R-18277	Res.	B	67	2	4016 S REDWOOD DR UNITS B_E	No	58.9	59.4	60.4	1.5
R-18278	Res.	B	67	2	4016 S REDWOOD DR UNITS C_D	No	59.9	60.3	61.1	1.2
R-18279	Res.	B	67	2	4022 S REDWOOD DR UNITS A_F	No	55.8	56.4	58.3	2.5
R-18280	Res.	B	67	2	4022 S REDWOOD DR UNITS B_E	No	58.9	59.4	60.6	1.7
R-18281	Res.	B	67	2	4022 S REDWOOD DR UNITS C_D	No	59.8	60.4	61.2	1.4
R-18282	Res.	B	67	2	4011 S CEDAR CREST DR APTS 121_122	No	52.5	53.1	54.8	2.3
R-18283	Res.	B	67	2	4011 S CEDAR CREST DR APTS 123_124	No	55.0	55.5	57.1	2.1
R-18284	Res.	B	67	2	4011 S CEDAR CREST DR APTS 125_126	No	57.4	58.0	59.9	2.5
R-18285	Res.	B	67	2	4011 S CEDAR CREST DR APTS 127_128	No	59.4	60.0	61.8	2.4
R-18286	Res.	B	67	2	4011 S CEDAR CREST DR APTS 129_130	No	58.2	58.7	60.6	2.4
R-18287	Res.	B	67	2	4011 S CEDAR CREST DR APTS 131_132	No	60.2	60.7	62.5	2.3
Predicted NSA 18 Traffic Noise Impacts									**64**	

Table B-19: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 19										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-19001	Res.	B	67	1	4166 S CARRIAGE LN	No	63.1	63.2	63.3	0.2
R-19002	Res.	B	67	1	4160 S CARRIAGE LN	No	63.7	63.8	63.9	0.2
R-19003	Res.	B	67	1	4154 S CARRIAGE LN	No	63.8	63.9	64.1	0.3
R-19004	Res.	B	67	1	4148 S CARRIAGE LN	No	64.2	64.3	64.3	0.1
R-19005	Res.	B	67	1	4142 S CARRIAGE LN	No	64.2	64.3	64.4	0.2
R-19006	Res.	B	67	1	4136 S CARRIAGE LN	No	64.2	64.3	64.3	0.1
R-19007	Res.	B	67	1	4130 S CARRIAGE LN	No	64.7	64.8	65.1	0.4
R-19008	Res.	B	67	1	4124 S CARRIAGE LN	Yes	69.3	69.5	70.8	1.5
R-19009	Res.	B	67	1	4118 S CARRIAGE LN	Yes	71.4	71.6	73.3	1.9
R-19010	Res.	B	67	1	16516 E 41ST TER S	Yes	72.5	72.7	74.8	2.3
R-19011	Res.	B	67	1	16524 E 41ST TER S	Yes	72.7	72.8	75.2	2.5
R-19012	Res.	B	67	1	16532 E 41ST TER S	Yes	72.5	72.7	74.9	2.4
R-19013	Res.	B	67	1	16600 E 41ST TER S	Yes	72.4	72.6	75.9	3.5
R-19014	Res.	B	67	1	16608 E 41ST TER S	Yes	71.7	71.9	75.4	3.7
R-19015	Res.	B	67	1	16616 E 41ST TER S	Yes	71.3	71.5	75.0	3.7
R-19016	Res.	B	67	1	16624 E 41ST TER S	Yes	69.2	69.5	73.9	4.7
R-19017	Res.	B	67	1	16700 E 41ST TER S	Yes	68.0	68.3	73.0	5.0
R-19018	Res.	B	67	1	16706 E 41ST TER S	Yes	67.3	67.6	70.7	3.4
R-19019	Res.	B	67	1	4157 S CARRIAGE LN	No	60.0	60.1	60.2	0.2
R-19020	Res.	B	67	1	4149 S CARRIAGE LN	No	60.4	60.5	60.5	0.1
R-19021	Res.	B	67	1	4143 S CARRIAGE LN	No	61.5	61.7	62.0	0.5
R-19022	Res.	B	67	1	4133 S CARRIAGE LN	No	61.6	61.7	62.1	0.5
R-19023	Res.	B	67	1	4121 S CARRIAGE LN	No	62.2	62.4	63.0	0.8
R-19024	Res.	B	67	1	4163 S CARRIAGE LN	No	55.6	55.7	56.1	0.5
R-19025	Res.	B	67	1	4162 S BRYANT DR	No	57.6	57.7	58.0	0.4
R-19026	Res.	B	67	1	4156 S BRYANT DR	No	58.2	58.4	58.6	0.4
R-19027	Res.	B	67	1	4150 S BRYANT DR	No	59.1	59.3	59.8	0.7
R-19028	Res.	B	67	1	4142 S BRYANT DR	No	60.4	60.5	61.1	0.7
R-19029	Res.	B	67	1	4136 S BRYANT DR	No	61.4	61.6	62.3	0.9
R-19030	Res.	B	67	1	4130 S BRYANT DR	No	61.4	61.6	62.3	0.9
R-19031	Res.	B	67	1	16501 E 42ND ST S	No	57.6	57.7	58.0	0.4
R-19032	Res.	B	67	1	16509 E 42ND ST S	No	56.4	56.5	56.7	0.3
R-19033	Res.	B	67	1	16517 E 42ND ST S	No	55.7	55.8	56.2	0.5
R-19034	Res.	B	67	1	16604 E 42ND TER S	No	56.6	56.8	58.1	1.5
R-19035	Res.	B	67	1	16612 E 42ND TER S	No	56.5	56.7	57.8	1.3
R-19036	Res.	B	67	1	16620 E 42ND TER S	No	55.9	56.1	57.1	1.2
R-19037	Res.	B	67	1	4207 E 42ND WAY S	No	52.9	53.1	53.8	0.9
R-19038	Res.	B	67	1	4201 E 42ND WAY S	No	52.9	53.1	53.2	0.3
R-19039	Res.	B	67	1	4159 S BRYANT DR	No	51.6	51.7	52.0	0.4
R-19040	Res.	B	67	1	4153 S BRYANT DR	No	52.9	53.1	53.3	0.4
R-19041	Res.	B	67	1	4147 S BRYANT DR	No	53.7	53.8	54.0	0.3
R-19042	Res.	B	67	1	4141 S BRYANT DR	No	57.2	57.4	58.3	1.1
R-19043	Res.	B	67	1	16605 E 41ST TER S	No	60.7	60.9	61.6	0.9
R-19044	Res.	B	67	1	16613 E 41ST TER S	No	60.8	61.1	62.6	1.8
R-19045	Res.	B	67	1	16621 E 41ST TER S	No	60.6	60.8	62.3	1.7
R-19046	Res.	B	67	1	4200 S MILTON DR	No	52.7	52.9	53.7	1.0
R-19047	Res.	B	67	1	4166 S MILTON DR	No	52.9	53.1	53.7	0.8
R-19048	Res.	B	67	1	4160 S MILTON DR	No	53.3	53.5	53.9	0.6
R-19049	Res.	B	67	1	4154 S MILTON DR	No	53.6	53.9	54.5	0.9
R-19050	Res.	B	67	1	4148 S MILTON DR	No	53.9	54.2	54.7	0.8
R-19051	Res.	B	67	1	4142 S MILTON DR	No	55.1	55.4	56.1	1.0
R-19052	Res.	B	67	1	4213 S MILTON DR	No	53.9	54.2	55.5	1.6
R-19053	Res.	B	67	1	4207 S MILTON DR	No	53.2	53.4	54.8	1.6
R-19054	Res.	B	67	1	4201 S MILTON DR	No	53.4	53.6	54.8	1.4
R-19055	Res.	B	67	1	4167 S MILTON DR	No	53.1	53.3	54.4	1.3
R-19056	Res.	B	67	1	4161 S MILTON DR	No	53.0	53.2	54.2	1.2
R-19057	Res.	B	67	1	4155 S MILTON DR	No	53.3	53.5	54.7	1.4
R-19058	Res.	B	67	1	4149 S MILTON DR	No	53.2	53.5	54.6	1.4
R-19059	Res.	B	67	1	4143 S MILTON DR	No	54.1	54.4	55.7	1.6
R-19060	Res.	B	67	1	4137 S MILTON DR	No	55.2	55.5	56.4	1.2
R-19061	Res.	B	67	1	4131 S MILTON DR	No	56.7	57.0	57.8	1.1
R-19062	Res.	B	67	1	16800 E 41ST TER S	Yes	64.4	64.6	66.7	2.3
R-19063	Res.	B	67	1	16804 E 41ST TER S	Yes	64.4	64.6	67.2	2.8
R-19064	Res.	B	67	1	16808 E 41ST TER S	Yes	66.4	66.6	70.6	4.2
R-19065	Res.	B	67	1	16812 E 41ST TER S	Yes	69.1	69.4	73.8	4.7
R-19066	Res.	B	67	1	16816 E 41ST TER S	Yes	68.8	69.0	73.0	4.2
R-19067	Res.	B	67	1	16900 E 41ST TER S	Yes	68.4	68.6	71.6	3.2

Table B-19: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 19										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-19068	Res.	B	67	1	4110 S KERRINGTON DR	No	54.6	54.8	56.0	1.4
R-19069	Res.	B	67	1	4114 S KERRINGTON DR	No	51.3	51.5	52.5	1.2
R-19070	Res.	B	67	1	4118 S KERRINGTON DR	No	50.6	50.9	51.5	0.9
R-19071	Res.	B	67	1	4122 S KERRINGTON DR	No	50.0	50.0	50.0	0.0
R-19072	Res.	B	67	1	4126 S KERRINGTON DR	No	50.0	50.0	50.0	0.0
R-19073	Res.	B	67	1	16904 E 41ST TER S	No	69.0	69.1	71.3	2.3
R-19074	Res.	B	67	1	16908 E 41ST TER S	No	68.5	68.7	70.7	2.2
R-19075	Res.	B	67	1	16912 E 41ST TER S	No	67.5	67.7	69.9	2.4
R-19076	Res.	B	67	1	16916 E 41ST TER S	No	66.5	66.7	68.7	2.2
R-19077	Res.	B	67	1	16920 E 41ST TER S	No	60.5	60.7	62.7	2.2
R-19078	Res.	B	67	1	16915 E 41ST TER S	No	60.0	60.2	62.3	2.3
R-19079	Res.	B	67	1	16911 E 41ST TER S	No	61.4	61.6	63.8	2.4
R-19080	Res.	B	67	1	16905 E 41ST TER S	No	64.1	64.3	66.5	2.4
R-19081	Res.	B	67	1	16815 E 41ST TER S	No	64.3	64.5	66.8	2.5
R-19082	Res.	B	67	1	16811 E 41ST TER S	No	62.2	62.4	64.7	2.5
R-19083	Res.	B	67	1	4115 S KERRINGTON DR	No	52.7	52.9	53.5	0.8
R-19084	Res.	B	67	1	4119 S KERRINGTON DR	No	50.6	50.9	51.6	1.0
R-19085	Res.	B	67	1	4123 S KERRINGTON DR	No	50.0	50.0	50.4	0.4
R-19086	Res.	B	67	1	16810 E 42ND TER S	No	50.0	50.0	50.0	0.0
R-19087	Res.	B	67	1	16814 E 42ND TER S	No	50.0	50.0	50.0	0.0
R-19088	Res.	B	67	1	16818 E 42ND TER S	No	50.0	50.0	50.0	0.0
R-19089	Res.	B	67	1	16900 E 42ND TER S	No	51.1	51.3	53.7	2.6
R-19090	Res.	B	67	1	16904 E 42ND TER S	No	56.6	56.8	60.3	3.7
R-19091	Res.	B	67	1	16908 E 42ND TER S	No	61.1	61.3	63.7	2.6
R-19092	Res.	B	67	1	16912 E 42ND TER S	No	61.3	61.5	63.7	2.4
R-19093	Res.	B	67	1	4126 S MARSHALL DR	No	63.0	63.1	65.3	2.3
R-19094	Res.	B	67	1	4124 S MARSHALL DR	No	64.5	64.6	67.1	2.6
R-19095	Res.	B	67	1	4120 S MARSHALL DR	Yes	65.2	65.4	68.9	3.7
R-19096	Res.	B	67	1	4116 S MARSHALL DR	Yes	67.3	67.4	69.3	2.0
R-19097	Res.	B	67	1	4113 S MARSHALL DR	Yes	67.7	67.9	69.0	1.3
R-19098	Res.	B	67	1	4117 S MARSHALL DR	Yes	67.2	67.3	68.5	1.3
R-19099	Res.	B	67	1	4200 S KERRINGTON DR	No	50.0	50.0	50.0	0.0
R-19100	Res.	B	67	1	4204 S KERRINGTON DR	No	50.0	50.0	50.0	0.0
R-19101	Res.	B	67	1	4208 S KERRINGTON DR	No	50.0	50.0	50.0	0.0
R-19102	Res.	B	67	1	4203 S KERRINGTON DR	No	50.0	50.0	50.0	0.0
R-19103	Res.	B	67	1	4207 S KERRINGTON DR	No	50.0	50.0	50.0	0.0
R-19104	Res.	B	67	1	4211 S KERRINGTON DR	No	50.0	50.0	50.0	0.0
R-19105	Res.	B	67	1	16815 E 42ND TER S	No	50.0	50.0	50.0	0.0
R-19106	Res.	B	67	1	16819 E 42ND TER S	No	50.0	50.0	50.0	0.0
R-19107	Res.	B	67	1	16901 E 42ND TER S	No	50.3	50.6	52.2	1.9
R-19108	Res.	B	67	1	16905 E 42ND TER S	No	52.0	52.3	54.7	2.7
R-19109	Res.	B	67	1	16909 E 42ND TER S	No	55.0	55.2	58.0	3.0
R-19110	Res.	B	67	1	16913 E 42ND TER S	No	60.5	60.7	63.7	3.2
R-19111	Res.	B	67	1	16900 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-19112	Res.	B	67	1	16904 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-19113	Res.	B	67	1	16908 E 43RD ST S	No	50.0	50.0	50.0	0.0
R-19114	Res.	B	67	1	16912 E 43RD ST S	No	50.0	50.0	50.5	0.5
R-19115	Res.	B	67	1	17000 E 43RD ST S	No	50.2	50.5	52.0	1.8
R-19116	Res.	B	67	1	4200 S MARSHALL DR	No	64.6	64.8	67.3	2.7
R-19117	Res.	B	67	1	4210 S MARSHALL DR	No	59.7	59.9	62.2	2.5
R-19118	Res.	B	67	1	4218 S MARSHALL DR	No	54.1	54.4	56.6	2.5
R-19119	Res.	B	67	1	4201 S MARSHALL DR	No	67.4	67.5	70.2	2.8
R-19120	Res.	B	67	1	4205 S MARSHALL DR	No	66.7	66.8	69.6	2.9
R-19121	Res.	B	67	1	4209 S MARSHALL DR	No	66.6	66.7	69.1	2.5
R-19122	Res.	B	67	1	4213 S MARSHALL DR	No	65.6	65.7	68.2	2.6
R-19123	Res.	B	67	1	4217 S MARSHALL DR	No	63.7	63.9	66.7	3.0
R-19124	Res.	B	67	1	17016 E 43RD ST S	No	63.9	64.1	67.1	3.2
R-19125	Res.	B	67	1	17020 E 43RD ST S	No	63.9	64.1	67.1	3.2
R-19126	Res.	B	67	1	4212 S SHRANK CT	No	63.5	63.6	65.2	1.7
R-19127	Res.	B	67	1	4208 S SHRANK CT	No	63.7	63.8	65.1	1.4
R-19128	Res.	B	67	1	4200 S SHRANK CT	No	66.4	66.5	67.5	1.1
R-19129	Res.	B	67	1	4201 S SHRANK CT	No	65.4	65.5	65.6	0.2
R-19130	Res.	B	67	1	4209 S SHRANK CT	No	63.5	63.7	64.3	0.8
R-19131	Res.	B	67	1	4213 S SHRANK CT	No	62.6	62.8	63.8	1.2
R-19132	Res.	B	67	1	4221 S SHRANK CT	No	62.8	63.0	64.1	1.3
R-19133	Res.	B	67	1	4301 S MARSHALL DR	No	53.5	53.8	56.4	2.9
R-19134	Res.	B	67	1	17005 E 43RD ST S	No	57.3	57.5	60.2	2.9

Table B-19: Noise Sensitive Receptors and Hourly Equivalent Noise Levels 2050 Ultimate Build – NSA 19										
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))			
ID #	Use	NAC	Impact Criteria	ERs	Address	First-Row	2023 Existing	2050 No-Build	2050 Build	Build - Existing (Change)
R-19135	Res.	B	67	1	17009 E 43RD ST S	No	59.8	60.0	62.7	2.9
R-19136	Res.	B	67	1	17013 E 43RD ST S	No	59.5	59.7	62.3	2.8
R-19137	Res.	B	67	1	17017 E 43RD ST S	No	61.6	61.8	64.4	2.8
R-19138	Res.	B	67	1	4301 S SHRANK CT	No	62.0	62.2	63.7	1.7
R-19139	Res.	B	67	1	4314 S DAVIDSON DR	No	56.2	56.4	57.8	1.6
R-19140	Res.	B	67	1	4312 S DAVIDSON DR	No	57.0	57.1	58.5	1.5
R-19141	Res.	B	67	1	4306 S DAVIDSON DR	No	58.3	58.4	59.6	1.3
R-19142	Res.	B	67	1	4304 S DAVIDSON DR	No	58.8	59.0	60.1	1.3
R-19143	Res.	B	67	1	4311 S DAVIDSON DR	No	58.0	58.1	59.2	1.2
R-19144	Res.	B	67	1	4309 S DAVIDSON DR	No	58.2	58.3	59.4	1.2
R-19145	Res.	B	67	1	4301 S DAVIDSON DR	No	59.4	59.6	60.4	1.0
R-19146	Res.	B	67	1	4303 S DAVIDSON DR	No	59.1	59.3	60.2	1.1
R-19147	Res.	B	67	1	4305 S DAVIDSON DR	No	58.0	58.2	59.1	1.1
R-19148	Res.	B	67	1	4307 S DAVIDSON DR	No	57.2	57.4	58.4	1.2
R-19149	Res.	B	67	1	17400 E 43RD TERRACE CT	No	58.1	58.2	59.0	0.9
R-19150	Res.	B	67	1	17402 E 43RD TERRACE CT	No	57.7	57.9	58.8	1.1
R-19151	Res.	B	67	1	17406 E 43RD TERRACE CT	No	60.1	60.3	61.5	1.4
R-19152	Res.	B	67	1	17408 E 43RD TERRACE CT	No	60.5	60.7	62.6	2.1
R-19153	Res.	B	67	1	17401 E 43RD TERRACE CT	No	58.3	58.5	59.5	1.2
R-19154	Res.	B	67	1	17403 E 43RD TERRACE CT	No	58.1	58.3	59.4	1.3
R-19155	Res.	B	67	1	17405 E 43RD TERRACE CT	No	57.2	57.4	58.5	1.3
R-19156	Res.	B	67	1	17407 E 43RD TERRACE CT	No	57.9	58.1	59.5	1.6
R-19157	Res.	B	67	1	17409 E 43RD TERRACE CT	No	58.5	58.7	60.5	2.0
R-19158	Res.	B	67	1	17411 E 43RD TERRACE CT	No	59.7	59.9	62.5	2.8
R-19159	Res.	B	67	1	17405 E 44TH STREET CT	No	55.5	55.7	56.7	1.2
R-19160	Res.	B	67	1	17403 E 44TH STREET CT	No	56.0	56.3	57.1	1.1
R-19161	Res.	B	67	1	17401 E 44TH STREET CT	No	56.3	56.5	57.4	1.1
R-19162	Res.	B	67	1	17400 E 44TH STREET CT	No	55.8	56.0	56.9	1.1
R-19163	Res.	B	67	1	17402 E 44TH STREET CT	No	53.7	53.9	55.0	1.3
R-19164	Res.	B	67	1	17404 E 44TH STREET CT	No	55.8	55.9	57.8	2.0
R-19165	Res.	B	67	1	4300 S ATHERTON CT	No	66.9	67.1	70.1	3.2
R-19166	Res.	B	67	1	4302 S ATHERTON CT	No	65.1	65.3	68.5	3.4
R-19167	Res.	B	67	1	4304 S ATHERTON CT	No	64.8	65.1	68.3	3.5
R-19168	Res.	B	67	1	4310 S ATHERTON CT	No	62.5	62.8	65.6	3.1
R-19169	Res.	B	67	1	4312 S ATHERTON CT	No	61.7	62.0	64.3	2.6
R-19170	Res.	B	67	1	4314 S ATHERTON CT	No	60.5	60.7	62.6	2.1
R-19171	Res.	B	67	1	4316 S ATHERTON CT	No	59.6	59.8	61.5	1.9
R-19172	Res.	B	67	1	4318 S ATHERTON CT	No	58.6	58.8	60.4	1.8
R-19173	Res.	B	67	1	4320 S ATHERTON CT	No	57.5	57.8	59.4	1.9
R-19174	Res.	B	67	1	4301 S ATHERTON CT	No	68.9	69.1	72.5	3.6
R-19175	Res.	B	67	1	4305 S ATHERTON CT	No	67.4	67.6	71.2	3.8
R-19176	Res.	B	67	1	4307 S ATHERTON CT	No	66.6	66.9	69.3	2.7
R-19177	Res.	B	67	1	4309 S ATHERTON CT	No	65.9	66.1	68.4	2.5
R-19178	Res.	B	67	1	4311 S ATHERTON CT	No	64.4	64.6	66.5	2.1
R-19179	Res.	B	67	1	4313 S ATHERTON CT	No	63.2	63.4	65.3	2.1
R-19180	Res.	B	67	1	4315 S ATHERTON CT	No	62.0	62.2	63.9	1.9
R-19181	Res.	B	67	1	4317 S ATHERTON CT	No	61.3	61.5	63.2	1.9
R-19182	Res.	B	67	1	4319 S ATHERTON CT	No	60.2	60.4	62.0	1.8
R-19183	Res.	B	67	1	4321 S ATHERTON CT	No	59.2	59.5	61.0	1.8
R-19184	Res.	B	67	1	4323 S ATHERTON CT	No	58.2	58.5	59.7	1.5
R-19185	Res.	B	67	1	4325 S ATHERTON CT	No	57.6	57.8	58.8	1.2
R-19186	Res.	B	67	1	4401 S ATHERTON CT	No	57.2	57.5	58.3	1.1
R-19187	Res.	B	67	1	4403 S ATHERTON CT	No	57.1	57.5	58.4	1.3
Predicted NSA 19 Traffic Noise Impacts									45	

Appendix C
Noise Barrier Analysis Results

NW1 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-1001	Res.	B	67	1	3304 WINCHESTER AVE	No	60.1	60.1	0.0
R-1002	Res.	B	67	1	3306 WINCHESTER AVE	No	57.5	57.5	0.0
R-1003	Res.	B	67	1	3308 WINCHESTER AVE	No	56.7	56.6	0.1
R-1004	Res.	B	67	1	3310 WINCHESTER AVE	No	59.7	59.6	0.1
R-1005	Res.	B	67	1	3312 WINCHESTER AVE	No	57.4	57.4	0.0
R-1006	Res.	B	67	1	3314 WINCHESTER AVE	No	62.0	61.9	0.1
R-1007	Res.	B	67	1	3316 WINCHESTER AVE	No	59.6	59.5	0.1
R-1008	Res.	B	67	1	3318 WINCHESTER AVE	Yes	66.8	66.6	0.2
R-1009	Res.	B	67	1	3301 WINCHESTER AVE	No	50.0	50.0	0.0
R-1010	Res.	B	67	1	3303 WINCHESTER AVE	No	50.0	50.0	0.0
R-1011	Res.	B	67	1	3305 WINCHESTER AVE	No	51.3	51.2	0.1
R-1012	Res.	B	67	1	3307 WINCHESTER AVE	No	53.9	53.9	0.0
R-1013	Res.	B	67	1	3309 WINCHESTER AVE	No	51.1	51.0	0.1
R-1014	Res.	B	67	1	3311 WINCHESTER AVE	No	54.0	54.0	0.0
R-1015	Res.	B	67	1	3313 WINCHESTER AVE	No	53.2	53.0	0.2
R-1016	Res.	B	67	1	3315 WINCHESTER AVE	No	59.3	59.1	0.2
R-1017	Res.	B	67	1	3317 WINCHESTER AVE	No	54.1	53.4	0.7
R-1018	Res.	B	67	1	3319 WINCHESTER AVE	No	55.3	54.6	0.7
R-1019	Res.	B	67	1	3321 WINCHESTER AVE	Yes	65.8	59.7	6.1
R-1020	Res.	B	67	1	3300 BRISTOL AVE	No	50.0	50.0	0.0
R-1021	Res.	B	67	1	3302 BRISTOL AVE	No	50.7	50.6	0.1
R-1022	Res.	B	67	1	3304 BRISTOL AVE	No	53.3	53.2	0.1
R-1023	Res.	B	67	1	3306 BRISTOL AVE	No	51.0	50.9	0.1
R-1024	Res.	B	67	1	3308 BRISTOL AVE	No	55.3	55.1	0.2
R-1025	Res.	B	67	1	3310 BRISTOL AVE	No	56.6	56.1	0.5
R-1026	Res.	B	67	1	3312 BRISTOL AVE	No	57.3	56.7	0.6
R-1027	Res.	B	67	1	3314 BRISTOL AVE	No	55.1	54.9	0.2
R-1028	Res.	B	67	1	3316 BRISTOL AVE	No	55.9	55.5	0.4
R-1029	Res.	B	67	1	3318 BRISTOL AVE	Yes	66.8	59.7	7.1
R-1030	Res.	B	67	1	3305 BRISTOL AVE	No	52.1	52.0	0.1
R-1031	Res.	B	67	1	3307 BRISTOL AVE	No	50.1	50.1	0.0
R-1032	Res.	B	67	1	3309 BRISTOL AVE	No	51.8	51.8	0.0
R-1033	Res.	B	67	1	3311 BRISTOL AVE	No	55.0	55.0	0.0
R-1034	Res.	B	67	1	3313 BRISTOL AVE	No	53.0	53.0	0.0
R-1035	Res.	B	67	1	3315 BRISTOL AVE	No	52.7	52.1	0.6
R-1036	Res.	B	67	1	3317 BRISTOL AVE	No	53.8	52.8	1.0
R-1037	Res.	B	67	1	3319 BRISTOL AVE	No	59.5	55.2	4.3
R-1038	Res.	B	67	1	3321 BRISTOL AVE	Yes	56.9	54.6	2.3
R-1039	Res.	B	67	1	3300 CORRINGTON AVE	No	55.1	55.0	0.1
R-1040	Res.	B	67	1	3302 CORRINGTON AVE	No	54.7	54.7	0.0
R-1041	Res.	B	67	1	3304 CORRINGTON AVE	No	54.0	53.9	0.1
R-1042	Res.	B	67	1	3306 CORRINGTON AVE	No	54.5	54.5	0.0
R-1043	Res.	B	67	1	3308 CORRINGTON AVE	No	53.0	53.0	0.0
R-1044	Res.	B	67	1	3310 CORRINGTON AVE	No	54.5	54.4	0.1
R-1045	Res.	B	67	1	3312 CORRINGTON AVE	No	54.8	54.8	0.0
R-1046	Res.	B	67	1	3314 CORRINGTON AVE	No	55.9	54.3	1.6
R-1047	Res.	B	67	1	3316 CORRINGTON AVE	Yes	65.5	65.0	0.5
R-1048	Res.	B	67	1	3301 CORRINGTON AVE	No	53.9	53.9	0.0
R-1049	Res.	B	67	1	3303 CORRINGTON AVE	No	52.7	52.7	0.0
R-1050	Res.	B	67	1	3305 CORRINGTON AVE	No	51.5	51.4	0.1
R-1051	Res.	B	67	1	3307 CORRINGTON AVE	No	53.5	53.4	0.1
R-1052	Res.	B	67	1	3309 CORRINGTON AVE	No	54.3	53.9	0.4
R-1053	Res.	B	67	1	3311 CORRINGTON AVE	No	56.3	55.7	0.6
R-1054	Res.	B	67	1	3313 CORRINGTON AVE	Yes	64.0	57.9	6.1
R-1055	Res.	B	67	1	3300 CRYSTAL AVE	No	59.0	59.0	0.0
R-1056	Res.	B	67	1	3302 CRYSTAL AVE	No	60.6	60.6	0.0
R-1057	Res.	B	67	1	3304 CRYSTAL AVE	No	59.6	59.6	0.0
R-1058	Res.	B	67	1	3306 CRYSTAL AVE	No	62.1	62.1	0.0
R-1059	Res.	B	67	1	3308 CRYSTAL AVE	No	61.4	61.4	0.0

NW1 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-1060	Res.	B	67	1	3310 CRYSTAL AVE	No	64.4	64.2	0.2
R-1061	Res.	B	67	1	3312 CRYSTAL AVE	Yes	66.1	59.0	7.1
R-1062	Res.	B	67	1	3301 CRYSTAL AVE	No	54.7	54.7	0.0
R-1063	Res.	B	67	1	3303 CRYSTAL AVE	No	54.7	54.7	0.0
R-1064	Res.	B	67	1	3305 CRYSTAL AVE	No	53.6	53.6	0.0
R-1065	Res.	B	67	1	3307 CRYSTAL AVE	No	56.6	56.6	0.0
R-1066	Res.	B	67	1	3309 CRYSTAL AVE	No	57.2	57.2	0.0
R-1067	Res.	B	67	1	3311 CRYSTAL AVE	No	54.7	54.7	0.0
R-1068	Res.	B	67	1	3313 CRYSTAL AVE	No	57.1	57.1	0.0
R-1069	Res.	B	67	1	3315 CRYSTAL AVE	No	56.4	56.3	0.1
R-1070	Res.	B	67	1	3317 CRYSTAL AVE	No	63.7	58.6	5.1
R-1071	Res.	B	67	1	3319 CRYSTAL AVE	Yes	66.7	52.8	13.9
R-1072	Res.	B	67	1	3302 EASTERN AVE	No	55.7	55.7	0.0
R-1073	Res.	B	67	1	3304 EASTERN AVE	No	54.8	54.8	0.0
R-1074	Res.	B	67	1	3306 EASTERN AVE	No	54.8	54.8	0.0
R-1075	Res.	B	67	1	3308 EASTERN AVE	No	54.9	54.9	0.0
R-1076	Res.	B	67	1	3310 EASTERN AVE	No	58.8	58.8	0.0
R-1077	Res.	B	67	1	3312 EASTERN AVE	No	58.5	58.5	0.0
R-1078	Res.	B	67	1	3314 EASTERN AVE	No	58.2	58.2	0.0
R-1079	Res.	B	67	1	3316 EASTERN AVE	No	60.4	60.4	0.0
R-1080	Res.	B	67	1	3318 EASTERN AVE	No	60.2	60.1	0.1
R-1081	Res.	B	67	1	3320 EASTERN AVE	No	61.9	61.6	0.3
R-1082	Res.	B	67	1	3322 EASTERN AVE	No	63.2	60.9	2.3
R-1083	Res.	B	67	1	3324 EASTERN AVE	Yes	67.1	59.2	7.9
R-1084	Res.	B	67	1	7401 E 33RD ST	No	51.5	51.5	0.0
R-1085	Res.	B	67	1	3301 EASTERN AVE	No	51.1	51.1	0.0
R-1086	Res.	B	67	1	3303 EASTERN AVE	No	50.8	50.7	0.1
R-1087	Res.	B	67	1	3305 EASTERN AVE	No	50.0	50.0	0.0
R-1088	Res.	B	67	1	3307 EASTERN AVE	No	53.4	53.4	0.0
R-1089	Res.	B	67	1	3309 EASTERN AVE	No	52.7	52.7	0.0
R-1090	Res.	B	67	1	3311 EASTERN AVE	No	52.1	52.1	0.0
R-1091	Res.	B	67	1	3313 EASTERN AVE	No	54.0	54.0	0.0
R-1092	Res.	B	67	1	3315 EASTERN AVE	No	56.4	56.4	0.0
R-1093	Res.	B	67	1	3317 EASTERN AVE	No	57.1	56.2	0.9
R-1094	Res.	B	67	1	3319 EASTERN AVE	No	63.1	59.7	3.4
R-1095	Res.	B	67	1	3321 EASTERN AVE	No	64.3	62.4	1.9
R-1096	Res.	B	67	1	3323 EASTERN AVE	Yes	66.7	53.9	12.8
R-1097	Res.	B	67	1	3300 OAKLAND AVE	No	50.0	50.0	0.0
R-1098	Res.	B	67	1	3302 OAKLAND AVE	No	51.5	51.5	0.0
R-1099	Res.	B	67	1	3304 OAKLAND AVE	No	53.6	53.6	0.0
R-1100	Res.	B	67	1	3306 OAKLAND AVE	No	53.2	53.2	0.0
R-1101	Res.	B	67	1	3308 OAKLAND AVE	No	53.7	53.7	0.0
R-1102	Res.	B	67	1	3310 OAKLAND AVE	No	52.3	52.3	0.0
R-1103	Res.	B	67	1	3312 OAKLAND AVE	No	53.6	53.6	0.0
R-1104	Res.	B	67	1	3314 OAKLAND AVE	No	53.5	53.5	0.0
R-1105	Res.	B	67	1	3316 OAKLAND AVE	No	55.9	55.9	0.0
R-1106	Res.	B	67	1	3318 OAKLAND AVE	No	58.0	58.0	0.0
R-1107	Res.	B	67	1	3320 OAKLAND AVE	No	59.9	59.9	0.0
R-1108	Res.	B	67	1	3322 OAKLAND AVE	No	65.9	65.5	0.4
R-1109	Res.	B	67	1	3319 OAKLAND AVE	No	54.8	54.8	0.0
R-1110	Res.	B	67	1	3321 OAKLAND AVE	No	56.9	56.9	0.0
R-1111	Res.	B	67	1	3323 OAKLAND AVE	No	59.2	59.2	0.0
R-1112	Res.	B	67	1	3325 OAKLAND AVE	No	65.8	65.2	0.6
R-1113	Res.	B	67	1	3327 OAKLAND AVE	No	66.3	64.1	2.2
R-1114	Res.	B	67	1	3329 OAKLAND AVE	Yes	68.9	61.9	7.0
							Predicted Build Alternative With Barrier Benefits		6
							Noise Impact		Benefited Receptor

NW1 Performance
Without Barrier and With Barrier Noise Levels
2050 Ultimate Build

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
1,048	13	13,190	6	2,198
Is the noise barrier preliminarily feasible and reasonable?				**No**

NW3 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-3001	Hotel	E	72	4	3830 BLUE RIDGE CUT OFF	Yes	58.3	58.2	0.1
R-3002	Res.	B	67	1	3810 LAUREL AVE	No	60.7	60.2	0.5
R-3003	Res.	B	67	1	9110 E 38TH TER	No	62.9	62.8	0.1
R-3004	Res.	B	67	1	9130 E 38TH TER	No	61.3	60.9	0.4
R-3005	Res.	B	67	1	9119 E 38TH TER	No	62.1	62.0	0.1
R-3006	Res.	B	67	1	9018 E 39TH ST	No	63.2	63.2	0.0
R-3007	Res.	B	67	1	9022 E 39TH ST	No	63.0	63.0	0.0
R-3008	Res.	B	67	1	3829 LAUREL AVE	No	57.7	56.7	1.0
R-3009	Res.	B	67	1	3837 LAUREL AVE	No	60.9	60.3	0.6
R-3010	Res.	B	67	1	3834 DITZLER AVE	No	53.9	52.3	1.6
R-3011	Res.	B	67	1	3836 DITZLER AVE	No	56.7	55.0	1.7
R-3012	Res.	B	67	1	9114 E 39TH ST	No	61.0	60.8	0.2
R-3013	Res.	B	67	1	9120 E 39TH ST	No	59.0	58.2	0.8
R-3014	Res.	B	67	1	9200 E 39TH ST	No	56.7	55.1	1.6
R-3015	Res.	B	67	1	9210 E 39TH ST	No	53.4	51.8	1.6
R-3016	Res.	B	67	1	9220 E 39TH ST	No	53.5	50.8	2.7
R-3017	Res.	B	67	1	3908 CRESCENT AVE	No	62.7	59.9	2.8
R-3018	Res.	B	67	1	3910 CRESCENT AVE	No	63.8	60.4	3.4
R-3019	Res.	B	67	1	9412 E 40TH ST	No	65.8	62.4	3.4
R-3020	Res.	B	67	1	9414 E 40TH ST	No	66.1	62.0	4.1
R-3021	Res.	B	67	1	9420 E 40TH ST	No	65.7	60.9	4.8
R-3022	Res.	B	67	1	9321 E 40TH ST	No	69.1	64.8	4.3
R-3023	Res.	B	67	1	4000 DENTON RD	No	68.7	64.3	4.4
R-3024	Res.	B	67	1	4002 DENTON RD	No	70.6	64.9	5.7
R-3025	Res.	B	67	1	4004 DENTON RD	Yes	72.2	65.3	6.9
R-3026	Res.	B	67	1	4006 DENTON RD	Yes	76.1	65.4	10.7
R-3027	Res.	B	67	1	4003 DENTON RD	No	68.1	57.6	10.5
R-3028	Res.	B	67	1	4005 DENTON RD	Yes	72.4	59.0	13.4
R-3029	Res.	B	67	1	4000 CRESCENT AVE	No	64.5	55.7	8.8
R-3030	Res.	B	67	1	4008 CRESCENT AVE	No	65.9	55.6	10.3
R-3031	Res.	B	67	1	4102 CRESCENT AVE	No	68.9	56.2	12.7
R-3032	Res.	B	67	1	4106 CRESCENT AVE	Yes	70.6	58.4	12.2
R-3033	Res.	B	67	1	3907 CRESCENT AVE	No	62.5	58.2	4.3
R-3034	Res.	B	67	1	3937 CRESCENT AVE	No	61.7	56.7	5.0
R-3035	Res.	B	67	1	3941 CRESCENT AVE	No	63.6	57.7	5.9
R-3036	Res.	B	67	1	4005 CRESCENT AVE	No	63.6	54.0	9.6
R-3037	Res.	B	67	1	4013 CRESCENT AVE	No	72.8	61.5	11.3
R-3038	Res.	B	67	1	4017 CRESCENT AVE	Yes	75.6	60.7	14.9
R-3039	Res.	B	67	1	3916 ARLINGTON AVE	No	59.5	52.9	6.6
R-3040	Res.	B	67	1	4000 ARLINGTON AVE	No	63.3	53.9	9.4
R-3041	Res.	B	67	1	4004 ARLINGTON AVE	No	64.3	54.7	9.6
R-3042	Res.	B	67	1	4008 ARLINGTON AVE	No	69.9	60.6	9.3
R-3043	Res.	B	67	1	4012 ARLINGTON AVE	No	72.3	62.3	10.0
R-3044	Res.	B	67	1	4100 ARLINGTON AVE	Yes	75.5	58.2	17.3
R-3045	Res.	B	67	1	4011 ARLINGTON AVE	Yes	71.1	61.3	9.8
R-3046	Res.	B	67	1	4009 ARLINGTON AVE	No	67.8	60.3	7.5
R-3047	Res.	B	67	1	4000 PITTMAN RD	No	57.4	56.6	0.8
R-3048	Res.	B	67	1	4008 PITTMAN RD	No	58.6	57.9	0.7
R-3049	Res.	B	67	1	4012 PITTMAN RD	No	59.2	58.6	0.6
R-3050	Res.	B	67	1	4014 PITTMAN RD	No	60.4	59.9	0.5
R-3051	Res.	B	67	1	4018 PITTMAN RD	No	63.6	63.2	0.4
R-3052	Res.	B	67	1	9800 E 41ST ST	Yes	74.9	62.2	12.7
R-3053	Res.	B	67	1	9804 E 41ST ST	Yes	66.3	59.7	6.6
R-3054	Res.	B	67	1	9808 E 41ST ST	Yes	65.5	60.4	5.1
R-3055	Res.	B	67	1	9812 E 41ST ST	Yes	63.8	61.2	2.6

NW3 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-3056	Res.	B	67	1	9816 E 41ST ST	No	63.2	62.1	1.1
R-3057	Res.	B	67	1	9840 E 41ST ST	No	64.9	64.0	0.9
R-3058	Res.	B	67	1	4100 PITTMAN RD	Yes	**74.8**	**66.3**	**8.5**
R-3059	Res.	B	67	1	4005 PITTMAN RD	No	57.8	57.6	0.2
R-3060	Res.	B	67	1	4009 PITTMAN RD	No	58.7	58.7	0.0
								Predicted Build Alternative With Barrier Benefits	**19**
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
2,232	12	27,602	19	1,453
Is the noise barrier preliminarily feasible and reasonable?				**No**

NW4 Performance
Without Barrier and With Barrier Noise Levels
2050 Ultimate Build

Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-4001	Res.	B	67	1	4136 ARLINGTON AVE	No	64.6	64.5	0.1
R-4002	Res.	B	67	1	4120 ARLINGTON AVE	Yes	65.9	64.9	1.0
R-4003	Res.	B	67	1	4121 ARLINGTON AVE	Yes	69.0	61.2	7.8
R-4004	Res.	B	67	1	4135 ARLINGTON AVE	No	61.1	59.0	2.1
R-4005	Res.	B	67	1	4139 ARLINGTON AVE	No	57.6	57.3	0.3
R-4006	Res.	B	67	1	4201 ARLINGTON AVE	No	57.7	57.7	0.0
R-4007	Res.	B	67	1	4203 ARLINGTON AVE	No	53.3	53.3	0.0
R-4008	Res.	B	67	1	4205 ARLINGTON AVE	No	50.0	50.0	0.0
R-4009	Res.	B	67	1	4209 ARLINGTON AVE	No	51.0	51.0	0.0
R-4010	Res.	B	67	1	4215 ARLINGTON AVE	No	51.4	51.4	0.0
R-4011	Res.	B	67	1	4112 HAWTHORNE AVE	Yes	59.8	57.1	2.7
R-4012	Res.	B	67	1	4116 HAWTHORNE AVE	No	50.3	50.3	0.0
R-4013	Res.	B	67	1	4120 HAWTHORNE AVE	No	50.0	50.0	0.0
R-4014	Res.	B	67	1	4200 HAWTHORNE AVE	No	50.0	50.0	0.0
R-4015	Res.	B	67	1	4204 HAWTHORNE AVE	No	50.0	50.0	0.0
R-4016	Res.	B	67	1	4214 HAWTHORNE AVE	No	50.0	50.0	0.0
R-4017	Res.	B	67	1	4224 HAWTHORNE AVE	No	50.0	50.0	0.0
R-4018	Res.	B	67	1	4115 HAWTHORNE AVE	Yes	69.3	62.5	6.8
R-4019	Res.	B	67	1	4119 HAWTHORNE AVE	No	66.1	62.5	3.6
R-4020	Res.	B	67	1	4123 HAWTHORNE AVE	No	62.5	60.8	1.7
R-4021	Res.	B	67	1	4127 HAWTHORNE AVE	No	59.9	58.8	1.1
R-4022	Res.	B	67	1	4201 HAWTHORNE AVE	No	58.6	57.6	1.0
R-4023	Res.	B	67	1	4205 HAWTHORNE AVE	No	57.3	56.6	0.7
R-4024	Res.	B	67	1	4209 HAWTHORNE AVE	No	55.1	54.3	0.8
R-4025	Res.	B	67	1	4225 HAWTHORNE AVE	No	53.2	52.5	0.7
R-4026	Res.	B	67	1	4227 HAWTHORNE AVE	No	51.5	50.8	0.7
R-4027	Res.	B	67	1	4112 PITTMAN RD	Yes	65.0	64.9	0.1
R-4028	Res.	B	67	1	4120 PITTMAN RD	No	60.9	60.3	0.6
R-4029	Res.	B	67	1	4124 PITTMAN RD	No	57.4	56.7	0.7
R-4030	Res.	B	67	1	4200 PITTMAN RD	No	54.6	54.0	0.6
R-4031	Res.	B	67	1	4210 PITTMAN RD	No	53.8	53.3	0.5
								Predicted Build Alternative With Barrier Benefits	1
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
1,341	20	26,827	1	26,827
Is the noise barrier preliminarily feasible and reasonable?				**No**

NW5 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-5001	Res.	B	67	1	4000 HARDY AVE	No	55.7	55.7	0.0
R-5002	Res.	B	67	1	4002 HARDY AVE	No	56.7	56.6	0.1
R-5003	Res.	B	67	1	4004 HARDY AVE	No	58.1	58.0	0.1
R-5004	Res.	B	67	1	10401 E 40TH ST	No	58.7	58.1	0.6
R-5005	Res.	B	67	1	10403 E 40TH ST	No	59.3	58.6	0.7
R-5006	Res.	B	67	1	10405 E 40TH ST	No	60.2	59.5	0.7
R-5007	Res.	B	67	1	10407 E 40TH ST	No	61.4	60.5	0.9
R-5008	Res.	B	67	1	10409 E 40TH ST	No	62.3	61.0	1.3
R-5009	Res.	B	67	1	10505 E 40TH ST	No	63.0	61.2	1.8
R-5010	Res.	B	67	1	10509 E 40TH ST	No	63.2	61.1	2.1
R-5011	Res.	B	67	1	10511 E 40TH ST	No	62.7	60.5	2.2
R-5012	Res.	B	67	1	4005 HARDY AVE	No	59.5	59.4	0.1
R-5013	Res.	B	67	1	10402 E 40TH TER	No	60.2	59.8	0.4
R-5014	Res.	B	67	2	4009/4011 WILLOW AVE 4	No	57.7	56.6	1.1
R-5015	Res.	B	67	2	4009/4011 WILLOW AVE 5	No	60.8	59.3	1.5
R-5016	Res.	B	67	2	4009/4011 WILLOW AVE 1	No	60.9	58.8	2.1
R-5017	Res.	B	67	2	4009/4011 WILLOW AVE 2	No	65.0	62.3	2.7
R-5018	Res.	B	67	2	4009/4011 WILLOW AVE 3	No	66.8	64.0	2.8
R-5019	Res.	B	67	2	4009/4011 WILLOW AVE 6	No	61.6	58.8	2.8
R-5020	Res.	B	67	2	4009/4011 WILLOW AVE 7	No	65.3	61.8	3.5
R-5021	Res.	B	67	2	4001/4003 WILLOW AVE 6	No	50.0	50.0	0.0
R-5022	Res.	B	67	2	4001/4003 WILLOW AVE 7	No	50.0	50.0	0.0
R-5023	Res.	B	67	2	4001/4003 WILLOW AVE 4	No	61.6	58.0	3.6
R-5024	Res.	B	67	2	4001/4003 WILLOW AVE 5	No	63.1	59.6	3.5
R-5025	Res.	B	67	2	4001/4003 WILLOW AVE 1	No	61.1	58.5	2.6
R-5026	Res.	B	67	2	4001/4003 WILLOW AVE 2	No	65.1	61.5	3.6
R-5027	Res.	B	67	2	4001/4003 WILLOW AVE 3	No	66.7	63.3	3.4
R-5028	Res.	B	67	1	10510 E 40TH TER	No	58.9	54.9	4.0
R-5029	Res.	B	67	1	10512 E 40TH TER	No	60.2	55.9	4.3
R-5030	Res.	B	67	1	10514 E 40TH TER	No	60.3	55.8	4.5
R-5031	Res.	B	67	1	10516 E 40TH TER	No	61.9	56.9	5.0
R-5032	Res.	B	67	1	10518 E 40TH TER	No	63.0	57.2	5.8
R-5033	Res.	B	67	1	10520 E 40TH TER	No	64.8	58.7	6.1
R-5034	Res.	B	67	1	4000 HEDGES AVE	No	54.3	52.0	2.3
R-5035	Res.	B	67	1	4002 HEDGES AVE	No	55.1	52.7	2.4
R-5036	Res.	B	67	1	4004 HEDGES AVE	No	55.6	53.1	2.5
R-5037	Res.	B	67	1	4006 HEDGES AVE	No	57.1	54.8	2.3
R-5038	Res.	B	67	1	4001 HEDGES AVE	No	53.2	51.2	2.0
R-5039	Res.	B	67	1	4003 HEDGES AVE	No	53.3	51.1	2.2
R-5040	Res.	B	67	1	4005 HEDGES AVE	No	50.9	50.0	0.9
R-5041	Res.	B	67	1	4007 HEDGES AVE	No	50.8	50.0	0.8
R-5042	Res.	B	67	1	4008 HEDGES AVE	No	55.4	52.2	3.2
R-5043	Res.	B	67	1	4010 HEDGES AVE	No	56.3	52.9	3.4
R-5044	Res.	B	67	1	4012 HEDGES AVE	No	56.9	53.0	3.9
R-5045	Res.	B	67	1	4014 HEDGES AVE	No	57.5	53.3	4.2
R-5046	Res.	B	67	1	4016 HEDGES AVE	No	58.8	54.2	4.6
R-5047	Res.	B	67	1	4018 HEDGES AVE	No	57.6	53.4	4.2
R-5048	Res.	B	67	1	4020 HEDGES AVE	No	60.6	55.4	5.2
R-5049	Res.	B	67	1	4022 HEDGES AVE	No	61.1	56.0	5.1
R-5050	Res.	B	67	1	4024 HEDGES AVE	No	60.7	55.5	5.2
R-5051	Res.	B	67	1	4026 HEDGES AVE	No	61.7	56.8	4.9
R-5052	Res.	B	67	1	4009 HEDGES AVE	No	58.5	55.2	3.3
R-5053	Res.	B	67	1	4011 HEDGES AVE	No	59.0	55.6	3.4
R-5054	Res.	B	67	1	4013 HEDGES AVE	No	59.4	55.9	3.5
R-5055	Res.	B	67	1	4015 HEDGES AVE	No	59.6	56.1	3.5
R-5056	Res.	B	67	1	4017 HEDGES AVE	No	53.3	50.0	3.3
R-5057	Res.	B	67	1	4019 HEDGES AVE	No	54.3	50.6	3.7
R-5058	Res.	B	67	1	4021 HEDGES AVE	No	54.5	50.6	3.9
R-5059	Res.	B	67	1	4023 HEDGES AVE	No	56.6	52.5	4.1

NW5 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-5060	Res.	B	67	1	4025 HEDGES AVE	No	63.5	58.5	5.0
R-5061	Res.	B	67	1	4027 HEDGES AVE	No	63.9	58.4	5.5
R-5062	Res.	B	67	1	4029 HEDGES AVE	No	64.7	59.0	5.7
R-5063	Res.	B	67	1	4031 HEDGES AVE	No	65.5	59.6	5.9
R-5064	Res.	B	67	1	4033 HEDGES AVE	No	66.5	59.5	7.0
R-5065	Res.	B	67	1	4035 HEDGES AVE	No	68.1	60.5	7.6
R-5066	Res.	B	67	1	10442 E 41ST ST	No	62.4	57.5	4.9
R-5067	Res.	B	67	1	10440 E 41ST ST	No	63.5	58.3	5.2
R-5068	Res.	B	67	1	10438 E 41ST ST	No	64.8	58.9	5.9
R-5069	Res.	B	67	1	10436 E 41ST ST	No	66.5	60.2	6.3
R-5070	Res.	B	67	1	10432 E 41ST ST	No	69.0	60.8	8.2
R-5071	Res.	B	67	1	10430 E 41ST ST	Yes	72.7	65.6	7.1
R-5072	Res.	B	67	1	10506 E 41ST ST	No	62.0	58.2	3.8
R-5073	Res.	B	67	1	10508 E 41ST ST	No	62.1	57.6	4.5
R-5074	Res.	B	67	1	10510 E 41ST ST	No	61.4	56.2	5.2
R-5075	Res.	B	67	1	10512 E 41ST ST	No	62.0	56.7	5.3
R-5076	Res.	B	67	1	10514 E 41ST ST	No	63.5	56.3	7.2
R-5077	Res.	B	67	1	10516 E 41ST ST	No	66.0	58.0	8.0
R-5078	Res.	B	67	1	10518 E 41ST ST	No	66.5	58.2	8.3
R-5079	Res.	B	67	1	10520 E 41ST ST	No	67.5	59.5	8.0
R-5080	Res.	B	67	1	10511 E 41ST ST	No	63.8	59.1	4.7
R-5081	Res.	B	67	1	10513 E 41ST ST	No	61.4	56.6	4.8
R-5082	Res.	B	67	1	10515 E 41ST ST	No	58.4	54.9	3.5
R-5083	Res.	B	67	1	10517 E 41ST ST	No	62.5	57.6	4.9
R-5084	Res.	B	67	1	10512 E 41ST TER	Yes	74.3	66.1	8.2
R-5085	Res.	B	67	1	10514 E 41ST TER	Yes	74.5	65.7	8.8
R-5086	Res.	B	67	1	10516 E 41ST TER	Yes	74.2	64.5	9.7
R-5087	Res.	B	67	1	10518 E 41ST TER	Yes	74.3	64.1	10.2
R-5088	Res.	B	67	1	10521 E 41ST TER	Yes	75.8	66.1	9.7
R-5089	Res.	B	67	1	10523 E 41ST TER	Yes	75.1	65.6	9.5
R-5090	Res.	B	67	1	10600 E 41ST TER	Yes	72.5	61.6	10.9
R-5091	Res.	B	67	1	10602 E 41ST TER	Yes	72.4	61.5	10.9
R-5092	Res.	B	67	1	10604 E 41ST TER	Yes	72.1	61.2	10.9
R-5093	Res.	B	67	1	10606 E 41ST TER	Yes	71.1	60.4	10.7
R-5094	Res.	B	67	1	10609 E 41ST ST	Yes	75.2	64.1	11.1
R-5095	Res.	B	67	1	10611 E 41ST ST	Yes	73.9	64.0	9.9
R-5096	Res.	B	67	1	10613 E 41ST ST	Yes	73.1	63.5	9.6
R-5097	Res.	B	67	1	10615 E 41ST ST	Yes	72.4	63.2	9.2
R-5098	Res.	B	67	2	4000 HARVARD CIR 1	No	50.0	50.0	0.0
R-5099	Res.	B	67	2	4000 HARVARD CIR 2	No	50.0	50.0	0.0
R-5100	Res.	B	67	2	4004 HARVARD CIR 1	No	50.0	50.0	0.0
R-5101	Res.	B	67	2	4004 HARVARD CIR 2	No	50.0	50.0	0.0
R-5102	Res.	B	67	1	4018 HARVARD CIR 13	No	65.3	57.6	7.7
R-5103	Res.	B	67	1	4018 HARVARD CIR 14	No	66.0	59.1	6.9
R-5104	Res.	B	67	1	4018 HARVARD CIR 15	No	66.6	60.4	6.2
R-5105	Res.	B	67	2	4018 HARVARD CIR 10	No	66.0	58.1	7.9
R-5106	Res.	B	67	2	4018 HARVARD CIR 11	No	66.7	59.8	6.9
R-5107	Res.	B	67	2	4018 HARVARD CIR 12	No	67.4	61.1	6.3
R-5108	Res.	B	67	1	4018 HARVARD CIR 7	No	66.8	58.8	8.0
R-5109	Res.	B	67	1	4018 HARVARD CIR 8	No	67.4	60.5	6.9
R-5110	Res.	B	67	1	4018 HARVARD CIR 9	No	68.3	62.1	6.2
R-5111	Res.	B	67	2	4018 HARVARD CIR 4	No	67.4	59.4	8.0
R-5112	Res.	B	67	2	4018 HARVARD CIR 5	No	68.0	61.1	6.9
R-5113	Res.	B	67	2	4018 HARVARD CIR 6	No	69.0	62.9	6.1
R-5114	Res.	B	67	1	4018 HARVARD CIR 1	No	68.4	60.4	8.0
R-5115	Res.	B	67	1	4018 HARVARD CIR 2	No	69.1	62.3	6.8
R-5116	Res.	B	67	1	4018 HARVARD CIR 3	No	70.2	64.2	6.0
R-5117	Res.	B	67	1	4018 HARVARD CIR 28	No	50.0	50.0	0.0
R-5118	Res.	B	67	1	4018 HARVARD CIR 29	No	50.5	50.1	0.4
R-5119	Res.	B	67	1	4018 HARVARD CIR 30	No	57.1	54.0	3.1
R-5120	Res.	B	67	2	4018 HARVARD CIR 25	No	50.0	50.0	0.0

NW5 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-5121	Res.	B	67	2	4018 HARVARD CIR 26	No	50.9	50.1	0.8
R-5122	Res.	B	67	2	4018 HARVARD CIR 27	No	58.0	54.3	3.7
R-5123	Res.	B	67	1	4018 HARVARD CIR 22	No	54.8	50.0	4.8
R-5124	Res.	B	67	1	4018 HARVARD CIR 23	No	55.7	51.5	4.2
R-5125	Res.	B	67	1	4018 HARVARD CIR 24	No	58.0	54.4	3.6
R-5126	Res.	B	67	2	4018 HARVARD CIR 19	No	55.5	50.0	5.5
R-5127	Res.	B	67	2	4018 HARVARD CIR 20	No	56.2	51.7	4.5
R-5128	Res.	B	67	2	4018 HARVARD CIR 21	No	58.0	54.8	3.2
R-5129	Res.	B	67	1	4018 HARVARD CIR 16	No	53.3	50.0	3.3
R-5130	Res.	B	67	1	4018 HARVARD CIR 17	No	55.3	52.9	2.4
R-5131	Res.	B	67	1	4018 HARVARD CIR 18	No	57.0	55.3	1.7
R-5132	Res.	B	67	2	4003 HARVARD CIR 1	No	50.0	50.0	0.0
R-5133	Res.	B	67	2	4003 HARVARD CIR 2	No	50.0	50.0	0.0
R-5134	Res.	B	67	2	4007 HARVARD CIR 1	No	50.0	50.0	0.0
R-5135	Res.	B	67	2	4007 HARVARD CIR 2	No	50.0	50.0	0.0
R-5136	Res.	B	67	2	4015 HARVARD CIR 1	No	54.2	50.0	4.2
R-5137	Res.	B	67	2	4015 HARVARD CIR 2	No	55.0	50.0	5.0
R-5138	Res.	B	67	2	4019 HARVARD CIR 1	No	57.2	50.6	6.6
R-5139	Res.	B	67	2	4019 HARVARD CIR 2	No	58.7	52.5	6.2
R-5140	Res.	B	67	2	4023 HARVARD CIR 1	No	59.8	54.4	5.4
R-5141	Res.	B	67	2	4023 HARVARD CIR 2	No	62.0	56.9	5.1
R-5142	Res.	B	67	2	4048 HARVARD CIR 1	No	67.4	60.7	6.7
R-5143	Res.	B	67	2	4048 HARVARD CIR 2	No	68.9	63.3	5.6
R-5144	Res.	B	67	2	4044 HARVARD CIR 1	No	64.8	58.3	6.5
R-5145	Res.	B	67	2	4044 HARVARD CIR 2	No	66.2	61.8	4.4
R-5146	Res.	B	67	2	4008 HARVARD CIR 1	No	53.9	53.9	0.0
R-5147	Res.	B	67	2	4008 HARVARD CIR 2	No	54.7	54.7	0.0
R-5148	Res.	B	67	2	4012 HARVARD CIR 1	No	50.7	50.8	-0.1
R-5149	Res.	B	67	2	4012 HARVARD CIR 2	No	51.4	51.5	-0.1
R-5150	Res.	B	67	2	4016 HARVARD CIR 1	No	50.0	50.0	0.0
R-5151	Res.	B	67	2	4016 HARVARD CIR 2	No	50.0	50.0	0.0
R-5152	Res.	B	67	1	4023 HARVARD CIR 15	No	50.0	50.0	0.0
R-5153	Res.	B	67	1	4023 HARVARD CIR 16	No	58.2	55.6	2.6
R-5154	Res.	B	67	1	4023 HARVARD CIR 17	No	60.9	59.3	1.6
R-5155	Res.	B	67	2	4023 HARVARD CIR 12	No	50.0	50.0	0.0
R-5156	Res.	B	67	2	4023 HARVARD CIR 13	No	58.2	56.1	2.1
R-5157	Res.	B	67	2	4023 HARVARD CIR 14	No	62.1	59.9	2.2
R-5158	Res.	B	67	1	4023 HARVARD CIR 9	No	54.6	53.2	1.4
R-5159	Res.	B	67	1	4023 HARVARD CIR 10	No	58.5	56.8	1.7
R-5160	Res.	B	67	1	4023 HARVARD CIR 11	No	62.4	60.1	2.3
R-5161	Res.	B	67	2	4023 HARVARD CIR 6	No	54.3	51.1	3.2
R-5162	Res.	B	67	2	4023 HARVARD CIR 7	No	58.0	55.6	2.4
R-5163	Res.	B	67	2	4023 HARVARD CIR 8	No	61.4	59.4	2.0
R-5164	Res.	B	67	1	4023 HARVARD CIR 3	No	52.4	50.0	2.4
R-5165	Res.	B	67	1	4023 HARVARD CIR 4	No	54.4	52.2	2.2
R-5166	Res.	B	67	1	4023 HARVARD CIR 5	No	59.7	58.7	1.0
R-5167	Res.	B	67	1	4023 HARVARD CIR 30	No	65.0	62.8	2.2
R-5168	Res.	B	67	1	4023 HARVARD CIR 31	No	67.3	65.0	2.3
R-5169	Res.	B	67	1	4023 HARVARD CIR 32	No	68.5	66.4	2.1
R-5170	Res.	B	67	2	4023 HARVARD CIR 27	No	66.3	63.8	2.5
R-5171	Res.	B	67	2	4023 HARVARD CIR 28	No	67.9	65.5	2.4
R-5172	Res.	B	67	2	4023 HARVARD CIR 29	No	69.0	66.9	2.1
R-5173	Res.	B	67	1	4023 HARVARD CIR 24	No	67.6	64.8	2.8
R-5174	Res.	B	67	1	4023 HARVARD CIR 25	No	69.1	66.3	2.8
R-5175	Res.	B	67	1	4023 HARVARD CIR 26	No	69.8	67.5	2.3
R-5176	Res.	B	67	2	4023 HARVARD CIR 21	No	68.3	65.4	2.9
R-5177	Res.	B	67	2	4023 HARVARD CIR 22	No	69.9	66.9	3.0
R-5178	Res.	B	67	2	4023 HARVARD CIR 23	No	70.6	68.2	2.4
R-5179	Res.	B	67	1	4023 HARVARD CIR 18	No	69.3	65.8	3.5
R-5180	Res.	B	67	1	4023 HARVARD CIR 19	No	70.6	67.3	3.3
R-5181	Res.	B	67	1	4023 HARVARD CIR 20	No	71.2	68.7	2.5

NW5 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-5182	Res.	B	67	1	4032 HARVARD CIR 1	Yes	74.8	67.8	7.0
R-5183	Res.	B	67	1	4032 HARVARD CIR 2	No	75.7	71.3	4.4
R-5184	Res.	B	67	1	4032 HARVARD CIR 3	No	75.9	73.7	2.2
R-5185	Res.	B	67	2	4032 HARVARD CIR 4	Yes	74.9	67.4	7.5
R-5186	Res.	B	67	2	4032 HARVARD CIR 5	No	75.9	71.0	4.9
R-5187	Res.	B	67	2	4032 HARVARD CIR 6	No	76.2	73.9	2.3
R-5188	Res.	B	67	1	4032 HARVARD CIR 7	Yes	75.5	67.9	7.6
R-5189	Res.	B	67	1	4032 HARVARD CIR 8	No	76.2	71.7	4.5
R-5190	Res.	B	67	1	4032 HARVARD CIR 9	No	76.5	74.3	2.2
R-5191	Res.	B	67	2	4032 HARVARD CIR 10	Yes	75.7	66.8	8.9
R-5192	Res.	B	67	2	4032 HARVARD CIR 11	No	76.6	71.8	4.8
R-5193	Res.	B	67	2	4032 HARVARD CIR 12	No	76.9	74.7	2.2
R-5194	Res.	B	67	1	4032 HARVARD CIR 13	Yes	76.2	67.0	9.2
R-5195	Res.	B	67	1	4032 HARVARD CIR 14	No	77.0	72.3	4.7
R-5196	Res.	B	67	1	4032 HARVARD CIR 15	No	77.3	75.2	2.1
R-5197	Res.	B	67	1	4035 HARVARD CIR 1	Yes	76.6	69.0	7.6
R-5198	Res.	B	67	1	4035 HARVARD CIR 2	No	77.4	73.8	3.6
R-5199	Res.	B	67	1	4035 HARVARD CIR 3	No	77.4	75.8	1.6
R-5200	Res.	B	67	2	4035 HARVARD CIR 4	Yes	76.3	67.8	8.5
R-5201	Res.	B	67	2	4035 HARVARD CIR 5	No	77.3	72.9	4.4
R-5202	Res.	B	67	2	4035 HARVARD CIR 6	No	77.4	75.4	2.0
R-5203	Res.	B	67	1	4035 HARVARD CIR 7	Yes	76.3	67.6	8.7
R-5204	Res.	B	67	1	4035 HARVARD CIR 8	No	77.1	71.8	5.3
R-5205	Res.	B	67	1	4035 HARVARD CIR 9	No	77.3	75.2	2.1
R-5206	Res.	B	67	2	4035 HARVARD CIR 10	Yes	76.2	67.4	8.8
R-5207	Res.	B	67	2	4035 HARVARD CIR 11	No	77.0	71.1	5.9
R-5208	Res.	B	67	2	4035 HARVARD CIR 12	No	77.3	75.0	2.3
R-5209	Res.	B	67	1	4035 HARVARD CIR 13	Yes	76.2	67.2	9.0
R-5210	Res.	B	67	1	4035 HARVARD CIR 14	No	77.0	70.8	6.2
R-5211	Res.	B	67	1	4035 HARVARD CIR 15	No	77.2	74.8	2.4
R-5212	Daycare	C	67	3	4010 STERLING AVE	Yes	72.7	65.7	7.0
								Predicted Build Alternative With Barrier Benefits	**46**
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
2,500	14	35,253	46	766
Is the noise barrier preliminarily feasible and reasonable?				**Yes**

NW6 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-6001	Res.	B	67	2	10012_10014 E 42ND ST	Yes	74.8	67.4	7.4
R-6002	Res.	B	67	2	10016_10018 E 42ND ST	Yes	75.0	67.1	7.9
R-6003	Res.	B	67	2	10020_10022 E 42ND ST	Yes	74.6	66.9	7.7
R-6004	Res.	B	67	2	10008_10010 E 42ND ST	Yes	63.1	62.8	0.3
R-6005	Res.	B	67	2	10004_10006 E 42ND ST	Yes	61.5	61.4	0.1
R-6006	Res.	B	67	2	10000_10002 E 42ND ST	No	60.8	60.7	0.1
R-6007	Res.	B	67	2	10024_10026 E 42ND ST	Yes	68.1	61.0	7.1
R-6008	Res.	B	67	2	10028_10030 E 42ND ST	Yes	66.8	59.8	7.0
R-6009	Res.	B	67	2	10032_10034 E 42ND ST	No	63.5	56.8	6.7
R-6010	Res.	B	67	2	10036_10038 E 42ND ST	No	62.8	55.9	6.9
R-6011	Res.	B	67	1	4119 PITTMAN RD	No	53.9	52.4	1.5
R-6012	Res.	B	67	1	4201 PITTMAN RD	No	55.8	53.9	1.9
R-6013	Res.	B	67	1	4205 PITTMAN RD	No	55.1	53.1	2.0
R-6014	Res.	B	67	1	4207 PITTMAN RD	No	54.2	52.4	1.8
R-6015	Res.	B	67	1	4211 PITTMAN RD	No	55.0	53.2	1.8
R-6016	Res.	B	67	2	10108_10110 E 42ND ST	Yes	65.5	59.6	5.9
R-6017	Res.	B	67	2	10104_10106 E 42ND ST	No	64.4	58.4	6.0
R-6018	Res.	B	67	2	10100_10102 E 42ND ST	No	63.2	57.2	6.0
R-6019	Res.	B	67	2	10112_10114 E 42ND ST	Yes	71.0	63.6	7.4
R-6020	Res.	B	67	2	10116_10118 E 42ND ST	Yes	70.1	63.0	7.1
R-6021	Res.	B	67	2	10120_10122 E 42ND ST	Yes	67.3	57.8	9.5
R-6022	Res.	B	67	2	10124_10126 E 42ND ST	No	63.2	56.5	6.7
R-6023	Res.	B	67	2	10128_10130 E 42ND ST	No	60.4	54.5	5.9
R-6024	Res.	B	67	2	10212_10214 E 42ND ST	Yes	72.5	63.8	8.7
R-6025	Res.	B	67	2	10208_10210 E 42ND ST	Yes	70.6	61.2	9.4
R-6026	Res.	B	67	2	10216_10218 E 42ND ST	Yes	76.6	68.5	8.1
R-6027	Res.	B	67	2	10220_10222 E 42ND ST	Yes	75.3	67.3	8.0
R-6028	Res.	B	67	2	10224_10226 E 42ND ST	Yes	63.6	58.6	5.0
R-6029	Res.	B	67	2	10228_10230 E 42ND ST	Yes	60.5	56.2	4.3
R-6030	Res.	B	67	2	10232_10234 E 42ND ST	No	55.6	53.1	2.5
R-6031	Res.	B	67	2	10236_10238 E 42ND ST	No	53.7	51.8	1.9
R-6032	Res.	B	67	2	10312_10314 E 42ND ST	Yes	67.4	60.4	7.0
R-6033	Res.	B	67	2	10308_10310 E 42ND ST	Yes	62.4	57.0	5.4
R-6034	Res.	B	67	2	10304_10306 E 42ND ST	No	56.7	54.5	2.2
R-6035	Res.	B	67	2	10300_10302 E 42ND ST	No	54.4	52.6	1.8
R-6036	Res.	B	67	2	10316_10318 E 42ND ST	Yes	74.2	66.1	8.1
R-6037	Res.	B	67	2	10320_10322 E 42ND ST	Yes	75.1	66.1	9.0
R-6038	Res.	B	67	2	10324_10326 E 42ND ST	Yes	72.1	63.1	9.0
R-6039	Res.	B	67	2	10328_10330 E 42ND ST	Yes	69.8	62.7	7.1
R-6040	Res.	B	67	2	10332_10334 E 42ND ST	No	61.3	56.6	4.7
R-6041	Res.	B	67	2	10336_10338 E 42ND ST	No	57.3	54.6	2.7
R-6042	Res.	B	67	2	10201_10203 E 42ND ST	No	57.6	54.1	3.5
R-6043	Res.	B	67	2	10205_10207 E 42ND ST	No	56.0	53.7	2.3
R-6044	Res.	B	67	2	10209_10211 E 42ND ST	No	55.8	53.4	2.4
R-6045	Res.	B	67	2	10229_10231 E 42ND ST	No	50.8	50.0	0.8
R-6046	Res.	B	67	2	10225_10227 E 42ND ST	No	50.0	50.0	0.0
R-6047	Res.	B	67	2	10221_10223 E 42ND ST	No	50.0	50.0	0.0
R-6048	Res.	B	67	2	10301_10303 E 42ND ST	No	58.4	54.4	4.0
R-6049	Res.	B	67	2	10305_10307 E 42ND ST	No	57.4	53.0	4.4
R-6050	Res.	B	67	2	10333_10335 E 42ND ST	No	54.8	51.7	3.1
R-6051	Res.	B	67	2	10329_10331 E 42ND ST	No	54.9	51.3	3.6
R-6052	Res.	B	67	2	10400 E 42ND ST FL1	Yes	69.6	62.6	7.0
R-6053	Res.	B	67	2	10400 E 42ND ST FL2	No	73.2	65.0	8.2
R-6054	Res.	B	67	2	10404 E 42ND ST FL1	Yes	70.9	63.8	7.1
R-6055	Res.	B	67	2	10404 E 42ND ST FL2	No	74.3	65.9	8.4
R-6056	Res.	B	67	2	10408 E 42ND ST FL1	Yes	72.6	63.7	8.9
R-6057	Res.	B	67	2	10408 E 42ND ST FL2	No	75.0	66.8	8.2
R-6058	Res.	B	67	2	10412 E 42ND ST FL1	Yes	73.3	65.7	7.6
R-6059	Res.	B	67	2	10412 E 42ND ST FL2	No	75.3	68.0	7.3

NW6 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-6060	Res.	B	67	2	10401 E 42ND ST FL1	No	56.6	54.3	2.3
R-6061	Res.	B	67	2	10401 E 42ND ST FL2	No	60.2	57.9	2.3
R-6062	Res.	B	67	2	10401 E 42ND ST FL3	No	62.3	59.1	3.2
R-6063	Res.	B	67	2	10405 E 42ND ST FL1	No	56.9	54.0	2.9
R-6064	Res.	B	67	2	10405 E 42ND ST FL2	No	60.3	58.1	2.2
R-6065	Res.	B	67	2	10405 E 42ND ST FL3	No	62.5	59.3	3.2
R-6066	Res.	B	67	2	10409 E 42ND ST FL1	No	61.5	56.4	5.1
R-6067	Res.	B	67	2	10409 E 42ND ST FL2	No	63.4	59.5	3.9
R-6068	Res.	B	67	2	10409 E 42ND ST FL3	No	65.0	61.0	4.0
R-6069	Res.	B	67	2	10413 E 42ND ST FL1	No	62.4	56.5	5.9
R-6070	Res.	B	67	2	10413 E 42ND ST FL2	No	63.9	59.3	4.6
R-6071	Res.	B	67	2	10413 E 42ND ST FL3	No	65.4	60.7	4.7
R-6072	Res.	B	67	2	10417 E 42ND ST FL1	No	63.6	56.9	6.7
R-6073	Res.	B	67	2	10417 E 42ND ST FL2	No	65.1	59.8	5.3
R-6074	Res.	B	67	2	10417 E 42ND ST FL3	No	66.6	61.2	5.4
R-6075	Res.	B	67	2	10501 E 42ND ST FL1	No	64.7	59.0	5.7
R-6076	Res.	B	67	2	10501 E 42ND ST FL2	No	65.7	60.5	5.2
R-6077	Res.	B	67	2	10501 E 42ND ST FL3	No	67.2	62.5	4.7
R-6078	Res.	B	67	2	10505 E 42ND ST FL1	No	66.6	60.5	6.1
R-6079	Res.	B	67	2	10505 E 42ND ST FL2	No	67.6	61.9	5.7
R-6080	Res.	B	67	2	10505 E 42ND ST FL3	No	68.7	63.6	5.1
R-6081	Res.	B	67	2	10509 E 42ND ST FL1	No	64.6	59.4	5.2
R-6082	Res.	B	67	2	10509 E 42ND ST FL2	No	65.9	61.8	4.1
R-6083	Res.	B	67	2	10509 E 42ND ST FL3	No	67.1	63.5	3.6
R-6084	Res.	B	67	2	10513 E 42ND ST FL1	No	64.5	59.5	5.0
R-6085	Res.	B	67	2	10513 E 42ND ST FL2	No	65.7	61.7	4.0
R-6086	Res.	B	67	2	10513 E 42ND ST FL3	No	67.1	63.9	3.2
R-6087	Res.	B	67	2	10508 E 42ND ST FL1	Yes	71.1	62.3	8.8
R-6088	Res.	B	67	2	10508 E 42ND ST FL2	No	72.1	65.1	7.0
R-6089	Res.	B	67	2	10508 E 42ND ST FL3	No	73.1	67.0	6.1
R-6090	Res.	B	67	2	10512 E 42ND ST FL1	Yes	72.4	62.9	9.5
R-6091	Res.	B	67	2	10512 E 42ND ST FL2	No	73.4	66.0	7.4
R-6092	Res.	B	67	2	10512 E 42ND ST FL3	No	74.2	68.5	5.7
R-6093	Res.	B	67	2	10600 E 42ND ST FL1	Yes	76.5	69.5	7.0
R-6094	Res.	B	67	2	10600 E 42ND ST FL2	No	77.5	74.8	2.7
R-6095	Res.	B	67	2	10600 E 42ND ST FL3	No	77.8	76.4	1.4
R-6096	Res.	B	67	2	10604 E 42ND ST FL1	Yes	76.7	69.7	7.0
R-6097	Res.	B	67	2	10604 E 42ND ST FL2	No	77.7	76.0	1.7
R-6098	Res.	B	67	2	10604 E 42ND ST FL3	No	77.9	77.1	0.8
R-6099	Res.	B	67	2	10608 E 42ND ST FL1	Yes	76.9	67.5	9.4
R-6100	Res.	B	67	2	10608 E 42ND ST FL2	No	77.8	75.2	2.6
R-6101	Res.	B	67	2	10608 E 42ND ST FL3	No	78.0	77.7	0.3
R-6102	Res.	B	67	2	10612 E 42ND ST FL1	Yes	77.3	67.8	9.5
R-6103	Res.	B	67	2	10612 E 42ND ST FL2	No	78.1	75.8	2.3
R-6104	Res.	B	67	2	10612 E 42ND ST FL3	No	78.2	78.0	0.2
R-6105	Res.	B	67	2	10616 E 42ND ST FL1	Yes	76.8	67.4	9.4
R-6106	Res.	B	67	2	10616 E 42ND ST FL2	No	77.6	74.9	2.7
R-6107	Res.	B	67	2	10616 E 42ND ST FL3	No	77.8	77.8	0.0
R-6108	Res.	B	67	2	10620 E 42ND ST FL1	Yes	76.2	69.2	7.0
R-6109	Res.	B	67	2	10620 E 42ND ST FL2	No	77.0	74.7	2.3
R-6110	Res.	B	67	2	10620 E 42ND ST FL3	No	77.2	77.2	0.0
R-6111	Res.	B	67	2	10601 E 42ND ST FL1	No	62.2	58.6	3.6
R-6112	Res.	B	67	2	10601 E 42ND ST FL2	No	64.0	60.8	3.2
R-6113	Res.	B	67	2	10601 E 42ND ST FL3	No	65.6	63.3	2.3
R-6114	Res.	B	67	2	10605 E 42ND ST FL1	No	62.6	60.2	2.4
R-6115	Res.	B	67	2	10605 E 42ND ST FL2	No	64.7	62.3	2.4
R-6116	Res.	B	67	2	10605 E 42ND ST FL3	No	66.3	64.4	1.9
R-6117	Res.	B	67	2	10609 E 42ND ST FL1	No	62.9	60.9	2.0
R-6118	Res.	B	67	2	10609 E 42ND ST FL2	No	64.9	63.0	1.9
R-6119	Res.	B	67	2	10609 E 42ND ST FL3	No	66.4	64.8	1.6
R-6120	Res.	B	67	2	10613 E 42ND ST FL1	No	60.9	60.3	0.6

NW6 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-6121	Res.	B	67	2	10613 E 42ND ST FL2	No	63.6	63.0	0.6
R-6122	Res.	B	67	2	10613 E 42ND ST FL3	No	65.1	64.5	0.6
R-6123	Res.	B	67	2	10617 E 42ND ST FL1	No	63.9	63.0	0.9
R-6124	Res.	B	67	2	10617 E 42ND ST FL2	No	65.9	65.2	0.7
R-6125	Res.	B	67	2	10617 E 42ND ST FL3	No	**66.9**	**66.2**	0.7
R-6126	Hospital	D	77	8	4251 NORTHERN AVE	Yes	**74.3**	**74.1**	0.2
R-6127	Church	D	77	9	11100 E 43RD ST	Yes	**70.3**	**70.2**	0.1
								Predicted Build Alternative With Barrier Benefits	**70**
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
2,678	12	32,835	70	469
Is the noise barrier preliminarily feasible and reasonable?				**Yes**

NW7 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-7001	Res.	B	67	1	11201 E 40TH ST S	No	67.5	67.5	0.0
R-7002	Res.	B	67	1	11205 E 40TH ST S	No	66.9	66.9	0.0
R-7003	Res.	B	67	1	11209 E HIGHRIDGE DR	No	67.5	67.5	0.0
R-7004	Res.	B	67	1	11215 E HIGHRIDGE DR	No	67.9	67.9	0.0
R-7005	Res.	B	67	1	11221 E HIGHRIDGE DR	No	68.4	68.4	0.0
R-7006	Res.	B	67	1	11231 E HIGHRIDGE DR	No	68.5	68.5	0.0
R-7007	Res.	B	67	1	11237 E HIGHRIDGE DR	No	68.6	68.6	0.0
R-7008	Res.	B	67	1	11241 E HIGHRIDGE DR	No	68.7	68.7	0.0
R-7009	Res.	B	67	1	11247 E HIGHRIDGE DR	No	69.2	69.2	0.0
R-7010	Res.	B	67	1	11309 E HIGHRIDGE DR	No	69.4	69.4	0.0
R-7011	Res.	B	67	1	11311 E HIGHRIDGE DR	No	69.7	69.7	0.0
R-7012	Res.	B	67	1	11315 E HIGHRIDGE DR	No	69.6	69.5	0.1
R-7013	Res.	B	67	1	11319 E HIGHRIDGE DR	No	69.1	69.1	0.0
R-7014	Res.	B	67	1	11325 E HIGHRIDGE DR	No	68.2	68.2	0.0
R-7015	Res.	B	67	1	11335 E HIGHRIDGE DR	No	69.7	69.6	0.1
R-7016	Res.	B	67	1	11339 E HIGHRIDGE DR	No	71.2	71.2	0.0
R-7017	Res.	B	67	1	11343 E HIGHRIDGE DR	Yes	72.4	72.4	0.0
R-7019	Res.	B	67	1	11407 E HIGHRIDGE DR	Yes	73.0	65.1	7.9
R-7020	Res.	B	67	1	11417 E HIGHRIDGE DR	Yes	74.2	65.8	8.4
R-7021	Res.	B	67	1	11419 E HIGHRIDGE DR	Yes	74.2	65.3	8.9
R-7022	Res.	B	67	1	11425 E HIGHRIDGE DR	Yes	74.4	67.1	7.3
R-7023	Res.	B	67	1	11431 E HIGHRIDGE DR	Yes	74.5	67.5	7.0
R-7024	Res.	B	67	1	11435 E HIGHRIDGE DR	Yes	75.5	66.7	8.8
R-7025	Res.	B	67	1	11308 E HIGHRIDGE DR	No	66.1	66.0	0.1
R-7026	Res.	B	67	1	11312 E HIGHRIDGE DR	No	66.3	66.3	0.0
R-7027	Res.	B	67	1	11316 E HIGHRIDGE DR	No	66.4	66.3	0.1
R-7028	Res.	B	67	1	11320 E HIGHRIDGE DR	No	66.2	66.1	0.1
R-7029	Res.	B	67	1	11324 E HIGHRIDGE DR	No	65.9	65.9	0.0
R-7030	Res.	B	67	1	11328 E HIGHRIDGE DR	No	65.5	65.5	0.0
R-7031	Res.	B	67	1	11220 E 40TH ST S	No	62.1	62.1	0.0
R-7032	Res.	B	67	1	11300 E 40TH ST S	No	63.2	63.1	0.1
R-7033	Res.	B	67	1	11302 E 40TH ST S	No	63.4	63.4	0.0
R-7034	Res.	B	67	1	11304 E 40TH ST S	No	63.3	63.2	0.1
R-7035	Res.	B	67	1	11308 E 40TH ST S	No	63.0	62.9	0.1
R-7036	Res.	B	67	1	11312 E 40TH ST S	No	62.9	62.8	0.1
R-7037	Res.	B	67	1	11316 E 40TH ST S	No	63.0	63.0	0.0
R-7038	Res.	B	67	1	11320 E 40TH ST S	No	62.7	62.6	0.1
R-7039	Res.	B	67	1	11324 E 40TH ST S	No	61.9	61.8	0.1
R-7040	Res.	B	67	1	11328 E 40TH ST S	No	62.7	62.6	0.1
R-7041	Res.	B	67	1	11332 E 40TH ST S	No	62.3	62.3	0.0
R-7042	Res.	B	67	1	3924 S CRESTVIEW RD	No	61.6	61.5	0.1
R-7043	Res.	B	67	1	3927 S CRESTVIEW RD	No	61.3	61.2	0.1
R-7044	Res.	B	67	1	3924 S BLUE RIDGE BLVD	No	62.6	62.6	0.0
R-7045	Res.	B	67	1	11321 E 40TH ST S	No	64.8	64.7	0.1
R-7046	Res.	B	67	1	11325 E 40TH ST S	No	64.6	64.5	0.1
R-7047	Res.	B	67	1	11333 E 40TH ST S	No	62.4	62.4	0.0
R-7048	Res.	B	67	1	4012 S VALLEY WAY	No	63.2	63.2	0.0
R-7049	Res.	B	67	1	4007 S CRESTVIEW RD	No	63.1	62.9	0.2
R-7050	Res.	B	67	1	4013 S CRESTVIEW RD	No	63.7	63.6	0.1
R-7051	Res.	B	67	1	4019 S CRESTVIEW RD	No	64.5	64.3	0.2
R-7052	Res.	B	67	1	4025 S CRESTVIEW RD	No	65.2	65.0	0.2
R-7053	Res.	B	67	1	4031 S CRESTVIEW RD	No	66.0	65.8	0.2
R-7054	Res.	B	67	1	4037 S CRESTVIEW RD	No	66.4	66.0	0.4
R-7055	Res.	B	67	1	4043 S CRESTVIEW RD	No	66.8	66.3	0.5
R-7056	Res.	B	67	1	11414 E HIGHRIDGE DR	No	66.5	65.7	0.8
R-7057	Res.	B	67	1	4000 S BLUE RIDGE BLVD	No	62.6	62.4	0.2
R-7058	Res.	B	67	1	4008 S BLUE RIDGE BLVD	No	62.9	62.7	0.2
R-7059	Res.	B	67	1	4016 S BLUE RIDGE BLVD	No	63.3	63.1	0.2
R-7060	Res.	B	67	1	4020 S BLUE RIDGE BLVD	No	63.9	63.6	0.3

NW7 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-7061	Res.	B	67	1	4026 S BLUE RIDGE BLVD	No	64.6	64.1	0.5
R-7062	Res.	B	67	1	4030 S BLUE RIDGE BLVD	No	65.0	64.3	0.7
R-7063	Res.	B	67	1	4032 S BLUE RIDGE BLVD	No	**66.0**	65.2	0.8
								Predicted Build Alternative With Barrier Benefits	**6**
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
401	11	4,287	6	715
Is the noise barrier preliminarily feasible and reasonable?				**Yes**

NW9 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-9001	Res.	B	67	1	4003 S CRYSLER AVE APT 1	No	50.7	50.0	0.7
R-9002	Res.	B	67	1	4003 S CRYSLER AVE APT 2	No	58.0	58.0	0.0
R-9003	Res.	B	67	1	4003 S CRYSLER AVE APT 3	No	58.0	58.0	0.0
R-9004	Res.	B	67	1	4003 S CRYSLER AVE APT 4	No	50.5	50.0	0.5
R-9005	Res.	B	67	1	4003 S CRYSLER AVE APT 5	No	52.1	50.0	2.1
R-9006	Res.	B	67	1	4003 S CRYSLER AVE APT 6	No	59.3	59.3	0.0
R-9007	Res.	B	67	1	4003 S CRYSLER AVE APT 7	No	59.2	59.2	0.0
R-9008	Res.	B	67	1	4003 S CRYSLER AVE APT 8	No	51.8	50.0	1.8
R-9009	Res.	B	67	1	4017 S CRYSLER AVE APT 1	No	54.3	50.3	4.0
R-9010	Res.	B	67	1	4017 S CRYSLER AVE APT 2	No	58.1	58.1	0.0
R-9011	Res.	B	67	1	4017 S CRYSLER AVE APT 3	No	58.1	58.1	0.0
R-9012	Res.	B	67	1	4017 S CRYSLER AVE APT 4	No	54.0	50.0	4.0
R-9013	Res.	B	67	1	4017 S CRYSLER AVE APT 5	No	58.2	52.4	5.8
R-9014	Res.	B	67	1	4017 S CRYSLER AVE APT 6	No	59.5	59.5	0.0
R-9015	Res.	B	67	1	4017 S CRYSLER AVE APT 7	No	59.5	59.5	0.0
R-9016	Res.	B	67	1	4017 S CRYSLER AVE APT 8	No	57.3	51.8	5.5
R-9017	Res.	B	67	1	4025 S CRYSLER AVE APT 1	No	62.9	59.0	3.9
R-9018	Res.	B	67	1	4025 S CRYSLER AVE APT 2	No	52.6	52.6	0.0
R-9019	Res.	B	67	1	4025 S CRYSLER AVE APT 3	No	50.8	50.8	0.0
R-9020	Res.	B	67	1	4025 S CRYSLER AVE APT 4	No	62.9	58.7	4.2
R-9021	Res.	B	67	1	4025 S CRYSLER AVE APT 5	No	66.5	61.8	4.7
R-9022	Res.	B	67	1	4025 S CRYSLER AVE APT 6	No	54.0	54.0	0.0
R-9023	Res.	B	67	1	4025 S CRYSLER AVE APT 7	No	52.5	52.5	0.0
R-9024	Res.	B	67	1	4025 S CRYSLER AVE APT 8	No	66.4	61.4	5.0
R-9025	Res.	B	67	1	4005 S CRYSLER AVE APT 1	No	53.6	50.0	3.6
R-9026	Res.	B	67	1	4005 S CRYSLER AVE APT 2	No	51.9	50.0	1.9
R-9027	Res.	B	67	1	4005 S CRYSLER AVE APT 3	No	51.2	50.0	1.2
R-9028	Res.	B	67	1	4005 S CRYSLER AVE APT 4	No	53.4	50.0	3.4
R-9029	Res.	B	67	1	4005 S CRYSLER AVE APT 5	No	57.2	51.8	5.4
R-9030	Res.	B	67	1	4005 S CRYSLER AVE APT 6	No	55.0	51.5	3.5
R-9031	Res.	B	67	1	4005 S CRYSLER AVE APT 7	No	54.8	51.8	3.0
R-9032	Res.	B	67	1	4005 S CRYSLER AVE APT 8	No	56.7	51.5	5.2
R-9033	Res.	B	67	1	4015 S CRYSLER AVE APT 1	No	56.1	52.3	3.8
R-9034	Res.	B	67	1	4015 S CRYSLER AVE APT 2	No	56.9	53.1	3.8
R-9035	Res.	B	67	1	4015 S CRYSLER AVE APT 3	No	54.0	50.3	3.7
R-9036	Res.	B	67	1	4015 S CRYSLER AVE APT 4	No	60.5	54.6	5.9
R-9037	Res.	B	67	1	4015 S CRYSLER AVE APT 5	No	61.5	55.5	6.0
R-9038	Res.	B	67	1	4015 S CRYSLER AVE APT 6	No	54.8	51.2	3.6
R-9039	Res.	B	67	1	4015 S CRYSLER AVE APT 7	No	56.4	51.1	5.3
R-9040	Res.	B	67	1	4015 S CRYSLER AVE APT 8	No	63.0	55.7	7.3
R-9041	Res.	B	67	1	4015 S CRYSLER AVE APT 9	No	64.2	56.6	7.6
R-9042	Res.	B	67	1	4015 S CRYSLER AVE APT 10	No	57.1	51.9	5.2
R-9043	Res.	B	67	1	4027 S CRYSLER AVE APT 1	No	59.6	55.6	4.0
R-9044	Res.	B	67	1	4027 S CRYSLER AVE APT 2	No	62.1	57.3	4.8
R-9045	Res.	B	67	1	4027 S CRYSLER AVE APT 3	No	62.8	57.6	5.2
R-9046	Res.	B	67	1	4027 S CRYSLER AVE APT 4	No	60.4	56.6	3.8
R-9047	Res.	B	67	1	4027 S CRYSLER AVE APT 5	No	62.5	57.7	4.8
R-9048	Res.	B	67	1	4027 S CRYSLER AVE APT 6	No	66.4	60.4	6.0
R-9049	Res.	B	67	1	4027 S CRYSLER AVE APT 7	No	66.8	60.7	6.1
R-9050	Res.	B	67	1	4027 S CRYSLER AVE APT 8	No	63.4	58.7	4.7
R-9051	Res.	B	67	1	4029 S CRYSLER AVE APT 1	No	65.5	59.0	6.5
R-9052	Res.	B	67	1	4029 S CRYSLER AVE APT 2	No	67.1	60.2	6.9
R-9053	Res.	B	67	1	4029 S CRYSLER AVE APT 3	Yes	67.9	60.4	7.5
R-9054	Res.	B	67	1	4029 S CRYSLER AVE APT 4	Yes	66.6	59.5	7.1
R-9055	Res.	B	67	1	4029 S CRYSLER AVE APT 5	No	69.6	62.2	7.4
R-9056	Res.	B	67	1	4029 S CRYSLER AVE APT 6	No	70.7	63.3	7.4
R-9057	Res.	B	67	1	4029 S CRYSLER AVE APT 7	Yes	71.4	63.8	7.6
R-9058	Res.	B	67	1	4029 S CRYSLER AVE APT 8	Yes	70.6	63.0	7.6
R-9059	Res.	B	67	1	4007 S CRYSLER AVE APT 1	No	54.3	50.5	3.8

NW9 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-9060	Res.	B	67	1	4007 S CRYSLER AVE APT 2	No	50.0	50.0	0.0
R-9061	Res.	B	67	1	4007 S CRYSLER AVE APT 3	No	50.0	50.0	0.0
R-9062	Res.	B	67	1	4007 S CRYSLER AVE APT 4	No	53.6	50.0	3.6
R-9063	Res.	B	67	1	4007 S CRYSLER AVE APT 5	No	58.0	52.1	5.9
R-9064	Res.	B	67	1	4007 S CRYSLER AVE APT 6	No	52.6	50.0	2.6
R-9065	Res.	B	67	1	4007 S CRYSLER AVE APT 7	No	52.2	50.0	2.2
R-9066	Res.	B	67	1	4007 S CRYSLER AVE APT 8	No	57.2	51.5	5.7
R-9067	Res.	B	67	1	4013 S CRYSLER AVE APT 1	No	56.8	53.4	3.4
R-9068	Res.	B	67	1	4013 S CRYSLER AVE APT 2	No	52.7	50.0	2.7
R-9069	Res.	B	67	1	4013 S CRYSLER AVE APT 3	No	52.1	50.0	2.1
R-9070	Res.	B	67	1	4013 S CRYSLER AVE APT 4	No	56.5	52.9	3.6
R-9071	Res.	B	67	1	4013 S CRYSLER AVE APT 5	No	62.2	55.8	6.4
R-9072	Res.	B	67	1	4013 S CRYSLER AVE APT 6	No	55.3	50.7	4.6
R-9073	Res.	B	67	1	4013 S CRYSLER AVE APT 7	No	54.5	50.1	4.4
R-9074	Res.	B	67	1	4013 S CRYSLER AVE APT 8	No	61.3	54.9	6.4
R-9075	Res.	B	67	1	4009 S CRYSLER AVE APT 1	No	55.1	51.5	3.6
R-9076	Res.	B	67	1	4009 S CRYSLER AVE APT 2	No	54.5	50.0	4.5
R-9077	Res.	B	67	1	4009 S CRYSLER AVE APT 3	No	54.0	50.0	4.0
R-9078	Res.	B	67	1	4009 S CRYSLER AVE APT 4	No	54.9	51.3	3.6
R-9079	Res.	B	67	1	4009 S CRYSLER AVE APT 5	No	59.2	54.2	5.0
R-9080	Res.	B	67	1	4009 S CRYSLER AVE APT 6	No	56.4	51.3	5.1
R-9081	Res.	B	67	1	4009 S CRYSLER AVE APT 7	No	55.8	50.8	5.0
R-9082	Res.	B	67	1	4009 S CRYSLER AVE APT 8	No	58.9	54.1	4.8
R-9083	Res.	B	67	1	4011 S CRYSLER AVE APT 1	No	55.9	52.5	3.4
R-9084	Res.	B	67	1	4011 S CRYSLER AVE APT 2	No	55.9	52.8	3.1
R-9085	Res.	B	67	1	4011 S CRYSLER AVE APT 3	No	54.7	51.0	3.7
R-9086	Res.	B	67	1	4011 S CRYSLER AVE APT 4	No	60.3	55.1	5.2
R-9087	Res.	B	67	1	4011 S CRYSLER AVE APT 5	No	60.6	55.4	5.2
R-9088	Res.	B	67	1	4011 S CRYSLER AVE APT 6	No	55.0	51.5	3.5
R-9089	Res.	B	67	1	4011 S CRYSLER AVE APT 7	No	58.5	53.0	5.5
R-9090	Res.	B	67	1	4011 S CRYSLER AVE APT 8	No	64.6	56.1	8.5
R-9091	Res.	B	67	1	4011 S CRYSLER AVE APT 9	No	65.1	56.4	8.7
R-9092	Res.	B	67	1	4011 S CRYSLER AVE APT 10	No	59.3	53.5	5.8
R-9093	Res.	B	67	1	12402 E 41ST ST S	Yes	70.2	62.5	7.7
R-9094	Res.	B	67	1	12404 E 41ST ST S	Yes	71.1	63.0	8.1
R-9095	Res.	B	67	1	12406 E 41ST ST S	Yes	69.1	61.9	7.2
R-9096	Res.	B	67	1	12408 E 41ST ST S	Yes	72.1	63.3	8.8
R-9097	Res.	B	67	1	12412 E 41ST ST S	Yes	73.0	63.7	9.3
R-9098	Church	C	67	5	4010 S RIVER BLVD 1	No	61.1	55.5	5.6
R-9099	Church	C	67	5	4010 S RIVER BLVD 2	No	58.8	54.7	4.1
R-9100	Res.	B	67	1	12801 E 40TH ST S	No	61.2	54.9	6.3
R-9101	Res.	B	67	1	12805 E 40TH ST S	No	61.5	54.6	6.9
R-9102	Res.	B	67	1	12809 E 40TH ST S	No	61.9	55.0	6.9
R-9103	Res.	B	67	1	12901 E 40TH ST S	No	60.8	53.9	6.9
R-9104	Res.	B	67	1	12905 E 40TH ST S	No	61.6	54.7	6.9
R-9105	Res.	B	67	1	12909 E 40TH ST S	No	61.1	54.5	6.6
R-9106	Res.	B	67	1	12913 E 40TH ST S	No	60.9	54.0	6.9
R-9107	Res.	B	67	1	13001 E 40TH ST S	No	60.2	53.5	6.7
R-9108	Res.	B	67	1	13005 E 40TH ST S	No	59.8	53.1	6.7
R-9109	Res.	B	67	1	13009 E 40TH ST S	No	59.8	53.1	6.7
R-9110	Res.	B	67	1	13013 E 40TH ST S	No	59.9	53.1	6.8
R-9111	Res.	B	67	1	13017 E 40TH ST S	No	59.5	53.1	6.4
R-9112	Res.	B	67	1	13021 E 40TH ST S	No	59.9	53.1	6.8
R-9113	Res.	B	67	1	4000 S DELAWARE AVE	No	59.6	53.1	6.5
R-9114	Res.	B	67	1	12800 E 40TH TER S	No	62.9	56.5	6.4
R-9115	Res.	B	67	1	12804 E 40TH TER S	No	61.9	55.4	6.5
R-9116	Res.	B	67	1	12808 E 40TH TER S	No	60.0	54.2	5.8
R-9117	Res.	B	67	1	12900 E 40TH TER S	No	60.6	54.5	6.1
R-9118	Res.	B	67	1	12904 E 40TH TER S	No	60.5	54.5	6.0
R-9119	Res.	B	67	1	12908 E 40TH TER S	No	59.2	53.5	5.7
R-9120	Res.	B	67	1	12912 E 40TH TER S	No	59.9	53.9	6.0

NW9 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-9121	Res.	B	67	1	13000 E 40TH TER S	No	59.6	53.2	6.4
R-9122	Res.	B	67	1	13004 E 40TH TER S	No	59.9	53.3	6.6
R-9123	Res.	B	67	1	13008 E 40TH TER S	No	60.5	54.4	6.1
R-9124	Res.	B	67	1	13012 E 40TH TER S	No	60.3	53.8	6.5
R-9125	Res.	B	67	1	13016 E 40TH TER S	No	60.7	53.8	6.9
R-9126	Res.	B	67	1	13100 E 40TH TER S	No	61.2	54.6	6.6
R-9127	Res.	B	67	1	12801 E 40TH TER S	No	62.3	56.0	6.3
R-9128	Res.	B	67	1	12805 E 40TH TER S	No	62.6	55.9	6.7
R-9129	Res.	B	67	1	12809 E 40TH TER S	No	62.6	55.9	6.7
R-9130	Res.	B	67	1	12901 E 40TH TER S	No	62.6	55.7	6.9
R-9131	Res.	B	67	1	12905 E 40TH TER S	No	62.7	55.8	6.9
R-9132	Res.	B	67	1	12909 E 40TH TER S	No	62.7	55.8	6.9
R-9133	Res.	B	67	1	12913 E 40TH TER S	No	61.3	54.9	6.4
R-9134	Res.	B	67	1	13001 E 40TH TER S	No	61.4	54.9	6.5
R-9135	Res.	B	67	1	13005 E 40TH TER S	No	61.3	54.8	6.5
R-9136	Res.	B	67	1	13009 E 40TH TER S	No	61.9	55.0	6.9
R-9137	Res.	B	67	1	13013 E 40TH TER S	No	61.7	54.8	6.9
R-9138	Res.	B	67	1	13021 E 40TH TER S	No	61.9	55.8	6.1
R-9139	Res.	B	67	1	12800 E 41ST ST S	No	67.3	59.8	7.5
R-9140	Res.	B	67	1	12804 E 41ST ST S	No	67.0	59.3	7.7
R-9141	Res.	B	67	1	12808 E 41ST ST S	No	65.8	58.3	7.5
R-9142	Res.	B	67	1	12900 E 41ST ST S	No	65.0	58.0	7.0
R-9143	Res.	B	67	1	12904 E 41ST ST S	No	66.3	58.5	7.8
R-9144	Res.	B	67	1	12908 E 41ST ST S	No	67.0	59.0	8.0
R-9145	Res.	B	67	1	12912 E 41ST ST S	No	65.4	58.2	7.2
R-9146	Res.	B	67	1	13000 E 41ST ST S	No	66.7	59.1	7.6
R-9147	Res.	B	67	1	13004 E 41ST ST S	No	65.4	58.1	7.3
R-9148	Res.	B	67	1	13008 E 41ST ST S	No	64.5	57.5	7.0
R-9149	Res.	B	67	1	13012 E 41ST ST S	No	63.8	57.1	6.7
R-9150	Res.	B	67	1	4014 S DELAWARE AVE	No	64.0	57.1	6.9
R-9151	Res.	B	67	1	12801 E 41ST ST S	Yes	70.4	62.5	7.9
R-9152	Res.	B	67	1	12805 E 41ST ST S	Yes	69.0	61.7	7.3
R-9153	Res.	B	67	1	12809 E 41ST ST ST	Yes	68.2	61.0	7.2
R-9154	Res.	B	67	1	12901 E 41ST ST S	Yes	68.1	61.0	7.1
R-9155	Res.	B	67	1	12905 E 41ST ST S	Yes	67.9	60.9	7.0
R-9156	Res.	B	67	1	12909 E 41ST ST S	Yes	68.5	60.8	7.7
R-9157	Res.	B	67	1	12913 E 41ST ST S	Yes	68.5	61.1	7.4
R-9158	Res.	B	67	1	13001 E 41ST ST S	Yes	68.2	61.1	7.1
R-9159	Res.	B	67	1	13005 E 41ST ST S	Yes	68.8	61.3	7.5
R-9160	Res.	B	67	1	13009 E 41ST ST S	Yes	68.4	60.8	7.6
R-9161	Res.	B	67	1	13013 E 41ST ST S	Yes	68.2	60.6	7.6
R-9162	Res.	B	67	1	13017 E 41ST ST S	Yes	67.4	60.4	7.0
R-9163	Res.	B	67	1	4019 S DELAWARE AVE	No	66.5	59.9	6.6
R-9164	Res.	B	67	1	4015 S DELAWARE AVE	No	65.5	59.1	6.4
R-9165	Res.	B	67	1	4011 S DELAWARE AVE	No	63.9	57.7	6.2
R-9166	Res.	B	67	1	4009 S DELAWARE AVE	No	61.8	54.9	6.9
R-9167	Res.	B	67	1	4005 S DELAWARE AVE	No	60.6	54.6	6.0
R-9168	Res.	B	67	1	4001 S DELAWARE AVE	No	60.7	54.5	6.2
R-9169	Res.	B	67	1	13101 E 40TH ST S	No	60.5	54.1	6.4
R-9170	Res.	B	67	1	4000 S PLEASANT ST	No	61.5	54.7	6.8
R-9171	Res.	B	67	1	4004 S PLEASANT ST	No	60.7	54.4	6.3
R-9172	Res.	B	67	1	4008 S PLEASANT ST	No	61.2	54.9	6.3
R-9173	Res.	B	67	1	4012 S PLEASANT ST	No	61.3	54.3	7.0
R-9174	Res.	B	67	1	4016 S PLEASANT ST	No	61.8	54.8	7.0
R-9175	Res.	B	67	1	4020 S PLEASANT ST	No	62.4	55.4	7.0
R-9176	Res.	B	67	1	4024 S PLEASANT ST	No	63.6	56.4	7.2
R-9177	Res.	B	67	1	4028 S PLEASANT ST	No	64.9	57.5	7.4
R-9178	Res.	B	67	1	4032 S PLEASANT ST	Yes	65.0	58.0	7.0
R-9179	Res.	B	67	1	13201 E 40TH TER S	Yes	68.3	61.2	7.1
R-9180	Res.	B	67	1	13205 E 40TH TER S	Yes	67.7	60.7	7.0
R-9181	Res.	B	67	1	13209 E 40TH TER S	Yes	69.7	61.6	8.1

NW9 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-9182	Res.	B	67	1	13213 E 40TH TER S	Yes	69.2	61.2	8.0
R-9183	Res.	B	67	1	13217 E 40TH TER S	Yes	69.6	61.2	8.4
R-9184	Res.	B	67	1	13301 E 40TH TER S	Yes	69.8	61.5	8.3
R-9185	Res.	B	67	1	13305 E 40TH TER S	Yes	70.6	63.0	7.6
R-9186	Res.	B	67	1	13309 E 40TH TER S	Yes	71.2	63.8	7.4
R-9187	Res.	B	67	1	13313 E 40TH TER S	Yes	71.3	64.7	6.6
R-9188	Res.	B	67	1	13317 E 40TH TER S	Yes	73.0	66.3	6.7
R-9189	Res.	B	67	1	4001 S PLEASANT ST	No	64.7	56.9	7.8
R-9190	Res.	B	67	1	4005 S PLEASANT ST	No	64.6	56.6	8.0
R-9191	Res.	B	67	1	4009 S PLEASANT ST	No	64.6	56.5	8.1
R-9192	Res.	B	67	1	4013 S PLEASANT ST	No	63.5	55.3	8.2
R-9193	Res.	B	67	1	4017 S PLEASANT ST	No	64.5	56.3	8.2
R-9194	Res.	B	67	1	4021 S PLEASANT ST	No	64.8	56.7	8.1
R-9195	Res.	B	67	1	4025 S PLEASANT ST	No	66.0	57.6	8.4
R-9196	Res.	B	67	1	4029 S PLEASANT ST	No	66.5	57.8	8.7
R-9197	Res.	B	67	1	4000 S SPRING ST	No	63.9	55.2	8.7
R-9198	Res.	B	67	1	4004 S SPRING ST	No	64.3	55.4	8.9
R-9199	Res.	B	67	1	4008 S SPRING ST	No	64.3	55.1	9.2
R-9200	Res.	B	67	1	4012 S SPRING ST	No	63.7	55.2	8.5
R-9201	Res.	B	67	1	4016 S SPRING ST	No	64.8	55.8	9.0
R-9202	Res.	B	67	1	4020 S SPRING ST	No	65.3	56.4	8.9
R-9203	Res.	B	67	1	4024 S SPRING ST	No	65.3	56.4	8.9
R-9204	Res.	B	67	1	4028 S SPRING ST	No	66.3	56.9	9.4
R-9205	Res.	B	67	1	3933 S SPRING ST	No	63.5	57.8	5.7
R-9206	Res.	B	67	1	3937 S SPRING ST	No	64.1	58.0	6.1
R-9207	Res.	B	67	1	4001 S SPRING ST	No	62.7	54.5	8.2
R-9208	Res.	B	67	1	4005 S SPRING ST	No	64.0	55.5	8.5
R-9209	Res.	B	67	1	4009 S SPRING ST	No	64.1	54.7	9.4
R-9210	Res.	B	67	1	4013 S SPRING ST	No	64.4	55.1	9.3
R-9211	Res.	B	67	1	4017 S SPRING ST	No	65.4	55.9	9.5
R-9212	Res.	B	67	1	4021 S SPRING ST	No	64.8	55.7	9.1
R-9213	Res.	B	67	1	4025 S SPRING ST	No	65.0	56.1	8.9
R-9214	Res.	B	67	1	13304 E 40TH TER S	No	68.3	59.6	8.7
R-9215	Res.	B	67	1	13308 E 40TH TER S	No	67.7	59.4	8.3
R-9216	Res.	B	67	1	13312 E 40TH TER S	No	68.0	61.3	6.7
R-9217	Res.	B	67	1	3932 S OSAGE ST	No	61.0	55.1	5.9
R-9218	Res.	B	67	1	3936 S OSAGE ST	No	60.1	54.2	5.9
R-9219	Res.	B	67	1	4000 S OSAGE ST	No	61.1	55.0	6.1
R-9220	Res.	B	67	1	4004 S OSAGE ST	No	61.4	55.4	6.0
R-9221	Res.	B	67	1	4008 S OSAGE ST	No	63.0	56.5	6.5
R-9222	Res.	B	67	1	4012 S OSAGE ST	No	63.1	56.9	6.2
R-9223	Res.	B	67	1	4016 S OSAGE ST	No	64.3	57.8	6.5
R-9224	Res.	B	67	1	4020 S OSAGE ST	No	64.1	58.1	6.0
R-9225	Res.	B	67	1	4024 S OSAGE ST	No	65.9	59.2	6.7
R-9226	Res.	B	67	1	3929 S OSAGE ST	No	60.4	55.1	5.3
R-9227	Res.	B	67	1	3933 S OSAGE ST	No	59.6	54.2	5.4
R-9228	Res.	B	67	1	3937 S OSAGE ST	No	59.7	54.4	5.3
R-9229	Res.	B	67	1	4001 S OSAGE ST	No	59.5	54.6	4.9
R-9230	Res.	B	67	1	4005 S OSAGE ST	No	59.3	55.1	4.2
R-9231	Res.	B	67	1	4009 S OSAGE ST	No	60.9	56.3	4.6
R-9232	Res.	B	67	1	4013 S OSAGE ST	No	62.3	57.4	4.9
R-9233	Res.	B	67	1	4017 S OSAGE ST	No	63.1	58.5	4.6
R-9234	Res.	B	67	1	4021 S OSAGE ST	No	64.0	59.6	4.4
R-9235	Res.	B	67	1	4025 S OSAGE ST	No	65.1	61.1	4.0
R-9236	Res.	B	67	1	4029 S OSAGE ST	No	67.2	62.8	4.4
R-9237	Res.	B	67	1	4033 S OSAGE ST	No	68.6	64.5	4.1
							Predicted Build Alternative With Barrier Benefits		76
							Noise Impact		Benefited Receptor

NW9 Performance
Without Barrier and With Barrier Noise Levels
2050 Ultimate Build

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
3,463	14	49,982	76	658
Is the noise barrier preliminarily feasible and reasonable?				**Yes**

NW10 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-10001	Res.	B	67	1	3926 S LIBERTY ST	No	62.8	62.3	0.5
R-10002	Res.	B	67	1	3930 S LIBERTY ST	No	63.2	62.5	0.7
R-10003	Res.	B	67	1	4000 S LIBERTY ST	No	64.0	63.2	0.8
R-10004	Res.	B	67	1	4004 S LIBERTY ST	No	64.9	64.0	0.9
R-10005	Res.	B	67	1	4008 S LIBERTY ST	No	63.2	61.6	1.6
R-10006	Res.	B	67	1	4012 S LIBERTY ST	No	63.7	61.9	1.8
R-10007	Res.	B	67	1	4016 S LIBERTY ST	No	65.1	63.0	2.1
R-10008	Res.	B	67	1	4020 S LIBERTY ST	No	66.3	63.9	2.4
R-10009	Res.	B	67	1	4024 S LIBERTY ST	No	67.3	64.6	2.7
R-10010	Res.	B	67	1	4028 S LIBERTY ST	No	70.4	66.7	3.7
R-10011	Res.	B	67	1	4032 S LIBERTY ST	Yes	73.2	68.7	4.5
R-10012	Res.	B	67	1	13507 E 41ST TER S	Yes	74.9	67.9	7.0
R-10013	Res.	B	67	1	13511 E 41ST TER S	Yes	74.8	66.8	8.0
R-10014	Res.	B	67	1	13601 E 41ST TER S	Yes	75.8	66.7	9.1
R-10015	Res.	B	67	1	13605 E 41ST TER S	Yes	75.3	66.1	9.2
R-10016	Res.	B	67	1	13609 E 41ST TER S	Yes	75.1	65.4	9.7
R-10017	Res.	B	67	1	13613 E 41ST TER S	Yes	75.3	65.5	9.8
R-10018	Res.	B	67	1	13617 E 41ST TER S	Yes	75.2	65.0	10.2
R-10019	Res.	B	67	1	13621 E 41ST TER S	Yes	75.1	64.8	10.3
R-10020	Res.	B	67	1	13625 E 41ST TER S	Yes	75.2	64.3	10.9
R-10021	Res.	B	67	1	13701 E 41ST TER S	Yes	75.0	63.8	11.2
R-10022	Res.	B	67	1	13705 E 41ST TER S	Yes	73.8	63.4	10.4
R-10023	Res.	B	67	1	13709 E 41ST TER S	Yes	69.6	61.8	7.8
R-10024	Res.	B	67	1	13713 E 41ST TER S	Yes	69.7	61.8	7.9
R-10025	Res.	B	67	1	13717 E 41ST TER S	Yes	68.0	61.0	7.0
R-10026	Res.	B	67	1	3927 S LIBERTY ST	No	63.1	62.1	1.0
R-10027	Res.	B	67	1	13516 E 40TH ST S	No	61.7	60.5	1.2
R-10028	Res.	B	67	1	13511 E 40TH ST S	No	65.2	63.7	1.5
R-10029	Res.	B	67	1	13515 E 40TH ST S	No	64.7	63.1	1.6
R-10030	Res.	B	67	1	13519 E 40TH ST S	No	64.6	62.8	1.8
R-10031	Res.	B	67	1	13601 E 40TH ST S	No	63.5	61.4	2.1
R-10032	Res.	B	67	1	3929 S MAIN ST	No	59.8	56.8	3.0
R-10033	Res.	B	67	1	3925 S MAIN ST	No	57.1	53.9	3.2
R-10034	Res.	B	67	1	13510 E 41ST ST S	No	65.8	63.7	2.1
R-10035	Res.	B	67	1	13600 E 41ST ST S	No	65.8	63.6	2.2
R-10036	Res.	B	67	1	13604 E 41ST ST S	No	65.8	63.3	2.5
R-10037	Res.	B	67	1	13608 E 41ST ST S	No	65.6	62.8	2.8
R-10038	Res.	B	67	1	13612 E 41ST ST S	No	65.4	62.1	3.3
R-10039	Res.	B	67	1	13616 E 41ST ST S	No	65.7	62.1	3.6
R-10040	Res.	B	67	1	13620 E 41ST ST S	No	65.0	60.6	4.4
R-10041	Res.	B	67	1	13511 E 41ST ST S	No	68.3	64.8	3.5
R-10042	Res.	B	67	1	13601 E 41ST ST S	No	68.9	65.5	3.4
R-10043	Res.	B	67	1	13605 E 41ST ST S	No	69.1	65.5	3.6
R-10044	Res.	B	67	1	13609 E 41ST ST S	No	69.0	65.4	3.6
R-10045	Res.	B	67	1	13613 E 41ST ST S	No	68.9	64.7	4.2
R-10046	Res.	B	67	1	13617 E 41ST ST S	No	68.9	64.2	4.7
R-10047	Res.	B	67	1	13621 E 41ST ST S	No	68.2	62.5	5.7
R-10048	Res.	B	67	1	13510 E 41ST TER S	No	70.9	65.6	5.3
R-10049	Res.	B	67	1	13600 E 41ST TER S	No	71.4	65.0	6.4
R-10050	Res.	B	67	1	13604 E 41ST TER S	No	71.6	64.8	6.8
R-10051	Res.	B	67	1	13608 E 41ST TER S	No	71.5	64.3	7.2
R-10052	Res.	B	67	1	13612 E 41ST TER S	No	71.7	64.1	7.6
R-10053	Res.	B	67	1	13616 E 41ST TER S	No	71.6	64.0	7.6
R-10054	Res.	B	67	1	13620 E 41ST TER S	No	71.6	63.6	8.0
R-10055	Res.	B	67	1	4007 S LYNN ST	No	56.1	53.4	2.7
R-10056	Res.	B	67	1	4013 S LYNN ST	No	57.9	54.7	3.2
R-10057	Res.	B	67	1	4019 S LYNN ST	No	60.1	56.3	3.8
R-10058	Res.	B	67	1	4025 S LYNN ST	No	62.5	57.8	4.7
R-10059	Res.	B	67	1	4006 S LYNN ST	No	56.6	52.7	3.9

NW10 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-10060	Res.	B	67	1	4012 S LYNN ST	No	58.9	54.5	4.4
R-10061	Res.	B	67	1	4018 S LYNN ST	No	60.1	55.0	5.1
R-10062	Res.	B	67	1	4024 S LYNN ST	No	62.0	56.6	5.4
R-10063	Res.	B	67	1	13700 E 41ST ST S	No	65.4	60.5	4.9
R-10064	Res.	B	67	1	13704 E 41ST ST S	No	64.6	60.0	4.6
R-10065	Res.	B	67	1	13708 E 41ST ST S	No	64.3	59.1	5.2
R-10066	Res.	B	67	1	13712 E 41ST ST S	No	63.4	58.0	5.4
R-10067	Res.	B	67	1	13701 E 41ST ST S	No	**68.9**	62.5	6.4
R-10068	Res.	B	67	1	13705 E 41ST ST S	No	**68.3**	61.8	6.5
R-10069	Res.	B	67	1	13709 E 41ST ST S	No	**68.0**	61.2	6.8
R-10070	Res.	B	67	1	13713 E 41ST ST S	No	**67.1**	60.0	**7.1**
R-10071	Res.	B	67	1	13700 E 41ST TER S	No	**71.2**	62.3	**8.9**
R-10072	Res.	B	67	1	13704 E 41ST TER S	No	**71.1**	62.3	**8.8**
R-10073	Res.	B	67	1	13708 E 41ST TER S	No	**70.8**	61.9	**8.9**
R-10074	Res.	B	67	1	13712 E 41ST TER S	No	**70.5**	61.1	**9.4**
R-10075	Hotel	E	72	4	4032 S LYNN COURT DR	No	61.4	56.0	5.4
R-10076	Hotel	E	72	7	4048 S LYNN COURT DR	Yes	62.6	62.5	0.1
								Predicted Build Alternative With Barrier Benefits	**23**
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
1,302	14	18,238	23	793
Is the noise barrier preliminarily feasible and reasonable?				**Yes**

NW11 & NW12 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-11001	Res.	B	67	1	12300 E 41ST TER S	Yes	69.5	67.7	1.8
R-11002	Res.	B	67	1	12304 E 41ST TER S	Yes	73.5	66.4	7.1
R-11003	Res.	B	67	1	12308 E 41ST TER S	Yes	69.7	66.1	3.6
R-11004	Res.	B	67	1	12310 E 41ST TER S	Yes	68.0	65.8	2.2
R-11005	Res.	B	67	1	4114 S CRYSLER AVE	Yes	65.7	63.9	1.8
R-11006	Res.	B	67	1	12301 E 41ST TER S	No	62.7	62.3	0.4
R-11007	Res.	B	67	1	12303 E 41ST TER S	No	61.9	61.4	0.5
R-11008	Res.	B	67	1	12307 E 41ST TER S	No	60.7	60.3	0.4
R-11009	Res.	B	67	1	12311 E 41ST TER S	No	60.6	59.9	0.7
R-11010	Res.	B	67	1	12313 E 41ST TER S	No	61.7	60.1	1.6
R-11011	Res.	B	67	1	4118 S CRYSLER AVE	No	61.4	60.0	1.4
R-11012	Res.	B	67	1	4200 S LARSON DR	No	58.5	58.0	0.5
R-11013	Res.	B	67	1	12100 E 42ND ST S	No	57.8	56.5	1.3
R-11014	Res.	B	67	1	4140 S CRYSLER AVE	No	59.2	57.6	1.6
R-11015	Res.	B	67	1	4200 S CRYSLER AVE	No	58.5	57.5	1.0
R-11016	Res.	B	67	1	4206 S CRYSLER AVE	No	57.6	56.7	0.9
R-11017	Res.	B	67	1	12101 E 42ND ST S	No	57.4	56.5	0.9
R-12001	Res.	B	67	1	4111 S CRYSLER AVE	Yes	66.3	60.2	6.1
R-12002	Res.	B	67	1	4135 S CRYSLER AVE	No	62.0	58.4	3.6
R-12003	Res.	B	67	1	4137 S CRYSLER AVE	No	60.0	57.0	3.0
R-12004	Res.	B	67	1	4141 S CRYSLER AVE	No	59.2	56.8	2.4
R-12005	Res.	B	67	1	4143 S CRYSLER AVE	No	58.2	55.9	2.3
R-12006	Res.	B	67	1	12522 E 41ST TER S	Yes	66.2	60.0	6.2
R-12007	Res.	B	67	1	12526 E 41ST TER S	Yes	68.2	61.0	7.2
R-12008	Res.	B	67	1	12600 E 41ST TER S	Yes	68.4	61.3	7.1
R-12009	Res.	B	67	1	12606 E 41ST TER S	Yes	69.2	61.7	7.5
R-12010	Res.	B	67	1	12612 E 41ST TER S	Yes	68.8	61.5	7.3
R-12011	Res.	B	67	1	12618 E 41ST TER S	Yes	66.4	60.7	5.7
R-12012	Res.	B	67	1	12624 E 41ST TER S	Yes	70.2	62.1	8.1
R-12013	Res.	B	67	1	12628 E 41ST TER S	Yes	68.6	61.6	7.0
R-12014	Res.	B	67	1	12519 E 41ST TER S	No	60.8	56.2	4.6
R-12015	Res.	B	67	1	12527 E 41ST TER S	No	60.7	55.9	4.8
R-12016	Res.	B	67	1	12601 E 41ST TER S	No	61.2	56.6	4.6
R-12017	Res.	B	67	1	12607 E 41ST TER S	No	61.2	56.9	4.3
R-12018	Res.	B	67	1	12613 E 41ST TER S	No	61.7	57.1	4.6
R-12019	Res.	B	67	1	12621 E 41ST TER S	No	61.5	56.9	4.6
R-12020	Res.	B	67	1	4129 S GRAND AVE	No	61.8	57.1	4.7
R-12021	Res.	B	67	1	4135 S GRAND AVE	No	60.9	57.3	3.6
R-12022	Res.	B	67	1	12222 E 42ND ST S	No	56.1	53.6	2.5
R-12023	Res.	B	67	1	12300 E 42ND ST S	No	54.6	52.9	1.7
R-12024	Res.	B	67	1	12304 E 42ND ST S	No	54.5	53.0	1.5
R-12025	Res.	B	67	1	12308 E 42ND ST S	No	54.6	53.1	1.5
R-12026	Res.	B	67	1	12312 E 42ND ST S	No	55.7	53.7	2.0
R-12027	Res.	B	67	1	12400 E 42ND ST S	No	55.5	54.4	1.1
R-12028	Res.	B	67	1	12404 E 42ND ST S	No	57.9	55.4	2.5
R-12029	Res.	B	67	1	4144 S RIVER BLVD	No	61.4	57.6	3.8
R-12030	Res.	B	67	1	12424 E 42ND ST S	No	60.6	56.9	3.7
R-12031	Res.	B	67	1	4104 S RIVER BLVD	Yes	75.1	65.6	9.5
R-12032	Res.	B	67	1	4110 S RIVER BLVD	No	66.9	62.1	4.8
R-12033	Res.	B	67	1	12507 E 42ND ST S	No	57.6	54.1	3.5
R-12034	Res.	B	67	1	12501 E 42ND ST S	No	57.4	54.2	3.2
R-12035	Res.	B	67	1	12315 E 42ND ST S	No	53.9	53.0	0.9
R-12036	Res.	B	67	1	12313 E 42ND ST S	No	53.0	52.0	1.0
R-12037	Res.	B	67	1	12309 E 42ND ST S	No	53.1	51.8	1.3
R-12038	Res.	B	67	1	12305 E 42ND ST S	No	52.4	51.5	0.9
R-12039	Res.	B	67	1	12301 E 42ND ST S	No	52.7	51.5	1.2
R-12040	Res.	B	67	1	12221 E 42ND ST S	No	54.6	52.2	2.4
R-12041	Res.	B	67	1	4203 S CRYSLER AVE	No	58.7	57.3	1.4
R-12042	Res.	B	67	1	4216 S RIVER BLVD	No	50.9	50.0	0.9

NW11 & NW12 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-12043	Res.	B	67	1	4214 S RIVER BLVD	No	52.2	50.8	1.4
R-12044	Res.	B	67	1	4101 S RIVER BLVD	Yes	77.1	67.6	9.5
R-12045	Res.	B	67	1	4105 S RIVER BLVD	No	73.2	65.4	7.8
R-12046	Res.	B	67	1	4109 S RIVER BLVD	No	69.9	63.1	6.8
R-12047	Res.	B	67	1	4113 S RIVER BLVD	No	67.2	61.1	6.1
R-12048	Res.	B	67	1	4117 S RIVER BLVD	No	65.0	59.9	5.1
R-12049	Res.	B	67	1	4121 S RIVER BLVD	No	62.0	57.5	4.5
R-12050	Res.	B	67	1	4125 S RIVER BLVD	No	59.8	56.0	3.8
R-12051	Res.	B	67	1	4201 S RIVER BLVD	No	58.2	54.6	3.6
R-12052	Res.	B	67	1	4205 S RIVER BLVD	No	55.1	50.8	4.3
R-12053	Res.	B	67	1	4209 S RIVER BLVD	No	54.0	50.3	3.7
R-12054	Res.	B	67	1	4213 S RIVER BLVD	No	51.9	50.0	1.9
R-12055	Res.	B	67	1	4200 S COTTAGE AVE	No	54.9	52.2	2.7
R-12056	Res.	B	67	1	4204 S COTTAGE AVE	No	53.2	50.5	2.7
R-12057	Res.	B	67	1	4208 S COTTAGE AVE	No	50.3	50.0	0.3
R-12058	Res.	B	67	1	4212 S COTTAGE AVE	No	50.0	50.0	0.0
R-12059	Res.	B	67	1	4124 S COTTAGE AVE	No	58.6	55.8	2.8
R-12060	Res.	B	67	1	4120 S COTTAGE AVE	No	60.6	56.8	3.8
R-12061	Res.	B	67	1	4116 S COTTAGE AVE	No	64.1	58.9	5.2
R-12062	Res.	B	67	1	4112 S COTTAGE AVE	No	67.2	60.9	6.3
R-12063	Res.	B	67	1	4108 S COTTAGE AVE	No	73.1	64.7	8.4
R-12064	Res.	B	67	1	12900 E 41ST TER S	Yes	75.3	66.4	8.9
R-12065	Res.	B	67	1	12904 E 41ST TER S	Yes	77.8	68.7	9.1
R-12066	Res.	B	67	1	12908 E 41ST TER S	Yes	76.8	68.3	8.5
R-12067	Res.	B	67	1	12912 E 41ST TER S	Yes	76.9	68.7	8.2
R-12068	Res.	B	67	1	13000 E 41ST TER S	Yes	76.9	68.8	8.1
R-12069	Res.	B	67	1	13004 E 41ST TER S	Yes	76.8	68.6	8.2
R-12070	Res.	B	67	1	13008 E 41ST TER S	Yes	77.0	69.0	8.0
R-12071	Res.	B	67	1	13012 E 41ST TER S	Yes	76.9	68.8	8.1
R-12072	Res.	B	67	1	13100 E 41ST TER S	Yes	77.0	70.0	7.0
R-12073	Res.	B	67	1	13104 E 41ST TER S	Yes	76.9	68.1	8.8
R-12074	Res.	B	67	1	13108 E 41ST TER S	Yes	77.2	68.8	8.4
R-12075	Res.	B	67	1	13112 E 41ST TER S	Yes	77.0	67.9	9.1
R-12076	Res.	B	67	1	13200 E 41ST TER S	Yes	77.6	70.5	7.1
R-12077	Res.	B	67	1	13204 E 41ST TER S	Yes	77.4	68.9	8.5
R-12078	Res.	B	67	1	13208 E 41ST TER S	Yes	77.7	70.4	7.3
R-12079	Res.	B	67	1	13212 E 41ST TER S	Yes	78.4	71.0	7.4
R-12080	Res.	B	67	1	13300 E 41ST TER S	Yes	78.1	69.3	8.8
R-12081	Res.	B	67	1	13304 E 41ST TER S	Yes	77.8	68.4	9.4
R-12082	Res.	B	67	1	13308 E 41ST TER S	Yes	77.7	68.0	9.7
R-12083	Res.	B	67	1	13312 E 41ST TER S	Yes	77.3	67.1	10.2
R-12084	Res.	B	67	1	13400 E 41ST TER S	Yes	78.0	68.0	10.0
R-12085	Res.	B	67	1	13402 E 41ST TER S	Yes	77.5	67.7	9.8
R-12086	Res.	B	67	1	13404 E 41ST TER S	Yes	77.5	67.3	10.2
R-12087	Res.	B	67	1	13408 E 41ST TER S	Yes	77.4	67.6	9.8
R-12088	Res.	B	67	1	13412 E 41ST TER S	Yes	75.8	67.1	8.7
R-12089	Res.	B	67	1	4105 S OSAGE ST	No	71.4	64.3	7.1
R-12090	Res.	B	67	1	4215 S COTTAGE AVE	No	50.4	50.0	0.4
R-12091	Res.	B	67	1	4211 S COTTAGE AVE	No	51.4	50.4	1.0
R-12092	Res.	B	67	1	4209 S COTTAGE AVE	No	52.4	51.3	1.1
R-12093	Res.	B	67	1	4205 S COTTAGE AVE	No	53.5	52.8	0.7
R-12094	Res.	B	67	1	4201 S COTTAGE AVE	No	56.0	54.4	1.6
R-12095	Res.	B	67	1	4123 S COTTAGE AVE	No	57.2	55.2	2.0
R-12096	Res.	B	67	1	4119 S COTTAGE AVE	No	59.0	56.6	2.4
R-12097	Res.	B	67	1	4115 S COTTAGE AVE	No	61.3	58.6	2.7
R-12098	Res.	B	67	1	12901 E 41ST TER S	No	66.9	62.2	4.7
R-12099	Res.	B	67	1	12905 E 41ST TER S	No	64.4	61.8	2.6
R-12100	Res.	B	67	1	12909 E 41ST TER S	No	64.4	61.5	2.9
R-12101	Res.	B	67	1	4116 S UNION AVE	No	60.8	58.6	2.2
R-12102	Res.	B	67	1	4120 S UNION AVE	No	59.1	57.2	1.9
R-12103	Res.	B	67	1	4124 S UNION AVE	No	56.8	55.4	1.4

NW11 & NW12 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-12104	Res.	B	67	1	4200 S UNION AVE	No	55.5	54.4	1.1
R-12105	Res.	B	67	1	4204 S UNION AVE	No	53.5	52.6	0.9
R-12106	Res.	B	67	1	4208 S UNION AVE	No	51.9	51.5	0.4
R-12107	Res.	B	67	1	4212 S UNION AVE	No	50.0	50.0	0.0
R-12108	Res.	B	67	1	4216 S UNION AVE	No	50.0	50.0	0.0
R-12109	Res.	B	67	1	4115 S UNION AVE	No	61.4	59.4	2.0
R-12110	Res.	B	67	1	4119 S UNION AVE	No	59.2	57.3	1.9
R-12111	Res.	B	67	1	4123 S UNION AVE	No	57.4	55.6	1.8
R-12112	Res.	B	67	1	4201 S UNION AVE	No	55.9	54.4	1.5
R-12113	Res.	B	67	1	4205 S UNION AVE	No	54.2	53.2	1.0
R-12114	Res.	B	67	1	4209 S UNION AVE	No	52.2	51.8	0.4
R-12115	Res.	B	67	1	4213 S UNION AVE	No	50.4	50.4	0.0
R-12116	Res.	B	67	1	4217 S UNION AVE	No	50.0	50.0	0.0
R-12117	Res.	B	67	1	13001 E 41ST TER S	No	**66.7**	63.4	3.3
R-12118	Res.	B	67	1	13005 E 41ST TER S	No	**67.9**	63.8	4.1
R-12119	Res.	B	67	1	13009 E 41ST TER S	No	**68.0**	64.0	4.0
R-12120	Res.	B	67	1	4116 S DELAWARE AVE	No	60.6	58.8	1.8
R-12121	Res.	B	67	1	4120 S DELAWARE AVE	No	55.7	54.3	1.4
R-12122	Res.	B	67	1	4124 S DELAWARE AVE	No	54.8	54.5	0.3
R-12123	Res.	B	67	1	4200 S DELAWARE AVE	No	52.4	52.4	0.0
R-12124	Res.	B	67	1	4204 S DELAWARE AVE	No	50.4	50.4	0.0
R-12125	Res.	B	67	1	4208 S DELAWARE AVE	No	50.0	50.0	0.0
R-12126	Res.	B	67	1	4212 S DELAWARE AVE	No	50.0	50.0	0.0
R-12127	Res.	B	67	1	4216 S DELAWARE AVE	No	50.0	50.0	0.0
R-12128	Res.	B	67	1	4115 S DELAWARE AVE	No	60.8	58.8	2.0
R-12129	Res.	B	67	1	4119 S DELAWARE AVE	No	58.8	57.1	1.7
R-12130	Res.	B	67	1	4123 S DELAWARE AVE	No	55.5	55.0	0.5
R-12131	Res.	B	67	1	4201 S DELAWARE AVE	No	52.4	52.1	0.3
R-12132	Res.	B	67	1	4205 S DELAWARE AVE	No	50.0	50.0	0.0
R-12133	Res.	B	67	1	4209 S DELAWARE AVE	No	50.0	50.0	0.0
R-12134	Res.	B	67	1	4213 S DELAWARE AVE	No	50.0	50.0	0.0
R-12135	Res.	B	67	1	4217 S DELAWARE AVE	No	50.0	50.0	0.0
R-12136	Res.	B	67	1	13101 E 41ST TER S	No	65.9	63.2	2.7
R-12137	Res.	B	67	1	13105 E 41ST TER S	No	**66.5**	63.4	3.1
R-12138	Res.	B	67	1	13109 E 41ST TER S	No	**67.8**	63.9	3.9
R-12139	Res.	B	67	1	4116 S MCCOY ST	No	59.1	57.8	1.3
R-12140	Res.	B	67	1	4120 S MCCOY ST	No	56.8	55.2	1.6
R-12141	Res.	B	67	1	4124 S MCCOY ST	No	54.0	53.3	0.7
R-12142	Res.	B	67	1	4200 S MCCOY ST	No	50.8	50.8	0.0
R-12143	Res.	B	67	1	4204 S MCCOY ST	No	50.0	50.0	0.0
R-12144	Res.	B	67	1	4208 S MCCOY ST	No	50.0	50.0	0.0
R-12145	Res.	B	67	1	4212 S MCCOY ST	No	50.0	50.0	0.0
R-12146	Res.	B	67	1	4216 S MCCOY ST	No	50.0	50.0	0.0
R-12147	Res.	B	67	1	4107 S MCCOY ST	No	**66.1**	62.1	4.0
R-12148	Res.	B	67	1	4111 S MCCOY ST	No	60.3	58.7	1.6
R-12149	Res.	B	67	1	4117 S MCCOY ST	No	56.9	55.9	1.0
R-12150	Res.	B	67	1	4121 S MCCOY ST	No	54.9	54.3	0.6
R-12151	Res.	B	67	1	4125 S MCCOY ST	No	52.9	51.9	1.0
R-12152	Res.	B	67	1	4201 S MCCOY ST	No	50.4	50.0	0.4
R-12153	Res.	B	67	1	4205 S MCCOY ST	No	50.0	50.0	0.0
R-12154	Res.	B	67	1	4209 S MCCOY ST	No	50.0	50.0	0.0
R-12155	Res.	B	67	1	4213 S MCCOY ST	No	50.0	50.0	0.0
R-12156	Res.	B	67	1	4108 S PLEASANT ST	No	64.2	61.4	2.8
R-12157	Res.	B	67	1	4112 S PLEASANT ST	No	59.5	58.2	1.3
R-12158	Res.	B	67	1	4116 S PLEASANT ST	No	55.7	55.7	0.0
R-12159	Res.	B	67	1	4120 S PLEASANT ST	No	53.8	53.2	0.6
R-12160	Res.	B	67	1	4124 S PLEASANT ST	No	53.5	53.1	0.4
R-12161	Res.	B	67	1	4200 S PLEASANT ST	No	50.4	50.0	0.4
R-12162	Res.	B	67	1	4204 S PLEASANT ST	No	50.0	50.0	0.0
R-12163	Res.	B	67	1	4208 S PLEASANT ST	No	50.0	50.0	0.0
R-12164	Res.	B	67	1	4212 S PLEASANT ST	No	50.0	50.0	0.0

NW11 & NW12 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-12165	Res.	B	67	1	4115 S PLEASANT ST	No	60.8	58.5	2.3
R-12166	Res.	B	67	1	4119 S PLEASANT ST	No	57.8	56.1	1.7
R-12167	Res.	B	67	1	4123 S PLEASANT ST	No	54.7	54.0	0.7
R-12168	Res.	B	67	1	4201 S PLEASANT ST	No	52.7	52.3	0.4
R-12169	Res.	B	67	1	4205 S PLEASANT ST	No	51.6	50.8	0.8
R-12170	Res.	B	67	1	4209 S PLEASANT ST	No	50.1	50.0	0.1
R-12171	Res.	B	67	1	4213 S PLEASANT ST	No	50.0	50.0	0.0
R-12172	Res.	B	67	1	4217 S PLEASANT ST	No	50.0	50.0	0.0
R-12173	Res.	B	67	1	13301 E 41ST TER S	No	66.0	62.5	3.5
R-12174	Res.	B	67	1	13305 E 41ST TER S	No	68.0	63.0	5.0
R-12175	Res.	B	67	1	13309 E 41ST TER S	No	66.5	62.4	4.1
R-12176	Res.	B	67	1	4116 S SPRING ST	No	61.9	58.5	3.4
R-12177	Res.	B	67	1	4120 S SPRING ST	No	60.0	56.5	3.5
R-12178	Res.	B	67	1	4124 S SPRING ST	No	58.3	55.0	3.3
R-12179	Res.	B	67	1	4200 S SPRING ST	No	56.6	53.6	3.0
R-12180	Res.	B	67	1	4204 S SPRING ST	No	55.2	52.5	2.7
R-12181	Res.	B	67	1	4208 S SPRING ST	No	52.5	50.7	1.8
R-12182	Res.	B	67	1	4212 S SPRING ST	No	50.9	50.0	0.9
R-12183	Res.	B	67	1	4216 S SPRING ST	No	50.0	50.0	0.0
R-12184	Res.	B	67	1	4217 S SPRING ST	No	50.0	50.0	0.0
R-12185	Res.	B	67	1	4213 S SPRING ST	No	51.4	50.0	1.4
R-12186	Res.	B	67	1	4209 S SPRING ST	No	53.7	51.1	2.6
R-12187	Res.	B	67	1	4205 S SPRING ST	No	55.8	52.8	3.0
R-12188	Res.	B	67	1	4201 S SPRING ST	No	57.4	53.8	3.6
R-12189	Res.	B	67	1	4123 S SPRING ST	No	58.6	55.0	3.6
R-12190	Res.	B	67	1	4119 S SPRING ST	No	60.6	56.8	3.8
R-12191	Res.	B	67	1	4115 S SPRING ST	No	63.2	59.0	4.2
R-12192	Res.	B	67	1	13401 E 41ST TER S	No	66.3	62.1	4.2
R-12193	Res.	B	67	1	13405 E 41ST TER S	No	65.8	61.6	4.2
R-12194	Res.	B	67	1	13409 E 41ST TER S	No	65.0	61.4	3.6
R-12195	Res.	B	67	1	4116 S OSAGE ST	No	63.3	59.4	3.9
R-12196	Res.	B	67	1	4120 S OSAGE ST	No	60.7	57.1	3.6
R-12197	Res.	B	67	1	4124 S OSAGE ST	No	59.0	56.0	3.0
R-12198	Res.	B	67	1	4200 S OSAGE ST	No	57.5	54.8	2.7
R-12199	Res.	B	67	1	4204 S OSAGE ST	No	55.5	53.5	2.0
R-12200	Res.	B	67	1	4208 S OSAGE ST	No	52.8	51.4	1.4
R-12201	Res.	B	67	1	4212 S OSAGE ST	No	52.1	51.0	1.1
R-12202	Res.	B	67	1	4216 S OSAGE ST	No	50.6	50.0	0.6
R-12203	Res.	B	67	1	4213 S OSAGE ST	No	51.9	50.1	1.8
R-12204	Res.	B	67	1	4209 S OSAGE ST	No	52.8	50.9	1.9
R-12205	Res.	B	67	1	4205 S OSAGE ST	No	53.7	51.9	1.8
R-12206	Res.	B	67	1	4201 S OSAGE ST	No	55.0	52.9	2.1
R-12207	Res.	B	67	1	4125 S OSAGE ST	No	56.9	54.8	2.1
R-12208	Res.	B	67	1	4121 S OSAGE ST	No	58.4	56.1	2.3
R-12209	Res.	B	67	1	4117 S OSAGE ST	No	60.0	57.2	2.8
R-12210	Res.	B	67	1	4113 S OSAGE ST	No	62.3	59.1	3.2
R-12211	Res.	B	67	1	4109 S OSAGE ST	No	64.9	60.3	4.6
							Predicted Build Alternative With Barrier Benefits		37
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
4,046	12	48,103	37	1,300
Is the noise barrier preliminarily feasible and reasonable?				Yes

NW13 Performance
Without Barrier and With Barrier Noise Levels
2050 Ultimate Build

Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-13001	Hotel	E	72	4	13712 E 42ND TER S	Yes	78.0	71.0	7.0
R-13002	Hotel	E	72	6	4142 S NOLAND RD	No	57.3	57.3	0.0
R-13003	Restaurant	E	72	3	4140 S NOLAND RD	Yes	70.7	70.5	0.2
								Predicted Build Alternative With Barrier Benefits	4
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
401	18	7,018	4	1,755
Is the noise barrier preliminarily feasible and reasonable?				No

NW14 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-14001	Restaurant	E	72	3	4029 S NOLAND RD	No	62.7	61.8	0.9
R-14002	Res.	B	67	1	3918 S HOCKER AVE	No	60.5	57.4	3.1
R-14003	Res.	B	67	1	3920 S HOCKER AVE	No	61.5	58.4	3.1
R-14004	Res.	B	67	1	4000 S HOCKER AVE	No	63.2	60.2	3.0
R-14005	Res.	B	67	1	4002 S HOCKER AVE	No	64.0	61.1	2.9
R-14006	Res.	B	67	1	4004 S HOCKER AVE	No	65.3	62.1	3.2
R-14007	Res.	B	67	1	4006 S HOCKER AVE	No	66.5	63.1	3.4
R-14008	Res.	B	67	1	4008 S HOCKER AVE	No	67.5	63.8	3.7
R-14009	Res.	B	67	1	4010 S HOCKER AVE	No	68.9	64.7	4.2
R-14010	Res.	B	67	1	4012 S HOCKER AVE	No	70.1	65.0	5.1
R-14011	Res.	B	67	1	4014 S HOCKER AVE	No	71.5	65.2	6.3
R-14012	Res.	B	67	1	4018 S HOCKER AVE	Yes	70.6	63.4	7.2
R-14013	Res.	B	67	1	14401 E 41ST ST S	Yes	71.0	63.8	7.2
R-14014	Res.	B	67	1	14405 E 41ST ST S	Yes	71.0	63.9	7.1
R-14015	Res.	B	67	1	14409 E 41ST ST S	Yes	72.7	64.7	8.0
R-14016	Res.	B	67	1	14501 E 41ST ST S	Yes	74.9	65.2	9.7
R-14017	Res.	B	67	1	14505 E 41ST ST S	Yes	75.8	66.5	9.3
R-14018	Res.	B	67	1	14509 E 41ST ST S	Yes	75.8	66.8	9.0
R-14019	Res.	B	67	1	14513 E 41ST ST S	Yes	75.7	67.6	8.1
R-14020	Res.	B	67	1	14605 E 41ST ST S	Yes	76.0	68.8	7.2
R-14021	Res.	B	67	1	14609 E 41ST ST S	Yes	75.7	67.6	8.1
R-14022	Res.	B	67	1	14613 E 41ST ST S	Yes	75.2	65.7	9.5
R-14023	Res.	B	67	1	14617 E 41ST ST S	Yes	75.0	65.1	9.9
R-14024	Res.	B	67	1	14701 E 41ST ST S	Yes	75.4	65.3	10.1
R-14025	Res.	B	67	1	14705 E 41ST ST S	Yes	75.1	65.1	10.0
R-14026	Res.	B	67	1	14400 E 40TH ST S	No	61.9	59.1	2.8
R-14027	Res.	B	67	1	14404 E 40TH ST S	No	61.3	58.9	2.4
R-14028	Res.	B	67	1	14500 E 40TH ST S	No	60.7	58.2	2.5
R-14029	Res.	B	67	1	14502 E 40TH ST S	No	60.9	58.4	2.5
R-14030	Res.	B	67	1	14504 E 40TH ST S	No	60.3	57.8	2.5
R-14031	Res.	B	67	1	14506 E 40TH ST S	No	60.6	58.2	2.4
R-14032	Res.	B	67	1	14600 E 40TH ST S	No	59.9	58.0	1.9
R-14033	Res.	B	67	1	14602 E 40TH ST S	No	60.2	58.4	1.8
R-14034	Res.	B	67	1	14606 E 40TH ST S	No	60.4	58.8	1.6
R-14035	Res.	B	67	1	3920 S LESLIE AVE	No	57.1	55.5	1.6
R-14036	Res.	B	67	1	14401 E 40TH ST S	No	64.2	60.9	3.3
R-14037	Res.	B	67	1	14405 E 40TH ST S	No	62.8	59.7	3.1
R-14038	Res.	B	67	1	14501 E 40TH ST S	No	62.3	59.3	3.0
R-14039	Res.	B	67	1	14503 E 40TH ST S	No	62.7	59.6	3.1
R-14040	Res.	B	67	1	14505 E 40TH ST S	No	63.2	60.2	3.0
R-14041	Res.	B	67	1	14507 E 40TH ST S	No	62.0	59.4	2.6
R-14042	Res.	B	67	1	14601 E 40TH ST S	No	61.8	59.6	2.2
R-14043	Res.	B	67	1	14603 E 40TH ST S	No	62.4	60.3	2.1
R-14044	Res.	B	67	1	14607 E 40TH ST S	No	63.1	60.6	2.5
R-14045	Res.	B	67	1	4005 S HOCKER AVE	No	65.3	61.3	4.0
R-14046	Res.	B	67	1	14406 E 40TH TER S	No	64.8	60.9	3.9
R-14047	Res.	B	67	1	14500 E 40TH TER S	No	64.7	61.3	3.4
R-14048	Res.	B	67	1	14502 E 40TH TER S	No	65.0	61.4	3.6
R-14049	Res.	B	67	1	14506 E 40TH TER S	No	65.5	62.2	3.3
R-14050	Res.	B	67	1	14510 E 40TH TER S	No	65.0	62.0	3.0
R-14051	Res.	B	67	1	14600 E 40TH TER S	No	66.0	62.9	3.1
R-14052	Res.	B	67	1	14602 E 40TH TER S	No	65.8	62.8	3.0
R-14053	Res.	B	67	1	4006 S LESLIE AVE	No	64.4	61.5	2.9
R-14054	Res.	B	67	1	4009 S HOCKER AVE	No	68.9	62.8	6.1
R-14055	Res.	B	67	1	14407 E 40TH TER S	No	67.4	62.7	4.7
R-14056	Res.	B	67	1	14501 E 40TH TER S	No	68.1	63.6	4.5
R-14057	Res.	B	67	1	14503 E 40TH TER S	No	68.2	63.7	4.5
R-14058	Res.	B	67	1	14507 E 40TH TER S	No	67.9	63.9	4.0
R-14059	Res.	B	67	1	14511 E 40TH TER S	No	68.5	64.5	4.0

NW14 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-14060	Res.	B	67	1	14601 E 40TH TER S	No	**67.8**	64.0	3.8
R-14061	Res.	B	67	1	14603 E 40TH TER S	No	**68.2**	64.1	4.1
R-14062	Res.	B	67	1	14605 E 40TH TER S	No	**68.7**	64.6	4.1
R-14063	Res.	B	67	1	14611 E 40TH TER S	No	**67.9**	63.5	4.4
R-14064	Res.	B	67	1	4010 S LESLIE AVE	No	65.8	60.7	5.1
R-14065	Res.	B	67	1	4013 S HOCKER AVE	No	**69.0**	62.1	6.9
R-14066	Res.	B	67	1	14404 E 41ST ST S	No	**71.3**	64.4	6.9
R-14067	Res.	B	67	1	14500 E 41ST ST S	No	**70.9**	65.0	5.9
R-14068	Res.	B	67	1	14504 E 41ST ST S	No	**70.9**	65.8	5.1
R-14069	Res.	B	67	1	14508 E 41ST ST S	No	**70.9**	65.7	5.2
R-14070	Res.	B	67	1	14512 E 41ST ST S	No	**71.0**	65.9	5.1
R-14071	Res.	B	67	1	14600 E 41ST ST S	No	**71.3**	**66.4**	4.9
R-14072	Res.	B	67	1	14604 E 41ST ST S	No	**70.5**	65.1	5.4
R-14073	Res.	B	67	1	14608 E 41ST ST S	No	**70.8**	65.3	5.5
R-14074	Res.	B	67	1	14612 E 41ST ST S	No	**69.2**	62.5	6.7
R-14075	Res.	B	67	1	4014 S LESLIE AVE	No	**68.9**	61.3	**7.6**
R-14076	Res.	B	67	1	3919 S LESLIE AVE	No	59.7	57.3	2.4
R-14077	Res.	B	67	1	3921 S LESLIE AVE	No	60.3	57.7	2.6
R-14078	Res.	B	67	1	4001 S LESLIE AVE	No	62.0	59.1	2.9
R-14079	Res.	B	67	1	4005 S LESLIE AVE	No	62.3	59.3	3.0
R-14080	Res.	B	67	1	4007 S LESLIE AVE	No	64.0	60.6	3.4
R-14081	Res.	B	67	1	4011 S LESLIE AVE	No	64.7	60.2	4.5
R-14082	Res.	B	67	1	4015 S LESLIE AVE	No	**66.6**	61.7	4.9
R-14083	Res.	B	67	1	4019 S LESLIE AVE	No	**67.0**	62.8	4.2
R-14084	Res.	B	67	1	4021 S LESLIE AVE	Yes	**72.4**	65.4	**7.0**
R-14085	Res.	B	67	1	3920 S PHELPS RD	No	59.1	56.8	2.3
R-14086	Res.	B	67	1	4000 S PHELPS RD	No	61.6	58.9	2.7
								Predicted Build Alternative With Barrier Benefits	**16**
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
1,852	11	20,654	16	1,291
Is the noise barrier preliminarily feasible and reasonable?				**Yes**

NW15 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-15001	Res.	B	67	1	14800 E 40TH ST S	No	58.2	58.2	0.0
R-15002	Res.	B	67	1	14804 E 40TH ST S	No	55.6	55.6	0.0
R-15003	Res.	B	67	1	14808 E 40TH ST S	No	52.4	52.4	0.0
R-15004	Res.	B	67	1	14812 E 40TH ST S	No	51.7	51.7	0.0
R-15005	Res.	B	67	1	14801 E 40TH ST S	No	61.5	61.5	0.0
R-15006	Res.	B	67	1	14805 E 40TH ST S	No	60.5	60.5	0.0
R-15007	Res.	B	67	1	4004 S CRANE ST	No	61.7	61.7	0.0
R-15008	Res.	B	67	1	4008 S CRANE ST	No	63.3	63.3	0.0
R-15009	Res.	B	67	1	4012 S CRANE ST	No	64.1	64.1	0.0
R-15010	Res.	B	67	1	4014 S CRANE CIR	No	63.5	63.1	0.4
R-15011	Res.	B	67	1	4016 S CRANE CIR	No	63.4	63.3	0.1
R-15012	Res.	B	67	1	4020 S CRANE CIR	No	69.9	69.7	0.2
R-15013	Res.	B	67	1	4021 S CRANE CIR	Yes	74.8	69.0	5.8
R-15014	Res.	B	67	1	4023 S CRANE CIR	Yes	74.5	67.2	7.3
R-15015	Res.	B	67	1	4025 S CRANE CIR	No	68.8	63.8	5.0
R-15016	Res.	B	67	1	14901 E 41ST ST S	Yes	73.5	63.9	9.6
R-15017	Res.	B	67	1	14903 E 41ST ST S	Yes	71.6	63.4	8.2
R-15018	Res.	B	67	1	14907 E 41ST ST S	Yes	71.9	62.7	9.2
R-15019	Res.	B	67	1	15001 E 41ST ST S	Yes	73.6	62.8	10.8
R-15020	Res.	B	67	1	15003 E 41ST ST S	Yes	71.1	62.4	8.7
R-15021	Res.	B	67	1	15007 E 41ST ST S	Yes	73.7	62.9	10.8
R-15022	Res.	B	67	1	15011 E 41ST ST S	Yes	70.3	62.4	7.9
R-15023	Res.	B	67	1	15101 E 41ST ST S	Yes	66.0	61.5	4.5
R-15024	Res.	B	67	1	15103 E 41ST ST S	Yes	65.3	61.3	4.0
R-15025	Res.	B	67	1	15107 E 41ST ST S	Yes	63.1	60.7	2.4
R-15026	Res.	B	67	1	15111 E 41ST ST S	Yes	63.5	60.9	2.6
R-15027	Res.	B	67	1	15115 E 41ST ST S	Yes	63.8	60.9	2.9
R-15028	Res.	B	67	1	15201 E 41ST ST S	Yes	64.8	61.2	3.6
R-15029	Res.	B	67	1	15203 E 41ST ST S	Yes	65.9	61.5	4.4
R-15030	Res.	B	67	1	15207 E 41ST ST S	Yes	69.1	62.0	7.1
R-15031	Res.	B	67	1	15211 E 41ST ST S	Yes	71.6	62.6	9.0
R-15032	Res.	B	67	1	15215 E 41ST ST S	Yes	72.3	62.8	9.5
R-15033	Res.	B	67	1	15301 E 41ST ST S	Yes	68.1	62.1	6.0
R-15034	Res.	B	67	1	15303 E 41ST ST S	Yes	69.7	62.7	7.0
R-15035	Res.	B	67	1	15307 E 41ST ST S	Yes	70.5	63.1	7.4
R-15036	Res.	B	67	1	15311 E 41ST ST S	Yes	72.2	63.7	8.5
R-15037	Res.	B	67	1	15315 E 41ST ST S	Yes	74.7	65.1	9.6
R-15038	Res.	B	67	1	15401 E 41ST ST S	Yes	74.3	64.7	9.6
R-15039	Res.	B	67	1	15403 E 41ST ST S	Yes	74.5	65.1	9.4
R-15040	Res.	B	67	1	15407 E 41ST ST S	Yes	74.6	65.7	8.9
R-15041	Res.	B	67	1	15411 E 41ST ST S	Yes	74.6	65.7	8.9
R-15042	Res.	B	67	1	15415 E 41ST ST S	Yes	74.8	65.8	9.0
R-15043	Res.	B	67	1	15501 E 41ST ST S	Yes	74.6	66.3	8.3
R-15044	Res.	B	67	1	15503 E 41ST ST S	Yes	74.0	65.8	8.2
R-15045	Res.	B	67	1	15507 E 41ST ST S	Yes	72.8	65.2	7.6
R-15046	Res.	B	67	1	15511 E 41ST ST S	Yes	72.5	64.8	7.7
R-15047	Res.	B	67	1	15601 E 41ST ST S	Yes	72.5	64.2	8.3
R-15048	Res.	B	67	1	15607 E 41ST ST S	Yes	72.7	65.6	7.1
R-15049	Res.	B	67	1	15613 E 41ST ST S	Yes	72.4	64.3	8.1
R-15050	Res.	B	67	1	15619 E 41ST ST S	Yes	71.3	63.2	8.1
R-15051	Res.	B	67	1	15707 E 40TH TER S	No	68.9	61.7	7.2
R-15052	Res.	B	67	1	15717 E 40TH TER S	No	68.6	60.8	7.8
R-15053	Res.	B	67	1	15727 E 40TH TER S	No	70.0	62.3	7.7
R-15054	Res.	B	67	1	15733 E 40TH TER S	Yes	72.9	64.2	8.7
R-15055	Res.	B	67	1	4001 S CRANE ST	No	53.1	53.1	0.0
R-15056	Res.	B	67	1	4005 S CRANE ST	No	55.8	55.9	-0.1
R-15057	Res.	B	67	1	4009 S CRANE ST	No	59.4	59.3	0.1
R-15058	Res.	B	67	1	4013 S CRANE ST	No	60.5	60.4	0.1
R-15059	Res.	B	67	1	4017 S CRANE ST	No	60.0	59.5	0.5

NW15 Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-15060	Res.	B	67	1	14900 E 41ST ST S	No	59.5	58.4	1.1
R-15061	Res.	B	67	1	14902 E 41ST ST S	No	60.7	59.0	1.7
R-15062	Res.	B	67	1	14906 E 41ST ST S	No	62.1	59.1	3.0
R-15063	Res.	B	67	1	15000 E 41ST ST S	No	61.4	58.6	2.8
R-15064	Res.	B	67	1	15002 E 41ST ST S	No	60.3	58.3	2.0
R-15065	Res.	B	67	1	15006 E 41ST ST S	No	59.3	58.0	1.3
R-15066	Res.	B	67	1	14901 E 40TH ST S	No	53.2	53.2	0.0
R-15067	Res.	B	67	1	14905 E 40TH ST S	No	50.0	50.0	0.0
R-15068	Res.	B	67	1	14909 E 40TH ST S	No	50.0	50.0	0.0
R-15069	Res.	B	67	1	4002 S DRUMM AVE	No	50.0	50.0	0.0
R-15070	Res.	B	67	1	4006 S DRUMM AVE	No	50.0	50.0	0.0
R-15071	Res.	B	67	1	4010 S DRUMM AVE	No	50.0	50.0	0.0
R-15072	Res.	B	67	1	4011 S DRUMM AVE	No	52.3	51.9	0.4
R-15073	Res.	B	67	1	4007 S DRUMM AVE	No	52.3	52.4	-0.1
R-15074	Res.	B	67	1	4003 S DRUMM AVE	No	51.0	50.4	0.6
R-15075	Res.	B	67	1	14900 E 40TH ST S	No	50.0	50.0	0.0
R-15076	Res.	B	67	1	14904 E 40TH ST S	No	50.0	50.0	0.0
R-15077	Res.	B	67	1	14908 E 40TH ST S	No	50.0	50.0	0.0
R-15078	Res.	B	67	1	15001 E 40TH ST S	No	50.0	50.0	0.0
R-15079	Res.	B	67	1	15005 E 40TH ST S	No	50.0	50.0	0.0
R-15080	Res.	B	67	1	15009 E 40TH ST S	No	50.0	50.0	0.0
R-15081	Res.	B	67	1	15013 E 40TH ST S	No	52.1	51.4	0.7
R-15082	Res.	B	67	1	15000 E 40TH ST S	No	50.0	50.0	0.0
R-15083	Res.	B	67	1	15004 E 40TH ST S	No	50.0	50.0	0.0
R-15084	Res.	B	67	1	15008 E 40TH ST S	No	50.2	50.0	0.2
R-15085	Res.	B	67	1	4004 S ADAMS AVE	No	52.7	51.6	1.1
R-15086	Res.	B	67	1	4008 S ADAMS AVE	No	53.6	52.3	1.3
R-15087	Res.	B	67	1	4012 S ADAMS AVE	No	54.4	53.1	1.3
R-15088	Res.	B	67	1	4016 S ADAMS AVE	No	55.4	54.2	1.2
R-15089	Res.	B	67	1	4001 S ADAMS AVE	No	53.3	52.1	1.2
R-15090	Res.	B	67	1	4005 S ADAMS AVE	No	54.1	52.8	1.3
R-15091	Res.	B	67	1	4009 S ADAMS AVE	No	55.1	53.5	1.6
R-15092	Res.	B	67	1	4013 S ADAMS AVE	No	56.2	54.3	1.9
R-15093	Res.	B	67	1	4017 S ADAMS AVE	No	57.4	54.9	2.5
R-15094	Res.	B	67	1	15100 E 41ST ST S	No	60.6	57.8	2.8
R-15095	Res.	B	67	1	15102 E 41ST ST S	No	58.1	56.4	1.7
R-15096	Res.	B	67	1	4018 S ROGERS ST	No	58.6	56.0	2.6
R-15097	Res.	B	67	1	15105 E 40TH ST S	No	51.4	51.2	0.2
R-15098	Res.	B	67	1	15109 E 40TH ST S	No	50.0	50.0	0.0
R-15099	Res.	B	67	1	4002 S ROGERS ST	No	50.4	50.0	0.4
R-15100	Res.	B	67	1	4006 S ROGERS ST	No	52.3	51.1	1.2
R-15101	Res.	B	67	1	4010 S ROGERS ST	No	53.3	51.5	1.8
R-15102	Res.	B	67	1	4014 S ROGERS ST	No	55.6	54.0	1.6
R-15103	Res.	B	67	1	15100 E 40TH ST S	No	51.7	50.6	1.1
R-15104	Res.	B	67	1	15104 E 40TH ST S	No	50.5	50.0	0.5
R-15105	Res.	B	67	1	15108 E 40TH ST S	No	50.0	50.0	0.0
R-15106	Res.	B	67	1	15112 E 40TH ST S	No	50.0	50.0	0.0
R-15107	Res.	B	67	1	15200 E 40TH ST S	No	50.0	50.0	0.0
R-15108	Res.	B	67	1	15204 E 40TH ST S	No	50.0	50.0	0.0
R-15109	Res.	B	67	1	15208 E 40TH ST S	No	50.0	50.0	0.0
R-15110	Res.	B	67	1	15212 E 40TH ST S	No	50.0	50.0	0.0
R-15111	Res.	B	67	1	15216 E 40TH ST S	No	50.0	50.0	0.0
R-15112	Res.	B	67	1	15300 E 40TH ST S	No	50.0	50.0	0.0
R-15113	Res.	B	67	1	15304 E 40TH ST S	No	50.0	50.0	0.0
R-15114	Res.	B	67	1	15308 E 40TH ST S	No	50.0	50.0	0.0
R-15115	Res.	B	67	1	15312 E 40TH ST S	No	50.0	50.0	0.0
R-15116	Res.	B	67	1	15400 E 40TH ST S	No	50.0	50.0	0.0
R-15117	Res.	B	67	1	15404 E 40TH ST S	No	50.0	50.0	0.0
R-15118	Res.	B	67	1	15201 E 40TH ST S	No	50.0	50.0	0.0
R-15119	Res.	B	67	1	15205 E 40TH ST S	No	50.0	50.0	0.0
R-15120	Res.	B	67	1	15209 E 40TH ST S	No	51.0	50.2	0.8

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R-15121	Res.	B	67	1	4003 S ROGERS ST	No	50.0	50.0	0.0
R-15122	Res.	B	67	1	4007 S ROGERS ST	No	50.6	50.0	0.6
R-15123	Res.	B	67	1	4011 S ROGERS ST	No	52.3	50.9	1.4
R-15124	Res.	B	67	1	4015 S ROGERS ST	No	54.1	52.6	1.5
R-15125	Res.	B	67	1	15200 E 41ST ST S	No	57.4	55.6	1.8
R-15126	Res.	B	67	1	15202 E 41ST ST S	No	58.8	57.0	1.8
R-15127	Res.	B	67	1	4004 S KINGS HWY	No	50.6	50.4	0.2
R-15128	Res.	B	67	1	4008 S KINGS HWY	No	52.6	52.0	0.6
R-15129	Res.	B	67	1	4012 S KINGS HWY	No	54.8	54.1	0.7
R-15130	Res.	B	67	1	4016 S KINGS HWY	No	57.6	56.3	1.3
R-15131	Res.	B	67	1	4020 S KINGS HWY	No	60.0	58.1	1.9
R-15132	Res.	B	67	1	4005 S KINGS HWY	No	52.7	52.1	0.6
R-15133	Res.	B	67	1	4009 S KINGS HWY	No	54.2	53.4	0.8
R-15134	Res.	B	67	1	4013 S KINGS HWY	No	55.3	54.4	0.9
R-15135	Res.	B	67	1	4017 S KINGS HWY	No	57.0	56.5	0.5
R-15136	Res.	B	67	1	15301 E 40TH ST S	No	50.0	50.0	0.0
R-15137	Res.	B	67	1	15305 E 40TH ST S	No	50.0	50.0	0.0
R-15138	Res.	B	67	1	15309 E 40TH ST S	No	50.0	50.0	0.0
R-15139	Res.	B	67	1	15401 E 40TH ST S	No	50.0	50.0	0.0
R-15140	Res.	B	67	1	15405 E 40TH ST S	No	50.0	50.0	0.0
R-15141	Res.	B	67	1	15300 E 41ST ST S	No	61.4	59.4	2.0
R-15142	Res.	B	67	1	15302 E 41ST ST S	No	62.8	60.1	2.7
R-15143	Res.	B	67	1	4022 S HANDS CIR	No	57.4	57.1	0.3
R-15144	Res.	B	67	1	4018 S HANDS CIR	No	54.3	54.3	0.0
R-15145	Res.	B	67	1	4014 S HANDS CIR	No	51.9	52.1	-0.2
R-15146	Res.	B	67	1	4010 S HANDS CIR	No	53.3	53.3	0.0
R-15147	Res.	B	67	1	4015 S HANDS CIR	No	52.7	52.7	0.0
R-15148	Res.	B	67	1	4019 S HANDS CIR	No	55.6	55.1	0.5
R-15149	Res.	B	67	1	4023 S HANDS CIR	No	62.0	59.9	2.1
R-15150	Res.	B	67	1	15402 E 41ST ST S	No	67.8	62.0	5.8
R-15151	Res.	B	67	1	15406 E 41ST ST S	No	64.8	61.2	3.6
R-15152	Res.	B	67	1	4014 S WOODBURY ST	No	61.9	58.7	3.2
R-15153	Res.	B	67	1	4010 S WOODBURY ST	No	54.4	53.8	0.6
R-15154	Res.	B	67	1	4006 S WOODBURY ST	No	51.5	50.8	0.7
R-15155	Res.	B	67	1	4002 S WOODBURY ST	No	50.0	50.0	0.0
R-15156	Res.	B	67	1	4019 S WOODBURY ST	No	68.5	61.8	6.7
R-15157	Res.	B	67	1	4015 S WOODBURY ST	No	64.3	58.6	5.7
R-15158	Res.	B	67	1	4011 S WOODBURY ST	No	59.2	55.9	3.3
R-15159	Res.	B	67	1	4007 S WOODBURY ST	No	53.2	53.0	0.2
R-15160	Res.	B	67	1	4003 S WOODBURY ST	No	50.7	50.7	0.0
R-15161	Res.	B	67	1	15409 E 40TH ST S	No	50.0	50.0	0.0
R-15162	Res.	B	67	1	15501 E 40TH ST S	No	50.0	50.0	0.0
R-15163	Res.	B	67	1	15505 E 40TH ST S	No	50.0	50.0	0.0
R-15164	Res.	B	67	1	15509 E 40TH ST S	No	50.0	50.0	0.0
R-15165	Res.	B	67	1	15513 E 40TH ST S	No	50.0	50.0	0.0
R-15166	Res.	B	67	1	15517 E 40TH ST S	No	51.4	50.0	1.4
R-15167	Res.	B	67	1	15512 E 40TH ST S	No	51.4	50.0	1.4
R-15168	Res.	B	67	1	15508 E 40TH ST S	No	50.0	50.0	0.0
R-15169	Res.	B	67	1	15504 E 40TH ST S	No	50.0	50.0	0.0
R-15170	Res.	B	67	1	15500 E 40TH ST S	No	50.0	50.0	0.0
R-15171	Res.	B	67	1	15412 E 40TH ST S	No	50.0	50.0	0.0
R-15172	Res.	B	67	1	15408 E 40TH ST S	No	50.0	50.0	0.0
R-15173	Res.	B	67	1	15502 E 41ST ST S	No	66.7	61.2	5.5
R-15174	Res.	B	67	1	15506 E 41ST ST S	No	66.4	60.8	5.6
R-15175	Res.	B	67	1	15510 E 41ST ST S	No	65.9	60.4	5.5
R-15176	Res.	B	67	1	15600 E 41ST ST S	No	67.7	61.1	6.6
R-15177	Res.	B	67	1	15608 E 41ST ST S	No	67.2	60.9	6.3
R-15178	Res.	B	67	1	15618 E 41ST ST S	No	63.2	59.1	4.1
R-15179	Res.	B	67	1	15628 E 41ST ST S	No	62.3	57.4	4.9
R-15180	Res.	B	67	1	15601 E 40TH TER S	No	56.7	53.9	2.8
R-15181	Res.	B	67	1	15610 E 40TH TER S	No	56.7	52.4	4.3

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R-15182	Res.	B	67	1	15618 E 40TH TER S	No	58.5	53.7	4.8
R-15183	Res.	B	67	1	15626 E 40TH TER S	No	60.5	54.9	5.6
R-15184	Res.	B	67	1	15634 E 40TH TER S	No	62.5	56.7	5.8
R-15185	Res.	B	67	1	15700 E 40TH TER S	No	64.0	57.4	6.6
R-15186	Res.	B	67	1	15706 E 40TH TER S	No	64.7	58.0	6.7
R-15187	Res.	B	67	1	15712 E 40TH TER S	No	66.7	59.4	7.3
R-15188	Res.	B	67	1	15718 E 40TH TER S	No	68.0	60.2	7.8
R-15189	Res.	B	67	1	15724 E 40TH TER S	No	69.0	60.9	8.1
R-15190	Res.	B	67	1	15730 E 40TH TER S	No	71.7	62.9	8.8
R-15191	Res.	B	67	1	15736 E 40TH TER S	Yes	73.6	64.5	9.1
R-15192	Res.	B	67	1	3920 S STONEWALL AVE	No	54.1	50.0	4.1
R-15193	Res.	B	67	1	3921 S STONEWALL AVE	No	56.6	50.5	6.1
R-15194	Res.	B	67	1	3924 S SHERMAN DR	No	58.0	51.6	6.4
R-15195	Res.	B	67	1	3928 S SHERMAN DR	No	59.4	52.2	7.2
R-15196	Res.	B	67	1	3932 S SHERMAN DR	No	60.1	52.6	7.5
R-15197	Res.	B	67	1	3936 S SHERMAN DR	No	60.9	53.1	7.8
R-15198	Res.	B	67	1	3940 S SHERMAN DR	No	61.9	53.7	8.2
R-15199	Res.	B	67	1	3944 S SHERMAN DR	No	62.7	54.3	8.4
R-15200	Res.	B	67	1	3948 S SHERMAN DR	No	65.0	56.7	8.3
R-15201	Res.	B	67	1	3923 S BRECKENRIDGE DR	No	61.4	54.2	7.2
R-15202	Res.	B	67	1	3921 S BRECKENRIDGE DR	No	61.6	53.6	8.0
R-15203	Res.	B	67	1	3920 S GRANT AVE	No	61.7	53.4	8.3
R-15204	Res.	B	67	1	3924 S GRANT AVE	No	63.3	55.0	8.3
R-15205	Res.	B	67	1	3928 S GRANT AVE	No	64.6	55.7	8.9
R-15206	Res.	B	67	1	3932 S GRANT AVE	No	62.7	54.9	7.8
R-15207	Res.	B	67	1	3921 S GRANT AVE	No	62.5	54.9	7.6
R-15208	Res.	B	67	1	3923 S GRANT AVE	No	63.7	55.7	8.0
R-15209	Res.	B	67	1	3927 S GRANT AVE	No	64.9	56.7	8.2
R-15210	Res.	B	67	1	3931 S GRANT AVE	No	66.2	57.1	9.1
R-15211	Res.	B	67	1	3935 S GRANT AVE	No	64.2	55.6	8.6
R-15212	Res.	B	67	1	15908 E 41ST ST S	No	66.1	57.6	8.5
R-15213	Res.	B	67	1	15901 E 41ST ST S	Yes	67.3	59.6	7.7
R-15214	Res.	B	67	1	15909 E 41ST ST S	Yes	67.1	59.7	7.4
R-15215	Res.	B	67	1	15917 E 41ST ST S	Yes	68.5	60.5	8.0
R-15216	Res.	B	67	1	15925 E 41ST ST S	Yes	69.5	61.0	8.5
R-15217	Res.	B	67	1	15933 E 41ST ST S	Yes	70.1	61.9	8.2
R-15218	Res.	B	67	1	16001 E 41ST ST S	Yes	72.0	65.0	7.0
R-15219	Res.	B	67	1	16009 E 41ST ST S	Yes	73.5	66.4	7.1
R-15220	Res.	B	67	1	16015 E 41ST ST S	Yes	74.5	66.5	8.0
R-15221	Res.	B	67	1	16023 E 41ST ST S	Yes	73.8	65.6	8.2
R-15222	Res.	B	67	1	16029 E 41ST ST S	Yes	74.5	65.3	9.2
R-15223	Res.	B	67	1	16101 E 41ST ST S	Yes	74.6	64.9	9.7
R-15224	Res.	B	67	1	16107 E 41ST ST S	Yes	74.6	64.3	10.3
R-15225	Res.	B	67	1	16115 E 41ST ST S	Yes	74.9	64.1	10.8
R-15226	Res.	B	67	1	16121 E 41ST ST S	Yes	75.2	64.5	10.7
R-15227	Res.	B	67	1	16129 E 41ST ST S	Yes	73.7	62.7	11.0
R-15228	Res.	B	67	1	16201 E 41ST ST S	Yes	75.0	63.9	11.1
R-15229	Res.	B	67	1	16209 E 41ST ST S	Yes	75.9	68.9	7.0
R-15230	Res.	B	67	1	15916 E 41ST ST S	No	67.9	58.7	9.2
R-15231	Res.	B	67	1	15924 E 41ST ST S	No	68.3	58.9	9.4
R-15232	Res.	B	67	1	15932 E 41ST ST S	No	66.9	58.8	8.1
R-15233	Res.	B	67	1	16002 E 41ST ST S	No	65.6	59.1	6.5
R-15234	Res.	B	67	1	16008 E 41ST ST S	No	65.7	60.3	5.4
R-15235	Res.	B	67	1	16014 E 41ST ST S	No	65.7	61.6	4.1
R-15236	Res.	B	67	1	16022 E 41ST ST S	No	66.2	62.3	3.9
R-15237	Res.	B	67	1	16028 E 41ST ST S	No	66.4	62.6	3.8
R-15238	Res.	B	67	1	16100 E 41ST ST S	No	67.1	62.9	4.2
R-15239	Res.	B	67	1	16106 E 41ST ST S	No	67.7	63.0	4.7
R-15240	Res.	B	67	1	16114 E 41ST ST S	No	67.2	62.4	4.8
R-15241	Res.	B	67	1	16120 E 41ST ST S	No	64.0	60.9	3.1
R-15242	Res.	B	67	1	16128 E 41ST ST S	No	66.0	61.6	4.4

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R-15243	Res.	B	67	1	16210 E 41ST ST S	No	65.1	61.2	3.9
R-15244	Res.	B	67	1	16216 E 41ST ST S	No	65.6	62.0	3.6
R-15245	Res.	B	67	1	16224 E 41ST ST S	No	**67.1**	64.2	2.9
R-15246	Res.	B	67	1	16230 E 41ST ST S	No	**67.6**	65.7	1.9
R-15247	Res.	B	67	1	16304 E 41ST ST S	No	**68.4**	**67.5**	0.9
R-15248	Res.	B	67	1	16007 E 40TH TER S	No	65.8	59.5	6.3
R-15249	Res.	B	67	1	16009 E 40TH TER S	No	**66.1**	60.1	6.0
R-15250	Res.	B	67	1	16015 E 40TH TER S	No	64.7	59.5	5.2
R-15251	Res.	B	67	1	16023 E 40TH TER S	No	64.5	60.0	4.5
R-15252	Res.	B	67	1	16029 E 40TH TER S	No	65.0	60.8	4.2
R-15253	Res.	B	67	1	16101 E 40TH TER S	No	65.1	61.1	4.0
R-15254	Res.	B	67	1	16107 E 40TH TER S	No	**66.1**	61.8	4.3
R-15255	Res.	B	67	1	16115 E 40TH TER S	No	**66.0**	61.7	4.3
R-15256	Res.	B	67	1	16121 E 40TH TER S	No	**66.4**	62.0	4.4
R-15257	Res.	B	67	1	16129 E 40TH TER S	No	65.7	61.2	4.5
R-15258	Res.	B	67	1	16006 E 40TH TER S	No	63.5	58.1	5.4
R-15259	Res.	B	67	1	16008 E 40TH TER S	No	63.6	57.8	5.8
R-15260	Res.	B	67	1	16014 E 40TH TER S	No	63.1	57.6	5.5
R-15261	Res.	B	67	1	16022 E 40TH TER S	No	63.3	58.5	4.8
R-15262	Res.	B	67	1	16028 E 40TH TER S	No	62.6	58.4	4.2
R-15263	Res.	B	67	1	16100 E 40TH TER S	No	62.4	58.8	3.6
R-15264	Res.	B	67	1	16106 E 40TH TER S	No	61.5	58.2	3.3
R-15265	Res.	B	67	1	16114 E 40TH TER S	No	61.4	58.7	2.7
R-15266	Res.	B	67	1	16120 E 40TH TER S	No	61.4	58.8	2.6
R-15267	Res.	B	67	1	16128 E 40TH TER S	No	61.3	58.5	2.8
R-15268	Res.	B	67	1	4095 S QUEEN RIDGE DR	No	59.4	57.5	1.9
R-15269	Res.	B	67	1	4097 S QUEEN RIDGE DR	No	59.5	56.8	2.7
R-15270	Res.	B	67	1	4099 S QUEEN RIDGE DR	No	64.0	58.4	5.6
R-15271	Church	C	67	1	4235 S STAYTON AVE	No	59.5	57.5	2.0
R-15272	Res.	B	67	1	16105 E 40TH ST S	No	61.7	57.6	4.1
R-15273	Res.	B	67	1	16109 E 40TH ST S	No	62.1	58.5	3.6
R-15274	Res.	B	67	1	16113 E 40TH ST S	No	61.7	58.3	3.4
R-15275	Res.	B	67	1	16117 E 40TH ST S	No	61.6	58.8	2.8
R-15276	Res.	B	67	1	16121 E 40TH ST S	No	61.4	58.9	2.5
R-15277	Res.	B	67	1	16201 E 40TH ST S	No	61.1	58.8	2.3
R-15278	Res.	B	67	1	16205 E 40TH ST S	No	61.1	58.5	2.6
R-15279	Res.	B	67	1	16209 E 40TH ST S	No	60.4	58.1	2.3
R-15280	Res.	B	67	1	16213 E 40TH ST S	No	60.4	58.3	2.1
R-15281	Res.	B	67	1	16301 E 40TH ST S	No	59.7	57.8	1.9
R-15282	Res.	B	67	1	3925 S SUMMIT RIDGE DR	No	58.1	57.6	0.5
R-15283	Res.	B	67	1	3928 S LEES SUMMIT RD	No	61.1	60.2	0.9
R-15284	Res.	B	67	1	3924 S LEES SUMMIT RD	No	60.6	59.8	0.8
							Predicted Build Alternative With Barrier Benefits		**75**
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
4,594	15	69,842	75	931
Is the noise barrier preliminarily feasible and reasonable?				**Yes**

NW17a Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-17001	Res.	B	67	1	4228 E 42ND CT S	No	58.0	57.6	0.4
R-17002	Res.	B	67	1	4226 E 42ND CT S	No	60.4	59.6	0.8
R-17003	Res.	B	67	1	4224 E 42ND CT S	No	62.9	61.4	1.5
R-17004	Res.	B	67	1	4222 E 42ND CT S	Yes	67.6	64.7	2.9
R-17005	Res.	B	67	1	4220 E 42ND CT S	Yes	73.4	66.2	7.2
R-17006	Res.	B	67	1	4221 E 42ND CT S	Yes	73.8	64.4	9.4
R-17007	Res.	B	67	1	4223 E 42ND CT S	Yes	68.7	61.7	7.0
R-17008	Res.	B	67	1	4225 E 42ND CT S	No	61.4	58.3	3.1
R-17009	Res.	B	67	1	4227 E 42ND CT S	No	59.4	58.9	0.5
R-17010	Res.	B	67	1	15012 E 42ND TER S	No	61.8	58.8	3.0
R-17011	Res.	B	67	1	15016 E 42ND TER S	Yes	63.9	59.9	4.0
R-17012	Res.	B	67	1	15100 E 42ND TER S	Yes	64.8	60.6	4.2
R-17013	Res.	B	67	1	15104 E 42ND TER S	Yes	66.0	61.3	4.7
R-17014	Res.	B	67	1	15108 E 42ND TER S	Yes	65.9	61.0	4.9
R-17015	Res.	B	67	1	15112 E 42ND TER S	Yes	68.4	61.4	7.0
R-17016	Res.	B	67	1	15116 E 42ND TER S	Yes	69.1	61.4	7.7
R-17017	Res.	B	67	1	15200 E 42ND TER S	Yes	68.6	61.2	7.4
R-17018	Res.	B	67	1	15204 E 42ND TER S	Yes	68.9	61.0	7.9
R-17019	Res.	B	67	1	15208 E 42ND TER S	Yes	68.5	60.9	7.6
R-17020	Res.	B	67	1	15212 E 42ND TER S	Yes	68.4	61.0	7.4
R-17021	Res.	B	67	1	15216 E 42ND TER S	Yes	66.0	60.3	5.7
R-17022	Res.	B	67	1	15300 E 42ND TER S	Yes	66.5	60.6	5.9
R-17023	Res.	B	67	1	15304 E 42ND TER S	Yes	67.1	60.9	6.2
R-17024	Res.	B	67	1	15308 E 42ND TER S	Yes	67.3	60.8	6.5
R-17025	Res.	B	67	1	15312 E 42ND TER S	Yes	67.8	60.8	7.0
R-17026	Res.	B	67	1	15400 E 42ND TER S	No	68.4	61.2	7.2
R-17027	Res.	B	67	1	15001 E 42ND TER S	No	55.7	55.7	0.0
R-17028	Res.	B	67	1	15005 E 42ND TER S	No	55.1	55.1	0.0
R-17029	Res.	B	67	1	15009 E 42ND TER S	No	54.1	54.1	0.0
R-17030	Res.	B	67	1	15013 E 42ND TER S	No	55.2	55.2	0.0
R-17031	Res.	B	67	1	15017 E 42ND TER S	No	55.9	55.7	0.2
R-17032	Res.	B	67	1	15101 E 42ND TER S	No	56.9	55.9	1.0
R-17033	Res.	B	67	1	15105 E 42ND TER S	No	58.8	57.0	1.8
R-17034	Res.	B	67	1	15109 E 42ND TER S	No	59.4	57.2	2.2
R-17035	Res.	B	67	1	15113 E 42ND TER S	No	60.2	57.6	2.6
R-17036	Res.	B	67	1	15117 E 42ND TER S	No	59.8	57.9	1.9
R-17037	Res.	B	67	1	15201 E 42ND TER S	No	59.4	57.5	1.9
R-17038	Res.	B	67	1	15205 E 42ND TER S	No	59.4	57.5	1.9
R-17039	Res.	B	67	1	15209 E 42ND TER S	No	58.7	56.7	2.0
R-17040	Res.	B	67	1	15213 E 42ND TER S	No	59.3	57.3	2.0
R-17041	Res.	B	67	1	15217 E 42ND TER S	No	60.0	57.3	2.7
R-17042	Res.	B	67	1	15301 E 42ND TER S	No	61.1	57.7	3.4
R-17043	Res.	B	67	1	15305 E 42ND TER S	No	60.7	57.7	3.0
R-17044	Res.	B	67	1	15309 E 42ND TER S	No	58.2	57.0	1.2
R-17045	Res.	B	67	1	15000 E 43RD ST S	No	53.1	53.1	0.0
R-17046	Res.	B	67	1	15004 E 43RD ST S	No	51.7	51.7	0.0
R-17047	Res.	B	67	1	15008 E 43RD ST S	No	52.3	52.3	0.0
R-17048	Res.	B	67	1	15100 E 43RD ST S	No	53.3	53.3	0.0
R-17049	Res.	B	67	1	15104 E 43RD ST S	No	53.5	53.3	0.2
R-17050	Res.	B	67	1	15108 E 43RD ST S	No	54.3	53.3	1.0
R-17051	Res.	B	67	1	15112 E 43RD ST S	No	54.1	53.3	0.8
R-17052	Res.	B	67	1	15116 E 43RD ST S	No	51.1	51.1	0.0
R-17053	Res.	B	67	1	15200 E 43RD ST S	No	51.7	51.7	0.0
R-17054	Res.	B	67	1	15204 E 43RD ST S	No	52.4	52.2	0.2
R-17055	Res.	B	67	1	15208 E 43RD ST S	No	53.8	53.1	0.7
R-17056	Res.	B	67	1	15212 E 43RD ST S	No	53.8	53.0	0.8
R-17057	Res.	B	67	1	15216 E 43RD ST S	No	53.9	52.6	1.3
R-17058	Res.	B	67	1	15300 E 43RD ST S	No	53.6	52.2	1.4
R-17059	Res.	B	67	1	15304 E 43RD ST S	No	53.3	52.0	1.3

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R-17060	Res.	B	67	1	15313 E 42ND TER S	No	56.6	53.4	3.2
R-17061	Res.	B	67	1	4224 S SAVILLE AVE	No	55.5	52.8	2.7
R-17062	Res.	B	67	1	15308 E 43RD ST S	No	51.2	50.2	1.0
R-17063	Res.	B	67	1	15001 E 43RD ST S	No	53.5	53.5	0.0
R-17064	Res.	B	67	1	15005 E 43RD ST S	No	51.9	51.9	0.0
R-17065	Res.	B	67	1	15101 E 43RD ST S	No	51.3	51.3	0.0
R-17066	Res.	B	67	1	15105 E 43RD ST S	No	50.4	50.4	0.0
R-17067	Res.	B	67	1	15109 E 43RD ST S	No	50.4	50.4	0.0
R-17068	Res.	B	67	1	15113 E 43RD ST S	No	50.0	50.0	0.0
R-17069	Res.	B	67	1	15117 E 43RD ST S	No	50.0	50.0	0.0
R-17070	Res.	B	67	1	15201 E 43RD ST S	No	50.0	50.0	0.0
R-17071	Res.	B	67	1	15205 E 43RD ST S	No	50.0	50.0	0.0
R-17072	Res.	B	67	1	15209 E 43RD ST S	No	50.0	50.0	0.0
R-17073	Res.	B	67	1	15213 E 43RD ST S	No	50.0	50.0	0.0
R-17074	Res.	B	67	1	15217 E 43RD ST S	No	50.0	50.0	0.0
R-17075	Res.	B	67	1	15301 E 43RD ST S	No	50.0	50.0	0.0
R-17076	Res.	B	67	1	15305 E 43RD ST S	No	50.0	50.0	0.0
R-17077	Res.	B	67	1	15102 E 43RD PL S	No	50.1	50.1	0.0
R-17078	Res.	B	67	1	15106 E 43RD PL S	No	50.0	50.0	0.0
R-17079	Res.	B	67	1	15110 E 43RD PL S	No	50.0	50.0	0.0
R-17080	Res.	B	67	1	15114 E 43RD PL S	No	50.0	50.0	0.0
R-17081	Res.	B	67	1	15118 E 43RD PL S	No	50.0	50.0	0.0
R-17082	Res.	B	67	1	15202 E 43RD PL S	No	50.0	50.0	0.0
R-17083	Res.	B	67	1	15206 E 43RD PL S	No	50.0	50.0	0.0
R-17084	Res.	B	67	1	15210 E 43RD PL S	No	50.0	50.0	0.0
R-17085	Res.	B	67	1	15214 E 43RD PL S	No	50.0	50.0	0.0
R-17086	Res.	B	67	1	15302 E 43RD PL S	No	50.0	50.0	0.0
R-17087	Res.	B	67	1	15306 E 43RD PL S	No	50.0	50.0	0.0
R-17088	Res.	B	67	1	15310 E 43RD PL S	No	50.0	50.0	0.0
R-17089	Res.	B	67	1	15314 E 43RD PL S	No	50.0	50.0	0.0
R-17090	Res.	B	67	1	15404 E 42ND PL S	Yes	71.1	62.2	8.9
R-17091	Res.	B	67	1	15408 E 42ND PL S	Yes	74.3	64.8	9.5
R-17092	Res.	B	67	1	15412 E 42ND PL S	Yes	75.5	65.4	10.1
R-17093	Res.	B	67	1	15416 E 42ND PL S	Yes	75.3	64.8	10.5
R-17094	Res.	B	67	1	15500 E 42ND PL S	Yes	75.3	65.0	10.3
R-17095	Res.	B	67	1	15504 E 42ND PL S	Yes	75.3	64.9	10.4
R-17096	Res.	B	67	1	15508 E 42ND PL S	Yes	75.2	64.7	10.5
R-17097	Res.	B	67	1	15512 E 42ND PL S	Yes	75.4	65.1	10.3
R-17098	Res.	B	67	1	15516 E 42ND PL S	Yes	75.5	65.2	10.3
R-17099	Res.	B	67	1	15600 E 42ND PL S	Yes	75.4	65.1	10.3
R-17100	Res.	B	67	1	15604 E 42ND PL S	Yes	75.6	65.9	9.7
R-17101	Res.	B	67	1	15608 E 42ND PL S	Yes	75.6	66.0	9.6
R-17102	Res.	B	67	1	15612 E 42ND PL S	Yes	75.6	66.6	9.0
R-17103	Res.	B	67	1	15700 E 42ND PL S	Yes	75.6	66.7	8.9
R-17104	Res.	B	67	1	15704 E 42ND PL S	Yes	75.9	68.5	7.4
R-17105	Res.	B	67	1	15708 E 42ND PL S	Yes	76.0	68.4	7.6
R-17106	Res.	B	67	1	15712 E 42ND PL S	Yes	76.5	69.2	7.3
R-17107	Res.	B	67	1	15800 E 42ND PL S	Yes	76.6	69.6	7.0
R-17108	Res.	B	67	1	15804 E 42ND PL S	No	74.8	69.5	5.3
R-17109	Res.	B	67	1	15805 E 42ND PL S	No	71.4	68.4	3.0
R-17110	Res.	B	67	1	15801 E 42ND PL S	No	71.4	67.5	3.9
R-17111	Res.	B	67	1	15413 E 42ND PL S	No	67.6	61.6	6.0
R-17112	Res.	B	67	1	15417 E 42ND PL S	No	69.8	62.4	7.4
R-17113	Res.	B	67	1	15501 E 42ND PL S	No	70.6	62.8	7.8
R-17114	Res.	B	67	1	15505 E 42ND PL S	No	69.3	62.4	6.9
R-17115	Res.	B	67	1	15509 E 42ND PL S	No	69.5	62.5	7.0
R-17116	Res.	B	67	1	15513 E 42ND PL S	No	69.8	62.7	7.1
R-17117	Res.	B	67	1	15517 E 42ND PL S	No	71.6	63.9	7.7
R-17118	Res.	B	67	1	15601 E 42ND PL S	No	71.6	63.8	7.8
R-17119	Res.	B	67	1	15605 E 42ND PL S	No	71.7	64.4	7.3
R-17120	Res.	B	67	1	15609 E 42ND PL S	No	71.9	65.0	6.9

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R-17121	Res.	B	67	1	4220 S STAYTON AVE	No	71.7	65.6	6.1
R-17122	Res.	B	67	1	15406 E 42ND TER S	No	67.0	60.9	6.1
R-17123	Res.	B	67	1	15410 E 42ND TER S	No	64.7	59.8	4.9
R-17124	Res.	B	67	1	15414 E 42ND TER S	No	64.7	60.0	4.7
R-17125	Res.	B	67	1	15502 E 42ND TER S	No	65.2	60.4	4.8
R-17126	Res.	B	67	1	15506 E 42ND TER S	No	65.9	61.0	4.9
R-17127	Res.	B	67	1	15510 E 42ND TER S	No	66.6	61.6	5.0
R-17128	Res.	B	67	1	15514 E 42ND TER S	No	67.2	62.2	5.0
R-17129	Res.	B	67	1	15518 E 42ND TER S	No	67.7	63.1	4.6
R-17130	Res.	B	67	1	15602 E 42ND TER S	No	67.8	63.2	4.6
R-17131	Res.	B	67	1	15606 E 42ND TER S	No	67.5	63.0	4.5
R-17132	Res.	B	67	1	15610 E 42ND TER S	No	67.4	63.2	4.2
R-17133	Res.	B	67	1	15614 E 42ND TER S	No	66.9	63.0	3.9
R-17134	Res.	B	67	1	4224 S STAYTON AVE	No	64.8	61.6	3.2
R-17135	Res.	B	67	1	4222 S STAYTON AVE	No	66.4	63.4	3.0
R-17136	Res.	B	67	1	4221 S STAYTON AVE	No	71.4	66.9	4.5
R-17137	Res.	B	67	1	4223 S STAYTON AVE	No	67.5	65.5	2.0
R-17138	Res.	B	67	1	4225 S STAYTON AVE	No	67.2	65.5	1.7
R-17139	Res.	B	67	1	4227 S STAYTON AVE	No	67.5	65.7	1.8
R-17140	Res.	B	67	1	4229 S STAYTON AVE	No	67.7	66.0	1.7
R-17141	Res.	B	67	1	4221 S SAVILLE AVE	No	60.3	57.5	2.8
R-17142	Res.	B	67	1	4225 S SAVILLE AVE	No	52.1	50.8	1.3
R-17143	Res.	B	67	1	4229 S SAVILLE AVE	No	50.0	50.0	0.0
R-17144	Res.	B	67	1	15407 E 42ND TER S	No	55.1	52.5	2.6
R-17145	Res.	B	67	1	15411 E 42ND TER S	No	57.8	56.1	1.7
R-17146	Res.	B	67	1	15415 E 42ND TER S	No	58.7	57.3	1.4
R-17147	Res.	B	67	1	15503 E 42ND TER S	No	59.5	58.1	1.4
R-17148	Res.	B	67	1	15507 E 42ND TER S	No	60.7	58.9	1.8
R-17149	Res.	B	67	1	15511 E 42ND TER S	No	61.9	59.6	2.3
R-17150	Res.	B	67	1	15515 E 42ND TER S	No	62.6	60.2	2.4
R-17151	Res.	B	67	1	15519 E 42ND TER S	No	63.1	60.7	2.4
R-17152	Res.	B	67	1	15603 E 42ND TER S	No	62.2	60.5	1.7
R-17153	Res.	B	67	1	15607 E 42ND TER S	No	62.7	60.9	1.8
R-17154	Res.	B	67	1	15611 E 42ND TER S	No	62.5	61.1	1.4
R-17155	Res.	B	67	1	15615 E 42ND TER S	No	63.4	61.7	1.7
R-17156	Res.	B	67	1	15701 E 42ND TER S	No	64.5	62.5	2.0
R-17157	Res.	B	67	1	4226 S STAYTON AVE	No	64.9	63.3	1.6
R-17158	Res.	B	67	1	4228 S STAYTON AVE	No	65.7	64.0	1.7
R-17159	Res.	B	67	7	4000 S LEES SUMMIT RD	No	65.4	63.9	1.5
R-17160	Res.	B	67	1	4231 S STAYTON AVE	No	64.8	63.7	1.1
R-17161	Res.	B	67	1	15404 E 43RD ST S	No	50.0	50.0	0.0
R-17162	Res.	B	67	1	15408 E 43RD ST S	No	50.0	50.0	0.0
R-17163	Res.	B	67	1	15412 E 43RD ST S	No	50.0	50.0	0.0
R-17164	Res.	B	67	1	15416 E 43RD ST S	No	50.0	50.0	0.0
R-17165	Res.	B	67	1	15500 E 43RD ST S	No	51.0	50.7	0.3
R-17166	Res.	B	67	1	15504 E 43RD ST S	No	56.8	56.1	0.7
R-17167	Res.	B	67	1	15508 E 43RD ST S	No	58.9	58.0	0.9
R-17168	Res.	B	67	1	15512 E 43RD ST S	No	59.5	58.7	0.8
R-17169	Res.	B	67	1	15600 E 43RD ST S	No	60.4	59.5	0.9
R-17170	Res.	B	67	1	15604 E 43RD ST S	No	61.0	60.0	1.0
R-17171	Res.	B	67	1	15608 E 43RD ST S	No	61.8	60.5	1.3
R-17172	Res.	B	67	1	15612 E 43RD ST S	No	62.2	60.9	1.3
R-17173	Res.	B	67	1	15616 E 43RD ST S	No	62.9	61.3	1.6
R-17174	Res.	B	67	1	15700 E 43RD ST S	No	63.0	61.5	1.5
R-17175	Res.	B	67	1	15704 E 43RD ST S	No	63.0	61.5	1.5
R-17176	Res.	B	67	1	15708 E 43RD ST S	No	62.8	61.4	1.4
R-17177	Res.	B	67	1	15712 E 43RD ST S	No	63.0	61.9	1.1
R-17178	Res.	B	67	1	15800 E 43RD ST S	No	63.0	62.1	0.9
R-17179	Res.	B	67	1	4233 S STAYTON AVE	No	63.2	62.5	0.7
R-17180	Park	C	67	9	15901 E 42ND TER S	No	64.1	62.7	1.4
R-17181	Res.	B	67	1	4230 S STAYTON AVE	No	66.8	65.4	1.4

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R-17182	Res.	B	67	1	4232 S STAYTON AVE	No	66.1	64.8	1.3
R-17183	Res.	B	67	1	4234 S STAYTON AVE	No	65.3	64.2	1.1
R-17184	Res.	B	67	1	15900 E 43RD ST S	No	62.7	61.6	1.1
R-17185	Res.	B	67	1	15904 E 43RD ST S	No	62.3	61.2	1.1
R-17186	Res.	B	67	1	15908 E 43RD ST S	No	61.7	60.6	1.1
R-17187	Res.	B	67	1	15912 E 43RD ST S	No	60.2	59.0	1.2
								Predicted Build Alternative With Barrier Benefits	**36**
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
3,400	16	54,098	36	1,503
Is the noise barrier preliminarily feasible and reasonable?				**No**

NW17b Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-17001	Res.	B	67	1	4228 E 42ND CT S	No	58.0	58.0	0.0
R-17002	Res.	B	67	1	4226 E 42ND CT S	No	60.4	60.4	0.0
R-17003	Res.	B	67	1	4224 E 42ND CT S	No	62.9	62.9	0.0
R-17004	Res.	B	67	1	4222 E 42ND CT S	Yes	67.6	67.6	0.0
R-17005	Res.	B	67	1	4220 E 42ND CT S	Yes	73.4	73.4	0.0
R-17006	Res.	B	67	1	4221 E 42ND CT S	Yes	73.8	73.8	0.0
R-17007	Res.	B	67	1	4223 E 42ND CT S	Yes	68.7	68.7	0.0
R-17008	Res.	B	67	1	4225 E 42ND CT S	No	61.4	61.4	0.0
R-17009	Res.	B	67	1	4227 E 42ND CT S	No	59.4	59.4	0.0
R-17010	Res.	B	67	1	15012 E 42ND TER S	No	61.8	61.8	0.0
R-17011	Res.	B	67	1	15016 E 42ND TER S	Yes	63.9	63.9	0.0
R-17012	Res.	B	67	1	15100 E 42ND TER S	Yes	64.8	64.8	0.0
R-17013	Res.	B	67	1	15104 E 42ND TER S	Yes	66.0	66.0	0.0
R-17014	Res.	B	67	1	15108 E 42ND TER S	Yes	65.9	65.8	0.1
R-17015	Res.	B	67	1	15112 E 42ND TER S	Yes	68.4	68.4	0.0
R-17016	Res.	B	67	1	15116 E 42ND TER S	Yes	69.1	69.1	0.0
R-17017	Res.	B	67	1	15200 E 42ND TER S	Yes	68.6	68.3	0.3
R-17018	Res.	B	67	1	15204 E 42ND TER S	Yes	68.9	68.5	0.4
R-17019	Res.	B	67	1	15208 E 42ND TER S	Yes	68.5	68.0	0.5
R-17020	Res.	B	67	1	15212 E 42ND TER S	Yes	68.4	67.8	0.6
R-17021	Res.	B	67	1	15216 E 42ND TER S	Yes	66.0	65.1	0.9
R-17022	Res.	B	67	1	15300 E 42ND TER S	Yes	66.5	65.3	1.2
R-17023	Res.	B	67	1	15304 E 42ND TER S	Yes	67.1	64.7	2.4
R-17024	Res.	B	67	1	15308 E 42ND TER S	Yes	67.3	63.8	3.5
R-17025	Res.	B	67	1	15312 E 42ND TER S	Yes	67.8	63.3	4.5
R-17026	Res.	B	67	1	15400 E 42ND TER S	No	68.4	63.2	5.2
R-17027	Res.	B	67	1	15001 E 42ND TER S	No	55.7	55.7	0.0
R-17028	Res.	B	67	1	15005 E 42ND TER S	No	55.1	55.1	0.0
R-17029	Res.	B	67	1	15009 E 42ND TER S	No	54.1	54.1	0.0
R-17030	Res.	B	67	1	15013 E 42ND TER S	No	55.2	55.2	0.0
R-17031	Res.	B	67	1	15017 E 42ND TER S	No	55.9	55.9	0.0
R-17032	Res.	B	67	1	15101 E 42ND TER S	No	56.9	56.9	0.0
R-17033	Res.	B	67	1	15105 E 42ND TER S	No	58.8	58.7	0.1
R-17034	Res.	B	67	1	15109 E 42ND TER S	No	59.4	59.3	0.1
R-17035	Res.	B	67	1	15113 E 42ND TER S	No	60.2	59.9	0.3
R-17036	Res.	B	67	1	15117 E 42ND TER S	No	59.8	59.5	0.3
R-17037	Res.	B	67	1	15201 E 42ND TER S	No	59.4	59.0	0.4
R-17038	Res.	B	67	1	15205 E 42ND TER S	No	59.4	58.9	0.5
R-17039	Res.	B	67	1	15209 E 42ND TER S	No	58.7	58.3	0.4
R-17040	Res.	B	67	1	15213 E 42ND TER S	No	59.3	58.5	0.8
R-17041	Res.	B	67	1	15217 E 42ND TER S	No	60.0	59.0	1.0
R-17042	Res.	B	67	1	15301 E 42ND TER S	No	61.1	59.6	1.5
R-17043	Res.	B	67	1	15305 E 42ND TER S	No	60.7	59.3	1.4
R-17044	Res.	B	67	1	15309 E 42ND TER S	No	58.2	57.0	1.2
R-17045	Res.	B	67	1	15000 E 43RD ST S	No	53.1	53.1	0.0
R-17046	Res.	B	67	1	15004 E 43RD ST S	No	51.7	51.7	0.0
R-17047	Res.	B	67	1	15008 E 43RD ST S	No	52.3	52.3	0.0
R-17048	Res.	B	67	1	15100 E 43RD ST S	No	53.3	53.3	0.0
R-17049	Res.	B	67	1	15104 E 43RD ST S	No	53.5	53.5	0.0
R-17050	Res.	B	67	1	15108 E 43RD ST S	No	54.3	54.1	0.2
R-17051	Res.	B	67	1	15112 E 43RD ST S	No	54.1	53.9	0.2
R-17052	Res.	B	67	1	15116 E 43RD ST S	No	51.1	50.5	0.6
R-17053	Res.	B	67	1	15200 E 43RD ST S	No	51.7	51.0	0.7
R-17054	Res.	B	67	1	15204 E 43RD ST S	No	52.4	52.0	0.4
R-17055	Res.	B	67	1	15208 E 43RD ST S	No	53.8	53.2	0.6
R-17056	Res.	B	67	1	15212 E 43RD ST S	No	53.8	53.0	0.8
R-17057	Res.	B	67	1	15216 E 43RD ST S	No	53.9	52.7	1.2
R-17058	Res.	B	67	1	15300 E 43RD ST S	No	53.6	51.7	1.9
R-17059	Res.	B	67	1	15304 E 43RD ST S	No	53.3	51.7	1.6

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R-17060	Res.	B	67	1	15313 E 42ND TER S	No	56.6	55.1	1.5
R-17061	Res.	B	67	1	4224 S SAVILLE AVE	No	55.5	54.5	1.0
R-17062	Res.	B	67	1	15308 E 43RD ST S	No	51.2	50.0	1.2
R-17063	Res.	B	67	1	15001 E 43RD ST S	No	53.5	53.5	0.0
R-17064	Res.	B	67	1	15005 E 43RD ST S	No	51.9	51.8	0.1
R-17065	Res.	B	67	1	15101 E 43RD ST S	No	51.3	51.1	0.2
R-17066	Res.	B	67	1	15105 E 43RD ST S	No	50.4	50.2	0.2
R-17067	Res.	B	67	1	15109 E 43RD ST S	No	50.4	50.1	0.3
R-17068	Res.	B	67	1	15113 E 43RD ST S	No	50.0	50.0	0.0
R-17069	Res.	B	67	1	15117 E 43RD ST S	No	50.0	50.0	0.0
R-17070	Res.	B	67	1	15201 E 43RD ST S	No	50.0	50.0	0.0
R-17071	Res.	B	67	1	15205 E 43RD ST S	No	50.0	50.0	0.0
R-17072	Res.	B	67	1	15209 E 43RD ST S	No	50.0	50.0	0.0
R-17073	Res.	B	67	1	15213 E 43RD ST S	No	50.0	50.0	0.0
R-17074	Res.	B	67	1	15217 E 43RD ST S	No	50.0	50.0	0.0
R-17075	Res.	B	67	1	15301 E 43RD ST S	No	50.0	50.0	0.0
R-17076	Res.	B	67	1	15305 E 43RD ST S	No	50.0	50.0	0.0
R-17077	Res.	B	67	1	15102 E 43RD PL S	No	50.1	50.0	0.1
R-17078	Res.	B	67	1	15106 E 43RD PL S	No	50.0	50.0	0.0
R-17079	Res.	B	67	1	15110 E 43RD PL S	No	50.0	50.0	0.0
R-17080	Res.	B	67	1	15114 E 43RD PL S	No	50.0	50.0	0.0
R-17081	Res.	B	67	1	15118 E 43RD PL S	No	50.0	50.0	0.0
R-17082	Res.	B	67	1	15202 E 43RD PL S	No	50.0	50.0	0.0
R-17083	Res.	B	67	1	15206 E 43RD PL S	No	50.0	50.0	0.0
R-17084	Res.	B	67	1	15210 E 43RD PL S	No	50.0	50.0	0.0
R-17085	Res.	B	67	1	15214 E 43RD PL S	No	50.0	50.0	0.0
R-17086	Res.	B	67	1	15302 E 43RD PL S	No	50.0	50.0	0.0
R-17087	Res.	B	67	1	15306 E 43RD PL S	No	50.0	50.0	0.0
R-17088	Res.	B	67	1	15310 E 43RD PL S	No	50.0	50.0	0.0
R-17089	Res.	B	67	1	15314 E 43RD PL S	No	50.0	50.0	0.0
R-17090	Res.	B	67	1	15404 E 42ND PL S	Yes	71.1	64.1	7.0
R-17091	Res.	B	67	1	15408 E 42ND PL S	Yes	74.3	66.6	7.7
R-17092	Res.	B	67	1	15412 E 42ND PL S	Yes	75.5	66.2	9.3
R-17093	Res.	B	67	1	15416 E 42ND PL S	Yes	75.3	65.1	10.2
R-17094	Res.	B	67	1	15500 E 42ND PL S	Yes	75.3	65.1	10.2
R-17095	Res.	B	67	1	15504 E 42ND PL S	Yes	75.3	65.0	10.3
R-17096	Res.	B	67	1	15508 E 42ND PL S	Yes	75.2	64.7	10.5
R-17097	Res.	B	67	1	15512 E 42ND PL S	Yes	75.4	65.1	10.3
R-17098	Res.	B	67	1	15516 E 42ND PL S	Yes	75.5	65.2	10.3
R-17099	Res.	B	67	1	15600 E 42ND PL S	Yes	75.4	65.1	10.3
R-17100	Res.	B	67	1	15604 E 42ND PL S	Yes	75.6	65.9	9.7
R-17101	Res.	B	67	1	15608 E 42ND PL S	Yes	75.6	66.0	9.6
R-17102	Res.	B	67	1	15612 E 42ND PL S	Yes	75.6	66.6	9.0
R-17103	Res.	B	67	1	15700 E 42ND PL S	Yes	75.6	66.7	8.9
R-17104	Res.	B	67	1	15704 E 42ND PL S	Yes	75.9	68.5	7.4
R-17105	Res.	B	67	1	15708 E 42ND PL S	Yes	76.0	68.4	7.6
R-17106	Res.	B	67	1	15712 E 42ND PL S	Yes	76.5	69.2	7.3
R-17107	Res.	B	67	1	15800 E 42ND PL S	Yes	76.6	69.6	7.0
R-17108	Res.	B	67	1	15804 E 42ND PL S	No	74.8	69.5	5.3
R-17109	Res.	B	67	1	15805 E 42ND PL S	No	71.4	68.4	3.0
R-17110	Res.	B	67	1	15801 E 42ND PL S	No	71.4	67.5	3.9
R-17111	Res.	B	67	1	15413 E 42ND PL S	No	67.6	62.2	5.4
R-17112	Res.	B	67	1	15417 E 42ND PL S	No	69.8	62.9	6.9
R-17113	Res.	B	67	1	15501 E 42ND PL S	No	70.6	63.2	7.4
R-17114	Res.	B	67	1	15505 E 42ND PL S	No	69.3	62.7	6.6
R-17115	Res.	B	67	1	15509 E 42ND PL S	No	69.5	62.6	6.9
R-17116	Res.	B	67	1	15513 E 42ND PL S	No	69.8	62.8	7.0
R-17117	Res.	B	67	1	15517 E 42ND PL S	No	71.6	64.0	7.6
R-17118	Res.	B	67	1	15601 E 42ND PL S	No	71.6	63.9	7.7
R-17119	Res.	B	67	1	15605 E 42ND PL S	No	71.7	64.4	7.3
R-17120	Res.	B	67	1	15609 E 42ND PL S	No	71.9	65.0	6.9

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R-17121	Res.	B	67	1	4220 S STAYTON AVE	No	71.7	65.6	6.1
R-17122	Res.	B	67	1	15406 E 42ND TER S	No	67.0	62.0	5.0
R-17123	Res.	B	67	1	15410 E 42ND TER S	No	64.7	60.6	4.1
R-17124	Res.	B	67	1	15414 E 42ND TER S	No	64.7	60.6	4.1
R-17125	Res.	B	67	1	15502 E 42ND TER S	No	65.2	60.8	4.4
R-17126	Res.	B	67	1	15506 E 42ND TER S	No	65.9	61.3	4.6
R-17127	Res.	B	67	1	15510 E 42ND TER S	No	66.6	61.8	4.8
R-17128	Res.	B	67	1	15514 E 42ND TER S	No	67.2	62.4	4.8
R-17129	Res.	B	67	1	15518 E 42ND TER S	No	67.7	63.2	4.5
R-17130	Res.	B	67	1	15602 E 42ND TER S	No	67.8	63.3	4.5
R-17131	Res.	B	67	1	15606 E 42ND TER S	No	67.5	63.1	4.4
R-17132	Res.	B	67	1	15610 E 42ND TER S	No	67.4	63.3	4.1
R-17133	Res.	B	67	1	15614 E 42ND TER S	No	66.9	63.0	3.9
R-17134	Res.	B	67	1	4224 S STAYTON AVE	No	64.8	61.6	3.2
R-17135	Res.	B	67	1	4222 S STAYTON AVE	No	66.4	63.4	3.0
R-17136	Res.	B	67	1	4221 S STAYTON AVE	No	71.4	66.9	4.5
R-17137	Res.	B	67	1	4223 S STAYTON AVE	No	67.5	65.5	2.0
R-17138	Res.	B	67	1	4225 S STAYTON AVE	No	67.2	65.5	1.7
R-17139	Res.	B	67	1	4227 S STAYTON AVE	No	67.5	65.7	1.8
R-17140	Res.	B	67	1	4229 S STAYTON AVE	No	67.7	66.0	1.7
R-17141	Res.	B	67	1	4221 S SAVILLE AVE	No	60.3	58.4	1.9
R-17142	Res.	B	67	1	4225 S SAVILLE AVE	No	52.1	50.0	2.1
R-17143	Res.	B	67	1	4229 S SAVILLE AVE	No	50.0	50.0	0.0
R-17144	Res.	B	67	1	15407 E 42ND TER S	No	55.1	52.8	2.3
R-17145	Res.	B	67	1	15411 E 42ND TER S	No	57.8	56.7	1.1
R-17146	Res.	B	67	1	15415 E 42ND TER S	No	58.7	57.7	1.0
R-17147	Res.	B	67	1	15503 E 42ND TER S	No	59.5	58.4	1.1
R-17148	Res.	B	67	1	15507 E 42ND TER S	No	60.7	59.2	1.5
R-17149	Res.	B	67	1	15511 E 42ND TER S	No	61.9	59.8	2.1
R-17150	Res.	B	67	1	15515 E 42ND TER S	No	62.6	60.3	2.3
R-17151	Res.	B	67	1	15519 E 42ND TER S	No	63.1	60.8	2.3
R-17152	Res.	B	67	1	15603 E 42ND TER S	No	62.2	60.6	1.6
R-17153	Res.	B	67	1	15607 E 42ND TER S	No	62.7	60.9	1.8
R-17154	Res.	B	67	1	15611 E 42ND TER S	No	62.5	61.1	1.4
R-17155	Res.	B	67	1	15615 E 42ND TER S	No	63.4	61.7	1.7
R-17156	Res.	B	67	1	15701 E 42ND TER S	No	64.5	62.5	2.0
R-17157	Res.	B	67	1	4226 S STAYTON AVE	No	64.9	63.3	1.6
R-17158	Res.	B	67	1	4228 S STAYTON AVE	No	65.7	64.0	1.7
R-17159	Res.	B	67	7	4000 S LEES SUMMIT RD	No	65.4	63.9	1.5
R-17160	Res.	B	67	1	4231 S STAYTON AVE	No	64.8	63.7	1.1
R-17161	Res.	B	67	1	15404 E 43RD ST S	No	50.0	50.0	0.0
R-17162	Res.	B	67	1	15408 E 43RD ST S	No	50.0	50.0	0.0
R-17163	Res.	B	67	1	15412 E 43RD ST S	No	50.0	50.0	0.0
R-17164	Res.	B	67	1	15416 E 43RD ST S	No	50.0	50.0	0.0
R-17165	Res.	B	67	1	15500 E 43RD ST S	No	51.0	50.6	0.4
R-17166	Res.	B	67	1	15504 E 43RD ST S	No	56.8	56.2	0.6
R-17167	Res.	B	67	1	15508 E 43RD ST S	No	58.9	58.1	0.8
R-17168	Res.	B	67	1	15512 E 43RD ST S	No	59.5	58.8	0.7
R-17169	Res.	B	67	1	15600 E 43RD ST S	No	60.4	59.5	0.9
R-17170	Res.	B	67	1	15604 E 43RD ST S	No	61.0	60.0	1.0
R-17171	Res.	B	67	1	15608 E 43RD ST S	No	61.8	60.6	1.2
R-17172	Res.	B	67	1	15612 E 43RD ST S	No	62.2	60.9	1.3
R-17173	Res.	B	67	1	15616 E 43RD ST S	No	62.9	61.3	1.6
R-17174	Res.	B	67	1	15700 E 43RD ST S	No	63.0	61.5	1.5
R-17175	Res.	B	67	1	15704 E 43RD ST S	No	63.0	61.6	1.4
R-17176	Res.	B	67	1	15708 E 43RD ST S	No	62.8	61.4	1.4
R-17177	Res.	B	67	1	15712 E 43RD ST S	No	63.0	61.9	1.1
R-17178	Res.	B	67	1	15800 E 43RD ST S	No	63.0	62.1	0.9
R-17179	Res.	B	67	1	4233 S STAYTON AVE	No	63.2	62.5	0.7
R-17180	Park	C	67	9	15901 E 42ND TER S	No	64.1	62.7	1.4
R-17181	Res.	B	67	1	4230 S STAYTON AVE	No	66.8	65.4	1.4

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R-17182	Res.	B	67	1	4232 S STAYTON AVE	No	**66.1**	64.8	1.3
R-17183	Res.	B	67	1	4234 S STAYTON AVE	No	65.3	64.2	1.1
R-17184	Res.	B	67	1	15900 E 43RD ST S	No	62.7	61.6	1.1
R-17185	Res.	B	67	1	15904 E 43RD ST S	No	62.3	61.2	1.1
R-17186	Res.	B	67	1	15908 E 43RD ST S	No	61.7	60.6	1.1
R-17187	Res.	B	67	1	15912 E 43RD ST S	No	60.2	59.0	1.2
								Predicted Build Alternative With Barrier Benefits	**23**
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
1,700	15	25,502	23	1,109
Is the noise barrier preliminarily feasible and reasonable?				**Yes**

NW18a Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-18001	Res.	B	67	1	3924 S CARRIAGE LN	No	59.7	59.6	0.1
R-18002	Res.	B	67	1	16404 E 40TH ST S	No	62.2	62.1	0.1
R-18003	Res.	B	67	1	16408 E 40TH ST S	No	60.3	60.0	0.3
R-18004	Res.	B	67	1	3925 S CARRIAGE LN	No	56.7	56.7	0.0
R-18005	Res.	B	67	1	3924 S BRYANT DR	No	55.3	55.2	0.1
R-18006	Res.	B	67	1	3929 S CARRIAGE LN	No	58.4	58.3	0.1
R-18007	Res.	B	67	1	16504 E 40TH ST S	No	58.2	58.0	0.2
R-18008	Res.	B	67	1	16508 E 40TH ST S	No	57.6	57.5	0.1
R-18009	Res.	B	67	1	3925 S BRYANT DR	No	54.8	54.8	0.0
R-18010	Res.	B	67	1	3924 S MILTON DR	No	53.4	53.4	0.0
R-18011	Res.	B	67	1	16600 E 40TH ST S	No	55.8	55.8	0.0
R-18012	Res.	B	67	1	16604 E 40TH ST S	No	56.5	56.5	0.0
R-18013	Res.	B	67	1	16608 E 40TH ST S	No	55.3	55.3	0.0
R-18014	Res.	B	67	1	16401 E 40TH ST S	No	65.1	65.1	0.0
R-18015	Res.	B	67	1	16405 E 40TH ST S	No	62.7	62.5	0.2
R-18016	Res.	B	67	1	16409 E 40TH ST S	No	61.6	61.3	0.3
R-18017	Res.	B	67	1	16413 E 40TH ST S	No	61.2	60.9	0.3
R-18018	Res.	B	67	1	16501 E 40TH ST S	No	61.3	60.7	0.6
R-18019	Res.	B	67	1	16505 E 40TH ST S	No	61.0	60.4	0.6
R-18020	Res.	B	67	1	16509 E 40TH ST S	No	60.7	60.2	0.5
R-18021	Res.	B	67	1	16513 E 40TH ST S	No	59.6	59.1	0.5
R-18022	Res.	B	67	1	16517 E 40TH ST S	No	58.3	58.0	0.3
R-18023	Res.	B	67	1	16601 E 40TH ST S	No	56.2	56.2	0.0
R-18024	Res.	B	67	1	4000 S MILTON DR	No	53.5	53.5	0.0
R-18025	Res.	B	67	1	4019 S LEES SUMMIT RD	No	62.1	61.1	1.0
R-18026	Res.	B	67	1	4029 S LEES SUMMIT RD	No	63.5	62.2	1.3
R-18027	Res.	B	67	1	4035 S LEES SUMMIT RD	No	66.9	64.5	2.4
R-18028	Res.	B	67	1	4020 S SURREY LN	No	54.0	54.0	0.0
R-18029	Res.	B	67	1	4022 S SURREY LN	No	55.5	55.5	0.0
R-18030	Res.	B	67	1	4024 S SURREY LN	No	57.3	56.9	0.4
R-18031	Res.	B	67	1	4028 S SURREY LN	No	59.6	58.2	1.4
R-18032	Res.	B	67	1	4032 S SURREY LN	No	63.8	60.7	3.1
R-18033	Res.	B	67	1	4036 S SURREY LN	No	66.8	62.8	4.0
R-18034	Res.	B	67	1	16509 E 41ST ST S	Yes	69.3	62.3	7.0
R-18035	Res.	B	67	1	3925 S MILTON DR	No	50.7	50.7	0.0
R-18036	Res.	B	67	1	3929 S MILTON DR	No	51.8	51.8	0.0
R-18037	Res.	B	67	1	3933 S MILTON DR	No	53.0	53.0	0.0
R-18038	Res.	B	67	1	4001 S MILTON DR	No	56.0	56.0	0.0
R-18039	Res.	B	67	1	4005 S MILTON DR	No	56.4	56.4	0.0
R-18040	Res.	B	67	1	4009 S MILTON DR	No	56.4	56.4	0.0
R-18041	Res.	B	67	1	4013 S MILTON DR	No	54.8	54.8	0.0
R-18042	Res.	B	67	1	3924 S COACHMAN DR	No	50.3	50.3	0.0
R-18043	Res.	B	67	1	3928 S COACHMAN DR	No	52.5	52.5	0.0
R-18044	Res.	B	67	1	3932 S COACHMAN DR	No	52.1	52.1	0.0
R-18045	Res.	B	67	1	3936 S COACHMAN DR	No	54.1	54.1	0.0
R-18046	Res.	B	67	1	4019 S SURREY LN	No	55.9	55.8	0.1
R-18047	Res.	B	67	1	4021 S SURREY LN	No	55.3	55.3	0.0
R-18048	Res.	B	67	1	4023 S SURREY LN	No	58.6	58.1	0.5
R-18049	Res.	B	67	1	4027 S SURREY LN	No	60.2	59.1	1.1
R-18050	Res.	B	67	1	4004 S MILTON DR	No	54.9	54.6	0.3
R-18051	Res.	B	67	1	4006 S MILTON DR	No	55.7	55.4	0.3
R-18052	Res.	B	67	1	4008 S MILTON DR	No	54.7	54.7	0.0
R-18053	Res.	B	67	1	4010 S MILTON DR	No	53.8	53.8	0.0
R-18054	Res.	B	67	1	16604 E 41ST ST S	No	60.3	59.3	1.0
R-18055	Res.	B	67	1	16608 E 41ST ST S	No	60.6	59.3	1.3
R-18056	Res.	B	67	1	16700 E 41ST ST S	No	58.3	58.0	0.3
R-18057	Res.	B	67	1	16704 E 41ST ST S	No	60.1	59.0	1.1
R-18058	Res.	B	67	1	16708 E 41ST ST S	No	59.5	58.8	0.7
R-18059	Res.	B	67	1	16712 E 41ST ST S	No	59.7	59.1	0.6

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R-18060	Res.	B	67	1	3925 S COACHMAN DR	No	57.7	57.7	0.0
R-18061	Res.	B	67	1	3929 S COACHMAN DR	No	58.5	58.4	0.1
R-18062	Res.	B	67	1	3933 S COACHMAN DR	No	58.5	58.5	0.0
R-18063	Res.	B	67	1	3937 S COACHMAN DR	No	58.9	58.9	0.0
R-18064	Res.	B	67	1	3941 S COACHMAN DR	No	58.4	58.4	0.0
R-18065	Res.	B	67	1	3945 S COACHMAN DR	No	58.2	58.2	0.0
R-18066	Res.	B	67	1	4001 S COACHMAN DR	No	53.7	53.7	0.0
R-18067	Res.	B	67	1	4005 S COACHMAN DR	No	56.0	55.7	0.3
R-18068	Res.	B	67	1	4009 S COACHMAN DR	No	59.7	59.5	0.2
R-18069	Res.	B	67	1	16601 E 41ST ST S	Yes	76.2	66.9	9.3
R-18070	Res.	B	67	1	16605 E 41ST ST S	Yes	75.7	64.2	11.5
R-18071	Res.	B	67	1	16609 E 41ST ST S	Yes	70.3	62.1	8.2
R-18072	Res.	B	67	1	16613 E 41ST ST S	Yes	69.1	62.1	7.0
R-18073	Res.	B	67	1	16701 E 41ST ST S	Yes	65.8	61.9	3.9
R-18074	Res.	B	67	1	16705 E 41ST ST S	Yes	64.3	61.6	2.7
R-18075	Res.	B	67	1	16709 E 41ST ST S	Yes	61.5	60.9	0.6
R-18076	Res.	B	67	1	16713 E 41ST ST S	Yes	63.4	62.9	0.5
R-18077	Res.	B	67	1	16801 E 41ST ST S	Yes	63.6	63.4	0.2
R-18078	Res.	B	67	1	16805 E 41ST ST S	Yes	63.0	62.9	0.1
R-18079	Res.	B	67	1	16809 E 41ST ST S	Yes	63.7	63.7	0.0
R-18080	Res.	B	67	1	16811 E 41ST ST S	Yes	63.6	63.6	0.0
R-18081	Res.	B	67	1	16813 E 41ST ST S	Yes	62.7	62.7	0.0
R-18082	Res.	B	67	1	16815 E 41ST ST S	Yes	62.5	62.5	0.0
R-18083	Res.	B	67	1	16817 E 41ST ST S	Yes	61.7	61.7	0.0
R-18084	Res.	B	67	1	16819 E 41ST ST S	Yes	63.0	63.0	0.0
R-18085	Res.	B	67	1	16821 E 41ST ST S	Yes	64.0	64.0	0.0
R-18086	Res.	B	67	1	16823 E 41ST ST S	Yes	63.6	63.6	0.0
R-18087	Res.	B	67	1	16825 E 41ST ST S	Yes	64.8	64.8	0.0
R-18088	Res.	B	67	1	16827 E 41ST ST S	Yes	64.6	64.6	0.0
R-18089	Res.	B	67	1	16829 E 41ST ST S	Yes	67.7	67.7	0.0
R-18090	Res.	B	67	1	16831 E 41ST ST S	Yes	67.1	67.1	0.0
R-18091	Res.	B	67	1	16812 E 41ST ST S	No	61.4	61.2	0.2
R-18092	Res.	B	67	1	16814 E 41ST ST S	No	61.0	60.9	0.1
R-18093	Res.	B	67	1	16816 E 41ST ST S	No	61.8	61.8	0.0
R-18094	Res.	B	67	1	16818 E 41ST ST S	No	62.3	62.2	0.1
R-18095	Res.	B	67	1	16820 E 41ST ST S	No	63.0	62.9	0.1
R-18096	Res.	B	67	1	16822 E 41ST ST S	No	63.9	63.9	0.0
R-18097	Res.	B	67	1	16824 E 41ST ST S	No	64.7	64.7	0.0
R-18098	Res.	B	67	1	16826 E 41ST ST S	No	65.4	65.4	0.0
R-18099	Res.	B	67	1	16828 E 41ST ST S	No	63.5	63.5	0.0
R-18100	Res.	B	67	1	16830 E 41ST ST S	No	64.4	64.4	0.0
R-18101	Res.	B	67	1	16811 E 40TH TER S	No	53.5	53.5	0.0
R-18102	Res.	B	67	1	16815 E 40TH TER S	No	58.6	58.6	0.0
R-18103	Res.	B	67	1	16817 E 40TH TER S	No	60.3	60.3	0.0
R-18104	Res.	B	67	1	16819 E 40TH TER S	No	61.4	61.4	0.0
R-18105	Res.	B	67	1	16821 E 40TH TER S	No	62.3	62.3	0.0
R-18106	Res.	B	67	1	16823 E 40TH TER S	No	62.9	62.9	0.0
R-18107	Res.	B	67	1	16825 E 40TH TER S	No	62.0	62.0	0.0
R-18108	Res.	B	67	1	16827 E 40TH TER S	No	61.6	61.6	0.0
R-18109	Res.	B	67	1	16829 E 40TH TER S	No	61.7	61.7	0.0
R-18110	Res.	B	67	1	16831 E 40TH TER S	No	61.8	61.8	0.0
R-18111	Res.	B	67	1	4010 S COLONIAL DR	No	56.1	56.1	0.0
R-18112	Res.	B	67	1	4008 S COLONIAL DR	No	57.3	57.2	0.1
R-18113	Res.	B	67	1	4006 S COLONIAL DR	No	55.3	55.2	0.1
R-18114	Res.	B	67	1	4004 S COLONIAL DR	No	56.3	56.2	0.1
R-18115	Res.	B	67	1	4002 S COLONIAL DR	No	55.6	55.6	0.0
R-18116	Res.	B	67	1	4001 S COLONIAL DR	No	57.3	57.3	0.0
R-18117	Res.	B	67	1	4003 S COLONIAL DR	No	57.9	57.9	0.0
R-18118	Res.	B	67	1	4005 S COLONIAL DR	No	56.8	56.8	0.0
R-18119	Res.	B	67	1	4007 S COLONIAL DR	No	56.4	56.4	0.0
R-18120	Res.	B	67	1	4009 S COLONIAL DR	No	55.0	55.0	0.0

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R-18121	Res.	B	67	1	4011 S COLONIAL DR	No	55.6	55.6	0.0
R-18122	Park	C	67	12	16900 E 40TH TER S	No	58.4	58.4	0.0
R-18123	Res.	B	67	1	4012 S MARSHALL DR	No	60.1	60.1	0.0
R-18124	Res.	B	67	1	4014 S MARSHALL DR	No	60.7	60.7	0.0
R-18125	Res.	B	67	1	4016 S MARSHALL DR	No	64.5	64.5	0.0
R-18126	Res.	B	67	1	3922 S HARBAUGH DR	No	61.9	61.9	0.0
R-18127	Res.	B	67	1	3924 S HARBAUGH DR	No	62.4	62.4	0.0
R-18128	Res.	B	67	1	3926 S HARBAUGH DR	No	62.8	62.8	0.0
R-18129	Res.	B	67	1	3928 S HARBAUGH DR	No	63.4	63.4	0.0
R-18130	Res.	B	67	1	3930 S HARBAUGH DR	No	63.8	63.8	0.0
R-18131	Res.	B	67	1	3932 S HARBAUGH DR	No	64.2	64.2	0.0
R-18132	Res.	B	67	1	4002 S MASTERBROOKE DR	No	64.0	64.0	0.0
R-18133	Res.	B	67	1	4008 S MASTERBROOKE DR	No	64.8	64.8	0.0
R-18134	Res.	B	67	1	16905 E 40TH TER S	No	63.2	63.2	0.0
R-18135	Res.	B	67	1	16907 E 40TH TER S	No	63.9	63.9	0.0
R-18136	Res.	B	67	1	16909 E 40TH TER S	No	63.8	63.8	0.0
R-18137	Res.	B	67	1	4009 S MASTERBROOKE DR	No	63.6	63.6	0.0
R-18138	Res.	B	67	1	4007 S MASTERBROOKE DR	No	63.2	63.2	0.0
R-18139	Res.	B	67	1	4005 S MASTERBROOKE DR	No	62.6	62.6	0.0
R-18140	Res.	B	67	1	4003 S MASTERBROOKE DR	No	61.8	61.7	0.1
R-18141	Res.	B	67	1	4001 S MASTERBROOKE DR	No	60.9	60.9	0.0
R-18142	Res.	B	67	1	3923 S MASTERBROOKE DR	No	60.0	60.0	0.0
R-18143	Res.	B	67	1	3921 S MASTERBROOKE DR	No	59.6	59.6	0.0
R-18144	Res.	B	67	1	4012 S BEDFORD AVE	No	59.4	59.4	0.0
R-18145	Res.	B	67	1	4016 S BEDFORD AVE	No	61.3	61.3	0.0
R-18146	Res.	B	67	1	4020 S BEDFORD AVE	No	62.6	62.6	0.0
R-18147	Res.	B	67	1	4024 S BEDFORD AVE	No	63.6	63.6	0.0
R-18148	Res.	B	67	1	4028 S BEDFORD AVE	No	65.3	65.3	0.0
R-18149	Res.	B	67	1	4032 S BEDFORD AVE	No	**66.6**	**66.6**	0.0
R-18150	Res.	B	67	1	4036 S BEDFORD AVE	No	**68.2**	**68.2**	0.0
R-18151	Res.	B	67	1	17201 E 41ST ST S	No	**68.7**	**68.7**	0.0
R-18152	Res.	B	67	1	17205 E 41ST ST S	No	**68.7**	**68.7**	0.0
R-18153	Res.	B	67	1	17209 E 41ST ST S	No	**68.6**	**68.6**	0.0
R-18154	Res.	B	67	1	17213 E 41ST ST S	No	**68.8**	**68.8**	0.0
R-18155	Res.	B	67	1	17217 E 41ST ST S	No	**68.5**	**68.5**	0.0
R-18156	Res.	B	67	1	17221 E 41ST ST S	No	**67.5**	**67.5**	0.0
R-18157	Res.	B	67	1	17225 E 41ST ST S	No	**66.1**	**66.1**	0.0
R-18158	Res.	B	67	1	17229 E 41ST ST S	No	65.7	65.7	0.0
R-18159	Res.	B	67	1	17233 E 41ST ST S	No	65.1	65.1	0.0
R-18160	Res.	B	67	1	4100 S COVENTRY DR	No	64.8	64.8	0.0
R-18161	Res.	B	67	1	4013 S BEDFORD AVE	No	57.6	57.6	0.0
R-18162	Res.	B	67	1	4017 S BEDFORD AVE	No	60.3	60.3	0.0
R-18163	Res.	B	67	1	4021 S BEDFORD AVE	No	60.6	60.6	0.0
R-18164	Res.	B	67	1	4025 S BEDFORD AVE	No	60.1	60.1	0.0
R-18165	Res.	B	67	1	4029 S BEDFORD AVE	No	61.4	61.4	0.0
R-18166	Res.	B	67	1	17204 E 41ST ST S	No	65.0	65.0	0.0
R-18167	Res.	B	67	1	17208 E 41ST ST S	No	64.3	64.3	0.0
R-18168	Res.	B	67	1	17212 E 41ST ST S	No	64.3	64.3	0.0
R-18169	Res.	B	67	1	17216 E 41ST ST S	No	63.0	63.0	0.0
R-18170	Res.	B	67	1	17222 E 41ST ST S	No	61.9	61.9	0.0
R-18171	Res.	B	67	1	17226 E 41ST ST S	No	61.0	61.0	0.0
R-18172	Res.	B	67	1	17230 E 41ST ST S	No	62.0	62.0	0.0
R-18173	Res.	B	67	1	17234 E 41ST ST S	No	60.7	60.7	0.0
R-18174	Res.	B	67	1	17230 E 40TH TER S	No	58.4	58.4	0.0
R-18175	Res.	B	67	1	17226 E 40TH TER S	No	58.3	58.3	0.0
R-18176	Res.	B	67	1	17222 E 40TH TER S	No	57.8	57.8	0.0
R-18177	Res.	B	67	1	17218 E 40TH TER S	No	57.5	57.5	0.0
R-18178	Res.	B	67	1	17214 E 40TH TER S	No	55.9	55.9	0.0
R-18179	Res.	B	67	1	17213 E 40TH TER S	No	61.4	61.4	0.0
R-18180	Res.	B	67	1	17217 E 40TH TER S	No	62.6	62.6	0.0
R-18181	Res.	B	67	1	17221 E 40TH TER S	No	61.7	61.7	0.0

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R-18182	Res.	B	67	1	17225 E 40TH TER S	No	61.9	61.9	0.0
R-18183	Res.	B	67	1	17229 E 40TH TER S	No	61.8	61.8	0.0
R-18184	Res.	B	67	1	17233 E 40TH TER S	No	61.5	61.5	0.0
R-18185	Res.	B	67	1	17237 E 40TH TER S	No	60.7	60.7	0.0
								Predicted Build Alternative With Barrier Benefits	**5**
								Noise Impact	Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
718	12	8,815	5	1,763
Is the noise barrier preliminarily feasible and reasonable?				**No**

NW18b Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-18186	Res.	B	67	1	4017 S COVENTRY DR	No	60.9	60.9	0.0
R-18187	Res.	B	67	1	17305 E 40TH TER S	No	61.1	60.2	0.9
R-18188	Res.	B	67	1	17309 E 40TH TER S	No	61.1	60.2	0.9
R-18189	Res.	B	67	1	4017 S MAYBROOK AVE	No	60.3	59.5	0.8
R-18190	Res.	B	67	1	4013 S MAYBROOK AVE	No	60.9	60.1	0.8
R-18191	Res.	B	67	1	4021 S COVENTRY DR	No	62.0	62.0	0.0
R-18192	Res.	B	67	1	17304 E 41ST ST S	No	61.0	61.0	0.0
R-18193	Res.	B	67	1	17308 E 41ST ST S	No	61.2	60.8	0.4
R-18194	Res.	B	67	1	17312 E 41ST ST S	No	61.6	61.2	0.4
R-18195	Res.	B	67	1	17316 E 41ST ST S	No	62.8	62.1	0.7
R-18196	Res.	B	67	1	17320 E 41ST ST S	No	63.8	62.6	1.2
R-18197	Res.	B	67	1	4101 S COVENTRY DR	No	64.7	63.3	1.4
R-18198	Res.	B	67	1	17305 E 41ST ST S	No	65.0	63.6	1.4
R-18199	Res.	B	67	1	17309 E 41ST ST S	No	64.9	63.2	1.7
R-18200	Res.	B	67	1	17313 E 41ST ST S	No	65.5	63.7	1.8
R-18201	Res.	B	67	1	17317 E 41ST ST S	No	65.9	64.0	1.9
R-18202	Res.	B	67	1	17321 E 41ST ST S	No	65.9	63.8	2.1
R-18203	Res.	B	67	1	17325 E 41ST ST S	No	65.9	63.6	2.3
R-18204	Res.	B	67	1	4020 S CRACKERNECK RD	No	64.2	62.7	1.5
R-18205	Res.	B	67	1	4016 S CRACKERNECK RD	No	62.8	61.7	1.1
R-18206	Res.	B	67	1	4012 S CRACKERNECK RD	No	61.3	60.4	0.9
R-18207	Res.	B	67	1	4104 S CRACKERNECK RD	No	66.7	64.6	2.1
R-18208	Res.	B	67	1	4106 S CRACKERNECK RD	No	67.4	65.1	2.3
R-18209	Res.	B	67	1	4108 S CRACKERNECK RD	No	68.6	66.0	2.6
R-18210	Res.	B	67	1	4110 S CRACKERNECK RD	No	69.4	66.5	2.9
R-18211	Res.	B	67	1	17324 E 42ND ST S	No	71.4	67.3	4.1
R-18212	Res.	B	67	1	17326 E 42ND ST S	No	71.1	66.9	4.2
R-18213	Res.	B	67	1	17325 E 42ND ST S	Yes	75.8	68.8	7.0
R-18214	Res.	B	67	1	17327 E 42ND ST S	Yes	75.7	68.6	7.1
R-18215	Res.	B	67	1	17329 E 42ND ST S	Yes	75.8	68.3	7.5
R-18216	Res.	B	67	1	17331 E 42ND ST S	Yes	75.7	68.0	7.7
R-18217	Res.	B	67	1	17401 E 42ND ST S	Yes	75.8	68.4	7.4
R-18218	Res.	B	67	1	17403 E 42ND ST S	Yes	75.7	68.0	7.7
R-18219	Res.	B	67	1	17405 E 42ND ST S	Yes	75.5	67.8	7.7
R-18220	Res.	B	67	1	17407 E 42ND ST S	Yes	75.4	67.4	8.0
R-18221	Res.	B	67	1	17409 E 42ND ST S	Yes	75.0	67.0	8.0
R-18222	Res.	B	67	1	17411 E 42ND ST S	Yes	74.7	66.6	8.1
R-18223	Res.	B	67	1	17413 E 42ND ST S	Yes	76.5	69.0	7.5
R-18224	Res.	B	67	1	17415 E 42ND ST S	Yes	76.3	68.2	8.1
R-18225	Res.	B	67	1	17417 E 42ND ST S	Yes	76.4	68.6	7.8
R-18226	Res.	B	67	1	17419 E 42ND ST S	Yes	75.7	68.7	7.0
R-18227	Res.	B	67	1	17421 E 42ND ST S	Yes	76.8	68.8	8.0
R-18228	Res.	B	67	1	17423 E 42ND ST S	Yes	76.3	69.3	7.0
R-18229	Res.	B	67	1	17425 E 42ND ST S	No	73.6	69.3	4.3
R-18230	Res.	B	67	1	17427 E 42ND ST S	No	72.8	69.2	3.6
R-18231	Res.	B	67	1	17400 E 42ND ST S	No	70.7	66.4	4.3
R-18232	Res.	B	67	1	17402 E 42ND ST S	No	70.1	66.0	4.1
R-18233	Res.	B	67	1	17404 E 42ND ST S	No	70.1	66.1	4.0
R-18234	Res.	B	67	1	17406 E 42ND ST S	No	70.7	66.5	4.2
R-18235	Res.	B	67	1	17408 E 42ND ST S	No	69.6	65.7	3.9
R-18236	Res.	B	67	1	17410 E 42ND ST S	No	69.2	65.6	3.6
R-18237	Res.	B	67	1	17412 E 42ND ST S	No	69.4	66.6	2.8
R-18238	Res.	B	67	1	17414 E 42ND ST S	No	69.2	66.8	2.4
R-18239	Res.	B	67	1	4105 S CRACKERNECK RD	No	69.0	66.3	2.7
R-18240	Res.	B	67	1	4107 S CRACKERNECK RD	No	69.4	66.6	2.8
R-18241	Res.	B	67	1	17405 E 41ST TER S	No	69.3	66.8	2.5
R-18242	Res.	B	67	1	17407 E 41ST TER S	No	69.0	66.5	2.5
R-18243	Res.	B	67	1	17409 E 41ST TER S	No	68.6	66.3	2.3
R-18244	Res.	B	67	1	17411 E 41ST TER S	No	68.5	66.4	2.1

NW18b Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-18245	Res.	B	67	1	17413 E 41ST TER S	No	**66.6**	65.2	1.4
R-18246	Res.	B	67	1	17415 E 41ST TER S	No	**67.0**	65.5	1.5
R-18247	Res.	B	67	1	17420 E 41ST TER S	No	64.9	64.1	0.8
R-18248	Res.	B	67	1	17422 E 41ST TER S	No	64.2	63.7	0.5
R-18249	Res.	B	67	1	17424 E 41ST TER S	No	**66.0**	65.1	0.9
R-18250	Res.	B	67	1	17426 E 41ST TER S	No	**66.8**	65.7	1.1
R-18251	Res.	B	67	1	17428 E 41ST TER S	No	**67.8**	**66.3**	1.5
R-18252	Res.	B	67	1	17430 E 41ST TER S	No	**68.5**	**67.0**	1.5
R-18253	Res.	B	67	1	17432 E 41ST TER S	No	**69.0**	**67.5**	1.5
R-18254	Res.	B	67	1	17434 E 41ST TER S	No	**69.7**	**67.8**	1.9
R-18255	Res.	B	67	2	4009 S CRACKERNECK RD UNITS A_F	No	50.0	50.0	0.0
R-18256	Res.	B	67	2	4009 S CRACKERNECK RD UNITS B_E	No	50.0	50.0	0.0
R-18257	Res.	B	67	2	4009 S CRACKERNECK RD UNITS C_D	No	54.2	53.7	0.5
R-18258	Res.	B	67	2	4015 S CRACKERNECK RD UNITS A_F	No	53.9	53.9	0.0
R-18259	Res.	B	67	2	4015 S CRACKERNECK RD UNITS B_E	No	55.9	55.8	0.1
R-18260	Res.	B	67	2	4015 S CRACKERNECK RD UNITS C_D	No	57.9	57.7	0.2
R-18261	Res.	B	67	2	4021 S CRACKERNECK RD UNITS A_F	No	56.3	56.1	0.2
R-18262	Res.	B	67	2	4021 S CRACKERNECK RD UNITS B_E	No	58.9	58.6	0.3
R-18263	Res.	B	67	2	4021 S CRACKERNECK RD UNITS C_D	No	60.4	60.0	0.4
R-18264	Res.	B	67	2	17401 E 41ST ST S UNTIS A_F	No	50.0	50.0	0.0
R-18265	Res.	B	67	2	17401 E 41ST ST S UNITS B_E	No	50.0	50.0	0.0
R-18266	Res.	B	67	2	17401 E 41ST ST S UNITS C_D	No	50.1	50.1	0.0
R-18267	Res.	B	67	2	17409 E 41ST ST S UNITS A_F	No	50.0	50.0	0.0
R-18268	Res.	B	67	2	17409 E 41ST ST S UNITS B_E	No	50.0	50.0	0.0
R-18269	Res.	B	67	2	17409 E 41ST ST S UNITS C_D	No	50.0	50.0	0.0
R-18270	Res.	B	67	2	17415 E 41ST ST S UNITS A_F	No	50.0	50.0	0.0
R-18271	Res.	B	67	2	17415 E 41ST ST S UNITS B_E	No	50.0	50.0	0.0
R-18272	Res.	B	67	2	17415 E 41ST ST S UNITS C_D	No	50.0	50.0	0.0
R-18273	Res.	B	67	2	4008 S REDWOOD DR UNITS A_F	No	57.6	57.5	0.1
R-18274	Res.	B	67	2	4008 S REDWOOD DR UNITS B_E	No	60.0	59.9	0.1
R-18275	Res.	B	67	2	4008 S REDWOOD DR UNITS C_D	No	60.7	60.5	0.2
R-18276	Res.	B	67	2	4016 S REDWOOD DR UNITS A_F	No	58.0	58.0	0.0
R-18277	Res.	B	67	2	4016 S REDWOOD DR UNITS B_E	No	60.4	60.3	0.1
R-18278	Res.	B	67	2	4016 S REDWOOD DR UNITS C_D	No	61.1	61.0	0.1
R-18279	Res.	B	67	2	4022 S REDWOOD DR UNITS A_F	No	58.3	58.3	0.0
R-18280	Res.	B	67	2	4022 S REDWOOD DR UNITS B_E	No	60.6	60.6	0.0
R-18281	Res.	B	67	2	4022 S REDWOOD DR UNITS C_D	No	61.2	61.1	0.1
R-18282	Res.	B	67	2	4011 S CEDAR CREST DR APTS 121_122	No	54.8	54.8	0.0
R-18283	Res.	B	67	2	4011 S CEDAR CREST DR APTS 123_124	No	57.1	57.1	0.0
R-18284	Res.	B	67	2	4011 S CEDAR CREST DR APTS 125_126	No	59.9	59.7	0.2
R-18285	Res.	B	67	2	4011 S CEDAR CREST DR APTS 127_128	No	61.8	61.4	0.4
R-18286	Res.	B	67	2	4011 S CEDAR CREST DR APTS 129_130	No	60.6	60.3	0.3
R-18287	Res.	B	67	2	4011 S CEDAR CREST DR APTS 131_132	No	62.5	61.9	0.6
								Predicted Build Alternative With Barrier Benefits	**16**
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
1,037	13	13,757	16	860
Is the noise barrier preliminarily feasible and reasonable?				**Yes**

NW19a Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-19001	Res.	B	67	1	4166 S CARRIAGE LN	No	63.3	63.3	0.0
R-19002	Res.	B	67	1	4160 S CARRIAGE LN	No	63.9	63.9	0.0
R-19003	Res.	B	67	1	4154 S CARRIAGE LN	No	64.1	64.1	0.0
R-19004	Res.	B	67	1	4148 S CARRIAGE LN	No	64.3	64.3	0.0
R-19005	Res.	B	67	1	4142 S CARRIAGE LN	No	64.4	64.4	0.0
R-19006	Res.	B	67	1	4136 S CARRIAGE LN	No	64.3	64.3	0.0
R-19007	Res.	B	67	1	4130 S CARRIAGE LN	No	65.1	64.8	0.3
R-19008	Res.	B	67	1	4124 S CARRIAGE LN	Yes	70.8	69.4	1.4
R-19009	Res.	B	67	1	4118 S CARRIAGE LN	Yes	73.3	66.2	7.1
R-19010	Res.	B	67	1	16516 E 41ST TER S	Yes	74.8	64.3	10.5
R-19011	Res.	B	67	1	16524 E 41ST TER S	Yes	75.2	65.0	10.2
R-19012	Res.	B	67	1	16532 E 41ST TER S	Yes	74.9	65.7	9.2
R-19013	Res.	B	67	1	16600 E 41ST TER S	Yes	75.9	65.6	10.3
R-19014	Res.	B	67	1	16608 E 41ST TER S	Yes	75.4	65.0	10.4
R-19015	Res.	B	67	1	16616 E 41ST TER S	Yes	75.0	64.6	10.4
R-19016	Res.	B	67	1	16624 E 41ST TER S	Yes	73.9	64.0	9.9
R-19017	Res.	B	67	1	16700 E 41ST TER S	Yes	73.0	63.7	9.3
R-19018	Res.	B	67	1	16706 E 41ST TER S	Yes	70.7	63.7	7.0
R-19019	Res.	B	67	1	4157 S CARRIAGE LN	No	60.2	60.2	0.0
R-19020	Res.	B	67	1	4149 S CARRIAGE LN	No	60.5	60.5	0.0
R-19021	Res.	B	67	1	4143 S CARRIAGE LN	No	62.0	61.9	0.1
R-19022	Res.	B	67	1	4133 S CARRIAGE LN	No	62.1	62.0	0.1
R-19023	Res.	B	67	1	4121 S CARRIAGE LN	No	63.0	62.3	0.7
R-19024	Res.	B	67	1	4163 S CARRIAGE LN	No	56.1	56.1	0.0
R-19025	Res.	B	67	1	4162 S BRYANT DR	No	58.0	58.0	0.0
R-19026	Res.	B	67	1	4156 S BRYANT DR	No	58.6	58.6	0.0
R-19027	Res.	B	67	1	4150 S BRYANT DR	No	59.8	59.7	0.1
R-19028	Res.	B	67	1	4142 S BRYANT DR	No	61.1	60.7	0.4
R-19029	Res.	B	67	1	4136 S BRYANT DR	No	62.3	61.3	1.0
R-19030	Res.	B	67	1	4130 S BRYANT DR	No	62.3	61.3	1.0
R-19031	Res.	B	67	1	16501 E 42ND ST S	No	58.0	58.0	0.0
R-19032	Res.	B	67	1	16509 E 42ND ST S	No	56.7	56.7	0.0
R-19033	Res.	B	67	1	16517 E 42ND ST S	No	56.2	56.2	0.0
R-19034	Res.	B	67	1	16604 E 42ND TER S	No	58.1	58.0	0.1
R-19035	Res.	B	67	1	16612 E 42ND TER S	No	57.8	57.6	0.2
R-19036	Res.	B	67	1	16620 E 42ND TER S	No	57.1	57.0	0.1
R-19037	Res.	B	67	1	4207 E 42ND WAY S	No	53.8	53.8	0.0
R-19038	Res.	B	67	1	4201 E 42ND WAY S	No	53.2	53.2	0.0
R-19039	Res.	B	67	1	4159 S BRYANT DR	No	52.0	52.0	0.0
R-19040	Res.	B	67	1	4153 S BRYANT DR	No	53.3	53.3	0.0
R-19041	Res.	B	67	1	4147 S BRYANT DR	No	54.0	54.0	0.0
R-19042	Res.	B	67	1	4141 S BRYANT DR	No	58.3	57.8	0.5
R-19043	Res.	B	67	1	16605 E 41ST TER S	No	61.6	60.4	1.2
R-19044	Res.	B	67	1	16613 E 41ST TER S	No	62.6	60.6	2.0
R-19045	Res.	B	67	1	16621 E 41ST TER S	No	62.3	60.7	1.6
R-19046	Res.	B	67	1	4200 S MILTON DR	No	53.7	53.3	0.4
R-19047	Res.	B	67	1	4166 S MILTON DR	No	53.7	53.2	0.5
R-19048	Res.	B	67	1	4160 S MILTON DR	No	53.9	53.5	0.4
R-19049	Res.	B	67	1	4154 S MILTON DR	No	54.5	54.0	0.5
R-19050	Res.	B	67	1	4148 S MILTON DR	No	54.7	54.6	0.1
R-19051	Res.	B	67	1	4142 S MILTON DR	No	56.1	55.8	0.3
R-19052	Res.	B	67	1	4213 S MILTON DR	No	55.5	55.3	0.2
R-19053	Res.	B	67	1	4207 S MILTON DR	No	54.8	54.7	0.1
R-19054	Res.	B	67	1	4201 S MILTON DR	No	54.8	54.5	0.3
R-19055	Res.	B	67	1	4167 S MILTON DR	No	54.4	54.2	0.2
R-19056	Res.	B	67	1	4161 S MILTON DR	No	54.2	53.9	0.3
R-19057	Res.	B	67	1	4155 S MILTON DR	No	54.7	54.5	0.2
R-19058	Res.	B	67	1	4149 S MILTON DR	No	54.6	54.5	0.1
R-19059	Res.	B	67	1	4143 S MILTON DR	No	55.7	55.5	0.2

NW19a Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-19060	Res.	B	67	1	4137 S MILTON DR	No	56.4	56.2	0.2
R-19061	Res.	B	67	1	4131 S MILTON DR	No	57.8	57.5	0.3
								Predicted Build Alternative With Barrier Benefits	**10**
							Noise Impact		Benefited Receptor

Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
1,021	12	12,009	10	1,201
Is the noise barrier preliminarily feasible and reasonable?				**No**

NW19b Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
Receptors							Predicted Noise Levels, $L_{eq(h)}$ (dB(A))		
ID#	Use	NAC	Impact Criteria	ERs	Address	First-Row	2050 Build	2050 With Barrier	Insertion Loss
R-19062	Res.	B	67	1	16800 E 41ST TER S	Yes	66.7	62.5	4.2
R-19063	Res.	B	67	1	16804 E 41ST TER S	Yes	67.2	62.4	4.8
R-19064	Res.	B	67	1	16808 E 41ST TER S	Yes	70.6	63.3	7.3
R-19065	Res.	B	67	1	16812 E 41ST TER S	Yes	73.8	65.0	8.8
R-19066	Res.	B	67	1	16816 E 41ST TER S	Yes	73.0	64.2	8.8
R-19067	Res.	B	67	1	16900 E 41ST TER S	Yes	71.6	63.9	7.7
R-19068	Res.	B	67	1	4110 S KERRINGTON DR	No	56.0	54.6	1.4
R-19069	Res.	B	67	1	4114 S KERRINGTON DR	No	52.5	51.8	0.7
R-19070	Res.	B	67	1	4118 S KERRINGTON DR	No	51.5	50.6	0.9
R-19071	Res.	B	67	1	4122 S KERRINGTON DR	No	50.0	50.0	0.0
R-19072	Res.	B	67	1	4126 S KERRINGTON DR	No	50.0	50.0	0.0
R-19073	Res.	B	67	1	16904 E 41ST TER S	No	71.3	64.4	6.9
R-19074	Res.	B	67	1	16908 E 41ST TER S	No	70.7	64.0	6.7
R-19075	Res.	B	67	1	16912 E 41ST TER S	No	69.9	63.4	6.5
R-19076	Res.	B	67	1	16916 E 41ST TER S	No	68.7	62.4	6.3
R-19077	Res.	B	67	1	16920 E 41ST TER S	No	62.7	58.3	4.4
R-19078	Res.	B	67	1	16915 E 41ST TER S	No	62.3	58.1	4.2
R-19079	Res.	B	67	1	16911 E 41ST TER S	No	63.8	59.7	4.1
R-19080	Res.	B	67	1	16905 E 41ST TER S	No	66.5	61.7	4.8
R-19081	Res.	B	67	1	16815 E 41ST TER S	No	66.8	62.7	4.1
R-19082	Res.	B	67	1	16811 E 41ST TER S	No	64.7	61.5	3.2
R-19083	Res.	B	67	1	4115 S KERRINGTON DR	No	53.5	52.7	0.8
R-19084	Res.	B	67	1	4119 S KERRINGTON DR	No	51.6	50.8	0.8
R-19085	Res.	B	67	1	4123 S KERRINGTON DR	No	50.4	50.0	0.4
R-19086	Res.	B	67	1	16810 E 42ND TER S	No	50.0	50.0	0.0
R-19087	Res.	B	67	1	16814 E 42ND TER S	No	50.0	50.0	0.0
R-19088	Res.	B	67	1	16818 E 42ND TER S	No	50.0	50.0	0.0
R-19089	Res.	B	67	1	16900 E 42ND TER S	No	53.7	50.0	3.7
R-19090	Res.	B	67	1	16904 E 42ND TER S	No	60.3	54.3	6.0
R-19091	Res.	B	67	1	16908 E 42ND TER S	No	63.7	57.6	6.1
R-19092	Res.	B	67	1	16912 E 42ND TER S	No	63.7	58.1	5.6
R-19093	Res.	B	67	1	4126 S MARSHALL DR	No	65.3	59.7	5.6
R-19094	Res.	B	67	1	4124 S MARSHALL DR	No	67.1	60.4	6.7
R-19095	Res.	B	67	1	4120 S MARSHALL DR	Yes	68.9	60.3	8.6
R-19096	Res.	B	67	1	4116 S MARSHALL DR	Yes	69.3	61.5	7.8
R-19097	Res.	B	67	1	4113 S MARSHALL DR	Yes	69.0	61.1	7.9
R-19098	Res.	B	67	1	4117 S MARSHALL DR	Yes	68.5	61.5	7.0
R-19099	Res.	B	67	1	4200 S KERRINGTON DR	No	50.0	50.0	0.0
R-19100	Res.	B	67	1	4204 S KERRINGTON DR	No	50.0	50.0	0.0
R-19101	Res.	B	67	1	4208 S KERRINGTON DR	No	50.0	50.0	0.0
R-19102	Res.	B	67	1	4203 S KERRINGTON DR	No	50.0	50.0	0.0
R-19103	Res.	B	67	1	4207 S KERRINGTON DR	No	50.0	50.0	0.0
R-19104	Res.	B	67	1	4211 S KERRINGTON DR	No	50.0	50.0	0.0
R-19105	Res.	B	67	1	16815 E 42ND TER S	No	50.0	50.0	0.0
R-19106	Res.	B	67	1	16819 E 42ND TER S	No	50.0	50.0	0.0
R-19107	Res.	B	67	1	16901 E 42ND TER S	No	52.2	50.0	2.2
R-19108	Res.	B	67	1	16905 E 42ND TER S	No	54.7	50.0	4.7
R-19109	Res.	B	67	1	16909 E 42ND TER S	No	58.0	52.3	5.7
R-19110	Res.	B	67	1	16913 E 42ND TER S	No	63.7	56.8	6.9
R-19111	Res.	B	67	1	16900 E 43RD ST S	No	50.0	50.0	0.0
R-19112	Res.	B	67	1	16904 E 43RD ST S	No	50.0	50.0	0.0
R-19113	Res.	B	67	1	16908 E 43RD ST S	No	50.0	50.0	0.0
R-19114	Res.	B	67	1	16912 E 43RD ST S	No	50.5	50.0	0.5
R-19115	Res.	B	67	1	17000 E 43RD ST S	No	52.0	50.0	2.0
R-19116	Res.	B	67	1	4200 S MARSHALL DR	No	67.3	62.5	4.8
R-19117	Res.	B	67	1	4210 S MARSHALL DR	No	62.2	58.4	3.8
R-19118	Res.	B	67	1	4218 S MARSHALL DR	No	56.6	54.6	2.0
R-19119	Res.	B	67	1	4201 S MARSHALL DR	No	70.2	64.3	5.9
R-19120	Res.	B	67	1	4205 S MARSHALL DR	No	69.6	64.9	4.7

NW19b Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-19121	Res.	B	67	1	4209 S MARSHALL DR	No	69.1	64.7	4.4
R-19122	Res.	B	67	1	4213 S MARSHALL DR	No	68.2	64.3	3.9
R-19123	Res.	B	67	1	4217 S MARSHALL DR	No	66.7	63.3	3.4
R-19124	Res.	B	67	1	17016 E 43RD ST S	No	67.1	63.6	3.5
R-19125	Res.	B	67	1	17020 E 43RD ST S	No	67.1	63.8	3.3
R-19126	Res.	B	67	1	4212 S SHRANK CT	No	65.2	61.1	4.1
R-19127	Res.	B	67	1	4208 S SHRANK CT	No	65.1	59.5	5.6
R-19128	Res.	B	67	1	4200 S SHRANK CT	No	67.5	62.9	4.6
R-19129	Res.	B	67	1	4201 S SHRANK CT	No	65.6	62.1	3.5
R-19130	Res.	B	67	1	4209 S SHRANK CT	No	64.3	61.8	2.5
R-19131	Res.	B	67	1	4213 S SHRANK CT	No	63.8	61.7	2.1
R-19132	Res.	B	67	1	4221 S SHRANK CT	No	64.1	61.9	2.2
R-19133	Res.	B	67	1	4301 S MARSHALL DR	No	56.4	55.9	0.5
R-19134	Res.	B	67	1	17005 E 43RD ST S	No	60.2	59.7	0.5
R-19135	Res.	B	67	1	17009 E 43RD ST S	No	62.7	60.4	2.3
R-19136	Res.	B	67	1	17013 E 43RD ST S	No	62.3	61.1	1.2
R-19137	Res.	B	67	1	17017 E 43RD ST S	No	64.4	62.3	2.1
R-19138	Res.	B	67	1	4301 S SHRANK CT	No	63.7	61.6	2.1
R-19139	Res.	B	67	1	4314 S DAVIDSON DR	No	57.8	57.2	0.6
R-19140	Res.	B	67	1	4312 S DAVIDSON DR	No	58.5	57.6	0.9
R-19141	Res.	B	67	1	4306 S DAVIDSON DR	No	59.6	58.3	1.3
R-19142	Res.	B	67	1	4304 S DAVIDSON DR	No	60.1	58.5	1.6
R-19143	Res.	B	67	1	4311 S DAVIDSON DR	No	59.2	57.7	1.5
R-19144	Res.	B	67	1	4309 S DAVIDSON DR	No	59.4	58.0	1.4
R-19145	Res.	B	67	1	4301 S DAVIDSON DR	No	60.4	58.8	1.6
R-19146	Res.	B	67	1	4303 S DAVIDSON DR	No	60.2	58.5	1.7
R-19147	Res.	B	67	1	4305 S DAVIDSON DR	No	59.1	57.4	1.7
R-19148	Res.	B	67	1	4307 S DAVIDSON DR	No	58.4	57.2	1.2
R-19149	Res.	B	67	1	17400 E 43RD TERRACE CT	No	59.0	57.5	1.5
R-19150	Res.	B	67	1	17402 E 43RD TERRACE CT	No	58.8	57.8	1.0
R-19151	Res.	B	67	1	17406 E 43RD TERRACE CT	No	61.5	60.7	0.8
R-19152	Res.	B	67	1	17408 E 43RD TERRACE CT	No	62.6	61.5	1.1
R-19153	Res.	B	67	1	17401 E 43RD TERRACE CT	No	59.5	57.9	1.6
R-19154	Res.	B	67	1	17403 E 43RD TERRACE CT	No	59.4	57.9	1.5
R-19155	Res.	B	67	1	17405 E 43RD TERRACE CT	No	58.5	57.2	1.3
R-19156	Res.	B	67	1	17407 E 43RD TERRACE CT	No	59.5	58.2	1.3
R-19157	Res.	B	67	1	17409 E 43RD TERRACE CT	No	60.5	59.2	1.3
R-19158	Res.	B	67	1	17411 E 43RD TERRACE CT	No	62.5	61.1	1.4
R-19159	Res.	B	67	1	17405 E 44TH STREET CT	No	56.7	54.7	2.0
R-19160	Res.	B	67	1	17403 E 44TH STREET CT	No	57.1	55.0	2.1
R-19161	Res.	B	67	1	17401 E 44TH STREET CT	No	57.4	55.6	1.8
R-19162	Res.	B	67	1	17400 E 44TH STREET CT	No	56.9	54.9	2.0
R-19163	Res.	B	67	1	17402 E 44TH STREET CT	No	55.0	53.4	1.6
R-19164	Res.	B	67	1	17404 E 44TH STREET CT	No	57.8	55.4	2.4
R-19165	Res.	B	67	1	4300 S ATHERTON CT	No	70.1	70.1	0.0
R-19166	Res.	B	67	1	4302 S ATHERTON CT	No	68.5	68.4	0.1
R-19167	Res.	B	67	1	4304 S ATHERTON CT	No	68.3	68.1	0.2
R-19168	Res.	B	67	1	4310 S ATHERTON CT	No	65.6	65.3	0.3
R-19169	Res.	B	67	1	4312 S ATHERTON CT	No	64.3	64.2	0.1
R-19170	Res.	B	67	1	4314 S ATHERTON CT	No	62.6	62.5	0.1
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R-19173	Res.	B	67	1	4320 S ATHERTON CT	No	59.4	58.9	0.5
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R-19178	Res.	B	67	1	4311 S ATHERTON CT	No	66.5	66.5	0.0
R-19179	Res.	B	67	1	4313 S ATHERTON CT	No	65.3	65.3	0.0
R-19180	Res.	B	67	1	4315 S ATHERTON CT	No	63.9	63.9	0.0
R-19181	Res.	B	67	1	4317 S ATHERTON CT	No	63.2	63.1	0.1

NW19b Performance Without Barrier and With Barrier Noise Levels 2050 Ultimate Build									
R-19182	Res.	B	67	1	4319 S ATHERTON CT	No	62.0	62.0	0.0
R-19183	Res.	B	67	1	4321 S ATHERTON CT	No	61.0	60.9	0.1
R-19184	Res.	B	67	1	4323 S ATHERTON CT	No	59.7	59.7	0.0
R-19185	Res.	B	67	1	4325 S ATHERTON CT	No	58.8	58.7	0.1
R-19186	Res.	B	67	1	4401 S ATHERTON CT	No	58.3	58.2	0.1
R-19187	Res.	B	67	1	4403 S ATHERTON CT	No	58.4	58.2	0.2
								Predicted Build Alternative With Barrier Benefits	**8**
							Noise Impact		Benefited Receptor

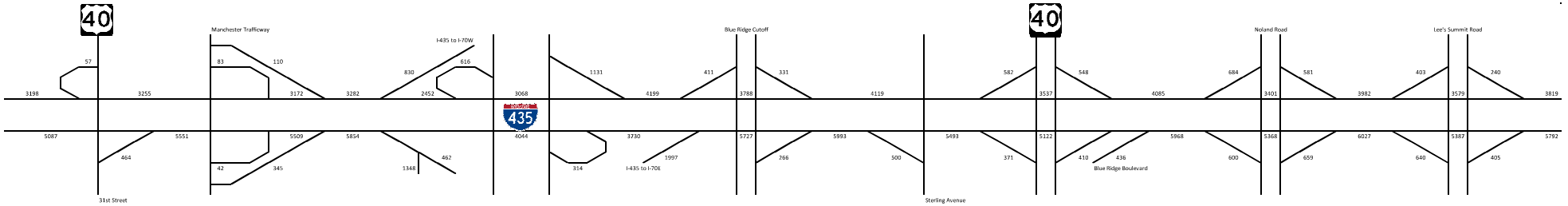
Feasibility and Reasonableness:

The noise barrier must provide at least a 5 dBA reduction for two or more first-row, impacted receptors to be considered feasible. The noise barrier must provide a 7 dBA reduction for 100% of first-row, benfited receptors. The squre footage of the noise barrier per benefited receptor cannot exceed 1,300. A benefited receptor is defined as a receptor receiving at least a 7.0 dBA reduction from a noise abatement measure.

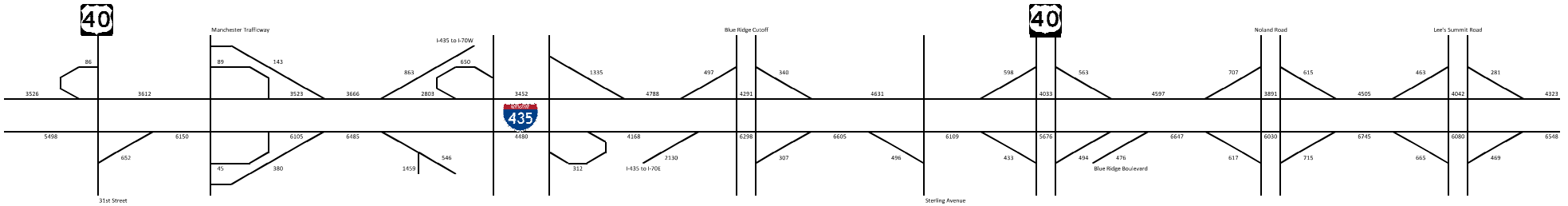
Length (Ft)	Ave. Height	Sq Ft	Benefited Receptors	Sq Ft per Benefited Receptor
1,697	15	25,117	8	3,140
Is the noise barrier preliminarily feasible and reasonable?				**No**

Appendix D
Traffic Projections

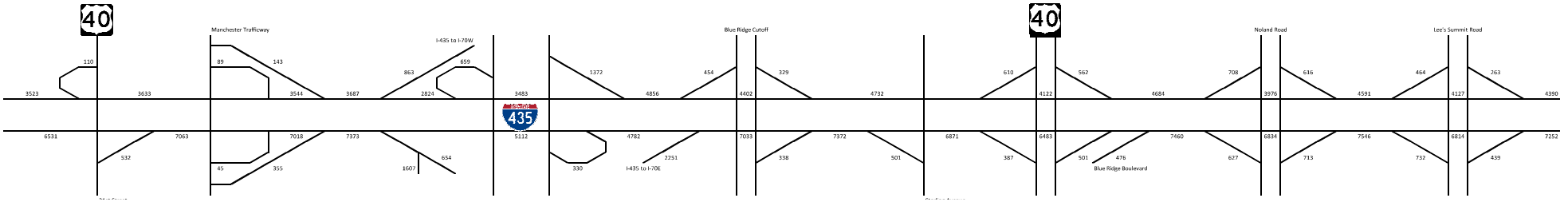
2023 Existing PM Peak Hour



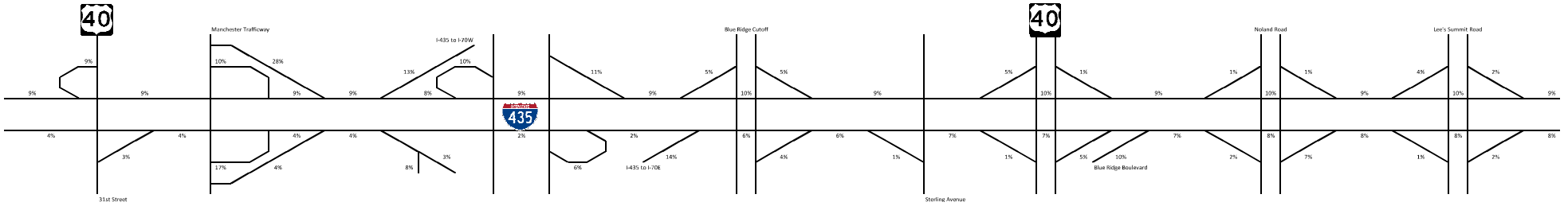
2050 No-Build PM Peak Hour



2050 Build PM Peak Hour

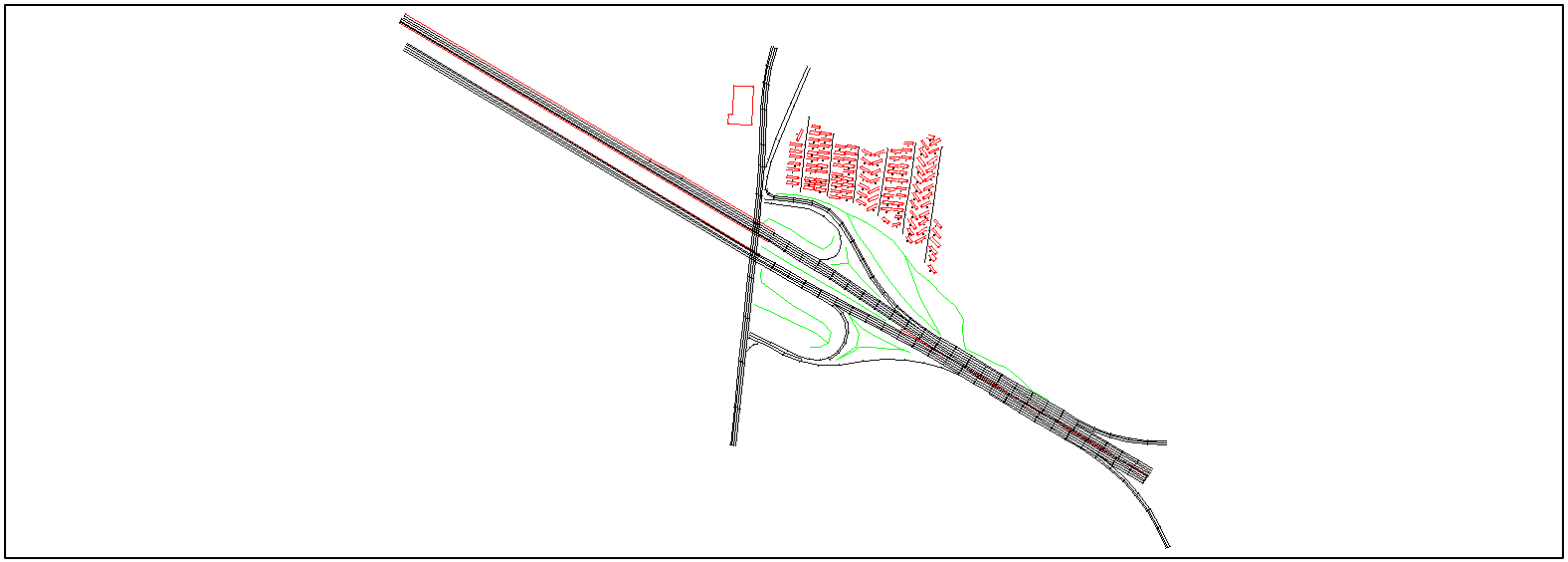


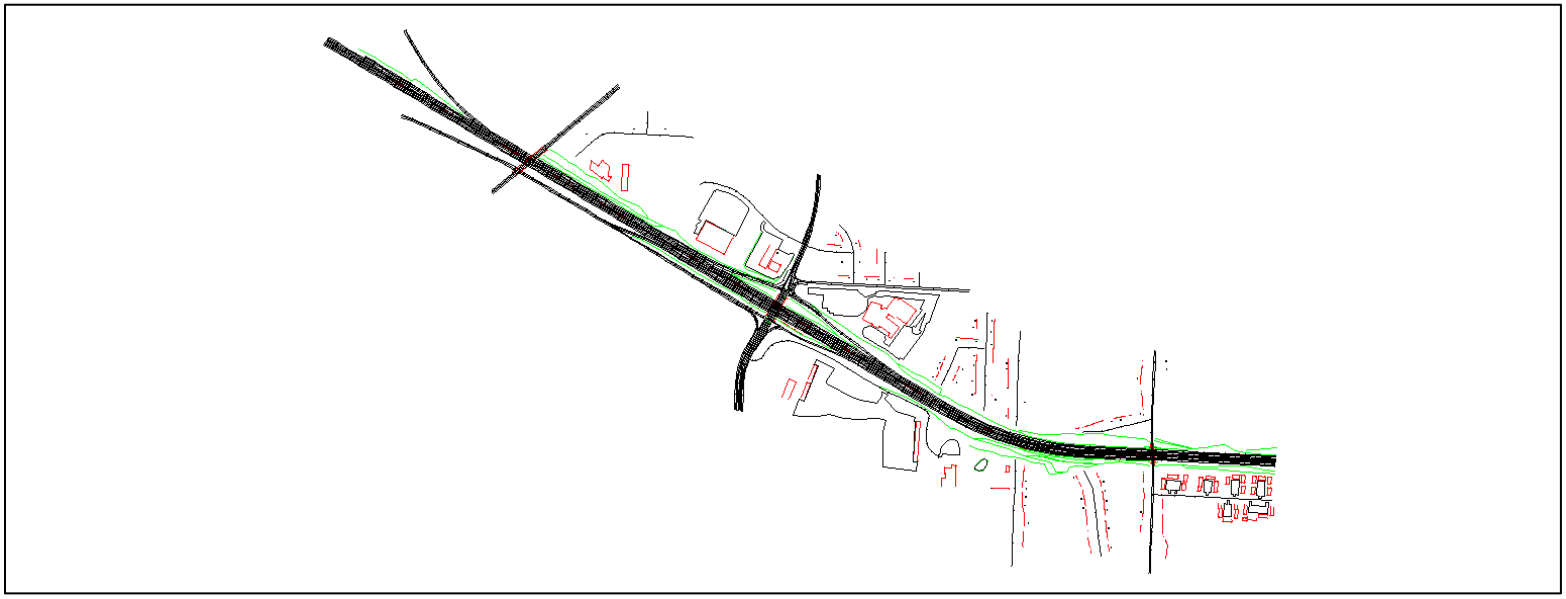
PM Peak Hour Truck Percentages

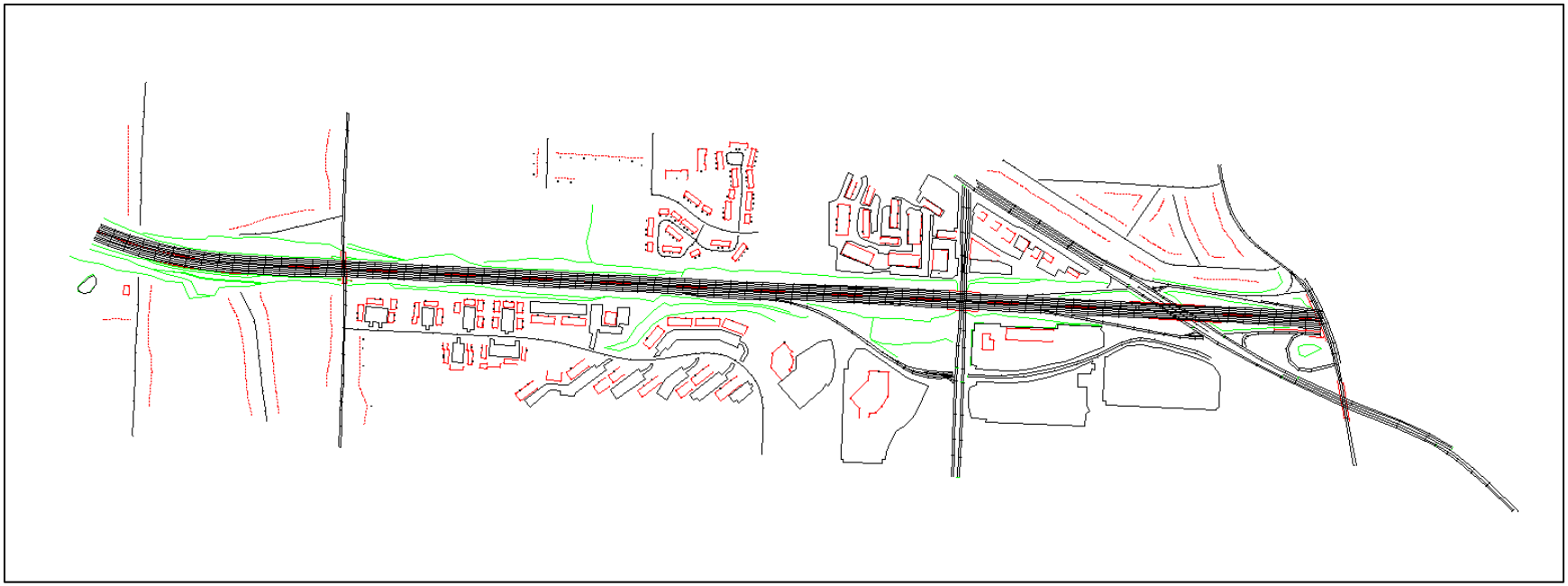


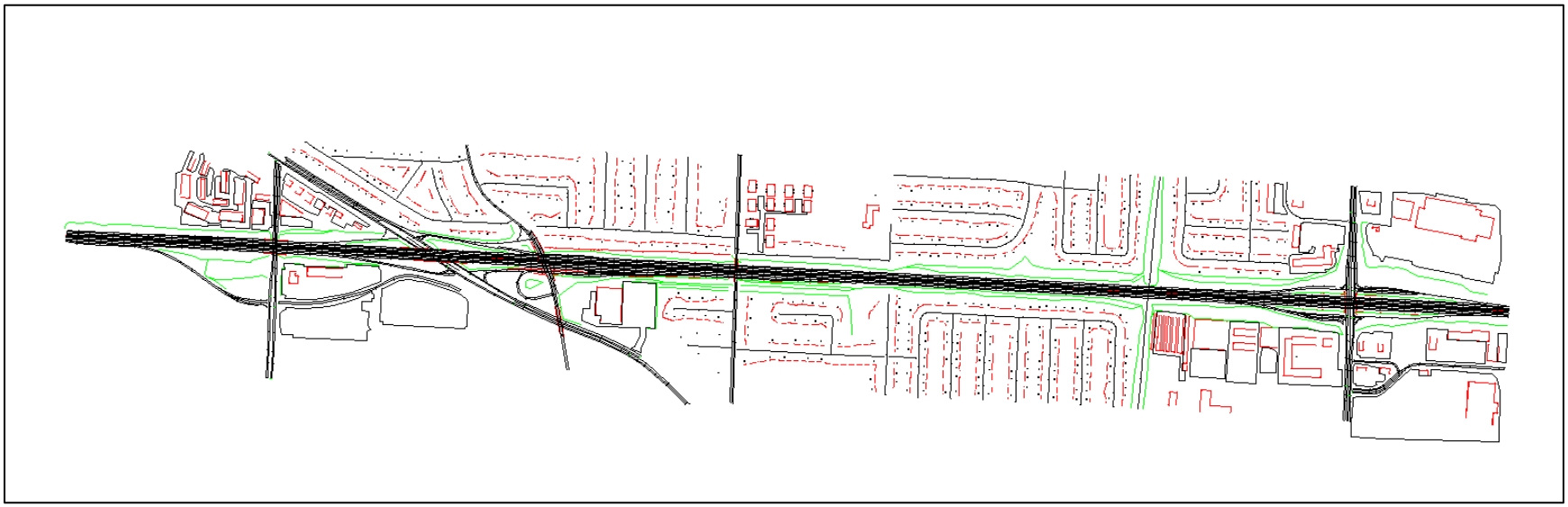
Appendix E
TNM Plan Views

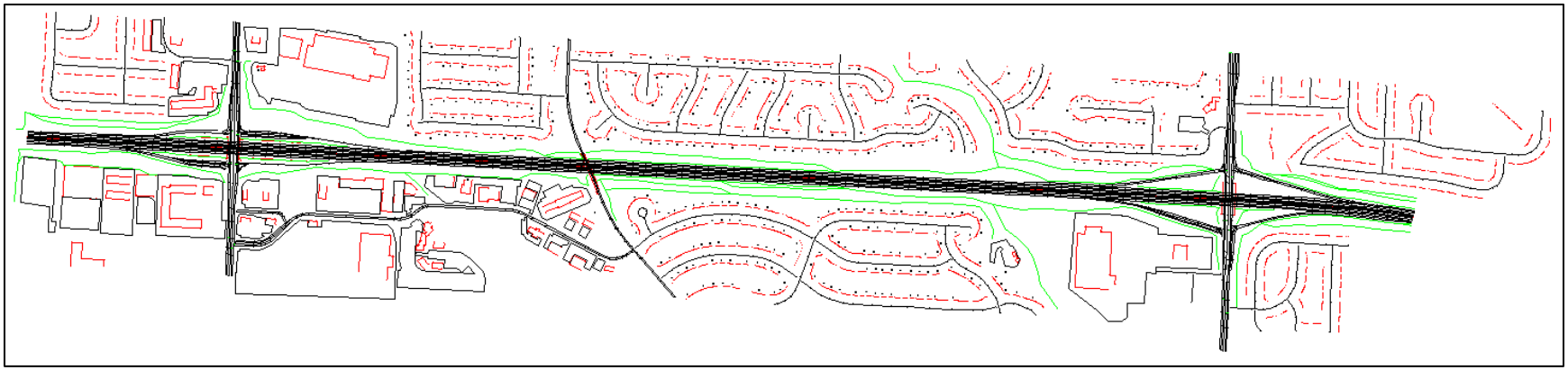
Existing / No-Build

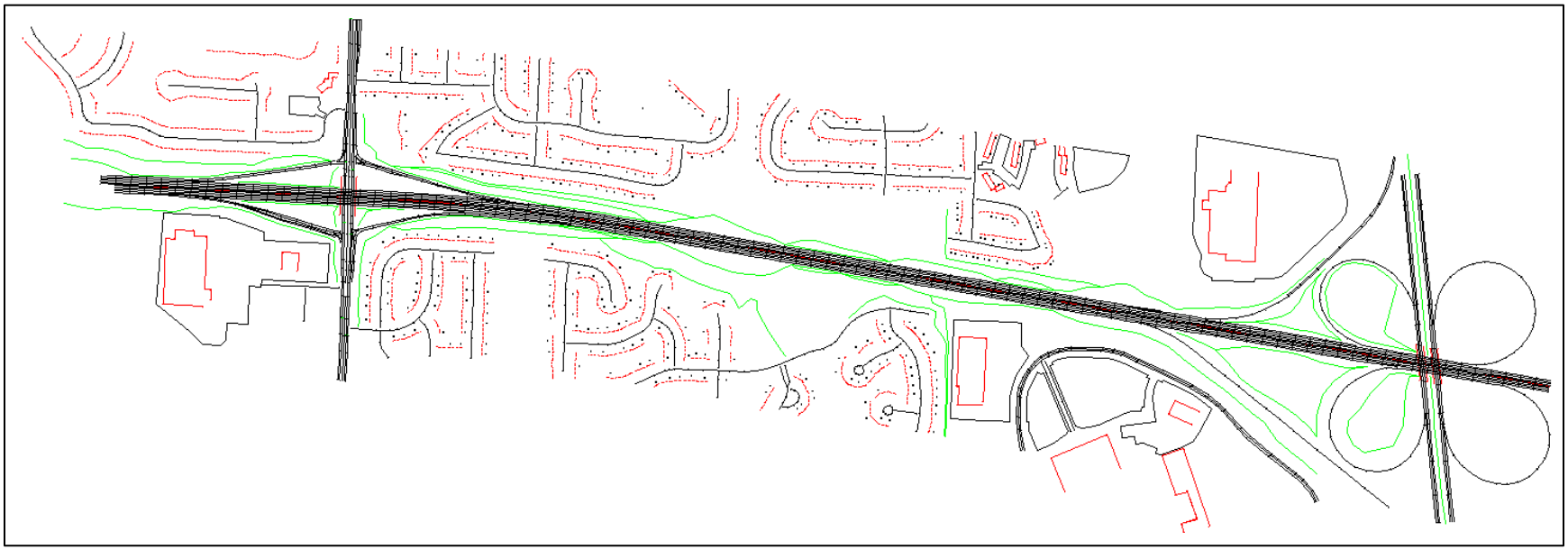




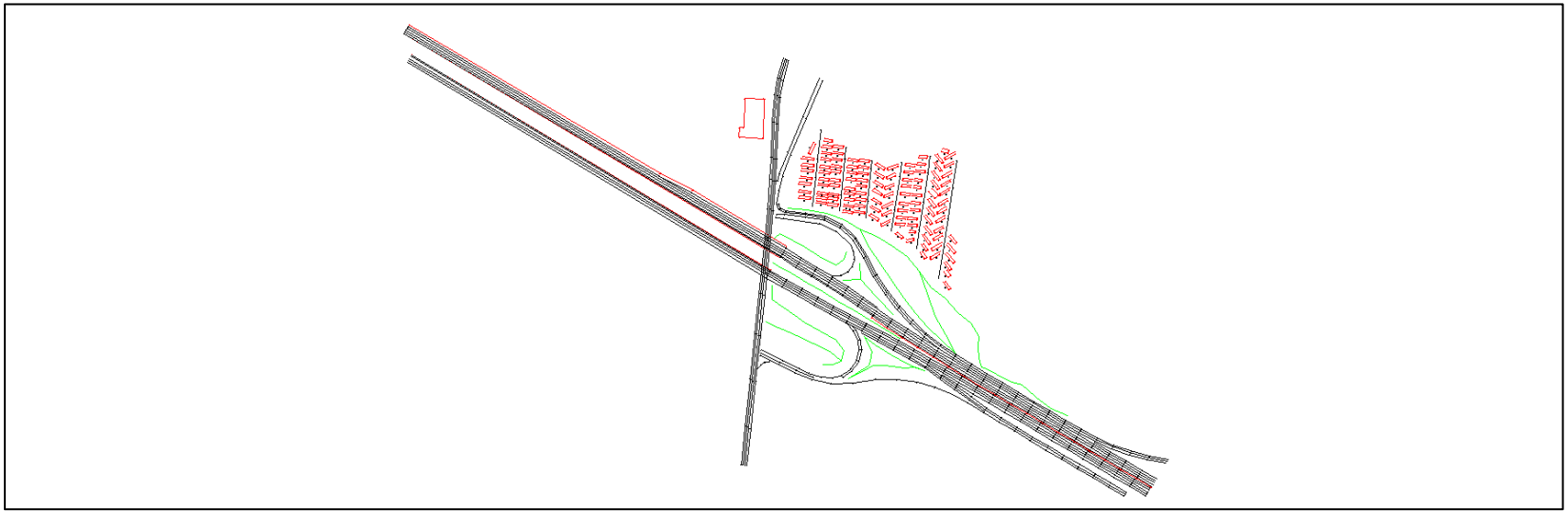


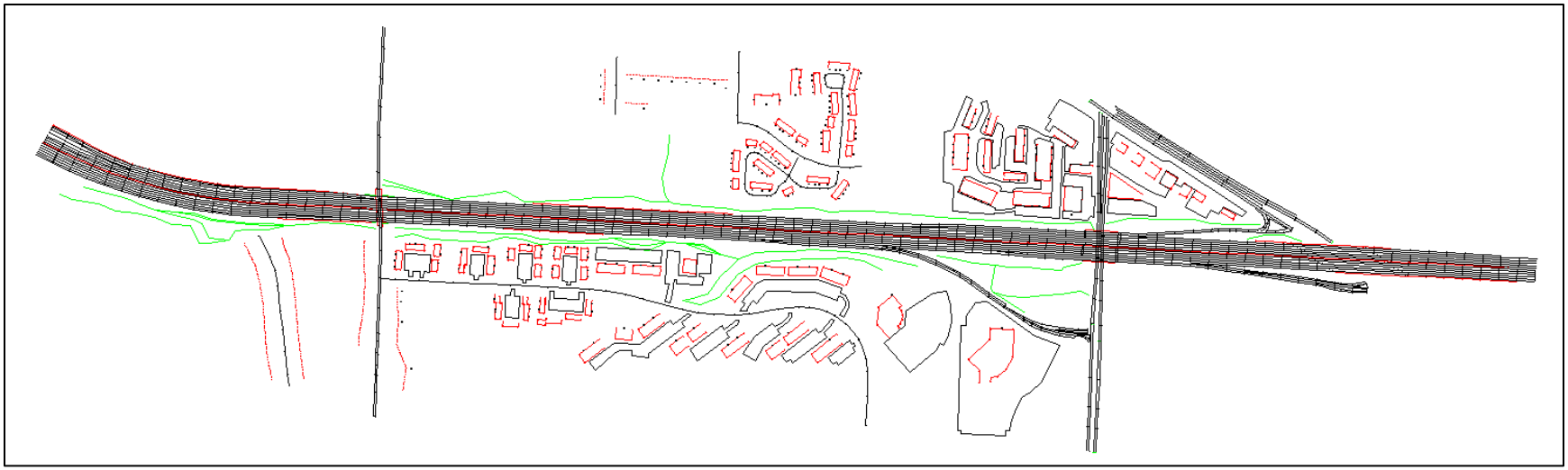


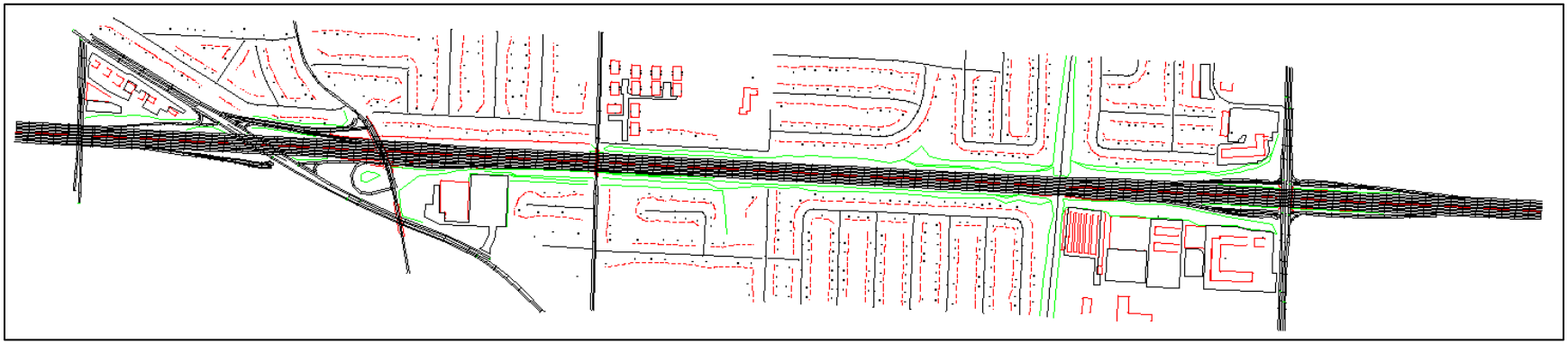


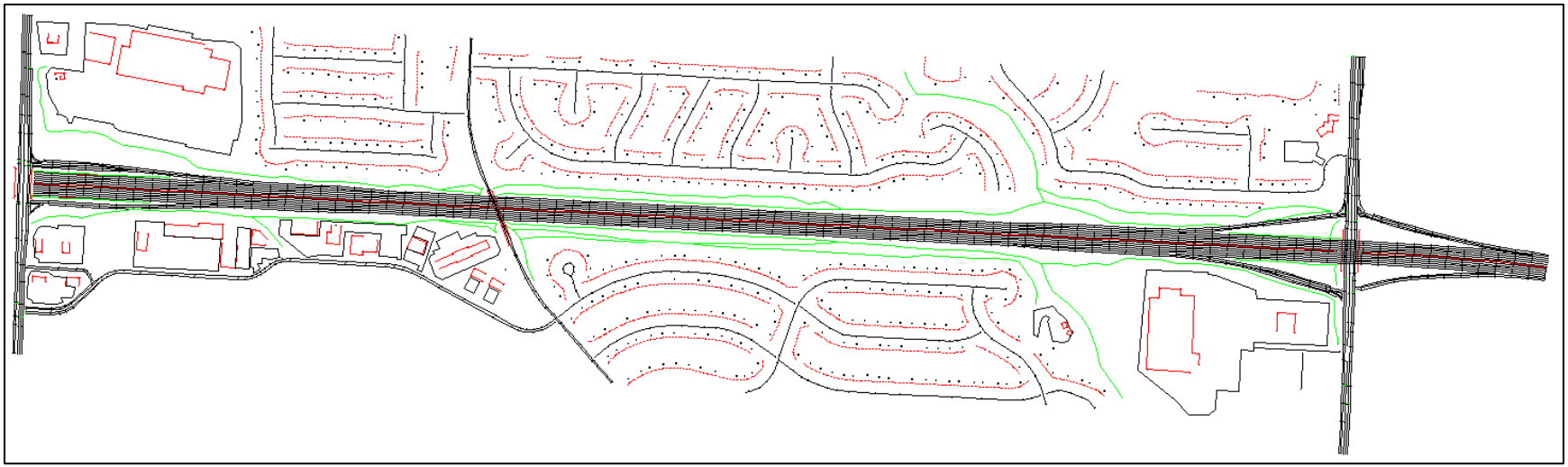


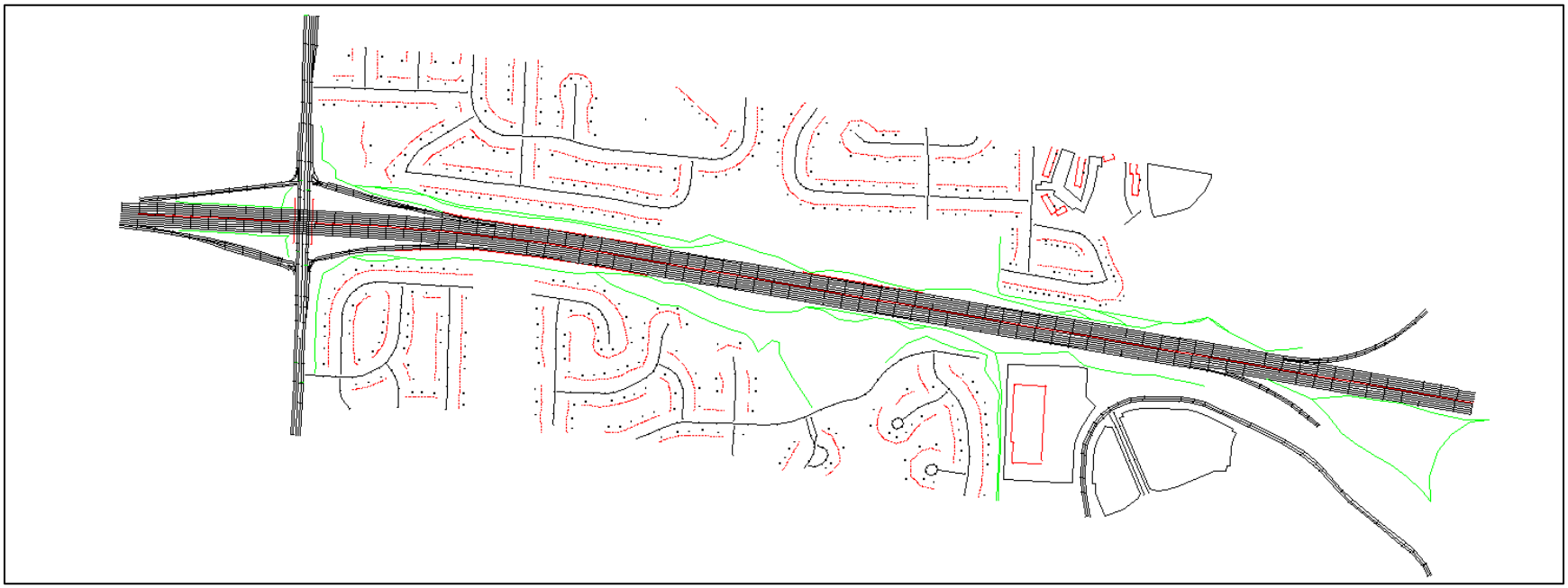
Ultimate Build











Appendix F

Cultural Resources

Due to the sensitive nature of this appendix, the report contents are not made available online. Please contact MoDOT Project Manager Jodie Puhr (Jodie.puhr@modot.mo.gov) with any questions.

Appendix G

Public Involvement

I-70 Environmental Assessment: I-435 to I-470 Public Involvement Plan

September 2025

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1.0 INTRODUCTION

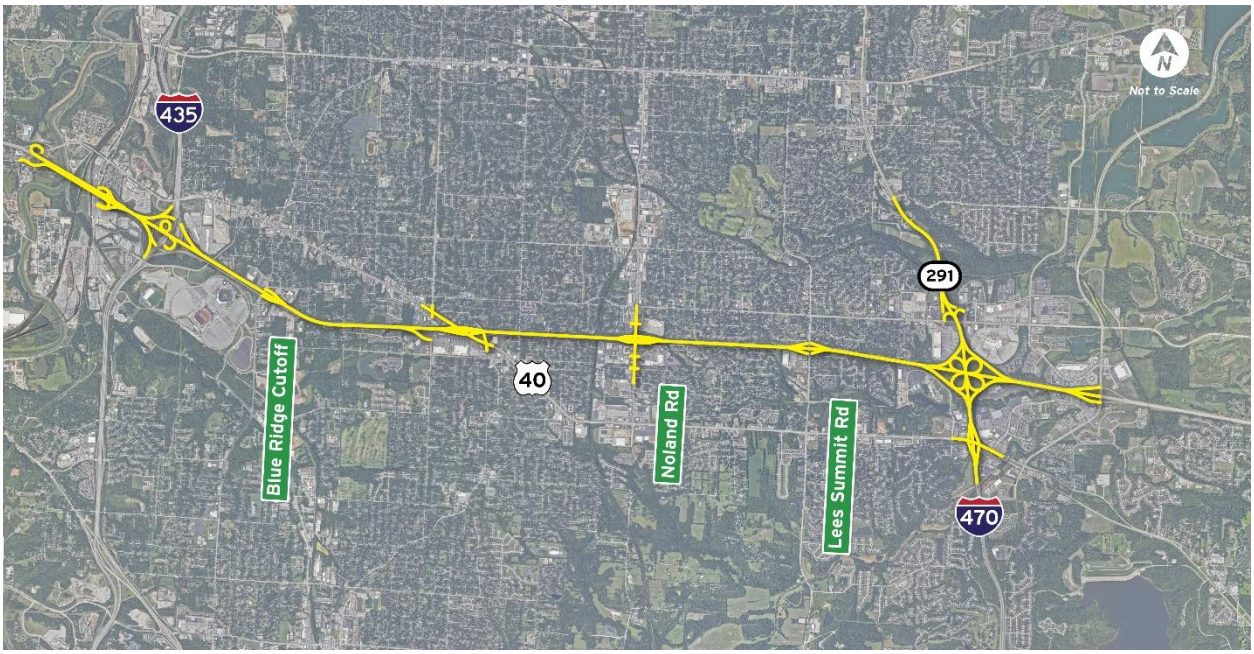
The Public Involvement Plan (Plan) is a guide designed to achieve communications and public participation goals during the Missouri Department of Transportation (MoDOT) I-70 Environmental Assessment: I-435 to I-470. The Plan is a living document and may be updated throughout the project duration.

1.1 PROJECT OVERVIEW

Since its original construction more than 50 years ago, I-70 has been a vital lifeline for moving people and goods across Missouri and beyond. This project is one of several which will modernize the I-70 corridor across the state. I-70 from I-435 to I-470 provides a critical link to the central region of the United States, particularly for freight traffic, and is a key access point for the Kansas City region.

In compliance with the National Environmental Policy Act (NEPA), the I-70 environmental study followed a tiered environmental documentation process. Tiering complies with NEPA requirements and other environmental regulations. A Tier I Environmental Impact Statement (EIS) was completed for the I-70 corridor in 2011. The Tier I study identified several segments for further review in Tier II. The I-70 Environmental Assessment: I-435-I-470 is a Tier II document of the previous Tier I study. The Environmental Assessment (EA) Process for this portion of I-70 will begin in the spring of 2024. Initial steps include efforts to understand the traffic volumes and safety conditions throughout the study area.

Figure 1: Study Area Map



The primary goal of the EA is to evaluate short- and long-term alternatives and identify proposed actions to reduce congestion, improve operational performance, and address asset management. The project team will examine alternatives to serve existing and future transportation needs, with the intent to improve traffic operations, travel time, mobility options, and safety challenges, as well as integrate with existing and planned transit routes.

Upon conclusion of the EA, the Federal Highway Administration is anticipated to issue a Finding of No Significant Impact (FONSI) or require additional evaluation through an Environmental Impact Statement. The study timeline is approximately 14 months and is scheduled to conclude in Fall of 2025.

1.2 PROJECT IDENTITY

The formal name of the study is the MoDOT I-70 Environmental Assessment: I-435 to I-470. MoDOT is working in conjunction with a project team led by HNTB consultant team.

The project will incorporate the Improve I-70 logo with the study name to add continuity for MoDOT and the overall Improve I-70 projects.

The MoDOT logo, I-70 logo and other project partner logos will be used on public materials.

2.0 INITIAL KEY ISSUES- GOALS

Based on previous studies, including the I-70 Tier 1 Study, the MoDOT Team will identify improvement alternatives that will:

- Improve safety.
- Reduce congestion.
- Improve accessibility and goods movement.
- Restore and maintain existing Infrastructure.

Through additional studies, the MoDOT Team will:

- Validate and update the purpose and need for improvements in this corridor as part of the Tier II Environmental Assessment.
- Recommend improvement alternatives by January 2025.
- Engage the community and stakeholders to inform the process throughout the project.

3.0 KEY MESSAGES

Strategy: Succinct key messages will be developed to clearly communicate basic project information across a range of collateral materials, including the website. The messages will highlight:

- **Purpose and Need:**
  - Explain to public why this project is needed (identify the problem and potential benefits from the Study))
  - Acknowledges federal process
- **Project Overview:**
  - Project study area
  - Who this project may impact
  - Project schedule
- **Project Alternatives:**
  - Improvement alternatives details
  - Project impacts details
- **What's Next:**
  - Alternative Screening
  - Environmental analysis
  - Engagement opportunities
  - Funding considerations and opportunities

Tools and Tactics:

- Develop key messages in collaboration with MoDOT
- Create outreach materials and provide translation, if appropriate:
  - Website content (hosted on MoDOT's website)
  - Social media toolkit with sample posts
  - Up to three email newsletters

4.0 PUBLIC PARTICIPATION GOALS

The purpose of the Plan is to build on the following goals:

- Establish a transparent approach to inform and engage project stakeholders in a timely manner.
- Utilize a variety of communications strategies and tools for people to access information that will help them understand the project purpose, engagement opportunities, and schedule.
- Engage with stakeholders to identify and understand potential issues, concerns, and opportunities within the project study area.
- Elicit community feedback on strategies to improve and strengthen the I-70 corridor from I-435 to I-470 and supporting arterial roads.

- Provide MoDOT with meaningful input to address the purpose and need.

5.0 STAKEHOLDERS

There are a variety of stakeholders in the project study area, including, but not limited to:

- **Government Agencies:** MoDOT, Federal Highway Administration (FHWA), City of Kansas City, Missouri (KCMO), City of Independence, Mid-America Regional Council (MARC), Kansas City Area Transportation Authority (KCATA), Jackson County, resource agencies, federally recognized tribes, state, and local elected officials
- **Businesses:** Area businesses and large employers, trade organizations, unions, healthcare organizations, aviation, chambers of commerce, financial institutions, economic development entities, tax incremental financing (TIF) districts
- **Community:** Environmental organizations, civic/public interest groups, public libraries, community centers, institutions of higher learning, school districts, transportation organizations, places of worship
- **Residents:** Residents within the study area, neighborhood associations, and property owners
- **General:** Commuters, transit riders, general public, and news media

5.1 IMPACTED COMMUNITIES

It is important to understand the stakeholders in and around the study area. The following maps and graphics breakdown the demographics of the area. Data comes from 2022 America Community Census 5YR Estimate data.

Figure 2: English Proficiency

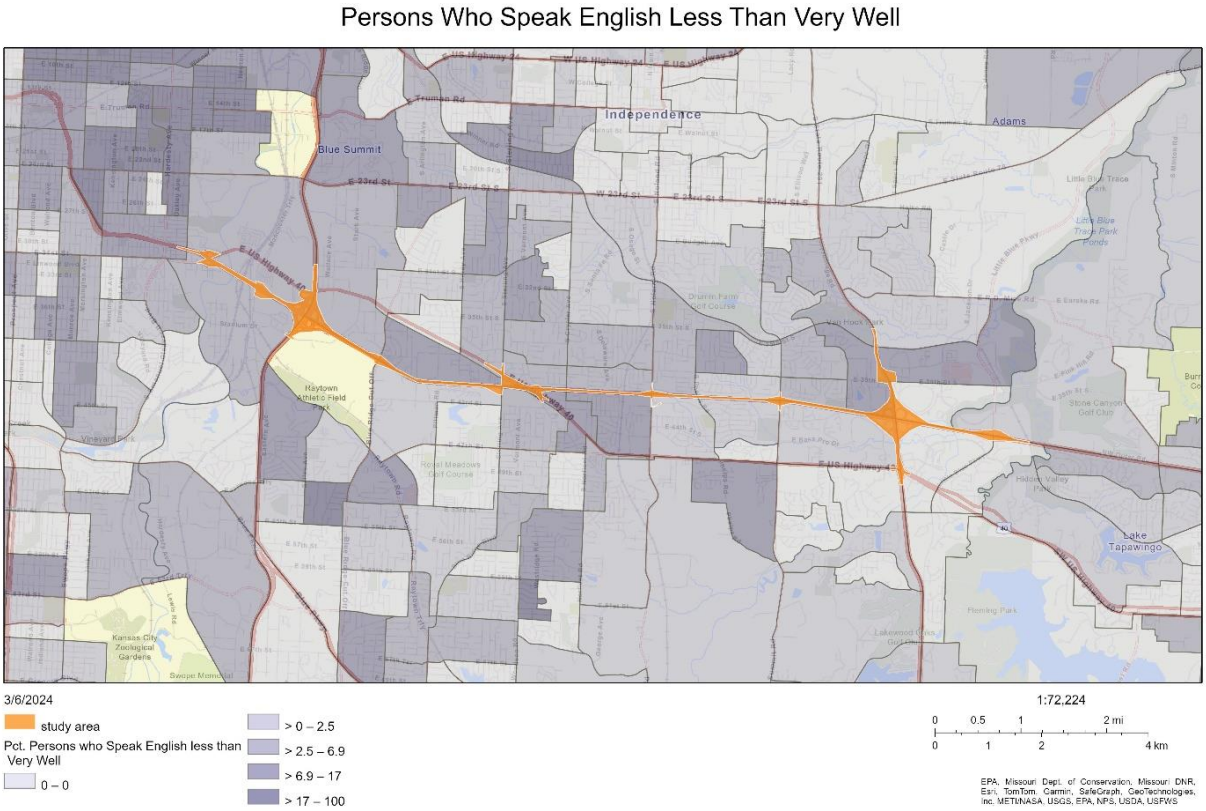


Figure 3: Study Area Census Track LEP Percentages

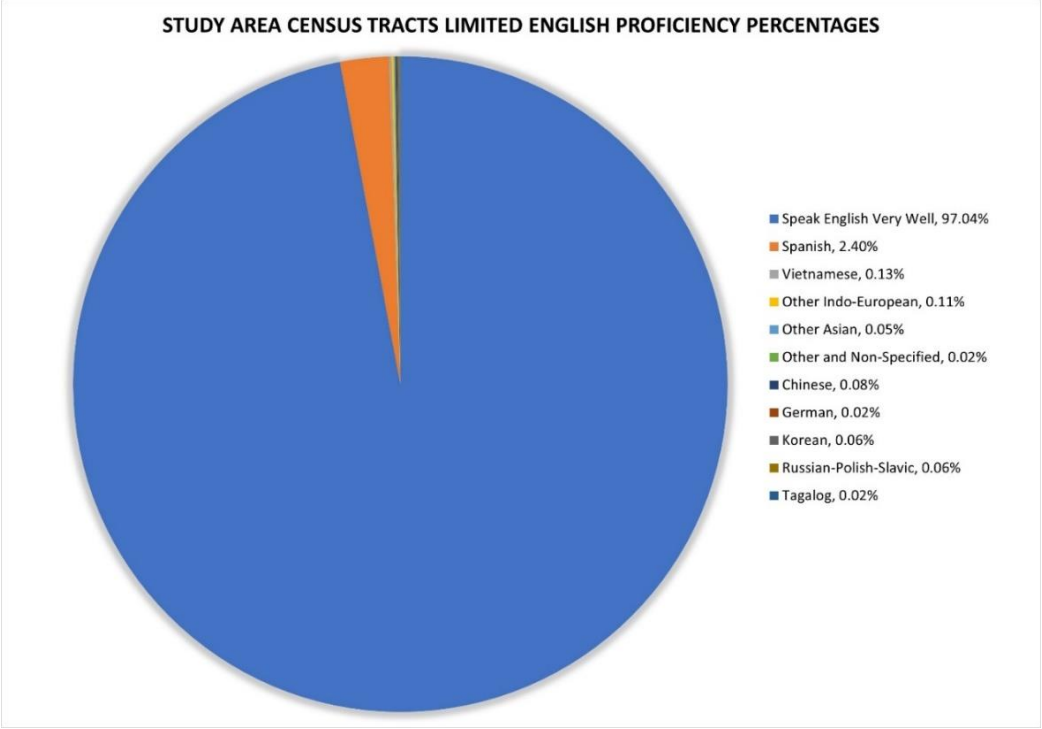


Figure 4: Persons of Color Population

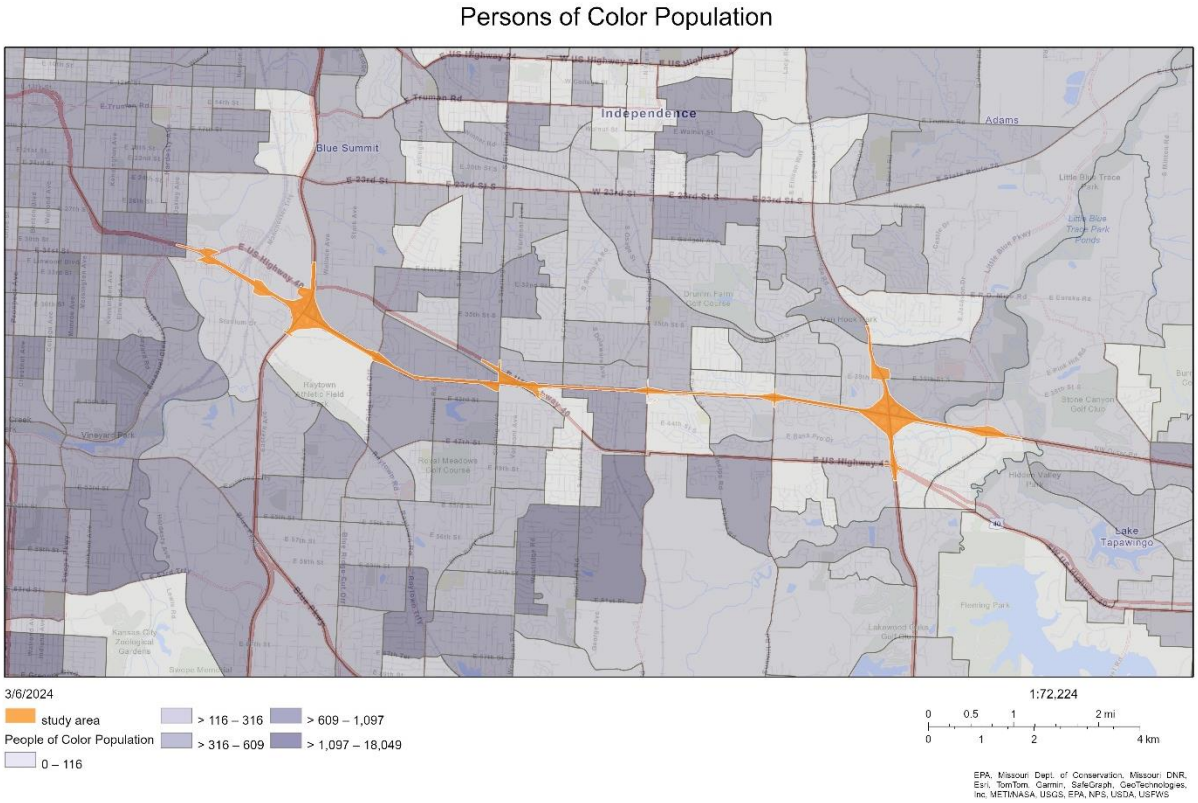


Figure 5: Study Area Block Groups Race/Ethnicity

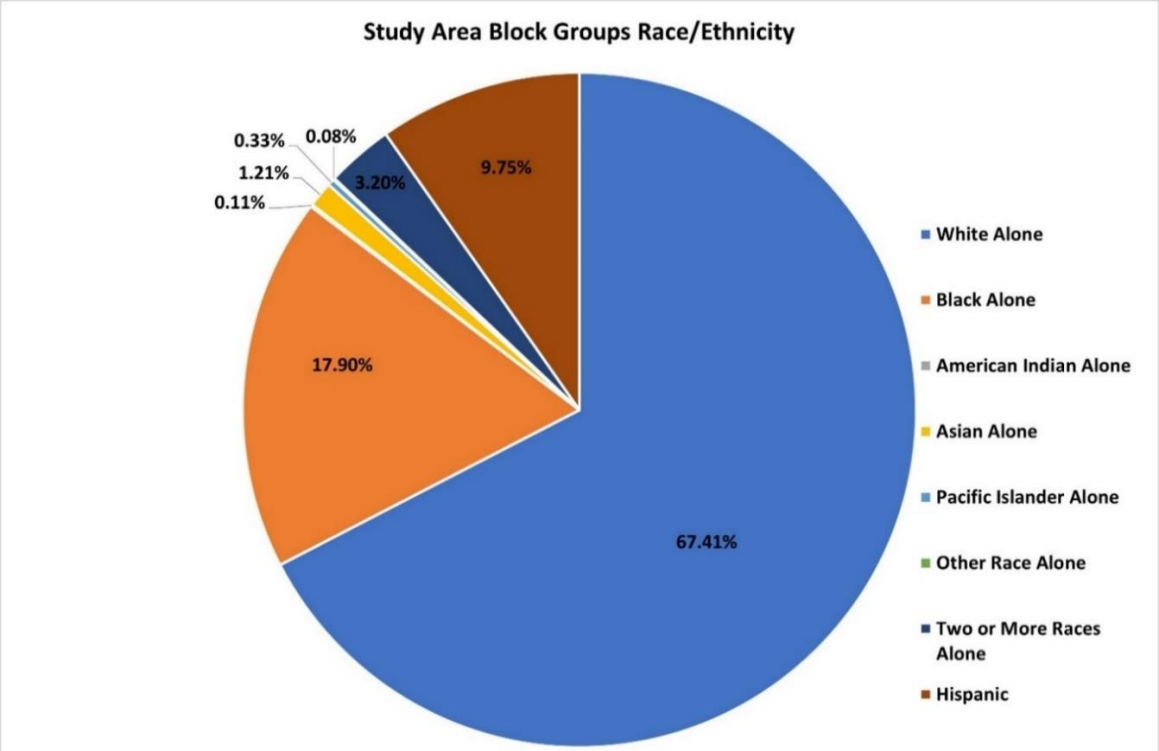


Figure 6: Households Below Poverty Level

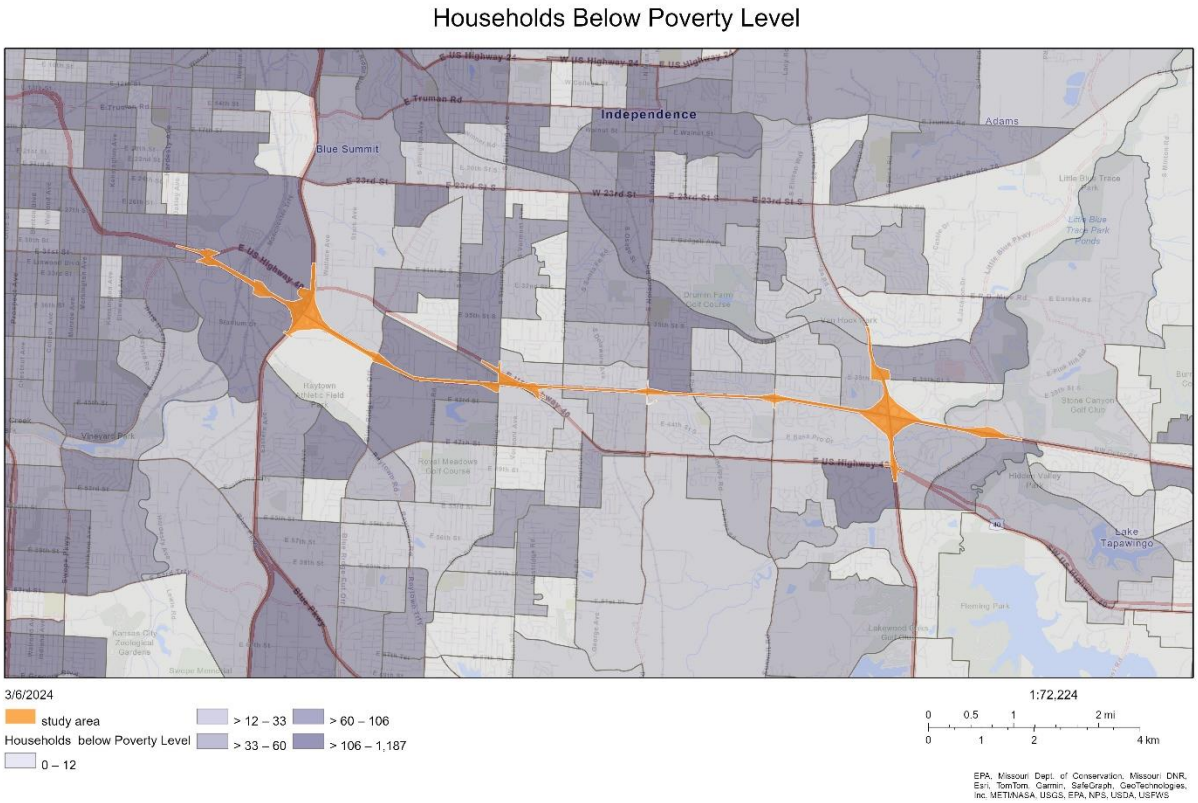


Figure 7: Study Area Block Group Household Income

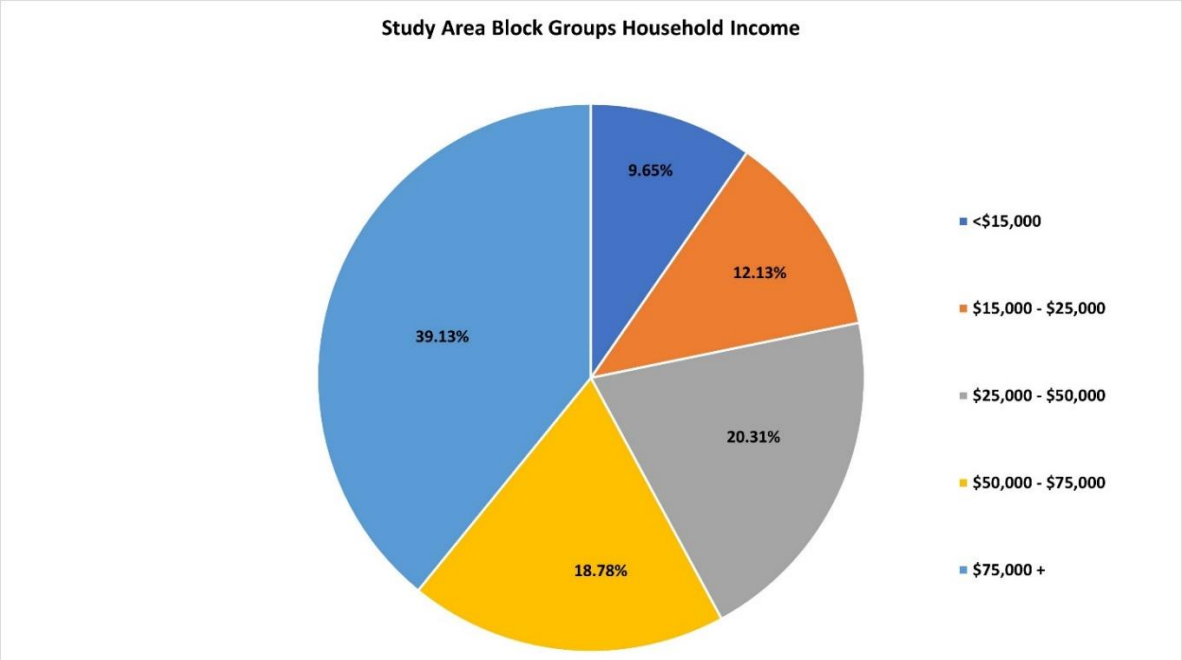
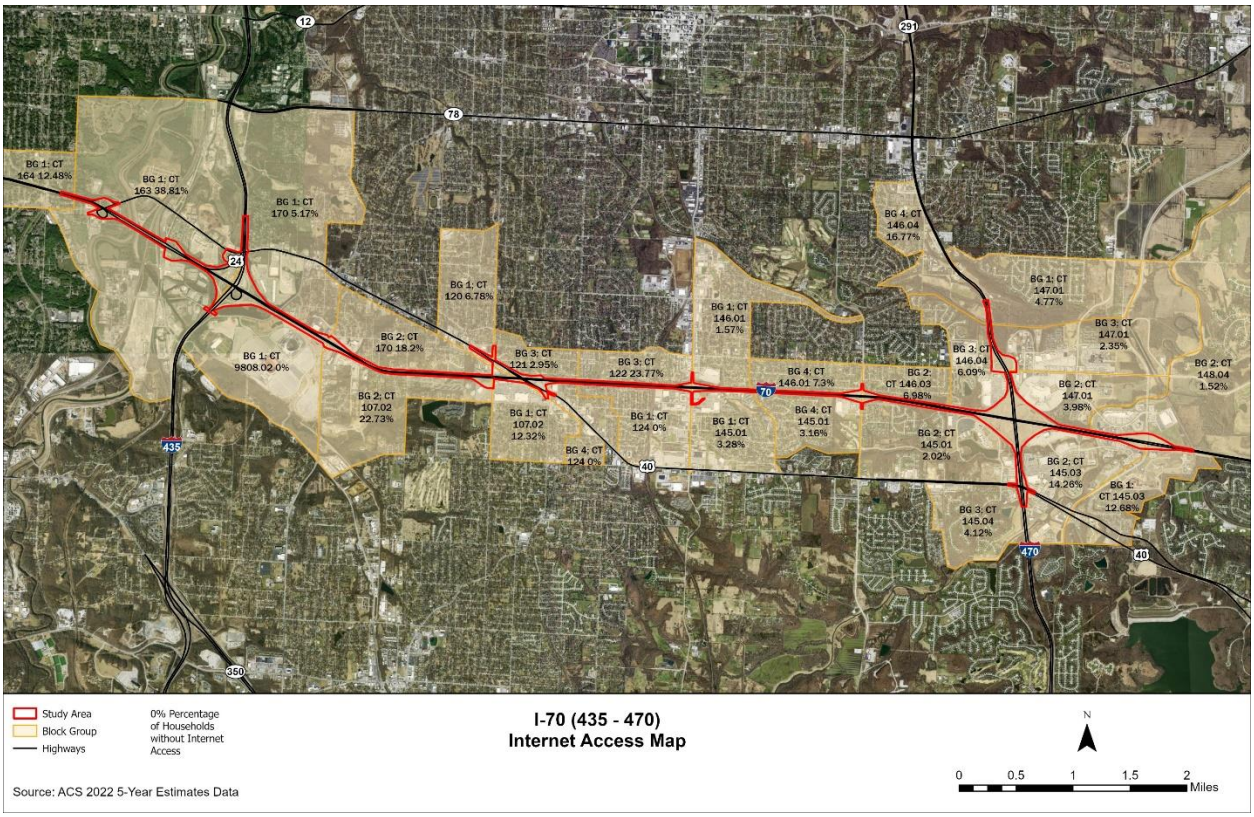


Figure 8: Internet Access



6.0 OUTREACH METHODS

The Plan incorporates several outreach methods to ensure key messages and information reach the range of stakeholder groups in the study area. To increase awareness and knowledge about the project, the Plan utilizes a diverse mix of communications strategies, tools, and tactics that will continue to engage stakeholders and communities of concern. Public participation outreach activities will be documented throughout the project duration and summarized upon conclusion of the study.

6.1 STAKEHOLDER OUTREACH

Strategy: The consultant will create and maintain a stakeholder database to engage with people located within the project study area and/or potentially impacted throughout the project duration.

Tools and Tactics: The consultant will:

- Create a stakeholder database and categorize it by level of engagement. Using the Public Involvement Management Application (PIMA), stakeholder information can be collected through signups on the MoDOT website. Stakeholder outreach including comment management, newsletter information, online public meetings, virtual live public meetings, and surveys can be executed through PIMA. It is a central tool that allows information to be collected and managed.
- Outreach activities may include a drop-in center or handing out flyers or surveys at neighborhood community centers, churches, schools, or public events in order to promote the project and gather input from a wide range of potentially interested parties.
- Update PIMA database, as necessary, to inform stakeholders throughout the process and share opportunities for public involvement, such as public meetings and surveys.

6.2 ONE-ON-ONE INTERVIEWS

Strategy: The consultant, assisted by MoDOT, will conduct up to five one-on-one interviews with key stakeholders at the beginning of the project to gather baseline data about the population, potential issues, concerns, and opportunities. Organizations to be interviewed include leadership from the Greater Kansas City Chamber, Kansas City Area Transportation Authority (KCATA), Kansas City Economic Development Council (EDC), City of Independence, KCMO and Jackson County.

Additional interviews or meetings may be conducted later in the study to share information and gather feedback with other businesses or organizations.

Tools and Tactics: The consultant will:

- Develop interview template/questions
- Conduct and schedule meetings
- Summarize interview notes

6.3 COMMUNITY ADVISORY COMMITTEE

Strategy: Facilitate up to four Community Advisory Committee (CAC) meetings with 30-40 identified community members representing a range of interests. At key milestones, the consultant will present project information and gather CAC feedback. Discussion topics will likely involve issues, challenges, and opportunities, purpose and need, as well as alternatives and potential impacts. Interactive tools, such as digital white boards and real-time polling, will be used to help collect comments.

Tools and Tactics: The consultant, in conjunction with MoDOT, will:

- Create CAC roster
- Update CAC information and/or identify replacement members, if necessary
- Draft and send an invitation and email reminders (email and/or hard copy)
- Schedule up to four meetings within the project timeline (in-person or virtual after discussion with MoDOT)
- Edit and review agenda/run of show
- Edit and review presentation
- Schedule run through with project team
- Summarize meetings

6.4 KEY STAKEHOLDER MEETINGS

Strategy: To reach broader audiences, the consultant will present project information at up to 20 regularly scheduled meetings with community, civic, and neighborhood organizations. In coordination with MoDOT, the primary stakeholder groups were identified to engage because the study's outcomes may impact them directly. Other meetings may be scheduled to reach additional audiences.

Tools and Tactics: MoDOT and the consultant will:

- Identify trusted community organizations
- Request to present at stakeholder meetings
- Schedule and present at meetings, as necessary

6.5 PUBLIC MEETINGS/HEARING

Strategy: Facilitate one, in-person, open house-style public meetings at the alternatives phase to provide project information and elicit feedback on purpose and need and alternatives. Following the in-person public meetings, virtual opportunities will be made available online. When the EA is available for review, a public hearing will be held to provide the public with an opportunity to review the recommendations and the EA document.

Tools and Tactics: The consultant will:

- Handle logistics for the public meetings/hearing, including, but not limited to:
    - Identify preferred methods to collect and elicit feedback
        - For public hearing secure court reporter or comment collection system
    - Confirm essential project team staff
    - Confirm time/date/location
    - Meeting supplies - fact sheet, sign-in sheet, comment card/survey, project boards, refreshments, technology and other items, as needed
    - Summarize the meetings

MoDOT and the consultant will:

- Promote through multiple communications channels, including, but not limited to:
    - Email invitation to stakeholders
    - Website content
    - Newsletter content
    - Social media posts
    - News release for MoDOT distribution
    - Messaging toolkit for distribution to community partners and key stakeholders
- Update project website with materials and resources, following the meetings.

6.6 SURVEY

Strategy: Community members will have the opportunity to respond to two surveys to provide feedback and shape the decision-making process at specific milestones throughout the project process:

- Purpose and need and study goals,
- Reasonable alternatives and study outcomes.

Tools and Tactics: The consultant will develop:

- Electronic surveys (hard copy available, upon request)
- QR code linked directly to the survey on printed materials

- Promotion through multiple communications channels, including, but not limited to:
    - Project fact sheet
    - Website content
    - Newsletter content
    - Social media posts
    - Messaging toolkit for distribution to community partners and key stakeholders
    - Work with LEP and underserved community representatives, such as churches, schools and community resources to promote survey opportunities to LEP and EJ populations.

6.7 WEBSITE

Strategy: The consultant will develop project material to be placed on a MoDOT hosted project website. Information should include a project overview, study area map, project timeline, key milestones, and information about any upcoming outreach activities. Links to sign up for project information will also be available on the website. Its address will be:
Interstate 70 Environmental Assessment in Jackson
(https://www.modot.org/interstate-70-environmental-assessment-jackson)

6.8 CONTACT INFORMATION

A project email address has been established for project communication. It is:
i70_ea_i435_i470@modot.mo.gov

The consultant will review public comments and be responsible for drafting responses for MoDOT approval.

6.9 AGENCY COORDINATION MEETINGS

Strategy: The consultant will assist MoDOT with conducting agency coordination meetings with local, state, and federal staff to solicit technical input and expertise throughout the EA Study and address concerns. Agency coordination meetings will be held up to two times during the EA. The first one will occur at project initiation; the second before the draft EA is released for comment.

Tools and Tactics: The consultant will:

- Draft and email out letters to agencies regarding kick-off of the study and asking for information.
- Draft letter for MoDOT or FHWA to email out Tribal letters to communicate kick-off of the study.

- Establish meeting dates, locations, secure meeting facilities, provide facilitation services, and provide technical advice regarding coordination.
- Contact FHWA, Mid-America Regional Council, KCMO, and any additional resource agencies identified by MoDOT to be included in the meetings.
- MoDOT and FHWA will consult with Federally recognized tribes as required.

7.0 TIMELINE

The Plan is a living document, and the timeline schedule and action plan will be updated accordingly. Meetings will occur at each milestone of the study to present new information and project progress as part of the environmental documentation process.

Figure 9: Public Engagement Schedule

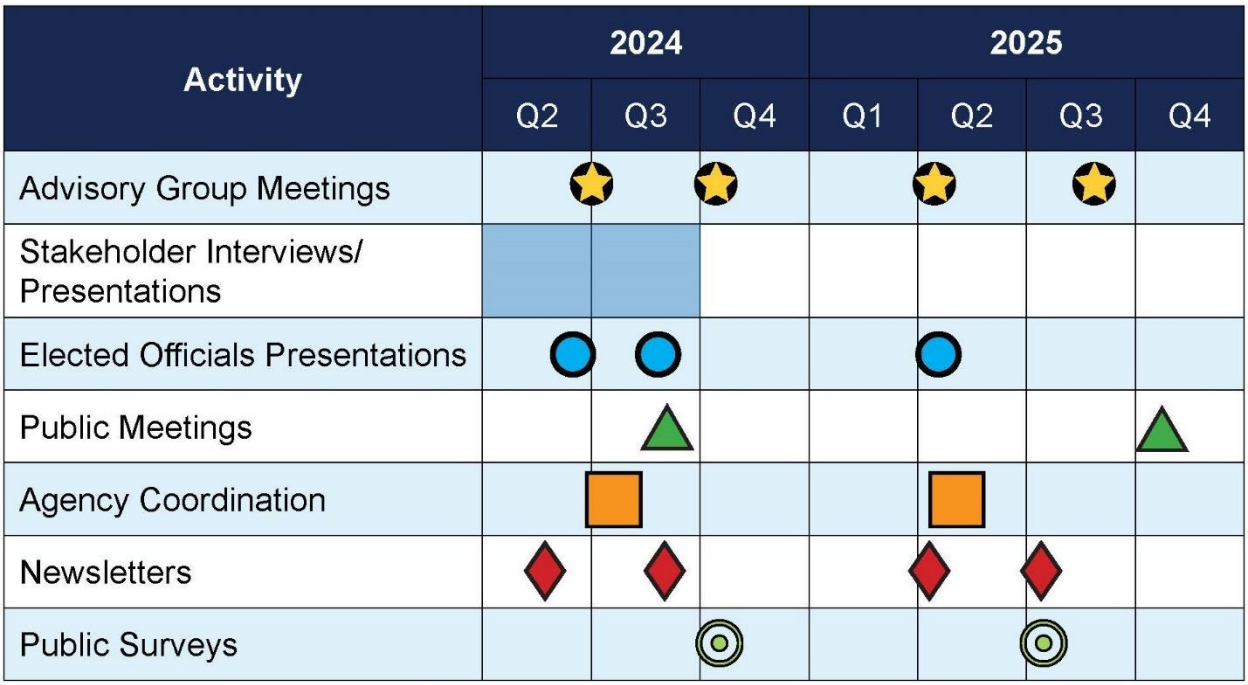


Figure 10: Action Plan for Activities

Activity/ Deliverable	Supporting Materials	Initial Draft Review	Final Draft	Due Date	Notes
Draft Social Media Posts for MoDOT	Website	In conjunction with newsletters and meetings	Monthly Core Team Meetings – Ongoing	5/24/2024	Used to promote project first week of June.
Newsletter #1	Website	5/17/2024	5/24/2024	5/24/2024	Send out week of 5/27/2024

Activity/ Deliverable	Supporting Materials	Initial Draft Review	Final Draft	Due Date	Notes
Advisory Group List Review	Stakeholder list, PIMA	5/7/2024	Due from MoDOT – 5/20/2024	5/31/2024	
Advisory Group Meeting #1	Invitations, website, presentation	5/17/2024	5/24/2024	6/5/2024	Introduce Study and review Purpose and Need – June
Stakeholder Interviews/ Presentations	Presentation, questionnaire	5/17/2024	5/24/2024	5/2024-7/2024	Due anytime between May-July 24
Newsletter #2	Website	Draft Review – 7/12/2024	7/26/2024	8/13/2024	
Survey Draft #1	Website	6/24/2024	7/10/2024	8/1/2024	Get feedback on Study and Purpose and Need
Fact Sheet 2024	Website	Internal Team Discussion/Draft Review – 6/11/2024	First Client Review 7/8/2024	8/13/2024	
Boards for Public Meetings	Website, Story Map	Internal Team Discussion/Draft Review – 6/11/2024	First Client Review 7/8/2024	8/13/2024	
Media Release Public Meeting #1	Fact Sheets, website	Internal Team Discussion/Draft Review – 7/8/2024	First Client Review 7/29/2024	8/19/2024	
Advisory Group Meeting #2	Invite, presentation	7/19/2024	8/2/2024	8/20/2024	Present initial Alternatives
Elected Officials Briefing	Website, fact sheets, PowerPoint presentation	Internal Team Discussion/Draft Presentation – 6/17/2024	Client Review and Discussion 8/6/2024	8/27/2024	Present initial Alternatives
Public Meeting #1	Fact sheets, boards, website, PIMA, social media, newsletter	Internal Review – ROS, room layout, presentation discussion – 4-6 weeks in advance no later than 7/26/2024	Client Review – ROS, room layout, presentation discussion, monthly core meeting – 4 weeks in advance no later than 8/9/2024	8/27/2024	Present initial Alternatives and Purpose and Need to get feedback

Activity/ Deliverable	Supporting Materials	Initial Draft Review	Final Draft	Due Date	Notes
Advisory Group Meeting #3	Presentation, fact sheet	4/11/2025	4/25/2025	5/1/2025	Present draft Recommendations
Newsletter #3	Website	5/16/2025	5/30/2025	6/1/2025	Promote Hearing and final Survey
Media Release for Public Meeting #2	Fact sheets, website	9/16/2025	9/30/2025	10/3/2025	
Public Meeting #2	Fact sheets, boards, website, PIMA, social media, newsletter	Internal Review – ROS, room layout, presentation discussion – 4-6 weeks in advance no later than 8/23/2025	Client Review – ROS, room layout, presentation discussion, monthly core meeting – 4 weeks in advance no later than 9/116/2025	10/3/2025	Present Recommendations from EA
Survey Draft #2	Website	10/3/2025	10/20/225	10/24/2025	Gather input on Recommendations
Advisory Group Meeting #4	Presentation	10/8/2025	10/15/2025	10/17/2025	Present Recommendations from EA and input from Public Hearing
Newsletter #4	Website, social media	11/17/2025	12/1/2025	12/5/2025	Summarize final Survey results, Recommendations and Next Steps

8.0 Public Comments

Six public comments were submitted during the public meeting comment period in October 2024. One commenter requested a response back from MoDOT.
The response back was: Thank you for your comments. Your input is important to MoDOT during this phase of the project work. We have recorded your comments.

Public Comment 1
Date: 10/08/2024
Level of Support: Neutral

Topics:
Comment: Might consider bus on shoulder to improve transit operations.
Public Comment 2
Date: 10/17/2024
Level of Support: In Favor
Topics: Accessibility, Rod Design, Safety
Comment: I would like to encourage an extension on the entrance ramp from westbould US 40 to Blue Ridge CutOff. It would be helpful for traffic going to the Truman Sports Complex keeping off the main through lanes. Of course, if both the Royals and Chiefs leave the Sports Complex my comment would be moot.

Public Comment 3
Date: 10/17/2024
Level of Support: In Favor
Topics: Accessibility, Rod Design, Safety
Comment: I would like to see the entrance ramp from Blue Ridge CutOff eastbound extended to Sterling Avenue

Public Comment 4
Date: 10/21/2024
Level of Support: In Favor
Topics: Environmental, Road Design, Safety
Comment: I approve and support MoDOT's I-70 Environmental Assessment: I-435 to I-470 Project. The alternative that I support is Alternative 2 because Alternative 2 will improve safety, reduce congestion, and improve freight mobility on I-70 from I-435 to I-470.

Public Comment 5
Date: 10/25/2024
Level of Support: In favor
Topics: Road Design, Safety
Comment: The 70 and 470 interchange cloverleaf design is outdated and does not function well in the suburban environment with current traffic volumes. Some or all of the loop ramps needs to be replaced with high speed flyover ramps.

Public Comment 6
Date: 10/29/2024
Level of Support: In Favor
Topics: Road Design, Safety
Comment: This needs to be repaired as soon as possible. It has been terrible for decades. The ramps number of lanes need to be increased. In my opinion the signage by 170 and 435 are confusing. Especially Southbound 435 to East Bound I70 & 40Hwy.

Meeting Overview

The Missouri Department of Transportation (MoDOT) held the public meeting for the I-70 Environmental Assessment: I-435 to I-470 from 4 to 6 p.m. This meeting presented baseline information about the study area including current safety and traffic conditions, environmental factors and multimodal opportunities.

The study team introduced the Alternatives under consideration and explained the draft Alternative screening criteria.

Attendees received information about the noise study process and could provide general comments and suggestions at key areas they found to be important, marking on a roll plot map.

There were two ways to participate: attending the in-person meeting on Tuesday, October 8, 2024, or by viewing the virtual component on the project website from October 8 to November 4, 2024. 49 attendees participated in at least one of the meeting platforms. The general sentiment of comments received was positive. Respondents are in favor of this project and feel improvements are needed on various aspects of the corridor.

In-Person Public Meeting

The in-person public meeting was held Tuesday, October 8 from 4 to 6 p.m. at the Mid-America Carpenters Regional Council located at 8955 E. 38th Terrace, Kansas City, Mo. 64129. The purpose of this meeting was to introduce the Environmental Assessment (EA), share study area characteristics that were reviewed, detail the noise study process and present the Alternatives being considered.

The in-person meeting had 17 attendees. Upon arrival, attendees signed in digitally using the Public Involvement Management Application (PIMA). The meeting was open-house style and did not include a formal presentation. Attendees were able to review sixteen exhibit boards stationed around the room and pose questions to members of the study team. The board were ordered as follows:

1. Welcome Board
2. Study Area & Study Purpose
3. Project Draft Purpose & Need
4. Environmental Assessment Process
5. Community Characteristics
6. Community Resources
7. Environmental Factors
8. Multimodal Considerations
9. Baseline Conditions: Safety
10. Baseline Conditions: Traffic Operations
11. Draft Alternatives Screening Criteria
12. Alternatives Considered
13. Noise
14. EA Timeline
15. Public Engagement Process & How to Stay Informed
16. Other I-70 Projects

Additional comments could be provided using the roll plot map positioned in the center of the room. Here, guests could provide information on a sticky note and place it at a location of interest. Lastly, comments were collected at a public comment station adjacent to the roll plot. Attendees could leave longer comments using the digital comment form provided through PIMA or a paper comment form. At the in-person public meeting **one (1)** comment was received.

Virtual Component

A virtual public meeting launched concurrently with the in-person public meeting on October 8 and was available until November 4 – allowing for an extended comment period. As of November 4, 2024, the virtual meeting had 32 participants. The virtual public meeting shared the same information as the in-person meeting and was paired with an identical digital comment form. A total of 5 comments were received during the online comment period.

Between both meetings, a total of 6 comments were collected. See **Appendix A** for a list of all comments.

To view public meeting photos please see **Appendix B.**

Meeting Promotion

Prior to the public meeting, the meeting was promoted across several channels including email, social media, word of mouth and flyer distribution. Images of all promotional materials can be found in **Appendix C.**

Email reminders were sent through PIMA to 150 stakeholders including advisory group members, businesses and the general public on the following dates:

- September 10
- September 30
- October 4

The MoDOT Kansas City social media page posted weekly meeting reminders leading up the meeting date including:

- September 10
- September 17
- September 24
- October 1
- October 8

Flyers were hand-distributed to local businesses, organizations and Carpenters Unions surrounding the study area. A full list of organizations reached is in **Appendix D.**

Survey Results

A survey was created for Public Meeting #1 to understand public sentiment around the I-70 from I-435 to I-470 and what improvements respondents would like to see. A question was also asked about the Draft Purpose and Need Statement. Questions were tailored to gain personal insights from those who travel along the corridor. Respondents had the opportunity to provide comments. The survey was open to the public from October 8 to November 4, 2024. A total of 28 responses were received during this time period.

Below are the results of each survey question along with the top responses. The results from the Missouri Veterans Association included questions are not part of this report

Question 1: What do you like about I-70?

Question 1 was an open-ended question that received 19 responses. Common themes from the responses include:

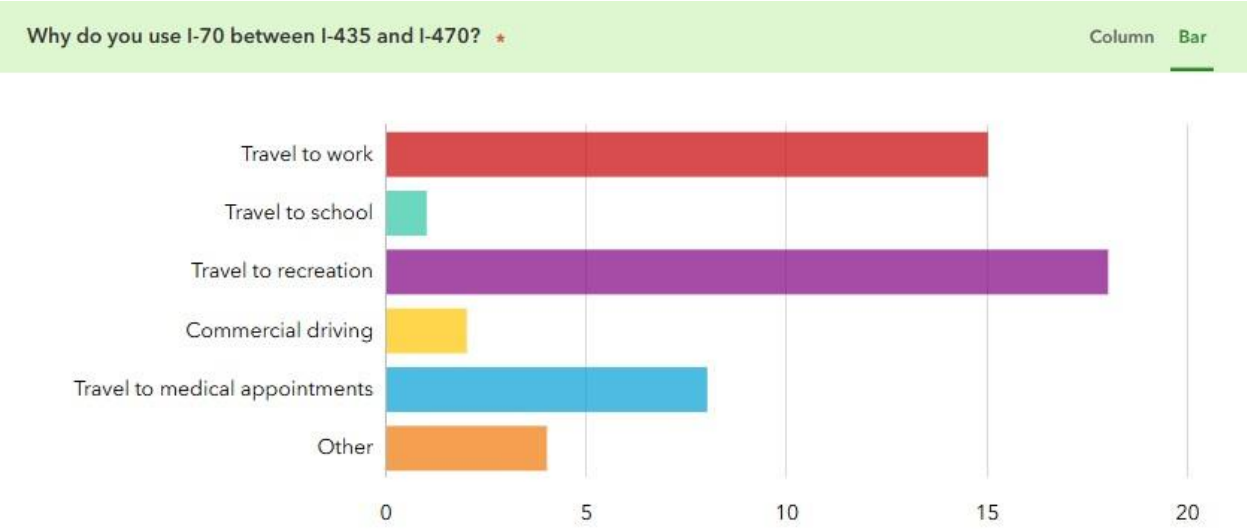
- Convenient and direct route to many places (7)
- High speed limit (4)
- Nothing (4)
- Good design/maintenance (2)

Question 2: Why do you use I-70 between I-435 and I-470?

Respondents had six options to choose from: Travel to work, Travel to school, Travel to recreation, Commercial driving, Travel to medical appointments, or other. Out of the six options given:

- 'Travel to recreation' received the most responses with 18 (64%),
- Travel to Work coming in second at 15 responses (53.57%).

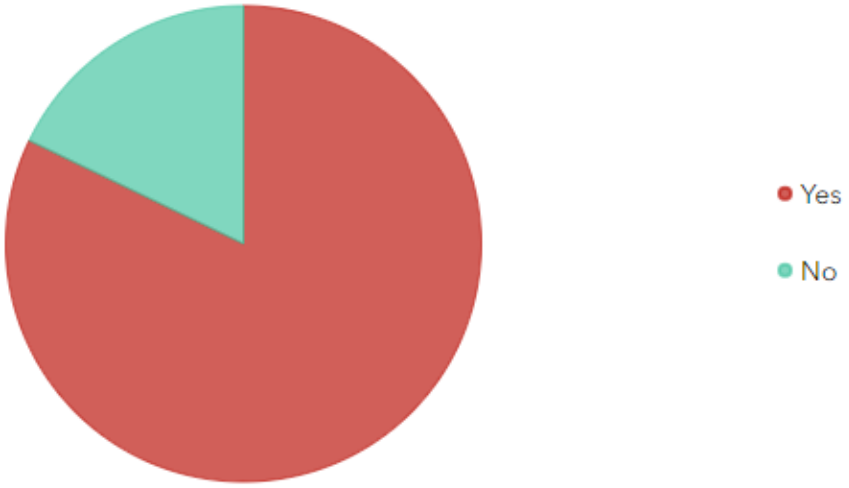
A chart detailing the options and their results is shown below.



Question 3: Do you experience issues along I-70 between I-435 and I-470?

Question 3 required a yes or no answer. 23 respondents (82%) answered yes to this question.

Do you experience issues along I-70 between I-435 and I-470? *



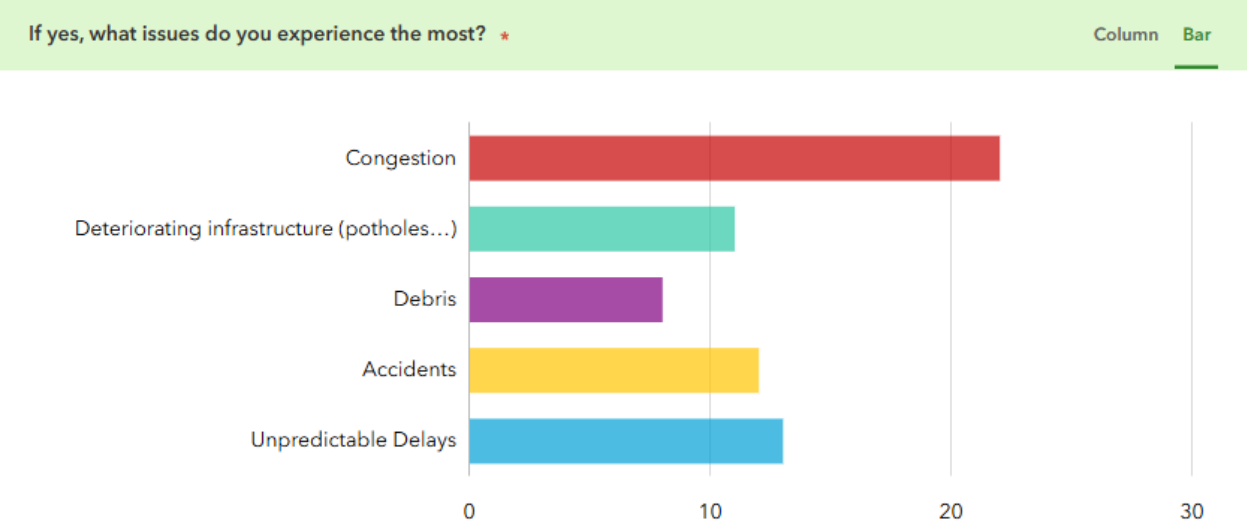
Of those who answered Yes, traffic congestion was listed as the main issue (78%), and 35% said it was a weekly issue.

Question 4: How would you like to see I-70 improved?

- 21 respondents (75%) cited Adding Additional Lanes.
- 20 respondents (71%) said improving interchanges would help.

Question 5: What potential benefits do you think improvements to I-70 will bring?

- 25 respondents (89%) said better traffic flow for commuters
- 23 respondents (82.14%) said Improved safety for travelers on I-70



25 respondents (89%) agreed with the Draft Purpose and Need Statement.

Complete responses for the Survey are available upon request.

Overall favorability for the project is positive. Respondents feel improvements are needed or overdue.

Appendix A - MoDOT Virtual Public Involvement Comment Summary

---

Public Comment 1
Date: 10/08/2024
Level of Support: Neutral
Topics:
Comment: Might consider bus on shoulder to improve transit operations.

Public Comment 2
Date: 10/17/2024
Level of Support: In Favor
Topics: Accessibility, Rod Design, Safety
Comment: I would like to encourage an extension on the entrance ramp from westbould US 40 to Blue Ridge CutOff. It would be helpful for traffic going to the Truman Sports Complex keeping off the main through lanes. Of course, if both the Royals and Chiefs leave the Sports Complex my comment would be moot.

Public Comment 3
Date: 10/17/2024
Level of Support: In Favor
Topics: Accessibility, Rod Design, Safety
Comment: I would like to see the entrance ramp from Blue Ridge CutOff eastbound extended to Sterling Avenue

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Date: 10/21/2024
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Topics: Environmental, Road Design, Safety
Comment: I approve and support MoDOT's I-70 Environmental Assessment: I-435 to I-470 Project. The alternative that I support is Alternative 2 because Alternative 2 will improve safety, reduce congestion, and improve freight mobility on I-70 from I-435 to I-470.

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Topics: Road Design, Safety
Comment: The 70 and 470 interchange cloverleaf design is outdated and does not function well in the suburban environment with current traffic volumes. Some or all of the loop ramps needs to be replaced with high speed flyover ramps.

Public Comment 6
Date: 10/29/2024
Level of Support: In Favor
Topics: Road Design, Safety
Comment: This needs to be repaired as soon as possible. It has been terrible for decades. The ramps number of lanes need to be increased. In my opinion the signage by 170 and 435 are confusing. Especially Southbound 435 to East Bound I70 & 40Hwy.

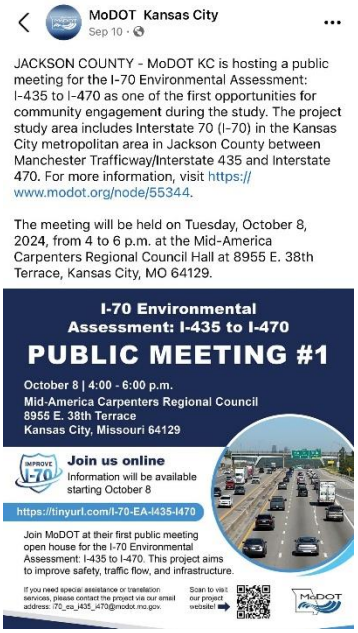
Appendix B – Meeting Photos

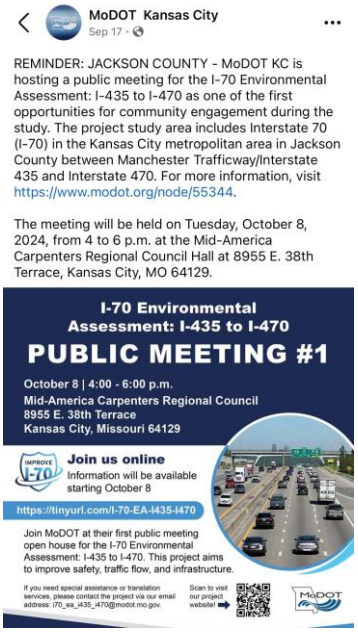
Community Resources
Conditions: Safety

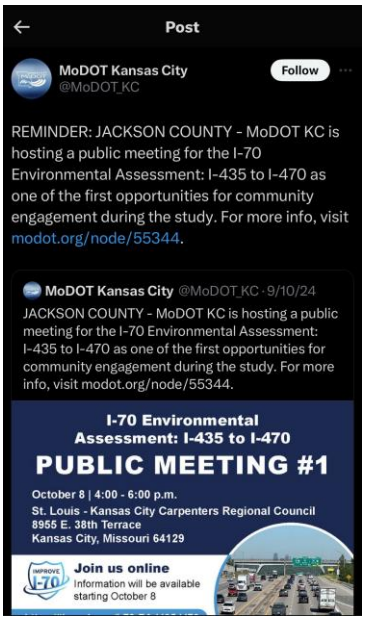
UNITED BROTHERHOOD OF
UNION
MADE
LOCAL
KC
MO
1127
CARPENTERS & JOINERS OF AMERICA

Appendix C – Meeting Promotion

Facebook and X Reminders







Email Invitation and Flyer

Appendix C – Meeting Promotion (Cont.)

Press Release

From: Brooke L. Rohlfing
To: Brooke L. Rohlfing
Subject: For immediate release: REMINDER: Missouri Department of Transportation Kansas City is soliciting input for I-70 Environmental Assessment: I-435 to I-470
Date: Tuesday, September 24, 2024 3:07:10 PM
Attachments: image004.png

External Email: Use caution when clicking on links, replying, or opening attachments.

For more information, contact Brooke Rohlfing at (816) 607-2151

Sept. 24, 2024 – For immediate release:

REMINDER: Missouri Department of Transportation Kansas City is soliciting input for I-70 Environmental Assessment: I-435 to I-470

JACKSON COUNTY - The Missouri Department of Transportation Kansas City (MoDOT KC) is hosting a public meeting for I-70 Environmental Assessment: I-435 to I-470 as one of the first opportunities for community engagement during the study. The project study area includes Interstate 70 (I-70) in the Kansas City metropolitan area in Jackson County between Manchester Trafficway/Interstate 435 and Interstate 470. The meeting will be held on Tuesday, October 8, 2024, from 4 to 6 p.m. at the Mid-America Carpenters Regional Council Hall at 8955 E. 38th Terrace, Kansas City, MO 64129.

In conjunction with MoDOT and in coordination with Federal Highway Administration (FHWA), the project team is seeking public feedback on the draft Purpose and Need for the project and what issues and concerns the public has with the I-70 corridor from I-435 to I-470. The intent of the project to is to address challenges along the I-70 corridor by:

- Improving safety
- Restoring and maintaining existing infrastructure
- Improving accessibility and goods movement
- Reducing congestion

"Since its original construction more than 50 years ago, I-70 has been a vital lifeline for moving people, goods and information across Missouri and beyond. This project is one of several which will modernize the I-70 corridor across the state," said Jill Bruss, MoDOT Area Engineer for Kansas City.

The I-70 Environmental Assessment: I-435 to I-470 is intended to better understand the existing and future traffic operations and; safety as well as infrastructure and environmental assets along this corridor. "Completing this environmental assessment will help provide feedback and recommendations as MoDOT KC evaluates issues, solutions, and future projects," said Bruss.

Following the public meeting, a self-guided virtual presentation and an online survey will be available on the project webpage at https://www.modot.org/interstate-70-environmental-assessment-jackson. The online survey will close on Monday, Nov. 4.

MoDOT is committed to providing equal access to this event for all participants. If you require translation services or need special assistance for the meeting, please contact the team at least 48-hours in advance of the meeting, at i70_ea_i435_i470@modot.mo.gov.

Estamos comprometidos a proporcionar igualdad de acceso a este evento para todos los participantes. Si necesita servicios de traducción o necesita asistencia especial para la reunión, por favor comuníquese con el equipo al menos 48 horas antes de la reunión: i70_ea_i435_i470@modot.mo.gov.

Questions? Contact the project team by email at i70_ea_i435_i470@modot.mo.gov.

For more information about MoDOT news, projects or events, please visit www.modot.org/kansascity. For instant updates, follow MoDOT_KC on X, or share posts and comments on Facebook at www.facebook.com/MoDOT.KansasCity/. MoDOT Kansas City maintains more than 7,000 miles of state roadway in nine counties. Sign up online for workzone updates or call 888-ASK-MODOT (275-6636).

####

BROOKE ROHLFING
Senior Communications Specialist
Missouri Department of Transportation
Kansas City District - Communications
600 NE Colbern Road, Lee's Summit, MO 64086
816.607.2151
816.803-4204 (cell)
www.modot.org

Hours: **Mon. – FRI.**: 8 AM – 4:30 PM

Appendix D – Flyer Distribution List

Mid-America Carpenters Regional Council

- 8955 E 38 Terrace #100, KCMO 64129

Life.Church East Kanas City

- 11100 E 43rd St, KCMO 64133

QuikTrip

- 11101 E 40th St S, Independence, MO 64055

Lowe's Home Improvement

- 4201 Sterling Ave, KCMO 64133

Walmart Supercenter

- 11601 E US Hwy 40, KCMO 64133

Starbucks

- 11815 E US Hwy 40, Independence, MO 64055

Custom Truck One Source

- 7701 Independence Ave Building H, Kansas City, MO 64125

First Federal Bank of Kansas City

- 4227 Blue Ridge Blvd. #1601, KCMO 64133

Sheet Metal Workers International Association

- 2902 Blue Ridge Blvd, Kansas City, MO 64129

Days Inn by Wyndham Independence

- 13712 E 42nd Terrace S, Independence, MO 64055

Americas Best Value Inn Independence

- 13710 E 42nd Terrace S, Independence, MO 64055

Countryside Suites Hotel

- 4142 S Noland Rd, Independence, MO 64055

Quality Inn & Suites Independence

- 4200 S Noland Rd, Independence, MO 64055

Mother's Refuge

- 14400 E 42 St. S #220, Independence, MO 64055

Price Chopper

- 4201 S Noland Rd, Independence, MO 64055

Independence Housing Authority

- 4215 S Hocker Ave #5, Independence, MO 64055

The Everlasting Church of Jesus Christ in the Latter Day

- 14480 E 42 St S, Independence, MO 64055

Greater Kansas City Construction and Building Trades

- 400 S Main St, Independence, MO 64050

Birch Hill Suites – Independence

- 14800 E 42 St S, Independence, MO 64055

Home Depot

- 4210 S Lee's Summit Rd, Independence, MO 64055

Bass Pro Shops

- 18001 Bass Pro Dr, Independence, MO 64055

Duluth Trading Company

- 18101 Bass Pro Dr, Independence, MO 64055

Stoney Creek Hotel – Independence, MO 64055

- 18011 Bass Pro Dr, Independence, MO 64055

Missouri Kansas Laborers' District Council - Kansas City Office

- 4731 S Cochise Suite #114 Independence MO 64055

Menards

- 4101 S Little Blue Pkwy, Independence MO 64057

Drury Inn & Suites – Kansas City

- 20300 E 42nd St S, Blue Springs, MO 64015

I-70 Environmental Assessment: I-435 to I-470 Project Coordination Plan

September 2024

In Partnership:

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3. Initial Agency Coordination 2
4. Lead, Cooperating, and Participating Agencies 3
5. Agency Coordination Points 4
6. Project Schedule 5
7. Agency Coordination Plan Revision History 6

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1. Introduction

To comply with the National Environmental Policy Act (NEPA) requirements, the Missouri Department of Transportation (MoDOT) has initiated an Environmental Assessment (EA) to modernize the I-70 Corridor from I-435 to I-470. This coordination plan has been developed to establish the anticipated schedule, process, and planned coordination and key milestones for agency participation for the project.

2. Project Background

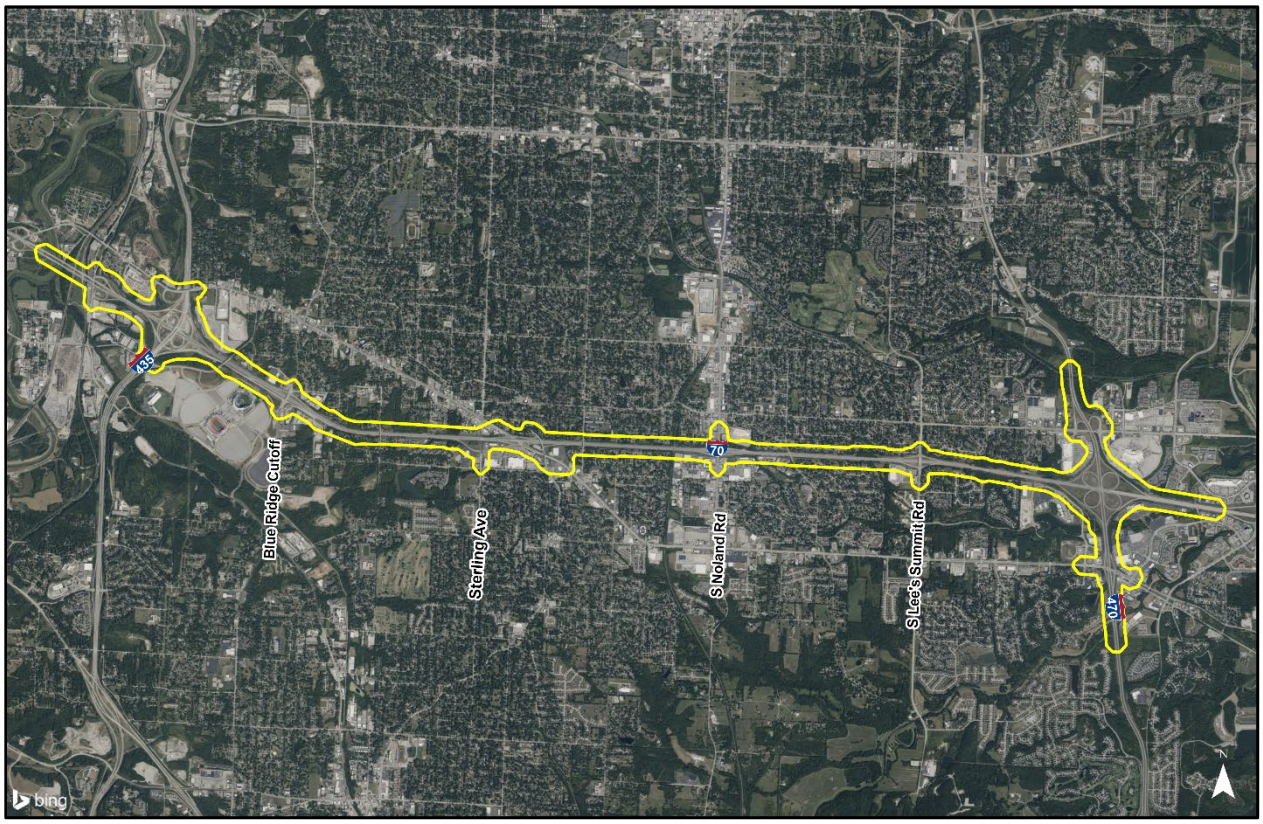
The I-70 Environmental Assessment: I-435 to I-470 is located in the cities of Independence and Kansas City, Missouri, from I-435 to I-470. The project location and boundaries, shown in **Figure 1** include the northbound and southbound traffic lanes of U.S. 40 to the west, and Little Blue Parkway to the east. The corridor totals approximately 9 miles. I-70 is an essential route for the movement of people and goods throughout and beyond Missouri. I-70 from I-435 to I-470 is a critical access point for the Kansas City region, especially for freight traffic.

MoDOT is providing planning, conceptual design, and public engagement and outreach activities for the proposed project. The NEPA and conceptual design planning stages of the project are being conducted by MoDOT and coordinated with the FHWA to meet all applicable NEPA processes and state and federal technical design requirements related to Interstate highways.

FHWA has determined that the NEPA class of action for this project is an EA. An EA document is required by NEPA for certain federal actions. Under NEPA, an EA is required to determine whether a federal action has the potential to cause significant environmental effects. If the FHWA determines that the proposed action will not have a significant environmental impact, a Finding of No Significant Impact (FONSI) will be issued. If the EA determines that the environmental impacts of a proposed federal action will have significant impacts, an Environmental Impact Statement (EIS) must then be prepared. The EA and the NEPA process for the I-70 Environmental Assessment was initiated on July 24, 2024.

Environmental analyses and NEPA documentation for environmental topics and resources will be prepared to gain required MoDOT and FHWA environmental approvals to proceed with further project development. Preparation of the NEPA environmental analyses will be based on meeting current MoDOT, CEQ, U.S. Environmental Protection Agency (USEPA), NEPA, and United States Department of Transportation (USDOT)/FHWA requirements.

Figure 1: Project Location Map



The general purpose of the project is to address several community-specific transportation-related challenges. To address these transportation issues, proposed improvements are expected to:

- **Improve Safety:** Reduce the potential for crashes at high crash locations.
- **Reduce Congestion:** Remove key bottlenecks, reduce the potential for ramp back-up onto the freeway, and improve the multi-modal travel times in coordination with plans put forward by local and regional agencies.
- **Restore and Maintain Existing Infrastructure:** Improve bridge and pavement conditions on I-70 and implement cost-effective investment strategies.
- **Improve Accessibility and Goods Management:** Provide travel options for all residents, increase safe access across I-70 for non-motorized travel, and support local and regional land use plans in addition to improving the efficiency of freight movement on I-70.

3. Initial Agency Coordination

Notice of Intent

There will not be a Notice of Intent (NOI) published in the Federal Register for this NEPA EA project. Should FHWA determine an EIS is required to continue with project development activities, an NOI will be filed in the Federal Register at that time.

Initial Coordination Package

MoDOT will prepare an initial coordination packet for distribution to local, state, and federal agencies, tribes, officials, and organizations identified in **Table 1**. This packet will be sent to

agencies in June 2024 and will include a letter inviting the agency to coordinate on the EA, a project description detailing the project and its process, a project study area map, the draft Purpose and Need Statement, and a copy of this Agency Coordination Plan.

The initial coordination packet is meant to fulfill the scoping activities point of collaboration. Future appendices will contain copies of response letters received from the agencies during the initial coordination process.

4. Lead, Cooperating, and Participating Agencies

MoDOT will serve as the lead state agency and FHWA will serve as the lead federal agency. For this project, all agencies will be considered participating agencies. Should the FHWA determine an EIS is required for this project, invitations for cooperating and participating agencies will be revisited at that time.

The NEPA evaluation process, environmental review, consultation, and other actions as required by Federal law for this project will be carried out by MoDOT in coordination with FHWA. Those actions include:

- Identifying agencies to participate in the environmental review process;
- Developing an Agency Coordination Plan;
- Developing a Public Involvement Plan;
- Providing the public and agencies opportunities to provide input on alternatives and findings of the evaluation process;
- Preparing and approving NEPA evaluation documentation; and
- Providing the public and agencies opportunities to review and provide input on the NEPA evaluation documentation and findings.

Table 1: List of Lead and Participating Agencies

Agency	Role	Response Received	Responsibility
Missouri Dept. of Transportation (MoDOT)	Lead State Agency	NA	Manage environmental review process; review and approve EA.
Federal Highway Administration (FHWA)	Lead Federal Agency	NA	Manage environmental review process; review and approve EA.
U.S. Army Corps of Engineers (USACE)	Participating Agency		Consultation
U.S. Fish and Wildlife Service (USFWS)	Participating Agency		Consultation
U.S. Environmental Protection Agency (USEPA)	Participating Agency		Consultation
U.S. Department of Agriculture (USDA)	Participating Agency		Consultation
Federal Emergency Management Agency (FEMA)	Participating Agency		Consultation

Agency	Role	Response Received	Responsibility
Missouri Department of Natural Resources (MDNR)	Participating Agency		Consultation
Missouri Department of Natural Resources (MDNR) - SHPO	Participating Agency		Consultation
State Emergency Management Agency Missouri (SEMA)	Participating Agency		Consultation
Missouri Office of Administration	Participating Agency		Consultation
Missouri Department of Conservation (MDC)	Participating Agency		Consultation
Iowa Tribe of Kansas and Nebraska	Tribe		Consultation
Iowa Tribe of Oklahoma	Tribe		Consultation
Kaw Indian Tribe of Oklahoma	Tribe		Consultation
Miami Tribe of Oklahoma	Tribe		Consultation
Osage Nation	Tribe		Consultation
Ponca Tribe of Nebraska	Tribe		Consultation
Ponca Tribe of Oklahoma	Tribe		Consultation
Sac and Fox Tribe of the Mississippi in Iowa	Tribe		Consultation
Sac and Fox Nation of Oklahoma	Tribe		Consultation
Shawnee Nation	Tribe		Consultation
Wyandotte Nation	Tribe		Consultation

5. Agency Coordination Points

Lead agencies (MoDOT and FHWA) for the EA evaluation must agree that the project may move forward at key points including:

- Project initiation, scoping activities, and purpose and need;
- Identification of alternative(s);
- Results of the EA evaluation; and
- Completion of permits, licenses, or approvals (post NEPA).

Agencies may be asked to review deliverables and provide feedback at these collaboration points. The study team will address comments received from participating agencies before finalizing documents for official approval.

The lead agencies will ensure information is presented to participating agencies at key points throughout the project through coordination. An agreed upon amount of time will be provided for agencies to review and submit feedback; this will typically be 30 days from receipt of the materials.

Key coordination points for this project and anticipated dates for coordination are shown in **Table 2**. **Table 2** will be updated as new information becomes available.

Table 2: Agency Coordination Schedule & Tracking

Anticipated Time Frame	Coordination Topic	Completion Date
July 2024	Project Initiation, scoping, and purpose and need	
October/November 2024	Identification of alternatives	
July 2024	Results of the EA evaluation	
TBD - Post NEPA	Completion of permits, licenses, and approvals	

6. Project Schedule

The following key milestones are anticipated for this project:

- Draft Purpose & Need Memorandum – July 2024
- Initiate NEPA process – July 2024
- Draft Alternatives Development and Screening Report – October 2024
- Public Meeting #1 – Purpose and Need, Alternatives, & Screening Criteria – October 2024
- Draft Noise Study & AJR – January 2025
- Draft NEPA EA Documentation – January 2025
- NEPA distribution & Public Meeting #2 – Preferred Alternative and draft NEPA results – July 2025
- Final Environmental Decision – Oct/Nov 2025

7. Agency Coordination Plan Revision History

The following Revision Log will be used to identify changes and updates to the Agency Coordination Plan.

Table 3: Revision Log

Version	Date	Document Name	Revision Description and why it is needed.
1		Draft Agency Coordination Plan	Original review draft

MoDOT

105 West Capitol Avenue
P.O. Box 270
Jefferson City, Missouri 65102

Missouri Department of Transportation
Ed Hassinger, Interim Director

573.751.2551
Fax: 573.751.6555
1.888.ASK MODOT (275.6636)

September 6, 2024

Ms. Tamra Wilson
Federal Assistance Clearinghouse
Office of Administration
State Capitol Building, Room 125
201 West Capitol Avenue, P.O. Box 809
Jefferson City, MO 65102

RE: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri

Dear Tamra Wilson:

To comply with the National Environmental Policy Act (NEPA) requirements and the Council on Environmental Quality (CEQ) regulations (40 CFR 1500 et seq.), the Missouri Department of Transportation (MoDOT) in coordination with the Mid-America Regional Council (MARC), the City of Kansas City, Missouri (KCMO), the City of Independence, Missouri, in coordination with the Federal Highway Administration (FHWA), has initiated an Environmental Assessment (EA) to expand the I-70 corridor from I-435 to I-470, focusing on addressing existing traffic and safety conditions along the corridor.

MoDOT is providing planning, conceptual design, and public engagement and outreach activities for the proposed project. The NEPA and conceptual design planning stages of the project are being conducted by MoDOT and coordinated with the FHWA to meet all applicable NEPA processes and state and federal technical design requirements related to Interstate highways.

The proposed project is in alignment with the identified needs and goals that are expressed in MARC's metropolitan transportation plan, Connected KC 2050. The purpose of the proposed project is to determine an improvement strategy for the I-70 corridor to reduce the potential for crashes and congestion, restore and maintain existing infrastructure, and improve accessibility and goods management.

FHWA has determined that the NEPA class of action for this project is an EA. Under NEPA, an EA is required to determine whether a federal action has the potential to cause significant environmental effects. If FHWA determines that the proposed action will not have a significant environmental impact, a Finding of No Significant Impact (FONSI) will be issued. If the EA determines the environmental impacts of the proposed Federal action will have significant impacts, an Environmental Impact Statement (EIS) must be prepared.

As part of the early coordination process for this EA, we are soliciting comments from your Agency regarding the proposed project as it relates to your Agency's area of expertise. Your comments and any supplied materials will help determine if the proposed improvement's impacts warrant further consideration. Your comments will be incorporated into the environmental planning process and EA document, as appropriate.

From: Hubbard, Patti <patti.hubbard@dnr.mo.gov>
Sent: Monday, September 9, 2024 4:00 PM
To: Jodie Puhr
Cc: Jamie Gregory
Subject: I-70 EA 435-470

External Email: Use caution when clicking on links, replying, or opening attachments.

Good Afternoon Jodie:

I received your letter in regard to the 1-70 Environmental Assessment from I-435 to 1-470. I oversee the pass-through side of the Land and Water Conservation Fund (LWCF) Grants for the State of Missouri. The City of Independence received two LWCF grants in 1985 to develop Van Hook Park located on Route 291 North of 1-70. Based on Project Location Map in Figure 1, Van Hook Park may be affected by this project. Since there is at least one LWCF Project Park within the project location, I would like to attend the meeting on October 9th. My email is patti.hubbard@dnr.mo.gov. Can you also send an invite to our new GRIP Director, Ryan Dunwoody, at ryan.dunwoody@dnr.mo.gov? He would like to attend this meeting with me.

Thank you,

Patti Hubbard
Outdoor Recreation Grants Planner
Grants Management Section, Missouri State Parks
573-751-8661
patti.hubbard@dnr.mo.gov

From: Weber, John S <John_S_Weber@fws.gov>
Sent: Monday, September 9, 2024 2:59 PM
To: Jamie Gregory
Cc: Brandon Yarbrough; Derek Vap; Jodie Puhr; Samantha J. Sawyer; Matthew Burcham
Subject: Re: [EXTERNAL] I-70 EA 435-470 - Agency Coordination Letter

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Greetings, Ms. Gregory,

Thank you for sending the notification of MoDOT's I-70 EA 435-470 Project NEPA. We do not have any initial comments for MoDOT, but look forward to coordinating with environmental staff on any Endangered Species Act review that may be required in the future.

Best,

John Weber
Field Office Supervisor
U.S. Fish & Wildlife Service
Missouri Ecological Services Field Office
Cell: 573-825-6048

From: Jamie Gregory <jagregory@hntb.com>
Sent: Friday, September 6, 2024 10:30 AM
To: Weber, John S <John_S_Weber@fws.gov>
Cc: Brandon Yarbrough <byarbrough@HNTB.com>; Derek Vap <dvap@HNTB.com>; Jodie Puhr <Jodie.puhr@modot.mo.gov>; Samantha J. Sawyer <samantha.sawyer@modot.mo.gov>; Matthew Burcham <matthew.burcham@modot.mo.gov>
Subject: [EXTERNAL] I-70 EA 435-470 - Agency Coordination Letter

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Good Morning,

Attached please find the first Agency Coordination letter for the I-70 Environmental Assessment: I-435 to I-470 project in Jackson County, Missouri.

Thank you,

Jamie Gregory, CEP-IT
Team Lead II - Planning
Tel (515) 259-8400
HNTB CORPORATION

601 E Locust Street, Suite 200 | Des Moines, IA 50309 | hntb.com

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This e-mail and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed. If you are NOT the intended recipient and receive this communication, please delete this message and any attachments. Thank you.

Rachel A. Campbell

From: Rost, Rebecca (FHWA) <rebecca.rost@dot.gov>
Sent: Thursday, September 12, 2024 4:22 PM
To: lfoster@iowas.org; akelley@iowas.org; CPershall@iowanation.org; srichardson@kawnation.com; iwilliams@kawnation.com; THPO@MiamiNation.com; luke.morris@osagenation-nsn.gov; s106@osagenation-nsn.gov; liana.hesler@ponca-nsn.gov; 106notifications@ponca-nsn.gov; tfoley@poncatribe-ne.org; gary.bahr@sacandfoxks.com; director.historic@meskwaki-nsn.gov; Chris.Boyd@sacandfoxnation-nsn.gov; tonya@shawnee-tribe.com; shaw@shawnee-tribe.com; sclemons@wyandottenation.org
Cc: Rachel A. Campbell
Subject: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri
Attachments: 2024-09-04- MoDOT_I-70_EA_Project Description.docx; I40 435 to 470 APE_ 20240801.kmz

To Whom It May Concern:

To comply with the National Environmental Policy Act (NEPA) requirements and the Council on Environmental Quality (CEQ) regulations (40 CFR 1500 et seq.), the Missouri Department of Transportation (MoDOT) in coordination with the Mid-America Regional Council (MARC), the City of Kansas City, Missouri (KCMO), the City of Independence, Missouri, and the Federal Highway Administration (FHWA), has initiated an Environmental Assessment (EA) to expand the I-70 corridor from I-435 to I-470, focusing on addressing existing traffic and safety conditions along the corridor. A study area map is enclosed with this letter.

MoDOT is providing planning, conceptual design, and public engagement and outreach activities for the proposed project. The NEPA and conceptual design planning stages of the project are being conducted by MoDOT and coordinated with the FHWA to meet all applicable NEPA processes and state and federal technical design requirements related to Interstate highways.

The proposed project is in alignment with the identified needs and goals that are expressed in MARC's metropolitan transportation plan, Connected KC 2050 (connectkc.org). The purpose of the proposed project is to determine an improvement strategy for the I-70 corridor to reduce the potential for crashes and congestion, restore and maintain existing infrastructure, and improve accessibility and goods management.

As part of the early coordination process for this EA and per Section 106 of the National Historic Preservation Act (NHPA), we are soliciting comments from your Tribe regarding the proposed project to determine if there would be an effect to cultural resources that may be of historical or religious significance to your Tribe. Comments and materials you supply will help determine if the proposed improvement's impacts warrant further consideration. Your comments will be incorporated into the environmental planning process and EA document, as appropriate. Any locational information regarding cultural resources will be kept confidential.

If you would like to request a Scoping Meeting, please respond to the contact listed below.

If you have any questions about the proposed project, please contact Jodie Puhr at (816) 607-2254 or by email at **Jodie.Puhr@modot.mo.gov** and copy me.

Sincerely,

Rebecca Rost
Environmental Protection Specialist

FHWA Missouri Division
3220 W. Edgewood, Suite H
Jefferson City, MO 65109
phone: 573-638-2623
email: rebecca.rost@dot.gov

From: Jodie Puhr <Jodie.Puhr@modot.mo.gov>
Sent: Thursday, September 12, 2024 10:55 AM
To: Shively, Matthew S CIV USARMY CENWK (USA)
Cc: Brandon Yarbrough; Jamie Gregory
Subject: RE: Invite Request: Oct 9 Scoping meeting, I-70 (435-470)

External Email: Use caution when clicking on links, replying, or opening attachments.

Matt,

Thank you for your response. I have your name down for the invite. We should be sending that out in the next week or so.

Thanks,

Jodie Puhr, PE
Transportation Project Manager
Missouri Department of Transportation
Kansas City District
Phone No. (816) 607-2254
Cell No. (816) 334-9732

From: Shively, Matthew S CIV USARMY CENWK (USA) <Matthew.S.Shively@usace.army.mil>
Sent: Thursday, September 12, 2024 9:19 AM
To: Jodie Puhr <Jodie.Puhr@modot.mo.gov>
Subject: Invite Request: Oct 9 Scoping meeting, I-70 (435-470)

Ms. Puhr,

Please include me on the invitation list for October 9 scoping meeting for the I-70 Environmental Assessment, I-435 to I-470 segment; to be held via Teams.

Respectfully,

Matt Shively
Regulatory Branch
USACE Kansas City District
(816) 389-3309 office
(816) 912-8583 cell

From: Reenan, James S CIV USARMY CENWK (USA) <James.S.Reenan@usace.army.mil>
Sent: Thursday, September 12, 2024 3:01 PM
To: Jamie Gregory; Jodie Puhr
Cc: Brandon Yarbrough; Derek Vap; Samantha J. Sawyer; Matthew Burcham
Subject: RE: I-70 EA 435-470 - Agency Coordination Letter

Importance: High

External Email: Use caution when clicking on links, replying, or opening attachments.

Received. The Corps of Engineers, Kansas City District, has no comments at this time. I will be the PM for this moving forward. Please provide me with the meeting link for the October 9th Agency Scoping Meeting.

Regards,

James S. Reenan
U.S. Army Corps of Engineers
WRDA 214 Program Manager; NWK/MVS
Regulatory Branch – Kansas City District
515 East High Street, Suite 202
Jefferson City, MO 65101
Office: (816) 389-3832
Telework: M, F /In-Office T, W, R

From: Hibbs, David R CIV USARMY CENWK (USA) <David.R.Hibbs@usace.army.mil>
Sent: Wednesday, September 11, 2024 3:58 PM
To: Jamie Gregory <jagregory@hntb.com>
Cc: Brandon Yarbrough <byarbrough@HNTB.com>; Derek Vap <dvap@HNTB.com>; Jodie Puhr <Jodie.puhr@modot.mo.gov>; Samantha J. Sawyer <samantha.sawyer@modot.mo.gov>; Matthew Burcham <matthew.burcham@modot.mo.gov>
Subject: RE: I-70 EA 435-470 - Agency Coordination Letter

Good afternoon, we received your email and letter. We'll be in touch with a project manager to coordinate this action moving forward.

Thanks,

David

David R. Hibbs
Chief, Regulatory Branch
Kansas City District, Corps of Engineers
816-389-3136 (Voice)
816-805-6163 (Cell)

http://www.nwk.usace.army.mil/Missions/RegulatoryBranch.aspx
****
Complete our Regulatory Service Survey at:
https://regulatory.ops.usace.army.mil/customer-service-survey/
****

From: Jamie Gregory <jagregory@hntb.com>
Sent: Friday, September 6, 2024 10:30 AM
To: Hibbs, David R CIV USARMY CENWK (USA) <David.R.Hibbs@usace.army.mil>
Cc: Brandon Yarbrough <byarbrough@HNTB.com>; Derek Vap <dvap@HNTB.com>; Jodie Puhr <Jodie.puhr@modot.mo.gov>; Samantha J. Sawyer <samantha.sawyer@modot.mo.gov>; Matthew Burcham <matthew.burcham@modot.mo.gov>
Subject: [Non-DoD Source] I-70 EA 435-470 - Agency Coordination Letter

Good Morning,

Attached please find the first Agency Coordination letter for the I-70 Environmental Assessment: I-435 to I-470 project in Jackson County, Missouri.

Thank you,

Jamie Gregory, CEP-IT
Team Lead II - Planning
Tel (515) 259-8400
HNTB CORPORATION
601 E Locust Street, Suite 200 | Des Moines, IA 50309 | hntb.com

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Michael L. Parson
Governor

State of Missouri
OFFICE OF ADMINISTRATION
Post Office Box 809
Jefferson City, Missouri 65102
Phone: (573) 751-1851

Kenneth J. Zellers
Commissioner

September 18, 2024

Jamie Gregory
105 West Capitol Ave
Jefferson City, MO 65102

Subject: 2503006
Legal Name: Missouri Department of Transportation
Agency:
Project Description: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County Missouir

The Missouri Federal Assistance Clearinghouse, in cooperation with state and local agencies interested or possibly affected, has completed the review on the above project application.

None of the agencies involved in the review had comments or recommendations to offer at this time. This concludes the Clearinghouse's review.

A copy of this letter is to be attached to the application as evidence of compliance with the State Clearinghouse requirements.

Sincerely,

Tamra Wilson

Tamra Wilson
Administrative Assistant

cc:

MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Michael L. Parson
Governor

Dru Buntin
Director

September 27, 2024

Jodie Puhr
105 West Capitol Avenue
Jefferson City, MO 65102

Dear Jodie,

The Missouri Department of Natural Resources appreciates the opportunity to review the materials for the I-70 EA: I-435 to I-470, Kansas City, Jackson County, Missouri project.

The department offers the following comments related to environmental considerations for use in evaluating your project's environmental impacts pursuant to National Environmental Policy Act as amended (42 U.S.C. §§ 4321, et seq.).

Project Location

The project location is in Jackson County along the I-70 corridor and passes through the municipalities of Blue Springs, Independence, and Kansas City The project location is bound by East 39th St. to the north edge, East 47th St and U.S. Highway 40 along the southern edge, Little Blue Parkway on the eastern edge, and Manchester Trafficway on the western edge. The following geographic descriptions apply to the approximate location of the study area.

Geographic Coordinates:
Start: 383945 E, 4321937 N
Stop: 369710 E, 4325154 N

Public Land Survey System:
T49N R31W S28, T49N R31W S29, T49N R31W S20,
T49N R31W S19, T49N R32W S24, T49N R32W S23,
T49N R32W S22, T49N R32W S21, T49N R32W S20,
T49N R32W S19, T49N R32W S18, T49N R33W S13

8-Digit Hydrologic Unit Code:
Lower Missouri-Crooked (10300101)

Ecological Drainage Unit:
Central Plains/Blackwater/Lamine

Geology and Geospatial Data

In this project portion of the I-70 corridor, the surficial materials range from 0-25 ft thick and consist of moderate to low permeability residuum and loess. The uppermost bedrock is the Kansas City group. It is approximately 200 feet thick and is composed of layered limestones, sandstones, and shales of low overall permeability.

If a full Geologic Assessment is required for a project, the Missouri Geological Survey can be contacted directly at 800-361-4827. Other maps showing natural and cultural resources can be found at https://dnr.mo.gov/land-geology/maps-data-research.

Karst Topography
There are two sinkholes near the project area. The project area is in the Blue Springs, Independence, and the Kansas City quadrangles. The Kansas City quadrangle has a cave density of 3.

There is one documented limestone surface mine within .25 miles of the project area, although it is not expected for this mine occurrence to impact the project. Springs, sinkholes, and caves are features on the landscape associated with karst topography that can act as direct conduits of surface water and pollutants to groundwater. As such, extra precaution should be taken to minimize disturbance of land in or around these features, and to avoid the introduction of pollutants to sensitive groundwater resources. Karst areas may also present the possibility of potential collapse.

Hazardous Waste
There are several hazardous substance sites within the bounds of the project area. The Beazer East and is located at 6740 Stadium Dr (near the western part of the proposed corridor). Information about the site can be found at https://apps5.mo.gov/ESTARTMAP/map/ESTARTMAP/map/summary.action?type=b&id=18268&areaId=jb3fae5c5e49d47fa9b5c32ce91947404/scratch/851d094f-7aa1-11ef-9c24-0a50409385a6.

Additionally, there are 14 Underground Storage Tanks (UST) or former UST sites within 250 feet of the indicated section of I-70. There are 42 documented USTs or former USTs within .25 miles of the total project area. Buried pipelines and other structures are commonly associated with UST facilities, and it is important to take note these locations if any excavation will be conducted for the project. For more information on these sites, please see https://apps5.mo.gov/ESTARTMAP).

In the event, that any activities encounter waste, the following technical bulletin would be useful: "Managing Construction and Demolition Waste." It will provide general disposal requirements for any waste discovered, and can be found on the department's web site at https://dnr.mo.gov/document-search/managing-construction-demolition-waste-pub2045/pub2045.

Wells
This project is located within the West Central Groundwater Province, and the bedrock units are within the Pennsylvanian Aquifer. Groundwater from this aquifer is of very poor quality and quantity and is rarely used in the Kansas City region. There are two active water wells within one mile of the project area. Though, it is unlikely that these wells would be impacted by the project.

There are 976 abandoned, soil, and other public wells near the project area. Wells can act as conduits of pollutants to groundwater resources. Abandoned wells should be plugged prior to any land disturbance, and care should be taken to utilize appropriate best management practices to protect any currently operating wells. For more information on locating and plugging wells, or

on private domestic wells, please visit the link below for the Department's Wellhead Protection Section webpage or contact the Department's Geological Survey Program directly. https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/wells-drilling.

Public Land:
There are no public lands located near the project area.

Conservation Opportunity Areas:
There are no Conservation Opportunity Areas (COA's) near the project area.

Water Protection

Best Management Practices

Best management practices should be utilized during project activities to limit the amount of sediment and other pollutants entering waters of the state, and to protect the water's chemical, physical, and biological characteristics. These practices include, but are not limited to, conducting work during low flow conditions whenever possible, keeping heavy equipment out of the water, and taking all necessary precautions to avoid the release of fuel or other waste products to streams and other waters. In addition, the Department encourages the preservation of existing riparian or buffer areas around each water resource to limit the amount of sediments or other pollutants entering the water. Any stream banks, riparian corridors, lake shores, or wetlands denuded of vegetation should be stabilized and re-vegetated as soon as is practicable.

Watershed Conditions

Public Drinking Water

The project area is in or around the Kansas City, and the Independence PDWS. There are three tanks near the project area. Proposed project personnel should be aware of nearby Public Drinking Water Districts. Work associated with any project should take into consideration the protection of surface and groundwater public drinking water supplies, implementing appropriate best management practices as necessary. For additional information regarding source water protection, please contact Ken Tomlin of the Department's Public Drinking Water Branch at 573-526-0269.

Designated Uses

Water Bodies with Specific Designated Uses

The proposed project area is in the watershed of the Missouri River, Blue River, and Little Blue River. Water bodies are assigned specific designated uses according to State of Missouri Water Quality regulations at 10 CSR 20-7.031(2). These waters are protected by numeric water quality criteria outlined in 10 CSR 20-7.031(5) and Table A, as well as general water quality criteria outlined at 10 CSR 20-7.031(4). Designated uses of The Missouri River, Blue River, and Little Blue River include the following:

- Protection and propagation of fish, shellfish, and wildlife – warm water habitat (WWH)
- Human health protection (HHP)
- Irrigation (IRR)
- Livestock and wildlife protection (LWP)
- Secondary contact recreation (SCR)

- Whole body contact recreation – Category B (WBC-B)
- Industrial water supply (IND)

Water Bodies without Specific Designated Uses
Water bodies that are not assigned specific designated uses are still protected by general water quality criteria outlined at 10 CSR 20-7.031(4) and are subject to the acute toxicity criteria of Tables A and B, as well as whole effluent toxicity conditions.

According to the National Wetlands Inventory https://www.fws.gov/wetlands/, there is the likelihood of freshwater wetlands and ponds within the riparian corridors of the Missouri River and Blue River. This project has the potential to impact wetlands, ponds, and the aforementioned tributaries and headwater streams to be impacted, depending on their proximity to land disturbance activities. Project sponsors should avoid such impacts through alternatives analysis before compensatory mitigation is considered. If wetlands, ponds, headwaters, or tributaries are not directly impacted but are near any land disturbance, project sponsors should take care to protect water quality. While these water bodies are not assigned specific designated uses, they are protected by Missouri's general water quality criteria.

Sensitive Waters
There are no sensitive waters in the project area for the following categories including waters designated for Cold Water Habitat, Outstanding National Resource Waters, Outstanding State Resource Waters, biocriteria reference locations, and losing streams.

Table F, Metropolitan No-Discharge Streams
The project area includes portions of the no-discharge watershed for Blue River and Little Blue River.

Project personnel should maintain compliance with 10 CSR 20-7.031(7) for any land disturbance activities that are within a Metropolitan No-Discharge stream's watershed. Discharge to metropolitan no-discharge streams is prohibited, except as specifically permitted at 10 CSR 20-7.031(7). These exceptions include uncontaminated cooling water, permitted stormwater discharges in compliance with permit conditions, and excess wet-weather bypasses not interfering with designated uses.

303(d) Impaired and 305(b) Threatened Waters
The Blue River is listed on the 303(d) list as impaired for *Escherichia coli*.
Rock Creek is listed on the 303(d) list as impaired for *Escherichia coli*.
Crackerneck Creek is listed on the 303(d) list as impaired for *Escherichia coli*.
The East Fork Little Blue River is listed on the 303(d) list as impaired for *Escherichia coli*.
The Little Blue River is listed on the 303(d) list as impaired for *Escherichia coli*.

Waters assessed by the department as threatened or impaired could potentially be impacted by projects. Project personnel should ensure that activities related to the project do not cause an increase in the pollutants impairing these waters nor re-suspend any pollutants that might be bound to sediment. Additional information can be found by contacting the department's Water Protection Program at 573-526-1446 or by vising the link below.
https://dnr.mo.gov/water/what-were-doing/water-planning/quality-standards-impaired-waters-total-maximum-daily-loads/impaired-waters

Waters with Approved Total Maximum Daily Loads
The area near the site includes the Missouri River TMDL for chlordane and PCB as well as the Blue River TMDL for Chlordane. The allocations for PCB are set at zero. Project actions should not contribute PCB to surface water.

Impairments should not be made worse by this project's activities. The department staff may require extra protections when developing permits or certifications to comply with total maximum daily load and wasteload allocations. Additional information can be found by contacting the department's Water Protection Program at 573-526-1446 or by visiting the link below.
https://dnr.mo.gov/water/what-were-doing/water-planning/quality-standards-impaired-waters-total-maximum-daily-loads/tmdls

The above comments concern potential environmental impacts related to air, land, and water. Feedback on this project related to the other topics should be directed as described below:

- Historic Preservation: Project personnel should check with the department's State Historic Preservation Office to determine if a Section 106 Review is needed. Information on the Section 106 Review can be found on the department's web site at www.mostateparks.com/page/84261/section-106-review or by contacting the State Historic Preservation Office at 573-751-7858 (do they have a general email we can add?).
- Floodplain: For information concerning flood plains impacts, contact the Missouri State Emergency Management Agency, Floodplain Management and Mitigation Branch, at 573-526-9100 or2302 Militia Drive, Jefferson City, MO 65101.
- Endangered Species: The MDC is responsible for collecting and managing information on the location and status of endangered species in the state. Contact MDC's Endangered Species Coordinator at 573-751-4115 or P.O. Box 180, Jefferson City, MO 65102 for information about endangered species impacts.

We appreciate the opportunity to provide comments for the proposed project. If you have any questions or need clarification, please contact me at 573-522-6221.

Sincerely,

Hannah Humphrey

Hannah Humphrey
Deputy Director

HH/rab

From: Jodie Puhr <Jodie.Puhr@modot.mo.gov>
Sent: Wednesday, October 2, 2024 1:42 PM
To: Jamie Gregory; Brandon Yarbrough
Subject: FW: I-70 EA 435-470

External Email: Use caution when clicking on links, replying, or opening attachments.

Can you add Austin to the invite for Wednesday's meeting?

Thanks,
Jodie

From: Jodie Puhr
Sent: Wednesday, October 2, 2024 1:41 PM
To: Jordan Meyer <Jordan.Meyer@mdc.mo.gov>
Cc: Austin Foley <Austin.Foley@mdc.mo.gov>
Subject: RE: I-70 EA 435-470

Jordan,

Thanks for reaching out. I will get Austin added to the invite.

Thanks,

Jodie Puhr, PE
Transportation Project Manager
Missouri Department of Transportation
Kansas City District
Phone No. (816) 607-2254
Cell No. (816) 334-9732

From: Jordan Meyer <Jordan.Meyer@mdc.mo.gov>
Sent: Wednesday, October 2, 2024 1:39 PM
To: Jodie Puhr <Jodie.Puhr@modot.mo.gov>
Cc: Austin Foley <Austin.Foley@mdc.mo.gov>
Subject: I-70 EA 435-470

Hi Jodie,

The Missouri Department of Conservation would be interested in attending the agency meeting regarding the I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri project. I typically serve as the point of contact for MDC on the technical advising of transportation projects, though local staff and I have schedule conflicts for the meeting next week on the 9th. Attending in our place will be Policy Specialist, Austin Foley (CC'ed), he will collect notes on our behalf and further comment may follow.

Thank you for the opportunity to coordinate on this project,

Jordan James Meyer (he/him/his)
Policy Coordinator

MO Dept. of Conservation
2901 W. Truman Blvd
PO Box 180
Jefferson City, MO, 65102
573-522-4115 ext 3197

From: Jodie Puhr <Jodie.Puhr@modot.mo.gov>
Sent: Monday, October 7, 2024 12:59 PM
To: Jamie Gregory; Brandon Yarbrough
Cc: Derek Vap
Subject: FW: EPA Scoping Comments - I-70 (I-435 to I-470) Project

External Email: Use caution when clicking on links, replying, or opening attachments.

FYI

From: Sedlacek, Michael <Sedlacek.Michael@epa.gov>
Sent: Monday, October 7, 2024 12:17 PM
To: Jodie Puhr <Jodie.Puhr@modot.mo.gov>
Subject: EPA Scoping Comments - I-70 (I-435 to I-470) Project

Dear Ms. Puhr:

The U.S. Environmental Protection Agency (EPA) Region 7 (Iowa, Kansas, Missouri, and Nebraska) has reviewed the project scoping document for the I-70 (I-435 to I-470) Project, Jackson County, Missouri. The following comments were prepared in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

NEPAssist

We recommend using NEPAssist as the first step to identify any potential environmental and human health concerns. NEPAssist may be accessed at: https://nepassisttool.epa.gov/nepassist/nepamap.aspx.

Water Quality

EPA recommends that the NEPA document identify any nearby impaired waterbodies and describe how the proposed actions may affect those waterbodies under Section 303(d) of the Clean Water Act. A list of impaired waterbodies and points of contact for EPA Region 7 and each state is found at: https://www.epa.gov/tmdl/impaired-waters-and-tmdls-region-7.

Wetlands/404(b) Considerations

EPA recommends that the NEPA document explain how the Clean Water Act (CWA) Section 404(b)(1) guidelines have been applied to both stream and wetland impacts. The Section 404 (b)(1) guidelines call for the Least Environmentally Damaging Practicable Alternative (LEDPA) to be selected to address impacts to wetlands, streams, and other waters of the United States. The guidelines also require the sequence of first avoiding, then minimizing, and finally mitigating for any impacts to aquatic resources.

EPA recommends that the NEPA document discuss proposed mitigation for unavoidable, minimized stream and wetland impacts (if applicable).

EPA recommends that any mitigation should occur in the same hydraulic unit code (HUC) 8 or smaller watershed as the location of the project impacts. We urge you to contact the appropriate authorities at the U.S. Army Corps of Engineers (USACE) at: https://www.usace.army.mil/missions/civil-works/Regulatory-Program-and-permits/Obtain-a-Permit/ to determine if a CWA Section 404 permit may be required for the proposed project. To find the appropriate EPA Region 7 contact, see: https://www.epa.gov/wetlands/forms/contact-us-about-wetlands#r7.

Air Quality Best Management Practices at Construction Sites

Temporary fugitive dust and diesel exhaust emissions from construction activities, such as use of heavy machinery and material hauling, would occur. In 2012, the International Agency for Research on Cancer concluded that diesel exhaust is carcinogenic to humans. Diesel exhaust can also lead to other serious health conditions and can worsen

heart and lung disease. We recommend implementing air quality best management practices (BMP) and mitigation measures for this project. Examples include:

- Use equipment that runs on clean, alternative fuels (e.g., ethanol or ultra-low sulfur diesel) or electric vehicles.
- Minimize engine idling (e.g., 5-10 minutes/hour) or establish an anti-idling policy.
- Use electric starting aids such as block heaters with older vehicles to warm the engine.
- Phase project construction to minimize exposed surface areas.
- Install wind fencing and phase grading operations where appropriate.
- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.
- Stabilize storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative, where appropriate.
- Use enclosed, climate-controlled cabs pressurized and equipped with high-efficiency particulate air (HEPA) filters to reduce the operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any incoming air is filtered first.
- Specify how impacts to sensitive receptors (e.g., communities living with environmental justice (EJ) concerns, children, elderly, and the infirm) will be avoided or minimized.
- Per Executive Order 13045 on Children's Health, EPA recommends the lead agency and project proponent pay particular attention to worksite proximity to places where children live, learn, and play, such as homes, schools, and playgrounds.

Stormwater Management

EPA recommends all construction activity that disturbs one or more acres be covered by a stormwater permit before any soil is disturbed at the project site. The permit coverage must be continued until all construction is completed and the ground is completely stabilized with a permanent vegetative cover. EPA recommends contacting [state regulatory agency name], as well as the appropriate county and/or municipality, to determine the best method of compliance with local and state ordinances and standards.

EPA also recommends Installing "green" stormwater management features, such as stormwater retention/detention basins, permeable pavement, rain gardens, rainwater cisterns, and/or over-sized culverts and bridges (see: https://www.epa.gov/green-infrastructure). For more information, or to find the appropriate EPA Region 7 contact, see: https://www.epa.gov/npdes-permits/forms/contact-us-about-npdes-permits-around-nation#r7.

Erosion and Sediment Control

EPA recommends erosion and sediment control methods be implemented into the proposed project. For examples of erosion and sediment control methods, see: https://www3.epa.gov/npdes/pubs/ch4-3a.htm.

Climate Change Resiliency and Adaptation

The Fifth National Climate Assessment (https://nca2023.globalchange.gov/) finds that in the Midwest, extreme heat, drought, severe weather, heavy downpours, and flooding will affect infrastructure, health, air, and water quality. Acute storm events are occurring with increasing frequency and intensity. EPA recommends that the NEPA document consider adaptation and mitigation strategies, such as:

- Consider the effect of extreme heat, extreme cold, and wind resistance, on the durability and strength of the construction materials being used. For instance, consider using lighter-colored materials that will help reflect heat and avoid heat absorption on hot days.
- Consider the effect of flooding on the design of any structure(s). For instance, if a project must be located within a 100-year floodplain, consider building any structures on elevated support beams instead of on a concrete foundation.
- Construct cool pavement to reflect solar energy, enhance evaporation, and offset the urban heat island effect in urban areas.
- Consider planting additional trees and vegetation to help moderate air temperature, provide shade, and trap and store carbon dioxide.

Additional climate change mitigation and adaptation strategies that may be implemented in this proposed project are available at EPA's Climate Change Resiliency and Adaptation Resource Center: https://www.epa.gov/arc-

x/planning-climate-change-adaptation. Climate change summaries and adaptation and mitigation strategies are also available for individual states, regions, impact types, and sectors at: https://www.epa.gov/climateimpacts.

Environmental Justice and Children's Health
EPA recommends using EJScreen (https://www.epa.gov/ejscreen) as the first step to identify communities living with Environmental Justice (EJ) concerns near the project area. EPA recommends that any affected communities living with EJ concerns be identified and given an opportunity to provide input into the remainder of the NEPA process, including proposed mitigation, if applicable.

EPA recommends that the NEPA document include information describing what was or will be done to inform these communities about the project and the potential impacts it may have on their communities, what input has been received to date from the communities, and how that input was or will be used in decision-making. Additional information may be found in: *Promising Practices for EJ Methodologies in NEPA Reviews* (https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf), and *Community Guide to Environmental Justice and NEPA Methods* (https://www.energy.gov/sites/default/files/2019/05/f63/NEPA%20Community%20Guide%202019.pdf). If you have any questions about EJ or would like EPA's help reaching out to the communities that may be affected by this project, see: https://www.epa.gov/environmentaljustice/environmental-justice-your-community#region7.

Demolition Activities
The scope of this proposed project may include demolition activities. EPA recommends testing structures to be demolished (and the soil beneath those structures) for lead paint, asbestos, mercury, polychlorinated biphenyl compounds (PCB), lead paint, asbestos, Per- and polyfluoroalkyl (PFAS) substances, and organic petroleum compounds. EPA recommends that any contaminated material that cannot be remediated, be disposed of in accordance with federal and state regulations before planting vegetation in the affected area.

EPA recommends reuse and/or recycling of construction debris to the maximum extent possible. For more information, see: https://www.epa.gov/smm/sustainable-management-construction-and-demolition-materials. To identify a point of contact for a specific state, see: https://www.epa.gov/large-scale-residential-demolition/state-demolition-information.

Energy Efficiency
For new structures associated with the proposed project, EPA encourages the use of energy-efficient and/or sustainable building materials, such as south-facing skylights and windows, motion-sensor lighting, adding additional insulation, and Energy Star certified windows, doors, and appliances. We also recommend installing renewable energy sources, such as solar panels. See: https://www.epa.gov/energy/reduce-environmental-impact-your-energy-use and Section 438 of the Energy Independence and Security Act (EISA) for examples of how to integrate energy efficiency into Federal projects.

Consultation Documentation
EPA recommends attaching to the NEPA document interagency consultation documents regarding historic and cultural resources (Missouri State Historic Preservation Office), wetlands and streams (U.S. Army Corps of Engineers), Federal and state threatened and endangered species (U.S. Fish and Wildlife Service and Missouri Department of Conservation), and nation-to-nation consultation for potentially affected Tribal governments.

Noise and Vibrations
Noise and vibration impacts may occur as part of the proposed project. EPA recommends that the NEPA document include the following:

- Maps and tables to disclose where noise and vibrations are expected to occur, as well as the intensity.
- Explain who is responsible for noise and vibrations mitigation.
- Collaborate with potentially impacted communities to hold public meetings to gather public input on proposed noise and vibration mitigation.
- Specific noise and vibrations mitigation measures.

For more information, see: https://www.epa.gov/laws-regulations/summary-noise-control-act.

Noxious Weeds and Invasive Species

The spread of noxious weeds and invasive (non-indigenous) plants is a threat to biodiversity. Many noxious weeds can out-compete native plants and produce a monoculture that has little or no plant species diversity or benefit to wildlife. Noxious weeds tend to gain a foothold where there is disturbance in the ecosystem. Studies show that new roads and pipeline/utility rights-of-way can become a pathway for the spread of invasive plants. Early recognition and control of new infestations is essential to stopping the spread of infestation and avoiding future widespread use of herbicides, which could correspondingly have more adverse impacts on biodiversity and nearby water quality. For more information on preventing or controlling noxious weeds and invasive species, see: https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases/sa_weeds/sa_noxious_weeds_program.

Habitat Connectivity

Large projects (e.g., solar farms) and linear projects (e.g., highways) often separate habitat areas, causing wildlife and/or aquatic life displacements, and subsequent safety issues. EPA recommends installing wildlife crossings and/or wildlife corridors in areas of the project that are known to have suitable habitat, such as known wildlife paths. For more information on the benefits of wildlife crossings and wildlife corridors, see: https://highways.dot.gov/federal-lands/programs/wildlife-crossings and https://www.fws.gov/story/wildlife-corridors.

Electronic Recordkeeping

In compliance with the National Archives' electronic records regulations, we request all NEPA project documents be emailed in electronic format to: R7_NEPA@epa.gov.

We appreciate your consideration of our recommendations. These comments are intended to help ensure a thorough assessment of the project's environmental impacts, adequate public disclosure, and an informed decision-making process. If you have any questions concerning our review, please contact Mike Sedlacek at sedlacek.michael@epa.gov or 913-551-7208.

Sincerely,

Mike Sedlacek
National Environmental Policy Act Program
Community and Environmental Review Branch
Environmental Justice, Community Engagement & Environmental Review Division
U.S. Environmental Protection Agency, Region 7
11201 Renner Boulevard
Lenexa, Kansas 66219
(913) 551-7208
Sedlacek.michael@epa.gov

From: Jodie Puhr <Jodie.Puhr@modot.mo.gov>
Sent: Monday, September 30, 2024 8:22 AM
To: Jamie Gregory; Brandon Yarbrough
Subject: FW: Agency Scoping Meeting

External Email: Use caution when clicking on links, replying, or opening attachments.

Can you add the person below to the meeting next week?

Thanks,
Jodie

From: Iven, Desiree <Desiree.Iven@sema.dps.mo.gov>
Sent: Monday, September 30, 2024 8:17 AM
To: Jodie Puhr <Jodie.Puhr@modot.mo.gov>
Subject: Agency Scoping Meeting

Good morning,
SEMA Director James Remillard would like to attend the meeting on October 9th.
Could you please send the link to james.remillard@sema.dps.mo.gov
Thank you

Thank you,
DESIREE IVEN - EXECUTIVE ADMINISTRATIVE SUPPORT ASSISTANT
State Emergency Management Agency
Executive Branch
State of Missouri, Department of Public Safety
2302 Militia Drive
P.O. Box 116
Jefferson City, MO 65101
Telephone: (573) 526-9104 **Cell:** (573) 536-8849
Fax: (573) 526- 9194
Desiree.Iven@sema.dps.mo.gov

From: Bilke, Nathan - FPAC-NRCS, MO <nathan.bilke@usda.gov>
Sent: Thursday, October 31, 2024 11:10 AM
To: Jodie Puhr
Cc: Jamie Gregory
Subject: I-70 EA 435-470 - Agency Coordination Letter
Attachments: USDA_I-70_EA_Letter.pdf; I70_I435 to I470 _KansasCity_JacksonCounty_Missouri_Environmental Review Response 10_31_24.pdf

External Email: Use caution when clicking on links, replying, or opening attachments.

Jodie,

Please see the attached response per your request.

Nathan S. Bilke
Area Soil Scientist
USDA Natural Resource Conservation Service
3915 Oakland Avenue, Suite 103
St. Joseph, Missouri 64506-4920
Cell #660-654-4576
Office Phone: 816-364-3927
nathan.bilke@mo.usda.gov

"It is not the critic who counts; not the man who points out how the strong man stumbles...the credit belongs to the man in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who at his worst, if he fails, at least fails while daring greatly, so that his place shall never be with those cold and timid souls who neither know victory nor defeat."

Teddy Roosevelt

From: Jamie Gregory <jagregory@hntb.com>
Sent: Friday, September 6, 2024 10:30 AM
To: Lugo-Camacho, Jorge - FPAC-NRCS, MO <jorge.lugo-camacho@usda.gov>
Cc: Brandon Yarbrough <byarbrough@HNTB.com>; Derek Vap <dvap@HNTB.com>; Jodie Puhr <Jodie.puhr@modot.mo.gov>; Samantha J. Sawyer <samantha.sawyer@modot.mo.gov>; Matthew Burcham <matthew.burcham@modot.mo.gov>
Subject: [External Email]I-70 EA 435-470 - Agency Coordination Letter

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Good Morning,

Attached please find the first Agency Coordination letter for the I-70 Environmental Assessment: I-435 to I-470 project in Jackson County, Missouri.

Thank you,

Jamie Gregory, CEP-IT

Team Lead II - Planning
Tel (515) 259-8400
HNTB CORPORATION
601 E Locust Street, Suite 200 | Des Moines, IA 50309 | hntb.com

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United States Department of Agriculture

USDA

NRCS Natural Resources Conservation Service

3915 Oakland Avenue, Suite 103, St. Joseph, MO. 64506

October 31, 2024

Jodie Puhr
MoDot Project Manager
Missouri Department of Transportation
105 West Capitol Avenue
P.O. Box 270
Jefferson City, Missouri 65102

Dear Jodie Puhr,

This letter is in response to your I-70: I-435-I470 Kansas City, Jackson County Missouri Environmental Assessment Letter dated September 6, 2024. The letter was sent to the NRCS Missouri State Soil Scientist in Columbia, Missouri and then forwarded to me. The following comments pertain to the I-70 project in Jackson County, Missouri. I have reviewed the proposed project and offer the following information for consideration in your environmental report:

1. Background Information-In 1981, the U.S. Congress passed the Farmland Protection Policy Act (FPPA) which directs USDA through NRCS to provide technical assistance to Federal agencies, and State and local governments or organizations that desire to develop programs or policies to limit the conversion of productive farmlands to non-agricultural uses.

2. The Goal of FPPA- is to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of important farmland to nonagricultural uses. More information is available at the FPPA web site-
Farmland Protection Policy Act | Natural Resources Conservation Service (usda.gov)

   As the web site explains, if areas are considered already in urban use, or are on existing right of way purchased before August 4th, 1984, then FPPA does not apply.
   You can obtain site specific acres of prime farmland, and farmland of statewide importance by utilizing the Web Soil Survey. http://websoilsurvey.nrcs.usda.gov/app/

3. Review of the Proposed Project-Areas where distribution facilities or lines are constructed within road and highway right of ways, are determined "previously converted" to non-agricultural uses. Areas where the poles and guy wires are installed in cultivated fields and pastures will have only a minor impact on the conversion of important farmlands. Generally, buried cables and pipelines will not cause the conversion of important farmlands. **If any areas can no longer be farmed due to new construction, or restricted access, they are subject to FPPA and a form AD-1006 should be completed.** Cropland, forest, grassland, are included in the definition of agricultural land. If final construction does not eliminate any

land from agricultural crop production, then FPPA does not apply. Construction for national defense purposes are exempt from the FPPA- Farmland Protection Policy Act.

4. The NRCS County Hydric soil lists can be obtained at the county NRCS field office, and on the Web Soil Survey. Hydric soils are soils that show properties of long-term saturation and have a high probability of being classified as a wetland. The Hydric soil list is also online at the NRCS Web Soil Survey. If needed, site specific wetland determinations for non-agricultural purposes can be requested from the U.S. Army Corps of Engineers, or from private consulting firms. NRCS does not complete wetland determinations for non-agricultural projects.

5. Erosion Considerations-If your project includes trenching, or construction activity that would destroy grass or vegetative cover, we recommend special attention be given to areas subject to soil erosion caused by rain and water flow. Even though most trenches are narrow, soil erosion can still be a significant hazard on slopes greater than 2 percent. Vegetation should be promptly reestablished on disturbed areas. The Missouri NRCS Critical Area Planting specification sheet can be accessed on the electronic field office tech guide at NATURAL RESOURCES CONSERVATION SERVICE (usda.gov).

6. Soil chemical and physical properties based on the county soil survey can be accessed on Web Soil Survey. This would include soils data regarding saturated hydraulic conductivity, and soil particle size distribution. The soil survey is a general planning tool and should not be substituted for site specific soil investigations, or soil laboratory analysis.

7. Endangered Species- Some species may fall under state, and or, federal protection. If you have not already done so, I recommend that you contact the Missouri Department of Conservation regarding specific threatened and endangered species in the project area. MDC can be contacted at 2901 W. Truman Blvd, P.O Box 180, Jefferson City, MO. 65102, phone- 573-751-4115.

If you have any questions, please call me at 660-654-4576

Sincerely,

Nathan S. Bilke

Nathan S. Bilke
Area Resource Soil Scientist

cc: Diane Bradley-Redden, Area Conservationist, St. Joseph, MO
Jorge L. Lugo-Camacho, State Soil Scientist, Columbia, MO

From:	Alan Kelley
To:	Rebecca Rost
Cc:	lfoster@iowas.org; CPershall@iowanation.org; srichardson@kawnation.com; iwilliams@kawnation.com; THPO@MiamiNation.com; luke.morris@osagenation-nsn.gov; s106@osagenation-nsn.gov; liana.hesler@ponca-nsn.gov; 106notifications@ponca-nsn.gov; tfoley@poncatribe-ne.org; gary.bahr@sacandfoxks.com; director.historic@meskwaki-nsn.gov; Chris.Boyd@sacandfoxnation-nsn.gov; tonya@shawnee-tribe.com; shaw@shawnee-tribe.com; sclemons@wyandottenation.org; Rachel A. Campbell
Subject:	Re: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri
Date:	Saturday, September 14, 2024 3:30:51 PM

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Thank you for the information. No Comments at this Time. if I get time I will give Jodie a call most of the next Two weeks.

Alan

On Thu, Sep 12, 2024 at 4:21 PM Rost, Rebecca (FHWA) <rebecca.rost@dot.gov> wrote:

> To Whom It May Concern:
>
>
>
> To comply with the National Environmental Policy Act (NEPA) requirements and the Council on Environmental Quality (CEQ) regulations (40 CFR 1500 et seq.), the Missouri Department of Transportation (MoDOT) in coordination with the Mid-America Regional Council (MARC), the City of Kansas City, Missouri (KCMO), the City of Independence, Missouri, and the Federal Highway Administration (FHWA), has initiated an Environmental Assessment (EA) to expand the I-70 corridor from I-435 to I-470, focusing on addressing existing traffic and safety conditions along the corridor. A study area map is enclosed with this letter.
>
> MoDOT is providing planning, conceptual design, and public engagement and outreach activities for the proposed project. The NEPA and conceptual design planning stages of the project are being conducted by MoDOT and coordinated with the FHWA to meet all applicable NEPA processes and state and federal technical design requirements related to Interstate highways.
>
> The proposed project is in alignment with the identified needs and goals that are expressed in MARC's metropolitan transportation plan, Connected KC 2050 (connectkc.org). The purpose of the proposed project is to determine an improvement strategy for the I-70 corridor to reduce the potential for crashes and congestion, restore and maintain existing infrastructure, and improve accessibility and goods management.
>
> As part of the early coordination process for this EA and per Section 106 of the National Historic Preservation Act (NHPA), we are soliciting comments from your Tribe regarding the proposed project to determine if there would be an effect to cultural resources that may be of historical or religious significance to your Tribe. Comments and materials you supply will help determine if the proposed improvement's impacts warrant further consideration. Your comments will be incorporated into the environmental planning process and EA document, as appropriate. Any locational information regarding cultural resources will be kept confidential.
>
> If you would like to request a Scoping Meeting, please respond to the contact listed below.
>
> If you have any questions about the proposed project, please contact Jodie Puhr at (816) 607-2254 or by email at Jodie.Puhr@modot.mo.gov and copy me.
>
>

>
> Sincerely,
>
>
>
> Rebecca Rost
>
> Environmental Protection Specialist
>
> FHWA Missouri Division
>
> 3220 W. Edgewood, Suite H
>
> Jefferson City, MO 65109
>
> phone: 573-638-2623
>
> email: rebecca.rost@dot.gov
>
>

--
Alan Kelley
Deputy THPO
Iowa Tribe of KS & NE
3345 Thrasher RD
White Cloud KS 66094
785-351-0080

From: Laserfiche Notification
To: Rebecca Rost
Subject: Section 106 Consultation - I-70 Environmental Assessment (EA): I-435 to I-470,
Date: Thursday, October 31, 2024 11:36:17 AM

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

This email is in response to I-70 Environmental Assessment (EA): I-435 to I-470,.

The Shawnee Tribe's Tribal Historic Preservation Department concurs that no known historic properties will be negatively impacted by this project. However, there is still potential for the discovery of unknown resources. We would like to accept your invitation for consultation.

We have no issues or concerns at this time, but in the event archaeological materials are encountered during construction, use, or maintenance of this location, please re-notify us at that time as we would like to resume immediate consultation under such a circumstance.

If you have any questions, you may contact me via email at Section106@shawnee-tribe.com

MoDOT

105 West Capitol Avenue
P.O. Box 270
Jefferson City, Missouri 65102

Missouri Department of Transportation
Ed Hassinger, Interim Director

573.751.2551
Fax: 573.751.6555
1.888.ASK MODOT (275.6636)

September 6, 2024

Teri Toye
Regional Environmental Officer
Federal Emergency Management Agency
11224 Holmes Road
Kansas City, MO 64131

RE: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri

Dear Teri Toye:

To comply with the National Environmental Policy Act (NEPA) requirements and the Council on Environmental Quality (CEQ) regulations (40 CFR 1500 et seq.), the Missouri Department of Transportation (MoDOT) in coordination with the Mid-America Regional Council (MARC), the City of Kansas City, Missouri (KCMO), the City of Independence, Missouri, in coordination with the Federal Highway Administration (FHWA), has initiated an Environmental Assessment (EA) to expand the I-70 corridor from I-435 to I-470, focusing on addressing existing traffic and safety conditions along the corridor.

MoDOT is providing planning, conceptual design, and public engagement and outreach activities for the proposed project. The NEPA and conceptual design planning stages of the project are being conducted by MoDOT and coordinated with the FHWA to meet all applicable NEPA processes and state and federal technical design requirements related to Interstate highways.

The proposed project is in alignment with the identified needs and goals that are expressed in MARC's metropolitan transportation plan, Connected KC 2050. The purpose of the proposed project is to determine an improvement strategy for the I-70 corridor to reduce the potential for crashes and congestion, restore and maintain existing infrastructure, and improve accessibility and goods management.

FHWA has determined that the NEPA class of action for this project is an EA. Under NEPA, an EA is required to determine whether a federal action has the potential to cause significant environmental effects. If FHWA determines that the proposed action will not have a significant environmental impact, a Finding of No Significant Impact (FONSI) will be issued. If the EA determines the environmental impacts of the proposed Federal action will have significant impacts, an Environmental Impact Statement (EIS) must be prepared.

As part of the early coordination process for this EA, we are soliciting comments from your Agency regarding the proposed project as it relates to your Agency's area of expertise. Your comments and any supplied materials will help determine if the proposed improvement's impacts warrant further consideration. Your comments will be incorporated into the environmental planning process and EA document, as appropriate.

MoDOT

105 West Capitol Avenue
P.O. Box 270
Jefferson City, Missouri 65102

Missouri Department of Transportation
Ed Hassinger, Interim Director

573.751.2551
Fax: 573.751.6555
1.888.ASK MODOT (275.6636)

The enclosed Project Description identifies the nature and location of the proposed improvements.

An Agency Scoping Meeting will be held at 1pm on Wednesday, October 9th via Microsoft Teams. If your agency would like to attend, please respond to the contact listed below for the meeting link. This meeting will be recorded for those unable to attend live and can be made available upon request.

To remain on schedule, send your response and comments to our office within 30 days of receipt of this letter. If you have any questions about the proposed project, please contact me at (816) 617-2254 or by email at **Jodie.Puhr@modot.mo.gov**.

Sincerely,

Jodie Puhr
MoDOT Project Manager

Enclosures:
Project Description

Project Description

Since its original construction more than 50 years ago, I-70 has been a vital lifeline for moving people and goods across Missouri and beyond. This project is one of several which would modernize the I-70 corridor across the state. I-70 from I-435 to I-470 provides a critical link to the central region of the United States, particularly for freight traffic, and is a key access point for the Kansas City region.

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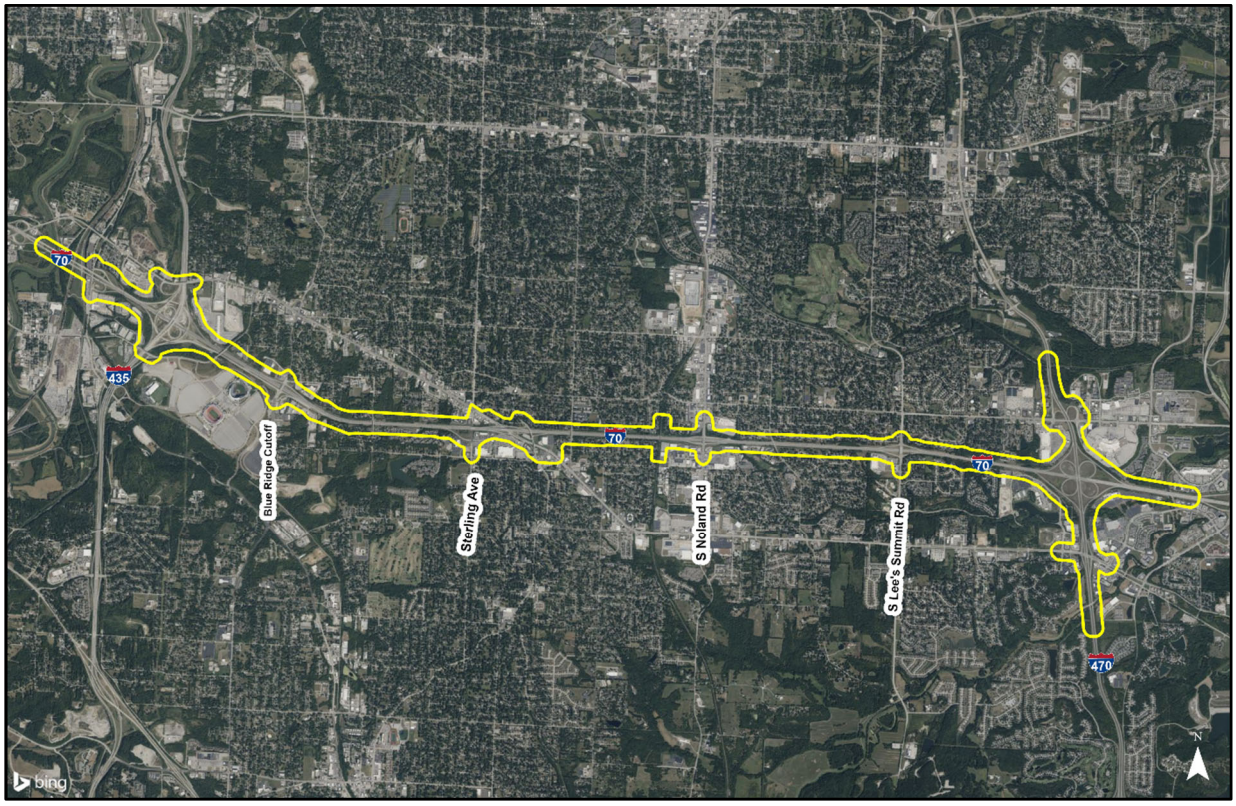

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MoDOT

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Missouri Department of Transportation
Ed Hassinger, Interim Director

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Fax: 573.751.6555
1.888.ASK MODOT (275.6636)

September 6, 2024

Mr. Jordan Meyer
Policy Coordination
Missouri Department of Conservation
P.O. Box 180
Jefferson City, MO 65102

RE: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri

Dear Jordan Meyer:

To comply with the National Environmental Policy Act (NEPA) requirements and the Council on Environmental Quality (CEQ) regulations (40 CFR 1500 et seq.), the Missouri Department of Transportation (MoDOT) in coordination with the Mid-America Regional Council (MARC), the City of Kansas City, Missouri (KCMO), the City of Independence, Missouri, in coordination with the Federal Highway Administration (FHWA), has initiated an Environmental Assessment (EA) to expand the I-70 corridor from I-435 to I-470, focusing on addressing existing traffic and safety conditions along the corridor.

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Sincerely,

Jodie Puhr
MoDOT Project Manager

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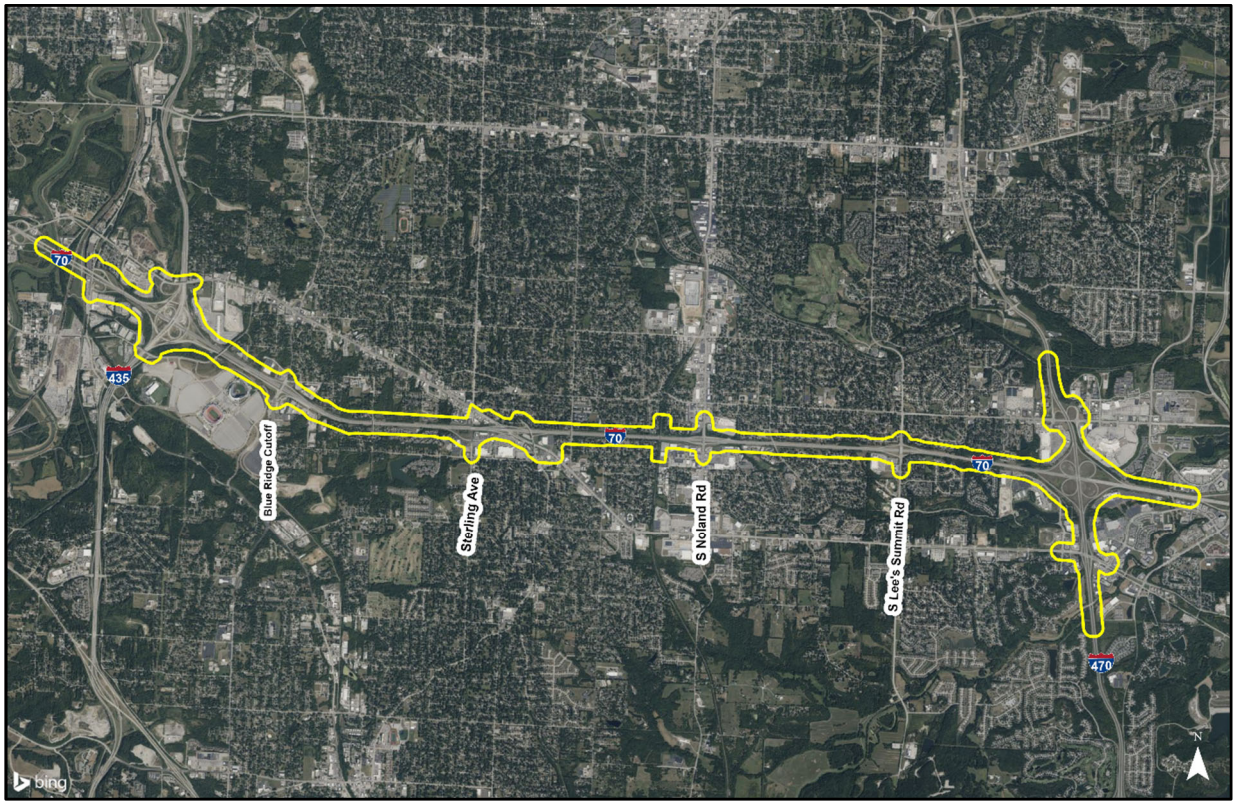

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September 6, 2024

Ms. Patti Hubbard
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

RE: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri

Dear Patti Hubbard:

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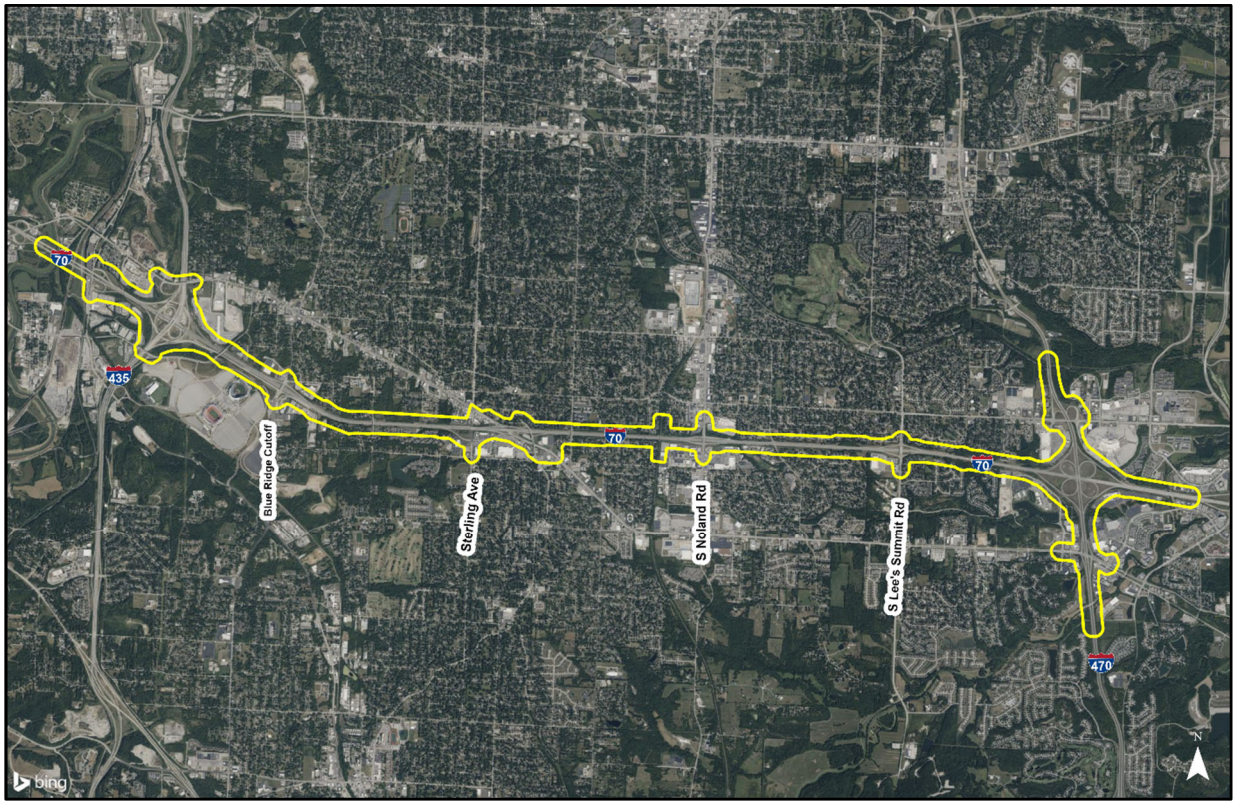

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September 6, 2024

Mr. Ryan Dunwoody
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

RE: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri

Dear Ryan Dunwoody:

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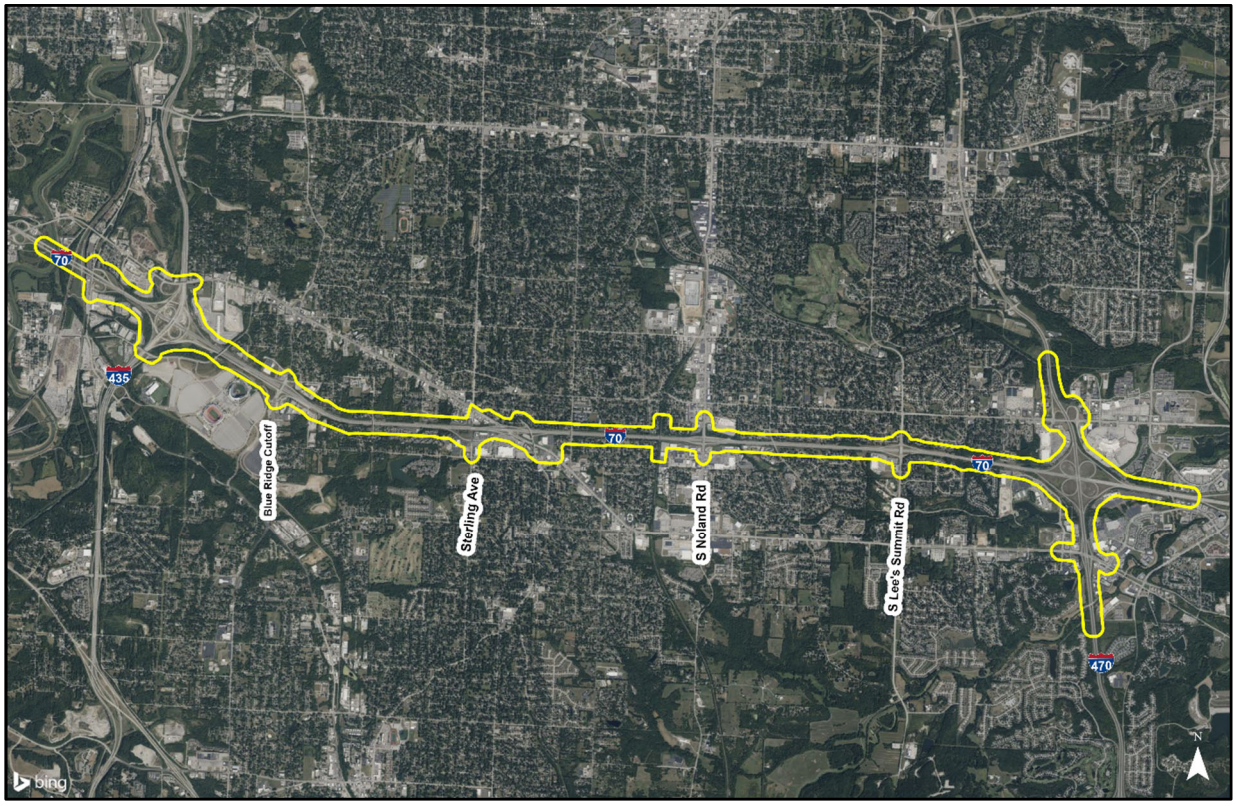

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September 6, 2024

Ms. Melissa Newman
Executive Assistant
Director's Office
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

RE: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri

Dear Missy Newman:

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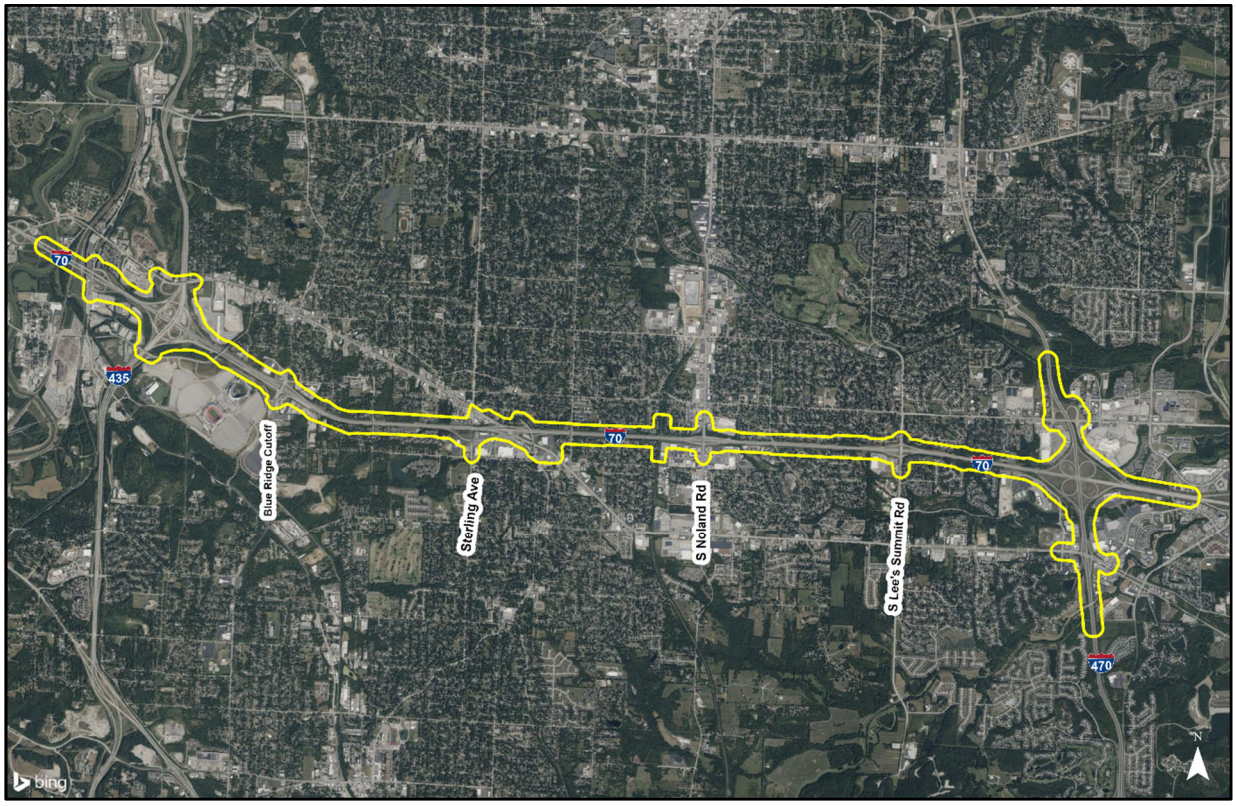

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Mr. James Remillard
State Emergency Management Agency
2302 Militia Drive
P.O. Box 116
Jefferson City, MO 65102

RE: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri

Dear James Remillard:

To comply with the National Environmental Policy Act (NEPA) requirements and the Council on Environmental Quality (CEQ) regulations (40 CFR 1500 et seq.), the Missouri Department of Transportation (MoDOT) in coordination with the Mid-America Regional Council (MARC), the City of Kansas City, Missouri (KCMO), the City of Independence, Missouri, in coordination with the Federal Highway Administration (FHWA), has initiated an Environmental Assessment (EA) to expand the I-70 corridor from I-435 to I-470, focusing on addressing existing traffic and safety conditions along the corridor.

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The proposed project is in alignment with the identified needs and goals that are expressed in MARC's metropolitan transportation plan, Connected KC 2050. The purpose of the proposed project is to determine an improvement strategy for the I-70 corridor to reduce the potential for crashes and congestion, restore and maintain existing infrastructure, and improve accessibility and goods management.

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MoDOT

105 West Capitol Avenue
P.O. Box 270
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Missouri Department of Transportation
Ed Hassinger, Interim Director

573.751.2551
Fax: 573.751.6555
1.888.ASK MODOT (275.6636)

The enclosed Project Description identifies the nature and location of the proposed improvements.

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Sincerely,

Jodie Puhr
MoDOT Project Manager

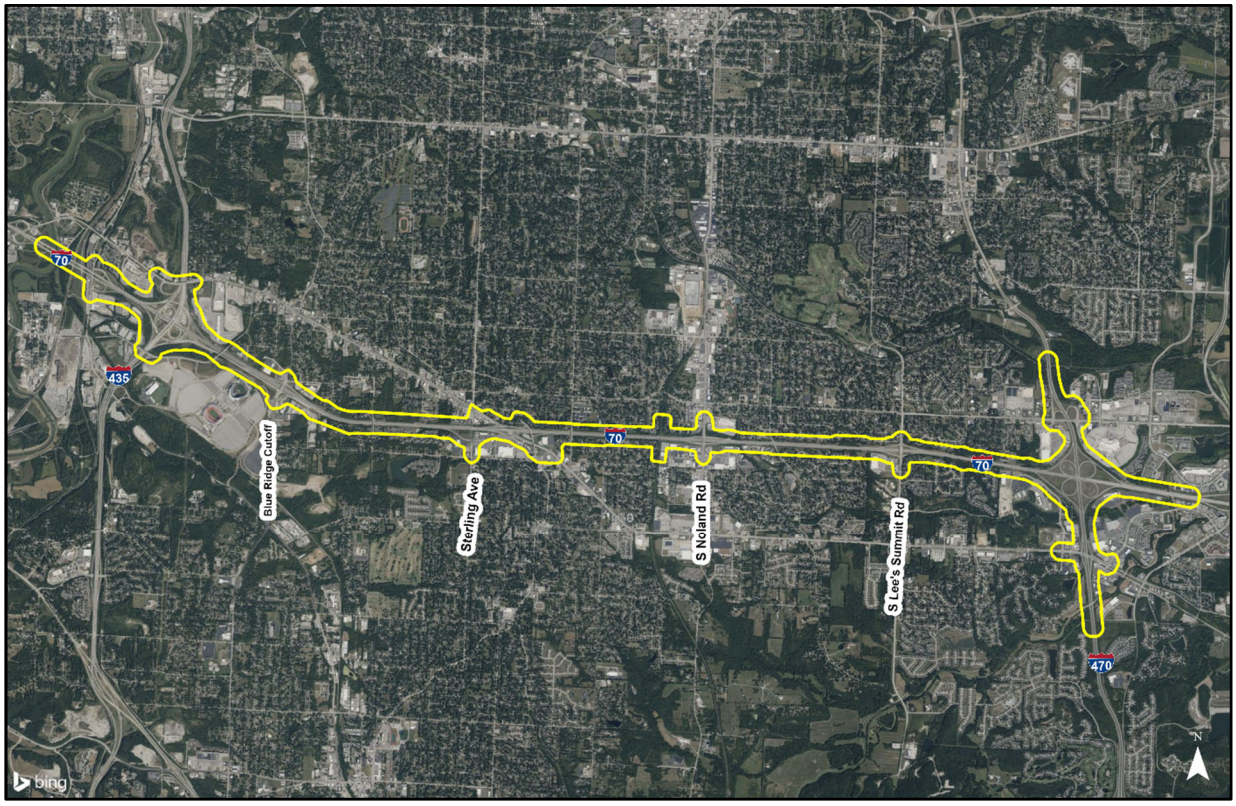
Enclosures:
Project Description

Project Description

Since its original construction more than 50 years ago, I-70 has been a vital lifeline for moving people and goods across Missouri and beyond. This project is one of several which would modernize the I-70 corridor across the state. I-70 from I-435 to I-470 provides a critical link to the central region of the United States, particularly for freight traffic, and is a key access point for the Kansas City region.

The I-70 Environmental Assessment: I-435 to I-470 Project Area (Project Area) is located entirely in Jackson County, Missouri and includes all land within 250 feet of the existing highway right-of-way (ROW) along the corridor. The Project Area extends from U.S. 40 on the west end to the east end of the I-70/I-470 interchange. For most of this length, I-70 is a four or six-lane divided and fully access-controlled interstate facility.

Figure 1: Project Location Map



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September 6, 2024

State Historic Preservation Officer
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

RE: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri

Dear State Historic Preservation Officer:

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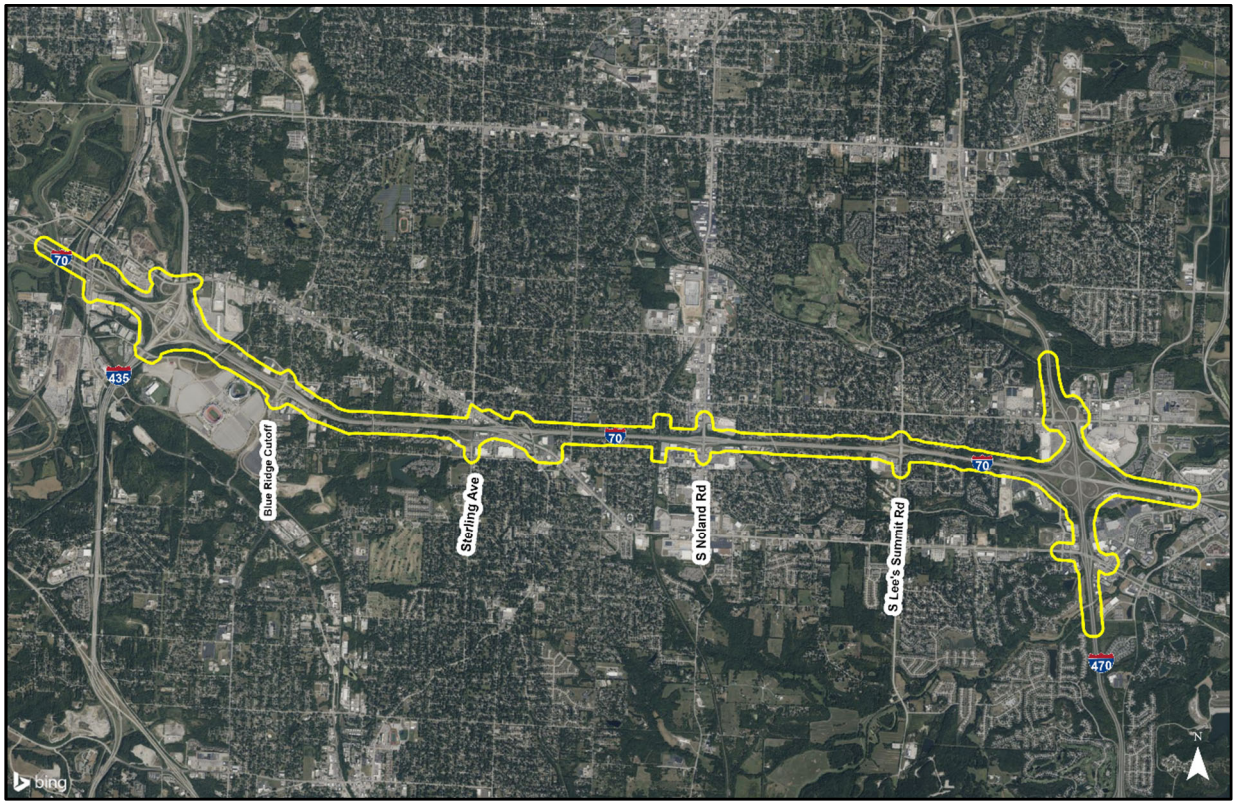

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September 6, 2024

Colonel Travis J. Rayfield
District Commander
U.S. Army Corps of Engineers, Kansas City District
600 Federal Building
601 E. 12th Street
Kansas City, MO 64106

RE: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri

Dear Colonel Travis J. Rayfield:

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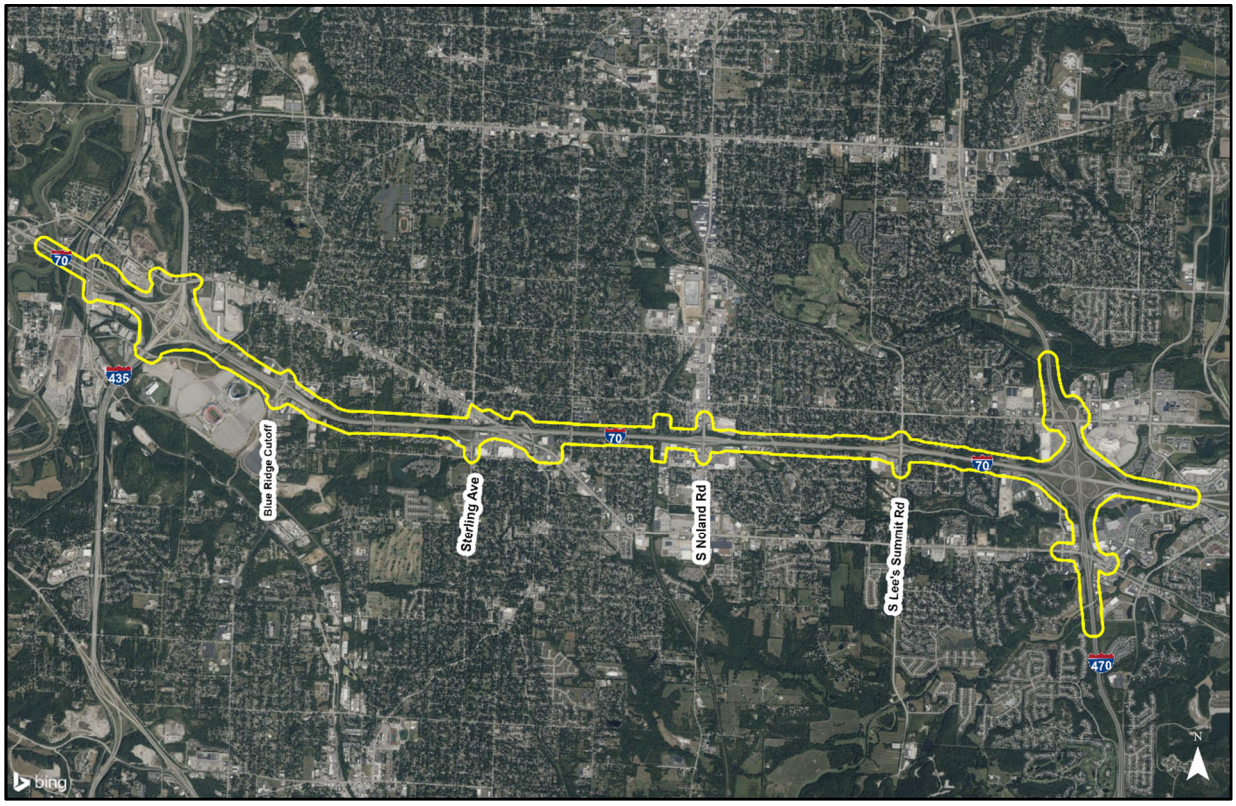

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September 6, 2024

Mr. David Hibbs, Chief
Regulatory Branch
U.S. Army Corps of Engineers, Kansas City District
600 Federal Building
601 E. 12th Street
Kansas City, MO 64106

RE: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri

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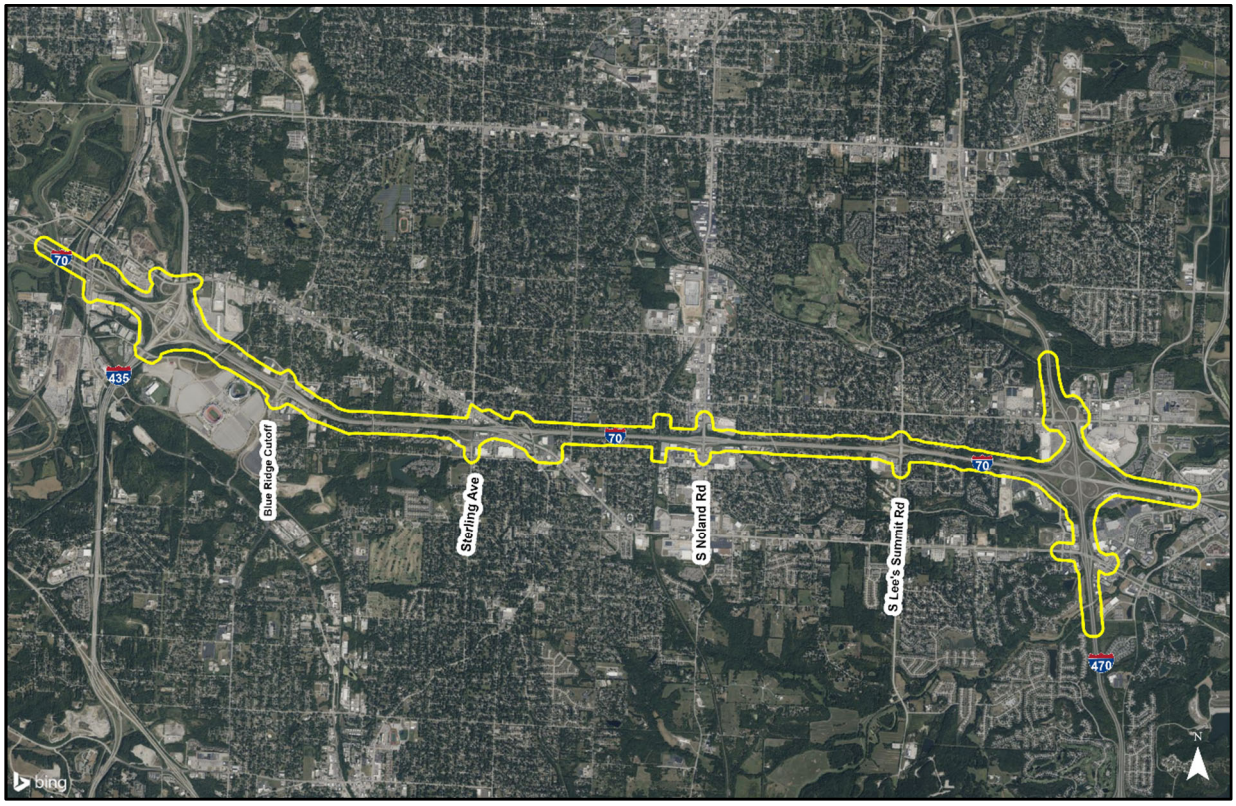

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September 6, 2024

Mr. Jorge Lugo-Camacho
State Soil Scientist
U.S. Department of Agriculture
Natural Resources Conservation Service
Parkade Center, Suite 250
601 Business Loop 70 West
Columbia, MO 65203

RE: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri

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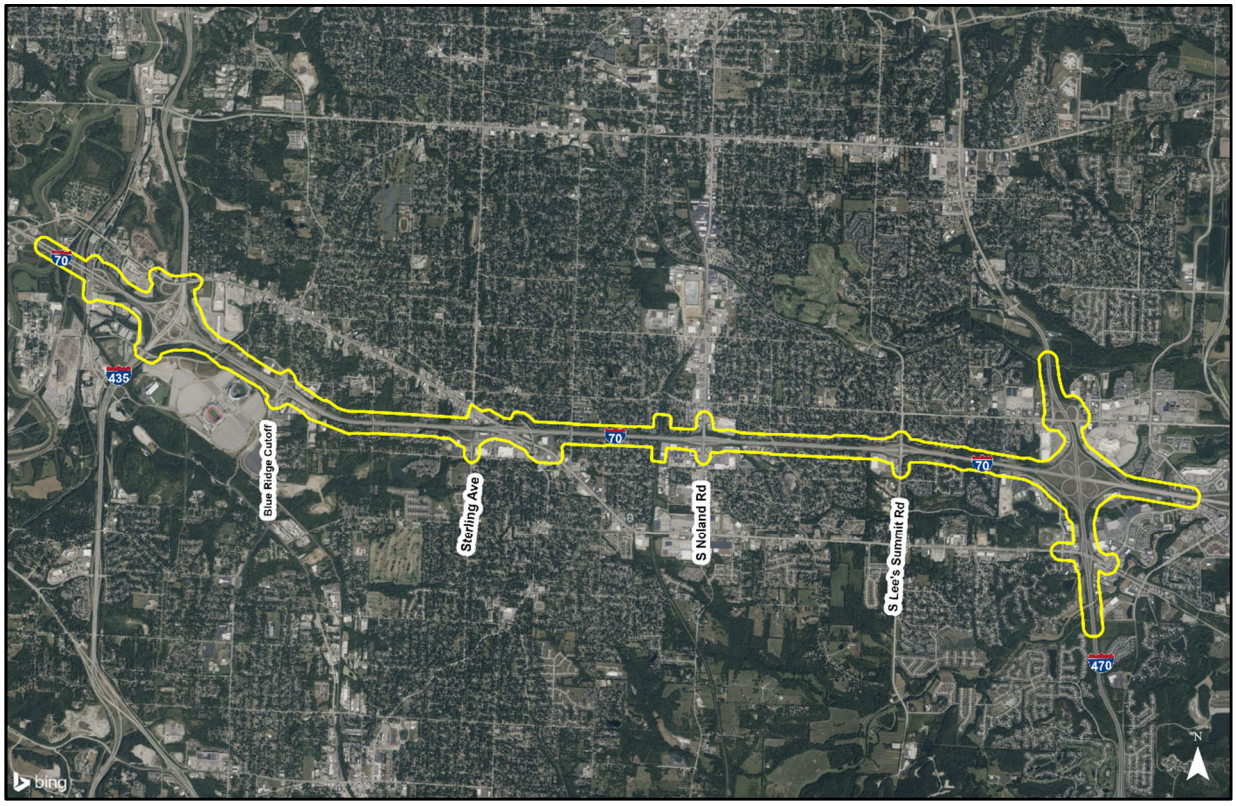

The proposed project is needed to address existing and future conditions along the I-70 corridor from I-435 to I-470.The corridor no longer meets the current and future mobility needs, resulting in reduced safety, reliability, and congestion.

In compliance with the National Environmental Policy Act (NEPA), the I-70 environmental study followed a tiered environmental documentation process. Tiering complies with NEPA requirements and other environmental regulations. A Tier I Environmental Impact Statement (EIS) was completed for the I-70 corridor in 2011. The Tier I study identified several segments for further review in Tier II. The Federal Highway Administration (FHWA) has determined the NEPA class of action for this project is an Environmental Assessment (EA). An EA is a document required by

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The EA will evaluate the No-Build alternative and two alternatives identified in the Tier I EIS for further consideration, the Improve Key Bottlenecks Strategy and the Add General Lanes Strategy. Environmental analyses will be based on current USDOT/FHWA, MoDOT, Council on Environmental Quality (CEQ), US Environmental Protection Agency (EPA), and NEPA requirements.

Anticipated Impacts

A wide spectrum of resources will be evaluated including cultural resources, threatened and endangered species, floodplains, wetlands, parks and recreational facilities, impacts to homes and businesses, land use and development, socioeconomic resources, noise, and air quality. Impacts may vary depending on the elements of the conceptual design and other design criteria.

Existing MoDOT right-of-way will be used wherever practical. Precise ROW impacts, as well as potential impacts resulting from social and natural environment, will be determined as planning and design activities continue.

Development Procedures

Project funding will include a combination of State and Federal funding. As a result, this project is being developed in anticipation of Federal funding participation. Current regulations governing development of Federally funded projects require early coordination with units of government who may have interest in the project or its potential impacts, or jurisdiction over some aspect of the project. This package of information is intended to provide early notification of the proposed project and to solicit comments regarding the potential impacts of such an action. As part of the process for project impact identification, several federal, state, and local agencies will be contacted directly to request their early input.

MoDOT

105 West Capitol Avenue
P.O. Box 270
Jefferson City, Missouri 65102

Missouri Department of Transportation
Ed Hassinger, Interim Director

573.751.2551
Fax: 573.751.6555
1.888.ASK MODOT (275.6636)

September 6, 2024

Ms. Amy Bhesania
NEPA Program Director
U.S. Environmental Protection Agency
11201 Renner Boulevard
Lenexa, Kansas 66219

RE: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri

Dear Amy Bhesania:

To comply with the National Environmental Policy Act (NEPA) requirements and the Council on Environmental Quality (CEQ) regulations (40 CFR 1500 et seq.), the Missouri Department of Transportation (MoDOT) in coordination with the Mid-America Regional Council (MARC), the City of Kansas City, Missouri (KCMO), the City of Independence, Missouri, in coordination with the Federal Highway Administration (FHWA), has initiated an Environmental Assessment (EA) to expand the I-70 corridor from I-435 to I-470, focusing on addressing existing traffic and safety conditions along the corridor.

MoDOT is providing planning, conceptual design, and public engagement and outreach activities for the proposed project. The NEPA and conceptual design planning stages of the project are being conducted by MoDOT and coordinated with the FHWA to meet all applicable NEPA processes and state and federal technical design requirements related to Interstate highways.

The proposed project is in alignment with the identified needs and goals that are expressed in MARC's metropolitan transportation plan, Connected KC 2050. The purpose of the proposed project is to determine an improvement strategy for the I-70 corridor to reduce the potential for crashes and congestion, restore and maintain existing infrastructure, and improve accessibility and goods management.

FHWA has determined that the NEPA class of action for this project is an EA. Under NEPA, an EA is required to determine whether a federal action has the potential to cause significant environmental effects. If FHWA determines that the proposed action will not have a significant environmental impact, a Finding of No Significant Impact (FONSI) will be issued. If the EA determines the environmental impacts of the proposed Federal action will have significant impacts, an Environmental Impact Statement (EIS) must be prepared.

As part of the early coordination process for this EA, we are soliciting comments from your Agency regarding the proposed project as it relates to your Agency's area of expertise. Your comments and any supplied materials will help determine if the proposed improvement's impacts warrant further consideration. Your comments will be incorporated into the environmental planning process and EA document, as appropriate.

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The enclosed Project Description identifies the nature and location of the proposed improvements.

An Agency Scoping Meeting will be held at 1pm on Wednesday, October 9th via Microsoft Teams. If your agency would like to attend, please respond to the contact listed below for the meeting link. This meeting will be recorded for those unable to attend live and can be made available upon request.

To remain on schedule, send your response and comments to our office within 30 days of receipt of this letter. If you have any questions about the proposed project, please contact me at (816) 617-2254 or by email at **Jodie.Puhr@modot.mo.gov**.

Sincerely,

Jodie Puhr
MoDOT Project Manager

Enclosures:
Project Description

Project Description

Since its original construction more than 50 years ago, I-70 has been a vital lifeline for moving people and goods across Missouri and beyond. This project is one of several which would modernize the I-70 corridor across the state. I-70 from I-435 to I-470 provides a critical link to the central region of the United States, particularly for freight traffic, and is a key access point for the Kansas City region.

The I-70 Environmental Assessment: I-435 to I-470 Project Area (Project Area) is located entirely in Jackson County, Missouri and includes all land within 250 feet of the existing highway right-of-way (ROW) along the corridor. The Project Area extends from U.S. 40 on the west end to the east end of the I-70/I-470 interchange. For most of this length, I-70 is a four or six-lane divided and fully access-controlled interstate facility.

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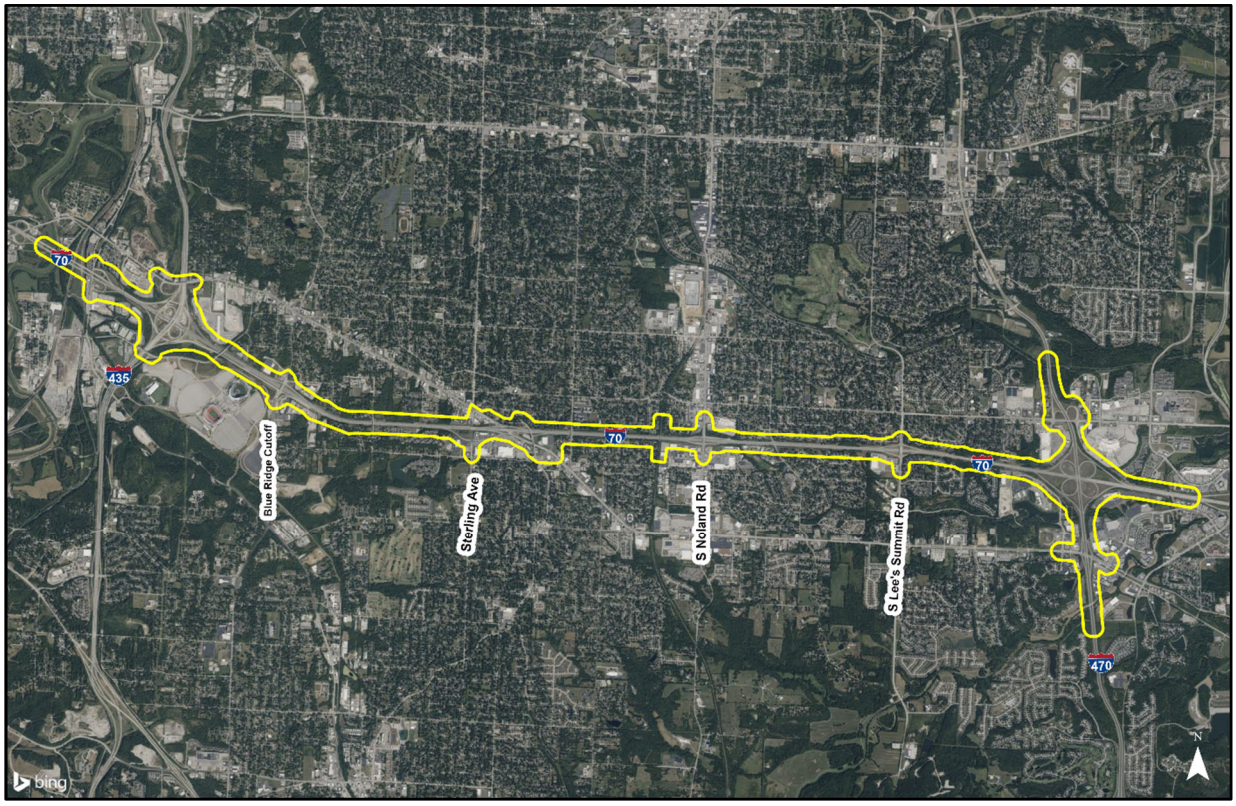

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September 6, 2024

Mr. John Weber
Field Supervisor
U.S. Fish and Wildlife Services
Columbia Ecological Services Field Office
101 Park DeVille Drive, Suite A
Columbia, MO 65203-0057

RE: I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri

Dear John Weber:

To comply with the National Environmental Policy Act (NEPA) requirements and the Council on Environmental Quality (CEQ) regulations (40 CFR 1500 et seq.), the Missouri Department of Transportation (MoDOT) in coordination with the Mid-America Regional Council (MARC), the City of Kansas City, Missouri (KCMO), the City of Independence, Missouri, in coordination with the Federal Highway Administration (FHWA), has initiated an Environmental Assessment (EA) to expand the I-70 corridor from I-435 to I-470, focusing on addressing existing traffic and safety conditions along the corridor.

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Sincerely,

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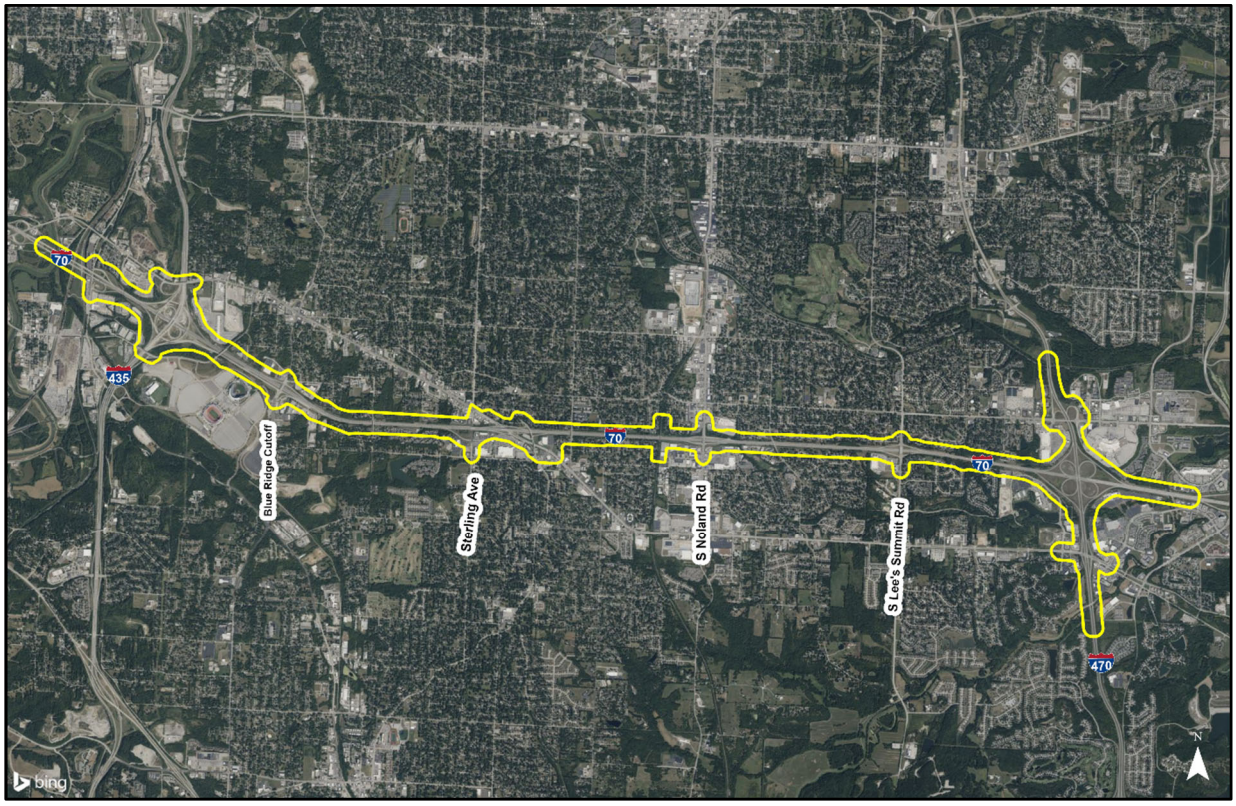

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Outlook

I-70 Environmental Assessment (EA): I-435 to I-470, Kansas City, Jackson County, Missouri, MoDOT Job No. J4I3195

From Rost, Rebecca (FHWA) <rebecca.rost@dot.gov>

Date Wed 11/19/2025 2:45 PM

To akelley@iowas.org <akelley@iowas.org>; CPershall@iowanation.org <CPershall@iowanation.org>; thpo@kawnation.gov <thpo@kawnation.gov>; director.historic@meskwaki-nsn.gov <director.historic@meskwaki-nsn.gov>; THPO@MiamiNation.com <THPO@MiamiNation.com>; luke.morris@osagenation-nsn.gov <luke.morris@osagenation-nsn.gov>; s106@osagenation-nsn.gov <s106@osagenation-nsn.gov>; liana.hesler@ponca-nsn.gov <liana.hesler@ponca-nsn.gov>; 106notifications@ponca-nsn.gov <106notifications@ponca-nsn.gov>; tfoley@poncatribe-ne.org <tfoley@poncatribe-ne.org>; gary.bahr@sacandfoxks.com <gary.bahr@sacandfoxks.com>; nagpracoordinator@sacandfox.com <nagpracoordinator@sacandfox.com>; tonya@shawnee-tribe.com <tonya@shawnee-tribe.com>; shaw@shawnee-tribe.com <shaw@shawnee-tribe.com>; sclemons@wyandottenation.org <sclemons@wyandottenation.org>

Cc Rachel A. Campbell <rachel.campbell@modot.mo.gov>; Jodie Puhr <jodie.puhr@modot.mo.gov>

To Whom It May Concern,

This letter is regarding the Environmental Assessment (EA) being prepared by the Missouri Department of Transportation (MoDOT) in coordination with the Mid-America Regional Council (MARC), the City of Kansas City, Missouri (KCMO), the City of Independence, Missouri, and the Federal Highway Administration (FHWA) to expand the I-70 corridor from I-435 to I-470. Please use the following link for additional information on this project: I-70 Environmental Assessment (EA) I-435 to I-470, Kansas City, Jackson County, Missouri, MoDOT No. J4I3195.

As part of the NEPA Concurrence Process for the project, an Alternatives Memorandum has been prepared to document the range of alternatives for the project. We are soliciting comments from your tribal nation regarding the potential for the proposed project to effect cultural resources that may be of historical or religious significance. The range of alternatives have been shared with the project advisory group and the public during public and stakeholder engagement in October 2024 to provide an opportunity for public review and comment.

Comments and information you provide during the EA will be used to determine if the proposed improvements may have impacts that warrant further consideration prior to design and construction of the project. Your comments will be incorporated into the environmental clearance process and ultimately the EA document, as appropriate; any locational information regarding cultural resources will be kept confidential.

If you have any comments or requests for additional information concerning this project, please contact Jodie Puhr (Jodie.Puhr@modot.mo.gov) and the MoDOT Environmental and Historic Preservation Section who are included on this email and copy me.

Sincerely,

Rebecca Rost
Environmental Protection Specialist
FHWA Missouri Division
3220 W. Edgewood, Suite H
Jefferson City, MO 65109
phone: 573-638-2623
email: rebecca.rost@dot.gov

1. Purpose and Need

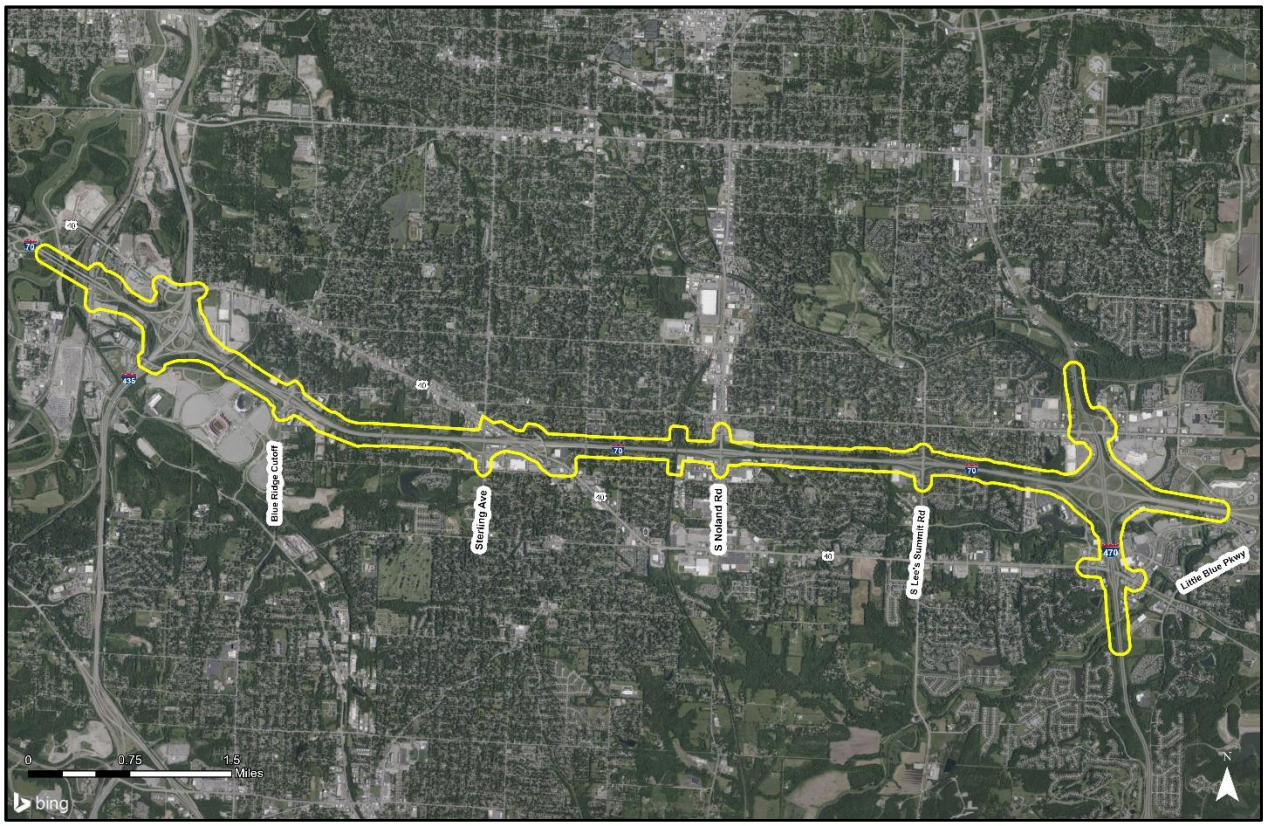
A Purpose and Need Statement describes the transportation problems that a proposed project is to address. This statement provides a description of the purpose of the I-70 Environmental Assessment: I-435 to I-470 and a demonstration of the need for improvements the proposed project is to address within the study area.

1.1 Project Overview and Background

Since its original construction more than 50 years ago, Interstate 70 (I-70) has been a vital corridor for moving people and goods across Missouri and beyond. This project is one of several which would modernize the I-70 corridor across the state. I-70 from I-435 to I-470 provides a critical link to the central region of the United States, particularly for freight traffic, and is a key access point for the Kansas City region.

I-70 is a four or six-lane, barrier-divided, fully access-controlled interstate facility. The I-70 Environmental Assessment: I-435 to I-470 Project Area (Project Area) is located entirely in Jackson County, Missouri and includes all land within 250 feet of the existing highway right-of-way (ROW) along the corridor. The Project Area extends from U.S. 40 on the west end to the east end of the I-70/I-470 interchange. The Project Area is shown in **Figure 1**.

Figure 1: Project Area Map



In compliance with the National Environmental Policy Act (NEPA), this I-70 environmental study follows a tiered environmental documentation process. Tiering complies with NEPA requirements and other environmental regulations. A Tier I Environmental Impact Statement (EIS) was completed for the I-70 corridor in 2011. The Tier I study identified several segments for further review in Tier II. The Environmental Assessment (EA) process for this portion of I-70 began in the spring of 2024. Initial steps include efforts to understand the traffic volumes and safety conditions throughout the study area.

NEPA requires the Federal Highway Administration (FHWA) to assess the environmental effects of projects that include federal funding or involves a federal action. The NEPA process allows transportation officials to make project decisions that balance engineering and transportation needs with social, economic, and natural environmental factors. At the direction of FHWA, an EA is being prepared for the Project Area to determine whether the proposed action has the potential to cause significant environmental effects to the natural or man-made environment. Within the EA, FHWA and the Missouri Department of Transportation (MoDOT) are evaluating a 'No Action' or 'No-Build' alternative and two improvement alternatives identified in the Tier 1 EIS for further consideration; the Fix Key Bottlenecks Strategy and the Add General Capacity Strategy.

Upon conclusion of the EA, FHWA will issue a Finding of No Significant Impact (FONSI) or require additional evaluation through an EIS. The study timeline is approximately 14 months and is scheduled to conclude in fall of 2025.

1.2. Purpose and Need

The Project Area includes approximately nine miles of I-70. In the Project Area, I-70 is a six-lane, barrier-divided, fully access-controlled interstate facility. From the western project boundary to the I-70/I-435 Interchange, the speed limit is 55 miles per hour (mph). From the I-70/I-435 Interchange to the eastern project boundary, the speed limit is 65 mph. This section of I-70 was designed and constructed in the 1950s, originally with two lanes in each direction. In the late 1970s to 1980s, a third lane was added in each direction, converting the grass median to a closed concrete median.

The Project Area includes I-70 eastbound and westbound access to and from Manchester Trafficway, northbound and southbound I-435, Blue Ridge Cutoff, East U.S. Highway 40/Blue Ridge Boulevard, South Noland Road, South Lee's Summit Road, and northbound and southbound I-470. Additionally, the Project Area includes the I-70 eastbound off ramp to Sterling Avenue. The Project Area also includes I-435 northbound and southbound access to and from Stadium Drive and East U.S. Highway 40 and I-470 northbound and southbound access to and from East U.S. Highway 40 and East 39th Street South.

In the Project Area, I-70 from west to east is crossed by Manchester Trafficway, I-435, Stadium Drive, Blue Ridge Cutoff, Pittman Road, Sterling Avenue, East U.S. Highway 40, Blue Ridge Boulevard, South Crysler Avenue, South Noland Road, South Phelps Road, South Lee's Summit Road, and I-470. I-70 also crosses the Union Pacific Railroad and the Kansas City Southern Railroad within the Project Area.

There are 31 existing bridges within the Project Area, including four mainline I-70 bridges, 14 roadway bridges over I-70, one railroad bridge over I-70, five bridges on I-435, one bridge over I-435, one bridge over East U.S. Highway 40, and five bridges on I-470. As of 2024, all bridges over I-70 can accommodate the potential widening of one additional lane in each direction except for the Union Pacific Railroad bridge. MoDOT has identified a project (Job No. J4I3211) that will address the replacement of the Union Pacific Railroad bridge in preparation of the widening of I-70. Multiple bridges have been reconstructed over the past decade, but some older bridges remain, requiring frequent maintenance.

Several of the ramps within the Project Area do not meet current minimum engineering design criteria due to their geometry. As of 2023, the I-70 corridor serves over 100,000 vehicles per day (vpd) on the east end of the Project Area near I-470. On the west end of the Project Area near I-435, the corridor serves approximately 125,000 vpd, according to MoDOT traffic volumes maps.

1.2.1. Need for the Proposed Project

The proposed project will address existing and future conditions along the I-70 corridor from I-435 to I-470. The corridor no longer meets the current and future mobility needs, resulting in reduced safety and reliability and increased congestion.

The proposed project is needed to:

- Improve Safety: Reduce the potential for crashes at high crash locations;
- Reduce Congestion: Remove key bottlenecks, reduce the potential for ramp back-up onto the freeway, and improve multi-modal travel times in coordination with local and regional agencies' plans;
- Restore and Maintain Existing Infrastructure: Improve bridge and pavement conditions on I-70 and implement cost-effective investment strategies;
- Improve Accessibility and Goods Movement: Provide travel options for all residents, increase safe access across I-70 for non-motorized travel, support local and regional land use plans, and improve the efficiency of freight movement on I-70.

1.2.2. Purpose for the Proposed Project

The purpose of the proposed project is to determine improvements for future capacity, safety, and mode choices in order to address the need elements in Section 1.2.1.

1.3. Elements of The Purpose and Need

The transportation-related challenges identified in Section 1.2 are further discussed in this section.

1.3.1. Improve Safety

A safety analysis has been completed with the corridor's existing conditions including I-70, I-435, I-470/MO-291, East U.S. Highway 40, and ramps and ramp terminals. The analysis used the most current crash data (2018 to 2022) to identify safety-related deficiencies along the corridor. Approximately 17 miles of mainlines (major roads within the Project Area, but not ramps or ramp terminals), split into 23 study segments, were evaluated. From 2018 to 2022, 2,837 crashes were reported within the safety study limits. This is approximately 1.5 crashes per day on average for the entire five-year study period.

Of the 2,837 crashes reported, approximately 67% of all crashes resulted in property damage only, 32% caused some form of injury to vehicle occupants, and less than 1% of all crashes resulted in fatalities, as shown in **Figure 2**. Crashes along mainline segments primarily consisted of congestion-related crash types such as rear end, side swipe, and out of control collisions, as shown in **Figure 3**. Pedestrian and bicycle crashes were analyzed along the corridor for the same five-year period. Sixteen pedestrian/bicycle crashes occurred along the mainline portions of the Project Area, eight of which occurred on I-70.

Figure 2: Crash Severity – Corridor Mainlines

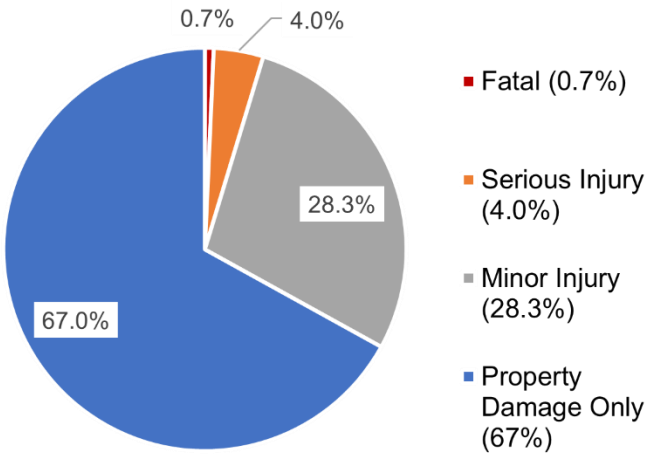
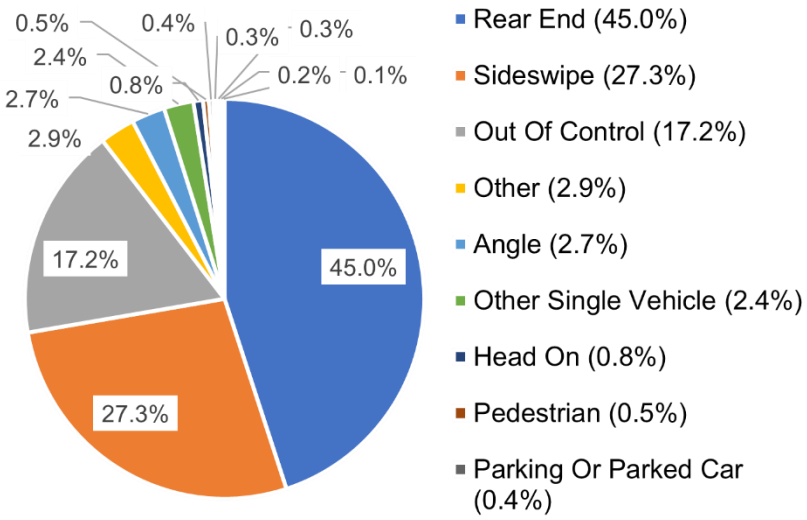


Figure 3: Crash Type – Corridor Mainlines



Source: MoDOT Crash Data, 2018-2022

A safety analysis was also completed for the system-to-system ramps and service ramps across the Project Area. A total of 584 crashes occurred at these ramps between 2018 and 2022, with 213 occurring on the system-to-system ramps and 371 occurring on service ramps. Additionally, an analysis of ramp terminals was conducted using a 150-foot buffer from all approaches of the intersection, per MoDOT Engineering Policy Guide Methodology. In total, 769 crashes occurred on the 20 ramp terminals in the Project Area during the five years. Generally, the ramps and ramp terminals experienced primarily low severity single vehicle, rear end, or sideswipe crashes. Less than 0.5% of crashes were fatal or had suspected serious injuries. Because the crash

types within the Project Area were generally low severity and congestion-related, overall roadway congestion likely influenced crashes throughout the corridor.

As traffic volumes continue to increase through the no build scenario in 2050, the conditions causing safety concerns are expected to worsen without corridor improvements.

1.3.2. Reduce Congestion

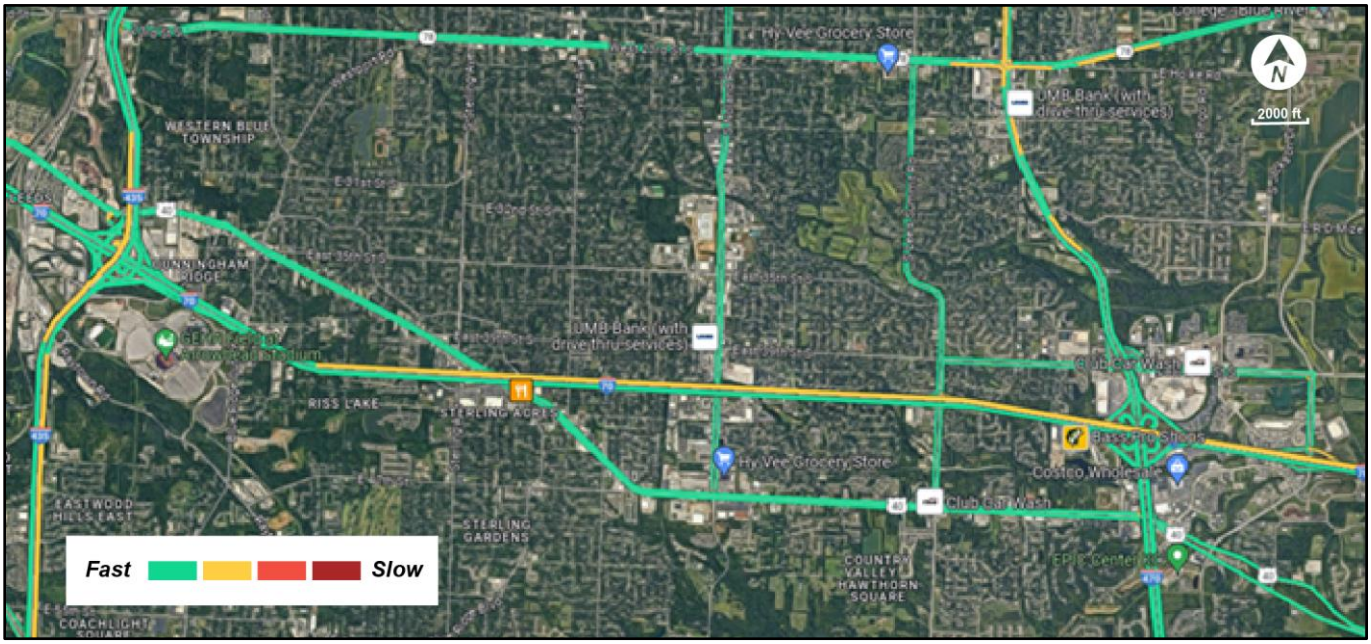
Interstate 70 from I-435 to I-470 has outlasted its original design life of 20 years and needs improvements to provide congestion relief today and capacity improvements in the future. Traffic growth on I-70 is primarily the result of population and economic growth in the Kansas City Metropolitan Area. Significant congestion occurs on eastbound I-70 in the PM peak hour every day beginning just east of I-435; the interstate decreases from five lanes, where I-435 ramp traffic enters I-70, to three lanes within one mile. During the AM peak period, westbound I-70 has recurring congestion between I-435 and I-470. No one specific bottleneck exists as it does in the eastbound direction, but the corridor is generally over capacity.

As daily traffic volumes are projected to grow, congestion during these peak times are expected to worsen. During the PM peak period, congestion causes speeds to decrease in some areas down to 10 mph in the eastbound lanes of I-70. During the AM peak period, westbound traffic speeds decrease to 30 mph in some areas. In 2023, the corridor serves over 100,000 vpd on the east end of the corridor at I-470 and about 125,000 vpd on the west end near I-435. Daily traffic volumes are anticipated to grow in the No-Build scenario between 0.4 to 1.0 percent annually by the project design year of 2050, depending on location in the corridor. This additional traffic volume is projected to further degrade operations in this area over time, leading to more congestion and the increasing presence of bottlenecks if no improvements are made. **Figures 4** and **5** show the existing AM and PM peak period congestion along the I-70 mainline. The PM peak period congestion begins around the I-435 corridor and continues east. The AM peak period congestion, although not as severe as the PM peak, spans a greater length of I-70. AM congestion begins around Pittman Road and continues east.

Figure 4: PM Peak Hour Congestion – I-70 Corridor

Source: Google Maps. May 2024

Figure 5: AM Peak Hour Congestion – I-70 Corridor



Source: Google Maps. May 2024

1.3.3. Restore and Maintain Existing Infrastructure

Interstate 70 from I-435 to I-470 is located on the eastern edge of the Kansas City Metropolitan Area, in an area that is becoming more densely populated and heavily traveled and serves as the primary link between downtown Kansas City and the suburban east side of the greater metropolitan area. The interstate serves many

functional groups including a large volume of commuter traffic, heavy local commercial and industrial traffic, and nationwide freight movement. Growing congestion requires safety, capacity, and reliability improvements to meet the corridor's needs and create long-term sustainability. Due to the age of the existing infrastructure and projected traffic volumes, improvement of infrastructure conditions is necessary. Most of the Project Area is more than 50 years old; improvements are needed to modernize the interstate.

1.3.4. Improve Accessibility and Goods Movement

Major linear features, such as rivers or interstates, often provide barriers to pedestrians, bicyclists, and those without access to a motor vehicle. A review of the existing bikeway and shared use paths took into consideration on-street bike lanes, sidewalks, and multi-use recreational trails. The majority of bridges and underpasses over and under I-70 have sidewalk accommodations on at least one side of the street; however, there are four locations without sidewalks available. There are three trails that cross through the Project Area; all are paved shared use paths.

Commercial trucks are a major component of the traffic stream within the Project Area. Kansas City's mid-continent location makes the region a key area for the movement of goods. National cargo passes through the region and I-70 is one of the primary truck routes. Additionally, shipments of local goods often use the interstate system as an efficient means to distribute goods from the manufacturer to the warehouse, and eventually the store. According to 2023 traffic counts for I-70 from I-435 to I-470, around 20 percent of the average daily traffic (ADT) is identified as being trucks.

2. Alternatives

2.1. Overview of Alternative Development Process

The alternatives development process entailed screening of the alternatives to determine which warrant further consideration for the project. The alternatives screening was qualitative and quantitative in nature to determine their potential impacts in comparison to the No-Build Alternative and each other.

Through the alternatives screening process, a Preferred Alternative, or Proposed Action, was selected. The Preferred Alternative meets the Purpose and Need (**Section 1**) for the project while avoiding, minimizing, or mitigating impacts to both the natural and human environment, and considers engineering, costs, and public and stakeholder input.

The Preferred Alternative is carried forward and evaluated alongside the No-Build Alternative as part of the EA. The process of screening alternatives with an ascending level of detail assures decision-makers of the fulfillment of the improvement's goals, while fostering informed consent with reviewing agencies, stakeholders, and the public.

2.2. Alternatives Development and Screening

Since the Tier I EIS received a Record of Decision on April 29, 2011, significant changes have been made to the study area configuration and the needs of the study area have changed. Two build alternatives were carried over as the preferred strategies from the Tier I EIS, along with the No-Build alternative to utilize as a baseline, and considered in this study for further analysis. Detailed information on the development of alternatives and screening is located in **Appendix A**.

The potential alternatives include the following:

- No-Build
- Fix Key Bottlenecks
- Add General Capacity

2.2.1. No-Build

As part of the environmental clearance process, a No-Build Alternative is used as a benchmark for comparison against other alternatives being evaluated to improve a project. The No-Build Alternative means that no roadway and/or bridge reconstruction or capacity improvements would be constructed on the I-70: I-435 to I-470 corridor. This alternative would include ongoing maintenance of the corridor and bridges, along with minor pavement and bridge rehabilitation. This alternative also includes all future projects that are currently planned and already committed within the corridor's study area and noted in state, regional, and local transportation improvement plans through the 2050 design year of the project.

The following improvements are committed within or adjacent to the corridor:

- Truman Connect - East U.S. Highway 40 between Sterling Avenue and Blue Ridge Cutoff and on Sterling Avenue from East U.S. Highway 40 to Winner Road (MARC TIP)
- Project 4I1486D: Improve I-70: Kansas City I-70 - improvements in downtown Kansas City from Paseo Boulevard to East U.S. Highway 40/31st Street (MoDOT 2025-2029 STIP)
- Project ST0019: Improve I-70: Blue Springs to Odessa - I-70 improvements from Blue Springs to Odessa (MoDOT Improve I-70 Program)
- Project 4P3323B: I-70 Median barrier safety improvements from Manchester Trafficway to Chrysler St. (MoDOT 2025-2029 STIP)
- Project KU0114: I-70 Bridge Replacements over East U.S. Highway 40 and Sterling Avenue (MoDOT 2025-2029 STIP)

2.2.2. Fix Key Bottlenecks

This alternative includes improvements to key bottleneck areas where congestion and safety deficiencies are highest within the corridor. This alternative will maintain the current 3-lane design of I-70 between I-435 and I-470, but would add shoulder improvements and select ramp/auxillary lane improvements. Specific improvements include:

- Reconstruct all existing lane pavement for improved reliability and longevity;
- Widening existing inside and outside shoulders from 7 feet to 8 feet up to 12 feet;
- Building additional auxiliary lanes;
- Ramp improvements; and
- Considerations for future interchange improvements to the East U.S. Highway 40 and I-470 interchanges.

If this alternative is selected, improvements likely would be constructed in phases. Decisions on phasing will be based on funding availability and when traffic congestion and safety needs warrant the improvements along the corridor. For this analysis, the full buildout of the alternative prior to the project design year is considered when rating against the screening criteria. A map series showing the Fix Key Bottlenecks Alternative is attached in **Appendix A.**

2.2.3. Add General Capacity

This alternative considers the reconstruction of pavement and bridges along the corridor and constructing additional through travel lanes. The alternative also incorporates additional capacity to improve connections to and from ramps along the corridor, such as auxiliary lanes, which provide a continuous lane of travel between closely spaced interchange entrance ramps and exit ramps.

Geometric and condition improvements include:

- Updating the corridor to four through lanes in each direction;
- Select ramp and safety improvements;
- Widening existing inside and outside shoulders from 7 feet to 8 feet up to 12 feet;
- Evaluation of capacity improvements for an eastbound barrier-separated collector-distributor (C-D) roadway between Manchester Trafficway and I-435;
- Evaluation of capacity improvements for a westbound barrier-separated collector-distributor roadway between Blue Ridge Cutoff and Manchester Trafficway; and
- Considerations for future interchange improvements to the East U.S. Highway 40 and I-470 interchanges.

If this alternative is selected, improvements likely will be constructed in phases. Decisions on phasing will be based on funding availability and when traffic congestion and safety needs warrant the improvements along the corridor. For this analysis, the full buildout of the alternative prior to the project design year is considered when rating against the screening criteria. A map series showing the Add General Capacity Alternative is attached in **Appendix A**.

2.3. Screening Criteria

Screening Criteria were developed across three broad categories covering various aspects of the project.

Screening Criteria Categories

- Project Purpose and Need
- Natural and Human Environment
- Engineering Considerations

Each category contains several criteria, discussed below. Ratings for each alternative are summarized in the Screening Matrix.

2.3.1. Purpose and Need Screening Criteria

The purpose of the proposed project is to determine improvements for future capacity, safety, and mode choices in order to address the need elements in **Section 1.2.1**.

The screening criteria to evaluate meeting the Purpose and Need are defined as:

- ***Improve Safety*** to reduce the potential for crashes at high crash locations.
- ***Reduce Congestion*** through removing key bottlenecks to reduce the potential for ramp back-up on the freeway and improve multi-modal travel times in coordination with local and regional agencies' plans.
- ***Restore and Maintain Existing Infrastructure*** by improving bridge and pavement conditions on I-70 and implement cost-effective investment strategies.

- ***Improve Accessibility and Goods Movement*** by providing travel options for all residents, increasing safe access across I-70 for non-motorized travel, supporting local and regional land use plans, and improving the efficiency of freight movement on I-70.

2.3.2. Natural and Human Environment Screening Criteria

All alternatives are additionally evaluated for quantitative and qualitative analysis against Natural and Human Environment criteria.

The natural environmental impacts are related to the physical features of the landscape. The human environmental impacts include any community, neighborhood, Title VI Civil Rights Act considerations, and business resources that may be affected by the proposed project alternatives.

2.3.3. Engineering and Cost Screening Criteria

The study team evaluated each alternative for potential engineering and cost considerations including roadway and interchange geometrics, ROW and displacement impacts, project construction timeline, phasing, maintenance of traffic and constructability, as well as the ability to address project costs and funding needs.

2.3.4. Public and Stakeholder Input Screening Criteria

The project team has evaluated each alternative based on public and stakeholder input received on the alternatives. This input is obtained through numerous sources and includes a broad cross section of interested stakeholders and the general public. Input received from public and stakeholder activities, such as stakeholder interviews and presentations, Advisory Group meetings, public information meetings, community surveys, community focus group sessions, and social media outreach is incorporated into the alternative's screening using public comment tools on the website, at meetings, and through social media channels to document public and stakeholder feedback on the project.

Public and stakeholder input screening measures indicate positive, neutral, or negative reactions from stakeholders and the public on each alternative and is captured via the project team's public and stakeholder outreach activities. The public and stakeholder input screening criteria and responses are included in the Alternatives Analysis Report in **Appendix A.**

2.4. Screening of Alternatives

A detailed quantifiable analysis as well as a qualitative analysis was completed for select environmental and engineering criteria. The No-Build Alternative, while not a Reasonable Alternative, was carried forward for evaluation as a point of comparison against the Build Alternatives. The two Reasonable Alternatives performed similarly as a result of the screening as shown in the Alternatives Screening Matrix located in

Appendix A. This section discusses impacts from and any differences between the two Reasonable Alternatives.

2.4.1. Purpose and Need Screening

Each alternative was evaluated across several criteria under each element of the Purpose and Need.

Improve Safety – While both build alternatives have the potential to improve safety along the corridor, the Add General Capacity Alternative has the greatest impact to improve the safety of the corridor as it will better address crashes caused by stop and go traffic and includes improvements to roadway, ramp, and interchange geometrics along the entire corridor. The Fix Key Bottlenecks Alternative will also address these issues, but only in key bottleneck locations throughout the corridor.

Reduce Congestion – Both alternatives have a high rating for improving traffic operations and reducing congestion along the corridor as they would both decrease the likelihood of bottlenecks and the potential for ramp back-ups and delay within the corridor through widening of the road. The Add General Capacity Alternative scored slightly higher as it would aid in reducing congestion along the entire corridor and not only in key bottleneck areas.

Restore and Maintain Existing Infrastructure – Both alternatives would improve bridge and pavement condition throughout the corridor. However, the Add General Capacity Alternative scored higher as this alternative will provide one additional through lane throughout the entire corridor, have improvements to the eastbound C-D road at I-435, and add a new westbound C-D road between Blue Ridge Cutoff and I-435 to accommodate larger traffic volumes rather than only in key bottleneck areas.

Improve Accessibility and Goods Movement – Both alternatives would improve accessibility across communities and neighborhoods as well as improve the efficiency of freight movement throughout the corridor. The Add General Capacity Alternative scored slightly better as the widening of the entire corridor would better improve accessibility and movement as a whole rather than only in key bottleneck areas.

2.4.2. Natural and Human Environment Screening

The natural and human environment screening of the alternatives was conducted using qualitative data and quantifiable data where appropriate. The No-Build Alternative generally has more favorable ratings since it is a “no action” strategy and does not cause physical impacts to the natural or manmade environment. The build alternatives do have the potential for impacts to the natural and manmade environment within the Project Area. The two build alternatives have similar impacts. The potential natural and human environment impacts are discussed in greater detail in **Section 3**.

2.4.3. Engineering and Cost Screening

Both alternatives were evaluated against the Engineering and Cost Criteria. The No-Build Alternative was also carried forward as a benchmark for comparison.

Generally, the Fix Key Bottlenecks Alternative has a smaller ROW footprint than the Add General Capacity Alternative; therefore fewer impacts are expected to engineering and cost factors.

Both alternatives will address roadway, ramp and interchange deficiencies. The construction phases and timing will also be similar for both alternatives.

2.5. Recommended Preferred Alternative (Proposed Action)

The Add General Capacity Alternative was selected as the Recommended Preferred Alternative, designated as the Proposed Action for the I-70 EA: I-435 to I-470 Project. The Add General Capacity Alternative was recommended by the project team due to its ability to meet the Purpose and Need of the project and to better address congestion and traffic safety concerns within the corridor at a similar cost amount to the Fix Key Bottlenecks Alternative. A map series showing the Recommended Preferred Alternative can be found in **Exhibit 1**. **Exhibit 1** does not include the I-470 interchange at this time. The I-70 and I-470 interchange is a complex interstate to interstate connection that also interacts with adjacent 39th St. interchange on MO-291 to the north and US-40 interchange on I-470 to the south. Multiple interchange alternatives were evaluated for geometric, operational, and safety considerations during the EA process to identify the largest potential footprint for environmental impacts. Since the focus of the EA is the I-70 corridor, and future analysis and improvements are needed on the I-470/MO-291 corridor, a preferred interchange alternative at I-70 and I-470 is not being identified but rather a largest possible footprint is shown.

The Add General Capacity Alternative met the Purpose and Need of the project by:

- **Improving Safety** – The implementation of the Add General Capacity Alternative will enhance safety performance through adding new lanes of travel capacity which will address crashes caused by stop and go traffic and include improvements to roadway, ramp, and interchange geometrics along the corridor.
- **Reducing Congestion** – The Add General Capacity Alternative had the highest ratings for improving traffic operations. Additional lanes will increase the overall corridor's travel speed and increase the corridor's throughput.
- **Restore and Maintain Existing Infrastructure** – Adding additional capacity results in the highest rating to improve the infrastructure condition due to the replacement of pavement and bridges along the corridor. The addition of through lanes would impact long-term travel reliability and life-cycle costs through additional capacity in the corridor.
- **Improve Accessibility and Goods Movement** – The Add General Capacity Alternative offers improved additional capacity through the addition of lanes for

other modes of transportation and larger transportation vehicles, by alleviating roadway congestion. In addition, as a result of construction, there will be improved access to transit, bicycle, and pedestrian connections in the Project Area.

Both alternatives are shown to have similar impacts to the natural and human environments. The Fix Key Bottlenecks Alternative will take less overall ROW than the Add General Capacity Alternative. The wetlands and forested area impacts are slightly different for the two alternatives.

From an engineering and cost standpoint the Fix Key Bottlenecks Alternative has an overall lower construction cost of $300-350 million. The Add General Capacity Alternative is estimated to cost $350-400 million. This is the highest cost build alternative.

Project development and construction of the Preferred Alternative is anticipated to occur over a period of two decades, with improvements based on safety, operational needs, and funding availability. This phased approach allows for critical areas with the greatest need to be addressed with the initial phases and the full scope of improvements to be constructed as traffic demand throughout the corridor grows and funding is identified.

The initial improvements are focused on safety enhancements and infrastructure upgrades currently programmed in the Statewide Transportation Improvement Program (STIP) and part of the Preferred Alternative. Construction of these improvements is anticipated to occur in the late 2020 and early 2030 decade, they include:

- Replacement of the median barrier from Manchester Trafficway to Chrysler Avenue. As a result of the Preferred Alternative to handle added traffic, added safety, and new lanes, the project will build a taller barrier design to discourage pedestrian crossing and replaces the existing deteriorating segmented barrier, enhancing safety. Letting is schedule for December 2026 (job number: J4P3323B).
- Replacement of I-70 bridges over Sterling Avenue and US 40. As a result of the Preferred Alternative to handle added traffic and new lanes, this project will include the widening between Sterling Avenue and Blue Ridge Boulevard, tying into the new I-70 pavement. Widening from Pittman Road to Blue Ridge Boulevard is being considered. Letting is scheduled for February 2028 (job number: JKU0114).
- Replacement of the Union Pacific Railroad bridge over I-70 in preparation of widening identified as the preferred alternative…. Letting is scheduled for December 2029 (job number: J4I3211).
- Resurfacing of pavement from Manchester Trafficway to I-470. Letting is scheduled for fiscal year 2030 (job number: JKU0284).

Pending funding and design development, the following improvements identified as high priority in the High Priority Unfunded Needs Document are proposed for the 2030 decade:

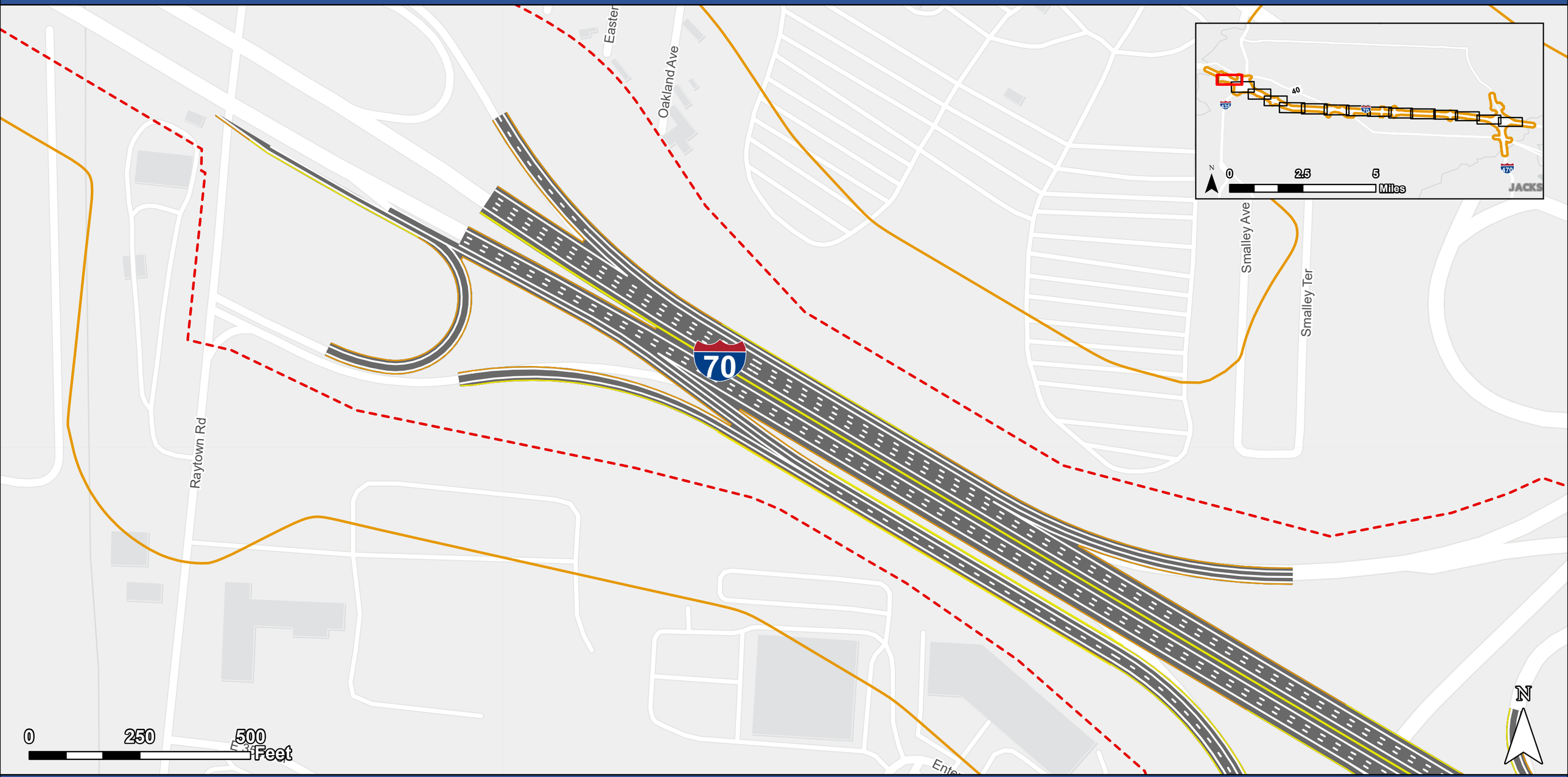
- Widen I-70 to four lanes from Pittman Road or Blue Ridge Boulevard to I-470, depending on previous project phase JKU0114. Sound walls will likely be constructed on both sides of I-70 during this phase.
- Improvement of ramps between Manchester Trafficway and I-435. This phase would require an Access Justification Report (AJR).
- Improvement of I-470 interchange depending on widening of I-470 from US 40 to I-70.
- Widen I-70 to four lanes from I-470 to Blue Ridge Cutoff.
- Addition of a WB collector-distributor (C-D) road and ramps and improvements to the existing EB C-D road from Blue Ridge Cutoff to Manchester Trafficway. This phase would require an AJR.

Table 14 in **Section 6** indicates a general timeline of when the project phasing will occur according to the planned phased approach.

The No-Build Alternative does not meet the Purpose and Need for the project and was not selected as the Recommended Preferred Alternative due to the presence of a constructible, fundable, and viable Build Alternative that met the Purpose and Need for the project.

Preferred Alternative Design

Exhibit 1



Preferred Alternative Impact Limits
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Curbs and/or gutters
Edge of shoulder
Roadway-Safety
Roadway-Walls
Traffic Control-Permanent striping

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Design

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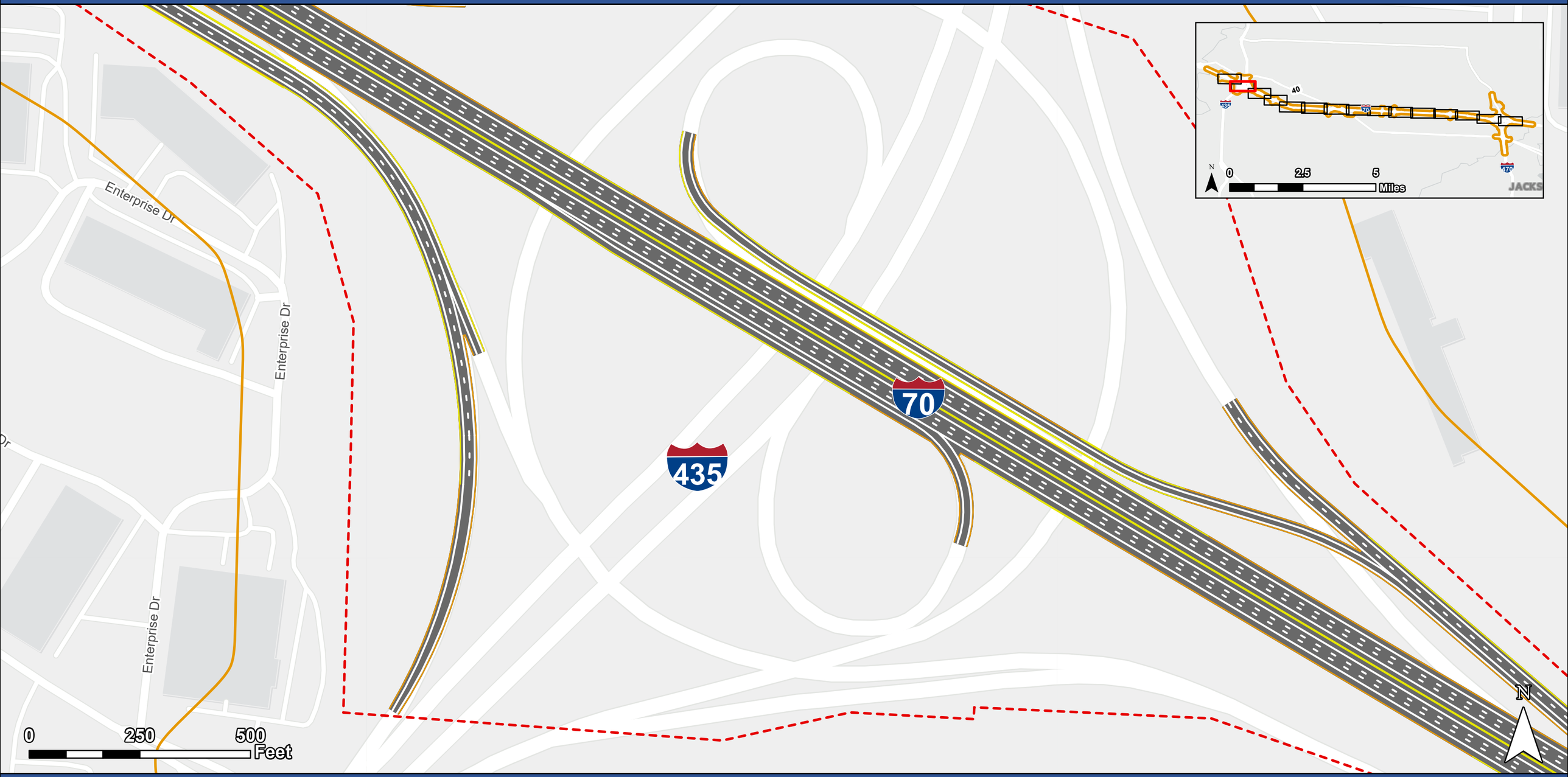

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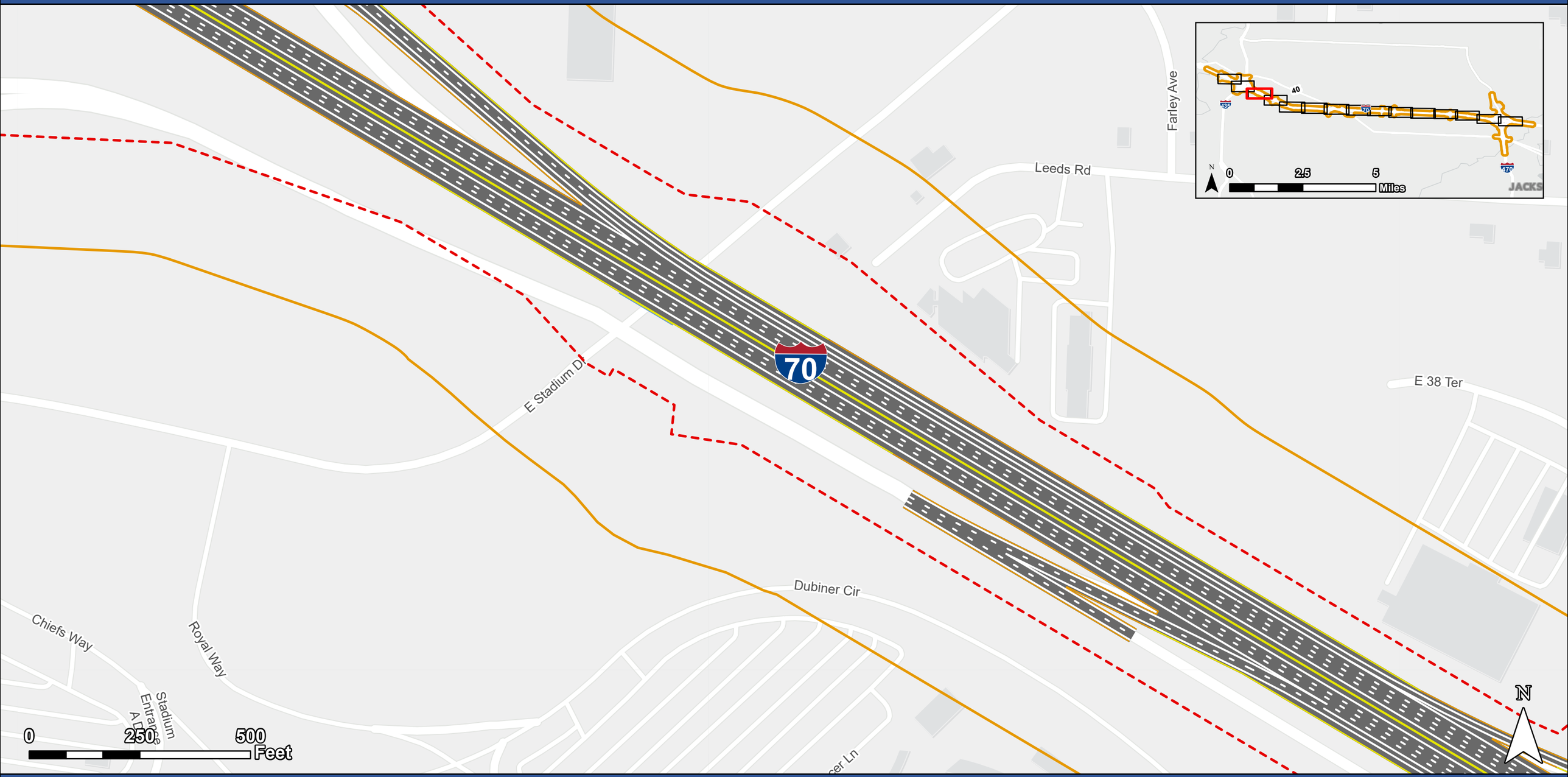

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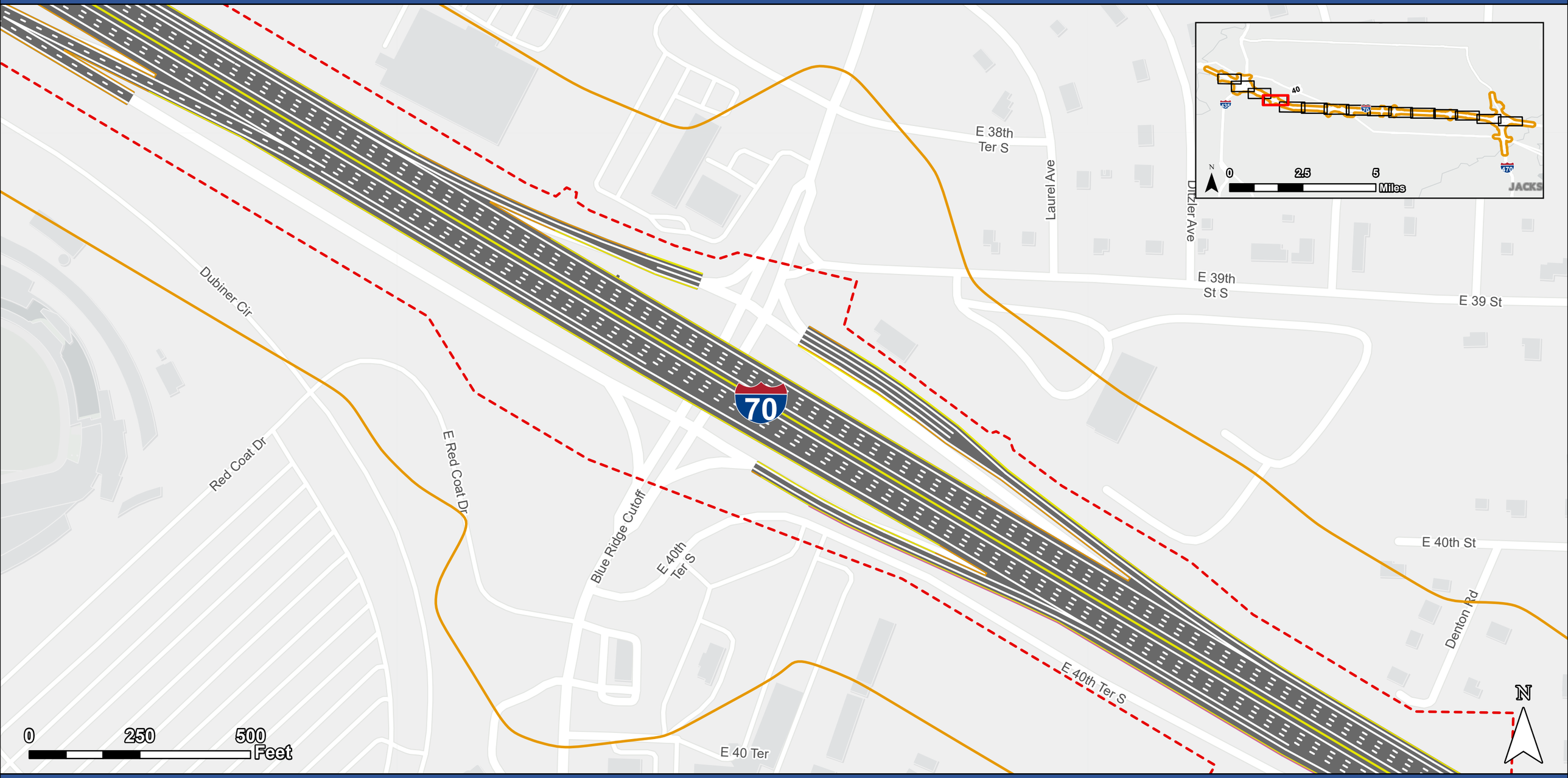

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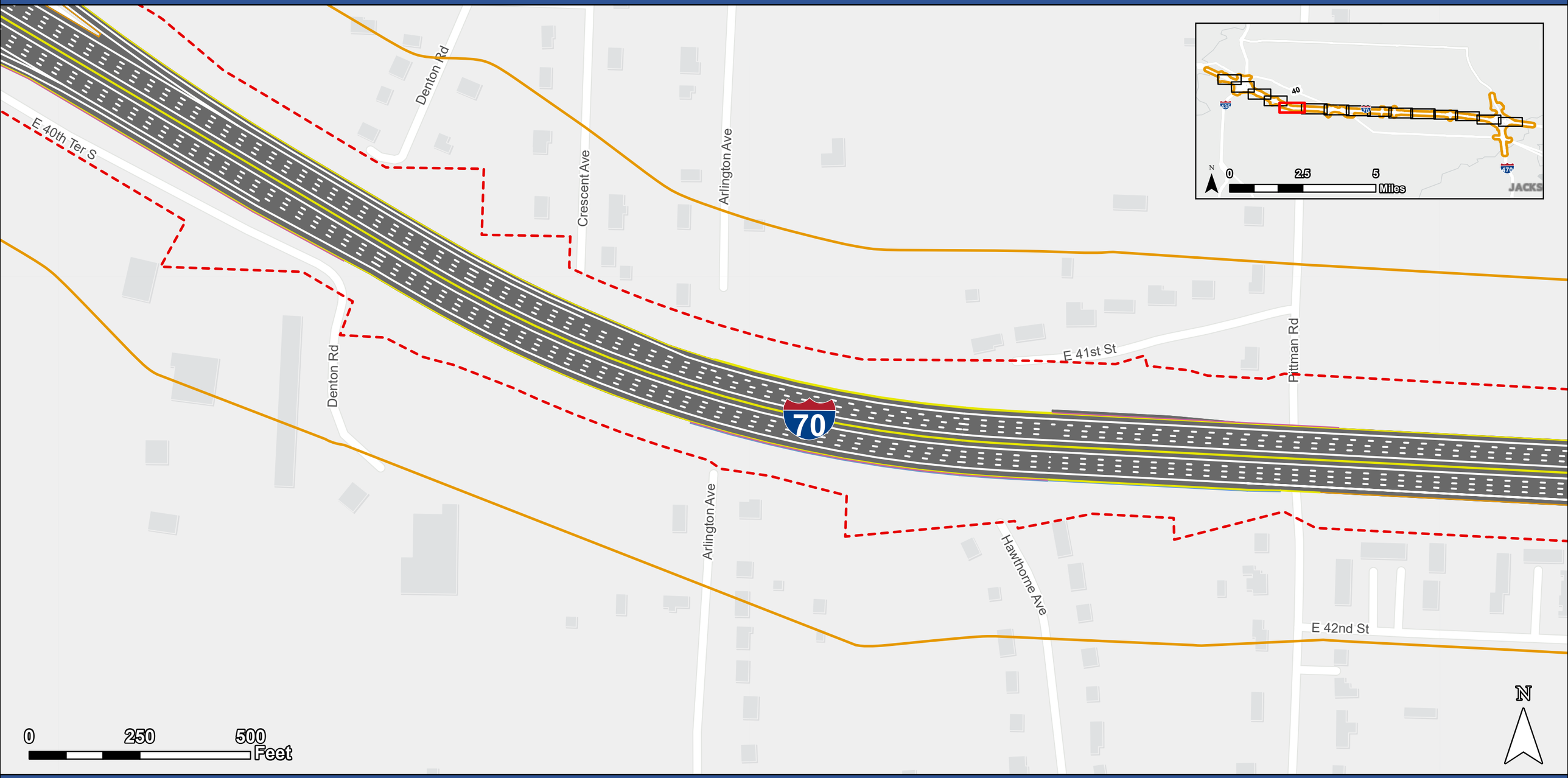

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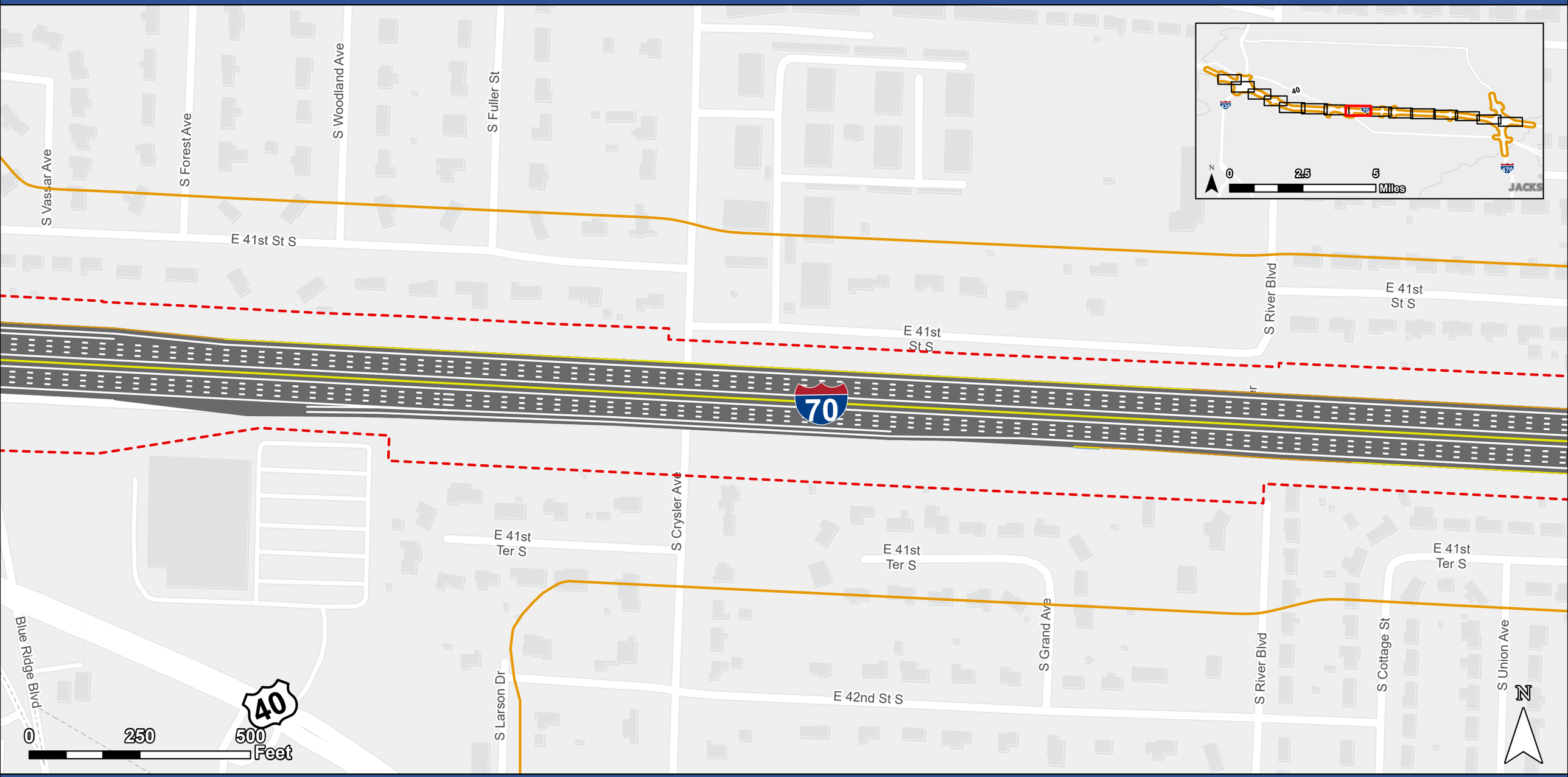

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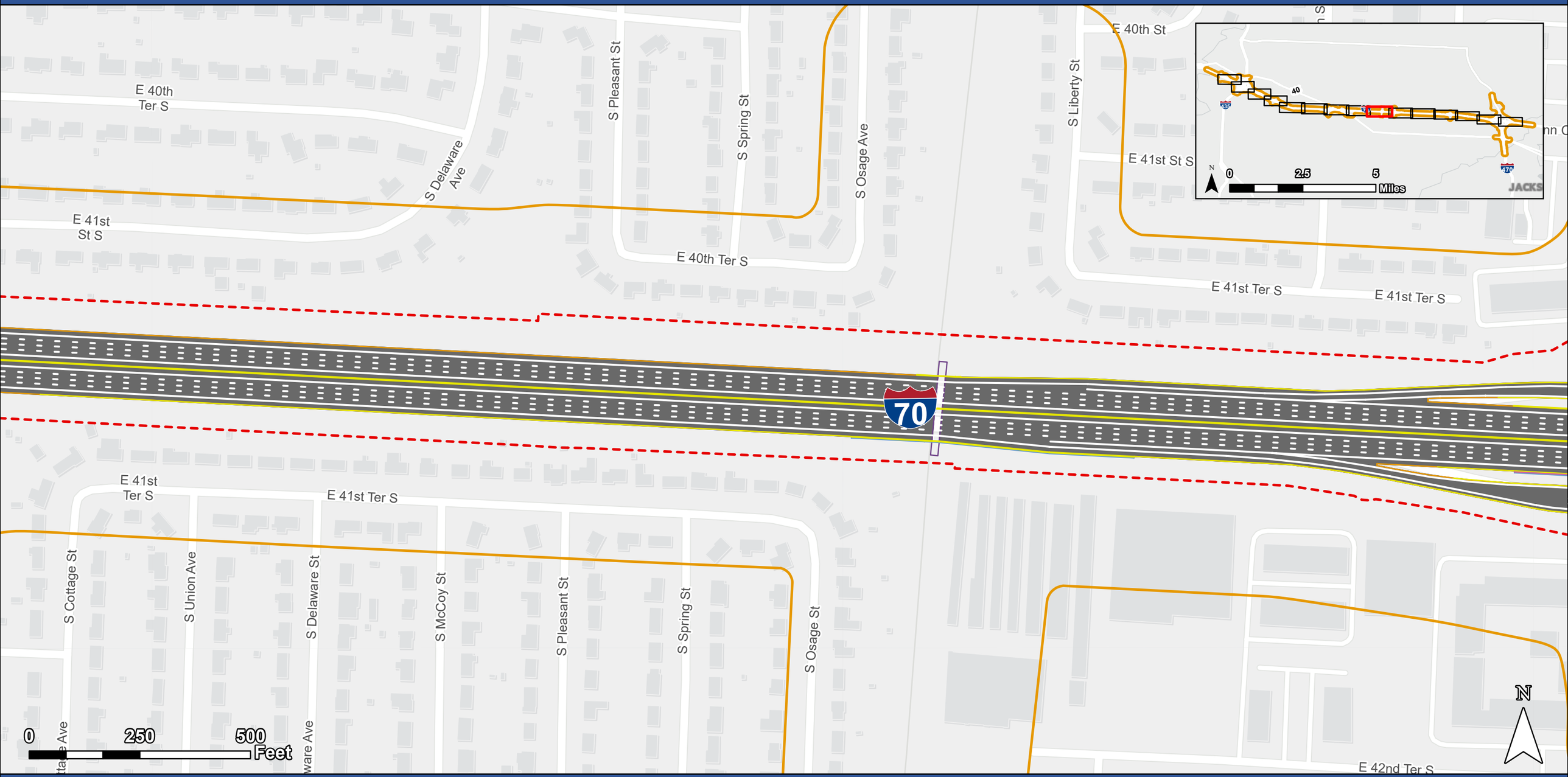

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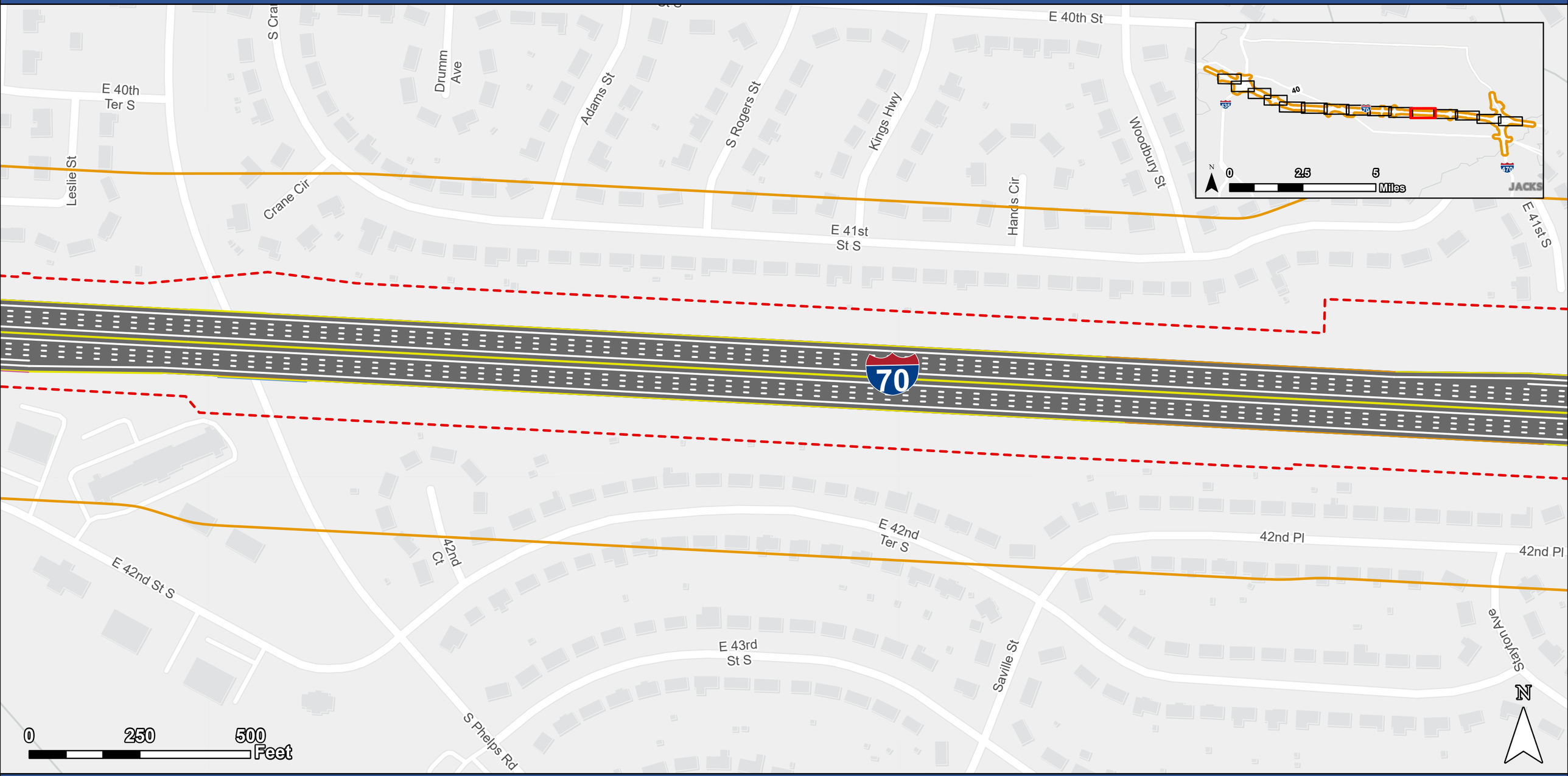

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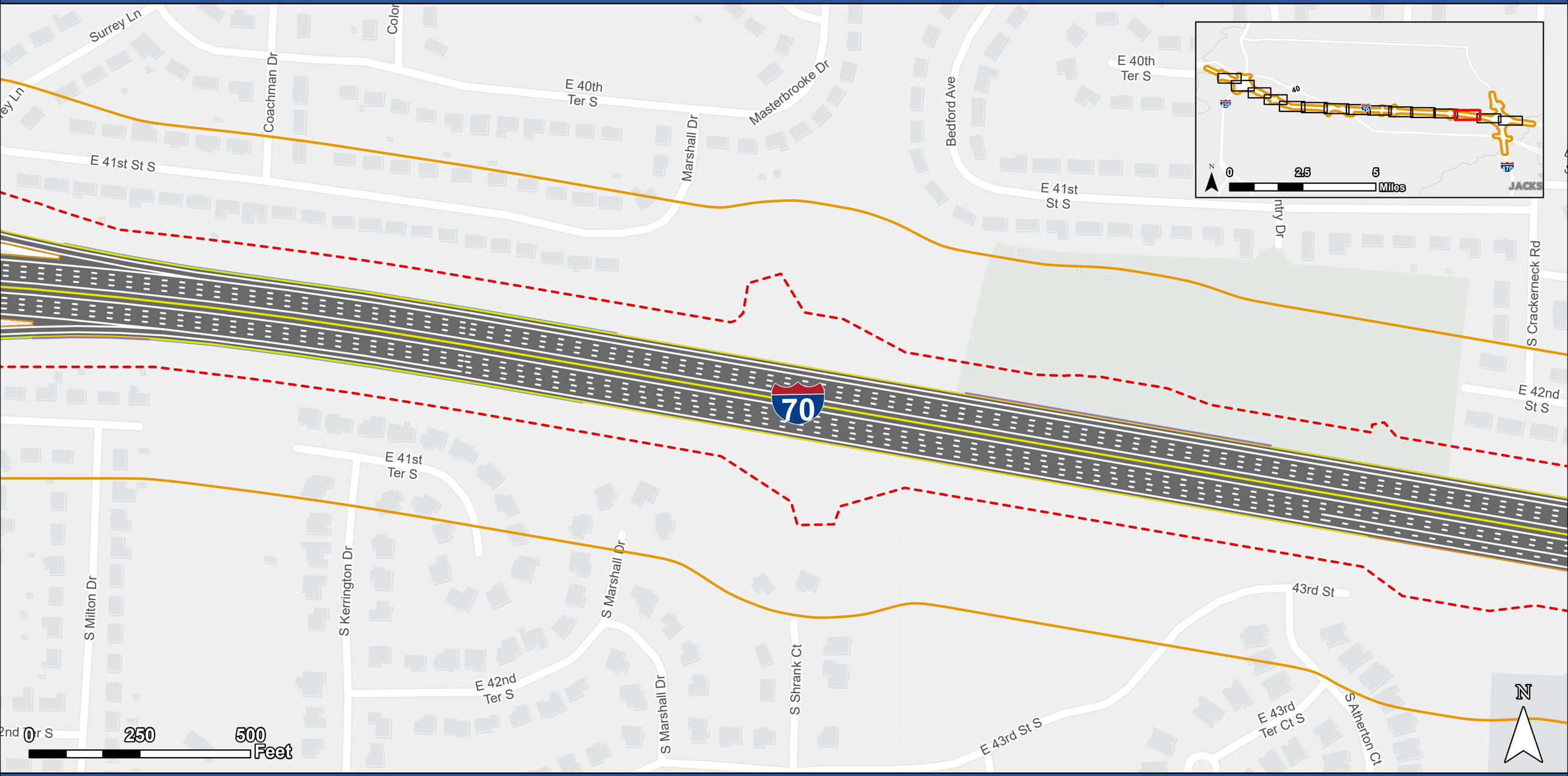

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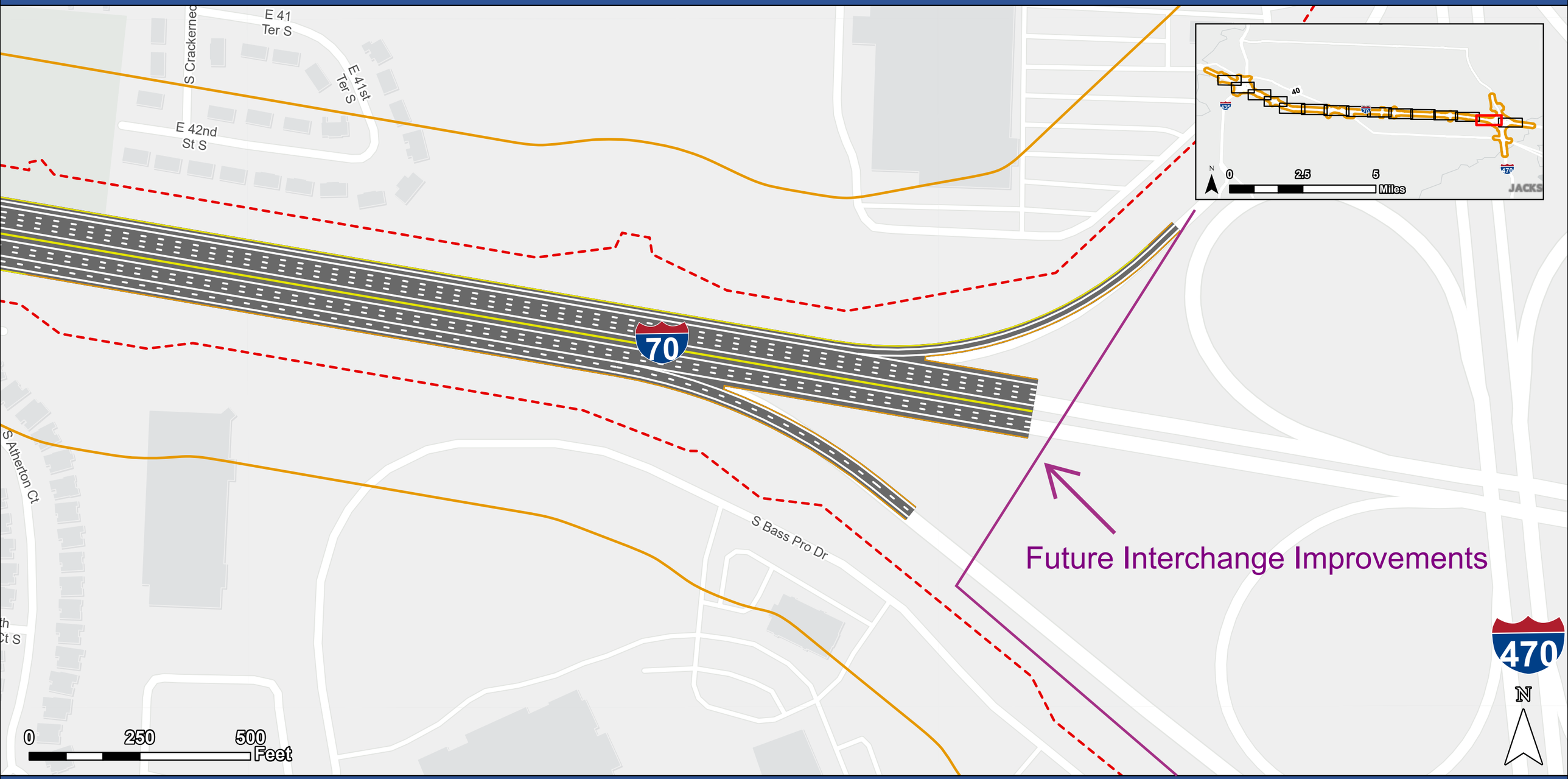

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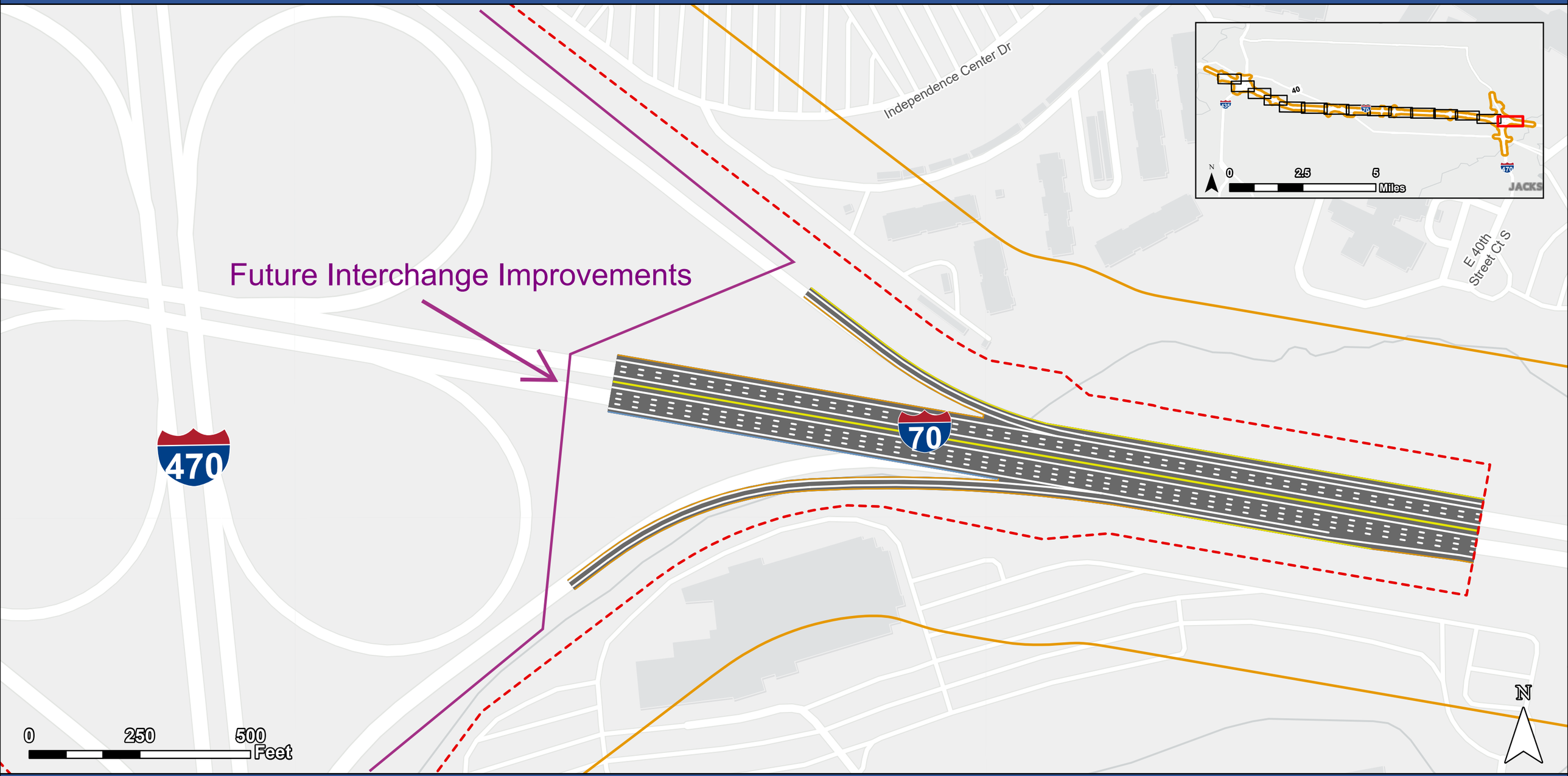

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I-70 Environmental Assessment: I-435 to I-470

3. Impacts of Proposed Action

This section describes the existing social, economic, and environmental conditions in the Project Area and the effects or impacts the proposed action will have upon them. Existing conditions serve as baseline for evaluating the potential beneficial and adverse social, economic, and environmental effects of the No-Build and Preferred Alternative. **Exhibit 2** identifies the Project Area and the field work study area.

To determine the potential impacts, field surveys were completed for wetlands, streams, and threatened and endangered species. The field study area is considered the area most likely directly impacted by the Preferred Alternative. The field study area was identified using an approximate 300-foot buffer from the Preferred Alternative alignment centerline (150 feet from each side). This alignment lines up approximately with the existing ROW limits of I-435, I-70, and I-470.

Applicable Commitment(s):

1. 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.

3.1. Land Use and Zoning

There are eight general zoning and land use designations located within the Project Area, four within Kansas City's municipal limits and four within the city of Independence's municipal limits. In Kansas City, approximately 57% of the Project Area's zoning is residential with the remaining split between commercial/office, industrial designations, and vacant/other. In Independence, approximately 27% of the Project Area's zoning is commercial/office, with the remaining split between residential and industrial/manufacturing designation. Zoning types in the vicinity of the Project Area are shown in **Exhibit 3**.

Surrounding land uses are generally an extension of what is found within the Project Area. Over 50% of the area surrounding the Project Area is dominated by residential land uses. Along the eastern edge of the Project Area there are a greater proportion of commercial land uses such as retail shops, entertainment, and food and drink establishments. Developments adjacent to the Project Area include the Kansas City Royal's Kauffman Stadium, the Kansas City Chief's Arrowhead Stadium, hotels, restaurants, retail, offices, and surface parking lots.

There will be no impacts to the existing land use in and surrounding the Project Area from the No-Build or Preferred Alternative.

3.2. Community and Socioeconomics

A community effects assessment was conducted to evaluate the potential impacts of the proposed project on I-70 from I-435 to I-470. Each community's impact of potential concern within the Project Area is discussed. The specific categories described include demographics and economics, neighborhoods and community resources, displacements and relocations, and visual resources.

3.2.1. Demographics and Economics

The Project Area is located within the municipal limits of the cities of Independence and Kansas City, Jackson County, Missouri. The total population and population growth rates in Missouri, Jackson County, Independence, and Kansas City from 2012 to 2022 are shown in **Table 1**. According to American Community Survey (ACS) five-year estimates, the population in Missouri, Jackson County, and Kansas City have steadily increased from 2012 to 2022. The population in Independence has fluctuated from 2012 to 2022, increasing slightly overall but having some years of negative growth.

Table 1: Population Trends

Year	State of Missouri		Jackson County		Independence		Kansas City	
	Population	Growth	Population	Growth	Population	Growth	Population	Growth
2012	5,982,413	-	672,784	-	116,513	-	459,772	-
2013	6,007,182	0.4%	675,641	0.4%	116,881	0.3%	462,378	0.6%
2014	6,028,076	0.4%	678,167	0.4%	117,160	0.2%	465,005	0.6%
2015	6,045,448	0.3%	680,905	0.4%	117,192	0.0%	467,990	0.6%
2016	6,059,651	0.2%	683,643	0.4%	117,217	0.0%	471,767	0.8%
2017	6,075,300	0.3%	688,554	0.7%	117,369	0.1%	476,974	1.1%
2018	6,090,062	0.2%	692,003	0.5%	117,207	-0.1%	481,417	0.9%
2019	6,104,910	0.2%	696,216	0.6%	117,084	-0.1%	486,404	1.0%
2020	6,124,160	0.3%	700,733	0.7%	117,139	0.1%	491,158	1.0%
2021	6,141,534	0.3%	713,229	1.8%	122,230	4.4%	502,597	2.3%
2022	6,154,422	0.2%	715,526	0.3%	122,218	0.0%	505,958	0.7%

Source: U.S. Census Bureau 2012-2022 (ACS 5-Year Estimates) Table B01003
Note: Negative growth rates indicated in red text.

The racial makeup of 23 of the 28 block groups within the Project Area is greater than 50% of white, non-Hispanic individuals. In four of the block groups, Census Tract 170, Block Group 2 and Census Tract 107.02, Block Groups 1, 2, and 3, white is not the majority of the racial makeup. Census Tract 170, Block Group 2 has the highest percentage of minority population (67% of population). Census Tract 9808.02, Block Group 1, has no population; the entire block group is owned by Jackson County and utilized as a sports complex. **Table 2** identifies the percentage of each race for the Project Area block groups in comparison to the percentage of each race for the cities of Independence and Kansas City, Jackson County, and Missouri.

Table 2: Racial Makeup of the Project Area

Census Area	White Alone	Black or African American Alone	Hispanic or Latino	American Indian and Alaskan Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some Other Race alone	Two or More Races
CT 107.02; BG 1	46.4%	39.5%	10.5%	0.0%	0.0%	0.0%	0.0%	3.6%
CT 107.02; BG 2	49.6%	43.8%	3.1%	0.0%	0.0%	0.0%	0.0%	3.5%
CT 107.02; BG 3	36.7%	54.3%	7.5%	0.0%	0.7%	0.0%	0.0%	0.8%
CT 120; BG 1	69.6%	14.8%	14.5%	0.1%	0.4%	0.0%	0.0%	0.6%
CT 121; BG 3	69.6%	24.9%	4.1%	0.0%	0.0%	0.0%	0.0%	1.5%
CT 122; BG 3	58.8%	0%	38.6%	0.0%	0.0%	0.0%	0.0%	2.6%
CT 124; BG 1	59.9%	21.3%	11.0%	0.0%	5.3%	0.0%	0.8%	1.8%
CT 124; BG 4	59.7%	1.2%	36.5%	0.0%	0.0%	0.0%	0.0%	2.6%
CT 142.03; BG 3	87.0%	5.1%	3.8%	0.0%	0.0%	0.0%	3.5%	0.6%
CT 145.01; BG 1	94.9%	1.0%	2.3%	1.3%	0.0%	0.0%	0.0%	0.6%
CT 145.01; BG 2	89.3%	5.3%	4.5%	0.0%	0.0%	0.0%	1.0%	0.0%
CT 145.01; BG 4	78.1%	5.1%	3.3%	0.0%	2.2%	2.8%	0.0%	8.5%
CT 145.03; BG 2	84.1%	10.8%	4.5%	0.2%	0.0%	0.0%	0.0%	0.4%
CT 145.04; BG 3	75.6%	22.8%	1.2%	0.0%	0.0%	0.0%	0.0%	0.4%
CT 146.01; BG 1	66.7%	15.1%	13.4%	0.9%	0.0%	0.0%	0.0%	3.9%
CT 146.01; BG 4	98.2%	0.1%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%
CT 146.03; BG 2	76.2%	4.8%	6.0%	0.0%	2.7%	0.0%	0.0%	10.3%
CT 146.04; BG 3	74.1%	2.0%	7.7%	0.0%	11.7%	0.0%	0.0%	4.6%
CT 146.04; BG 4	83.5%	13.7%	0.0%	0.0%	1.3%	0.0%	0.0%	1.5%
CT 147.01; BG 1	90.6%	3.1%	0.4%	0.0%	2.8%	0.0%	0.0%	3.1%
CT 147.01; BG 2	50.1%	45.6%	2.6%	0.0%	0.0%	0.0%	0.0%	1.7%
CT 147.01; BG 3	56.8%	28.6%	0.0%	0.0%	0.0%	7.8%	0.0%	6.8%
CT 148.04; BG 2	82.8%	2.1%	3.9%	0.0%	3.3%	0.0%	0.0%	7.9%
CT 163; BG 1	68.9%	9.5%	18.9%	0.0%	0.0%	0.0%	0.0%	2.7%
CT 170; BG 1	66.4%	25.9%	2.6%	0.0%	0.0%	0.6%	0.0%	4.4%
CT 170; BG 2	32.9%	39.5%	19.7%	0.0%	0.0%	0.0%	0.0%	8.0%
CT 185; BG 3	83.3%	6.2%	6.4%	0.0%	1.3%	0.0%	0.0%	2.8%
CT 9808.02; BG 1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Communities of Comparison								
Missouri	77.6%	11.2%	4.6%	0.2%	2.1%	0.1%	0.3%	4.0%
Jackson County	61.1%	22.6%	9.6%	0.2%	1.7%	0.3%	0.5%	3.9%
Independence	72.9%	10.9%	9.6%	0.2%	1.1%	1.1%	0.7%	3.6%
Kansas City	55.2%	26.0%	11.1%	0.2%	2.7%	0.2%	0.4%	4.3%

Source: U.S. Census Bureau 2022 (ACS 5-Year Estimates) Table B03002

Household characteristics for Missouri, Jackson County, Independence, and Kansas City are shown in **Table 3**. Most characteristics are similar, but Kansas City has a lower median age, Missouri has a higher average family size, and Independence has a lower median household income and higher percent of population below the poverty level.

Table 3: Household Characteristics

Characteristic	Missouri	Jackson County	Independence	Kansas City
Married Couples	75.1%	68.7%	67.6%	67.0%
With Children Under 18	27.8%	26.3%	21.7%	27.7%
Male Householder, no spouse/partner	7.2%	7.6%	8.3%	8.4%
With Children Under 18	3.8%	3.6%	4.2%	3.9%
Female Householder, no spouse/partner	17.6%	23.8%	24.2%	24.6%
With Children Under 18	9.6%	13.0%	14.4%	13.4%
Average Family Size	3.06	2.29	2.22	2.21
Median Age	38.8	37.0	39.5	35.4
Median Household Income	$65,920	$65,169	$57,415	$65,256
Percent of Population Below Poverty Level	12.8%	13.9%	15.1%	14.9%
Total Households	1,542,797	169,849	30,048	115,353

Source: U.S. Census Bureau 2022 (ACS 5-Year Estimates) Tables B11003, C17002, S0101, S1901

While economic statistics specifically for the Project Area were not calculated, economic trends for Missouri, Jackson County, Independence, and Kansas City show a general picture of economic health. Employment trends during the period of 2012 to 2022 are positive, as shown in **Table 4**. The average annual employment growth during that period was 0.2% for Missouri, 0.7% for Jackson County, 0.5% for Independence, and 1.2% for Kansas City.

The unemployment rate in Missouri, Jackson County, Independence, and Kansas City steadily decreased from 2012 to 2022, as shown in **Table 4**. The average unemployment rate during that period was 6.2% for Missouri, 6.6% for Jackson County, 7.3% for Independence, and 6.8% for Kansas City.

Table 4: Employment Trends

Year	Missouri			Jackson County		
	Population in Labor Force	Labor Force Growth	Unemployment Rate	Population in Labor Force	Labor Force Growth	Unemployment Rate
2012	3,062,560	-	8.5%	354,570	-	9.7%
2013	3,059,214	-0.1%	8.8%	354,133	-0.1%	9.4%
2014	3,054,519	-0.2%	8.4%	353,951	-0.1%	8.8%
2015	3,053,938	0.0%	7.5%	353,183	-0.2%	7.6%
2016	3,055,025	0.0%	6.6%	356,031	0.8%	6.7%
2017	3,062,657	0.3%	5.8%	358,803	0.8%	5.7%
2018	3,062,496	0.0%	5.1%	362,349	1.0%	5.1%
2019	3,074,639	0.4%	4.6%	366,945	1.3%	4.4%
2020	3,090,253	0.5%	4.5%	373,329	1.7%	4.9%
2021	3,104,195	0.5%	4.5%	380,028	1.8%	5.0%
2022	3,107,514	0.1%	4.3%	380,766	0.2%	4.9%

Year	Independence			Kansas City		
	Population in Labor Force	Labor Force Growth	Unemployment Rate	Population in Labor Force	Labor Force Growth	Unemployment Rate
2012	58,553	-	10.5%	248,471	-	9.9%
2013	58,325	-0.4%	10.2%	248,049	-0.2%	9.7%
2014	57,711	-1.1%	9.0%	250,484	1.0%	9.1%
2015	57,143	-1.0%	8.4%	251,714	0.5%	7.9%
2016	57,768	1.1%	7.8%	253,904	0.9%	6.8%
2017	57,635	-0.2%	6.2%	258,119	1.7%	5.9%
2018	57,671	0.1%	5.4%	261,758	1.4%	5.4%
2019	58,523	1.5%	4.9%	265,707	1.5%	4.8%
2020	59,209	1.2%	5.6%	270,785	1.9%	4.9%
2021	61,191	3.4%	6.1%	278,402	2.8%	5.1%
2022	61,429	0.4%	6.2%	279,173	0.3%	4.8%

Source: U.S. Census Bureau 2022 (ACS 5-Year Estimates) Table DP03
Note: Negative growth rates indicated in red text.

The area surrounding the Project Area has seen private and public sector investments since the early 1970s. Areas adjacent to the Project Area contain substantial numbers of commercial, retail, office, and food and drink establishments including major brand-name hotels, restaurants and bars, clothing stores, offices, major grocers and retailers, and other commercial enterprises. There is very little undeveloped or vacant property in the existing corridor and most non-structural portions of property are paved or used for parking, circulation, and ingress or egress.

According to existing zoning and future land use plans for the cities of Independence and Kansas City, most of the undeveloped land within and adjacent to the Project Area

is anticipated to remain as commercial, low-density residential, and industrial development.

3.2.2. Neighborhoods and Community Resources

Community resources such as neighborhoods, schools, universities, places of worship, hospitals, and emergency response services are located in the vicinity of the Project Area. **Exhibit 4** displays the residential neighborhoods within a half-mile of the Project Area and **Exhibit 5** displays the community resources within that same distance.

The Project Area crosses through the following 11 City of Independence neighborhoods: Pitcher, South, South Crysler, Luff, Sycamore, Southern, 39th East, Glendale, Blackburn, Highland Manor, and Rainbow.

The Project Area crosses through the following seven Kansas City neighborhoods: Leeds, Blue Valley Industrial, Western Blue Township, Cunningham Ridge, Ashland Ridge, Riss Lake, and Sterling Acres.

There are four school districts that cross the Project Area: the Kansas City Public School District, the Raytown Public School District, the Independence Public School District, and the Blue Springs Public School District. Seven school and educational facilities are located within a half-mile of the Project Area, none of which are within the Project Area. From west to east, these include:

- Pitcher Elementary School – 9915 E. 38th Terrace
- Nativity of Mary Catholic School – 10021 E. 36th Terrace S.
- Northwood School – 4400 Sterling Avenue
- John W. Luff Elementary School – 3700 S. Delaware Avenue
- William Southern Elementary School – 4300 S. Phelps Road
- Sycamore Hills Elementary School – 15208 E. 39th Street S.
- William Yates Elementary School – 3600 S. Davidson Avenue

There are thirty-six places of worship and religious administration facilities found within a half-mile of the Project Area, seven of which are within the Project Area (marked with an asterisk below). From west to east, these include:

- Calvary Worship Center International – 3200 Donnelly Avenue
- Triumphant Church Assembly of God – 4207 Blue Ridge Cutoff
- Kansas City Temple Family Worship Center – 4201 Blue Ridge Cutoff
- Blue Ridge Baptist Church – 9320 E. 35th Street S.
- *Christ Covenant Church – 4041 S. Denton Road
- Rose of Sharon Pentecostal Church of God – 9621 E. 38th Terrace
- Eastside Assembly of God Church – 3923 Pittman Road
- Trinity Independent Baptist Church – 4501 Pittman Road
- La Iglesia de Dios Inc. – 10215 E. U.S. Highway 40
- Nativity of Mary Catholic Church – 10021 E. 36th Terrace S.

- *Life Church East Kansas City – 11100 E. 43rd Street
- Sterling Acres Baptist Church – 11200 E. 47th Street
- Good Shepard Community of Christ – 4341 Blue Ridge Boulevard
- Rivers of Life Church – 12401 E. 43rd Street S.
- *Eastgate Christian Church – 4010 S. River Boulevard
- Christ the Rock Church – 13901 E. Noland Court
- The Gathering Baptist Church – 4505 S. Noland Road
- Church of the Four Corners – 14300 E. U.S. Highway 40
- King's Family Church – 14300 E. U.S. Highway 40
- Unity Church of Independence – 14304 E. 39th Street S.
- New Light Church – 14500 E. 39th Street S.
- *The Everlasting Church of Jesus Christ in the Latter Day–14480 E. 42nd Street S.
- Christ United Methodist Church – 14506 E. 39th Street S.
- Community of Christ – 15006 E. 39th Street S.
- Sycamore Hills Baptist Church – 15200 E. 39th Street S.
- Church of Christ – 15331 E. 39th Street S.
- St. Mark Catholic Church – 3736 S. Lee's Summit Road
- *St. Michael's Episcopal Church – 4000 S. Lee's Summit Road
- Coventry Estates Baptist Church – 17133 E. 39th Street S.
- Soul's Harbor Assembly of God – 17142 E. 39th Street S.
- Saint Paul Lutheran Church – 17200 E. 39th Street S.
- *EPIC Church – 3711 S. Whitney Avenue
- *United Methodist Church Heartland District – 4731 S. Cochise Drive
- Crown Pointe Church – 5950 N.E. Lakewood Way
- First Baptist Church Blue Springs – 4500 Little Blue Parkway
- Independence Christian Center – 20201 N.W. Valley View Road

Within a half-mile of the Project Area, but outside of its boundaries, there is one library, the Mid-Continent Public Library – East Independence Branch, located at 4505 Little Blue Parkway.

There are seven healthcare facilities located within a half-mile of the Project Area, three of which are within the Project Area (marked with an asterisk below). From west to east these include:

- *CareNow Urgent Care – Independence – West – 4179 Sterling Avenue
- CareNow Urgent Care – Independence – 17700 E. 39th Street S.
- Saint Luke's Primary Care – Independence – 4801 S. Cliff Avenue, Suite 300
- *Encompass Medical Group Independence Office – 4811 S. Arrowhead Drive
- Family Care of Independence – 4911 S. Arrowhead Drive, Suite 200 & 201
- *Urgent Care of Kansas City – 4741 S. Arrowhead Drive, Suite B
- Concentra Urgent Care – 19000 E. Eastland Center Court, Suite 200

Within a half-mile of the Project Area, but outside of its boundaries, there is one cemetery, the Dalton-Luttrell-Carr Cemetery, located at 3733 S. Milton Drive.

The Kansas City Police East Patrol Division is located at 5301 E. 27th Street which is just under a mile from the eastern edge of the Project Area. There are two fire stations within a half-mile of the Project Area, the Kansas City Fire Station No. 39 located at 11100 E. 47th Street and Fire Station No. 2 – Independence, MO located at 14510 E. 39th Street S.

No community resources or services will be affected by the No-Build or Preferred Alternative.

3.2.3. Title VI

All Federal agencies must comply with Title VI of the 1964 Civil Rights Act (Title VI). Under Title VI and related statutes, each Federal agency is required to ensure that no person is excluded from participation in, denied the benefit of, or subjected to the discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, disability, or religion.

FHWA administers its governing statutes to identify and avoid discrimination by:

1. Identifying and evaluating environmental, public health, and interrelated social and economic effects of FHWA programs, policies, and activities;
2. Considering alternatives to proposed programs, policies, and activities where such alternatives would result in avoiding; and
3. Providing public involvement opportunities and considering the results thereof, including providing meaningful access to public information concerning the human health or environmental impacts and soliciting input from affected populations in considering alternatives during the planning and development of alternatives and decisions.

Census data was utilized to assess the Limited English proficiency (LEP) data for the Project Area block groups (**Table 5**). The LEP percentage is defined as the percentage of all individuals over five years of age who speak a language other than English and speak English less than “very well.” The majority of the Project Area block groups have no identifiable LEP populations. There are four block groups with LEP populations between one and three percent. This is comparable to Jackson County and the cities of Independence and Kansas City.

Table 5: Percent LEP for Project Area Block Groups

Census Area	Percent LEP
CT 107.02; BG 1	0.0%
CT 107.02; BG 2	0.0%
CT 107.02; BG 3	0.0%
CT 120; BG 1	0.0%
CT 121; BG 3	0.0%
CT 122; BG 3	0.0%
CT 124; BG 1	3.0%
CT 124; BG 4	0.0%
CT 142.03; BG 3	0.0%
CT 145.01; BG 1	0.0%
CT 145.01; BG 2	0.0%
CT 145.01; BG 4	1.0%
CT 145.03; BG 2	0.0%
CT 145.04; BG 3	0.0%
CT 146.01; BG 1	0.0%
CT 146.01; BG 4	0.0%
CT 146.03; BG 2	2.0%
CT 146.04; BG 3	0.0%
CT 146.04; BG 4	0.0%
CT 147.01; BG 1	0.0%
CT 147.01; BG 2	0.0%
CT 147.01; BG 3	0.0%
CT 148.04; BG 2	0.0%
CT 163; BG 1	0.0%
CT 170; BG 1	0.0%
CT 170; BG 2	3.0%
CT 185; BG 3	0.0%
CT 9808.02; BG 1	0.0%
Jackson County	2.0%
Independence	1.0%
Kansas City	2.0%

Source: U.S. Census Bureau 2022

3.3. Prime and Unique Farmland

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), pursuant to the Farmland Protection Policy Act of 1981 (FPPA), is responsible for evaluating the conversion of prime and unique farmland and statewide and locally important farmland to non-agricultural use. The Project Area is located within a fully developed urban area and the FPPA does not apply, therefore there are no

farmland impacts associated with either the No-Build Alternative or the Preferred Alternative.

3.4. Public Transit

The transit network within the Project Area includes several RideKC transit bus services provided by the Kansas City Area Transportation Authority (KCATA) and IndeBus including:

- **Truman Road Limited (route 16)** travels westbound and eastbound through the Project Area on I-70 from the western proposed project boundary to the I-70/I-470 interchange, where it then travels on I-470 through the northern proposed project boundary.
- **Blue Ridge (route 28)** travels westbound and eastbound on East U.S. Highway 40 where it crosses I-435 within the Project Area. The route also travels northbound and southbound through the Project Area on Sterling Avenue and East U.S. Highway 40 where they cross I-70.
- **Blue Ridge Limited (route 29)** travels westbound and eastbound through the Project Area on I-70 from the western project boundary to Blue Ridge Cutoff where it continues along Blue Ridge Cutoff through the southern project boundary.
- **31st Street (route 31)** travels westbound and eastbound on East U.S. Highway 40 where it crosses I-435 within the Project Area. The route then travels northbound and southbound through the Project Area on Pittman Road where it crosses I-70 and eastbound and westbound along the Project Area's southern boundary on East 42nd Street, East 43rd Street, and the Blue Ridge Crossing parking lot.
- **Broadway (route 47)** travels northbound and southbound through the Project Area. The route crosses the Project Area at Blue Ridge Cutoff, Sterling Avenue, and East U.S. Highway 40.
- **Blue Route (route 302)** travels northbound and southbound on Sterling Avenue where it crosses I-70 within the Project Area. The route then travels eastbound and westbound through the Blue Ridge Crossing parking lot and along East U.S. Highway 40 through the southern proposed project boundary.
- **Purple Route (route 303)** travels northbound and southbound on South Noland Road where it crosses I-70 within the Project Area.
- **Lee's Summit Express (route 550)** travels eastbound through the Project Area on I-70 from the western proposed project boundary to Manchester Trafficway where it continues along Manchester Trafficway through the southern project boundary. The route also travels westbound through the Project Area on I-435 from the southern proposed project boundary, then enters I-70 on the I-70/I-435 Interchange, and travels on I-70 through the western proposed project boundary.

- **Blue Springs Express (route 570)** travels westbound and eastbound through the Project Area on I-70 from the western proposed project boundary to the eastern proposed project boundary.

Exhibit 6 displays the transit network in and around the Project Area.

There will be no permanent impact to the transit routes due to the Preferred Alternative. There may be some short-term impacts on schedule and detours due to construction.

Applicable Commitment(s):

2. MoDOT, in coordination with the relevant transit agencies, will develop a plan prior to construction to reroute transit services during construction as necessary to maintain connections to community resources and employers.

3.5. Parks, Recreation, and Section 4(f) Resources

The U.S. Department of Transportation (USDOT) refers to publicly owned land from parks, recreation areas, and wildlife and waterfowl refuges, or land from historic sites that are listed or potentially eligible for listing on the National Register of Historic Places (NRHP), as "Section 4(f) properties" because they have special status under the provisions of Section 4(f) of the USDOT Act of 1966 (49 USC Part 303 and 23 CFR Part 774). Section 4(f) states the administration may not approve the use of a Section 4(f) property unless: (1) there is no prudent and feasible avoidance alternative to the use of the property and (2) the action includes all possible planning to minimize harm to the property; or if the use of the property, including any measures to minimize harm (avoidance, minimization, mitigation, or enhancement measures), will have a de minimis impact on the Section 4(f) property. In addition, any public park or recreation land that has used funds from the National Park Service's (NPS) Land and Water Conservation Fund (LWCF) for acquisition or development is protected under Section 6(f) of the LWCF Act. The following section describes the potential Section 4(f) and Section 6(f) areas located within the Project Area, other than historic sites listed or potentially eligible for listing on the NRHP. NRHP sites are discussed further in **Section 3.16**, Cultural Resources and the Cultural Resources Report included in **Appendix F**.

3.5.1. Park and Recreation Facilities

Data from Jackson County, the city of Independence, the city of Kansas City, and the Mid-America Regional Council (MARC) identified the recreational resources within the Project Area. There are four parks and three trails that cross or are located at least partially within the Project Area. The parks and trails within the Project Area are listed in **Table 6** and shown in **Exhibit 7**.

Table 6: Parks and Trails Within the Project Area

Facility	Type	Description	Designation
Little Creek Park	Private	Privately owned park.	-
Van Hook Park	Neighborhood and Special Use	Public park with various park amenities, also a Section 6(f) park	4(f)/6(f)
Cable Dahmer Arena / Independence Community Ice	Special Use / Local	Indoor sports complex / community ice rink located on the property	Multiple-use 4(f)*
Little Blue Trace Park	County	A park that surrounds the Little Blue Trace Trail. Includes various park amenities including shelters, picnic tables, and a softball field.	4(f)
Waterfall Park Trail	Local	Eight-foot-wide shared use path.	4(f)
U.S. 40 Little Blue Trace Trail Connector	Local	Eight-foot-wide shared use path.	4(f)
Little Blue Trace Trail	Regional	Ten-foot-wide shared use path, the trail is considered a Section 6(f) facility.	4(f)/6(f)

Note: Trails are listed from west to east
*Only the portion of property associated with Independence Community Ice is considered a 4(f) resource

Little Creek Park

Little Creek Park is located southwest of the I-70 exit ramp to South Lee's Summit Road (Exit 14). The park has a picnic shelter, playground equipment, and open green space. The portion of the park within the Project Area is open green space and does not include any park amenities. The park is not considered a Section 4(f) resource as it is privately owned by the Stewart Height East Homeowners Association and the land is currently zoned as residential.

Van Hook Park

Van Hook Park is located northwest of the I-70/I-470 interchange, north of 39th Street at the edge of the Project Area. The park is large with soccer fields, a pavilion, and open green space. The portion of the park within the Project Area is forested green space and does not include any park amenities. The park is considered a Section 4(f) resource. Additionally, it received LWCF funding in 1985; and is also a Section 6(f) resource.

Cable Dahmer Arena / Independence Community Ice

Cable Dahmer Arena is a large multi-purpose indoor event center located directly southeast of the I-70/I-470 interchange. The portion of the property in the Project Area includes greenspace surrounding the arena and portions of the arena building and parking lot. The Cable Dahmer Arena is primarily used for commercial purposes and is not generally open to the public for recreation. However, Independence Community Ice, located on the arena property, is owned by the City of Independence and does have public skating dates/hours. Therefore, per the Section 4(f) Policy Paper, the property

constitutes a multiple-use public land holding. Only the portion of property related to Independence Community Ice is subject to Section 4(f) requirements.

Little Blue Trace Park

Little Blue Trace Park is located along the Little Blue Trace Trail and includes shelters, picnic tables, and a softball field. The portion of the park in the Project Area is just north of I-70 and east of the I-70/I-470 interchange on the eastern edge of the Project Area. The park is considered a Section 4(f) resource.

Waterfall Park Trail

The Waterfall Park Trail is a multi-use trail on the west side of Bass Pro Drive north of East U.S. Highway 40 within the Project Area. The 1.25-mile trail is an eight-foot-wide shared use path with recreational facilities such as a playground, lake, and picnic shelters outside of the Project Area. The trail connects to the U.S. 40 Little Blue Trace Trail Connector. The trail is a Section 4(f) resource.

U.S. 40 Little Blue Trace Trail Connector

The U.S. 40 Little Blue Trace Trail Connector is a multi-use trail on the south side of East U.S. Highway 40 where it crosses I-470. The 0.6-mile trail is an eight-foot-wide shared use path with no recreational facilities. The trail connects the Waterfall Park Trail and the Little Blue Trace Trail. The trail is a Section 4(f) resource.

Little Blue Trace Trail

The Little Blue Trace Trail is a multi-use trail adjacent to the Little Blue River. The trail crosses I-70 just east of the I-70/I-470 Interchange and crosses I-470 south of East U.S. Highway 40, which is within the Project Area but outside of the area of impact for the Preferred Alternative. The 15.5-mile trail is a ten-foot-wide shared use path with recreational facilities such as sports areas and picnic shelters outside of the Project Area. The trail is a Section 4(f) resource. Additionally, the Little Blue Trace Trail received approximately $1.08 million in funding from the LWCF, making it a Section 6(f) resource.

3.5.2. Potential Impacts to Parks and Recreation Facilities

The No-Build Alternative will have no impact on parks and recreation facilities. Although the above trails and parks are located within the Project Area, only the Little Creek Park extends into the area of impacts for the Preferred Alternative. The Preferred Alternative will impact less than 0.2 acre of Little Creek Park as a result of required ROW for the Preferred Alternative. This park is privately owned and not open for use by the general public. The park is not considered a Section 4(f) resource. There are no other parks and recreation facilities impacts.

3.6. Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities in or near the Project Area include bicycle-friendly roads, sidewalks, and the trails discussed in **Section 3.5**. The bicycle and pedestrian facilities within the Project Area are displayed in **Exhibit 7** and include:

3.6.1. Sidewalks

Sidewalks within the Project Area are available and accommodate bicycle or pedestrian use. Sidewalk widths in the Project Area are generally 5-feet wide and available on most side streets, and streets that cross the I-70 corridor and through the Project Area. Sidewalks are not shown in **Exhibit 7**.

3.6.2. Bike Routes

Within the Project Area, Blue Ridge Cutoff and South Crysler Avenue are designated as bike routes. These roads contain share the road signs but no lane markings. The closest existing dedicated bike lane with lane markings is southwest along Leeds Trafficway, about 0.5 mile from the Project Area at its closest point.

3.6.3. Potential Impacts to Bicycle and Pedestrian Facilities

There will be no permanent impacts to bicycle and pedestrian facilities from either the No-Build or the Preferred Alternative. There may be a need for temporary detours or signage due to construction.

3.7. Right of Way and Displacements

Among the various impacts of a highway or other transportation improvement project is the acquisition of real property, including residences and businesses. In an effort to make the property acquisition process as equitable as possible, regulations including the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. 4601) and MoDOT's relocation program and relocation advisory assistance program which satisfies the requirements of Title VI of the Civil Rights Act of 1964, have been developed to ensure adequate consideration and compensation for the persons whose property is required for the project.

The ROW acquisition impacts include land that is acquired for highway construction and operation purposes. ROW impacts include both acquisition (i.e., the entire tract, parcel or lot is acquired for ROW), partial acquisition (i.e., only a portion of the tract, parcel or lot is acquired for ROW), and permanent and temporary easements. With a partial acquisition that includes more than just land, a habitable residence or viable commercial business would remain, and the primary structure is not acquired. In accordance with the Uniform Act and MoDOT's relocation programs, fair market compensation will be provided to property owners who are affected by this project.

ROW acquisition was evaluated within the categories of permanent impacts and temporary impacts due to construction activities. Permanent impacts are those property acquisitions that are necessary for the new alignment of I-70 that will be converted to

permanent ROW or permanent easement. Temporary impacts are those to property acquisitions that are needed as temporary construction easements and do not require ROW to be permanently acquired. Relocation impacts were evaluated within the categories of residential, business, parkland, and cemetery displacements.

The No-Build Alternative will have no impact on the existing MoDOT ROW. Approximately 1.5 acres of ROW and/or permanent easement will be required to complete construction of the Preferred Alternative but there will be no displacements or relocations of homes or businesses.

Applicable Commitment(s):

3. MoDOT will follow the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 for all property acquisitions prior to construction.

3.8. Water Resources

Discharges of dredged or fill materials in WOTUS, including wetlands and streams, requires prior authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). The actual limits and jurisdictional status of delineated waters for permitting purposes must be verified by the USACE. Final authorization for activities in Waters of the United States (WOTUS) areas must be authorized by the USACE District Engineer.

3.8.1. Wetlands

Wetlands, waterways, lakes, natural ponds, and impoundments are regulated by the USACE under Section 404 of the CWA, which requires a permit to authorize the discharge of dredged or fill material into WOTUS (33 U.S. Code § 1344). Executive Order 11990, Protection of Wetlands, directs federal agencies to implement “no net loss” measures for wetlands (42 Federal Register 26951). These no net loss measures include a phased approach to wetland avoidance, then minimization of impacts if wetlands cannot be avoided, and finally mitigation of unavoidable impacts.

Desktop and field survey efforts were conducted in July 2024 and April 2025 to determine the presence of potential jurisdictional wetlands within the field study area. The field study area is considered the area most likely directly impacted by the Preferred Alternative and was completed using an approximately 300-foot buffer from the Preferred Alternative alignment centerline (150 feet from each side). This alignment lines up approximately with the existing ROW limits of I-435, I-70, and I-470.

The result of the field and desktop survey was the identification of three wetlands within the field study area in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (USACE, 2010). One wetland was also found within the National Wetland Inventory (NWI) mapping system and two additional wetland areas were found within the field study area that would be directly impacted by construction of the Preferred Alternative. **Table 7** lists the wetlands observed and delineated during the field survey.

Table 7: Delineated Wetlands

Site ID	NWI Designation	Size (acres)	Jurisdictional Opinion
W2	Freshwater Emergent	0.11	Potentially Jurisdictional
W10	None	0.04	Likely Non-Jurisdictional
W12	None	0.35	Likely Non-Jurisdictional

Field photographs and the wetland determination datasheets are located in **Attachment B** of the Wetlands and Stream Assessment Report (**Appendix B**).

Based on these findings, it appears that the field study area contains one potentially jurisdictional wetland (W2).

The No-Build Alternative would have no impact on wetlands in the Project Area. The Preferred Alternative would, for the most part, be constructed within the existing roadway footprint. Based on the field and desktop survey, three delineated wetlands (W2, W10, and W12) totaling 0.50 acres are located within the field study area and could be impacted by the Preferred Alternative.

Additional details regarding the wetland assessment is included in the Wetland Delineation and Stream Assessment Report in **Appendix B.**

3.8.2. Streams

A field survey was conducted in July 2024 and April 2025 to determine the presence of potential jurisdictional streams within the field study area. Thirteen stream locations were investigated resulting in the confirmation of six perennial streams, four intermittent streams, and three ephemeral streams, totaling 5,044 linear feet in the field study area.

The Blue River, Little Blue River, and Camp Creek are the named waterways within the field study area. Other streams are tributaries of these water ways, with the exception of one tributary of Round Grove Creek.

The No-Build Alternative will have no stream impacts. The Preferred Alternative has the potential to impact all or parts of the 5,044 linear feet of streams.

Additional details regarding the stream assessment are included in the Wetland Delineation and Stream Assessment Report in **Appendix B.**

3.9. Surface Waters and Water Quality

Section 303(d) of the CWA requires states to identify all water bodies where state water quality standards are not being met. Water quality in Missouri is governed by the Code of State Regulations 10 CSR 20-7.031 and is administered by the Missouri Department

of Natural Resources (MoDNR). The MoDNR maintains an impaired waters list, which was reviewed to determine if any surface waters within or near the Project Area contained impairments that require a Total Maximum Daily Load (TMDL).

The Project Area lies within, and is drained by, the Lower Missouri-Crooked (10300101) eight-digit hydrologic unit code (HUC 8) subbasin of the Missouri River Basin. Surface waters within the Project Area include the Blue River and unnamed tributaries, an unnamed tributary of Round Grove Creek, Camp Creek and unnamed tributaries, and the Little Blue River and unnamed tributaries (**Exhibit 8**). The water quality of these resources varies depending upon factors such as water permanence, presence or absence of in-flowing streams, surrounding vegetation, and surrounding land use. The Blue River and the Little Blue River within the Project Area are listed on the 303(d) list of impaired waters with a primary pollutant of *E. coli*. Urban runoff and storm sewer discharges are the primary sources of pollution.

Major considerations for potential water quality impacts are sedimentation, contamination from street surface runoffs, agents for weed, insect, and rodent control, contamination from chemical or other toxic material spills, and groundwater pollution. Sediment loads in rivers, streams, and wetlands can have an impact on drinking water quality and aquatic animals by limiting oxygen absorption. Sedimentation may result from bridge and drainage facility construction and erosion resulting from the proposed project construction. Standard engineering best management practices (BMPs) of mitigation, such as temporary erosion, sediment, and water pollution control, should prove to be adequate to minimize sedimentation and water quality impacts.

Groundwater well data did not indicate any groundwater wells within the Project Area. According to the MoDNR's online GeoStrat data, the groundwater elevation throughout the Project Area ranges from approximately 850 to 920 feet above the mean sea level. The majority of the Project Area is paved with concrete or asphalt; therefore, construction is unlikely to affect groundwater. Drinking water supplied to the Project Area is from the Missouri River which accounts for approximately 80 percent of the city of Kansas City's water supply and groundwater wells for the city of Independence.

The MoDNR is responsible for administering the National Pollutant Discharge Elimination System (NPDES) to protect waters of the state from sediment and other contaminants. Any project that disturbs greater than one acre from construction activities requires a stormwater permit from the MoDNR. The primary requirement of the stormwater permit is the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must specify the BMPs to be employed and what controls will be implemented to minimize the contamination of stormwater runoff associated with construction activity.

Existing water quality conditions would continue under the No-Build Alternative. Road and bridge maintenance would continue, resulting in periodic and short-term decreases in local surface water quality as the result of paving and grinding activities and application of roadway deicing compounds during severe winter weather.

The Preferred Alternative would result in the construction of new roadway improvements. Construction related impacts to water quality would be primarily the result of stormwater runoff. Water quality impacts resulting from construction of the new project would be relatively short-term due to the nature of the construction process. Converting unpaved median or ROW area to through lanes will result in greater runoff from the road. Roadway runoff contains oils, chemicals, and other sediment which will have a long-term adverse impact to water quality. Adding more paved area will require a greater quantity of deicing compounds necessary to maintain safe driving conditions during severe weather events, which will potentially result in long-term adverse impacts to water quality.

Applicable Commitment(s):

4. MoDOT will obtain the appropriate permits and develop the appropriate plans prior to the beginning of construction. MoDOT will follow BMPs and will also follow recommendations set forth in the TMDLs for the Missouri River.

3.10. Floodplains

Executive Order 11988 on Floodplain Management directs federal agencies “to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.”

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) and the National Flood Hazard Layer (NFHL) showing mapped 100-year floodplains, 500-year floodplains, and regulatory floodways were available for Jackson County. Floodplains and floodways located within and near the Project Area are shown in **Exhibit 8**. According to the FIRM and NFHL data, the proposed project will occur within portions of a 100-year floodplain, 500-year floodplain, and regulated floodway. A floodplain technical memorandum in accordance with 23 CFR 650.111(c) was completed and is attached as **Appendix C.**

The No-Build Alternative will have no impact on the mapped floodplain and regulatory floodway.

The Preferred Alternative will affect 2.8 acres of 100-year floodplain and 6.3 acres of floodway. In implementing the Preferred Alternative MoDOT will avoid modification to the functions of the natural floodplain environment or will maintain it as closely as practicable in its natural state. MoDOT will ensure the floodplain analysis and certifications comply with floodplain regulations and demonstrate minimal impacts to the floodplains within the Project Area. MoDOT, on behalf of the contractor, will obtain floodplain development permits from SEMA prior to FHWA authorization for construction. Because of these actions the Preferred Alternative will have minimal impact on the existing floodplain and regulatory floodways.

Applicable Commitment(s):

5. MoDOT will obtain floodplain development permits from SEMA prior to construction.

6. MoDOT will ensure modifications to the functions of the natural floodplain environment are avoided or are maintained as closely as practicable in its natural state.

7. MoDOT will ensure local and regional access to existing rural and urban areas and facilities are maintained during construction.

8. MoDOT will ensure the floodplain analysis and no-rise certifications comply with floodplain regulations and demonstrate minimal impacts to the floodplains within the project area.

9.MoDOT will ensure sediment and erosion control best management practices are implemented during construction.

3.11.Wildlife and Habitat

The Project Area is located within the cities of Kansas City and Independence, Missouri. The corridor is mostly a mix of urban, suburban, and greenspace. The vegetation or natural wildlife habitat present includes open undeveloped space, shrub and forested areas near and around the Blue River, the Little Blue River, and Camp Creek, plus tributaries of all and of Round Grove Creek. Based on the limited vegetation present and general urban environment, the wildlife present would be limited to urban/suburban wildlife. According to the U.S. Fish and Wildlife Service (USFWS) there is no critical habitat present within the Project Area.

Federally listed threatened and endangered species are subject to the protection afforded under Section 7 of the Endangered Species Act of 1973, as amended (ESA) (16USC 1531 et seq.). The ESA provides protection of animal and plant species that are in population decline and in jeopardy of becoming extinct.

A desktop survey was completed utilizing the USFWS Information for Planning and Consultation (IPaC) tool and the Missouri Department of Conservation (MDC) Natural Heritage Database in July 2024 and updated in December 2025. **Table 8** details the threatened and endangered species from the IPaC and MDC reviews:

Table 8: Federal & State Listed Threatened and Endangered Species

Common Name	Scientific Name	Federal Status[1][2]	State Status[2]	Critical Habitat in Project Study Area	Effects Determination
Monarch Butterfly	*Danaus plexippus*	Proposed Threatened	Not Listed	None	NLJ[3]
Western Regal Fritillary	*Argynnis idalia occidentalis*	Proposed Threatened	Not Listed	None	No Effect
Pallid Sturgeon	*Scaphirhynchus albus*	Endangered	Endangered	None	No Effect

Common Name	Scientific Name	Federal Status[1][2]	State Status[2]	Critical Habitat in Project Study Area	Effects Determination
Tricolored Bat	*Perimyotis subflavus*	Proposed Endangered	Not Listed	None	NLJ
Gray Bat	*Myotis grisescens*	Endangered	Endangered	None	No Effect
Indiana Bat	*Myotis sodalis*	Endangered	Endangered	None	NLAA[4]
Northern Long-Eared Bat	*Myotis septentrionalis*	Endangered	Endangered	None	NLAA

(1) USFWS IPaC tool, Dec 2025
(2) MDC Natural Heritage Database, Dec 2025
(3) NLJ – Not Likely to Jeopardize the Existence of the Species
(4) NLAA – May Affect, but Not Likely to Adversely Affect

Further details of the listed species are included below.

Monarch Butterfly

Two monarch butterfly populations exist in North America—east and west of the Rocky Mountains. The western population migrates to overwintering sites in California, and the eastern population migrates to the country of Mexico. Both populations are in serious decline, but the western population has been nearly extinct in recent years. Under the ESA, if the USFWS determines that the western population should be protected and listed, the eastern population must receive the same protections and listing status. Milkweed is an obligate host plant for eggs and larvae, and adult butterflies need a variety of blooming nectar sources during breeding and migration. Conversion of native and naturalized milkweed and nectar plant habitats could negatively impact monarchs at an individual and population level. However, the median, ROW, and other greenspaces within the Project Area are mostly previously disturbed, maintained vegetation or wooded riparian areas. There will be minimal if any removal of naturalized native plant areas. As a result this project will not jeopardize the existence of the monarch butterfly. If the project has not progressed to construction by the time monarch butterfly is listed as threatened, MoDOT will revisit USFWS consultation requirements when the listing becomes final. MoDOT does not anticipate additional conservation or mitigation measures.

Western Regal Fritillary Butterfly

The western regal fritillary is a non-immigratory butterfly found in grassland habitat from Indiana to Colorado and from North Dakota to Oklahoma. There is one generation each year and they only have one larval food source, violets. The western regal fritillary requires large, intact grasslands at a landscape level, generally more than 3.96 square miles, with diverse plant species, including violets and nectar sources for adults and be maintained by periodic disturbances in order to control the encroachment of woody vegetation. According to the USFWS, the regal fritillary is unable to survive in any sort of altered habitat. The greenspace within the I-70 ROW does not meet the habitat requirements for the western regal fritillary; therefore, the project will have no effect on this species.

Pallid Sturgeon

Pallid sturgeon are found in the Missouri and Mississippi Rivers and some of their major tributaries in Missouri. Their preferred habitat has a diversity of depths and velocities formed by braided channels, sand bars, sand flats, and gravel bars. There will be no impact to the Mississippi or Missouri Rivers or their major tributaries; therefore, the project will have no effect on pallid sturgeon or its habitat.

Gray, Indiana, Northern Long-Eared Bats

Gray bats are cave obligate species which congregate in maternity or bachelor colonies in the summer using dome cave and mine habitats, and during winter hibernation congregate in mixed colonies in vertical or pit-type caves and mines. They use mainly stream corridors for foraging spring through fall. Gray bats have been recorded statewide except for northwest Missouri. It is possible for gray bats to roost in small clusters temporarily on a bridge or inside large culverts.

Indiana and northern long-eared bats hibernate in caves during winter and spend the breeding season in forested areas of the state where they may use suitable summer roost trees. Roosting and maternity habitats consist primarily of live or dead hardwood trees with shingle-like bark, providing space for bats to roost underneath the bark. Summer habitats for these species include minimum diameter, measured at breast height (dbh), five-inch trees for Indiana bats (IB) and three-inch trees for northern long-eared bats (NLEB) with suitable characteristics of exfoliating bark, splits, crevices, hollow sections, and other damage. These two bat species could occur anywhere in Missouri where suitable habitat exists. Removal of suitable summer roost trees at any time of the year may affect both species.

A search of the MoDNR Geosciences Technical Resource Assessment Tool (GeoSTRAT) did not show any mines or karst features (sinkholes, caves, losing streams, or springs) within the field study area and no mines, quarries, or karst features were observed during field investigations on July 22-23, 2024, and April 1, 2025. Bridges and culverts were checked for the presence of bats, however, there were no indications of use by bats and no bats were observed during the field investigations. Thirteen stream locations were investigated resulting in the confirmation of six perennial streams, four intermittent streams, and three ephemeral drainages. Since no mines, quarries, or karst features were observed during the field investigations, and no bridges or culverts showed signs of being used by bats, the proposed project will have No Effect on the gray bat or its habitat.

Habitat and roosting requirements for the remaining bat species include mature trees with exfoliating bark or snags present for roosting, or trees that are at least three inches dbh for NLEB or five inches dbh for IB with exfoliating bark, cracks, crevices, and/or hollows. The field study area is completely within ROW and contains approximately 82 acres of forested habitat or forested riparian areas.

The forested habitat and streams provide foraging habitat for NLEB and IB. A field investigation was conducted to determine the presence or absence of suitable forested habitat within the field study area. Suitable bat habitat was found in three locations throughout the project area as noted in the Habitat Assessment Report (**Appendix D**). Some tree removal may be necessary during the construction of the Preferred Alternative. It is recommended that tree clearing occur in the inactive months, which is October 16 to March 31 in Missouri. If tree removal occurs in the inactive season, then the Preferred Alternative may affect but is not likely to adversely affect NLEB and IB.

Tricolored Bats

In September 2022, Tricolored bats (TCB) were federally proposed as endangered. They mainly roost in foliage of live and dead trees in the spring, summer, and fall, and hibernate in caves and other subterranean habitats during the winter. According to the USFWS 2024 *Range-wide Indiana bat and Northern Long-eared Bat Survey Guidelines*, updated to include the tricolored bat, tricolored bats will roost in a variety of tree species, especially oaks, often selecting roosts in tall, large diameter trees. However, tricolored bats will roost in smaller diameter trees (4-inch diameter) when potential roost substrate, such as live/dead leaf clusters, Spanish moss, recently dead deciduous trees, and beard lichen, is present. These bats can occasionally be found roosting on bridges and in culverts. The primary threat to this species is white nose syndrome (WNS), which typically afflicts bats during hibernation. Given the extreme losses from WNS and impact of wind industry related mortality- loss of roosting, foraging, and commuting habitat (forested habitat) between summer and winter can have a large impact, depending on timing, location, and extent of removal. A field survey was conducted to verify the potential roosting habitats for the TCB. Suitable TCB habitat was found in four locations throughout the project area as noted in the Habitat Assessment Report (**Appendix D**). Some tree removal may be necessary during the construction of the Preferred Alternative. It is recommended that tree clearing occurs in the inactive months, which is October 16 to March 31 in Missouri. If tree removal occurs in the inactive season, then the Preferred Alternative is not likely to jeopardize the existence of the TCB.

Due to requirements for additional protections of the bald and golden eagle as well as migratory birds, further information is included below regarding these species.

Bald and Golden Eagles

The bald eagle is not a listed threatened or endangered species; however, it is still afforded protection by the federal government under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). The BGEPA provides for the protection of bald and golden eagles by prohibiting the taking, possession, and commerce of such birds, except under certain specified conditions. There is no nesting habitat for bald or golden eagles within the Project Area. According to the USFWS, bald eagles generally select the tops of

the tallest trees to build nests, with limbs strong enough to support them. Nests are four to five feet wide and two to four feet deep, but can reach ten feet across. Eagles tend to use the same nest each year, adding additional material. Additionally, bald eagles tend to choose nesting spots within clear view of a water body capable of foraging. The closest area with the potential for nesting trees is the Missouri River, which is approximately 4.6 miles away from the Project Area at its closest point. Golden eagles prefer to nest on cliffs and bluffs, but will nest in trees in areas without rocky leges. Golden eagles are more sensitive to human activity and are generally found in less developed areas. Due to the lack of nesting trees or rocky ledges within or adjacent to the Project Area and the area being more highly developed, the proposed project would not result in the take of bald or golden eagles.

Migratory Birds

The MBTA makes it unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture, or kill; possess, offer to sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product, manufactured or not. Provisions are in place for the protection of migratory birds, parts, nests, eggs, or products. Under the MBTA, “migratory birds” includes all birds native to the U.S. and the regulations pertain to any time of the year, not just during migration. Various bird species could be using existing structures within the Project Area for nesting. Based on conservation measures, impacts to migratory birds would be minimal.

A field survey was conducted in July 2024 and April 2025 to determine the presence or absence of suitable habitat for threatened and endangered species (TES) and the presence of nesting for migratory birds on structures in the field study area. Structures were observed and photographed to determine if nesting was or had occurred for migratory birds. All nests observed were not active at the time of the field survey.

A suitable habitat assessment for the three listed endangered and one proposed endangered bat species was completed during the field survey. Habitat was considered suitable based on the USFWS definition of suitable habitat which can include forests, woodlots, and linear features like fencerows and riparian forests with live or dead trees that are at least three inches in diameter at breast height (dbh) and have cracks, crevices, cavities, or exfoliating bark. Additionally, individual trees can also be considered suitable habitat if they are within 1,000 feet of other forested areas with similar characteristics. Four areas were considered as potential summer habitat for the listed bat species during the field survey. All four sites are considered suitable habitat for the TCB. Three of the four sites were considered low-quality habitat for the NLEB and IB. More detailed information on the field surveys are located in the Habitat Assessment located in **Appendix D**.

The No-Build Alternative will have no effects on federal or state-listed wildlife species. This is not likely to change with ongoing maintenance.

The Preferred Alternative is not likely to have an effect on the pallid sturgeon or the gray bat. There is approximately 83 acres of forested habitat within the field study area. Some tree removal may be necessary during the construction of the Preferred Alternative. It is recommended that tree clearing occurs in the inactive months, which is October 16 to March 31 in Missouri. The Preferred Alternative may affect, but not likely adversely affect, the IB and NLEB. There will be no effect on the western regal fritillary and it is not likely to jeopardize the existence of the monarch butterfly or TCB.

Applicable Commitment(s):

10. Tree clearing will not occur prior to completion of consultation with USFWS and MDC. It is recommended that tree clearing occur in the inactive months, with is October 16 to March 31 in Missouri.

11. MoDOT will be responsible for adhering to the MBTA. If migratory birds are found to be nesting, then a protective Job Special Provision (JSP) will be put in place to avoid conflict with the MBTA and follow up with the MDC will be initiated.

12. If the project has not progressed to construction by the time monarch butterfly is listed as threatened, MoDOT will revisit USFWS consultation requirements when the listing becomes final.

3.12. Geology and Soils

Geotechnical data from the MoDNR and the NRCS was assessed for the Project Area. Within the Project Area, the topography is generally flat but increases slightly as you move east, until around the intersection with East U.S. Highway 40 where it begins to decrease. The geology of the area consists of limestone and shale, with minor sandstone and coal bedrock. The surficial materials range from 0 – 20 feet thick and consist of moderate to low permeability residuum and loess. The uppermost bedrock is sandstone and shales with low permeability. The Missouri Geological Survey (MGS) online interactive map indicated that bedrock in the Project Area was mostly comprised of the Bronson Subgroup (Pb, Pkcb), Linn Subgroup (Pkcl), the Zarah Subgroup (Pz), and the Pleasanton Group (Pp) of the Pennsylvanian geologic group.

The Zarah subgroup is comprised of three formations – Lane, Wyandotte, and Bonner Springs, which are mostly shale with the exception of the Wyandotte formation, which is mainly limestone. The Linn subgroup is comprised of four formations – Cherryvale, Drum, Chanute, and Iola. These formations make up the middle of the Kansas City Group and are comprised of shale associated with thin limestones. The Bronson subgroup is comprised of five shale and limestone formations – Hertha, Elm Branch, Swope, Galesburg, and Dennis. The Pleasanton Group, only found along the eastern portion of the Project Area, lies below the Hertha limestone and consists of four

formations – Checkerboard, Seminole, Hepler, and Holdenville. These formations are a mix of shale, limestone, and sandstone.

The Project Area is located in the Blue Springs, Independence, and Kansas City quadrangles. The Kansas City quadrangle has a cave density of 3. There is one documented limestone mine located within 0.25 mile of the Project Area.

The NRCS Soil Survey classifies 93% of the Project Area as urban land. The other 7% is split between various silt loams and rock outcrop units. According to the MoDNR, earthquakes occur frequently throughout the state at small scales. The MoDNR Division of Geology and Land Survey, funded in part by the Missouri State Emergency Management Agency, created a Geologic Hazards Map of the State of Missouri. This map can be used as a general guide to regional geologic and earthquake hazard potential and is split into various regions. The Kansas City area, including the entire Project Area, is considered part of Region A. According to this data, no historically recorded earthquake records exist near or within the Project Area. According to the MoDNR GeoSTRAT online database, there are no known or recorded mines or sink holes within the Project Area.

The No-Build Alternative will leave the current structures in place and there will be little or no disturbance of surface or subsurface soil. Construction of the Preferred Alternative would minimally disturb soils in the Project Area.

Applicable Commitment(s):

13. The Contractor and Project Partners will perform geotechnical investigations in later design phases to determine precise bedrock and structural loading requirements.

3.13. Hazardous Materials

A review of federal and state agency environmental and hazardous material databases was performed to evaluate the likelihood of soil and/or groundwater contamination within the Project Area or if anywhere within the Project Area may require remediation that would result in additional costs and/or time. The evaluation did not include a complete site assessment or constitute a hazardous waste remedial investigation. A federal and state agency database search was conducted in June of 2024, including the MoDNR Environmental Site Tracking and Research tool (E-Start) and the Environmental Protection Agency (EPA) Facility Registry Service (FRS).

The results of the database searches were prioritized by the likelihood of soil and/or groundwater contamination present in or near the Project Area. The contamination probability was assigned as either “*none-to-low*,” “*low-to-moderate*,” or “*moderate-to-high*.” A total of 54 sites were identified within the Project Area boundary. Hazardous material sites within the Project Area are displayed in **Tables 9** and **10**.

Sites identified within the Project Area fall into several categories including currently operating and former underground storage tank (UST) facilities, hazardous waste generators, NPDES permits, and enforcement activities. In general, sites that are

included in the database for enforcement or compliance activities, such as NPDES permits and air emission violations, are rated as having "*none-to-low*" probability of contamination for the Project Area. UST facilities and hazardous waste generators near the site are generally rated as having a "*low-to-moderate*" or "*moderate-to-high*" probability of contamination.

Of the 54 sites within the Project Area, eight have a "moderate-to-high" (Priority 1) probability for contamination. The sites are shown in **Exhibit 9.**

Table 9: Hazardous Material Sites Within the Project Area – MoDNR Databases

FRS Database Number (if cross-listed)	Name	Address	Status / Federal or State Program List	Priority*	Site ID
Operating UST Facility Sites					
110017984412	Ryder Transportation Services #0340	3320 Manchester Trafficway, Kansas City, MO	Operating UST; Contaminant: Petroleum constituents; RCRA unspecified universe	1	1
110015905092	Amoco Oil SS #2160; Stadium BP	4009 Blue Ridge Cutoff, Kansas City, MO	NPDES permit; Operating UST; Contaminant: petroleum constituents; RCRA unspecified universe	1	2
110028149983	Everyday 4201 DBA K & M Liquor and Tobacco; Sinclair	4201 Blue Ridge Blvd., Kansas City, MO	Enforcement / compliance activity; Operating UST with no known release	1	3
110022322529	QuikTrip #216	4024 S. Noland Rd., Independence, MO	NPDES permit; Operating UST; Contaminants: benzene, petroleum constituents; RCRA unspecified universe	1	4
110015904020; 110032623855; 110042674184	Casey's General Store #4351; Circle K; Phillips Pet. Co. Station #27074	4208 S. Noland Rd., Independence, MO	Enforcement / compliance activity; Operating UST; Contaminant: petroleum constituents; RCRA unspecified universe	1	5
110003982664; 110009885240	Sams Club Fueling Station #8293	4100 S. Bolger Rd., Independence, MO	NPDES permit; Operating UST with no known release; VSQG	1	6
110015859720; 110042639339	Groendyke Transport, Inc.; QuikTrip #248	4740 S. Arrowhead Dr., Independence, MO	Operating UST with no known release; VSQG	1	7

FRS Database Number (if cross-listed)	Name	Address	Status / Federal or State Program List	Priority*	Site ID
110069210277	Quiktrip #205	11101 E. U.S. Hwy 40, Independence, MO	NPDES Permit; Operating UST; Contaminant: Petroleum constituents	1	8
Former UST Facility Sites					
	Hertz Equipment Rental	3490 Manchester Trafficway, Kansas City, MO	Former UST	2	9
	Kansas City Maintenance Lot	9000 E. 39th St., Kansas City, MO	Former UST	2	10
	Quaker State Minit-Lube	11201 E. U.S. Hwy 40, #1338, Independence, MO	Former UST	2	11
	Amoco Oil SS #7282	11801 E. U.S. Hwy 40, Independence, MO	Former UST	2	12
110003951974; 110003975743; 110009411966; 110024578018	CPI Photo Finish; Firestone Store #41F1/017051 – Former; MBS Mall Investor 98, LLC	4200 Blue Ridge Blvd., Kansas City, MO	Former UST; NPDES permit; RCRA unspecified universe	2	13
110017994811	Broome Oldsmobile, Inc.; Crash Champions Independence HWY 40; Lloyd Ketcham Oldsmobile, Inc.	11911 E. U.S. Hwy 40, Independence, MO	Former UST; SQG	2	14
110042463651	Amoco Service Station #8631; Noland Road Amoco	4016 S. Noland Rd., Independence, MO	Former UST; NPDES permit; RCRA unspecified universe	2	15
	Venture Store #10	4012 S. Noland Rd., Independence, MO	Former UST	2	16
	Percy Oil	18318 E. U.S. Hwy 40, Independence, MO	Former UST; Contaminants: Methyl tertiary butyl ether, benzene, TPH-GRO	2	17
	The Boating Center	E. U.S. Hwy 40 & Route 291, Independence, MO	Former UST	2	18
Other Known Petroleum Facility Sites					
110066973261	MO Highway & Transportation Department; MODOT Stadium	9101 E. 40th Terrace, Kansas City, MO	Hazardous waste biennial reporter; Other known petroleum facility; RCRA unspecified universe	2	19

1 = Moderate-to-High Potential for Contamination
2 = Low-to-Moderate Potential for Contamination
3 = None-to-Low Potential for Contamination

Table 10: Hazardous Material Sites Within the Project Area – EPA Databases

FRS Database Number	Name	Address	Status / Federal or State Program List	Priority*	Site ID
110056983144	Manchester Bridge Project	E. U.S. Hwy 40 & I-70 East to I-435, Kansas City, MO	NPDES permit	3	20
110042454377	Clarkson Construction Co. – Plant 6206	SE of I-70 and Manchester Trafficway, Kansas City, MO	NPDES permit	3	21
110054114212	Vander Haags, Inc.	7501 E. U.S. Hwy 40, Kansas City, MO	NPDES permit	3	22
110022939294	Jim Kidwell Construction Company	7524 Stadium Dr., Kansas City, MO	Minor air emissions	3	23
110070527803	Emery Sapp and Sons Con E Co.	8190 E. U.S. Hwy 40, Kansas City, MO	NPDES permit	3	24
110022828010	Jackson County Sports Authority	8501 Stadium Dr., Kansas City, MO	RCRA unspecified universe	3	25
110003966129	MODOT	9000 E. 40th Terrace, Kansas City, MO	RCRA unspecified universe	2	26
110001470783	Holiday Inn	4011 Blue Ridge Cutoff, Kansas City, MO	Minor air emissions	3	27
110031420889; 110069601924	KCMO Burger King; UMB Bank McRealty Group	4001 Blue Ridge Cutoff, Kansas City, MO	NPDES permit; RCRA unspecified universe	3	28
110015899018	Fuji Photo Film USA Inc Adams Mark KC	9103 E. 39th St., Kansas City, MO	RCRA unspecified universe	3	29
110071669997	Foundation Capital Resources	4101 Pittman Rd., Kansas City, MO	NPDES permit	3	30
110071357170	Whataburger – Stadium	4200 Sterling Ave., Kansas City, MO	NPDES permit	3	31
110038878587	Lowes of East Kansas City MO #2943	4201 Sterling Ave., Kansas City, MO	SQG	2	32
110071298432	Go Car Wash	4220 Sterling Ave., Kansas City, MO	NPDES permit	3	33
110042489081	Blue Ridge Theatre Restaurant	11916 E. U.S. Hwy 40, Independence, MO	State master	3	34
110003964835	Blue Ridge Cleaners	12011 E. 43rd St., Kansas City, MO	Air emissions, classification unknown; VSQG	2	35
110001470989	McDonald Auto Body, Inc.	12100 E. U.S. Hwy 40, Independence, MO	Minor air emissions; SQG	2	36
110044238633	Reach Manufacturing (Formerly US Filter Waterpro)	13621 E. 42nd Terrace S., Independence, MO	Enforcement / compliance activity	3	37
110001459706; 110046238861	Kmart #9336; Venture Stores Incorporated Number 10	4023 S. Noland Rd., Independence, MO	VSQG; Hazardous waste biennial reporter	3	38
110069586585	American Inn	4141 S. Noland Rd., Independence, MO	NPDES permit	3	39
110003981870	Market Place Cleaners	4201 S. Noland Rd., Suite T, Independence, MO	RCRA unspecified universe	2	40

FRS Database Number	Name	Address	Status / Federal or State Program List	Priority*	Site ID
110070559525	Petco #1693	4201 S. Noland Rd., Suite L1, Independence, MO	VSQG	3	41
110071082184	Andy's Frozen Custard	4029 S. Noland Rd., Independence, MO	NPDES permit	3	42
110006805733	Lake Ridge Bay Subdivision	14400 E. 42nd St. S., Independence, MO	State Master	3	43
110018919562	Towne Square Property Management, Inc.	14500 E. 42nd St. S., Independence, MO	Enforcement / compliance activity	3	44
110037424203	Bass Pro Shops	18001 Bass Pro Dr., Independence, MO	SQG	3	45
110055628110	Stoney Creek Inn	18011 Bass Pro Dr., Independence, MO	NPDES permit	3	46
110015864616; 110042799166	Walmart Supercenter #1014	4000 S. Bolger Rd., Independence, MO	SQG; NPDES permit	3	47
110063877167	Crackerneck Center	S. Cochise Ct. & E. 46th Terrace S., Independence, MO	NPDES permit	3	48
110055026671	Green Lantern Carwash #8	18600 E. U.S. Hwy 40, Independence, MO	NPDES permit	3	49
110037503207; 110042670231	Independence Event Center; Parking Lot	19100 E. Valley View Pkwy., Independence, MO	NPDES permit	3	50
110037507686	United Missouri Bank	18909 E. 48th St., Independence, MO	NPDES permit	3	51
110042712286	Midwest Public Risk MPR Office Building	19400 E. Valley View Pkwy., Independence, MO	NPDES permit	3	52
110054119832	Home Depot #3006	4210 S. Lee's Summit Rd., Independence, MO	NPDES permit	3	53
110003987302	Big O Tires #4803	4011 S. Bolger Rd., Independence, MO	VSQG, State Master	3	54

1 = Moderate-to-High Potential for Contamination
2 = Low-to-Moderate Potential for Contamination
3 = None-to-Low Potential for Contamination

The No-Build Alternative will not affect any potentially hazardous materials sites.

There are two hazardous materials sites that could potentially be impacted by the Preferred Alternative. Those locations are the Manchester Bridge Project (Site ID: 20) and the Clarkson Construction Co. Plant 6206 (Site ID: 21). These sites have "none-to-low" probability of contamination.

Applicable Commitment(s):

14. MoDOT will ensure that any unknown hazardous waste sites found during project construction will be handled according to Federal and State Laws and Regulations. If regulated solid or hazardous wastes are found during construction activities, MoDOT's construction inspector shall direct the contractor to cease work at the suspect site. The construction inspector will contact the appropriate environmental specialist to discuss options for remediation. The environmental specialist, the construction office, and the contractor will develop a plan for sampling, remediation, and continuation of project construction. Independent consulting, analytical and remediation services will be

contracted, if necessary. MoDOT will contact MDNR and EPA for coordination and approval of required activities.

3.14. Noise

This section summarizes the traffic noise study that was performed in accordance with FHWA standards and regulations (23 CFR Part 772) and MoDOT's Traffic Noise Policy (EPG Section 127.13). The full noise study is included as **Appendix E** for reference.

3.14.1. Traffic Noise Methodology

Traffic noise is most commonly measured in "A-weighted" decibels (dBA). An A-weighted decibel corresponds to the manner in which the human ear perceives noise at different frequencies. Vehicle noise is a combination of noise produced by the engine, exhaust, and tires. Heavier traffic volumes, higher speeds, and a greater number of trucks all increase the loudness of traffic noise. Since traffic noise is generated by passing vehicles and traffic volumes generally fluctuate, an hourly equivalent sound level, or $L_{eq(h)}$, is used to measure traffic noise. The $L_{eq(h)}$ is the constant, average sound level that contains the same amount of sound energy over the time period as does the varying levels of actual traffic noise.

The Project Area was divided into 19 separate Noise Sensitive Areas (NSAs) to group receptors influenced by similar noise sources. Receptors within approximately 800 feet of I-70 were generally included. Beyond this distance, noise impacts and any benefits provided by noise abatement are not anticipated. In certain locations, receptors were modeled further out to ensure all impacts were identified. A total of 2,578 noise sensitive receptors were identified within the NSAs. The NSAs are defined as follows and are shown in **Figure 10**:

- NSA 1: North of I-70, east of Manchester Trafficway
- NSA 2: North of I-70, east of Stadium Drive
- NSA 3: North of I-70, between Stadium Drive and Pittman Road
- NSA 4: South of I-70, west of Pittman Road
- NSA 5: North of I-70, west of Sterling Avenue
- NSA 6: South of I-70, between Pittman Road and Sterling Avenue
- NSA 7: North of I-70, between US-40 and Blue Ridge Boulevard
- NSA 8: North of I-70, between Blue Ridge Boulevard and Crysler Avenue
- NSA 9: North of I-70, between Crysler Avenue and the UPRR bridge
- NSA 10: North of I-70, between the UPRR bridge and Noland Road
- NSA 11: South of I-70, between US-40 and Blue Ridge Boulevard
- NSA 12: South of I-70, between Crysler Avenue and the UPRR bridge
- NSA 13: South of I-70, between the UPRR bridge and Noland Road
- NSA 14: North of I-70, between Noland Road and Phelps Road
- NSA 15: North of I-70, between Phelps Road and Lee's Summit Road
- NSA 16: South of I-70, between Noland Road and Phelps Road

- NSA 17: South of I-70, between Phelps Road and Lee's Summit Road
- NSA 18: North of I-70, between Lee's Summit Road and I-470
- NSA 19: South of I-70, between Lee's Summit Road and I-470

In accordance with FHWA requirements, detailed computer models were created using the FHWA Traffic Noise Model (TNM) 2.5 software. The computer models were validated to within acceptable tolerances of field-measured traffic noise data and were used to predict loudest-hour equivalent traffic noise levels for noise sensitive receptors in the vicinity of the project.

3.14.2. Existing Conditions

The vast majority of the noise sensitive receptors are residential, including both single-family and multifamily dwellings, which fall under Activity Category B in FHWA's Noise Abatement Criteria (NAC). Other noise-sensitive receptors being analyzed for impacts include churches, daycare centers, and parks, which fall under Activity Category C; a hospital and an additional church within the Project Area eligible for interior noise evaluation, which fall under Activity Category D; and finally, hotels and restaurants, which fall under NAC Category E.

FHWA and MoDOT define a noise impact as occurring when either noise levels approach (within 1 dB) or exceed NAC or future noise levels substantially exceed (at least 15 dB) existing noise levels. NAC for Activity Categories B and C correlates to an $L_{eq(h)}$ of 67 dBA. **Table 11** summarizes the NAC by activity category. In the existing condition, the worst hourly noise levels approach or exceed the NAC at 553 receptors.

Table 11: Noise Abatement Criteria

Hourly Equivalent A-Weighted Sound Level (decibels (dB(A))			
Activity Category	**Activity Criteria[1] $L_{eq(h)}$[2]**	**Evaluation Location**	**Activity Description**
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[3]	67	Exterior	Residential.
C[3]	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E[3]	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A- D or F.

Hourly Equivalent A-Weighted Sound Level (decibels (dB(A))			
Activity Category	Activity Criteria[1] $L_{eq(h)}$[2]	Evaluation Location	Activity Description
F	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	--	--	Undeveloped lands that are not permitted.

1. The $L_{eq(h)}$ Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.
2. The equivalent steady-state sound level which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period, with $L_{eq(h)}$ being the hourly value of L_{eq}.
3. Includes undeveloped lands permitted for this activity category.

3.14.3. Traffic Noise Impacts

This section discusses the noise impacts associated with the No-Build Alternative and the Preferred Alternative. A total of 553 noise impacts were identified under the existing (2023) conditions, 579 noise impacts were identified for the No-Build Alternative (2050 design year), and 755 noise impacts were identified for the Preferred Alternative (2050 design year). Noise impacts for each NSA are summarized in **Table 12**. All impacts identified were due to noise levels approaching the NAC value. No locations are predicted to have a substantial increase in noise levels. Detailed information on the noise impacts can be found in the Noise Study Report located in **Appendix E**.

Table 12: Summary of Traffic Noise Impacts

Number of Impacted Receptors				
NSA	Total Receptors	Existing (2023)	No-Build Alternative Design Year (2050)	Preferred Alternative Design Year (2050)
1	114	5	6	8
2	4	0	0	0
3	63	18	18	20
4	31	2	2	3
5	288	97	101	117
6	262	94	98	118
7	62	24	28	32
8	88	1	1	2
9	245	32	35	52
10	85	37	37	40
11	17	4	4	4

Number of Impacted Receptors				
NSA	Total Receptors	Existing (2023)	No-Build Alternative Design Year (2050)	Preferred Alternative Design Year (2050)
12	211	36	36	54
13	13	4	4	4
14	88	34	37	44
15	284	55	57	83
16	4	0	0	0
17	201	34	36	65
18	331	46	48	64
19	187	30	31	45
Total:	2578	553	579	755

3.14.4. Noise Abatement Criteria

FHWA and MoDOT require that feasible and reasonable noise abatement measures be considered and evaluated for all predicted build-condition traffic noise impacts. Feasibility and reasonableness are distinct and separate considerations. Feasibility is the combination of acoustic and engineering factors considered in the evaluation of a noise barrier, such as topography, access, drainage, safety, and maintenance. Reasonableness is the consideration of the social, economic, and environmental factors considered in the evaluation of a noise barrier. The MoDOT Noise Policy was used to determine whether noise abatement would be feasible and reasonable for impacted receptors.

The factors that should be evaluated related to feasibility include access to adjacent properties for non-access-controlled facilities, sight distance, clear zone, drainage, utilities, and constructability of the barrier, including issues associated with constructing noise barriers on bridges. Acoustic feasibility refers to a noise abatement measure's ability to achieve the minimum noise reduction at impacted receptors. MoDOT requires at least a 5 dBA insertion loss for a minimum of two first-row, impacted receivers for noise abatement to be considered feasible.

If a noise abatement measure is considered feasible, it is then evaluated for three mandatory Reasonableness criteria, including:

1. Viewpoints of owners and residents of the benefitted receptors will be obtained. These will usually be obtained by ballot through mailings or at a public forum;
2. Noise abatement measures shall not exceed 1,300 square feet per benefitted receptor, in the case of noise walls. Where noise walls are not options, other

noise abatement techniques may be considered, but cannot exceed $46,000 per benefitted receptor. In order to ensure that the noise abatement parameters remain current, the wall area limit and cost per benefited receptor shall be recalculated at an interval not to exceed every five years. The updated values may not be used to analyze noise abatement calculations from previous years. MoDOT does not allow cost averaging; and

3. Noise abatement measures must provide a minimum reduction of 7 dBA for 100 percent of benefited, first-row receptors.

See **Appendix E** for more information on the feasibility and reasonableness criteria utilized for this project.

3.14.5. Potential for Noise Abatement

The potential for noise barriers was analyzed for every receptor predicted to be impacted in the Preferred Alternative. Generally, the barriers were analyzed along the shoulder of I-70 or near the ROW line depending on the topography of the area.

Twelve (12) noise barriers were determined to be both feasible and reasonable per the criteria used and will benefit 398 receptors. The NSAs are shown on **Exhibit 10**. Additional information on the noise walls can be found in the Noise Study Report located in **Appendix E**.

Applicable Commitment(s):

15. The MoDOT Noise Policy will be used to address noise impacts. For locations where noise walls are feasible and reasonable, MoDOT will discuss noise wall locations and provide benefited residents an opportunity to vote on whether they would like a noise wall. The noise analysis was performed following MoDOT's current, FHWA approved, noise policy. Final noise barrier decisions will be made during final design. If at that time, a new MoDOT noise policy approved by FHWA is in place, the new noise policy will be used for a new noise analysis and final noise barrier decisions.

16. MoDOT has special provisions for construction, which require that all contractors comply with all applicable local, state, and federal laws and regulations relating to noise levels permissible within and adjacent to the project construction site. Construction equipment is required to have mufflers installed in accordance with the equipment manufacturers' specifications.

3.15. Air Quality

The Clean Air Act (CAA) requires states to adopt National Ambient Air Quality Standards (NAAQS). NAAQS were established to limit the amount of sulfur dioxide, particulate matter, carbon monoxide, nitrogen dioxide, ozone, and lead. Missouri established additional criteria for hydrogen sulfide and sulfuric acid. MoDOT is responsible for implementing conformity regulations in nonattainment and maintenance areas.

The proposed project is a non-classified area as defined by the EPA through the CAA. Therefore, conformity requirements of 40 CFR Part 93 do not apply. The proposed project is exempt according to 93.126 and no further action is necessary. The Preferred Alternative is not expected to generate large and permanent quantities of air pollutants. Fugitive dust and emissions from construction vehicles and equipment will occur but will be minor and temporary.

3.16. Cultural Resources

NEPA requires consideration of important historic, cultural, and natural aspects of our national heritage under Section 106 of the National Historic Preservation Act of 1966 (NHPA). A 150-foot buffer area was applied to the Project Area to encompass the area of potential effect (APE) which consists of a survey area of approximately 1,014 acres. The APE includes any existing and potential new ROW and permanent and temporary easements for the consideration of direct effects due to construction-related ground disturbing activities.

3.16.1. Architectural Resources

The initial step in satisfying Section 106 regulations regarding historic properties is to determine if there are any properties listed or eligible for listing on the National Register of Historic Places (NRHP) that may be affected by the proposed project.

Architectural field investigations were undertaken within the APE on October 2-4 and 8-10, 2024. Architectural investigations required photographic recordation of all historic properties within the APE, as well as an assessment for eligibility for the NRHP of all properties that met with base requirements. The Built Environment Report can be found in **Appendix F**.

There were 486 parcels recorded within the APE. Of the 486 parcels identified, 87 were less than 40 years old. Out of the 399 parcels that were 40 years or older, only one parcel, AR 32, was identified as eligible for inclusion in the NRHP. AR 32 is located at 8300 E US 40 Highway, Kansas City, Missouri and is recommended eligible for listing on the NRHP under Criterion A in the area of Commerce. The Preferred Alternative does not extend beyond the ramp connections to I-70 and are not in proximity to US 40. As such, a finding of no historic properties adversely affected is recommended and no additional work is warranted unless the project scope is expanded beyond the current APE. On November 4, 2025, SHPO concurred that the scope of work as described would have no adverse effect on historic properties.

3.16.2. Archeological Resources

An archeological survey of the APE was conducted from October 28 through November 1, 2024. Because the APE was entirely within MoDOT ROW, access was available for the entire property. Much of the APE included active roadways including I-70 as well as roadside drainage ditches and active utility corridors north and south of the highway. The preponderance of disturbed soils, steeply sloped/graded landforms, and eroded

soils within the APE provided a low potential for significant subsurface deposits. These characteristics result in an overall very low likelihood of intact cultural resources within the current APE.

Four previously recorded archeological sites are partially located within the current APE. Archeological investigations within and adjacent to the site boundaries determined that sites 23JA54, 23JA399, 23JA559, and 23JA586 have been significantly impacted by previous roadway construction.

Sites 23JA54, 23JA399, 23JA559, and 23JA586 were unevaluated for the NRHP since the entire site could not be tested. However, the portion of each site within the APE does not contain information that would contribute to the site's overall significance. As such, a finding of no historic properties affected is recommended and no additional work is warranted unless the project scope is expanded beyond the current APE.

On November 4, 2025, SHPO concurred that sites 23JA54, 23JA399, 23JA559, 23JA586 have been significantly impacted by previous construction and, archaeologically, there will be no historic properties affected.

MoDOT in consultation with FHWA and SHPO developed a project specific Programmatic Agreement (PA) to guide further archaeological survey work, including identifying parcels requiring future survey and testing and mitigation measures if sites cannot be avoided during the project. Efforts to avoid, minimize, or mitigate adverse effects were addressed through consultation for the development of the PA, which includes continuing consultation to ensure stipulations in the PA are accomplished. For projects using the Design-Build process, the effects of the project on historic properties are re-evaluated as the project design is developed through consistent communication between the Design-Build contractor and MoDOT Historic Preservation staff. On November 5, 2025, FHWA notified the Advisory Council on Historic Preservation (ACHP), inviting the ACHP to consult on the development of the PA. The ACHP has chosen not to participate in consultation (November 18, 2025). MoDOT submitted a draft PA to the SHPO for legal review and to FHWA for approval. MoDOT distributed the PA to the Missouri Highways and Transportation Commission, the SHPO, and FHWA for signatures. MoDOT will adhere to all stipulations of the executed Section 106 PA for the Improvements to I-70 between I-435 and I-470 project.

The Built Environment Survey, SHPO Concurrence Letter and project specific Section 106 PA are included in **Appendix F – Cultural Resources**.

Applicable Commitment(s):

17. MoDOT will comply with the newly executed project specific Programmatic Agreement. Should design modifications and/or construction activities result in impacts to historic properties, MoDOT will coordinate with SHPO related to the Section 106 process.

3.17. Construction and Emergency Access

It is essential for the health, safety, and general welfare of a community that emergency response vehicles and services have adequate roadway access to all residential, commercial, and industrial properties. I-70 has and will continue to be a vital lifeline for moving people and goods across Missouri and beyond. I-70 from I-435 to I-470 provides a critical link to the central region of the U.S., particularly for freight traffic, and is a key access point for the Kansas City region. I-70's role in connecting these routes is of vital importance and long-term closures could have substantial impacts on regional commerce, mobility, and safety.

Construction activities typically include temporary roadway closures, detour routes, prohibited turns, and possible lane width restrictions. These modifications can all impact emergency response times and access to incidents requiring first responder presence. Contractors on the proposed project will be required to comply with all applicable local, state, and federal air pollution regulations.

Applicable Commitment(s):

18. MoDOT will develop a maintenance of traffic management plan during the construction phase of the project and will comply with all applicable local, state, and federal air pollution regulations during construction.

19. MoDOT will ensure measures are taken to reduce fugitive dust and other emissions generated during construction. Emissions from construction equipment will be controlled in accordance with emission standards prescribed under state and federal regulations. Materials resulting from construction operations will be removed from the project and disposed of by the contractor. Additionally, burning of construction debris will be prohibited and all materials will be properly disposed of offsite.

20. MoDOT will ensure that emergency response vehicles have access throughout the corridor during construction. Any detours will be limited in duration to the period of time required to construct project improvements. These detours will be coordinated with emergency services prior to their implementation.

3.18. Utilities

Utility information was compiled from available online information from local municipalities and utility companies. The approximate locations of existing utility infrastructure above- and below-ground within and around the Project Area were identified using the National Pipeline Mapping System Public Viewer and the Open Infrastructure Map. Utilities identified include gas, electrical, telecommunications towers, power lines, and solar energy generators. Potential service disruptions that could occur from the Preferred Alternative were evaluated at a high level, as well as the need for

future improvements to the existing utility infrastructure. That evaluation helped determine potential impacts.

In Kansas City, electrical services are provided by Evergy and Spire provides natural gas service. KCWater provides water service and sewer lines. Other utilities include resources from the following providers:

- Telephone: AT&T, Verizon, Spectrum
- Television: DIRECTV, Spectrum, Charter, and Comcast
- Internet: AT&T, Century Link, Google Fiber, KCMO Fiber, Spectrum, and Verizon

In the city of Independence, electrical services are provided by Independence Power and Light and Spire provides natural gas service. The city of Independence Water Division provides water service and sewer lines. Other utilities include resources from the following providers:

- Telephone: AT&T and Verizon
- Television: Comcast
- Internet: AT&T and Verizon

Utilities in the Project Area are both buried underground and hung on above-ground poles. **Exhibit 11** displays select utilities within the Project Area.

MoDOT's utility engineers and representatives of the various utilities will plan the details of individual utility adjustments on a case-by-case basis.

Applicable Commitment(s):

21. MoDOT will coordinate with utility companies during final design and construction to minimize the impact of necessary utility relocations. The responsible party for any relocations will obtain the necessary clearances should they occur outside of the Project Area. All design work, maintenance, and relocation efforts of underground and above-ground electric lines throughout the Project Area shall be designed based on current practices of the power company, the requirements of the electrical code of the local agency having jurisdiction, and the (National Electric Safety Code) NESC.

3.19. Reasonably Foreseeable Impacts

Reasonably foreseeable impacts are those social, economic, and environmental impacts that are not only possible, but probable based on the proposed action.

Construction of the Preferred Alternative would have reasonably foreseeable impacts, but they are not anticipated to be adverse to the broader community. The Preferred Alternative is anticipated to support access, connectivity, and mobility within the Kansas City metropolitan area. There would be no reasonably foreseeable impacts with the No-Build Alternative.

3.20. Summary of Preferred Alternative Impacts

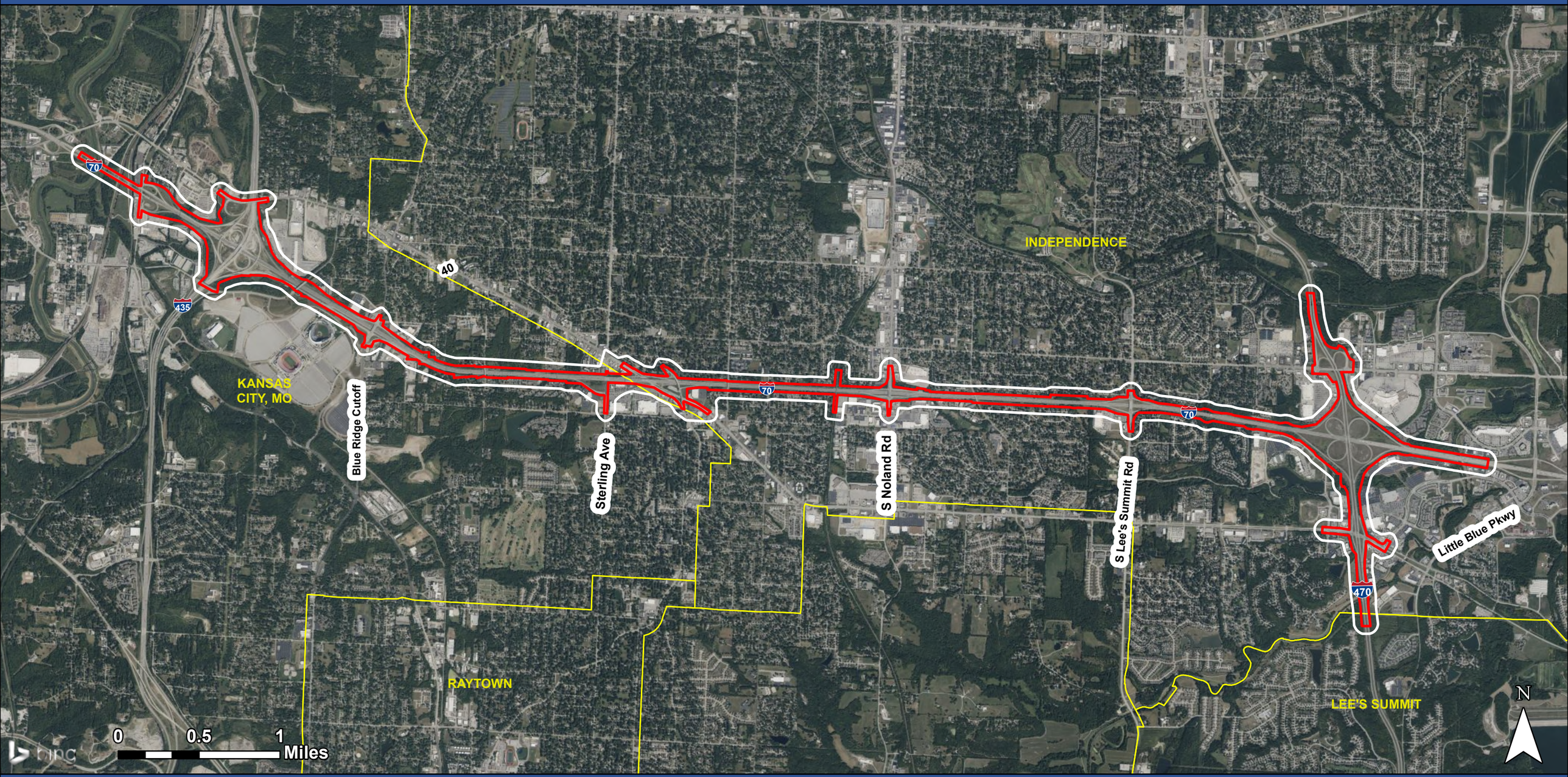
The potential impacts of the Preferred Alternative are shown in **Exhibit 12** and are summarized in **Table 13**.

Table 13: Potential Impacts of the Preferred Alternative

Resource	Measure	No-Build	Preferred Alternative
Places of Worship and Schools	Quantity	0	0
Community Resources (Police, Fire, Libraries, Hospitals)	Quantity	0	0
Economic	Positive/Negative Impacts	Negative	Positive
Park and Recreation Areas	Quantity and Acres	0	1 park; 0.2 acres of non Section 4(f) Park
Bike Routes	Quantity and Linear Feet	0	0
Trails	Quantity and Linear Feet	0	0
Historical Sites or Districts	Quantity	0	0
Archaeological Sites	Quantity	0	0
Section 4(f) Properties	Quantity and Type	0	0
Section 6(f) Properties	Quantity and Type	0	0
ROW and Permanent Easement Acquisitions	Acres	0	1.5
Displacements	Quantity and Type	0	0
Farmland Soil Impacts	Acres	0	0
Wetland Impacts	Acres	0	0.5
Stream Impacts	Linear Feet	0	5,044
Floodway Impacts	Acres	0	6.3
100-year Floodplain Impacts	Acres	0	2.8
Woodland Vegetation	Acres	0	83
Noise Impacts	Number of sensitive receptors with impacts	576	753
Contaminated and Regulated Material Sites	Quantity and Type	0	2

Project Area

Exhibit 2

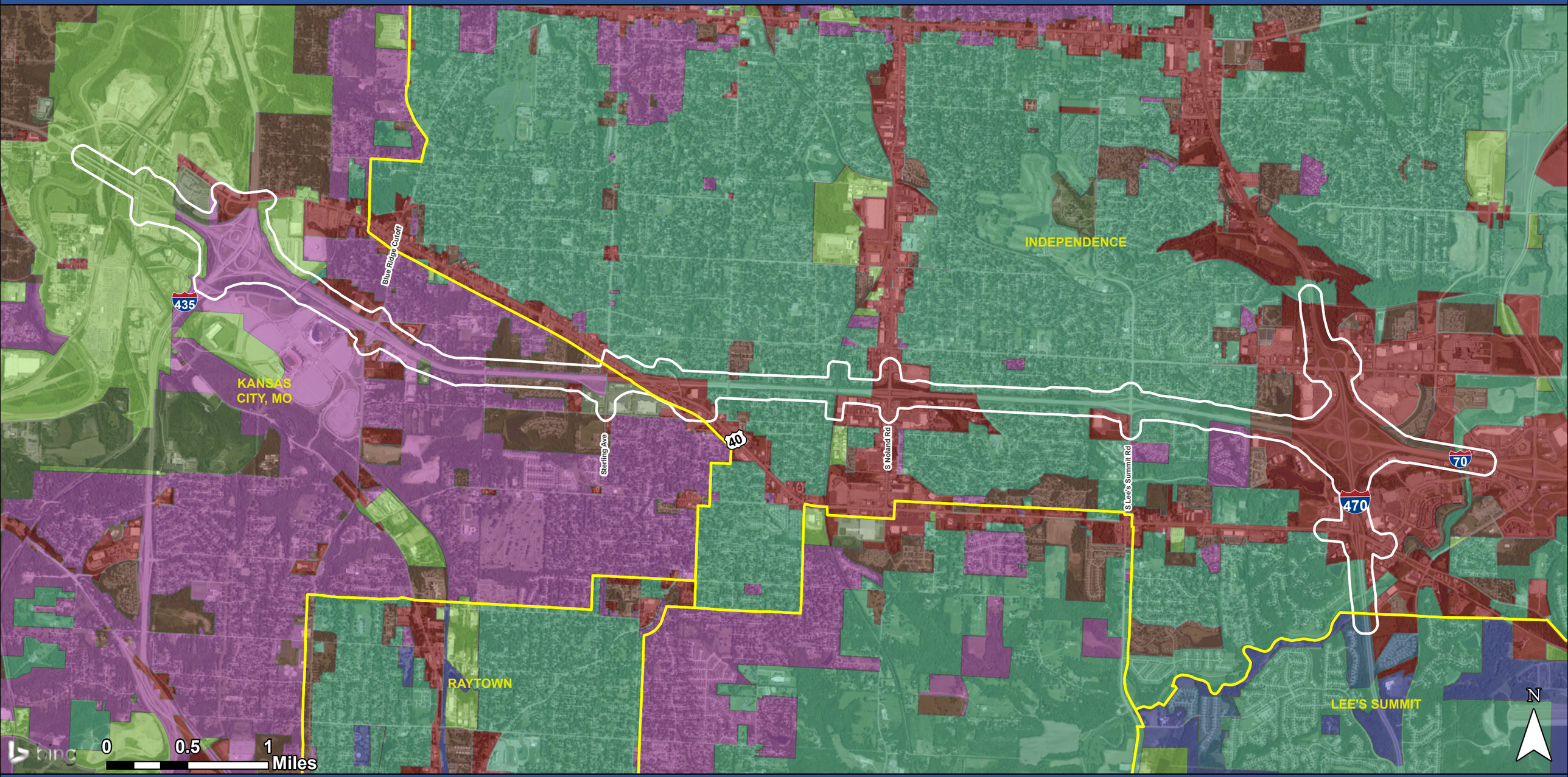


Project Area
Field Work Study Area
City Boundary

I-70 Environmental Assessment: I-435 to I-470

Existing Zoning

Exhibit 3



- Project Area
- City Boundary

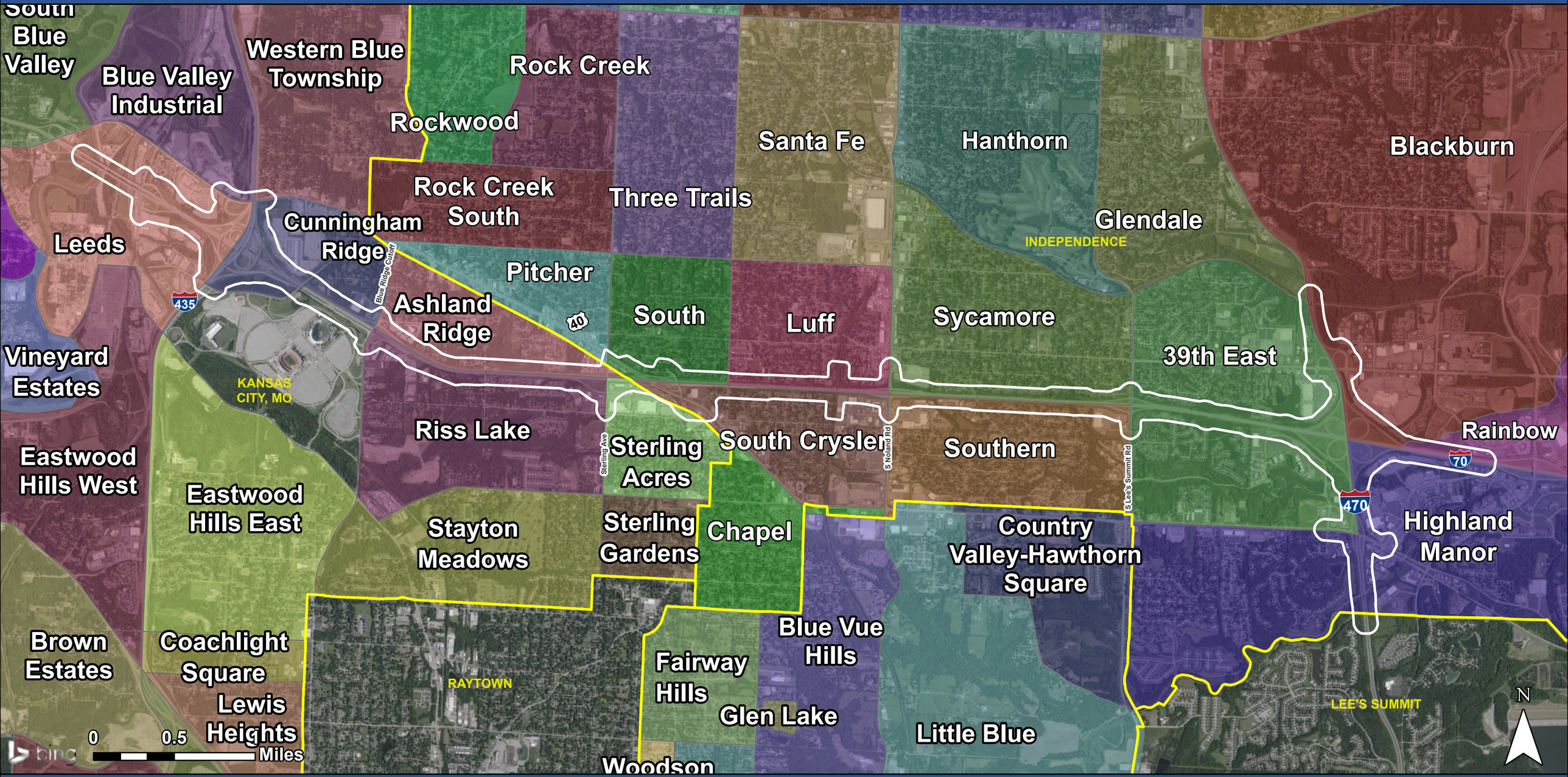
Zoning Designation

- Low Density Residential
- Medium Density Residential
- High Density Residential
- Mixed Use
- Commercial/Office
- Industrial/Manufacturing
- Green Space
- Other

I-70 Environmental Assessment: I-435 to I-470

Residential Neighborhoods

Exhibit 4



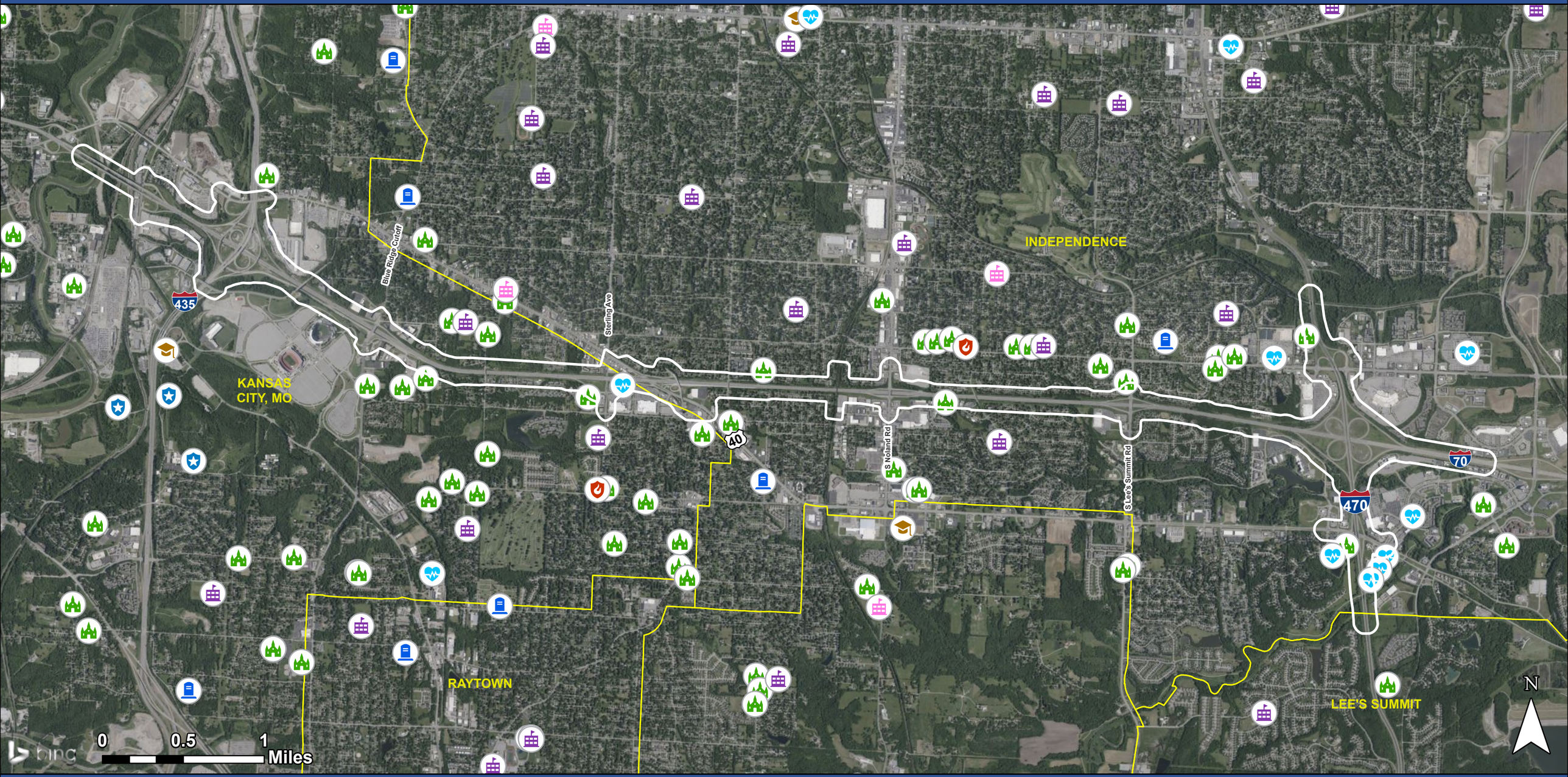
Project Area

City Boundary

I-70 Environmental Assessment: I-435 to I-470

Community Resources

Exhibit 5

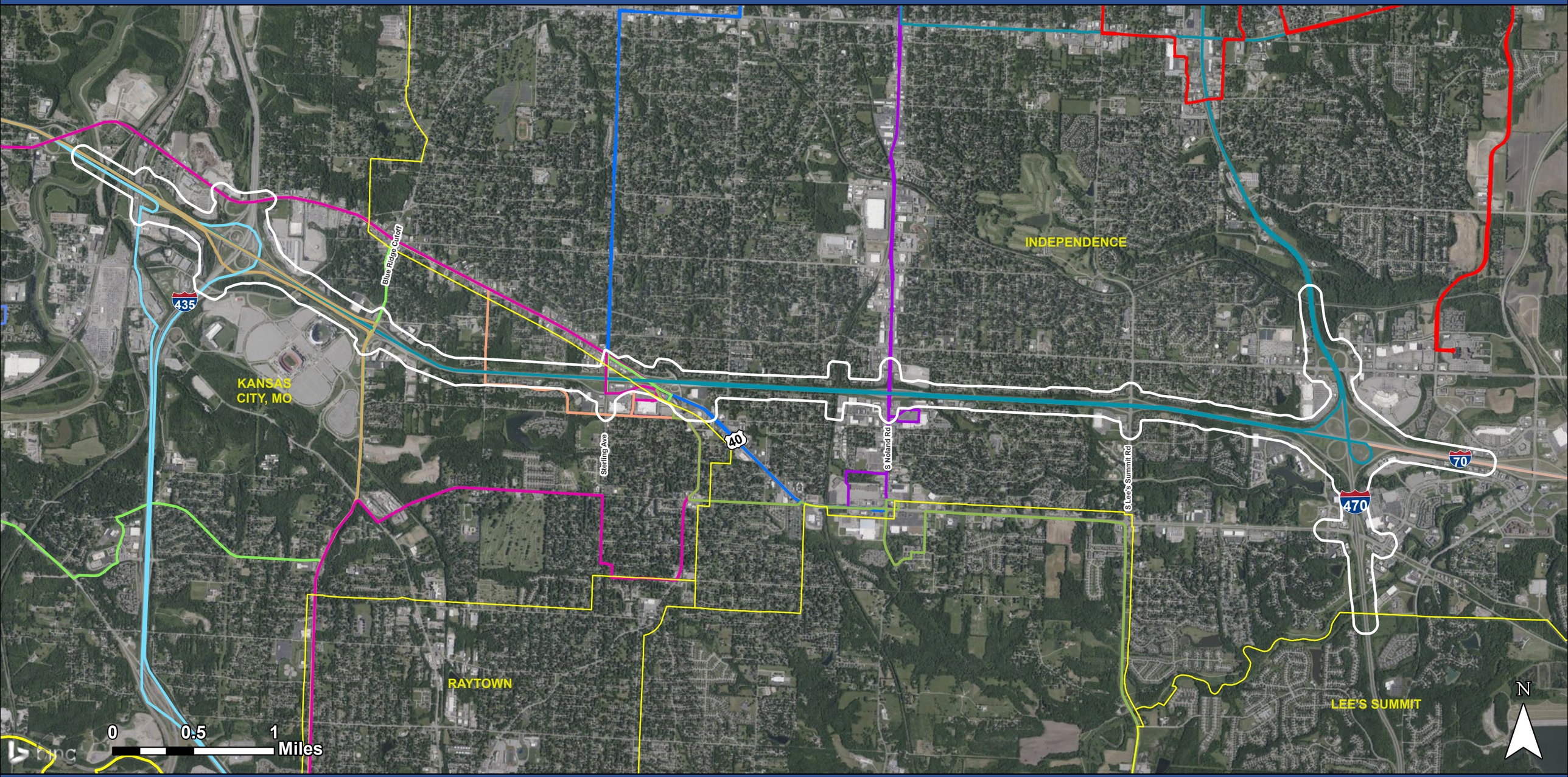


- Project Area
- City Boundary
- Public School
- Private School
- College/University
- Place of Worship
- Fire Station
- Police Station
- Cemetery
- Healthcare Facility
- City Boundary

I-70 Environmental Assessment: I-435 to I-470

Transit Routes

Exhibit 6



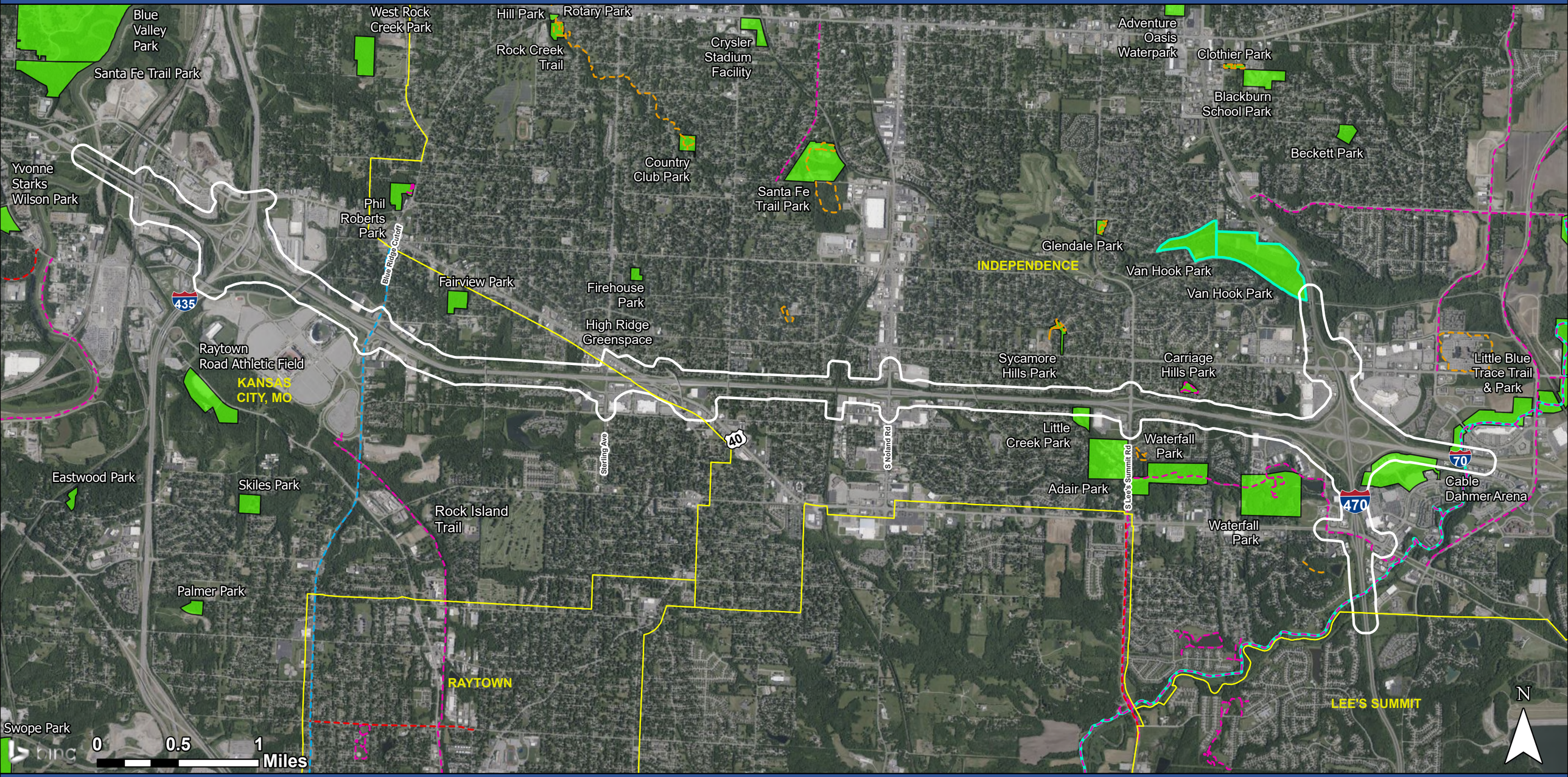
Project Area
City Boundary

Transit Route
- 31st Street
- 39th Street
- 63rd Street
- Blue Ridge
- Blue Ridge Limited
- Blue Route
- Blue Springs Express
- Broadway
- Lee's Summit Express
- Purple Route
- Red Route
- TMC Lakewood
- Truman Road Limited
- City Boundary

I-70 Environmental Assessment: I-435 to I-470

Parks, Trails, and Pedestrian Facilities

Exhibit 7

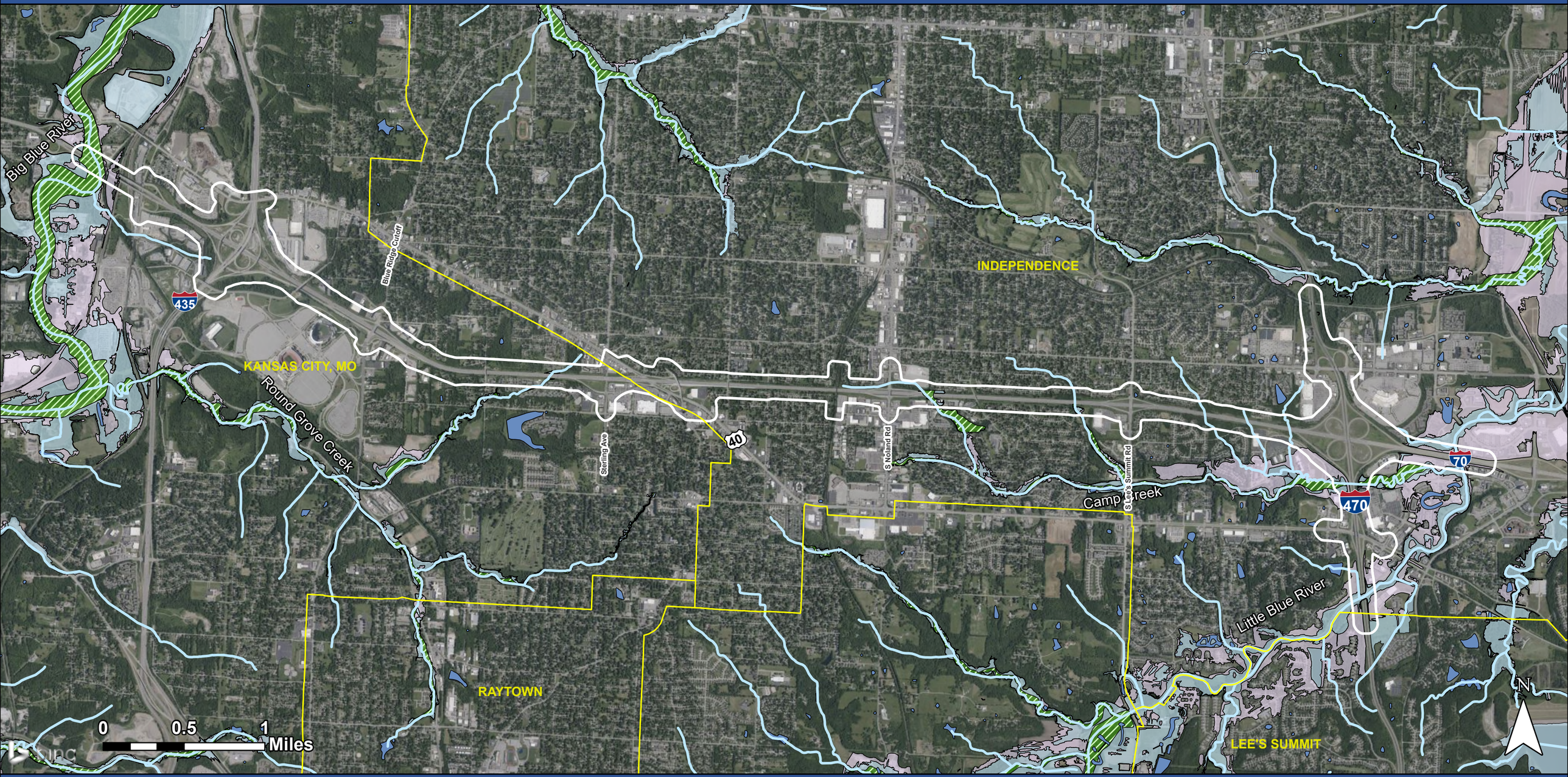


- Project Area
- City Boundary
- Section 6(f) Resource
- Parks
- Bike Lane
- Share the Road Signage
- Shared Use Path
- Walking Trail

I-70 Environmental Assessment: I-435 to I-470

Surface Waters

Exhibit 8

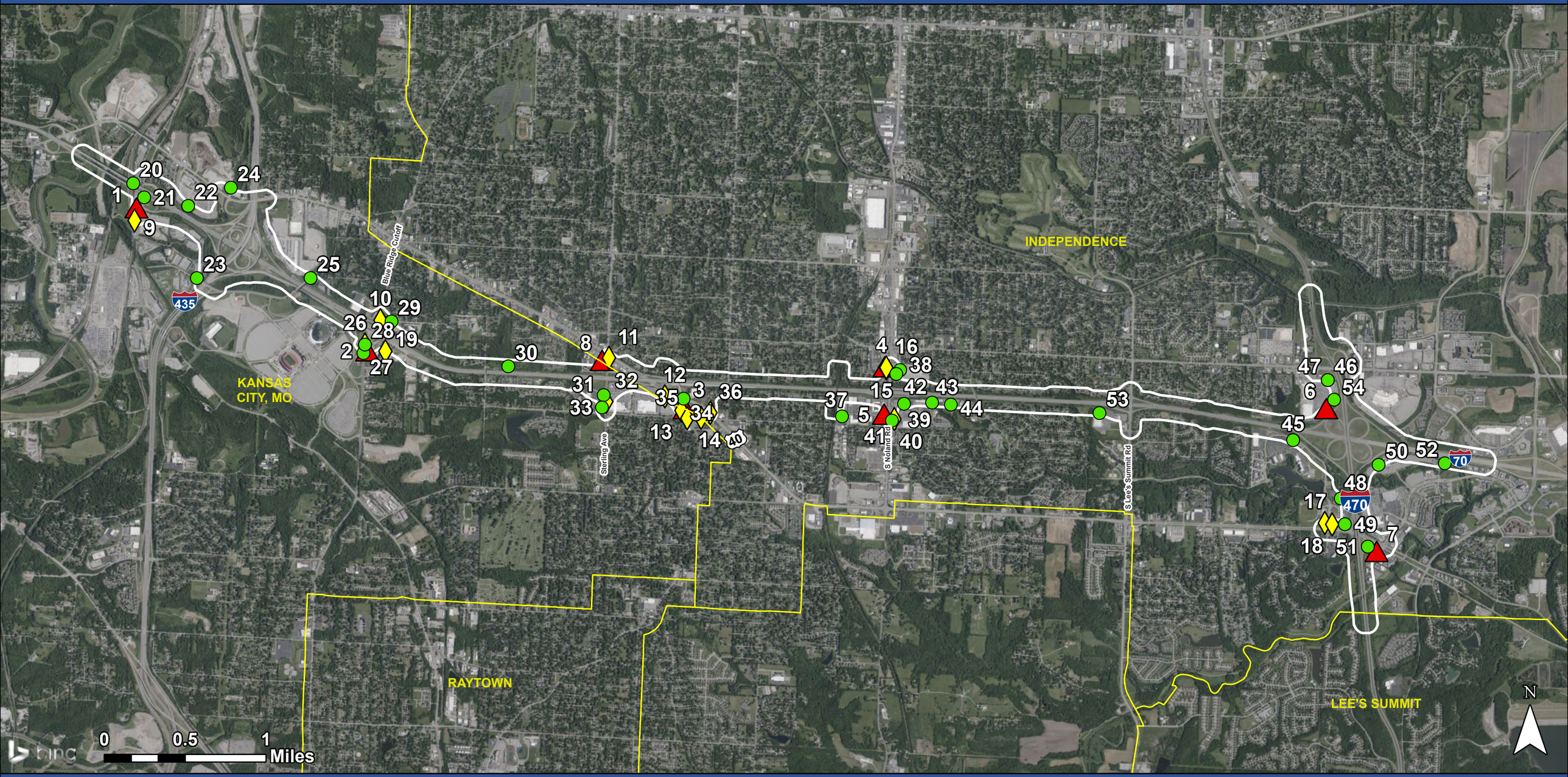


- Project Area
- City Boundary
- Streams
- Freshwater Pond
- Floodway
- 100-Year Floodplain
- 500-Year Floodplain

I-70 Environmental Assessment: I-435 to I-470

Hazardous Materials

Exhibit 9



Project Area

City Boundary

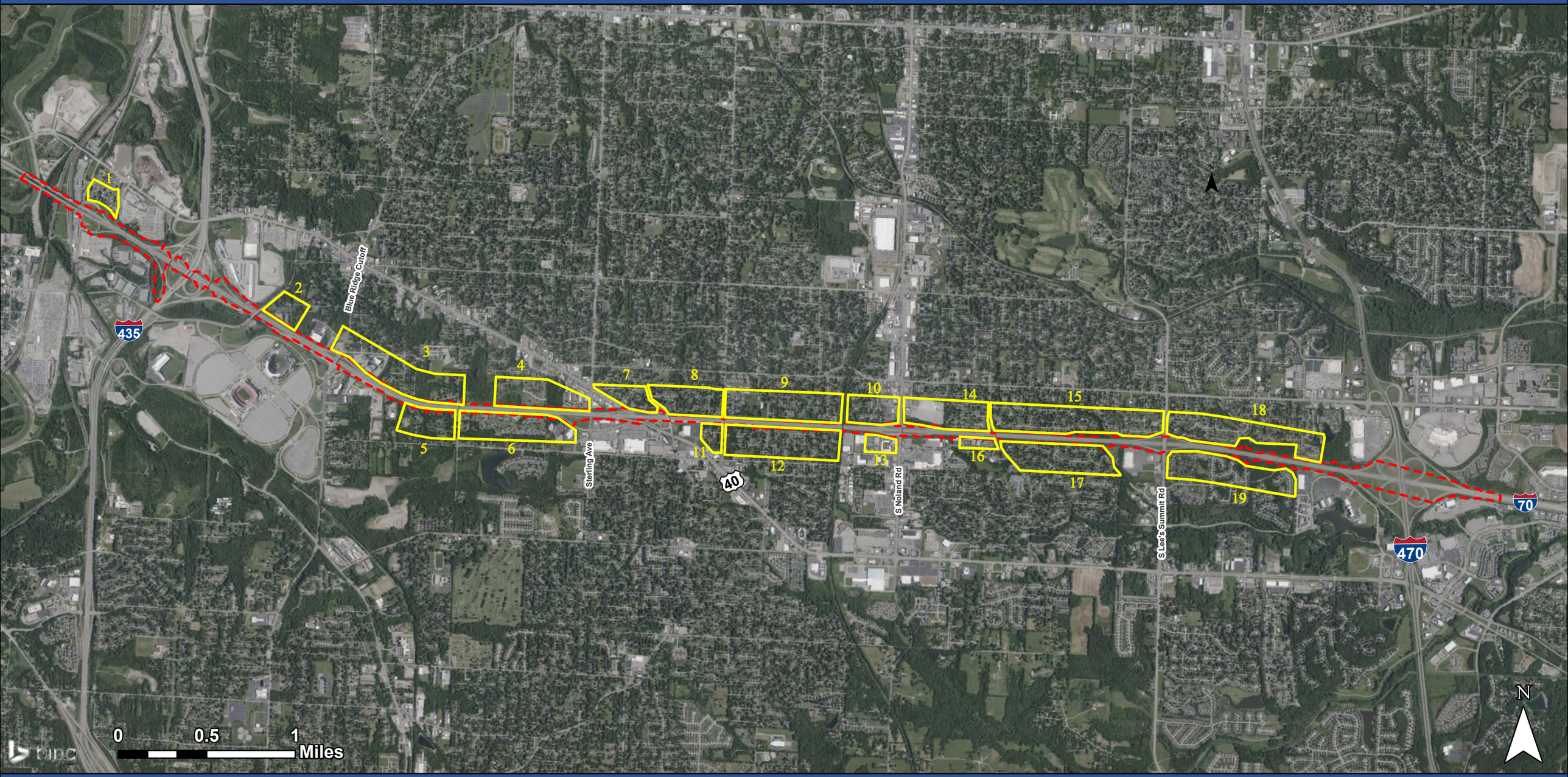
Site Priority

- 1: Moderate to High
- 2: Low to Moderate
- 3: None to Low

I-70 Environmental Assessment: I-435 to I-470

Noise Sensitive Areas

Exhibit 10



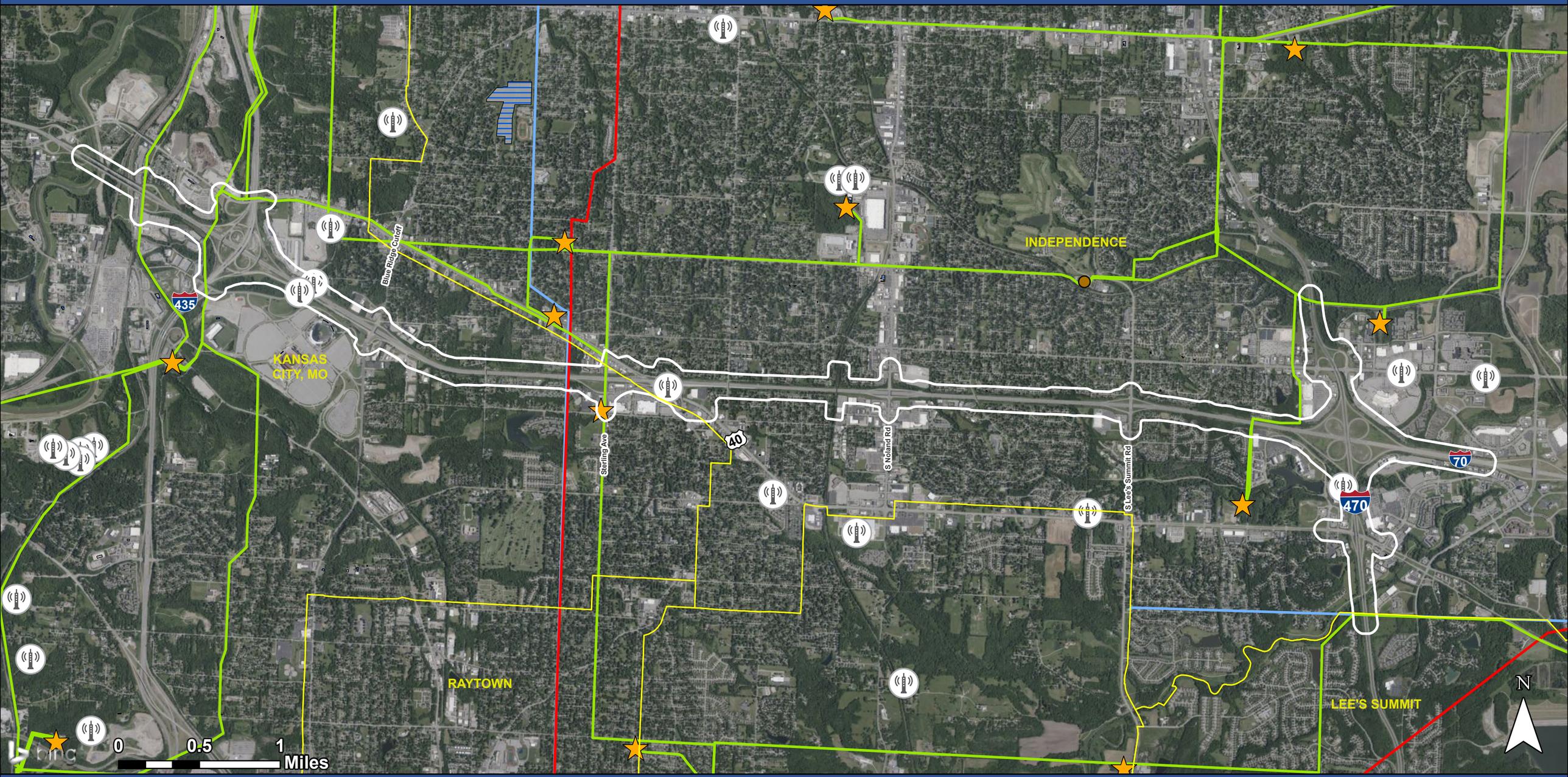
Preferred Alternative Impact Limits

Noise Sensitive Area

I-70 Environmental Assessment: I-435 to I-470

Utilities

Exhibit 11

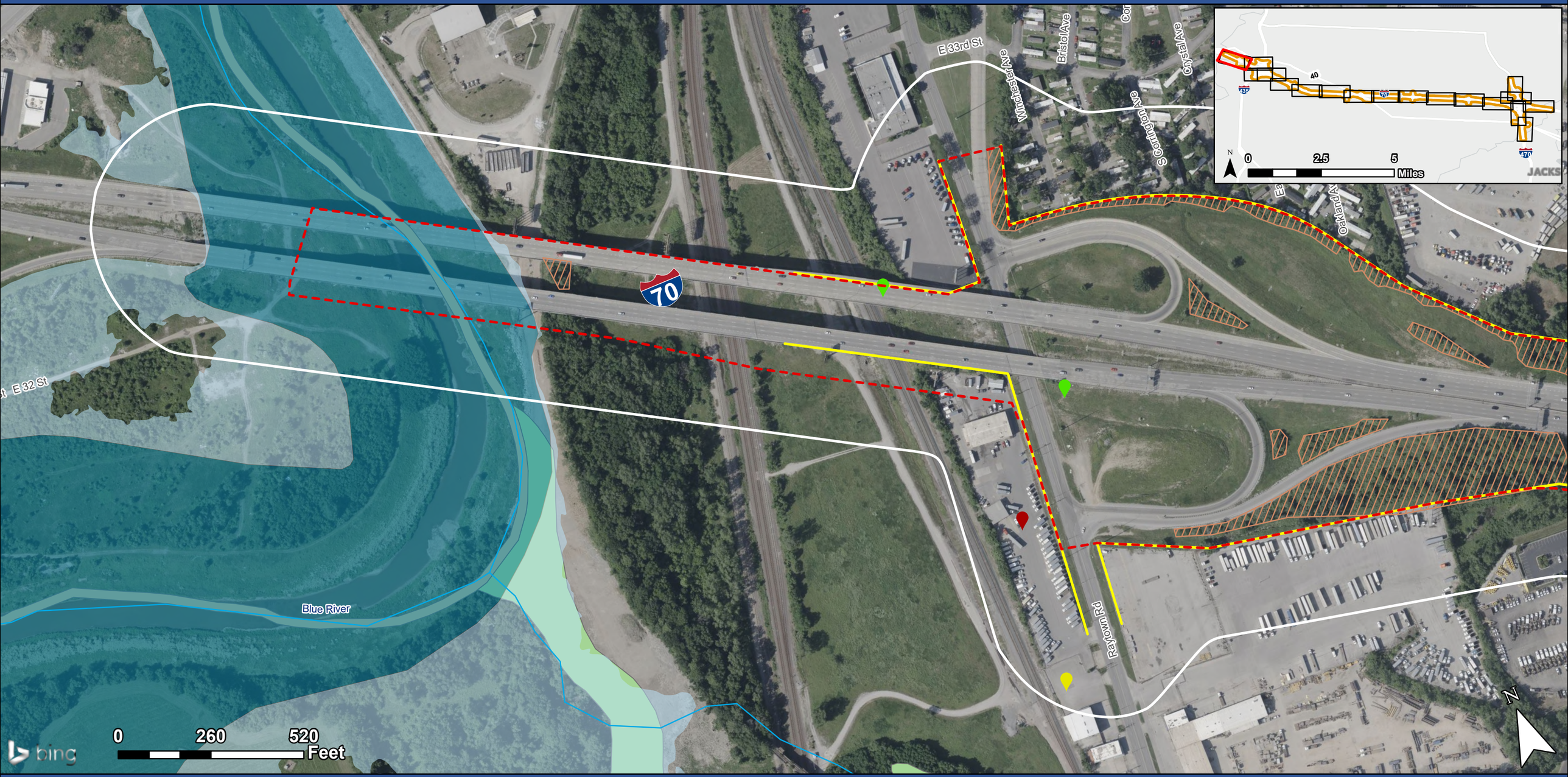


- Project Area
- City Boundary
- Solar Energy
- Telecommunications Tower
- Electricity Substation
- Power Plant
- Gas Transmission Pipeline
- Hazardous Liquid Pipeline
- Power Line

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

Exhibit 12



Study Area
Preferred Alternative Impact Limits
Existing ROW and Easements
Parks
River/Stream
Floodway
100- Year Floodplain

Woodland Area

Wetlands
Freshwater Forested/Shrub Wetland
Riverine
Field Delineated Wetland

Trails and Bikeways
Bike Lanes
Marked Bike Route
Paved Shoulders
Pedestrian Hike Trail
Separated Bike Lanes
Share the Road No Signs
Shared Use Path
Walking Trail

Hazardous Materials
Priority
1
2
3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

Exhibit 12

- Study Area
- Preferred Alternative Impact Limits
- Existing ROW and Easements
- Parks
- River/Stream
- Floodway
- 100- Year Floodplain
- Woodland Area

Wetlands

- Freshwater Emergent Wetland
- Riverine
- Field Delineated Wetland

Trails and Bikeways

- Bike Lanes
- Marked Bike Route
- Paved Shoulders
- Pedestrian Hike Trail
- Separated Bike Lanes
- Share the Road No Signs
- Shared Use Path
- Walking Trail

Hazardous Materials

Priority

- 1
- 2
- 3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

Exhibit 12

Study Area
Preferred Alternative Impact Limits
Existing ROW and Easements
Parks
River/Stream
Floodway
100- Year Floodplain
Woodland Area

Wetlands
Freshwater Emergent Wetland
Riverine
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Trails and Bikeways
Bike Lanes
Marked Bike Route
Paved Shoulders
Pedestrian Hike Trail
Separated Bike Lanes
Share the Road No Signs
Shared Use Path
Walking Trail

Hazardous Materials
Priority
1
2
3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

Exhibit 12

- Study Area
- Preferred Alternative Impact Limits
- Existing ROW and Easements
- Parks
- River/Stream
- Floodway
- 100- Year Floodplain
- Woodland Area
- Field Delineated Wetland

Trails and Bikeways

- Bike Lanes
- Marked Bike Route
- Paved Shoulders
- Pedestrian Hike Trail
- Separated Bike Lanes
- Share the Road No Signs
- Shared Use Path
- Walking Trail

Hazardous Materials

Priority

- 1
- 2
- 3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

Exhibit 12

Study Area
Preferred Alternative Impact Limits
Existing ROW and Easements
Parks
River/Stream
Floodway
100- Year Floodplain
Woodland Area
Field Delineated Wetland

Trails and Bikeways
Bike Lanes
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Hazardous Materials
Priority
1
2
3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

Exhibit 12

- Study Area
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Trails and Bikeways

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Hazardous Materials

Priority

- 1
- 2
- 3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

Exhibit 12

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Hazardous Materials

Priority

- 1
- 2
- 3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

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- Shared Use Path
- Walking Trail

Hazardous Materials

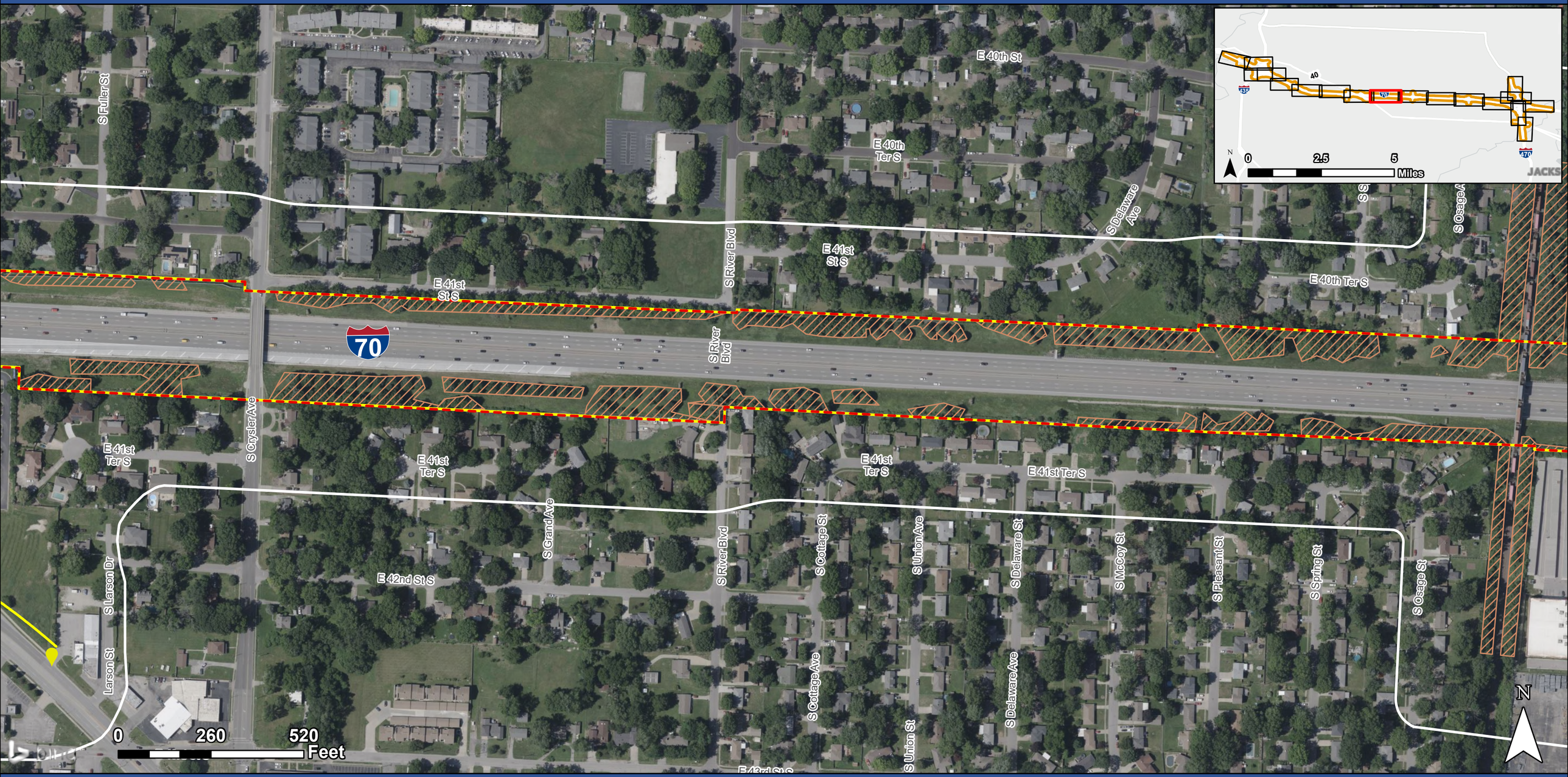
Priority

- 1
- 2
- 3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

Exhibit 12



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- Preferred Alternative Impact Limits
- Existing ROW and Easements
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Hazardous Materials

Priority

- 1
- 2
- 3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

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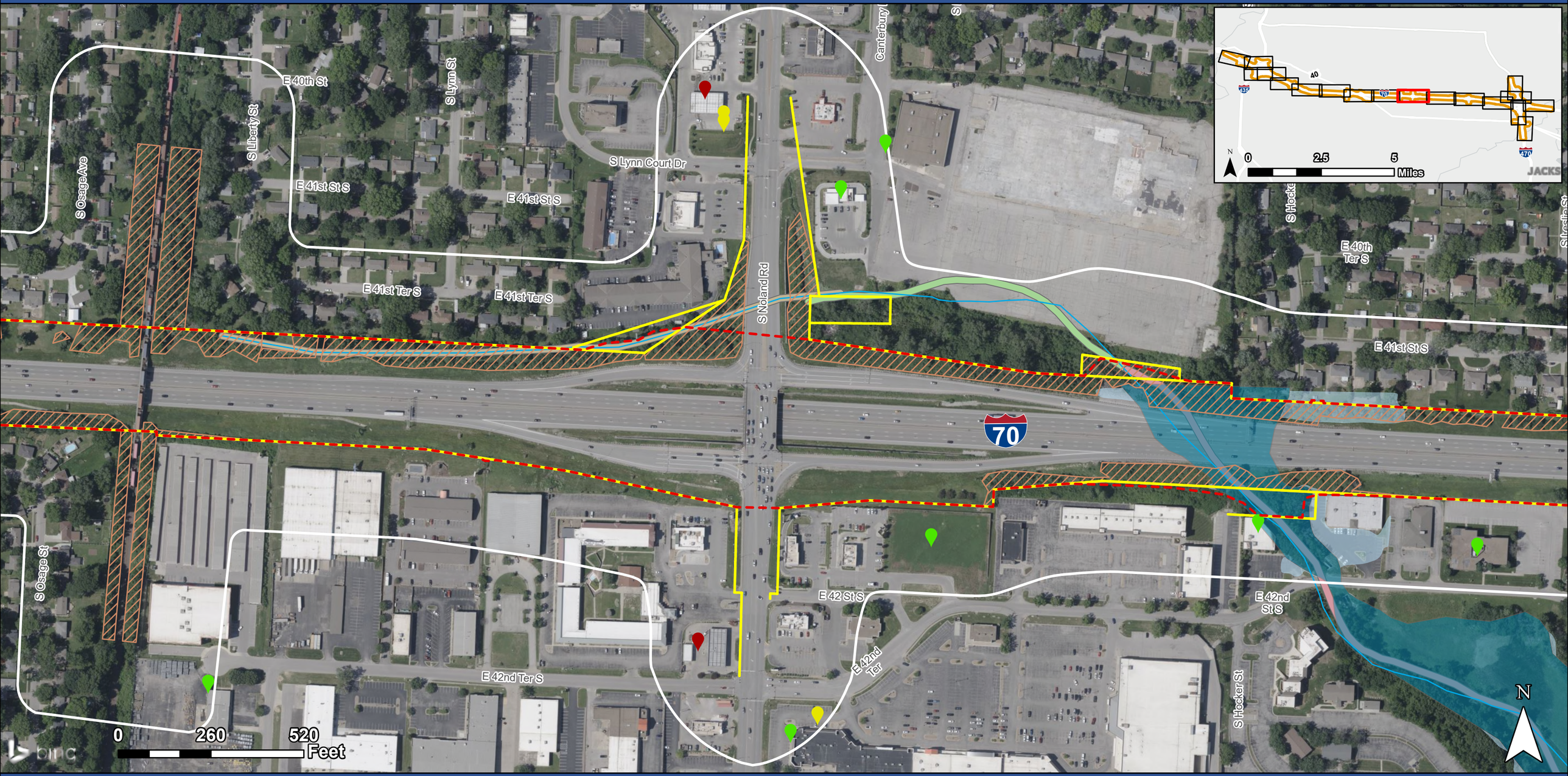

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Hazardous Materials

Priority

- 1
- 2
- 3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

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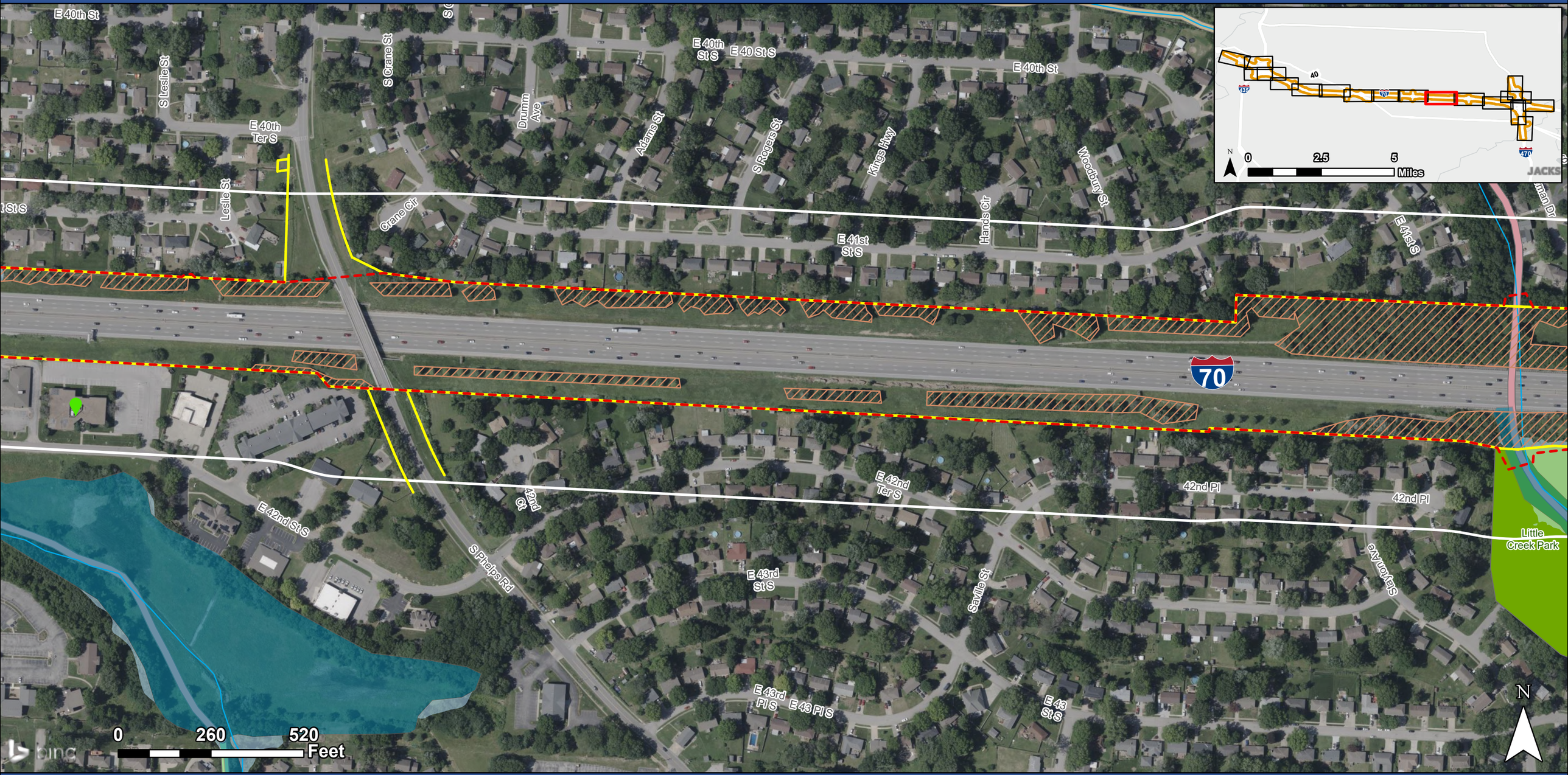

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- Walking Trail

Hazardous Materials

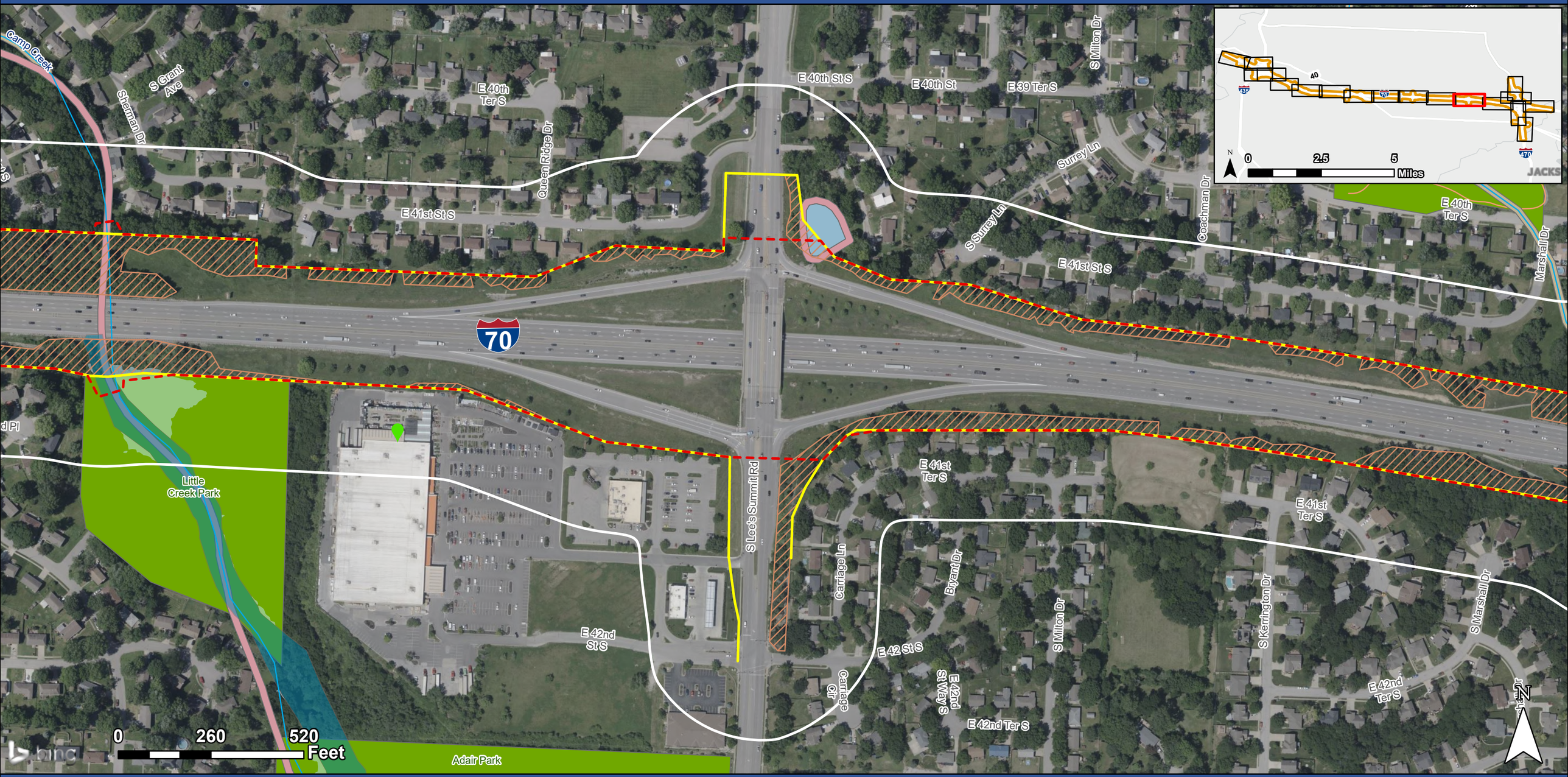
Priority

- 1
- 2
- 3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

Exhibit 12



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Existing ROW and Easements
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Floodway
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Hazardous Materials
Priority
1
2
3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

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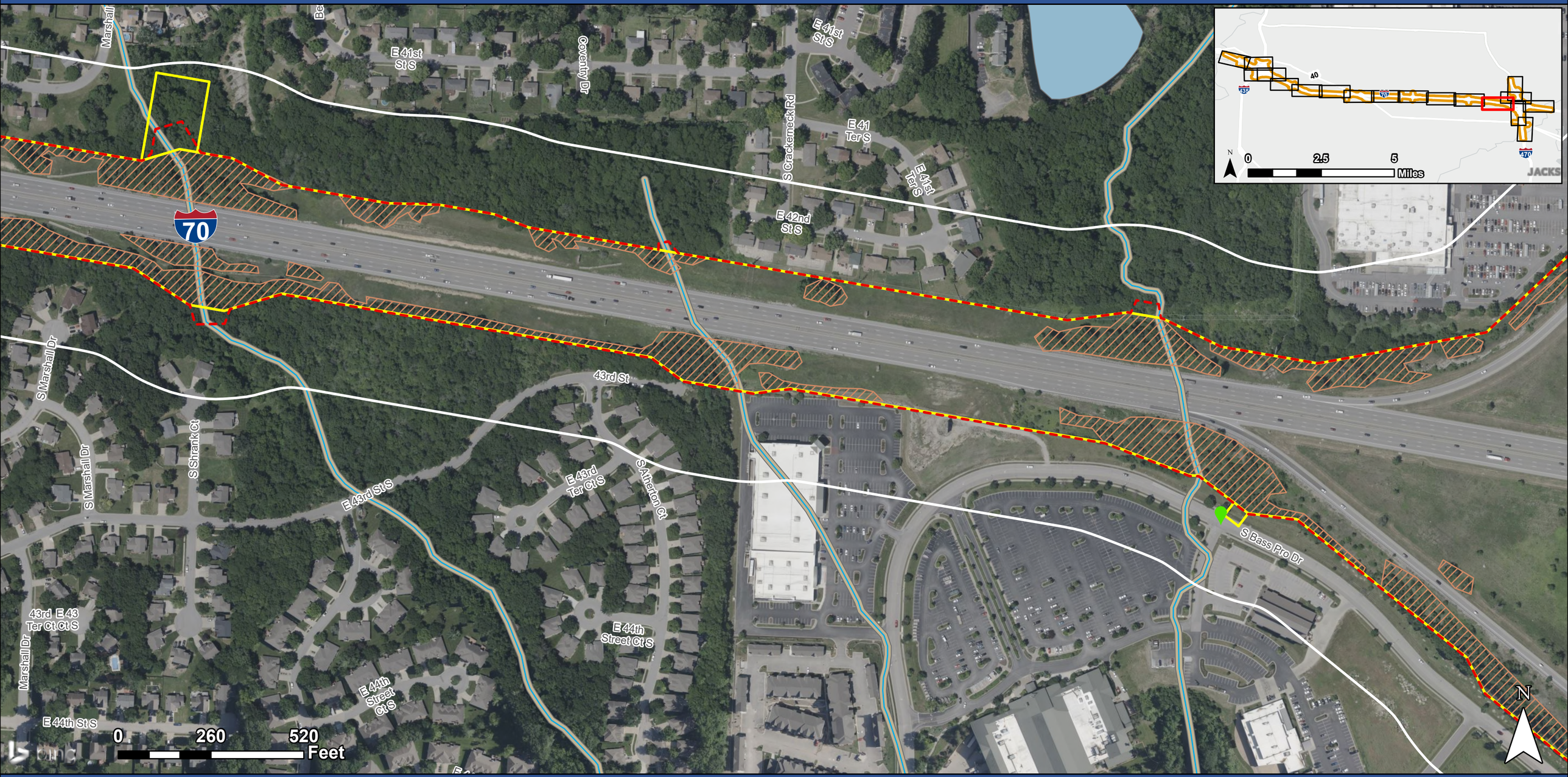

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Hazardous Materials

Priority

- 1
- 2
- 3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

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Hazardous Materials

Priority

- 1
- 2
- 3

I-70 Environmental Assessment: I-435 to I-470

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Hazardous Materials

Priority

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- 3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

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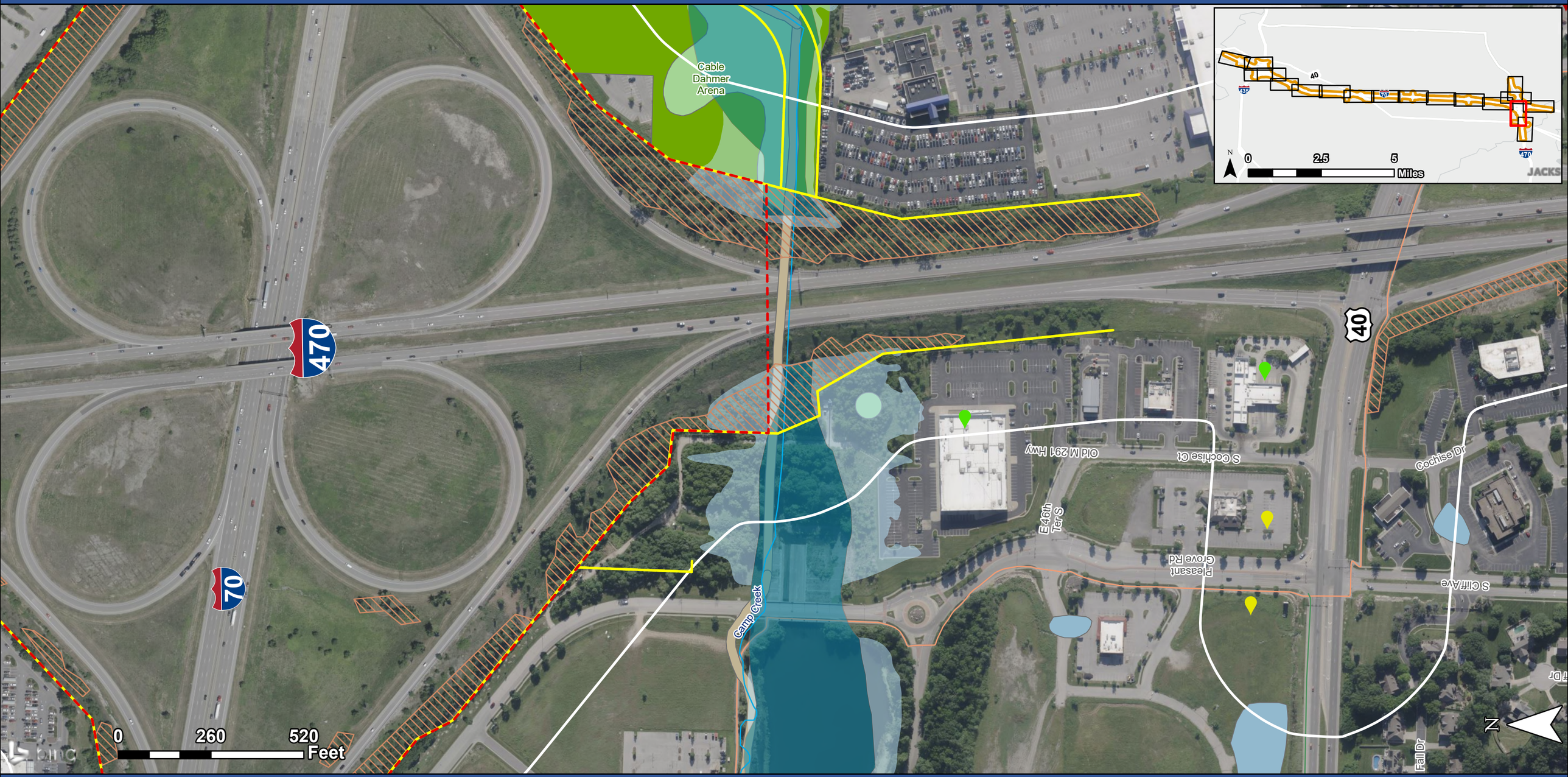

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Hazardous Materials

Priority

- 1
- 2
- 3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

Exhibit 12

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Hazardous Materials

Priority

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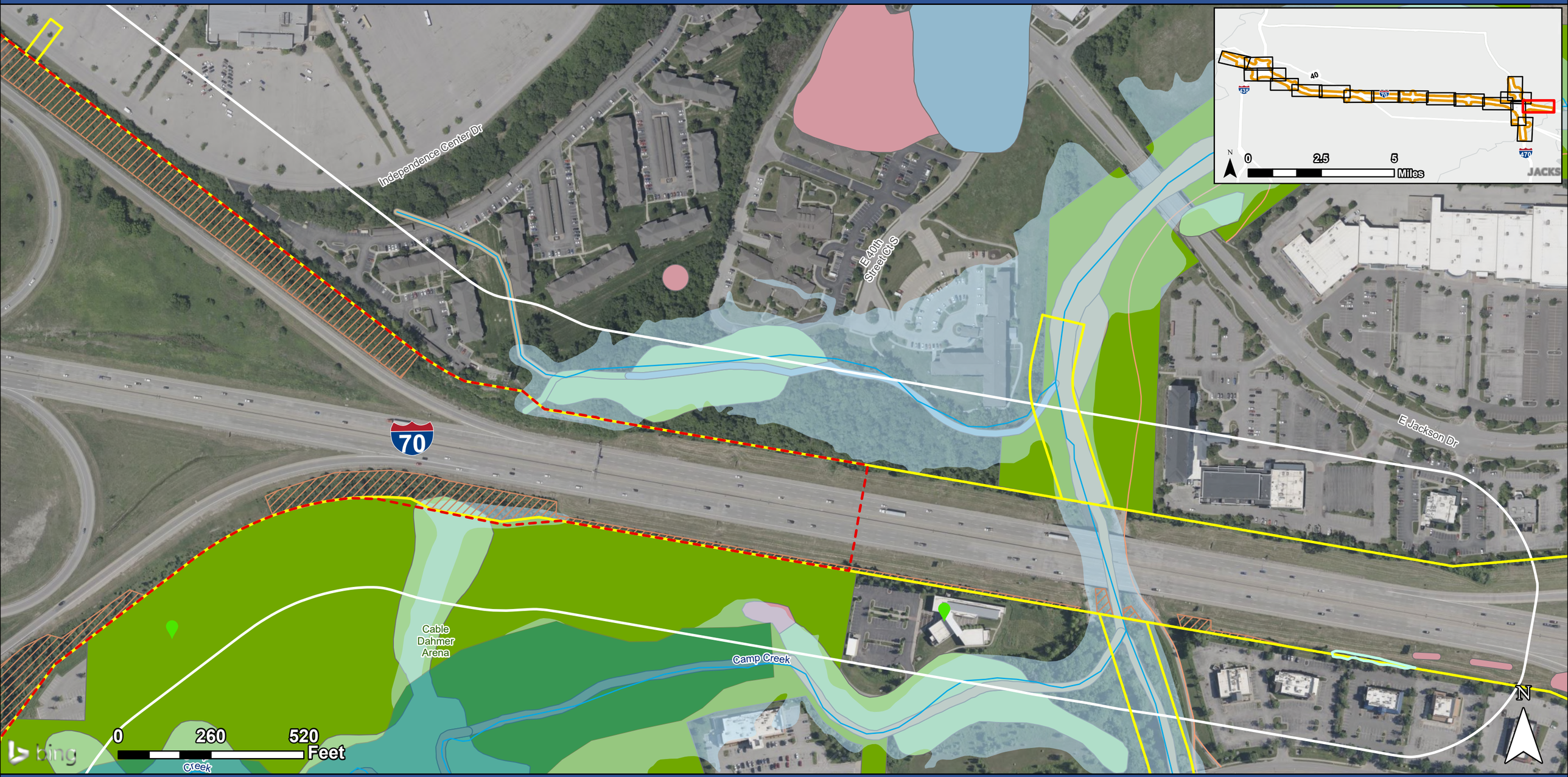
- 3

I-70 Environmental Assessment: I-435 to I-470

Preferred Alternative Impacts

Exhibit 12



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- Walking Trail

Hazardous Materials

Priority

- 1
- 2
- 3

I-70 Environmental Assessment: I-435 to I-470

4. Comments and Coordination

Public outreach has been used to inform, as well as solicit input from, the public and stakeholders identified within the Project Area. MoDOT has also coordinated with the appropriate resource agencies and tribal nations throughout the NEPA process.

4.1. Introduction

A variety of methods were utilized throughout the process of preparing this EA to provide information and solicit feedback from the stakeholders and agency partners regarding the Project Area. The preparation of the EA was initiated in early 2024. The outreach approach developed in the Public Involvement Plan (**Appendix G**), helped to assess the needs and issues for I-70, as well as the impacts and overall effectiveness of potential alternatives to address those needs. Stakeholder and public involvement were critical to this approach and helped build awareness and understanding. This outreach also played a crucial role in providing input into an outcome that reflects the interdisciplinary, collaborative process, and included input from various people and groups with a stake in the EA with translation services available, if requested. This section summarizes the various public outreach and resource agency approaches used during the NEPA process.

4.1.1. Public Meeting

The study team completed an in-person public meeting on October 8, 2024 at the Mid-America Carpenters Regional Council located at 8955 E. 38th Terrace, Kansas City, MO 64129. The purpose of this meeting was to introduce the EA, share study area characteristics that were reviewed, detail the noise study process and present the Alternatives being considered. There were 17 attendees.

A virtual component of the public meeting launched on October 8, 2024 and was available until November 4, 2024. As of November 4, the virtual meeting had 32 participants. The virtual public meeting shared the same information as the in-person meeting and was paired with an identical digital comment form. A total of five comments were received during the online comment period.

Between both meetings, a total of six comments were collected. Those comments were:

- Consider locating bus on shoulder to improve transit operations.
- Encourage the extension on the entrance ramp from westbound US 40 to Blue Ridge Cutoff to help traffic going to the Truman Sports Complex keep off the main through lanes.
- Extend the entrance ramp from Blue Ridge Cutoff eastbound extended to Sterling Avenue.
- The I-70/I-470 interchange cloverleaf should be replaced with high-speed flyover ramps.

- Support for Alternative 2 (Add General Capacity Alternative) because it will improve safety, reduce congestion, and improve freight mobility on I-70 from I-435 to I-470.
- This needs to be repaired as soon as possible. The number of ramp lanes need to be increased and signage for I-70 and I-435 is confusing.

For more information regarding public outreach activities refer to **Appendix G**.

4.2. Resource Agency Coordination

The EA included coordination with FHWA and the various state and federal resource agencies with responsibility over the different environmental resources. The Resource Agency Coordination Plan (**Appendix H**) was developed for the EA.

Several collaboration points were identified for coordinating with the various resource agencies. The collaboration points include:

- Purpose and Need
- Reasonable Alternatives
- Preferred Alternative

Other areas of coordination include:

- FHWA Coordination – FHWA was an active participant in the EA and provided critical guidance throughout.
- Section 106 Coordination – Detailed results of the cultural resources investigations, including summaries of the Section 106 Consultation, have been provided in separate cultural resource reports.
- Tribal Coordination – Eleven tribal nations were asked if they would like to participate and consult in the study process. Two tribal responses were received.

Agency communications and responses are included in **Appendix H**.

5. Commitments

The city of Kansas City, City of Independence, MARC, and MoDOT ("Project Partners"), in coordination with the FHWA, commit to adhering to all local, state, and federal laws, rules, and regulations, and will implement all regulatory commitments as listed in this section.

1. 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. **Public Transit (Section 3.4) –** MoDOT, in coordination with the relevant transit agencies, will develop a plan prior to construction to reroute transit services during construction as necessary to maintain connections to community resources and employers.
3. **Right-of-Way and Displacements (Section 3.7)** – MoDOT will follow the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 for all property acquisitions prior to construction.
4. **Surface Waters and Water Quality (Section 3.9)** – MoDOT will obtain the appropriate permits and develop the appropriate plans prior to the beginning of construction. MoDOT will follow BMPs and will also follow recommendations set forth in the TMDLs for the Missouri River.
5. **Floodplains (Section 3.10)** – MoDOT will obtain floodplain development permits from SEMA prior to construction.
6. **Floodplains (Section 3.10)** – MoDOT will ensure modifications to the functions of the natural floodplain environment are avoided or are maintained as closely as practicable in its natural state.
7. **Floodplains (Section 3.10)** – MoDOT will ensure local and regional access to existing rural and urban areas and facilities are maintained during construction.
8. **Floodplains (Section 3.10)** – MoDOT will ensure the floodplain analysis and no-rise certifications comply with floodplain regulations and demonstrate minimal impacts to the floodplains within the project area.
9. **Floodplains (Section 3.10)** – MoDOT will ensure sediment and erosion control best management practices are implemented during construction.
10. **Wildlife and Habitat (Section 3.11)** - Tree clearing will not occur prior to completion of consultation with USFWS and MDC. It is recommended that tree clearing occur in the inactive months, with is October 16 to March 31 in Missouri.
11. **Wildlife and Habitat (Section 3.11)** - MoDOT will be responsible for adhering to the MBTA. If migratory birds are found to be nesting, then a protective JSP

will be put in place to avoid conflict with the MBTA and follow up with the MDC will be initiated.

12. **Wildlife and Habitat (Section 3.11)** - If the project has not progressed to construction by the time monarch butterfly is listed as threatened, MoDOT will revisit USFWS consultation requirements when the listing becomes final.
13. **Geology and Soils (Section 3.12**) – The Contractor and Project Partners will perform geotechnical investigations in later design phases to determine precise bedrock and structural loading requirements.
14. **Hazardous Materials (Section 3.13)** – MoDOT will ensure that any unknown hazardous waste sites found during project construction will be handled according to Federal and State Laws and Regulations. If regulated solid or hazardous wastes are found during construction activities, MoDOT's construction inspector shall direct the contractor to cease work at the suspect site. The construction inspector will contact the appropriate environmental specialist to discuss options for remediation. The environmental specialist, the construction office, and the contractor will develop a plan for sampling, remediation, and continuation of project construction. Independent consulting, analytical and remediation services will be contracted, if necessary. MoDOT will contact MDNR and EPA for coordination and approval of required activities.
15. **Noise (Section 3.14)** – The MoDOT Noise Policy will be used to address noise impacts. For locations where noise walls are feasible and reasonable, MoDOT will discuss noise wall locations and provide benefited residents an opportunity to vote on whether they would like a noise wall. The noise analysis was performed following MoDOT's current, FHWA approved, noise policy. Final noise barrier decisions will be made during final design. If at that time, a new MoDOT noise policy approved by FHWA is in place, the new noise policy will be used for a new noise analysis and final noise barrier decisions.
16. MoDOT has special provisions for construction, which require that all contractors comply with all applicable local, state, and federal laws and regulations relating to noise levels permissible within and adjacent to the project construction site. Construction equipment is required to have mufflers installed in accordance with the equipment manufacturers' specifications.
17. **Cultural Resources (Section 3.16)** – MoDOT will comply with the newly executed project specific Programmatic Agreement. Should design modifications and/or construction activities result in impacts to historic properties, MoDOT will coordinate with SHPO related to the Section 106 process.
18. **Construction and Emergency Routes (Section 3.17)** – MoDOT will develop a maintenance of traffic management plan during the construction phase of the project and will comply with all applicable local, state, and federal air pollution regulations during construction.

19. **Construction and Emergency Routes (Section 3.17)** – MoDOT will ensure measures are taken to reduce fugitive dust and other emissions generated during construction. Emissions from construction equipment will be controlled in accordance with emission standards prescribed under state and federal regulations. Materials resulting from construction operations will be removed from the project and disposed of by the contractor. Additionally, burning of construction debris will be prohibited and all materials will be properly disposed of offsite.
20. **Construction and Emergency Routes (Section 3.17) –** MoDOT will ensure that emergency response vehicles have access throughout the corridor during construction. Any detours will be limited in duration to the period of time required to construct project improvements. These detours will be coordinated with emergency services prior to their implementation.
21. **Utilities (Section 3.18**) – MoDOT will coordinate with utility companies during final design and construction to minimize the impact of necessary utility relocations. The responsible party for any relocations will obtain the necessary clearances should they occur outside of the Project Area. All design work, maintenance, and relocation efforts of underground and above-ground electric lines throughout the Project Area shall be designed based on current practices of the power company, the requirements of the electrical code of the local agency having jurisdiction, and the (National Electric Safety Code) NESC.

Each commitment of the phased approach for the Preferred Alternative outlined in **Section 2.5** is detailed in **Table 14**.

Table 14: Preferred Alternative Commitment Phasing

Commitment	Programmed Projects				High Priority Unfunded Needs				
	4P3323B - Median Barrier	KU0114 - Bridge Replacements and Widening	4I3211 - Union Pacific RR Bridge	KU0284 - Resurfacing	Widen I-70 EB from Pittman/Blue Ridge-I-470	Ramps - Manchester Trafficway to I-435	I-470 Interchange	Widen I-70 WB from I-470 to Blue Ridge Cuttoff	WB C-D Road and Ramps
1. 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.	X	X	X	X	X	X	X	X	X
2. Public Transit (Section 3.4) – MoDOT, in coordination with the relevant transit agencies, will develop a plan prior to construction to reroute transit services during construction as necessary to maintain connections to community resources and employers.	N/A	X	X	N/A	X	X	X	X	X
3. Right-of-Way and Displacements (Section 3.7) – MoDOT will follow the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 for all property acquisitions prior to construction.	N/A	X	N/A	N/A	X	X	X	X	N/A
4. Surface Waters and Water Quality (Section 3.9) – MoDOT will obtain the appropriate permits and develop the appropriate plans prior to the beginning of construction. MoDOT will follow BMPs and will also follow recommendations set forth in the TMDLs for the Missouri River.	N/A	N/A	N/A	N/A	X	X	X	X	X
5. Floodplains (Section 3.10) – MoDOT will obtain floodplain development permits from SEMA prior to construction.	X	X	N/A	X	X	X	X	X	N/A
6. Floodplains (Section 3.10) – MoDOT will ensure modifications to the functions of the natural floodplain environment are avoided or are maintained as closely as practicable in its natural state.	X	N/A	N/A	X	X	X	X	X	N/A
7. Floodplains (Section 3.10) – MoDOT will ensure local and regional access to existing rural and urban areas and facilities are maintained during construction.	X	N/A	N/A	X	X	X	X	X	N/A
8. Floodplains (Section 3.10) – MoDOT will ensure the floodplain analysis and no-rise certifications comply with floodplain regulations and demonstrate minimal impacts to the floodplains within the project area.	X	N/A	N/A	X	X	X	X	X	N/A
9. Floodplains (Section 3.10) – MoDOT will ensure sediment and erosion control best management practices are implemented during construction.	X	N/A	N/A	X	X	X	X	X	N/A
10. Wildlife and Habitat (Section 3.11) - Tree clearing will not occur prior to completion of consultation with USFWS and MDC. It is recommended that tree clearing occur in the inactive months, with is October 16 to March 31 in Missouri.	N/A	X	X	N/A	X	X	X	X	X

Commitment	Programmed Projects				High Priority Unfunded Needs				
	4P3323B - Median Barrier	KU0114 - Bridge Replacements and Widening	4I3211 - Union Pacific RR Bridge	KU0284 - Resurfacing	Widen I-70 EB from Pittman/Blue Ridge-I-470	Ramps - Manchester Trafficway to I-435	I-470 Interchange	Widen I-70 WB from I-470 to Blue Ridge Cuttoff	WB C-D Road and Ramps
11. Wildlife and Habitat (Section 3.11) - MoDOT will be responsible for adhering to the MBTA. If migratory birds are found to be nesting, then a protective JSP will be put in place to avoid conflict with the MBTA and follow up with the MDC will be initiated.	X	X	X	X	X	X	X	X	X
12. Geology and Soils (Section 3.12) – The Contractor and Project Partners will perform geotechnical investigations in later design phases to determine precise bedrock and structural loading requirements.	N/A	X	X	X	X	X	X	X	X
13. Hazardous Materials (Section 3.13) – The Contractor will monitor the construction site for hazardous materials during construction. If hazardous materials are encountered during construction, the contractor will cease work at the suspect site immediately. The contractor will contact the appropriate environmental agency, in this case MoDNR, to discuss options for remediation. The MoDNR, EPA, MoDOT, and the contractor will develop a plan for sampling, remediation, and continuation of project construction. Hazardous materials consulting, analytical, and remediation services will be obtained if necessary.	X	X	X	X	X	X	X	X	X
14. Noise (Section 3.14) – The MoDOT Noise Policy will be used to address noise impacts. For locations where noise walls are feasible and reasonable, MoDOT will discuss noise wall locations and provide benefited residents an opportunity to vote on whether they would like a noise wall. The noise analysis was performed following MoDOT's current, FHWA approved, noise policy. Final noise barrier decisions will be made during final design. If at that time, a new MoDOT noise policy approved by FHWA is in place, the new noise policy will be used for a new noise analysis and final noise barrier decisions.	N/A	X	X	N/A	X	X	X	X	X
15. MoDOT has special provisions for construction, which require that all contractors comply with all applicable local, state, and federal laws and regulations relating to noise levels permissible within and adjacent to the project construction site. Construction equipment is required to have mufflers installed in accordance with the equipment manufacturers' specifications.	X	X	X	X	X	X	X	X	X
16. Cultural Resources (Section 3.16) – MoDOT will comply with the newly executed project specific Programmatic Agreement. Should design modifications and/or construction activities result in impacts to historic properties, MoDOT will coordinate with SHPO related to the Section 106 process.	X	X	X	X	X	X	X	X	X
17. Construction and Emergency Routes (Section 3.17) – MoDOT will develop a maintenance of traffic management plan during the construction phase of the project and will comply with all applicable local, state, and federal air pollution regulations during construction.	X	X	X	X	X	X	X	X	X

Commitment	Programmed Projects				High Priority Unfunded Needs				
	4P3323B - Median Barrier	KU0114 - Bridge Replacements and Widening	4I3211 - Union Pacific RR Bridge	KU0284 - Resurfacing	Widen I-70 EB from Pittman/Blue Ridge-I-470	Ramps - Manchester Trafficway to I-435	I-470 Interchange	Widen I-70 WB from I-470 to Blue Ridge Cuttoff	WB C-D Road and Ramps
18. Construction and Emergency Routes (Section 3.17) – MoDOT will ensure measures are taken to reduce fugitive dust and other emissions generated during construction. Emissions from construction equipment will be controlled in accordance with emission standards prescribed under state and federal regulations. Materials resulting from construction operations will be removed from the project and disposed of by the contractor. Additionally, burning of construction debris will be prohibited and all materials will be properly disposed of offsite.	X	X	X	X	X	X	X	X	X
19. Construction and Emergency Routes (Section 3.17) – MoDOT will ensure that emergency response vehicles have access throughout the corridor during construction. Any detours will be limited in duration to the period of time required to construct project improvements. These detours will be coordinated with emergency services prior to their implementation.	X	X	X	X	X	X	X	X	X
20. Utilities (Section 3.18) – MoDOT will coordinate with utility companies during final design and construction to minimize the impact of necessary utility relocations. The responsible party for any relocations will obtain the necessary clearances should they occur outside of the Project Area. All design work, maintenance, and relocation efforts of underground and above-ground electric lines throughout the Project Area shall be designed based on current practices of the power company, the requirements of the electrical code of the local agency having jurisdiction, and the (National Electric Safety Code) NESC.	X	X	X	N/A	X	X	X	X	X

I-70 Environmental Assessment: I-435 to I-470

Environmental Assessment

February 2026

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PROGRAMMATIC AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION, THE MISSOURI STATE HISTORIC PRESERVATION OFFICER, AND THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REGARDING MODOT JOB J4I3195 INTERSTATE 70 BETWEEN I-435 AND I-470 JACKSON COUNTY, MISSOURI

UNDERTAKING: Improvements to Interstate 70 (I-70) between Interstates 435 (I-435) and 470 (I-470) to address existing and future capacity, safety, and mobility needs. Proposed improvements include replacing all pavement and providing larger shoulders, increasing general capacity by adding an additional traffic lane in each direction and improvement of bridges. These improvements will meet project goals to improve safety, reduce congestion, improve accessibility and goods movement, and restore and maintain existing infrastructure. Missouri Department of Transportation Job Number J4I3195. The maps in Attachment A provides the APE limits of this study.

STATE: Missouri
AGENCY: Federal Highway Administration

WHEREAS, the Federal Highway Administration (FHWA) Missouri Division is the federal agency responsible for ensuring the undertaking complies with Section 106 of the National Historic Preservation Act (NHPA) (54 USC § 306108) codified in its implementing regulations 36 CFR Part 800, *Protection of Historic Properties*; and

WHEREAS, the duties of the Missouri State Historic Preservation Officer (SHPO) pursuant to Section 106 of the NHPA (54 USC 306108) and 36 CFR Part 800 include responsibilities to advise, assist, review, and consult with Federal agencies as they carry out their historic preservation responsibilities and to respond to Federal agencies' requests within a specified period of time; and

WHEREAS, the Missouri Highways and Transportation Commission (MHTC) is the board that governs the Missouri Department of Transportation (MoDOT), appoints the Director and authorizes the Statewide Transportation Improvement Program, and acting by and through MoDOT, has participated in the consultation and has been invited to be a signatory to this Programmatic Agreement (PA); and

WHEREAS, MoDOT is acting on behalf of the FHWA, as stipulated under the Missouri Statewide Section 106 Programmatic Agreement executed in 2025; and

WHEREAS, the FHWA and MoDOT are conducting an environmental study under the National Environmental Policy Act (NEPA) for Improvements to I-70 between I-435 and I-470, and anticipate a Finding of No Significant Impact will be issued, and anticipate funding from National Highway Performance Program to fund improvements pursuant to the Infrastructure Investment and Jobs Act (IIJA) (PL 117-58); and

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WHEREAS, the MoDOT, acting on behalf of the FHWA, has determined that the undertaking's area of potential effects (APE), as defined at 36 CFR Part 800.16(d), has been identified as the project footprint, including existing right of way (ROW) and new ROW, including permanent and temporary easements, for the consideration of direct effects per 36 CFR Part 800.16(d), and considered the dimensional aspects of the APE including height and depth as well as length and width. The APE is further described and mapped in Attachment B to this PA; and

WHEREAS, the FHWA has notified the Advisory Council on Historic Preservation (Council) of the development of this PA on November 5, 2025 and the Council has chosen not to participate on November 18, 2025; and

WHEREAS, the FHWA recognizes that the Iowa Tribe of Kansas and Nebraska, Iowa Tribe of Oklahoma, Kaw Nation of Oklahoma, Miami Tribe of Oklahoma, The Osage Nation, Ponca Tribe of Nebraska, Ponca Tribe of Indians of Oklahoma, Sac and Fox Nation of the Missouri in Kansas and Nebraska, Meskwaki Nation (Sac and Fox Tribe of the Mississippi in Iowa), Sac and Fox Nation, Oklahoma, Shawnee Tribe, and Wyandotte Nation, have an interest in the undertaking area, and has consulted with them on a government-to-government basis on September 12, 2024, providing a notification letter and project location map September 12, 2024; and

WHEREAS, the Iowa Tribe of Kansas and Nebraska responded on September 14, 2024, with no comments or objections to the proposed project at this time, and request a copy of the Archaeological Report, when completed; and

WHEREAS, the Shawnee Tribe responded on October 31, 2024, with no comments or objections to the proposed project at this time, and

WHEREAS, the FHWA has consulted with the recognized Tribes on a government-to-government basis, providing a notification letter and copy of the draft Environmental Assessment on November 19, 2025; and

WHEREAS, to date, no additional tribal nations have responded to the invitation to participate in consultation; and

WHEREAS, the City of Independence, Jackson County, Jackson County Historical Society, Kansas City, and the Mid-America Regional Council have been notified of undertaking and have been invited to participate in consultation by a Section 106 undertaking notification letter dated August 5, 2024; and

WHEREAS, to date, no parties have responded to the invitation to participate in consultation; and

WHEREAS, public involvement for this undertaking will be handled in accordance with the MoDOT *Engineering Policy Guide*, Chapter 129: Public Involvement; and

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WHEREAS, a public meeting was held at the Kansas City Carpenters Regional Council Hall on October 8, 2024, from 4:00 to 6:00 p.m., with a virtual presentation and an online survey posted online that closed for comment on Monday, November 4, 2024. The virtual presentation is available on the project website[1]; and

WHEREAS, no public comments have been received regarding historic properties, project effects on historic properties, or proposed mitigation measures; and

WHEREAS, 36 CFR Part 800.11(c) provides for the confidentiality of archaeologically sensitive information where appropriate, and FHWA has accordingly modified the role of public involvement required by 36 CFR Part 800.2(d); and

WHEREAS, this PA is necessary because MoDOT has been denied access to certain parcels within this project area by current landowners and has not been able to assess the entire area of potential effects to determine the presence or absence of historic properties; and

WHEREAS, MoDOT acknowledges that the results of the cultural resource work conducted after MoDOT purchases the property that it has been denied access to may have the potential to adversely affect historic properties; and

NOW, THEREFORE, the FHWA, SHPO, and the MHTC agree that the undertaking will be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

FHWA, with the assistance of MoDOT, shall ensure that the following stipulations are carried out:

I. CONSULTATION AND PUBLIC INVOLVEMENT

A. The FHWA, assisted by MoDOT, shall consult with federally recognized Tribal Nations with ancestral, historic, and ceded land connections to Missouri and that may attach religious and/or cultural significance to historic properties in the county with the proposed project and invite them to participate in Section 106 consultation per 36 CFR Part 800.2(c)(2).

B. The FHWA and MoDOT, in consultation with the SHPO, shall work to identify other consulting parties to notify of the proposed project and invite to participate in consultation per 36 CFR Parts 800.2(c)(3) and 800.2(c)(5).

[1] Missouri Department of Transportation, *Interstate 70 Environmental Assessment—Jackson*, accessed May 14, 2025, https://www.modot.org/projects/interstate-70-environmental-assessment-jackson.

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C. Consultation shall occur at major milestones in the Section 106 process and shall also be timed to allow the consulting parties the opportunity to have input into the proposed project.

D. The public shall be kept informed of the status of the Section 106 process and informed of how to request consulting party status through the project website (if one is developed for the proposed project), project publications, and through public meetings held for the proposed project, which will include displays on the Section 106 process and handouts explaining the Section 106 process and how to request consulting party status for the proposed project.

1. Any substantive comments about historic properties or Section 106 concerns received from the public will be shared with the consulting parties and will be addressed in the Section 106 consultation process and the resolution discussed in the project documentation for NEPA.
2. Consulting parties will be informed of substantive comments received from the public concerning Section 106 and historic properties and how they will be addressed.

E. Any requests for consulting party status that are received shall be considered by FHWA, MoDOT, and the SHPO.

II. QUALIFICATION STANDARDS

A. MoDOT shall ensure that actions prescribed by this Agreement that involve the identification, evaluation, recording, treatment, monitoring, or disposition of historic properties, or that involve the reporting or documentation of such actions in the form of reports, forms, or other records, shall be carried out by or under the direct supervision of a person or persons who meets the Secretary of the Interior's Professional Qualifications Standards (SOI) (published in 48 FR 44716-44740) for the resource being considered.

III. AREA OF POTENTIAL EFFECTS

A. FHWA and MoDOT shall consult with SHPO, Tribal Nations and consulting parties to determine the APE for the proposed project, with the understanding that the APE will be three dimensions (i.e., having height and depth as well as length and width), encompass the full range of alternatives and will be refined as alternatives are added and eliminated throughout the study (see Attachment B). The APE shall consider:

1. Direct effects from construction-related activities including ground disturbance, demolition of resources, visual, auditory, vibration and atmospheric effects;

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2. Proposed construction impacts, ground-disturbing and non–ground-disturbing, to justify the types and level of investigative effort to identify historic properties.

3. The APE may contract over time as alternatives are eliminated. Tribal Nations and other consulting parties will be consulted as this occurs.

B. The APE may be supplemented if the Design-Build Process is utilized. If the Design-Build consultant proposes an alternative(s) that meets Purpose & Need that falls outside the original APE, FHWA and MoDOT shall consult per Stipulation III.A.

IV. IDENTIFICATION OF RESOURCES

A. MoDOT shall ensure that the Built Environment investigations are conducted in a manner consistent with MoDOT's Built Environment Resource Methods 2017, found in MoDOT *Engineering Policy Guide*, Chapter 127.2.6: How does the District Initiate Section 106 Compliance..

B. MoDOT shall ensure that the archaeological investigations are conducted in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and SHPO's Guidelines for Phase I Archaeological Surveys and Reports.

C. Reporting

1. The results of the Built Environment and Archaeological surveys shall be reported in a single, comprehensive report. The report shall include:

a. Background Research Results including previous surveys, National Register of Historic Places (NRHP) listed and determined eligible properties, previously reported sites, appropriate historic context, and historic mapping to understand the APE

b. Field Survey Results will be reported on the MoDOT Section 106 Survey Memo, which meets the standards set by the Missouri SHPO for surveys done in Missouri. Any properties where access was denied or where survey was not possible for any reason shall be clearly identified on mapping and in the report text; and

c. Determinations made through consultation between MoDOT, FHWA, SHPO, the Tribal Nations and other consulting and interested parties shall be included in the Report.

d. The report shall be shared with FHWA, SHPO and consulting parties. SHPO and the consulting parties shall have thirty (30) days

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to comment on the results and findings of the report. The results and findings shall be the topics of meetings between MoDOT, FHWA, SHPO and the consulting parties as needed.

D. Properties that could not be accessed for survey during the Phase I investigations shall be surveyed, in accordance with Stipulations IV.4-A-C, as design proceeds and property is acquired.

V. NATIONAL REGISTER OF HISTORIC PLACES ELIGIBILITY EVALUATION

A. MoDOT, in consultation with FHWA, SHPO, Tribal Nations, and other consulting and interested parties, shall apply the NRHP criteria (36 CFR Part 63), and applicable guidance issued by the Keeper of the National Register, to each property identified in the field survey or through consultation to determine if the property is eligible for listing in the NRHP (a historic property).

B. MoDOT will in consultation with FHWA and SHPO determine the eligibility for each resource identified as eligible for listing in the NRHP.

C. MoDOT will seek the concurrence of Tribal Nations and other consulting parties on eligibility for each resource identified as eligible for listing in the NRHP.

D. Properties that are eligible for listing in the NRHP shall have the following addressed in the report: the NRHP criteria the property is eligible for listing under; area(s) of significance, characteristics that qualify the property for inclusion in the NRHP, contributing and non-contributing elements, period(s) of significance and boundary of the historic property.

VI. ASSESSMENT OF EFFECTS

A. MoDOT, on behalf of FHWA, shall apply the criteria of adverse effects (36 CFR Part 800.5) to each property listed in or eligible for listing in the NRHP, for each alternative under consideration. FHWA and MoDOT shall consult with the SHPO, Tribal Nations and other consulting parties about the effects of the various alternatives on historic properties.

B. If FHWA and MoDOT find that project activities have adverse effects on properties eligible for the NRHP, they shall consult with SHPO, Tribal Nations and other consulting parties to resolve the adverse effects, consistent with guidance provided in 36 CFR Part 800.6. This consultation shall include efforts to develop and evaluate alternatives or modifications to the undertaking that could avoid or minimize the adverse effects on said historic properties.

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VII. RESOLUTION OF ADVERSE EFFECTS

A. If FHWA and MoDOT find project activities have adverse effects on historic properties, they will consult with SHPO, Tribal Nations and other interested parties to resolve the adverse effects, consistent with guidance provided in 36 CFR Part 800.6, through the implementation of a Mitigation Plan for Built Environment Resources or an Archaeological Data Recovery Plan(s) developed in accordance with the Council's *Recommended Approach for Consultation on the Recovery of Significant Information from Archaeological Sites* and the Secretary of the Interior's *Standards for Archaeological Documentation*.

B. Mitigation measures that benefit and engage the public shall be developed to the extent practical. Public benefit mitigation measures may be used as a substitute for traditional mitigation measures in some cases.

C. All mitigation measures shall be memorialized in a Mitigation Plan, which shall be developed and will contain all agreed upon mitigation measures.

D. The Mitigation Plan or Archaeological Data Recovery Plan will be negotiated among the signatories and consulting parties and will become effective only upon written concurrence by representatives for all signatories and invited signatories.

VIII. TREATMENT OF HUMAN REMAINS

A. The FHWA recognizes that any human remains (other than from a crime scene or covered under Missouri's Cemeteries Law, §§ 214. RSMo) that may be discovered during project activities and are located on non-federal land are subject to the immediate jurisdiction of the SHPO, albeit FHWA or its delegate is responsible to have a professional archaeologist analyze the remains and advise SHPO of the physical location and cultural and biological characteristics, and if SHPO determines, as per the consultation conducted under Section 106, excavation is warranted, such remains will be handled pursuant to the Missouri Unmarked Human Burial Sites Act, §§ 194.400 – 194.410, RSMo. All discoveries of human remains shall be treated as sensitive information and shall not be made available to the public.

B. The USDOT is a signatory to the Memorandum of Understanding Regarding Interagency Coordination and Collaboration for the Protection of Indigenous Sacred Sites to affirm their commitment to improve the protection of, and access to, Indigenous sacred sites through enhanced and improved interdepartmental coordination, collaboration, and action and to demonstrate their commitment through the early consideration of the protection and access to Indigenous sacred sites in agency decision-making and regulatory processes.

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C. If human remains are encountered during archaeological investigations or during construction:

1. The archaeologists shall immediately stop all work within a one hundred (100) meter (approximately 330-foot) radius of the remains and shall not resume without specific authorization from the SOI Qualified MoDOT Historic Preservation Manager and either the SHPO or the local law enforcement officer, or if on federal land the land management agency, whichever party has jurisdiction over and responsibility for such remains.

2. MoDOT HP staff will notify the local law enforcement (to ensure that it is not a crime scene) and the SHPO as per the Missouri Unmarked Human Burial Sites Act and contact FHWA and Tribes that have expressed interest in Section 106 undertakings in the County the remains were found in, within twenty-four (24) hours of the discovery.

3. FHWA shall seek consensus and incorporate identifications, recommendations, and Native American traditional knowledge to the maximum extent possible regarding treatment of the remains and proposed actions and then direct MoDOT HP to carry out the appropriate actions on consultation with the SHPO and Tribes within forty eight (48) hours of the determination.

4. If after consultation with Tribes excavation is determined to be necessary, MoDOT shall monitor the archaeological data recovery and handling of any such human remains and associated or unassociated funerary objects, sacred objects or objects of cultural patrimony, to assure itself that these are handled, excavated or processed in accordance with the Missouri Unmarked Human Burials Sites Act.

5. Should, through consultation with Tribes, excavation be determined necessary, MoDOT will provide notification within twenty-four (24) hours to affiliated Tribes when physically transferring possession of ancestors or cultural items to SHPO for continued consultation on reinternment.

IX. POST-REVIEW DISCOVERIES

A. Planning for Subsequent Discoveries

MoDOT shall include in any environmental document, contract, and specifications a plan for post-review discovery of historic properties. Implementation of the plan as originally proposed or modified as necessary owing to the nature and extent of the properties discovered, will be in accordance with 36 CFR Parts 800.4-6.

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B. If cultural resources are encountered during construction:

1. The contractor shall immediately stop all work within a one hundred (100)-meter (approximately 330 foot) radius around the limits of the resource and shall not resume work without specific authorization from the SOI Qualified MoDOT Historic Preservation Manager.

2. The contractor shall notify the MoDOT Resident Engineer or Construction Inspector, who shall contact the MoDOT Historic Preservation (HP) section within twenty-four (24) hours of the discovery.

3. MoDOT HP shall contact FHWA, Tribes and SHPO within forty-eight (48) hours of learning of the discovery to report the discovery after a preliminary evaluation of the resource and reasonable efforts to see if it can be avoided.

4. FHWA shall make an eligibility and effects determination based upon the preliminary evaluation and consult with MoDOT, Tribes and SHPO to minimize or mitigate any adverse effect.

5. FHWA shall take into account Tribal recommendations regarding the eligibility of the property and proposed actions, and direct MoDOT to carry out the appropriate actions. The Council does not need to be notified if the SHPO, Tribes, and other parties agree to the treatment plan.

6. MoDOT shall provide FHWA and SHPO with a report of the actions when they are completed.

7. Upon receipt, FHWA shall provide this report to the Tribes.

8. MoDOT, in coordination with FHWA, will make this report available to the public and other consulting parties, if it is not limited by the requirements for confidentiality, as identified in Stipulation X.

C. If the discovery is not limited by the confidentiality requirements of Section 304 of the NHPA and Stipulation X of this Agreement, the public shall be notified of the late discovery, in the following manner:

1. Information on the discovery shall be posted to the MoDOT website associated with the project, if one exists. This information will include the nature of the discovery, how it is being treated, and the evaluation of it. The website will include information on how to contact the project manager or the MoDOT HP Section with comments or concerns about the discovery.

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2. MoDOT will issue a press release about the discovery. The press release will include the nature of the discovery, how it is being treated and the evaluation. The press release will include a way for the public to contact the project manager or the MoDOT HP Section if they have comments or concerns about the discovery.

X. CONFIDENTIALITY

All parties to this Agreement acknowledge that information about historic properties or potential historic properties are or may be subject to the provisions of Section 304 of NHPA. Section 304 allows FHWA to withhold from disclosure to the public, information about the location, character, or ownership of a historic resource if the signatories and invited signatories determine that disclosure may: 1) cause a significant invasion of privacy; 2) risk harm to the historic resource; or 3) impede the use of a traditional religious site by practitioners. Having so acknowledged, all parties to this Agreement will ensure that all actions and documentation prescribed by this Agreement are, where necessary, consistent with the requirements of Section 304 of the NHPA.

XI. DURATION

This Agreement shall remain in effect for a period of ten (10) years after the date it takes effect, unless it is terminated prior to that time. No later than six (6) months prior to the conclusion of the ten (10)-year period, MoDOT will notify all parties in writing if an extension is needed. The Agreement may be extended for an additional term, the length of which will be agreed to by the signatories and invited signatories. The extension will be codified through an amendment of the Agreement in accordance with Stipulation XIV. If any party objects to extending the Agreement, or proposes amendments, MoDOT will consult with the parties to consider amendments or other actions to avoid termination.

XII. REPORTING

MoDOT, acting on behalf of FHWA, shall, at the end of each calendar year following the execution of this PA, provide to all signatories a written report regarding the actions taken to fulfill the terms of the agreement, and shall file a copy with the Council per 36 CFR Part 800.6(b)(iv). The report shall include the following information:

A. Any stipulations completed during the calendar year;

B. Work done toward completion of any stipulations during the calendar year;

C. Any consultation done regarding any of the stipulations during the calendar year, the subject of the consultation and parties consulted with; and

D. The status of the project, including tasks that remain outstanding.

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XIII. RESOLVING OBJECTIONS TO IMPLEMENTATION OF THIS AGREEMENT

A. Should any signatory object in writing to FHWA regarding the manner in which the terms of this Agreement are carried out, FHWA will immediately notify the other signatory parties of the objection and proceed to consult with the objecting party to resolve the objection. FHWA will honor the request of any signatory party to participate in the consultation and will take any comments provided by such parties into account. The FHWA shall establish a reasonable time frame for such consultations.

B. Should any signatory party object to a MoDOT or FHWA determination of eligibility, FHWA will submit the determination to the Keeper of the NRHP for resolution.

C. If the objection is resolved through consultation, FHWA may authorize the disputed action to proceed in accordance with the terms of such resolution.

D. If after initiating such consultation, FHWA determines that the objection cannot be resolved through consultation, FHWA shall forward all documentation relevant to the objection to the Council and other signatories and invited signatories, including FHWA's proposed response to the objection. Within thirty (30) days after receipt of all pertinent documentation, Council shall exercise one of the following options:
    1. Advise FHWA that Council concurs in FHWA's proposed response to the objection, whereupon FHWA will respond to the objection accordingly; or
    2. Provide FHWA with recommendations, which FHWA shall take into account in reaching a final decision regarding its response to the objection; or
    3. Notify FHWA that the objection will be referred for comment pursuant to 36 CFR Part 800.7(a)(4) and proceed to refer the objection and comment. In this event, FHWA shall ensure that the Agency Official is prepared to take the resulting comments into account in accordance with 36 CFR Part 800.7(a)(4).

E. If the Council does not provide its advice regarding the dispute within the thirty (30) day time period, FHWA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, FHWA shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the PA and provide them and the Council with a copy of such written response.

F. FHWA shall consider any Council recommendation or comment and any comments from the other signatories and invited signatories to this Agreement in

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reaching a final decision regarding the objection. FHWA's responsibility to carry out all actions under this Agreement that are not the subjects of the objection shall remain unchanged.

G. FHWA shall provide all other signatories and invited signatories to this Agreement with a written copy of its final decision regarding any objection addressed pursuant to this Stipulation.

H. FHWA may authorize any action subject to objection under this Stipulation to proceed, provided the objection has been resolved in accordance with the terms of this Stipulation.

I. At any time during implementation of the terms of this Agreement, should any member of the public, consulting party, or Tribe raise an objection in writing pertaining to such implementation to any signatory or invited signatory to this Agreement, that signatory or invited signatory shall immediately notify FHWA. FHWA shall immediately notify the other signatories and invited signatories in writing of the objection. Any signatory or invited signatory may choose to comment on the objection to FHWA. FHWA shall establish a reasonable time frame for this comment period. FHWA shall consider the objection, and in reaching its decision, FHWA will take all comments from the other parties into account. Within fifteen (15) days following closure of the comment period, FHWA will render a decision regarding the objection and respond to the objecting party. FHWA will promptly notify the other parties of its decision in writing, including a copy of the response to the objecting party. FHWA's decision regarding resolution of the objection will be final. Following the issuance of its final decision, FHWA may authorize the action subject to dispute hereunder to proceed in accordance with the terms of that decision.

XIV. AMENDMENTS

Any signatory or invited signatory to this Agreement may at any time propose amendments, whereupon all signatories and invited signatories shall consult to consider such amendment. This Agreement may be amended only upon written concurrence of all signatories and invited signatories. The amendment will be effective on the date a copy signed by all of the signatories is filed with the Council.

XV. TERMINATION

A. Any signatory party may terminate this agreement. If this Agreement is not amended as provided for in Stipulation XIV, or if any signatory party proposes termination of this Agreement for other reasons, the party proposing termination shall notify the other signatory parties in writing, explain the reasons for proposing termination, and consult with the other parties for no more than 30 days to seek alternatives to termination.

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B. Should such consultation result in an agreement on an alternative to termination, the signatory parties shall proceed in accordance with that agreement.

C. Should such consultation fail, the signatory party proposing termination may terminate this Agreement by promptly notifying the other signatories in writing.

D. Should this Agreement be terminated, FHWA would carry out the requirements of 36 CFR Part 800 for individual undertakings. Beginning with the date of termination, FHWA shall ensure that until and unless a new Agreement is executed for the actions covered by this Agreement, such undertakings shall be reviewed individually in accordance with 36 CFR Parts 800.4-800.6

XVI. EXECUTION

Execution of this PA by the FHWA, the SHPO and the MHTC and the implementation of its terms evidence that FHWA has taken into account the effects of this undertaking on historic properties and afforded the Council an opportunity to comment. A copy of the executed PA shall be provided by FHWA to the Council for their records.
The parties agree a person may execute this document by electronic symbol or process attached to or logically associated with the document, with an intent to sign the document and by method that must include a feature to verify the identity of the signer and the authenticity of the document, commonly referred to as verified electronic signature.

This document may be signed in two or more counterparts, with a separate page for each signature, each of which shall be deemed an original for all purposes, and all of which when taken together shall be considered one and the same agreement.

A. This PA shall become effective within the applicable state on the date of signature, whichever is latest, by the FHWA, MHTC, or the SHPO.

B. The MTHC shall ensure each consulting party is provided with a complete copy of the final PA and that the final PA and any amendments are filed with the Council.

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PROGRAMMATIC AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION,
THE MISSOURI STATE HISTORIC PRESERVATION OFFICER, AND
THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
REGARDING MODOT JOB J4I3195
INTERSTATE 70 BETWEEN I-435 AND I-470
JACKSON COUNTY, MISSOURI

Signatory:

Federal Highway Administration

By: Signed by: Rebecca Rost 72E83291114141B... Date: 2026-02-20 | 8:29 AM CST

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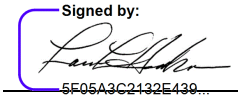
INTERSTATE 70 BETWEEN I-435 AND I-470
JACKSON COUNTY, MISSOURI

Signatory:

State Historic Preservation Officer

Signed by:
By: 
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Date: 2026-02-09 | 4:42 PM CST

Laura Hendrickson
Director of Missouri State Parks and Deputy State Historic Preservation Officer

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REGARDING MODOT JOB J4I3195
INTERSTATE 70 BETWEEN I-435 AND I-470
JACKSON COUNTY, MISSOURI

Invited Signatory:

Missouri Highways and Transportation Commission:

By: DocuSigned by: F9943CE0C28A409... Date: 2026-02-10 | 1:02 PM CST

Title: Assistant Chief Engineer

Attest: DocuSigned by: 7467BCDEFDFD4DE...
Commission Secretary

Approved as to form: DocuSigned by: 8183FA5D71B4415...
Commission Counsel

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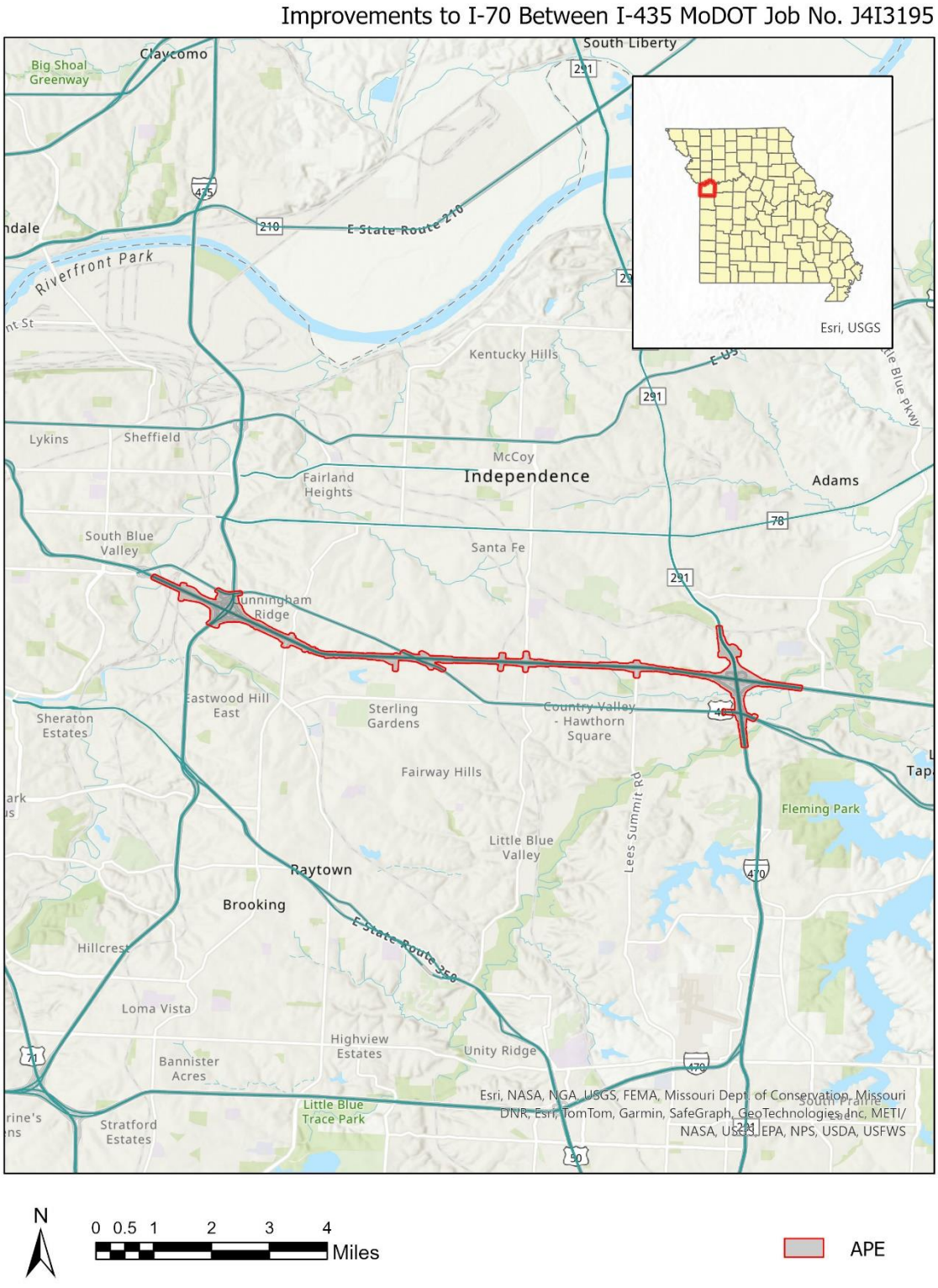
Attachment A:



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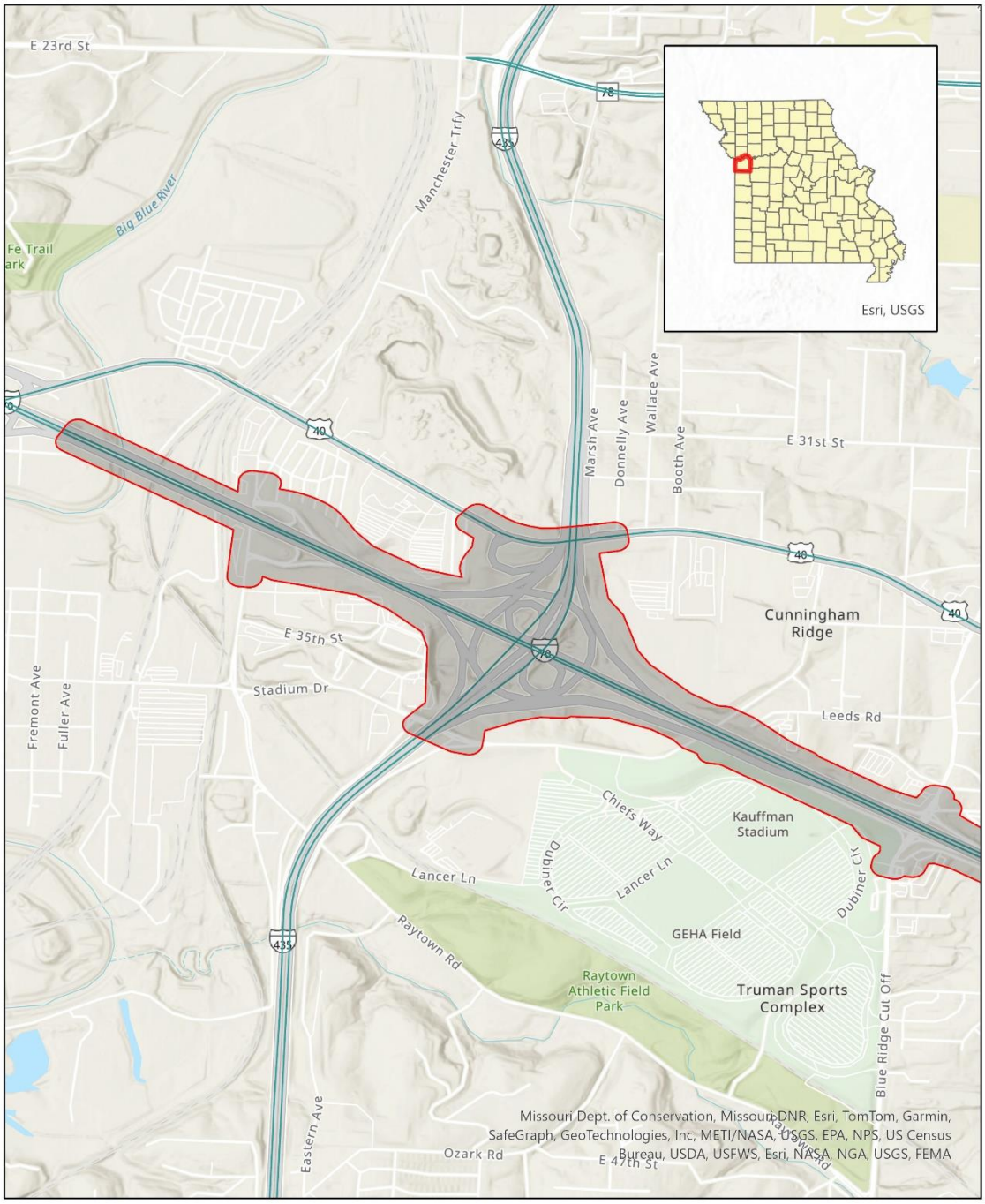
Improvements to I-70 Between I-435 MoDOT Job No. J4I3195



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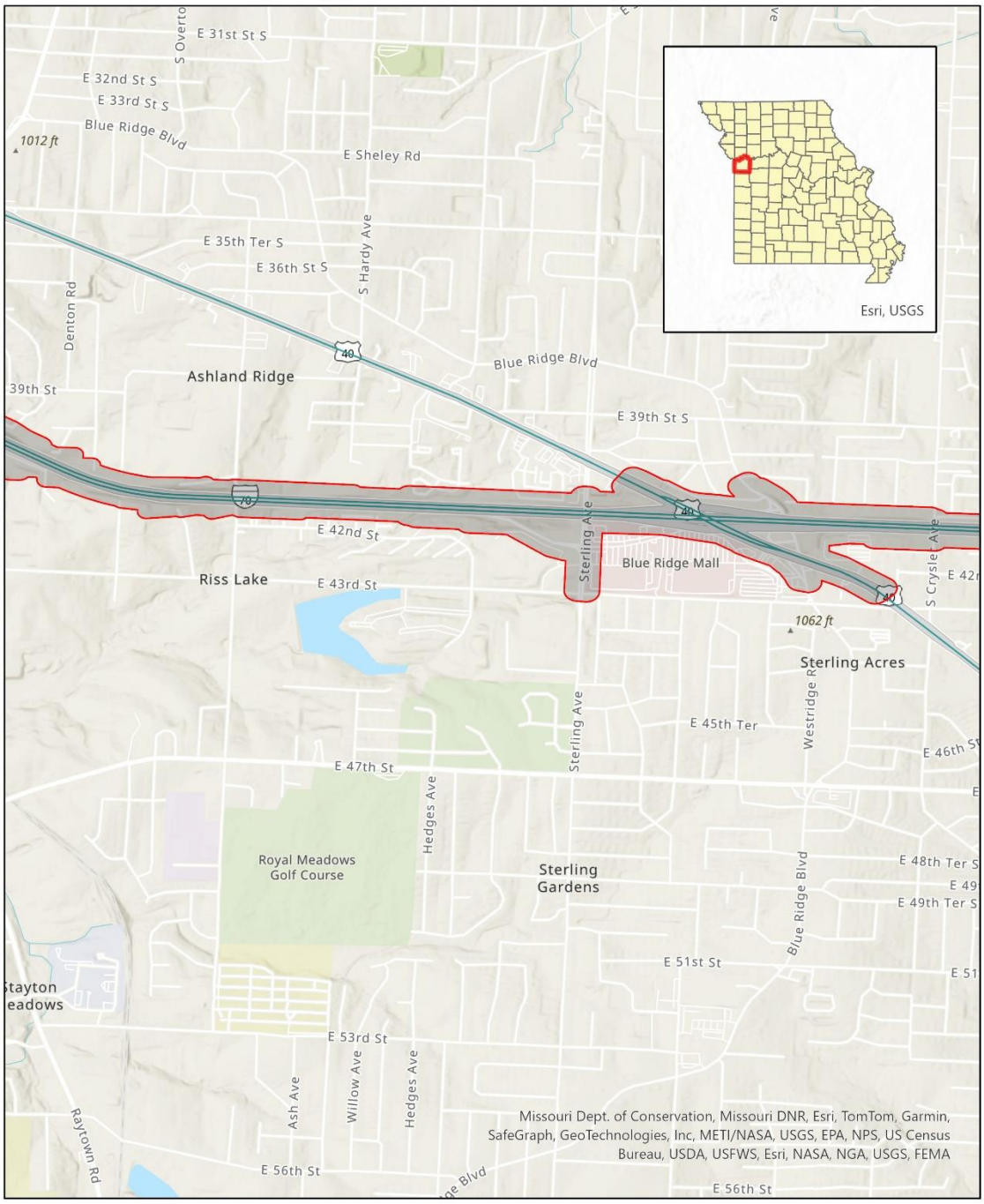
Improvements to I-70 Between I-435 MoDOT Job No. J4I3195



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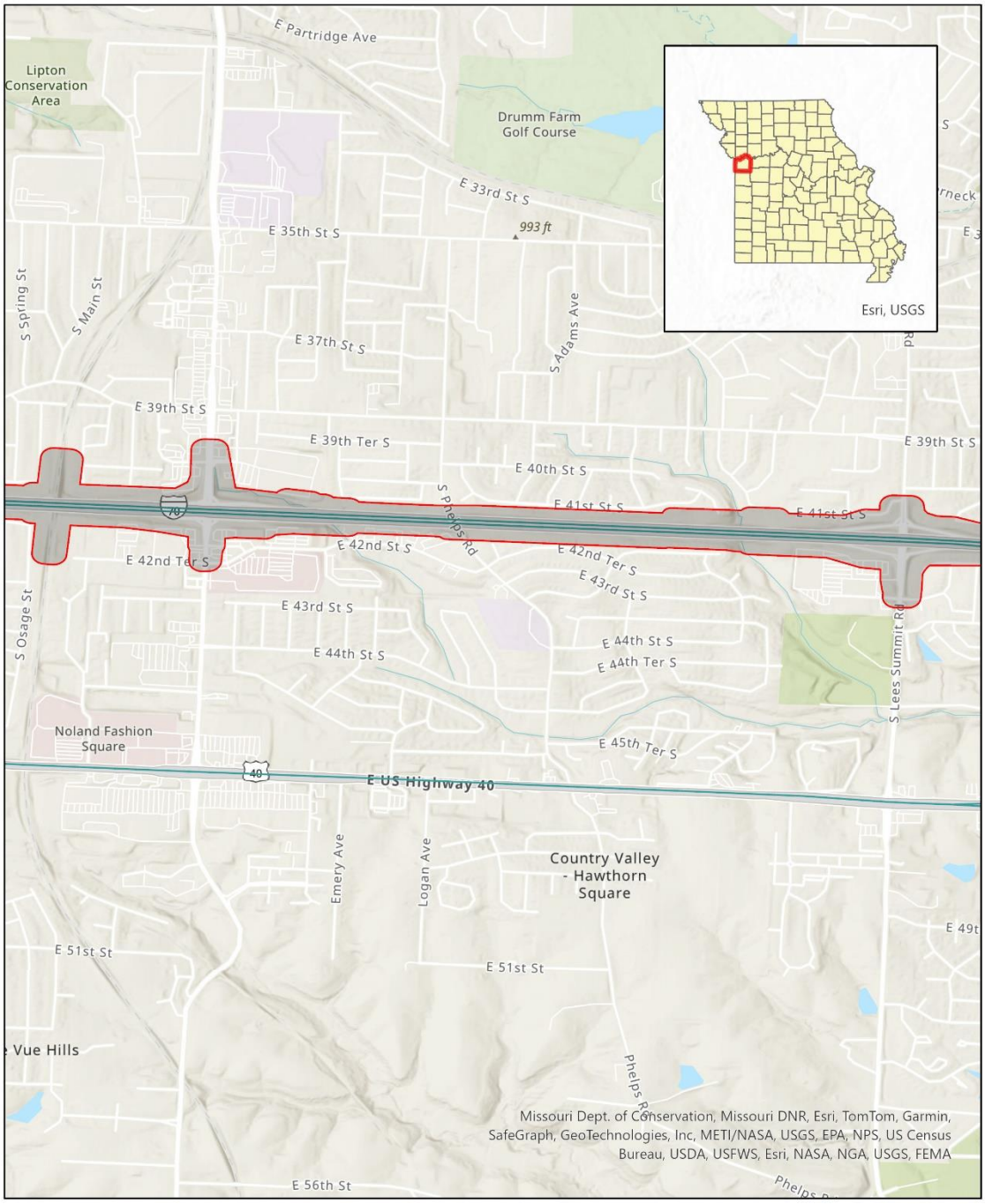

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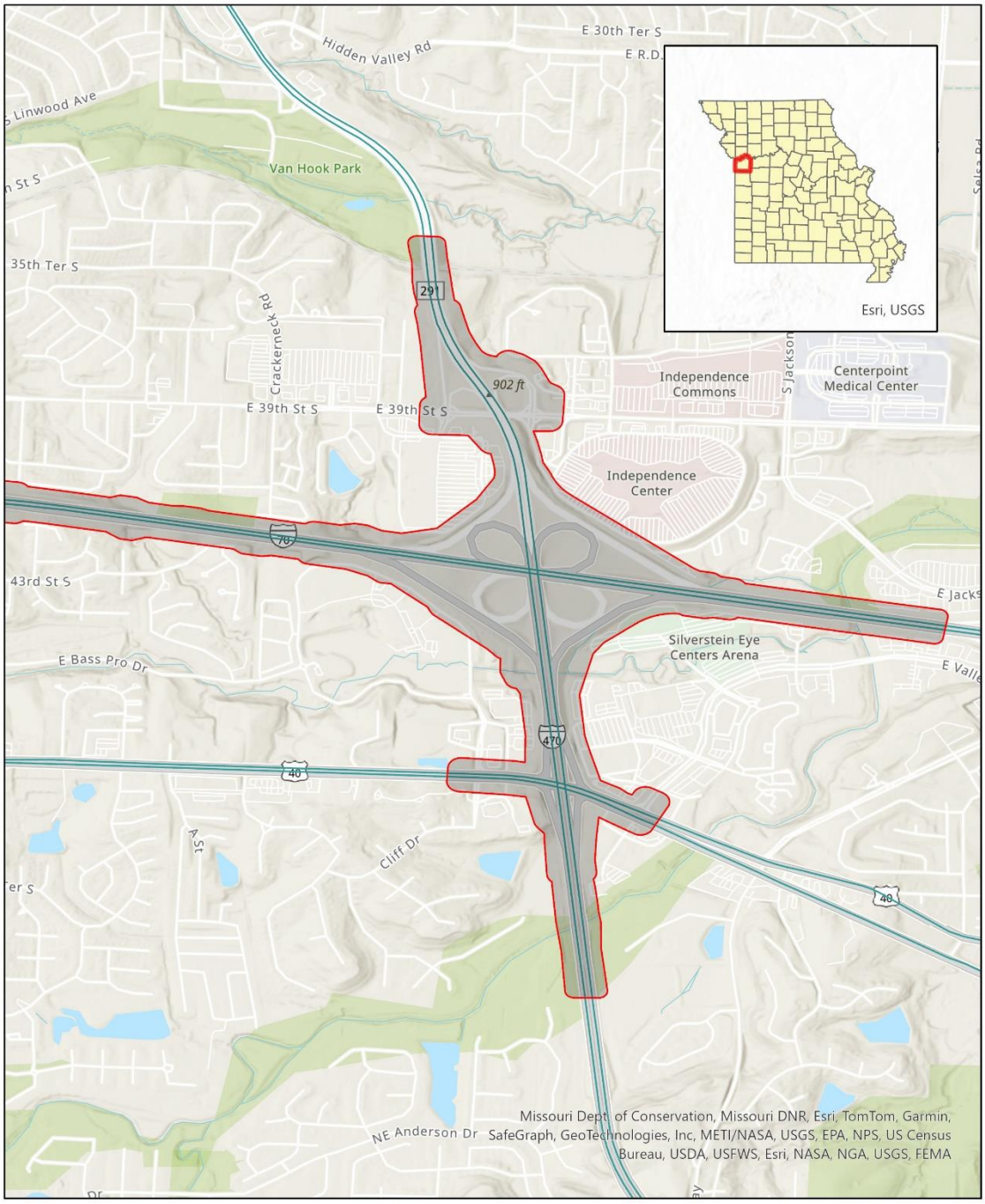
Improvements to I-70 Between I-435 MoDOT Job No. J4I3195



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Attachment B:

The area of potential effect (APE) as defined at 36 CFR Part 800.16(d), has been identified as an offset buffer of 350 feet on either side of the interstate centerline with extensions off the intersections to encompass proposed improvements and the right of way (ROW) necessary as well as visual effects of the improvements as shown on the project location map (Attachment A). At those interchanges with planned improvements the APE expands 400-800 feet along the intersecting highway and 200 feet off the centerline of the intersecting highway, including 400 feet from the outermost ramp of each interchange. The APE allows for the consideration of effects due to construction related activities such as the acquisition of new ROW acquisition, including permanent and temporary easements, demolition, new construction, and other ground disturbance. It also considers direct effects such as the demolition of historic resources, changes in setting, visual, atmospheric, vibration and auditory impacts, as well as indirect and cumulative effects.

The Archeological APE encompasses the project footprint, including existing ROW and new ROW, including permanent and temporary easements, for the consideration of ground disturbing activities and considered the dimensional aspects of the APE including height and depth as well as length and width.

The State Historic Preservation Office (SHPO) has been consulted about the adequacy of the APE and has concurred that it is appropriate for this project.