MEETING SUMMARY

Date: April 23, 2020
Time: 2-4 p.m.
Meeting: North Split Environmental Justice Working Group Meeting #4
Location: Meeting conducted online via WebEx

**Complete attendee list is provided on page 13.*

1. **Welcome and Introductions**
   Kia Gillette from HNTB welcomed Environmental Justice (EJ) Working Group members and introduced everyone on the WebEx. She reviewed the meeting agenda with attendees.

2. **Public Involvement**
   Kia reviewed the schedule for the upcoming North Split meetings:
   - Virtual Public Open House – April 28, 2-4 p.m.
   - Virtual Public Open House – April 30, 4-6 p.m.
   - National Environmental Policy Act (NEPA) Public Hearing for the North Split – Summer 2020

   Kia noted that the COVID-19 pandemic has caused a lot of changes, and the North Split Project Team would normally have had an in-person public meeting but will be conducting meetings virtually. Similarly, the North Split Environmental Assessment (EA) will be published this summer and there normally would be an in-person public hearing, but the North Split Project Team does not want to put anyone's health at risk. No decisions have been made on how the public hearing will be conducted, but the Project Team is seeking input for alternate ways.

   The NEPA Public Hearing could potentially include a virtual component. The goal of the North Split Project Team is to ensure everyone has a voice but protect public health.

   Kia said the North Split Project Team requests the input of the EJ Working Group on recommendations for supplementing the virtual public hearing while protecting public health. Some options:
   - Office hours with a limited number of people.
   - Telephone numbers for the public to call to receive answers to their questions.
   - Conducting a more traditional in-person meeting in a large room with a limited number of people.

EJ Working Group member input included:

- Bryan Luellen from IndyGo recommended working with the City of Indianapolis and its cable access channel, Channel 16, to conduct a live television broadcast with the ability for live public telephone calls into the broadcast to ask questions. The North Split Project Team will contact someone with the City of Indianapolis to determine if the presentation can be broadcast live, while having the opportunity for live call-in questions.
- Kristen LaEace from the Indiana Association of Area Agencies on Aging recommended contacting WFYI-TV, Indianapolis' Public Broadcast Station, to see if the station would partner with the North Split Project Team to broadcast the presentation live with live public call-in opportunities.
- Bryan Luellen said he knows that if you are in the City-County Building, it will make a live presentation [broadcast] on Channel 16 easier. You could take calls at a remote call center and transmit emails of questions to be read on air.
- Mandla Moyo from AARP Indiana said the webinar and postcard with a phone number would be a good idea.
- Paula Brooks from Ransom Place Neighborhood said in-person is not advisable [for the Public Hearing]. She said, "I would not want to jeopardize anyone's health. Regardless if the Governor lifts the shelter in place order, someone could be an asymptomatic carrier."
- Roland Smith from Keep Indianapolis Beautiful (KIB) agreed with Paula.

Kia asked the EJ Working Group members to email her at kgillette@hntb.com or email info@northsplit.com if they have other ideas for supplementing a possible virtual public hearing.

3. Project Background

Kia provided EJ Working Group members a brief overview of the North Split Project.

- The North Split interchange is where I-65 and I-70 meet at the northeast corner of the downtown Indianapolis inner loop.
- It is the second busiest interchange in Indiana with 214,000 vehicles traveling it every day.
- It was constructed in the 1960s and 1970s, and the pavement and bridges need to be replaced.
- The interchange has safety concerns, with over 1,600 crashes from 2012 to 2016.
- The interchange was originally designed for a fourth interstate leg to travel northeast to Fishers. That interstate will never be constructed, and the current interchange design is not an optimal design for a three-legged interchange.

The new North Split Interchange:

- Is smaller and more compact.
- Will have new pavement and bridges.
- Corrects the biggest safety problems.
- Removes the worst bottlenecks.
- Does not add through lanes, as the result of public feedback early in the project.

Kia provided an overview and timing for the North Split Environmental Assessment (EA):

- The North Split EA analyzes the impact to both the human and the natural environment.
- Key EA focus areas are highway noise impacts, Environmental Justice (EJ), Section 106 consultation for historic properties, and traffic impacts of construction.
- The North Split Project has included an extensive public involvement process, and public involvement will continue even through construction.

- The North Split Project Team is preparing the EA as part of NEPA. The EA will be published in summer 2020, and a NEPA public hearing will be scheduled sometime this summer.
- A final NEPA determination will occur in fall 2020. The finding will be either a Finding of No Significant Impact (FONSI), or a determination that an Environmental Impact Statement is needed. The determination will occur later this fall.

Kia reviewed the status of specific North Split tasks. Completed project tasks include:

- Project kick-off
- System-Level Analysis
- Alternative Screening Report, which identified the Preferred Alternative
- Alternative refinement
- Highway noise studies
- Public survey
- Aesthetic Design Guidelines

Active project tasks still in process are:

- Historic properties (Section 106 process)
- Environmental Assessment (NEPA)
- Context-Sensitive Solutions (CSS); the North Split Project Team is now coming back to the public with the Aesthetic Design Guidelines as part of the CSS Process
- Mobility Management Plan (MMP)
- Design-build procurement
- Public involvement – to continue through construction

4. Environmental Justice/Public Survey

Kia reminded EJ Working Group members that during the previous meeting, the EJ Working Group was asked for ideas for promoting the Public Survey. The North Split Project Team used that input and implemented many of the EJ Working Group member ideas.

The Public Survey was completed in 2019 to achieve a better understanding of overall project impacts and help identify whether the North Split Project had disproportionately higher impacts on minority and low-income communities.

The Public Survey was heavily promoted, and many EJ Working Group members posted the information on NextDoor and on their own social media channels.

- More than 43,000 postcards were mailed to residents.
- The survey was promoted by email, on the North Split website, and on social media.
- Fliers in both English and Spanish were sent home with Indianapolis Public Schools students and posted in local grocery stores.
- Survey hard copies were also posted in libraries and community centers, and distributed at neighborhood meetings.
- IndyGo allowed the North Split Project Team to set up a booth at the downtown IndyGo Transit Center, with iPads to assist residents in completing the survey.
- The North Split Project Team also partnered with IndyGo for advertising placed inside and outside of IndyGo buses promoting the survey. The Project Team placed about 50 ads inside IndyGo buses and five large ads on the outside of buses.

A total of 1,623 survey responses were received:

- 1,575 surveys were essentially complete, which means respondents filled out most of the survey.
- 80 percent of the respondents lived in the EJ analysis area.
- 5 percent of those respondents self-identified as a minority.
- 2 percent of those respondents identified as low-income.

The North Split Project Team compared the EJ community responses and non-EJ community responses. These responses are documented in the EJ Technical Memorandum, which is an appendix of the EA. The North Split Project Team provided the EJ Working Group a preview of what they would see in the EJ Technical Memorandum.

Kia said the North Split Project Team reviewed the Public Survey to determine how non-EJ responses to questions compared to EJ responses and whether there were significant differences. The Public Survey found that EJ community responses were similar to responses from the non-EJ community. For example, responses to the question "How do you travel in the North Split project area?" indicated 5% of the non-EJ community used public transit, compared to 9% of the EJ community. This information shows that the North Split Project Team needs to make sure it coordinates with IndyGo and other transit agencies to ensure their routes can operate throughout construction.

The survey also sought input on how many times the EJ community traveled on I-65 and I-70 compared to the non-EJ community. The number of individuals in the non-EJ community who traveled on I-65 and I-70 20 or more times per week was 6%. For EJ community members, that number is 32%.

In general, responses from the EJ community paralleled those of the non-EJ community. Notable trends in responses were:

- Clear and proactive communication is desired.
- Travel is primarily via automobiles, carpools, and ridesharing services.
- Most people travel on I-65, I-70, and local streets.
- Most support the project.
- Most agree that the project will improve vehicular and pedestrian safety.

Kia encouraged the EJ Working Group to review the EJ Technical Memorandum when it is published. The Project Team reviewed factors and concluded the North Split Project would not have a disproportionate impact to minority and low-income communities. While some impacts may occur during construction, these construction impacts will occur for both EJ and non-EJ communities.

<u>Pause for Questions</u>
Kia paused the presentation for questions. *(See Discussion and Questions at the end of these minutes.)*

5. Project Update

a. Noise Barrier Recommendations

Kia reminded the EJ Working Group of the neighborhood meetings to discuss noise barriers that were conducted by the North Split Project Team in 2019. Kia walked EJ Working Group members through an overview of North Split noise barrier recommendations.

- Per the INDOT noise policy, noise barriers are considered where noise impacts are predicted to reach a level of 66 decibels for residences.
- Noise barriers can reduce noise levels by 5 to 10 decibels.
- The location and height of noise barriers are determined by the Traffic Noise Model.

The North Split noise analysis identified five possible noise barriers. Two barriers, 3E and 3W, were east of the North Split interchange and north of I-70. One barrier, Barrier 4, was on the north side of I-65, and Barrier 5 was south of I-65. Barrier 7 was west of I-65 and I-70, south of the interchange. Each of the locations was feasible and possibly reasonable, but input from benefited receptors was required.

INDOT is recommending construction of noise barriers 3E and 3W. This is largely due to the noise surveys sent to the adjacent communities that showed individuals in those area were supportive of the noise barriers. Noise barriers 4, 5, and 7 are not recommended for construction because the noise surveys of benefited receptors had mixed results. In addition, these barriers would have Adverse Effects to historic districts under Section 106 guidelines. The noise barrier recommendation for 3E and 3W will be re-evaluated during final design to determine whether conditions have changed.

Kia said INDOT is committing to innovative technologies to reduce noise throughout the North Split project area:

- Continuous Reinforced Concrete Pavement: Typical pavement has joints, which produces rhythmic "thuds" when it is driven across. Continuous Reinforced Concrete Pavement is jointless, eliminating the noise.
- "Next Generation" Pavement Grooving: With traditional pavement, vehicles drive across the pavement grooves, which makes a whining noise. "Next Generation" pavement has longitudinal grooves that reduce noise by 3 to 5 decibels or more.
- Jointless Concrete Bridges: The current bridges are loud, especially when heavy trucks drive across them. The new bridges are not as loud because they have no open joints.

b. Section 106 Update

Kia provided an update on the Section 106 Process, which is the consultation process for effects to historic properties. The Section 106 Process is part of the National Historic Preservation Act (NHPA) and protects historic districts and properties.

- As part of the Section 106 process for the North Split, Adverse Effects were identified for the Old Northside Historic District and the Morris-Butler House, St. Joseph Neighborhood Historic District, and Chatham-Arch Historic District.
- Mitigation commitments are defined to compensate for the diminishment of a historic property and are documented in a Memorandum of Agreement, or MOA.

Some proposed mitigation commitments under Section 106 are:

- Project elements, including trees and vegetation, will comply with North Split Aesthetic Design Guidelines.
- "Do Not Disturb" areas for existing trees. These are:
    - North of I-65 from College Avenue to Alabama Street, outside of a 15-foot construction zone.
    - Existing tree stands south of I-65 from College Avenue to Delaware Street.
    - West of I-65/I-70 between Michigan Street and New York Street.

- Opportunity for Section 106 Consulting Parties to review draft landscape and side slope plans prior to installation.
- INDOT commitment for a three-year maintenance plan for trees and shrubs.
- Underpass treatments complying with the North Split Aesthetic Design Guidelines.
- INDOT is partnering with the Benjamin Harrison Presidential Site for construction of the Old Northside Neighborhood Connector Neighborway trail.
- Portions of the Monon Trail Detour will remain as a permanent trail after construction, to be known as the Monon Loop.

Pause for Questions
Kia paused the presentation for questions. There were no questions.

c. Traffic Impacts of Construction

Seth Schickel from HNTB thanked EJ Working Group members for joining the presentation.

Seth addressed how North Split construction will impact traffic and when construction and traffic changes will begin:

- Long-term traffic changes will be minimal. After construction, the interchange will function similar to the way it does today because there will be no additional through lanes, entrances, or exits.
- Most traffic impacts will occur during the construction phase.
- The Design-Build Team will develop a Maintenance of Traffic (MOT) plan, which must meet specific INDOT criteria, that determines how traffic will move during the North Split Project. INDOT has full review and approval of the MOT plan.
- INDOT developed a "conceptual MOT plan" that was used to establish MOT criteria for the Design-Build Team, including the time needed for construction and what the impacts will be.

Seth reviewed downtown access changes that will occur during construction:

- I-65/I-70 through lanes will be closed between the North Split and Washington Street for two construction years or seasons. Through traffic will be re-routed to I-465 as a detour.
- Downtown exit and entrance ramps that will be open at all times during construction include: Dr. Martin Luther King Junior Street/West Street, West Street on the southwest corner, Meridian Street, the Meridian Street/Madison Avenue corridor, Washington Street, and Keystone Avenue/Rural Street.
- The I-65/I-70 link across the north part of the North Split will be open both ways throughout the project. A short closure of up to 45 days may be needed for bridge construction, but the goal is to keep traffic moving on I-65 and I-70.

Access into and out of downtown will be provided for high-volume destination movements, such as commuter traffic or individuals coming downtown for events:

- The Pine Street entrance ramp on the east side of downtown will remain open at all times during construction, providing access to I-70 eastbound.
- The Westbound I-70 ramp to the collector-distributor entrances and exits serving Michigan Street and Ohio Street will remain open at all times.
- A ramp to either Michigan Street or Ohio Street will remain open at all times.

Seth reviewed the movement closure guidelines for construction, clarifying that a construction season is essentially all year with the exception of one or two months in which weather does not allow for construction. North Split construction will start as early as possible in 2021, and the North Split will close and remain closed through all of 2021 and most of 2022.

- The mainline of I-65/I-70 will be closed for a maximum of two construction seasons.
- Ohio Street or Michigan Street will be closed a maximum of one construction season. Both will not be closed at the same time. When Ohio Street is closed, the Michigan Street exit will be open. When Michigan Street is closed, the Ohio Street exit must remain open.
- Local ramps and bridges will be closed for 90 days maximum.
- Local cross streets will not be closed simultaneously. For example, either Central Avenue or College Avenue will be open at all times during construction.

Seth reviewed the Mobility Management Plan (MMP), which will determine how mobility will occur in the downtown area during construction. The MMP has three goals:

1. Optimize traffic operations on the available transportation network.
2. Reduce overall demand on the roadway network, including strategies or ideas to encourage drivers not to use the roadway system during peak periods.
3. Provide enhanced motorist information regarding road closures and traffic conditions in the downtown area.

MMP task groups will be developed, which include:

- MOT/Construction, which will be a data-driven group.
- Local Traffic Operations, which will include representatives from the City of Indianapolis, statewide trucking organizations, and other similar groups. Emergency response agencies will be a subgroup, as they are key to ensuring emergency response in the downtown area.
- Travel Demand Management.
- Communications and Public Outreach. There will be a Public Involvement Plan just for the construction phase, and the North Split Project Team will share the plan with the public as soon as construction begins. The plan will continue through the end of construction.

Seth reviewed the Travel Demand Management plan, which looks at how people choose to travel and other available options than the interstate:

- Mode Choice
    - Transit
    - Carpool/vanpool
    - Bike/walk
- Trip Reduction/Reschedule
    - Staggered work hours
    - Offer employees flextime
    - Work from home, similar to what is occurring because of the pandemic response
- Public and employer education program
- Real-time traveler information, including traffic map apps such as Waze, Google Maps and Apple Maps. The North Split Project Team will develop partnerships with these apps to ensure their maps have the most current North Split construction information.

Seth reviewed the regional approach to improve traffic in downtown Indianapolis, and the region around downtown, in anticipation of the project:

- Adjacent Interchanges
    - Washington Street will see different traffic than normal. Work will be done on Washington Street, including minor lane alignments to improve traffic flow into and out of the project. The goal is to allow better access off of the interstate and to get vehicles back onto the interstate in a more efficient way.
    - At West Street/Dr. Martin Luther King Junior Street, additional ramp lanes will be added for getting vehicles on and off the interstates. These will be permanent improvements because they will continue to benefit interchange operations when North Split construction is complete.
- Regional Traffic Program with the City of Indianapolis to improve traffic flow
    - The North Split Project Team is working with the Indianapolis Department of Public Works (DPW) on ways to improve traffic flow throughout Indianapolis.
    - Traffic signal improvements in downtown Indianapolis will include new technology and upgrades to help them function more effectively and provide better traffic flow.
    - Spot intersection and roadway improvements. These improvements will occur on roads that will be used as detours or will see traffic differences during interstate closure. The North Split Project Team is still determining exactly where these improvements will occur, but they will be done in advance of North Split construction.

d. Next Steps

Seth reviewed the North Split Project steps that have already been completed:

- Started Project Development in March 2017.
- Conducted System-Level Analysis in May 2018.
- Developed an Alternatives Screening Report in September 2018.
- Conducted Preliminary Design and Environmental Study in 2019-2020.

Next steps are:

- In June 2020, the Design-Build Team will be on board.
- This summer (2020), the North Split Project Team will publish the EA and hold a public hearing.
- Final NEPA decision will occur in fall 2020.
- Construction may start as early as November/December of 2020.
- Construction will be complete in late 2022.

<u>Pause for Questions</u>

Seth paused the presentation for questions. *(See Discussion and Questions at the end of these minutes.)*

e. Aesthetic Design Guidelines

Ron Taylor from TSW Design Group provided an overview of the Aesthetic Design Guidelines (ADG) resulting from the 12-month Context-Sensitive Solutions (CSS) process. Ron said the ADG does not represent the final design but includes information that will lead the selected engineers and landscape architects to achieve the desired look the North Split Project Team has worked with the community to define.

The ADG is the result of an extensive public engagement process during the past 12 months. Ron reminded the EJ Working Group that if they were involved with the CSS Process, they would recall that the North Split Project Team developed different conceptual treatments and then worked with different groups to define the final designs. The groups with which the North Split Project Team worked included:

- Local neighborhoods and neighborhood organizations
- Local agencies and oversight departments
- Key local resource groups
- Local business organizations
- Local stakeholders and stakeholder groups

The ADG focuses on two broad categories – infrastructure, which includes bridges and underpasses, and landscape. Ron said his presentation focused on those two categories. Ron said the Project Team began with two conceptual design approaches and heard from the community that they wanted to minimize the detailing on the outside of the infrastructure and expose more of the bridge as part of the artistic expression of the bridge design.

<u>Bridge design applications</u>

- For the typical bridges, the focus is on bridge substructure.
- The bridges include two opportunities for local placemaking, with the incorporation of a street name or community name, and a location for future public art. The public art locations will not include art but are designed in a manner that art can be provided later, if desired.
- Three different bridge applications are described that vary based on location. Two of these are very similar and will be used in all major street crossings.
- One standard bridge application is provided for bridges that are only being rehabilitated but not fully reconstructed, and bridges that are part of a series of bridges. The bridge design still fits within the design vocabulary and is very similar to the other bridge design but is minimalized in certain areas.
- An image of the bridge column was presented, showing the detail and concrete work and demonstrating how the design vocabulary would work together.

Ron said the North Split Project Team received significant feedback from the community about bridge underpasses, so the Project Team placed significant emphasis on how those areas are treated.

<u>Bridge underpasses</u>

- To address the walking surface under the underpass, the ADG specifies asphalt pavers to be used in areas where mud might gather if not paved and to give the area more durability.
- The underpasses will be wider than they are currently.
- Another safety measure considered by the Project Team was lighting. Lighting along pedestrian ways will be built into the abutment walls for safety, and lighting will also be used in the interchange to highlight features of the design and monuments along the outside of the bridge underpasses.
- The underpass lighting will be brighter, providing a welcoming and safe feeling.

Retaining walls and wall patterns
Ron said through the CSS process, the North Split Project Team heard from the community that they wanted a very simple pattern for retaining walls and noise barriers. Therefore, the ADG specifies that the same pattern, color, and texture is consistent across the entire retaining wall design.

Landscape elements
Ron emphasized that the details in the ADG are not the final landscape design. The final design will be created by the Design-Build Team, and their landscape architects will create the final planting plans. The ADG specifies a series of different plantings and shows the different places in the interchange where these will occur:

1. Tree Preservation Areas – Throughout the interchange, there are areas identified as "Do Not Disturb" areas. The Design-Build Team is being given direction on activities they need to perform pre-construction, during construction, and post-construction to preserve these areas. The goal is to preserve as much as possible.
2. Buffer Zone – "Buffer zones" are 10-foot areas along each travel way that provide a clear zone for maintenance. The buffer zones will have plantings that will not interfere with the interstate. The ADG provides the Design-Build Team with guidance on the buffer zones and how plantings are applied.
3. Side Slope Plantings – These are applied across the largest area of the interchange and include a mixture of ground-level plants with low maintenance, as well as shrubs and trees to achieve a significant amount of planting.
4. Screen Plantings – Screen plantings will occur in areas with noise barriers and will be planted on the sides of the noise barriers exposed to adjacent communities. The use of evergreens and other plants will be provided to screen the back side of the noise barrier.
5. Interchange Plantings and Canopy Trees – This area will introduce a tree canopy into the open space and provide more trees and ground cover plantings. There will be a mixture of tree types and spacing of tree species to create an urban forest that looks very natural, but is still low maintenance
6. Detention Basin Plantings – The North Split Project Team recognizes there may be areas within the interchange that are lower and hold a little water. The ADG provides guidance on plantings that can tolerate a slightly wetter environment.

Pause for Questions
Ron paused the presentation for questions. *(See Discussion and Questions below for specific Q&A.)*

6. Discussion and Questions

Comments:

- Could you please be sure to notify me directly of future meetings of the justice panel? My phone/text/email is [participant provided information]. (Indianapolis Urban League)
- The maps are VERY HARD to READ and follow. You should consider inserting aerial views and pictures of the areas being discussed. (Indianapolis Urban League)

- Please thank Andy Dietrick for getting me in – albeit late. Thanks. (Indianapolis Urban League)
- Thank you for considering the existing vegetation and planning accordingly to promote successful vegetation. (Mayor's Office of Sustainability)
- Increased tree canopy = music to my ears. :) (Mayor's Office of Sustainability)
- So, the pedestrians will be inhaling gas fumes with no air quality monitoring? (Indianapolis Urban League)
- Thanks! Good presentation. (IndyGo)
- Air quality and inhalants are a salient issue that should not be overlooked - Quality of Life and Health. (Indianapolis Urban League)

Q: How many people identified as black [in the Public Survey]? (Ransom Place Neighborhood)
A: Five percent of the Public Survey respondents identified as minority. Greater detail is included in the EJ Technical Memorandum. There were also 11% of respondents who chose not to answer that question, so it is not certain what that 11% would have self-identified as.

Q: How will re-routes be communicated to the public? How soon will that information go out to give communities time to prepare? (Keep Indianapolis Beautiful)
A: This information will be communicated in every way possible. The North Split Project Team is developing a Public Information Plan specific to North Split construction. The goal is to have methods of contacting the public in whatever way is appropriate – media, social media, billboards, direct mail. The Public Information Plan will be completed this spring and implemented this summer to begin providing the public with information.

Q: Can you please explain the MLK [Dr. Martin Luther King Junior Street] improvement again? (Ransom Place Neighborhood)
A: Currently, at West Street/Dr. Martin Luther King Junior Street, the southbound exit ramp is a one-lane ramp that expands to four lanes at the first traffic signal. Prior to the beginning of North Split construction, the one-lane ramp will be expanded to be a two-lane ramp to allow for a smoother traffic flow of vehicles getting off the interstate at that exit. It also increases safety. At 11th Street and Dr. Martin Luther King Junior Street, when entering the interstate, it is a one-lane ramp. The North Split Project Team is proposing making that one-lane on-ramp a two-lane ramp to allow more people to get through that traffic signal and onto the interstate.

Q: What kind of considerations or adaptions have been incorporated into the pedestrian underpasses for the visually disabled and other disabled citizens? Braille language information on walls or surfaces? (Indianapolis Urban League)
A: The Design-Build Team will create a final design that is compliant with the Americans with Disabilities Act (ADA). There are additional areas where abutment wall panels are designated as areas for future information or art, and Braille could be incorporated into that.

Q: At the stoplight, when people take the turn to go west onto 11th Street, they do not slow down so it is a dangerous intersection. Now there will be heavy construction vehicles using West Street and Dr. Martin Luther King Junior Street. Can it be changed so people have to slow down at 11th Street, or can you make that turn safer? (Ransom Place Neighborhood)
A: The North Split Project Team will talk to the City of Indianapolis about this.

Q: Are you requiring that plantings be Indiana native plants? (Indiana Association of Area Agencies on Aging)
A: Yes, that is one of the requirements.

Q: Do we know how many trees in the area were deemed "Do Not Disturb"? (Keep Indianapolis Beautiful)
A: We do not have an exact number of trees. The areas that have been designated as Do Not Disturb have existing vegetation that is being preserved to screen local neighborhoods. Maps on the North Split website, northsplit.com, show those Do Not Disturb areas in more detail. [Note: Approximately 5 acres of mature trees and 0.9 acre of immature trees and shrubs are within the Do Not Disturb areas].

Q: Will there be 9-1-1 call boxes as they have on the canal [in the pedestrian underpass areas]? (Indianapolis Urban League)
A: Currently, those are not included in the Aesthetic Design Guidelines.

Q: Will air quality monitoring be part of this project? (Health by Design)
A: At this point we have worked with the Indiana Department of Environmental Management (IDEM) and the Environmental Protection Agency (EPA) to ensure we are conforming with all air quality requirements. There are no requirements for air quality monitoring as part of the North Split Project, nor is anyone intending to do any project-specific air quality monitoring at this time. In addition, vehicular traffic in the area of the North Split will be less during construction than it is currently.

Q: While North Split construction is going on, will the closing of the underpasses be staggered? (Keep Indianapolis Beautiful)
A: Yes, the goal is to stagger those closures so adjacent roadways are not closed at the same time. There may be a time when non-adjacent roadways are closed at same time, but the goal is to not have adjacent roads closed at the same time.

Q: Can you talk about pedestrian access and, in particular, how pedestrians might be walking into and out of downtown? Will transit stops be affected? (Keep Indianapolis Beautiful)
A: The goal is to provide pedestrian detours for any closed street. There will be staggered roadway and underpass closings, with alternative access for pedestrians provided. The North Split Project Team will work with IndyGo on the details for the public transit stops.

Q: [Is there] consideration for safety barriers in underpass areas between sidewalks and streets? (Keep Indianapolis Beautiful)
A: Safety barriers were not included in the Aesthetic Design Guidelines due to the concern about maintenance, but the walkways will be wider and a curb will be provided along the street.

Q: Who will you use [what vendor(s)] to assist in planting trees for the project? (Keep Indianapolis Beautiful)
A: The Design-Build Team will be the general contractor for the North Split construction and will use subcontractors. The North Split Project Team is looking at ways to ensure the significant landscape investment remains. The Project Team has been working with Keep Indianapolis Beautiful (KIB) and other agencies to determine the best way to develop and approach a landscape maintenance plan. It will be another year or two before plantings are installed, so the Project Team will continue to discuss and address this.

7. **Adjourn**
   Kia told EJ Working Group members that if they have questions to please email her or the project email, info@northsplit.com. The meeting was adjourned at 3:44 p.m.

Attendees:

EJ Working Group Members	
Paula Brooks	Ransom Place Neighborhood
Taylor Firestine	Health by Design
Kristen LaEace	Indiana Association of Area Agencies on Aging
Bryan Luellen	IndyGo
Mo McReynolds	Mayor's Office of Sustainability
Mandla Moyo	AARP Indiana
DeAndre Rhodes	CIRTA
Mark Russell	Indianapolis Urban League
Roland Smith	Keep Indianapolis Beautiful
James Wells	Mayor's Neighborhood Advocate (Area #8)
Fabio Yataco	Mayor's Neighborhood Advocate (Area #10)
North Split Team Members	
Michelle Allen	FHWA
Kia Gillette	HNTB
Amy Hanna	Borshoff
Brandon Miller	INDOT
John Myers	HNTB
Erin Pipkin	Compass Outreach Solutions
Seth Schickel	HNTB
Runfa Shi	INDOT
Scott Siefker	TSW
Ron Taylor	TSW
Luke Waltz	TSW

NORTH SPLIT UPGRADES DRIVING PROGRESS

Environmental Justice Working Group Meeting #4

April 23, 2020

Welcome/Meeting Agenda

- Welcome & Introductions
- Public Involvement
- Project Background
- Public Survey
- Project Update
  - Noise Barrier Recommendations
  - Section 106 Update
  - Traffic Impacts of Construction
  - Next Steps
  - Aesthetic Design Guidelines
- Discussion and Questions
- Adjourn

North Split Project Upcoming Meetings

- Virtual Public Open House April 28, 2 - 4 pm
- Virtual Public Open House April 30, 6 - 8 pm
- https://northsplit.com/virtual-open-house/

- NEPA Public Hearing Summer (Date TBD)

North Split NEPA Public Hearing – Request for Input

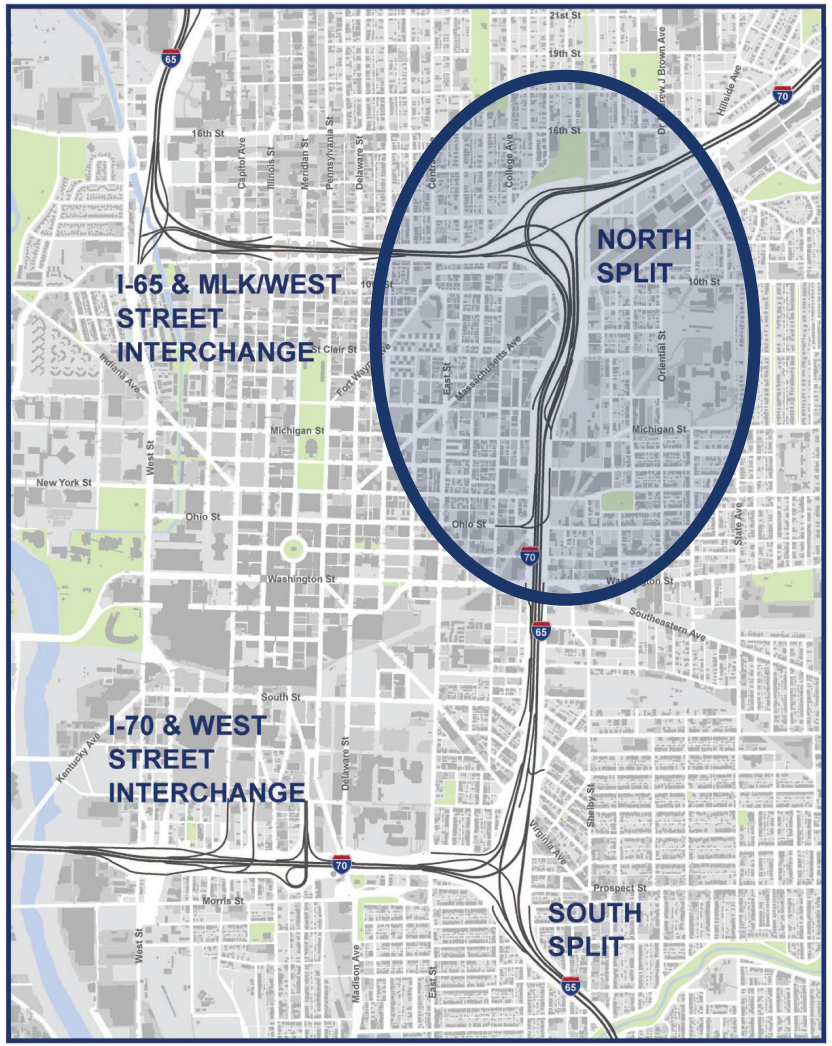
- EA will be published for public review and comment
- Possible virtual public hearing
- Ensure everyone has a voice and protect public health
- Request for input from EJ Working Group:
  - Are there methods to supplement a virtual public hearing while protecting health?
    - Office hours with limited number of people
    - Telephone numbers to answer questions
    - In-person meeting in large room with limited number of people

NORTH SPLIT
UPGRADES
DRIVING PROGRESS

Project Background

North Split Project

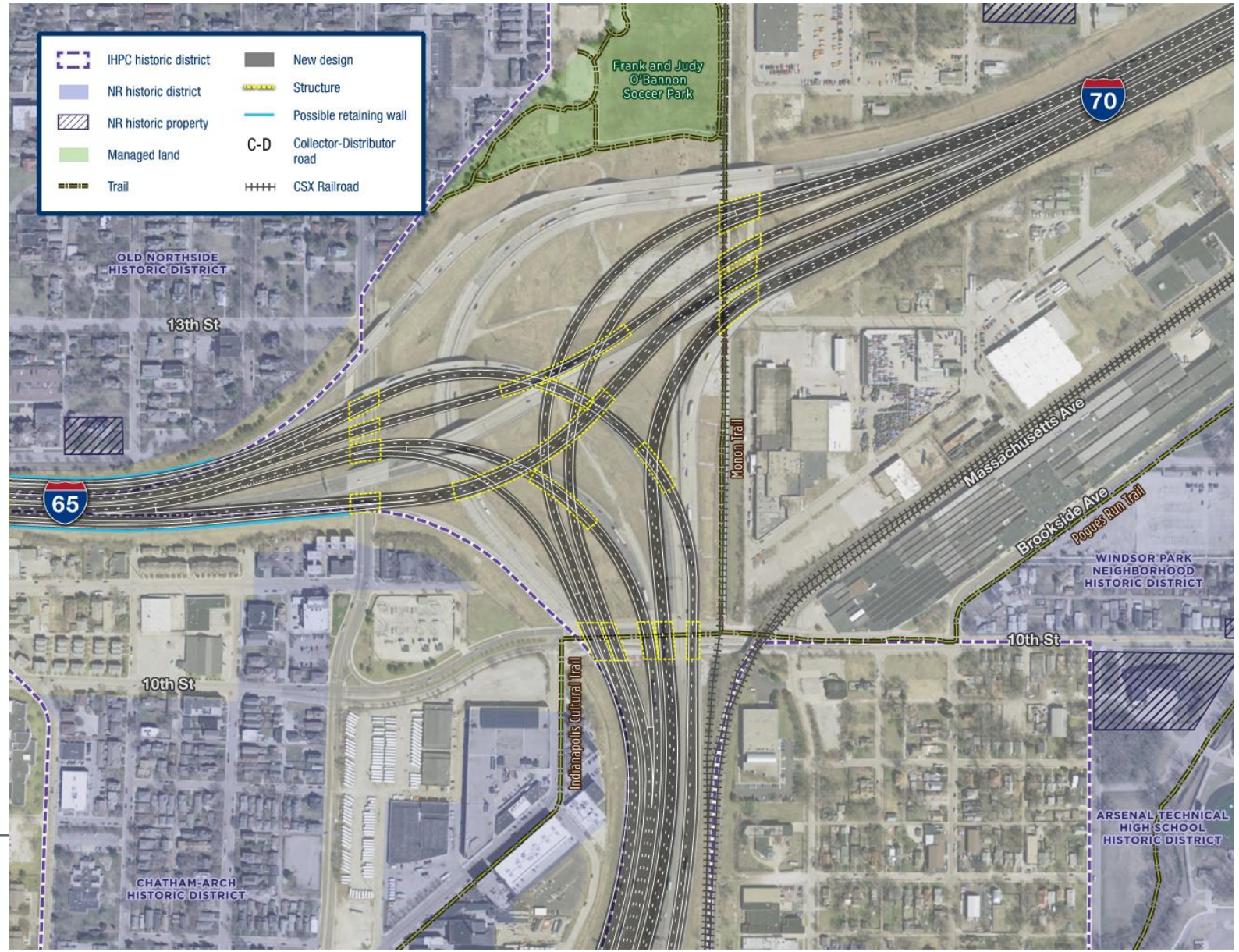
- Where I-65 and I-70 meet at northeast corner of downtown Indianapolis inner loop
- Second-busiest interchange in Indiana
  - 214,000 vehicles per day
- Constructed in 1960s and 1970s – pavement and bridges need replaced
- Safety concerns – over 1,600 crashes from 2012 to 2016
- Originally designed for a 4th interstate leg to the northeast



NORTH SPLIT UPGRADES DRIVING PROGRESS

North Split Project

- New interchange is smaller and more compact
- New pavement and bridges
- Corrects the biggest safety problems
- Removes the worst bottlenecks
- Does not add through lanes



NORTH SPLIT UPGRADES DRIVING PROGRESS

Environmental Assessment

- Analyzes impacts to both human and natural environment
- Key North Split focus areas:
  - Highway Noise
  - Environmental Justice/Public Survey
  - Historic Properties (Section 106)
  - Traffic Impacts of Construction
- Extensive Public Involvement Process
- EA Published in Summer 2020
- NEPA determination in Fall 2020

Project Status

COMPLETE

- Project kickoff
- System-Level Analysis
- Alternative screening report
- Alternative refinement
- Highway noise studies
- Public survey
- Aesthetic Design Guidelines

ACTIVE

- Historic properties (Section 106)
- Environmental Assessment (NEPA)
- Mobility Management Plan
- Design-build procurement
- Context Sensitive Solutions (CSS)
- Public involvement

NORTH SPLIT UPGRADES DRIVING PROGRESS

Environmental Justice/ Public Survey

Public Survey - Content

Conducted online survey to:

- Gain better understanding of project impacts
- Help identify potential disproportionately high and adverse effects on minority and low-income communities

Promoted via:

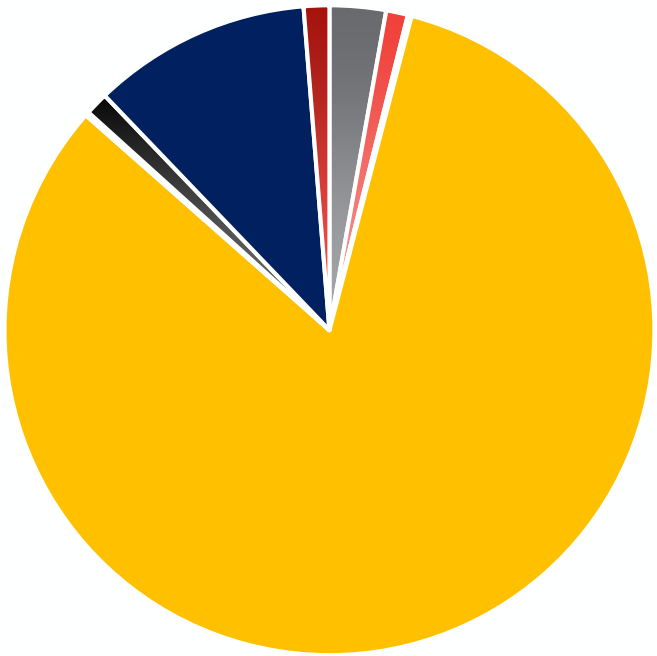
- 43,000+ postcards mailed to residents
- Project email, website, newsletters, & social media
- Fliers to IPS students and in grocery stores
- Hard copies in libraries, community centers and neighborhood meetings
- Booth at the Transit Center and ads on IndyGo buses

Public Survey - Demographics

1,623 total responses

- 80 percent live in the EJ analysis area
- 1,575 surveys were essentially complete
- 5% self-identified as a minority
- 2% self-identified as low-income

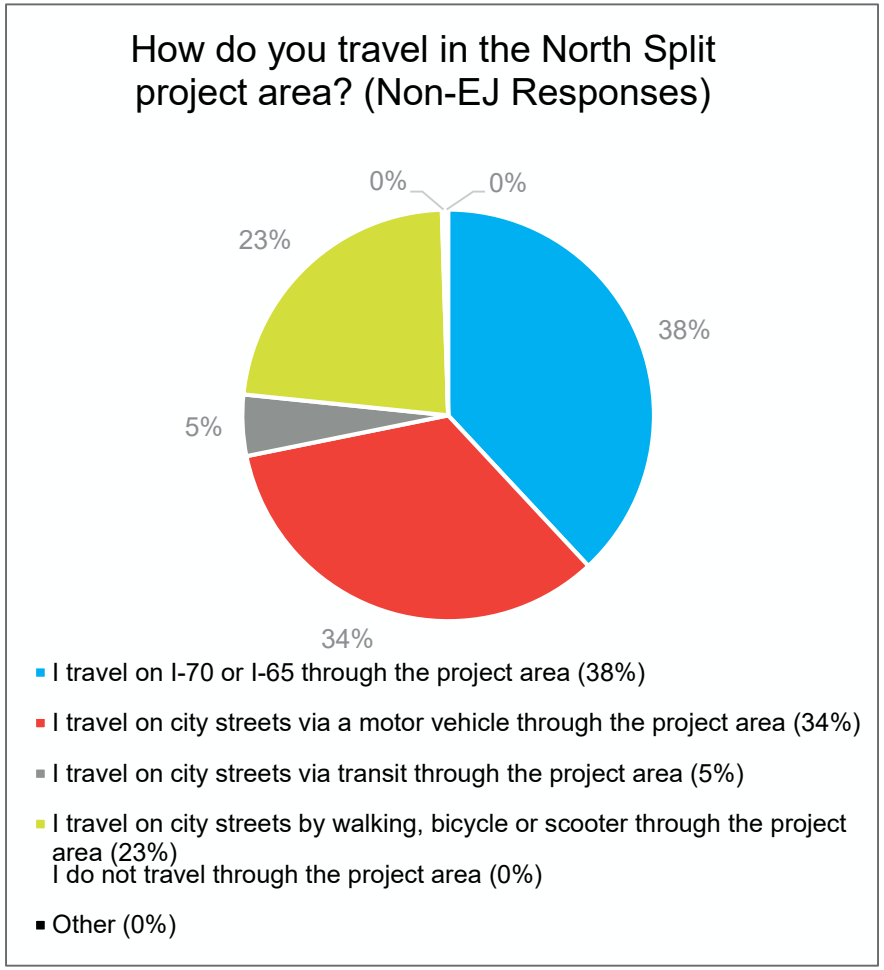
Race

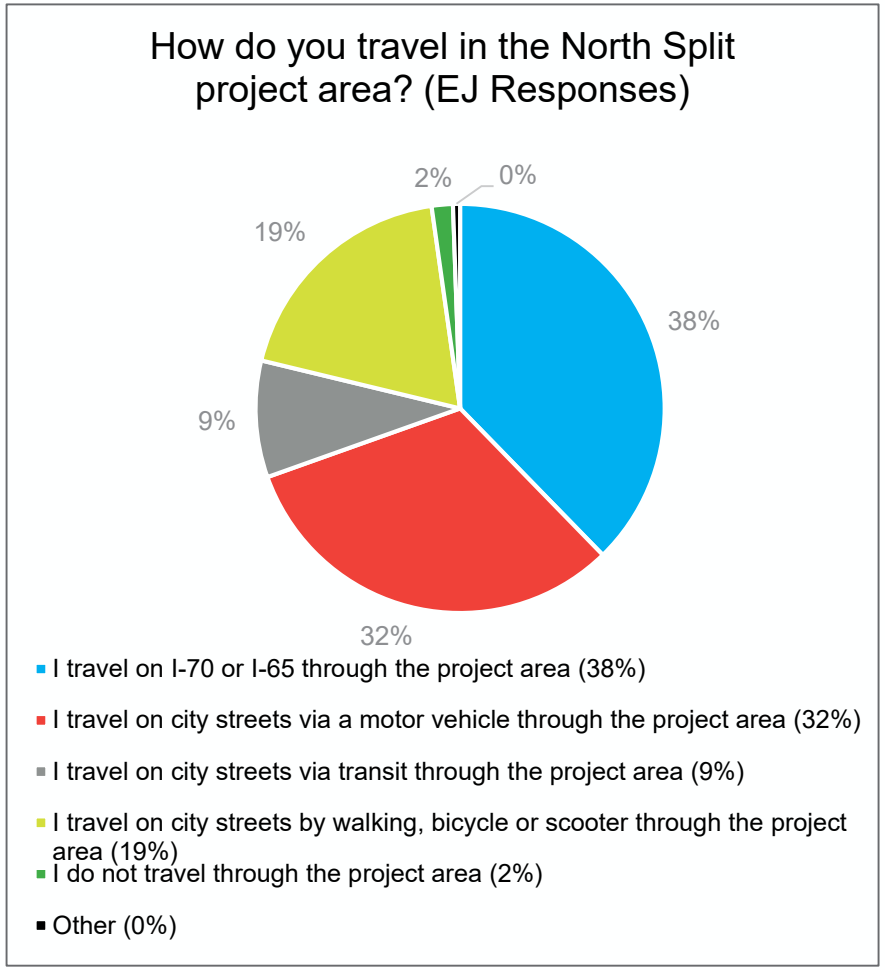


- Black (3%)
- Latino/Hispanic (1%)
- Native American/Native Alaskan (0%)
- White (83%)
- Native Hawaiian/Pacific Islander (0%)
- Asian (1%)
- Choose not to answer (11%)
- Other (1%)

Public Survey - Results

- Documented in an Environmental Justice Technical Memorandum in EA Appendix

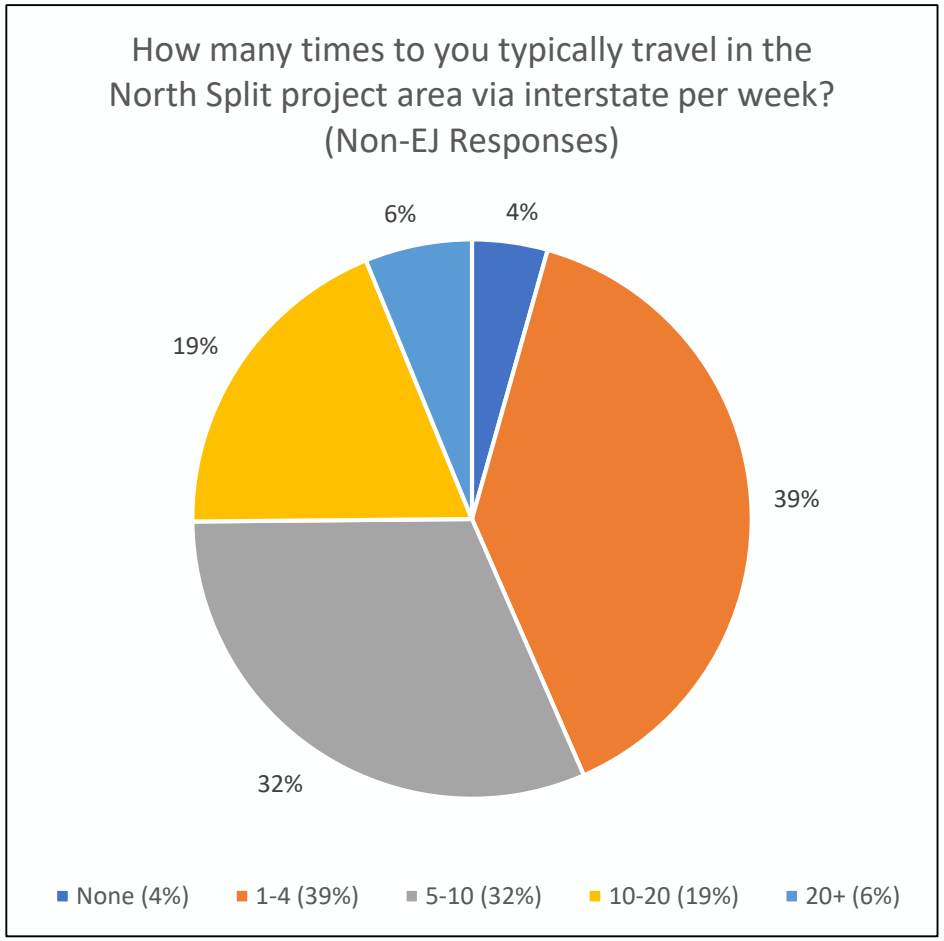


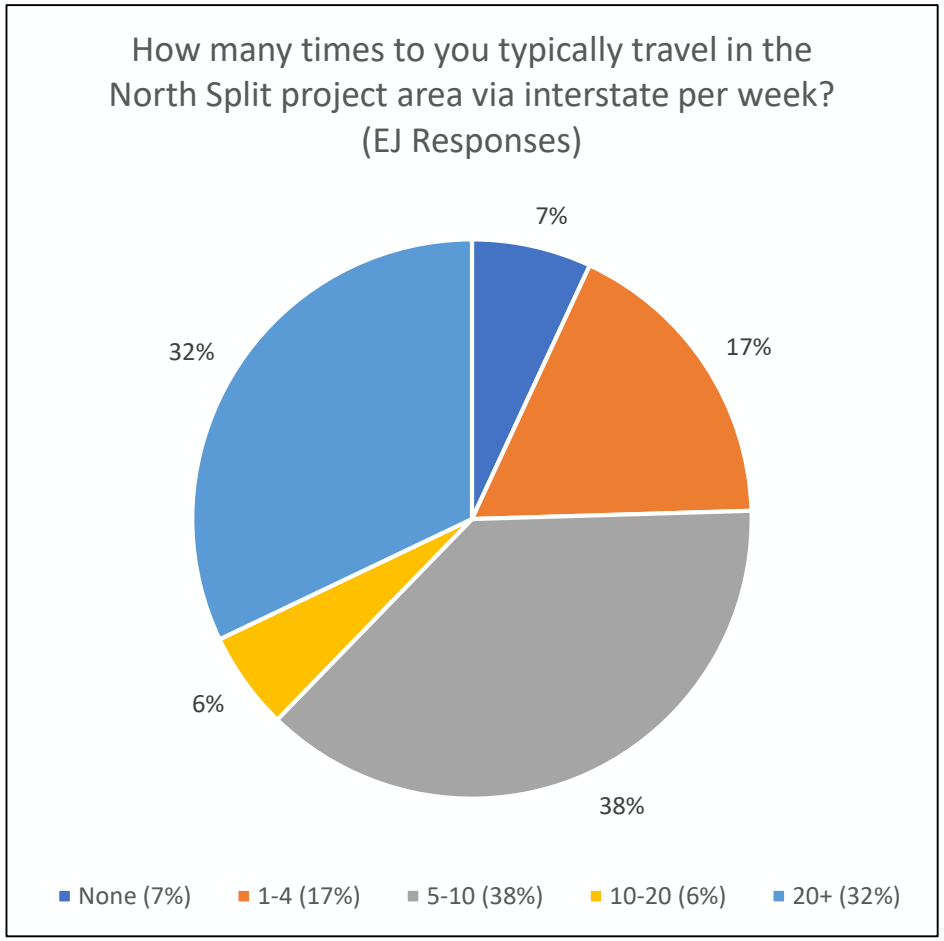


NORTH SPLIT UPGRADES DRIVING PROGRESS

Public Survey - Results

- EJ community members travel on I-65 and I-70 more frequently than non-EJ





NORTH SPLIT UPGRADES DRIVING PROGRESS

Public Survey - Responses

Responses from EJ communities paralleled those of the non-EJ community

EJ community members travel on I-65 and I-70 more frequently than non-EJ

Other notable trends in responses:

- The public receives project updates
- Clear and proactive communication is desired
- Travel via personal automobiles, carpools or ridesharing services
- Most people travel on I-70, I-65, and local streets
- Most support the project
- Most agree it will improve vehicular and pedestrian safety

Public Survey – Effects

No disproportionate adverse effects for displacement, air quality, land use, economic condition, mobility and access, public services and facilities, and safety.

Category	Finding	Mitigation Measures
Community Cohesion	Minor adverse effects due to potential retaining walls and noise barriers	CSS design treatments being implemented
Noise and Vibration	• Noise impacts predicted at 201 receptors with elevated concentrations of low-income and minority populations • No adverse vibration effects	• Noise barriers recommended • INDOT solicited viewpoints to determine if noise barriers are desired
Visual	Minor adverse effects due to changes in roadway height and location, steeper side slopes and/or retaining walls, and removal of existing vegetation	Aesthetic Design Guidelines outline design treatments, landscaping, fencing, etc.
Temporary Construction	Temporary adverse effects to air quality, noise, vibration, publish services, transit, and traffic	• INDOT's Standard Specifications and applicable air quality regulations • Vibration Monitoring and Control Plan • Mobility Management Plan • Emergency Response Plan

Public Survey - Effects

Category	Finding	Avoidance, Minimization or Mitigation Measures
Land Use	No adverse effects	None
Economic Condition	No adverse effects	None
Mobility and Access	• Minor effects to vehicular access • Positive effects to traffic flow • Positive effects to pedestrian and bicycle traffic	None
Public Services and Facilities	No adverse effects	None
Safety	Positive effects due to addressing the four top crash sites	None

Pause for Questions

NORTH SPLIT UPGRADES DRIVING PROGRESS

Highway Noise

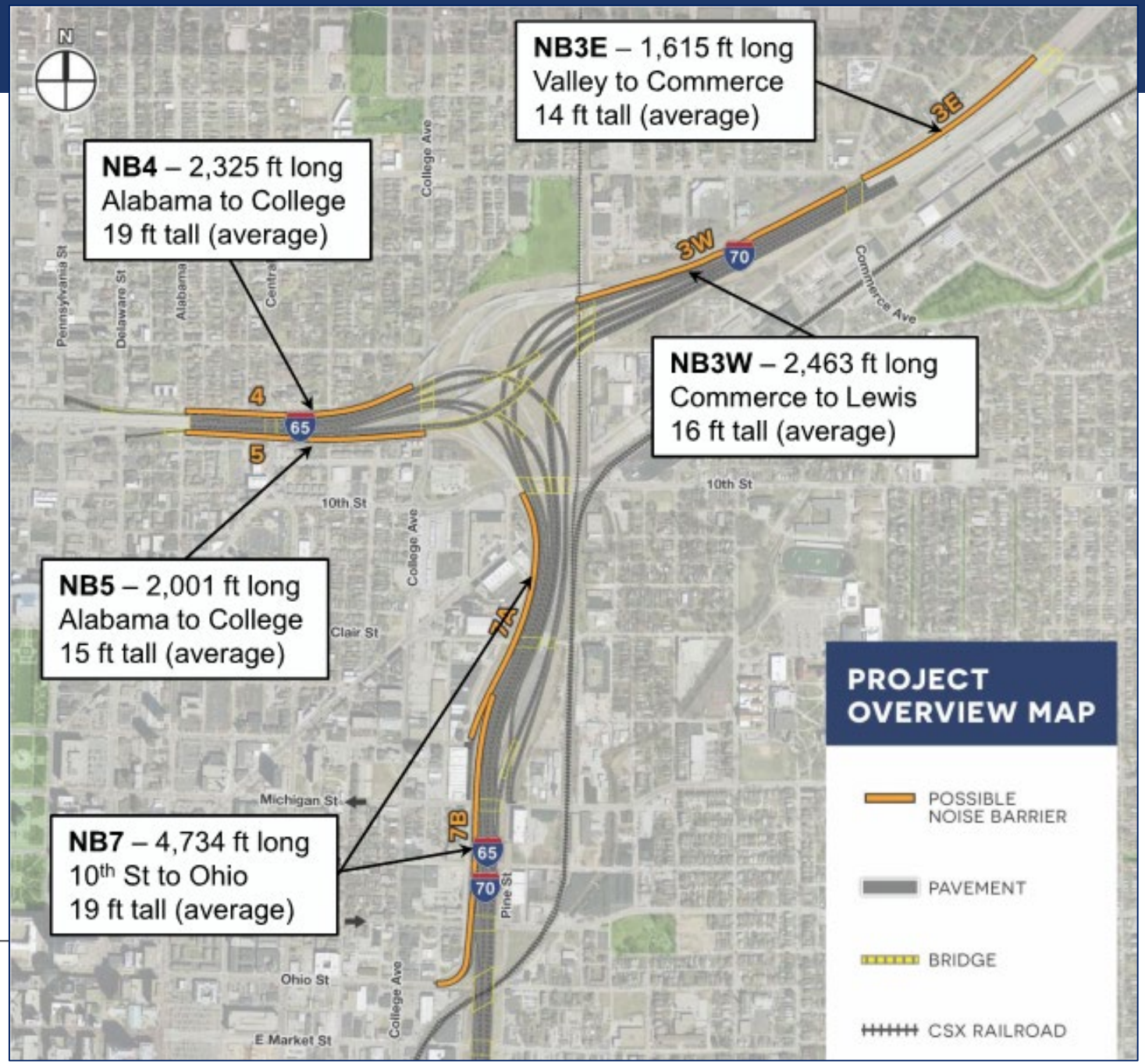
Noise Barriers

- Considered where there are **noise impacts** (66 dB(A) for residences)
- Barriers can reduce noise levels by 5 to 10 dB(A)
- Location and height determined by the Traffic Noise Model

Noise Barriers

Predicted noise exceeds current criteria (66 dB(A) for residences)

- Five potential locations
- Each location feasible
- Possibly reasonable
- Subject to input by benefited receptors



NORTH SPLIT UPGRADES DRIVING PROGRESS

Noise Barriers

- Recommended*
  - NB3E, NB3W
  - Noise surveys show support
- Not Recommended
  - NB4, NB5, NB7
  - Noise survey results mixed
  - Section 106 Adverse Effect

*Re-evaluation of the noise analysis to occur during final design to determine whether conditions have changed.

NORTH SPLIT UPGRADES DRIVING PROGRESS

Noise Reducing Technology

- Continuous Reinforced Concrete (CRC) Pavement
  - Jointless pavement
  - Double the design life
- “Next Generation” Pavement Grooving
  - Longitudinal grooves, rather than transverse
  - Reduces pavement noise 3 to 5 decibels
- Jointless Concrete Bridges
  - More durable, quieter structures than existing
  - Integral / Semi-Integral ends

NORTH SPLIT UPGRADES DRIVING PROGRESS

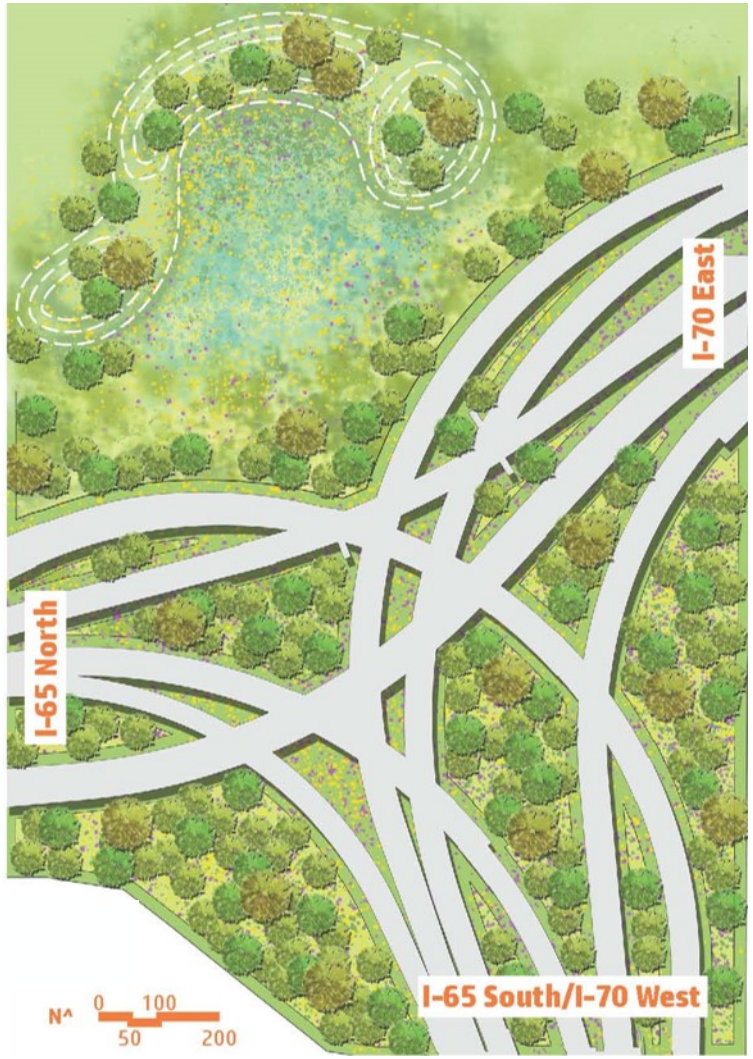
Historic Properties (Section 106)

Historic Properties Impacts

- Section 106 of the National Historic Preservation Act of 1966 (NHPA) protects historic districts and properties
- Adverse effect identified for 3 historic districts/ properties:
  - Old Northside Historic District/Morris Butler House
  - St. Joseph Neighborhood Historic District
  - Chatham-Arch Historic District
- Mitigation commitments are compensation for the diminishment of a historic property

Proposed Mitigation Commitments

- Project elements, including trees and vegetation, to comply with North Split Aesthetic Design Guidelines
- “Do Not Disturb” areas for existing trees
  - North of I-65, College to Alabama – outside of 15-foot construction zone
  - Existing tree stands south of I-65 from College to Delaware
  - West of I-65/I-70 between Michigan and New York
- Consulting Party review of draft landscape and side slope plan prior to installation
- 3-year maintenance plan for trees and shrubs
- Underpass treatments to comply with North Split Aesthetic Design Guidelines
- Funding for Benjamin Harrison Presidential Site Old Northside Connector Neighborway
- Portions of Monon Loop to remain as permanent trail



NORTH SPLIT UPGRADES DRIVING PROGRESS

Pause for Questions

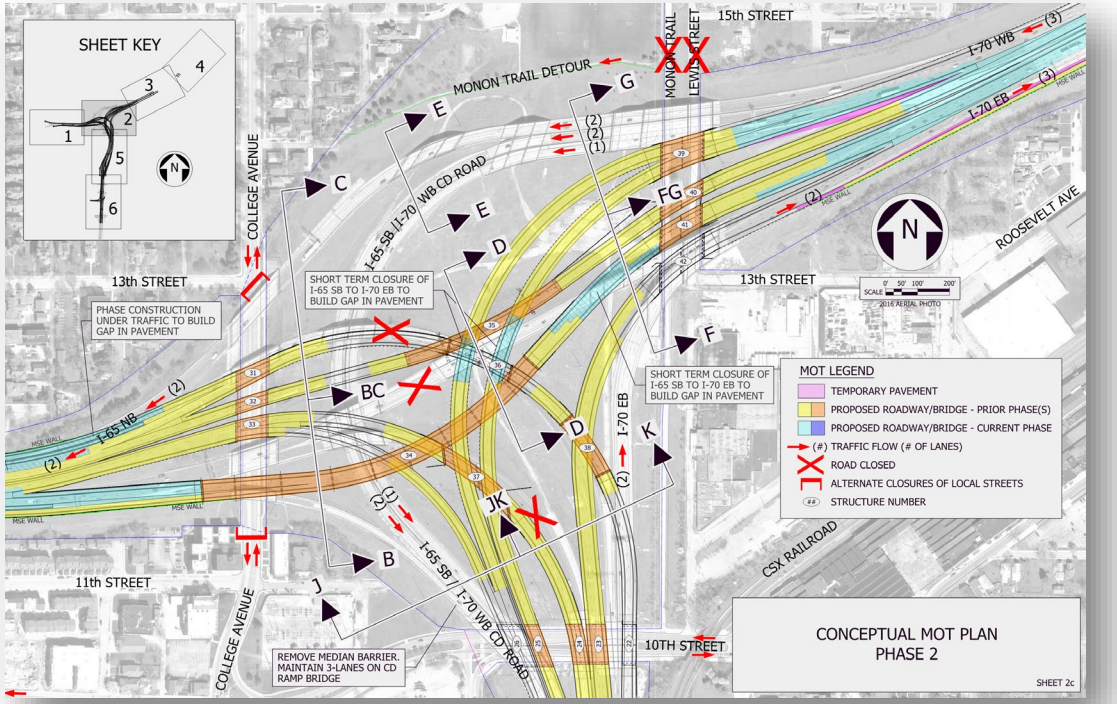
NORTH SPLIT UPGRADES DRIVING PROGRESS

Traffic Impacts of Construction

INDIANA DEPARTMENT OF TRANSPORTATION INDOT

Traffic Impacts

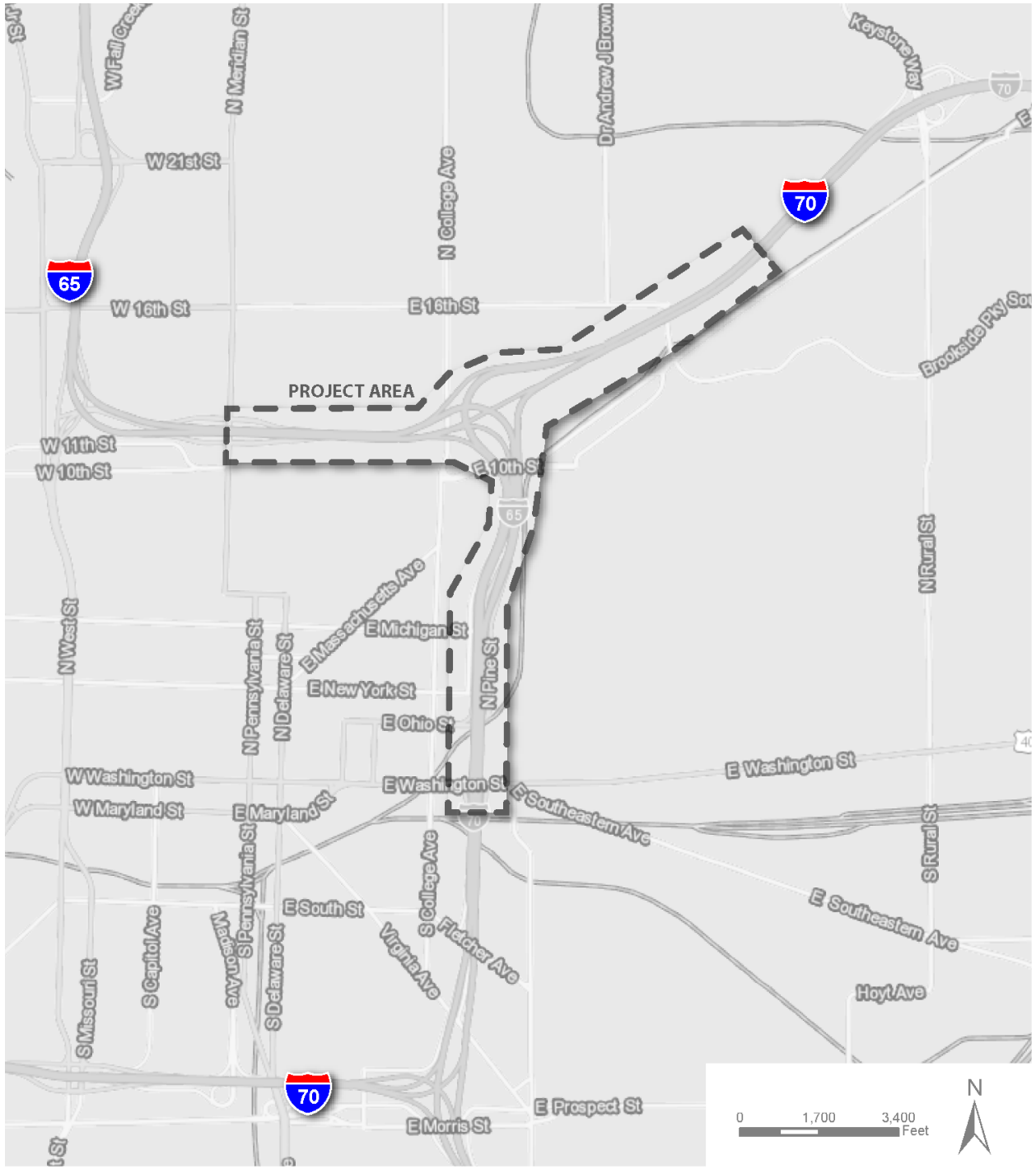
- Long-term traffic changes minimal due to no added through lanes
- Most traffic impacts will occur during construction
- Maintenance of Traffic (MOT) plan to be developed by design-build contractor
- MOT plan must meet INDOT criteria
- “Conceptual MOT Plan” by INDOT used to establish MOT criteria



NORTH SPLIT UPGRADES DRIVING PROGRESS

Downtown Access

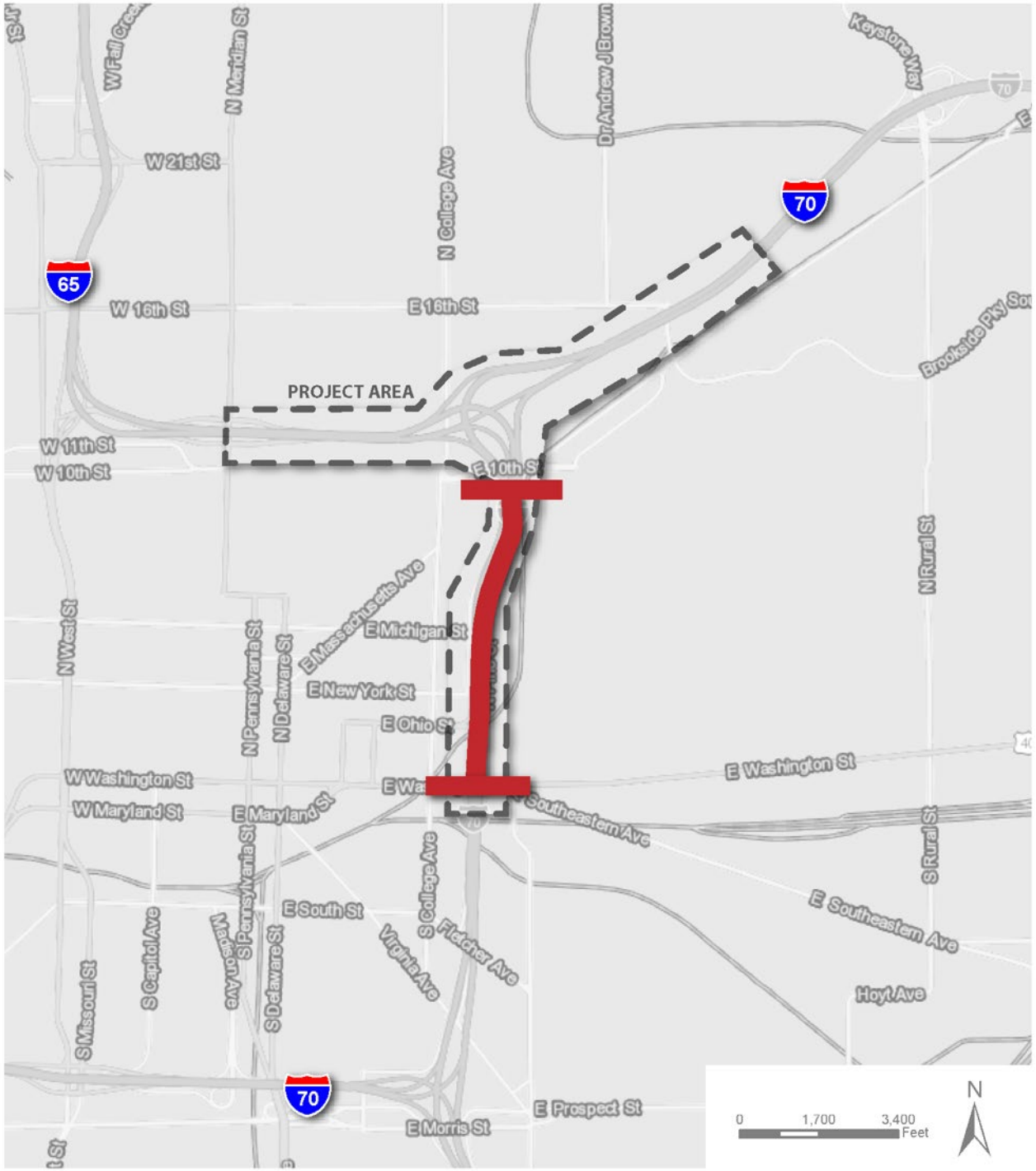
- North Split Construction Limits



NORTH SPLIT UPGRADES DRIVING PROGRESS

Downtown Access

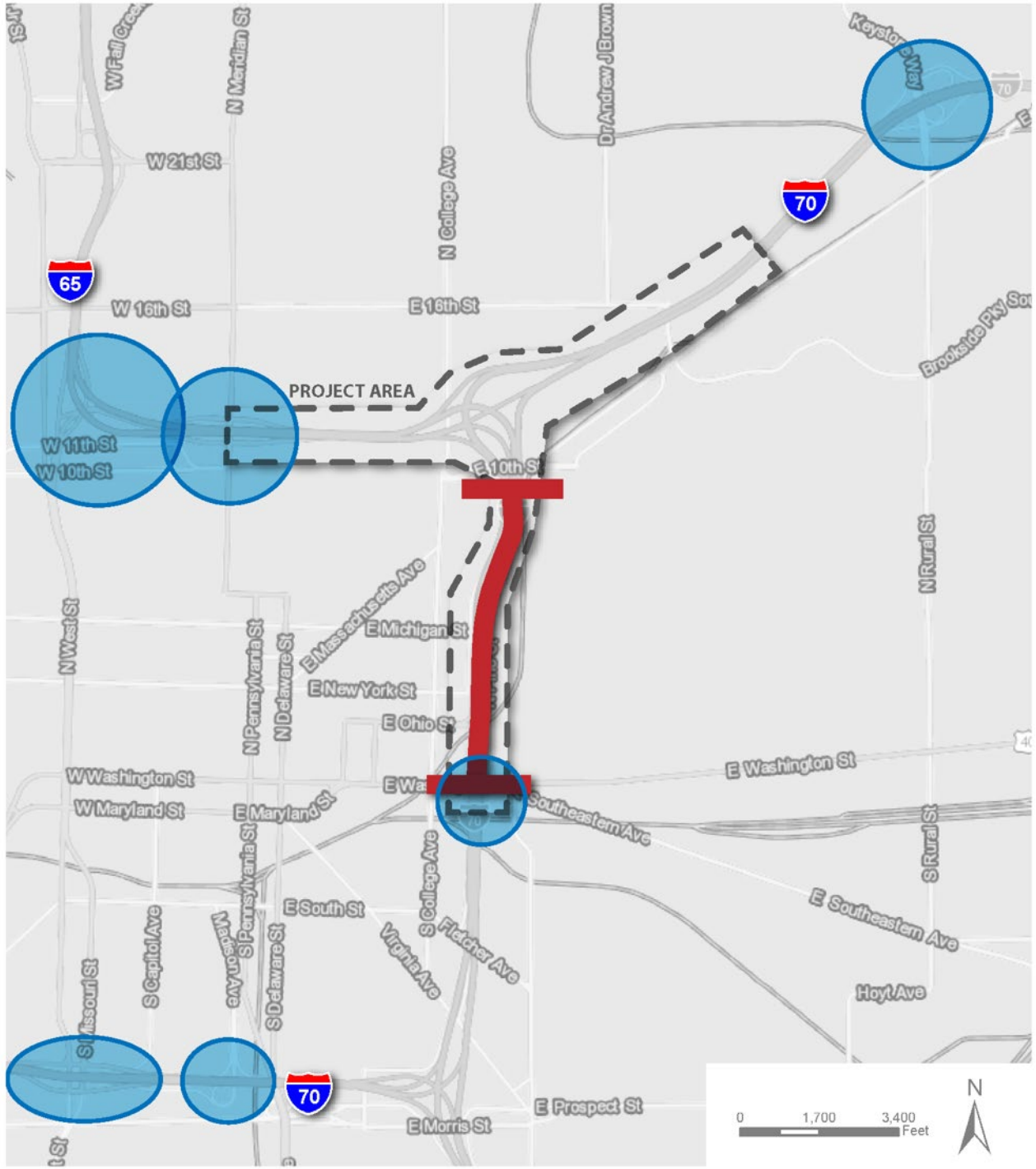
- I-65/I-70 through traffic closed between the North Split and Washington Street
- Closure to extend over two construction seasons
- Through traffic detour to I-465



NORTH SPLIT UPGRADES DRIVING PROGRESS

Downtown Access

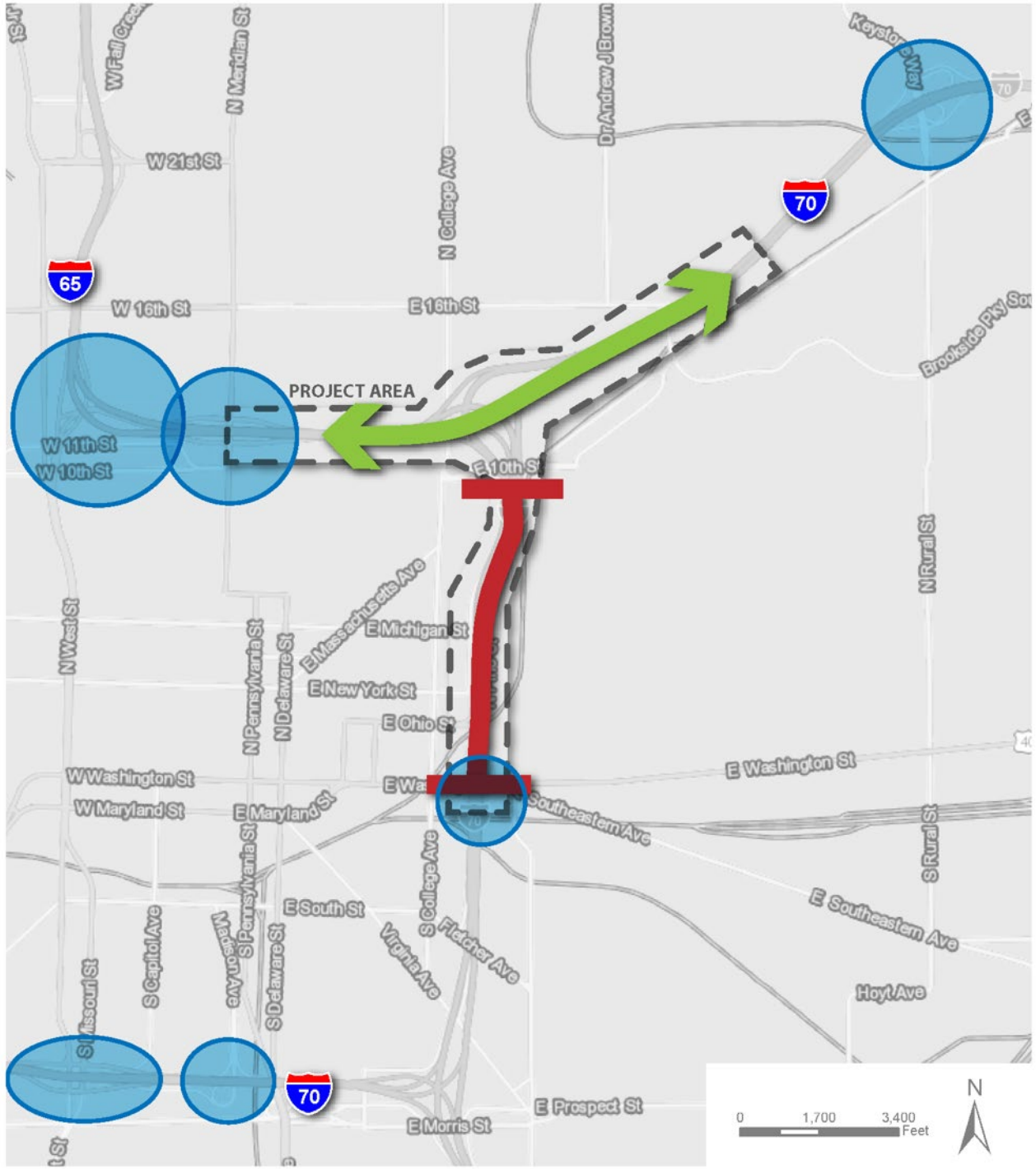
- Downtown exit and entrance ramps outside the North Split project area open at all times



NORTH SPLIT UPGRADES DRIVING PROGRESS

Downtown Access

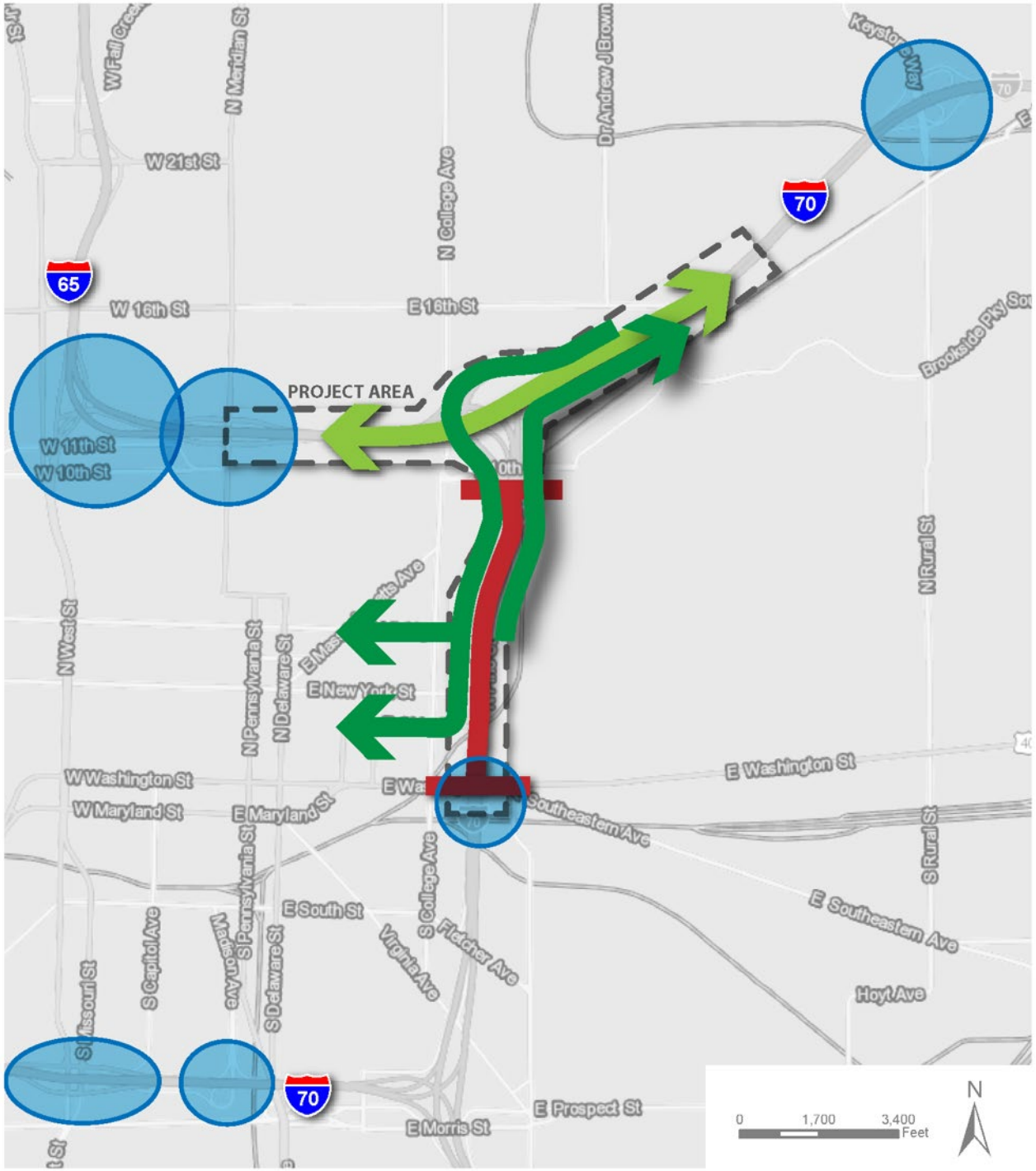
- I-65 to I-70 link across the north part of the North Split open to traffic each way
- May be short closure (up to 45 days) for construction of one bridge



NORTH SPLIT UPGRADES DRIVING PROGRESS

Downtown Access

- Pine Street entrance ramp to eastbound I-70 open at all times
- Westbound I-70 exit ramp open at all times to collector-distributor road
- Collector-distributor road to serve either Michigan Street or Ohio Street at all times



NORTH SPLIT UPGRADES DRIVING PROGRESS

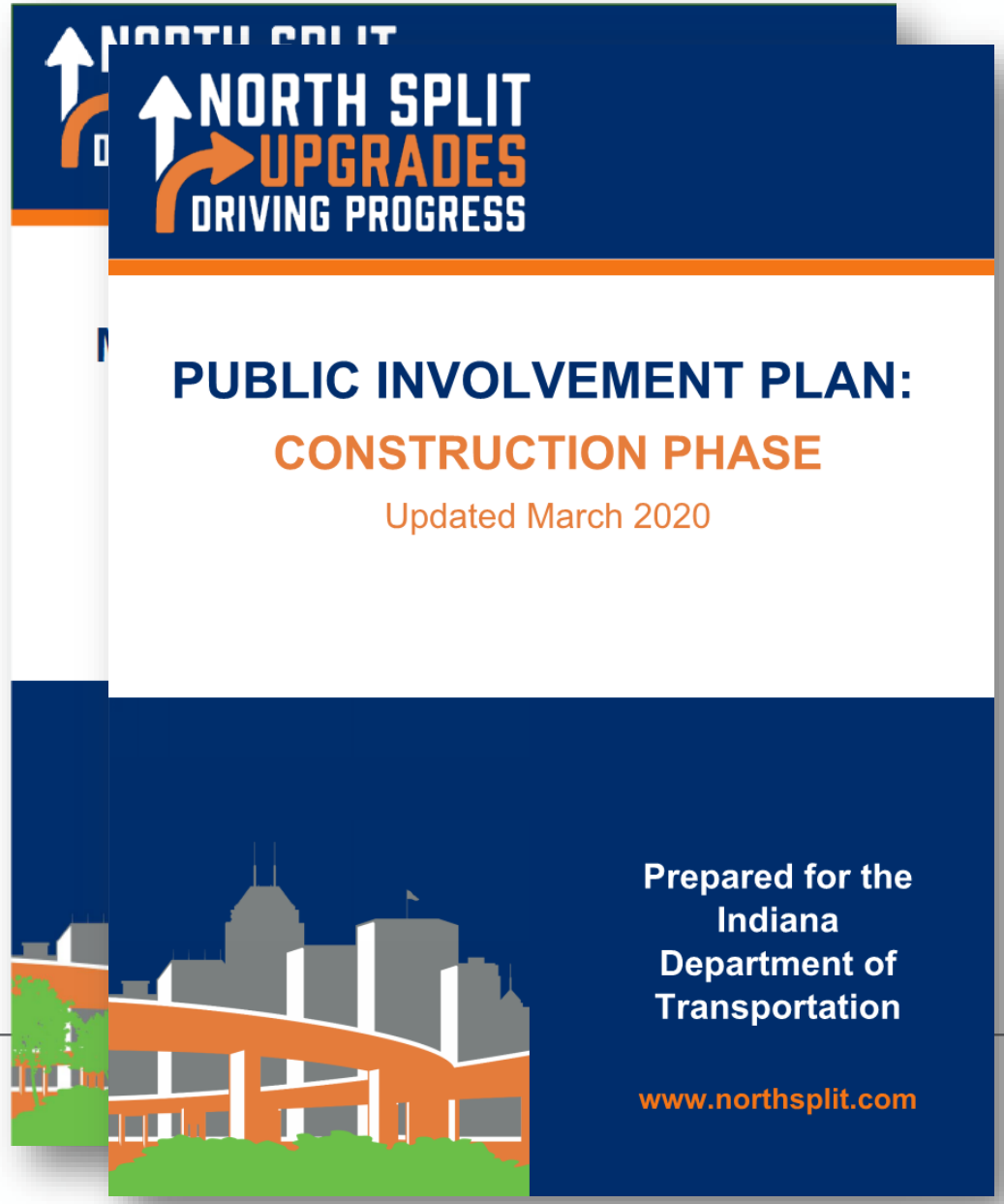
Movement Closure Guidelines

MOVEMENT	MAXIMUM
• I-65 / I-70 Mainline	2 seasons
• Eastside Exits* (Ohio /Michigan)	1 season
• Local ramps & bridges (not adjacent)	90 days

*Ohio Street and Michigan Street not closed at same time

Mobility Management Plan (MMP)

- MMP Goals
  - Optimize traffic operations on the available transportation network
  - Reduce overall roadway network demand
  - Provide enhanced motorist information
- MMP Task Groups
  - MOT/Construction
  - Local Traffic Operations
    - Subgroup – Emergency Response
  - Travel Demand Management
  - Communications & Public Outreach

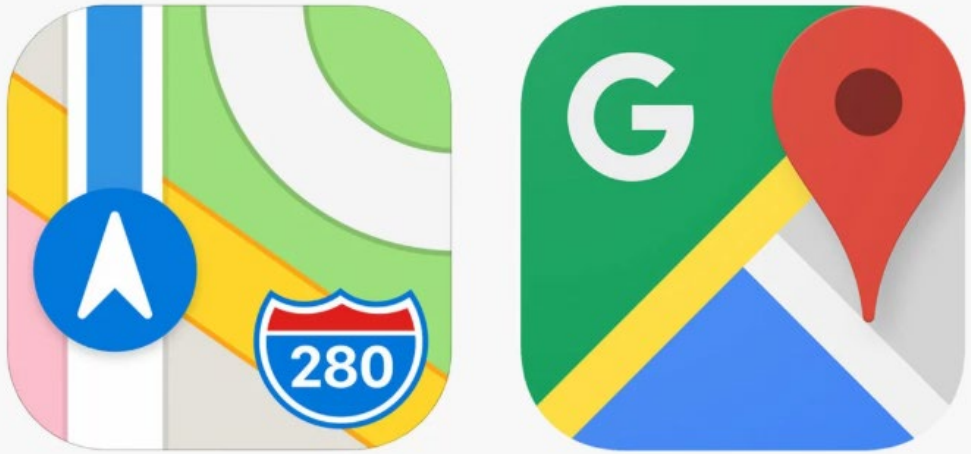


NORTH SPLIT UPGRADES DRIVING PROGRESS

Travel Demand Management

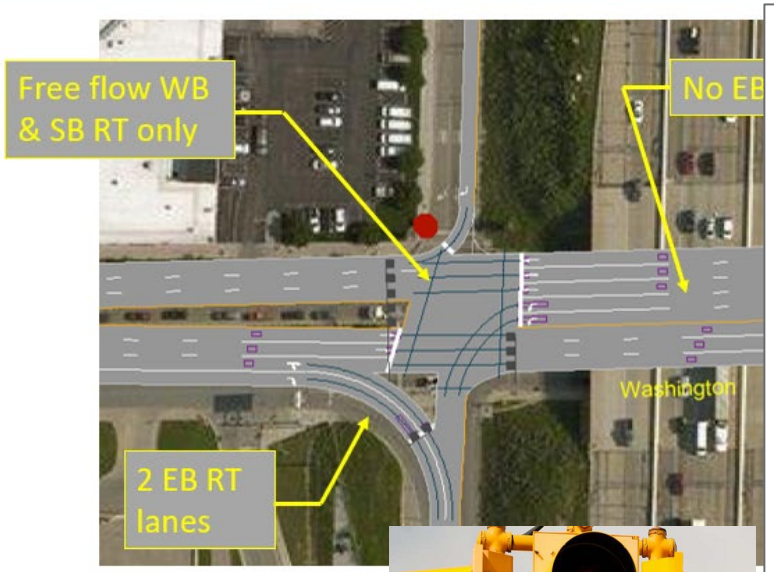
- Mode Choice
  - Transit
  - Carpool/Vanpool
  - Bike/Walk
- Trip Reduction / Reschedule
  - Staggered Work hours
  - Flextime
  - Work from Home
- Public and employer education program
- Real-time traveler information

waze
OUTSMARTING TRAFFIC, TOGETHER

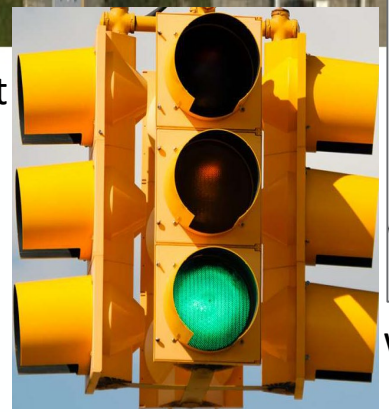


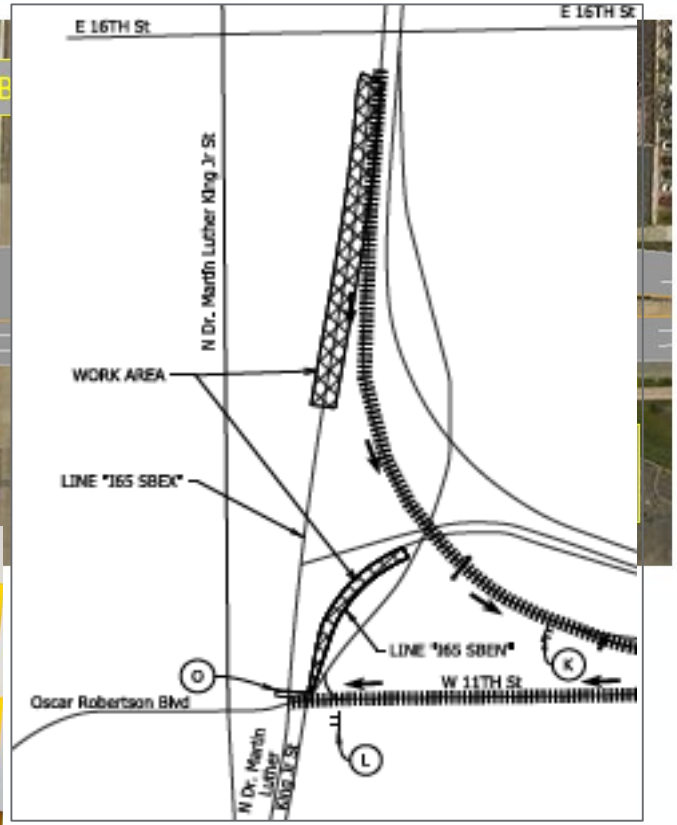
Regional Traffic Improvements

- Adjacent Interchanges
  - Washington Street lane realignments
  - West Street added ramp lanes
- Regional traffic program
  - Working with Indianapolis DPW on ways to improve traffic flow
  - Indianapolis traffic signal improvements
  - Spot intersection and roadway improvements



Washington Street





West Street Interchange

Next Steps

• Start Project Development	March 2017
• System-Level Analysis	May 2018
• Alternatives Screening Report	September 2018
• Preliminary Design / Enviro Study	2019 - 2020
• Select Design-Build Team	June 2020
• EA Published	Summer 2020
• EA Public Hearing	Summer 2020
• Final Environmental Approval	Fall 2020
• Construction start	Late 2020
• Construction complete	Late 2022

NORTH SPLIT UPGRADES DRIVING PROGRESS

Pause for Questions

NORTH SPLIT
UPGRADES
DRIVING PROGRESS

Aesthetic Design Guidelines

INDIANA DEPARTMENT OF TRANSPORTATION
INDOT

Aesthetic Design Guidelines

- The purpose of the Aesthetic Design Guidelines is to provide the Design-Build Team with aesthetic direction for their final design.
- The Aesthetic Design Guidelines are the result of an extensive public engagement process over the last 12 months, including meetings with:
  - Local neighborhoods and neighborhood organizations
  - Local agencies and oversight departments
  - Key local resource groups
  - Local business organizations
  - Local stakeholders and stakeholder groups

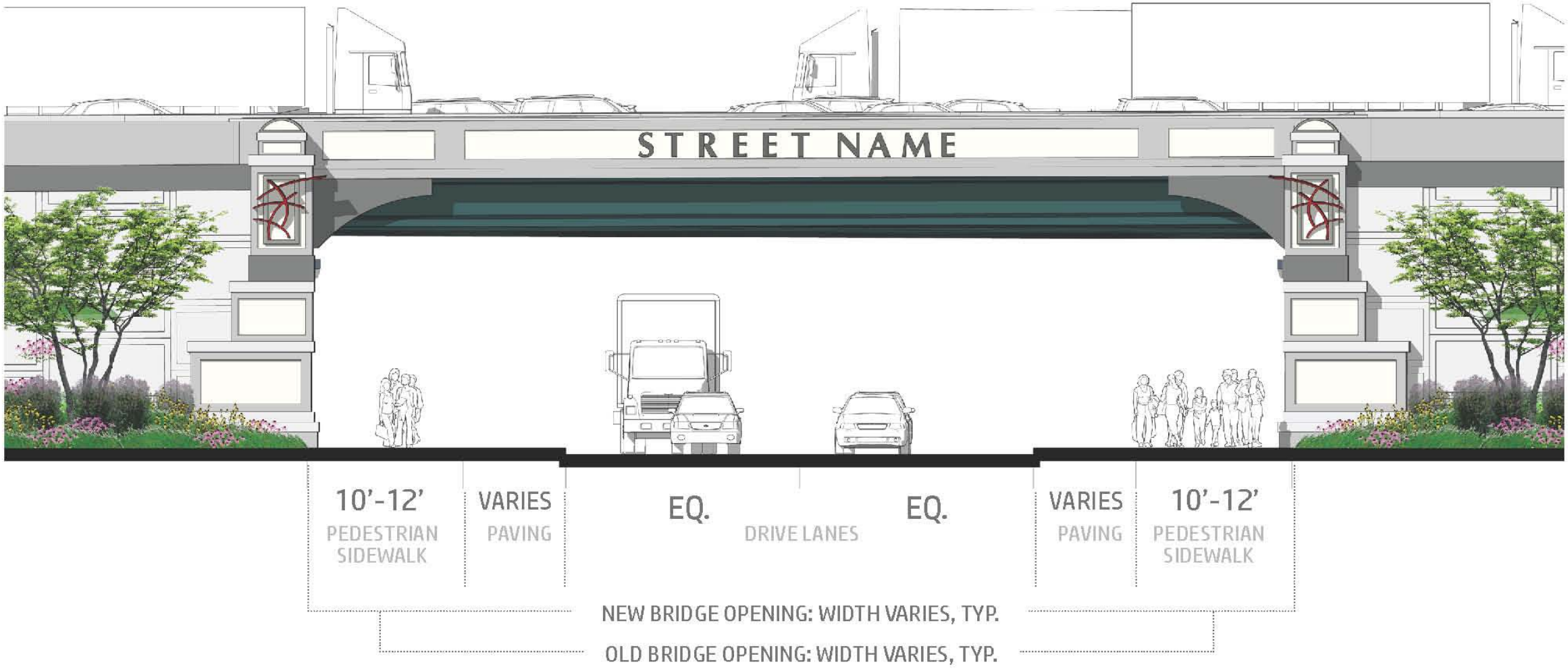
ATTACHMENT 6-1
NORTH SPLIT

AESTHETIC DESIGN GUIDELINES

INDIANA DEPARTMENT OF TRANSPORTATION
INDOT

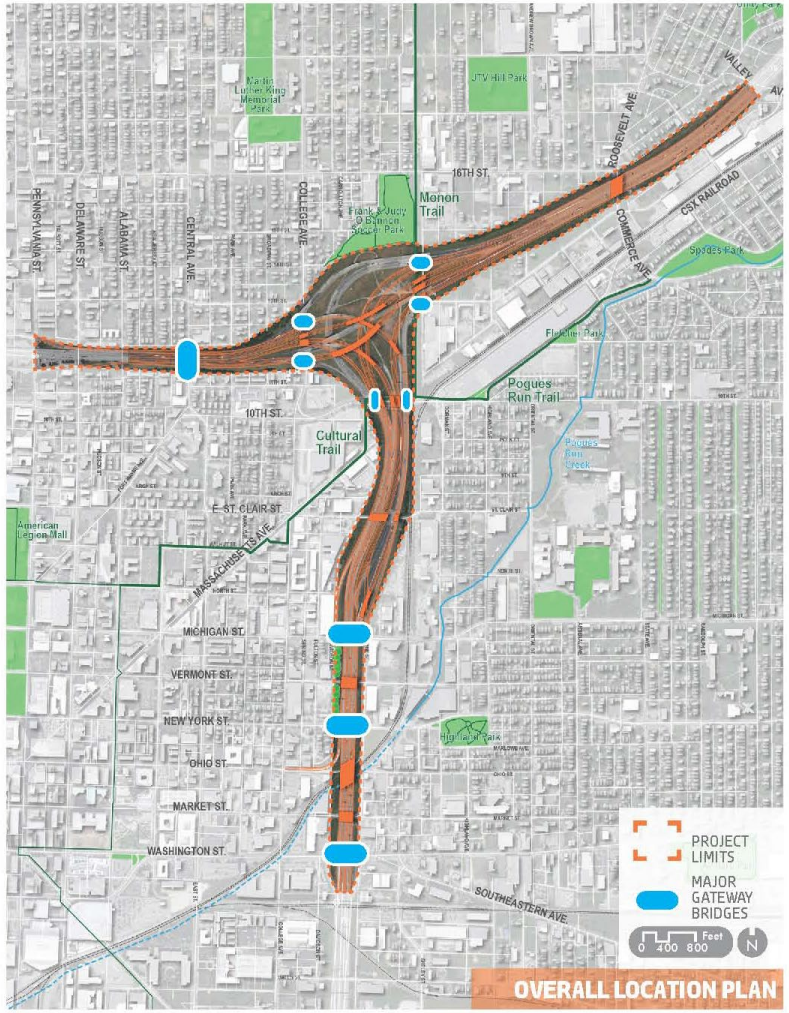
NORTH SPLIT UPGRADES DRIVING PROGRESS

Aesthetic Design Guidelines



TYPICAL MAJOR GATEWAY BRIDGE ELEVATION

Aesthetic Design Guidelines

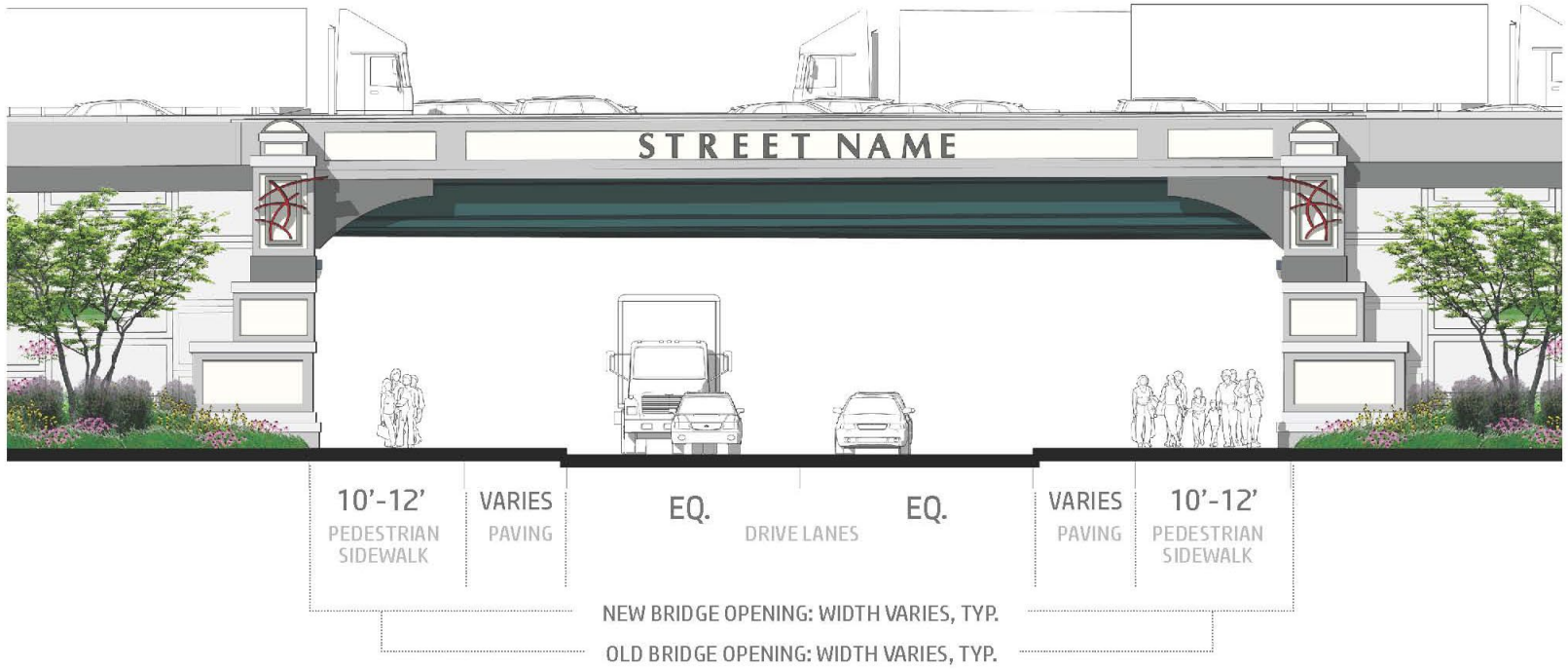


OVERALL LOCATION PLAN

BRIDGE APPLICATION SINGLE SPAN

NOTES:

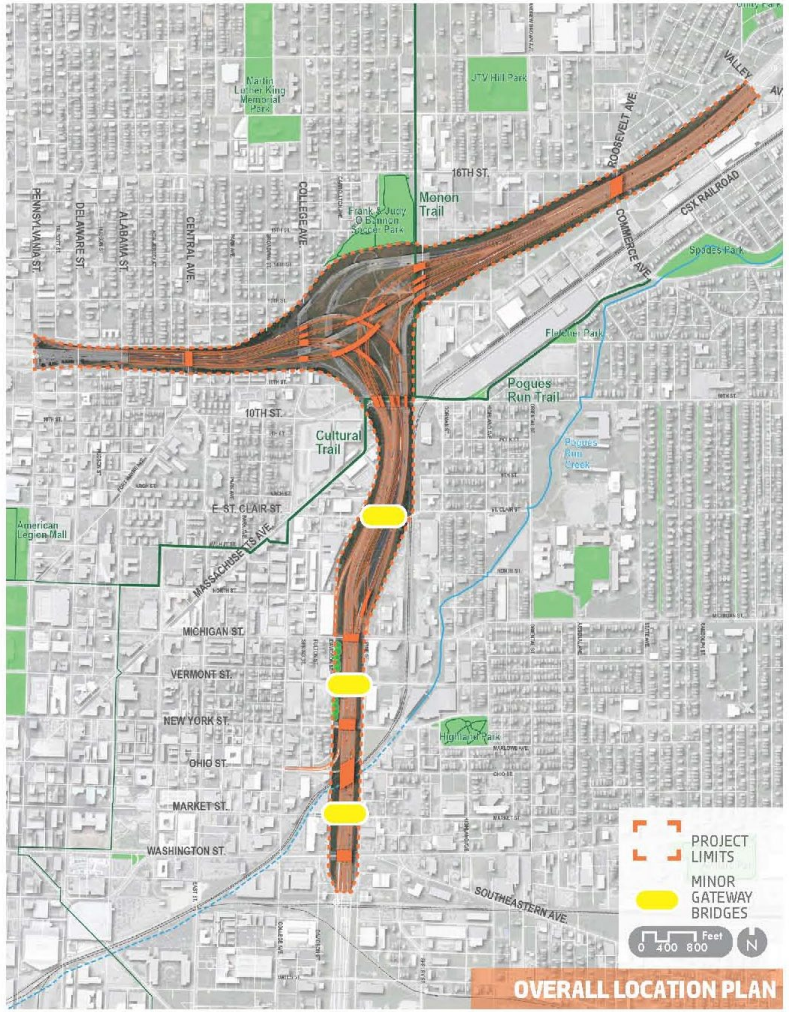
1. CORNER MONUMENTS ONLY REQUIRED ON THE OUTSIDE OF EXTERIOR BRIDGES FOR A TOTAL OF 4 PER CROSSING.



TYPICAL MAJOR GATEWAY BRIDGE ELEVATION

NORTH SPLIT UPGRADES DRIVING PROGRESS

Aesthetic Design Guidelines

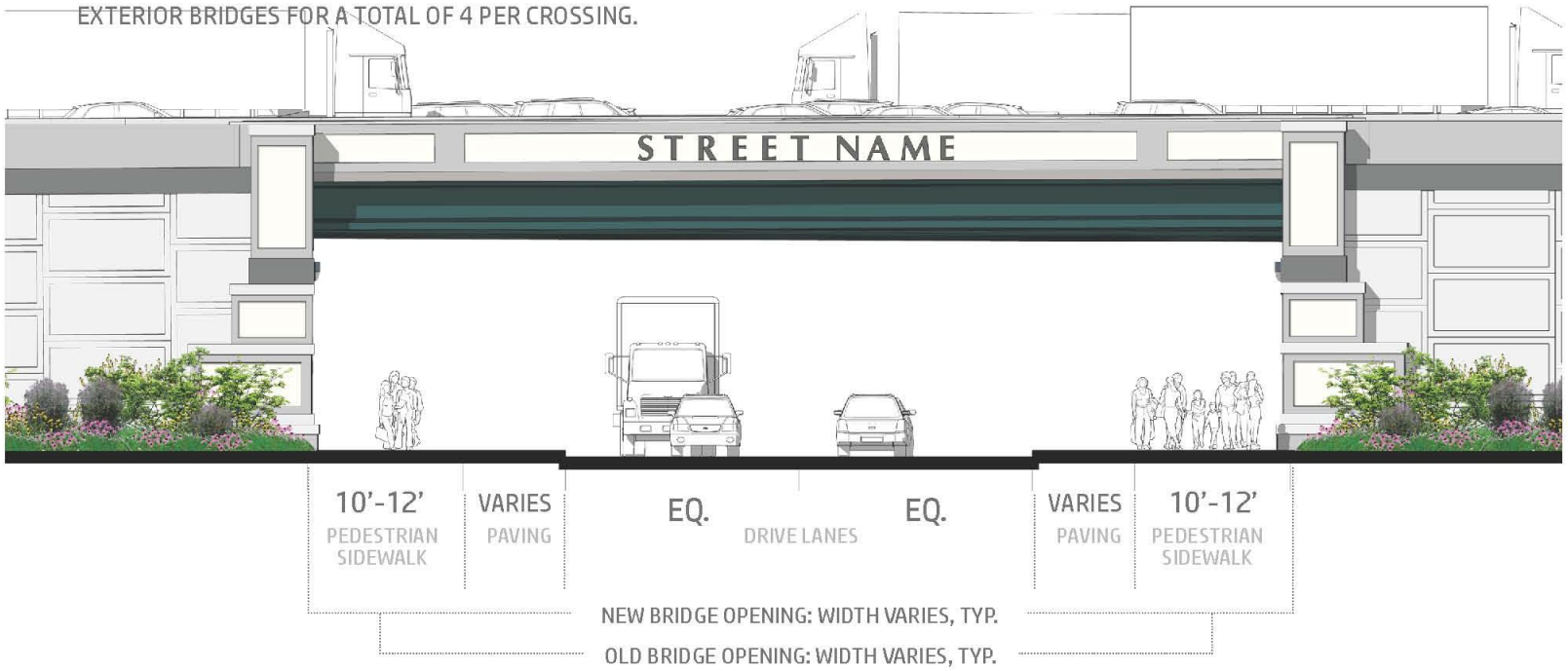


OVERALL LOCATION PLAN

BRIDGE APPLICATION

NOTES:

1. PLANTING AND LIGHTING BUFFER ZONES ONLY REQUIRED AT ST. CLAIR STREET CROSSING.
2. CORNER MONUMENTS ONLY REQUIRED ON THE OUTSIDE OF EXTERIOR BRIDGES FOR A TOTAL OF 4 PER CROSSING.



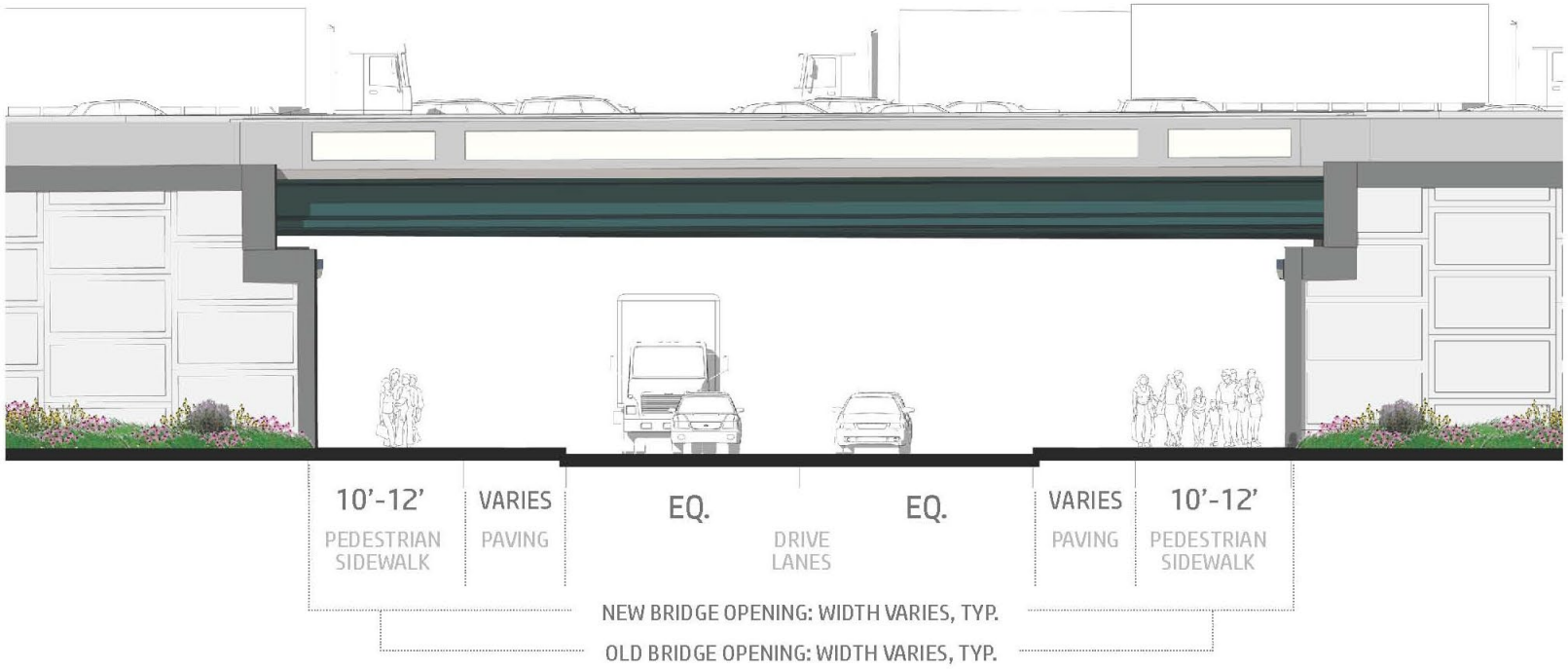
TYPICAL MINOR GATEWAY BRIDGE ELEVATION

NORTH SPLIT UPGRADES DRIVING PROGRESS

Aesthetic Design Guidelines

OVERALL LOCATION PLAN

BRIDGE APPLICATION



TYPICAL STANDARD BRIDGE ELEVATION

Aesthetic Design Guidelines

MAJOR GATEWAY SURFACING SUMMARY

- A consistent 3'-0" wide asphalt block paver band shall be constructed immediately adjacent to the back of curb and parallel to the roadway. Materials shall be a "ground finish". Color shall resemble Hanover A80044 or approved equal.
- Asphalt block paver bands (or other vehicular-rated paver type) shall be constructed perpendicular to the roadway. Paver bands are to be 3'-0" wide at 19'-0" O.C. maximum. Materials should be be a "ground finish". Color shall resemble Hanover A80046 or approved equal.
- Standard concrete pavement will separate each perpendicular asphalt paver band. All concrete surfaces shall be scored as indicated on the following drawings and receive a standard broom finish.

TREATMENT PATTERNS


RUNNING BOND PATTERN


SAW CUT JOINTS


COLOR BANDING


ACCENT COLORS


HEAVY DUTY

NORTH SPLIT UPGRADES DRIVING PROGRESS

Aesthetic Design Guidelines

DOWN LIGHTING

Wall Mounted:

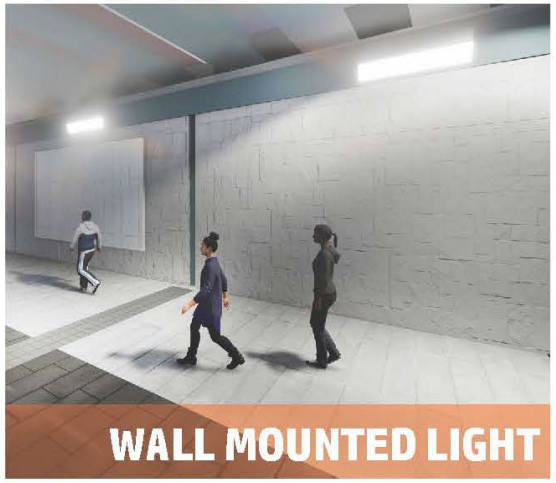
Bar Style down lighting shall be surface mounted to abutment wall coping to achieve pedestrian level lighting requirements. Mock-up shall be required for approval.

APPROPRIATE FIXTURES

TARGETTI | JEDI
COMPACT IP67 INTEGRAL

BEGA | LED
WALL WASHER

LED LINEAR | XOOLUM
IP67



Column Mounted:

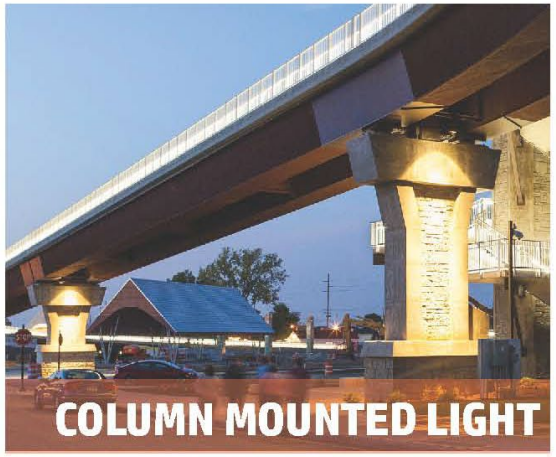
Down lighting shall be mounted to the pier cap. Aesthetic light wash shall be directed vertically down the column and horizontally across the bridge underside.

APPROPRIATE FIXTURES

BEGA | LED
WALL WASHER

BEGA | LED
COMPACT FLOOD

SELUX | AVANZA

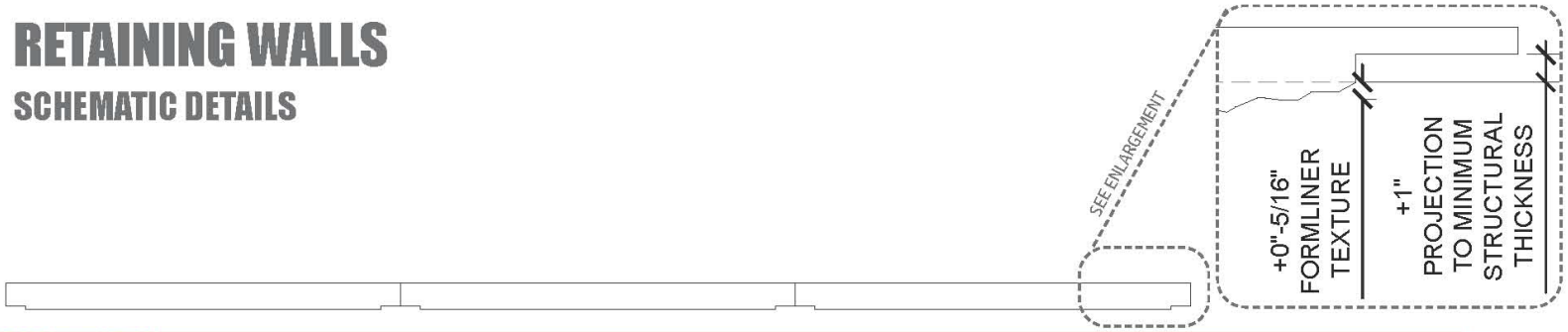


NORTH SPLIT UPGRADES DRIVING PROGRESS

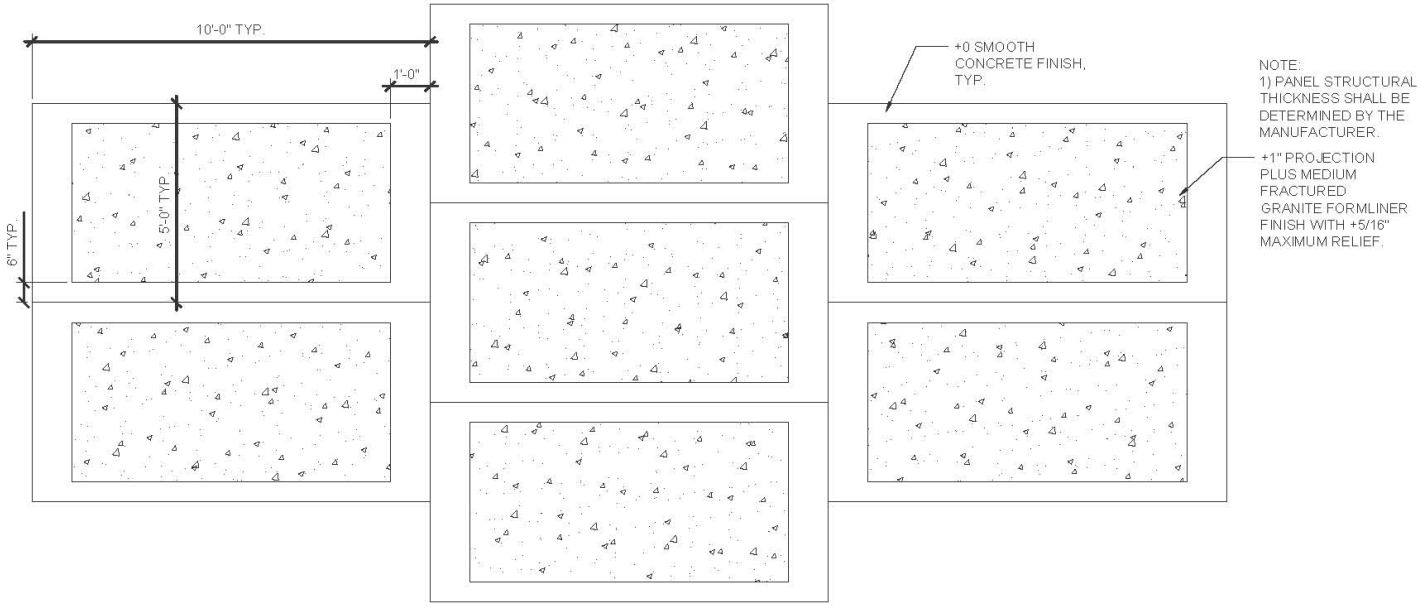
Aesthetic Design Guidelines

RETAINING WALLS

SCHEMATIC DETAILS



PLAN (TYPICAL)



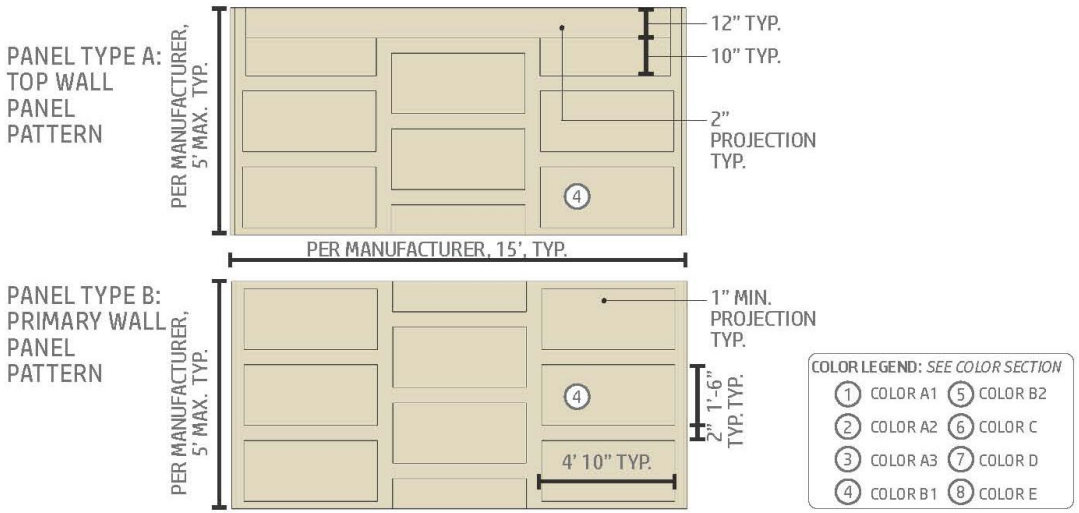
ELEVATION (TYPICAL)

Aesthetic Design Guidelines

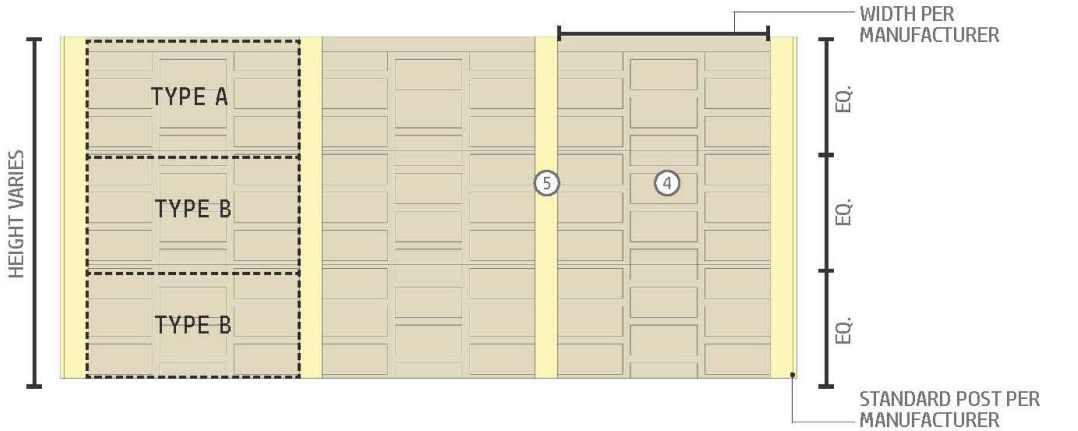
SOUND BARRIERS

Characteristics

- Panel patterns shall be proportionally scaled to meet manufacturer's requirements.
- Panel textures, colors and patterns shall be visually consistent with MSE walls.



SOUND BARRIER PANEL TYPES (TYPICAL)



SOUND BARRIER FRONT ELEVATION (TYPICAL)

NORTH SPLIT UPGRADES DRIVING PROGRESS

Aesthetic Design Guidelines

- Prototypical Treatment Application- Daytime View

NORTH SPLIT UPGRADES DRIVING PROGRESS

Aesthetic Design Guidelines

- Prototypical Treatment Application- Night-time View

NORTH SPLIT UPGRADES DRIVING PROGRESS

Aesthetic Design Guidelines

LANDSCAPE INTRODUCTION

Landscape Summary

This section of the North Split Aesthetic Design Guidelines provides direction for landscape form and function, evaluating how vegetative aesthetic treatments can also serve the needs for the INDOT-owned interstate, the City-owned local streets and the surrounding communities.

Information gained from neighborhood workshops and surveys during the Context Sensitive Solutions process of the I-65/I-70 North Split Project indicated that the public preferred a more naturalistic approach to landscape design with many referring to the term "urban forest." This urban forest concept has been considered as part of the design guidelines - found in *Interchange Plantings* of this section.

This document also recognizes the existence of INDOT standards, as well local groups (such as Keep Indianapolis Beautiful) and resources for achieving the proposed design.

NORTH SPLIT UPGRADES DRIVING PROGRESS

Aesthetic Design Guidelines

LANDSCAPE OVERVIEW

Landscape Design Typology

The landscape palette includes a range of treatments that focus primarily on native plant selections to enhance the aesthetic appeal of the interchange. The design concept places plant species within urban conditions that best represent their naturally occuring plant communities. The typologies for the landscape treatment include:

- Tree Preservation Areas as "The Nature Reserve"
- 10' Buffer-Zones as "The Lawn"
- Side Slope Plantings as "The Uplands"
- Screen Plantings as "The Woodlands"
- Interchange Plantings as "The Prairie's Edge"
- Detention Basin Plantings as "The Wetlands"

Typology 1: Tree Preservation

Tree Preservation Areas protect trees that are deemed "significant" to the landscape. Tree preservation areas were determined through the Section 106 Consultation Process and are included in the final "Do Not Disturb" areas for the project site.

Typology 2: 10' Buffer-Zone

The 10' Buffer-Zone is intended to maintain a set-back for plantings so there is no interference between the landscaped areas and roadway functions.

Typology 3: Side Slope Plantings

Plants, rather than extended infrastructure, can be used for erosion control and soil stabilization along the interstate embankments as a cost-effective and less-infrastructure dependent option.

Typology 4: Screen Plantings

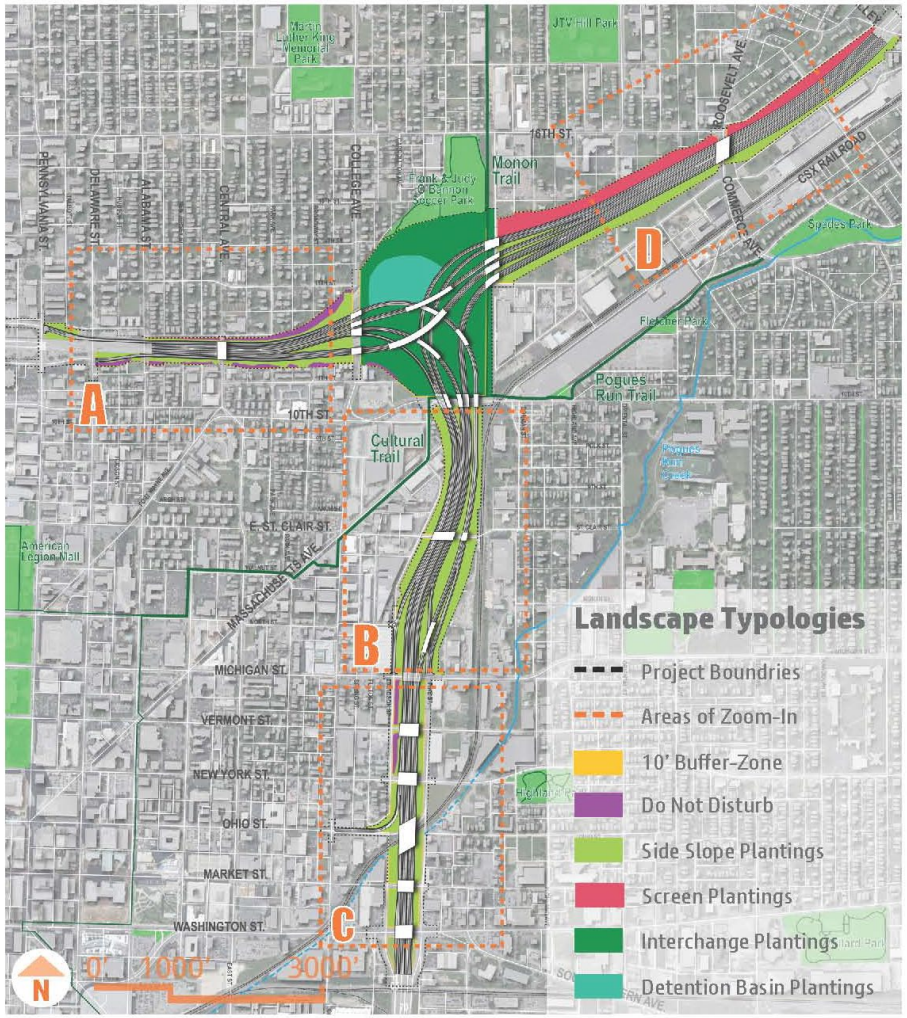
Plants can minimize the appearance of sound barriers from adjacent residences.

Typology 5: Interchange Plantings

Plants can give purpose to expansive spaces, within and around the interchange, in a manner that is low-cost and less maintenance intensive, while still providing visual interest.

Typology 6: Detention Basin Plantings

Plants allow for the filtration and infiltration of storm water on site. As such, a heavily planted area for the purpose of stormwater detention - a dry extended detention basin - is favored over a traditional retention pond for the benefits it can offer the urban landscape.



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TYPOLOGY 1: TREE PRESERVATION AREAS

Design Intent

Tree Preservation Areas protect trees that are deemed "significant" to the landscape. The tree preservation areas are included in the final "Do Not Disturb" areas for the project site.

Further details about tree preservation in the I-65/I-70 North Split Project can be referenced from the Section 106 Consultation Process and should correspond with the final "Do Not Disturb" project limits.

Design Concept
'The Nature Reserve'

Protect trees throughout all phases of construction, keeping valued natural elements existing within the city.

Benefits

- Retain visual interest
- Protect environmental health
- Provide erosion control

Tree Values

Trees provide lifelong environmental and aesthetic benefits that improve community quality of life. Trees add value to their surroundings by preserving water and soil quality, removing pollutants from the air, lowering surface and air temperatures and providing habitat for wildlife. While trees are some of our most valuable urban assets, they are vulnerable to environmental conditions.

Tree Protection

Trees have basic needs for survival and growth. Water and soil nutrients must be managed to maintain their health, safety and appearance. If not properly protected, construction activities such as soil compaction, grading, improper root and limb pruning, bark injury, incorrect storage of construction materials and dumping of waste can cause stress and damage to trees. However, in most cases, trees will survive if separated from construction equipment and materials.

Various professionals are involved in protecting trees throughout the construction process, including arborists, landscape architects, engineers, planners and municipal agencies. Protecting trees takes time, money and communication. All phases of construction should include tree protection procedures.

According to the Penn State Extension's *A Guide to Preserving Trees in Development Projects*, Tree preservation occurs during the entire construction process:

Pre-construction

- Tree inventory
- Planning, design, negotiations
- Removals
- Staking of construction footprints under trees—required limb pruning
- Insect control or other care
- Fencing preserved trees

Construction

- Communication and education
- Protection zones
- Required root pruning
- Maintenance of fencing
- Monitoring tree health
- Tree care

Post-Construction

- Communication and education
- Protecting
- Tree care

Aesthetic Design Guidelines

TYPOLOGY 2: 10' BUFFER-ZONES

10' Buffer-Zones

The 10' Buffer-Zones are intended to maintain a set-back for plantings so there is no interference between the landscaped areas and roadway functions, as well as providing unobstructed views.

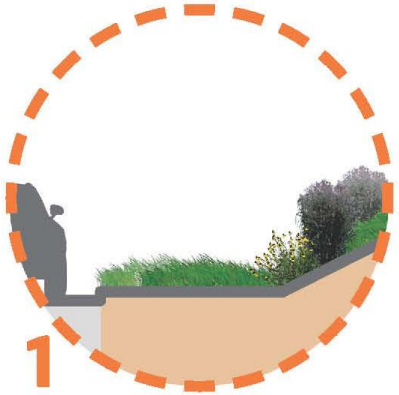
Design Concept 'The Lawn'

The Buffer-Zones provide a uniform edge around all plantings allowing for a "naturalized" look, while keeping a manicured appearance of turf amongst the urban context. This appearance is created through the use of a "low-to-no-mow" seed mix.

Benefits

- Minimizes costs associated with mowing and maintenance
- Creates a safe, open buffer zone along the roadway
- Provides order to naturalized plantings

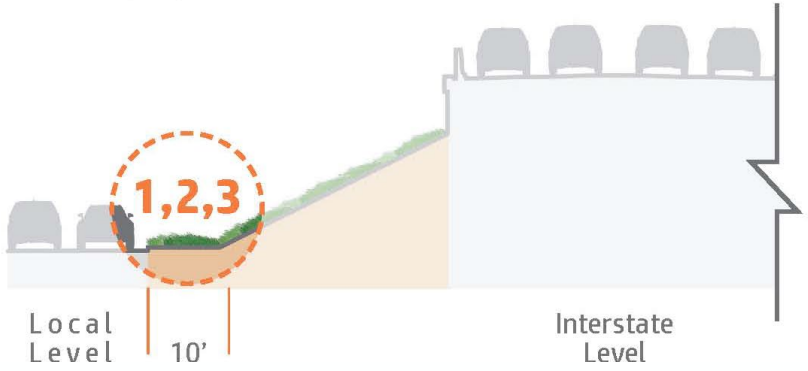
TYPOLOGY 2: 10' BUFFER-ZONES



Standard Condition: Buffer-Zone Lining Local Level Roadway Edges

Potential Condition: Street Tree at Local Level as part of the Buffer-Zone

Potential Condition: Street Tree and Pedestrian Walk at Local Level as part of the Buffer-Zone



Note: The Buffer-Zones also occur in the areas between side slopes and property lines, as well as along the edge of any trails/walks.

10' Mown-Buffer-Zone Scenarios

Eco-lawn natural appearance on slope.

Eco-lawn mown versus natural appearance.

NORTH SPLIT UPGRADES DRIVING PROGRESS

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TYPOLOGY 3: SIDE SLOPE PLANTINGS

Design Intent

Plants, rather than extended infrastructure, can be used for erosion control and soil stabilization along the interstate embankments as a cost-effective and less-infrastructure dependent option.

Design Concept: 'The Uplands'

Species of the upland plant community provide a root system for erosion control measures and adapt to the constructed terrain.

Benefits

- Unifies the east, west and south legs through repetition of plant massing and grouping
- Addresses erosion control concerns with an aesthetic solution
- Minimizes costs associate with mowing and maintenance
- Supports native flora and fauna

TYPOLOGY 3: SIDE SLOPE PLANTINGS

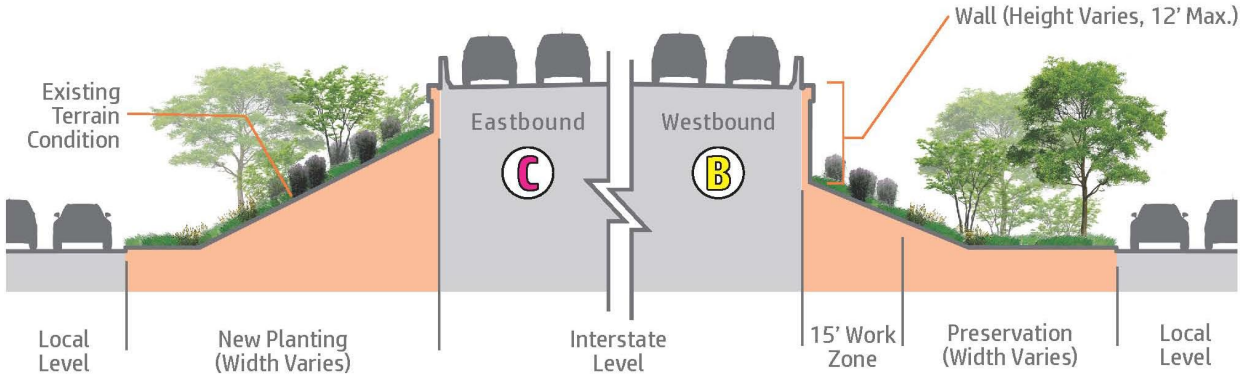

Itea virginica


Fragrant Sumac


Winterberry


Smooth Sumac

TYPOLOGY 3, CONDITIONS C & B




Minnesota Dept. of Transportation
Slope planting - forbs and grasses.

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TYPOLOGY 4: SCREEN PLANTINGS

Design Intent

Plants can minimize and soften the appearance of sound barriers.

Design Concept: 'The Woodlands'

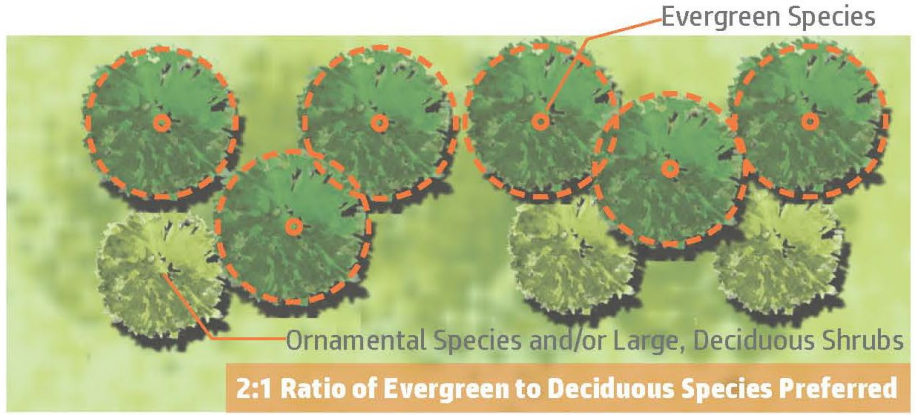
The massing of evergreen and deciduous plants at the base of sound barriers can create a natural backdrop that mimics a woodland edge transition, when viewed from adjacent properties.

Benefits:

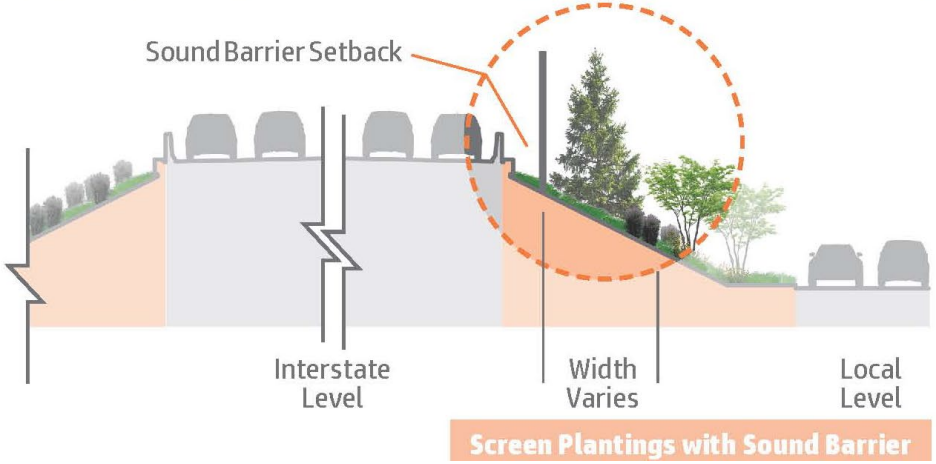
- Reduces the visual prominence of sound barriers
- Creates a visually interesting buffer and soft edge
- Offers a natural backdrop to neighboring communities

TYPOLOGY 4: SCREEN PLANTINGS

Spacing between screen tree plantings to be a min. of 10'. Plants should be staggered in placement, as seen in diagram on page 54.



Trees (particularly evergreen species) shall be placed so that they grow together to form a "green wall". A 2:1 ratio of evergreen to deciduous species is needed in order to achieve this effect as well as a maximum spacing of 10' on-center. Any location where a sound barrier is implemented, a screen will be used to camouflage and soften the appearance.




Green Pillar Pin Oak


Slender Silhouette Sweetgum


Freeman Maple

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TYPOLOGY 5: INTERCHANGE PLANTINGS

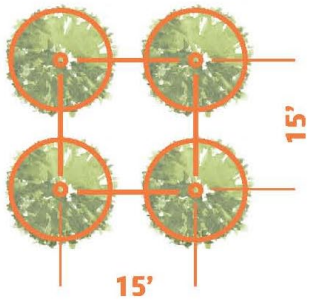
Design Intent

Plants can give purpose to expansive spaces in a manner that is low in cost and required maintenance, but high in visual quality. Over time, the maturation of trees in this area will create a more dense canopy that will begin to take on characteristics of some stakeholder desires to create an "urban forest." This is essentially the heavy massing of trees to create an urban vegetative treatment style.

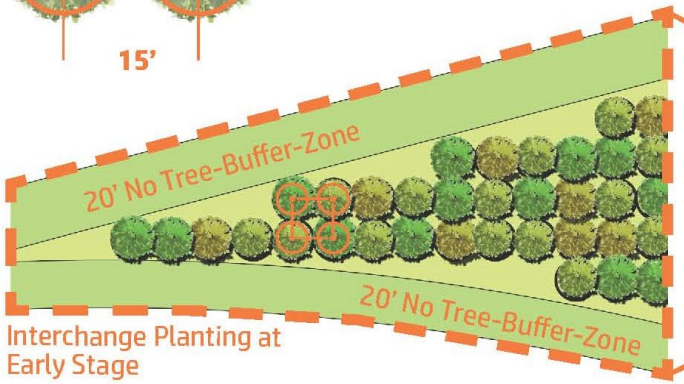
Design Concept: 'The Prairie's Edge'

The seeding and planting of large, open areas with mixes of native grasses, sedges and forbs, as well as a variety of tree species, responds to the public's desire for a natural-feel landscape juxtaposed against the urban setting.

TYPOLOGY 5: INTERCHANGE PLANTINGS, CANOPY TREES



The illustrations to the left and below show the use of a fractured grid pattern for the placement of trees within the interchange.



Interchange Planting at Early Stage

The approach to planting such a space shall be one of restorative quality - planting large quantities in close proximity - where survival of the fittest tree specimen will result in a naturalistic appearance. The interchange planting will follow Keep Indianapolis Beautiful's (KIB) planting standard of 15' on-center maximum spacing.

Canopy Tree Grid Arrangement


Tulip Tree


Black Gum


Cardno
Prairie Mix in bloom.


Cardno
Native Wildflower Seed Mix.


Michael Volker via Pinterest
Prairie planting early to late summer.


Iowa Natural Heritage Foundation
Prairie planting late summer to early fall.

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TYPOLOGY 6: DETENTION BASIN PLANTINGS

Design Intent

A heavily planted area for the purpose of stormwater detention - a dry extended detention basin - is favored over a traditional retention pond for benefits it offers the urban landscape.

Design Concept: 'The Wetlands'

A detention basin to resemble that of a wetland environment will provide more aesthetic value to the site, minimize the amount of standing water and allow even infiltration.

Benefits

- Filtrates pollutants from storm water runoff
- Allows for infiltration of otherwise standing water
- Designed alternative to traditional systems, offering aesthetic value
- Blends "natural" and urban environments
- Supports local flora and fauna

Seed Mix Composition:

STORMWATER SEED MIX

This planting application shall be used within the interchange for vegetated swales and in lieu of a retention pond.

The seed mix must tolerate highly fluctuating water levels and poor water quality associated with urban stormwater runoff with the following composition:

Approximately 10% Permanent Grass/Sedge Species Seed, 5% Forb Species Seed and 85% Temporary Cover Species Seed applied at a rate of approximately 35 PLS (Pure Live Seed) pounds per acre.

PRAIRIE SEED MIX

See *Typology 5: Interchange Plantings* section for Appropriate Seed Mix

The *Prairie Seed Mix* can be incorporated with the *Stormwater Seed Mix* in the upper third of basins that experience long, dry periods.

Detention Basin General Design Guidelines:

- Basin design should conform to regulations set by INDOT and local stormwater ordinances (IDEM Storm Water Quality Manual).
- Construct of basins should allow for the slow infiltration of water, with standing water persisting for no less than 24 hours and no longer than 72.
- Basins should be graded in a way that resembles a natural pond bed, having curvilinear and undulating forms.
- Bio-retention areas should be included at inlets/outlets of basins.
- Basin size should be dictated by the watershed coverage of collected runoff.
- Overall shape and side slopes should follow a 4:1,or flatter, ratio in construct.

Economy Prairie Seed Mix - Yellow Coneflower

Stormwater Seed Mix - Crested Oval Sedge

Naturalized Stormwater Detention Basin

Aesthetic Design Guidelines

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Pause for Questions

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I-65/I-70 North Split Project

Project Information: www.northsplit.com