


SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
 - Map: _____ Dated 10/30/2017
 - Data sheets prepared/submitted by or on behalf of the PJD requestor.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report. Rationale: _____
- Data sheets prepared by the Corps: _____
- Corps navigable waters' study: _____
- U.S. Geological Survey Hydrologic Atlas: _____
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Columbus, IN 7.5 min, 1962
- Natural Resources Conservation Service Soil Survey. Citation: SSURGO Bartholomew County
- National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/
- State/local wetland inventory map(s): _____
- FEMA/FIRM maps: _____
- 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Indiana Aerial Photograph, 2012
 or Other (Name & Date): Site Photographs, 8/23/2017
- Previous determination(s). File no. and date of response letter: _____
- Other information (please specify): _____

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of
Regulatory staff member
completing PJD



Signature and date of
person requesting PJD
(REQUIRED, unless obtaining
the signature is impracticable)¹

10/30/2017

¹ Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

Appendix G

Public Involvement



July 24, 2017

Name
Address
City, State Zip

Re: SR 46 Railroad Overpass and Intersection Improvement Project
INDOT Des No. 1700319

Dear Property Owner;

Our information indicates that you own or occupy property near this proposed highway project. Working with the Indiana Department of Transportation, our employees will be doing a survey of the project area in the near future. It may be necessary for them to come onto your property to complete this work. This is allowed by law by Indiana Code IC 8-23-7-26. They will show you their identification, if you are available, before coming onto your property. If you have sold this property, or it is occupied by someone else, please let us know the name and address of the new owner or current occupant so we can contact them about the survey.

At this stage, we generally do not know what effect, if any, our project may eventually have on your property. If we determine later that your property is involved, we will contact you with additional information.

The survey work will include mapping the location of features such as trees, buildings, fences and drives, and obtaining ground elevations. The survey work may also include the identification and mapping of wetlands, archaeological investigations (which may include excavation of small shovel test probes), and various other environmental studies. The survey is needed for the proper planning and design of this highway project. Please be assured of our sincere desire to cause you as little inconvenience as possible during this survey. If any problems do occur or if you have questions, please contact me at the phone number or address shown herein or the INDOT Project Manager, Joe Bell, at 812-524-3973 (or jbelle@indot.in.gov).

Sincerely,

A handwritten signature in black ink that reads "Nick Batta".

Nick Batta, PE
Project Engineer
nbatta@cmtengr.com
317-492-1962

THE REPUBLIC

AIM MEDIA INDIANA, d/b/a THE REPUBLIC, P.O. BOX 3213, McALLEN, TX 78502-3213 FED I.D. #32-0472774

Prescribed by State Board of Accounts

General Form No. 99P (Rev. 2009A)

Attn: MARY WRIGHT
Name: INDOT OFFICE OF PUBLIC INVOLVEMENT
Address: 100 N SENATE AVE RM N642
City State: INDIANAPOLIS IN 46204
(Government Unit)
County: Bartholomew
Acct. # C11151578
Order # 60023744

PUBLISHER'S CLAIM

LINE COUNT

Display Master (Must not exceed two actual lines, neither of which shall total more than four solid lines of the type in which the body of the advertisement is set) -- number of equivalent lines

Head -- number of lines _____
Body -- number of lines _____
Tail -- number of lines _____
Total number of lines in notice _____

246

COMPUTATION OF CHARGES

246 lines,	1	columns wide equals	246	equivalent lines at	\$	0.5017	
cents per line						\$	
Additional charges for notices containing rule or tabular work (50 per cent of above amount)						\$	
Charge for extra proofs of publication (\$1.00 for each proof in excess of two)							
TOTAL AMOUNT OF CLAIM						\$	123.41

DATA FOR COMPUTING COST

Width of single column in picas: 7.217 Size of type...7....point.
Number of insertions: 2

Pursuant to the provisions and penalties of IC 5-11-10-1, I hereby certify that the foregoing account is just and correct, that the amount claimed is legally due, after allowing all just credits, and that no part of the same has been paid.

I also certify that the printed matter attached hereto is a true copy, of the same column width and type size, which was duly published in said paper 2 times. The dates of publication being as follows:

5/14 & 5/21/19

Additionally, the statement checked below is true and correct:

- Newspaper does not have a Web site.
- Newspaper has a Web site and this public notice was posted on the same day as it was published in the newspaper.
- Newspaper has a Web site, but due to technical problem or error, public notice was posted on
- Newspaper has a Web site but refuses to post the public notice.

Date: May 21, 2019


Title.....Legal Advertising Clerk

Page : 1 of 4 05/21/2019 08:36:58

Ad Number : 50027814

Order Number : 60023744
PO Number : *Mary Wright
Customer : C11151578 INDOT OFFICE OF PUBLIC INV
Contact : RICHARD PHILLABAUM
Address1 : 100 N SENATE AVE RM N642
Address2 :
City St Zip : INDIANAPOLIS IN 46204
Phone : (317) 232-1493
Fax : (317) 232-1499
Credit Card :
Printed By : Vicki Fields
Entered By : Amirtha Sathi Sargunam

Ad Key :
Salesperson : 28 - Amirtha Sathi Sargunam
Publication : The Republic
Section : 60 Notices
Sub Section : 60 Notices
Category : 6015 Legals
Dates Run : 05/14/2019-05/21/2019
Days : 2
Size : 1 x 23.86, 246 lines
Words : 876
Ad Rate : Open
Ad Price : 123.41
Amount Paid : 0.00
Amount Due : 123.41

Keywords : NOPH May 29,2019
Notes : * 2 copies of Publisher's Claim mailed to Mary Wri
Zones :

NOTICE OF PUBLIC HEARING

Indiana Department of Transportation (INDOT) Public Hearing to present a proposed State Road (SR) 46 New Interchange carrying SR 46 over SR 11 and the Louisville and Indiana (L&I) Railroad.

The Indiana Department of Transportation (INDOT) will hold a public hearing with the presentation beginning at 6:00 p.m. on Wednesday, May 29, 2019, at the Cal Brand Meeting Hall, Columbus City Hall, 123 Washington Street, Columbus, IN 46075. The purpose of the public hearing is to offer all interested persons an opportunity to comment on the environmental document and related materials for the proposed new interchange. The doors will be open at 5:30 p.m. in order to view displays and talk to the representatives prior to the start of the hearing. The purpose of the project is to reduce current and anticipated future delays to traffic on SR 46 due to train activity at the L&I rail crossing, and to reduce congestion and improve vehicular mobility at the SR 46/SR 11 intersection. Several alternatives were studied in order to select a project that would meet the purpose and need while having minimal environmental impacts. The design selected is a modification of a cloverleaf interchange known as a Parclo or a partial cloverleaf interchange. This alternative removes the at grade intersection at SR 46 and SR 11 by elevating SR 46 over SR 11 and the railroad. This will allow free-flow operations for the SR 46 traffic. The SR 11 southbound traffic would pass underneath SR 46. Cloverleaf ramps would be provided for northbound SR 11 to westbound SR 46 and eastbound SR 46 to southbound SR 11. The intersection of SR 11 and the eastbound SR 46 off-ramp will be a signalized intersection located approximately 900 feet south of the current intersection. Known as a "green-T" layout, the intersection will install a curbed median along SR 11 so the southbound traffic can remain in a free-flow, bypassing the signal. Due to this project being located within a transition zone of higher suburban speeds and a downtown area with lower speeds, the design has been laid out accordingly. As vehicles travel eastbound along SR 46 through the project area, the three horizontal curves are designed at 50 mph, then 40 mph, and then 30 mph (and in reverse for westbound traffic). The interchange ramps are designed to 25 mph to minimize the perception of this being a freeway-style interchange. The Columbus People Trail system will be extended to the south along the west side of SR 11 within the project area. Tree clearing will occur as a part of this project. Mitigation for tree removal activities outside of the floodway will be addressed on-site with approximately 7.39 acres of tree planting within the project boundaries. Mitigation for tree removal activities within the floodway will be addressed as a separate project. This mitigated area off site will contain approximately 3.90 acres of tree planting. An estimated 50.0 acres of new right-of-way is proposed

with no relocations. The preferred maintenance of traffic plan will be implemented in five stages which at times will require lane closures, restrictions, and detour routes, however exact details will be refined when the project progresses to actual construction. Access to all adjacent properties will be maintained during construction. Disruption of emergency services and school bus routes may occur but will be notified prior to any construction that would block or limit access. The environmental document includes information regarding community and environmental impacts related to the proposed project. The environmental document and the preliminary designs are available to view prior to the public hearing at the following locations:

1. Bartholomew County Public Library, 536 5th St., Columbus, IN 47201
2. INDOT Seymour District at 185 Agric Ln., Seymour, IN 47274
3. Hearings Examiner, Room N642 of the IGCN, 100 N. Senate Ave., Indianapolis, IN 462042216, Phone # (317) 234-0796

Verbal statements will be accepted during a public comment session for the official public record immediately following the formal presentation. Verbal comments may be restricted to time limitations based on the number of speakers. In addition, written comments in regard to the projects may be submitted prior to the public hearing and within the comment period to: INDOT Public Hearings, IGCN Room N642, 100 N. Senate Ave., Indianapolis, IN 46204. E-Mail:

mwright@indot.in.gov
With advance notice, INDOT can provide special accommodation for persons with disabilities and/or limited English speaking ability and persons needing auxiliary aids or services such as interpreters, signers, readers, or large print. Should special accommodation be needed please contact Rickie Clark, Office of Public Involvement at (317) 232-6601, or email rclark@indot.in.gov preferably by Wednesday, May 22, 2019. This notice is published in compliance with Code of Federal Regulations, Title 23, Section 771 (CFR 771.111(h)(1)) states: "Each State must have procedures approved by the FHWA to carry out a public involvement/public hearing program." 23 CFR 450.212(a)(7) states: "Public involvement procedures shall provide for periodic review of the effectiveness of the public involvement process to ensure that the process provides full and open access to all and revision of the process as necessary", approved by the Federal Highway Administration, U.S. Department of Transportation on August 16, 2012. INDOT, Mary Wright, Public Hearings Examiner, Phone # (317) 234-0796, R:05/14, 05/21 60023744 hspaxlp

May 29, 2019
SR 46 & SR 11 New Interchange
DES # 1700139

Public Statements at the Public Hearing

John Dunlap – John Dunlap, a resident here in Columbus. My main concern because I live upstream of this new activity is the effects of what it is going to do flood wise. Over the last 15 years we have had ten of the highest, highest levels of flood and a lot of it is due to the dual lane (ing) and the dual lane (ing) of 46 West. When that was done there were many many, there were many many culverts planed for that and unfortunately if you drive along there are none. This to me looks like presents an opportunity to get some upstream relief. If you look, if you pull up the map, the roadway, the new roadway where 46 (I'll try and speak real load as he is walking to the screen) the new roadway here presents an opportunity for relief of water through here. I've been told that this is going to, that the roadbed will be removed. I hope it will be lowered. There are plans to lower it as well as remove it. I think it would be nice, because that way we would get into a situation where water here being restricted by 46 would be allowed down. Now this area here, I know you have plans for some culverts in there that would (inaudible) drainage in this area basically, because this restriction is here and here not here. So if we can get more than just some relief but a lot of relief in through here. Thank You.

Hutch Schumaker – My name is Hutch Schumaker. I appreciate John's comments I also own some property upstream from this project, but I do applaud city and state government for proceeding with the project because it is going to be a tremendous relief I think to our community. I guess we are not asking questions but I would, I've been told I think that you are gonna be moving about 480,000 cubic yards of dirt. And I don't know I can't tell from the plans maybe it's simply because I'm old and I can't see well, but I was wondering about future expansion plans, you know we have three lanes from what I understand you said going in and out in the plan currently. If this were to be expanded twenty years down the road to four lanes, are you planning far enough in advance so that the fill that you are bringing in doesn't require you to close down the entire roadway to add more lanes because you have to add another 100,000 cubic yards of fill so you have to shut down all of this again. And I say twenty years that will go really fast for me because I hope to be around in twenty years, but it flies and you know the way traffic happens and depending on the seven hundred acre development just to the west and south of this project with the hospital property that traffic could increase dramatically in the next five years after this opens. It would be an incredible shame in my estimation to find a 30 percent volume increase in traffic and say "oops" sure wish we had added another lane when we were planning this five years ago. So just kind of taking the big picture look – looking out into the future a few years for planning for additional roadways I think would be advisable. – Thank You

Demetrius Villa – My name is Demetrius Villa. Thank you for coming to our city and giving us the opportunity to opine of this. As others have stated around I do think construction of this infrastructure is a very good thing we need it. Especially for newer residents that are coming into the town, into the city. It's necessary for our growing county and state to not only move the economy forward but also save lives and time for the Hoosiers around here. And speaking of time, a long time ago, Hoosiers had the option to travel car free and traffic free by train. So with the end of the Hoosier State that's going to connect Indy over to Chicago, it's no doubt, that it's going to be regretful decision as other states like Florida and Texas are moving ahead to revitalize and privatize high speed passenger rail to connect their states and hopefully join the 21st century with the rest of the first world. At some point we will probably do the same, especially with the nest generation coming soon. And Columbus will at some point be re-connected with the rest of the state with modern passenger rail. So I'm hoping that with this construction with the separated rail, that there will be a look into to having passenger rail equipment as well as having that availability for not just freight railroad but for also passenger rail as that will be happening at some point in the future God willing. Thank you all for having me be here and I hope this project goes well. Thank you

Wright, Mary

From: Adam Endres <adam.endres15@gmail.com>
Sent: Friday, June 14, 2019 1:24 PM
To: Wright, Mary
Subject: SR 46 & SR 11 New Interchange Bridge over the L&I RR
Attachments: INDOT Input& Feedback Form 053119.pdf

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Name: Adam Endres
Address: 301 Sunset Dr.
Columbus, IN 47201
Email: adam.endres15@gmail.com

Comments:

I am writing in response to SR 46 & SR 11 New Interchange Bridge over the L&I RR design (see attached blank feedback form).

Please hear and consider the voices of those of us living in surrounding neighborhoods that

Our home is located in a floodplain just north of this exchange and this new interchange may be the ideal opportunity to mitigate potential future flooding. In previous reconstruction projects along the section of SR 46 being modified, it was discussed to add multiple culvert/bridges so as not to restrict spilling over water from the White and Flatrock Rivers from flowing south and to not back up into the nearby neighborhoods causing flooding hazards. This concept never became a reality and as such the flooding hazard has been exacerbated.

With new reconstruction taking place, now is the time to correct this previous miss and put flood mitigation in place for our homes and downtown area. As an engineer by trade, I know that the design phase is the best time to incorporate key stakeholder requirements while minimizing cost impact. There may not be a better time to correct this problem for a very long time.

Thank you for your time reading our concerns and your consideration of our voices.

Sincerely,

Adam Endres and family



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 234-0796
FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

May 29, 2019

The purpose of this meeting is to provide information to concerned citizens and to receive input and feedback. This form is provided for your convenience to comment on the project or the presentation. Comments may be submitted today, or mailed anytime in the next two (2) weeks to:

Mary Wright
INDOT Office of Public Involvement
100 North Senate Avenue
IGCN 642
Indianapolis, IN 46204

Fax: 317-233-4929
E-Mail: mwright@indot.in.gov

Final Comment Date:
Wednesday, June 12, 2019

Location: SR 46 @ SR 11 New Interchange
Bridge over the L&I RR
DES #: 1700139

Name: (Please Print) _____

Address: _____

E-Mail: _____

Comments: _____

Signature: _____

Wright, Mary

From: PATRICIA CONNER <pat.conner1@comcast.net>
Sent: Thursday, June 13, 2019 3:15 PM
To: Wright, Mary
Subject: 1700139 Public Hearing comments
Attachments: 1700139 SR46 comment.pdf; 1700139 Bush comment.pdf

****** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ******

1700139 SR 46 and SR 11 Railroad overpass intersection.

Mary

Thank you for providing revised information to the library and extending the comment period until Friday. Attached are two comments pertaining to the public hearing.

Pat Conner

Mary Wright
INDOT Office of Public Involvement
100 North Senate Avenue, IGCN 642
Indianapolis, IN 46204

Des. No 1700139
SR 46 @ SR 11 New Interchange
Bridge over the L&I RR

Patricia Conner
305 Sunset Drive
Columbus, In 47201
pat.conner1@comcast.net

Comments:

I am in favor of the project. The increased train traffic will create long lines of traffic headed both east and west on SR 46. Westbound traffic out of Columbus ties up several intersections in downtown. The project will eliminate an at-grade crossing and help will traffic flow. Having a design that also incorporates free-flow movements at the intersection is a great benefit. I do have a few comments concerning what was presented at the public hearing and in the environmental documentation.

1. Currently the speed limit heading east from I-65 starts at 40mph for almost a mile, then changes to 50mph for 0.5 mile and back to 40mph before the intersection with SR 11. It stays 40mph until after crossing the Stewart bridge, where it changes to 30 mph. The short distance of 50 mph is somewhat confusing and also leads to high speeds along this stretch, frequently up to 60mph. The proposed design has roadway curves at 50mph, 40mph before the SR 11 overpass, and then a 30mph curve just before the Stewart bridge. Could there be a more consistent speed along the roadway? Perhaps 45mph throughout the project, slowing to 35mph or 30mph entering town. I think the 30mph before the Stewart bridge is too tight. Currently it is 40mph.
2. Currently along Lindsey Street, there are three lanes of traffic at the signal with 3rd Street. The left lane is a through movement to continue on Lindsey St. The right lane primarily serves those headed WB 46, with the middle lane used for SB Sr11 and also WB 46. With the change in the traffic pattern to have WB 46 in the middle lane, what is the effect of right turn on red allowing enough cars to turn without backing up in one lane along Lindsey St. This weave pattern may be problematic.
3. I like the roundabout option. This was discarded for costing \$100,000 more than the preferred alternative. For a project costing \$25 million, that does not seem comparable benefit/rejection. The traffic for SR 11 to EB SR 46 should have a bend in the alignment to slow them down before heading over the Stewart bridge. Perhaps the roundabout layout could be a little farther northeast.
4. I am not a fan of the signal intersection design. The left side merge never feels comfortable. I notice there is no planned access to businesses along southbound SR 11 other than the veterinary clinic.
5. The introduction speech at the hearing mentioned the People Trail is to be extended south along the west side of SR 11 within the project limits. However, I see no mention of that in the environmental document.

6. The river along the east side of the project is the East Fork White River. The river to the north of the project is the Driftwood River. The two floodways overlap in the project area. Environmental impacts should be applied to these two rivers. There are incorrect to the Flatrock River and labeling throughout documents. However, as the Flatrock River and Driftwood River join at Mill Race Park, any impacts to these two rivers will also be felt along the Flatrock River.
7. Currently water overtops SR 46 during major flood events. Raising the roadway will affect the capacity of the floodway at this location. There was no mention of how drainage will be addressed, nor pipes under the SR 46 roadway.
8. The proposed project will have more pavement area, and higher elevations than the current footprint, which presents an increased risk to flooding. It was not mentioned how this increased impact to the floodways would be addressed.
9. Will pipes under the roadway also serve as wildlife crossings?
10. The project will remove trees, 6.4 acres of forest to be impacted. The environmental documentation divides tree clearing within the floodway, and outside the floodway and the areas are to be replanted separately. It appears the entire project is within limits of the floodway, and all clearing would be considered floodway tree removal. Where is each area defined?

Categorical Exclusion Level 4 – Environmental Document.

11. Part II, page 5. Funding source only checks Federal and State. Local and “other” funds are being used. City of Columbus and L&I railroad are contributing funds to the project.
12. Section B, page 21 Discussion of Floodways should address East Fork White River and Driftwood River.
13. Section B, page 23 states prime farmland to be affected by the project. How is that acquiring 40.5 acres of in-use farmland be considered no impact? Was NRCS using this same project area?
14. Section C, Cultural Resources. The trees along SR 46 were designed by noted landscape architect, Michael Van Valkenburgh, I think in conjunction with his work at Mill Race Park. Although not likely historic rating, perhaps worth noting, as some of these trees will be removed with the project.

Name Ben & Pat Bush
210 Newsom Ave
Columbus , Indiana, 47201
e-mail bbush@orchardsoft.com

Comments :

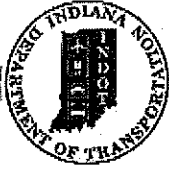
Since we live in the floodplain, some flooding in the area is an ever-present danger. We are always concerned about building and filling in the floodplain downstream from our development on Flat Rock. Although Flat Rock has never flooded us we were victims of flood by Hawcreek in 08.

Please give serious consideration to improvement of our area and others by adding adequate culverts under realigned SR46 at the intersection of the railroad overpass construction and SR 11 . This is an opportunity.

When they added a second lane to SR46 across the flood plain we were told that the project would not increase flood risk, and it could have been done that way, however, the added lane was built higher and became a flood restriction, with NO culvert relief carried out. This added restriction reduced the flow of the area water to a historic flood plain of over 2,000 acres to the south and represents and added increased flood threat to the South West and Southern Center city.

We have followed the comments and questions of John Dunlap expressed at the hearing and subsequently reported by the local paper and want to support his efforts and the others upstream who would benefit from a design that would reestablish the original draining capacity in the area of the overpass construction. With care you can make a large difference, for which we would be grateful.

Respectfully Submitted Pat and Ben Bush



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 234-0796
FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

May 29, 2019

The purpose of this meeting is to provide information to concerned citizens and to receive input and feedback. This form is provided for your convenience to comment on the project or the presentation. Comments may be submitted today, or mailed anytime in the next two (2) weeks to:

Mary Wright
INDOT Office of Public Involvement
100 North Senate Avenue
IGCN 642
Indianapolis, IN 46204
Fax: 317-233-4929
E-Mail: mwright@indot.in.gov

Final Comment Date: Location: SR 46 @ SR 11 New Interchange
~~Wednesday, June 12, 2019~~ Bridge over the L&I RR
June 14 2019 TIME: 1700130

FW
Name Ben & Pat Bush
210 Newsom Ave
Columbus, Indiana, 47201
e-mail bbush@orchardsoft.com

Comments :

Since we live in the floodplain, some flooding in the area is an ever-present danger. We are always concerned about building and filling in the floodplain downstream from our development on Flat Rock.

Please give serious consideration to improvement of our area and others by adding adequate culverts under realigned SR46 at the intersection of the railroad overpass construction and SR 11. This is an opportunity.

When they added a second lane to SR46 across the flood plain we were told that the project would not increase flood risk, and it could have been done that way, however, the added lane was built higher and became a flood restriction, with NO culvert relief carried out. This added restriction reduced the flow of the area water to a historic flood plain of over 2,000 acres to the south and represents and added increased flood threat to the South West and Southern Center city.

We have followed the comments and questions of John Dunlap expressed at the hearing and subsequently reported by the local paper and want to support his efforts and the others upstream who would benefit from a design that would reestablish the original draining capacity in the area of the overpass construction. With care you can make a large difference, for which we would be grateful.

Respectfully Submitted Pat and Ben Bush *Ben and Pat Bush*

www.in.gov/dot/
An Equal Opportunity Employer



Wright, Mary

From: Dennis Taylor <do.taylor@sbcglobal.net>
Sent: Tuesday, June 11, 2019 9:35 PM
To: Wright, Mary
Subject: Public Input - Indiana 46 Railroad Overpass
Attachments: Public Input.docx

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Dear Ms. Wright,

I attended the public meeting and received a packet with the submission form to be mailed to you. However, my printer gave up the ghost. I hope this email input will be equally valid.

Respectfully,

Dennis O. Taylor

I wish to echo and embellish the public comments put forth by Mr. John Dunlap concerning “Drainage” and “Flooding”

In 1968, Road 46 was a 2-lane highway. I recall seeing the floodwaters crossing the road at that time – at a location relatively close to the railroad crossing.

When the road was expanded to four lanes, INDOT told us the new lanes would sit lower than the original two lanes. Also, that culverts would transport floodwater beneath the roadway so that there would be no more impact on flooding upstream than with the two-lane arrangement.

Over time, this promise seems to have lost its lustre. Today, both lanes seem to be at the same level, and there are no culverts to transfer flood water beneath the roadbed. And, there is quite a bit of new construction in the floodplain in the 1/2-mile stretch close to the interstate.

NOW (with the construction of the overpass) would be a good time to reproduce the conditions that existed prior to 1968 or earlier, to wit, a more natural contour of the land that would allow flood waters to move where they would naturally want to go.

I recall hearing the Burke Engineering report (following the 2008 flood) which included words to the effect: (any) blockage upstream of you is OK; it delays and reduces the amount of flooding in your location. Any blockage downstream of you is bad: it hastens the onset of flooding and makes it worse.”

The three bridges in downtown Columbus (L&N Railroad, 3rd Street and Stewart (2nd Street), already present a barrier to the flow of floodwaters for those of us living upstream of the East Fork of White R. Let us not add to this problem, but rather, try to alleviate to the degree possible.

Let me address the growth issue posed by Mr. Schumaker – future expansion. Where will the new CRH facility fit in? Will access be via Road 11 or Road 46? Either way, the possibilities should be considered before the design is finished and the digging begins.

Respectfully submitted,

Dennis O. Taylor

301 Flatrock Drive

Columbus, IN 47201



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 234-0796
FAX: (317) 233-4929

Eric Holcomb, Governor
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May 29, 2019

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Mary Wright
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Indianapolis, IN 46204
Fax: 317-233-4929
E-Mail: mwright@indot.in.gov

Final Comment Date: Wednesday, June 12, 2019
Location: SR 46 @ SR 11 New Interchange
Bridge over the L&I RR
DES #: 1700139

Name: (Please Print) Martin Books
Address: 303 Flatrock Dr
Columbus, IN 47201
E-Mail: m-t-books@comcast.net

Comments:

I would like to voice my concern about the flooding impact of this project. The area along the Flatrock River naturally floods a couple of times per year. But the nature of that flooding changed when SR 46 heading west out of Columbus was widened some 15 or so years ago. At the time, they took the opportunity to raise the road bed so that it would be less susceptible to that flooding. But they failed to allow proper flow of flood waters under the road so that drainage followed its historical path. Now, properties to the north experience worse flooding than they had in the past (including my neighborhood). I believe the flooding in downtown Columbus in 2008 may have been less severe had the natural drainage been preserved. I am very enthusiastic about the current bridge project, but I would like the site planners to take proper account of flood drainage impact, including past project impacts. Please take all possible actions to not allow the new road to act as a dam, and to correct past mistakes by installing adequate culverts and drainage means so that both the river and flood waters can flow unimpeded downstream naturally.

Signature: _____

www.in.gov/dot
An Equal Opportunity Employer



To: Mary Wright
INDOT Office of Public Involvement
100 North Senate Avenue
IGCN 642
Indianapolis, IN 46204

June 10, 2019

Subject: Input Regarding SR 46 @ SR 11 New Interchange Bridge over the L&I RR

Dear Ms. Wright,

The planned railroad overpass, cloverleaf interchange, and realignment of SR 46 and SR 11 are improvements that will have a positive affect on safety and access while minimizing congestion in this high traffic area of our growing community. We support this project and believe its benefits will be substantial. We also applaud the collaborative funding arrangement established to bring it to fruition.

The East Fork of the White River is just north of the current SR 46/SR 11 intersection. Less than a mile upstream of this area, the Flatrock and Driftwood Rivers flow into the East Fork of the White River. The magnitude of this construction project will require significant changes to the surrounding area. After SR 46 was raised about 15 years ago, major rain events have resulted in flooding in the area to the north of the roadway. This includes our neighborhood (The Noblitt Falls Lagoons Association), sections of the town of Columbus, and a couple of adjacent parks. We have lived in the same home for over 31 years and have experienced a number of high water events as well as the major flood of June 7, 2008 which filled our lower level with eight feet of nasty river water! This was classified as a 500-year flood event!

Our major concern is that flooding mitigation will not receive sufficient front-end evaluation and implementation. The proposed "floodway storage areas" in the overpass area will be helpful, but will most likely not be sufficient to prevent future flooding. Addressing flooding impacts after construction is completed will be considerably more expensive, time consuming, and damaging than dealing with them at the beginning. The realignment of SR 46 also provides a timely opportunity to install culverts or other passages for water to flow under the roadway. Prior to SR 46 being raised several years ago, major rain events would result in water from the East Fork of the White River flowing over the roadway causing lane closures. The raised roadway essentially became an earthen dam from west of I65 to SR 11.

We urge INDOT and all associated planners, partners, and contractors to do all they can to minimize the impacts on flooding including addressing the flow of water under SR 46. Thank you for the opportunity to provide feedback on this major construction project. Should you need further clarification, we can be reached using the contact information provided below.

Sincerely,

Paul E. and Melinda G. Johnson
307 Sunset Drive
Columbus, IN 47201-4111
Cell Phone Numbers: Paul - 812.344.7555; Melinda - 812.343.5318



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 234-0796
FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

May 29, 2019

The purpose of this meeting is to provide information to concerned citizens and to receive input and feedback. This form is provided for your convenience to comment on the project or the presentation. Comments may be submitted today, or mailed anytime in the next two (2) weeks to:

Mary Wright
INDOT Office of Public Involvement
100 North Senate Avenue
IGCN 642
Indianapolis, IN 46204
Fax: 317-233-4929
E-Mail: mwright@indot.in.gov

Final Comment Date: Wednesday, June 12, 2019
Location: SR 46 @ SR 11 New Interchange
Bridge over the L&I RR
DES #: 1700139

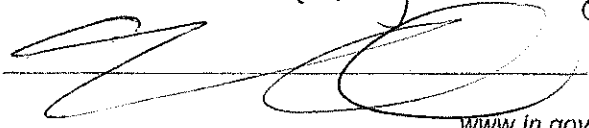
Name: (Please Print) Sharon Follendorf
Address: 311 Sunset Dr
Columbus IN 47201
E-Mail: sjf81972@gmail.com

Comments:

One of the reasons my neighborhood has experienced more flooding is due to the lack of any culverts under the 46 roadbed. A "dam" was created that restricts flood waters from passing through south of Columbus. These existing design errors MUST be addressed in the realignment of SR Rd 46.

The current design plan includes only ONE culvert under the new roadway. This is NOT sufficient to and could exacerbate an existing problem. Now is the time to install new culverts under the 46 roadbed!

Correct a current problem before creating an even greater problem for my neighborhood!!

Signature: 

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E-Mail: mwright@indot.in.gov

Final Comment Date: Wednesday, June 12, 2019
Location: SR 46 @ SR 11 New Interchange
Bridge over the L&I RR
DES #: 1700139

Name: (Please Print) Gerald + Lisa Kelly
Address: 306 Flatrock Drive
Columbus, IN 47201
E-Mail: Kelly Falls 4 @ Comcast.net

Comments:
Under the new stretch of realigned 46
before the railroad overpass, please consider
more than one culvert / bridge under the roadway.
This is a prime opportunity to get
upstream flood relief.

Signature: [Handwritten Signature]



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E-Mail: mwright@indot.in.gov

Final Comment Date: Wednesday, June 12, 2019
Location: SR 46 @ SR 11 New Interchange
Bridge over the L&I RR
DES #: 1700139

Name: (Please Print) Lacy & Don Haney
Address: 315 19th St
Columbus, IN 47201
E-Mail: ddhaney@sbcglobal.net
Comments:

See attached

Signature: _____

Indiana Department of Transportation

Location:mSR@ 46 SR 11 New Interchange
Bridge over the L & I RR
DES# 1700139

Names: Don and Lucy "Dody" Harvey
315 19th St
Columbus, Indiana 47201

E-Mail ddharvey@sbcglobal.net

We want to make sure that adequate consideration and best engineering practices have been addressed as to the impact of the flow of water in the floodway and floodway fringe area in the design of the new interchange as well as adequate retention of flood water during a major flood event. The 2008 flood severely impacted the near downtown neighborhoods. As residents of that neighborhood we want the city to address any obstructions that impact the flow of water during a major flood event.



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Fax: 317-233-4929
E-Mail: mwright@indot.in.gov

Final Comment Date:
Wednesday, June 12, 2019

Location: SR 46 @ SR 11 New Interchange
Bridge over the L&I RR
DES #: 1700139

Name: (Please Print) DENNIS ORWIN

Address: 314 SUNSET DR
COLUMBUS, IN 47201

E-Mail: ORWINDENNIS@GMAIL.COM

Comments:

REMOVAL OF OR RESTRICTIONS OF FLOOD PLAIN ARE A PROBLEM NATIONWIDE,
BUT WE HAVE AN OPPORTUNITY HERE, IN THIS PROJECT, TO ADDRESS THE
PAST PROBLEM OF FAILURE TO PROPERLY CULVERT SR 46 FROM STEWART
BRIDGE TO WEST HILL, AND TO ENSURE THAT THE ORIGINAL FLOOD PLAIN
ON 46 IS RESTORED. IN AN ERA WHERE STORMS AND RAIN ARE MORE
FREQUENT AND HEAVY, THOSE OF US WHO LIVE UPSTREAM NEED OUR
GOVERNMENT TO RESOLVE FLOOD ISSUES, NOT EXACERBATE THEM,

Signature:  6/1/19

Wright, Mary

From: Paul Duncan <pduncan@outlook.com>
Sent: Friday, May 24, 2019 8:22 AM
To: Wright, Mary
Subject: Highway 46 & 11 Overpass Project Columbus

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Mr. Wright,

I live south of Columbus on Highway 11 and have a question concerning the new rail overpass at the intersection of Highway 46 and 11 in Columbus.

As you may already know, Highway 11 often floods just North of the Shell station in Garden City, about a football field from the new project. This flooding happens at least annually with some years as often as four times and can shut down the road for more than a week.

My question is will this flooding issue be addressed-corrected as part of the interchange project ? If not, a vital part of this new 30 million dollar project will be shut down at lease once a year.

Thank you for your time.

Paul Duncan
5603 S. Jonesville Rd.
Columbus, IN 47201-9732
(812) 603-1738
pduncan@outlook.com

Wright, Mary

From: Garrett, Natalie R
Sent: Friday, May 24, 2019 10:14 AM
To: Prince, Greg; Wright, Mary
Subject: SR 46/11 Interchange Facebook Question

Greg & Mary,

Before I respond to Paul, I just want to confirm that flooding is being addressed as part of the proposed SR 46/11 interchange project. I will mention the public hearing on Wednesday as well.



Paul Duncan ▸ **Indiana Department of Transportation: Southeast**

1 hr · 🌐

I live south of Columbus on Highway 11 and have a question concerning the new rail overpass at the intersection of Highway 46 and 11 in Columbus.

As you may already know, Highway 11 often floods just North of the Shell station in Garden City, about a football field from the new project. This flooding happens at least annually with some years as often as four times and can shut down the road for more than a week.

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Natalie Garrett

Media Relations Director

Indiana Department of Transportation, Seymour District

Phone: 812-524-3733

Cell: 812-525-0571

Email: nagarrett@indot.in.gov

Wright, Mary

From: JOHN DUNLAP <john.dunlap11546@comcast.net>
Sent: Saturday, June 01, 2019 9:39 PM
To: Wright, Mary
Subject: New RR overpass in Columbus
Attachments: INDOT Feedback Form with response 060119.pdf

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Mary,

I attended and spoke at the public meeting in Columbus on Wednesday. I will tell you that I do not oppose

but definitely support this project. This project must proceed to alleviate the danger of not having emergency access into and out of town due to the anticipated increase in train traffic and lengths of trains.

I put forward my objections only to rectify past engineering errors that I mention on the attached INDOT "input and feedback" form.

Thanks,

John Dunlap



INDIANA DEPARTMENT OF TRANSPORTATION

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Room N642
Indianapolis, Indiana 46204

PHONE: (317) 234-0796
FAX: (317) 233-4929

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Fax: 317-233-4929
E-Mail: mwright@indot.in.gov

Final Comment Date: Wednesday, June 12, 2019
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Bridge over the L&I RR
DES #: 1700139

Name: (Please Print) JOHN DUNLAP
Address: 309 SUNSET DR.
COLUMBUS, IN 47201
E-Mail: john.dunlap11546@comcast.net

When work was done to four lane 46 West out of Columbus 15+ years ago the road bed was raised without the inclusion of any culverts under the road bed which in effect created an immense dam running from the river and new roadway to the incline/hill before the West Hill area which backs up more water upstream on the White and Flatrock Rivers.

This is one of the several reasons why we have experienced more historic high water marks in flooding situations over the last 15 years than reported in the years prior to the 46 reconstruction.

The flood situation was exacerbated more when the Robert Stewart Memorial Bridge and approach ways were built without installation of any significant culvert systems restricting the flood waters to pass through and south of Columbus. The amount of water shed flood backup waters is immense and these compounded design errors must be taken into account on the design of the realignment of St Rd 46.

In talking with the lead engineer prior to the meeting I found that the old 46 road bed would be removed and lowered. This allows for some corrective measures to take place.

I also found in the discussion that just one culvert/bridge under the roadway would be included in that new stretch of realigned 46 before the railroad overpass. This is just **NOT** enough. I would suggested that many more under road culverts be installed possibly even a bridge system. This is **THE** opportunity to get some relief for upstream flooding on significant rainfall events which are becoming more frequent given the apparent climate changes taking place in the Midwest.

I would also recommend that **NEW** culvert systems be installed under the roadbed on the west approach to the Robert Stewart Bridge. **Now** is the time to do this

Signature: John Dunlap

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Wright, Mary

From: Julia Lowe <j_lowe66@yahoo.com>
Sent: Tuesday, May 28, 2019 5:35 PM
To: Wright, Mary
Subject: Comment RE:1700139 SR 46 at SR 11 Grade Separation

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Mary,

Thank you for making the document and illustration available to me by email.

"Section J Environmental Commitments Remarks, Firm #50 Revegetate all bare and disturbed areas in the floodway with a mixture of native grasses, sedges and wildflowers as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants, (e.g. crown-vetch). (IDNR DFW)"

My comment: I would like to convey my agreement with the firm commitment to upon completion immediately revegetate native grasses, sedges and wildflowers. Planting native vegetation will increase pollinator habitat which has decreased drastically in the past decade and would be an improvement to planting non-native maintenance intense fescue.

My comment: The Navigatable Waterway that is referred to throughout the document that is close to "on-site" is not the Flatrock River but is the East Fork of the White River. The bridge spans the East Fork of the White River south of the confluence of the Driftwood River and the Flatrock River that make the East Fork of the White River.

Thank you,

Julie Lowe
Executive Committee Chair,
Winding Waters Group
Executive Committee Chair,
Hoosier Chapter | Sierra Club
Phone 317-345-8355 (text ok)

"If a man walks in the woods for love of them half of each day, he is in danger of being regarded as a loafer. But if he spends his days as a speculator, shearing off those woods and making the earth bald before her time, he is deemed an industrious and enterprising citizen." Henry David Thoreau

Wright, Mary

From: Thayer, Laura <lthayer@columbus.in.gov>
Sent: Thursday, May 30, 2019 1:36 PM
To: Wright, Mary
Subject: FW: Public Hearing Tomorrow - SR 46/SR 11/LIRC Overpass

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Mary,

Here is a comment from Dennis Baute, the president of CAMPO's Policy Board.

Laura

From: Dennis Baute [mailto:dwbaute@yahoo.com]
Sent: Tuesday, May 28, 2019 10:31 AM
To: Thayer, Laura
Cc: Fischer, Cory; Bergman, Jeffrey; Hayward, Dave; Danny Hollander
Subject: External Message: Re: Public Hearing Tomorrow - SR 46/SR 11/LIRC Overpass

*** ATTENTION *** This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Warning: Replies to this message will go to dwbaute@yahoo.com. If you are unsure this is correct please contact the helpdesk.

Thanks for the notification regarding the INDOT Public Hearing this Wednesday.

I am unable to attend, but I continue to have definite concerns as follows:

On page 22, the report states: "One goal of the plan is to provide flood free access along critical transportation routes when opportunities arise. Currently SR 11 and SR 46 both flood periodically throughout the year. This project presents an opportunity to pursue the creation of flood-free routes in this area. Members of the design team took the opportunity to discuss the elevations, and for areas within the project limits along SR46, the profile grade will be increased. Along SR 11, no significant grade change will made."

This project presents a major opportunity to improve the grade/elevation of SR 11 near the project at minimal cost compared to the rest of the project, but no effort is being made. This decision affects not just property, but also our safety. I fear we will regret our failure to plan and take advantage of this opportunity for SR 11 in the future.

If you could pass my concerns on to INDOT, it would be greatly appreciated.

Thanks again,

Dennis Baute

On Tuesday, May 28, 2019, 9:25:32 AM EDT, Thayer, Laura <lthayer@columbus.in.gov> wrote:

Good morning,

Attached are the Draft Environmental Document Summary and a concept illustration for the SR 46/ SR 11/ LIRC Overpass project. INDOT will host a public hearing for this project on Wednesday, May 29 at 6:00 p.m. in the Cal Brand Meeting Hall at Columbus City Hall. More information is available on the City's website at <https://www.columbus.in.gov/indot-public-hearing-on-proposed-overpass-to-be-held-may-29/>.

Laura

Laura Thayer, AICP

CAMPO Director

City of Columbus - Bartholomew County

Planning Department

123 Washington Street

Columbus, Indiana 47201

(812) 376-2550

lthayer@columbus.in.gov



Wright, Mary

From: Grant Hale <agranthale@yahoo.com>
Sent: Friday, May 31, 2019 10:13 AM
To: Wright, Mary
Subject: Re: IN 46 / IN 11 Overpass Question

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Ms. Wright -

Thank you very much for your response. My wife and I will be pleased with the new trees.

Will they be in any particular artistic configuration like the current ones?

Regards,

Grant

On Friday, May 31, 2019, 10:08 AM, Wright, Mary <MWRIGHT@indot.IN.gov> wrote:

Good Morning,

The best way I can think of to respond to your question is by attaching the specific slide from the presentation reflecting the tree mitigation. As you can see the ratio of replacement is double. There is no plan to move the current trees as part of this project.

Thank you for taking the time to submit your concerns. Your comments will become part of the official public hearing transcript for the project.

Mary Wright

INDOT Public Hearings

From: Grant Hale [mailto:agranthale@yahoo.com]
Sent: Friday, May 31, 2019 9:39 AM
To: Wright, Mary <MWRIGHT@indot.IN.gov>
Cc: Laura Thayer <lthayer@columbus.in.gov>
Subject: IN 46 / IN 11 Overpass Question

To Whom It May Concern:

I was wondering, what will happen to the trees planted in rows on the south side of 46 east of Wendy's and west of the railroad tracks?

My wife is from Columbus and she remembers when they were planted. Whenever we pass them she always points out what a great idea it was to put them there and how much she loves them.

I noticed the new approach of 46 will be well south of the current trees. Will there be new tree rows along the new road? What will happen to the old ones?

Thanks,

Grant

SR46+SR11

SIGN-IN SHEET *Columbus* PLEASE PRINT 1700139

DATE: 5/29/19

Before including your address, phone number, e-mail address, or other personal identifying information on the meeting Sign-In Sheet or on your comment submittal, be advised that your comment ~ including your personal identifying information ~ may be made publicly available at any time. While you can ask us to withhold personal identifying information from public review, we cannot guarantee that we will be able to do so.

NAME	ADDRESS	EMAIL- OPTIONAL
Harry A. Becker	952N-410E 47203	X
Berney Quick	3179 Sycamore Drive 47203	
MARSHALL MIDDENDORF	2785 LAF, 47201	
DON TRAPP	1070 WESTLAKE HILLS DR	
Chuck Hainz	3484 Country Club Rd	
Jean Chaille	4301 S. Poplar Columbus 47211	
Trena Carter	4211-26th St. Col. 47203	
JUSTIN GIFFORD	320 FRANKLIN Co. 47201 BECK, ROCKER & HADIG, P.C.	
Laura Trayer	2554 Franklin St	
JEFF RAUCH	110 OAKBROOK	



www.in.gov/indot

SR46+SR11

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NAME	ADDRESS	EMAIL- OPTIONAL
A.B. Manns	2534 Chestnut St	
Brenda Manns	" " "	
Scott Dompke	Columbus City Utilities	sdompke@columbusutilities.org
Michael Kinder	1725 Home Ave.	
Demetrius Villa	1148 Thicket Court	demetrius.villa@gmail.com
GREG LEWIS	2155 BROADMOOR LN. 47203	lewisg@bosc.k12.in.us
Corey Bangl	8640 S. 525 E Elizabethton	Corey.bangl@milestonelp.com
JD Futch	3532 Washington Street	Jeremiah.Futch@yahoo.com
DAN NORTON	3882 W. Norton Wood LK Dr	dannorton49@gmail.com
Buck Ritz	9524 Raintree Dr. Sec. Col.	buck.ritz@milestonelp.com



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SR40 & SR11

SIGN-IN SHEET

Columbus

PLEASE PRINT

1700139

DATE:

5/29/19

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NAME	ADDRESS	EMAIL- OPTIONAL
Rick CHAILLE	240 JONESVILLE RD	Rick.CHAILLE@HOTMAIL.COM
Milo Smith	632 3rd St	milo@miloSmith.com
Joe Bell	2098 Shadow Creek Blvd.	joebell991@gmail.com
Ben + Pat Bush	210 Newsum Ave Columbus	bbush@orchardsoft.com
MARK WEBER	The Republic Newspaper	
WILLIAM J. MANNING III	1414 LAUREL DRIVE COL. IND.	
Mindy Kupferer	2331 Meadow Bend Dr.	mindy.kupferer@sbcglobal.net



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SR46 & SR11

SIGN-IN SHEET *Columbus*

PLEASE PRINT 1700139

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NAME	ADDRESS	EMAIL- OPTIONAL
Bill Hawkins	5161 Regency Drive Col. IN 47203	
JOHN DUNLAP	309 SUNSET DR	john.dunlap 11546@ ^{comcast} .net
Pradeep	BERKSHIRE	pradeep @ hhsim. ^{com} com
Kate Johnson	6059 Acorn DR.	Kate.Johnson 003 @gmail.
Chris Bland	3830 Oriole Drive Col. 47203	
Greg Walker	3465 Duffer Drive Columbus	
Leynon L:	7017 Pinnacle Dr.	



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SR46+SR11

SIGN-IN SHEET

Columbus

PLEASE PRINT

1700139

DATE:

5/29/19

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NAME	ADDRESS	EMAIL- OPTIONAL
Dennis J. Taylor	301 Flatrock Dr	do.taylor@sbcglobal.net
Tom Dell	1063 Hummingbird Ln. 47203	E.tom.dell@gmail.com
Brian Sylva	990 N. National Road, Columbus, IN	bsylva@forceco.com



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NAME	ADDRESS	EMAIL- OPTIONAL
<i>Sheri Read</i>	<i>Columbus TN</i> 10092 N Hickory Ln 47203	
<i>Hutch Schumaker</i>	<i>4720</i> 2335 Riverside Dr Col	<i>hutchs@columbuscoker.com</i>
<i>Robert Finkler</i>	6002 N 600E Hope	
<i>Tom Helder</i>	410 Sixth St #202 <i>Columbus</i> 47201	<i>thelder09@gmail.com</i>
<i>Nore Cleary</i>	2938 Wandering Way Columbus, IN 47201	
<i>Taylor Nolting</i>	1520 Washington St. Columbus, IN	
<i>Sean Mathews</i>	1703 Newton St, 47201	
<i>Karen Mathews</i>	1703 Newton St, 47201	
<i>Ryan Lauer</i>	742 Chestnut St 47201	<i>H59@igs.h.gov</i>
<i>Brian Banta</i>	P.O. BOX 56 ERINBURGH, IN 46124	<i>BantaRail@aol.com</i>



State Road 46 at State Road 11
New Interchange Bridge
Over the Louisville and Indiana Railroad

DES# 1700139

Columbus, Indiana
Wednesday, May 29, 2019
6 p.m.

Please silence electronic devices.



Agenda

- Welcome & Introductions
- Formal Public Hearing
 - Presentations
 - Public Statements for the Record
 - Adjourn Formal Hearing

Invited to the display area for Q & A with the project team



Why a Public Hearing?

- Conducted as a requirement to the National Environmental Policy Act (NEPA)
 - NEPA requires evaluation of potential impacts to surrounding natural, cultural, and social environments.
 - Impacts are described in an environmental document.
 - Requires opportunity for the public to be involved and comment in the decision-making process of said impacts.



Environmental Document

- Categorical Exclusion Level 4
- Released for Public Involvement on April 23, 2019
- Published Legal Notice
 - The Republic
 - Tuesday, May 14th & 21st, 2019
- Announcing the public hearing and the location where the document is available for review



How Can You Participate?

- Verbally as a Public Statement
 - Statements are recorded
- Comment Form
 - Submit via mail, fax, or drop box
- Email – mwright@indot.in.gov
- Comment Period ends
 - Wednesday, June 12, 2019

Please feel free to use any and all methods.



How Will Comments be Addressed?

- All comments will be addressed in the Final Environmental Documents as a result of:
 - The public statements recorded at a public hearing.
 - All written comments, concerns, and suggestions such as letters, faxes, and emails received during the comment period.

Informal comments are always welcome, however, please note general conversations are not part of the official record.



Environmental Studies

Areas of environmental impacts

- **Right-of-way**
- Hazardous Materials
- **Threatened & Endangered Species**
- Historic & Archaeological
- Community Impacts
- **Farmland**
- **Floodplains**
- Land Use
- Wetlands & Waterways
- Noise
- Air Quality
- **Public Involvement**
 - **Public Hearing**



 HNTB

Right-of-Way

- Proposed 50.1 acres of permanent new right-of-way (ROW)
 - 40.5 Acres of Agricultural
 - 6.4 Acres of Forest/Trees
 - 1.0 Acre of Commercial
 - 2.2 Acre of Misc.
- Early Acquisition
 - Acquired through MAP-21 FHWA Streamlining Process
- No Relocations
 - No Condemnations

 HNTB

Environmental Impacts

- Indiana Bat and Northern Long-Eared Bat
 - Tree clearing activities
 - Mitigated via The Conservation Fund (TCF)
 - Range-wide In-Lieu Fee Program
 - The amount determined by the Habitat Block Method
 - Calculated by a compensatory price per acre

 HNTB

Project History

- 2012 – L&I and CSX railroads announce plans for joint use of the tracks
- 2013 – Railroads completed Environmental Assessment
- 2014 – On-going discussions Between INDOT and the City to address the problem
- 2015 – City of Columbus completes a Railroad Impact Study
- 2016 – INDOT considers project application
- 2017 – State of Indiana and City of Columbus announce a jointly funded project

 HNTB

Purpose and Need

- Trains volumes expected to increase from an average of two per day to 17 per day.
- Train lengths expected to increase from an average of 5,000 feet to 7,500 feet.
- At current rates, vehicle delays at the crossing will grow from 67 vehicle-hours to 716 vehicle-hours.
- Especially in the P.M. peak hours, the State Road 46/S.R. 11 traffic signal operates at unacceptable levels of average delay per vehicle.
- The Purpose of this project is to reduce vehicular delays at both the train crossing and the traffic signal.

 HNTB

Alternatives Considered

- Retain an At-Grade Crossing
- Route S.R. 46 Under the Railroad
- Keep S.R. 46 on Alignment
- Re-Align S.R. 46 to the North
- Overpass with Interchange



 context

 HNTB

Key Design Criteria

- Speed Transitions
- Existing White River Bridges
- S.R. 11 Property Access
- Floodplain Impacts
- Farmland Impacts



Overpass with Interchange Alternative



Overpass with Interchange Alternative



Overpass with Interchange Alternative (Preferred)



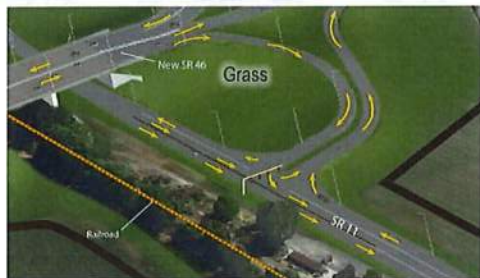
Overpass with Interchange Alternative (Preferred)



Overpass with Interchange Alternative (Preferred)



S.R. 11 at Ramp Intersection



context

Drainage



context

context

Mitigation and Aesthetics

- Total Project Tree Removal = 4.9 Acres
- Total New Tree Plantings = 11.3 Acres
- No Impacts to Waterways Protected by the Clean Water Act



context

context

Project Cost Estimates

- INDOT and the City of Columbus have entered into a 50/50 Funding Agreement
- Railroads will contribute 5 percent of project costs
- Project Cost Estimate = \$30 million

context

Traffic During Construction

- INDOT District Traffic
- City of Columbus
- Bartholomew County
- Bartholomew County School Corporation
- Bartholomew County Fairgrounds
- Columbus Regional Health
- Columbus Police Department
- Columbus Fire Department

context

Traffic During Construction

- Stage 1 – Off-Line Construction
 - Minimal Traffic Interruptions
 - Winter 2019/2020 and Spring 2020
- Stage 2A – S.R. 46 Eastbound
 - Reduced to One Lane
 - Early Fall 2020



context

context

Traffic During Construction

- Stage 2B – S.R. 11
 - Closed & Detoured via I-65
 - Early Summer 2020
- Stage 3 – S.R. 46 Westbound
 - Reduced to One Lane
 - Late Fall 2020
- Interchange Open to Traffic in Spring 2021
- Mitigation in Fall 2021



context

NextLevel

Utilities

- Approx. 2,500 feet of new City water main
- Approx. 4,000 feet of new City force main
- Utility relocations along S.R. 11 scheduled to begin this Summer

NextLevel

Comment Session

- No responses at this time.
- Statements are for the official public hearing transcript.
- First speakers are from the sign-in sheet.
- Open for additional public statements from the floor.
- Please come forward to the podium so that we may accurately record your statements.
- We encourage and appreciate your comments.



NextLevel

Public Comments

- Statements recorded at public hearing.
- Written Statements
 - Mary Wright
IGCN Room N642
100 North Senate Avenue
Indianapolis, IN 46204
- E-Mail – mwright@indot.in.gov
- Respectfully request comments to be postmarked by Wednesday, June 12, 2019.

All comments will be reviewed and evaluated and given full consideration before final design decisions.

NextLevel

What is Next?

- After Public Hearing and Public Comments
 - Environmental Document Approval
 - Legal Notice published to formally announce the conclusion of the environmental phase.

Human and Natural Environment Issues are Addressed in the NEPA Process



NextLevel

Thank You

- Please visit with project officials following the public comment session
 - View displays and preliminary plans
 - Informal questions and answers
 - Informal comments are always welcome, however, please note general conversations are not part of the official record.

Thank you for your attendance this evening.

Formal public hearing is adjourned.

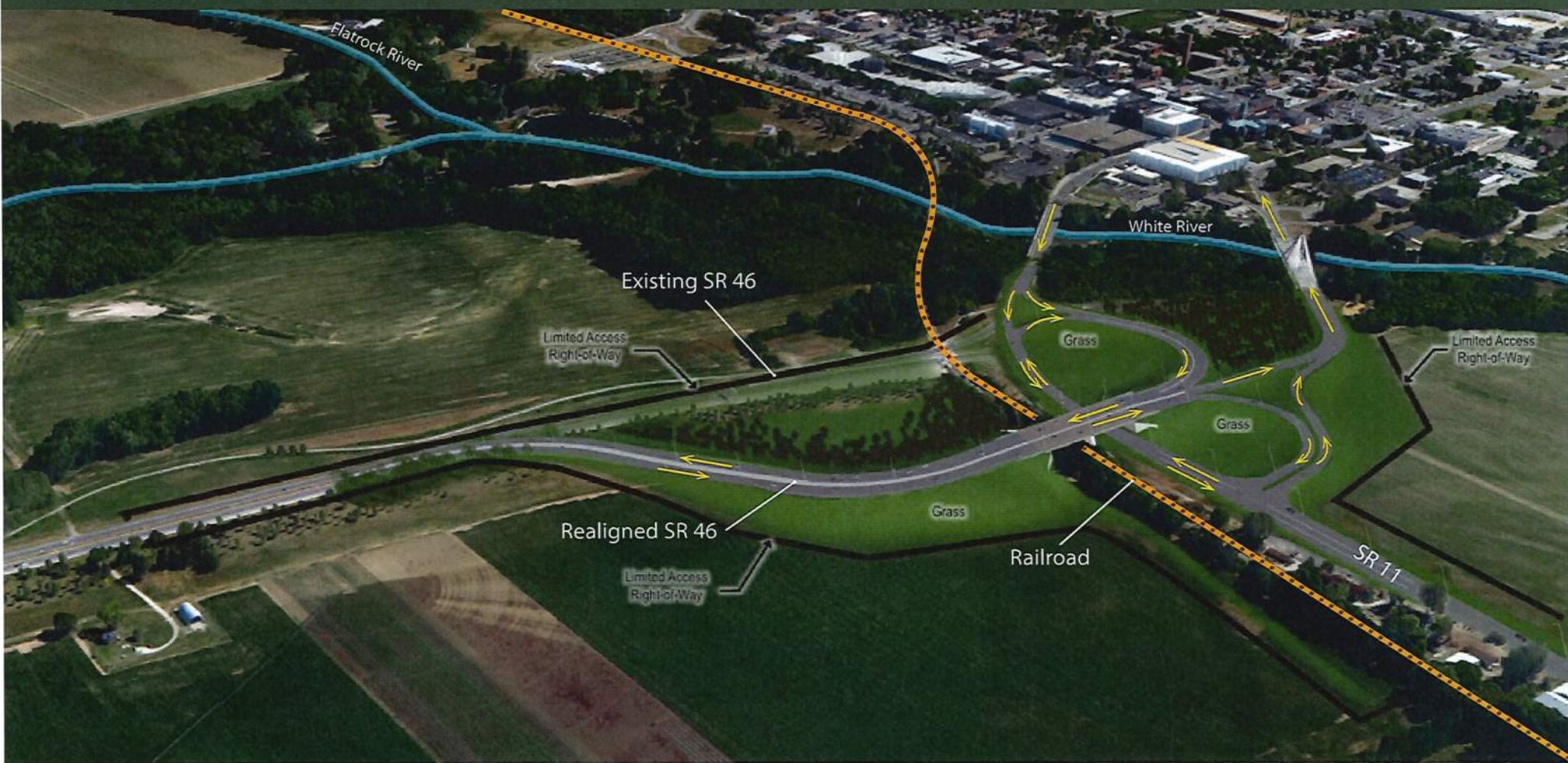
NextLevel

SR 46 Railroad Overpass Project

Columbus, Indiana

Indiana Department of Transportation and the
City of Columbus

Public Hearing – May 28, 2019



DANNY & FAYOLA FIVECOAT
1250 JONESVILLE RD
COLUMBUS IN 47201

GARY LEE NIENABER
6970 W SR 46
COLUMBUS IN 47201

BLAKE WEHMEIER
1695 JONESVILLE RD
COLUMBUS IN 47201

REP JIM LUCAS
1114 E 4TH ST
SEYMOUR IN 47274

SEN CHIP PERFECT
19074 PERFECT PL LN
LAWRENCEBURG IN 47025

SEN GREG WALKER
200 W WASHINGTON ST
INDIANAPOLIS IN 46204

REP SEAN EBERHART
2744 E MICHIGAN RD
SHELBYVILLE IN 46176

BARTHOLOMEW CO ENGINEER
2452 STATE ST
COLUMBUS IN 47201

BEECHTREE PLAZA PARTNERSHIP
434 FOURTH ST
COLUMBUS IN 47201

CHAILLE VETERINARY SERVICES LLC
4301 S POPLAR DR
COLUMBUS IN 47201

MEETING NOTICE
CHESTER TRIBUNE
PO BOX 919
193 S CALUMET RD
CHESTERTON IN 46304

COURIER & PRESS
DATA EDITOR
PO BOX 268
EVANSVILLE IN 47702

MAYELA SOSA
FEDERAL HIGHWAY ADMINISTRATION
575 N PENNSYLVANIA ST
RM 254
INDIANAPOLIS IN 46204

GARDEN CITY FARMS
85 E MAIN ST
SUITE E
GREENWOOD IN 46143

GRIFFIN INDUSTRIES INC
4221 ALEXANDRIA PK
COLD SPRING KY 41076

LOUISVILLE & IN R CO
224 S MICHIGAN AVE
STE 330
CHICAGO IL 60604

M & T HOLDINGS LLC
3638 N SR 7
MADISON IN 47250

MENARD
CORP ACCT
4777 MENARD DR
EAU CLAIRE WI 54703

MKLL LLC
PO BOX 1289
STE 330
BLOOMINGTON IN 47402

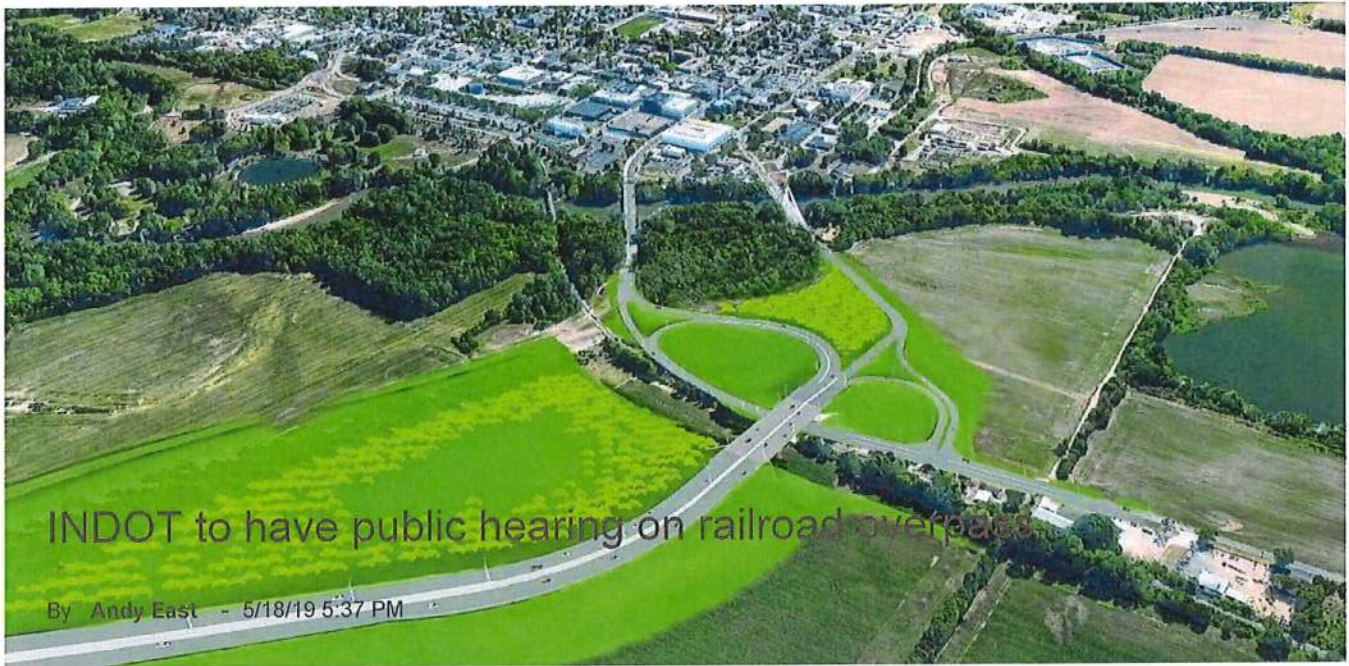
MORAVEC REALTY LLC
PO BOX 2127
COLUMBUS IN 47202

MOUNT PROPERTIES LLC
7033 S SPRAGUE RD
COLUMBUS IN 47201

OCONNOR FARMS
6925 E 50 N
COLUMBUS IN 47203

TOMY LLC
420 JONESVILLE RD
COLUMBUS IN 47201

WALMART REAL ESTATE
PO BOX 8050
BENTONVILLE AR 72712



The Indiana Department of Transportation will have a hearing to receive public comment about the planned railroad overpass for the State Road 46/State Road 11 intersection west of downtown Columbus.

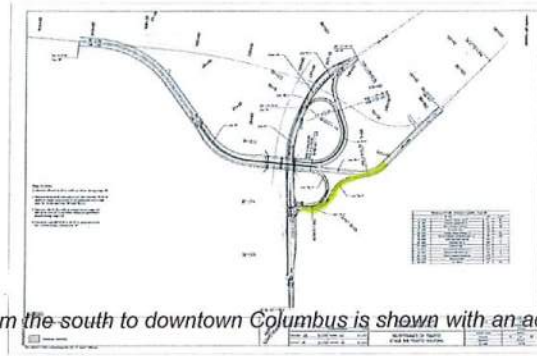
The hearing will be at 6 p.m. May 29 in the Cal Brand Meeting Room at Columbus City Hall. Comments are being sought about the environmental documents and materials about the proposed new \$30 million interchange that will allow motorists to avoid being slowed or stopped because of increasing railroad traffic projected to occur later this year.

Louisville & Indiana Railroad has leased its tracks running through Columbus to CSX, resulting in an increase in train traffic, train speed and delays at intersections involving a rail crossing, with the State Road 46/State Road 11 having the most local traffic.

Louisville & Indiana Railroad and CSX Transportation won approval in April 2015 from the federal Surface Transportation Board to use L&I's 106-mile mainline between Louisville and Indianapolis jointly and upgrade it from jointed steel rails to continuous welded ones.

Story continues below gallery

1 of 3 < >



Shaded in yellow, a motorist approach from the south to downtown Columbus is shown with an added curve to slow down traffic approaching the Robert Stewart bridge.

[Click here to purchase photos from this gallery](#)

The new rails allow heavier and faster trains to move through Columbus and other cities along the rail line, from Seymour to Indianapolis. The plan calls for CSX, which has invested \$70 million to \$90 million in improvements, to shift an estimated 13 to 15 trains per day to the L&I line, in addition to the L&I trains already using the line.

A 2016 study by Indianapolis engineering firm American Structurepoint Inc., commissioned by the city, indicates as many as 22 trains may travel through the State Road 46/State Road 11 intersection, and other Columbus downtown intersections.

The overpass project was developed as a collaboration between the city and the Indiana Department of Transportation, who has agreed to pick up half of the total cost, along with other partners providing funding.

Bartholomew County is paying \$1.5 million to the city, and another \$500,000 that will be paid over a two-year period. The city's share will include \$4 million from Central TIF District funds, while other funding sources include about \$5.5 million from the Cummins Engine Plant TIF District funds, up to \$2.5 million in state or federal highway programs along with cost savings and \$1.5 million from CSX and Louisville & Indiana Railroads.

Studying alternatives

Several overpass alternatives were studied to select an overpass design that would meet the purpose and need while having minimal environmental impacts, INDOT officials said. The design selected is a partial cloverleaf interchange. Cloverleaf interchanges are two-level interchanges that have curved ramp roads much like the shape of a cloverleaf.

A couple recent adjustments have been made to the project's design, said Dave Hayward, Columbus executive director of public works/city engineer.

Initial plans showed a straight road connecting northbound State Road 11 with eastbound State Road 46 near the Robert Stewart Bridge over the East Fork White River. Reworked designs added a curve to that stretch of roadway, to encourage motorists to drive slower through the interchange.

"We talked with INDOT and the designers and we thought it would be good to put something in there to slow people down," Hayward said.

The other change was adding a traffic signal where an exit ramp from State Road 46 would intersect with State Road 11 on the south side of the cloverleaf.

Based on the project's current design, a 40-foot-tall overpass bridge would be built over the State Road 46/State Road 11 railroad tracks, Hayward said. The current stoplight at the State Road 46 and State Road 11 intersection will be removed. State Road 11 will still be next to the train tracks, but will pass underneath the overpass, Hayward said.

Ramp configurations

There are three curved, cloverleaf-like ramps, according to the current design. The first is for drivers who are traveling north on State Road 11 and wish to take State Road 46 west. These drivers would drive underneath the overpass and then turn right to take a curved entrance ramp to merge on to the overpass.

The second curved ramp is for drivers heading east on State Road 46 who wish to travel south on State Road 11. They would cross the overpass and then take an exit ramp — similar in shape to the Interstate 65 exit ramps in Edinburgh — that curves south like a cloverleaf until intersecting with State Road 11. There would be a traffic signal at the end of the ramp to enter State Road 11.

The third curved ramp would be for drivers who are heading west from downtown Columbus and wish to travel west on Jonathan Moore Pike (State Road 46). These drivers would use the left-hand lane to take a curved entrance ramp to merge on to the overpass.

Considering it another way, those traveling westbound on State Road 46 out of downtown Columbus will reverse the current traffic pattern on the bridge. In the new configuration, those in the left two lanes will be heading toward the overpass and continue west out of downtown Columbus while those in the right lane will be heading on to State Road 11.

Hayward said State Road 46 will remain open during overpass construction, though it may be reduced to one lane at some point. INDOT is scheduled to open bids for the project on Oct. 9, and construction could begin in late November or early December, Hayward said.

If this winter is mild enough to allow for construction, the overpass could be open by Nov. 15, 2020, Hayward said.

How to view project documents

The environmental document for the overpass project includes information regarding community and environmental impacts. The environmental document and the preliminary designs are available to view prior to the public hearing at the following locations:

- Bartholomew County Public Library, 536 Fifth St., Columbus
- INDOT Seymour District at 185 Agrico Lane, Seymour
- Hearings Examiner, Room N642 of the Indiana Government Center, 100 N. Senate Ave., Indianapolis, phone (317) 234-0796.

Verbal statements will be accepted during a public comment session for the official public record immediately following the formal presentation. Verbal comments may be restricted to time limitations based on the number of speakers.

In addition, written comments in regard to the projects may be submitted prior to the public hearing and within the comment period to: INDOT Public Hearings, IGCN Room N642, 100 N. Senate Ave., Indianapolis, IN 46204.

If you go

What: Indiana Department of Transportation public hearing on overpass over State Road 46/State Road 11 intersection and railroad crossing

When: 6 p.m. May 29

Where: Cal Brand Meeting Room at Columbus City Hall, located at 123 Washington St., downtown Columbus

Andy East

Andy East is a reporter for the Columbus Republic. He can be reached at 812-379-5712 or by email at aeast@therepublic.com.

SPONSORED CONTENT

Wright, Mary

From: Indiana Department of Transportation <indot@subscriptions.in.gov>
Sent: Thursday, May 16, 2019 11:37 AM
To: Wright, Mary
Subject: INDOT to host public hearing regarding proposed new interchange, SR 46 at SR 11 in Columbus, Bartholomew County

The Indiana Department of Transportation (INDOT) will hold a public hearing at 6:00 p.m. on Wednesday, May 29, 2019, at the Cal Brand Meeting Hall, Columbus City Hall, 123 Washington Street, Columbus, IN 46075. The purpose of the public hearing is to offer all interested persons an opportunity to comment on the environmental document and related materials for the proposed new interchange.

The purpose of the project is to reduce current and anticipated future delays to traffic on SR 46 due to train activity at the L&I Rail Crossing and to reduce congestion and improve vehicular mobility at the SR 46/SR 11 intersection. Several alternatives were studied in order to select a project that would meet the purpose and need while having minimal environmental impacts. The design selected is a modification of a cloverleaf interchange / partial cloverleaf interchange. This alternative removes the at grade intersection at SR 46 and SR 11 by elevating SR 46 over SR 11 and the railroad. This will allow free-flow operations for the SR 46 traffic. The SR 11 southbound traffic would pass underneath SR 46.

Cloverleaf ramps would be provided for northbound SR 11 to westbound SR 46 and eastbound SR 46 to southbound SR 11. The intersection of SR 11 and the eastbound SR 46 off-ramp will be a signalized intersection located approximately 900 feet south of the current intersection. Known as a "green-T" layout, the intersection will install a curbed median along SR 11 so the southbound traffic can remain in a free-flow, bypassing the signal. Due to this project being located within a transition zone of higher suburban speeds and a downtown area with lower speeds, the design has been laid out accordingly. As vehicles travel eastbound along SR 46 through the project area, the three horizontal curves are designed at 50 mph, then 40 mph, and then 30 mph (and in reverse for westbound traffic). The interchange ramps are designed to 25 mph to minimize the perception of this being a freeway-style interchange.

The Columbus People Trail system will be extended to the south along the west side of SR 11 within the project area. Tree clearing will occur as a part of this project. Mitigation for tree removal activities outside of the floodway will be addressed on-site with approximately 7.4 acres of tree planting within the project boundaries. Mitigation for tree removal activities within the floodway will be addressed as a separate project. This mitigated area off site will contain approximately 3.90 acres of tree planting.

An estimated 50 acres of new right-of-way is proposed with no relocations. The preferred maintenance of traffic plan will be implemented in five stages which at times will require lane closures, restrictions, and detour routes, however exact details will be refined when the project progresses to actual construction. Access to all adjacent properties will be maintained during construction.

The environmental document includes information regarding community and environmental impacts related to the proposed project. The environmental document and the preliminary designs are available to view prior to the public hearing at the following locations:

1. Bartholomew County Public Library, 536 5th St., Columbus, IN 47201
2. INDOT Seymour District at 185 Agrico Ln., Seymour, IN 47274
3. Hearings Examiner, Room N642 of the IGCN, 100 N. Senate Ave., Indianapolis, IN 46204-2216, Phone # (317) 234-0796; project information to be posted to INDOT website

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Wright, Mary

From: Clark, Rickie
Sent: Friday, May 24, 2019 9:55 AM
To: sgross@bartholomew.in.gov; surveyor@bartholomew.in.gov;
ddsmith@bartholomew.in.gov; kstoner@bartholomew.in.gov;
dhollander@bartholomew.in.gov; carl.lienhoop@bartholomew.in.gov;
larry.kleinhenz@bartholomew.in.gov; rick.flohr@bartholomew.in.gov;
mayor@columbus.in.us; bryanburton@columbus.in.gov; Hayward, Dave; Thayer, Laura
Cc: McClellan, Tony; Wahlman, Chris; Wright, Mary; Garrett, Natalie R; Shriner, Kacey
Subject: INDOT to host public hearing on May 29 regarding proposed construction of a new interchange at the SR 46 and SR 11 intersection in Columbus, Bartholomew County



INDIANA DEPARTMENT OF TRANSPORTATION

The Indiana Department of Transportation (INDOT) will hold a public hearing at 6:00 p.m. on Wednesday, May 29, 2019, at the Cal Brand Meeting Hall, Columbus City Hall, 123 Washington Street, Columbus, IN 46075. The purpose of the public hearing is to offer all interested persons an opportunity to comment on the environmental document and related materials for the proposed new interchange.

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The Columbus People Trail system will be extended to the south along the west side of SR 11 within the project area. Tree clearing will occur as a part of this project. Mitigation for tree removal

activities outside of the floodway will be addressed on-site with approximately 7.4 acres of tree planting within the project boundaries. Mitigation for tree removal activities within the floodway will be addressed as a separate project. This mitigated area off site will contain approximately 3.90 acres of tree planting.

An estimated 50 acres of new right-of-way is proposed, the proposal does not involve the relocation of any residential or commercial properties. The preferred maintenance of traffic plan will be implemented in five stages which at times will require lane closures, restrictions, and detour routes, however exact details will be refined when the project progresses to actual construction. Access to all adjacent properties will be maintained during construction.

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Rickie Clark, MBA Indiana Department of Transportation
Office of Public Involvement / Communications
100 North Senate Avenue, Room N642
Indianapolis, Indiana 46204
Phone: (317) 232-6601 **Email:** rclark@indot.in.gov



Wright, Mary

From: Indiana Department of Transportation <indot@subscriptions.in.gov>
Sent: Friday, May 24, 2019 10:00 AM
To: Wright, Mary
Subject: INDOT to host public hearing regarding proposed new interchange, SR 46 at SR 11 in Columbus, Bartholomew County

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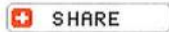
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Public Hearing Comment Disposition - DES. No.: 1700139

State Road 46 New Grade Interchange Construction Project

Verbal Comments

1. John Dunlap (5/29/2019) and (6/1/2019):

This to me looks like presents an opportunity to get some upstream relief. If you look, if you pull up the map, the roadway, the new roadway where 46, the new roadway presents an opportunity for relief of water through here. I've been told that this is going to, that the roadbed will be removed. I hop it will be lowered. There are plans to lower it as well as remove it. I think it would be nice, because that way we would get into a situation where water here being restricted by 46 would be allowed down.

Response to Comments Regarding Flooding Impacts:

In order to construct a project within a designated floodplain, a hydraulic model must be developed and approved by the Indiana Division of Natural Resources (who has legal jurisdiction of floodplains). This hydraulics model must prove that a project will not increase the upstream water elevations more than 0.14' during a 100-year storm event. This project has completed such hydraulics studies and received approval from IDNR's Division of Water and INDOT's Hydraulic Section.

In order to keep the upstream water increase below the acceptable threshold, a number of features needed to be included in the design. This includes the following:

- Retaining the 2-36" pipes under existing SR 46 (east of the existing SR 11 intersection)
- Using the interchange infields as detention areas
- Providing controlled release points of the interchange infields
- Installing multiple pipes and culverts under new SR 46 to equalize the water levels within the interchange area during large storm events

Mainline SR 46 and the ramps are being designed above the 100-year storm event to remain serviceable during larger flood events. The portions of SR 46 to be abandoned will remain at their current elevations, with the pavement removed, backfilled with soil, and seeded.

I will tell you that id not oppose but definitely support this project. This project must proceed to alleviate the danger of not having emergency access into and out of town due to the anticipated increase in train traffic and lengths of trains. I put forward my objections only to rectify past engineering errors that I mention on the attached INDOT "input and feedback" form.

Comment noted.

When work was done to four lane 46 West out of Columbus 15+ years ago the road bed was raised without the inclusion of any culverts under the road bed which in effect created an

immense dam running from the river and new roadway to the incline/hill before the West Hill area which backs up more water upstream on the White and Flatrock Rivers.

This is one of the several reasons why we have experienced more historic high water marks in flooding situations over the last 15 years than reported in the years prior to the 46 reconstruction.

The flood situation was exacerbated more when the Robert Stewart Memorial Bridge and approach ways were built without installation of any significant culvert systems restricting the flood waters to pass through and south of Columbus. The amount of water shed flood backup waters is immense and these compounded design errors must be taken into account on the design of the realignment of St Rd 46.

In talking with the lead engineer prior to the meeting I found that the old 46 road bed would be removed and lowered. This allows for some corrective measures to take place.

I also found in the discussion that just one culvert/bridge under the roadway would be included in that new stretch of realigned 46 before the railroad overpass. This is just **NOT** enough. I would suggested that many more under road culverts be installed possibly even a bridge system. This is **THE** opportunity to get some relief for upstream flooding on significant rainfall events which are becoming more frequent given the apparent climate changes taking place in the Midwest.

I would also recommend that NEW culvert systems be installed under the roadbed on the west approach to the Robert Stewart Bridge. No is the time to do this

Please see above response to comment #1, '[Response to Comments Regarding Flooding Impacts:](#)' for detailed information concerning the floodplain, hydraulic model, and associated flooding impacts.

2. Hutch Schumaker (5/29/2019):

I've been told I think that you are gonna be moving about 480,000 cubic yards of dirt. And I don't know I can't tell from the plans maybe it's simply because I'm old and I can't see well, but I was wondering about future expansion plans, you know we have three lanes from what I understand you said going in and out in the plan currently. If this were to be expanded twenty years down the road to four lanes, are you planning far enough in advance so that the fill that you are bringing in doesn't require you to close down the entire roadway to add more lanes because you have to add another 100,000 cubic yards of fill so you have to shut down all of this again.

The project has been designed to accommodate traffic 20 years beyond the expected opening to traffic after the project's completion. The number of lanes being proposed have been modeled and studied to accommodate the future traffic demand.

3. Demetrius Villa (5/29/2019):

It's necessary for our growing county and state to not only move the economy forward but also save lives and time for the Hoosiers around here. And speaking of time, a long time ago, Hoosiers had the option to travel car free and traffic free by train. So with the end of the Hoosier State that's going to connect Indy over to Chicago, it's no doubt, that it's going to be regretful decision as other states like Florida and Texas are moving ahead to revitalize and privatize high speed passenger rail to connect their states and hopefully join the 21st century with the rest of the first world. At some point will be probably do the same, especially with the next generation coming soon. And Columbus at some point be reconnected with the rest of the state with modern passenger rail. So I'm hoping that with this construction with the separated rail, that there will be a look into having passenger rail equipment as well as having that availability for not just freight railroad but for also passenger rail as that will be happening at some point in the future God willing.

[Modifying the type of train traffic along these rails is not an expected result of this project.](#)

Written and Emailed Comments

4. Don and Lucy "Dody" Harvey (5/29/2019):

We want to make sure that adequate consideration and best engineering practices have been addressed as to the impact of the flow of water in the floodway and floodway fringe area in the design of the new interchange as well as adequate retention of flood water during a major flood event. The 2008 flood severely impacted the near downtown neighborhoods. As residents of that neighborhood we want the city to address any obstructions that impact the flow of water during a major flood event.

[Please see above response to comment #1, 'Response to Comments Regarding Flooding Impacts:' for detailed information concerning the floodplain, hydraulic model, and associated flooding impacts.](#)

5. Dennis Orwin (6/1/2019):

Removal of or restrictions of flood plain are a problem nationwide, but we have an opportunity here, in this project, to address the past problem of failure to properly culvert SR 46 from Stewart Bridge to West Hill, and to ensure that the original flood plain on 46 is restored. In an era where storms and rain are more frequent and heavy, those of us who live upstream need our government to resolve flood issues, not exacerbate them.

[Please see above response to comment #1, 'Response to Comments Regarding Flooding Impacts:' for detailed information concerning the floodplain, hydraulic model, and associated flooding impacts.](#)

6. Paul Duncan (5/24/2019):

As you may already know, Highway 11 floods just North of the Shell station in Garden City, about a football field from the new project. This flooding happens at least annually with some years as often as four times and can shut down the road for more than a week.

My question is will this flooding issue be addressed-corrected as part of the interchange project? If not, a vital part of this new 30 million dollar project will be shut down at least once a year.

[Response to Comments Regarding the Purpose and Need of the Project:](#)

The purpose and need of the project is to address the congestion expected along SR 46 due to increased train traffic and delays at the SR 46/SR 11 signalized intersection. The City of Columbus' Flood Risk Management Plan (Plan) has a stated goal to provide flood-free access routes along critical facilities when the opportunity arise. Mainline SR 46, along with the interchange ramps, have been designed to remain open to traffic up to a 100-year storm event. In order to raise SR 11 above flood elevations, a significant grade raise would be needed to the south, well outside of the current project footprint. It would also require additional costs for new bridges and culverts under SR 11 along with potentially landlocking properties. Due to these cost increases and the fact the purpose and need of the project are not stated to correct flooding of SR 11, such an extension of this project is outside of the scope of work. However, improving SR 46 to provide a flood-free access route meets the City's Plan and the purpose and need of this project.

7. Julie Lowe (5/28/2019):

I would like to convey my agreement with the firm commitment to upon completion immediately revegetate native grasses, sedges, and wildflowers. Planting native vegetation will increase pollinator habitat which has decreased drastically in the past decade and would be an improvement to planting no-native maintenance intense fescue.

The Navigable Waterway that is referred to throughout the document that is close to "on-site" is not the Flatrock River but is the East Fork of the White River. The bridge spans the East Fork of the White River south of the confluence of the Driftwood River and the Flatrock that make the East Fork of the White River.

[INDOT standard seeding has been proposed for disturbed areas within the project area.](#)
[Comment noted about the name of the waterway.](#)

8. Dennis Baute (5/28/2019):

On page 22, the report states: "One goal of the plan is to provide flood free access along critical transportation routes when opportunities arise. Currently SR 11 and SR 46 both flood periodically throughout the year. This project presents an opportunity to pursue the creation of flood-free routes in this area. Members of the design team took the opportunity to discuss the elevations, and for areas within the project limits along SR 46, the profile grade will be increased. Along SR 11, no significant grade change will be made."

This project presents a major opportunity to improve the grade/elevation of SR 11 near the project at minimal cost compared to the rest of the project, but no effort is being made. This decision affects not just property, but also our safety. I fear we will regret our failure to plan and take advantage of this opportunity for SR 11 in the future.

Please see above response for comment #6, [‘Response to Comments Regarding the Purpose and Need of the Project:’](#) for detailed information regarding the purpose and need of the proposed project.

9. Grant Hale (5/31/2019):

I was wondering what will happen to the trees planted in rows on the south side of 46 east of Wendy’s and west of the railroad tracks?

My wife is from Columbus and she remembers when they were planted. Whenever we pass them she always points out what a great idea it was to them there and how much she loves them.

I noticed a new approach of 46 will be well south of the current trees. Will there be new tree rows along the new road? What will happen to the old ones?

In order to mitigate for tree removal, new trees will be planted within the project area. Any tree outside of the construction limits will remain.

Will they [the trees] be in any particular artistic configuration like the current ones?

Yes, they will use the same “quincunx” pattern as the existing.

10. Adam Endres (6/14/2019):

Our home is located in a floodplain just north of this exchange and this new interchange may be the ideal opportunity to mitigate potential future flooding. In previous reconstruction projects along the section of SR 46 being modified, it was discussed to add multiple culvert/bridges so as not to restrict spilling over water from the White and Flatrock Rivers from flowing south and to not back up into the nearby neighborhoods causing flooding hazards. This concept never became a reality and as such the flooding hazard has been exacerbated.

With new reconstruction taking place, now is the time to correct this previous miss and put flood mitigation in place for our homes and downtown area. As an engineer by trade, I know that the design phase is the best time to incorporate key stakeholder requirements while minimizing cost impact. There may not be a better time to correct this problem for a very long time.

Please see above response to comment #1, [‘Response to Comments Regarding Flooding Impacts:’](#) for detailed information concerning the floodplain, hydraulic model, and associated flooding impacts.

11. Patricia Connor (6/13/2019):

Currently the speed limit heading east from I-65 starts at 40mph for almost a mile, then changes to 50 mph for 0.5 mile and back to 40 mph before the intersection with SR 11. It stays 40 mph until after crossing the Stewart bridge, where it changes to 30 mph. The short distance of 50 mph is somewhat confusing and also leads to high speeds along this stretch, frequently up to 60 mph. The proposed design has roadway curves at 50mph, 40mph before the SR 11 overpass, and then a 30mph curve just before the Stewart bridge. Could there be a more consistent speed along the roadway? Perhaps 45mph throughout the project, slowing to 35mph or 30mph entering town. I think the 30mph before the Stewart bridge is too tight. Currently it is 40mph.

The project's design intent is to step-down the speeds of vehicles as they travel east from the more open 50 MPH roadway to the denser 30 MPH sections (and vice versa for westbound traffic). The speed limit changes will be signed to notify drivers. In the eastbound direction, that final curve prior to the Stewart bridge is being re-designed to a 40 MPH standard.

Currently along Lindsey Street, there are three lanes of traffic at the signal with 3rd Street. The left lane is a through movement to continue on Lindsey St. The right lane primarily serves those headed WB 46, with the middle lane used for SB Sr11 and also WB 46. With the change in the traffic pattern to have WB 46 in the middle lane, what is the effect of right turn on red allowing enough cars to turn without backing up in one lane along Lindsey St. This weave pattern may be problematic.

Right Turn on Red will continued to be permitted. Where as today the right turn lane closest to the street is used primarily for westbound SR 46 traffic; after the project the middle right turn lane will be so.

I like the roundabout option. This was discarded for costing \$100,000 more that the preferred alternative. For a project costing \$25 million, that does not seem comparable benefit/rejection. The traffic for SR 11 to EB SR 46 should have a bend in the alignment to slow them down before heading over the Stewart bridge. Perhaps the roundabout layout could be a little farther northeast.

The roundabout option was discarded due to additional reasons. Since the roundabout would occupy more space, it would have caused greater property impacts along the west side of SR 11. In addition, it would have shortened the length of the eastbound off ramp, requiring that ramp to use a down-grade that exceeds standards.

I am not a fan of the signal intersection design. The left side merge never feels comfortable. I notice there is no planned access to businesses along southbound SR11 over than the veterinary clinic.

Sufficient access is being provided for the one business along the west side of SR 11 within the project area. The southbound merge zone is of sufficient length to accelerate to 40MPH and merge safely. This intersection design will allow southbound traffic to move free-flow through the project area, while still providing safe crossings for left turning traffic.

The introduction speech at the hearing mentioned the People Trail is to be extended south along the west side of SR 11 within the project limits. However, I see no mention of that in the environmental document.

The CE will be corrected to clarify the addition of the trail along SR 11.

The river along the east side of the project is the East Fork White River. The river to the north of the project is the Driftwood River. The two floodways overlap in the project area. Environmental impacts should be applied to these two rivers. There are incorrect to the Flatrock River and labeling throughout documents. However, as the Flatrock River and Driftwood River join at Mill Race Park, any impacts to these two rivers will also be felt along the Flatrock River.

Currently water overtops SR 46 during major flood events. Raising the roadway will affect the capacity of the floodway at this location. There was no mention of how drainage will be addressed, nor pipes under the SR 46 roadway.

The proposed project will have more pavement area, and higher elevations than the current footprint, which presents an increased risk to flooding. It was not mentioned how this increased impact to the floodways will be addressed.

Please see above response to comment #1, '[Response to Comments Regarding Flooding Impacts](#):' for detailed information concerning the floodplain, hydraulic model, and associated flooding impacts.

Will pipes under the roadway also serve as wildlife passage?

The new pipes will not be large enough to serve as wildlife crossings.

The project will remove trees, 6.4 acres of forest to be impacted. The environmental document divides tree clearing within the floodway, and outside the floodway and the areas are to be replanted separately. It appears the entire project is within limits of the floodway, and all clearing would be considered floodway tree removal. Where is each area defined?

Per state statute, only tree clearing within the floodway must be mitigated (as opposed to the floodplain). Therefore, in order to confirm the project is meeting legal obligations, this distinction needs to be made. That said, the project sponsors are mitigating for these tree losses above-and-beyond the minimum.

Categorical Exclusion Level 4 – Environmental Document

Part II, page 5. Funding source only checks Federal and State. Local and “other” funds are being used. City of Columbus and L&I railroad are contributing funds to the project.

The funding sources will be corrected.

Section B, page 21. Discussion of Floodways should address East Fork White River and Driftwood River.

The entire floodplain within the project area has been studied and assessed for impacts. This would include all natural waterways that contribute to the floodplain in this area. The CE document will clarify that the Driftwood, Flatrock, and East Fork White River were considered in the floodplain studies.

Section B, page 23 states prime farmland to be affected by the project. How is that acquiring 40.5 acres of in-use farmland be considered no impact? Was NRCS using the same project area?

Coordination with NRCS occurred August 16, 2018. The NRCS responded September 20, 2018 indicating that the project will not cause a conversion of prime farmland. NRCS is responsible for determining what land is considered 'prime farmland' regardless of whether it is currently in use for agricultural production. NRCS was provided exhibits of the project area which have not changed.

Section C, Cultural Resources. The trees along SR 46 were designed by noted landscape architect, Michael Van Valkenburgh, I think in conjunction with his work at Mill Race Park. Although not likely historic rating, perhaps worth noting, as some of these trees will be removed with the project.

The landscape architecture along the south side of SR 46 was not identified by INDOT or IDNR as eligible for the National Register of Historic Places. That said, the project team coordinated with the offices of Michael Van Valkenburgh during the design. The new trees to be planted in the interchange infields will be of similar species and arrangement to compliment the two areas.

12. Ben & Pat Bush (5/29/2019):

Please give serious consideration to improvement of our area and others by adding adequate culverts under realigned SR46 at the intersection of the railroad overpass construction and SR11. This is an opportunity.

When they added a second lane to SR46 across the flood plain we were told that the project would not increase flood risk, and it could have been done that way, however, the added lane was built higher and became a flood restriction, with NO culvert relief carried out. This added restriction reduced the flow of the area water to a historic flood plain of over 2,000 acres to the south and represents and added increased flood threat to the South West and Southern Center city.

Please see above response to comment #1, '[Response to Comments Regarding Flooding Impacts:](#)' for detailed information concerning the floodplain, hydraulic model, and associated flooding impacts.

13. Dennis O. Taylor (5/28/2019):

In 1968, Road 46 was a 2-lane highway. I recall seeing the floodwaters crossing the road at that time – at a location relatively close to the railroad crossing.

When the road was expanded to four lanes, INDOT told us the new lanes would sit lower than the original two lanes. Also, that culverts would transport floodwaters beneath the roadway so that there would be no more impact on flooding upstream than with the two-lane arrangement.

Over time, this promise seems to have lost its lustre. Today, both lanes seem to be at the same level, and there are no culverts to transfer flood water beneath the roadbed. And, there is quite a bit of new construction in the floodplain in the 1/2-mile stretch close to the interstate.

NOW (with construction of the overpass) would be a good time to reproduce the conditions that existed prior to 1968 or earlier, to wit, a more natural contour of the land that would allow flood waters to move where they would naturally want to go.

Where will the new CRH facility fit in? Will access be via Road 11 or Road 46? Either way, the possibilities should be considered before the design is finished and the digging begins.

Please see above response to comment #1, '[Response to Comments Regarding Flooding Impacts:](#)' for detailed information concerning the floodplain, hydraulic model, and associated flooding impacts.

14. Martin Brooks (6/12/2019):

I would like to voice my concern about the flooding impact of this project. The area along the Flatrock River naturally floods a couple of times per year. But the nature of that flooding changed when SR 46 heading west out of Columbus was widened some 15 or so years ago. At the time, they took the opportunity to raise the road bed so that it would be less susceptible to that flooding. But they failed to allow proper flow of flood waters under the road so that drainage followed its historical path. Now, properties to the north experience worse flooding than they had in the past (including my neighborhood). I believe the flooding in downtown Columbus in 2008 may have been less severe had the natural drainage been preserved. I am very enthusiastic about the current bridge project, but I would like the site planners to take proper account of flood drainage impact, including past project impacts. Please take all possible actions to not allow the new road to act as a dam, and to correct past mistakes by installing adequate culverts and drainage means so that both the river and flood waters can flow unimpeded downstream naturally.

Please see above response to comment #1, '[Response to Comments Regarding Flooding Impacts:](#)' for detailed information concerning the floodplain, hydraulic model, and associated flooding impacts.

15. Paul E. & Melinda G. Johnson (6/10/2019):

Our major concern is that flooding mitigation will not receive sufficient front-end evaluation and implementation. The proposed “floodway storage areas” in the overpass area will be helpful, but will most likely not be sufficient to prevent future flooding. Addressing flooding impacts after construction is completed will be considerably more expensive, time consuming, and damaging than dealing with them at the beginning. The realignment of SR 46 also provides a timely opportunity to install culverts or other passages for water to flow under the roadway. Prior to SR 46 being raised several years ago, major rain events would result in water from the East Fork of the White River flowing over the roadway causing lane closures. The raised roadway essentially became an earthen dam from west of I-65 to SR 11.

We urge INDOT and all associated planners, partners, and contractors to do all they can do minimize impacts on flooding including addressing the flow of water under SR 46.

Please see above response to comment #1, [‘Response to Comments Regarding Flooding Impacts:’](#) for detailed information concerning the floodplain, hydraulic model, and associated flooding impacts.

16. Sharon Follendorf (5/29/2019):

One of the reasons my neighborhood has experienced more flooding is due to the lack of any culverts under the 46 roadbed. A “dam” was created that restricts flood waters from passing through south of Columbus. These existing design errors MUST be addressed in the realignment of St. Rd. 46.

The current design plan includes only ONE culvert under the new roadway. This is NOT sufficient and could exacerbate an existing problem. NOW is the time to install new culverts under the 46 roadbed! Correct a current problem before creating an even greater problem for my neighborhood!!

Please see above response to comment #1, [‘Response to Comments Regarding Flooding Impacts:’](#) for detailed information concerning the floodplain, hydraulic model, and associated flooding impacts.

17. Gerald & Lisa Kelly (5/29/2019):

Under the new stretch of realigned 46 before the railroad overpass, please consider more than one culvert/bridge under the roadway. This is a prime opportunity to get upstream flood relief.

Please see above response to comment #1, [‘Response to Comments Regarding Flooding Impacts:’](#) for detailed information concerning the floodplain, hydraulic model, and associated flooding impacts.

Appendix H

Air Quality

Indiana Department of Transportation (INDOT)
 State Preservation and Local Initiated Projects FY 2018 - 2021

SPONSOR	CONTR ACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2018	2019	2020	2021
Columbus	40372 / 1701327	A 14	MS 1	Railroad Protection	Railroad crossings between SR 46 and 11th Street	Seymour	0	STP	\$800,000.00	Columbus MPO	CN	\$640,000.00	\$0.00		\$640,000.00		
Comments:Add project to STIP. CAMPO FY2018-2021 TIP adopted 8/14/17.																	
Columbus	40373 / 1701325	A 02	IR 1024	Added Travel Lanes, HMA	Lowell Road between I-65 and Indianapolis Road (Phase 2)	Seymour	1	STP	\$3,500,000.00	Columbus MPO - PYB	PE	\$286,734.00	\$0.00	\$286,734.00			
										100% Local Funds	PE	\$0.00	\$71,683.00	\$71,683.00			
Comments:Amend new project to STIP. Project is in new CAMPO FY18-21 TIP.																	
Columbus	40375 / 1701323	A 02	ST 1026	Road Reconstruction (3R/4R Standards)	Talley Road between 25th Street and Rocky Ford Road	Seymour	1	STP	\$480,000.00	100% Local Funds	PE	\$0.00	\$56,000.00	\$56,000.00			
										Columbus MPO	PE	\$224,000.00	\$0.00	\$224,000.00			
Comments:Amend FY18-21 STIP. Add FY18 PE funding for Columbus MPO and 100% Local Funds. This project is in the new CAMPO FY18-21 TIP.																	
Bartholomew County	40375 / 1800008	A 14	ST 1026	Br Repl, Comp. Cont. Conc. Construction	Bridge #103 on Talley Road between 25th Street and Rocky Ford Road	Seymour	0	STP	\$1,080,000.00	100% Local Funds	PE	\$0.00	\$21,600.00	\$21,600.00			
										Columbus MPO	PE	\$86,400.00	\$0.00	\$86,400.00			
Comments:Add PE Phase to STIP. CAMPO TIP Resolution 2018-01 dated 2/12/2018.																	
Indiana Department of Transportation	40389 / 1700139	M 11	SR 46	New Interchange Construction	At the intersection of SR 46 and SR 11 in Columbus	Seymour	0	NHPP	\$21,958,122.00	Road ROW	RW	\$104,000.00	\$26,000.00	(\$430,000.00)	\$560,000.00		
Comments:Move most of RW funding to FY 2019. Modified to CAMPO's TIP per M20180514.																	
Indiana Department of Transportation	40389 / 1700139	M 12	SR 46	New Interchange Construction	At the intersection of SR 46 and SR 11 in Columbus	Seymour	0	NHPP	\$21,958,122.00	Road ROW	RW	\$104,000.00	\$26,000.00	(\$430,000.00)	\$560,000.00		
Comments:Move \$430K of RW funding to FY 2019 and slight increase. Modified in CAMPO's TIP per M20180514.																	
Indiana Department of Transportation	40389 / 1700139	A 04	SR 46	New Interchange Construction	At the intersection of SR 46 and SR 11 in Columbus	Seymour	0	NHPP	\$30,020,000.00	Road Construction	CN	\$8,000,000.00	\$2,000,000.00			\$10,000,000.00	
										100% Local Funds	CN	\$12,000,000.00	\$3,000,000.00			\$15,000,000.00	
										Road ROW	RW	\$400,000.00	\$100,000.00	\$500,000.00			
										Road Construction	PE	\$400,000.00	\$100,000.00	\$20,000.00			\$480,000.00
										Road Consulting	PE	\$3,200,000.00	\$800,000.00	\$2,000,000.00			\$2,000,000.00
Comments:Amend PE phase in FY 2018, RR/PE in FY 2018, RW in FY 2018, UT/CN, CN, and CE all in FY 2020. Amended to CAMPO's TIP per Resolution 2017-13 dated 7/10/13																	
Indiana Department of Transportation	40389 / 1702650	A 14	SR 46	New Bridge, Concrete Construction	Over Louisville and Indiana RR on SR 46	Seymour	0	NHPP	\$6,081,878.00	Bridge Construction	CN	\$2,816,000.00	\$704,000.00			\$3,520,000.00	
Comments:Amend CN phase in FY 2020 to the current STIP. Amended to CAMPO's TIP per Resolution 2018-01 dated February 12, 2018.																	

From: [Nick Batta](#)
To: [Aaron Toombs](#)
Cc: [Devin Stettler](#)
Subject: FW: STIP Comment - Des No. 1700139
Date: Thursday, January 31, 2019 9:29:25 AM

Can you attached this comment to your response to comments back INDOT?

NICK BATTA | **Crawford, Murphy & Tilly** | w 317.492.9162 | m 317.409.0665
Project Manager

From: Bolte, Robin <rbolte@indot.IN.gov>
Sent: Thursday, January 31, 2019 7:30 AM
To: Prince, Greg <gprince@indot.IN.gov>
Cc: Nick Batta <nbatta@cmtengr.com>
Subject: RE: STIP Comment - Des No. 1700139

Greg and Nick,

I'm not worrying about the RW in FY 2018, it has all been removed from the program tab and will fall out of the new STIP coming up soon. In FY 2019, we currently have \$1.5M in RW so the STIP is actually a little low, however, the RW phase is already authorized for this project so we do not have to do anything further with TIP/STIP for RW. We are good to go!

From: Prince, Greg
Sent: Wednesday, January 30, 2019 3:35 PM
To: Bolte, Robin <rbolte@indot.IN.gov>
Cc: Nick Batta <nbatta@cmtengr.com>
Subject: FW: STIP Comment - Des No. 1700139

Robin,

Would this be something you can help us with below?

Thanks,

Greg Prince

Project Manager

Capital Program Management
Indiana Department of Transportation
185 Agrico Lane
Seymour, IN 47274
Office: (812) 524-3783
Cell: (812) 528-6549
Email: gprince@indot.in.gov

From: Nick Batta [<mailto:nbatta@cmtengr.com>]
Sent: Wednesday, January 30, 2019 3:28 PM
To: Prince, Greg <gprince@indot.IN.gov>
Subject: STIP Comment - Des No. 1700139

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Greg,

During the review of the Draft CE, we got a comment about some discrepancies in the R/W funding in the STIP. I have attached the latest printout. If you go by fiscal year, you will see the R/W phase has \$500,000 programmed in FY2018; and then \$560,000 programmed in FY 2019 at two separate entries. It sure seem like there should only be one entry for FY 2019 at the \$560,000...not two. Do you know if this is an error; or who to ask?

NICK BATTA | Project Manager



Crawford, Murphy & Tilly | Engineers & Consultants

8790 Purdue Road | Indianapolis, IN 46268

w 317.492.9162 | m 317.409.0665 | f 317.298.4503 | nbatta@cmtengr.com



Centered in Value

Columbus Area Metropolitan Planning Organization
 FY 2018-2021 Transportation Improvement Program

Sponsor	Road / Bridge	DES#	Work type	Location	Funding Program	Funding Entity	Phase	Federal	Match	2018	2019	2020	2021	2018-2021 Funding Total	Pedestrian Facilities	Bicycle Facilities	2022	2023	2024	2025	M=Modification R=Resolution				
INDOT	SR 58	1801047	Small Structure Replacement	9.66 miles east of SR 258	STP	INDOT	PE	\$2,720	\$680		\$3,400			\$3,400								R2018-09; Lead DES# 1800287 SR 135 Jackson Co			
							RW	\$8,000	\$2,000				\$10,000	\$10,000											
		18011785	HMA Overlay, Preventive Maintenance	0.49 mile W of I-65 (CR 300 W) to 0.3 miles E of I-65	STP	INDOT	PE	\$8,000	\$2,000		\$10,000				\$10,000									R2018-09	
								CN	\$342,118	\$85,530				\$427,648	\$427,648									R2018-09	
	SR 46	1700139	Interchange Construction (RR Overpass)	Intersection of SR 46 & SR 11	Road Construction	INDOT	PE	\$1,600,000	\$400,000	\$2,000,000					\$2,000,000								R2017-13		
		1700139	Interchange Construction (RR Overpass)	Intersection of SR 46 & SR 11	Road Construction	INDOT	RR/PE	\$16,000	\$4,000	\$20,000					\$20,000										
		1700139	Interchange Construction (RR Overpass)	Intersection of SR 46 & SR 11	NHPP	INDOT	RW	\$504,000	\$126,000	\$70,000	\$560,000				\$630,000									M20180514	
		1700139	Interchange Construction (RR Overpass)	Intersection of SR 46 & SR 11	Road Construction	INDOT	UT/CN	\$400,000	\$100,000				\$500,000		\$500,000									R2017-13	
		1700139	Interchange Construction (RR Overpass)	Intersection of SR 46 & SR 11	NHPP	INDOT	CN	\$3,134,498	\$783,624				\$3,918,122		\$3,918,122									R2018-03, R2018-04	
		1700139	Interchange Construction (RR Overpass)	Intersection of SR 46 & SR 11	100% Local	INDOT	CN	\$15,000,000					\$15,000,000		\$15,000,000									R2017-13	
		1700139	Interchange Construction (RR Overpass)	Intersection of SR 46 & SR 11	Road Construction	INDOT	CE/PE	\$1,600,000	\$400,000				\$2,000,000		\$2,000,000										
		1702650	New Bridge, Concrete Construction	Over Louisville and Indiana RR on SR 46	NHPP	INDOT	CN	\$4,865,502	\$1,216,376					\$6,081,878		\$6,081,878									R2018-01, R2018-03, R2018-04
		1801374	Environmental Mitigation	SR 46 Interchange project	STP	INDOT	PE	\$160,000	\$40,000		\$200,000					\$200,000									R2018-03, R2018-04
		1801374	Environmental Mitigation	SR 46 Interchange project	STP	INDOT	RW	\$80,000	\$20,000		\$100,000					\$100,000									R2018-03, R2018-04
		1801374	Environmental Mitigation	SR 46 Interchange project	STP	INDOT	CN	\$1,296,000	\$324,000					\$1,620,000		\$1,620,000									R2018-03, R2018-04
		1800724	Bridge Thin Deck Overlay	SR 46 0.12 mile E of SR 11 over E Fork White River WBL	NHPP	INDOT	PE	\$64,000	\$16,000		\$80,000					\$80,000									R2018-03, R2018-04
		1800724	New Bridge, Concrete Construction	SR 46 0.12 mile E of SR 11 over E Fork White River WBL	NHPP	INDOT	CN	\$427,308	\$106,827					\$534,135		\$534,135									R-2018-03, R2018-04
	1593124	Replace Superstructure	0.59 miles W of SR 9 over Otter Creek	Bridge Construction	INDOT	CN	\$544,000	\$136,000		\$680,000					\$680,000										
	1401457	Bridge Thin Deck Overlay	1.81 miles E of Sr 11 over Haw Creek	Bridge Construction	INDOT	CN	\$135,446	\$33,861	\$169,308						\$169,308										
	1500608	HMA Overlay, Preventive Maintenance	From South County Road 350 W to East Fork White River Bridge	Road Construction	INDOT	CN	\$1,524,800	\$381,200	\$1,906,000						\$1,906,000										
	SR 11	1500014	Small Structure Replacement	Over unnamed tributary of Thompson Slough, 3.46 miles N of I-65	Bridge ROW	INDOT	RW	\$15,000	\$4,000		\$20,000				\$20,000									M20180514	
		1500014	Small Structure Replacement	Over unnamed tributary of Thompson Slough, 3.46 miles N of I-65	Bridge Construction	INDOT	CN	\$250,470	\$62,617				\$313,087		\$313,087										
		1500015	Small Structure Replacement	0.48 miles S of SR 46	Bridge Construction	INDOT	CN	\$180,526	\$45,131				\$225,657		\$225,657										
1500015		Small Structure Replacement	0.48 miles S of SR 46	Bridge Construction	INDOT	RW	\$12,000	\$3,000	\$5,000	\$10,000				\$15,000										M20171212	
1600661		Small Structure Replacement	4.61 miles N of I-65 over unnamed tributary to Thompsons Slough	Bridge Construction	INDOT	CN	\$342,040	\$85,510					\$427,559		\$427,559										
1600663		Small Structure Replacement	4.61 miles N of I-65 over unnamed tributary to Thompsons Slough	Bridge ROW	INDOT	RW	\$28,000	\$7,000				\$35,000		\$35,000											
1600663		Small Structure Replacement	4.61 miles N of I-65 over unnamed tributary to Thompsons Slough	Bridge Consulting	INDOT	PE	\$48,000	\$12,000					\$60,000		\$60,000										
1600663		Small Structure Replacement	4.61 miles N of I-65 over unnamed tributary to Thompsons Slough	Bridge Construction	INDOT	CN	\$136,000	\$34,000					\$170,000		\$170,000										
SR 9	1500314	Bridge Deck Replacement	Over Clifty Creek	Bridge Construction	INDOT	CN	\$1,125,200	\$281,300	\$1,406,500					\$1,406,500											
	1500314	Bridge Deck Replacement	Over Clifty Creek	Bridge Consulting	INDOT	PE	\$188,000	\$47,000	\$235,000					\$235,000											
	1500560	Bridge Deck Overlay	5.71 miles N of SR 46 at Little Haw Creek	Bridge Construction	INDOT	CN	\$337,600	\$84,800	\$422,000					\$422,000											

Appendix I

Noise

NOISE ANALYSIS

S.R. 46 INTERCHANGE INTERSECTION IMPROVEMENT PROJECT COLUMBUS TOWNSHIP, BARTHOLOMEW COUNTY, INDIANA DES. NO. 1700139

PREPARED FOR:

INDIANA DEPARTMENT OF TRANSPORTATION

JULY 30, 2018

Prepared by:



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ENVIRONMENTAL PROFESSIONALS CERTIFICATIONS

NOISE ANALYSIS

S.R. 46 INTERCHANGE INTERSECTION IMPROVEMENT PROJECT COLUMBUS TOWNSHIP, BARTHOLOMEW COUNTY, INDIANA

This Noise Analysis was prepared by Mr. Samir Raman, Environmental Engineer, under direction of Mr. Kenneth Beache, Senior Engineer, of Metric Environmental, LLC. (Metric) who reviewed this report for the Indiana Department of Transportation.

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EXECUTIVE SUMMARY

The Indiana Department of Transportation proposes to make improvements to the S.R. 46 Interchange over the railroad at the S.R. 11 Intersection. The Columbus People Trail is located north of S.R. 46 and runs directly adjacent and parallel to the west bound portion of S.R. 46 on the bridge that crosses over Flatrock River from downtown Columbus. Towards the center of the project area is a signal intersection that controls traffic moving from S.R. 11 to S.R. 46 West, S.R. 46 West to S.R. 11, and S.R. 46 East through the intersection. L & I Railroad crosses through the project area running north/south across S.R. 46, west of S.R. 11. The project area is comprised of mixed uses including commercial/industrial, residential, agricultural, and public land uses.

The project scope includes the following improvements:

- Construction of S.R. 46 and S.R. 11 interchange bridge and ramps over S.R. 11 and the L & I Railroad (the railroad).
- Widening of exterior shoulders along S.R. 11 and sections of S.R. 46.

Based on criteria of the Federal Highway Administration (FHWA) and Indiana Department of Transportation (INDOT), the proposed project is a Type I Project because the above improvements consist of a substantial vertical alteration “that removes shielding, and therefore exposes the line-of-sight between the receptors and the traffic noise source” and a noise analysis is required.

In accordance with 23 CFR Part 772-*Procedures for Abatement of Highway Noise* and the INDOT Traffic Noise Policy approved by the Federal Highway Administration effective July 1, 2017, existing and future noise levels were determined using the Federal Highway Administration (FHWA) *Traffic Noise Model (TNM) Program Version 2.5*. Train noise contributions were calculated using equations and methodology from the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment* document.

One (1) residential receptor was identified towards the western portion of the project area. Additionally, eight (8) receptors are associated with the Columbus People Trail. Three (3) receptors were found to be impacted in the proposed conditions by reaching or exceeding their NAC sound criteria levels. Abatement measures were evaluated and found to be feasible and met the INDOT design goal; however, the abatement measure exceeded the cost allowed per benefited receptor and were not found to be reasonable. For details about the modeled abatement measure, see Table 6, located in Section 4.0.

1.0 INTRODUCTION

1.1 Purpose of the Analysis

The purpose of this investigation is to analyze potential noise impacts generated by the S.R. 46 Interchange Intersection Improvement Project in Columbus, Bartholomew County, Indiana in accordance with the 2017 Indiana Department of Transportation (INDOT) Traffic Noise Policy. Based on the criteria of the Federal Highway Administration (FHWA) and Indiana Department of Transportation (INDOT), the proposed project is a Type I Project, because it involves a substantial vertical alteration “that removes shielding, and therefore exposes the line-of-sight between the receptors and the traffic noise source”.

Noise (unwanted sound) as perceived by the human ear, is the result of the sound pressure exerted on the eardrum. Sound pressure is the sensory mechanism by which the human ear perceives loudness. As sound pressure reduces, loudness (as perceived by the ear) decreases. The purpose of the noise analysis is to predict future noise levels, identify potential impacted receptors and, if necessary, evaluate noise abatement measures in areas that show potential noise impacts as a result of the proposed project.

In accordance with 23 CFR Part 772 Procedures for Abatement Highway Noise and the INDOT Traffic Noise Policy, the objectives of the study were achieved by performing the following tasks:

1. Measure existing traffic noise levels at representative locations using a Larson Davis SoundExpert LXT Type 1 Sound Level Meter,
2. Validate the project model created with FHWA Traffic Noise Model version 2.5 (FHWA-TNM) using measured traffic noise levels and volumes,
3. Model existing and future noise levels using FHWA-TNM to identify impacted receptors, if any, based on FHWA Noise Abatement Criteria (NAC) and/or a substantial increase in noise level of 15 dBA,
4. If impacts are identified, assess traffic noise mitigation measures, and
5. If impacts are identified, evaluate whether proposed abatement measures are both feasible and reasonable.

1.2 Project Description

The purpose of this project is to increase operational efficiency and traffic safety by relieving congestion caused by the railroad crossing and current S.R. 46 and S.R. 11 intersection layout. The project scope includes construction of a S.R. 46 interchange bridge and ramps that connect S.R. 11 and S.R. 46. The bridge will elevate S.R. 46 over S.R. 11 and the L & I Railroad (the railroad). Additionally, the project includes widening of exterior shoulders along S.R. 11 and sections of S.R. 46.

1.3 Existing Conditions

The existing roadways within the project area include S.R. 11 (Jonesville Road), S.R. 46 West and S.R. 46 East. S.R. 11 is a north-south Minor Arterial with a speed limit of 30 miles per hour (mph) and two 12 foot lanes (one in each direction). The portion of S.R. 46 west of S.R. 11 is a Principal Arterial with a speed limit of 40 mph and four 12 foot lanes (two in each direction). Both legs of S.R. 46 east of S.R. 11 are Principal Arterials with speed limits of 30 mph and three 12 foot lanes (in one direction). Towards the center of the project area is a signal intersection that controls traffic moving from S.R. 11 to S.R. 46 West, S.R. West to S.R. 11, and S.R. 46 East through the intersection. L & I Railroad crosses through the project area running north/south across S.R. 46, west of S.R. 11.

The project noise study area, within 500 feet of the outer reach of proposed improvements is comprised of mixed use commercial/ industrial, residential, agricultural, and public land uses. A majority of the central portion of the project area is occupied by agricultural/public land uses. Several commercial/industrial facilities adjoin the southern portion of S.R. 11 to the west. A pedestrian trail, Columbus People Trail, adjoins S.R. 46 to the north along the project area and one residential property is located towards the western border of the project area.

1.4 Proposed Improvements

Proposed improvements include the construction of an overpass and ramps to elevate S.R. 46 over S.R. 11 and the L & I Railroad and replace the existing intersection of S.R. 46 and S.R. 11. The bridge will allow uninterrupted traffic along S.R. 46 over S.R. 11 as well as include ramps between S.R. 46 and S.R. 11 in each direction. The S.R. 46 west ramp will include two 12 foot lanes (in one direction). The ramps that allow traffic from S.R. 11 to S.R. 46 west, S.R. 11 to S.R. 46 east, and S.R. 46 east to S.R. 11 will include one 16 foot wide lane (in one direction). The shoulders of the southern portion of S.R. 11 will be widened to 8 feet.

2.0 NOISE ANALYSIS METHODOLOGY

The FHWA Traffic Noise Model version 2.5 (FHWA-TNM) is used to assist in conducting the Noise Analysis. All models are inherently limited and do not fully represent real world conditions. Numerical noise models are a simplification of actual physical conditions. All model results are affected by numerical approximation used to solve the noise equations, modeled area, and the availability and the accuracy of data used to define receptors, traffic, etc. on the noise model for this project was limited by the availability and reliability of traffic data, the roadway characteristics, the and receptor locations.

FHWA-TNM 2.5 was used to develop noise models for the existing conditions (including a validation model) and future “no-build” and “build” conditions for the design year 2041. “No-build” and “Build” conditions connote the traffic patterns and volumes of the project area if the project is either not built or is built respectively.

2.1 Data Collection Site

Metric selected representative monitoring locations along the project alignment to measure existing noise levels at representative receptors. The criteria for selecting monitoring locations included, but were not limited to, existing land use, accessibility for purposes of conducting field measurements, and estimated distance from the edge of the roadway. The number of in-field measurement locations was determined through consultation with INDOT.

Noise levels were measured utilizing a Larson Davis SoundExpert LXT Type 1 sound level meter. The noise level meter was checked for calibration at the beginning and at the end of the series of measurements. Data was gathered between 4:19 pm and 5:35 pm on February 13, 2018. The pavement was dry at all the measurement locations. The average weather conditions were 40 degrees, sunny/cloudy, and <15 mph wind speed. During the measurements it was noted that there could be significant influence to the noise environment by the railroad throughout the project area, but the exact level of influence could not be measured during the field data collection period. Also, FHWA-TNM is limited to modelling traffic noise and cannot be used to accurately model the railroad noise impact. Therefore, in order to validate the FHWA-TNM model of the existing conditions, all noise measurements were taken during times in which railroad noise was not a contributing factor so that the measured noise levels reflect the noise levels generated from the FHWA-TNM noise model. Railroad noise impacts were calculated utilizing noise equations from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment document and added to the noise levels generated by the FHWA-TNM models at each receptor location. See Section 3.2 for further discussion regarding analysis of the railroad noise contributions.

Metric measured existing noise levels at four (4) representative locations along the project length based upon best judgment and criteria discussed above. The locations of the field measurements are depicted in Exhibit 1, located in Appendix B. One 15-minute recording period was performed at each monitoring location. During these 15-minute recording periods,

traffic volume data was recorded along S.R. 46 and S.R. 11 to validate the FHWA-TNM model of the existing conditions.

2.2 Traffic Volumes

Peak hour traffic counts for S.R. 11 and S.R. 46 were performed during data collection (February 13, 2018). Traffic was free-flowing during data collection. Each 15-minute traffic count interval was multiplied by four to simulate an hourly volume for input into the validation FHWA-TNM model.

Traffic volumes for roadways within the project area were provided by Crawford, Murphy & Tilly Consulting Engineers (CMT) for the existing conditions (Year 2017), future no-build conditions (Year 2041), and future build conditions (Year 2041). An estimated 10.15% linear growth was applied to determine future traffic volumes for the project area for the period 2017 to 2041. The traffic volumes provided by CMT were used for input into the existing and future FHWA-TNM models. Table 10 detailing the traffic data provided by CMT is included in Appendix F.

2.3 Model Assumptions

The following assumptions were made when handling traffic data:

- Existing and future traffic volumes for S.R. 46 and S.R. 11 provided by CMT were used as inputs for the existing, future no-build, and future build models.
- Traffic volumes used in the models were assumed to be uniformly distributed amongst multiple lanes when applied to a single movement within multiple lanes.
- Truck percentages applied to a traffic volume were all assumed to be heavy trucks reflecting a worst-case scenario for noise generation.

2.4 Model Validation

To validate the existing noise model, equivalent noise levels were calculated within a validation FHWA-TNM 2.5 model. The validation model mirrors the existing conditions model with the exception of receptors being placed in the approximate locations of the field noise measurements, the traffic data being replaced with the in-field traffic counts taken at the same time as the field noise measurements, and default TNM weather conditions replaced with weather conditions at the time of the field measurements.

Data presented in Table 1 shows field measured noise levels as well as modeled noise levels predicted using the validation FHWA-TNM 2.5 model.

Table 1: Noise Level Validation Modeled

Site Name	Noise Level Measured (dBA)	Noise Level Modeled (dBA)	Difference (+/-) (dBA)	Result
1	60.9	58.7	-2.2	Valid
2	71.9	72.7	+0.8	Valid
3	69.3	68.2	-1.1	Valid
4	65.7	64.3	-1.4	Valid

The noise model is considered to be accurate if the modeled noise level is within 3 dBA of the level measured in the field. All four (4) of the noise measurements taken in the field are within 3 dBA of the noise levels modeled at those locations. Therefore, the TNM model is validated. See Appendix E for field measurement worksheets, Sound Level Meter outputs, and sound meter Calibration Certificate.

3.0 IMPACT ANALYSIS

FHWA identifies seven Noise Abatement Criteria (NAC) categories. Four criteria are based on exterior land use activities. One criterion is based on interior uses. Each noise sensitive land use category has an assigned noise level above which abatement is required to be evaluated. See Table 2 for a description of NAC Activity Categories and criteria abatement action levels. Based on the FHWA NAC, land uses in the project area are associated with Activity Categories B, C, and F.

Table 2: FHWA Noise Abatement Criteria in dBA

Activity Category	NAC	Activity Description
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and severe an important public need and where preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B*	67 (Exterior)	Residential.
C*	67 (Exterior)	Active sport areas, amphitheatres, 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, Section 4(f)sites, schools, television studios, 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 stations, recording studios, schools, and television studios.
E*	72 (Exterior)	Hotels, motels, offices, restaurant/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.

*Includes undeveloped lands permitted for this activity category

The purpose of the noise analysis is to determine the impact to the project area from the altered traffic alignment and distributions generated by the project. In accordance with the INDOT Traffic Noise Policy, a receptor is classified as “impacted” if either of the two following conditions is met:

1. Predicted noise level approaches (within 1 dBA), meets or exceeds the applicable NAC, or
2. Predicted noise level substantially exceeds the existing noise level by at least 15 dBA.

3.1 Location and Description of Receivers

The total number of receptors identified within 500 feet of the outside travel lane along the proposed S.R. 46 Interchange Intersection Improvement Project are listed below in Table 3 and identified with their appropriate NAC categorical classification.

Table 3: Receptors per FHWA Activity Category

Activity Category	Number of Receptors	Receptor Numbers
A	0	
B	1	1
C	8	2-9
D	0	
E	0	
F	4	10-13
G	0	

Total **13**

Nine (9) noise sensitive receptors were identified in the project area. One (1) residential receptor (Category B) was identified towards the western portion of the project area. Additionally, eight (8) receptors (Category C) are associated with a pedestrian trail (Columbus People Trail) to the north and adjacent to S.R. 46 within the project area. Noise levels were modeled for areas with activity Categories B and C as previously defined in Section 1 of this report. Four (4) non-noise sensitive commercial/industrial receptors (Category F) were identified towards the southern end of the project area. The Category F receptors were modeled in FHWA-TNM due to the possibility of future outdoor uses at the locations.

A count of pedestrian traffic is required to evaluate the noise impacts to users of the Columbus People Trail. However, during the time of field data collection, no pedestrians were witnessed on the Columbus People Trail (February 13, 2018). Additionally, no pedestrian trail traffic data was available from the Columbus Indiana Parks and Recreation Department to assist with this determination. To determine this necessary data, trail traffic count information for several Indiana cities was obtained from the Indiana Trails Study Summary Report funded by the Indiana Department of Transportation, Indiana Department of Natural Resources, and National Park Service (Eppley Institute, 2001). The trails study includes average daily weekday and weekend trail users for the months of September and October, 2000. Of the cities analyzed in

the Trails Report, Muncie and Portage have the most comparable populations to Columbus. The month of September was used because it had the highest traffic counts and was therefore selected for greatest public protection. Table 4 below details the trail traffic data obtained from the Indiana Trails Study Summary Report.

Table 4: Muncie and Portage September 2000 Trail Traffic Summary

City	Average Traffic Count	
	Weekday	Weekend
Muncie	270	408
Portage	376	541

The average (by week) trail traffic for Muncie and Portage for the month of September, 2000 is approximately 366 people per day (see equations below). To account for population growth since 2000, a safety factor of 10% was applied to the calculated average of the 2000 pedestrian counts and resulted in a traffic count of 400 pedestrians per day as our assumption for the Columbus People Trail.

$$\frac{(Weekday\ Trail\ Traffic * 5) + (Weekend\ Trail\ Traffic * 2)}{7} = \frac{Average\ Daily\ Users}{Day}$$

$$\frac{\frac{(270 * 5) + (408 * 2)}{7} + \frac{(376 * 5) + (541 * 2)}{7}}{2} = 366.3 \frac{Users}{Day}$$

$$366.3 \frac{Users}{Day} \times 1.1 (safety\ factor) \approx 400 \frac{Users}{Day}$$

The length of Columbus People Trail is approximately 19 miles, approximately 0.95 miles of which is within the project area. As per the 2017 INDOT Traffic Noise Policy, the average household size in Indiana is 2.52 people per household, which is used to convert the number of trail users to equivalent household receptors as defined by FHWA-TNM. The following equation was used to determine the number of receptors to represent the Columbus People Trail, as per the 2017 INDOT Traffic Noise Policy:

$$\frac{Daily\ Number\ of\ Users}{2.52\ People\ per\ Average\ Household} \times Percentage\ of\ Trail\ Within\ Project\ Area$$

$$= Number\ of\ Receptors\ (rounded\ up)$$

$$\frac{400}{2.52} \frac{\text{Users}}{\text{People / Household}} \times \frac{0.95 \text{ mile}}{19 \text{ miles}} = 7.9 \text{ Receptors} \approx 8 \text{ Receptors}$$

Metric also contacted several local agencies/representatives to discuss any permitted planned development along the proposed S.R. 46 Interchange Intersection Improvements project. All agency representatives indicated that there is no development currently planned for this area, and no permits are filed for any parcels within the project area. See Section 5.0 for further details regarding agency correspondence.

3.2 Railroad Noise Consideration

FHWA-TNM 2.5 is intended to model roadway noise and does not include provisions for modeling train noise. Therefore, train noise contributed by the L & I Railroad was calculated separately and was added to the roadway noise levels in accordance with decibel addition procedures. The influence of the railroad on the noise environment was calculated utilizing noise equations from Chapters 5.2 and 5.3 of the FTA Transit Noise and Vibration Impact Assessment document. The FHWA-TNM receptor noise levels were adjusted to account for railroad noise contributions through calculations from FTA guidance.

Usage statistics for the railroad at the S.R. 46 and S.R. 11 intersection were obtained through communication with CSX Transportation through their public phone line and the Department of Transportation Federal Railroad Administration GIS system. It was estimated that 20 locomotive trains per day with 40 cars travelling at 20 mph would generate locomotive noise at 56.76 dBA Leq (1 hour) and train horn noise at 74.04 dBA Leq (1 hour) at the nearest trail receptor which is within 50 feet of the railroad (Receptor 7). Distance correction factors from the FTA guidance were used to calculate the noise levels from the locomotive and horn noise contributions for receptors at distances greater than 50 feet from the railroad. The frequency and speed of locomotive trains along the railroad are not anticipated to change after the development of the proposed interchange project. Although the train will no longer approach S.R. 46 at grade in the proposed conditions, the train will still sound the horn due to crossing the Columbus People Trail at grade; therefore, the horn noise contributions for the train were factored in the proposed conditions as well as the existing ones. The equations and methods used to calculate the railroad noise contributions and Table 9 detailing the distance adjustments and locomotive and horn noise contributions are included in Appendix C of this report.

3.3 Description of Noise Levels for Future Condition

FHWA-TNM was used to estimate future noise levels for identified receptors. Future noise levels were generated based on traffic volumes for design year 2041 and the preferred alternative for the proposed project. As with the existing noise model conditions, the future proposed noise levels generated by FHWA-TNM 2.5 were adjusted to include noise contributions from the railroad that runs through the project area.

Three (3) of the receptors were found to be impacted by exceeding their NAC sound criteria levels for the future build conditions. All three (3) impacted receptors are associated with the Columbus People Trail. All three (3) of these impacted receptors were found to be impacted in the existing model as well as the proposed model, indicating that the receptors are already experiencing high noise levels before the proposed project. The predicted noise levels indicate that no receptors were impacted by a substantial noise level increase of more than 15 dBA from the existing conditions. The FHWA-TNM 2.5 noise levels and the FTA guidance calculation-adjusted noise levels for the proposed conditions are included in Table 5 below.

Table 5: Predicted Noise Level Distributions

Receptor Number	NAC Category	Predicted Noise Level (dBA)						Difference (+/-) (dBA)	Impacted (Yes/ No)
		TNM Existing	FTA Adjustment*	Adjusted Existing	TNM Proposed	FTA Adjustment*	Adjusted Proposed		
1	B/ Residential (66 dBA)	51.7	+0.2	51.9	56.0	+0.1	56.1	+4.2	No
2	C/ Trail (66 dBA)	60.8	+0.0	60.8	64.9	+0.0	64.9	+4.1	No
3	C/ Trail (66 dBA)	57.6	+0.2	57.8	62.4	+0.1	62.5	+4.7	No
4	C/ Trail (66 dBA)	66.5	+0.1	66.6	63.6	+0.1	63.7	-2.8	No
5	C/ Trail (66 dBA)	61.4	+0.7	62.1	56.0	+2.2	58.2	-4.0	No
6	C/ Trail (66 dBA)	71.0	+0.3	71.3	54.6	+5.8	60.4	-10.8	No
7	C/ Trail (66 dBA)	69.2	+6.1	75.3	59.2	+15.1	74.3	-1.1	Yes
8	C/ Trail (66 dBA)	68.4	+0.9	69.3	70.3	+0.6	70.9	+1.6	Yes
9	C/ Trail (66 dBA)	67.9	+0.8	68.7	69.2	+0.6	69.8	+1.1	Yes
10	F/ Commercial (Non-Noise Sensitive)	59.2	+15.1	74.3	64.8	+9.8	74.6	+0.3	N/A
11	F/ Commercial (Non-Noise Sensitive)	60.3	+9.4	69.7	65.6	+5.1	70.7	+1.1	N/A
12	F/ Industrial (Non-Noise Sensitive)	61.2	+6.9	68.1	66.8	+3.2	70.0	+1.9	N/A
13	F/ Industrial (Non-Noise Sensitive)	60.6	+5.8	66.4	66.2	+2.5	68.7	+2.3	N/A

*The equations used to calculate the railroad noise contributions and further details regarding railroad noise contributions are included in Appendix C of this report.

Receptor locations and measurement locations are depicted in Exhibit 1, located in Appendix B. Noise level results for each receptor in the proposed and existing conditions are included in Appendix C.

3.4 Barrier Analysis

According to FHWA regulations and the INDOT Traffic Noise Policy, receptors that are found to be impacted in the design year require abatement measures to be analyzed. A noise barrier wall between the proposed roadway and the three (3) impacted receptors was assessed. As discussed in the methodology section of this report, a noise barrier wall, must be both feasible and reasonable to be recommended.

3.4.1 Feasibility Considerations

The Columbus People Trail is located north of S.R. 46 and runs directly adjacent and parallel to the west bound portion of S.R. 46, including the bridge crossing over Flatrock River from downtown Columbus. Impacted receptor 7 is located along Columbus People Trail in the northwest quadrant of the intersection of S.R. 46 and S.R. 11. It is directly adjacent to the railroad that runs through the project area. Due to safety and line of sight considerations, any noise barrier cannot approach the railroad or the westbound S.R. 46 bridge, and thus is unlikely to benefit receptor 7.

Impacted receptors 8 and 9 associated with the Columbus People Trail are located on the bridge portion of S.R. 46. The construction of a noise barrier on the S.R. 46 bridge over Flatrock River may require a structural assessment of the bridge due to the deadload weight increase resulting from the noise barrier. Additionally, anchoring or securing of the base of the noise barrier wall can impact the structural integrity of the bridge. If additional lateral bracing is required to secure the noise barrier, the increased width of the barrier would encroach upon the vehicle travel lanes of the bridge and/or pedestrian trail. Due to the proximity of such a noise barrier wall to the railroad and the associated potential engineering and safety concerns, further evaluation is required to determine the engineering feasibility of the noise barrier wall at this location. However, for purposes of this analysis it has been assumed that construction of a noise barrier on the bridge is structurally feasible without changes to either the Columbus People Trail or the bridge's vehicle travel lanes.

3.4.2 Reasonableness Considerations

All receptors within the project area, with the exception of receptors 11, 12, and 13, are first row receptors with respect to abatement considerations. A majority of the receptors in this analysis were in place before the existence of the roadway; therefore, the “reasonable” allowable cost for abatement per receptor is \$30,000. The minimum barrier that would satisfy the noise reduction feasibility requirement and noise reduction design goal is 7,640 square feet in area and over \$100,000 per benefitted receptor. The abatement measures were therefore not found to be reasonable. For details about the modeled abatement measure, see Table 6, located below.

Table 6: Noise Barrier Designs Analyzed

Barrier Design Option	Average Height of Barrier (ft)	Length of Barrier (ft)	Total Cost	# of Benefited Receptors	Cost per Benefited Receptor
Optimal Design for Receptors 7, 8, and 9	9.28	823	\$229,079	2	\$114,540

The railroad is located on the opposite side of the impacted receptors to S.R. 46 and was therefore not considered during this analysis of abatement measures since it would not affect the intended noise reduction achieved by the above-mentioned noise barrier wall. The railroad would influence the effectiveness of the barrier at times when a train on the tracks. However, for this evaluation it was not included in the abatement evaluation because the more conservative assessment was still not reasonable. The FHWA-TNM 2.5 noise levels for the above referenced noise barrier are included below in Table 7 below.

Table 7: Noise Abatement Levels Distribution

Receptor Number	Predicted Noise Levels (dBA)			Noise Abatement Design Goal	Benefited (Yes/ No)
	No Barrier TNM Output	With Barrier TNM Output	Noise Abatement		
7	59.2	58.6	0.6	7	No
8	70.3	63.2	7.1	7	Yes
9	69.2	62.2	7.0	7	Yes

The location of the modeled noise abatement walls for receptors 7, 8, and 9 is depicted in Exhibit 1, located in Appendix B.

4.0 CONSTRUCTION NOISE

Construction noise is unwanted sound from an active construction site and includes but is not limited to backing trucks, heavy equipment, and saws. No adverse noise impacts from construction are anticipated because construction noise would be short-term and intermittent. Measures to minimize the temporary impacts could include requiring equipment to have sound-control devices that are no less effective than those provided on the original equipment and requiring all equipment to be muffled.

5.0 AGENCY CORRESPONDENCE

Metric contacted the following agencies/representatives to discuss any permitted planned development along the proposed S.R. 46 Interchange Intersection Improvements project:

- Mr. Hester, President of the Greater Columbus Indiana Economic Development Corporation
- Mr. Hollander, County Engineer of the Bartholomew County Highway Office
- Mr. Finke, Head of Hydrology of the Bartholomew County Surveyor
- Mr. Morales, President of the Bartholomew County Redevelopment Commission

All agency representatives indicated that there is no development currently planned for this area, and no permits are filed for any parcels within the project area. Responses from agency representatives confirm that no additional modelling should be undertaken for areas currently identified as NAC Category F. Additionally, the 2002 Columbus, Indiana Comprehensive Plan Land Use Plan Element document by the Columbus/Bartholomew Planning Department was reviewed for future land use planning within the project noise study area. The City of Columbus Comprehensive Plan Future Land Use Map indicates that the project noise study area is planned agricultural land and floodway/sensitive areas with the exception of planned residential areas towards the western and southern ends. Logs containing pertinent information regarding the correspondence with the various agency representatives and City of Columbus Comprehensive Plan Future Land Use Map are located in Appendix D.

Setback distances at which noise contributions are 66 dBA (NAC for Category “B” and “C” receptors) from the proposed alignment of the intersection have been estimated using the FHWA-TNM model for the proposed conditions and FTA calculations to account for railroad noise contributions. Areas of potential future residential development were identified towards the western and southern portions of the project area in the City of Columbus Comprehensive Plan Future Land Use Map. For the purposes of future planning in the project area, receptors placed in the future build FHWA-TNM model at varying distances from roadways and FTA calculations were used to determine an approximate 66 dBA Sound Level contour for areas of potential future residential development. For details about the modeled abatement measure, see Table 8, located below.

Table 8: Setback Distances (66 dBA Sound Levels)

Location	Approximate Setback Distance (ft)
North side of Western portion of S.R. 46	130
South side of Western portion of S.R. 46	150
West side of S.R. 11/Jonesville Road	330

The 66 dBA Sound Level contour around the potentially future noise sensitive areas of proposed alignment of the intersection is depicted in Exhibit 2, located in Appendix B.

6.0 CONCLUSION

Metric conducted the Noise Analysis for the proposed S.R. 46 Interchange Intersection Improvement Project. The results of this noise analysis show that predicted noise levels did not have a substantial increase of at least 15 dBA at any of the receptors. However, three (3) Category "C" receptors associated with the Columbus People Trail will be impacted in the Future Build condition based on exceedance of the 66 dBA NAC; therefore, noise abatement measures were investigated.

Based on the FHWA TNM 2.5 model, abatement measures for the impacted receptors were assumed to be feasible but were not reasonable due to a cost that exceeded \$30,000 per benefited receptor. Therefore no abatement measures are recommended. Based on the studies thus far accomplished, the State of Indiana has not identified any locations where noise abatement is likely. Noise abatement measures that were studied at these locations were based upon preliminary design costs and design criteria. Noise abatement has not been found to be reasonable based on the cost of the abatement per benefited receptor. A re-evaluation of the noise analysis will occur during final design. If during final design it has been determined that conditions have changed such that noise abatement is feasible and reasonable, the abatement measures might be provided. As part of the feasibility evaluation, engineering evaluations will be required to ensure that the potential noise barrier has engineering feasibility due to right-of-way concerns and bridge loading issues. The final decision on the installation of any abatement measure(s) will be made upon the completion of the project's final design and the public involvement processes.

The viewpoints of the benefited residents and property owners are a major consideration in determining the reasonableness of highway traffic noise abatement measures for proposed highway construction projects. These viewpoints have been determined and addressed during the environmental phase of project development. The will and desires of the public are an important factor in dealing with the overall problems of highway traffic noise. INDOT will incorporate highway traffic noise consideration in on-going activities for public involvement in the highway program, i.e., and will reexamine the residents' and property owners' views on the desirability and acceptability of abatement during project development.

7.0 REFERENCES

Indiana Department of Transportation. (2017). *Traffic Noise Analysis Procedure*.
(<https://www.in.gov/indot/files/2017%20INDOT%20Noise%20Policy.pdf>)

Indiana Department of Transportation, Indiana Department of Natural Resources National Park Service. (2001). *Summary Report Indiana Trails Study, A Study of Trails in 6 Indiana Cities*. Indianapolis, IN

U.S. Department of Transportation, Federal Railroad Administration. *GIS System*
(<http://fragis.fra.dot.gov/gisfrasafety/>)

APPENDIX A
RECEPTOR ADDRESSES

S.R. 46 Interchange Intersection Improvements
 Metric Project # 17-0057
 Receptor Addresses

Noise Sensitive Receptors								
Receptor No	Street Number	Street	City, State, Zip	Owner Name	Elevations (ft)	Noise Reduction Goal (dBA)	Land Use Category	Impact Level (dBA)
1	1265	Jonathan Moore Pk	Columbus, IN 47201	Nienaber Gary Lee	627	7	B	66
2		Jonathan Moore Pk (Columbus People Trail)	Columbus, IN 47201	City Of Columbus IN	623	7	C	66
3		Jonathan Moore Pk (Columbus People Trail)	Columbus, IN 47201	City Of Columbus IN	623	7	C	66
4		Jonathan Moore Pk (Columbus People Trail)	Columbus, IN 47201	City Of Columbus IN	625	7	C	66
5		Jonathan Moore Pk (Columbus People Trail)	Columbus, IN 47201	City Of Columbus IN	624	7	C	66
6		Jonathan Moore Pk (Columbus People Trail)	Columbus, IN 47201	City Of Columbus IN	633	7	C	66
7		Jonathan Moore Pk (Columbus People Trail)	Columbus, IN 47201	City Of Columbus IN	635	7	C	66
8		Jonathan Moore Pk (Columbus People Trail)	Columbus, IN 47201	City Of Columbus IN	637	7	C	66
9		Jonathan Moore Pk (Columbus People Trail)	Columbus, IN 47201	City Of Columbus IN	639	7	C	66

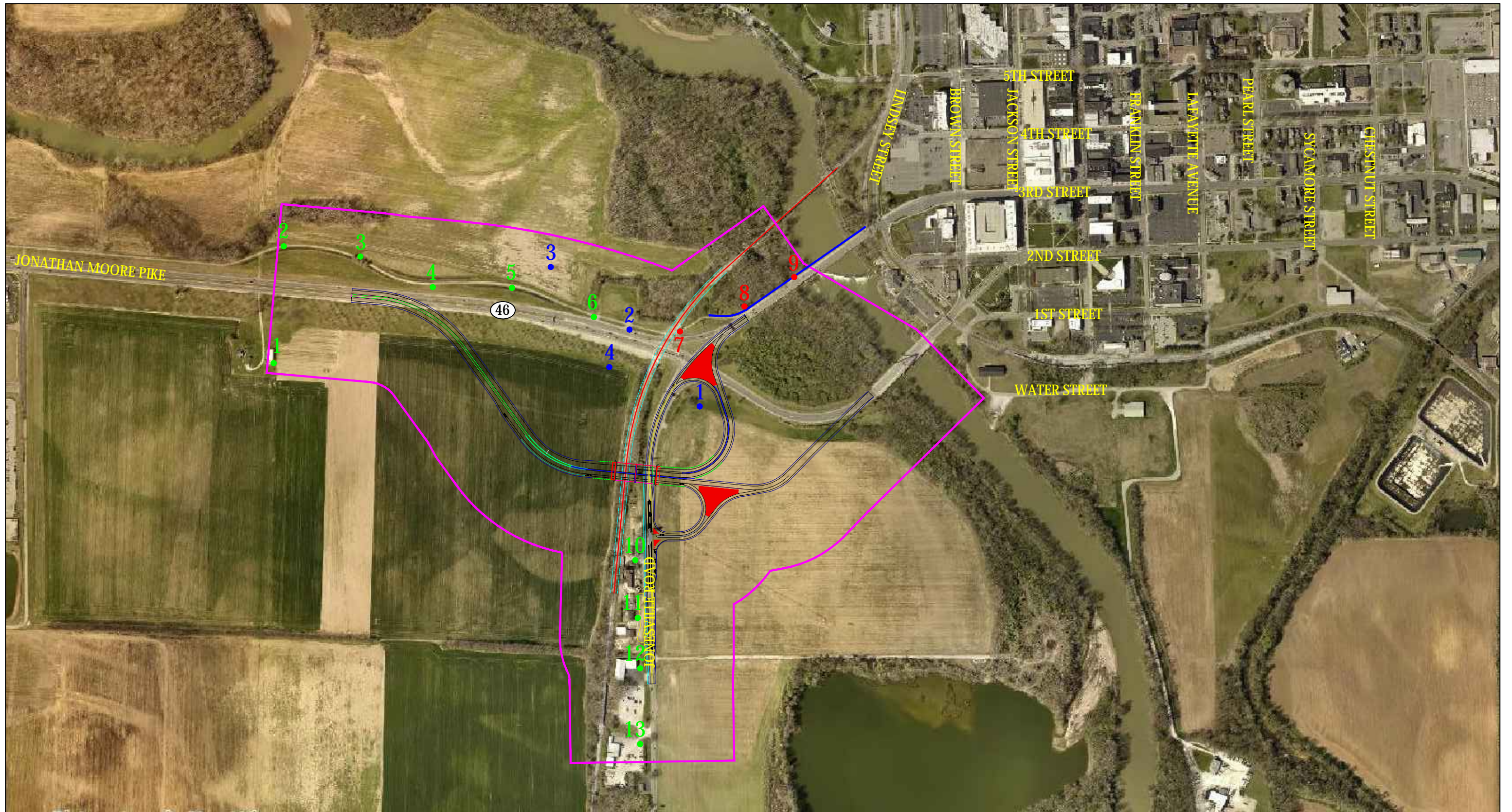
Category F Receptors (Non-Noise Sensitive)							
Receptor No	Street Number	Street	City, State, Zip	Owner Name	Elevations (ft)	Noise Reduction Goal (dBA)	Land Use Category
10	240	Jonesville Rd	Columbus, IN 47201	Chaille Veterinary Services Llc	624	7	F
11		(Retail Building)	Columbus, IN 47201	Chaille Veterinary Services Llc	624	5	F
12	420	Jonesville Rd	Columbus, IN 47201	Tomy Llc	625	5	F
13	460	Jonesville Rd	Columbus, IN 47201	Mount Properties Llc	627	5	F

APPENDIX B

EXHIBITS

EXHIBIT 1 - RECEPTOR AND SAMPLING EXHIBITS

EXHIBIT 2 – SETBACK DISTANCES EXHIBIT

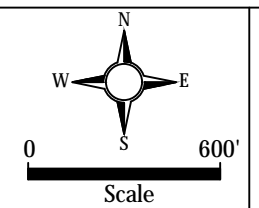


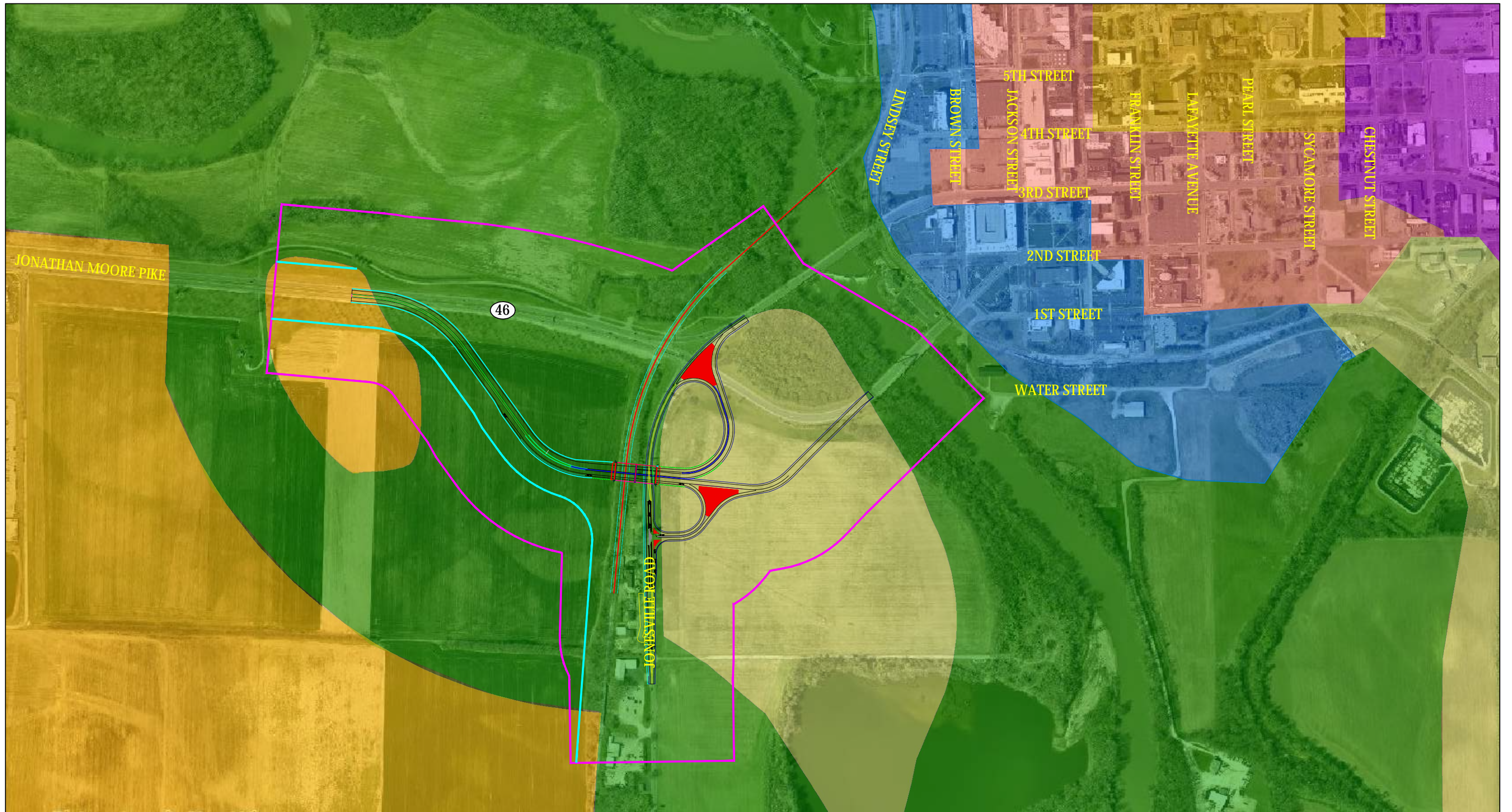
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Exhibit 1 - Receptors and Sampling Locations Exhibit
 Noise Analysis
 SR 46 Intersection Improvements over SR 11
 Bartholomew County, Indiana
 Des. No. 1700139
 Metric Project # 17-0057-1

Note: All locations are approximate

- 500 foot buffer area
- FHWA-TNM modeled noise barrier
- Noise Receptors
- Impacted Receptors
- Measurements




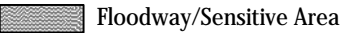








Source: <https://bartholomewin.elevatemaps.io/#extent=260074.91315092248,251324.91315092248,1441444.303083349,1436725.553083349,2244>

Exhibit 2 - Setback Distances Exhibit
Noise Analysis
SR 46 Intersection Improvements over SR 11
Bartholomew County, Indiana
Des. No. 1700139
Metric Project # 17-0057-1

Note: All locations are approximate

- | | | |
|--|--|--|
|  500 foot buffer area |  66 dBA Sound Level Contour | |
|  Residential |  Floodway/Sensitive Area |  Commercial |
|  Agricultural |  Mixed Use |  Industrial |

