Photo 93: View of non-jurisdictional feature AB facing southwest (June 17, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 94: View of non-jurisdictional feature AC facing southwest (June 17, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 95: View of non-jurisdictional feature AD facing southwest (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 96: View of non-jurisdictional feature AE facing southwest (June 17, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 97: View of non-jurisdictional feature AF facing northeast (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 98: View of non-jurisdictional feature AG facing northeast (June 17, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 99: View of non-jurisdictional feature AH facing northeast (June 17, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 100: View of Wetland 21 facing northeast (June 18, 2014). This feature extends outside of the roadside drainage along I-69. The Brooks School Road Overpass is present in the background.

Photo 101: View of Wetland 21 facing east (June 18, 2014).

Photo 102: View of Wetland 22 facing southwest (June 18, 2014). This feature extends outside of the roadside drainage along I-69.

Photo 103: View of Wetland 22 facing northeast (June 18, 2014).

Photo 104: View of non-jurisdictional feature AI facing southwest (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 105: View of Wetland 23 facing southwest (June 18, 2014). This feature extends outside of the roadside drainage along I-69.

Photo 106: View of Wetland 23 facing north (June 18, 2014).

Photo 107: View of non-jurisdictional feature AJ facing northeast (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 108: View of non-jurisdictional feature AK facing southwest (June 18, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 109: View of non-jurisdictional feature AL facing northeast (June 17, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 110: View of non-jurisdictional feature AM facing southwest (June 17, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 111: View of shrub-scrub component of Wetland 24 facing northeast (June 18, 2014). This feature extends beyond the roadside drainage along I-69.

Photo 112: View of emergent component of Wetland 24 facing southwest (June 18, 2014).

Photo 113: View of UNT5 to Sand Creek surrounded by Wetland 24 facing south (June 18, 2014).

Photo 114: View of non-jurisdictional feature AN facing southwest (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 115: View of non-jurisdictional feature AO facing northeast (June 17, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 116: View of Wetland 25 facing northeast (June 17, 2014). This feature extends outside of the roadside drainage and borders UNT5 to Sand Creek.

Photo 117: View of UNT5 to Sand Creek facing northeast (June 17, 2014). Water enters INDOT right-of-way via twin pipes and then enters the large pipe under I-69. Wetland 25 is in the background.

Photo 118: View of Wetland 26 facing southwest (June 17, 2014). This feature is located adjacent to the roadside drainage along I-69.

Photo 119: View of Wetland 26 facing south (June 17, 2014).

Photo 120: View of non-jurisdictional feature AP facing northeast (June 18, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 121: View of non-jurisdictional feature AQ facing northeast (June 18, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 122: View of non-jurisdictional feature AR facing northeast (June 18, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 123: View of non-jurisdictional feature AS facing southwest (June 18, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 124: View of non-jurisdictional feature AT facing southwest (July 10, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 125: View of Wetland 27 facing south (June 17, 2014). This feature extends beyond the roadside drainage along I-69.

Photo 126: View of Wetland 27 facing west (June 17, 2014).

Photo 127: View of Wetland 28 facing south (June 18, 2014). This photograph was taken within the forested portion of this wetland.

Photo 128: View of Wetland 28 from the Campus Parkway Interchange facing west (June 18, 2014). The roadside drainage along this slope contained the emergent portion of this wetland.

Photo 129: View of the emergent portion of Wetland 28 facing northwest along Campus Parkway (June 18, 2014).

Photo 130: View of the pipe draining into the forested portion of Wetland 28 facing southwest (June 18, 2014). No OHWM was observed within (or leaving) this wetland.

Photo 131: View of non-jurisdictional feature AU facing west (June 19, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 132: View of non-jurisdictional feature AV facing east (June 17, 2014). This feature was not vegetated, and is located entirely within the roadside drainage along I-69.

Photo 133: View of Wetland 29 facing east (June 23, 2013). This feature is located between the off-ramp slope and the old roadbed slope to the east.

Photo 134: View of Wetland 29 facing northwest (June 23, 2014).

Photo 135: View of Wetland 29 from the old roadbed slope, facing southwest towards the Campus Parkway Interchange (June 23, 2014).

Photo 136: View of non-jurisdictional feature AW facing south (June 23, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 137: View of non-jurisdictional feature AX facing east (June 17, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 138: View of Wetland 30 facing southeast (June 23, 2014). The primary source of hydrology for this wetland is an underdrain along the I-69 southbound off-ramp.

Photo 139: View of Wetland 30 facing north (June 23, 2014).

Photo 140: View of non-jurisdictional feature AY facing southwest (June 19, 2014). This feature is located entirely within the roadside drainage along I-69. The Campus Parkway Interchange is in the background.

Photo 141: View of non-jurisdictional feature AZ facing northwest (June 23, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 142: View of non-jurisdictional feature BA facing east (June 19, 2014). This feature is located entirely within the roadside drainage along I-69. The Olio Road Overpass is in the background.

Photo 143: View of non-jurisdictional feature BB facing west (July 10, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 144: View of non-jurisdictional feature BC facing east (June 23, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 145: View of Wetland 31 facing east (June 23, 2014). This feature extends beyond the roadside drainage along I-69.

Photo 146: View of Wetland 31 facing west (June 23, 2014).

Photo 147: View of non-jurisdictional feature BD facing east (July 10, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 148: View of UNT1 to Mud Creek facing east (June 19, 2014). The OHWM is 6 inches wide and 3 inches in depth.

Photo 149: View of UNT1 to Mud Creek facing west (June 19, 2014).

Photo 150: View of Mud Creek facing east along the southbound lanes of I-69 (June 25, 2014).

Photo 151: View of Mud Creek facing northeast (August 14, 2014). The OHWM is 27 feet wide and 54 inches deep.

Photo 152: View of Mud Creek facing south outside of INDOT right-of-way (June 25, 2014).

Photo 153: View of UNT2 to Mud Creek facing west (June 25, 2014). The OHWM is 3 feet in width and 10 inches in depth.

Photo 154: View of UNT2 to Mud Creek near its confluence with Mud creek facing east (June 25, 2014).

Photo 155: View of Wetland 32 facing west (June 25, 2014). This wetland is adjacent to UNT2 to Mud Creek.

Photo 156: View of Wetland 32 adjacent to UNT2 facing south (June 25, 2014).

Photo 157: View of non-jurisdictional feature BE facing east (June 25, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 158: View of UNT3 to Mud Creek facing west (June 25, 2014). The OHWM is 4 feet in width and 6 inches in depth.

Photo 159: View of UNT3 to Mud Creek at its confluence with Mud Creek facing west (June 25, 2014).

Photo 160: View of the soil profile at Mud Creek Data Point 1 on June 25, 2014. This data point was taken on the floodplain shelf adjacent to Mud Creek and did not meet any hydric soil indicator.

Photo 161: View of George Burke Drain (Hamilton County regulated drain) facing northwest (June 25, 2014). No OHWM was observed.

Photo 162: View of George Burke Drain regulated drain facing south (June 25, 2014). No OHWM was observed.

Photo 163: View of non-jurisdictional feature BF facing east (June 25, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 164: View of non-jurisdictional feature BG facing south (June 25, 2014). This feature is lined with riprap and located entirely within the roadside drainage along I-69.

Photo 165: View of non-jurisdictional feature BH facing south (June 25, 2014). This feature is lined with riprap and located entirely within the roadside drainage along I-69.

Photo 166: View of non-jurisdictional feature BI facing west (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 167: View of non-jurisdictional feature BJ facing east (June 25, 2014). This feature is riprap lined and located entirely within the median roadside drainage along I-69.

Photo 168: View of non-jurisdictional feature BL facing west (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 169: View of non-jurisdictional feature BM facing east (June 25, 2014). This feature is riprap lined and located entirely within the median roadside drainage along I-69.

Photo 170: View of non-jurisdictional feature BN facing west (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 171: View of UNT1 to Thorpe Creek (John Underwood Drain) facing south (June 25, 2014). The OHWM is 2.5 feet in width and 12 inches in deep.

Photo 172: View of UNT1 to Thorpe Creek (John Underwood Drain) facing north (June 25, 2014).

Photo 173: View of non-jurisdictional feature BO facing east (June 26, 2014). This feature is riprap lined and located entirely within the roadside drainage along I-69.

Photo 174: View of UNT2 to Thorpe Creek facing west (June 26, 2014). The OHWM is 1 foot in width and 4 inches in depth.

Photo 175: View of UNT2 to Thorpe Creek facing east (June 26, 2014).

Photo 176: View of non-jurisdictional feature BP facing east (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 177: View of non-jurisdictional feature BQ facing west (June 26, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 178: View of non-jurisdictional feature BR facing west (June 26, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 179: View of non-jurisdictional feature BS facing east (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 180: View of Wetland 33 facing east (June 26, 2014). This feature extends beyond the roadside drainage along I-69.

Photo 181: View of Wetland 33 facing west (June 26, 2014).

Photo 182: View of non-jurisdictional feature BT facing east (June 26, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 183: View of non-jurisdictional feature BU facing west (June 26, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 184: View of non-jurisdictional feature BV facing east (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 185: View of non-jurisdictional feature BW facing west (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 186: View of non-jurisdictional feature BX facing west (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 187: View of non-jurisdictional feature BY facing east (June 26, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 188: View of non-jurisdictional feature BZ facing west (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 189: View of non-jurisdictional feature CA facing east (June 26, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 190: View of non-jurisdictional feature CB facing east (June 26, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 191: View of non-jurisdictional feature CC facing west (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 192: View of Wetland 34 facing southeast (July 9, 2014). This feature is located on a floodplain shelf adjacent to Thorpe Creek.

Photo 193: View of Wetland 34 facing west (July 9, 2014).

Photo 194: View of Thorpe Creek facing north near the I-69 Northbound Bridge (August 14, 2014). Note the floodplain shelves on both sides of the creek (Wetlands 34 and 35).

Photo 195: View of Thorpe Creek facing south outside of INDOT right-of-way (August 14, 2014). The OHWM is 8.5 feet in width and 6 inches in depth.

Photo 196: View of Thorpe Creek facing east along the I-69 Southbound Bridge (July 9, 2014).

Photo 197: View of Thorpe Creek under the I-69 Northbound Bridge facing north (June 26, 2014).

Photo 198: View of Wetland 35 facing south (July 9, 2014). This feature is located on a floodplain shelf adjacent to Thorpe Creek.

Photo 199: View of Wetland 35 facing east (July 9, 2014).

Photo 200: View of Wetland 36 facing southwest (June 26, 2014). This feature is located on the I-69 northbound roadside slope.

Photo 201: View of the hydrology source (underdrain) for Wetland 36 facing north (June 26, 2014).

Photo 202: View of Wetland 37 facing east (June 26, 2014). This feature is located on the I-69 southbound roadside slope. The source of hydrology for this wetland is an underdrain.

Photo 203: View of non-jurisdictional feature CD facing west (July 3, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 204: View of non-jurisdictional feature CE facing east (June 26, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 205: View of Wetland 38 facing north (July 9, 2014). This feature is located on the I-69 southbound roadside slope.

Photo 206: View of Wetland 38 facing northeast (July 9, 2014). The primary source of hydrology for this wetland is an underdrain.

Photo 207: View of Wetland 39 facing north (June 26, 2014). This feature is located on the I-69 northbound roadside slope.

Photo 208: View of Wetland 39 facing west (June 26, 2014). The primary source of hydrology for this wetland is an underdrain.

Photo 209: View of non-jurisdictional feature CF facing east (June 26, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 210: View of non-jurisdictional feature CG facing west (June 27, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 211: View of non-jurisdictional feature CJ facing west (June 27, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 212: View of non-jurisdictional feature CI facing west (June 27, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 213: View of non-jurisdictional feature CH facing west (June 27, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 214: View of Wetland 41 facing southeast (June 27, 2014). This feature is located on the I-69 southbound roadside slope.

Photo 215: View of Wetland 41 facing east (July 3, 2014). The primary source of hydrology for this wetland is an underdrain.

Photo 216: View of Wetland 40 facing north (June 27, 2014). This feature is located on the I-69 northbound roadside slope.

Photo 217: View of Wetland 40 facing southeast (June 27, 2014). The primary source of hydrology for this wetland is an underdrain.

Photo 218: View of Wetland 42 facing southwest (June 27, 2014). This feature extends beyond the roadside drainage along I-69.

Photo 219: View of Wetland 42 facing east (June 27, 2014).

Photo 220: View of non-jurisdictional feature CK facing south (July 3, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 221: View of non-jurisdictional feature CL facing west (June 27, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 222: View of non-jurisdictional feature CM facing west (June 27, 2014). This feature is lined with riprap and located entirely within the median roadside drainage along I-69.

Photo 223: View of non-jurisdictional feature CN facing west (June 27, 2014). This feature is lined with riprap and located entirely within the median roadside drainage along I-69.

Photo 224: View of non-jurisdictional feature D facing northeast (May 8, 2014). This feature is entirely within the roadside drainage along I-69.

Photo 225: View of non-jurisdictional feature T facing northeast (June 27, 2014). This feature is entirely within the median roadside drainage along I-69.

Photo 226: View of non-jurisdictional feature BK facing west (June 25, 2014). This feature is entirely within the roadside drainage along I-69.

Photo 227: View of typical soil profile exhibiting a depleted matrix as observed throughout the I-69 Interstate Expansion Corridor.

Photo 228: View of typical soil profile redox features as observed throughout the I-69 Interstate Expansion Corridor.

Photo 229: View of typical soil profile exhibiting a depleted matrix as observed throughout the I-69 Interstate Expansion Corridor.

EXHIBIT 7

QHEI/HHEI ASSESSMENTS

*The QHEI/HHEI assessments have been omitted as they are summarized in Table 2 of the report.

EXHIBIT 8

WETLAND DATA FORMS

*The Wetland Data Forms have been omitted as the results are summarized throughout the report.

EXHIBIT 9

MEETING MINUTES

PARSONS

MEETING MINUTES

DATE:	*Office:* August 13, 2014 9:00 am – 12:00 pm	*Field:* August 18, 2014 12:30 pm – 3:30 pm
PROJECT:	I-69 Interstate Expansion Madison/Hamilton Counties INDOT Des. Nos. 1383332/1383336/1383489	
LOCATION:	*Office:* Parsons 101 West Ohio Street, Suite 2121 Indianapolis, Indiana 46204	*Field:* Various locations throughout corridor
ATTENDEES:	Deb Snyder, USACE Jay Turner, IDEM Tony Jones, INDOT Lisa Herber, INDOT Ben Carnahan, Parsons (*office only*) Dan Miller, Parsons T.J. Warrner, Parsons Wade Kimmon, Parsons (*office only*)	

TOPICS:

Introductions were made. All of the meeting participants (above) were in attendance. *Note that these meeting minutes were organized using the agenda and do not necessarily reflect the order items were discussed during the meetings. Discussion items from the field meeting are included as updates to the office meeting minutes to provide all related discussion within the same document.*

Dan provided a summary of the proposed projects and their locations. Project 1 (Des. 1383332) will construct added travel lanes in the median from 106th St to 0.5 mi N of Campus Parkway. An auxiliary lane will be added on southbound I-69 between 106th Street and 116th Street. Project 2 (Des. 1383489) is an Interchange Modification at Exit 210 (Campus Parkway). Currently 4 interchange types are being considered, with 2 being focused on for the possible preferred alternative. Project 3 (Des. 1383336) will construct added travel lanes in the median from 0.5 mi N of Campus Parkway to 0.5 mi East of SR 13. Design is in early stages, as these are "design-build" projects. Deb asked if the interchange project was related to the traffic anticipated for the Cabelas store. Ben indicated that, while traffic models had been adjusted to reflect the additional traffic from Cabelas, this was part of INDOT's 2020 funded projects.

Dan detailed Parsons' waters of the U.S. survey efforts to date, which included a walking survey of the entire I-69 project corridor, including median. He also discussed the field data that was collected.

I. Results of May-July Fieldwork
   A. Wetlands
      - 36 median wetlands totaling 0.75 acre (35 isolated)
      - 96 roadside wetlands totaling 9.84 acres (41 isolated)

- 129 located in *mapped* hydric soils; 3 located in mapped non-hydric soils
- Types: 127 emergent, 1 shrub-scrub, 4 forested (all current impacts are emergent)

Dan gave an overview of the wetlands delineated in the field (both in the median and outside ditches), discussed their low quality, and noted 35 of the 36 median wetland and nearly half of the roadside ditch wetlands were isolated.

Deb noted that there have been recent meetings with INDOT regarding roadside ditch (RSD) guidance and associated wetlands (discussed in detail below). She agreed that most of these wetlands were RSDs, had low functional value, and noted that the proposed road design would potentially recreate these features within the new roadside drainage. She noted that the goal of the 404 program is to replace wetland function, and with this potential replacement function would not be lost.

Dan discussed the high prevalence of mapped nationally listed hydric soils within the project area, and noted that only 3 identified wetlands were located in mapped non-hydric soils.

Deb asked about the five non-emergent wetlands and their jurisdiction. TJ indicated that one was isolated while the rest were likely jurisdictional due to their connection to waters of the U.S. Dan noted that no forested or shrub-scrub wetlands would be impacted based on the current design.

Jay noted that Jason Randolph from IDEM had mentioned at least one higher quality wetland of concern was located along the project. Dan noted that these wetlands will not be impacted by the project.

B. Streams
- 5 streams crossed (all have historic drainage)
- 16 streams identified within I-69 roadside drainage (8 have historic drainage)

Deb asked about the age of I-69 in relation to historic drainage features. TJ indicated that the soil surveys from 1967 showed “proposed I-69”, likely indicating that this stretch of interstate was constructed in the late 1960s or early 1970s. Ben confirmed that this is correct.

II. Problematic Features

A. Updated USACE guidance on roadside ditch wetlands
- Details on new guidance
- General discussion on impact to field results

Deb referred to a recent meeting with INDOT regarding updated roadside ditch guidance. She stated that if the roadside ditch develops all three wetland indicators and does not extend outside of the RSD it is <u>not</u> jurisdictional. Additionally, the RSD must not have any historic drainage or be dug out of pre-existing wetlands. These features would not be considered wetland since “normal conditions” are not present (their “normal condition” is acting as a roadside ditch). Deb noted that the non-jurisdictional features should not be included in the pre-JD form that is included in the waters report. Dan indicated that three quarters, or more, of the wetlands were located within roadside ditches.

Lisa asked about the gray area regarding the definition of upland soils/excavated in uplands. Deb stated that the areas along the I-69 corridor have been heavily impacted by urbanization, further complicating the discussion.

Jay stated that Deb's feedback is in agreement with a recent IDEM meeting with the USACE on this topic.

UPDATE: Field Meeting: Several wetlands contained entirely within roadside drainage were reviewed in the field. These included multiple drainage features that eventually drain into Thorpe Creek at the S.R. 13 Interchange. Each of these exhibit all three wetland characteristics and are contained entirely within the roadside drainage. None of these features have historic drainage. Deb indicated that all met the updated USACE roadside ditch guidance. Because the median wetlands are all contained within roadside drainage, Deb indicated that this same guidance would apply and she did not need to specifically review these in the field.

B. Stream versus wetland conveyances (7)
   - Field observations/photographs
   - Historic drainage absent
   - Resource agency feedback

Deb indicated that the examples provided in the presentation would likely be considered roadside ditches and therefore not jurisdictional.

Tony asked if it was important to identify features that are located within right-of-way but are unlikely to be impacted by proposed construction. Ben discussed how this is a design-build project, making it important that all resources are clearly identified on the plans, should the contractor make changes once the contract is awarded. It would then be on the contractor to modify the permits and mitigate for any additional impacts.

C. Non-vegetated wetlands (6)
   - Field observations/photographs
   - No vegetation data
   - Resource agency feedback

Dan discussed how some of these features had ruts, with the top of the rut containing non-hydrophytic vegetation (K-31, thistle, etc.). Bare soil was located in the bottom of these ruts, likely where the water collected. Dan noted that these features would likely fall out based on earlier meeting discussion on roadside ditches.

D. Riprap lined wetlands
   - Field observations/photographs
   - 10 failed to meet soils indicator but had adjacent hydric soils for out point
   - Several additional met indicator despite presence of riprap close to surface
   - Resource agency feedback

Deb agreed that the out points located adjacent to these features could be used as a surrogate for the wetland soils data. Dan, however, noted that most if not all of these features will likely be removed based on earlier meeting discussion on roadside ditches. Deb noted that the function of these features will likely be replaced by the nature of the project.

E. Hillslope wetlands (6)
   - Field observations/photographs
   - Artificial hydrology

- USACE previous guidance (I-70) for similar features
- Resource agency feedback

Dan discussed previous USACE feedback on these types of features not being jurisdictional. Deb indicated that she, however, would likely take these features since they exhibit all three characteristics under "normal conditions." She will confirm with her section chief.

The jurisdictional status of these features was discussed. Even though their connections to Thorpe Creek (via roadside ditches) are not considered resources, these features exist outside of the RSDs and would still be considered jurisdictional by connection via the RSDs.

Ben indicated that the under drains feeding these wetland features could be left in place by design. Deb and Jay stated that if these areas are impacted, the only way they could be used as "restoration" would be to monitor these areas (against success criteria) for several years.

UPDATE: Fieldwork Meeting: Several of these were visited within or near the S.R. 13 Interchange and the office meeting determination was confirmed.

F. Data collection in median wetlands with safety concerns (2)
   - Field observations/photographs
   - No soil data collected (met hydrology and vegetation criteria)
   - Located in mapped hydric soils
   - Resource agency feedback

Deb agreed that soil data collection was not required for these two wetlands. Dan noted that these features will likely be removed due to earlier discussion of roadside ditches.

G. Potential jurisdictional ditches
   - Field observation/photographs
   - Concrete lined ditch draining into Cheeney Creek
   - Misc. interchange and roadside drainages without connection to waters of the US (15)

After reviewing the example roadside drainages with OHWMs but undetermined connection, Deb indicated that she would likely not take these since historic drainage was not present.

Lisa asked about making a call on features that lacked historical drainage, such as the long stream relocation area. Deb indicated that this feature would be taken due to its relatively permanent flow. A follow-up field visit was proposed to specifically evaluate several ditches.

UPDATE: Field Meeting: The concrete lined ditch draining to Cheeney Creek was visited. Its poor quality was confirmed by both IDEM and the USACE. Active construction (noise wall) was observed near the 116th Street Interchange within this UNT (non-paved portion). Both Lisa and Deb indicated they would check to see if this was previously permitted. Deb indicated she would evaluate how far upstream of Cheeney Creek she would take jurisdiction on this UNT. Both agencies indicated that there office stance on mitigation remained unchanged for this feature (see Section III Part A).

III. 404/401 Permits

A. Stream relocation

- Concrete lined ditch draining to Cheeney Creek
- Approximately 1,200' impact (most recent estimate)
- Resource agency mitigation requirements

Deb asked if an approved JD was going to be used. TJ indicated that the project schedule likely dictated the use of the preliminary JD.

Dan asked if there would be a deed restriction if the concrete lined ditch was relocated and INDOT pursued on-site mitigation. Deb and Jay both indicated this would not be required. Deb and Jay stated that this would be considered "self mitigating" and no success criteria would be tied to this relocation.

Deb indicated that she would not want to see an increase in the length of concrete-lined ditches. She also stated that if the impact threshold exceeds 1,500' a 404 Individual Permit would be required. This can take 12 months, or longer, to obtain.

Dan indicated that some of the concrete lined ditch may not be necessary following relocation, and could be constructed as a vegetated ditch instead. Per discussions with design, a small section of the concrete would have to remain due to scour. Ben stated that riprap may be a viable alternative. Deb noted that riprap or vegetation would be seen as an improvement in resource quality over concrete. Dan asked about leaving the 400' of concrete ditch (north of the relocation) in place vs. clearing this area and making it a vegetated ditch. Deb and Jay confirmed that removing this portion of the ditch and making it vegetated would be ideal. Deb stated she would look into the upcoming RGP to see if this could be allowed without pushing the project into a 404 Individual Permit.

Jay noted that a key point of this discussion was there is little need to monitor the relocated roadside channel. The post-construction condition of the roadside stream is an important part of the 401 (and 404). The 401 certification might simply refer to the mitigation plan for the design of UNT1 Cheeney Creek, or it might list success criteria. Either way, this roadside channel will not be viewed as a traditional mitigation project requiring monitoring. If success criteria are listed in the 401 certification, they would be used to describe what is to be built and planted to ensure the result is a more natural channel rather than a concrete lined channel. Example success criteria are as follows:

- "Ensure the relocated stream consists of a minimum of xxx linear feet of open channel flowing over native substrate."
- "Construct xxxx linear feet of UNT Cheeney Creek as described in the mitigation plan."
- "Plant an herbaceous wetland seed mix in and along the UNT for xxxx linear feet of the relocated channel."

B. USACE cumulative determination on impacts

- Unnamed tributaries (UNTs) draining to major creeks
- Wetlands in close proximity to each other

Deb indicted that the examples shown in the presentation would likely be considered cumulative. Dan noted that several of the wetlands in these examples would be ruled out based on earlier meeting guidance on roadside ditches.

Jay indicated that impacts along the entire corridor would be considered cumulatively per IDEM requirements.

C. Wetland impacts
   - Mitigation
   - Central Indiana Mitigation Bank
   - Resource agency update on credit status

Dan stated that approximately 0.75 acre of median wetland identified in the field would have been impacted by current design. Ben discussed that some of this was related to lowering the median near SR 13, while in other locations this was due to lane widening into the median. Dan stated that, based on earlier meeting feedback on roadside ditches, it appears that virtually all of these wetlands will be classified as non-jurisdictional.

Deb asked if any forested wetlands would be impacted. Dan indicated that none of these are impacted based on current design.

Dan thought the total wetland impacts for the corridor could potentially be less than 0.1 acre based on resource agency feedback.

Deb noted that the current RGP program expires on 12/15/2014. This could affect the 404 (and 401) application submittal which is anticipated in January.

Dan asked Deb and Jay if they would approve wetland credits from the Central Indiana Mitigation Bank, if/when made available, if the project ended up requiring mitigation. Both indicated that this would be a preferred source for credits. Jay indicated that the typical IDEM ratios would apply. Jay and Deb confirmed that credits are currently not available, but the bank is working to get these released shortly.

D. Hamilton County regulated drain permit requirements
   - Required detention
   - Figures
   - Potential conflicts with 401 permitting

Dan discussed that detention would included water storage for 24 to 48 hours and that berms would be used in some locations to help achieve detention. This could potentially inundate some waters. Jay indicated he would want to see more specifics.

Participants agreed that a field check would be useful to finalize thoughts on several identified waters in the project corridor and questions regarding relatively permanent flow for ditch to Thorpe Creek. Dan indicated he would be scheduling this as soon as possible to accommodate the project schedule.

Tony reiterated that this project is on an aggressive schedule to use the allotted 2020 project funding. He asked all involved to process documents and requests with urgency to help keep this project on schedule.

Warrner, Thomas

From: Warrner, Thomas
Sent: Wednesday, September 17, 2014 11:03 AM
To: 'Snyder, Deborah D LRL'
Cc: Miller, Daniel J; Herber, Lisa
Subject: RE: I-69 Hamilton/Madison Counties Conference Call Minutes (UNCLASSIFIED)

Thanks Deb. Dan and I were in the process of generating a response to confirm that very same thing.

T.J.

-----Original Message-----
From: Snyder, Deborah D LRL [mailto:Deborah.D.Snyder@usace.army.mil]
Sent: Wednesday, September 17, 2014 10:39 AM
To: Warrner, Thomas
Cc: Miller, Daniel J; Herber, Lisa
Subject: RE: I-69 Hamilton/Madison Counties Conference Call Minutes (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

T.J. and Dan,

I talked to Lisa about this e-mail, and there is one more clarification:

Any roadside ditch that has perennial or relatively permanent flow is considered jurisdictional, no matter what mapped soil type the ditch was cut into.

I think that our discussion assumed this without anybody stating it, but I thought I would reiterate this point.

Thanks,
Deb
317-517-2659

-----Original Message-----
From: Warrner, Thomas [mailto:Thomas.Warrner@parsons.com]
Sent: Wednesday, September 17, 2014 9:55 AM
To: Snyder, Deborah D LRL
Cc: Miller, Daniel J
Subject: [EXTERNAL] I-69 Hamilton/Madison Counties Conference Call Minutes
Importance: High

Hi Deb,

Thank-you for the time this morning to discuss various features that Parsons has field delineated throughout the I-69 Interstate Expansion Corridor.

Since our earlier office meeting and field review, there have been a few changes to the guidance you provided on USACE jurisdiction over potential waters of the U.S. During the phone call you clarified the following:

* Roadside ditches with an OHWM:

o If mapped entirely in hydric (100%) and/or predominantly hydric (66-99%), consider these features jurisdictional.

o If mapped entirely in not hydric (0%), predominantly non-hydric (1-32%), and/or partially hydric (33-65%) consider these features non-jurisdictional. This would be considered cut in upland.

o If the feature is split between the first and second bullet point, only consider those portions that lie within the first bullet point jurisdictional.

Note: Soil classifications are based on revised NRCS hydric classifications that are available for both Hamilton and Madison Counties. These may not be available for all counties in Indiana.

The drainage features that drain into Thorpe Creek were specifically discussed in regards to this revised guidance. These features were evaluated during the field review meeting, and you confirmed over the call that these features lacked an OHWM. Because of this, these will remain non-jurisdictional. This contrasts to Cheeny Creek's tributaries which were also discussed. These have distinct OHWMs and will remain jurisdictional.

* Roadside ditches with wetlands but no OHWM:

o If located entirely within the existing ditchline, the feature will not be considered a wetland. The mapped soil unit does not affect jurisdiction.

o If the feature extends beyond the existing ditchline, the feature will be considered jurisdictional. The mapped soil unit does not affect jurisdiction.

Take care,

T.J.

Thomas J. Warrner

Environmental Planner
Parsons_Blue_300ppi 2
101 West Ohio Street, Suite 2121

Indianapolis, Indiana 46204

Phone: (317) 616-4671

E-mail: thomas.warrner@parsons.com

Web: www.parsons.com <http://www.parsons.com/>

Classification: UNCLASSIFIED
Caveats: NONE

EXHIBIT 10

PRELIMINARY JD FORM

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): September 30, 2014

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD: Parsons; 101 West Ohio Street Suite 2121; Indianapolis, Indiana 46204; Thomas J. Warrner; (317) 616-4671; thomas.warrner@parsons.com

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: Project 1
The Indiana Department of Transportation (INDOT) is planning an I-69 Interstate Expansion from 106th Street in Fishers to Exit 226 (S.R. 9 and S.R. 109 in Anderson) in Hamilton and Madison Counties. This expansion has been broken into multiple projects with independent utility and logical termini. This report pertains to Projects 1, 2, and 3.

Project 1 (Des. 1383332) extends on I-69 from 106th Street to 0.5 mile north of the Campus Parkway in Hamilton County. This project would construct additional lanes from Exit 205 (116th Street and S.R. 37 in Fishers) to Exit 210 (Campus Parkway) in the form of median travel lanes. An outside auxiliary lane would be added on southbound I-69 from 106th Street to 116th Street. Existing pavement would be resurfaced. The cross section would have a 10-foot paved inside shoulder and a 10-foot paved outside shoulder. Double-sided guardrail would be installed. All mainline bridges would be widened in the median. There would be work on the overhead structure at Cumberland Road. The structure at Brooks School Road over I-69 would have the bridge deck replaced. The overhead structure at 126th Street would require no additional work. The interchange at Exit 210 would be modified as part of a separate project (Project 2). All small structures would be evaluated to determine if rehabilitation or replacement is necessary. Detention would likely be required at all legal drains. All detention basins would be constructed within existing right-of-way. No new right-of-way would be required for this project.

Project 3 (Des. 1383336) extends on I-69 from 0.5 mile north of Campus Parkway to 0.5 mile east of S.R. 13 in Hamilton and Madison Counties. The project would construct additional lanes from Exit 210 (Campus Parkway) to S.R. 13 in the form of median travel lanes. Existing pavement would be resurfaced. The cross section would have a 10-foot paved inside shoulder and a 10-foot paved outside shoulder. Double-sided guardrail would be installed in most areas, though not in wide median areas. All mainline bridges would be widened in the median. The overhead structures at Olio Road and Cyntheanne Road would require no additional work. The pavement on S.R. 13 under I-69 would be lowered to provide adequate bridge clearance. All small structures will be evaluated to determine if rehabilitation or replacement is necessary. Detention would likely be required at all legal drains within Hamilton County. Detention is not expected to be required in Madison County. All detention basins would be constructed within existing right-of-way. No new right-of-way would be required for this project.

Project 2 (Des. 1383489) is a proposed interchange modification at Exit 210 (Campus Parkway) to improve the level of service (LOS). Improvements to the existing interchange, such as added auxiliary lanes, will be considered. Transportation System Management (TSM) improvements, such as ramp metering and signal coordination, will also be considered. In addition, modification to the interchange type will be considered. While all interchange types will be considered as possible improvements, the limited right-of-way in the vicinity of the interchange will make the following interchange types most likely to be selected: partial-cloverleaf interchange, tight diamond with roundabouts at the ramp termini, single point urban interchange,

and double-crossover diamond interchange. The primary factors in determining the modifications selected will be construction costs, LOS rating, traffic safety, land acquisition costs, environmental impacts, and cultural resources impacts. New permanent and/or temporary right-of-way may be required for this project depending upon the type of improvements selected for this undertaking.

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: Indiana County/parish/borough: Hamilton/Madison City: Fishers
Center coordinates of site (lat/long in degree decimal format): Lat. 39.582807° N, Long. -85.574496° **W**.
Universal Transverse Mercator: Northing: 496104.1087982189 Easting: 505020.7991331144 Zone: 37
Name of nearest waterbody: various (see attached) that all drain to the West Fork White River

Identify (estimate) amount of waters in the review area:
Non-wetland waters: 17,605 linear feet: various width (ft) and/or 2.6 acres.
Cowardin Class: various (see attached table)
Stream Flow: various (see attached table)
Wetlands: 5.6 acres
Cowardin Class: various (see attached table)

Name of any water bodies on the site that have been identified as Section 10 waters:
Tidal: NA
Non-Tidal: NA

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of

jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:Parsons.

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

- ☐ Office concurs with data sheets/delineation report.
- ☐ Office does not concur with data sheets/delineation report.

☐ 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:USGS 7.5 Minute Topographic Map; Fishers, McCordsville, and Ingalls Quadrangles.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation:Soil Survey Geographic (SSURGO) Hamilton and Madison Counties.
☒ National wetlands inventory map(s). Cite name:USFWS GIS database (see NWI Map).

☐ State/Local wetland inventory map(s): .

☒ FEMA/FIRM maps:as noted on the NWI Map.

☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (Name & Date):Orthos 2012, Orthos 2008, Othos 2005.

or ☒ Other (Name & Date):May-July Fieldwork (see report for specific dates).

☐ 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.

_____	10/2/2014
Signature and date of Regulatory Project Manager (REQUIRED)	Signature and date of person requesting preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
Cheeney Creek	39.947832 N	-86.014879 W	Riverine-Perennial	400 linear feet	non-section 10 – non-wetland
UNT1 to Cheeney Creek	39.953972 N	-86.010587 W	Riverine-Intermittent	5,865 linear feet	non-section 10 – non-wetland
UNT2 to Cheeney Creek	39.946620 N	-86.014934 W	Riverine-Ephemeral	960 linear feet	non-section 10 – non-wetland
UNT3 to Cheeney Creek	39.949073 N	-86.013086 W	Riverine-Ephemeral	1,000 linear feet	non-section 10 – non-wetland
UNT4 to Cheeney Creek	39.948231 N	-86.013557 W	Riverine-Perennial	425 linear feet	non-section 10 – non-wetland
UNT5 to Cheeney Creek	39.941494 N	-86.019577 W	Riverine-Ephemeral	55 linear feet	non-section 10 – non-wetland
Sand Creek	39.969304 N	-85.975870 W	Riverine-Perennial	340 linear feet	non-section 10 – non-wetland
UNT1 to Sand Creek	39.968671 N	-85.979058 W	Riverine-Ephemeral	1,930 linear feet	non-section 10 – non-wetland
UNT2 to Sand Creek	39.969631 N	-85.976066 W	Riverine-Ephemeral	135 linear feet	non-section 10 – non-wetland
UNT3 to Sand Creek	39.969063 N	-85.975866 W	Riverine-Ephemeral	100 linear feet	non-section 10 – non-wetland
UNT4 to Sand Creek	39.970221 N	-85.972345 W	Riverine-Perennial	325 linear feet	non-section 10 – non-wetland
UNT5 to Sand Creek	39.986532 N	-85.937797 W	Riverine-Intermittent	260 linear feet	non-section 10 – non-wetland
Mud Creek	39.991031 N	-85.902347 W	Riverine-Perennial	430 linear feet	non-section 10 – non-wetland
UNT1 to Mud Creek	39.990680 N	-85.903144 W	Riverine-Ephemeral	2,920 linear feet	non-section 10 – non-wetland
UNT2 to Mud Creek	39.990579 N	-85.902138 W	Riverine-Ephemeral	200 linear feet	non-section 10 – non-wetland
UNT3 to Mud Creek	39.990580 N	-85.902244 W	Riverine-Ephemeral	185 linear feet	non-section 10 – non-wetland
Thorpe Creek	39.993419 N	-85.848462 W	Riverine-Perennial	370 linear feet	non-section 10 – non-wetland
UNT1 to Thorpe Creek	39.991478 N	-85.871661 W	Riverine-Perennial	275 linear feet	non-section 10 – non-wetland
UNT2 to Thorpe Creek	39.991175 N	-85.871161 W	Riverine-Ephemeral	1,430 linear feet	non-section 10 – non-wetland
Wetland 01	39.941511 N	-86.019662 W	Palustrine Emergent	0.0438 acre	non-section 10 – wetland
Wetland 02	39.942207 N	-86.019095 W	Palustrine Emergent	0.0495 acre	non-section 10 – wetland
Wetland 03	39.942749 N	-86.017783 W	Palustrine Emergent	0.1479 acre	non-section 10 – wetland
Wetland 04	39.942755 N	-86.018625 W	Palustrine Emergent	0.0344 acre	non-section 10 – wetland
Wetland 05	39.963123 N	-86.004264 W	Palustrine Emergent	0.0290 acre	non-section 10 – wetland
Wetland 06	39.965024 N	-86.001207 W	Palustrine Emergent	0.4531 acre	non-section 10 – wetland
Wetland 07	39.965956 N	-86.000959 W	Palustrine Emergent	0.2222 acre	non-section 10 – wetland
Wetland 08	39.967467 N	-85.994772 W	Palustrine Emergent	0.7879 acre	non-section 10 – wetland

Wetland 09	39.967663 N	-85.993443 W	Palustrine Forested	0.0845 acre	non-section 10 – wetland
Wetland 10	39.967081 N	-85.993381 W	Palustrine Emergent	0.1198 acre	non-section 10 – wetland
Wetland 11	39.967321 N	-85.990890 W	Palustrine Emergent	0.0556 acre	non-section 10 – wetland
Wetland 12	39.970826 N	-85.970673 W	Palustrine Emergent	0.0216 acre	non-section 10 – wetland
Wetland 13	39.972154 N	-85.967835 W	Palustrine Emergent	0.1800 acre	non-section 10 – wetland
Wetland 14	39.972774 N	-85.966487 W	Palustrine Emergent	0.0084 acre	non-section 10 – wetland
Wetland 15	39.975844 N	-85.960098 W	Palustrine Emergent	0.0037 acre	non-section 10 – wetland
Wetland 16	39.976626 N	-85.958684 W	Palustrine Emergent	0.1970 acre	non-section 10 – wetland
Wetland 17	39.977147 N	-85.957434 W	Palustrine Emergent	0.0350 acre	non-section 10 – wetland
Wetland 18	39.977592 N	-85.956632 W	Palustrine Forested	0.0549 acre	non-section 10 – wetland
Wetland 19	39.979228 N	-85.953082 W	Palustrine Emergent	0.2472 acre	non-section 10 – wetland
Wetland 20	39.980530 N	-85.950366 W	Palustrine Emergent	0.01946 acre	non-section 10 – wetland
Wetland 21	39.983607 N	-85.943890 W	Palustrine Emergent	0.0090 acre	non-section 10 – wetland
Wetland 22	39.984029 N	-85.943140 W	Palustrine Emergent	0.0659 acre	non-section 10 – wetland
Wetland 23	39.984469 N	-85.942132 W	Palustrine Emergent	0.0225 acre	non-section 10 – wetland
Wetland 24	39.986690 N	-85.937636 W	Palustrine Shrub-Scrub and Palustrine Emergent	0.2720 acre	non-section 10 – wetland
Wetland 25	39.986188 N	-85.937119 W	Palustrine Emergent	0.0072 acre	non-section 10 – wetland
Wetland 26	39.987122 N	-85.935137 W	Palustrine Emergent	0.1881 acre	non-section 10 – wetland
Wetland 27	39.989670 N	-85.927868 W	Palustrine Emergent	0.0592 acre	non-section 10 – wetland
Wetland 28	39.991350 N	-85.927043 W	Palustrine Forested and Palustrine Emergent	0.8000 acre	non-section 10 – wetland
Wetland 29	39.992603 N	-85.924896 W	Palustrine Emergent	0.6763 acre	non-section 10 – wetland
Wetland 30	39.991734 N	-85.923098 W	Palustrine Emergent	0.0110 acre	non-section 10 – wetland
Wetland 31	39.991403 N	-85.916568 W	Palustrine Emergent	0.0709 acre	non-section 10 – wetland
Wetland 32	39.990578 N	-85.901911 W	Palustrine Forested	0.0947 acre	non-section 10 – wetland
Wetland 33	39.991914 N	-85.861960 W	Palustrine Emergent	0.0490 acre	non-section 10 – wetland
Wetland 34	39.993123 N	-85.848439 W	Palustrine Emergent	0.0708 acre	non-section 10 – wetland
Wetland 35	39.993134 N	-85.848327 W	Palustrine Emergent	0.0434 acre	non-section 10 – wetland
Wetland 36	39.993155 N	-85.848169 W	Palustrine Emergent	0.0061 acre	non-section 10 – wetland
Wetland 37	39.993760 N	-85.848281 W	Palustrine Emergent	0.0046 acre	non-section 10 – wetland
Wetland 38	39.994123 N	-85.844783 W	Palustrine Emergent	0.0214 acre	non-section 10 – wetland
Wetland 39	39.993470 N	-85.844670 W	Palustrine Emergent	0.0232 acre	non-section 10 – wetland

Wetland 40	39.993376 N	-85.841504 W	Palustrine Emergent	0.0321 acre	non-section 10 – wetland
Wetland 41	39.994010 N	-85.841344 W	Palustrine Emergent	0.0385 acre	non-section 10 – wetland
Wetland 42	39.992773 N	-85.837616 W	Palustrine Emergent	0.0843 acre	non-section 10 – wetland

Miller, Daniel J

From: Herber, Lisa [LHerber@indot.IN.gov]
Sent: Monday, October 20, 2014 10:21 AM
To: Warrner, Thomas; Jones, Tony W; Allen, Kathleen
Cc: Miller, Daniel J; Carnahan, Ben
Subject: RE: I-69 Des 1383332/138336/1383489 Marion and Hamilton Counties, Waters of the U.S. Report Revisions

Follow Up Flag: Follow up
Flag Status: Flagged

TJ,

I have reviewed the waters revisions and everything looks great! The information in this report should be used by the project designer to determine if waters of the U.S. will be impacted by the project. Avoidance and minimization of impacts must occur *before* mitigation will be considered. If mitigation is required, the project manager or project designer must coordinate with the EWPO to discuss how adequate compensatory mitigation will be provided.

The project manager should notify the EWPO if there is any change to the project footprint presented in this report. Such changes may require additional fieldwork and submittal of an updated waters report covering areas not previously investigated. *This report is only valid for a period of five years from the date of fieldwork.* If the report expires prior to waterway permit application submittal, additional fieldwork and a revised waters report will be required. The waters report will not be sent to the United States Army Corps of Engineers (USACE) or the Indiana Department of Environmental Management (IDEM) until the waterways permit applications are submitted to these agencies.

A couple of things: submittal of the waters report ahead of permits to the USACE for their approval may be preferable if there are concerns with mitigation needs for some of these features. I also saw the status report for milestones/completion dates for the project and did not see a Rule 5 listed as a milestone. Please verify.

Lisa Herber
Ecology & Waterway Permits Team Lead
100 North Senate Avenue, Rm N642
Indianapolis, Indiana 46204
Office: (317) 232-5135
Email: Lherber@indot.in.gov

From: Warrner, Thomas [mailto:Thomas.Warrner@parsons.com]
Sent: Thursday, October 16, 2014 1:41 PM
To: Herber, Lisa
Cc: Miller, Daniel J; Carnahan, Ben; Jones, Tony W
Subject: RE: I-69 Des 1383332/138336/1383489 Marion and Hamilton Counties, Waters of the U.S. Report Revisions

Hi Lisa,

Thank-you for your quick review and comments. The revised waters report I dropped off this afternoon incorporates each comment (below) per our morning phone conversation. Please let me know if you have any additional questions or comments on this report.

Take care,

T.J.
317-616-1033

From: Herber, Lisa [mailto:LHerber@indot.IN.gov]
Sent: Wednesday, October 15, 2014 2:57 PM
To: Warrner, Thomas
Cc: Jones, Tony W; Carnahan, Ben; Miller, Daniel J
Subject: RE: I-69 Des 1383332/138336/1383489 Marion and Hamilton Counties, Waters of the U.S. Report

TJ, I have reviewed the waters report and have a few comments:

1. Table 2, Stream Summary: Habitat Quality for Cheeney Creek is listed as Poor but the report states Average.
Table 2 has been revised as requested.
2. Maps: Waterways are not labeled on Exhibits 2 & 3. Wetland type is not consistently named on the maps.
We discussed over the phone on 10/16/14 that waterways would typically be included on the NWI and soils mapping. However, to keep the report length down (this revision would add approximately 100 pages), we will leave these two exhibits as originally submitted. These layers can be readily combined should the USACE or IDEM request this during their review. Also, as discussed, wetland labels for emergent wetlands will be left as is. An additional label has been added for the three forested wetlands (Wetland 09, Wetland 18, and Wetland 32). The only shrub scrub wetland was labeled previously since it was split between emergent and shrub-scrub wetland types.
3. QHEI & HHEI: Check substrate scores for QHEIs; HHEIs do not have the % substrate filled in on all. Area drawing for both forms should have north arrow and the stream named/labeled.
QHEI substrate scores for Sand Creek and Mud Creek were calculated correctly. The error on the Thorpe Creek QHEI score has been corrected, and all references to this score have been updated in the report. HHEI forms where % substrate was missing have also been updated. A north arrow and stream label has been added to all drawings on both the QHEI and HHEI forms.
4. Pre-JD: Uncheck Box E; typically for USACE use.
This has been revised as requested.

Everything else looks great! Let me know if you have any questions.

Lisa Herber
Ecology & Waterway Permits Team Lead
100 North Senate Avenue, Rm N642
Indianapolis, Indiana 46204
Office: (317) 232-5135
Email: Lherber@indot.in.gov

From: Warrner, Thomas [mailto:Thomas.Warrner@parsons.com]
Sent: Monday, October 06, 2014 3:07 PM
To: Herber, Lisa
Cc: Jones, Tony W; Carnahan, Ben; Miller, Daniel J
Subject: I-69 Des 1383332/138336/1383489 Marion and Hamilton Counties, Waters of the U.S. Report

Hi Lisa,

Thank-you for meeting with me this afternoon so I could deliver the I-69 Interstate Expansion Waters of the U.S. Report for your review. As discussed, we incorporated the feedback from three early coordination meetings with INDOT, IDEM, and the USACE into the document. Attached is a copy of the cover letter that accompanied our submittal.

Please let me know if you have any questions or comments on the report.

Take care,

T.J.
Thomas J. Warrner
Environmental Planner
PARSONS
101 West Ohio Street, Suite 2121
Indianapolis, Indiana 46204
Phone: (317) 616-4671
E-mail: thomas.warrner@parsons.com
Web: www.parsons.com

Appendix G: Red Flag Investigation (Summary)

INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204-2216 (317) 232-5348 FAX: (317) 233-4929

Michael R. Pence, Governor
Karl B. Browning, Commissioner

Date: August 13, 2014

To: Hazardous Materials Unit
Environmental Services
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: Daniel J Miller
Senior Environmental Planner
Parsons
101 W. Ohio St., Suite 2121
Indianapolis, IN 46204
Daniel.J.Miller@parsons.com

Re: RED FLAG INVESTIGATION
Des. Nos. 1383332 & 1383336
I-69 Interstate Expansion
Project 1 (from 106th St to 0.5 mi N of Campus Parkway) & Project 3 (from 0.5 mi N of Campus Parkway to 0.5 mi East of SR 13); Hamilton & Madison Counties, Indiana

NARRATIVE

The Indiana Department of Transportation is planning an I-69 Interstate Expansion from 106th St in Fishers to Exit 226 (SR 9 & 109 in Anderson), in Hamilton and Madison Counties. This expansion has been broken into multiple projects with independent utility and logical termini. This report is being conducted for Project 1 (Des. No. 1383332), from 106th Street to 0.5 mi N of Campus Parkway, and Project 3 (Des. No. 1383336), from 0.5 mi N of Campus Parkway to 0.5 mi East of SR 13.

Purpose and Need: The need for these projects stems from traffic congestion issues that currently exist on these segments of I-69. Traffic data was analyzed using Highway Capacity Manual methodology in Highway Capacity Software (HCS). The data was collected by INDOT in 2011, and a 1.5% per year growth rate was applied to forecast the traffic for 2013 ("current year") and 2033 ("design year"). The adjusted and balanced data was then used to produce results in Level of Service (LOS). LOS is a rating for traffic congestion with LOS A being the least delay and LOS F being the most delay. I-69 between Exit 205 and SR 38 is currently operating at LOS E, which is characterized as "unstable flow". In 2033, I-69 from Exit 205 to SR 13 is predicted to experience "forced flow" (LOS F). This is likely to appear in the form of queuing upstream of ramp junctions (southbound at SR 13 in the AM peak hours and northbound at Exit 210 in the PM peak hours). I-69 is considered to be urban to Exit 210 from the south and rural from Exit 210 to the north, which means the minimally acceptable LOS's are D and C, respectively. The results show unacceptable LOS for both existing and future traffic in each direction for this section of I-69.

The purpose of these projects is to improve overall traffic operation by reducing congestion on this segment of I-69.

Existing Conditions: The existing cross section of I-69 from Exit 205 to 0.5 mi E of SR 13 has 2 travel lanes in each direction. The northbound cross section of 3 lanes in each direction ends at Cumberland Rd. The southbound 3-lane section starts with the southbound SR 37 entrance ramps. A pavement resurfacing project (Des. No. 0900053) has recently been completed for this segment of I-69. The pavement condition in this area will be determined by INDOT Pavement Design and the ultimate decision on the level of pavement work required for the project will depend on the condition of the pavement.

Proposed Projects:

Project 1: I-69 from 106th Street to 0.5 mile north of Campus Parkway, Hamilton County

The project would construct additional lanes from Exit 205 (116th Street and SR 37 in Fishers) to Exit 210 (Campus Parkway) in the form of median travel lanes. An outside auxiliary lane would be added on southbound I-69 from 106th Street to 116th Street. Existing pavement would be resurfaced. The cross section would have a 12-foot paved inside shoulder and a 10-foot paved outside shoulder. Double-sided guardrail would be installed. All mainline bridges would be widened in the median. The overhead structure at Cumberland Road would receive minor joint improvements, while the structure at Brooks School Road may be replaced. The overhead structure at 126th St would require no additional work. The interchange at Exit 210 would be modified as part of a separate project (Project 2). All small structures will be evaluated to determine if rehabilitation or replacement is necessary. Detention would likely be required at all legal drains. All detention basins would be constructed within existing right-of-way.

Project 3: I-69 from 0.5 mile north of Campus Parkway to 0.5 mile east of SR 13, Hamilton and Madison Counties

The project would construct additional lanes from Exit 210 to SR 13 in the form of median travel lanes. Existing pavement would be resurfaced. The cross section would have a 12-foot paved inside shoulder and a 10-foot paved outside shoulder. Double-sided guardrail would be installed in most areas, though not in wide median areas. All mainline bridges would be widened in the median. The overhead structure at Olio Road would require no additional work. The overhead structure at Cyntheanne Road may be replaced due to horizontal clearance. The SR 13 interchange will be evaluated to determine if additional auxiliary lanes (within existing right-of-way) would be necessary. All small structures will be evaluated to determine if rehabilitation or replacement is necessary. Detention would likely be required at all legal drains within Hamilton County. Detention is not expected to be required in Madison County. All detention basins would be constructed within existing right-of-way.

Right-of-Way (ROW): A small amount of new strip ROW may be required for Project 1 to accommodate the southbound auxiliary lane from 106th Street to 116th Street. Design alternatives, such as Mechanically Stabilized Earth (MSE) walls, will be evaluated to minimize ROW to the extent practical. No new ROW would be required for Project 3.

SUMMARY

Infrastructure
Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:

Religious Facilities	**4**	Recreational Facilities	**13***
Airports	**1***	Pipelines	**5 (6 segments)**
Cemeteries	**N/A**	Railroads	**1**
Hospitals	**2***	Trails	**64 (segments)**
Schools	**7**	Managed Lands	**N/A**

Explanation: (Please provide a separate paragraph for each item.)

- *Religious Facilities:* Four religious facilities lie within a half-mile radius of the project areas. All four lie outside of the project areas (the closest being Beech Grove Church, approximately 0.1 mile south of the project area on SR 13). Therefore, none of the facilities will be altered by construction activities. Minor inconveniences may occur from the maintenance of traffic (MOT). Due to the local roads offering a very minimal detour around the project

areas, impacts from the MOT would be minimal and should not significantly affect these facilities. These projects are Type I projects, and therefore Noise Analysis will be conducted to determine traffic noise levels, potential noise impacts, and the feasibility of traffic noise mitigation. If any of these facilities are determined to have traffic noise impacts, noise abatement measures will be considered and appropriate measures constructed to mitigate for these impacts.

- *Recreational Facilities:* Thirteen recreational facilities lie within a half-mile radius of the project areas. Four recreational facilities (Lanternwoods, Fishers Elementary School, Billerclay Park, and Fishers High School [*the High School was not included in the output for recreational facilities] lie directly adjacent to the project areas. The other nine locations lie outside of the project areas (beyond 0.1 mile) and will not be altered by construction activities. Billerclay Park and Fishers High School lie north of 116th St, where new ROW will not be required. Therefore, they will not be altered by construction activities. Lanternwoods and Fishers Elementary School lie between 106th St and 116th St, where new ROW may be required. Lanternwoods is located far enough outside of construction limits that ROW will not be required, and it will not be altered by construction activities. Fishers Elementary School lies directly adjacent to the project area (Project 1), with two of its baseball/softball fields lying directly adjacent to the existing ROW. As previously stated, design alternatives, such as MSE walls, will be evaluated to minimize ROW to the greatest extent possible. The school will be coordinated with throughout the project development process. As this facility is likely to be considered a Section 4(f) resource, if impacts to the resource occur, the project will be evaluated to determine the appropriate level of involvement and documentation that must occur.

  Minor inconveniences may occur to all of the recreational facilities due to the MOT. Due to the local roads offering a very minimal detour around the project areas, impacts from the MOT would be minimal and should not significantly affect these facilities. As previously stated, these projects are Type I projects, and therefore Noise Analysis will be conducted to determine traffic noise levels, potential noise impacts, and the feasibility of traffic noise mitigation. If any of these facilities are determined to have traffic noise impacts, noise abatement measures will be considered and appropriate measures constructed to mitigate for these impacts.

- *Airports*: No airports are located within a half-mile radius of the project area. *However, the Indianapolis Metropolitan Airport is located southwest of the project area, approximately 0.8 mile outside of the half-mile radius. Although this airport is beyond the half-mile buffer, it and the INDOT Office of Aviation will be coordinated with during the project development.

- *Pipelines:* Five pipelines (4 Indiana Gas Co. and 1 Buckeye Pipeline Company (2 segments)) lie within a half mile radius of the project areas. One of the Indiana Gas Co. pipelines lies outside of the project areas (approximately 0.17 mile northeast of the project areas near 116th Street) and will not be impacted by the proposed projects. The remaining four pipelines cross the project areas (the Buckeye Pipeline crosses twice). Coordination will occur with the utilities during project development and any impacts will be appropriately mitigated for.

- *Railroads:* One railroad lies within a half-mile radius of the project areas, but well outside of the projects limits (running approximately 0.35 mile northeast of the project areas along the western portion of the project). Therefore, it will not be impacted by the proposed projects.

- *Hospitals:* *The GIS review did not locate any hospitals within a half-mile radius of the project areas. However, IU Health Saxony Hospital is now located off of the southwest quadrant of the Campus Parkway exit, and St. Vincent Health is now located off of the southeast quadrant of the Campus Parkway exit (the locations of the hospitals have been noted on the attached maps). As previously stated, this exit will be modified as part of Project 2, and the hospitals will therefore not be impacted by these projects. Minor inconveniences may occur from the MOT. Due to the local roads offering a very minimal detour around the project areas, impacts from the MOT would be minimal and should not significantly affect these hospitals. As previously stated, these projects are Type I projects, and therefore Noise Analysis will be conducted to determine traffic noise levels, potential

noise impacts, and the feasibility of traffic noise mitigation. If the hospitals are determined to have traffic noise impacts, noise abatement measures will be considered and appropriate measures constructed to mitigate for these impacts.

- *Trails:* Sixty-four segments of trail (37 open, 21 planned, and 6 potential) lie within a half-mile radius of the project areas. Portions of five open trail segments (Billerclay Park Trail, Brooks School Rd/Fall Creek Rd to 136th St, Lantern Road/106th St to Cheeney Creek Park, Commercial Dr to Oak Dr North, and Marilyn Rd/146th St to I-69) lie directly adjacent to the project areas. However, none of these segments are expected to be impacted by the proposed projects. One open segment (146th St from Pointe Blvd to I-69) crosses Campus Parkway and may be impacted by the interchange modification project (Project 2, discussed above), but would not be impacted by the proposed projects.

- *Schools:* Seven schools (Fishers Elementary School, Fishers High School, Lantern Road Elementary School, Eman Elementary School, Hoosier Road Elementary School, Sand Creek Elementary School, and Sand Creek Intermediate School) lie within a half-mile radius of the project areas. Lantern Road Elementary School, Eman Elementary School, Hoosier Road Elementary School, Sand Creek Elementary School, and Sand Creek Intermediate School lie outside of the project areas, and therefore will not be altered by construction activities. Fishers High School lies adjacent to the project area (Project 1) (north of 116th St), where new ROW will not be required. Therefore, it will not be altered by construction activities. Fishers Elementary School lies directly adjacent to the project area (Project 1), with two of its baseball/softball fields lying directly adjacent to the existing ROW. As previously stated, design alternatives, such as MSE walls, will be evaluated to minimize ROW to the greatest extent possible. The school will be coordinated with throughout the project development process. As this facility is likely to be considered a Section 4(f) resource, if impacts to the resource occur, the project will be evaluated to determine the appropriate level of involvement and documentation that must occur.

  Minor inconveniences may occur to these schools from the MOT. Due to the local roads offering a very minimal detour around the project areas, impacts from the MOT would be minimal and should not significantly affect these schools. As previously stated, these projects are Type I projects, and therefore Noise Analysis will be conducted to determine traffic noise levels, potential noise impacts, and the feasibility of traffic noise mitigation. If any of these schools are determined to have traffic noise impacts, noise abatement measures will be considered and appropriate measures constructed to mitigate for these impacts.

Water Resources
Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:

NWI - Points	**7**	NWI - Wetlands	**36**
Karst Springs	**N/A**	IDEM 303d Listed Lakes	**N/A**
Canal Structures – Historic	**N/A**	Lakes	**74**
NWI - Lines	**18**	Floodplain - DFIRM	**4 (37 segments)**
IDEM 303d Listed Rivers and Streams (Impaired)	**N/A**	Cave Entrance Density	**N/A**
Rivers and Streams	**7 (22 segments)**	Sinkhole Areas	**N/A**
Canal Routes - Historic	**N/A**	Sinking-Stream Basins	**N/A**

Explanation: (Please provide a separate paragraph for each item.)

- *NWI Points:* Seven NWI points lie within a half-mile radius of the project areas, but all are located outside of the projects limits (the closest occurring approximately 335 feet south of the project (south of E 131st St.)) and would not be impacted by the proposed projects.

- *NWI Wetlands:* Thirty-six NWI-wetlands lie within a half-mile radius of the project areas. Twelve lie adjacent to the project areas (within 300 feet), but all lie outside of the projects limits. Due to the scope of these projects, a waters/wetland determination will be performed and any possible wetlands delineated. A Waters Report will then be written to summarize the findings. All applicable permits will be applied for and acquired before construction can begin. Applicable agencies will be coordinated with, and any comments received will be incorporated into the environmental document.

- *Lakes:* Seventy-four lakes lie within a half-mile radius of the projects limits with several located adjacent to the projects limits. Currently, no lakes are expected to be impacted by the proposed projects. As previously stated, a waters determination will be performed to verify jurisdictional waters within and/or adjacent to the project areas.

- *NWI Lines:* Eighteen NWI line segments lie within a half-mile radius of the project areas. Three segments lie within the project area (along Sand Creek, Mud Creek, and Thorpe Creek). Again, a waters/wetland determination will be performed and any possible wetlands delineated. A Waters Report will then be written to summarize the findings. All applicable permits will be applied for and acquired before construction can begin. Applicable agencies will be coordinated with, and any comments received will be incorporated into the environmental document.

- *Floodplain – DFIRM*: Four floodplains (Cheeney Creek (1 segment (GIS)), Sand Creek (20 segments), Mud Creek (14 segments), and Thorpe Creek (2 segments)) lie within a half-mile radius of the project areas. The Cheeney Creek Floodplain lies outside of the project areas and will not be impacted by the proposed projects. The other 3 floodplains lie within the project areas. It is expected that all three will require Construction in a Floodway (CIF) permits. All applicable permits will be applied for and acquired before construction can begin. Applicable agencies will be coordinated with, and any comments received will be incorporated into the environmental document.

- *Rivers and Streams:* Seven Streams (Cheeney Creek (1 segment), Sand Creek (7 segments), Unnamed Tributary (UNT) to Sand Creek (3 segments), High Ditch (2 segments), Mud Creek (4 segments), UNT to Mud Creek (1 segment), and Thorpe Creek (4 segments)) lie within a half-mile radius of the project areas. Three streams (Sand Creek, Mud Creek, and Thorpe Creek) lie within the project areas. Again, a waters determination will be performed and a Waters Report will then be written to summarize the findings. All applicable permits will be applied for and acquired before construction can begin. Applicable agencies will be coordinated with, and any comments received will be incorporated into the environmental document.

Mining/Mineral Exploration Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:			
Petroleum Wells	**54**	Petroleum Fields	**1**
Mines – Surface	**N/A**	Mines – Underground	**N/A**

Explanation: (Please provide a separate paragraph for each item.)

- *Petroleum Wells:* Fifty-four petroleum wells lie within a half-mile radius of the project areas. Nine inactive wells are noted within or directly adjacent to the project areas. No wells were identified within or adjacent to the project areas at a field check on December 4, 2013. Therefore, no petroleum wells will be impacted by the proposed projects.

- *Petroleum Fields:* Both project areas lie entirely within the Trenton Petroleum Field. Again, no petroleum wells were identified within or adjacent to the project areas at a field check on December 4, 2013. The proposed projects are not expected to impact this petroleum field.

Hazmat Concerns
Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:

Brownfield Sites	**N/A**	Restricted Waste Sites	**N/A**
Corrective Action Sites (RCRA)	**N/A**	Septage Waste Sites	**N/A**
Confined Feeding Operations	**1**	Solid Waste Landfills	**N/A**
Construction Demolition Waste	**N/A**	State Cleanup Sites	**2**
Industrial Waste Sites (RCRA Generators)	**3**	Tire Waste Sites	**N/A**
Infectious/Medical Waste Sites	**N/A**	Waste Transfer Stations	**N/A**
Lagoon/Surface Impoundments	**N/A**	RCRA Waste Treatment, Storage, and Disposal Sites (TSDs)	**N/A**
Leaking Underground Storage Tanks (LUSTs)	**9**	Underground Storage Tanks	**5**
Manufactured Gas Plant Sites	**N/A**	Voluntary Remediation Program	**N/A**
NPDES Facilities	**1***	Superfund	**N/A**
NPDES Pipe Locations	**4**	Institutional Control Sites	**N/A**
Open Dump Sites	**N/A**		

Explanation: (Please provide a separate paragraph for each item.)

- *Confined Feeding Operations:* One confined feeding operation lies within a half-mile radius of the project areas (approximately 0.36 mile south of the project areas, southwest of the SR 13 interchange), but well outside of the projects limits. Therefore, it will not be impacted by the proposed projects.

- *State Cleanup Sites:* Two state cleanup sites are located within a half-mile radius of the project areas, but outside of the projects limits (the closest occurring approximately 0.075 mile northwest of the project areas near 116th St). Therefore, they will not be impacted by the proposed projects.

- *Industrial Waste Sites (RCRA Generators):* Three Industrial Waste Sites are located within a half-mile radius of the project areas, but outside of the projects limits (the closest occurring approximately 0.2 mile south of the project areas along Cumberland Road. Therefore, they will not be impacted by the proposed projects.

- *Leaking Underground Storage Tanks (LUSTs):* Nine LUSTs are located within a half-mile radius of the project areas, but outside of the projects limits (the closest occurring approximately 350 feet northeast of the project areas off of Reynolds Drive). Therefore, they will not be impacted by the proposed projects.

- *Underground Storage Tanks (USTs):* Five USTs are located within a half-mile radius of the project areas, but outside of the projects limits (the closest occurring approximately 1,070 feet northeast of the project areas off of Reynolds Drive). Therefore, they will not be impacted by the proposed projects.

- *NPDES Pipe Facilities:* One NPDES Pipe Facility (Carefree Homes Mobile Homes Park) is noted on the maps within a half-mile radius of the project areas. The facility was located directly adjacent to the project area

(Project 3). *However, the permit status is listed as "terminated". Therefore, no NPDES Pipe Facilities will be impacted by the proposed project.

- *NPDES Pipe Locations:* Four NPDES Pipe Locations are located within a half-mile radius of the project areas. Three of the pipes (IH Sewer Corporation, Pilot Travel Center, and Carefree Homes Mobile Homes Park) are located directly adjacent to the project areas. The owners of all three pipes will be coordinated with to determine where exactly the pipes are located, and that they will not be disturbed by the proposed projects. The other pipe is located outside of the project areas and will not be impacted by the proposed projects.

Ecological Information

The Hamilton & Madison Counties listings of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities are attached with ETR species highlighted.

Early coordination will be initiated with applicable resource agencies and any comments received will be incorporated into the environmental document.

Cultural Resources

The Section 106 process has been initiated by Weintraut & Associates, Inc. All commitments received from the Section 106 process will be incorporated in the final environmental document for these projects.

RECOMMENDATIONS

INFRASTRUCTURE: Noise Analysis will be conducted to determine traffic noise levels, potential noise impacts, and the feasibility of traffic noise mitigation. If any of the identified religious facilities, recreational facilities, hospitals, or schools are determined to have traffic noise impacts, noise abatement measures will be considered and appropriate measures constructed to mitigate for these impacts.

Fishers Elementary School lies directly adjacent to the project area (Project 1), with two of its baseball/softball fields lying directly adjacent to the existing ROW. Design alternatives, such as MSE walls, will be evaluated to minimize ROW to the greatest extent possible. The school will be coordinated with throughout the project development process. As this facility is likely to be considered a Section 4(f) resource, if impacts to the resource occur, the project will be evaluated to determine the appropriate level of involvement and documentation that must occur.

Four pipelines cross the project areas (three Indiana Gas Co. pipelines and one Buckeye Pipeline Co (twice)). Coordination will occur with the utilities during project development and any impacts will be appropriately mitigated for.

The Indianapolis Metropolitan Airport is located southwest of the project area, approximately 0.8 mile outside of the half-mile radius. Although this airport is beyond the half-mile buffer, it and the INDOT Office of Aviation will be coordinated with during the project development.

WATER RESOURCES: Twelve NWI-wetlands lie adjacent to the project areas, but all lie outside of the projects limits. Seventy-four lakes lie within a half-mile radius of the projects limits with several located adjacent to the projects limits. Currently, no lakes are expected to be impacted by the proposed projects. Three NWI line segments lie within the project area (along Sand Creek, Mud Creek, and Thorpe Creek). Three floodplains Sand Creek (20 segments), Mud Creek (14 segments), and Thorpe Creek (2 segments)) lie within the project areas. Three streams (Sand Creek, Mud Creek, and Thorpe Creek) lie within the project areas.

Due to the scope of these projects, a waters/wetland determination will be performed and any possible wetlands delineated. A Waters Report will then be written to summarize the findings. All applicable permits will be applied for and acquired before construction can begin. Applicable agencies will be coordinated with, and any comments received will be incorporated into the environmental document. It is expected that a Section 401/404 permit, 3 CIF permits, and

8 County Regulated Drain Permits will be required. If mitigation is required for these projects, construction will take place concurrently with or before the construction of these projects.

MINING/MINERAL EXPLORATION: N/A. No impacts to mining/mineral exploration resources are expected to occur from the proposed projects.

HAZMAT CONCERNS: Four NPDES Pipe Locations are located within a half-mile radius of the project areas. Three of the pipes (IH Sewer Corporation, Pilot Travel Center, and Carefree Homes Mobile Homes Park) are located directly adjacent to the project areas. The owners of all three pipes will be coordinated with to determine where exactly the pipes are located, and that they will not be disturbed by the proposed projects.

ECOLOGICAL INFORMATION: Early coordination will be initiated with applicable resource agencies and any comments received will be incorporated into the environmental document. Impacts to endangered species are not expected to occur from the proposed projects.

CULTURAL RESOURCES: The Section 106 process has been initiated by Weintraut & Associates, Inc. All commitments received from the Section 106 process will be incorporated in the final environmental document for these projects.

INDOT Environmental Services concurrence: Marlene Mathas Digitally signed by Marlene Mathas DN: cn=Marlene Mathas, o=INDOT Environmental Services, ou=Hazardous Materials, email=mmathas@indot.in.gov, c=US Date: 2014.09.02 10:29:37 -04'00' (Signature)

Prepared by:

Daniel J. Miller
Senior Environmental Planner
Parsons

Graphics:

A map for each report section with a ½ mile radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

GENERAL SITE MAP SHOWING PROJECT AREA: YES

Maps/Graphics for the RFI are included in Appendix B.

INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: YES

HAZMAT CONCERNS: YES

Appendix H: Air Quality

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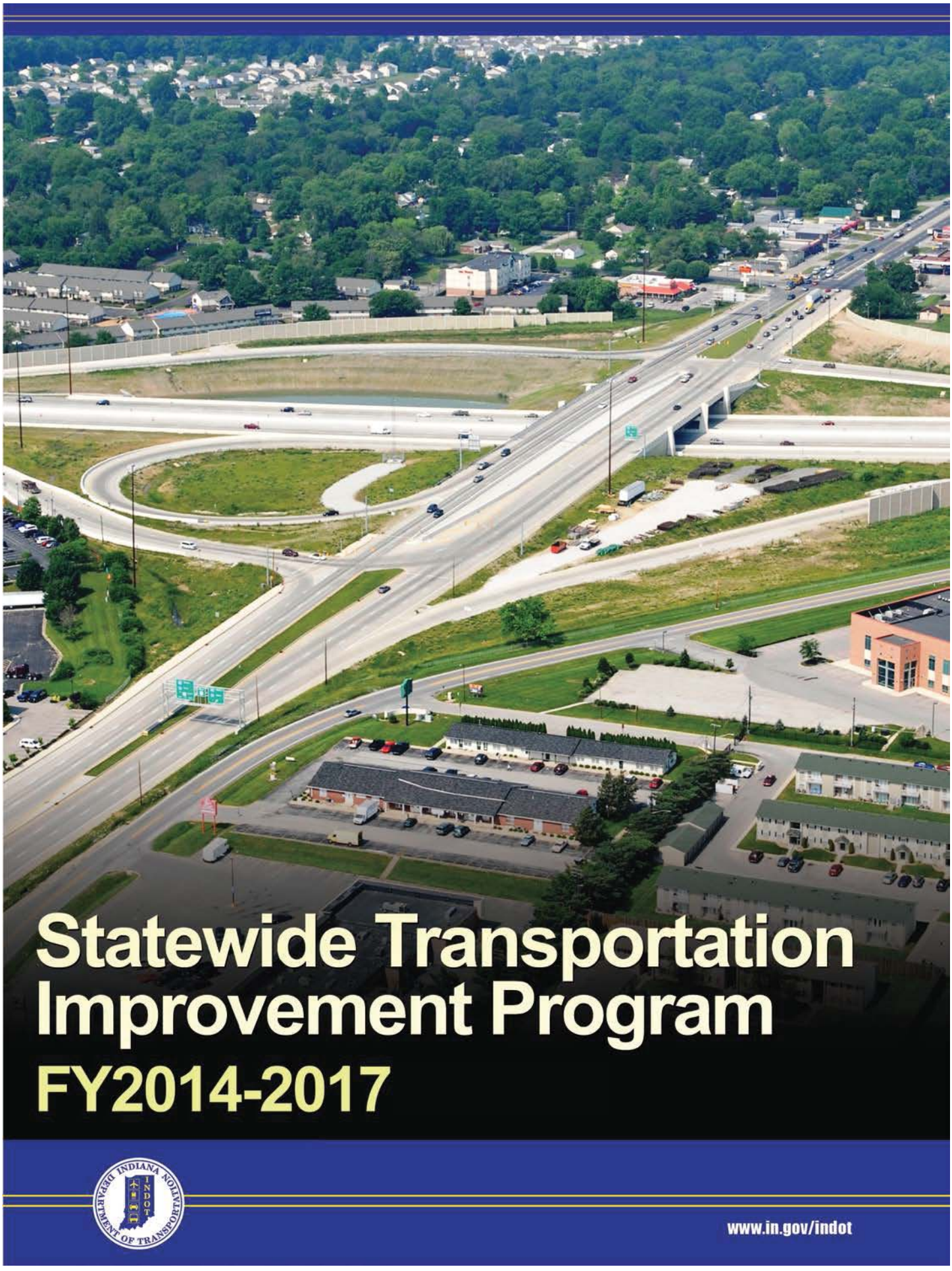

Statewide Transportation Improvement Program

FY2014-2017

www.in.gov/indot

Indiana Department of Transportation (INDOT)
State Preservation and Local Initiated Projects FY 2014 - 2017

SPONSOR	DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2014	2015	2016	2017
Fishers	1383253	A 11	ST 1054	Install New Guard Rail	Install timber guardrail, Brooks School Rd S Fall Cr & 116th St	Greenfield	.78	Off Federal Aid		100% Local Funds	CN	$0.00	$27,750.00		$27,750.00		
	Comments: CN Phase in 14-17 IRTIP for FY 15. In 14-17 STIP via amendment 14-11																
Fishers	1383253	M 07	ST 1054	Install New Guard Rail	Install timber guardrail, Brooks School Rd S Fall Cr & 116th St	Greenfield	.78	Off Federal Aid		Indianapolis MPO	CN	$27,750.00	$0.00		$27,750.00		
	Comments: 14-06.1 - ADMINISTRATIVE - Q4S 2014 Increase CN/CE in SFY 2015 by $27,750, to 100% federally funded in order to spend down the MPO's 2015 Section 164 Penalty Funds.																
Hamilton County	1383254	A 11	IR 1062	Guardrail, Maintenance Or Repair	Guardrail end treatment upgrades - various locations	Greenfield	0	On Federal Aid		Indianapolis MPO	CN	$335,858.00	$0.00		$335,858.00		
										100% Local Funds	PE	$0.00	$81,125.00	$81,125.00			
										100% Local Funds	CN	$0.00	$37,317.00		$37,317.00		
	Comments: PE and CN phase in 14-17 IRTIP for FY 15 - in 14-17 STIP via amendment 14-11																
Hamilton County	1383254	M 07	IR 1062	Guardrail, Maintenance Or Repair	Guardrail end treatment upgrades - various locations	Greenfield	0	On Federal Aid		Indianapolis MPO	CN	$37,317.00	$0.00		$37,317.00		
	Comments: 14-06.1 - ADMINISTRATIVE - Q4S 2014 Increase CN/CE in SFY 2015 by $37,317 to 100% federally funded in order to spend down the MPO's 2015 Section 164 Penalty Funds.																
Hamilton County	1383256	A 11	ST 1001	Traffic Signals, New Or Modernized	Pedestrain countdown signal heads & pushbuttons various intersections in county	Greenfield	0	Off Federal Aid		Indianapolis MPO	CN	$51,300.00	$0.00		$51,300.00		
										100% Local Funds	CN	$0.00	$5,700.00		$5,700.00		
	Comments: PE and CN phase in 14-17 IRTIP for FY 15 - in 14-17 STIP via amendment 14-11																
Hamilton County	1383256	A 24	ST 1001	Traffic Signals, New Or Modernized	Pedestrain countdown signal heads & pushbuttons various intersections in county	Greenfield	0	Off Federal Aid		100% Local Funds	CN	$0.00	$10,670.00		$10,670.00		
										Indianapolis MPO	CN	$96,030.00	$0.00		$96,030.00		
	Comments: In 14-17 IRTIP for CE/CN increased funding $106,700																
Hamilton County	1383256	A 27	ST 1001	Traffic Signals, New Or Modernized	Pedestrain countdown signal heads & pushbuttons various intersections in county	Greenfield	0	Off Federal Aid		100% Local Funds	CN	$0.00	$13,044.00		$13,044.00		
										Indianapolis MPO	CN	$117,392.00	$0.00		$117,392.00		
	Comments: 14-03.2 - LOCAL - Q2S 2014 Increase CN/CE by $117,392 Federal HSIP $13,044 Local Match in SFY 2015.																
Indiana Department of Transportation	1006215	Init.	I 69	Small Structure Pipe Lining	Str#: SS-I69-29-06.30; 0.800 mi. N. of SR 37	Greenfield	0	Interstate		Bridge Construction	CN	$114,300.00	$12,700.00	$127,000.00			
Indiana Department of Transportation	1006439	Init.	I 69	Small Structure Pipe Lining	3.30 mile North SR 37 (SS-I69-29-08.80)	Greenfield	0	Interstate		Bridge Construction	CN	$73,800.00	$8,200.00	$82,000.00			
Indiana Department of Transportation	1383332	A 19	I 69	Added Travel Lanes	At SR 37 (N jct.) to 5.24 miles N of SR 37 (N jct.) (0.50 mile N of old SR 238)	Greenfield	5.242	Interstate		Road Consulting	PE	$0.00	$1,395,800.00	$1,395,800.00			

*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2014 - 2017

SPONSOR	DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2014	2015	2016	2017
Indiana Department of Transportation	1383332	A 19	I 69	Added Travel Lanes	At SR 37 (N jct.) to 5.24 miles N of SR 37 (N jct.) (0.50 mile N of old SR 238)	Greenfield	5.242	Interstate		2020 Trust Fund Program - Construction	CN	$0.00	$41,500,000.00		$41,500,000.00		
Comments: PE in FY 14 and CN in FY 15 amended into 14-17 IRTIP via Reso 14-IMPO-002 on 3.5.14. This is a 2020 project																	
Indiana Department of Transportation	1383485	A 24	I 69	Repair Or Replace Joints	I69 at Cumberland Rd	Greenfield	0	Interstate		Major New - Construction	CN	$18,000.00	$2,000.00		$20,000.00		
Comments: Project added for CN in FY 2015 of the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383486	A 24	I 69	Bridge Widening	I69 NB at Sand Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
Comments: Project added for FY 2015 CN to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resoluton # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383487	A 24	I 69	Bridge Widening	I69 SB at Sand Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resoluiton # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383488	A 24	I 69	Bridge Deck Replacement	Brook School Rd over I69	Greenfield	0	Interstate		Major New - Construction	CN	$2,025,000.00	$225,000.00		$2,250,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383489	A 24	I 69	Interchange Modification	I69 at Old SR238 (Exit 210)	Greenfield	0	Interstate		Major New - Construction	CN	$11,700,000.00	$1,300,000.00		$13,000,000.00		
										Road Consulting	PE	$1,137,294.00	$126,366.00	$1,163,770.00	$99,890.00		
Comments: Project added for PE in FY 2015 and CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383490	A 24	I 69	Bridge Widening	Old SR238 over I69	Greenfield	0	Interstate		Major New - Construction	CN	$1,800,000.00	$200,000.00		$2,000,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383509	A 24	I 69	Bridge Widening	I69 NB at Mud Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a comformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383510	A 24	I 69	Bridge Widening	I69 SB at Mud Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383511	A 24	I 69	Bridge Replacement, Concrete	Cyntheanne Rd over I69	Greenfield	0	Interstate		Major New - Construction	CN	$2,259,000.00	$251,000.00		$2,510,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	

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Indiana Department of Transportation (INDOT)
State Preservation and Local Initiated Projects FY 2014 - 2017

SPONSOR	DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2014	2015	2016	2017
Elkhart County	1383188	A 30	IR 1001	Sign Modernization (Series Of Units)	Sign Replacements various locations in Elkhart and Kosciusko Counties.	Fort Wayne	0	Multiple		Group III Program	PE	$120,000.00	$0.00		$120,000.00		
Comments: MACOG Resolution 37-14: Add PE phase for project in FY 2015. $120,000 Federal HSIP, ($150,000 total).																	
Elkhart County	1383188	A 07	IR 1001	Sign Modernization (Series Of Units)	Sign Replacements various locations in Elkhart and Kosciusko Counties.	Fort Wayne	0	Multiple		Elkhart-Goshen MPO	CN	$855,325.00	$0.00	$855,325.00			
										100% Local Funds	CN	$0.00	$38,590.00	$38,590.00			
Comments: New HSIP Project added to MACOG TIP for PE & CN via Amendment 34-13.																	
Indiana Department of Transportation	1383181	A 14	SR 25	HMA Overlay, Preventive Maintenance	From 0.18 mi N of SR 55 to 0.06 mi S of the S Jct of SR 28	Crawfordsville	7.074	On Federal Aid		District Other Construction	CN	$1,040,000.00	$260,000.00	$1,300,000.00			
Comments: CN phase added to Lafayette TIP for FY 2014 by Resolution # T-14-02 approved February 19, 2014.																	
Indiana Department of Transportation	1173380	A 10	VA VARI	Traffic Signals Modernization	US231@Wabash, US231@ Pike, US231@US136, US 231@ Main, US 136@ Green,	Crawfordsville	0	On Federal Aid		Safety Construction	CN	$630,000.00	$0.00	$630,000.00			
Comments: Adding CN in FY 2014 for $630,000 Safety Program 100% federal																	
Indiana Department of Transportation	1383336	A 19	I 69	Added Travel Lanes	5.24 mi N of SR 37 (N jct.) (0.50 mi N of old SR 238) to 0.85 mi N of SR13	Greenfield	4.674	Interstate		Road Consulting	PE	$0.00	$1,312,620.00	$1,312,620.00			
										2020 Trust Fund Program - Construction	CN	$0.00	$24,100,000.00		$24,100,000.00		
Comments: PE in FY 14 and CN in FY 15 in 14-17 IRTIP via Reso 14-IMPO-002 on 3.5.14. Also in MCCOG 12-15 TIP via Reso 03-14 on 3.6.14. This is a 2020 project																	
Indiana Department of Transportation	1383343	A 19	I 65	Added Travel Lanes	4.72 miles S of I-465 South Leg to 2.88 miles S of I-465 South Leg	Greenfield	2.385	Interstate		2020 Trust Fund Program - Construction	CN	$0.00	$21,750,000.00		$21,750,000.00		
										Road Consulting	PE	$0.00	$800,000.00	$800,000.00			
Comments: PE in FY 14 and CN in FY 15 amended into 14-17 IRTIP via Reso 14-IMPO-002 on 3.5.14. This is a 2020 project																	
Indiana Department of Transportation	1400679	A 23	I 65	Patch And Rehab Pavement	US 52 to SR 43	Crawfordsville	34.992	Interstate		Road Construction	CN	$3,150,000.00	$350,000.00		$3,500,000.00		
Comments: Amended in 15-18 TCAPC for CN in 15 on May 23, 2014.																	
Indiana Department of Natural Resources	1383283	A 14	MS 1	Other Type Project (Miscellaneous)	Knobstone Trail Maint RT 13003	Seymour	0	On Federal Aid		Recreational Trails Program	CN	$52,791.00	$0.00	$26,396.00	$26,395.00		
Comments: DNR RTP Project for CN in FY 14 and 15																	
Sweetser	1383285	A 14	MS 1	Other Type Project (Miscellaneous)	Sweetser Switch Trail Ph 3 RT 13004	Fort Wayne	0	On Federal Aid		Recreational Trails Program	RW	$29,600.00	$0.00	$29,600.00			
										Recreational Trails Program	PE	$20,000.00	$0.00	$20,000.00			
Comments: RTP/DNR project for PE in FY 14, RW in FY 14 and CN in FY 15 and 16																	
Indiana Department of Transportation	1400582	A 24	VA VARI	Raised Pavement Markings, Refurbished	RPM's throughout the Seymour District	Seymour	0	On Federal Aid		Safety Construction	CN	$160,000.00	$40,000.00		$200,000.00		

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Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2014 - 2017

SPONSOR	DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2014	2015	2016	2017
Indiana Department of Transportation	1383332	A 19	I 69	Added Travel Lanes	At SR 37 (N jct.) to 5.24 miles N of SR 37 (N jct.) (0.50 mile N of old SR 238)	Greenfield	5.242	Interstate		2020 Trust Fund Program - Construction	CN	$0.00	$41,500,000.00		$41,500,000.00		
Comments: PE in FY 14 and CN in FY 15 amended into 14-17 IRTIP via Reso 14-IMPO-002 on 3.5.14. This is a 2020 project																	
Indiana Department of Transportation	1383485	A 24	I 69	Repair Or Replace Joints	I69 at Cumberland Rd	Greenfield	0	Interstate		Major New - Construction	CN	$18,000.00	$2,000.00		$20,000.00		
Comments: Project added for CN in FY 2015 of the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383486	A 24	I 69	Bridge Widening	I69 NB at Sand Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
Comments: Project added for FY 2015 CN to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resoluton # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383487	A 24	I 69	Bridge Widening	I69 SB at Sand Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resoluiton # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383488	A 24	I 69	Bridge Deck Replacement	Brook School Rd over I69	Greenfield	0	Interstate		Major New - Construction	CN	$2,025,000.00	$225,000.00		$2,250,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383489	A 24	I 69	Interchange Modification	I69 at Old SR238 (Exit 210)	Greenfield	0	Interstate		Major New - Construction	CN	$11,700,000.00	$1,300,000.00		$13,000,000.00		
										Road Consulting	PE	$1,137,294.00	$126,366.00	$1,163,770.00	$99,890.00		
Comments: Project added for PE in FY 2015 and CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383490	A 24	I 69	Bridge Widening	Old SR238 over I69	Greenfield	0	Interstate		Major New - Construction	CN	$1,800,000.00	$200,000.00		$2,000,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383509	A 24	I 69	Bridge Widening	I69 NB at Mud Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a comformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383510	A 24	I 69	Bridge Widening	I69 SB at Mud Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383511	A 24	I 69	Bridge Replacement, Concrete	Cyntheanne Rd over I69	Greenfield	0	Interstate		Major New - Construction	CN	$2,259,000.00	$251,000.00		$2,510,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	

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SPONSOR	DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2014	2015	2016	2017
	Comments: Anderson MPO TIP resolution #7 on 6-5-2014 - adding PE to FY 15 Federal 15,400 and Local 3,850. Original PE amounts were in FY 14. Now: total PE Federal = 29,800 total PE Local = 7,450																
Alexandria	1383054	M 04	ST 1002	Road Rehabilitation (3R/4R Standards)	Washington Street; phase 2 from Wayne Street to Chestnut Street	Greenfield	.6	On Federal Aid		Anderson MPO	RW	$32,000.00	$0.00		$32,000.00		
										100% Local Funds	RW	$0.00	$8,000.00		$8,000.00		
	Comments: 1383054 ? Adding RW to FY 15 ? Federal 32,000 and Local 8,000 ? Anderson MPO TIP resolution #7 dated 6-5-14.																
Alexandria	1383054	A 07	ST 1002	Road Rehabilitation (3R/4R Standards)	Washington Street; phase 2 from Wayne Street to Chestnut Street	Greenfield	.6	On Federal Aid		Anderson MPO	PE	$14,400.00	$0.00	$14,400.00			
										100% Local Funds	RW	$0.00	$60,000.00	$60,000.00			
										Anderson MPO	CN	$600,000.00	$0.00		$600,000.00		
										Anderson MPO	RW	$240,000.00	$0.00	$240,000.00			
										100% Local Funds	CN	$0.00	$150,000.00		$150,000.00		
										100% Local Funds	PE	$0.00	$3,600.00	$3,600.00			
	Comments: Policy Resolution in above entry should be 10-3-13.																
Madison County	1382752	A 07	VA VARI	Bridge Inspections	Various Bridges in Madison County	Greenfield	0	On Federal Aid		Local Bridge Program	PE	$279,200.00	$0.00	$279,200.00			
										100% Local Funds	PE	$0.00	$69,800.00	$69,800.00			
	Comments: Adding PE FY 14 MCCOG Policy Resolution 10-3-13.																
Indiana Department of Transportation	1383512	A 24	I 69	Bridge Widening	I69 NB at Thorpe Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
	Comments: Project amended for FY 2015 CN in the FY 2012-2015 Anderson and Madison County TIP via Resoluton 7-2014 approved on June 5, 2014.																
Indiana Department of Transportation	1383513	A 24	I 69	Bridge Widening	I69 SB at Thorpe Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
	Comments: Project added for CN in FY 2015 of the FY 2012-2015 Anderson and Madison County TIP via Resolutin # 7-2014 approved on June 5, 2014.																
Indiana Department of Transportation	1383514	A 24	I 69	Bridge Widening	I69 NB at SR13	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
	Comments: Project added for FY 2015 CN to the FY 2012-2015 Anderson and Madison County TIP via Resoluion # 7-2014 approved on June 5, 2014.																
Indiana Department of Transportation	1383515	A 24	I 69	Bridge Widening	I69 SB at SR13	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		

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Last Amended: December 12, 2013

2014-2017 INDIANAPOLIS REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM

Prepared by the Indianapolis Metropolitan Planning Organization

www.indympo.org.

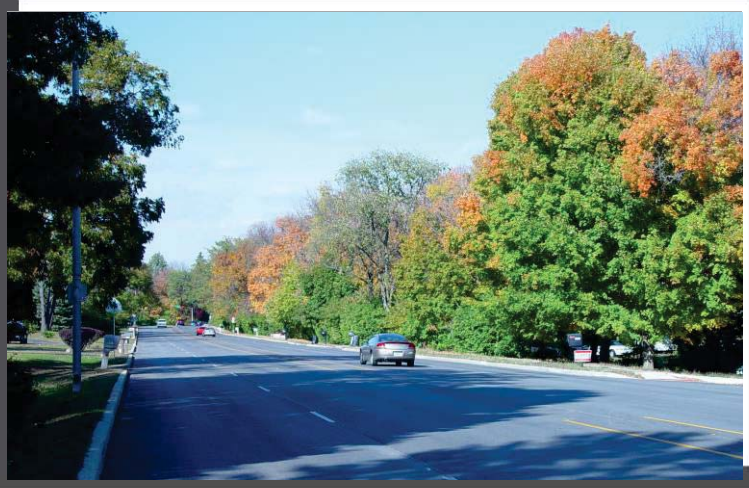

TABLE 5.1
Indiana Department of Transportation (INDOT)
Interstate Projects

Projects in bold are considered regionally significant for air quality purposes.

Des. No.	County	Work Type	Project Description/Length (mi.)	INDOT District	Fund Type	Phase	SFY	Total Cost	Federal Funds	State Match
0900324	Marion Co.	Bridge Painting	Bridge Repair on 7 Streets, RR, Monorail Dist:N/A	G	Interstate	CN	2015	$ 8,200,000	$ 7,380,000	$ 820,000
0900359	Marion Co.	Bridge Painting	7 Streets, RR, Monorail Dist:n/a	G	Interstate	CN	2016	$ 16,101,000	$ 14,490,900	$ 1,610,100
1173721	Marion Co.	Concrete Pavement Restoration (CPR)	I-65 from Morris St. exit ramp to the N split of the inner loop Dist:1.048	G	Interstate	CN	2016	$ 1,083,000	$ 974,700	$ 108,300
0902297	**Marion Co.**	**Interchange Modification**	**I-465 and I-65 S of Indianapolis Dist:0.35**	**G**	**Highway**	**CN**	**2014**	**$ 43,380,000**	**$ 34,704,000**	**$ 8,676,000**
1297786	Marion Co.	Repairs To Approach Slab	I-65 BCPI Project 1.97 mi. N of I-465 Dist:N/A	G	Highway	CN	2014	$ 68,000	$ 61,200	$ 6,800
1297787	Marion Co.	Repair Or Replace Joints	I-65 BCPI Project 2.38 mi. N of I-465 Dist:N/A	G	Highway	CN	2014	$ 36,000	$ 32,400	$ 3,600
1297791	Marion Co.	Repair Or Replace Joints	I-65 BCPI Project 2.38 mi. N of I-465 Dist:N/A	G	Highway	CN	2014	$ 36,000	$ 32,400	$ 3,600
1297829	Marion Co.	Repairs To Approach Slab	I-65 BCPI Project 3.35 mi. N of I-465 Dist:N/A	G	Highway	CN	2014	$ 49,000	$ 44,100	$ 4,900
1297831	Marion Co.	Repair Or Replace Joints	I-65 BCPI Project .39 mi. S of I-70 Dist:N/A	G	Highway	CN	2014	$ 35,000	$ 31,500	$ 3,500
1297832	Marion Co.	Repair Or Replace Joints	I-65 BCPI Project .39 mi. S of I-70 Dist:N/A	G	Highway	CN	2014	$ 35,000	$ 31,500	$ 3,500
1297833	Marion Co.	Repair Or Replace Joints	I-65 BCPI Project .29 mi. S of I-70 Dist:N/A	G	Highway	CN	2014	$ 41,000	$ 36,900	$ 4,100
1297834	Marion Co.	Repair Or Replace Joints	I-65 BCPI Project .29 mi. S of I-70 Dist:N/A	G	Highway	CN	2014	$ 38,000	$ 34,200	$ 3,800
1296613	Marion Co.	Replace Superstructure	I-65; at 1.1 mile N I-70, CSX RR and Ohio St (I-65-112-02431 AO) Dist:N/A	G	State STP	PE	2014	$ 750,000	$ 675,000	$ 75,000
0800960	Marion Co.	Bridge Painting	2 bridges in Marion County (see project log) Dist:N/A	G	State STP	CN	2015	$ 412,000	$ 370,800	$ 41,200
0800963	Marion Co.	Bridge Painting	4 bridges in Marion County (see project log) Dist:N/A	G	State STP	CN	2015	$ 377,000	$ 339,300	$ 37,700
1173296	Marion Co.	Its Traveller Informations Systems	At Mile 119.7 NB & 108.4 SB on I-65 & Mile 98.5 WB on I-74 (Dynamic Message Signs) Dist:N/A	G	State STP	CN	2015	$ 310,000	$ 279,000	$ 31,000
1296613	Marion Co.	Replace Superstructure	I-65; at 1.1 mile N I-70, CSX RR and Ohio St (I-65-112-02431 AO) Dist:N/A	G	State STP	CN	2017	$ 5,594,000	$ 5,034,600	$ 559,400
1296284	Morgan Co.	Install New Cable Rail Barriers	From 4.71 miles north of SR 43 to 0.67 miles south of US 231 south jct Dist:n/a	C	State HSIP	CN	2015	$ 995,000	$ 895,500	$ 99,500
1296193	Shelby Co.	Pipe Lining	I-65 Pipe Lining North of Barthlomew Co. Line at RP 81, .07 miles S of CR 1000S and I-65 Dist:N/A	G	Interstate	CN	2015	$ 54,993	$ 49,494	$ 5,499
1173722	Various	HMA Overlay, Preventive Maintenance	I-65; from 0.55 mile N of I-465 to 0.39 mile S of SR 334 (RP 123+05 to 129+72) Dist:N/A	G	State STP	CN	2015	$ 4,142,000	$ 3,727,800	$ 414,200
			I-69							
1006355	Hamilton Co.	Pipe Lining	I-69 Pipe Lining 0.050 miles north of Marion/Hamilton Co. line Dist:N/A	G	Bridge	CN	2014	$ 75,000	$ 60,000	$ 15,000
1006249	Hamilton Co.	Pipe Lining	I-69 Pipe Lining 2.250 miles north of Marion/Hamilton Co. line Dist:N/A	G	Bridge	CN	2014	$ 110,000	$ 88,000	$ 22,000
1296714	Hamilton Co.	Bridge Deck Overlay	3.74 mi N of I-465 over 106th St. Dist:N/A	G	Bridge	CN	2017	$ 1,659,000	$ 1,493,100	$ 165,900
1006215	Hamilton Co.	Pipe Lining	0.8 mile N of SR 37 Dist:N/A	G	Other	CN	2014	$ 125,000	$ 100,000	$ 25,000
1006439	Hamilton Co.	Pipe Lining	I-69 Pipe Lining, 3.30 miles N of SR 37 Dist:N/A	G	Other	CN	2014	$ 80,000	$ 64,000	$ 16,000
1006233	Marion Co.	Pipe Lining	I-69, Pipe Lining .93 miles North of I-465 Dist:N/A	G	Bridge	CN	2014	$ 125,000	$ 112,500	$ 12,500
1006311	Marion Co.	Pipe Lining	I-69, Pipe Lining .155 miles North of I-465 Dist:N/A	G	Bridge	CN	2014	$ 50,000	$ 45,000	$ 5,000
1006245	Marion Co.	Pipe Lining	I-69, .11 miles North of I-465 Dist:N/A	G	Bridge	CN	2014	$ 50,000	$ 45,000	$ 5,000
1006425	Marion Co.	Pipe Lining	I-69 Pipe Lining, .92 miles North of I-465 Dist:N/A	G	Bridge	CN	2014	$ 75,000	$ 67,500	$ 7,500
1298049	Marion Co.	Bridge - Other	I-69; 0.178 miles N of I-465 Dist:N/A	G	Bridge	CN	2014	$ 145,000	$ 130,500	$ 14,500
1297917	Hamilton Co.	Noise Abatement	I-69 SB side from Fishers Pointe Blvd. to 800 ft south of 116th St.	G	NHS	PE	2014	$ 14,000	$ 12,600	$ 1,400
1297917	Hamilton Co.	Noise Abatement	I-69 SB side from Fishers Pointe Blvd. to 800 ft south of 116th St.	G	NHS	CN	2014	$ 1,200,000	$ 960,000	$ 240,000
			I-70							
0800956	Hancock Co.	Bridge Deck Overlay	4.29 miles E of SR 9 (CR600E) Dist:0.01	G	Bridge	CN	2014	$ 417,000	$ 333,600	$ 83,400
1296692	Hancock Co.	Bridge Deck Overlay	0.3 mi E of SR-9 (Brandywine Creek) Dist:N/A	G	Bridge	CN	2017	$ 225,000	$ 202,500	$ 22,500
1296694	Hancock Co.	Bridge Deck Overlay	0.3 miles E of SR-0 (Brandywine Creek) Dist:N/A	G	Bridge	CN	2017	$ 264,000	$ 237,600	$ 26,400
1296716	Hancock Co.	Bridge Deck Overlay	2.64 mi W of SR 109 over Six Mile Creek Dist:N/A	G	Bridge	CN	2017	$ 167,000	$ 150,300	$ 16,700
1296719	Hancock Co.	Bridge Deck Overlay	2.64 mi W of SR 109 over Six Mile Creek Dist:N/A	G	Bridge	CN	2017	$ 167,000	$ 150,300	$ 16,700
1297868	Hancock Co.	Bridge Rehabilitation Or Repair	I-70, 5.75 mi. W of SR 9 at 400 W (I70-97-05388A) Dist:N/A	G	State STP	CN	2014	$ 35,619	$ 28,495	$ 7,124
1297869	Hancock Co.	Bridge Rehabilitation Or Repair	I-70, 3.75 mi. W of SR 9 at CR 200 W (I70-100-05389A) Dist:N/A	G	State STP	CN	2014	$ 35,619	$ 28,495	$ 7,124

INDIANAPOLIS METROPOLITAN PLANNING ORGANIZATION

INDIANAPOLIS REGIONAL TRANSPORTATION COUNCIL
POLICY COMMITTEE

Resolution Number 14-IMPO-002

A RESOLUTION amending the 2014-2017 Indianapolis Regional Transportation Improvement Program.

WHEREAS, the 2014-2017 Indianapolis Regional Transportation Improvement Program (IRTIP) incorporates projects proposed by local governments and agencies within the Indianapolis Metropolitan Planning Area; and

WHEREAS, the projects contained in the proposed IRTIP amendment have been reviewed as to their immediate impact and importance to the continued improvement of the transportation system operating within the area; and

WHEREAS, changing conditions necessitate periodic amendments to the IRTIP; and

WHEREAS, section 176(c) of the Clean Air Act, amended in 1990, required that the Transportation Conformity Rule establish criteria and procedures by which the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and metropolitan planning organizations (MPOs) determine the conformity of federally funded or approved highway and transit plans, programs, and projects to state implementation plans (SIPs) prepared for criteria pollutants; and

WHEREAS, the MPO consulted with the Interagency Consultation Group and the agencies did not take exception to the MPO finding that (1) each project in the TIP as amended is consistent with the design concept and scope of the project that was modeled in the most recent conformity demonstration, (2) the open-to-traffic date of each project in the TIP as amended is consistent with the open-to-traffic dates in the most recent conformity demonstration, (3) that the previous emissions analysis meets the requirements of 40 CFR 93.118 and demonstrate conformity of the TIP as amended; and

WHEREAS, the proposed IRTIP amendments were made available for public comment and comments received were provided to the Indianapolis Regional Transportation Council Policy Committee (IRTC); and

WHEREAS, the IRTC Policy Committee is the approval body for all transportation-related activities of the Metropolitan Planning Organization for the Indianapolis Urbanized Area under applicable U.S. Department of Transportation regulations;

NOW, THEREFORE, BE IT RESOLVED, that the IRTC hereby approves the amendment to the 2014-2017 Indianapolis Regional Transportation Improvement Program as shown on the attached Exhibit A.

The above and foregoing resolution was adopted this 5 day of March 2014 by the IRTC Policy Committee.

DATE: 3/5/14

Anna M Gremling

Anna M. Gremling, Executive Director
Indianapolis MPO
For the IRTC Policy Committee Chair

QUARTER Q1, 2014 INDOT 14-01

	LEAD AGENCY	DES NUM	ROAD TRAIL	PROJECT TITLE	TYPE	EXEMPT?	TOTAL	TOTAL DIFF	PHASE	FFY DESC	FED FUNDS	LINE TOTAL	FED TOTAL	FED %	STATE TOTAL	STATE %	JUSTIFICATION	ACTION PROPOSED
NEW	INDOT	1383324	I- 465	ITS Communications systems on I-465	Its Communications Systems	Exempt	$1,430,000	$1,430,000	CON	FY 2015	CMAQ-ST	$1,300,000	$1,040,000	80%	$260,000	20%	NEW PROJECT	Add PE to SFY 2014 and CN to SFY 2015
NEW									PE/PL	FY 2014	CMAQ-ST	$130,000	$104,000	80%	$26,000	20%		
NEW	INDOT	1383338	I- 70	Added Travel Lanes on I-70 W from 0.85 mile west of SR 39 to 0.50 mile east of SR 267 in Hendricks and Morgan Counties	Existing Roadway Capacity Improvement	Non-Ex	$63,170,000	$63,170,000	CON	FY 2015		$60,170,000	$-	0%	$60,170,000	100%	NEW PROJECT	Add PE to SFY 2014, RW and CN to SFY 2015.
NEW									PE/PL	FY 2014		$2,800,000	$-	0%	$2,800,000	100%		
NEW									ROW	FY 2015		$200,000	$-	0%	$200,000	100%		
NEW	INDOT	1383341	I- 65	Added Travel Lanes on I-65 S from 0.85 mile S of SR 44 to 5.41 mile N of SR 44 (0.50 mile N of Whiteland Road) in Johnson County	Existing Roadway Capacity Improvement	Non-Ex	$57,930,000	$57,930,000	CON	FY 2015		$55,430,000	$-	0%	$55,430,000	100%	NEW PROJECT	Add PE to SFY 2014 and CN to SFY 2015.
NEW									PE/PL	FY 2014		$2,500,000	$-	0%	$2,500,000	100%		
NEW	INDOT	1383342	I- 65	Added Travel Lanes on I-65 S from 5.41 miles N of SR 44 (0.50 mile N of Whiteland Road) to 6.18 miles S of I-465 ((0.50 mile N of Main Street in Greenwood) in Johnson County	Existing Roadway Capacity Improvement	Non-Ex	$43,600,000	$43,600,000	CON	FY 2015		$41,700,000	$-	0%	$41,700,000	100%	NEW PROJECT	Add PE to SFY 2014 and CN to SFY 2015
NEW									PE/PL	FY 2014		$1,900,000	$-	0%	$1,900,000	100%		
NEW	INDOT	1383354	I- 65	Added Travel Lanes on I-65 S from 6.18 mile S of I-465 (0.50 mile N of Main Street in Greenwood) to 4.72 miles S of I-465 at 0.50 mile N of County Line Road in Johnson and Marion Counties	Existing Roadway Capacity Improvement	Non-Ex	$15,530,000	$15,530,000	CON	FY 2015		$14,830,000	$-	0%	$14,830,000	100%	NEW PROJECT	Add PE to SFY 2014 and CN to SFY 2015
NEW									PE/PL	FY 2014		$700,000	$-	0%	$700,000	100%		
NEW	INDOT	1383343	I- 65	Added Travel Lanes on I-65 S from 4.72 miles S of I-465 (0.50 mile N of County Line Road) to 2.88 miles S of I-465 (Southport Road) in Marion County	Existing Roadway Capacity Improvement	Non-Ex	$24,440,000	$24,440,000	CON	FY 2015		$23,440,000	$-	0%	$23,440,000	100%	NEW PROJECT	Add PE to SFY 2014 and CN to SFY 2015
NEW									PE/PL	FY 2014		$1,000,000	$-	0%	$1,000,000	100%		
NEW	INDOT	1383332	I- 69	Added Travel Lanes on I-69 N from SR 37 N jct to 0.50 mile N of Old SR 238 in Hamilton County	Existing Roadway Capacity Improvement	Non-Ex	$72,520,000	$72,520,000	CON	FY 2015		$67,880,000	$-	0%	$67,880,000	100%	NEW PROJECT	Add PE to SFY 2014, RW to SFY 2014-2015, and CN to SFY 2015
NEW									PE/PL	FY 2014		$3,000,000	$-	0%	$3,000,000	100%		
NEW									ROW	FY 2014		$140,000	$-	0%	$140,000	100%		
NEW									ROW	FY 2015		$1,500,000	$-	0%	$1,500,000	100%		

	LEAD AGENCY	DES NUM	ROAD TRAIL	PROJECT TITLE	TYPE	EXEMPT?	TOTAL	TOTAL DIFF	PHASE	FFY DESC	FED FUNDS	LINE TOTAL	FED TOTAL	FED %	STATE TOTAL	STATE %	JUSTIFICATION	ACTION PROPOSED
NEW	INDOT	1383336	I- 69	Added Travel Lanes on I-69 N from 0.50 North of Old SR 238 to 0.50 mile N of SR 13 in Hamilton and Madison Counties	Existing Roadway Capacity Improvement	Non-Ex	$43,110,000	$43,110,000	CON	FY 2015		$40,810,000	$-	0%	$40,810,000	100%	NEW PROJECT	Add PE to SFY 2014, RW to SFY 2014-2015, and CN to SFY 2015.
NEW									PE/PL	FY 2014		$1,700,000	$-	0%	$1,700,000	100%		
NEW									ROW	FY 2014		$100,000	$-	0%	$100,000	100%		
NEW									ROW	FY 2015		$500,000	$-	0%	$500,000	100%		

INDIANAPOLIS METROPOLITAN PLANNING ORGANIZATION

INDIANAPOLIS REGIONAL TRANSPORTATION COUNCIL
POLICY COMMITTEE

Resolution Number 14-IMPO-005

A RESOLUTION amending the 2014-2017 Indianapolis Regional Transportation Improvement Program.

WHEREAS, the 2014-2017 Indianapolis Regional Transportation Improvement Program (IRTIP) incorporates projects proposed by local governments and agencies within the Indianapolis Metropolitan Planning Area; and

WHEREAS, the projects contained in the proposed IRTIP amendment have been reviewed as to their immediate impact and importance to the continued improvement of the transportation system operating within the area; and

WHEREAS, changing conditions necessitate periodic amendments to the IRTIP; and

WHEREAS, section 176(c) of the Clean Air Act, amended in 1990, required that the Transportation Conformity Rule establish criteria and procedures by which the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and metropolitan planning organizations (MPOs) determine the conformity of federally funded or approved highway and transit plans, programs, and projects to state implementation plans (SIPs) prepared for criteria pollutants; and

WHEREAS, the MPO consulted with the Interagency Consultation Group and the agencies did not take exception to the MPO finding that (1) each project in the TIP as amended is consistent with the design concept and scope of the project that was modeled in the most recent conformity demonstration, (2) the open-to-traffic date of each project in the TIP as amended is consistent with the open-to-traffic dates in the most recent conformity demonstration, (3) that the previous emissions analysis meets the requirements of 40 CFR 93.118 and demonstrate conformity of the TIP as amended; and

WHEREAS, the proposed IRTIP amendments were made available for public comment and comments received were provided to the Indianapolis Regional Transportation Council Policy Committee (IRTC); and

WHEREAS, the IRTC Policy Committee is the approval body for all transportation-related activities of the Metropolitan Planning Organization for the Indianapolis Urbanized Area under applicable U.S. Department of Transportation regulations;

NOW, THEREFORE, BE IT RESOLVED, that the IRTC hereby approves the amendment to the 2014-2017 Indianapolis Regional Transportation Improvement Program as shown on the attached Exhibit A.

The above and foregoing resolution was adopted this 28 day of May 2014 by the IRTC Policy Committee.

DATE: 5/28/14

Anna M. Gremling

Anna M. Gremling, Executive Director
Indianapolis MPO
For the IRTC Policy Committee Chair

	LEAD AGENCY	DES NUM	ROAD/TRAIL	PROJECT TITLE	TYPE	EXEMPT?	TOTAL	TOTAL DIFF	PHASE	SFY	FED FUNDS	LINE TOTAL	FED TOTAL	FED %	STATE TOTAL	STATE %	JUSTIFICATION	ACTION PROPOSED
NEW	INDOT	1400014	I- 65	Bridge subproject on CR 500 N (Whiteland Road) over I-65 within the limits of added travel lanes (DES # 1383341) from 0.85 mile S of SR 44 to 0.50 mile N of Whiteland Road	Bridge Deck Overlay	Exempt	$905,000	$905,000	CN	SFY 2015		$905,000	$-	0%	$905,000	100%	NEW PROJECT	Add CN to SFY 2015
NEW	INDOT	1383485	I- 69	Bridge subproject (Cumberland Road) to I-69 Added Travel Lanes from SR 37 to 0.50 mile N of Old SR 238 (DES # 1383332) that was amended to the LRP and TIP in first quarter CY 2014	Repair Or Replace Joints	Exempt	$20,000	$20,000	CN	SFY 2015		$20,000	$-	0%	$20,000	100%	NEW PROJECT	Add CN to SFY 2015
NEW	INDOT	1383486	I- 69	Bridge subproject (over Sand Creek - NB lanes) on I-69 added travel lanes project (DES # 1383332) that was amended to the long range plan and TIP in the first quarter of CY 2014	Bridge Widening	Exempt	$1,500,000	$1,500,000	CN	SFY 2015		$1,500,000	$-	0%	$1,500,000	100%	NEW PROJECT	Add CN to SFY 2015
NEW	INDOT	1383487	I- 69	Bridge subproject over Sand Creek SB lanes on I69 inluded in added travel lanes project (DES # 1383332) that was amended to the long range plan and TIP in the first quarter of CY 2014	Bridge Widening	Exempt	$1,500,000	$1,500,000	CN	SFY 2015		$1,500,000	$-	0%	$1,500,000	100%	NEW PROJECT	Add CN to SFY 2015
NEW	INDOT	1383488	I- 69	Bridge subproject on Brooks School Road over I-69 within the limits of added travel lanes project (DES # 1383332) that was amended to the long range plan and TIP in the first quarter of CY 2014	Bridge Replacement, Concrete	Exempt	$2,250,000	$2,250,000	CN	SFY 2015		$2,250,000	$-	0%	$2,250,000	100%	NEW PROJECT	Add CN to SFY 2015
NEW	INDOT	1383489	I- 69	Interchange subproject at I-69 and Old SR 238 within the limits of project DES # 1383332 for added lanes from SR 37 to 0.50 mile N of Old SR 238 added to the LRP and TIP in first quarter CY 2014	Interchange Modification	Exempt	$14,263,660	$14,263,660	PE/PL	SFY 2015		$1,263,660	$-	0%	$1,263,660	100%	NEW PROJECT	Add CN to SFY 2015
NEW									CN	SFY 2015		$13,000,000	$-	0%	$13,000,000	100%		
NEW	INDOT	1383490	I- 69	Bridge subproject Old SR 238 at I-69 as part of added travel lanes project (DES # 1383332) from SR 37 to 0.50 mile N of Old SR 238 that was amended to the LRP and TIP in the first quarter of CY 2014	Bridge Widening	Exempt	$2,000,000	$2,000,000	CN	SFY 2015		$2,000,000	$-	0%	$2,000,000	100%	NEW PROJECT	Add CN to SFY 2015

	LEAD AGENCY	DES NUM	ROAD/TRAIL	PROJECT TITLE	TYPE	EXEMPT?	TOTAL	TOTAL DIFF	PHASE	SFY	FED FUNDS	LINE TOTAL	FED TOTAL	FED %	STATE TOTAL	STATE %	JUSTIFICATION	ACTION PROPOSED
NEW	INDOT	1383509	I- 69	Bridge subproject on I-69 over Mud Creek (NB lanes) within DES # 1383336 for added lanes from 0.50 mile N of Old SR 238 to 0.86 mile N of SR 13 amended to the LRP and TIP in first quarter CY 2014	Bridge Widening	Exempt	$1,500,000	$1,500,000	CN	SFY 2015		$1,500,000	$-	0%	$1,500,000	100%	NEW PROJECT	Add CN to SFY 2015
NEW	INDOT	1383510	I- 69	Bridge subproject on I-69 (SB lanes over Mud Creek) within the limits of added travel lanes project (DES # 1383336) amended into the LRP and TIP in the first quarter CY 2014	Bridge Widening	Exempt	$1,500,000	$1,500,000	CN	SFY 2015		$1,500,000	$-	0%	$1,500,000	100%	NEW PROJECT	Add CN to SFY 2015
NEW	INDOT	1383511	I- 69	Bridge subproject on I-69 (Cyntheanne Road over) within the limits of added travel lanes project (DES # 1383336) that was added to the LRP and TIP in the first quarter of CY 2014	Bridge Replacement, Concrete	Exempt	$2,510,000	$2,510,000	CN	SFY 2015		$2,510,000	$-	0%	$2,510,000	100%	NEW PROJECT	Add CN to SFY 2015
NEW	INDOT	1400422	US 31	Bridge deck overlay on US 31 (NB lanes over Big Blue River) 0.29 mile S of SR 252 in Johnson County	Bridge Deck Overlay	Exempt	$206,000	$206,000	PE/PL	SFY 2015	STP-ST	$20,000	$16,000	80%	$4,000	20%	NEW PROJECT	Add PE in SFY 2015 and CN in SFY 2016.
NEW									CN	SFY 2016	STP-ST	$186,000	$148,800	80%	$37,200	20%		
NEW	INDOT	1400431	US 31	Bridge deck overlay on US 31 (SB lanes over Big Blue River) 0.29 mile S of SR 252 in Johnson County	Bridge Deck Overlay	Exempt	$206,000	$206,000	PE/PL	SFY 2015	STP-ST	$20,000	$16,000	80%	$4,000	20%	NEW PROJECT	Add PE in SFY 2015 and CN in SFY 2016.
NEW									CN	SFY 2016	STP-ST	$186,000	$148,800	80%	$37,200	20%		
NEW	INDOT	1400432	SR 44	SR 44 bridge deck overlay at South Prong Stotts Creek, 0.11 mile W of SR 135 in Johnson County	Bridge Deck Overlay	Exempt	$88,000	$88,000	PE/PL	SFY 2015	STP-ST	$20,000	$16,000	80%	$4,000	20%	NEW PROJECT	Add PE in SFY 2015 and CN in SFY 2016.
NEW									CN	SFY 2016	STP-ST	$68,000	$54,400	80%	$13,600	20%		
NEW	INDOT	1400451	SR 252	SR 252 bridge deck overlay at Big Blue River, 0.52 mile E of US 31 in Johnson County	Bridge Deck Overlay	Exempt	$195,500	$195,500	PE/PL	SFY 2015	STP-ST	$20,000	$16,000	80%	$4,000	20%	NEW PROJECT	Add PE in SFY 2015 and CN in SFY 2016.
NEW									CN	SFY 2016	STP-ST	$175,500	$140,400	80%	$35,100	20%		
NEW	INDOT	1298375	US 36	Small structure pipe lining of US 36, 1.21 miles E of SR 267 in Hendricks County	Pipe Lining	Exempt	$25,000	$25,000	PE/PL	SFY 2015	STP-ST	$15,000	$12,000	80%	$3,000	20%	NEW PROJECT	Add PE in SFY 2015 and RW in SFY 2017.
NEW									ROW	SFY 2017	STP-ST	$10,000	$8,000	80%	$2,000	20%		
NEW	INDOT	1298333	US 36	New Bridge, Pipe Arch or Culvert on US36, 0.58 mile W of SR 39 W Jct in Hendricks County	New Br, Pipe Arch Or Culvert	Exempt	$75,000	$75,000	PE/PL	SFY 2015	STP-ST	$20,000	$16,000	80%	$4,000	20%	NEW PROJECT	Add PE in SFYs 2015 and 2016. Add RW in SFY 2017.
NEW									PE/PL	SFY 2016	STP-ST	$30,000	$24,000	80%	$6,000	20%		
NEW									ROW	SFY 2017	STP-ST	$25,000	$20,000	80%	$5,000	20%		
NEW	INDOT	1400465	SR 267	Repair or replace joints on SR 267 bridge over I-70, 2.98 miles S of US 40 in the Town of Painfield in Hendricks County	Repair Or Replace Joints	Exempt	$27,000	$27,000	CN	SFY 2016	IM	$27,000	$24,300	90%	$2,700	10%	NEW PROJECT	Add CN in SFY 2016.

Madison County Council of Governments (Anderson MPO)
FY 2012-2015 Transportation Improvement Program (TIP)
All Projects: Current Through September 12, 2014

REF	PROJECT DETAILS						PROJECT FUNDING							Reference Documents
	DES	Sponsor Name	Work Category (Work Type)	Location & Description	Length	County	Funding Obligation Year (State Fiscal)	Project Phase	Federal Funds by Phase	Required Local/State Matching Funds	Total Funds by Phase	Federal Funding Program	Letting Date (Obligation Date of CN Phase)	
176	**1296845**	INDOT	Traffic Signals Modernization	**Various Interstates, US, & State Routes** (Statewide)		48	2017	CN	$ 928,000	$ -	$ 928,000	HSIP	7/13/2016	Res. 10-3-13, Res. 12-20-13
177	**1383336**	INDOT	Added Travel Lanes	**I-69,** .5 miles N. of Exit 210 (old SR 238) to .5 miles N. of SR 13		48	2014	PE	$ -	$ 1,700,000	$ 1,700,000	State Funds Only	5/10/2015	Res. 3-6-14, Res. 4-3-14, Res. 6-5-14
178	**1383336**	INDOT	Added Travel Lanes	**I-69,** .5 miles N. of Exit 210 (old SR 238) to .5 miles N. of SR 13		48	2015	CN	$ -	$ 24,010,000	$ 24,010,000	State Funds Only	5/10/2015	Res. 3-6-14, Res. 4-3-14, Res. 6-5-14
179	**1383337**	INDOT	Added Travel Lanes	**I-69,** .5 miles N. of SR 13 to .5 miles N. of SR 38		48	2014	PE	$ -	$ 1,600,000	$ 1,600,000	State Funds Only	TBD	Res. 3-6-14
180	**1383337**	INDOT	Added Travel Lanes	**I-69,** .5 miles N. of SR 13 to .5 miles N. of SR 38		48	2015	CN	$ -	$ 38,610,000	$ 38,610,000	State Funds Only	TBD	Res. 3-6-14
181	**1006489**	INDOT	Br Repl, P.T.Comp.Cont.Pres.Conc.I-Beam	**SR 9 ,** 2.01 miles S. of US 36 @ Bridge over Lick Creek		48	2015	RW	$ 40,000	$ 10,000	$ 50,000	STP	10/5/2016	Res. 4-3-14, Res. 8-7-14
182	**1383512**	INDOT	Bridge Widening	**I-69 @ SB Bridge over Thorpe Creek**		48	2015	CN	$ -	$ 1,500,000	$ 1,500,000	State Funds Only	10/8/2014	Res. 6-5-14
183	**1383513**	INDOT	Bridge Widening	**I-69 @ NB Bridge over Thorpe Creek**		48	2015	CN	$ -	$ 1,500,000	$ 1,500,000	State Funds Only	10/8/2014	Res. 6-5-14
184	**1383514**	INDOT	Bridge Widening	**I-69 @ NB Bridge over SR 13**		48	2015	CN	$ -	$ 1,500,000	$ 1,500,000	State Funds Only	10/8/2014	Res. 6-5-14
185	**1383515**	INDOT	Bridge Widening	**I-69 @ NB Bridge over SR 13**		48	2015	CN	$ -	$ 1,500,000	$ 1,500,000	State Funds Only	10/8/2014	Res. 6-5-14

Indianapolis Metropolitan Planning Area

Air Quality Conformity Determination Report

2035 Long-Range Transportation Plan: 2014 Update & 2014-2017 Indianapolis Regional Transportation Improvement Program

March 5, 2014

Indianapolis Metropolitan Planning Organization
Indiana Department of Transportation

Prepared by:
Indianapolis Metropolitan Planning Organization
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Introduction

The Indianapolis Metropolitan Planning Organization is updating its 2035 Long Range Transportation Plan (LRTP) to amend several INDOT interstate widening projects being funded through the 2020 Trust Fund as approved by the Indiana General Assembly in 2013. Many of these interstate widening projects are not new to the LRTP as they have been in both the MPO's and INDOT's long range plan in the recent past.

Another action being taken with this update is the reaffirmation of the goals and objectives as developed and approved in the 2010/2011 LRTP Major Update. Those goals and objectives are shown in the table below:

Goals and Objectives of the 2035 Long Range Transportation Plan	
Goal 1: Preserve, make safe, and improve utilization of the existing transportation system.	***Objective 1:*** Maintain the existing network in a state-of-good repair. ***Objective 2:*** Use cost-effective transportation system management, transportation demand management, intelligent transportation system, and operational improvements and techniques to increase the efficiency and safety of the existing transportation system.
Goal 2: Enhance regional transportation mobility and accessibility.	***Objective 1:*** Provide cost-effective transportation improvements to address identified mobility problems and reduce the growth in traffic congestion. ***Objective 2:*** Provide appropriate travel options and choice for all users, including auto, transit, paratransit, bicycle, and pedestrian. ***Objective 3:*** Improve accessibility to regional employment and activity centers. ***Objective 4:*** Enhance connections between modes. ***Objective 5:*** Support commercial goods movement within and through the region.
Goal 3: Coordinate transportation system improvements to be consistent with regional values.	***Objective 1:*** Partner with state and local jurisdictions to ensure transportation and land use are complementary. ***Objective 2:*** Enhance transportation system sustainability and minimize impacts of the transportation system to the built and natural environment. ***Objective 3:*** Support regional economic development. ***Objective 4:*** Support transportation security.

Current Air Quality Status

Under the standards set forth in the Clean Air Act Amendments in 1990, the 9-county region of Hancock, Hamilton, Hendricks, Johnson, Morgan, Madison, Marion, Boone, and Shelby Counties is currently in

attainment of the annual National Ambient Air Quality Standard (NAAQS) for the current eight-hour ozone standard.

The counties of Hamilton, Hendricks, Johnson, Marion, and Morgan counties are currently a Maintenance area for Particulate Matter of 2.5 microns or less in size (PM2.5).

Planning Assumptions

The only change in the planning assumptions for the 2035 Long Range Transportation Plan is the type of travel demand model (TDM) being used by the Indianapolis MPO. The MPO has moved from a gravity travel demand model to a destination-choice model in order to better reflect transit ridership. Successful checks to the new TDM have been made throughout the transition to make sure air quality conformity is maintained.

Interagency Consultation Group (ICG) Process

As prescribed in the Interagency Consultation Group, Conformity Consultation Guidance document, this consultation process is intended to guide Metropolitan Planning Organizations (MPOs) and other interagency consultation group parties through the Transportation Conformity Process. On January 17, 2014, the MPO held the conference call with members of the ICG and discussed the projects proposed for change in the LRTP, and the travel demand modeling and air quality modeling process to represent those changes. The meeting summary can be found in Appendix A.

Public Involvement Process

The 2014 LRTP Update was offered for public review beginning February 14 through February 28, 2014.

LRTP Project List Changes

See complete table in Appendix B.

INDOT 2020 Trust Fund Projects (added travel lanes to be constructed by 2020):

- I-65 from 0.7 m S of SR 44 to 0.5 m N of Whiteland Rd. in Johnson County
- I-65 from 0.5 m N of Whiteland Rd. to 0.5 N of Main St. (Greenwood) in Johnson County
- I-65 from 0.5 m N of Main St. (Greenwood) to 0.5 m N of County Line Rd. in Johnson County
- I-65 from 0.5 m N of County Line Rd. to Southport Road in Marion County
- I-70 from 0.7 m W of SR 39 to 0.5 m E of SR 267 in Hendricks County
- I-69 from SR 37 (N jct.) to 0.5 miles N of old SR 238 in Hamilton County
- I-69 from Exit 210 (SR 238) in Hamilton County to SR 13 in Madison County
- I-69 from SR 13 to SR 38 in Madison County

IndyGo New Service (locally funded in 2013)

- New Crosstown fixed-route: 86th St. between Traders Point and Community Hospital North

Appendix B: Table of 2014 Project Changes

LRTP #	Roadway/ Route	Project Limits	Project Type	LRTP Period	Sponsor	Funding Source	Comments
5005	I-65	0.7 m S of SR 44 to 0.5 m N of Whiteland Rd.	Added Travel Lanes	2016-2025	INDOT	INDOT 2020 Trust Fund	Requires State legislative approval.
5006	I-65	0.5 m N of Whiteland Rd. to 0.5 N of Main St. (Grnwd)	Added Travel Lanes	2016-2025	INDOT	INDOT 2020 Trust Fund	Requires State legislative approval.
5007	I-65	0.5 m N of Main St. (Grnwd) to 0.5 m N of County Line Rd.	Added Travel Lanes	2016-2025	INDOT	INDOT 2020 Trust Fund	Requires State legislative approval.
6035	I-65	0.5 m N of County Line Rd. to Southport Road	Added Travel Lanes	2016-2025	INDOT	INDOT 2020 Trust Fund	Requires State legislative approval.
4001	I-70	0.7 m W of SR 39 to 0.5 m E of SR 267	Added Travel Lanes	2016-2025	INDOT	INDOT 2020 Trust Fund	Requires State legislative approval.
2014	I-69	SR 37 (N jct.) to 0.5 miles N of old SR 238	Added Travel Lanes	2016-2025	INDOT	INDOT 2020 Trust Fund	Requires State legislative approval.
2015	I-69	from Exit 210 (SR 238) to SR 13 in Madison Co.	Added Travel Lanes	2016-2025	INDOT	2020 Trust Fund	Requires State legislative approval.
2016	I-69	from SR 13 to SR 38 in Madison Co.	Added Travel Lanes	2016-2025	INDOT	2020 Trust Fund	Requires State legislative approval.
9001	86th St.	between Trader's Point (northwest side) and Community Hospital North (northeast side)	New fixed-route service (crosstown)	2011-2015	IndyGo	Local	implemented in 2013 with local money.
9002	Various	extending routes to serve more destinations, improving connections and frequency, offering more direct service	Service Improvements	2011-2015	IndyGo	Local	implemented in 2013 with local money.
1204	Bennett Parkway	from 106th Street to 0.5 miles south (new alignment)	new roadway	2011-2015	Zionsville	Local	Project #1204 being split in two projects. The northern half moves to 1st LRTP Period (2011-2015); the southern half is #1208, and remains in 2nd Period (2016-2025).
1208	Bennett Parkway	from 0.5 miles south of 106th Street to 96th Street	new roadway	2016-2025	Zionsville	Local	Project #1204 being split in two projects. The northern half moves to 1st LRTP Period; the southern half is #1208, and remains in 2nd Period.
2104	96th St.	from just east of Lantern Road to just west of Cumberland Road	Added Travel Lanes (2 to 4)	2026-2035	Fishers	STP (illustrative in '18)	This project is programmed in the TIP as illustrative in 2018 (STP); should be moved to 2nd Period (2016-2025)
5108	CRs 700N and 750N	from CR 325 E to CR 400E in Clark Township	new roadway	2011-2015	Johnson County	STP Group IV	This project is programmed in the TIP, CN in 2015; should be moved to 2nd Period (2016-2025)
6002	I-465	at SR 37 (Indianapolis' south side)	Interchange Modification	2011-2015	INDOT	INDOT	This project has been completed; was included in the LRTP but not considered regionally significant during previous consultation. Remove from the Plan (model changes already made)
2002	SR 32	from SR 37 to E Junction w/ SR 38	Widen 2 to 5 lanes	2011-2015	INDOT	INDOT	This project is not moving forward and should be moved to illustrative list.
6004	I-465	from 0.5 W of Allisonville to Fall Creek	Added Travel Lanes (Widen from 6 to 10 lanes)	2016-2025	INDOT	INDOT	This project is not moving forward and should be moved to illustrative list.
6005	I-69	I-465 to 96th Street interchange + 2 interchanges at I-465 and 82nd Street	Added Travel Lanes (Widen to 8 lanes divided with 6 collector/distributor lanes - up to 14 lanes total)	2016-2025	INDOT	INDOT	This project is not moving forward and should be moved to illustrative list.
5003	SR 135 (Meridian St.)	CR 500 N (Whiteland Rd.) to CR 700 N (Stones Crossing Rd.)	Widen 2 to 5 lanes	2016-2025	INDOT	INDOT	This project is not moving forward and should be moved to illustrative list.
7001	SR 39	SR 37 to SR 67	New Alignment; remains 2 lanes	2016-2025	INDOT	INDOT	This project is not moving forward and should be moved to illustrative list.

2035 LONG RANGE TRANSPORTATION PLAN










ANDERSON / MADISON COUNTY URBANIZED AREA

the County between 1970 and 2000, in which a sizable proportion of the local population moved from the urban areas (Indianapolis, Anderson and smaller municipalities) out into the unincorporated areas of Madison County. The impact of Anderson's out-migration has been significant in Richland, Adams, Union, and Fall Creek Townships. A significant portion of this population is housed in the form of new, single-family homes located on re-zoned parcels of agricultural land adjacent to the County roadway system. In most cases, these new residential properties have required a driveway cut, and have consequently increasing traffic and access conflict points on local roads.

Interstate 69 Corridor

Growth along the I-69 Corridor and the resulting traffic congestion has become a great concern, specifically near and adjacent to the interchanges. This increase in traffic is expected to continue as the Indianapolis metropolitan area and Madison County become more economically interdependent. Requests concerning development potential and land availability have increased substantially for commercial and industrial uses at the interchanges, and large tracts of land are proposed for development as this plan is being developed. Considering the potential and expected inter-county travel patterns, planning efforts will focus toward a more comprehensive approach towards transportation and land use, paying particular attention to potential impacts on the key travel corridors of the County.

Growth Dispersion

Increased growth is anticipated for Stony Creek and Green Townships due to their close proximity to the Indianapolis metropolitan area. As growth in eastern Hamilton County and northern Hancock County moves east and northward, its effects have started to flow into western and southern portions of Madison County, especially to areas near the Hamilton, Hancock, and Madison County lines around I-69 and State Roads 13, 38, 37, and 67. Based on several data sources (MCCOG, Indianapolis MPO, INDOT volume counts, and Census Journey to Work Data) it is estimated that expanded travel patterns will continue to increase, along with growing numbers of vehicle trips to the larger metropolitan area via the interstate, state, and county roads. Growth dispersion, along with out-migration from urban cores, creates these new travel patterns, which in many instances impact the ability of the existing road network to safely and efficiently handle traffic. For example, as individual changes in land use intensity accumulate over time, the operating efficiency of the roadway network often becomes obsolete before its expected lifecycle is fulfilled.

Economic Development

The primary selection factor for locating new business and industry has consistently been highway access. Madison County's transportation system will need to be upgraded to better facilitate the movement of goods and services to remain attractive for growth. Known planned improvements are listed in the current MPO Transportation Improvement Program (TIP). Other improvements to the transportation network should be considered more seriously if/when intense development is proposed. Meaningful truck routes, adequate transfer terminals, and quick access to regional markets are part of the transportation/economic growth or development issue that must be accommodated in any new development. Transportation resources should be protected and preserved in terms of their carrying capacity and ease of access to protect the long-term public financial resources of all governmental units. As the I-69 Corridor has become more developed, concerns have been raised as to whether this vital transportation route and interchanges will become more congested due to unplanned growth patterns that provide accessibility over mobility. If these routes and interchanges continue to become more compromised (e.g. see discussion on **Congestion and Circulation** below), the County will lose an important local competitive advantage. Thus, it is imperative that existing roads be maintained and protected in terms of their ability to function at a high level of service without excessive expansion of access to the I-69 corridor.

8. **SR 37, Between CR 400 N. and SR 28:** Added travel lanes are recommended for the entire length of the portion of SR 37 that travels through Madison County. The State Road 37 corridor from 191st Street to SR 9 North Junction in Marion is currently being studied for added travel lanes. This corridor ranges between 8,500 and 10,500 vehicles per day with a 6-8% heavy-truck classification. The continuous development on this multi-county state route will greatly contribute to the influx of commuting passenger cars and heavy-truck traffic.

9. **SR 37, Between SR 28 and CR 1900 N:** Added travel lanes are recommended for the remaining portion of the corridor that travels through Madison County. This segment of SR 37 is a continuation of the SR 37 corridor feasibility.

10. **SR 38, Between I-69 and Hamilton County Line:** Road reconstruction is recommended for the portion of SR 38 that travels through Madison County. This 4.5 mile segment of SR 38 extends west from Interstate 69 Interchange Exit 19 to the Madison/Hamilton County line. Traffic volumes range from 5,200 to 6,500 vehicles per day with a 5-6% heavy-truck classification. Commercial and residential development on this corridor will continue to increase future travel demand for the next 10-15 years.

11. **I-69, Between SR 238 Exit # 10 Interchange and SR 9/SR 67 Exit # 22 Interchange.** This project was originally scheduled for added travel lanes in the 2011-2020 analysis period but has since been moved back due to funding. The recent developments of the Noblesville Professional Complex at the Exit # 10 Interchange have generated an influx of vehicular travel within the project area. The average daily traffic ranges from 42,000 to 45,000 vehicles per day on I-69. Vehicle classifications for commercial and heavy truck volumes range between 18% to 22%.

12. **I-69, Between SR 9/SR 67 Exit # 22 Interchange and SR 32/SR 67 Exit # 34 Interchange.** This interstate segment was scheduled for construction in the 2011-2020 program period but has been moved out on the schedule due to funding. The increased presence of interstate heavy-truck traffic and the regional commuter traffic from Fort Wayne, Marion, Muncie, and Anderson have created the demand for additional capacity. The average daily traffic ranges from 40,000 to 45,000 vehicles per day on I-69. Vehicle classifications for commercial and heavy truck volumes range between 22% to 25%.

13. **W. Enterprise Drive, Between MLK Blvd. and Ridgeview Drive.** New road construction of a two-lane roadway link of minor arterial/collector functional classification is recommended for 2010-2020 with sidewalks and/or a multi-modal trail. The 60th Street extension project is intended to serve as a frontage road between Exit #22 at Pendleton Avenue and Exit #26 of Interstate 69. The first segment of 60th Street between Scatterfield Road and Columbus Avenue was completed in 1995. Projected traffic volume upon completion of the 3.75 mile roadway segment is 5,000 to 6,000 vehicles per day.

14. **W. Enterprise Drive, Between Ridgeview Drive and Madison Avenue.** New road construction of a two-lane roadway link of minor arterial/collector functional classification is recommended for 2010-2020 with sidewalks and/or a multi-modal trail. The 60th Street extension project is intended to serve as a frontage road between Exit #22 at Pendleton Avenue and Exit #26 of Interstate 69. The first segment of 60th Street between Scatterfield Road and Columbus Avenue was completed in 1995. Projected traffic volume upon completion of the 3.75 mile roadway segment is 5,000 to 6,000 vehicles per day.

15. **W. Enterprise Drive, Between Madison Avenue and Columbus Avenue.** New road construction of a two-lane roadway link of minor arterial/collector functional classification is recommended for

Miller, Daniel J

From: Jones, Tony W [TWJones@indot.IN.gov]
Sent: Tuesday, September 23, 2014 5:15 PM
To: Miller, Daniel J
Cc: Carnahan, Ben
Subject: Hot Spot Analysis
Attachments: INDOT PM25 Project-Level Consultation Handouts 9-18-14.pdf; Project Level ICG_20140918 _FINAL Meeting Minutes.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dan,
I received email below from Mary Jo Hammons. Our I-69 project is in the list, so FYI.

All,

*INDOT & FHWA hosted an Interagency Consultation Group Meeting to discuss whether any of the projects listed below would qualify as "projects of air quality concern" for PM2.5 pollutants on Thursday, Sept. 18, 2014. It was determined that **none** of the listed projects were to be considered with that distinction. As such, no hotspot analysis is required for PM2.5 pollutants for any of the projects listed below. As noted in the INDOT CE Manual, the preparer of each environmental document should summarize the findings, including coordination with other agencies in the CE.*

*I've attached the Final Meeting Minutes and the Handouts used at the meeting to this email. **Please route these to your respective consultants for use as an appendix to their environmental documents.***

Either Ron Bales or I are available if there are any questions.

Kind Regards, Mary Jo

Tony Jones, PE
INDOT, Project Manager
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Indianapolis, IN 46204

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317-233-5282 Office
317-503-5026 Cell

INDOT $PM_{2.5}$ Project Level Interagency Consultation

Conference Call Handouts
September 18, 2014

Goals and Methods for Evaluation

Goal:

- Identify INDOT projects "of air quality concern" (if any) that will require a $PM_{2.5}$ quantitative hot-spot analysis
- Include consultation decisions in NEPA documents to indicate projects are <u>not</u> of air quality concern

Evaluation Methods:

- Compare current and forecast traffic volumes from the Indiana Statewide Travel Demand Model (ISTDM) vs. project examples identified in the current guidance
- Determine if ISTDM project Build vs. No-Build volume changes are "significant"
- Assess nearby monitor readings
- Compare project to other projects found to be of air quality concern

EPA Guidance (Appendix B) Examples

Some examples of projects of local air quality concern that would be covered by 40 CFR 93.123(b)(1)(i) and (ii) are:

- A project on a new highway or expressway that serves a significant volume of diesel truck traffic, such as facilities with greater than 125,000 annual average daily traffic (AADT) and 8% or more of such AADT is diesel truck traffic;
- New exit ramps and other highway facility improvements to connect a highway or expressway to a major freight, bus, or intermodal terminal;
- Expansion of an existing highway or other facility that affects a congested intersection (operated at Level-of-Service D, E, or F) that has a significant increase in the number of diesel trucks; and,
- Similar highway projects that involve a significant increase in the number of diesel transit busses and/or diesel trucks.

Reference Link:
http://www.epa.gov/oms/stateresources/transconf/policy/420b13053-appx.pdf

Previous INDOT Project-Level Analyses (Indianapolis)

Item	I-69 Section 5 (Bloomington to Martinsville) DES# 0300381	I-65 (SR44 to Southport Road) DES# 1383343/1383354/1383342/1383341
Highest AADT	2035 Build AADT = **61,588**	2035 Build AADT = **125,695**
Highest Truck Volume	2035 Build Trucks = **12,785**	2035 Build Trucks = **22,442**
Build vs. No-Build %	2035 AADT = **+ 38%** 2035 Trucks = **+ 16%**	2035 Trucks = < **10%**
Background Concentration	**10.43** µg/m³	**11.27** µg/m³
Estimated Analysis Year Design Values	2018 = **11.4** µg/m³ 2035 = **11.1** µg/m³	2017 = **12.0** µg/m³

Compared against 15 µg/m³ Annual NAAQS

** Designations under 12 µg/m³ NAAQS expected in December 2014*

INDOT Initial Project Screening

- Evaluated INDOT project lists to identify projects that clearly do not require a quantitative hot-spot analysis
  - ❑ Not in a nonattainment/maintenance area
  - ❑ Intersection projects
  - ❑ Low traffic volumes (< 75,000 forecast AADT and 10,000 Trucks)
  - ❑ No significant capacity increase resulting from project
- Identify projects for further review

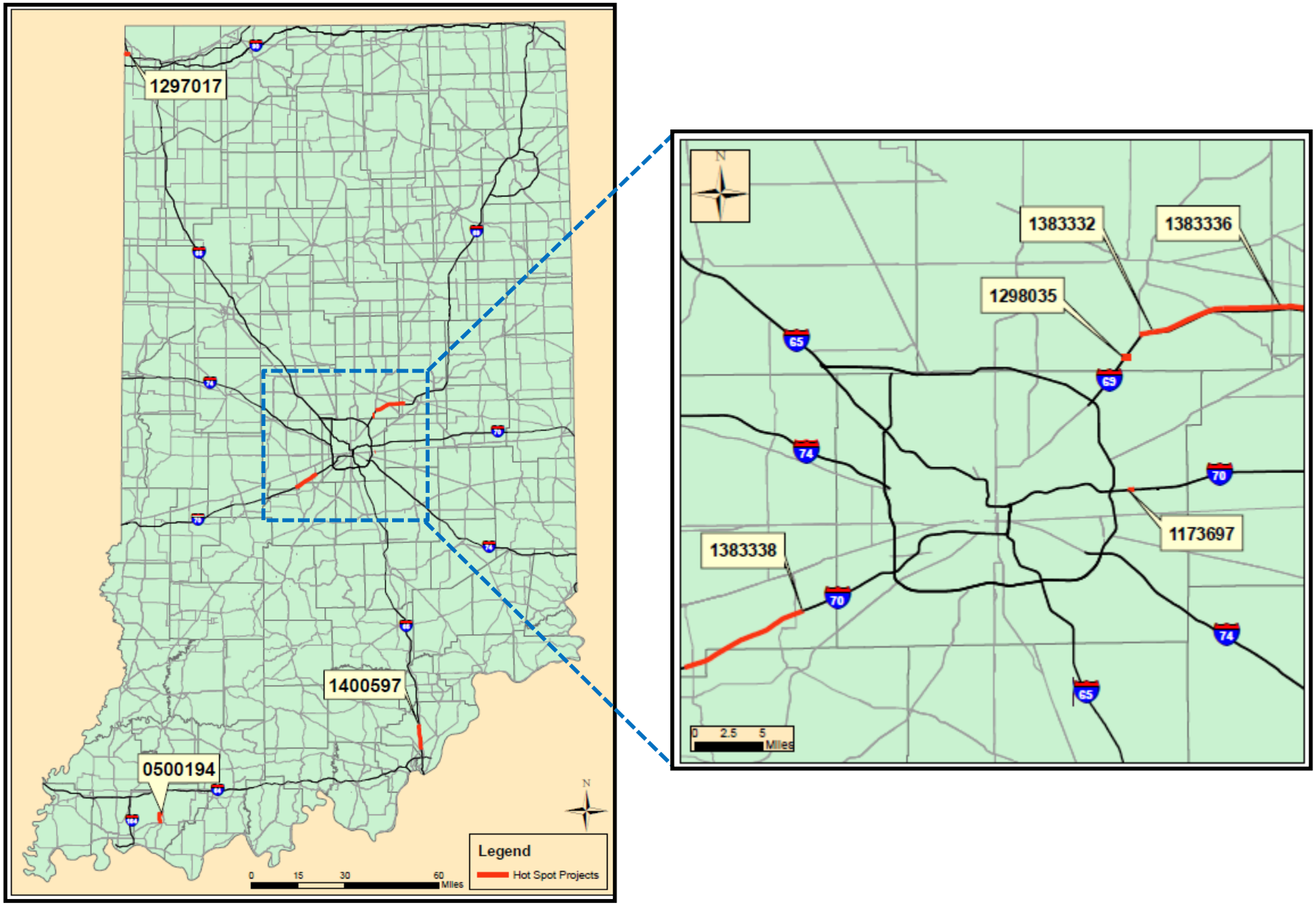
Corr#	LRP#	Old LRP	KIN#	LD	DES	Contract Prefix	Contract Number	Contract#	District	CO#	County	Route	Location	Work Category Name	Section	Notes	ELIMINATE DUE
002			4454	Y	0400283	IR	30153	IR-30153	Greenfield	49	Marion	I465	From 0.5 mile W of I-69 interchange to 75th street	Added Travel Lanes Project	I-69 to 75th St		Active
016				N	1172943	IR	33066	IR-33066	Greenfield	49	Marion	I65	Ramp (I-465 to I-65 SB) over I-65 and I-465	Interchange Modification Project			Active
022				Y	1006581	IR	34001	IR-34001	Greenfield	29	Hamilton	I69	I-69 improvements from I-465 to 116th and SR 37 interchan	Added Travel Lanes Project		SR-37 interchange	Under Construction
022				Y	1173161	IR	34166	IR-34166	Greenfield	49	Marion	I69	I-69 improvements from I-465 to 116th and SR 37 interchan	Added Travel Lanes Project		116th St interchange	Under Construction
																96th St interchange	Under Construction
																82nd St interchange	Under Construction
266			5592	Y	1005696	IR	33274	IR-33274	Greenfield	49	Marion	US52	German Church Road	Intersection Improvement Project		German Church Rd intersection	Project Type
266				N	1005697	IR	33305	IR-33305	Greenfield	49	Marion	US52	Bade Davis	Intersection Improvement Pr	No data for Bade	Bade Rd intersection	Project Type
																Davis Rd intersection	Project Type
266			2645		9700320	PLC	37344	PLC-37344	Greenfield	49	Marion	US52	Marion/Hancock County Line to CR 500W (PE & RW Trackin	Added Travel Lanes Project	C/L to CR500W	Mt. Comfort Rd intersection	Project Type
402				Y	1297199	IR	35187	IR-35187	Seymour	41	Johnson	I65	@ Worthsville Road, 7.7 miles North of SR 44	New Interchange Project			PM2.5 Review COMPLETED as
405				Y	1383332	R	37053	R-37053	Greenfield	29	Hamilton	I69	At SR 37 (N jct.) to 5.24 miles N of SR 37 (N jct.) (0.50 mile N	Added Travel Lanes Project	SR-37 to SR-238		Active
405				N	1383489	R	37053	R-37053	Greenfield	29	Hamilton	I69	I69 at Old SR238 (Exit 210)	Added Travel Lanes Project		SR-238 interchange	Active
405				Y	1383336	R	37055	R-37055	Greenfield	29	Hamilton	I69	5.24 mi N of SR 37 (N jct.) (0.50 mi N of old SR 238) to 0.85 n	Added Travel Lanes Project	SR-238 to SR-13	SR-13 interchange	Hold - reassessment of MM20
406				Y	1383338	R	37133	R-37133	Crawfordsville	32	Hendricks	I70	0.85 mile W of SR 39 to 0.50 mile E of SR 267	Added Travel Lanes Project	SR-39 to SR-267		Hold - reassessment of MM20
406				N	1400176	R	37133	R-37133	Crawfordsville	32	Hendricks	I70	SR39 at I70, 2.39 mi N of SR42	Added Travel Lanes Project		SR-39 interchange	Hold - reassessment of MM20
407				Y	1383343	R	37075	R-37075	Greenfield	41	Johnson	I65	4.72 miles S of I-465 South Leg to 2.88 miles S of I-465 Sout	Added Travel Lanes Project	County Line Rd to Southport Rd	Southport Rd Interchange	PM2.5 Study COMPLETED as
407				Y	1383354	R	37094	R-37094	Seymour	41	Johnson	I65	6.18 miles S of I-465 South Leg (0.50 mile N of Main St Greer	Added Travel Lanes Project	Main St to County Line Rd	County Line Rd Interchange	PM2.5 Study COMPLETED as
407				Y	1383342	R	37095	R-37095	Seymour	41	Johnson	I65	5.41 miles N of SR 44 to 6.18 miles S of I-465 South Leg (Just	Added Travel Lanes Project	Whiteland Rd to Main St	Main St-Greenwood Interchange	PM2.5 Study COMPLETED as
407				Y	1383341	R	37096	R-37096	Seymour	41	Johnson	I65	0.85 mile S of SR 44 to 5.41 miles N of SR 44 (0.50 mile N of	Added Travel Lanes Project	SR-44 to Whiteland Rd	Whiteland Rd Interchange	PM2.5 Study COMPLETED as
																SR-44 Interchange	PM2.5 Study COMPLETED as
					0400962	R	30395	R-30395	Greenfield	49	Marion	SR135	1.52 miles S of US 31 (Edgewood Avenue)	Intersection Improvement Project		Edgewood Ave intersection	Project Type
					1006121	R	34861	R-34861	Greenfield	29	Hamilton	SR38	At 226th Street/6 Points Road	District Intersection Improvement Project		226th St intersection	Project Type
				Y	1173698	R	35048	R-35048	Greenfield	49	Marion	I465	exit ramp from EB I-465 to US 421(Michigan Road)	Interchange Modification	Interchange Modification	I465 at US-421/Michigan Rd interchange	Active
				N	1173700	R	35048	R-35048	Greenfield	49	Marion	I465	Entrance ramp from US 421 (Michigan Road) to EB I-465	Added Travel Lanes Project			Active
				N	1173701	R	35048	R-35048	Greenfield	49	Marion	I465	Entrance Ramp from US 421 (Michigan Road) to WB I-465	Added Travel Lanes Project			Active
				N	1173704	R	35048	R-35048	Greenfield	49	Marion	I465	Exit ramp from WB I-465 to US 421 (Michigan Road)	Added Travel Lanes Project			Active
					1173697	R	35459	R-35459	Greenfield	49	Marion	I70	Exit ramp from EB I-70 to Post Road RP 90+71	Interchange Modification		Post Rd interchange	Active
					1298035	IR	35629	IR-35629	Greenfield	29	Hamilton	I69	I-69 at 106 Street	Intersection Improvement Project		106th St interchange	Active
					1296847	R	35680	R-35680	Greenfield	29	Hamilton	SR37	SR 37; at Strawtown Ave (6.34 mile north SR 32 / SR 38 Conn	District Intersection Improvement Project		Strawtown Ave intersection	Project Type

Projects Identified for Consultation Review (List)

Project DES # *	Route	Project Type	Length (mi)	County / Nonattainment Area
1383332 1383489	I-69	Added Travel Lanes	5.17	Hamilton Indianapolis
1383336		Added Travel Lanes	4.64	
1298035		New Interchange	0.47	
1383338 1400176	I-70	Added Travel Lanes	7.99	Hendricks Indianapolis
1173697		Interchange Modification	0.20	Marion Indianapolis
1400597	I-65	Added Travel Lanes	8.11	Clark Louisville KY-IN
0500194 1005804 (bridge)	SR 61	New Road (Minor Arterial) Construction	4.17	Warrick Evansville
1297017	Chicago Street Corridor	Added Travel Lanes	------	Lake Chicago-Gary-Lake Cty

** Project DES numbers in bold are shown on MAP (next page)*

Projects Identified for Consultation Review (Map)



I-69 Projects

- DES # 1383332
- DES # 1383489
- DES # 1383336
- DES # 1298035

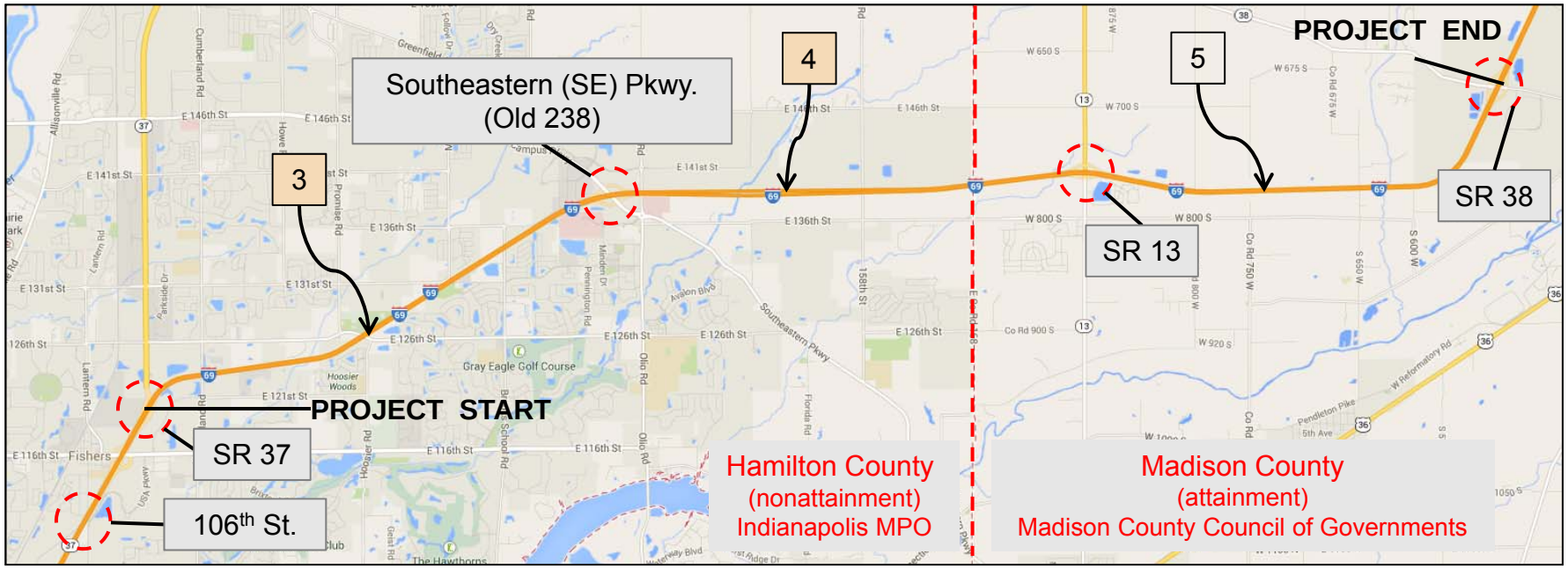
Project Description

I-69 PROJECTS

- **Add a third travel lane in each direction on I-69 from SR 37 to SR 38**
- **Interchange modification at Exit 210**
- **New interchange @ 106th Street**
- **Completion Year of 2016**
- **Eastern portion of project located in the Indianapolis PM2.5 nonattainment area**

Project Location & Traffic Volumes

I-69 PROJECTS



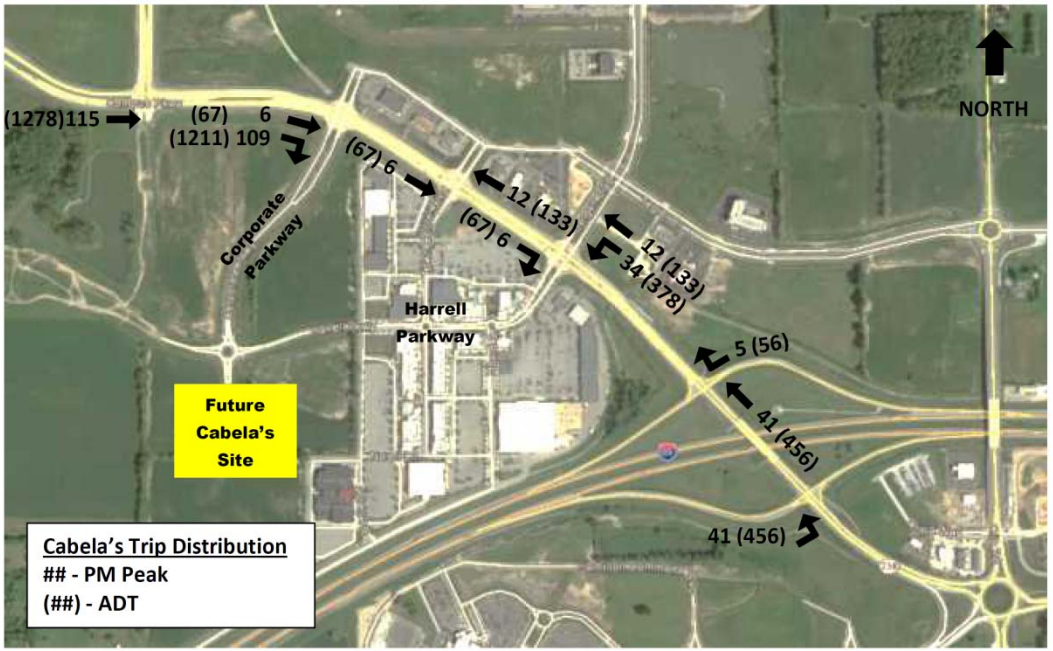
		2010		2020 (closest to completion year)				2035			
ID	I-69 Section	AADT	Truck	AADT	AADT Build vs NoBuild	Truck	Truck Build vs NoBuild	AADT	AADT Build vs NoBuild	Truck	Truck Build vs NoBuild
3	SR 37 to SE Pkwy	62,161	10,485	**72,403**	**+ 4%**	**12,131**	**+ 1%**	91,016	+ 11%	15,097	+ 11%
4	SE Pkwy to SR 13	57,734	11,749	**64,784**	**+ 4%**	**13,090**	**+ 1%**	77,006	+ 3%	15,394	+ 3%

August 21, 2014 INDOT Summary of ISTDM Base and Forecast Volumes including Build vs. No-Build

Campus Parkway Study

I-69 PROJECTS

- **April 2014 AECOM "Traffic Volume Forecast" for I-69 at Campus Parkway (Exit 210) and SR 13 (Exit 214)**
- **Exit 210 (Campus Parkway) interchange in nonattainment area**
- **Average traffic growth rates determined from the Indianapolis MPO model**
- **Impact of new Cabela's added to forecasts**

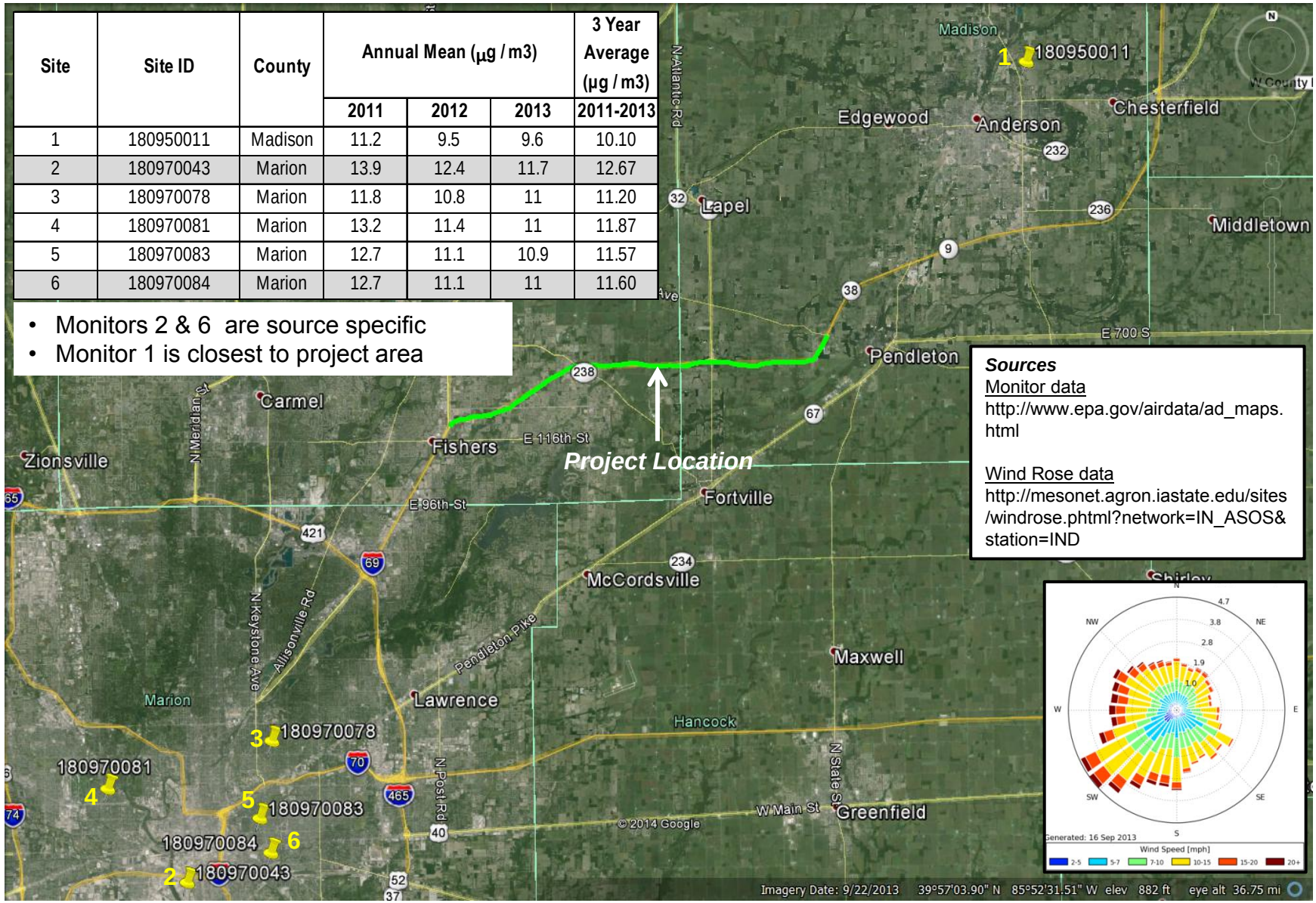


Background Concentration Monitor Locations and Readings

I-69 PROJECTS

Site	Site ID	County	Annual Mean (µg / m3)			3 Year Average (µg / m3)
			2011	2012	2013	2011-2013
1	180950011	Madison	11.2	9.5	9.6	10.10
2	180970043	Marion	13.9	12.4	11.7	12.67
3	180970078	Marion	11.8	10.8	11	11.20
4	180970081	Marion	13.2	11.4	11	11.87
5	180970083	Marion	12.7	11.1	10.9	11.57
6	180970084	Marion	12.7	11.1	11	11.60

- Monitors 2 & 6 are source specific
- Monitor 1 is closest to project area



Sources

Monitor data
http://www.epa.gov/airdata/ad_maps.html

Wind Rose data
http://mesonet.agron.iastate.edu/sites/windrose.phtml?network=IN_ASOS&station=IND

Evaluating Need for Hot-spot Analysis

Highest Section: SR 37 to SE Pkwy

I-69 PROJECTS

Item	Comparison to EPA Guidance Examples	Comparison To Previous I-69 Hot-Spot Analyses	Comparison To Previous I-65 Hot-Spot Analyses
Highest AADT	**< 125,000 AADT**	**Higher**	**Lower** (38% less AADT in 2035)
Highest Truck Volume	**>10,000 Trucks**	**Higher**	**Lower** (32% less Trucks in 2035)
Build vs. No-Build %	**Only 1% Change in 2020 Diesel Traffic**	**Lower**	**Lower**
Background Concentration	-----	Higher	Similar

INDOT PM2.5 Project-Level Consultation Interagency Consultation Group Conference Call

Thursday, September 18, 2014, 2014, 10:00 am

1. *Meeting Attendees*

Name	Organization	Email	Phone
Larry Heil	FHWA – Indiana Division	LHEIL@dot.gov	317-226-748
Michelle Allen	FHWA – Indiana Division	Michelle.Allen@dot.gov	317-226-7344
Tony Maietta	US EPA – Region 5	maietta.anthony@epa.gov	312-353-8777
Laura Hilden	INDOT – Environmental Services	lhilden@indot.in.gov	317-233-5018
Ken McMullen	INDOT – Environmental Policy Manager	KMCMULLEN@indot.IN.gov	317-233-1164
Ron Bales	INDOT – NEPA Specialist	rbales@indot.IN.gov	317-234-4916
Frank Baukert	INDOT – Long Range Planning	FBAUKERT@indot.IN.gov	317-232-1486
Shawn Seals	IDEM – Office of Air Quality	SSEALS@idem.IN.gov	317-233-0425
Dan Szekeres	Michael Baker Jr., Inc. (Baker)	dszekeres@mbakerintl.com	717-221-2019
Rob Dabadie	Baker	RDabadie@mbakerintl.com	410-689-3452
Mary Jo Hamman	Baker	mhamman@mbakerintl.com	317-663-8190
Dean Munn	Corradino Group	dmunn@corradino.com	317-488-2363

Materials: Attached Handouts (INDOT PM25 Project-Level Consultation Handouts 9-18-14.pdf)

2. *Overview*

- Larry Heil (FHWA) provided background on the purpose of the conference call.
- In Indiana, project-level air quality analyses have been completed for three projects (I-69, I-65, Iliana). For each analysis, the project portion of the total concentration was about 1 µg/m³ and forecasted peak year concentrations were below the current 15 µg/m³ annual PM2.5 National Ambient Air Quality Standard (NAAQS).
- All projects except for Chicago St and the 106th St. interchange are being advanced as Categorical Exclusions. These other projects are expected to be Environmental Assessments.

3. *Project Review*

- Dan Szekeres (Baker) led discussions through each of the handout pages including an overview of the key data and resources to assist the consultation group in determining whether projects are of "air quality concern" requiring a quantitative analysis.
- The evaluation methods included an assessment of existing and forecast traffic volumes, the impact of the project on volume (build vs. no-build), nearby monitor readings, and comparisons of volumes to EPA guidance examples. All forecasted traffic volumes were developed from the Indiana Statewide

Travel Demand Model (ISTDM) and produced by INDOT.

- Handout page 4 provides roadway traffic and monitor data for the completed quantitative hotspot analyses for I-69 (Section 5) and I-65 (SR 44 to Southport Road) under the current NAAQS. Both IDEM and EPA noted that they do not expect the Indianapolis area to be nonattainment under the upcoming 2012 PM2.5 NAAQS designations.
- IDEM commented that there may be other factors and considerations when evaluating projects for quantitative analysis beyond the current numbers provided in the handouts. However, no specific concerns or issues were identified for the projects under consideration at this time.
- For the I-65 project in Clark County, IDEM noted that this area is the most sensitive PM area in the state. However, it was agreed that the project impact on diesel traffic for this project is expected to be minimal.
- All participants on the consultation call agreed that quantitative analyses were not required for each of the projects.
- Minor enhancements to the handout materials will be provided including:
    - Remove the reference to "15 μg/m³" in the footnote on Slide 4
    - Modify the graphic on Slide 10 to show the 106th St. Interchange
    - Remove decision references for each grouping of projects on Slides 13, 18, 23, 28, 33
    - Include traffic count information for SR 61 on Slide 26

4. Conclusions

- The interagency consultation group concurred that each of the projects provided in the handouts (see handout page 6) is not a project of air quality concern and does not require a quantitative hotspot analysis. This includes the following project DES #s:
    - DES # 1383332
    - DES # 1383489
    - DES # 1383336
    - DES # 1298035
    - DES # 1383338
    - DES # 1400176
    - DES # 1173697
    - DES #1400597
    - DES # 0500194
    - DES # 1005804
    - DES # 1297017
- Each of the environmental documents should contain the conference call meeting minutes and the associated handouts. The conformity determination will include references to indicate that the associated projects were determined not to be of air quality concern.
- INDOT and FHWA will continue to track other new major transportation investment projects to determine future consultation.

Meeting concluded at 10:55 am ET.

Miller, Daniel J

From: Bales, Ronald [rbales@indot.IN.gov]
Sent: Thursday, November 06, 2014 2:35 PM
To: Miller, Daniel J
Subject: RE: INDOT Des #s 1383332 & 1383336; I-69 Interstate Expansion Projects 1 & 3; Hamilton & Madison Counties; MSAT Analysis

Follow Up Flag: Follow up
Flag Status: Flagged

Dan,

Please use the following language.

> The purpose of this project is to (insert major deficiency that the project is meant to address) by constructing (insert major elements of the project). This project has been determined to generate minimal air quality impacts for CAAA criteria pollutants and has not been linked with any special MSAT concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts of the project from that of the no-build alternative.
>
> Moreover, EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOVES model forecasts a combined reduction of over 80 percent in the total annual emission rate for the priority MSAT from 2010 to 2050 while vehicle-miles of travel are projected to increase by over 100 percent. This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

As far as selecting the MSAT Level Analysis Check box, please check Level 1b analysis.

Ron

From: Miller, Daniel J [mailto:Daniel.J.Miller@parsons.com]
Sent: Thursday, November 06, 2014 11:47 AM
To: Bales, Ronald
Subject: RE: INDOT Des #s 1383332 & 1383336; I-69 Interstate Expansion Projects 1 & 3; Hamilton & Madison Counties; MSAT Analysis

Outstanding! Thanks for your help!

Daniel J. Miller
Principal Environmental Planner
PARSONS
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Indianapolis, IN 46204
Phone: (317)616-4663
E-mail: Daniel.J.Miller@Parsons.com
Web: www.parsons.com


Please consider the environment before printing this email

From: Bales, Ronald [mailto:rbales@indot.IN.gov]
Sent: Thursday, November 06, 2014 11:39 AM
To: Miller, Daniel J
Subject: RE: INDOT Des #s 1383332 & 1383336; I-69 Interstate Expansion Projects 1 & 3; Hamilton & Madison Counties; MSAT Analysis

An emission analysis will not be needed. I will get back with you later today. Should be able to provide the standard language in the CE Manual for projects with no meaningful impact. I still need to confer with FHWA. Thank you.

Ron

From: Miller, Daniel J [mailto:Daniel.J.Miller@parsons.com]
Sent: Wednesday, November 05, 2014 3:30 PM
To: Bales, Ronald
Subject: FW: INDOT Des #s 1383332 & 1383336; I-69 Interstate Expansion Projects 1 & 3; Hamilton & Madison Counties; MSAT Analysis
Importance: High

Ron,
I just got a message delivery error for your e-mail saying that the message could not be delivered. Please let me know if you receive this.

Thanks,
Daniel J. Miller
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E-mail: Daniel.J.Miller@Parsons.com
Web: www.parsons.com

Please consider the environment before printing this email

From: Miller, Daniel J
Sent: Wednesday, November 05, 2014 3:27 PM
To: Bales, Ronald (rbales@indot.IN.gov)
Cc: Carnahan, Ben; 'Jones, Tony W'
Subject: INDOT Des #s 1383332 & 1383336; I-69 Interstate Expansion Projects 1 & 3; Hamilton & Madison Counties; MSAT Analysis
Importance: High

Ron,
As we discussed, in finishing up the CE write-up for the I-69 Added Travel Lanes projects, I noticed that the AADTs provided only covered the sections where the added travel lanes will be included (from Exit 205 (116th Street and SR 37 in Fishers) to Exit 210 (Campus Parkway) and from Exit 210 to SR 13). I discussed this with our designer, and asked him to provide the AADT & other required information for the 106th St to 116th ST section, where an auxiliary lane will be added from 106th St to 116th St. The design year AADT for this section is 163,300.

Previously, we were told that a quantitative analysis would not be required for the ATL projects because the design year AADT would be below 140,000. This is true for the remaining sections of the ATL projects (see below).

ROADWAY CHARACTER:

t 1: I-69 from 106th Street to 116th Street

Functional Classification:	Principal Arterial				
Current ADT:	118,560	VPD (2015)	Design Year ADT:	163,300	VPD (2035)
Design Hour Volume (DHV):	13,064	Truck Percentage (%)	8		
Designed Speed (mph):	70	Legal Speed (mph):	65		

	Existing	**Proposed**
Number of Lanes:	5 SB *	6 SB*
Type of Lanes:	Through	Through
Pavement Width:	60ft	72ft
Shoulder Width: Inside	4ft	4ft
Outside	10ft	10ft
Median Width:	12ft	12ft
Sidewalk Width:	N/A	N/A

Setting:	✓	Urban		Suburban		Rural
Topography:	✓	Level		Rolling		Hilly

ork will occur on the NB lanes in this section. Therefore, the information only includes the SB lanes.

t 1: 116th Street Southbound Ramp

Functional Classification:	Principal Arterial				
Current ADT:	12,350	VPD (2015)	Design Year ADT:	15,670	VPD (2035)
Design Hour Volume (DHV):	1,411	Truck Percentage (%)	5		
Designed Speed (mph):	35/60	Legal Speed (mph):	45		

	Existing	**Proposed**
Number of Lanes:	1	1
Type of Lanes:	Ramp	Ramp
Pavement Width:	16ft	16ft
Shoulder Width: Inside	4ft	4ft
	6ft	8ft

Outside		
Median Width:	N/A	N/A
Sidewalk Width:	N/A	N/A

Setting: ☑ Urban ☐ Suburban ☐ Rural
Topography: ☑ Level ☐ Rolling ☐ Hilly

proposed action has multiple roadways, this section should be filled out for each roadway.

t 1: I-69 from SR 37 to Campus Parkway

Functional Classification: Principal Arterial

Current ADT: 63,440 VPD (2015) Design Year ADT: 83,850 VPD (2035)

Design Hour Volume (DHV): 5,870 Truck Percentage (%): 20

Designed Speed (mph): 70 Legal Speed (mph): 70

	Existing	**Proposed**
Number of Lanes:	4 (2 NB, 2 SB)	6 (3 NB, 3 SB)
Type of Lanes:	Through	Through
Pavement Width:	48ft	72ft
Shoulder Width: Inside	4ft	10ft
Outside	10ft	10ft
Median Width:	60ft	36ft
Sidewalk Width:	N/A	N/A

Setting: ☑ Urban ☑ Suburban ☑ Rural
Topography: ☑ Level ☐ Rolling ☐ Hilly

t 3: I-69 from Campus Parkway to SR 13

Functional Classification: Principal Arterial

Current ADT: 56,140 VPD (2015) Design Year ADT: 66,190 VPD (2035)

Design Hour Volume (DHV): 5,296 Truck Percentage (%): 10

Designed Speed (mph): 70 Legal Speed (mph): 70

	Existing	**Proposed**
Number of Lanes:	4 (2 NB, 2 SB)	6 (3 NB, 3 SB)

Type of Lanes:	Through	Through
Pavement Width:	46ft	72ft
Shoulder Width: Inside Outside	4ft 10ft	10ft 10ft
Median Width:	60ft	36ft
Sidewalk Width:	N/A	N/A

Setting: ☐ Urban ☐ Suburban ☑ Rural
Topography: ☑ Level ☐ Rolling ☐ Hilly

t 3: SR 13

Functional Classification: State Collector

Current ADT: 12,472 VPD (2015) Design Year ADT: 18,213 VPD (2035)

Design Hour Volume (DHV): 1,989 Truck Percentage (%): 12

Designed Speed (mph): 55 Legal Speed (mph): 55

Existing **Proposed**

Number of Lanes:	2	2
Type of Lanes:	Through	Through
Pavement Width:	24ft	24ft
Shoulder Width: Inside Outside	6ft 10ft	6ft 10ft
Median Width:	N/A	N/A
Sidewalk Width:	N/A	N/A

Setting: ☐ Urban ☐ Suburban ☑ Rural
Topography: ☑ Level ☐ Rolling ☐ Hilly

As you can see, the portions of the projects where added travel lanes will be added have design year ADTs of 83,850 (Project 1: I-69 from SR 37 to Campus Parkway) and 66,190 (Project 3: I-69 from Campus Parkway to SR 13), and the 116th St SB ramp & SR 13 are well below the 40,000 limit.

I called Mary Jo Hamman from Baker to ask her if she had performed a quantitative analysis for this section of I-69. She stated that Baker was only contracted to do the $PM_{2.5}$ analysis for the I-69 projects. In reviewing their handout that was provided, they did not consider this section of I-69 in their analysis (see attached, pg 10).

Currently we have included the qualitative analysis, but have not conducted the quantitative emission analysis. Again, the section with the high AADT (163,300) is where an auxiliary lane is being built between 106th St. and

116th St. The remaining sections, where the added travel lanes are being built, have design year AADTs below 140,000. Do we need to conduct a quantitative emission analysis for this section? Please advise.

Please let me know if you need any additional information.

Thanks,
Daniel J. Miller
Principal Environmental Planner
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Indianapolis, IN 46204
Phone: (317)616-4663
E-mail: Daniel.J.Miller@Parsons.com
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Please consider the environment before printing this email

From: Jones, Tony W [mailto:TWJones@indot.IN.gov]
Sent: Tuesday, September 23, 2014 5:15 PM
To: Miller, Daniel J
Cc: Carnahan, Ben
Subject: Hot Spot Analysis

Dan,
I received email below from Mary Jo Hammons. Our I-69 project is in the list, so FYI.

All,

*INDOT & FHWA hosted an Interagency Consultation Group Meeting to discuss whether any of the projects listed below would qualify as "projects of air quality concern" for PM2.5 pollutants on Thursday, Sept. 18, 2014. It was determined that **none** of the listed projects were to be considered with that distinction. As such, no hotspot analysis is required for PM2.5 pollutants for any of the projects listed below. As noted in the INDOT CE Manual, the preparer of each environmental document should summarize the findings, including coordination with other agencies in the CE.*

*I've attached the Final Meeting Minutes and the Handouts used at the meeting to this email. **Please route these to your respective consultants for use as an appendix to their environmental documents.***

Either Ron Bales or I are available if there are any questions.

Kind Regards, Mary Jo

Tony Jones, PE
INDOT, Project Manager
100 North Senate Ave, Rm 601
Indianapolis, IN 46204

twjones@indot.in.gov
317-233-5282 Office
317-503-5026 Cell

Appendix I: Noise

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Hamilton and Madison Counties, Indiana – Des. No.'s 1383332, 1383336

I-69 EXPANSION DESIGN BUILD PROJECTS
DRAFT TRAFFIC NOISE IMPACT ANALYSIS

October 2014

PREPARED BY

PARSONS

101 W. Ohio Street, Suite 2121
Indianapolis, IN 46204

PREPARED FOR

INDIANA DEPARTMENT OF TRANSPORTATION

100 N. Senate Avenue, Room N642
Indianapolis, IN 46204

Executive Summary

A Draft Traffic Noise Impact Analysis was conducted for the I-69 Expansion Project from 106th Street to ½ mile north of SR 13. A subsequent Traffic Noise Impact Analysis will be conducted for the reconfiguration of the I-69 Campus Parkway Interchange Project. The Federal Highway Administration (FHWA) Traffic Noise Model (TNM) Version 2.5 was used to model existing and proposed noise levels. Because numerous design year noise levels have been predicted to approach or exceed the FHWA Noise Abatement Criteria (NAC) for Category B (residential) land uses, the project has been found to have traffic noise impacts. Based on the Indiana Department of Transportation Traffic Noise Analysis Procedure (INDOT Noise 2011), the feasibility and cost effectiveness of noise barriers were evaluated at all locations in the project area where noise impacts were identified under the future build alternative. Based on this evaluation, four feasible and cost effective barriers were identified for this project: NB 00 located between 106th Street and 116th Street west of I-69, NB 1 located on the northbound side of I-69 north of Cumberland Road, NB 10 located on the northbound side of I-69 just north of Brooks School Road, and NB 12 located on the northbound side of I-69 east of the SR 13/I-69 interchange.

Table ES-1 Recommended Noise Barriers

Barrier ID	NSA	Location	Barrier Length	Benefited Receivers
00	1	Between 106th Street and 116th street west of I-69	1,700	73
01	4	South of I-69 and east of Cumberland Road	3,900	307
10	9	South of I-69 and east of Brooks School Road	2,400	69
12	12	South of I-69 and east of the SR 13 interchange	2,020	35

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APPENDIX H Sound Level Meter Calibration Records

APPENDIX I Field Survey Forms and Photo Log

1.0 PROJECT HISTORY AND BACKGROUND INFORMATION

1.1 Purpose of the Draft Traffic Noise Impact Analysis

The purpose of this Draft Traffic Noise Impact Analysis is to evaluate noise impacts and abatement under the requirements of Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) "Procedures for Abatement of Highway Traffic Noise" for the I-69 Expansion Design Build Projects. 23 CFR 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. According to 23 CFR 772.3, all highway projects that are developed in conformance with this regulation are deemed to be in conformance with Federal Highway Administration (FHWA) noise standards.

The Indiana Department of Transportation (INDOT) *Traffic Noise Analysis Procedure* (INDOT Noise, 2011) establishes INDOT policy for implementing 23 CFR 772 in Indiana. The *Traffic Noise Analysis Procedure* outlines the requirements for analyzing highway traffic noise. Noise impacts associated with this project will be included in the project's Categorical Exclusion Level 4, (CE-4), in compliance with the National Environmental Policy Act (NEPA).

1.2 Project Purpose and Need

The purpose of these projects is to improve overall traffic operation by reducing congestion on this segment of I-69.

The need for these projects stems from traffic congestion issues that currently exist on these segments of I-69. Traffic data was analyzed using Highway Capacity Manual methodology in Highway Capacity Software (HCS). The data was collected by INDOT in 2011, and a 1.5% per year growth rate was applied to forecast the traffic for 2013 ("current year") and 2035 ("design year"). The adjusted and balanced data was then used to produce results in Level of Service (LOS). LOS is a rating for traffic congestion with LOS A being the least delay and LOS F being the most delay. I-69 between Exit 205 and SR 38 is currently operating at LOS E, which is characterized as "unstable flow". In 2033, I-69 from Exit 205 to SR 13 is predicted to experience "forced flow" (LOS F). This is likely to appear in the form of queuing upstream of ramp junctions (southbound at SR 13 in the AM peak hours and northbound at Exit 210 in the PM peak hours). I-69 is considered to be urban to Exit 210 from the south and rural from Exit 210 to the north, which means the minimally acceptable LOS's are D and C, respectively. The results show unacceptable LOS for both existing and future traffic in each direction for this section of I-69.

1.3 Project Description

Project 1 (Des. 1383332) will construct added travel lanes in the median from 106th Street to 0.5 mile north of Campus Parkway. An auxiliary lane will be added on southbound I-69 between 106th Street and 116th Street. Project 2 (Des. 1383489) is an interchange modification at Exit 210 (Campus Parkway). Traffic noise will be analyzed for this project under a separate report. Project 3 (Des. 1383336) will construct added travel lanes in the median from 0.5 mile north of Campus Parkway to 0.5 mile east of S.R. 13. All three are design-build projects that will be let under a single construction contract. A project location map is provided in Appendix A for reference.

2.0 EXISTING NOISE ENVIRONMENT

2.1 Existing Land Uses

Field investigations were conducted on July 21, 22, and 23, 2014 to identify land uses that could be subject to traffic and construction noise impacts from the proposed project. Single-family residences,

apartments, condominiums, mobile home parks, light industrial warehouses, manufacturing facilities, a shopping center, schools, recreational areas, athletic fields, hospitals, and agricultural fields were identified as Activity Category B, C, D, E, F and G land uses in the project area.

As required by the *Traffic Noise Analysis Procedure,* although all developed land uses are evaluated in this analysis, noise abatement is only considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, this impact analysis focuses on locations with defined outdoor activity areas, such as residential backyards and common use areas at other facilities.

For the majority of this project, one receptor was modeled for a single corresponding dwelling unit or area of frequent outdoor use. Receptor locations that were used to represent more than one dwelling unit (apartment complexes and condominium homes) are specified in Table C-1 through C-8 in Appendix C.

To determine the number of receptors appropriate for Billericay Park, Mudsock Fields, Cheeney Creek Natural Area, Fishers High School, and Fishers Elementary School the algorithm provided in the *Traffic Noise Analysis Procedure* was used. This algorithm converts total usage to equivalent receptors. The daily number of users for Billericay Park, Mudsock Fields, and Cheeny Creek Natural Area were obtained through correspondence with the respective Parks Superintendant. The daily number of users for Fishers High School and Fishers Elementary School was obtained through correspondence with administration officials from each school.

2.2 Noise Study Area (NSA) Descriptions

Land uses in the project area have been grouped into a series of numbered Noise Sensitive Areas (NSAs) that are identified in Appendix A.

- NSA 1 is located on the southbound side of I-69 between 106th Street and Cheney Creek. This area consists of a partially built out commercial area and residential land use. The residential land use includes the Lantern Woods Apartments (Activity Category B). The apartment balconies and common use areas such as patios with a line of sight to the highway have been included as modeled receivers. This area is generally flat. No sound barrier or topographical shielding occurs between the highway and the residential areas.
- NSA 2 is located on the southbound side of I-69 between Fishers Pointe Blvd. and 116th Street. Residential land uses (Activity Category B) include the Heritage Meadows Subdivision, Morgan Meadows Subdivision, Fisherdale Subdivision, Lonberger Subdivision, and RE Harold Subdivision. Cheeney Creek Natural Area(Activity Category C), Fishers Elementary School (Activity Category C) and a hotel (Activity Category E) are also located in this area. INDOT is currently constructing a noise barrier in this area to protect sensitive land uses as part of a previous project. This barrier was incorporated into the existing model.
- NSA 3 is located on the southbound side of I-69 between Cumberland Road and 126th Street. This area consists of sparse single family residences (Activity Category C) mixed with commercial properties (Activity Category C). This area is generally flat. No areas of frequent human outdoor use were identified for the commercial land uses. There are no topographical shielding factors between the residences and the highway.
- NSA 4 is located on the northbound side of I-69 from Cumberland Road to Sand Creek. This area consists of a few commercial properties (Activity Category C) and residences (Activity Category B). No areas of frequent outdoor human use were identified for the commercial properties. Residential land uses include the Cumberland Crossing Apartments and Cumberland Woods Subdivision. There are no topographical shielding factors between the highway and Cumberland Crossing Apartments but there is a berm between the highway and Cumberland Woods Subdivision which shields a significant amount of sound from the subdivision.
- NSA 5 is located on the northbound side of I-69 from Sand Creek to 126th Street. This area consists entirely of residential land uses (Activity Category B). This area is generally flat with a high berm. This berm provides significant shielding to the Sumerlin Trails at Hoosier Woods

Subdivision. The Sumerlin Trails at Hoosier Woods Subdivision has single family detached homes with backyards that face the highway.

- NSA 6 is located on the southbound side of I-69 from 126th Street to Brooks School Road. This area consists of Billericay Park (Activity Category C), Fishers High School (Activity Category C), a commercial property (Activity Category E), a private dog park, and residences (Activity Category B). No areas of frequent outdoor human use were identified for the commercial properties. This area is generally flat with the exception of a short berm and fence between the Limestone Springs Condominiums and the highway.
- NSA 7 is located on the northbound side of I-69 from 126th Street to Brooks School Road. This area consists of residences (Activity Category B) and Mudsock Fields athletic fields (Activity Category C). Residential development within this NSA includes Whispering Wood Subdivision, The Bristols Subdivision, and HS Waterview Estates Subdivision. This area is generally flat with the exception of a short berm and fence between Whispering Woods Condominiums Subdivision (front yards facing out) and the highway. There is no topographical shielding or sound barrier between Mudsock Fields and the highway.
- NSA 8 is located on the southbound side of I-69 from Brooks School Road to the western edge of Hamilton Town Center. This area has a commercial property (Activity Category E) and residences (Activity Category B). This area is generally flat. No areas of frequent outdoor human use were identified for the commercial properties. There are no topographical shielding factors between the highway and residential land uses.
- NSA 9 is located on the northbound side of I-69 from Brooks School Road to the western edge of IU Health Saxony Hospital. This area consists entirely of residences (Activity Category B). The backyards of single family detached homes in the Brooks Chase Subdivision face the highway. This area is generally flat with the exception of a berm and fence between the Brooks Chase Subdivision and the highway. This berm and fence provides some shielding to the Brooks Chase Subdivision.
- NSA 10 encompasses the I-69 and Campus Parkway interchange. Traffic Noise impacts within this NSA will be analyzed in a subsequent study as part of the Interchange Reconfiguration project (Des. No. 1383489).
- NSA 11 is located on the northbound and southbound side of I-69 from Olio Road to SR 13. This area consists of St. Vincent Hospital (Activity Category D), a single residence (Activity Category B) and farmland. This area is generally flat. There is no topographical shielding or sound barrier between any of the properties and the highway.
- NSA 12 is located on the northbound side of I-69 from SR 13 to the eastern terminus of the project limits (one half mile east of SR 13). This area consists of residences (Activity Category B) and is generally flat. There are no topographical shielding factors between the highway and residential land uses (Carefree Mobil Homes).
- NSA 13 is located on the southbound side of I-69 from SR 13 to the eastern terminus of the project limits (one half mile east of SR 13). This area consists of one residence (Activity Category B) and is generally flat. There is no topographical shielding or sound barrier between this residence and the highway.

2.3 Noise-Sensitive Receptors and Existing Noise Conditions

Noise-sensitive receptors are those locations where activities that could be affected by increased traffic noise levels occur (e.g., residences, motels, churches, schools, parks and libraries). Existing noise levels are determined for the most commonly used outdoor living areas at sensitive receptors. For residences, this is typically the backyard or front porch. Noise-sensitive receptors are located extensively throughout the project corridor (see Appendix A). A total of 822 sensitive receptors representing 1,091 equivalent dwelling units or areas of frequent outdoor use were identified in the project area for analysis as part of

the noise study. These receptors include all Category B, C, D, and E land uses located within approximately 500 feet of the alignment.

2.3.1 Consideration of Existing Noise Barriers

In accordance with FHWA guidance (FHWA-HEP-12-051) the effectiveness of existing barriers was considered as part of this noise study. This noise barrier within NSA 2 is currently under construction and is anticipated to be complete in late 2014. To evaluate the effectiveness of the barrier a TNM model was prepared that included the existing noise barrier.

With the barrier there are 5 impacted receptors. The existing barrier reduces the noise level by 5 dB(A) or more for 4 impacted receptors, so the existing barrier meets the feasibility requirements of INDOT noise policy. There are 23 benefitting receptors, so at least 12 of these receptors mush achieve the design goal to meet the reasonableness requirement. Thirteen (13) benefitting receptors meet the design goal. In this case, the existing barrier performs according to the requirements of the INDOT policy, so no further action is required.

2.4 Measurement Procedures, Equipment, and Results

Measurement locations were selected to represent major developed areas within the project area.

These short term measurements were conducted using a Larson-Davis Model LD-820 sound level meter (serial number 1501). Measurements were taken over a 20-minute period at a majority of the sites. Noise measurements were stopped short of 20 minutes at the aforementioned sites due to park patrons using the field and creating substantial noise. Calibration of the meter was checked before and after field work using a Larson-Davis Model Cal 200 (serial number 11087). Noise meter calibration data is included in Appendix H.

During the measurements the temperature varied around 80-90 degrees Fahrenheit, and winds were light, having little effect of sound propagation over moderate distances. Temperature, humidity, and winds speeds were within the manufactures recommended guidelines for operation of the sound level meter. Site conditions for each measurement are included on the field survey forms in Appendix I.

Table 2 summarizes the results of the existing noise measurements taken.

Table 1

Summary of Short-Term Measurements

Position	Address	Land Use	Start Time	Duration (minutes)	Measure $D_{Leq(h)}$
ST01	10589 Clay Prairie Parkway	Commercial	11:27 am	20	63.5
ST02	8610 106th Street	Commercial	12:19 pm	20	65.6
ST03	11144 Lantern Road	Residential	10:19 am	20	75.7
ST04	11442 Lantern Road	School	3:22 pm	18	61.4
ST05	10225 Stage Coach Trail	Residential	8:47 am	20	69.3
ST06	10526 Blue Springs Lane	Residential	9:40 am	20	61.5
ST07	11025 Cool Winds Way	Residential	11:20 am	20	52.3

ST08	11066 Cool Winds Way	Residential	10:42 am	20	64.1
ST09	12690 Promise Road	Recreational	11:54 am	20	65.8
ST10	12160 Packers Avenue	Recreational	12:45 pm	15	64.7
ST11	440 Scoria Drive	Residential	9:09 am	20	64.1
ST12	12578 Loyalty Drive	Residential	1:47 pm	20	67.2
ST13	12547 136th Street	Commercial	3:35 pm	20	61.8
ST14	13916 Southeastern Parkway	Hospital	2:49 pm	20	64.9
ST15	8620 Pin Oak Drive	Residential	1:47 pm	20	69.8

TNM 2.5 was used to compare measured traffic noise levels to modeled noise levels at the measurement locations. As shown in Table 3, comparing the modeled and measured noise levels using observed traffic counts confirms the applicability of the model to the study area. In several of the TNM validation model runs it was necessary to input features such as existing wooden fences in order to reduce the modeled noise levels to a level that reasonable matched the measured levels. As these features were not specifically designed as noise attenuation measures they were not included in the existing, no-build, and proposed model runs. Predicted traffic noise levels using the traffic counts observed during the measurements are generally within +/- 3 dBA of the measured levels, indicating reasonable correlation. Only ST-8 was slightly outside of this 3 dBA standard. Therefore, this model is validated per 23 CFR 722.11 (d)(2), and no calibration of the model was made.

Table 2

Comparison of Measured to Predicted Sound Levels in the TNM Model

Measurement Position	Measured Sound Level (dBA)	Predicted Sound Level (dBA)	Measured minus Predicted (dBA)
ST01	63.5	64.1	-0.6
ST02	65.6	66.7	-1.1
ST03	75.7	77.5	-1.8
ST04	61.4	64.0	-2.6
ST05	69.3	70.7	-1.4
ST06	61.5	63.7	-2.2
ST07	52.3	55.1	-2.8
ST08	64.1	60.9	3.2

ST09	65.8	66.0	-0.2
ST10	64.7	63.8	0.9
ST11	64.1	64.8	0.7
ST12	67.2	68.8	-1.6
ST13	61.8	62.2	-0.4
ST14	64.9	62.7	2.2
ST15	69.8	70.4	-0.6

3.0 METHODOLOGY

3.1 Fundamentals of Traffic Noise

The human ear perceives noise as a form of vibration that causes pressure variations. The ear is sensitive to this variation and perceives it as sound. The intensity of these pressure variations causes the ear to discern different levels of loudness. These pressure differences are commonly measured in decibels (dB). The decibel scale that is audible to the human ear spans about 140 decibels. A dB level of zero is barely audible to the human ear while 140 dB is an unrecognizable sound which is painful to the listener. The decibel scale is a logarithmic representation of the actual sound pressure variation. This means that a 26 percent change in energy level only changes the sound level 1 dB. It would be possible for the human ear to detect this difference only in a laboratory. Increasing the energy level 100 percent would result in a 3 dB increase, which would be barely perceptible outdoors. A tripling in sound energy level would result in a clearly noticeable change of 5 dB in the sound level. An increase of ten times the energy level would result in a 10 dB increase in the sound level, which would be perceived as a doubling of the sound level.

The human ear has a non-linear sensitivity to noise. To account for this in noise measurement, electronic weighting scales are used to define the relative loudness of different frequencies. The "A" weighting scale, expressed as dBA, is widely used in environmental work because it most nearly matches the non-linear nature of human hearing.

The measurement that is most commonly used to express dBA levels for traffic noise is the Hourly Equivalent Sound Level [$L_{eq}(h)$]. The $L_{eq}(h)$ describes a noise-sensitive receptor's cumulative exposure from all noise-producing events over a 1-hour period.

Traffic noise studies for road projects in Indiana are performed in accordance with 23 CFR 772 and INDOT's *Traffic Noise Analysis Procedure.* There are five main steps comprising traffic noise studies:

1. Identify noise sensitive receptors,
2. Determine existing ambient peak noise levels,
3. Predict future peak noise levels,
4. Identify traffic noise impacts, and
5. Evaluate mitigation measures for sensitive receptors where traffic noise impacts occur.

Traffic-generated $L_{eq}(h)$ noise levels were predicted for the design year (2035) using FHWA TNM 2.5, a computer simulation model. The model takes into account anticipated traffic volumes, vehicle types, vehicle speeds, roadway geometry, and sensitive receptor locations to calculate future traffic-generated

noise levels. Noise levels were predicted for the outdoor living areas at each sensitive receptor using the worst traffic conditions likely to occur on a regular basis during the design year. Future noise levels predicted for the project area are included on Table C-1 through C-8 in Appendix C.

According to FHWA and INDOT noise policies, a traffic noise impact occurs when either of the following conditions result at a sensitive receptor:

- The future predicted $L_{eq}(h)$ noise level approaches (is within 1 dBA) or exceeds the Noise Abatement Criteria (NAC) shown in Table 3.
- The future predicted $L_{eq}(h)$ noise level substantially exceeds (by 15 or more dBA) the existing $L_{eq}(h)$ noise level. Traffic-generated noise level increases of 15 dBA or more are typically associated with roadway improvements on a new alignment.

3.2 Methods for Identifying Land Uses and Selecting Noise Measurement and Modeling Locations

A field investigation was conducted to identify land uses that could be subject to traffic and construction noise impacts from the proposed project. Land uses in the project area were categorized by land use type, Activity Category as defined in Table 3, and the extent of frequent human use. As stated in the *Traffic Noise Analysis Procedure,* noise abatement is only considered for areas of frequent human use that would benefit from a lowered noise level. Although all developed land uses are evaluated in this analysis, the focus is on locations of frequent human use that would benefit from a lowered noise level. Accordingly, this impact analysis focuses on locations with defined outdoor activity areas, such as residential backyards and common use areas at recreational facilities.

Table 3

Noise Abatement Criteria in 23 CFR 772

Activity Category	***$L_{Aeq}(h)$***	***Evaluation Location***	***Activity Description***
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67	Exterior	Residential.
C	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structure, radio stations, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.

D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structure, radio studios, recording studios, schools, and television studios.
E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D, or F.
F	–––	–––	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	–––	–––	Undeveloped lands that are not permitted.

Source: 23 CFR 772

3.3 Traffic Noise Level Prediction Methods

Traffic noise levels were predicted using FHWA TNM 2.5. Traffic noise was evaluated under design year conditions for both alternatives. Loudest-hour traffic volumes, vehicle classification percentages, and traffic speeds under design-year (2035) conditions were developed for input into the model. The loudest hour traffic volumes, vehicle classification percentages, and traffic speeds under design-year (2035) conditions were developed for input into the traffic noise model. The loudest hour is generally characterized by free-flowing traffic at the highway design speed (i.e., Level of Service [LOS] C or better). Peak traffic volumes for the new roadway alternatives are not predicted to exceed LOS C, therefore design hour traffic volumes were used in this analysis. Hourly traffic volumes used in this study were taken from a series of memorandums prepared by INDOT and received via e-mail on June 11, 2014.

3.4 Methods for Identifying Traffic Noise Impacts and Consideration of Abatement

Traffic noise impacts are considered to occur at receptor locations where predicted design-year noise levels are at least 15 dBA greater than existing noise levels, or where predicted design year noise levels approach or exceed the NAC for the applicable activity category. Where traffic noise impacts are identified, noise abatement must be considered for reasonableness and feasibility as required by 23 CFR 772 and the *Traffic Noise Analysis Procedure.*

According to the *Traffic Noise Analysis Procedure,* abatement measures are considered acoustically feasible if a minimum noise reduction of 5 dBA at a majority of impacted receptors is predicted with implementation of the abatement measures. Other factors that affect feasibility include topography, access requirements for driveways and ramps, presence of local cross streets, utility conflicts, other noise sources in the area, and safety considerations. The overall reasonableness of noise abatement is determined by considering factors such as:

- Cost;
- Absolute predicted noise levels;
- Predicted future increase in noise levels;
- Expected noise abatement benefits;
- Build date of surrounding residential development along the highway;
- Environmental impacts of abatement construction;
- Opinions of affected residents;

- Input from the public and local agencies; and
- Social, legal, and technological factors.

Details of this evaluation are provided in Section 4.2.

4.0 FUTURE NOISE ENVIRONMENT, IMPACTS, AND ABATEMENT

4.1 Future Noise Environment and Impacts

Tables C-1 through C-8 in Appendix C summarize the traffic noise modeling results for existing conditions and design-year conditions with and without the noise barriers. As described in Section 3.3, these predictions utilize forecasted design hour traffic conditions to ensure a conservative estimate of noise levels for the loudest noise hour. The comparison to existing conditions is included in the analysis to identify traffic noise impacts under 23 CFR 772. The comparison to no-project conditions indicates the direct effect of the project.

The results shown in Appendix C indicate that predicted traffic noise levels for the design-year with-project conditions approach or exceed the NAC of 67 dBA $L_{eq}(h)$ for Category B land uses. Therefore, traffic noise impacts are predicted to occur at activity category B land uses within the project area, and noise abatement must be considered.

As shown in Appendix A, undeveloped areas adjacent to the corridor are predicted to approach or exceed the NAC for Activity Category B and C land uses based on the 66 dBA contour line.

4.2 Noise Abatement Analysis

In accordance with 23 CFR 772, noise abatement is considered where noise impacts are predicted in areas of frequent human use that would benefit from a lowered noise level. Potential noise abatement measures include the following:

- Avoiding the impact by using design alternatives, such as altering the horizontal and vertical alignment of the project;
- Construction Noise Barriers;
- Acquiring property to serve as a buffer zone;
- Using Traffic management measures to regulate types of vehicles and speeds; and
- Acoustically insulating public-use or nonprofit institutional structures.

Alteration of the roadway geometry would not be feasible. The preferred alternative has been developed to best meet the transportation need of the corridor while minimizing impacts to the immediate area and meeting the purpose of the project. Horizontal geometry changes significant enough to effect noise levels at receiver locations would require numerous relocations and is not a practical alternative. Thus any changes to these alignments would be limited, and have only minimal effects on sound levels.

Noise barriers placed along roadways on State-owned right-of way can effectively shield locations from traffic-related noise. A barrier's feasibility is based on its acoustic effectiveness, which depends on the area's geometry, the barrier's configuration, and the effects of other (unblocked) noise sources. Noise barriers were evaluated, and the results are described below.

Vacant or undeveloped property may be acquired to provide a buffer zone from noise generating facilities. However, there is no vacant land in the study area that, if acquired, would provide effective abatement as a buffer zone.

Traffic management measures would not be effective for this project. Traffic management measures that could reduce sound levels include "traffic calming" actions, such as reducing volumes, especially truck volumes, or travel speeds. Such measures are not consistent with the transportation needs in the area or purpose of the project.

Insulation of public structures and nonprofit institutions is not relevant, since there are no public-use or nonprofit institutional structures impacted by the project. Interior noise levels at public-use or nonprofit institutional structures are not anticipated to be above interior NAC levels.

All of these abatement options have been considered. However, because of the configuration and location of the project, abatement in the form of noise barriers is the only abatement that is suited for this project.

Feasibility of Abatement

Feasibility analysis deals with engineering considerations to determine if a particular form of abatement can actually have an effect on the traffic noise levels at a receiver. It also takes into account such considerations as topography, drainage, safety, and access/maintenance needs (which may include right-of-way considerations). To be feasible, an abatement measure must meet or exceed a 5 dBA reduction at a majority (greater than 50%) of the impacted receptors. If a barrier cannot achieve this acoustic goal, abatement is considered to not be acoustically feasible.

Reasonableness of Abatement

"Reasonable" means that INDOT believes abatement of traffic noise impacts is prudent based on consideration of the following factors:

1. Cost Effectiveness

   To determine cost effectiveness, the estimated cost of constructing a noise barrier (including installation and additional necessary construction such as foundations or guardrail) will be divided among the number of benefited receivers (those who would receive a reduction of at least 5 dBA). A cost of $25,000 or less per benefited receiver is considered to be “cost effective”. A base cost of $30 per square foot was used to estimate the cost of each barrier. Based on the increased cost of noise barriers in excess of twenty (20) feet in height, no wall taller than twenty (20) feet will be considered to be cost effective. Development in which a majority (50% + 1) of the receivers were in place prior to construction of the highway will receive additional consideration for abatement. The cost-effectiveness criteria to be used for these cases will be 20% higher ($30,000). Severe noise impacts may warrant special consideration of highway traffic noise abatement measures beyond what would normally be considered. Severe noise impacts are defined as exceeding the NAC by greater than 15 dBA. These may merit abatement beyond the standard cost criteria and could include measures that are not normally considered, such as purchase of buffer land or impacted properties, or noise insulation of public use or non-profit institutional buildings.

2. Views of impacted and/or Benefited Receivers

   If noise abatement is determined to be feasible and cost effective, then potentially affected property owners will be surveyed to determine whether they do or do not want noise abatement. A majority (50% + 1) of the total benefited receivers must state that they want a barrier constructed for it to be considered reasonable. Note that for apartment complexes and hotels, the decision as to whether a barrier is desired rests with property owners rather than occupants.

Each noise barrier evaluated has been analyzed for feasibility based on achievable noise reduction and engineering considerations. Reasonableness criteria were evaluated for each noise barrier found to be acoustically feasible. Of the 14 noise barriers analyzed along the project four met INDOT’s reasonable and feasible criteria. Table D provided in Appendix D summarizes the reasonable analysis of each feasible barrier.

Any revision to the reasonableness or feasibility of these barriers resulting from the public involvement process will be discussed in the Final Traffic Noise Impact Analysis.

Future Design Revisions

If pertinent parameters change substantially during the continuing project design, the noise abatement decision may be changed or eliminated from the final project design.

5.0 CONSTRUCTION NOISE

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction.

Table 4 summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels ranging from 70 to 90 dBA at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of approximately 6 dBA per doubling of distance.

Table 4

Construction Equipment Noise

Equipment	Maximum Noise Level (dBA at 50 feet)
Scrapers	89
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: U.S. Environmental Protection Agency 1971.

No adverse noise impacts from construction are anticipated because construction noise would be short-term and intermittent. Measures to minimize the temporary impacts will 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.

6.0 PUBLIC INVOLVEMENT

As described in the *Traffic Noise Analysis Procedure*, INDOT is required to seek the input of owners and residents of all benefited property. The concerns and opinions of the property owner and the unit occupants will be balanced with other considerations in determining whether a barrier is appropriate for a given location. This information will be gathered during a public involvement process that will commence following the approval of this Draft Traffic Noise Impact Analysis and the results of this process will be detailed in the Final Traffic Noise Impact Analysis.

7.0 STATEMENT OF LIKELIHOOD

Based on the studies completed to date, the State of Indiana has identified 287 impacted receptors and has determined that noise abatement is likely, but not guaranteed, at four locations. Noise abatement at these locations is based upon preliminary design costs and design criteria. Noise abatement in these locations at this time has been estimated to cost $4,685,100 and will reduce noise level by a minimum of 7 dB(A) at a majority of the identified impacted receptors. A reevaluation 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 not feasible and reasonable, the abatement measures might not be provided. 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 process.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on this evaluation, four feasible and reasonable barriers were identified for this project: NB 00 located in front of the Lantern Woods Apartments, NB 1 located on the northbound side of I-69 north of Cumberland Road, NB 10 located on the northbound side of I-69 just north of Brooks School Road, and NB 12 located on the northbound side of I-69 east of the SR 13/I-69 interchange. NB 00, at approximately 1,700 feet long and an average of 14.7 feet tall, will reduce noise levels by at least 5dBA for 73 benefitted receptors at a cost of $751,500. NB 1, at approximately 3,900 feet long and an average of 18.8 feet tall, will reduce noise levels by at least 5 dBA for 307 benefited receptors at a cost of $2,202,600. NB 10, at approximately 2,400 feet long and an average of 16.3 feet tall, will reduce noise levels by at least 5 dBA for 69 benefited receivers at a cost of $1,182,000. NB 12, at approximately 2,020 feet long and an average of 9.0 feet tall, will reduce noise levels by at least 5 dBA for 35 benefited receivers at a cost of $549,000.

Additional details regarding these barriers is provided in Table D. Changes to these barriers may be necessary due to conditions encountered during final design.

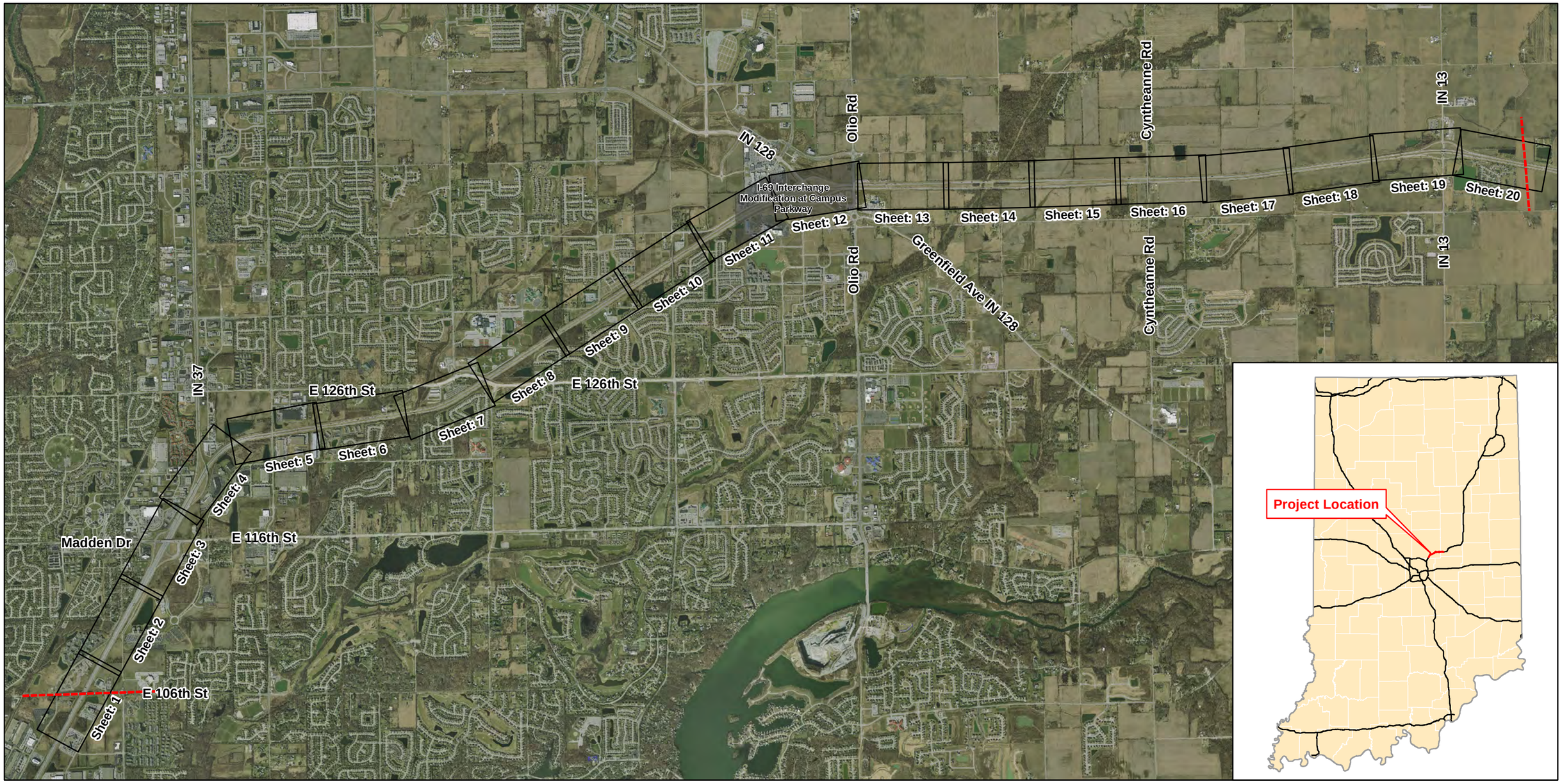
9.0 REFERENCES

23 CFR 772 (2011). "Procedures for Abatement of Highway Traffic Noise and Construction Noise." Accessed August 4, 2014.

Indiana Department of Transportation (INDOT, Noise). 2011. *Traffic Noise Analysis Procedure.*

U.S. Environmental Protection Agency, "Noise from Construction Equipment and Operations, Building Equipment and Home Appliances," NTID300.1, December 31, 1971.

Appendix A
Noise Measurement and Model Location Figures



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1 inch = 3,500 feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Appendix A: Index
Measurment and Modeling Locations

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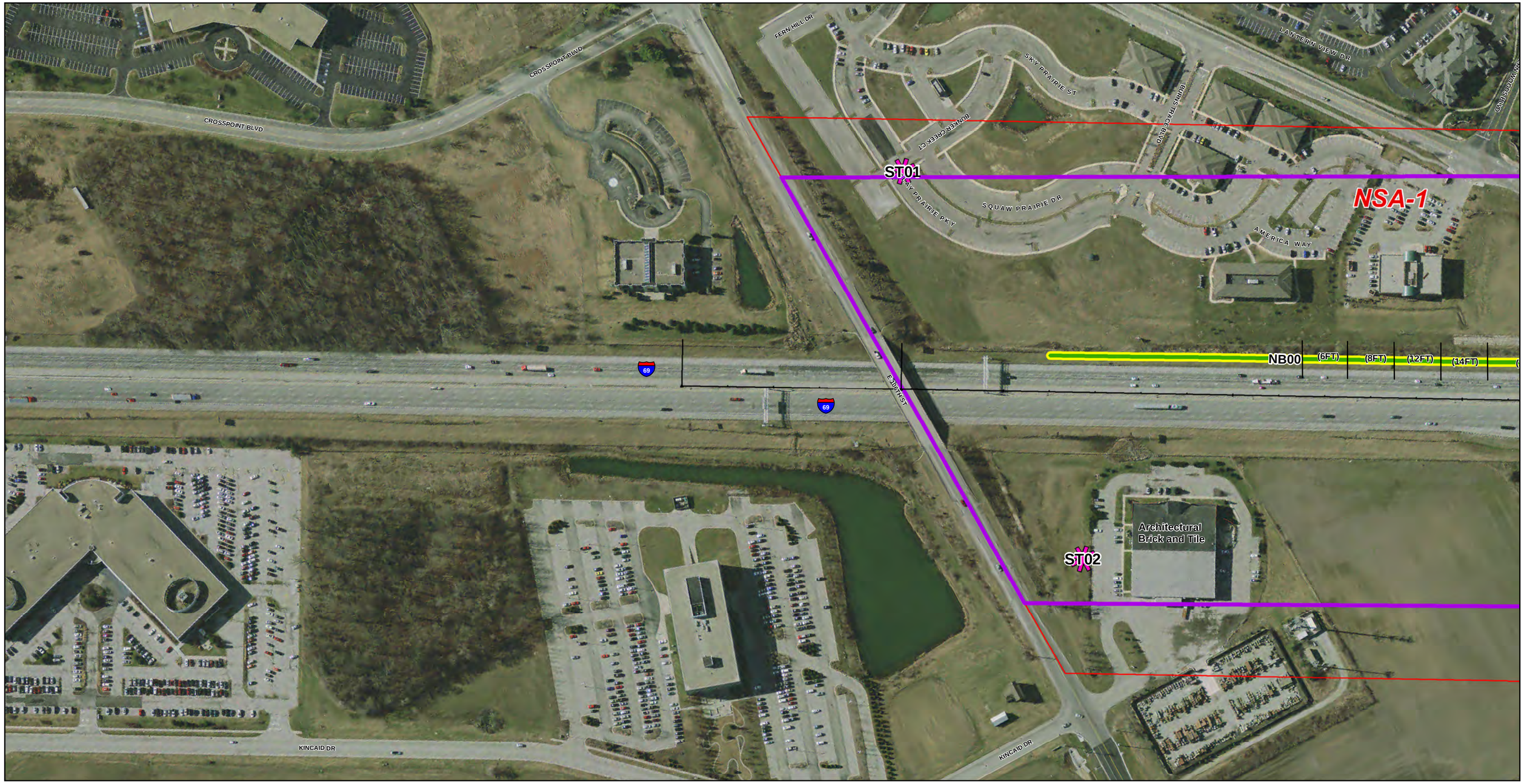

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Legend

- Receptors
- Measurement Locations
- Feasible and Cost Effective Noise Barriers
- Analyzed Noise Barriers
- 500' Study Corridor
- 66dBA Contour Line at 5' Above Ground Surface
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- Pavement Lanes
- Shoulders Paved
- Concrete Barrier

0 125 250 500 Feet

1 inch = 200 feet

Sources:

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Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Figure 1: Measurement and Modeling Locations

Sheet 1 of 20

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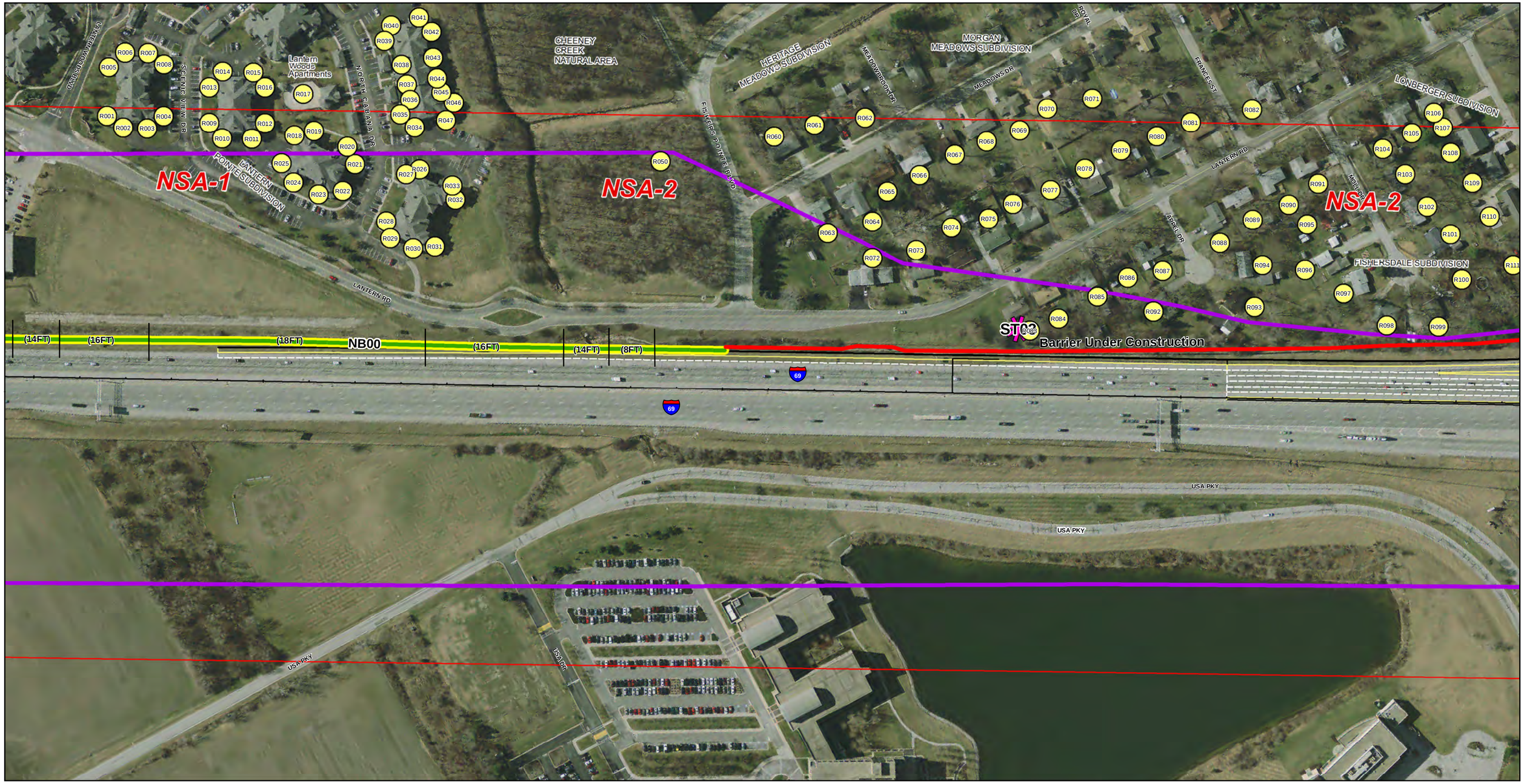

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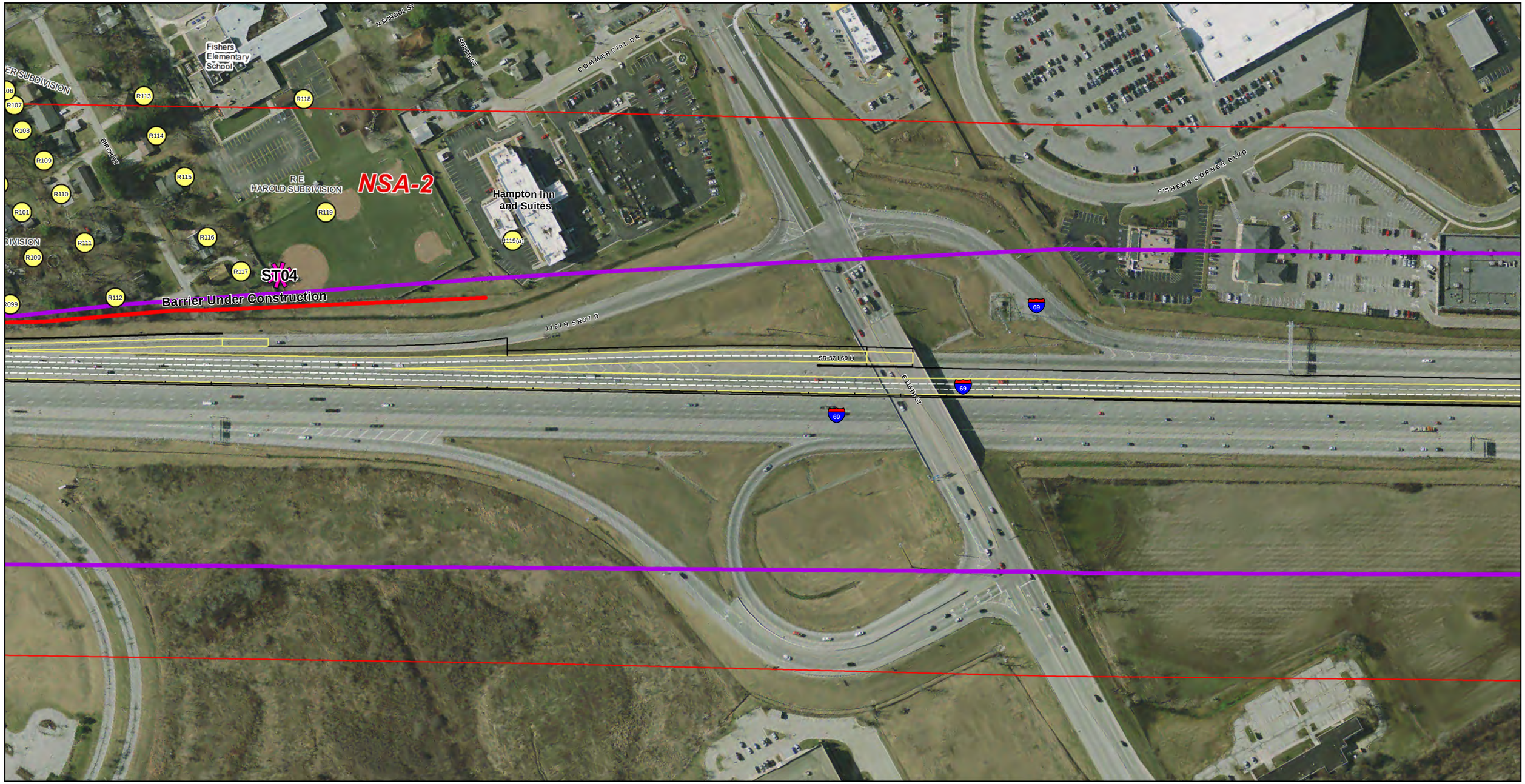

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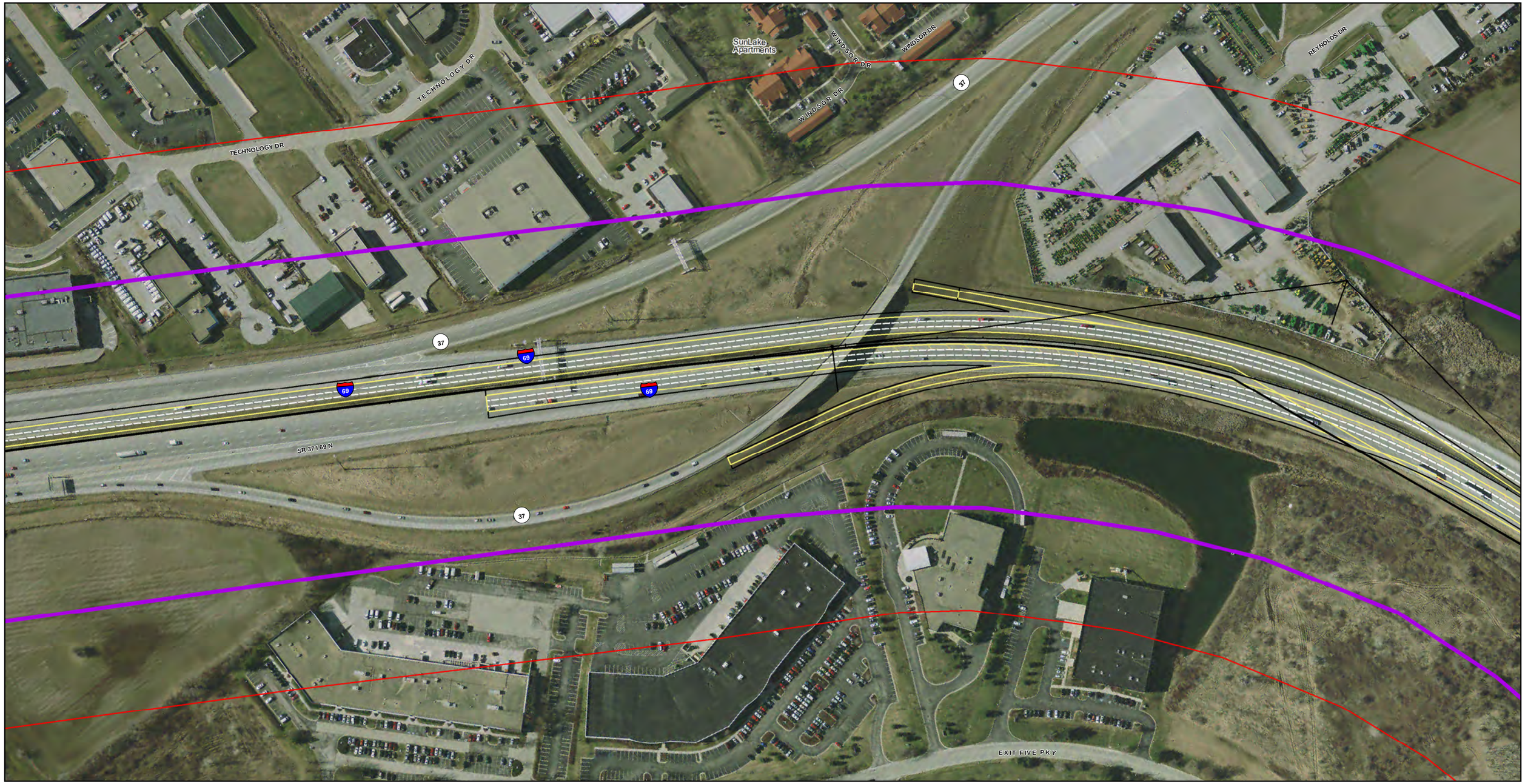

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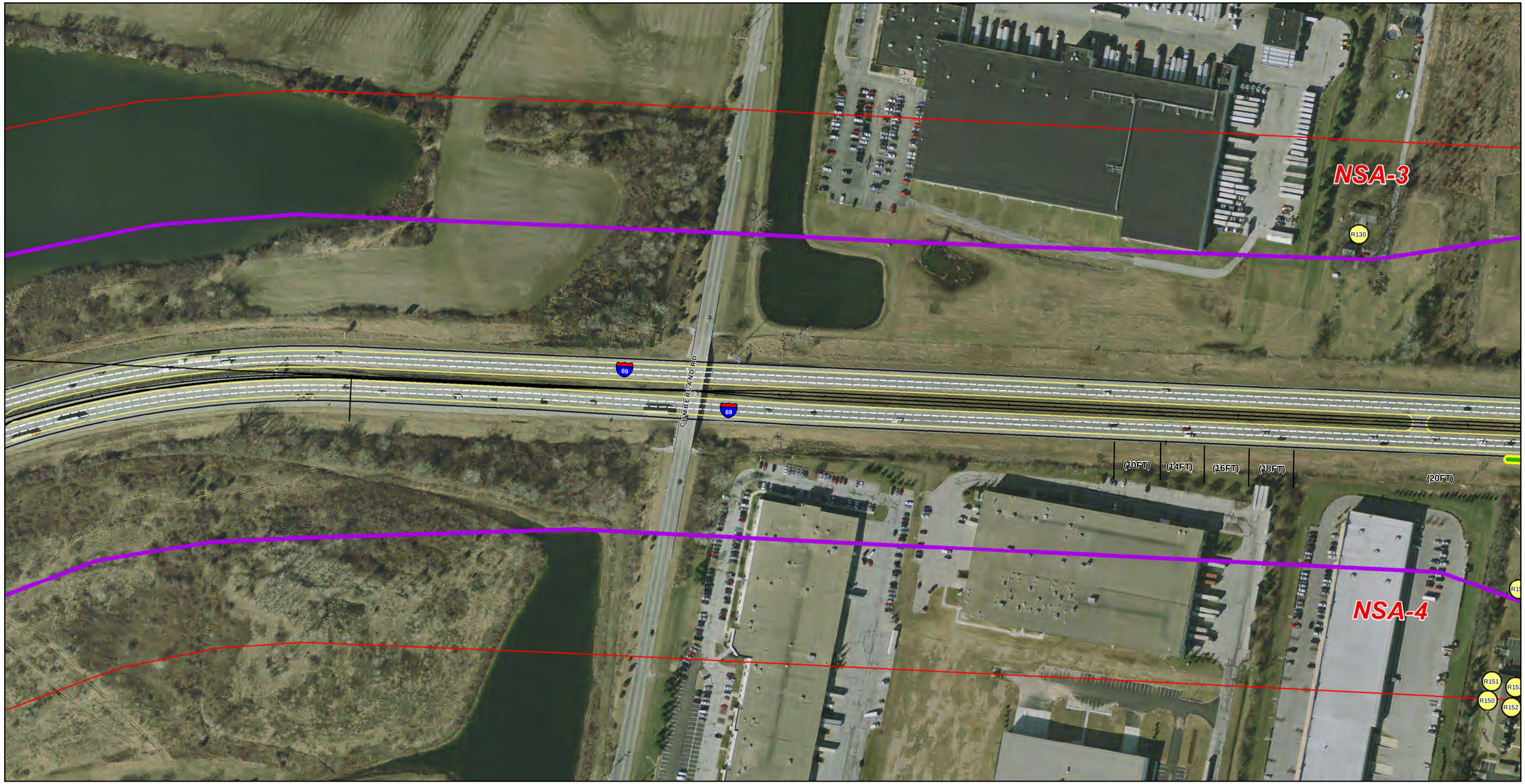

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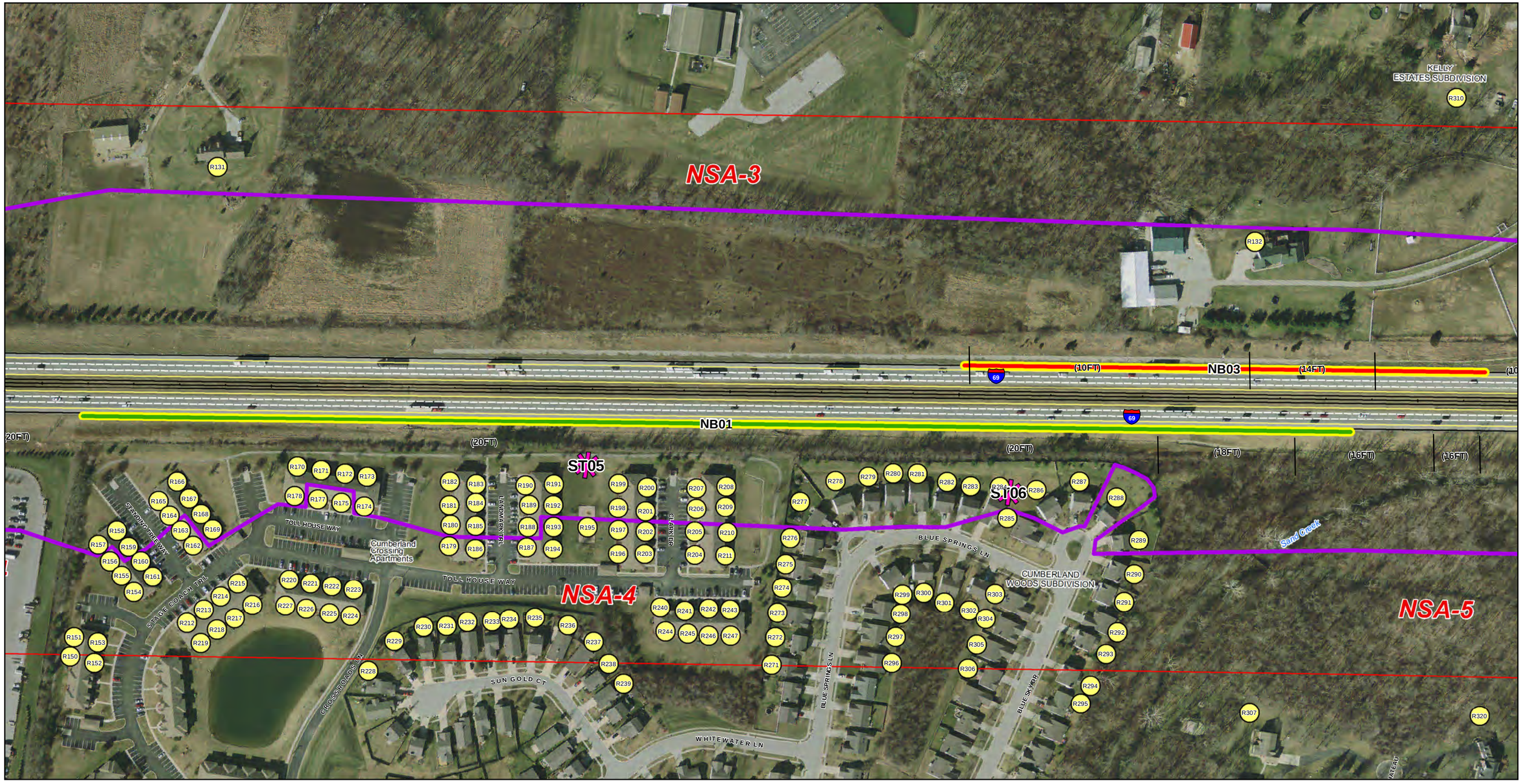

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Figure 1: Measurement and Modeling Locations

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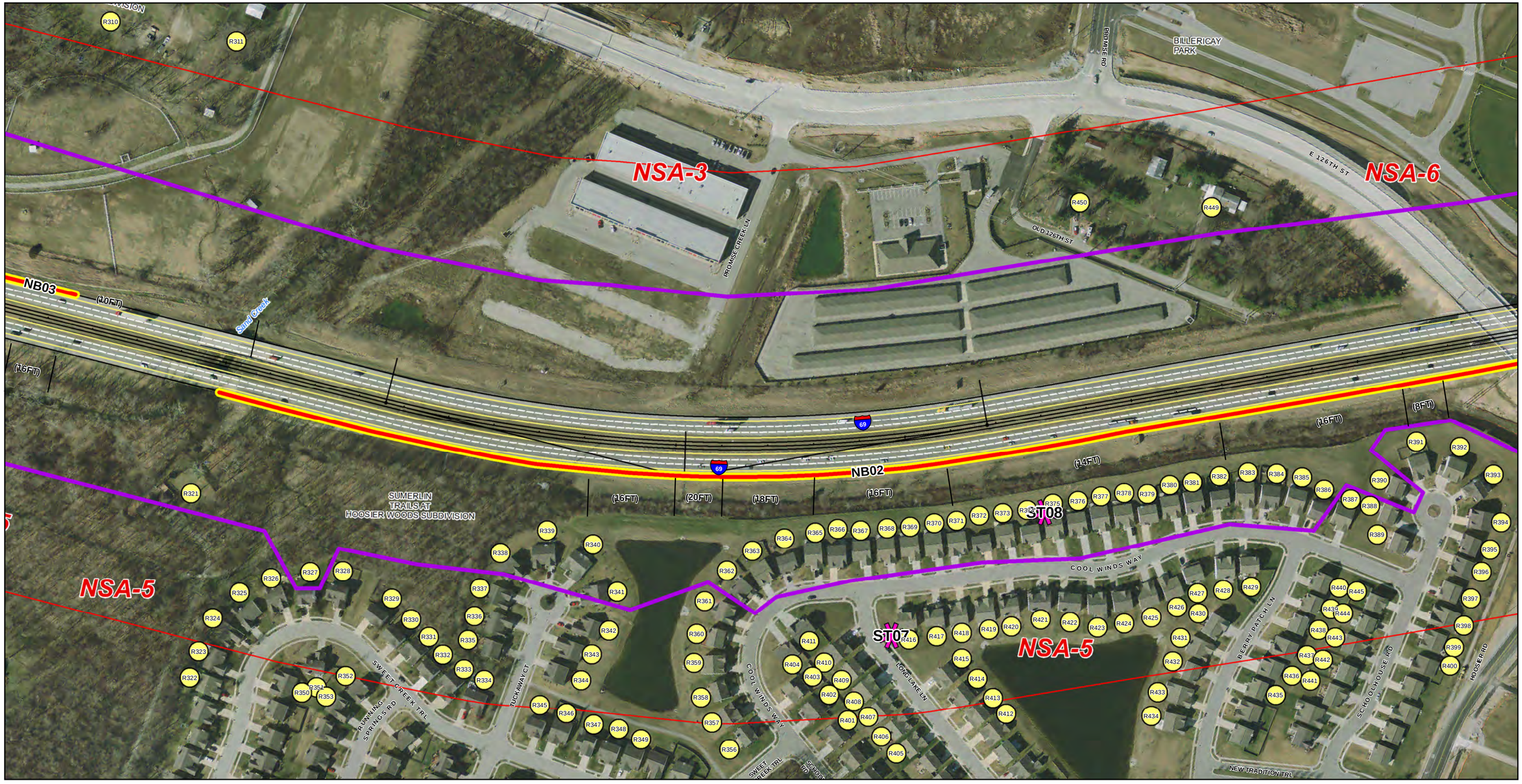

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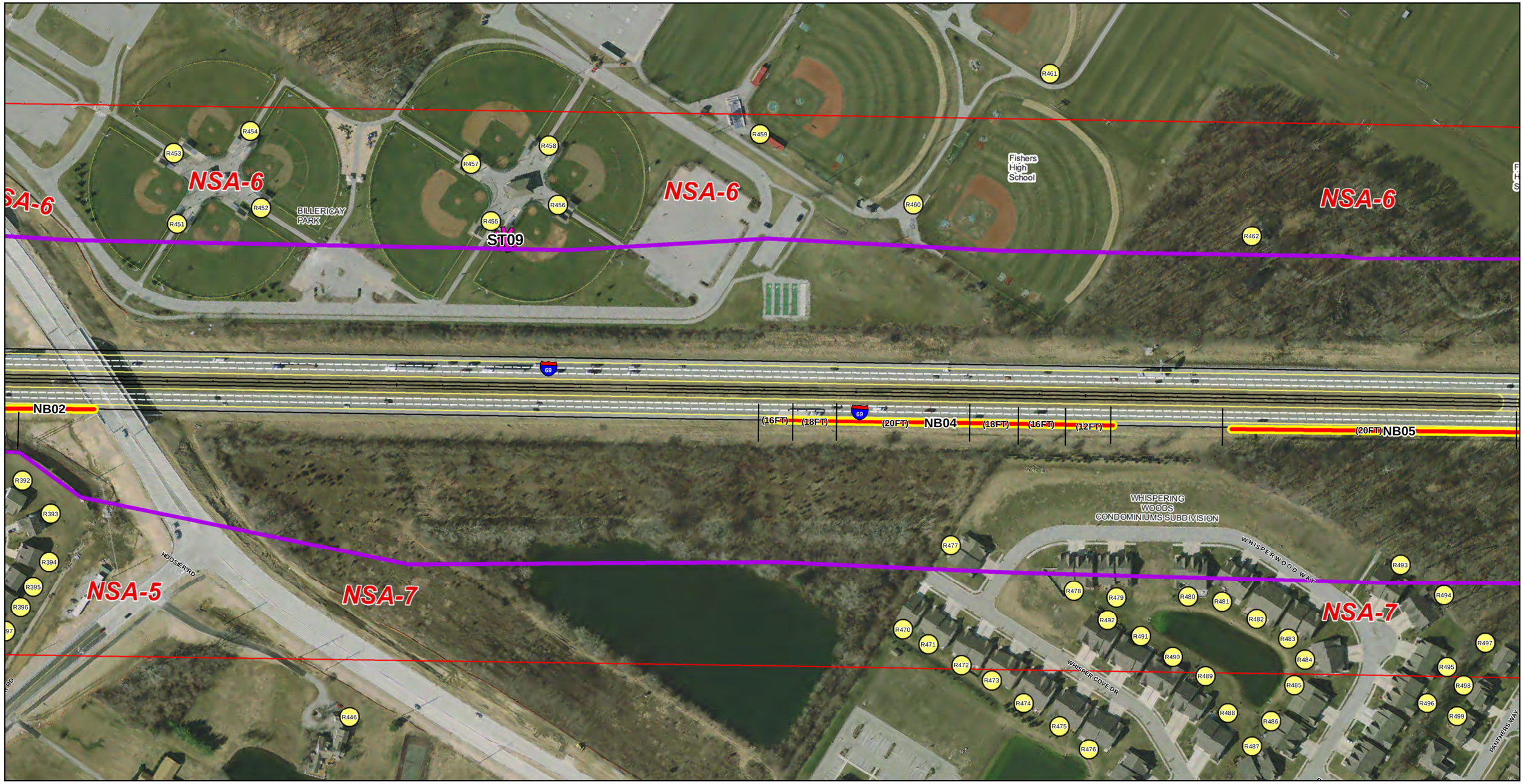

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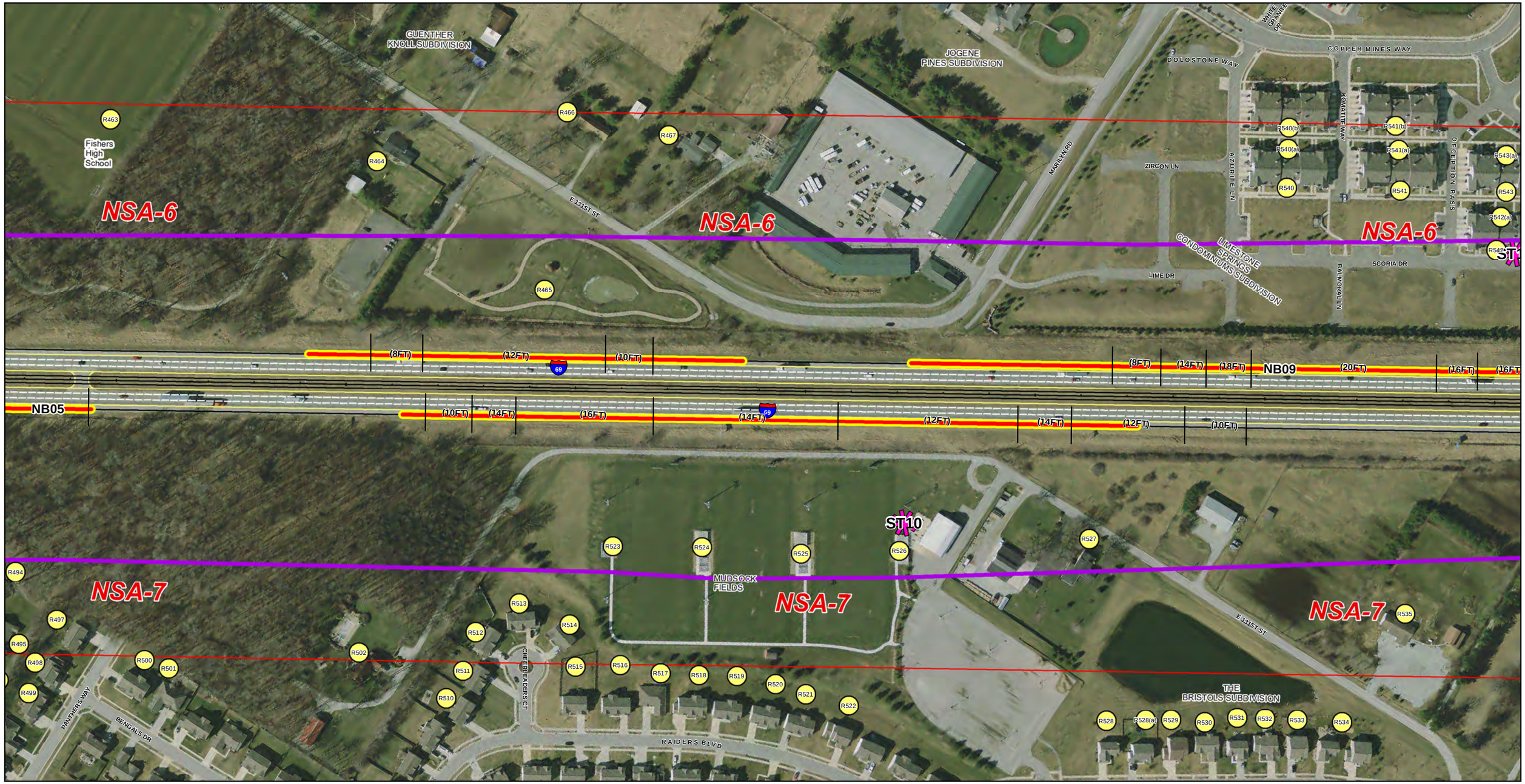

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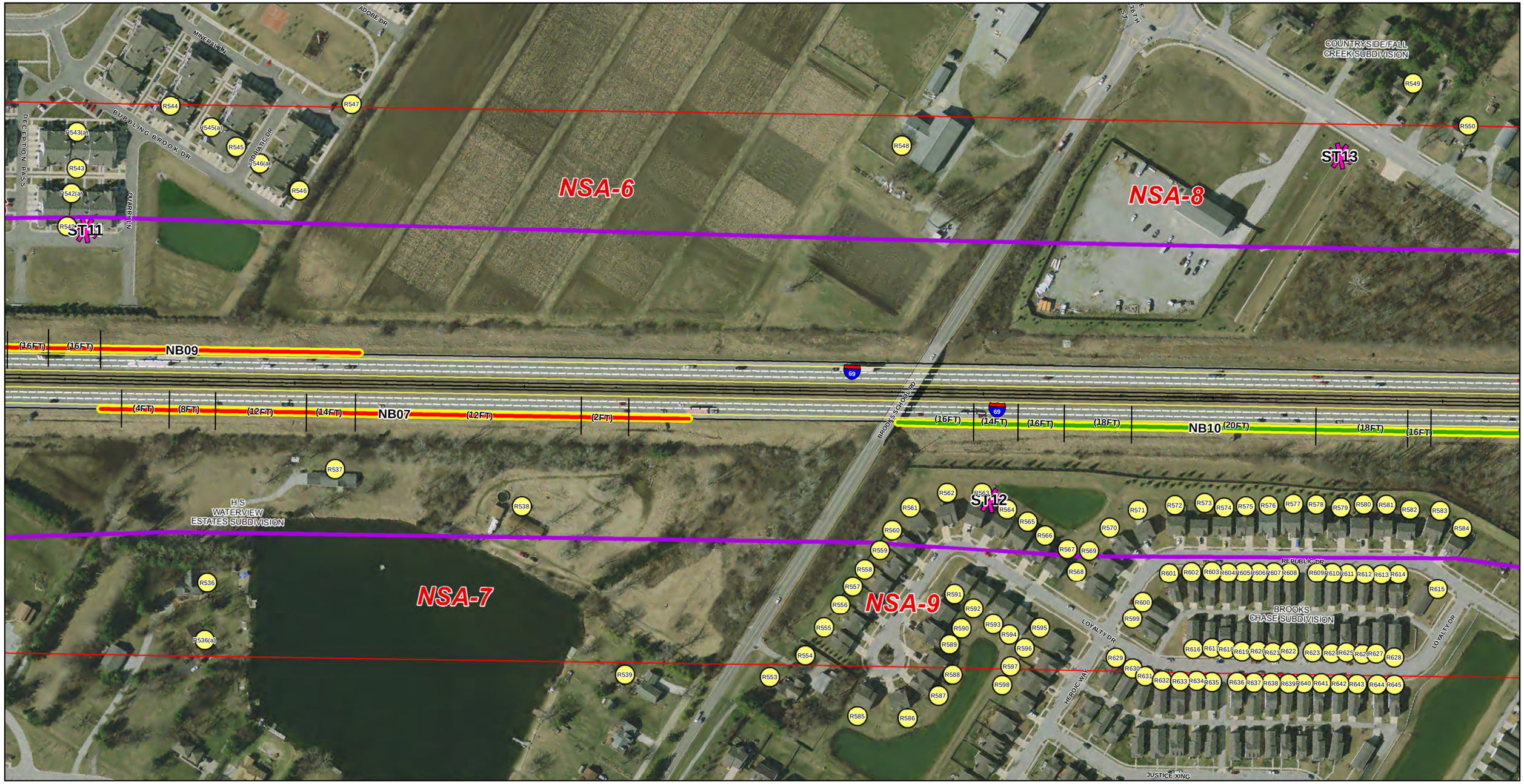

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0 125 250 500 Feet

1 inch = 200 feet

Sources:

Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library

Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Figure 1: Measurement and Modeling Locations

Sheet 10 of 20

Des. 1383332, 1383336	
Date: 9/22/2014	
Created By: WCK	

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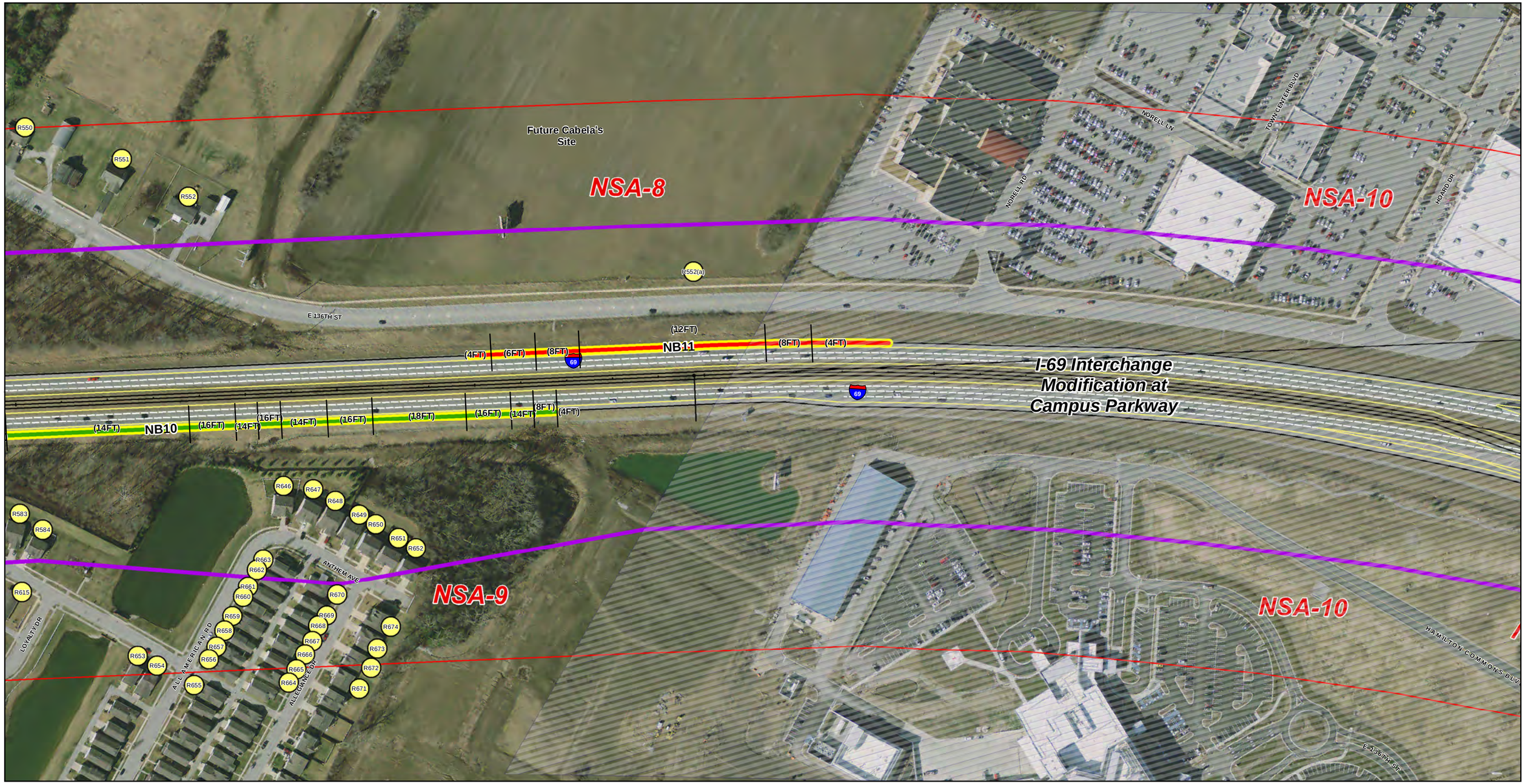

ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

- Receptors
- Measurement Locations
- Feasible and Cost Effective Noise Barriers
- Analyzed Noise Barriers
- 500' Study Corridor
- 66dBA Contour Line at 5' Above Ground Surface
- Pavement Edge
- Pavement Lanes
- Shoulders Paved
- Concrete Barrier

0 125 250 500 Feet

1 inch = 200 feet

Sources:

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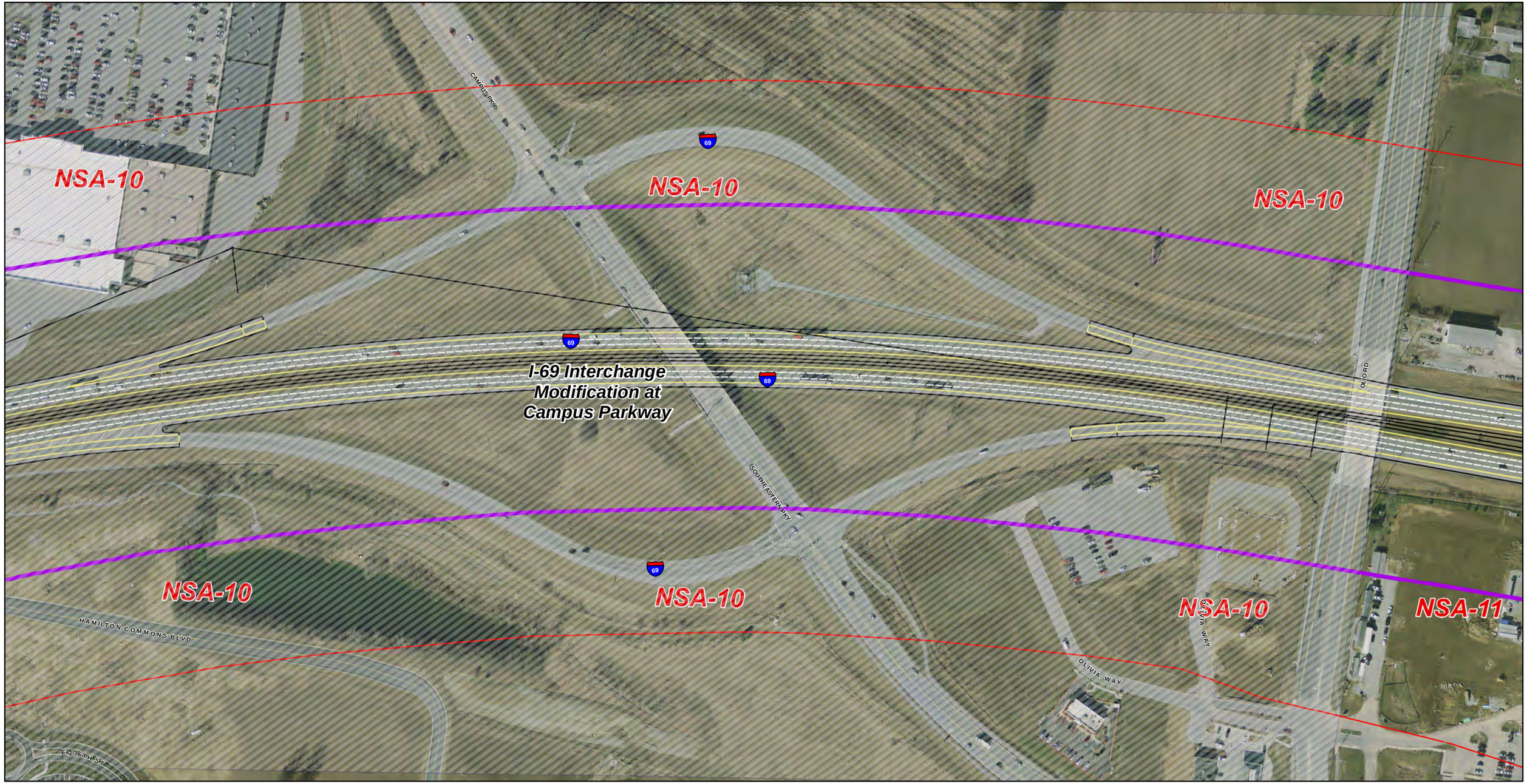
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Figure 1: Measurement and Modeling Locations

Sheet 11 of 20

Des. 1383332, 1383336	
Date: 9/22/2014	
Created By: WCK	

PARSONS



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

- Receptors
- Measurement Locations
- Feasible and Cost Effective Noise Barriers
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- Pavement Lanes
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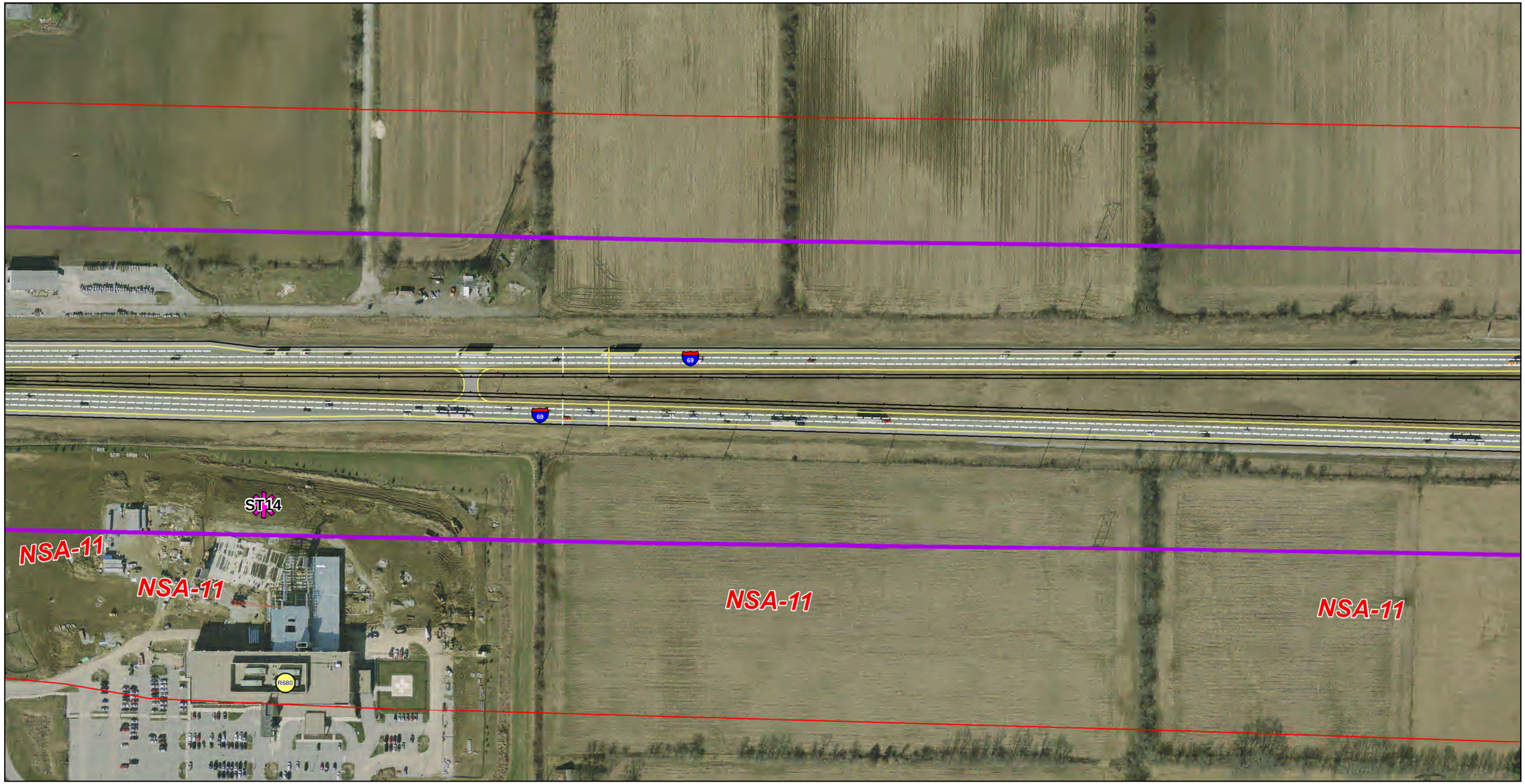
Figure 1: Measurement and Modeling Locations

Sheet 12 of 20

Des. 1383332, 1383336	
Date: 9/22/2014	
Created By: WCK	

PARSONS



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

- Receptors
- Measurement Locations
- Feasible and Cost Effective Noise Barriers
- Analyzed Noise Barriers
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- Pavement Edge
- Pavement Lanes
- Shoulders Paved
- Concrete Barrier

N

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Figure 1: Measurement and Modeling Locations

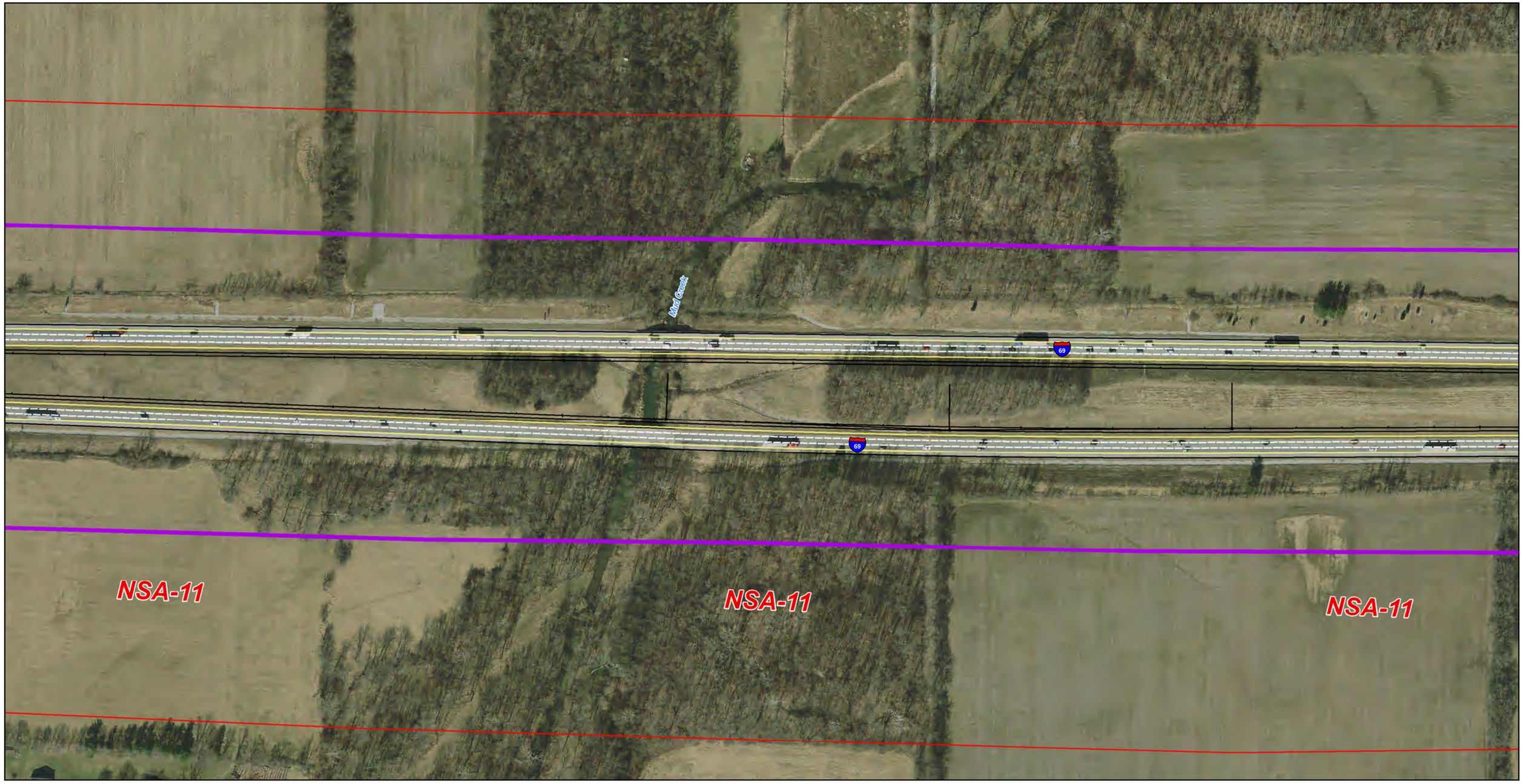
Sheet 13 of 20

Des. 1383332, 1383336

Date: 9/22/2014

Created By: WCK

PARSONS



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

- Receptors
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- Concrete Barrier

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Figure 1: Measurement and Modeling Locations

Sheet 14 of 20

Des. 1383332, 1383336

Date: 9/22/2014

Created By: WCK

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ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

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- Analyzed Noise Barriers
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- Pavement Edge
- Pavement Lanes
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Figure 1: Measurement and Modeling Locations

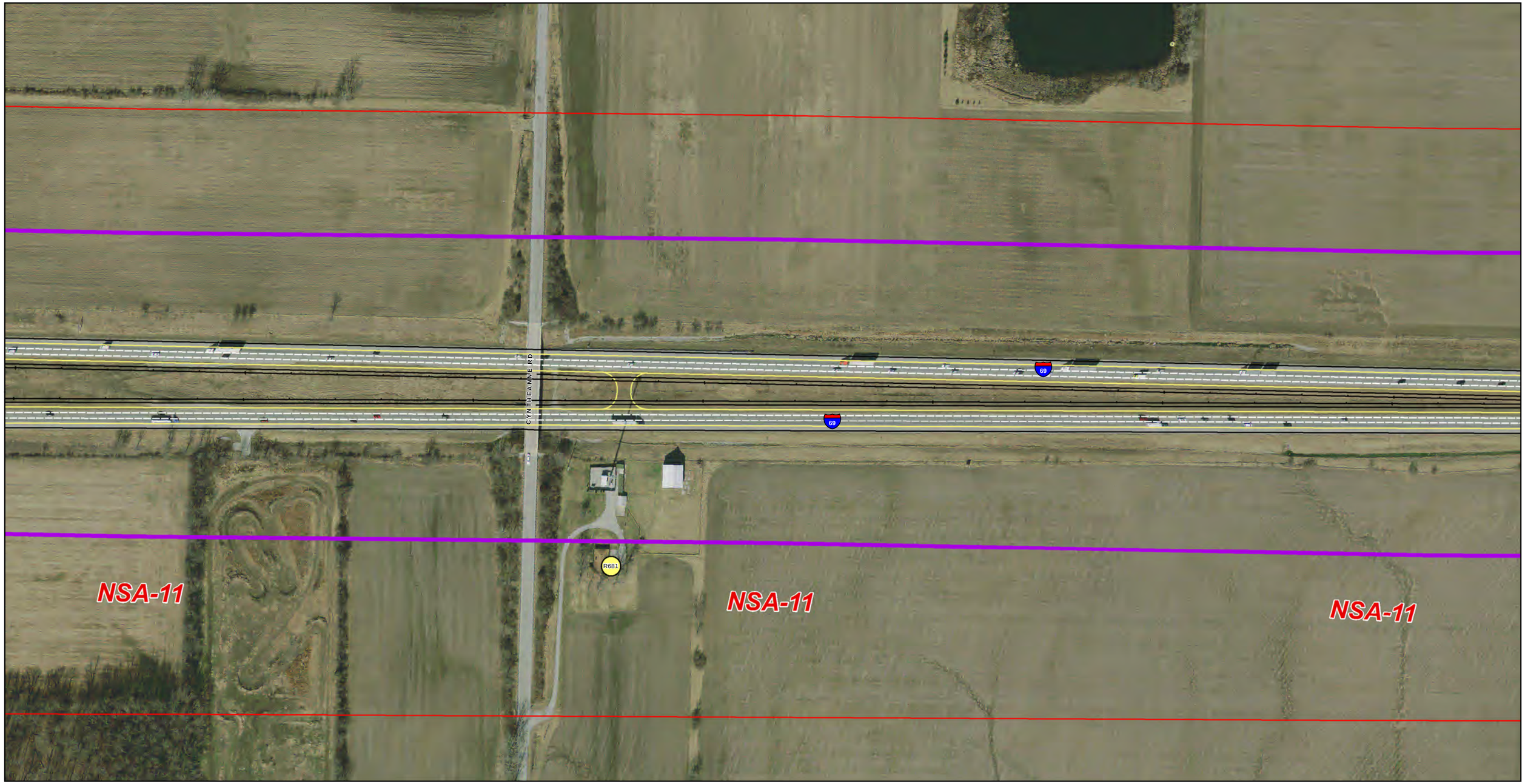
Sheet 15 of 20

Des. 1383332, 1383336

Date: 9/22/2014

Created By: WCK

PARSONS



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

- Receptors
- Measurement Locations
- Feasible and Cost Effective Noise Barriers
- Analyzed Noise Barriers
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Figure 1: Measurement and Modeling Locations

Sheet 16 of 20

Des. 1383332, 1383336

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Created By: WCK

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ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

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Figure 1: Measurement and Modeling Locations

Sheet 17 of 20

Des. 1383332, 1383336

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Created By: WCK

PARSONS

ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

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Figure 1: Measurement and Modeling Locations

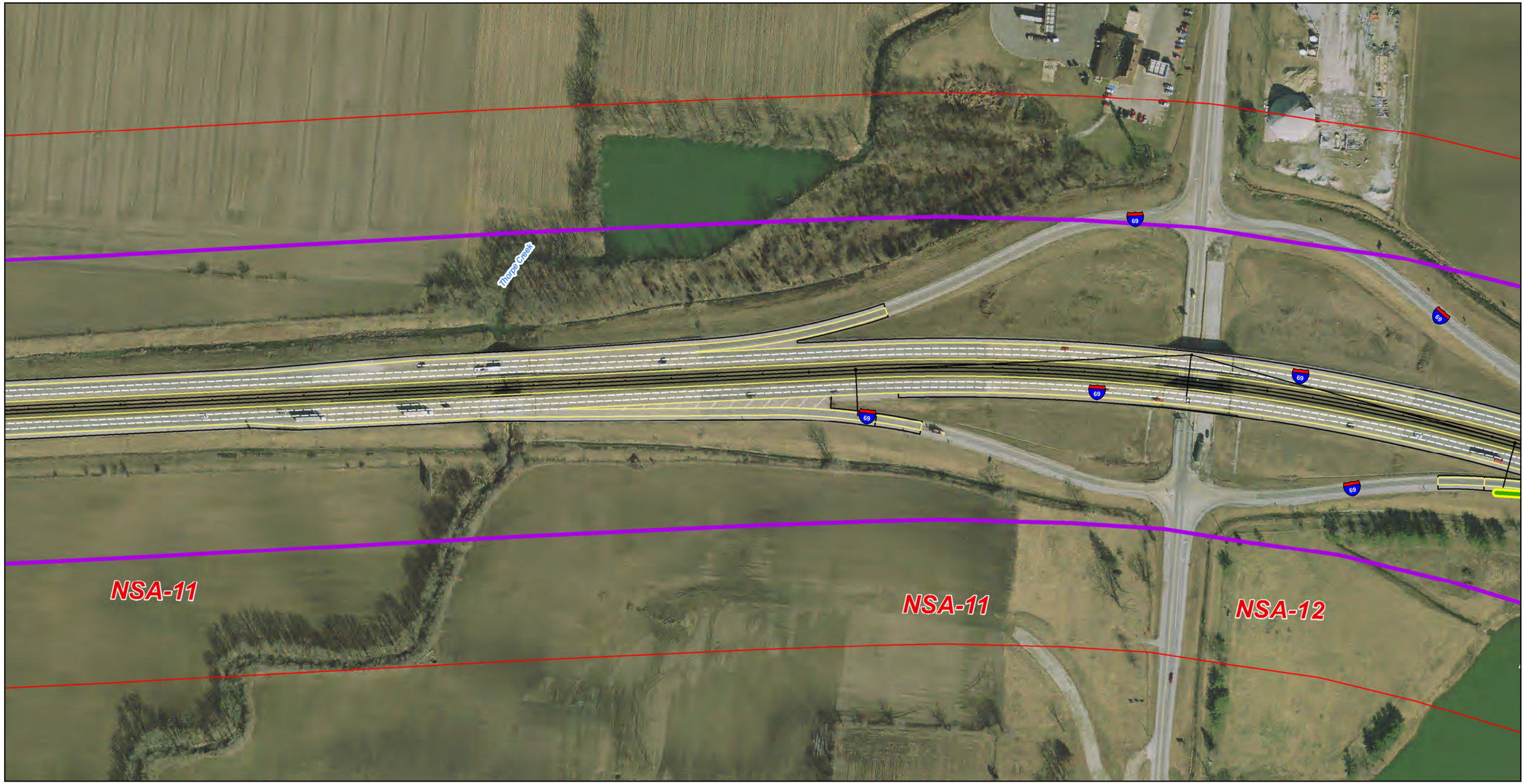
Sheet 18 of 20

Des. 1383332, 1383336

Date: 9/22/2014

Created By: WCK

PARSONS



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

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Figure 1: Measurement and Modeling Locations

Sheet 19 of 20

Des. 1383332, 1383336	
Date: 9/22/2014	
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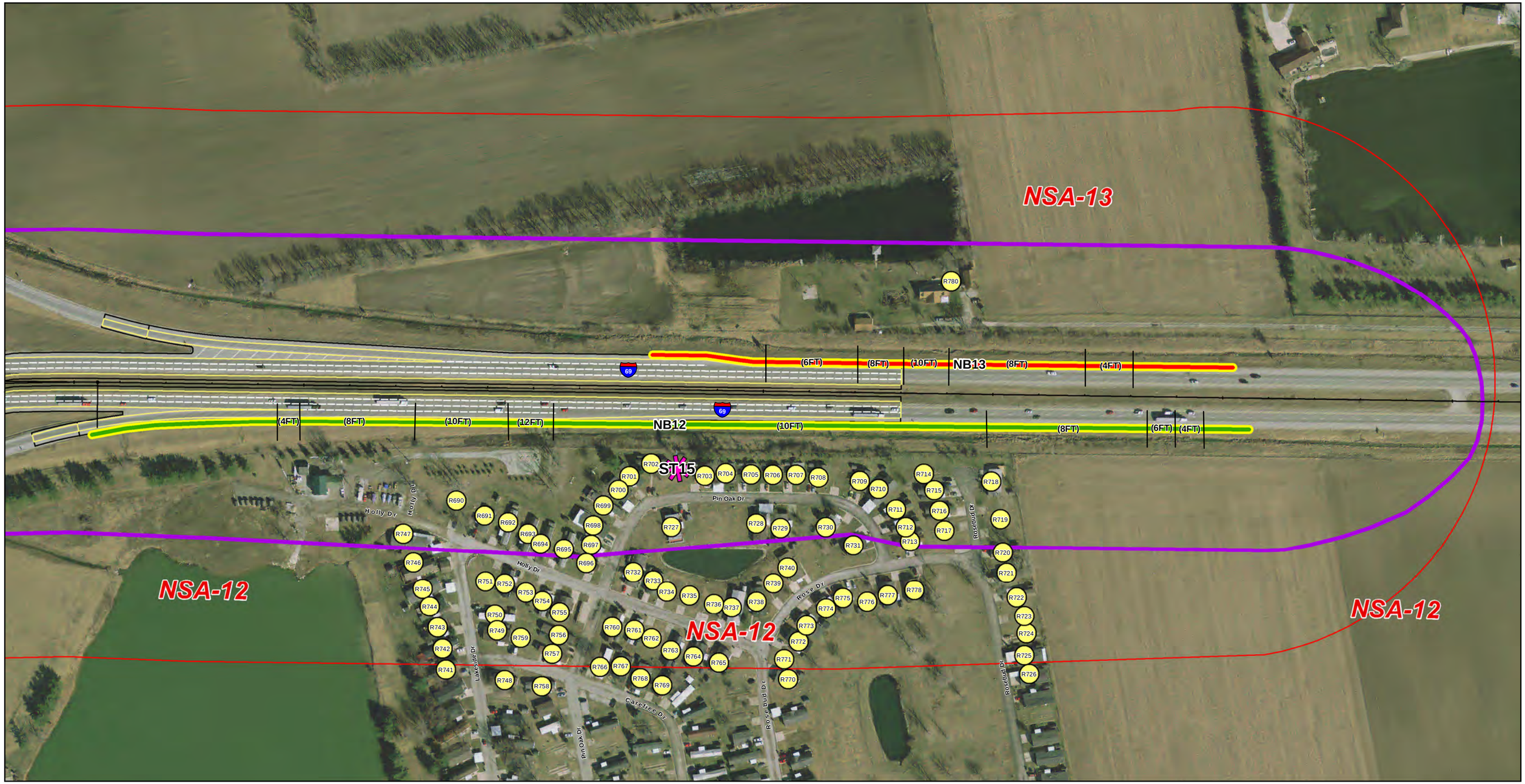
PARSONS



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

- Receptors
- Measurement Locations
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- Analyzed Noise Barriers
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Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Figure 1: Measurement and Modeling Locations

Sheet 20 of 20

Des. 1383332, 1383336

Date: 9/22/2014

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Appendix B
Identification of Receptors

Table B Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R001	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R001 Second Floor	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R002	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R002 Second Floor	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R003	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R003 Second Floor	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R004	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R004 Second Floor	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R005	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R005 Second Floor	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R006	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R006 Second Floor	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R007	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R007 Second Floor	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R008	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R008 Second Floor	8525 Scenic View Dr	Fishers	46038	Residential	B	67	1
R009	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R009 Second Floor	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R010	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R010 Second Floor	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R011	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R011 Second Floor	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R012	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R012 Second Floor	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R013	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R013 Second Floor	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R014	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R014 Second Floor	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R015	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R015 Second Floor	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R016	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R016 Second Floor	8524 Scenic View Dr	Fishers	46038	Residential	B	67	1
R017	0	0	0	Residential	B	67	1
R017 Second Floor	0	0	0	Residential	B	67	1
R018	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R018 Second Floor	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R019	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R019 Second Floor	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R020	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R020 Second Floor	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R021	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R021 Second Floor	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R022	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R022 Second Floor	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R023	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R023 Second Floor	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R024	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R024 Second Floor	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R025	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R025 Second Floor	8594 Scenic View Dr	Fishers	46038	Residential	B	67	1
R026	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R026 Second Floor	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R027	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R027 Second Floor	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R028	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R028 Second Floor	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R029	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R029 Second Floor	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R030	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R030 Second Floor	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R031	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R031 Second Floor	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R032	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R032 Second Floor	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R033	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R033 Second Floor	8612 North Cabana Dr	Fishers	46038	Residential	B	67	1
R034	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R034 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R035	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R035 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R036	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R036 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R037	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R037 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R038	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R038 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R039	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R039 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R040	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R040 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R041	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R041 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R042	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R042 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R043	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R043 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R044	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R044 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R045	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R045 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R046	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R046 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R047	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R047 Second Floor	8572 North Cabana Dr	Fishers	46038	Residential	B	67	1
R060	11101 MEADOWS DR	Fishers	46038	Residential	B	67	1
R061	11121 MEADOWS DR	Fishers	46038	Residential	B	67	1
R062	8699 MEADOWBROOK DR	Fishers	46038	Residential	B	67	1
R063	11100 MEADOWS DR	Fishers	46038	Residential	B	67	1
R064	11120 MEADOWS DR	Fishers	46038	Residential	B	67	1
R065	11138 MEADOWS DR	Fishers	46038	Residential	B	67	1
R066	11156 MEADOWS DR	Fishers	46038	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R067	11178 MEADOWS DR	Fishers	46038	Residential	B	67	1
R068	11196 MEADOWS DR	Fishers	46038	Residential	B	67	1
R069	11200 MEADOWS DR	Fishers	46038	Residential	B	67	1
R070	11224 MEADOWS DR	Fishers	46038	Residential	B	67	1
R071	11248 MEADOWS DR	Fishers	46038	Residential	B	67	1
R072	11101 LANTERN RD	Fishers	46038	Residential	B	67	1
R073	11123 LANTERN RD	Fishers	46038	Residential	B	67	1
R074	11145 LANTERN RD	Fishers	46038	Residential	B	67	1
R075	11167 LANTERN RD	Fishers	46038	Residential	B	67	1
R076	11199 LANTERN RD	Fishers	46038	Residential	B	67	1
R077	11201 LANTERN RD	Fishers	46038	Residential	B	67	1
R078	11225 LANTERN RD	Fishers	46038	Residential	B	67	1
R079	11249 LANTERN RD	Fishers	46038	Residential	B	67	1
R080	11277 LANTERN RD	Fishers	46038	Residential	B	67	1
R081	11293 LANTERN RD	Fishers	46038	Residential	B	67	1
R082	11301 LANTERN RD	Fishers	46038	Residential	B	67	1
R083	11144 LANTERN RD	Fishers	46038	Residential	B	67	1
R084	11166 LANTERN RD	Fishers	46038	Residential	B	67	1
R085	11198 LANTERN RD	Fishers	46038	Residential	B	67	1
R086	11202 LANTERN RD	Fishers	46038	Residential	B	67	1
R087	11234 LANTERN RD	Fishers	46038	Residential	B	67	1
R088	8800 APPEL DR	Fishers	46038	Residential	B	67	1
R089	11284 LANTERN RD	Fishers	46038	Residential	B	67	1
R090	11296 LANTERN RD	Fishers	46038	Residential	B	67	1
R091	8807 MOLL DR	Fishers	46038	Residential	B	67	1
R092	8827 APPEL ST	Fishers	46038	Residential	B	67	1
R093	8836 APPEL DR	Fishers	46038	Residential	B	67	1
R094	8818 APPEL DR	Fishers	46038	Residential	B	67	1
R095	8829 MOLL DR	Fishers	46038	Residential	B	67	1
R096	8839 MOLL DR	Fishers	46038	Residential	B	67	1
R097	8865 MOLL DR	Fishers	46038	Residential	B	67	1
R098	8883 MOLL DR	Fishers	46038	Residential	B	67	1
R099	8899 MOLL DR	Fishers	46038	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R100	8874 MOLL DR	Fishers	46038	Residential	B	67	1
R101	8856 MOLL DR	Fishers	46038	Residential	B	67	1
R102	8838 MOLL DR	Fishers	46038	Residential	B	67	1
R103	8820 MOLL DR	Fishers	46038	Residential	B	67	1
R104	8802 MOLL DR	Fishers	46038	Residential	B	67	1
R105	11324 LANTERN RD	Fishers	46038	Residential	B	67	1
R106	11336 LANTERN RD	Fishers	46038	Residential	B	67	1
R107	8801 BIRCH ST	Fishers	46038	Residential	B	67	1
R108	8813 BIRCH ST	Fishers	46038	Residential	B	67	1
R109	8831 BIRCH ST	Fishers	46038	Residential	B	67	1
R110	8849 BIRCH ST	Fishers	46038	Residential	B	67	1
R111	8885 BIRCH ST	Fishers	46038	Residential	B	67	1
R112	8927 BIRCH ST	Fishers	46038	Residential	B	67	1
R113	8842 BIRCH ST	Fishers	46038	Residential	B	67	1
R114	8858 BIRCH ST	Fishers	46038	Residential	B	67	1
R115	8900 BIRCH ST	Fishers	46038	Residential	B	67	1
R116	8918 BIRCH ST	Fishers	46038	Residential	B	67	1
R117	8936 BIRCH ST	Fishers	46038	Residential	B	67	1
R118	11442 LANTERN RD	Fishers	46038	Playground	C	67	1
R119	11442 LANTERN RD	Fishers	46038	Sport Area	C	67	1
R119(a)	11575 COMMERCIAL DR	Fishers	46038	Hotel	E	72	1
R130	10049 E 126TH ST	Fishers	46038	Residential	B	67	1
R131	10097 E 126TH ST	Fishers	46038	Residential	B	67	1
R132	10557 E 126TH ST	Fishers	46038	Residential	B	67	1
R150	12244 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R150 Second Floor	12242 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R151	12256 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R151 Second Floor	12254 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R152	12248 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R152 Second Floor	12246 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R153	12252 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R153 Second Floor	12250 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R154	10185 STANDING TREE WAY	Fishers	46037	Residential	B	67	2

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R154 Second Floor	10183 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R155	10175 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R155 Second Floor	10177 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R156	10167 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R156 Second Floor	10169 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R157	10161STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R157 Second Floor	10159 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R158	10157 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R158 Second Floor	10155 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R159	10163 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R159 Second Floor	10165 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R160	10171 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R160 Second Floor	10173 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R161	10179 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R161 Second Floor	10181 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R162	10154 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R162 Second Floor	10156 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R163	10164 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R163 Second Floor	10162 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R164	10172 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R164 Second Floor	10170 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R165	10180 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R165 Second Floor	10178 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R166	10184 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R166 Second Floor	10182 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R167	10176 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R167 Second Floor	10174 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R168	10168 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R168 Second Floor	10166 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R169	10160 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R169 Second Floor	10158 STANDING TREE WAY	Fishers	46037	Residential	B	67	2
R170	10232 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R170 Second Floor	10234 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R171	10238 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R171 Second Floor	10240 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R172	10246 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R172 Second Floor	10248 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R173	10254 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R173 Second Floor	10256 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R174	10262 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R174 Second Floor	10260 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R175	10252 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R175 Second Floor	10254 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R177	10244 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R177 Second Floor	10246 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R178	10236 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R178 Second Floor	10238 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R179	12326 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R179 Second Floor	12322 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R180	12342 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R180 Second Floor	12338 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R181	12358 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R181 Second Floor	12354 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R182	12374 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R182 Second Floor	12370 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R183	12382 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R183 Second Floor	12378 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R184	12366 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R184 Second Floor	12362 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R185	12350 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R185 Second Floor	12346 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R186	12334 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R186 Second Floor	12330 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R187	12327 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R187 Second Floor	12323 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R188	12343 LANDMARK TRL	Fishers	46037	Residential	B	67	2

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R188 Second Floor	12339 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R189	12359 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R189 Second Floor	12355 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R190	12375 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R190 Second Floor	12371 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R191	12383 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R191 Second Floor	12379 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R192	12367 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R192 Second Floor	12363 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R193	12351 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R193 Second Floor	12347 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R194	12335 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R194 Second Floor	12331 LANDMARK TRL	Fishers	46037	Residential	B	67	2
R195	10225 STAGE COACH TRL	Fishers	46037	Playground	C	67	0
R196	12328 CLARK DR	Fishers	46037	Residential	B	67	2
R196 Second Floor	12324 CLARK DR	Fishers	46037	Residential	B	67	2
R197	12344 CLARKS DR	Fishers	46037	Residential	B	67	2
R197 Second Floor	12340 CLARKS DR	Fishers	46037	Residential	B	67	2
R198	12360 CLARKS DR	Fishers	46037	Residential	B	67	2
R198 Second Floor	12356 CLARKS DR	Fishers	46037	Residential	B	67	2
R199	12376 CLARKS DR	Fishers	46037	Residential	B	67	2
R199 Second Floor	12372 CLARKS DR	Fishers	46037	Residential	B	67	2
R200	12384 CLARKS DR	Fishers	46037	Residential	B	67	2
R200 Second Floor	12380 CLARKS DR	Fishers	46037	Residential	B	67	2
R201	12368 CLARKS DR	Fishers	46037	Residential	B	67	2
R201 Second Floor	12364 CLARKS DR	Fishers	46037	Residential	B	67	2
R202	12352 CLARKS DR	Fishers	46037	Residential	B	67	2
R202 Second Floor	12348 CLARKS DR	Fishers	46037	Residential	B	67	2
R203	12336 CLARKS DR	Fishers	46037	Residential	B	67	2
R203 Second Floor	12332 CLARKS DR	Fishers	46037	Residential	B	67	2
R204	12329 CLARKS DR	Fishers	46037	Residential	B	67	2
R204 Second Floor	12325 CLARKS DR	Fishers	46037	Residential	B	67	2
R205	12345 CLARKS DR	Fishers	46037	Residential	B	67	2

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R205 Second Floor	12341 CLARKS DR	Fishers	46037	Residential	B	67	2
R206	12361 CLARKS DR	Fishers	46037	Residential	B	67	2
R206 Second Floor	12357 CLARKS DR	Fishers	46037	Residential	B	67	2
R207	12377 CLARKS DR	Fishers	46037	Residential	B	67	2
R207 Second Floor	12373 CLARKS DR	Fishers	46037	Residential	B	67	2
R208	12385 CLARKS DR	Fishers	46037	Residential	B	67	2
R208 Second Floor	12381 CLARKS DR	Fishers	46037	Residential	B	67	2
R209	12369 CLARKS DR	Fishers	46037	Residential	B	67	2
R209 Second Floor	12365 CLARKS DR	Fishers	46037	Residential	B	67	2
R210	12353 CLARKS DR	Fishers	46037	Residential	B	67	2
R210 Second Floor	12349 CLARKS DR	Fishers	46037	Residential	B	67	2
R211	12337 CLARKS DR	Fishers	46037	Residential	B	67	2
R211 Second Floor	12333 CLARKS DR	Fishers	46037	Residential	B	67	2
R212	12267 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R212 Second Floor	12269 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R213	12277 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R213 Second Floor	12275 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R214	12285 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R214 Second Floor	12283 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R215	12293 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R215 Second Floor	12291 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R216	12297 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R216 Second Floor	12295 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R217	12289 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R217 Second Floor	12287 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R218	12281 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R218 Second Floor	12279 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R219	12273 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R219 Second Floor	12271 STAGE COACH TRL	Fishers	46037	Residential	B	67	2
R220	10233 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R220 Second Floor	10235 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R221	10241 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R221 Second Floor	10243 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R222	10249 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R222 Second Floor	10251 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R223	10257 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R223 Second Floor	10259 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R224	10261 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R224 Second Floor	10263 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R225	10253 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R225 Second Floor	10255 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R226	10245 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R226 Second Floor	10247 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R227	10237 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R227 Second Floor	10239 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R228	10272 SUN GOLD CT	Fishers	46037	Residential	B	67	1
R229	10282 SUN GOLD CT	Fishers	46037	Residential	B	67	1
R230	10292 SUN GOLD CT	Fishers	46037	Residential	B	67	1
R231	10302 SUN GOLD CT	Fishers	46037	Residential	B	67	1
R232	10312 SUN GOLD CT	Fishers	46037	Residential	B	67	1
R233	10322 SUN GOLD CT	Fishers	46037	Residential	B	67	1
R234	10332 SUN GOLD CT	Fishers	46037	Residential	B	67	1
R235	10342 SUN GOLD CT	Fishers	46037	Residential	B	67	1
R236	10352 SUN GOLD CT	Fishers	46037	Residential	B	67	1
R237	10362 SUN GOLD CT	Fishers	46037	Residential	B	67	1
R238	10372 SUN GOLD CT	Fishers	46037	Residential	B	67	1
R239	10382 SUN GOLD CT	Fishers	46037	Residential	B	67	1
R240	10393 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R240 Second Floor	10395 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R241	10401 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R241 Second Floor	10403 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R242	10409 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R242 Seconf Floor	10411 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R243	10417 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R243 Second Floor	10423 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R244	10419 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R244 Second Floor	10421 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R245	10413 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R245 Second Floor	10425 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R246	10405 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R246 Second Floor	10407 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R247	10397 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R247 Second Floor	10427 TOLL HOUSE WAY	Fishers	46037	Residential	B	67	2
R271	12282 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R272	12294 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R273	12306 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R274	12318 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R275	12330 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R276	12342 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R277	12354 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R278	10454 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R279	10466 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R280	10478 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R281	10490 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R282	10502 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R283	10514 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R284	10526 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R285	12352 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R286	12364 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R287	12376 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R288	12375 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R289	12363 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R290	12351 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R291	12339 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R292	12327 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R293	12315 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R294	12303 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R295	12291 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R296	12293 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R297	12305 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R298	12317 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R299	10477 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R300	10501 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R301	10513 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R302	10537 BLUE SPRINGS LN	Fishers	46037	Residential	B	67	1
R303	12328 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R304	12316 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R305	12304 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R306	12292 BLUE SKY DR	Fishers	46037	Residential	B	67	1
R310	10523 E 126TH ST	Fishers	46037	Residential	B	67	1
R311	10543 E 126TH ST	Fishers	46037	Residential	B	67	1
R449	11070 E 126TH ST	Fishers	46038	Residential	B	67	1
R450	11020 126TH ST	Fishers	46038	Residential	B	67	1
R307	12365 CHATEAU CT	Fishers	46037	Residential	B	67	1
R320	12362 CHATEAU CT	Fishers	46037	Residential	B	67	1
R321	10754 E 121ST ST	Fishers	46037	Residential	B	67	1
R322	12290 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R323	12310 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R324	12320 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R325	12330 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R326	10778 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R327	10780 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R328	10784 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R329	10790 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R330	10798 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R331	10802 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R332	10816 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R333	10830 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R334	10850 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R335	12336 TUCKAWAY CT	Fishers	46037	Residential	B	67	1
R336	12352 TUCKAWAY CT	Fishers	46037	Residential	B	67	1
R337	12368 TUCKAWAY CT	Fishers	46037	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R338	12384 TUCKAWAY CT	Fishers	46037	Residential	B	67	1
R339	12400 TUCKAWAY CT	Fishers	46037	Residential	B	67	1
R340	12399 TUCKAWAY CT	Fishers	46037	Residential	B	67	1
R341	12383 TUCKAWAY CT	Fishers	46037	Residential	B	67	1
R342	12367 TUCKAWAY CT	Fishers	46037	Residential	B	67	1
R343	12351 TUCKAWAY CT	Fishers	46037	Residential	B	67	1
R344	12335 TUCKAWAY CT	Fishers	46037	Residential	B	67	1
R345	10880 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R346	10890 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R347	10900 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R348	10910 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R349	10920 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R350	12309 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R351	10789 SWEET CREEK TRL	Fishers	46037	Residential	B	67	1
R352	12322 RUNNING SPRINGS RD	Fishers	46037	Residential	B	67	1
R353	12312 RUNNING SPRINGS RD	Fishers	46037	Residential	B	67	1
R356	12322 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R357	12332 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R358	12342 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R359	12352 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R360	12362 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R361	12372 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R362	12382 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R363	12392 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R364	12402 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R365	12412 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R366	12422 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R367	10986 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R368	10996 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R369	11006 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R370	11016 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R371	11026 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R372	11036 COOL WINDS WAY	Fishers	46037	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R373	11046 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R374	11056 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R375	11066 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R376	11076 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R377	11086 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R378	11096 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R379	11106 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R380	11116 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R381	11126 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R382	11136 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R383	11146 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R384	11156 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R385	11166 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R386	11176 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R387	11186 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R388	12526 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R389	12516 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R390	12536 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R391	12546 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R392	12556 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R393	12545 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R394	12535 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R395	12525 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R396	12515 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R397	12505 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R398	12495 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R399	12485 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R400	12475 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R401	11014 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R403	12353 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R404	12373 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R405	11045 LONG LAKE LN	Fishers	46037	Residential	B	67	1
R406	11035 LONG LAKE LN	Fishers	46037	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R407	11025 LONG LAKE LN	Fishers	46037	Residential	B	67	1
R408	11015 LONG LAKE LN	Fishers	46037	Residential	B	67	1
R409	11005 LONG LAKE LN	Fishers	46037	Residential	B	67	1
R410	10995 LONG LAKE LN	Fishers	46037	Residential	B	67	1
R411	12383 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R412	11080 LONG LAKE LN	Fishers	46037	Residential	B	67	1
R413	11070 LONG LAKE LN	Fishers	46037	Residential	B	67	1
R414	11060 LONG LAKE LN	Fishers	46037	Residential	B	67	1
R415	11050 LONG LAKE LN	Fishers	46037	Residential	B	67	1
R416	11025 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R417	11035 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R418	11045 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R419	11055 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R420	11065 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R421	11075 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R422	11085 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R423	11095 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R424	11105 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R425	11115 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R426	11125 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R427	11135 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R428	11145 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R429	11155 COOL WINDS WAY	Fishers	46037	Residential	B	67	1
R430	12468 BERRY PATCH LN	Fishers	46037	Residential	B	67	1
R431	12458 BERRY PATCH LN	Fishers	46037	Residential	B	67	1
R432	12448 BERRY PATCH LN	Fishers	46037	Residential	B	67	1
R433	12438 BERRY PATCH LN	Fishers	46037	Residential	B	67	1
R434	12428 BERRY PATCH LN	Fishers	46037	Residential	B	67	1
R435	12449 BERRY PATCH LN	Fishers	46037	Residential	B	67	1
R436	12459 BERRY PATCH LN	Fishers	46037	Residential	B	67	1
R437	12469 BERRY PATCH LN	Fishers	46037	Residential	B	67	1
R438	12479 BERRY PATCH LN	Fishers	46037	Residential	B	67	1
R439	12489 BERRY PATCH LN	Fishers	46037	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R440	12499 BERRY PATCH LN	Fishers	46037	Residential	B	67	1
R441	12446 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R442	12456 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R443	12466 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R444	12476 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R445	12486 SCHOOLHOUSE RD	Fishers	46037	Residential	B	67	1
R446	12520 HOOSIER RD	Fishers	46037	Residential	B	67	1
R451	12690 PROMISE RD	Fishers	46038	Baseball Field	C	67	1
R452	12690 PROMISE RD	Fishers	46038	Baseball Field	C	67	1
R453	12690 PROMISE RD	Fishers	46038	Baseball Field	C	67	1
R454	12690 PROMISE RD	Fishers	46038	Baseball Field	C	67	1
R455	12690 PROMISE RD	Fishers	46038	Baseball Field	C	67	1
R456	12690 PROMISE RD	Fishers	46038	Baseball Field	C	67	1
R457	12690 PROMISE RD	Fishers	46038	Baseball Field	C	67	1
R458	12690 PROMISE RD	Fishers	46038	Baseball Field	C	67	1
R459	13000 PROMISE RD	Fishers	46038	Baseball Field	C	67	1
R460	13000 PROMISE RD	Fishers	46038	Baseball Field	C	67	1
R462	11761 E 131ST ST	Fishers	46038	Residential	B	67	1
R463	13000 PROMISE RD	Fishers	46038	Baseball Field	C	67	1
R464	11787 E 131ST ST	Fishers	46038	Residential	B	67	1
R465	11787 E 131ST ST	Fishers	46038	Dog Park	C	67	2
R466	11842 E 131ST ST	Fishers	46038	Residential	B	67	1
R467	11888 E 131ST ST	Fishers	46038	Residential	B	67	1
R540	13226 KOMATITE WAY	Fishers	46038	Residential	B	67	6
R540(a)	13226 KOMATITE WAY	Fishers	46038	Residential	B	67	6
R540(b)	13266 KOMATITE WAY	Fishers	46038	Residential	B	67	6
R541	13249 KOMATITE WAY	Fishers	46038	Residential	B	67	6
R541(a)	13249 KOMATITE WAY	Fishers	46038	Residential	B	67	6
R541(b)	13289 KOMATITE WAY	Fishers	46038	Residential	B	67	6
R542	13225 DECEPTION PASS	Fishers	46038	Residential	B	67	6
R542(a)	13225 DECEPTION PASS	Fishers	46038	Residential	B	67	6
R543	13255 DECEPTION PASS	Fishers	46038	Residential	B	67	6
R543(a)	13255 DECEPTION PASS	Fishers	46038	Residential	B	67	6

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R544	12175 BUBBLING BROOK DR	Fishers	46038	Residential	B	67	6
R545	12205 BUBBLING BROOK DR	Fishers	46038	Residential	B	67	6
R545(a)	12205 BUBBLING BROOK DR	Fishers	46038	Residential	B	67	6
R546	12235 BUBBLING BROOK DR	Fishers	46038	Residential	B	67	6
R546(a)	12235 BUBBLING BROOK DR	Fishers	46038	Residential	B	67	6
R547	13401 SAHARA DR	Fishers	46038	Park	C	67	1
R548	12491 E 136TH ST	Fishers	46038	Residential	B	67	1
R470	11705 WHISPER COVE DR	Fishers	46037	Residential	B	67	2
R471	11709 WHISPER COVE DR	Fishers	46037	Residential	B	67	2
R472	11711 WHISPER COVE DR	Fishers	46037	Residential	B	67	2
R473	11715 WHISPER COVE DR	Fishers	46037	Residential	B	67	2
R474	11717 WHISPER COVE DR	Fishers	46037	Residential	B	67	2
R475	11721 WHISPER COVE DR	Fishers	46037	Residential	B	67	2
R476	11723 WHISPER COVE DR	Fishers	46037	Residential	B	67	2
R477	11727 WHISPER COVE DR	Fishers	46037	Residential	B	67	2
R478	11729 WHISPER COVE DR	Fishers	46037	Residential	B	67	2
R479	11739 WHISPER COVE DR	Fishers	46037	Residential	B	67	2
R480	11741 WHISPER COVE DR	Fishers	46037	Residential	B	67	2
R481	11698 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R482	11702 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R483	11719 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R484	11721 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R485	11725 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R486	11727 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R487	11737 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R488	11739 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R489	11743 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R490	11745 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R491	11747 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R492	11749 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R493	11753 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R494	11755 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2
R495	12822 WHISPERWOOD WAY	Fishers	46037	Residential	B	67	2

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R496	12824 PANTHERS WAY	Fishers	46037	Residential	B	67	2
R497	12814 PANTHERS WAY	Fishers	46037	Residential	B	67	1
R498	12804 PANTHERS WAY	Fishers	46037	Residential	B	67	1
R499	11796 BENGALS DR	Fishers	46037	Residential	B	67	1
R500	11816 BENGALS DR	Fishers	46037	Residential	B	67	1
R501	11981 E 131ST ST	Fishers	46037	Residential	B	67	1
R502	12864 RAIDERS BLVD	Fishers	46037	Residential	B	67	1
R510	12884 CHEERLEADERS CT	Fishers	46037	Residential	B	67	1
R511	12904 CHEERLEADERS CT	Fishers	46037	Residential	B	67	1
R512	12924 CHEERLEADERS CT	Fishers	46037	Residential	B	67	1
R513	12925 CHEERLEADERS CT	Fishers	46037	Residential	B	67	1
R514	12012 RAIDERS BLVD	Fishers	46037	Residential	B	67	1
R515	12022 RAIDERS BLVD	Fishers	46037	Residential	B	67	1
R516	12032 RAIDERS BLVD	Fishers	46037	Residential	B	67	1
R517	12042 RAIDERS BLVD	Fishers	46037	Residential	B	67	1
R518	12052 RAIDERS BLVD	Fishers	46037	Residential	B	67	1
R519	12062 RAIDERS BLVD	Fishers	46037	Residential	B	67	1
R520	12072 RAIDERS BLVD	Fishers	46037	Residential	B	67	1
R521	12082 RAIDERS BLVD	Fishers	46037	Residential	B	67	1
R522	12160 PACKERS AVE	Fishers	46037	Residential	B	67	1
R523	12160 PACKERS AVE	Fishers	46037	Football Fields	C	67	1
R524	12160 PACKERS AVE	Fishers	46037	Football Fields	C	67	1
R525	12160 PACKERS AVE	Fishers	46037	Football Fields	C	67	1
R526	12071 E 131ST ST	Fishers	46037	Football Fields	C	67	1
R527	12166 PACKERS AVE	Fishers	46037	Residential	B	67	1
R528	12824 PANTHERS WAY	Fishers	46037	Residential	B	67	1
R528(a)	12814 PANTHERS WAY	Fishers	46037	Residential	B	67	1
R529	12804 PANTHERS WAY	Fishers	46037	Residential	B	67	1
R530	11796 BENGALS DR	Fishers	46037	Residential	B	67	1
R531	11816 BENGALS DR	Fishers	46037	Residential	B	67	1
R532	11981 E 131ST ST	Fishers	46037	Residential	B	67	1
R533	12864 RAIDERS BLVD	Fishers	46037	Residential	B	67	1
R534	12884 CHEERLEADERS CT	Fishers	46037	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R535	12904 CHEERLEADERS CT	Fishers	46037	Residential	B	67	1
R536	12924 CHEERLEADERS CT	Fishers	46037	Residential	B	67	1
R536(a)	12925 CHEERLEADERS CT	Fishers	46037	Residential	B	67	1
R537	12012 RAIDERS BLVD	Fishers	46037	Residential	B	67	1
R538	12022 RAIDERS BLVD	Fishers	46037	Residential	B	67	1
R539	12032 RAIDERS BLVD	Fishers	46037	Residential	B	67	1
R549	12560 E 136TH ST	Noblesville	46060	Residential	B	67	1
R550	12602 E 136TH ST	Noblesville	46060	Residential	B	67	1
R551	12630 E 136TH ST	Noblesville	46060	Residential	B	67	1
R552	12698 E 136TH ST	Noblesville	46060	Residential	B	67	1
R552(a)	13735 Corporate Pky	Noblesville	46060	Trail	C	67	1
R553	13220 BROOKS SCHOOL RD	Fishers	46037	Residential	B	67	1
R554	13220 BROOKS SCHOOL RD	Fishers	46037	Residential	B	67	1
R555	13304 LOYALTY DR	Fishers	46037	Residential	B	67	1
R556	13314 LOYALTY DR	Fishers	46037	Residential	B	67	1
R557	13324 LOYALTY DR	Fishers	46037	Residential	B	67	1
R558	13334 LOYALTY DR	Fishers	46037	Residential	B	67	1
R559	13344 LOYALTY DR	Fishers	46037	Residential	B	67	1
R560	13354 LOYALTY DR	Fishers	46037	Residential	B	67	1
R561	13364 LOYALTY DR	Fishers	46037	Residential	B	67	1
R562	12570 LOYALTY DR	Fishers	46037	Residential	B	67	1
R563	12578 LOYALTY DR	Fishers	46037	Residential	B	67	1
R564	12586 LOYALTY DR	Fishers	46037	Residential	B	67	1
R565	12594 LOYALTY DR	Fishers	46037	Residential	B	67	1
R566	12602 LOYALTY DR	Fishers	46037	Residential	B	67	1
R567	12610 LOYALTY DR	Fishers	46037	Residential	B	67	1
R568	13350 HEROIC WAY	Fishers	46037	Residential	B	67	1
R569	13360 HEROIC WAY	Fishers	46037	Residential	B	67	1
R570	13370 HEROIC WAY	Fishers	46037	Residential	B	67	1
R571	12620 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R572	12626 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R573	12632 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R574	12638 REPUBLIC DR	Fishers	46037	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R575	12644 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R576	12650 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R577	12656 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R578	12662 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R579	12668 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R580	12674 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R581	12680 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R582	12686 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R583	12692 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R584	12698 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R585	13285 LOYALTY DR	Fishers	46037	Residential	B	67	1
R586	13295 LOYALTY DR	Fishers	46037	Residential	B	67	1
R587	13305 LOYALTY DR	Fishers	46037	Residential	B	67	1
R588	13315 LOYALTY DR	Fishers	46037	Residential	B	67	1
R589	13325 LOYALTY DR	Fishers	46037	Residential	B	67	1
R590	13335 LOYALTY DR	Fishers	46037	Residential	B	67	1
R591	12585 LOYALTY DR	Fishers	46037	Residential	B	67	1
R592	12593 LOYALTY DR	Fishers	46037	Residential	B	67	1
R593	12601 LOYALTY DR	Fishers	46037	Residential	B	67	1
R594	12609 LOYALTY DR	Fishers	46037	Residential	B	67	1
R595	13320 HEROIC WAY	Fishers	46037	Residential	B	67	1
R596	13310 HEROIC WAY	Fishers	46037	Residential	B	67	1
R597	13300 HEROIC WAY	Fishers	46037	Residential	B	67	1
R598	13290 HEROIC WAY	Fishers	46037	Residential	B	67	1
R599	13345 HEROIC WAY	Fishers	46037	Residential	B	67	1
R600	13355 HEROIC WAY	Fishers	46037	Residential	B	67	1
R601	13365 HEROIC WAY	Fishers	46037	Residential	B	67	1
R602	12631 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R603	12635 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R604	12639 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R605	12645 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R606	12649 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R607	12651 REPUBLIC DR	Fishers	46037	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R608	12657 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R609	12663 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R610	12667 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R611	12671 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R612	12675 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R613	12681 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R614	12691 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R615	12699 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R616	12648 LOYALTY DR	Fishers	46037	Residential	B	67	1
R617	12660 LOYALTY DR	Fishers	46037	Residential	B	67	1
R618	12666 LOYALTY DR	Fishers	46037	Residential	B	67	1
R619	12672 LOYALTY DR	Fishers	46037	Residential	B	67	1
R620	12678 LOYALTY DR	Fishers	46037	Residential	B	67	1
R621	12684 LOYALTY DR	Fishers	46037	Residential	B	67	1
R622	12690 LOYALTY DR	Fishers	46037	Residential	B	67	1
R623	12696 LOYALTY DR	Fishers	46037	Residential	B	67	1
R624	12702 LOYALTY DR	Fishers	46037	Residential	B	67	1
R625	12708 LOYALTY DR	Fishers	46037	Residential	B	67	1
R626	12714 LOYALTY DR	Fishers	46037	Residential	B	67	1
R627	12720 LOYALTY DR	Fishers	46037	Residential	B	67	1
R628	12726 LOYALTY DR	Fishers	46037	Residential	B	67	1
R629	12629 LOYALTY DR	Fishers	46037	Residential	B	67	1
R630	12635 LOYALTY DR	Fishers	46037	Residential	B	67	1
R631	12641 LOYALTY DR	Fishers	46037	Residential	B	67	1
R632	12647 LOYALTY DR	Fishers	46037	Residential	B	67	1
R633	12653 LOYALTY DR	Fishers	46037	Residential	B	67	1
R634	12659 LOYALTY DR	Fishers	46037	Residential	B	67	1
R635	12665 LOYALTY DR	Fishers	46037	Residential	B	67	1
R636	12671 LOYALTY DR	Fishers	46037	Residential	B	67	1
R637	12677 LOYALTY DR	Fishers	46037	Residential	B	67	1
R638	12683 LOYALTY DR	Fishers	46037	Residential	B	67	1
R639	12689 LOYALTY DR	Fishers	46037	Residential	B	67	1
R640	12695 LOYALTY DR	Fishers	46037	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R641	12701 LOYALTY DR	Fishers	46037	Residential	B	67	1
R642	12707 LOYALTY DR	Fishers	46037	Residential	B	67	1
R643	12713 LOYALTY DR	Fishers	46037	Residential	B	67	1
R644	12719 LOYALTY DR	Fishers	46037	Residential	B	67	1
R645	12725 LOYALTY DR	Fishers	46037	Residential	B	67	1
R646	12780 ANTHEM AVE	Fishers	46037	Residential	B	67	1
R647	12790 ANTHEM AVE	Fishers	46037	Residential	B	67	1
R648	12802 ANTHEM AVE	Fishers	46037	Residential	B	67	1
R649	12812 ANTHEM AVE	Fishers	46037	Residential	B	67	1
R650	12822 ANTHEM AVE	Fishers	46037	Residential	B	67	1
R651	12832 ANTHEM AVE	Fishers	46037	Residential	B	67	1
R652	12842 ANTHEM AVE	Fishers	46037	Residential	B	67	1
R653	12755 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R654	12761 REPUBLIC DR	Fishers	46037	Residential	B	67	1
R655	13445 ALL AMERICAN RD	Fishers	46037	Residential	B	67	1
R656	13451 ALL AMERICAN RD	Fishers	46037	Residential	B	67	1
R657	13457 ALL AMERICAN RD	Fishers	46037	Residential	B	67	1
R658	13463 ALL AMERICAN RD	Fishers	46037	Residential	B	67	1
R659	13471 ALL AMERICAN RD	Fishers	46037	Residential	B	67	1
R660	13479 ALL AMERICAN RD	Fishers	46037	Residential	B	67	1
R661	13487 ALL AMERICAN RD	Fishers	46037	Residential	B	67	1
R662	13495 ALL AMERICAN RD	Fishers	46037	Residential	B	67	1
R663	13503 ALL AMERICAN RD	Fishers	46037	Residential	B	67	1
R664	13450 ALLEGIANCE DR	Fishers	46037	Residential	B	67	1
R665	13456 ALLEGIANCE DR	Fishers	46037	Residential	B	67	1
R666	13486 ALLEGIANCE DR	Fishers	46037	Residential	B	67	1
R667	13492 ALLEGIANCE DR	Fishers	46037	Residential	B	67	1
R668	13506 ALLEGIANCE DR	Fishers	46037	Residential	B	67	1
R669	13512 ALLEGIANCE DR	Fishers	46037	Residential	B	67	1
R670	13516 ALLEGIANCE DR	Fishers	46037	Residential	B	67	1
R671	13487 ALLEGIANCE DR	Fishers	46037	Residential	B	67	1
R672	13497 ALLEGIANCE DR	Fishers	46037	Residential	B	67	1
R673	13507 ALLEGIANCE DR	Fishers	46037	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R674	13517 ALLEGIANCE DR	Fishers	46037	Residential	B	67	1
R681	13782 CYNTHEANNE RD	Fishers	46037	Hospital	C	67	1
R690	8724 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R691	8716 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R692	8712 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R693	8702 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R694	8698 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R695	8678 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R696	8656 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R697	8652 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R698	8646 PIN OAK DR	Pendleton	46048	Residential	B	67	1
R699	8642 PIN OAK DR	Pendleton	46048	Residential	B	67	1
R700	8638 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R701	8634 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R702	8630 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R703	8616 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R704	8604 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R705	8594 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R706	8584 PIN OAK DR	Pendleton	46048	Residential	B	67	1
R707	8576 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R708	8564 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R709	8550 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R710	8546 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R711	8542 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R712	8538 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R713	8529 W ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R714	7701 S ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R715	7713 S ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R716	7721 S ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R717	7731 S ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R718	7704 S ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R719	7726 S ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R720	7742 S ROSE BUD DR	Pendleton	46048	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R721	7750 S ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R722	7760 S ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R723	7770 S ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R724	7776 S ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R725	7788 S ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R726	7798 S ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R727	8647 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R728	8603 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R729	8593 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R730	8533 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R731	8529 W PIN OAK DR	Pendleton	46048	Residential	B	67	1
R732	8661 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R733	8646 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R734	8638 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R735	8632 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R736	8622 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R737	8614 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R738	8608 W ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R739	8594 W ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R740	8584 W ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R741	7741 S LAKESIDE DR	Pendleton	46048	Residential	B	67	1
R742	7733 S LAKESIDE DR	Pendleton	46048	Residential	B	67	1
R743	7719 S LAKESIDE DR	Pendleton	46048	Residential	B	67	1
R744	7715 S LAKESIDE DR	Pendleton	46048	Residential	B	67	1
R745	7705 S LAKESIDE DR	Pendleton	46048	Residential	B	67	1
R746	7693 S LAKESIDE DR	Pendleton	46048	Residential	B	67	1
R747	8745 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R748	8727 W CAREFREE DR	Pendleton	46048	Residential	B	67	1
R749	8726 W CAREFREE DR	Pendleton	46048	Residential	B	67	1
R750	7716 S LAKESIDE DR	Pendleton	46048	Residential	B	67	1
R751	7688 S LAKESIDE DR	Pendleton	46048	Residential	B	67	1
R752	8715 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R753	8709 W HOLLY DR	Pendleton	46048	Residential	B	67	1

Table B-1 – Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R754	8701 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R755	8693 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R756	7735 S PIN OAK DR	Pendleton	46048	Residential	B	67	1
R757	8698 CAREFREE DR	Pendleton	46048	Residential	B	67	1
R758	7753 S PIN OAK DR	Pendleton	46048	Residential	B	67	1
R759	BETWEEN 8726 AND 8698 CAREFREE DR	Pendleton	46048	Residential	B	67	1
R760	8663 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R761	8659 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R762	8649 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R763	8639 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R764	8635 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R765	8625 W HOLLY DR	Pendleton	46048	Residential	B	67	1
R766	7742 S PIN OAK DR	Pendleton	46048	Residential	B	67	1
R767	8676 W CAREFREE DR	Pendleton	46048	Residential	B	67	1
R768	8672 W CAREFREE DR	Pendleton	46048	Residential	B	67	1
R769	8660 W CAREFREE DR	Pendleton	46048	Residential	B	67	1
R770	7772 S ROSE BUD RD	Pendleton	46048	Residential	B	67	1
R771	BETWEEN 7772 S ROSE BUD DR AND 8595 W ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R772	8595 W ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R773	8589 W ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R774	8581 W ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R775	8569 W ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R776	8561 W ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R777	8549 W ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R778	8537 W ROSE BUD DR	Pendleton	46048	Residential	B	67	1
R780	8562 W 775 S	Pendleton	46064	Residential	B	67	1
R681	13782 CYNTHEANNE RD	Fishers	46037	Hospital	C	67	1

Appendix C
Predicted Noise Levels

Table C-1 – Predicted Noise Levels NSA 1

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R001	67	1	63.8	64.5	64.2	NB 00	59.3	4.9	Y	Y	None
R001 Second Floor	67	1	68.1	68.9	68.6	NB 00	62.8	5.8	Y	Y	A/E
R002	67	1	64.2	65.0	64.7	NB 00	59.5	5.2	Y	Y	None
R002 Second Floor	67	1	68.5	69.4	69.1	NB 00	62.9	6.2	Y	Y	A/E
R003	67	1	64.2	64.9	64.8	NB 00	59.4	5.4	Y	Y	None
R003 Second Floor	67	1	68.5	69.4	69.1	NB 00	62.7	6.4	Y	Y	A/E
R004	67	1	63.7	64.4	64.2	NB 00	58.8	5.4	Y	Y	None
R004 Second Floor	67	1	68.0	68.9	68.7	NB 00	62.4	6.3	Y	Y	A/E
R005	67	1	61.7	62.4	62.2	NB 00	58.0	4.2	N	N	None
R005 Second Floor	67	1	66.4	67.2	66.9	NB 00	61.8	5.1	N	Y	A/E
R006	67	1	61.3	62.0	61.7	NB 00	57.4	4.3	N	N	None
R006 Second Floor	67	1	65.9	66.7	66.5	NB 00	61.4	5.1	N	Y	A/E
R007	67	1	61.2	62.0	61.7	NB 00	57.4	4.3	N	N	None
R007 Second Floor	67	1	65.9	66.7	66.5	NB 00	61.2	5.3	N	Y	A/E
R008	67	1	61.6	62.4	62.1	NB 00	57.7	4.4	N	N	None
R008 Second Floor	67	1	66.3	67.1	66.8	NB 00	61.4	5.4	N	Y	A/E
R009	67	1	63.8	64.6	64.6	NB 00	58.9	5.7	Y	Y	None
R009 Second Floor	67	1	68.2	69.1	68.9	NB 00	62.2	6.7	Y	Y	A/E
R010	67	1	64.6	65.4	65.4	NB 00	59.3	6.1	Y	Y	None
R010 Second Floor	67	1	68.9	69.7	69.6	NB 00	62.5	7.1	Y	Y	A/E
R011	67	1	64.5	65.2	65.3	NB 00	59.1	6.2	Y	Y	None
R011 Second Floor	67	1	68.8	69.7	69.6	NB 00	62.4	7.2	Y	Y	A/E
R012	67	1	63.8	64.5	64.7	NB 00	58.8	5.9	Y	Y	None
R012 Second Floor	67	1	68.2	69.1	69.0	NB 00	62.1	6.9	Y	Y	A/E
R013	67	1	62.4	63.1	63.1	NB 00	57.9	5.2	N	Y	None
R013 Second Floor	67	1	67.0	67.8	67.6	NB 00	61.6	6.0	N	Y	A/E

Table C-1 – Predicted Noise Levels NSA 1

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R014	67	1	61.7	62.5	62.3	NB 00	57.5	4.8	N	N	None
R014 Second Floor	67	1	66.4	67.3	67.1	NB 00	61.2	5.9	N	Y	A/E
R015	67	1	61.9	62.6	62.4	NB 00	57.5	4.9	N	N	None
R015 Second Floor	67	1	66.5	67.3	67.2	NB 00	61.2	6.0	N	Y	A/E
R016	67	1	62.4	63.1	63.0	NB 00	57.8	5.2	N	Y	None
R016 Second Floor	67	1	66.9	67.8	67.7	NB 00	61.5	6.2	N	Y	A/E
R017	67	1	62.6	63.3	63.3	NB 00	58.0	5.3	N	Y	None
R017 Second Floor	67	1	67.1	68.0	67.9	NB 00	61.6	6.3	N	Y	A/E
R018	67	1	64.4	65.2	65.2	NB 00	59.1	6.1	N	Y	None
R018 Second Floor	67	1	68.7	69.5	69.5	NB 00	62.3	7.2	N	Y	A/E
R019	67	1	64.2	64.9	64.9	NB 00	59.0	5.9	N	Y	None
R019 Second Floor	67	1	68.5	69.3	69.3	NB 00	62.3	7.0	N	Y	A/E
R020	67	1	64.7	65.5	65.7	NB 00	59.5	6.2	N	Y	None
R020 Second Floor	67	1	69.0	69.9	69.9	NB 00	62.8	7.1	N	Y	A/E
R021	67	1	65.3	66.1	66.4	NB 00	60.0	6.4	N	Y	A/E
R021 Second Floor	67	1	69.7	70.6	70.6	NB 00	63.1	7.5	N	Y	A/E
R022	67	1	66.7	67.5	67.9	NB 00	60.8	7.1	Y	Y	A/E
R022 Second Floor	67	1	70.9	71.8	71.8	NB 00	63.6	8.2	Y	Y	A/E
R023	67	1	66.8	67.6	68.1	NB 00	60.7	7.4	Y	Y	A/E
R023 Second Floor	67	1	71.1	72.0	72.0	NB 00	63.5	8.5	Y	Y	A/E
R024	67	1	66.4	67.2	67.5	NB 00	60.4	7.1	Y	Y	A/E
R024 Second Floor	67	1	70.6	71.5	71.5	NB 00	63.2	8.3	Y	Y	A/E
R025	67	1	65.4	66.1	66.4	NB 00	59.8	6.6	Y	Y	A/E
R025 Second Floor	67	1	69.8	70.7	70.6	NB 00	62.8	7.8	Y	Y	A/E
R026	67	1	65.4	66.2	66.5	NB 00	60.6	5.9	N	Y	A/E
R026 Second Floor	67	1	69.8	70.7	70.8	NB 00	63.8	7.0	N	Y	A/E

Table C-1 – Predicted Noise Levels NSA 1

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R027	67	1	65.8	66.6	66.9	NB 00	60.7	6.2	N	Y	A/E
R027 Second Floor	67	1	70.1	71.0	71.0	NB 00	63.8	7.2	N	Y	A/E
R028	67	1	68.3	69.1	69.7	NB 00	61.9	7.8	Y	Y	A/E
R028 Second Floor	67	1	72.1	73.1	73.2	NB 00	64.6	8.6	Y	Y	A/E
R029	67	1	69.3	70.1	70.7	NB 00	62.4	8.3	Y	Y	A/E
R029 Second Floor	67	1	73.0	73.9	74.0	NB 00	65.0	9.0	Y	Y	A/E
R030	67	1	70.0	70.8	71.4	NB 00	63.1	8.3	Y	Y	A/E
R030 Second Floor	67	1	73.5	74.4	74.6	NB 00	65.7	8.9	Y	Y	A/E
R031	67	1	69.8	70.6	71.2	NB 00	63.3	7.9	Y	Y	A/E
R031 Second Floor	67	1	73.3	74.3	74.4	NB 00	65.9	8.5	Y	Y	A/E
R032	67	1	66.9	67.7	68.1	NB 00	62.0	6.1	N	Y	A/E
R032 Second Floor	67	1	71.0	71.9	72.0	NB 00	65.0	7.0	N	Y	A/E
R033	67	1	66.1	66.8	67.2	NB 00	61.4	5.8	N	Y	A/E
R033 Second Floor	67	1	70.4	71.3	71.4	NB 00	64.6	6.8	N	Y	A/E
R034	67	1	63.8	64.5	64.6	NB 00	59.4	5.2	N	Y	None
R034 Second Floor	67	1	68.1	69.0	69.0	NB 00	62.9	6.1	N	Y	A/E
R035	67	1	63.3	64.0	64.0	NB 00	59.0	5.0	N	Y	None
R035 Second Floor	67	1	67.7	68.5	68.5	NB 00	62.5	6.0	N	Y	A/E
R036	67	1	62.8	63.5	63.4	NB 00	58.6	4.8	N	N	None
R036 Second Floor	67	1	67.1	68.0	68.0	NB 00	62.2	5.8	N	Y	A/E
R037	67	1	62.2	62.9	62.8	NB 00	58.2	4.6	N	N	None
R037 Second Floor	67	1	66.6	67.5	67.4	NB 00	61.9	5.5	N	Y	A/E
R038	67	1	61.5	62.2	62.1	NB 00	57.6	4.5	N	N	None
R038 Second Floor	67	1	66.0	66.8	66.8	NB 00	61.5	5.3	N	Y	A/E
R039	67	1	60.6	61.3	61.2	NB 00	57.1	4.1	N	N	None
R039 Second Floor	67	1	65.3	66.1	66.0	NB 00	60.9	5.1	N	Y	A/E

Table C-1 – Predicted Noise Levels NSA 1

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R040	67	1	60.1	60.8	60.6	NB 00	56.8	3.8	N	N	None
R040 Second Floor	67	1	64.8	65.6	65.5	NB 00	60.6	4.9	N	N	None
R041	67	1	60.1	60.9	60.4	NB 00	56.7	3.7	N	N	None
R041 Second Floor	67	1	64.5	65.3	65.2	NB 00	60.6	4.6	N	N	None
R042	67	1	60.2	60.9	60.8	NB 00	57.1	3.7	N	N	None
R042 Second Floor	67	1	64.9	65.7	65.7	NB 00	61.0	4.7	N	N	None
R043	67	1	61.2	61.9	61.7	NB 00	57.6	4.1	N	N	None
R043 Second Floor	67	1	65.7	66.5	66.5	NB 00	61.5	5.0	N	Y	A/E
R044	67	1	62.0	62.7	62.5	NB 00	58.2	4.3	N	N	None
R044 Second Floor	67	1	66.4	67.2	67.2	NB 00	62.0	5.2	N	Y	A/E
R045	67	1	62.3	63.1	63.0	NB 00	58.6	4.4	N	N	None
R045 Second Floor	67	1	66.8	67.7	67.6	NB 00	62.3	5.3	N	Y	A/E
R046	67	1	62.9	63.6	63.4	NB 00	59.0	4.4	N	N	None
R046 Second Floor	67	1	67.2	68.0	68.0	NB 00	62.7	5.3	N	Y	A/E
R047	67	1	63.4	64.1	64.2	NB 00	59.5	4.7	N	N	None
R047 Second Floor	67	1	67.8	68.6	68.6	NB 00	63.0	5.6	N	Y	A/E

Table C-2 – Predicted Noise Levels NSA 2

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R050	67	1	65.5	66.3	66.4	N/A	-	-	Y	-	A/E
R060	67	1	62.8	63.5	63.5	N/A	-	-	N	-	None
R061	67	1	62.1	62.7	62.7	N/A	-	-	N	-	None
R062	67	1	61.4	62.1	62.0	N/A	-	-	N	-	None
R063	67	1	66.2	66.9	66.8	N/A	-	-	N	-	A/E
R064	67	1	64.9	65.6	65.6	N/A	-	-	N	-	None
R065	67	1	63.8	64.5	64.4	N/A	-	-	N	-	None
R066	67	1	63.0	63.6	63.6	N/A	-	-	N	-	None
R067	67	1	62.1	62.7	62.7	N/A	-	-	N	-	None
R068	67	1	61.4	62.1	62.0	N/A	-	-	N	-	None
R069	67	1	60.8	61.4	61.3	N/A	-	-	N	-	None
R070	67	1	59.9	60.6	60.5	N/A	-	-	N	-	None
R071	67	1	59.2	59.9	59.8	N/A	-	-	N	-	None
R072	67	1	66.2	66.9	67.0	N/A	-	-	N	-	A/E
R073	67	1	65.1	65.8	65.8	N/A	-	-	N	-	None
R074	67	1	64.0	64.7	64.7	N/A	-	-	N	-	None
R075	67	1	63.5	64.2	64.1	N/A	-	-	N	-	None
R076	67	1	63.0	63.7	63.6	N/A	-	-	N	-	None
R077	67	1	62.5	63.2	63.1	N/A	-	-	N	-	None
R078	67	1	61.5	62.2	62.1	N/A	-	-	N	-	None
R079	67	1	60.5	61.2	61.0	N/A	-	-	N	-	None
R080	67	1	59.7	60.4	60.3	N/A	-	-	N	-	None
R081	67	1	59.2	59.9	59.8	N/A	-	-	N	-	None
R082	67	1	58.5	59.2	59.1	N/A	-	-	N	-	None
R083	67	1	66.6	67.5	67.6	N/A	-	-	Y	-	A/E

Table C-2 – Predicted Noise Levels NSA 2

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R084	67	1	66.3	67.2	67.2	N/A	-	-	Y	-	A/E
R085	67	1	65.4	66.2	66.2	N/A	-	-	N	-	A/E
R086	67	1	64.6	65.4	65.3	N/A	-	-	N	-	None
R087	67	1	64.0	64.8	64.7	N/A	-	-	N	-	None
R088	67	1	62.5	63.3	63.2	N/A	-	-	N	-	None
R089	67	1	61.5	62.4	62.2	N/A	-	-	N	-	None
R090	67	1	60.8	61.6	61.5	N/A	-	-	N	-	None
R091	67	1	60.1	60.9	60.7	N/A	-	-	N	-	None
R092	67	1	65.6	66.5	66.5	N/A	-	-	Y	-	A/E
R093	67	1	64.4	65.3	65.4	N/A	-	-	Y	-	None
R094	67	1	63.1	63.9	63.9	N/A	-	-	N	-	None
R095	67	1	61.3	62.1	62.0	N/A	-	-	N	-	None
R096	67	1	62.4	63.3	63.3	N/A	-	-	N	-	None
R097	67	1	62.9	63.8	63.9	N/A	-	-	Y	-	None
R098	67	1	63.5	64.4	64.6	N/A	-	-	Y	-	None
R099	67	1	62.9	63.8	64.0	N/A	-	-	Y	-	None
R100	67	1	62.5	63.4	63.4	N/A	-	-	Y	-	None
R101	67	1	61.0	61.9	61.7	N/A	-	-	N	-	None
R102	67	1	60.4	61.3	61.1	N/A	-	-	N	-	None
R103	67	1	59.5	60.4	60.2	N/A	-	-	N	-	None
R104	67	1	58.8	59.6	59.4	N/A	-	-	N	-	None
R105	67	1	58.3	59.1	58.9	N/A	-	-	N	-	None
R106	67	1	57.8	58.6	58.3	N/A	-	-	N	-	None
R107	67	1	58.1	58.9	58.7	N/A	-	-	N	-	None
R108	67	1	58.8	59.6	59.4	N/A	-	-	N	-	None

Table C-2 – Predicted Noise Levels NSA 2

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R109	67	1	59.7	60.6	60.4	N/A	-	-	N	-	None
R110	67	1	60.8	61.7	61.5	N/A	-	-	N	-	None
R111	67	1	62.2	63.1	63.0	N/A	-	-	Y	-	None
R112	67	1	62.6	63.5	63.7	N/A	-	-	Y	-	None
R113	67	1	57.8	58.6	58.4	N/A	-	-	N	-	None
R114	67	1	58.9	59.7	59.5	N/A	-	-	N	-	None
R115	67	1	59.9	60.8	60.6	N/A	-	-	N	-	None
R116	67	1	61.8	62.7	62.5	N/A	-	-	N	-	None
R117	67	1	62.8	63.7	63.6	N/A	-	-	Y	-	None
R118	67	1	58.3	59.1	58.9	N/A	-	-	N	-	None
R119	67	1	61.5	62.4	62.6	N/A	-	-	N	-	None
R119(a)	72	1	65.6	66.4	65.9	N/A	-	-	N	-	None

Table C-3 – Predicted Noise Levels NSA 3 and 4

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R130	67	1	63.3	64.6	64.5	N/A	-	N/A	Y	N	None
R131	67	1	61.9	63.2	63.6	N/A	-	N/A	Y	N	None
R132	67	1	65.6	66.9	67.2	NB 03	63.5	3.7	Y	N	A/E
R150	67	2	57.9	59.2	61.5	NB 01	56.8	4.7	N	N	None
R150 Second Floor	67	2	62.2	63.5	65.3	NB 01	60.9	4.4	N	N	None
R151	67	2	58.7	60.0	62.4	NB 01	57.4	5.0	N	Y	None
R151 Second Floor	67	2	63.1	64.4	66.1	NB 01	61.1	5.0	N	Y	A/E
R152	67	2	55.9	57.1	59.3	NB 01	53.7	5.6	N	Y	None
R152 Second Floor	67	2	59.7	60.9	62.7	NB 01	56.0	6.7	N	Y	None
R153	67	2	58.1	59.3	61.8	NB 01	57.1	4.7	N	N	None
R153 Second Floor	67	2	62.5	63.8	65.6	NB 01	61.0	4.6	N	N	None
R154	67	2	57.2	58.5	61.1	NB 01	56.8	4.3	N	N	None
R154 Second Floor	67	2	62.2	63.5	65.0	NB 01	61.0	4.0	N	N	None
R155	67	2	58.3	59.6	62.3	NB 01	57.5	4.8	N	N	None
R155 Second Floor	67	2	63.3	64.6	66.1	NB 01	61.7	4.4	N	N	A/E
R156	67	2	60.0	61.3	64.0	NB 01	58.5	5.5	N	Y	None
R156 Second Floor	67	2	64.9	66.2	67.6	NB 01	62.5	5.1	N	Y	A/E
R157	67	2	63.4	64.7	67.2	NB 01	60.1	7.1	N	Y	A/E
R157 Second Floor	67	2	67.9	69.2	70.6	NB 01	63.7	6.9	N	Y	A/E
R158	67	2	65.2	66.5	68.8	NB 01	60.7	8.1	N	Y	A/E
R158 Second Floor	67	2	69.5	70.8	72.1	NB 01	63.8	8.3	N	Y	A/E
R159	67	2	63.4	64.7	66.9	NB 01	58.8	8.1	N	Y	A/E
R159 Second Floor	67	2	67.8	69.1	70.4	NB 01	61.2	9.2	N	Y	A/E
R160	67	2	61.8	63.1	65.2	NB 01	57.5	7.7	N	Y	None
R160 Second Floor	67	2	66.3	67.5	68.8	NB 01	59.4	9.4	N	Y	A/E

Table C-3 – Predicted Noise Levels NSA 3 and 4

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R161	67	2	60.4	61.7	63.8	NB 01	56.4	7.4	N	Y	None
R161 Second Floor	67	2	64.9	66.2	67.5	NB 01	58.3	9.2	N	Y	A/E
R162	67	2	60.0	61.3	63.6	NB 01	57.4	6.2	N	Y	None
R162 Second Floor	67	2	64.8	66.1	67.4	NB 01	60.8	6.6	N	Y	A/E
R163	67	2	61.5	62.7	65.1	NB 01	58.1	7.0	N	Y	None
R163 Second Floor	67	2	66.0	67.2	68.6	NB 01	61.4	7.2	N	Y	A/E
R164	67	2	63.4	64.7	66.9	NB 01	58.8	8.1	N	Y	A/E
R164 Second Floor	67	2	67.5	68.8	70.2	NB 01	62.1	8.1	N	Y	A/E
R165	67	2	66.8	68.1	70.1	NB 01	60.2	9.9	N	Y	A/E
R165 Second Floor	67	2	70.4	71.7	73.1	NB 01	63.2	9.9	N	Y	A/E
R166	67	2	70.0	71.3	72.9	NB 01	61.8	11.1	Y	Y	A/E
R166 Second Floor	67	2	73.2	74.5	76.0	NB 01	64.3	11.7	Y	Y	A/E
R167	67	2	68.1	69.4	71.2	NB 01	60.5	10.7	N	Y	A/E
R167 Second Floor	67	2	71.8	73.0	74.4	NB 01	62.6	11.8	N	Y	A/E
R168	67	2	66.4	67.6	69.4	NB 01	59.3	10.1	N	Y	A/E
R168 Second Floor	67	2	70.3	71.6	72.9	NB 01	61.2	11.7	N	Y	A/E
R169	67	2	64.9	66.1	67.9	NB 01	58.4	9.5	N	Y	A/E
R169 Second Floor	67	2	69.1	70.4	71.7	NB 01	60.2	11.5	N	Y	A/E
R170	67	2	71.9	73.2	74.8	NB 01	61.6	13.2	Y	Y	A/E
R170 Second Floor	67	2	74.7	76.0	77.5	NB 01	65.1	12.4	Y	Y	A/E
R171	67	2	71.4	72.7	74.5	NB 01	61.9	12.6	Y	Y	A/E
R171 Second Floor	67	2	74.4	75.7	77.2	NB 01	65.5	11.7	Y	Y	A/E
R172	67	2	71.0	72.3	74.2	NB 01	62.0	12.2	Y	Y	A/E
R172 Second Floor	67	2	74.1	75.4	77.0	NB 01	65.4	11.6	Y	Y	A/E
R173	67	2	70.6	71.9	73.9	NB 01	62.0	11.9	Y	Y	A/E

Table C-3 – Predicted Noise Levels NSA 3 and 4

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R173 Second Floor	67	2	73.8	75.1	76.7	NB 01	65.2	11.5	Y	Y	A/E
R174	67	2	63.3	64.6	66.8	NB 01	58.4	8.4	N	Y	A/E
R174 Second Floor	67	2	67.9	69.2	70.6	NB 01	61.2	9.4	N	Y	A/E
R175	67	2	58.9	60.1	62.1	NB 01	55.9	6.2	N	Y	None
R175 Second Floor	67	2	63.5	64.8	66.2	NB 01	58.8	7.4	N	Y	A/E
R177	67	2	60.6	61.9	63.8	NB 01	56.5	7.3	N	Y	None
R177 Second Floor	67	2	64.7	66.0	67.4	NB 01	59.4	8.0	N	Y	A/E
R178	67	2	65.1	66.4	68.3	NB 01	58.6	9.7	N	Y	A/E
R178 Second Floor	67	2	68.8	70.1	71.5	NB 01	61.4	10.1	N	Y	A/E
R179	67	2	62.2	63.4	65.6	NB 01	57.8	7.8	N	Y	None
R179 Second Floor	67	2	67.0	68.3	69.5	NB 01	60.5	9.0	N	Y	A/E
R180	67	2	64.3	65.6	67.9	NB 01	58.9	9.0	N	Y	A/E
R180 Second Floor	67	2	68.5	69.7	71.1	NB 01	61.5	9.6	N	Y	A/E
R181	67	2	66.6	67.9	70.2	NB 01	60.0	10.2	N	Y	A/E
R181 Second Floor	67	2	70.3	71.5	73.0	NB 01	63.0	10.0	N	Y	A/E
R182	67	2	70.7	72.0	73.9	NB 01	62.2	11.7	Y	Y	A/E
R182 Second Floor	67	2	73.6	74.8	76.4	NB 01	65.5	10.9	Y	Y	A/E
R183	67	2	70.5	71.8	73.5	NB 01	61.8	11.7	Y	Y	A/E
R183 Second Floor	67	2	73.3	74.5	76.0	NB 01	64.9	11.1	Y	Y	A/E
R184	67	2	66.8	68.0	70.0	NB 01	58.9	11.1	N	Y	A/E
R184 Second Floor	67	2	70.3	71.6	73.0	NB 01	61.6	11.4	N	Y	A/E
R185	67	2	63.3	64.6	66.3	NB 01	57.0	9.3	N	Y	A/E
R185 Second Floor	67	2	67.7	69.0	70.3	NB 01	59.2	11.1	N	Y	A/E
R186	67	2	60.7	62.0	63.7	NB 01	55.5	8.2	N	Y	None
R186 Second Floor	67	2	65.7	67.0	68.2	NB 01	57.5	10.7	N	Y	A/E

Table C-3 – Predicted Noise Levels NSA 3 and 4

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R187	67	2	60.8	62.0	63.8	NB 01	55.8	8.0	N	Y	None
R187 Second Floor	67	2	65.8	67.1	68.3	NB 01	57.7	10.6	N	Y	A/E
R188	67	2	62.9	64.2	66.0	NB 01	57.0	9.0	N	Y	A/E
R188 Second Floor	67	2	67.5	68.8	70.1	NB 01	59.3	10.8	N	Y	A/E
R189	67	2	66.1	67.3	69.2	NB 01	58.6	10.6	N	Y	A/E
R189 Second Floor	67	2	69.7	71.0	72.4	NB 01	61.1	11.3	N	Y	A/E
R190	67	2	69.8	71.1	72.8	NB 01	60.9	11.9	Y	Y	A/E
R190 Second Floor	67	2	72.9	74.2	75.6	NB 01	63.7	11.9	Y	Y	A/E
R191	67	2	70.1	71.4	73.0	NB 01	61.0	12.0	Y	Y	A/E
R191 Second Floor	67	2	73.2	74.5	75.9	NB 01	63.7	12.2	Y	Y	A/E
R192	67	2	66.4	67.6	69.3	NB 01	58.6	10.7	N	Y	A/E
R192 Second Floor	67	2	70.3	71.5	72.8	NB 01	60.7	12.1	N	Y	A/E
R193	67	2	63.1	64.3	65.8	NB 01	56.8	9.0	N	Y	None
R193 Second Floor	67	2	68.1	69.3	70.6	NB 01	58.8	11.8	N	Y	A/E
R194	67	2	60.6	61.9	63.5	NB 01	55.4	8.1	N	Y	None
R194 Second Floor	67	2	66.2	67.5	68.7	NB 01	57.1	11.6	N	Y	A/E
R195	67	0	62.7	64.0	65.7	NB 01	57.0	8.7	N	Y	None
R196	67	2	59.7	61.0	62.7	NB 01	54.8	7.9	N	Y	None
R196 Second Floor	67	2	65.7	66.9	68.1	NB 01	56.5	11.6	N	Y	A/E
R197	67	2	61.7	63.0	64.6	NB 01	56.2	8.4	N	Y	None
R197 Second Floor	67	2	67.6	68.8	70.1	NB 01	58.1	12.0	N	Y	A/E
R198	67	2	64.6	65.9	67.5	NB 01	57.9	9.6	N	Y	A/E
R198 Second Floor	67	2	69.8	71.1	72.4	NB 01	59.9	12.5	N	Y	A/E
R199	67	2	69.2	70.5	72.3	NB 01	61.3	11.0	Y	Y	A/E
R199 Second Floor	67	2	73.4	74.7	76.1	NB 01	63.4	12.7	Y	Y	A/E

Table C-3 – Predicted Noise Levels NSA 3 and 4

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R200	67	2	68.8	70.1	71.7	NB 01	60.9	10.8	Y	Y	A/E
R200 Second Floor	67	2	73.1	74.4	75.7	NB 01	63.1	12.6	Y	Y	A/E
R201	67	2	64.0	65.3	66.9	NB 01	57.9	9.0	N	Y	A/E
R201 Second Floor	67	2	69.7	71.0	72.3	NB 01	59.9	12.4	N	Y	A/E
R202	67	2	61.6	62.9	64.6	NB 01	56.2	8.4	N	Y	None
R202 Second Floor	67	2	67.6	68.9	70.0	NB 01	58.2	11.8	N	Y	A/E
R203	67	2	59.8	61.0	62.7	NB 01	55.0	7.7	N	Y	None
R203 Second Floor	67	2	65.4	66.7	67.9	NB 01	56.8	11.1	N	Y	A/E
R204	67	2	59.7	61.0	62.6	NB 01	54.8	7.8	N	Y	None
R204 Second Floor	67	2	65.1	66.4	67.6	NB 01	56.4	11.2	N	Y	A/E
R205	67	2	61.5	62.8	64.4	NB 01	56.1	8.3	N	Y	None
R205 Second Floor	67	2	67.6	68.9	70.0	NB 01	57.9	12.1	N	Y	A/E
R206	67	2	63.9	65.2	66.8	NB 01	57.8	9.0	N	Y	A/E
R206 Second Floor	67	2	69.9	71.2	72.4	NB 01	59.9	12.5	N	Y	A/E
R207	67	2	67.7	69.0	70.5	NB 01	60.6	9.9	Y	Y	A/E
R207 Second Floor	67	2	72.9	74.2	75.5	NB 01	62.9	12.6	Y	Y	A/E
R208	67	2	67.8	69.1	70.5	NB 01	61.2	9.3	Y	Y	A/E
R208 Second Floor	67	2	73.2	74.5	75.8	NB 01	63.7	12.1	Y	Y	A/E
R209	67	2	64.7	65.9	67.5	NB 01	60.1	7.4	N	Y	A/E
R209 Second Floor	67	2	70.4	71.7	72.8	NB 01	62.1	10.7	N	Y	A/E
R210	67	2	62.6	63.9	65.5	NB 01	58.4	7.1	N	Y	None
R210 Second Floor	67	2	68.2	69.4	70.2	NB 01	60.8	9.4	N	Y	A/E
R211	67	2	61.0	62.3	63.9	NB 01	57.5	6.4	N	Y	None
R211 Second Floor	67	2	65.9	67.2	67.9	NB 01	59.9	8.0	N	Y	A/E
R212	67	2	58.8	60.1	62.2	NB 01	56.7	5.5	N	Y	None

Table C-3 – Predicted Noise Levels NSA 3 and 4

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R212 Second Floor	67	2	63.6	64.9	66.4	NB 01	59.4	7.0	N	Y	A/E
R213	67	2	59.2	60.5	62.6	NB 01	56.4	6.2	N	Y	None
R213 Second Floor	67	2	64.1	65.4	66.8	NB 01	58.5	8.3	N	Y	A/E
R214	67	2	60.1	61.4	63.6	NB 01	56.9	6.7	N	Y	None
R214 Second Floor	67	2	65.2	66.5	67.8	NB 01	58.7	9.1	N	Y	A/E
R215	67	2	61.2	62.4	64.5	NB 01	57.7	6.8	N	Y	None
R215 Second Floor	67	2	66.4	67.6	68.9	NB 01	59.6	9.3	N	Y	A/E
R216	67	2	57.5	58.8	60.6	NB 01	53.9	6.7	N	Y	None
R216 Second Floor	67	2	62.5	63.8	65.2	NB 01	55.5	9.7	N	Y	None
R217	67	2	52.6	53.9	55.6	NB 01	50.7	4.9	N	N	None
R217 Second Floor	67	2	56.5	57.8	59.3	NB 01	53.1	6.2	N	Y	None
R218	67	2	51.5	52.7	54.4	NB 01	50.6	3.8	N	N	None
R218 Second Floor	67	2	56.0	57.2	58.7	NB 01	53.8	4.9	N	Y	None
R219	67	2	52.6	53.9	55.6	NB 01	52.9	2.7	N	N	None
R219 Second Floor	67	2	56.9	58.2	59.8	NB 01	56.9	2.9	N	N	None
R220	67	2	60.2	61.5	63.5	NB 01	56.9	6.6	N	Y	None
R220 Second Floor	67	2	65.4	66.7	67.9	NB 01	58.9	9.0	N	Y	A/E
R221	67	2	59.9	61.2	63.2	NB 01	56.7	6.5	N	Y	None
R221 Second Floor	67	2	65.0	66.3	67.6	NB 01	58.7	8.9	N	Y	A/E
R222	67	2	59.5	60.8	62.9	NB 01	56.5	6.4	N	Y	None
R222 Second Floor	67	2	64.7	66.0	67.3	NB 01	58.4	8.9	N	Y	A/E
R223	67	2	59.3	60.6	62.8	NB 01	56.3	6.5	N	Y	None
R223 Second Floor	67	2	64.6	65.9	67.2	NB 01	58.3	8.9	N	Y	A/E
R224	67	2	52.4	53.7	55.2	NB 01	51.4	3.8	N	N	None
R224 Second Floor	67	2	55.8	57.1	58.6	NB 01	54.1	4.5	N	N	None

Table C-3 – Predicted Noise Levels NSA 3 and 4

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R225	67	2	51.1	52.3	54.0	NB 01	51.4	2.6	N	N	None
R225 Second Floor	67	2	55.3	56.5	58.1	NB 01	54.7	3.4	N	N	None
R226	67	2	52.1	53.4	55.4	NB 01	52.0	3.4	N	N	None
R226 Second Floor	67	2	56.9	58.2	59.8	NB 01	55.3	4.5	N	N	None
R227	67	2	56.8	58.1	60.4	NB 01	54.3	6.1	N	Y	None
R227 Second Floor	67	2	61.9	63.2	64.6	NB 01	56.9	7.7	N	Y	None
R228	67	1	55.5	56.8	58.8	NB 01	54.0	4.8	N	N	None
R229	67	1	57.2	58.5	60.6	NB 01	55.1	5.5	N	Y	None
R230	67	1	58.1	59.4	61.6	NB 01	55.6	6.0	N	Y	None
R231	67	1	58.6	59.8	62.1	NB 01	56.3	5.8	N	Y	None
R232	67	1	58.9	60.1	62.2	NB 01	56.4	5.8	N	Y	None
R233	67	1	58.5	59.8	61.8	NB 01	56.3	5.5	N	Y	None
R234	67	1	58.6	59.8	61.8	NB 01	56.2	5.6	N	Y	None
R235	67	1	58.8	60.0	61.9	NB 01	56.3	5.6	N	Y	None
R236	67	1	58.2	59.4	61.3	NB 01	56.0	5.3	N	Y	None
R237	67	1	57.4	58.7	60.4	NB 01	54.7	5.7	N	Y	None
R238	67	1	56.9	58.2	60.2	NB 01	55.5	4.7	N	N	None
R239	67	1	56.3	57.5	59.5	NB 01	55.1	4.4	N	N	None
R240	67	2	58.5	59.8	61.4	NB 01	56.4	5.0	N	Y	None
R240 Second Floor	67	2	62.6	63.9	65.2	NB 01	58.3	6.9	N	Y	None
R241	67	2	58.8	60.0	61.7	NB 01	56.8	4.9	N	Y	None
R241 Second Floor	67	2	62.8	64.1	65.3	NB 01	58.6	6.7	N	Y	None
R242	67	2	59.4	60.7	62.5	NB 01	57.3	5.2	N	Y	None
R242 Seconf Floor	67	2	63.5	64.8	66.0	NB 01	59.0	7.0	N	Y	A/E
R243	67	2	59.5	60.7	62.5	NB 01	57.5	5.0	N	Y	None

Table C-3 – Predicted Noise Levels NSA 3 and 4

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R243 Second Floor	67	2	63.7	64.9	66.0	NB 01	59.2	6.8	N	Y	A/E
R244	67	2	53.1	54.3	55.9	NB 01	51.1	4.8	N	N	None
R244 Second Floor	67	2	56.2	57.5	58.9	NB 01	53.8	5.1	N	Y	None
R245	67	2	51.8	53.0	55.0	NB 01	52.8	2.2	N	N	None
R245 Second Floor	67	2	54.5	55.7	57.4	NB 01	55.0	2.4	N	N	None
R246	67	2	52.2	53.4	55.8	NB 01	54.4	1.4	N	N	None
R246 Second Floor	67	2	55.3	56.5	58.3	NB 01	56.7	1.6	N	N	None
R247	67	2	55.1	56.3	58.1	NB 01	55.7	2.4	N	N	None
R247 Second Floor	67	2	59.3	60.6	61.8	NB 01	57.8	4.0	N	N	None
R271	67	1	56.7	58.0	59.3	NB 01	56.2	3.1	N	N	None
R272	67	1	57.6	58.9	60.2	NB 01	56.7	3.5	N	N	None
R273	67	1	58.5	59.8	61.0	NB 01	57.0	4.0	N	N	None
R274	67	1	59.7	60.9	61.9	NB 01	57.3	4.6	N	N	None
R275	67	1	61.0	62.3	63.1	NB 01	57.6	5.5	N	Y	None
R276	67	1	62.6	63.8	64.5	NB 01	58.5	6.0	N	Y	None
R277	67	1	65.3	66.5	66.2	NB 01	60.0	6.2	Y	Y	A/E
R278	67	1	69.3	70.6	67.0	NB 01	61.1	5.9	Y	Y	A/E
R279	67	1	70.1	71.4	67.2	NB 01	61.4	5.8	Y	Y	A/E
R280	67	1	69.8	71.1	66.6	NB 01	60.9	5.7	Y	Y	A/E
R281	67	1	69.2	70.5	66.4	NB 01	60.9	5.5	Y	Y	A/E
R282	67	1	68.6	69.9	66.4	NB 01	61.8	4.6	Y	N	A/E
R283	67	1	68.2	69.5	66.2	NB 01	61.3	4.9	Y	Y	A/E
R284	67	1	67.4	68.6	66.1	NB 01	61.2	4.9	Y	N	A/E
R285	67	1	64.4	65.7	64.4	NB 01	60.5	3.9	Y	N	None
R286	67	1	65.2	66.5	66.0	NB 01	61.8	4.2	Y	N	A/E

Table C-3 – Predicted Noise Levels NSA 3 and 4

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R287	67	1	65.8	67.1	66.0	NB 01	61.6	4.4	Y	N	A/E
R288	67	1	63.6	64.8	64.5	NB 01	60.4	4.1	Y	N	None
R289	67	1	62.4	63.7	66.1	NB 01	64.0	2.1	N	N	A/E
R290	67	1	61.4	62.6	64.5	NB 01	62.3	2.2	N	N	None
R291	67	1	60.6	61.8	63.9	NB 01	62.1	1.8	N	N	None
R292	67	1	59.7	61.0	62.1	NB 01	60.3	1.8	N	N	None
R293	67	1	58.5	59.7	61.1	NB 01	59.5	1.6	N	N	None
R294	67	1	58.0	59.3	60.4	NB 01	58.7	1.7	N	N	None
R295	67	1	57.2	58.5	60.1	NB 01	58.6	1.5	N	N	None
R296	67	1	57.6	58.8	59.9	NB 01	57.3	2.6	N	N	None
R297	67	1	58.5	59.8	60.7	NB 01	57.8	2.9	N	N	None
R298	67	1	59.5	60.8	61.4	NB 01	58.3	3.1	N	N	None
R299	67	1	60.8	62.1	62.7	NB 01	59.0	3.7	N	N	None
R300	67	1	61.0	62.3	62.7	NB 01	59.3	3.4	N	N	None
R301	67	1	60.3	61.6	62.0	NB 01	59.1	2.9	N	N	None
R302	67	1	59.7	61.0	61.4	NB 01	59.0	2.4	N	N	None
R303	67	1	60.2	61.5	61.7	NB 01	59.7	2.0	N	N	None
R304	67	1	59.0	60.2	60.8	NB 01	58.8	2.0	N	N	None
R305	67	1	58.0	59.3	60.2	NB 01	58.2	2.0	N	N	None
R306	67	1	57.3	58.5	59.5	NB 02	57.6	1.9	N	N	None
R310	67	1	58.9	60.1	61.1	N/A	-	-	N	N	None
R311	67	1	58.7	59.9	60.8	N/A	-	-	N	N	None
R449	67	1	64.6	65.5	65.6	N/A	-	-	N	N	None
R450	67	1	61.8	62.7	62.5	N/A	-	-	N	N	None

Table C-4 – Predicted Noise Levels NSA 5

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R307	67	1	59.5	60.7	60.5	NB 02	60.5	0.0	N	N	None
R320	67	1	58.9	60.2	61.5	NB 02	61.4	0.1	N	N	None
R321	67	1	66.9	68.2	69.9	NB 02	69.9	0.0	Y	N	A/E
R322	67	1	58.9	60.1	61.2	NB02	61.0	0.2	N	N	None
R323	67	1	59.8	61.0	62.1	NB 02	61.9	0.2	N	N	None
R324	67	1	60.9	62.2	63.2	NB 02	63.1	0.1	N	N	None
R325	67	1	62.3	63.6	64.7	NB 02	64.6	0.1	N	N	None
R326	67	1	63.3	64.6	65.7	NB 02	65.6	0.1	Y	N	None
R327	67	1	64.1	65.4	66.2	NB 02	66.1	0.1	Y	N	A/E
R328	67	1	64.4	65.7	65.8	NB 02	65.8	0.0	Y	N	None
R329	67	1	63.5	64.8	64.8	NB 02	64.5	0.3	Y	N	None
R330	67	1	62.6	63.9	63.9	NB 02	63.6	0.3	Y	N	None
R331	67	1	61.9	63.2	63.3	NB 02	62.9	0.4	Y	N	None
R332	67	1	61.2	62.5	62.6	NB 02	62.1	0.5	Y	N	None
R333	67	1	60.6	61.9	62.2	NB 02	61.6	0.6	N	N	None
R334	67	1	60.3	61.6	61.7	NB 02	61.0	0.7	N	N	None
R335	67	1	62.0	63.2	63.4	NB 02	62.8	0.6	N	N	None
R336	67	1	63.2	64.5	64.4	NB 02	63.9	0.5	N	N	None
R337	67	1	64.9	66.2	65.9	NB 02	65.4	0.5	N	N	None
R338	67	1	67.8	69.1	68.8	NB 02	68.3	0.5	Y	N	A/E
R339	67	1	70.2	71.5	71.7	NB 02	71.3	0.4	Y	N	A/E
R340	67	1	67.5	68.8	68.8	NB 02	67.3	1.5	Y	N	A/E
R341	67	1	64.9	66.2	66.1	NB 02	63.8	2.3	Y	N	A/E
R342	67	1	63.2	64.5	64.5	NB 02	62.3	2.2	N	N	None
R343	67	1	62.0	63.3	63.3	NB 02	61.5	1.8	N	N	None
R344	67	1	60.9	62.2	62.1	NB 02	60.6	1.5	N	N	None

Table C-4 – Predicted Noise Levels NSA 5

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R345	67	1	59.9	61.2	60.9	NB 02	59.8	1.1	N	N	None
R346	67	1	59.5	60.8	60.8	NB 02	59.4	1.4	N	N	None
R347	67	1	59.7	61.0	61.0	NB 02	59.0	2.0	N	N	None
R348	67	1	59.7	61.0	61.0	NB 02	58.6	2.4	N	N	None
R349	67	1	59.2	60.4	60.5	NB 02	58.1	2.4	N	N	None
R350	67	1	59.1	60.3	60.9	NB 02	60.7	0.2	N	N	None
R351	67	1	59.3	60.6	61.1	NB 02	60.8	0.3	N	N	None
R352	67	1	59.8	61.1	61.5	NB 02	61.2	0.3	N	N	None
R353	67	1	59.1	60.4	60.8	NB 02	60.5	0.3	N	N	None
R356	67	1	56.7	58.0	58.3	NB 02	56.4	1.9	N	N	None
R357	67	1	58.2	59.5	59.9	NB 02	57.8	2.1	N	N	None
R358	67	1	59.2	60.5	60.8	NB 02	58.5	2.3	N	N	None
R359	67	1	60.9	62.2	62.5	NB 02	59.8	2.7	N	N	None
R360	67	1	62.5	63.7	64.1	NB 02	61.0	3.1	N	N	None
R361	67	1	63.9	65.2	65.5	NB 02	61.9	3.6	N	N	None
R362	67	1	64.7	65.9	66.5	NB 02	61.5	5.0	Y	Y	A/E
R363	67	1	66.3	67.6	68.2	NB 02	61.9	6.3	Y	Y	A/E
R364	67	1	66.4	67.7	68.1	NB 02	61.6	6.5	Y	Y	A/E
R365	67	1	66.1	67.4	67.7	NB 02	61.3	6.4	Y	Y	A/E
R366	67	1	66.0	67.3	67.4	NB 02	61.3	6.1	Y	Y	A/E
R367	67	1	66.4	67.7	68.2	NB 02	61.7	6.5	Y	Y	A/E
R368	67	1	66.8	68.1	68.7	NB 02	62.1	6.6	Y	Y	A/E
R369	67	1	66.8	68.0	68.5	NB 02	62.2	6.3	Y	Y	A/E
R370	67	1	67.0	68.2	68.8	NB 02	62.4	6.4	Y	Y	A/E
R371	67	1	66.8	68.0	68.5	NB 02	62.4	6.1	Y	Y	A/E
R372	67	1	66.2	67.4	67.8	NB 02	62.2	5.6	Y	Y	A/E

Table C-4 – Predicted Noise Levels NSA 5

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R373	67	1	66.3	67.6	68.0	NB 02	62.5	5.5	Y	Y	A/E
R374	67	1	66.9	68.1	68.6	NB 02	62.9	5.7	Y	Y	A/E
R375	67	1	66.9	68.2	68.6	NB 02	62.8	5.8	Y	Y	A/E
R376	67	1	67.2	68.5	69.0	NB 02	63.2	5.8	Y	Y	A/E
R377	67	1	67.0	68.3	68.8	NB 02	62.9	5.9	Y	Y	A/E
R378	67	1	67.1	68.4	68.9	NB 02	63.0	5.9	Y	Y	A/E
R379	67	1	66.8	68.1	68.7	NB 02	63.1	5.6	Y	Y	A/E
R380	67	1	66.4	67.7	68.2	NB 02	62.4	5.8	Y	Y	A/E
R381	67	1	66.4	67.7	68.2	NB 02	62.3	5.9	Y	Y	A/E
R382	67	1	66.2	67.4	67.6	NB 02	61.8	5.8	Y	Y	A/E
R383	67	1	66.1	67.3	67.5	NB 02	61.5	6.0	Y	Y	A/E
R384	67	1	66.1	67.3	67.8	NB 02	61.4	6.4	Y	Y	A/E
R385	67	1	65.3	66.5	67.1	NB 02	61.4	5.7	Y	Y	A/E
R386	67	1	64.2	65.5	66.3	NB 02	61.3	5.0	Y	Y	A/E
R387	67	1	63.3	64.6	65.4	NB 02	61.2	4.2	Y	N	None
R388	67	1	63.1	64.4	65.3	NB 02	61.6	3.7	N	N	None
R389	67	1	61.3	62.6	63.5	NB 02	60.3	3.2	N	N	None
R390	67	1	63.8	65.1	66.1	NB 02	62.3	3.8	Y	N	A/E
R391	67	1	61.9	63.2	64.0	NB 02	62.3	1.7	Y	N	None
R392	67	1	62.7	64.0	64.4	NB 02	63.1	1.3	Y	N	None
R393	67	1	61.0	62.3	63.0	NB 02	61.7	1.3	Y	N	None
R394	67	1	60.0	61.3	62.0	NB 02	60.6	1.4	N	N	None
R395	67	1	59.4	60.7	61.5	NB 02	59.9	1.6	N	N	None
R396	67	1	58.9	60.2	61.0	NB 02	59.4	1.6	N	N	None
R397	67	1	58.4	59.7	60.5	NB 02	58.9	1.6	N	N	None
R398	67	1	57.7	59.0	59.7	NB 02	58.0	1.7	N	N	None

Table C-4 – Predicted Noise Levels NSA 5

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R399	67	1	57.2	58.5	59.1	NB 02	57.4	1.7	N	N	None
R400	67	1	56.9	58.2	58.6	NB 02	57.0	1.6	N	N	None
R401	67	1	57.3	58.6	59.0	NB 02	56.4	2.6	N	N	None
R403	67	1	59.6	60.9	61.4	NB 02	58.5	2.9	N	N	None
R404	67	1	60.6	61.9	62.4	NB 02	59.4	3.0	N	N	None
R405	67	1	55.3	56.5	56.7	NB 02	54.8	1.9	N	N	None
R406	67	1	56.0	57.2	57.3	NB 02	55.2	2.1	N	N	None
R407	67	1	56.3	57.6	58.0	NB 02	55.8	2.2	N	N	None
R408	67	1	56.9	58.2	58.7	NB 02	56.3	2.4	N	N	None
R409	67	1	57.9	59.2	59.7	NB 02	57.2	2.5	N	N	None
R410	67	1	59.1	60.4	60.8	NB 02	58.0	2.8	N	N	None
R411	67	1	61.1	62.4	62.7	NB 02	59.3	3.4	N	N	None
R412	67	1	57.0	58.3	58.7	NB 02	56.4	2.3	N	N	None
R413	67	1	57.6	58.9	59.2	NB 02	56.7	2.5	N	N	None
R414	67	1	58.2	59.5	59.9	NB 02	57.2	2.7	N	N	None
R415	67	1	58.9	60.2	60.5	NB 02	57.6	2.9	N	N	None
R416	67	1	61.0	62.2	62.5	NB 02	59.4	3.1	N	N	None
R417	67	1	56.9	58.2	58.4	NB 02	55.4	3.0	N	N	None
R418	67	1	56.6	57.8	58.0	NB 02	55.0	3.0	N	N	None
R419	67	1	56.6	57.9	58.1	NB 02	55.0	0.0	N	N	None
R420	67	1	56.5	57.8	57.9	NB 02	54.9	0.0	N	N	None
R421	67	1	56.7	58.0	58.1	NB 02	55.1	3.0	N	N	None
R422	67	1	56.8	58.1	58.3	NB 02	55.3	0.0	N	N	None
R423	67	1	56.5	57.8	57.9	NB 02	55.1	0.0	N	N	None
R424	67	1	56.2	57.4	57.5	NB 02	54.7	2.8	N	N	None
R425	67	1	56.5	57.8	57.9	NB 02	55.1	2.8	N	N	None

Table C-4 – Predicted Noise Levels NSA 5

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R426	67	1	57.0	58.2	58.4	NB 02	55.6	2.8	N	N	None
R427	67	1	56.9	58.2	58.3	NB 02	55.3	3.0	N	N	None
R428	67	1	56.9	58.1	58.2	NB 02	55.2	3.0	N	N	None
R429	67	1	57.4	58.6	58.7	NB 02	56.2	2.5	N	N	None
R430	67	1	59.8	61.1	61.5	NB 02	58.2	3.3	N	N	None
R431	67	1	58.7	60.0	60.4	NB 02	57.4	3.0	N	N	None
R432	67	1	57.9	59.2	59.5	NB 02	56.9	2.6	N	N	None
R433	67	1	57.0	58.3	58.6	NB 02	56.3	2.3	N	N	None
R434	67	1	56.6	57.9	58.2	NB 02	56.2	2.0	N	N	None
R435	67	1	57.1	58.4	58.7	NB 02	56.7	2.0	N	N	None
R436	67	1	57.6	58.9	59.2	NB 02	57.1	2.1	N	N	None
R437	67	1	58.2	59.5	59.8	NB 02	57.5	2.3	N	N	None
R438	67	1	59.0	60.3	60.6	NB 02	58.2	2.4	N	N	None
R439	67	1	59.7	61.0	61.3	NB 02	58.8	2.5	N	N	None
R440	67	1	60.5	61.8	62.1	NB 02	59.5	2.6	N	N	None
R441	67	1	57.5	58.8	59.1	NB 02	57.1	2.0	N	N	None
R442	67	1	57.9	59.2	59.5	NB 02	57.4	2.1	N	N	None
R443	67	1	58.6	59.9	60.3	NB 02	58.1	2.2	N	N	None
R444	67	1	59.4	60.6	61.0	NB 02	58.7	2.3	N	N	None
R445	67	1	60.2	61.5	61.9	NB 02	59.4	2.5	N	N	None
R446	67	1	59.7	61.0	62.3	N/A	59.2	3.1	N	N	None

Table C-5 – Predicted Noise Levels NSA 6

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R451	67	1	61.9	63.0	63.8	N/A	-	-	Y	-	None
R452	67	1	62.6	63.9	64.6	N/A	-	-	Y	-	None
R453	67	1	60.8	62.0	63.0	N/A	-	-	N	-	None
R454	67	1	61.7	62.9	63.7	N/A	-	-	Y	-	None
R455	67	1	61.8	63.1	64.1	N/A	-	-	Y	-	None
R456	67	1	62.7	63.9	64.8	N/A	-	-	Y	-	None
R457	67	1	60.7	61.9	63.1	N/A	-	-	N	-	None
R458	67	1	61.6	62.8	63.9	N/A	-	-	Y	-	None
R459	67	1	60.2	61.4	62.4	N/A	-	-	Y	-	None
R460	67	1	63.0	64.3	64.8	N/A	-	-	Y	-	None
R462	67	1	63.5	64.7	65.5	N/A	-	-	Y	-	None
R463	67	1	60.2	61.3	63.3	N/A	-	-	N	-	None
R464	67	1	61.2	62.5	64.0	N/A	-	-	N	-	None
R465	67	2	68.5	69.7	70.5	NB 08	65.4	5.1	Y	Y	A/E
R466	67	1	59.6	60.8	62.6	N/A	-	-	N	-	None
R467	67	1	60.1	61.4	63.1	N/A	-	-	N	-	None
R540	67	6	61.9	63.2	64.3	NB 09	62.9	1.4	Y	N	None
R540(a)	67	6	60.4	61.7	62.9	NB 09	61.5	1.4	N	N	None
R540(b)	67	6	59.7	61.0	62.0	NB 09	60.6	1.4	N	N	None
R541	67	6	62.1	63.4	64.6	NB 09	61.5	3.1	Y	N	None
R541(a)	67	6	60.6	61.8	63.1	NB 09	60.6	2.5	N	N	None
R541(b)	67	6	59.8	61.1	62.4	NB 09	60.1	2.3	N	N	None
R542	67	6	64.8	66.1	67.6	NB 09	61.8	5.8	Y	Y	A/E
R542(a)	67	6	63.3	64.5	65.9	NB 09	61.5	4.4	N	N	None
R543	67	6	62.1	63.4	64.7	NB 09	61.1	3.6	N	N	None

Table C-5 – Predicted Noise Levels NSA 6

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R543(a)	67	6	60.8	62.1	63.4	NB 09	60.5	2.9	N	N	None
R544	67	6	59.9	61.1	62.5	NB 09	60.2	2.3	N	N	None
R545	67	6	61.0	62.3	63.7	NB 09	61.8	1.9	N	N	None
R545(a)	67	6	60.4	61.7	63.1	NB 09	61.1	2.0	N	N	None
R546	67	6	62.6	63.8	65.3	NB 09	64.0	1.3	Y	N	None
R546(a)	67	6	61.5	62.7	64.2	NB 09	62.4	1.8	N	N	None
R547	67	1	59.9	61.1	62.5	NB 09	61.7	0.8	N	N	None
R548	67	1	58.8	60.1	61.6	N/A	-	-	N	-	None

Table C-6 – Predicted Noise Levels NSA 7

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R470	67	2	61.7	62.9	63.3	N/A	N/A	-	N	-	None
R471	67	2	61.0	62.3	62.9	N/A	N/A	-	N	-	None
R472	67	2	60.6	61.8	62.4	N/A	N/A	-	N	-	None
R473	67	2	59.9	61.2	62.2	N/A	N/A	-	N	-	None
R474	67	2	59.3	60.6	61.5	N/A	N/A	-	N	-	None
R475	67	2	58.6	59.9	60.6	N/A	N/A	-	N	-	None
R476	67	2	58.0	59.3	60.0	N/A	N/A	-	N	-	None
R477	67	2	65.3	66.6	66.6	NB 04	61.6	5.0	Y	Y	A/E
R478	67	2	63.1	64.4	64.8	N/A	N/A	-	Y	-	None
R479	67	2	62.8	64.0	64.6	N/A	N/A	-	Y	-	None
R480	67	2	62.9	64.2	64.8	N/A	N/A	-	Y	-	None
R481	67	2	62.7	64.0	64.8	N/A	N/A	-	Y	-	None
R482	67	2	62.0	63.3	64.1	N/A	N/A	-	Y	-	None
R483	67	2	61.3	62.5	63.5	N/A	N/A	-	Y	-	None
R484	67	2	60.6	61.9	63.0	N/A	N/A	-	N	-	None
R485	67	2	59.9	61.1	62.1	N/A	N/A	-	N	-	None
R486	67	2	58.7	60.0	61.0	N/A	N/A	-	N	-	None
R487	67	2	58.0	59.3	60.3	N/A	N/A	-	N	-	None
R488	67	2	59.0	60.2	61.2	N/A	N/A	-	N	-	None
R489	67	2	60.2	61.4	62.4	N/A	N/A	-	N	-	None
R490	67	2	60.7	62.0	62.9	N/A	N/A	-	N	-	None
R491	67	2	61.5	62.8	63.4	N/A	N/A	-	N	-	None
R492	67	2	61.9	63.2	64.0	N/A	N/A	-	N	-	None
R493	67	2	64.4	65.7	66.1	NB 05	61.1	5.0	Y	Y	A/E
R494	67	2	63.0	64.3	65.0	NB 05	60.5	4.5	Y	N	None

Table C-6 – Predicted Noise Levels NSA 7

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R495	67	2	60.4	61.7	62.9	N/A	N/A	-	N	-	None
R496	67	2	59.3	60.6	61.7	N/A	N/A	-	N	-	None
R497	67	1	61.1	62.4	63.5	N/A	N/A	-	Y	-	None
R498	67	1	59.8	61.1	62.5	N/A	N/A	-	N	-	None
R499	67	1	58.9	60.1	61.6	N/A	N/A	-	N	-	None
R500	67	1	59.9	61.2	62.5	N/A	N/A	-	Y	-	None
R501	67	1	59.8	61.0	62.3	N/A	N/A	-	Y	-	None
R502	67	1	60.0	61.3	63.0	N/A	N/A	-	Y	-	None
R510	67	1	58.7	60.0	61.7	N/A	N/A	-	N	-	None
R511	67	1	59.4	60.6	62.4	N/A	N/A	-	N	-	None
R512	67	1	60.5	61.8	63.4	N/A	N/A	-	Y	-	None
R513	67	1	61.6	62.9	64.3	N/A	N/A	-	Y	-	None
R514	67	1	60.7	62.0	63.7	N/A	N/A	-	Y	-	None
R515	67	1	59.4	60.7	62.5	N/A	N/A	-	N	-	None
R516	67	1	59.5	60.8	62.4	N/A	N/A	-	N	-	None
R517	67	1	59.2	60.5	62.2	N/A	N/A	-	N	-	None
R518	67	1	59.2	60.5	62.2	N/A	N/A	-	N	-	None
R519	67	1	59.1	60.4	62.2	N/A	N/A	-	N	-	None
R520	67	1	58.9	60.2	62.0	N/A	N/A	-	N	-	None
R521	67	1	58.7	59.9	61.8	N/A	N/A	-	N	-	None
R522	67	1	58.3	59.6	61.4	N/A	N/A	-	N	-	None
R523	67	1	64.2	65.5	66.5	NB 06	61.5	5.0	Y	Y	A/E
R524	67	1	64.1	65.4	66.4	NB 06	60.7	5.7	Y	Y	A/E
R525	67	1	63.9	65.1	66.1	NB 06	60.2	5.9	Y	Y	A/E
R526	67	1	64.1	65.4	66.5	NB 06	60.6	5.9	Y	Y	A/E

Table C-6 – Predicted Noise Levels NSA 7

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R527	67	1	65.1	66.4	67.3	NB 06	62.3	5.0	Y	Y	A/E
R528	67	1	58.1	59.3	61.0	N/A	N/A	-	Y	-	None
R528(a)	67	1	58.2	59.4	61.1	N/A	N/A	-	Y	-	None
R529	67	1	58.2	59.5	61.1	N/A	N/A	-	Y	-	None
R530	67	1	58.2	59.5	61.1	N/A	N/A	-	Y	-	None
R531	67	1	58.4	59.7	61.2	N/A	N/A	-	Y	-	None
R532	67	1	58.4	59.7	61.2	N/A	N/A	-	Y	-	None
R533	67	1	58.5	59.7	61.2	N/A	N/A	-	Y	-	None
R534	67	1	58.5	59.7	61.2	N/A	N/A	-	Y	-	None
R535	67	1	61.8	63.1	64.2	N/A	N/A	-	Y	-	None
R536	67	1	62.3	63.6	64.6	NB 07	62.7	1.9	Y	N	None
R536(a)	67	1	60.7	62.0	63.3	NB 07	61.5	1.8	N	N	None
R537	67	1	69.9	71.2	71.1	NB 07	64.4	6.7	Y	Y	A/E
R538	67	1	67.4	68.7	69.1	NB 07	64.1	5.0	Y	Y	A/E
R539	67	1	60.6	61.9	63.3	NB 07	61.8	1.5	Y	N	None

Table C-6 – Predicted Noise Levels NSA 8 and 9

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R549	67	1	59.4	60.5	61.7	N/A	-	-	Y	N	None
R550	67	1	60.3	61.4	62.6	N/A	-	-	Y	N	None
R551	67	1	61.0	62.2	63.4	N/A	-	-	Y	N	None
R552	67	1	62.4	63.6	64.9	N/A	-	-	Y	N	None
R552(a)	67	1	69.3	70.5	71.6	NB 11	66.5	5.1	Y	Y	A/E
R553	67	1	58.2	59.5	61.2	NB 10	59.9	1.3	N	N	None
R554	67	1	60.7	62.0	62.3	NB 10	60.9	1.4	N	N	None
R555	67	1	60.1	61.4	61.9	NB 10	59.9	2.0	N	N	None
R556	67	1	60.2	61.5	62.1	NB 10	59.5	2.6	N	N	None
R557	67	1	60.1	61.3	62.2	NB 10	58.4	3.8	N	N	None
R558	67	1	60.4	61.7	62.6	NB 10	57.5	5.1	N	Y	None
R559	67	1	62.0	63.2	64.3	NB 10	58.8	5.5	N	Y	None
R560	67	1	63.9	65.2	66.4	NB 10	60.4	6.0	N	Y	A/E
R561	67	1	66.4	67.7	69.0	NB 10	62.4	6.6	Y	Y	A/E
R562	67	1	68.8	70.1	71.2	NB 10	63.5	7.7	Y	Y	A/E
R563	67	1	68.5	69.8	71.3	NB 10	62.9	8.4	Y	Y	A/E
R564	67	1	67.0	68.3	69.8	NB 10	61.7	8.1	Y	Y	A/E
R565	67	1	65.9	67.2	68.7	NB 10	60.9	7.8	Y	Y	A/E
R566	67	1	64.9	66.2	67.6	NB 10	60.1	7.5	Y	Y	A/E
R567	67	1	64.0	65.2	66.4	NB 10	59.3	7.1	Y	Y	A/E
R568	67	1	62.6	63.9	65.0	NB 10	58.5	6.5	N	Y	None
R569	67	1	63.7	65.0	66.2	NB 10	59.1	7.1	Y	Y	A/E
R570	67	1	65.2	66.4	67.6	NB 10	59.8	7.8	Y	Y	A/E
R571	67	1	65.8	67.1	68.0	NB 10	60.2	7.8	Y	Y	A/E
R572	67	1	65.5	66.7	67.0	NB 10	60.0	7.0	Y	Y	A/E

Table C-6 – Predicted Noise Levels NSA 8 and 9

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R573	67	1	65.4	66.7	66.9	NB 10	60.0	6.9	Y	Y	A/E
R574	67	1	65.4	66.6	66.8	NB 10	59.9	6.9	Y	Y	A/E
R575	67	1	65.6	66.9	67.1	NB 10	59.9	7.2	Y	Y	A/E
R576	67	1	65.6	66.9	67.0	NB 10	60.0	7.0	Y	Y	A/E
R577	67	1	65.7	67.0	67.1	NB 10	60.0	7.1	Y	Y	A/E
R578	67	1	65.6	66.9	67.0	NB 10	60.2	6.8	Y	Y	A/E
R579	67	1	65.6	66.9	66.9	NB 10	60.3	6.6	Y	Y	A/E
R580	67	1	64.2	65.5	66.9	NB 10	60.6	6.3	Y	Y	A/E
R581	67	1	65.0	66.3	66.7	NB 10	60.9	5.8	Y	Y	A/E
R582	67	1	65.7	67.0	66.7	NB 10	60.9	5.8	Y	Y	A/E
R583	67	1	62.6	63.8	66.3	NB 10	61.0	5.3	Y	Y	A/E
R584	67	1	64.5	65.8	66.1	NB 10	61.0	5.1	Y	Y	A/E
R585	67	1	57.1	58.3	59.5	NB 10	57.2	2.3	N	N	None
R586	67	1	57.3	58.5	59.6	NB 10	56.8	2.8	N	N	None
R587	67	1	58.3	59.5	60.4	NB 10	57.2	3.2	N	N	None
R588	67	1	58.9	60.2	61.1	NB 10	57.6	3.5	N	N	None
R589	67	1	59.8	61.0	62.0	NB 10	58.1	3.9	N	N	None
R590	67	1	60.2	61.4	62.4	NB 10	57.8	4.6	N	N	None
R591	67	1	61.4	62.6	63.4	NB 10	58.2	5.2	N	Y	None
R592	67	1	60.6	61.9	63.0	NB 10	57.6	5.4	N	Y	None
R593	67	1	60.2	61.4	62.5	NB 10	57.3	5.2	N	Y	None
R594	67	1	59.9	61.2	62.3	NB 10	57.1	5.2	N	Y	None
R595	67	1	60.1	61.4	62.5	NB 10	57.0	5.5	N	Y	None
R596	67	1	59.3	60.5	61.9	NB 10	56.6	5.3	N	Y	None
R597	67	1	59.1	60.3	61.4	NB 10	57.0	4.4	N	N	None

Table C-6 – Predicted Noise Levels NSA 8 and 9

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R598	67	1	58.8	60.1	61.0	NB 10	57.0	4.0	N	N	None
R599	67	1	60.4	61.6	62.6	NB 10	56.9	5.7	N	Y	None
R600	67	1	61.0	62.2	63.2	NB 10	57.4	5.8	N	Y	None
R601	67	1	62.0	63.3	63.9	NB 10	58.1	5.8	N	Y	None
R602	67	1	62.0	63.2	63.8	NB 10	58.1	5.7	N	Y	None
R603	67	1	61.9	63.2	63.7	NB 10	58.1	5.6	N	Y	None
R604	67	1	61.8	63.1	63.5	NB 10	58.1	5.4	N	Y	None
R605	67	1	61.8	63.1	63.5	NB 10	58.1	5.4	N	Y	None
R606	67	1	61.8	63.0	63.5	NB 10	58.2	5.3	N	Y	None
R607	67	1	61.8	63.1	63.5	NB 10	58.3	5.2	N	Y	None
R608	67	1	61.8	63.1	63.4	NB 10	58.3	5.1	N	Y	None
R609	67	1	61.9	63.2	63.5	NB 10	58.5	5.0	N	Y	None
R610	67	1	61.9	63.1	63.4	NB 10	58.5	4.9	N	N	None
R611	67	1	61.7	63.0	63.3	NB 10	58.6	4.7	N	N	None
R612	67	1	61.7	63.0	63.2	NB 10	58.7	4.5	N	N	None
R613	67	1	61.7	62.9	63.2	NB 10	58.8	4.4	N	N	None
R614	67	1	61.7	62.9	63.1	NB 10	58.9	4.2	N	N	None
R615	67	1	61.1	62.3	62.6	NB 10	58.7	3.9	N	N	None
R616	67	1	59.1	60.3	61.1	NB 10	56.2	4.9	N	N	None
R617	67	1	59.1	60.3	61.1	NB 10	56.2	4.9	N	N	None
R618	67	1	59.1	60.3	61.0	NB 10	56.3	4.7	N	N	None
R619	67	1	58.9	60.2	60.8	NB 10	56.1	4.7	N	N	None
R620	67	1	58.9	60.1	60.8	NB 10	56.2	4.6	N	N	None
R621	67	1	58.8	60.1	60.7	NB 10	56.2	4.5	N	N	None
R622	67	1	58.8	60.1	60.7	NB 10	56.2	4.5	N	N	None

Table C-6 – Predicted Noise Levels NSA 8 and 9

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R623	67	1	58.7	60.0	60.6	NB 10	56.2	4.4	N	N	None
R624	67	1	58.6	59.9	60.5	NB 10	56.2	4.3	N	N	None
R625	67	1	58.8	60.1	60.7	NB 10	56.4	4.3	N	N	None
R626	67	1	58.6	59.9	60.6	NB 10	56.4	4.2	N	N	None
R627	67	1	58.8	60.0	60.7	NB 10	56.5	4.2	N	N	None
R628	67	1	58.5	59.8	60.6	NB 10	56.4	4.2	N	N	None
R629	67	1	59.1	60.4	61.4	NB 10	56.3	5.1	N	Y	None
R630	67	1	58.7	60.0	60.9	NB 10	56.1	4.8	N	N	None
R631	67	1	58.5	59.8	60.6	NB 10	56.0	4.6	N	N	None
R632	67	1	58.3	59.6	60.4	NB 10	55.9	4.5	N	N	None
R633	67	1	58.3	59.5	60.3	NB 10	55.9	4.4	N	N	None
R634	67	1	58.2	59.5	60.3	NB 10	55.9	4.4	N	N	None
R635	67	1	58.1	59.4	60.2	NB 10	55.7	4.5	N	N	None
R636	67	1	58.1	59.3	60.1	NB 10	55.7	4.4	N	N	None
R637	67	1	58.0	59.3	59.9	NB 10	55.6	4.3	N	N	None
R638	67	1	57.9	59.2	59.8	NB 10	55.6	4.2	N	N	None
R639	67	1	57.9	59.1	59.8	NB 10	55.6	4.2	N	N	None
R640	67	1	57.8	59.1	59.8	NB 10	55.6	4.2	N	N	None
R641	67	1	57.8	59.1	59.8	NB 10	55.6	4.2	N	N	None
R642	67	1	57.9	59.1	59.9	NB 10	55.7	4.2	N	N	None
R643	67	1	57.8	59.1	59.9	NB 10	55.7	4.2	N	N	None
R644	67	1	57.9	59.1	60.0	NB 10	55.8	4.2	N	N	None
R645	67	1	57.9	59.2	60.1	NB 10	55.8	4.3	N	N	None
R646	67	1	68.9	70.2	71.9	NB 10	63.0	8.9	Y	Y	A/E
R647	67	1	68.6	69.9	71.6	NB 10	63.0	8.6	Y	Y	A/E

Table C-6 – Predicted Noise Levels NSA 8 and 9

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R648	67	1	67.7	69.0	70.6	NB 10	62.6	8.0	Y	Y	A/E
R649	67	1	66.4	67.7	69.3	NB 10	62.1	7.2	Y	Y	A/E
R650	67	1	65.7	66.9	68.4	NB 10	61.9	6.5	Y	Y	A/E
R651	67	1	64.7	66.0	67.4	NB 10	61.6	5.8	Y	Y	A/E
R652	67	1	64.1	65.4	66.6	NB 10	61.4	5.2	Y	Y	A/E
R653	67	1	60.6	61.9	62.8	NB 10	57.5	5.3	N	Y	None
R654	67	1	60.3	61.6	62.7	NB 10	57.3	5.4	N	Y	None
R655	67	1	59.4	60.7	61.8	NB 10	56.8	5.0	N	Y	None
R656	67	1	60.4	61.7	62.8	NB 10	57.5	5.3	N	Y	None
R657	67	1	60.8	62.1	63.2	NB 10	57.8	5.4	N	Y	None
R658	67	1	61.4	62.6	64.0	NB 10	58.4	5.6	N	Y	None
R659	67	1	61.8	63.1	64.2	NB 10	58.8	5.4	N	Y	None
R660	67	1	62.5	63.8	64.9	NB 10	59.3	5.6	N	Y	None
R661	67	1	63.0	64.2	65.3	NB 10	59.6	5.7	N	Y	None
R662	67	1	63.7	64.9	66.1	NB 10	60.1	6.0	N	Y	A/E
R663	67	1	64.1	65.4	66.4	NB 10	60.4	6.0	N	Y	A/E
R664	67	1	59.2	60.4	62.0	NB 10	57.1	4.9	N	N	None
R665	67	1	59.6	60.8	62.5	NB 10	57.4	5.1	N	Y	None
R666	67	1	60.0	61.3	62.9	NB 10	57.8	5.1	N	Y	None
R667	67	1	60.4	61.7	63.4	NB 10	58.2	5.2	N	Y	None
R668	67	1	60.9	62.2	63.9	NB 10	58.6	5.3	N	Y	None
R669	67	1	61.3	62.5	64.2	NB 10	58.9	5.3	N	Y	None
R670	67	1	62.1	63.4	64.8	NB 10	59.5	5.3	N	Y	None
R671	67	1	58.8	60.1	61.6	NB 10	57.3	4.3	N	N	None
R672	67	1	59.5	60.7	62.3	NB 10	57.8	4.5	N	N	None

Table C-6 – Predicted Noise Levels NSA 8 and 9

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R673	67	1	60.0	61.3	62.8	NB 10	58.3	4.5	N	N	None
R674	67	1	60.6	61.9	63.4	NB 10	58.9	4.5	N	N	None

Table C-8 – Predicted Noise Levels NSA 11,12 and 13

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R680	67	1	58.4	57.2	60.0	N/A	-	-	Y	-	None
R681	67	1	62.8	63.3	64.3	N/A	-	-	Y	-	None
R690	67	1	67.9	68.5	69.8	NB 12	63.5	6.3	Y	Y	A/E
R691	67	1	66.6	67.2	68.7	NB 12	62.8	5.9	Y	Y	A/E
R692	67	1	65.9	66.5	68.5	NB 12	62.5	6.0	Y	Y	A/E
R693	67	1	64.5	65.1	67.5	NB 12	62.0	5.5	Y	Y	A/E
R694	67	1	63.9	64.5	66.6	NB 12	61.4	5.2	Y	Y	A/E
R695	67	1	63.2	63.8	66.2	NB 12	61.1	5.1	N	Y	A/E
R696	67	1	62.2	62.8	65.2	NB 12	60.5	4.7	N	N	None
R697	67	1	63.5	64.1	66.5	NB 12	61.3	5.2	N	Y	A/E
R698	67	1	65.1	65.8	68.2	NB 12	62.2	6.0	Y	Y	A/E
R699	67	1	67.1	67.8	69.8	NB 12	63.1	6.7	Y	Y	A/E
R700	67	1	69.0	69.6	71.3	NB 12	63.8	7.5	Y	Y	A/E
R701	67	1	71.0	71.6	72.9	NB 12	64.6	8.3	Y	Y	A/E
R702	67	1	72.5	73.2	74.0	NB 12	65.0	9.0	Y	Y	A/E
R703	67	1	71.2	71.8	73.0	NB 12	64.6	8.4	Y	Y	A/E
R704	67	1	71.4	72.0	73.3	NB 12	64.9	8.4	Y	Y	A/E
R705	67	1	71.1	71.7	73.0	NB 12	64.5	8.5	Y	Y	A/E
R706	67	1	70.9	71.5	72.9	NB 12	64.4	8.5	Y	Y	A/E
R707	67	1	70.6	71.2	72.8	NB 12	64.3	8.5	Y	Y	A/E
R708	67	1	70.0	70.6	72.4	NB 12	64.2	8.2	Y	Y	A/E
R709	67	1	69.2	69.9	71.8	NB 12	63.9	7.9	Y	Y	A/E
R710	67	1	68.1	68.8	70.8	NB 12	63.3	7.5	Y	Y	A/E
R711	67	1	65.9	66.5	68.7	NB 12	62.5	6.2	N	Y	A/E
R712	67	1	64.2	64.9	67.2	NB 12	61.7	5.5	N	Y	A/E

Table C-8 – Predicted Noise Levels NSA 11,12 and 13

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R713	67	1	63.1	63.7	66.0	NB 12	60.9	5.1	N	Y	A/E
R714	67	1	70.1	70.8	72.6	NB 12	64.3	8.3	Y	Y	A/E
R715	67	1	68.1	68.7	70.9	NB 12	63.9	7.0	N	Y	A/E
R716	67	1	65.8	66.5	68.8	NB 12	62.8	6.0	N	Y	A/E
R717	67	1	63.9	64.6	66.9	NB 12	61.7	5.2	N	Y	A/E
R718	67	1	69.1	69.8	71.8	NB 12	64.6	7.2	Y	Y	A/E
R719	67	1	65.0	65.6	68.0	NB 12	62.8	5.2	Y	Y	A/E
R720	67	1	62.2	62.9	65.3	NB 12	61.0	4.3	N	N	None
R721	67	1	60.8	61.4	63.9	NB 12	60.0	3.9	N	N	None
R722	67	1	59.3	59.9	62.7	NB 12	58.8	3.9	N	N	None
R723	67	1	58.4	59.1	61.8	NB 12	57.8	4.0	N	N	None
R724	67	1	57.6	58.3	61.1	NB 12	57.2	3.9	N	N	None
R725	67	1	56.9	57.5	60.4	NB 12	56.2	4.2	N	N	None
R726	67	1	56.3	57.0	59.8	NB 12	55.6	4.2	N	N	None
R727	67	1	65.0	65.6	68.1	NB 12	62.2	5.9	N	Y	A/E
R728	67	1	65.0	65.7	68.1	NB 12	62.0	6.1	N	Y	A/E
R729	67	1	64.5	65.2	67.7	NB 12	61.8	5.9	N	Y	A/E
R730	67	1	64.4	65.1	67.5	NB 12	61.7	5.8	N	Y	A/E
R731	67	1	63.0	63.6	65.9	NB 12	60.7	5.2	N	Y	None
R732	67	1	61.5	62.2	64.7	NB 12	60.1	4.6	N	N	None
R733	67	1	61.0	61.7	64.2	NB 12	59.7	4.5	N	N	None
R734	67	1	60.3	61.0	63.7	NB 12	59.1	4.6	N	N	None
R735	67	1	60.2	60.8	63.5	NB 12	58.9	4.6	N	N	None
R736	67	1	59.7	60.3	63.1	NB 12	58.5	4.6	N	N	None
R737	67	1	59.5	60.2	62.9	NB 12	58.3	4.6	N	N	None

Table C-8 – Predicted Noise Levels NSA 11,12 and 13

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R738	67	1	59.8	60.4	63.1	NB 12	58.5	4.6	N	N	None
R739	67	1	60.7	61.4	63.9	NB 12	59.3	4.6	N	N	None
R740	67	1	61.6	62.3	64.7	NB 12	59.9	4.8	N	N	None
R741	67	1	58.3	58.9	61.1	NB 12	57.6	3.5	N	N	None
R742	67	1	58.8	59.4	61.8	NB 12	58.1	3.7	N	N	None
R743	67	1	59.5	60.1	62.6	NB 12	58.8	3.8	N	N	None
R744	67	1	60.2	60.8	63.2	NB 12	59.5	3.7	N	N	None
R745	67	1	61.2	61.9	64.0	NB 12	60.2	3.8	N	N	None
R746	67	1	63.2	63.9	65.7	NB 12	61.3	4.4	N	N	None
R747	67	1	64.9	65.6	67.8	NB 12	62.8	5.0	N	Y	A/E
R748	67	1	57.7	58.3	61.1	NB 12	56.9	4.2	N	N	None
R749	67	1	58.9	59.5	62.7	NB 12	58.3	4.4	N	N	None
R750	67	1	59.6	60.2	62.9	NB 12	58.8	4.1	N	N	None
R751	67	1	61.4	62.0	64.4	NB 12	60.1	4.3	N	N	None
R752	67	1	61.0	61.7	64.5	NB 12	60.1	4.4	N	N	None
R753	67	1	60.5	61.1	64.0	NB 12	59.6	4.4	N	N	None
R754	67	1	60.0	60.6	63.5	NB 12	59.2	4.3	N	N	None
R755	67	1	59.4	60.0	63.0	NB 12	58.7	4.3	N	N	None
R756	67	1	58.5	59.1	62.2	NB 12	58.0	4.2	N	N	None
R757	67	1	58.0	58.6	61.7	NB 12	57.4	4.3	N	N	None
R758	67	1	57.3	57.9	60.7	NB 12	56.6	4.1	N	N	None
R759	67	1	58.9	59.5	62.4	NB 12	58.1	4.3	N	N	None
R760	67	1	58.7	59.3	62.3	NB 12	58.0	4.3	N	N	None
R761	67	1	58.6	59.2	62.2	NB 12	57.8	4.4	N	N	None
R762	67	1	58.2	58.9	61.9	NB 12	57.5	4.4	N	N	None

Table C-8 – Predicted Noise Levels NSA 11,12 and 13

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefitted Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R763	67	1	57.8	58.4	61.5	NB 12	57.0	4.5	N	N	None
R764	67	1	57.6	58.2	61.3	NB 12	56.7	4.6	N	N	None
R765	67	1	57.4	58.0	61.0	NB 12	56.4	4.6	N	N	None
R766	67	1	57.6	58.2	61.2	NB 12	56.8	4.4	N	N	None
R767	67	1	57.5	58.1	61.2	NB 12	56.8	4.4	N	N	None
R768	67	1	57.2	57.8	60.8	NB 12	56.3	4.5	N	N	None
R769	67	1	57.0	57.6	60.5	NB 12	56.0	4.5	N	N	None
R770	67	1	56.8	57.4	60.4	NB 12	55.7	4.7	N	N	None
R771	67	1	57.3	58.0	61.0	NB 12	56.3	4.7	N	N	None
R772	67	1	57.9	58.5	61.6	NB 12	56.9	4.7	N	N	None
R773	67	1	58.5	59.1	62.1	NB 12	57.5	4.6	N	N	None
R774	67	1	59.1	59.8	62.7	NB 12	58.1	4.6	N	N	None
R775	67	1	59.6	60.3	63.0	NB 12	58.5	4.5	N	N	None
R776	67	1	59.4	60.0	62.8	NB 12	58.3	4.5	N	N	None
R777	67	1	59.7	60.3	63.0	NB 12	58.5	4.5	N	N	None
R778	67	1	59.9	60.5	63.2	NB 12	58.8	4.4	N	N	None

Appendix D

Noise Barrier Reasonableness Analysis Worksheet

Table D Noise Barrier Reasonableness Analysis Worksheet

Barrier #	Percentage of First Row Receptors which Receive 7dBA or Greater Noise Reduction (%)	Percentage of Impacted Receptors which Receive 5dBA or Greater Noise Reduction (%)	Existing Noise Levels Leq(H) dBA	Range of Future Noise Levels		Barrier Characteristics							# of D/Us Attenuated (Min 5dBA)	Cost/Unit	Noise Barrier Effectiveness			Feasible and Cost Effective
				W/O Barriers Leq(dBA)	Barrier Leq(dBA)	Noise Reduction (dBA) *	Length (ft)	Beginning and End Point (Station)	Height (range)	Height (ft Average)	Total Barrier Area(sw ft)	Cost[1]			Design Goal Achieved[2]	Acoustic Feasibility Achieved [3]	Cost Effective Achieved [4]	
00	53	100	60.1-73.5	60.4-74.4	58.8-65.9	3.7-9.0	1,700	226 to 250 lt	6-18	14.7	25,050	$751,500	73	$10,300	Y	Y	Y	Y
1	68	84	50.9-74.7	54.0-77.5	50.6-65.5	1.4-13.2	3,900	361 to 389	10-20	18.8	73,420	$2,202,600	307	$7,200	Y	Y	Y	Y
2	0	78	55.3-70.2	56.5-71.5	54.7-71.3	0.0-6.6	1,900	395 to 423	8-20	15.4	29,210	$876,300	25	$35,100	Y	Y	N	N
3	0	100	65.6	68.8	56.8	5.1	1,160	380 to 392	6-20	13.9	16,090	$482,700	1	$482,700	N	Y	N	N
4	0	100	65.4	66.7	61.6	5.1	750	438 to 446	12-16	14.9	11,2000	$336,000	2	$168,000	N	Y	N	N
5	0	100	63.6-65.0	64.9-66.3	60.5-61.1	5.3-6.0	1,200	448 to 455	6-16	12.1	14,550	$436,500	5	$87,300	N	Y	N	N

Table D Noise Barrier Reasonableness Analysis Worksheet

Barrier #	Percentage of First Row Receptors which Receive 7dBA or Greater Noise Reduction (%)	Percentage of Impacted Receptors which Receive 5dBA or Greater Noise Reduction (%)	Existing Noise Levels Leq(H) dBA	Range of Future Noise Levels		Barrier Characteristics							# of D/Us Attenuated (Min 5dBA)	Cost/Unit	Noise Barrier Effectiveness			Feasible and Cost Effective
				W/O Barriers Leq(dBA)	Barrier Leq(dBA)	Noise Reduction (dBA) *	Length (ft)	Beginning and End Point	Height (range)	Height (ft Average)	Total Barrier Area(sw ft)	Cost[1]			Design Goal Achieved[2]	Acoustic Feasibility Achieved [3]	Cost Effective Achieved [4]	
6	0	100	63.9-65.1	66.1-67.3	60.0-62.0	5.2-6.1	2,100	461 to 477	4-14	11.7	24,560	$736,800	5	$147,400	N	Y	N	N
7	0	100	60.6-69.9	63.3-71.2	61.9 - 65.6	1.3-5.6	1,100	486 to 499	2-14	10.2	11,200	$336,000	2	$168,000	N	Y	N	N
8	0	100	68.5	70.5	65.4	5.1	600	459 to 469	8-12	11.0	6,600	$198,000	2	$99,000	N	Y	N	N
9	0	100	59.4-64.4	61.3-66.5	59.8-64.0	0.8-5.1	900	472 to 492	8-20	17.1	15,400	$462,000	6	$77,000	N	Y	N	N
10	57	100	57.1-69.3	59.5-71.9	55.6-66.5	1.3-8.9	2,400	503 to 527	6-20	16.3	39,400	$1,182,000	69	$17,100	Y	Y	Y	Y

Table D Noise Barrier Reasonableness Analysis Worksheet

Barrier #	Percentage of First Row Receptors which Receive 7dBA or Greater Noise Reduction (%)	Percentage of Impacted Receptors which Receive 5dBA or Greater Noise Reduction (%)	Existing Noise Levels Leq(H) dBA	Range of Future Noise Levels		Barrier Characteristics							# of D/Us Attenuated (Min 5dBA)	Cost/Unit	Noise Barrier Effectiveness			Feasible and Cost Effective
				W/O Barriers Leq(dBA)	Barrier Leq(dBA)	Noise Reduction (dBA) *	Length (ft)	Beginning and End Point	Height (range)	Height (ft Average)	Total Barrier Area(sw ft)	Cost[1]			Design Goal Achieved[2]	Acoustic Feasibility Achieved [3]	Cost Effective Achieved [4]	
11	0	100	69.3	71.6	66.5	5.1	900	525 to 534	4-12	8.7	7,800	$234,000	1	$234,000	N	Y	N	N
12	61	100	56.3-72.5	59.8-74.0	55.6-65.0	3.5-9.0	2,020	795 to 821	4-12	9.0	18,300	$549,000	35	$15,700	Y	Y	Y	Y
13	0	100	67.2	84.4	63.4	5.0	800	807 to 820	4-10	7.25	5,800	$174,000	1	$174,000	N	Y	N	N

Notes:

[1] Estimated cost of the barriers is based on the surface area cost of $30 per square foot of barrier wall.

[2] The INDOT design goal is 7 dBA noise reduction for a majority (greater than 50%) of benefitted first row receptors.

[3] Acoustic effectiveness of a barrier was judged by providing a noise reduction of 5 dBA or greater at 50 percent or more of the impacted receptors

[4] Cost effectiveness was based on INDOT unit cost of $25,000 per benefiting receptor. For developments where a majority (greater than 50% of receptors) were in place prior to initial construction of the roadway a cost effective criteria of $30,000 per benefitted receptor was used.

Appendix E
Traffic Data

Table E Traffic Data for Existing No-Build and Proposed Conditions

Segment	Number of Lanes	Loudest Hour Volume(DHV)	Auto(per lane)		Heavy Trucks (per lane)		Speed* (AT/HT)
			%	Volume	%	Volume	
Existing							
Start of Project to 116th Street	5	9306	82	1,263	18	66	68/59
116th Street to SR 37	4	4,406	86	947	14	154	68/59
SR 37 to SR 238/Campus Parkway	4	4,369	86	939	14	153	68/59
SR 238/Campus Parkway to SR 13	4	4,451	95	1,057	5	56	73/60
SR 13 to End of Project	4	5,781	99	1,431	1	58	73/60
No-Build							
Start of Project to 116th Street	5	13064	82	1,773	18	93	68/59
116th Street to SR 37	4	6,186	86	1,330	14	216	68/59
SR 37 to SR 238/Campus Parkway	4	5,870	86	1,262	14	205	68/59
SR 238/Campus Parkway to SR 13	4	5,295	95	1,258	5	66	73/60
SR 13 to End of Project	4	6,705	99	1,659	1	11	73/60
Build							
Start of Project to 116th Street		13064	82	1,551	18	82	68/59
116th Street to SR 37	6	6,186	86	841	14	137	68/59
SR 37 to SR 238/Campus Parkway	6	5,870	86	841	14	137	68/59
SR 238/Campus Parkway to SR 13	6	5,295	95	838	5	44	73/60
SR 13 to End of Project	6	6,705	99	1,106	1	11	73/60

*Speeds used were observed based on an average of three drive through of the corridor while maintaining the average speed of the flow of traffic.

Appendix F
Public Involvement Materials

Appendix G
TNM Data Tables

*TNM Data Tables were omitted as they are summarized in Appendix C.

Appendix H
Sound Level Meter Calibration Records

PCB PIEZOTRONICS
A PCB GROUP COMPANY

Certificate of Calibration and Conformance

Certificate Number 2014-187391

Instrument Model CAL200, Serial Number 11087, was calibrated on 7 Mar 2014. The instrument meets factory specifications per Procedure D0001.8190, IEC 60942:2003.

New Instrument
Date Calibrated: 7 Mar 2014
Calibration due:

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Larson Davis	2900	0661	12 Months	8 Apr 2014	2013-172252
Larson Davis	2559	2506	12 Months	13 Jun 2014	29027
Larson Davis	MTS1000/2201	0111	12 Months	22 Aug 2014	SM082213
Larson Davis	PRM902	0480	12 Months	23 Aug 2014	2013-178669
Hewlett Packard	34401A	3146A10352	12 Months	3 Sep 2014	6214490
PCB	1502C02FJ15PSIA	1429	12 Months	2 Oct 2014	3463562806
Larson Davis	PRM915	0112	12 Months	9 Oct 2014	2013-180644

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Environmental test conditions as shown on calibration report.

Affirmations

This Certificate attests that this Instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer.

Signed: Scott Montgomery
Technician: Scott Montgomery

Provo Engineering and Manufacturing Center, 1681 West 820 North, Provo, Utah 84601
Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2008 Certified

LARSON DAVIS
A PCB PIEZOTRONICS DIV.

Larson Davis CAL200 Acoustic Calibrator, SN: 11087
Certificate of Measured Output

Performance at Reference Conditions

Nominal Level (dB SPL):	94	114
Measured Level (dB SPL):	**94.01**	**114.01**
Expanded Uncertainty (dB):	0.137	0.135
Level Error Limit (dB):	±0.34	±0.33
Nominal Frequency (Hz):	1000	1000
Measured Frequency (Hz):	**1000.1**	**1000.1**
Expanded Uncertainty (Hz):	0.2	0.2
Frequency Error Limit (Hz):	±10.0	±10.0
Measured Distortion (%):	0.35	0.29
Expanded Uncertainty (%):	0.25	0.25
Distortion Limit (%):	2.0	2.0

The data is aquired by the insert voltage calibration method using the reference microphone's open circuit sensitivity.

Environmental Conditions

Temperature (°C):	25	25
Relative Humidity (%):	36	34
Static Pressure (kPa):	101.3	101.3

Reference Microphone

Model: Larson Davis 2559
Serial Number: 2506
Open Circuit Sensitivity: 12.230 mV/Pascal
Uncertainty: 0.110 dB

Influence of Static Pressure

Nominal Level (dB SPL): 114

Nominal Pressure (kPa)	Pressure (kPa)	Level Change (dB)	Frequency Change (Hz)	Distortion (%)
108.0	107.9	-0.03	0.00	0.29
101.3	101.2	0.00	0.00	0.29
92.0	91.9	0.04	0.01	0.30
83.0	83.1	0.04	-0.00	0.31
74.0	74.0	0.01	-0.00	0.34
65.0	65.0	-0.09	-0.01	0.37
Expanded Uncertainty:	1.0	0.04	0.20	0.25
Limit:		±0.30	±10.0	2.0

Reference microphone corrections applied.

Environmental Conditions

Temperature (°C):	23
Relative Humidity (%):	40

Reference Microphone

Model: Larson Davis 2559
Serial Number: 2506

Static pressure was measured with a calibrated Motorola pressure sensor MPX2100AP.
Temperature and humidity was measured with a calibrated Fluke 1620A sensor.
Expanded uncertainty of environmental measurements: 0.3 °C, 3 %RH, 1.0 kPa
Uncertainty values are given at 95% confidence level (k = 2).

A Sound Level Meter can be calibrated to a level (L) defined as: L = measured level + pressure sensitivity
or if a Sound Level Meter is calibrated using the nominal level, the adjustments to data (X) are defined as:
X = measured level - nominal level - pressure sensitivity

Scott Montgomery | Larson Davis Calibrator Calibration System | 03 / 07 / 2014

PCB PIEZOTRONICS
A PCB GROUP COMPANY

Certificate of Calibration and Conformance

Certificate Number 2014-190584

Instrument Model 820, Serial Number 1501, was calibrated on 7 May 2014. The instrument meets factory specifications per Procedure D0001.8160, ANSI S1.4 1983, IEC 651-Type 1 1979, and IEC 804-Type 1 1985.

Instrument found to be in calibration as received: NO
Date Calibrated: 7 May 2014
Calibration due:

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Larson Davis	LDSigGn/2239	0653 / 0101	12 Months	14 Apr 2015	2014-189483

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Temperature: 22 ° Centigrade

Relative Humidity: 35 %

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer.

"AS RECEIVED" data unavailable due to unit failure.

Signed: _____
Technician: Eric Olson

Provo Engineering and Manufacturing Center, 1681 West 820 North, Provo, Utah 84601
Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2008 Certified

THE MODAL SHOP INC
A PCB GROUP CO.

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph: 513-351-9919
Fax: 513-458-2172
www.modalshop.com

~ Certificate of Conformance ~

Manufacturer:	Larson Davis	Asset ID:	
Model:	PRM828	Calibration Date:	Jul 17, 2014 09:37:34
Serial Number:	2636	Due Date:	
Description:	Microphone Pre-Amplifier	Technician:	Ed Devlin
Customer:	TMS Rental	Approval:	

Calibration Result:
Frequency Response within ±0.2 dB with 18 pF loading
20.0 Hz - 20000.0 Hz

Temperature: 21 °C (70 °F)
Humidity: 43.5 %
Pressure: 998 mbar

Upon receipt for calibration, the instrument was found to be:
WITHIN the stated tolerance of the manufacturer's specification.

Note: As Found / As Left: In Tolerance.

Notes:
The subject instrument was tested under operating procedures intended to implement the requirements of ISO 9001, ISO 17025 and ANSI Z540. This document certifies that the instrument met the following specification upon its return to the customer. Unless otherwise noted, the reported value is both "as found" and "as left" data. Results relate only to the items calibrated. This certificate may not be reproduced, except in full, without written permission.

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Response (dB)	Frequency (Hz)	Response (dB)	Frequency (Hz)	Response (dB)	Frequency (Hz)	Response (dB)
20.0	-0.027	**1000.0**	0.014	**7100.0**	-0.019		
25.0	-0.023	**1120.0**	0.014	**8000.0**	-0.027		
31.5	0.009	**1250.0**	0.014	**9000.0**	-0.029		
40.0	0.024	**1400.0**	0.014	**10000.0**	-0.034		
50.0	0.014	**1600.0**	0.017	**11200.0**	-0.044		
63.0	0.015	**1800.0**	0.012	**12500.0**	-0.053		
80.0	0.020	**2000.0**	-0.012	**14000.0**	-0.065		
100.0	0.014	**2240.0**	-0.017	**16000.0**	-0.083		
125.0	0.014	**2500.0**	-0.012	**18000.0**	-0.094		
160.0	0.017	**2800.0**	-0.008	**20000.0**	-0.109		
200.0	0.016	**3150.0**	0.003				
250.0	0.001	**3550.0**	0.013				
315.0	0.006	**4000.0**	0.020				
400.0	0.007	**4500.0**	0.009				
500.0	0.011	**5000.0**	-0.001				
630.0	0.014	**5600.0**	-0.008				
800.0	0.013	**6300.0**	-0.014				

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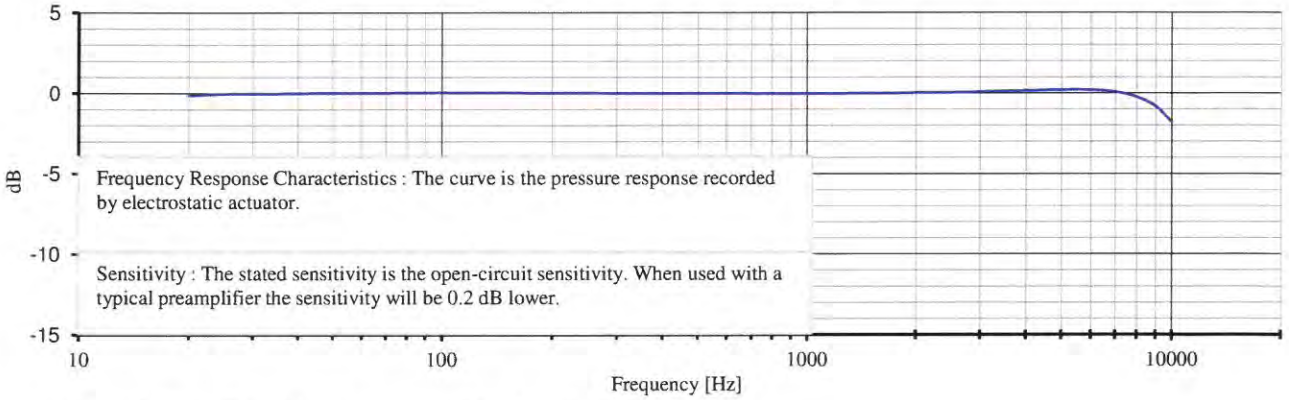
www.modalshop.com

~Certificate of Calibration~

Manufacturer:	Larson Davis	**Asset ID:**	
Model Number:	2560	**Customer:**	TMS Rental
Serial Number:	3384	**Calibration Date:**	Aug 22, 2013 15:35:42
Description:	Pressure Microphone	**Due Date:**	

Sensitivity:	**250 Hz**	**1 kHz**		**Temperature:**	73 (23)	°F (°C)
	-25.94	-25.96	dB re. 1V/Pa	**Humidity:**	48	%
	50.45	50.32	mV/Pa	**Ambient Pressure:**	996.1	mbar

Cal. Results: In Tolerance **Polarization Voltage:** 200 VDC



Traceability: The calibration is traceable through 681/280411-11.

Notes: Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB.
Calibrated per procedure PRD-P204.

User Note : As Found / As Left: In Tolerance.

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)
20	-0.14	**630**	-0.02	**4500**	0.17		
25	-0.05	**800**	-0.02	**5000**	0.18		
31.5	-0.03	**1000**	-0.02	**5600**	0.20		
40	-0.01	**1120**	-0.02	**6300**	0.16		
50	0.02	**1250**	-0.02	**7100**	0.04		
63	0.01	**1400**	-0.02	**8000**	-0.25		
80	0.02	**1600**	-0.01	**9000**	-0.83		
100	0.04	**1800**	0.00	**10000**	-1.83		
125	0.03	**2000**	0.02				
160	0.02	**2240**	0.02				
200	0.01	**2500**	0.03				
250	0.00	**2800**	0.05				
315	-0.01	**3150**	0.08				
400	-0.01	**3550**	0.11				
500	-0.01	**4000**	0.14				

ACCREDITED

Technician: Ed Devlin

Approval: Edward A. Devlin

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	77606	9/21/2012	9/21/2013

820 and NMS002 Kits

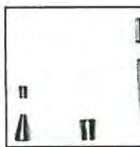
TMS THE MODAL SHOP, INC.
A PCB GROUP CO.

This shipment contains ____ 820 kits.

Each kit includes one each of items shown

Windscreen, 3.5" diameter

¼" and 1" microphones ship with adapters to connect with the ½" preamplifier.



2560

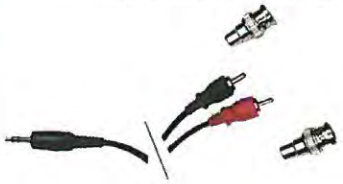
Microphones ship in a case with a guideline sheet, an o-ring, and active (blue) dessicant.

828 Preamplifiers ship in a protective case with a removable cap on the preamplifier end.

EXC series cable, 5 pin Switchcraft extension connector, used as (optional) extender cable between meter and preamp.

820 SLM, includes new 9V battery installed

CBL042 provides AC/DC output for external recording. 3.5mm to RCA ends, plus (2) BNC adapters. More info from the 820 manual, Page 4-8.



Also included are ____ NMS002 components:

EPS2106 subkit, includes clear enclosure, windscreen with birdspikes, dessicant cartridges and manual detailing installation instructions.

____ **PSA004** battery charger(s)

ADP034 adapter

Additional **EXC series cable,** if required

TRP003 tripod

EPS023 case and kit, includes BAT006 battery and connection cables (CBL102 and CBL116) in foam. Installation picture attached.

Also included are the following standard accessories:

Paperwork, including:

- This sheet as a reference
- 820 Reference Manual (Rev B or higher)
- 820 Users Quick Start Guide
- SLM Util Software (Rev. 1.39 or higher) + manual
- Calibration certs for each meter and microphone, and calibrator
- Rental Tracking Sheet, includes serial numbers of units shipped

Please note that Util software and 820 manual are also available for download from www.larsondavis.com in the "Support" section.
Feel free to call us if you have any questions! 513-351-9919

PD XXX Rev D 2 March 2007

CBL116 interfaces between a serial connection or external power in NMS systems (For more information, see SLM Connectivity Kit sheet or NMS Connectivity sheet)

ADP073 Use this adapter if computer has USB and no serial port. Includes driver/install CD and quick start guide.

Calibrator with adapters (if necessary), manual or instruction sheet. Chapter 3 of the 820 manual is short and covers calibration

Appendix I
Field Survey Forms and Photo Log

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL		ENGINEER: RJC	DATE: 7/23
MEASUREMENT ADDRESS: 10589 Clay Prairie Parkway	CITY: Fishers IN	☐ Single-Family ☐ Multi-Family ☐ Recreational ☒ Commercial	SITE NO.: ST-01

SOUND LEVEL METER:
☐ LD-870 ☒ LD-820
☐ LD-824 ☐ LD-812
☐ B&K-2250 ☐ _____
SERIAL #: 1501

MICROPHONE: ☒ WIND SCREEN
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
SERIAL #: 3384

PRE AMP:
☐ LD-900
☒ LD-828
☐ _____
SERIAL #: 2636

CALIBRATOR: Cal 200
☐ LD CA250
☐ B&K 4231
S/N 11087

Freq, Hz.
☐ 250
☒ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 94.0 / 93.8 / 8.1 / 11:27
After 94.0 / 93.9 / 8.1 / 11:52

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 72 °F R.H.: 89.3 %
WIND SPEED: 0.8 MPH
TOWARD (DIR): E
SKIES: Overcast
CAMERA —
PHOTO NOs. —

NOTES:
- Military helicopter set peak
- undeveloped commercial parcel

Dist. to Center of Nearest Lane 465
☐ Video ☐ Radar

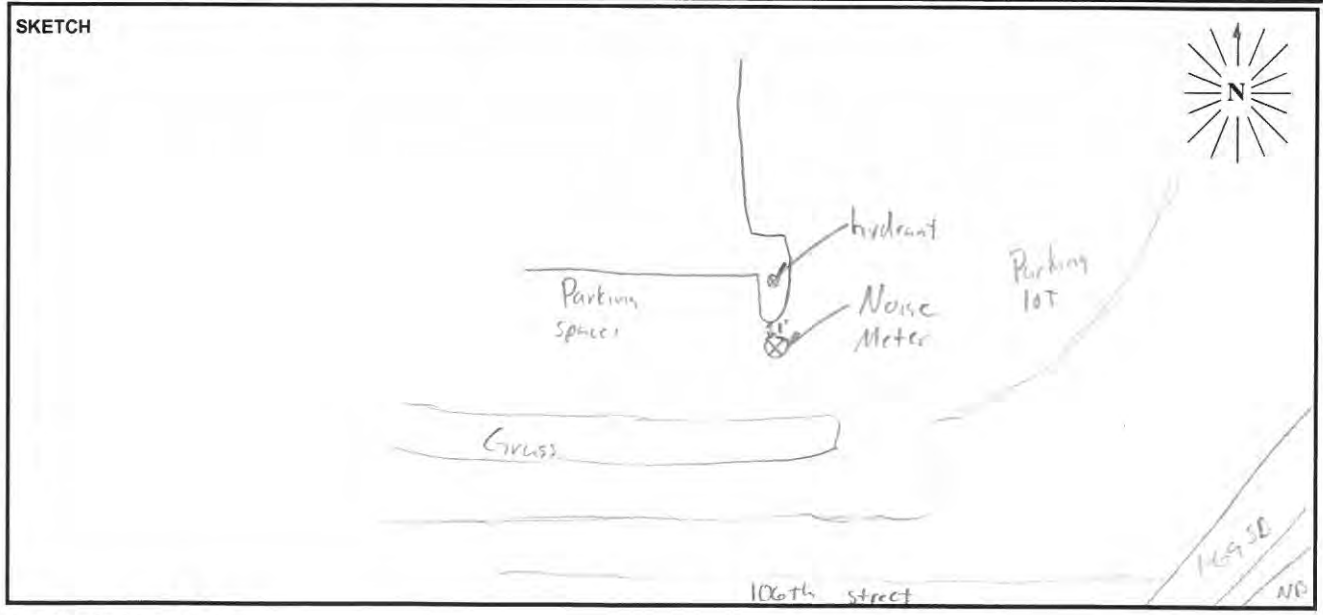
Counts (20 min)

	AT	MT	HT
NB	939	23	114
SB	1216	16	119

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/23	11:29	11:49	55.0	57.5	58.8	59.7	60.7	62.0	64.2	82.2	62.5	20min counts

SKETCH



PARSONS

Photo 1: 10589 Clay Prairie Parkway, Site No. ST-01, Facing North

Photo 2: 10589 Clay Prairie Parkway, Site No. ST-01, Facing East

Photo 3: 10589 Clay Prairie Parkway, Site No. ST-01, Facing West

Photo 4: 10589 Clay Prairie Parkway, Site No. ST-01, Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL		ENGINEER: RJC	DATE: 7/23
MEASUREMENT ADDRESS: 8610 106th Street Arch. Block and Tile	CITY: Fishers IN	☐ Single-Family ☐ Multi-Family ☐ Recreational ☒ Commercial	SITE NO.: ST-02

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ _____	MICROPHONE: ☒ WIND SCREEN ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM	PRE AMP: ☐ LD-900 ☒ LD-828 ☐ _____	NOTES: SYSTEM PWR: ☒ BAT ☐ AC (observations at start of measurement) TEMP: 73 °F R.H.: 82.1 % WIND SPEED: 0.9 MPH TOWARD (DIR): E SKIES: Overcast CAMERA — PHOTO NOs. —
SERIAL #: 1501	SERIAL #: 3384	SERIAL #: 2636	

CALIBRATOR: Cal 200 ☐ LD CA250 ☐ B&K 4231 S/N 11087	Freq, Hz. ☐ 250 ☒ 1000 ☐ _____	CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time Before 94.0 / 93.8 / 8.1 / 12:19 After 94.0 / 94.1 / 8.1 / 12:44

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES:

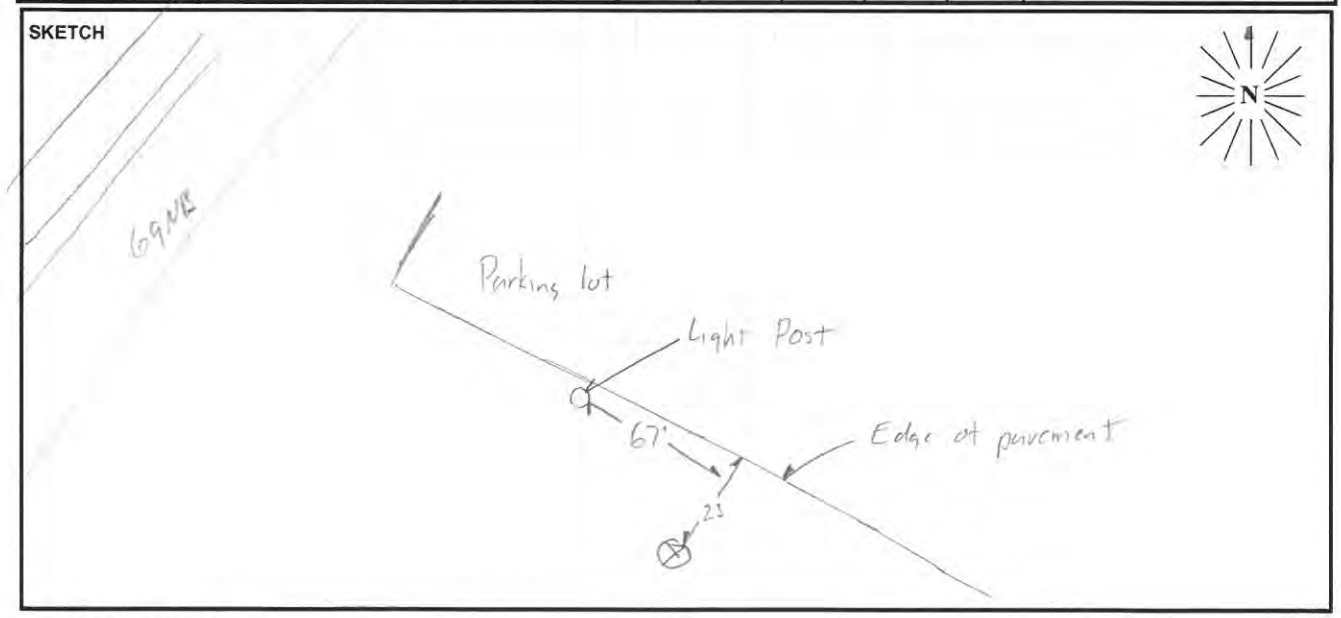
Dist. to Center of Nearest Lane 289 ☐ Video ☐ Radar

Counts	AT	MT	HT
SB	1173	17	122
NB	919	24	133

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}^{67}	L_{50}	L_{25}^{33}	L_{10}	L_{01}^{05}	L_{MAX}	L_{EQ}	NOTES:
7/23	12:20	12:40	60.6	62.0	64.3	65.2	66.1	67.7	68.3	70.0	65.6	

SKETCH



PARSONS

Photo 5: 8610 106th St Arch. Block and Tile, Site No. ST-02, Facing North

Photo 6: 8610 106th St Arch. Block and Tile, Site No. ST-02, Facing East

Photo 7: 8610 106th St Arch. Block and Tile, Site No. ST-02, Facing West

Photo 8: 8610 106th St Arch. Block and Tile, Site No. ST-02, Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL	ENGINEER: RJC	DATE: 7/23
MEASUREMENT ADDRESS: 11144 Lantern Road	CITY: Fishers IN	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial — SITE NO.: ST 03

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ _____	MICROPHONE: ☒ WIND SCREEN ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM	PRE AMP: ☐ LD-900 ☒ LD-828 ☐ _____	NOTES: SYSTEM PWR: ☐ BAT ☒ AC (observations at start of measurement) TEMP: 68 °F R.H.: 87.1 % WIND SPEED: 2.2 MPH TOWARD (DIR): E SKIES: Overcast CAMERA — PHOTO NOs. —
SERIAL #: 1501	SERIAL #: 3384	SERIAL #: 2636	

CALIBRATOR: Cal 200 ☐ LD CA250 ☐ B&K 4231 S/N 11087

Freq, Hz. ☐ 250 ☒ 1000 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before 94.0 / 94.0 / 8.1 / 10:19

After 94.0 / 94.1 / 8.1 / 10:42

METER SETTINGS: ☐ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☐ INTERVALS _____ - MINUTE ☒ L_N PERCENTILE VALUES

NOTES: Periodic braking on SB
No engine braking
Wet pavement

Dist. to Center of Nearest Lane ~88' ☐ Video ☐ Radar

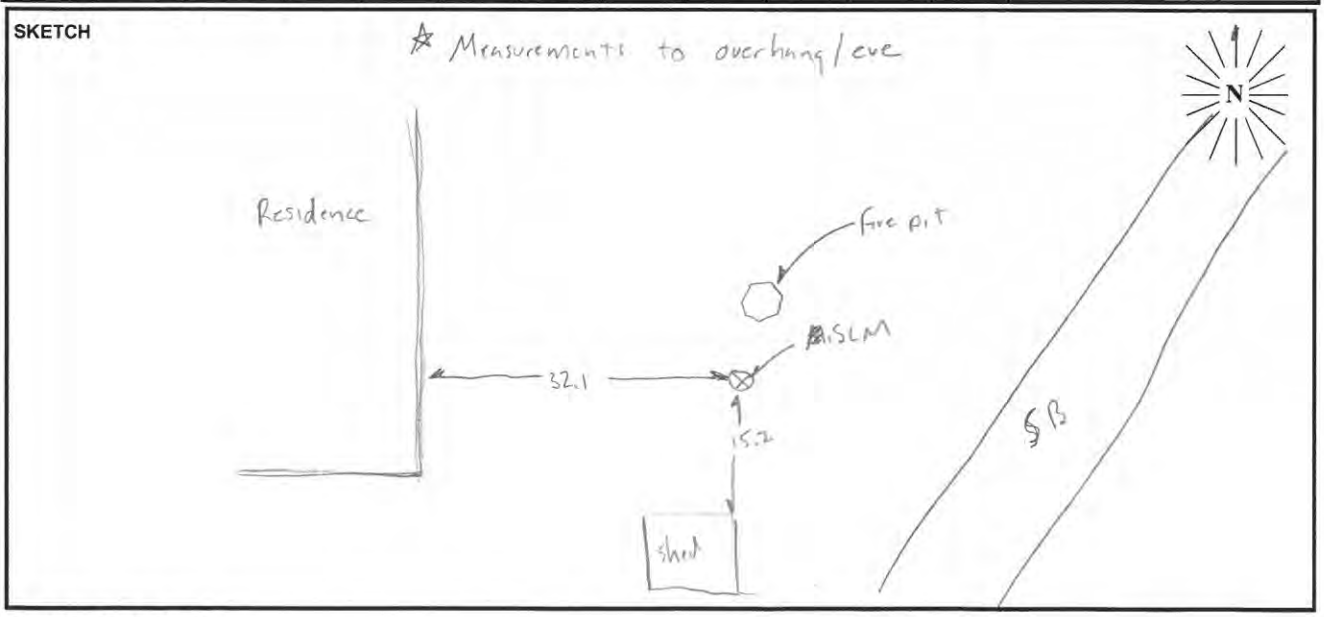
Counts 20 min

	AT	MT	HT
SB	1128	24	129
NB	819	27	131

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/23	10:21	10:41	65.4	72.0	73.8	75.1	76.1	78.0	78.7	88.2	75.7	

SKETCH



PARSONS

Photo 9: 11144 Lantern Rd, Site No. ST-03, Facing North

Photo 10: 11144 Lantern Rd, Site No. ST-03, Facing East

Photo 11: 11144 Lantern Rd, Site No. ST-03, Facing West

Photo 12: 11144 Lantern Rd, Site No. ST-03, Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL		ENGINEER: RJC	DATE: 7/22
MEASUREMENT ADDRESS: 11442 Lantern Road Fishers Elementary	CITY: Fishers IN	☐ Single-Family ☐ Multi-Family ☒ School ☐ Recreational ☐ Commercial	SITE NO.: ST 04

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ _____	MICROPHONE: ☒ WIND SCREEN ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM	PRE AMP: ☐ LD-900 ☒ LD-828 ☐ _____	NOTES: SYSTEM PWR: ☒ BAT ☐ AC (observations at start of measurement) TEMP: 84 °F R.H.: 52 % WIND SPEED: 1.8 MPH TOWARD (DIR): E SKIES: clear / sunny CAMERA — PHOTO NOs. —
SERIAL #: 1501	SERIAL #: 3384	SERIAL #: 2636	

CALIBRATOR: Cal 200 ☐ LD CA250 ☐ B&K 4231 S/N 11087	Freq, Hz. ☐ 250 ☒ 1000 ☐ _____	CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time Before 94.0 / 93.9 / 8.1 / 15:22 After 94.0 / 94.1 / 8.1 / 15:46

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES: Video traffic

Dist. to Center of Nearest Lane 122' ☐ Video ☐ Radar

Counts

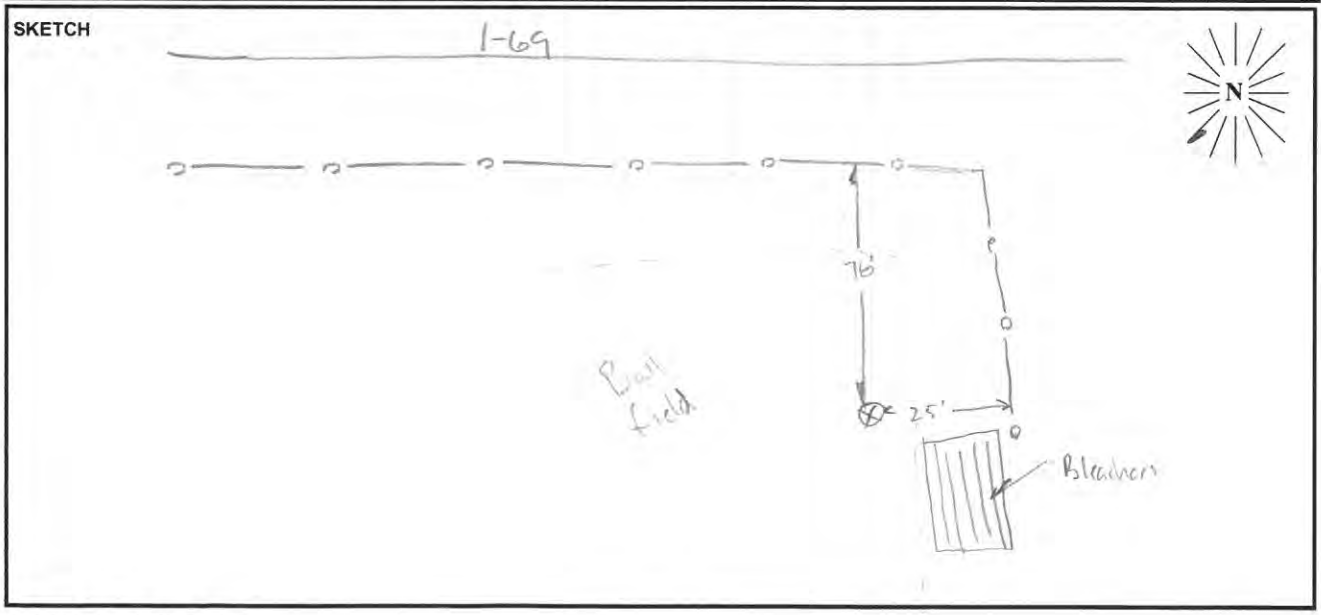
	AT	MT	HT
NB Exit	746	9	20
NB	599	10	81
SB	843	43	98
SB on ramp	262	6	3

18 min
3.)

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/22	15:25	15:45	52.9	57.8	59.2	60.3	61.2	63.0	63.8	75.1	61.4	

SKETCH



PARSONS

Photo 13: 11442 Lantern Rd, Fishers Elementary, Site No. ST-04, Facing North

Photo 14: 11442 Lantern Rd, Fishers Elementary, Site No. ST-04, Facing East

Photo 15: 11442 Lantern Rd, Fishers Elementary, Site No. ST-04, Facing West

Photo 16: 11442 Lantern Rd, Fishers Elementary, Site No. ST-04, Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL		ENGINEER: RJC	DATE: 7/22
MEASUREMENT ADDRESS: Cumberland Crossing Apartments, 10225 Stage Coach Trail	CITY: Fishers IN	☐ Single-Family ☒ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: ST 05

SOUND LEVEL METER:
☐ LD-870 ☒ LD-820
☐ LD-824 ☐ LD-812
☐ B&K-2250 ☐ _____
SERIAL #: 1501

MICROPHONE: ☒ WIND SCREEN
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
SERIAL #: 3384

PRE AMP:
☐ LD-900
☒ LD-828
☐ _____
SERIAL #: 2636

CALIBRATOR: Cal 200
☐ LD CA250
☐ B&K 4231
S/N 11087

Freq, Hz.
☐ 250
☒ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 94.0 / 94.1 / 0.1 / 8:47
After 94.0 / 94.0 / 0.1 / 9:17

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 81 °F R.H.: 58 %
WIND SPEED: 2.0 MPH
TOWARD (DIR): E
SKIES: Mostly Sunny
CAMERA —
PHOTO NOs. —

NOTES: Dist. to Center of Nearest Lane 129' ☐ Video ☐ Radar

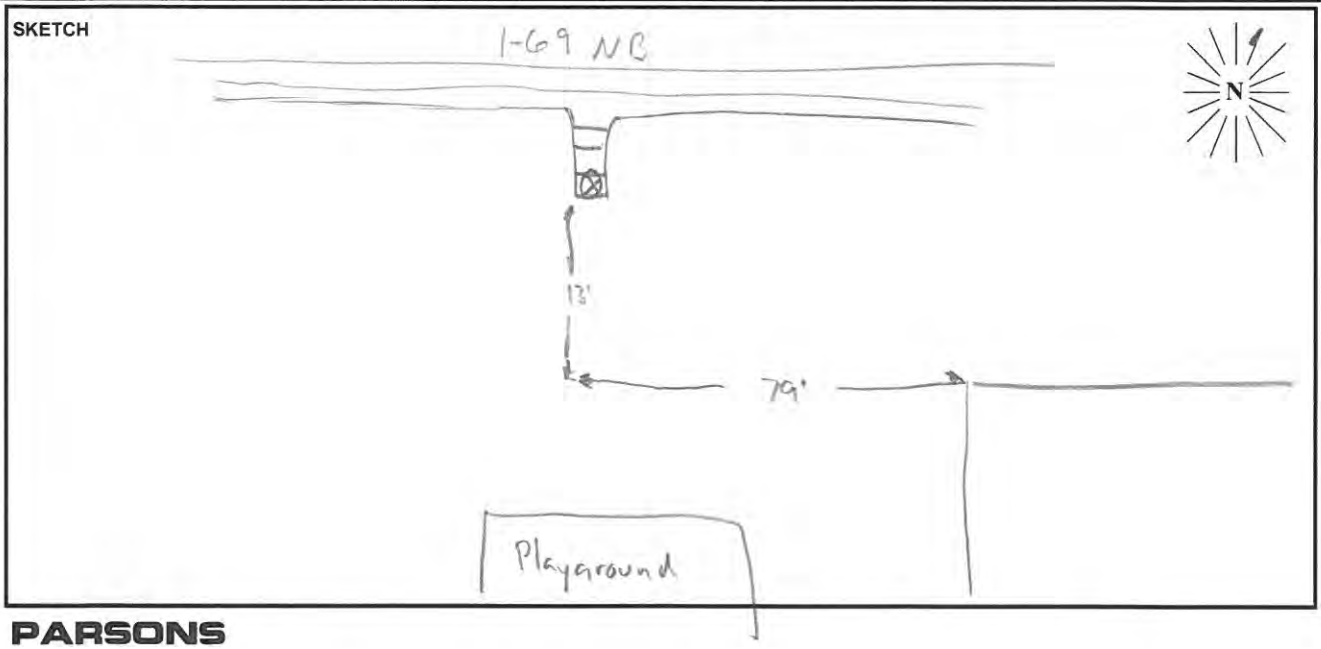
Counts

	AT	MT	HT
NB	359	16	107
SB	583	6	105

MEAS. TYPE: ☐ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	$L_{90}^{(2)}$	L_{50}	$L_{25}^{(2)}$	L_{10}	$L_{01}^{(5)}$	L_{MAX}	L_{EQ}	NOTES:
7/22	8:55	9:15	52.7	63.6	67.0	68.5	69.7	72.1	73.0	77.2	69.3	4 pedestrians

SKETCH



PARSONS

Photo 17: 10225 Stage Coach Trail, Cumberland Crossing Apt, Site No. ST- 05, Facing North

Photo 18: 10225 Stage Coach Trail, Cumberland Crossing Apt, Site No. ST- 05, Facing East

Photo 19: 10225 Stage Coach Trail, Cumberland Crossing Apt, Site No. ST- 05, Facing West

Photo 20: 10225 Stage Coach Trail, Cumberland Crossing Apt, Site No. ST- 05, Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL		ENGINEER: RJC	DATE: 7/22
MEASUREMENT ADDRESS: 10526 Blue Springs Lane	CITY: Fishers IN	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: ST06

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☐ LD-870 ☒ LD-820	☒ WIND SCREEN	☐ LD-900	SYSTEM PWR: ☒ BAT ☐ AC
☐ LD-824 ☐ LD-812	☐ NON-POLAR ☐ POLARIZED	☒ LD-828	(observations at start of measurement)
☐ B&K-2250 ☐ _____	☒ 1/2-INCH ☐ FREEFIELD	☐ _____	TEMP: 81.5 °F R.H.: 59 %
SERIAL #: 1501	☐ 1-INCH ☐ RANDOM	SERIAL #: 2636	WIND SPEED: 1.7 MPH
	SERIAL #: 3384		TOWARD (DIR): E

CALIBRATOR:	Freq, Hz.	CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time	
Cal 200	☐ 250	Before	94.0 / 94.1 / 8.1 / 9:40
☐ LD CA250	☒ 1000	After	94.0 / 94.0 / 8.1 / _____
☐ B&K 4231	☐ _____		
S/N 11087			

METER SETTINGS:					
☐ A-WTD	☐ LINEAR	☒ SLOW	☐ 1/1 OCT	☐ INTERVALS _____ - MINUTE	
☐ C-WTD	☐ IMPULSE	☐ FAST	☐ 1/3 OCT	☒ L_N PERCENTILE VALUES	

NOTES: Earthen Berm with 6' wooden fence

Dist. to Center of Nearest Lane: 169 ☐ Video ☐ Radar

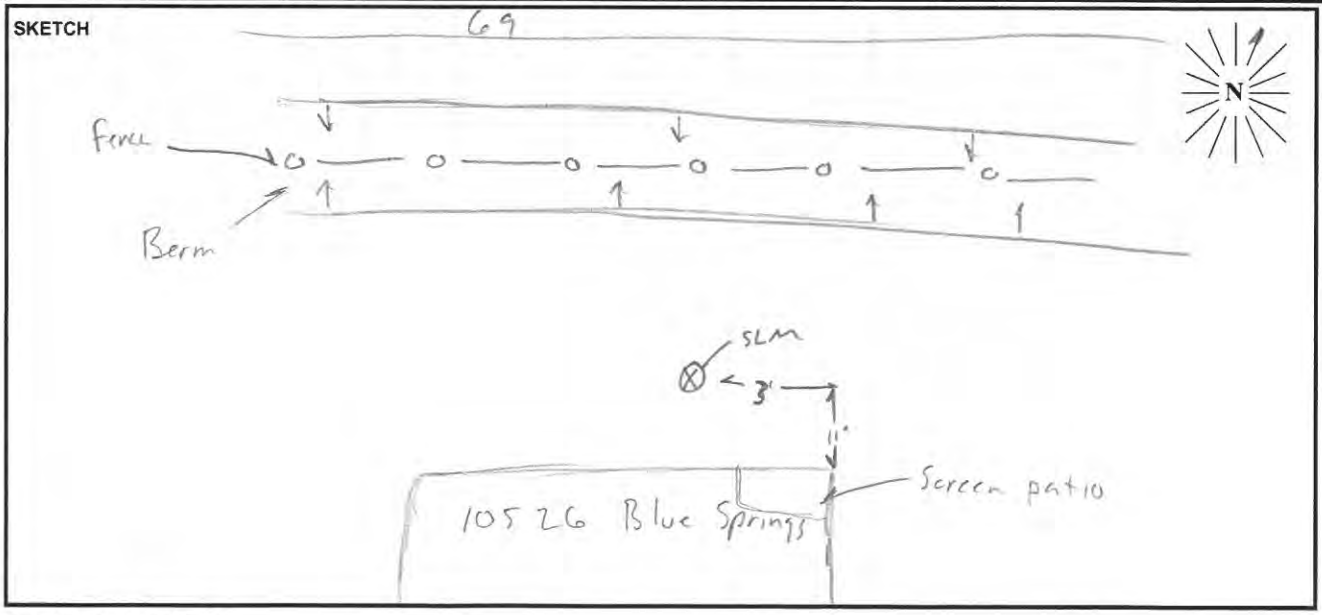
Counts

	AT	MT	HT
NB	359	16	107
SB	583	6	105

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/22	9:42	10:02	52.8	56.7	59.5	60.7	62.0	64.2	65.3	68.6	61.5	

SKETCH



PARSONS

Photo 21: 1526 Blue Springs Lane, Site No. ST- 06, Facing North

Photo 22: 1526 Blue Springs Lane, Site No. ST- 06, Facing East

Photo 23: 1526 Blue Springs Lane, Site No. ST- 06, Facing West

Photo 24: 1526 Blue Springs Lane, Site No. ST- 06, Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL	ENGINEER: RJC	DATE: 7/22
MEASUREMENT ADDRESS: 11025 Cool Winds Way	CITY: Fishers IN	☑ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial — SITE NO.: ST07

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ _____
SERIAL #: 1501

MICROPHONE: ☒ WIND SCREEN ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM
SERIAL #: 3384

PRE AMP: ☐ LD-900 ☒ LD-828 ☐ _____
SERIAL #: 2636

CALIBRATOR: Cal 200 ☐ LD CA250 ☐ B&K 4231 S/N 11087
Freq, Hz. ☐ 250 ☒ 1000 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 94.0 / 94.0 / 8.1 / 11:20
After 94.0 / 93.9 / 8.1 / 11.42

METER SETTINGS: ☐ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☐ INTERVALS _____ - MINUTE ☒ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☐ BAT ☐ AC
(observations at start of measurement)
TEMP: 83 °F R.H.: 58 %
WIND SPEED: 23 MPH
TOWARD (DIR): E
SKIES: Sunny
CAMERA —
PHOTO NOs. —

NOTES: Video 2

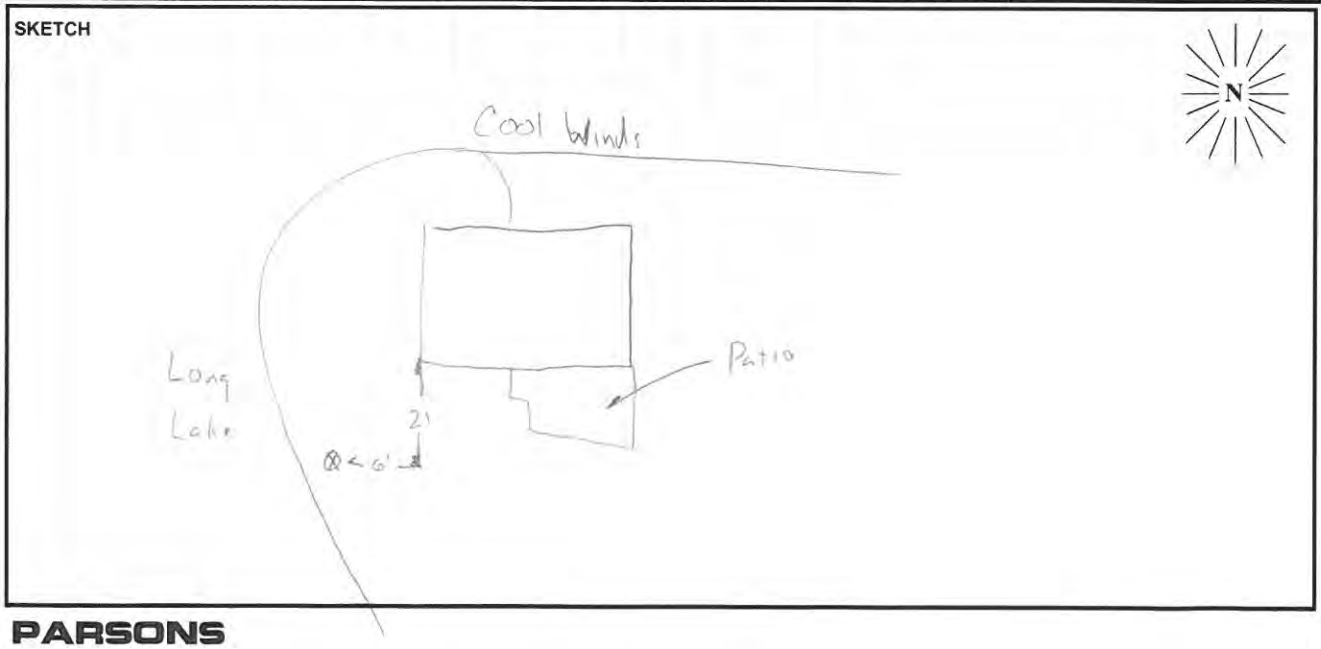
Dist. to Center of Nearest Lane 284 ☐ Video ☐ Radar

Counts	AT	MT	HT
NB	419	9	118
SB	564	8	100

MEAS. TYPE: ☐ Long Term ☑ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/22	11:22	11:42	44.8	48.5	50.2	51.5	52.6	54.8	55.8	61.9	52.3	

SKETCH



PARSONS

Photo 25: 11025 Cool Winds Way, Site No. ST- 07, Facing North

Photo 26: 11025 Cool Winds Way, Site No. ST- 07, Facing East

Photo 27: 11025 Cool Winds Way, Site No. ST- 07, Facing West

Photo 28: 11025 Cool Winds Way, Site No. ST- 07, Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL		ENGINEER: RJC	DATE: 7/22
MEASUREMENT ADDRESS: 11066 Cool Winds Way	CITY: Fishers IN	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: ST08

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☐ LD-870 ☒ LD-820	☒ WIND SCREEN	☐ LD-900	SYSTEM PWR: ☐ BAT ☐ AC
☐ LD-824 ☐ LD-812	☐ NON-POLAR ☐ POLARIZED	☒ LD-828	(observations at start of measurement)
☐ B&K-2250 ☐ _____	☒ 1/2-INCH ☐ FREEFIELD	☐ _____	TEMP: 84 °F R.H.: 55.9 %
SERIAL #: 1501	☐ 1-INCH ☐ RANDOM	SERIAL #: 2636	WIND SPEED: 2.6 MPH
	SERIAL #: 3384		TOWARD (DIR): E

CALIBRATOR:	Freq, Hz.	CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time	SKIES: E
Cal 200	☐ 250	Before 94.0 / 94.1 / 8.1 / 10:42	CAMERA Sunny
☐ LD CA250	☒ 1000	After 94.0 / 94.0 / 8.1 / 11.05	PHOTO NOs. _____
☐ B&K 4231	☐ _____		
S/N 11087			

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES: Video, 1st segment

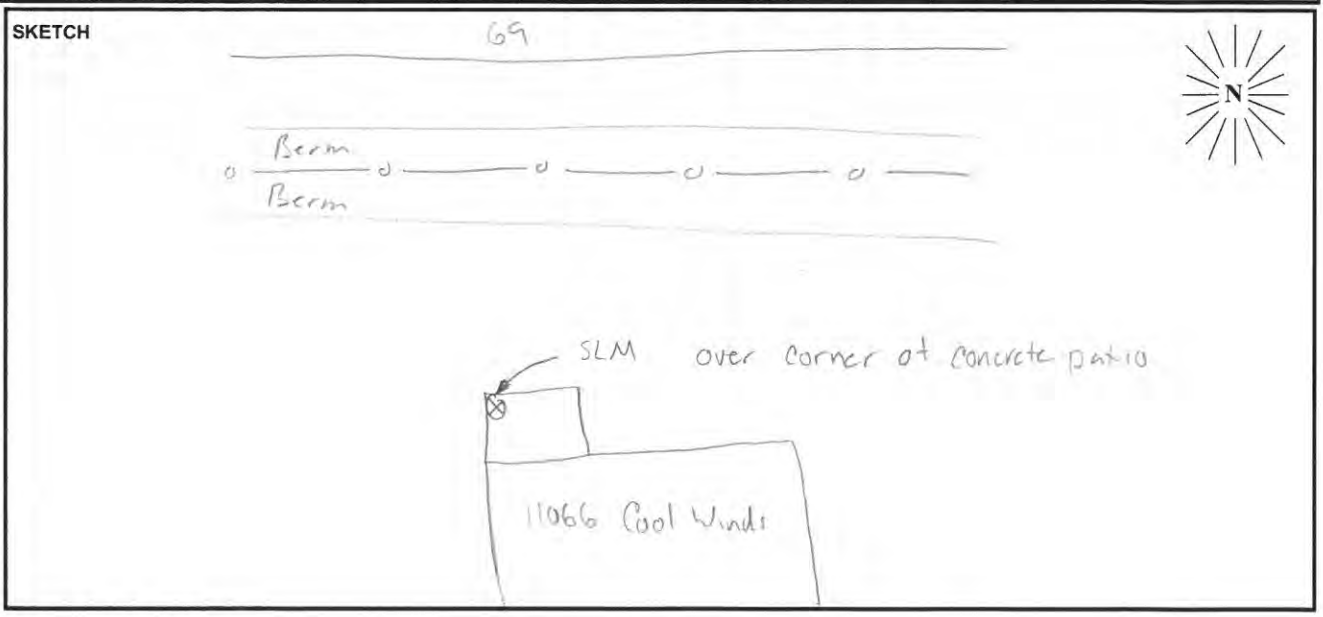
Dist. to Center of Nearest Lane 165 ☐ Video ☐ Radar

Counts	AT	MT	HT
NB	354	12	97
SB	497	13	102

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/22	10:43	11:03	51.1	59.1	61.8	63.2	64.7	66.7	67.7	72.0	64.1	

SKETCH



PARSONS

Photo 29: 11066 Cool Winds Way, Site No. ST- 08, Facing North

Photo 30: 11066 Cool Winds Way, Site No. ST- 08, Facing East

Photo 31: 11066 Cool Winds Way, Site No. ST- 08, Facing West

Photo 32: 11066 Cool Winds Way, Site No. ST- 08, Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL	ENGINEER: RJC	DATE: 7/21
MEASUREMENT ADDRESS: Billerica Park 12690 Promise Rd	CITY: Fishers IN	☐ Single-Family ☒ Recreational ☐ Multi-Family ☐ Commercial — SITE NO.: ST09

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☐ LD-870 ☒ LD-820	☒ WIND SCREEN	☐ LD-900	SYSTEM PWR: ☐ BAT ☐ AC
☐ LD-824 ☐ LD-812	☐ NON-POLAR ☐ POLARIZED	☒ LD-828	(observations at start of measurement)
☐ B&K-2250 ☐ _____	☒ 1/2-INCH ☐ FREEFIELD	☐ _____	TEMP: 88 °F R.H.: 43.7 %
SERIAL #: 1501	☐ 1-INCH ☐ RANDOM	SERIAL #: 2636	WIND SPEED: 7 MPH
	SERIAL #: 3384		TOWARD (DIR): E

CALIBRATOR:	Freq, Hz.	CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time	
Cal 200	☐ 250	Before	94.0 / 94.0 / 8.1 / 11:54
☐ LD CA250	☒ 1000	After	94.0 / 93.9 / 8.1 / 12:18
☐ B&K 4231	☐ _____		
S/N 11087			

SKIES: Sunny

CAMERA _____

PHOTO NOs. _____

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES: SB on video

Dist. to Center of Nearest Lane ~280

☐ Video ☐ Radar

Counts 20 min

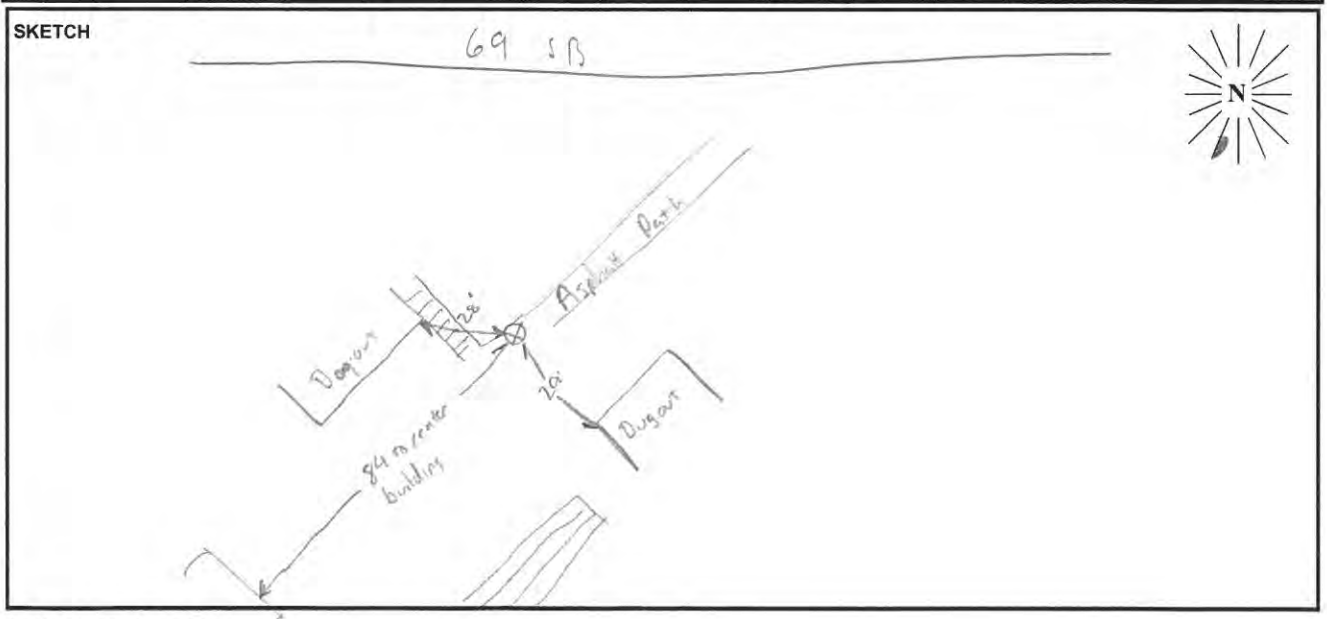
	AT	MT	HT
NB	423	29	87
SB	518	24	114

3 lanes on frontage road

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/21	11:56	12:16	54.1	62.2	64.2	65.2	66.6	68.2	68.7	72.1	65.8	

SKETCH



PARSONS

Photo 33: 12690 Promise Rd, Billericay Park, Site No. ST- 09, Facing North

Photo 34: 12690 Promise Rd, Billericay Park, Site No. ST- 09, Facing East

Photo 35: 12690 Promise Rd, Billericay Park, Site No. ST-09, Facing West

Photo 36: 12690 Promise Rd, Billericay Park, Site No. ST-09, Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL	ENGINEER: RJC	DATE: 7/22
MEASUREMENT ADDRESS: 12160 Packers Ave Mudsock Football fields	CITY: Fishers IN	☐ Single-Family ☒ Recreational ☐ Multi-Family ☐ Commercial — SITE NO.: St-10

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:
☐ LD-870 ☒ LD-820	☒ WIND SCREEN	☐ LD-900
☐ LD-824 ☐ LD-812	☐ NON-POLAR ☐ POLARIZED	☒ LD-828
☐ B&K-2250 ☐ _____	☒ 1/2-INCH ☐ FREEFIELD	☐ _____
SERIAL #: 1501	☐ 1-INCH ☐ RANDOM	SERIAL #: 2636
	SERIAL #: 3384	

NOTES:

SYSTEM PWR: ☐ BAT ☐ AC

(observations at start of measurement)

TEMP: 84 °F R.H.: 55 %

WIND SPEED: 3.0 MPH

TOWARD (DIR): E

SKIES: Sunny

CAMERA —

PHOTO NOs. —

CALIBRATOR: Cal 200
☐ LD CA250
☐ B&K 4231
S/N 11087

Freq, Hz.
☐ 250
☒ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time

Before 94.0 / 94.0 / 8.1 / 12:45

After 94.0 / 93.9 / 8.1 / 13:07

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES: 15 Min due to children playing

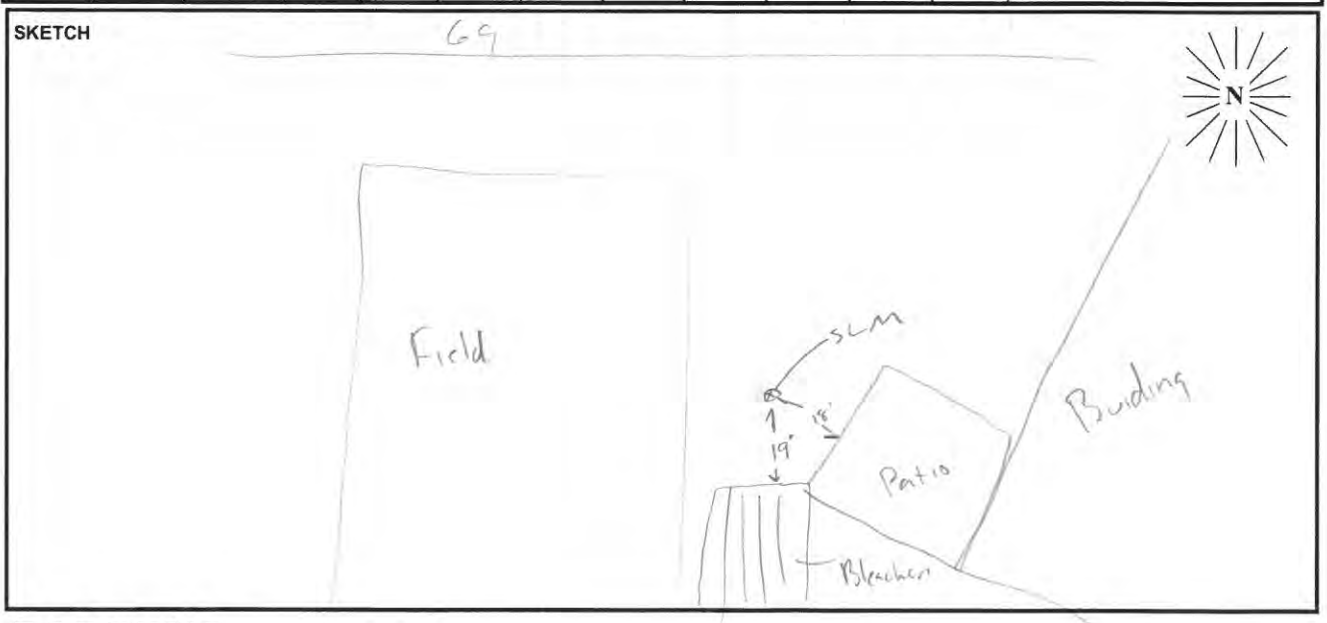
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts	AT	MT	HT
NB	336	7	67
SB	406	4	90

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/22	12:47	13:02	54.9	59.6	61.5	62.8	64.3	67.7	69.2	77.8	64.7	15 Min

SKETCH



PARSONS

Photo 37: 12160 Packers Ave, Mudsock football Fields, Site No. ST- 10, Facing North

Photo 38: 12160 Packers Ave, Mudsock football Fields, Site No. ST- 10, Facing East

Photo 39: 12160 Packers Ave, Mudsock football Fields, Site No. ST- 10, Facing West

Photo 40: 12160 Packers Ave, Mudsock football Fields, Site No. ST- 10, Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL	ENGINEER: RJC	DATE: 7/23
MEASUREMENT ADDRESS: 440 Scoria Drive, Limestone Springs Condos	CITY: Fishers IN	☐ Single-Family ☒ Multi-Family ☐ Recreational ☐ Commercial — SITE NO.: ST 11

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ ________

SERIAL #: 1501

MICROPHONE: ☒ WIND SCREEN ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM

SERIAL #: 3384

PRE AMP: ☐ LD-900 ☒ LD-828 ☐ ________

SERIAL #: 2636

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 67 °F R.H.: 78 %

WIND SPEED: 2.1 MPH

TOWARD (DIR): E

SKIES: overcast

CAMERA —

PHOTO NOs. —

CALIBRATOR: Cal 200 ☐ LD CA250 ☐ B&K 4231 S/N 11087

Freq, Hz. ☐ 250 ☒ 1000 ☐ ______

CALIBRATION RECORD:

Input, dB / Reading, dB / Offset, dB / Time

Before 94.0 / 94.0 / 8.1 / 9:09

After 94.0 / 94.2 / 8.1 / 9:32

METER SETTINGS: ☐ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS ______- MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES: Traffic Taken for both directions
10 min count
Measurement stopped due to trash truck

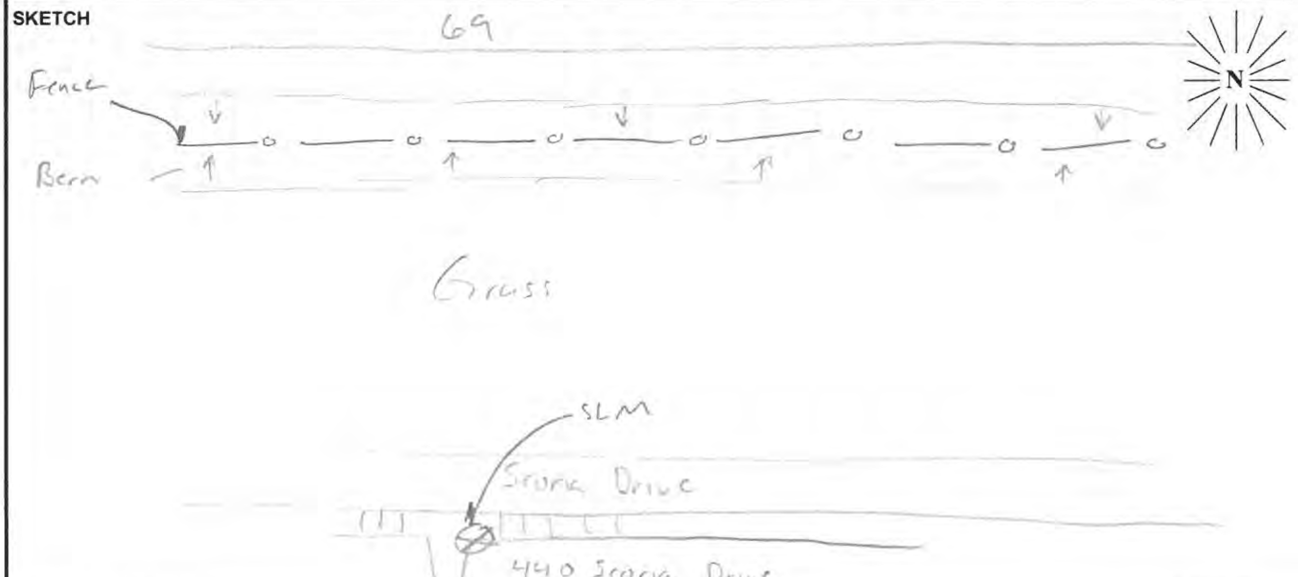
Dist. to Center of Nearest Lane 276 ☐ Video ☐ Radar

Counts: AT MT HT — Both 592 19 116

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/23	9:10	9:20	52.9	58.8	61.3	62.8	64.3	67.2	68.2	75.1	64.1	

SKETCH



PARSONS

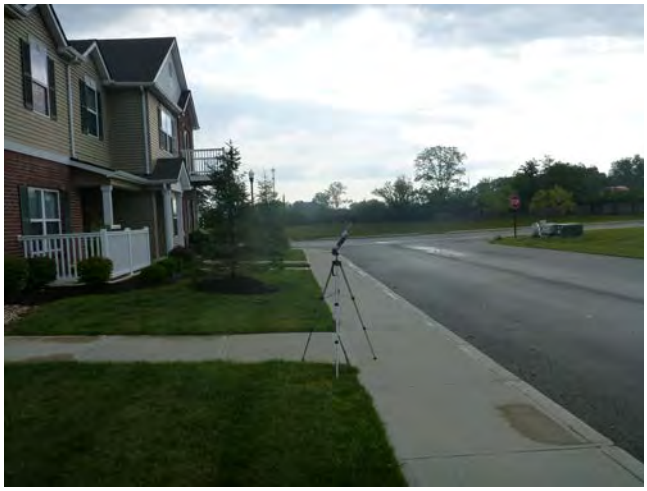


Photo 41: 440 Scoria Dr, Limestone Springs Condos, Site No. ST- 11, Facing North

Photo 42: 440 Scoria Dr, Limestone Springs Condos, Site No. ST- 11, Facing East

Photo 43: 440 Scoria Dr, Limestone Springs Condos, Site No. ST- 11, Facing West

Photo 44: 440 Scoria Dr, Limestone Springs Condos, Site No. ST- 11, Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL	ENGINEER: RJC	DATE: 7/22
MEASUREMENT ADDRESS: 12578 Loyalty Drive	CITY: Fishers IN	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial — SITE NO.: ST 12

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☐ LD-870 ☒ LD-820	☒ WIND SCREEN	☐ LD-900	SYSTEM PWR: ☑ BAT ☐ AC
☐ LD-824 ☐ LD-812	☐ NON-POLAR ☐ POLARIZED	☒ LD-828	(observations at start of measurement)
☐ B&K-2250 ☐ _____	☒ 1/2-INCH ☐ FREEFIELD	☐ _____	TEMP: 86 °F R.H.: 52 %
SERIAL #: 1501	☐ 1-INCH ☐ RANDOM	SERIAL #: 2636	WIND SPEED: 1.3 MPH
	SERIAL #: 3384		TOWARD (DIR): E

CALIBRATOR:	Freq, Hz.	CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time	SKIES: clear
Cal 200	☐ 250	Before 94.0 / 94.1 / 8.1 / 13:47	CAMERA —
☐ LD CA250	☒ 1000	After _____ / _____ / _____ / _____	PHOTO NOs. —
☐ B&K 4231	☐ _____		
S/N 11087			

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES: ~8' high wooden fence

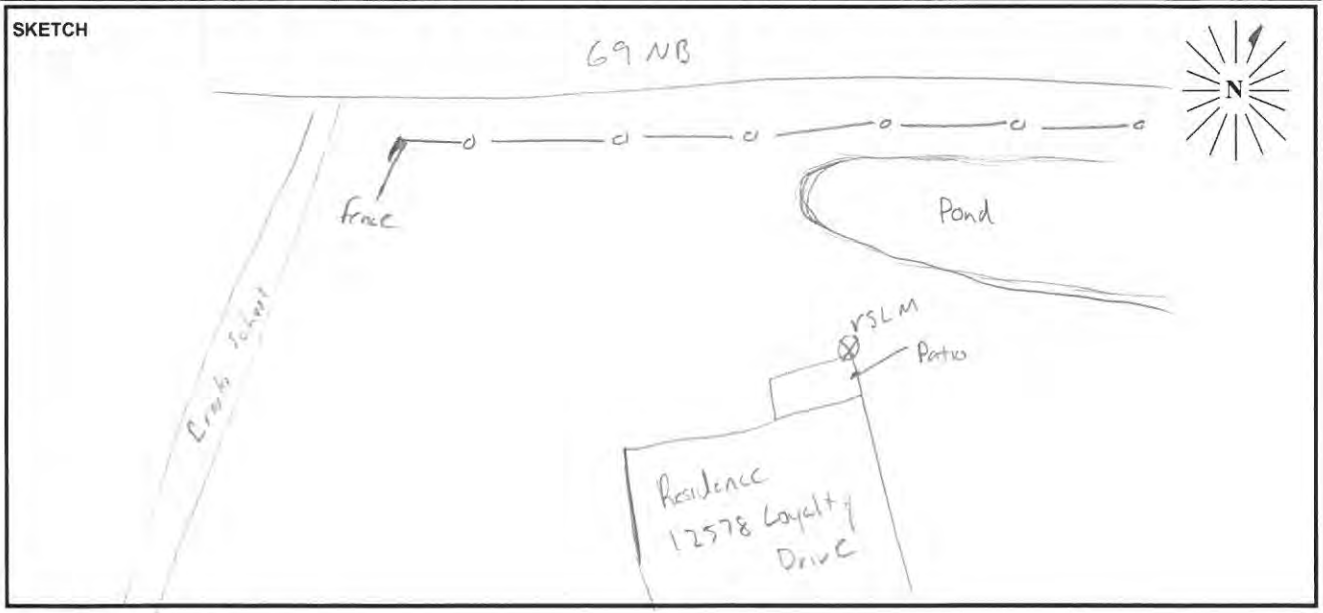
Dist. to Center of Nearest Lane 195 ☐ Video ☐ Radar

Counts	AT	MT	HT
NB	485	6	102
SB	477	18	93

MEAS. TYPE: ☐ Long Term ☑ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/22	13:49	14:09	54.7	62.0	64.7	66.1	67.6	70.1	71.2	75.4	67.2	

SKETCH



PARSONS

Photo 45: 12578 Loyalty Dr, Site No. ST-12, Facing North

Photo 46: 12578 Loyalty Dr, Site No. ST-12, Facing East

Photo 47: 12578 Loyalty Dr, Site No. ST-12, Facing West

Photo 48: 12578 Loyalty Dr, Site No. ST-12, Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL
ENGINEER: RJC
DATE: 7/21

MEASUREMENT ADDRESS: 12547 136th Street Maintinance Building
CITY: Fishers IN
☐ Single-Family ☐ Multi-Family ☐ Recreational ☒ Commercial
SITE NO.: ST 13

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ ________
SERIAL #: 1501

MICROPHONE: ☒ WIND SCREEN ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM
SERIAL #: 3384

PRE AMP: ☐ LD-900 ☒ LD-828 ☐ ________
SERIAL #: 2636

CALIBRATOR: Cal 200
☐ LD CA250 ☐ B&K 4231
S/N 11087
Freq, Hz.: ☐ 250 ☒ 1000 ☐ ______

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 94.0 / 94.0 / 8.1 / 15:35
After 94.0 / 93.8 / 8.1 / 16:05

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS ______ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 82 °F R.H.: 43.5 %
WIND SPEED: 3.3 MPH
TOWARD (DIR): E
SKIES: Sunny
CAMERA ____________
PHOTO NOs. ____________

NOTES: Noone home location moved to closest access to recievers
Development Not 136th
128 cars on 136th street

Dist. to Center of Nearest Lane ________
☐ Video ☐ Radar

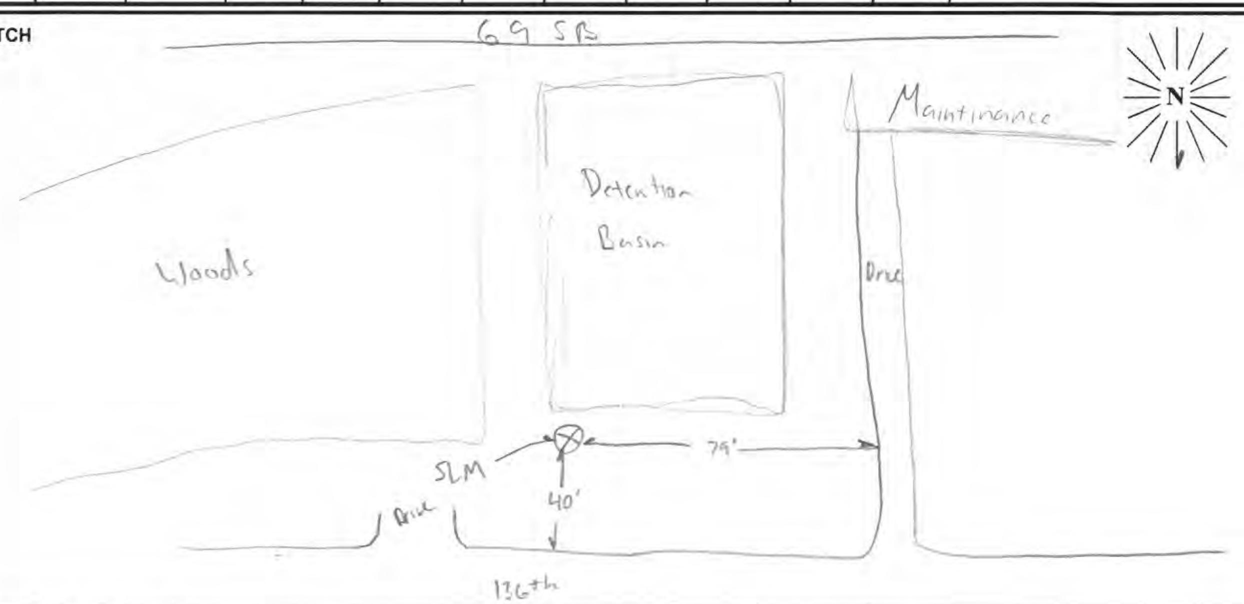
Counts 20 min

	AT	MT	HT
NB	829	19	108
SB	589	16	122

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/21	15:38	15:58	54.8	58.0	59.8	60.8	61.7	64.1	65.2	73.7	61.8	

SKETCH



PARSONS

Photo 49: 12547 136th St, Maintenance Building, Site No. ST- 13, Facing North

Photo 50: 12547 136th St, Maintenance Building, Site No. ST- 13 Facing East

Photo 51: 12547 136th St, Maintenance Building, Site No. ST- 13 Facing West

Photo 52: 12547 136th St, Maintenance Building, Site No. ST- 13 Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL	ENGINEER: RJC	DATE: 7/21
MEASUREMENT ADDRESS: 13916 Southeastern Parkway St. Vincent Fishers Hospital	CITY: Fishers IN	☐ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial Hospital — SITE NO.: ST 14

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:
☐ LD-870 ☒ LD-820	☒ WIND SCREEN	☐ LD-900
☐ LD-824 ☐ LD-812	☐ NON-POLAR ☐ POLARIZED	☒ LD-828
☐ B&K-2250 ☐ _____	☒ 1/2-INCH ☐ FREEFIELD	☐ _____
SERIAL #: 1501	☐ 1-INCH ☐ RANDOM	SERIAL #: 2636
	SERIAL #: 3384	

NOTES:

SYSTEM PWR: ☐ BAT ☐ AC

(observations at start of measurement)

TEMP: 85 °F R.H.: 50.5 %

WIND SPEED: 2.9 MPH

TOWARD (DIR): E

SKIES: Sunny

CAMERA —

PHOTO NOs. —

CALIBRATOR: Cal 200
☐ LD CA250
☐ B&K 4231
S/N 11087

Freq, Hz.
☐ 250
☒ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time

Before 94.0 / 94.0 / 8.1 / 14:49

After 94.0 / 93.9 / 8.1 / 15:16

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES:

Dist. to Center of Nearest Lane 212 ☐ Video ☐ Radar

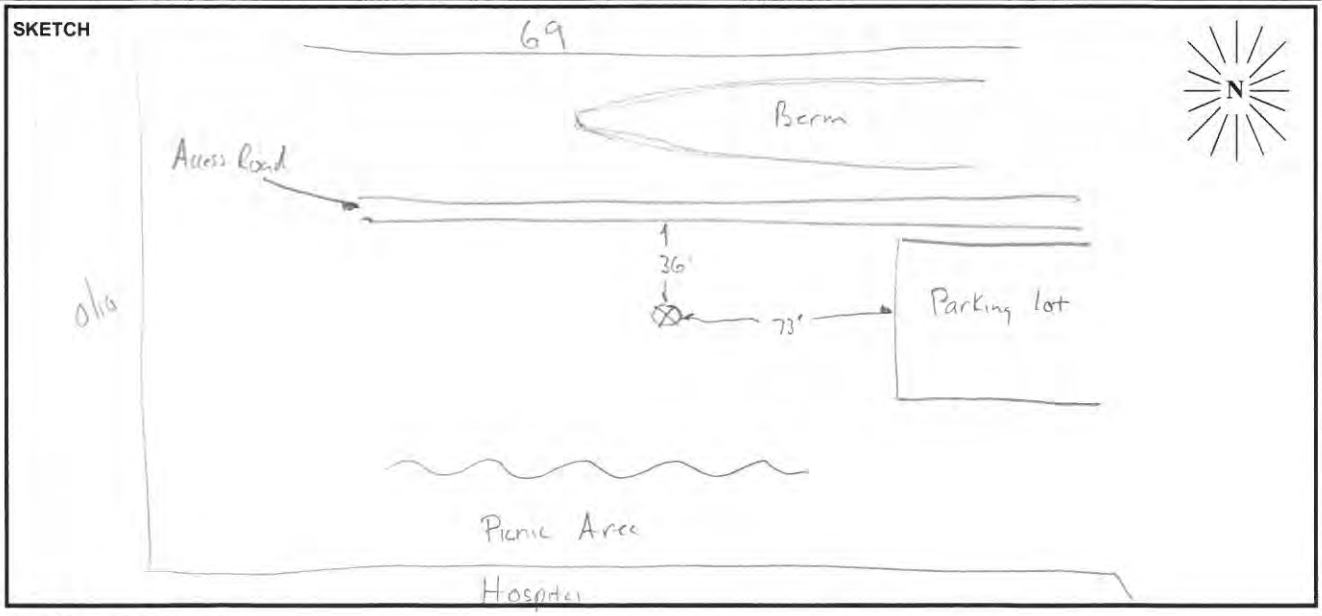
Counts

	AT	MT	HT
NB	593	20	79
SB	456	13	98

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/21	14:54	15:14	55.2	59.2	62.6	64.1	65.3	67.7	68.7	74.6	64.9	

SKETCH



PARSONS

Photo 53: 13916 Southeastern Parkway, St. Vincent Fishers Hospital, Site No. ST- 14, Facing North

Photo 54: 13916 Southeastern Parkway, St. Vincent Fishers Hospital, Site No. ST- 14, Facing East

Photo 55: 13916 Southeastern Parkway, St. Vincent Fishers Hospital, Site No. ST- 14, Facing West

Photo 56: 13916 Southeastern Parkway, St. Vincent Fishers Hospital, Site No. ST- 14, Facing South

FIELD SURVEY FORM

PROJECT: I-69 Hamilton County ATL	ENGINEER: RJC	DATE: 7/21
MEASUREMENT ADDRESS: 8620 Pin Oak Care Free Mobil Homes	CITY: Fishers IN	☑ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial — SITE NO.: ST-15

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☐ LD-870 ☒ LD-820	☒ WIND SCREEN	☐ LD-900	SYSTEM PWR: ☒ BAT ☐ AC
☐ LD-824 ☐ LD-812	☐ NON-POLAR ☐ POLARIZED	☒ LD-828	(observations at start of measurement)
☐ B&K-2250 ☐ _____	☒ 1/2-INCH ☐ FREEFIELD	☐ _____	TEMP: 85 °F R.H.: 50.7 %
SERIAL #: 1501	☐ 1-INCH ☐ RANDOM	SERIAL #: 2636	WIND SPEED: 0.7 MPH
	SERIAL #: 3384		TOWARD (DIR): E

CALIBRATOR:	Freq, Hz.	CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time	SKIES: Sunny
Cal 200	☐ 250	Before 94.0 / 94.1 / 8.1 / 13:47	CAMERA —
☐ LD CA250	☒ 1000	After 94.0 / 93.9 / 8.1 / 14:14	PHOTO NOs. —
☐ B&K 4231	☐ _____		
S/N 11087			

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES: Adjacent Home may be blocking noise

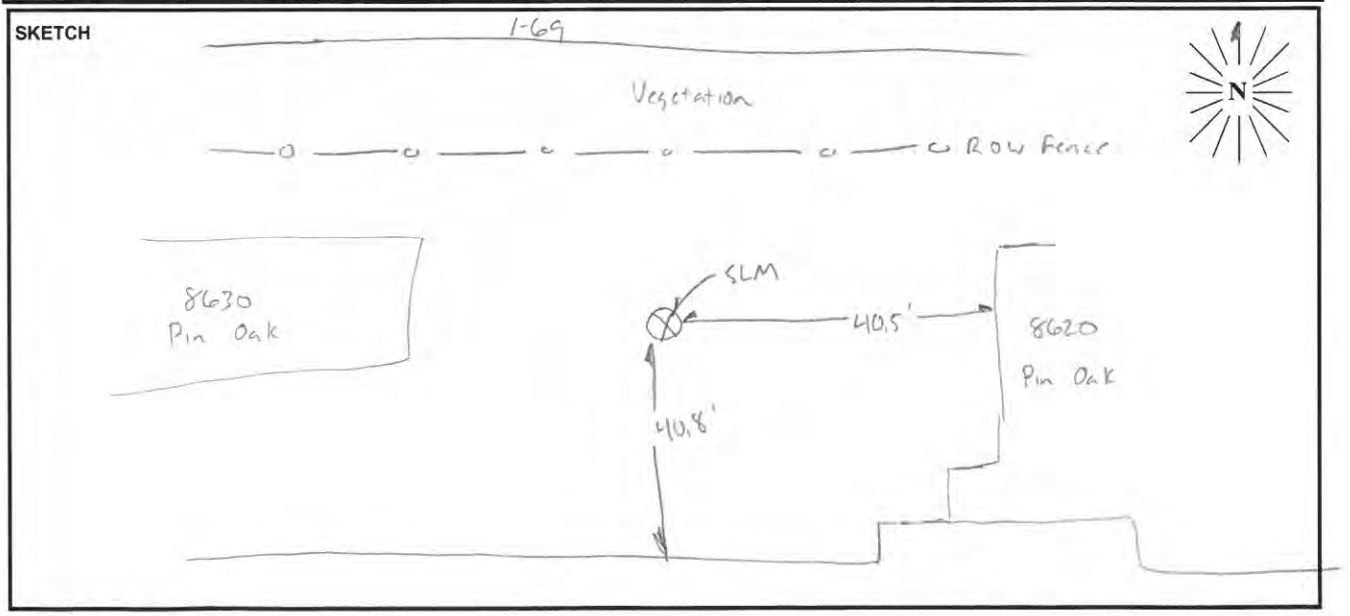
Dist. to Center of Nearest Lane 119 ☐ Video ☐ Radar

Counts	AT	MT	HT
SB	451	36	97
NB	396	18	98

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/21	13:32	14:12	53.1	62.8	66.8	68.6	70.2	73.1	74.0	78.3	69.8	

SKETCH



PARSONS

Photo 57: 8620 Pin oak, Care Free Mobil Homes, Site No. ST- 15, Facing North

Photo 58: 8620 Pin oak, Care Free Mobil Homes, Site No. ST- 15, Facing East

Photo 59: 8620 Pin oak, Care Free Mobil Homes, Site No. ST- 15, Facing West

Photo 60: 8620 Pin oak, Care Free Mobil Homes, Site No. ST- 15, Facing South

Miller, Daniel J

From: Connolly, Richard
Sent: Monday, October 27, 2014 12:37 PM
To: Miller, Daniel J
Cc: Prevost, Daniel
Subject: FW: INDOT Des no. 1383332; I-69 Expansion Project; Draft Traffic Noise Impact Analysis

Follow Up Flag: Follow up
Flag Status: Flagged

From: Bales, Ronald [mailto:rbales@indot.IN.gov]
Sent: Monday, October 27, 2014 12:35 PM
To: Jones, Tony W
Cc: Connolly, Richard; Carnahan, Ben
Subject: RE: INDOT Des no. 1383332; I-69 Expansion Project; Draft Traffic Noise Impact Analysis

INDOT-Environmental Services Division has reviewed the noise study for the above referenced project. The consultant has addressed all previous comments. The noise analysis is technically sufficient and the project may advance with the mailing of surveys. Please provide INDOT-ES and INDOT-Office of Public Involvement the packet that is to be sent to benefited residents prior to them being sent for a quick review. Currently, there are four (4) noise barriers that are feasible and reasonable.

Thank you.

Ron Bales
Senior Environmental Manager
100 North Senate Ave., Room 642
Indianapolis, IN 46204
Office: (317) 234-4916
Email: rbales@indot.in.gov

From: Connolly, Richard [mailto:Richard.Connolly@parsons.com]
Sent: Friday, October 24, 2014 8:30 AM
To: Bales, Ronald
Cc: Jones, Tony W; Carnahan, Ben
Subject: RE: INDOT Des no. 1383332; I-69 Expansion Project; Draft Traffic Noise Impact Analysis

Ron,

Parsons has incorporated your comments to the Draft Traffic Noise Impact Analysis and uploaded the revised document to the same folder in projectwise (Draft ENV Noise 1383332 for Roadway Services_v2). Please let me know if you have any questions.

Thanks
Rich

Appendix J: Public Involvement

Page(s)
Sample Notice of Entry Letter…… 1-3

PARSONS

101 West Ohio Street, Suite 2121 • Indianapolis, Indiana 46204 • (317) 616-1000 • Fax: (317) 616-1033 • www.parsons.com

«Owner_name»
«Address»
«City», «State» «Zip»

RE: Des. Nos. 1383332, 1383336, & 1383489
I-69 Interstate Expansion
Added Travel Lanes from 106th St to 0.5 mi East of SR 13, and Interchange Modification at Exit 210 (Campus Parkway); Hamilton & Madison Counties, Indiana

Notice of Entry for Survey or Investigations

March 14, 2014

Dear Property Owner,

Our information indicates that you own property near the above proposed transportation project. Representatives of the Indiana Department of Transportation will be conducting engineering and/or environmental surveys of the project area in the near future. It may be necessary for the INDOT Representatives to enter onto your property to complete this work. This is permitted by Indiana Code § 8-23-7-26. Anyone performing this type of work has been instructed to identify him or herself to you, if you are available, before they enter your property. If you no longer own this property or it is currently occupied by someone else (i.e. rental, sharecrop), please let us know the name of the new owner or occupant so that we can contact them about the survey.

Please read the attached notice to inform you of what the "Notice of Entry for Survey or Investigation" means. The design and environmental surveys are needed for the proper planning and design of this highway project. Engineering survey work would include mapping the location of features such as trees, buildings, fences, drives, ground elevations, etc. Environmental survey work may include the identification and mapping of wetlands, architectural surveys, archaeological investigations (which may involve the survey, testing, or excavation of identified archaeological sites), and various other environmental studies. It is our sincere desire to cause you as little inconvenience as possible during this 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.

If any problems occur, please contact the field crew or one of the following:

Ben Carnahan, PE
Project Manager (Parsons)
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
(317) 616-1016
ben.carnahan@parsons.com

Daniel J. Miller
Sr. Environmental Planner (Parsons)
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
(317) 616-4663
daniel.j.miller@parsons.com

Linda Weintraut, Ph.D.
Weintraut & Associates, Inc.
P.O. Box 5034
Zionsville, IN 46077
(317) 733-9770
linda@weintrautinc.com

Please be aware that IC 8-23-7-27 and 28 provides that you may seek compensation from INDOT for damages occurring to your property (land or water) that result from INDOT's entry for the purposes mentioned above in IC 8-23-7-26. In this case, a basic procedure that may be followed is for you and/or an INDOT employee or representative to present an account of the damages to one of the above named INDOT staff. They will check

the information and forward it to the appropriate person at INDOT who will contact you to discuss the situation and compensation.

In the event that property damage occurs as a result of work performed during survey, the Greenfield District Real Estate Manager can provide you with a form to request compensation for damages. You may contact:

Ronald Raney
Greenfield District Real Estate Manager
32 South Broadway
Greenfield, IN 46160
(317) 467-3499
rraney@indot.in.gov

After filling out the form, you can return it to the District Real Estate Manager for consideration. Please contact the District Real Estate Manager if you have questions regarding the matter, rights, and procedures.

If you are not satisfied with the compensation that INDOT determines is owed to you, Indiana Code 8-23-7-8 provides the following:

> The amount of damages shall be assessed by the county agricultural extension educator of the county in which the land or water is located and two (2) disinterested residents of the county, one (1) appointed by the aggrieved party and one (1) appointed by the department. A written report of the assessment of damages shall be mailed to the aggrieved party and the department by first class United States mail. If either the department or the aggrieved party is not satisfied with the assessment of damages, either or both may file a petition, not later than fifteen (15) days after receiving the report, in the circuit or superior court of the county in which the land or water is located.

Thank you in advance for your cooperation in this matter.

Sincerely,

Daniel J. Miller
Parsons, Senior Environmental Planner
101 W. Ohio St., Suite 2121
Indianapolis, IN 46204
daniel.j.miller@parsons.com

Attachment

INDIANA DEPARTMENT OF TRANSPORTATION
Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, IN 46204

Michael R. Pence, Governor
Karl B. Browning, Commissioner

Indiana Department of Transportation
Notice of Entry for Survey or Investigation
Indiana Department of Transportation

If you have received a "Notice of Entry for Survey or Investigation" from INDOT or an INDOT representative, you may be wondering what it means. In the early stages of a project's development, INDOT must collect as much information as possible to ensure that sound decisions are made in designing the proposed project. Before entering onto private property to collect that data, INDOT is required to notify landowners that personnel will be in the area and may need to enter onto their property. Indiana Code, Title 8, Article 23, Chapter 7, Section 26 deals with the department's authority to enter onto any property within Indiana.

Receipt of a Notice of Entry for Survey or Investigation does not necessarily mean that INDOT will be buying property from you. It doesn't even necessarily mean that the project will involve your property at all. Since the Notice of Entry for Survey or Investigation is sent out in the very early stages and since we want to collect data within AND surrounding the project's limits more landowners are contacted than will actually fall within the eventual project limits. It may also be that your property falls within the project limits but we will not need to purchase property from you to make improvements to the roadway. Another thing to keep in mind is that when you receive a Notice of Entry for Survey or Investigation, very few specifics have been worked out and actual construction of the project may be several years in the future.

Before INDOT begins a project that requires them to purchase property from landowners, they must first offer the opportunity for a public hearing. If you were on the list of people who received a Notice of Entry for Survey or Investigation, you should also receive a notice informing you of your opportunity to request a public hearing. These notices will also be published in your local newspaper so interested individuals who are not adjacent to the project will also have the opportunity to request a public hearing. If a public hearing is to be held, INDOT will publicize the date, location, and time. INDOT will present detailed project information at the public hearing, comments will be taken from the public in spoken and written form, and question and answer sessions will be offered. Based on the feedback INDOT receives from the public, a project can be modified and improved to better serve the public.

So, if you have received a "Notice of Entry for Survey or Investigation", remember:

1. You do not need to take any action at this time. It is merely letting you know that people in orange/lime vests are going to be in your neighborhood.
2. The project is still in its very early planning stages.
3. You will be notified of your opportunity to comment on the project at a later date.