



U.S. Department
of Transportation
**Federal Highway
Administration**

Michigan Division

October 9, 2013

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Lansing, MI 48933
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Michigan.FHWA@dot.gov

In Reply Refer To:
HDA-MI

Mr. Larry Doyle, P.E.
Local Agency Programs Engineer
Michigan Department of Transportation
Lansing, Michigan

Finding of No Significant Impact (FONSI) for proposed improvements
To State Road from Ellsworth Road to Michigan Avenue (US-12)
Pittsfield Township, Washtenaw County, MI

Dear Mr. Doyle:

This letter is in response to your July 10, 2013, letter requesting a Finding of No Significant Impact (FONSI) for the above noted project. FHWA has reviewed the final EA document per 23 CFR 771 and has determined a Finding of No Significant Impact (FONSI) for the preferred alternative.

Sincerely,

Kurt Zachary
Local Program Manager

For: Russell L. Jorgenson
Division Administrator

Enclosure

Emn

By e-mail:

cc: Gonzalo Puente, MDOT Local Agency Programs
David Williams, FHWA

File Directory: J:/GroupWise_Folder 400 Engineering & Operations

File Name: KZ State Road Washtenaw CRC FONSI Transmittal_10092013

DMS: KZ State Road Washtenaw CRC FONSI Transmittal_10092013



US Department of Transportation

**Federal Highway
Administration**

Contact: Michigan Division
315 W. Allegan Street, Room 201
Lansing, MI
Email: Michigan.FHWA@dot.gov
Phone: (517) 377-1844

Finding of No Significant Impact

Proposed improvements to State Road from Ellsworth Road to Michigan Avenue (US-12)
Pittsfield Township
Washtenaw County, Michigan

FINDING

In accordance with 23 CFR 771, the Federal Highway Administration (FHWA) has determined that the selected alternative will not have any significant impacts on the human or natural environment. This Finding of No Significant Impact (FONSI) is based on the February 2013 Environmental Assessment (EA) and the June 2013, supplemental material. FHWA independently evaluated this information and determined the documentation to adequately and accurately discuss the purpose & need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis to determining an EIS is not required.

This project is listed in the FY 2011-2014 STIP in the SEMCOG TIP per 23 U.S.C. § 135(g)(4)(E) and § 134(j)(3)(D).

DESCRIPTION OF THE PROPOSED ACTION

The action was proposed by the Washtenaw County Road Commission (WCRC) through the Michigan Department of Transportation's (MDOT) Local Agency Program. The selected alternative (alternative #2) is to construct a boulevard with a five-foot wide on-street bike lane and a 10-foot wide multi-use path on both sides of the road, with roundabouts at Morgan Street, West Textile Road, and Old State Road (as depicted on the attached plan sheet, Figure 2, Preferred Alternative). The project's total estimated cost is approximately:

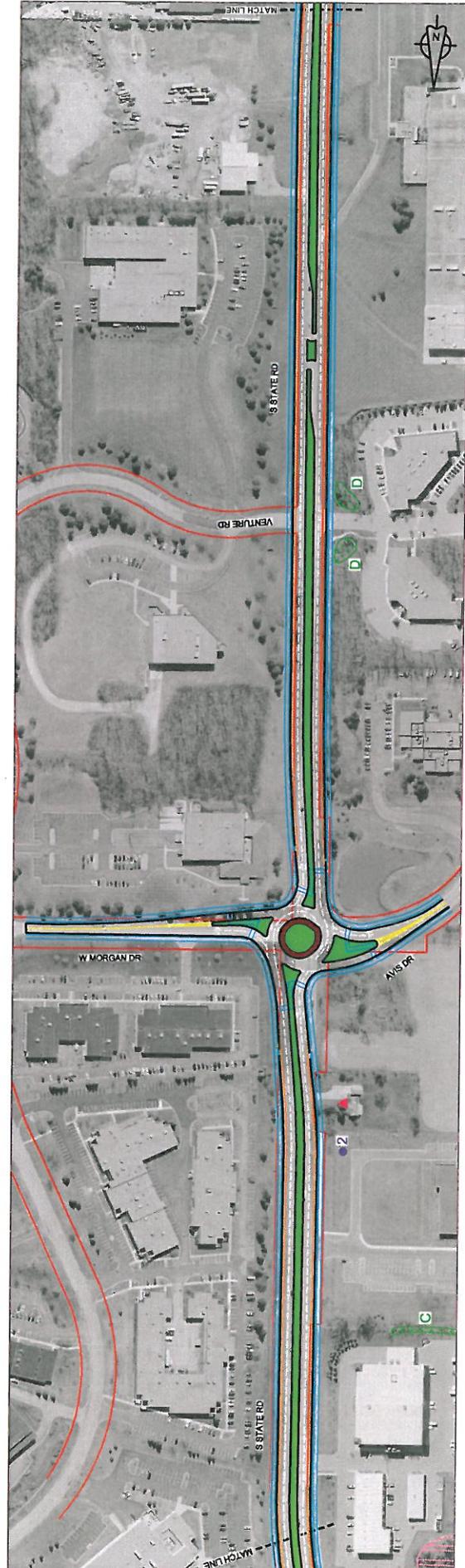
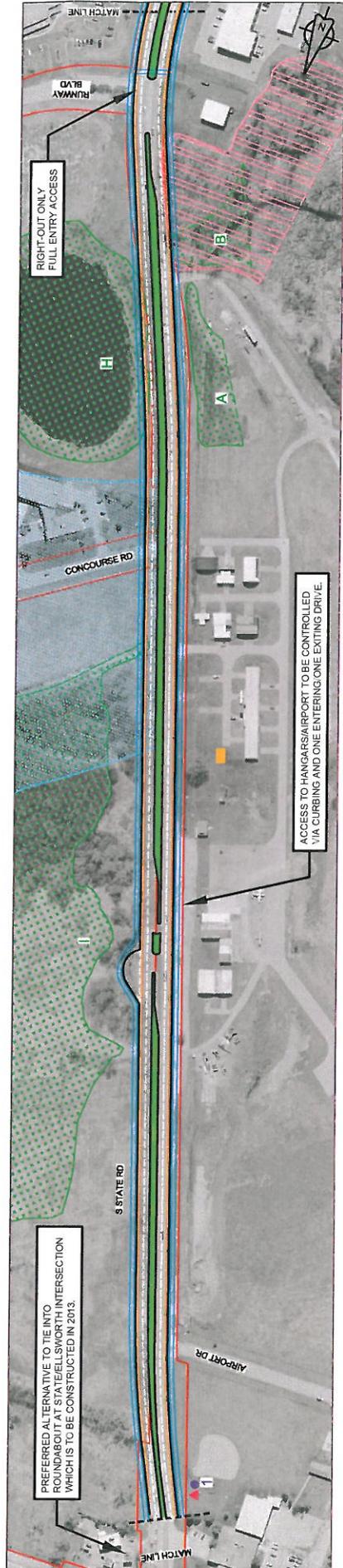
Construction Costs:	\$21.20 M
Engineering Costs:	\$4.20 M
ROW Costs:	\$3.40 M
Total Costs:	\$28.80 M

PROBABLE ENVIRONMENTAL EFFECTS & MITIGATION

The EA contains the anticipated environmental impacts, required mitigation, and any environmental enhancements. Environmental enhancements are those activities above and beyond what is required by law, and developed in cooperation with the local community.

For clarification:

- Right of Way Acquisition & Relocation: The preferred alternative requires acquisition of 12 acres (no residential or business relocations) of property (page 20, lines 40-48 of document) which will be conducted in accordance and compliance with the Federal Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended; Act 149, Michigan P.A. 1911 as amended; and Act 87, Michigan P.A. 1980, as amended.
- Land Use and Zoning: No change to existing land use or planned developments are anticipated from this project.



GRAPHIC SCALE (feet)



- Existing Features**
- Right of Way (ROW)
 - Potential Indiana Bat Habitat
 - 100-Year Floodplain
 - Sensitive Noise Receivers
 - Railroad
 - Wetlands
 - Potentially Contaminated Site (extent of contamination unknown)
 - Noise Monitoring Location

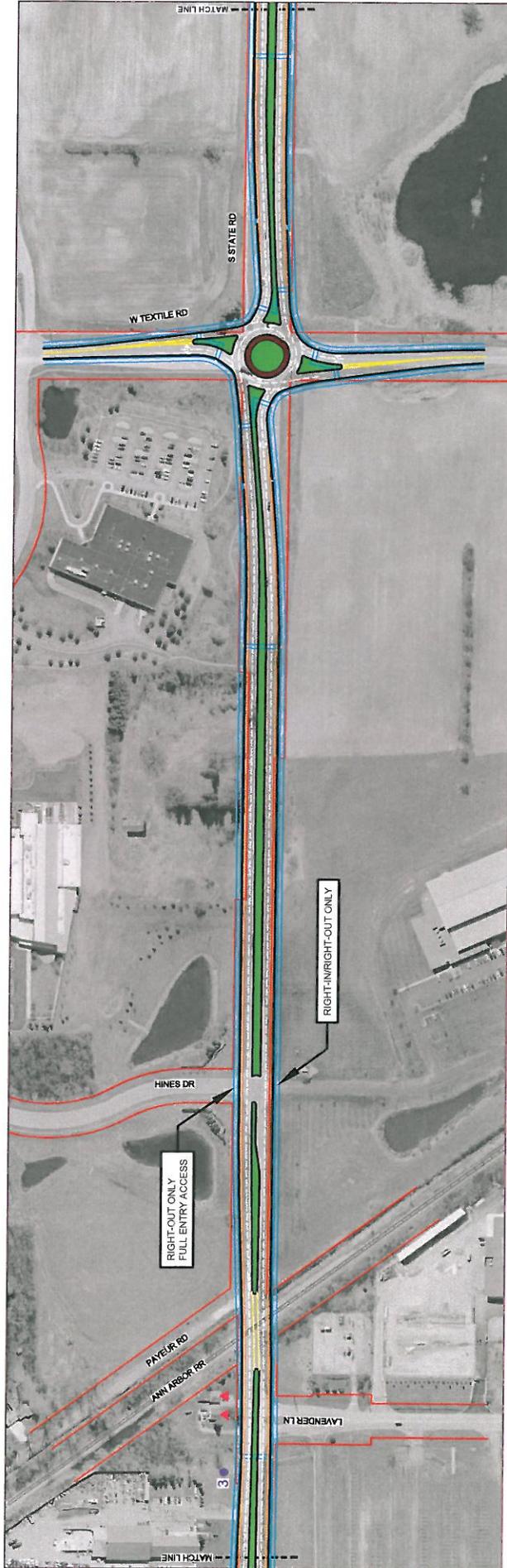
- Proposed Features**
- Proposed Edge of Pavement
 - Proposed Pavement Marking
 - Proposed Bike Lane
 - Proposed Non-Motorized Path

NOTES:

- 1) All median turnarounds are preliminary and will be finalized as the project moves through the design process.
- 2) All driveway/roads connecting to State Road to be accommodated in current configuration unless otherwise noted.

Source:
Aerial Photo: Lantier, 2010

Figure 2 *Sheet 1 of 3*
Preferred Alternative
State Road Environmental Assessment
Washtenaw County, Michigan



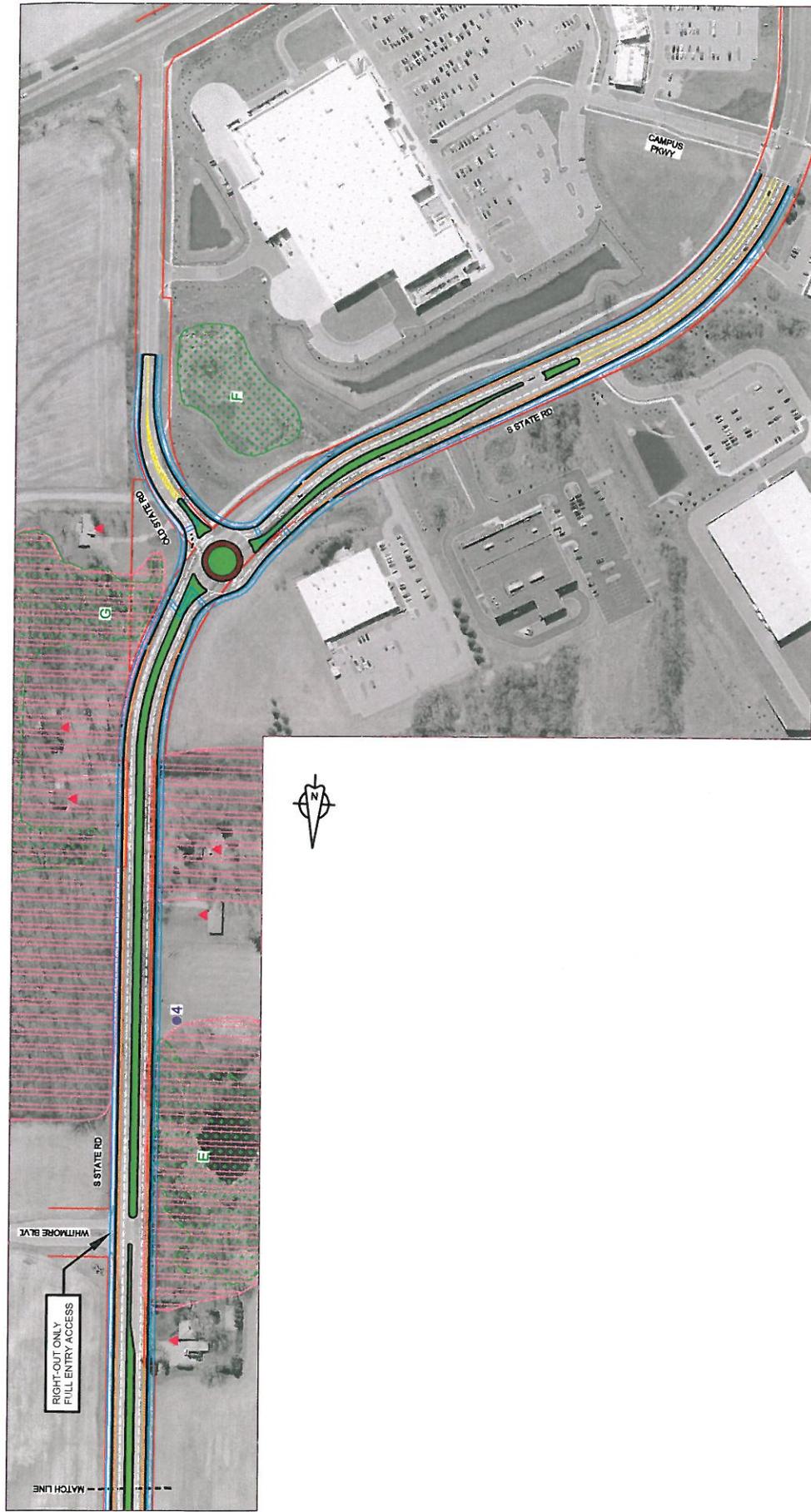
- Existing Features**
- Right of Way (ROW)
 - Potential Indiana Bat Habitat
 - 100-Year Floodplain
 - Sensitive Noise Receivers
 - Railroad
 - Wetlands
 - Potentially Contaminated Site (extent of release unknown)
 - Noise Monitoring Location

- Proposed Features**
- Edge of Pavement
 - Pavement Marking
 - Bike Lane
 - Non-lotized Path

NOTES:
 1) All median luminaires are preliminary and will be revealed as the project moves through the design.
 2) All driveway/trail connections to State Road to be accommodated in current configuration unless otherwise noted.

Source:
 Aerial Photo Data - 2010

Figure 2
 Preferred Alternative
 State Road Environmental Assessment
 Washtenaw County, Michigan



GRAPHIC SCALE (Feet)



- Existing Features**
- Right of Way (ROW)
 - Potential Indiana Bat Habitat
 - 100-Year Floodplain
 - Sensitive Noise Receivers
 - Railroad
 - Wetlands
 - Potentially Contaminated Site (extent of release unknown)
 - Noise Monitoring Location

- Proposed Features**
- Edge of Pavement
 - Pavement Marking
 - Bike Lane
 - Non-Motorized Path

NOTES:

- 1) All median turnounds are preliminary and will be resolved at the project moves through the design process.
- 2) All driveway/roads connecting to State Road to be accommodated in current configuration unless otherwise noted.

Source:
Aerial Photo: Dec 2010

Figure 2
Preferred Alternative
State Road Environmental Assessment
Washtenaw County, Michigan

- Public Recreational Facilities and potential Section 4(f) impacts: No public facilities are located within the project limits and are not impacted as a result of this project. Access to the Pittsfield Township park may be impacted during construction (page 44 lines 15-24) but requirements for access are detailed in the document. Thus a Section 4(f) analysis was not required.
- Historical or Archaeological Sites: No historical properties are located within the project limits. Under the authority of Section 106 of the National Historic Preservation Act of 1966, as amended, the Michigan State Historic Officer (SHPO) evaluated the selected alternative in accordance with the requirements of 36 CFR 800.5(b) and found no historic or archaeological sites are affected within the area of potential effects of the undertaking (page 43-lines 30-34).
- Air Quality Conformity. The project will not have significant impacts to either local or regional air quality and meets Air Quality Conformity requirements. (page 27 lines 42-50). No other impact is anticipated.
- Noise Considerations: A noise analysis was performed in accordance with Title 23 Code of Federal Regulations 772, FHWA's Highway Traffic: Analysis and Abatement Guidance as well as MDOT's Noise and Abatement Handbook. Noise levels at 10 receptors were calculated for the preferred alternative with 2035 traffic projections. The NAC for this activity category is 67 dBA. The noise impact is predicted to be 56.9 to 66.6 dBA AM peak and 55.8 to 65.9 dBA for PM peak (page 30 lines 19-22). FHWA requires noise abatement to be considered for sensitive receptors when a noise impact exists if it is reasonable and cost effective. While predicting noise levels at some receptors are expected to exceed 66 dBA by 2035, abatement is not feasible for the area between receptors 3 and 4. (Page 31 lines 1-20).
- Drainage and Water Quality: The Preferred Alternative requires the Pittsfield-Junction Drain culvert to be extended approximately 65 feet (page 32 line 26). BMPs will be utilized to accommodate storm water (page 32 lines 39-42) Storm, septic and water lines will be capped or re-routed per agency specifications if encountered by the contractor. (Page 33-lines 12-16).
- Wetlands: 0.45 acres of wetlands are to be impacted. Mitigation measures will include purchasing 1.00 acre worth of credit from the Whitney Farm Wetland Mitigation Bank. (Page 37 line 19-24).
- Endangered Species: tree removal activities will be restricted during months when the Indiana bat is not active. (Page 41 lines 32-36).
- Social Impact to traffic during Construction: Traffic will be maintained at a minimum of 1 lane in each direction at all times on State Road. (Page 22 line 48-50) via part-width construction and partial detours to minimize impacts.
- Title VI and Environmental Justice. As a result of the EA analysis and the subsequent public informational meetings, no impacts are foreseen as a result of the preferred alternative. If such impacts are identified at a later time, every effort will be made to actively involve affected parties during project development to avoid or mitigate the impacts.
- Economic Impacts: Although businesses in the project area may be impacted temporarily during construction all businesses will have maintained access during construction. (Page 26 line 1-4).
- Floodplain: Fill in the flood plan will be accomplished by compensation cut in the same vicinity and volume as the area of fill to ensure that there is not a net gain in 100-year flood elevations.
- Permits: Joint NREPA Permit and NPDES Permit (see page 47 of revised EA).

- Design considerations: WCRC will consider options to reduce the culvert extension at Pittsfield Drain crossing under State Rd. (page 54 of the revised EA). Green infrastructure and BMPs (for stormwater, erosion control, and drainage) will be considered.

COMMENTS AND COORDINATION

The FHWA verified the WCRC conducted the Public Involvement Process in accordance with 23 CFR 771.119. See Chapter 4 of the Amended Environmental Assessment. Appendix B agency and public coordination as well as the notice and Public Comments. WCRC responses are summarized in Chapter 4 of the document.

REVISIONS TO THE ENVIRONMENTAL ASSESSMENT

There were revisions to the February 2013 EA. These revisions were incorporated in the Amended Environmental Assessment dated June 2013. It included changes in response to public comments received (see appendix 1 of this FONSI). Prior to finalization of the final EA, FHWA Michigan Division staff reviewed it and provided comments. All of the Division’s comments have been addressed. The revised Environmental Assessment is attached to this FONSI and is hereby incorporated by reference into this rationale supporting the FONSI.

FHWA has reviewed the:

- MDOT July 10, 2013 letter requesting a Finding of No Significant Impact (FONSI).
- Original EA signed on February 22, 2013.
- MDOT Amended EA dated June 2013.
- MDOT Amended EA for Comment #9 and response to the US EPA dated September 19, 2013.

FEDERAL-AID PARTICIPATION IN PROPOSED MITIGATION MEASURES.

The proposed mitigation measures described in the document are eligible for Federal-aid participation. Of special note, the proposed noise mitigation consists of required mitigation and enhanced mitigation:

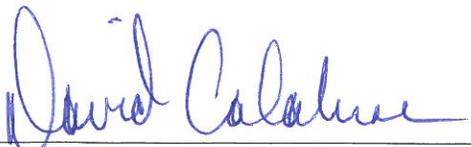
- Required Mitigation: Access to be maintained to the Pittsfield Township park will be maintained at all times during construction as described above.
- 1.0 acre of wetland mitigation purchase will be required as described above.

The above required mitigation measures are eligible for Federal-aid participation.

DETERMINATION THAT AN ENVIRONMENTAL IMPACT STATEMENT IS NOT NECESSARY

Per 40 CFR 1508.27 – Council on Environmental Quality’s regulations requiring consideration of a project’s context and intensity in determining whether the project will have a significant impact -- the EA provides sufficient evidence and analysis for determining that an environmental impact statement is not required. The FONSI will be reevaluated as appropriate pursuant to 23 C.F.R. 771.129(c).

Date: 10/7/2013

Responsible Official: 
 Engineering and Operations Manager
 FHWA-Michigan Division

APPENDIX 1

Comment #9 – U.S Environmental Protection Agency

Review of aerial photography indicates a potential wetland at the northeast corner of State Road and Textile Road. This was not noted in the Draft EA as a wetland area. Without having a wetland delineation report to review, EPA cannot confirm if this area was investigated and if wetland information was gathered here. EPA requests that this area be investigated if it was not already investigated as part of delineation.

Response to Comment #9

This particular area was investigated in detail as part of the wetland field study conducted for the project. Specifically, field reconnaissance for wetlands was conducted by qualified wetland scientists during June 2011 to determine the presence and approximate boundaries of wetlands within the project area. Wetland identification was based on the methodology described in the United States Army Corps of Engineers January 1987 Wetland Delineation Manual, and appropriate regional supplements (Northcentral and Northeast Supplement). Prior to the fieldwork, background information (such as NWI and soils maps) was also reviewed to establish the probability and potential location of wetlands in the project area.

Based on this investigation, no wetlands were identified within the northeast quadrant of the State Road and Textile Road intersection. As shown in Exhibits 1, 2, and 3, there is a stormwater detention pond (highlighted in blue) located on the north side of Textile Road about 400 feet east of State Road. This detention pond is located outside of the project area (i.e., not within the potential construction footprint/area of influence). Connected to this pond, there is also a stormwater conveyance ditch located along the east side of State Road. The ditch appears to transport water from the overflow of the detention pond as well as some parking lot runoff from the adjacent office complex. This ditch does not have a dominance of hydrophytic vegetation, hydric soils, or indicators of hydrology. Therefore, it is not considered a wetland/Water of the U.S. As shown in Exhibits 4, 5, and 6, the area to be impacted by the Preferred Alternative is mostly perched above the existing roadway elevation and is covered by upland plant species. The attached National Wetlands Inventory (NWI) map (Exhibit 3) also indicates no wetlands are present in the project area in the northeast corner of the State Road/Textile Road intersection. No wetland field notes were developed for this location since no wetlands exist.

During the design phase of the project, a detailed wetland delineation report will be prepared and submitted to MDEQ as part of the wetland permit application. As part of this process, MDEQ will verify all wetland boundaries within the project area.

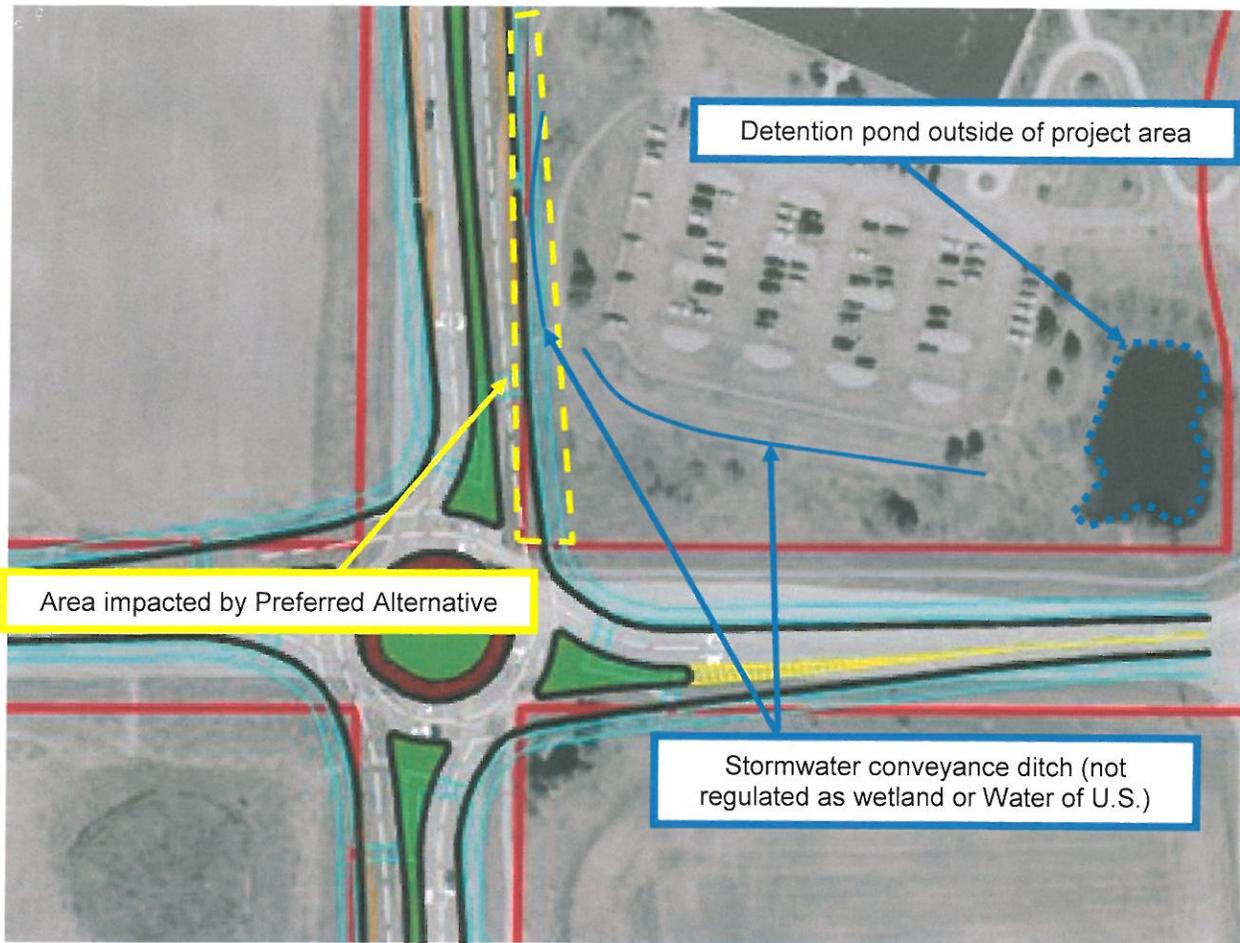


Exhibit 1 – NE Quadrant of State Road and Textile Road

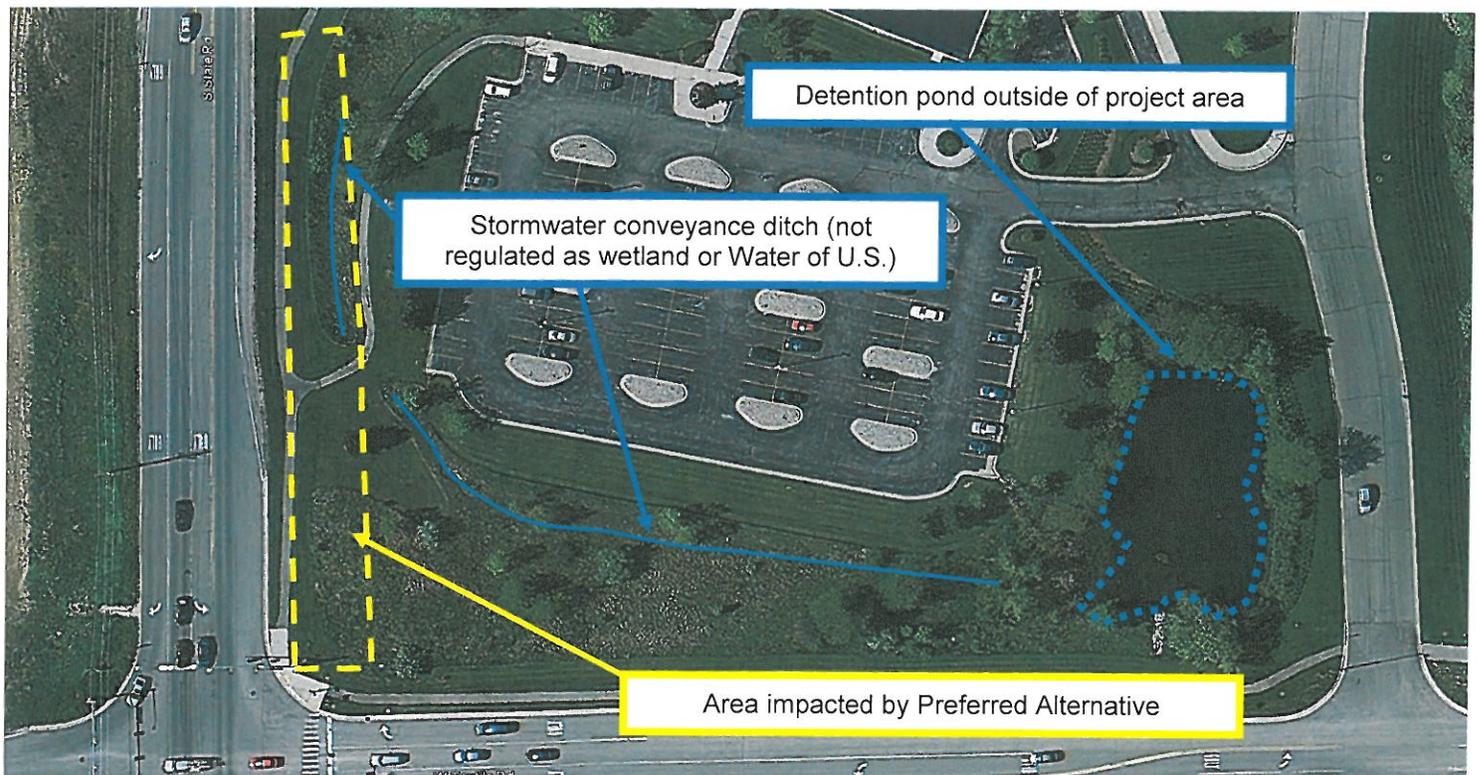


Exhibit 2 – Aerial Photograph of NE Quadrant of State Road and Textile Road (Source: Google Earth)

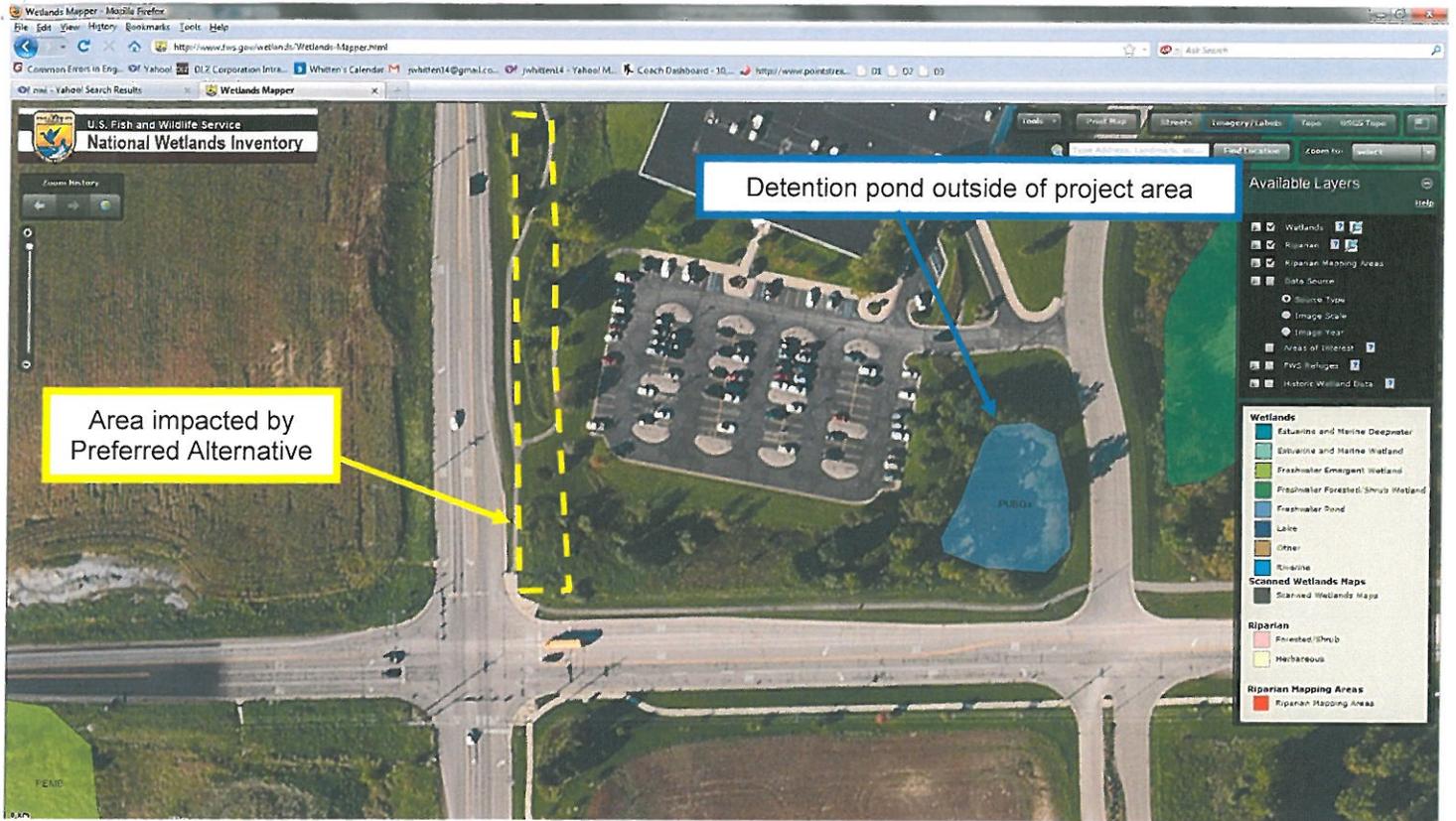


Exhibit 3 – NWI Map of State Road/Textile Road Intersection - Northeast Quadrant



Exhibit 4 – View of NE quadrant from State Road looking east (Source: Google Earth)



Exhibit 5 – View of NE quadrant from State Road looking southeast (Source: Google Earth)

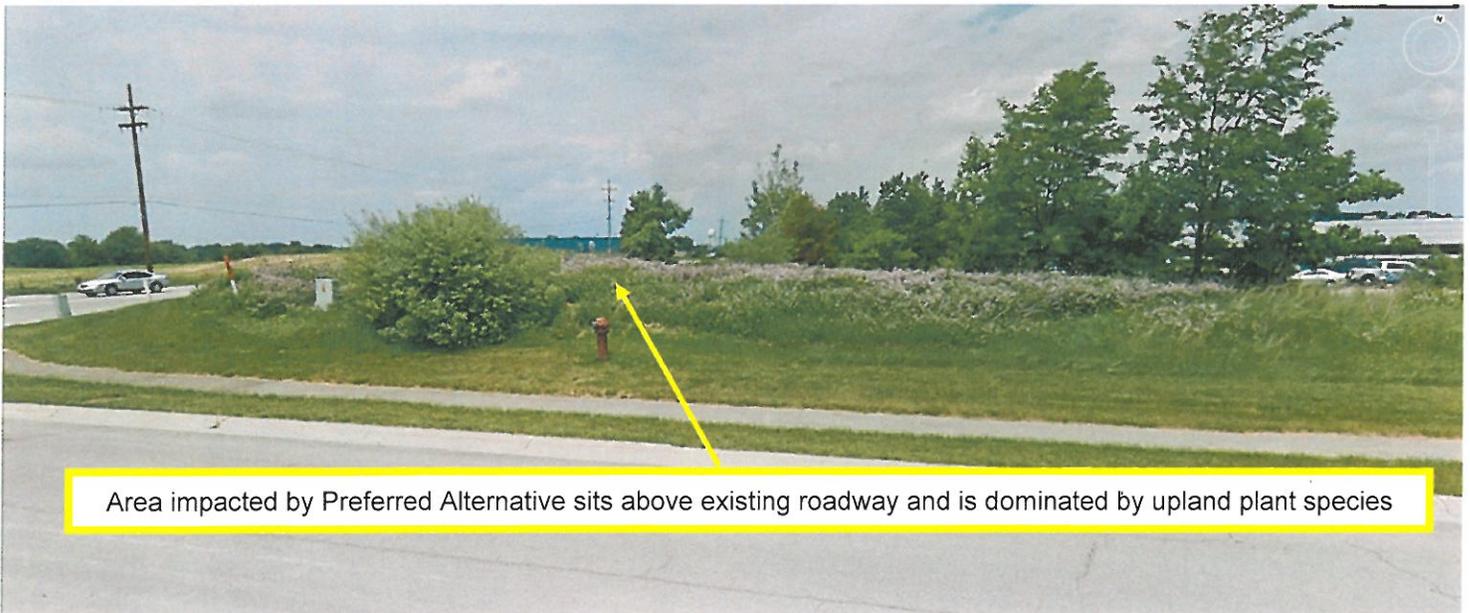


Exhibit 6 – View of NE quadrant from Textile Road looking north (Source: Google Earth)

Comment #19 – U.S. Environmental Protection Agency

In addition to the control measures stated in the Draft EA, the Washtenaw County Road Commission should commit to the following clean diesel strategies during construction activities.

- *Using ultra-low sulfur diesel fuel (less than 15 parts per million sulfur).*
- *Retrofitting engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.*
- *Positioning the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, thereby reducing the fume concentration to which personnel are exposed.*
- *Using catalytic converters to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes (these devices must be used with low sulfur fuels).*
- *Attaching a hose to the tailpipe of diesel vehicles running indoors and exhaust the fumes outside, where they cannot reenter the workspace. Inspect hoses regularly for defects and damage.*
- *Using enclosed, climate-controlled cabs pressurized and equipped with high efficiency particulate air (HEPA) filters to reduce the operator's exposure to diesel fumes.*
- *Regularly maintaining diesel engines, which is essential to keep exhaust emission low.*
- *Reducing exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel equipment operators to perform routine inspections, and maintaining filtration devices.*
- *Purchasing new vehicles that are equipped with the most advanced emissions control systems available.*
- *Using electric starting aids, such as block heaters, to warm the engines of older equipment and vehicles, thereby reducing diesel emissions.*
- *Using respirators, which are only an interim measure to control exposure to diesel emissions.*

Response to Comment #19

The contractor will be responsible for following all applicable laws and regulations and applicable standard specifications from MDOT. This includes that the contractor should keep construction equipment clean, tuned-up, and in good operating condition. It will be recommended to the contractor that the equipment use the best available diesel emission control technology whenever possible, and all vehicles and equipment follow MDOT Guidance #10179 (2/15/2009) *Vehicle and Equipment Engine Idling*.

MDOT's Standard Construction Specification Sections 107.15(A) and 107.19 will apply to control fugitive dust during construction and cleaning of haul roads. The Contractor will be asked to submit an "Air Quality Monitoring and Mitigation Plan" with their bid proposal addressing how the Contractor plans to limit airborne particulates and visible dust during construction, as well as a plan for how to mitigate and respond to complaints received. The "Air Quality Monitoring and Mitigation Plan" should contain at a minimum:

- (1) A description of mitigation measures taken to prevent decreased air quality from airborne particulates and visible dust.
- (2) (2) A complaint response and resolution process, including a timeframe for when action will be taken to reduce airborne particulates and visible dust once a complaint has been received.

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Amended Environmental Assessment

State Road Improvement Project Ellsworth Road to Michigan Avenue (US-12)

Pittsfield Township, Michigan

June 2013

Prepared by

Washtenaw County Road Commission



ENVIRONMENTAL ASSESSMENT

State Road Improvement Project
Ellsworth Road to Michigan Avenue (US-12)

Located in

Pittsfield Township,
Washtenaw County, Michigan

Prepared by:

Washtenaw County Road Commission

In Cooperation with:

U.S. Department of Transportation
Federal Highway Administration

2/22/2013
Date Approved


for Federal Highway Administration

For additional information concerning this proposed project or document, please contact:

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Environmental Program Manager
Federal Highway Administration
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Lansing, MI 48933
Phone: (517) 702-1820

PREFACE

3
4
5 The National Environmental Policy Act (NEPA) of 1969 requires that Federal government agencies
6 identify and consider the social, economic, and natural environmental (SEE) impacts of proposed actions
7 as part of their decision-making processes. NEPA also requires that Federal agencies provide information
8 to the public and consider their input when reaching decisions. This project is a Federally-funded
9 undertaking with funds administered by the Federal Highway Administration (FHWA). Therefore, this
10 Environmental Assessment (EA) has been prepared to identify and consider the SEE impacts of the
11 proposed action to satisfy NEPA requirements. This EA will also identify recommended improvements
12 for State Road and the intersections within the project limits.
13

14 Proposed Federal actions are classified into three different categories under NEPA. Class I actions are
15 those that would “significantly” affect the environment and require preparation of an Environmental
16 Impact Statement (EIS). Class II actions are those that do not have a significant effect on the
17 environment. Typically called “categorical exclusions,” Class II actions do not require preparation of an
18 EA or EIS. Class III actions are those for which the significance of impacts is not clear. These actions
19 require preparation of an EA to determine whether an EIS/Record of Decision (ROD) or Finding of No
20 Significant Impact (FONSI) is the appropriate type of documentation. This project falls under the Class
21 III designation.
22

23 This Amended EA has been prepared for the State Road Improvement Project located in Pittsfield
24 Township, Washtenaw County, Michigan. It includes several sections that address the following topics:
25

- 26 • The purpose of and need for the project.
- 27 • The alternatives that were considered as part of the study.
- 28 • The existing social, economic, and environmental conditions in the project area.
- 29 • The likely impacts and benefits associated with the Preferred Alternative.
- 30 • Mitigation measures that would minimize any impacts as the result of the Preferred Alternative.
- 31 • Consultation and coordination that have been conducted with the public and government
32 agencies.
33

34 The intent of the Amended EA is to serve as a decision making tool to be used by local, state, and Federal
35 officials in evaluating proposed road improvements along the State Road corridor. The original EA was
36 made available for review by members of the public, interest groups, and government agencies from
37 March 22, 2013 to May 7, 2013. Additionally, a public hearing was held on April 24, 2013 to solicit
38 input from the public regarding the project and its potential impacts. Comments received at the Public
39 Hearing and during the public review period have been summarized below in Section 4.5 (“Comments
40 and Responses”). Copies of all comments received and public notices are included in Appendix B.
41

42 This Amended EA has been prepared to address all relevant comments received during the review period.
43 This Amended EA supersedes the original EA published in March 2013.
44



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CHAPTER 1 – PURPOSE AND NEED

1
2
3 This chapter begins by describing the background of the State Road Improvement Project (project). It
4 then describes the purpose of the project and presents relevant background information that is helpful in
5 understanding the need for the project. These needs include existing traffic delays, projected intersection
6 and roadway capacity problems due to increases in future traffic volumes, opportunities to improve
7 safety, and consistency with the Pittsfield Township Master Plan.
8
9

10 1.1 Background

11
12 The State Road Improvement Project is a transportation improvement project sponsored by the
13 Washtenaw County Road Commission (WCRC) along the State Road corridor from Ellsworth Road south
14 approximately three miles to Michigan Avenue (US-12).
15

16 The project is located in Pittsfield Charter Township (Pittsfield Township) south of the city of Ann Arbor,
17 on the east side of Washtenaw County, in southeastern Michigan (Figure 1). State Road is currently
18 classified as an urban minor arterial road through the project area. Within the project area, State Road is a
19 two-lane roadway with one travel lane in each direction and intermittent turn lanes at intersections. The
20 posted speed limit on State Road is 50 mph from just north of Campus Parkway to the Ann Arbor
21 Railroad crossing, 45 mph from the railroad crossing to Concourse Drive, and 35 mph north of Concourse
22 Drive.
23

24 State Road serves the central portion of Pittsfield Township, the City of Ann Arbor Airport, and the cities
25 of Ann Arbor and Saline. State Road is also an important component of the transportation system in the
26 region, as it provides access to the following major roadway facilities/destinations:
27

- 28 • Interstate Highway 94 (I-94) to Chicago and Detroit
- 29 • Michigan Avenue (US-12) to US 23
- 30 • Michigan Avenue (US-12) to the Cities of Ypsilanti and Saline.

31
32 Land uses within the project area consist of commercial, industrial, research parks, residential,
33 agricultural, utilities, and some undeveloped parcels. State Road has been identified as a key corridor in
34 the *Pittsfield Township Master Plan* (Pittsfield Township 2010). The master plan describes the corridor
35 as “a vibrant center for a diverse set of employers ranging from alternative energy and technology firms,
36 to light manufacturing, such as printing and medical equipment facilities. There is an urgent need to
37 redesign State Street to accommodate multiple modes of transportation and incorporate green spaces.” A
38 more detailed discussion of existing land use and population trends is found in Chapter 3.
39

40 In 2006, WCRC, the Ann Arbor Transportation Authority (AATA) and Pittsfield Township funded the
41 *State Road Corridor Study* (Parsons Brinckerhoff/LSL Planning 2006). The purpose of the study was to
42 create a corridor transportation plan that would address traffic flow, land use, safety, and all modes of
43 travel (pedestrian, bicycle, vehicular, and transit). Other elements of the study included aesthetic
44 enhancement, and right-of-way (ROW) preservation.
45

46 The Southeast Michigan Council of Governments (SEMCOG), the Metropolitan Planning Organization
47 (MPO) for the Detroit metropolitan area and the Washtenaw Area Transportation Study (WATS) (a multi-
48 jurisdictional agency responsible for transportation planning in Washtenaw County), along with the
49 WCRC and Pittsfield Township, have planned system-wide transportation improvements that will benefit
50 the region. Committed transportation improvement projects are documented in the 2035 SEMCOG

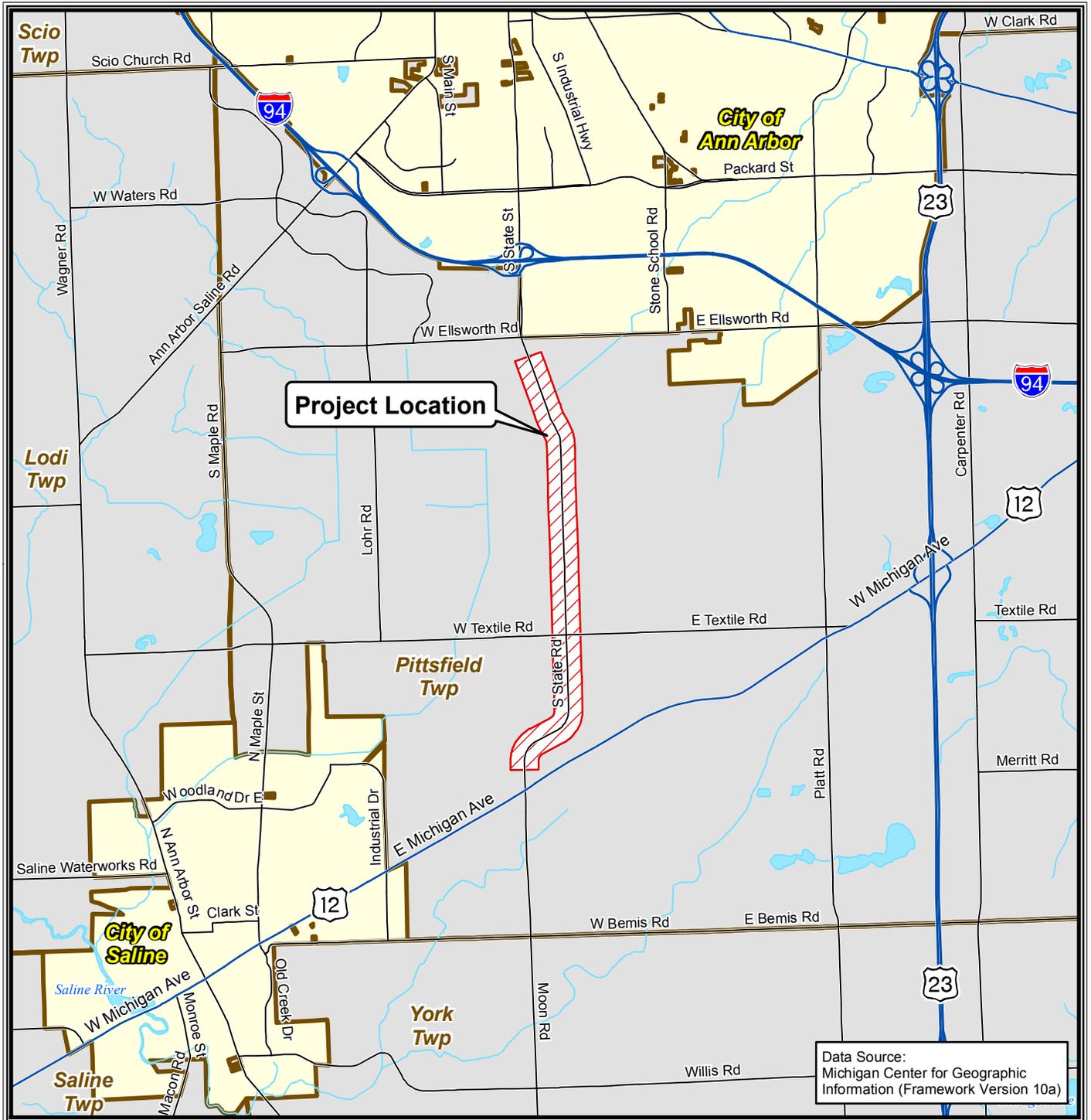
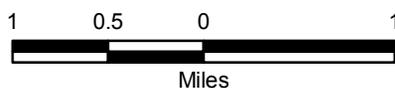


Figure 1 - Project Location Map

State Road Environmental Assessment

Washtenaw County, Michigan



1 Regional Transportation Plan (RTP) and the 2035 WATS Long Range Transportation Plan (LRTP). Both
2 of these plans include the widening of State Road within the project area (project numbers 2289 and
3 2358). Additionally, the State Road Improvement Project has been requested for inclusion on the 2040
4 RTP and LRTP. Preliminary engineering for the State Road segment between Morgan Road and
5 Ellsworth Road is included in the 2014-2017 WATS/SEMCOG Transportation Improvement Program
6 (TIP) that is currently under development.

9 1.2 Project Purpose

11 The purpose of this project is to:

- 13 • Accommodate existing and projected year 2035 traffic volumes;
- 14 • Accommodate all modes of transportation (bicyclists, pedestrians, automobiles, transit) by
15 providing a “Complete Street”;
- 16 • Increase safety along the corridor; and
- 17 • Meet the goals of the Pittsfield Township Master Plan

20 1.3 Project Need

22 This section provides information about the existing roadway and intersections and identifies their
23 existing and anticipated future deficiencies, safety problems, and consistency with the Pittsfield Township
24 Master Plan. Information supporting the need for the project is discussed in detail below.

26 1.3.1 Existing Traffic Operations (2011)

27 State Road serves as a vital link between the Cities of Saline and Ann Arbor. Additionally, it provides
28 access to I-94 and US-12, which in turn provide access to Detroit, Chicago, Jackson, and Ypsilanti.
29 Currently, State Road has one travel lane in each direction. The Average Annual Daily Traffic (AADT)
30 volumes for State Road within the project area are shown below in Table 1.

32 **Table 1. Existing (2010) AADT Volumes for State Road**

Road Segment	Annual Average Daily Traffic (AADT)
South of Ellsworth Road	17,566
North of Textile Road	12,737
South of Textile Road	12,909
North of Michigan Avenue	11,025

33 Source: WATS/SEMCOG

35 Within the project limits, the AM peak hour occurs between 7:30 and 8:30 AM. The general morning
36 commuter traffic pattern involves northbound travel on State Road toward the City of Ann Arbor and the
37 I-94 interchange. The PM commuter peak hour occurs between 4:45 and 5:45 PM, and the predominant
38 travel pattern is the opposite of the AM peak hour with motorists traveling towards US-12 and the City of
39 Saline. See Table 2 for existing peak hour traffic volumes.

41 Using recently collected traffic data, a SYNCHRO computer traffic model was developed for the existing
42 roads in the project area. The purpose of this model was to characterize the existing peak hour traffic
43 operations and to serve as a baseline for analysis of future traffic conditions. SYNCHRO is a
44 computerized traffic model that simulates the interactions between traffic. It predicts traffic impacts
45 caused by changes in road widths, intersection geometry, traffic speeds, and traffic signal timing changes.
46 The existing conditions SYNCHRO model that was developed for the project area included all primary

1 routes and major intersections. Existing traffic signal timing for the signalized intersections
 2 (State/Textile, State/Morgan, State/Old State, State/Campus) was used to run the model.

3
 4

Table 2. Existing (2011) Peak Hour Traffic Volumes for State Road

Intersection	AM Peak Hour Total Entering Volume*	PM Peak Hour Total Entering Volume*
State Road/Concourse Drive	1863	1923
State Road/Runway Drive	1731	1821
State Road/Morgan Road	1663	1975
State Road/ Lavender Drive	1310	1578
State Road/ Textile Road	1453	1728
State Road/ Old State Road	1291	1393
State Road/ Campus Parkway	1189	1339

5 Source: Washtenaw County Road Commission
 6 *Total number of vehicles entering an intersection from all approach legs during the peak hour

7

8 The SYNCHRO model identified the average Level of Service (LOS) and seconds of delay for the
 9 existing road network including the LOS for each intersection, intersection approach, and road segment.
 10 LOS is a qualitative measurement that reflects the degree of congestion and amount of delay experienced
 11 by motorists. LOS is expressed as a letter between A and F. LOS A represents a situation where
 12 motorists experience minimal congestion, minimal delays, and free-flow travel. At the other end of the
 13 spectrum, LOS F represents a situation where motorists experience extreme congestion, long delays, and
 14 severely impeded traffic flows. LOS A, B, C, and D are all considered acceptable, while LOS E and F are
 15 considered unacceptable.

16

17 The SYNCHRO results for existing levels of service are shown below in Table 3. As shown in Table 3,
 18 the traffic analysis indicated that three project area intersections and one road segment are currently
 19 operating at LOS E or worse.

20

Table 3. Existing (2011) LOS for State Road

Intersection	AM Peak Hour LOS					PM Peak Hour LOS				
	NB	SB	EB	WB	Overall	NB	SB	EB	WB	Overall
State Road/Concourse Drive	A	A	-	A	A	A	A	-	F	A
State Road/Runway Drive	A	A	-	C	A	A	A	-	D	A
State Road/Morgan Road	B	A	B	B	B	C	E	F	B	E
State Road/Lavender Drive	A	A	D	-	A	A	A	E	-	A
State Road/Textile Road	F	B	C	B	F	B	C	C	C	C
State Road/Old State Road	A	A	-	F	D	A	A	-	B	A
State Road/Campus Parkway	F	B	D	C	E	C	C	C	C	C
Road Segment	AM Peak Hour LOS				PM Peak Hour LOS					
	SB		NB		SB		NB			
Ellsworth Road to Morgan Road	A		C		D		C			
Morgan Road to Textile Road	B		B		C		B			
Textile Road to Old State Road	A		F		A		B			
Old State Road to Campus Parkway	C		A		A		C			

22 EB=Eastbound traffic, WB=Westbound traffic, NB=Northbound traffic, SB=Southbound traffic

23

24 **1.3.2 Future Traffic Operations (Year 2035)**

25 As the population of the township grows and development occurs over the next 20 years, traffic is
 26 expected to increase. In addition to traffic increases from population growth, traffic will also increase due
 27 to proposed land use changes along the corridor. The 2035 AADT volumes for State Road are shown
 28 below in Table 4.

Table 4. Future (2035) AADT Volumes for State Road

Road Segment	Annual Average Daily Traffic (AADT)
South of Ellsworth Road	23,658
North of Textile	18,000
South of Textile	13,135
North of Michigan	17,676

Source: WATS/SEMCOG

Projected future traffic volumes entering project area intersections are shown in Table 5 for the AM and PM peak hours. The following growth rates were used to develop the future traffic volumes:

- North limits to Morgan Road = 27% total growth from current to 2035
- Morgan Road to Textile Road = 22% total growth from current to 2035
- Textile Road to South limits = 22% total growth from current to 2035

In order to develop these growth rates, the historic ADT counts, peak hour turning movement counts, local land use and zoning plans, local transportation plans, transit plans, and information from the existing WATS travel models for the area were reviewed and evaluated. Upon this review, future growth rates were developed based on very specific local conditions in the corridor, land use plans, committed development projects in the region, anticipated population and employment growth, development patterns, and likely future development. Appendix A provides greater details regarding the traffic forecasting process.

Table 5. Future (2035) Peak Hour Traffic Volumes for State Road (No Build Alternative)

Intersection	AM Peak Hour Total Entering Volume	PM Peak Hour Total Entering Volume
State Road/Concourse Drive	2366	2442
State Road/Runway Drive	2198	2313
State Road/Morgan Road	2112	2508
State Road/Lavender Drive	1598	1925
State Road/Textile Road	1773	2108
State Road/Old State Road	1575	1699
State Road/Campus Parkway	1451	1634

The “No Build Alternative” was analyzed to determine traffic impacts from the future (year 2035) traffic volumes on the existing road network without any improvements to the existing road network in the project area. Table 6 shows the predicted peak hour LOS for the project area roadway segments and intersections under the No Build Alternative for year 2035. As shown in Table 6, if improvements are not made, four intersections within the project area will function at a LOS of E or lower. At these levels of service the entire project area will experience congestion and increased delay.

As shown in Table 6, with the existing lane configurations the Textile Road to Old State Road segment of State Road is predicted to fail during the AM peak hour, and the Ellsworth Road to Morgan Road and Morgan Road to Textile Road segments are predicted to fail during the PM peak hour (based on Highway Capacity Software analysis). Between Campus Parkway and Old State Road, the distance between these intersections is relatively short. When accounting for the storage lengths and tapers needed to widen/drop lanes at these intersections on either end of the segment, the length of road that would actually be two lanes (one lane in each direction) is less than 500 feet. From the perspective of lane continuity for the traveling public, this segment of road should have two through travel lanes in each direction (i.e., it is undesirable for drivers to merge from two lanes to one lane and a short distance later have the road widen back to two lanes).

Table 6. Future (2035) LOS for State Road (No Build Alternative)

Intersection	AM Peak Hour LOS					PM Peak Hour LOS				
	NB	SB	EB	WB	Overall	NB	SB	EB	WB	Overall
State Road/Concourse Drive	A	B	-	E	A	A	A	-	F	D
State Road/Runway Drive	A	A	-	C	A	A	A	-	F	A
State Road/Morgan Road	E	A	B	B	D	E	F	F	B	F
State Road/Lavender Drive	A	A	E	-	A	A	A	F	-	C
State Road/Textile Road	F	B	E	B	F	B	F	C	C	F
State Road/Old State Road	A	A	-	F	F	A	A	-	C	A
State Road/Campus Parkway	F	B	C	C	F	C	C	C	C	C
Road Segment	AM Peak Hour LOS				PM Peak Hour LOS					
	SB		NB		SB		NB			
Ellsworth Road to Morgan Road	A		C		E		F			
Morgan Road to Textile Road	B		D		F		D			
Textile Road to Old State Road	A		F		A		B			
Old State Road to Campus Parkway	C		A		C		A			

EB=Eastbound traffic, WB=Westbound traffic, NB=Northbound traffic, SB=Southbound traffic

1.3.3 Complete Street Facilities

Currently, transportation facilities in the project area primarily accommodate only automobile traffic. The majority of the project area does not have any sidewalks, multi-use paths, or bicycle facilities. The existing non-motorized facilities are limited and segmented throughout the corridor. Additionally, the existing roadway does not provide the opportunity for public transit facilities.

The 2006 *State Road Corridor Study* identified the need for the corridor to be designed as a “Complete Street” by improving the corridor’s functionality, relieving congestion, improving safety, enhancing aesthetics, accommodating multi-modal transportation, and incorporating non-motorized facilities.

Additionally, the Michigan State Transportation Commission officially adopted the *State Transportation Commission Policy on Complete Streets, July 26th, 2012*, as required by PA 134 and PA 135 of 2010. This law requires complete streets policies be sensitive to the local context, and consider the functional class, cost, and mobility needs of all legal users. The primary purpose of these efforts is to encourage development of complete streets, as appropriate to the context and cost of a project.

The *Pittsfield Township Master Plan* has mandated implementation of complete streets throughout the Township. As described in the Township’s master plan, “a complete street is one that is planned, designed, operated, and maintained for all users to safely, comfortably, and conveniently move along and across.” As noted in a coordination letter received from Pittsfield Township (Appendix B), the State Road corridor has been identified as an important transportation multi-modal route through the Township. Pittsfield Township has also recently completed 10-foot wide multi-use paths in the vicinity of State Road along Lohr Road and Textile Roads. As indicated in the coordination letter, due to the success of these pathways, the Township is in the process of amending its 2010 master plan to include State Road as part of the non-motorized plan, providing 10-foot multi-use paths along its entire length. The amendment process is anticipated to be completed by late 2013. This would provide a north-south non-motorized connection to numerous business, light industrial, research and development, and commercial centers within the project area.

Currently, bicyclists are riding on the existing roadway in traffic, as no on-street bike lanes exist. Local bicycle advocacy groups have indicated that experienced bicyclists prefer on-street bike lanes over multi-use paths. These more experienced bicyclists prefer that bicycle facilities are directly incorporated into the roadway design (i.e., on-street bike lanes) as the majority of these types of bicyclists are commuting

1 and behaving more like motor vehicles than recreational bicyclists. These commuting bicyclists have
2 expressed a clear preference for on-street bike lanes as opposed to multi-use paths. Local bike groups
3 have also indicated that the posted traffic speed of 50 mph/45 mph along State Road poses no significant
4 concerns with regard to on-street bike lanes.

6 **1.3.4 Safety**

7 An analysis of crashes in the project area supports the need to implement road improvements that will
8 reduce crash numbers, severity, and rates. Crash records for 2007 through 2011 indicate that a total of
9 123 crashes were reported in the project area during this five-year period. See Table 7 for a summary of
10 the crash data. As shown in Table 7, there were 123 crashes reported in the project corridor during the
11 five-year period. Of the 123 crashes, 90 were recorded as intersection crashes, and 33 were recorded as
12 segment crashes.

14 **1.3.4.1 Intersections**

15 The State/Textile intersection reported the most crashes over the five-year period with 18 crashes (three
16 injury crashes). The State/Concourse intersection had the second most recorded crashes with 17 (three
17 injury crashes), while the State/Morgan intersection had the third most with 12 crashes (three injury
18 crashes). Of the 90 intersection crashes in the project area, 13 resulted in injuries (including one
19 incapacitating injury crash at the State/Payeur intersection), and no fatalities were reported. Rear end
20 accidents accounted for 43 percent of the crashes in the project area (38 crashes). The majority of rear
21 end type crashes occurred at the State Road intersections with Concourse Drive, Morgan Road, and
22 Textile Road. The rear-end accidents at Morgan Road and Textile Road are likely caused by traffic
23 queuing back at each intersection while stopped for the traffic signal, while the crashes at Concourse
24 Drive are a result of southbound traffic stopping in the travel lane to make a left turn onto the side road.

25
26 Of the remaining intersection crashes, 25 percent (23 crashes) were single vehicle crashes. Of these
27 single vehicle crash types, ten were deer related, and four were alcohol related. Of the remaining single
28 vehicle crashes, six were coded as “lane departure.” Of these crashes, four involved wet or snowy
29 conditions. Of the six single vehicle accidents at State Road and Old State Road intersection, three were
30 deer related, and two were alcohol related. Of the five single vehicle accidents at State Road and
31 Concourse Drive intersection, one was deer related, and three were southbound vehicles leaving the road
32 to avoid hitting vehicles stopped to make a left turn onto Concourse Drive. Of the four single vehicle
33 accidents at the State Road and Payeur Drive intersection, two were deer related. The remaining eight
34 single vehicle crashes were distributed amongst the other intersections (Table 7). Four of these crashes
35 were deer related, three were lane departures, and one was alcohol related.

37 **1.3.4.2 Roadway Segments**

38 The segment between Airport Drive and Concourse Drive recorded the most crashes with ten (two injury
39 crashes). The segment between Old State Road and Whitmore Drive recorded six crashes (one injury
40 crash). The segment between Textile Road and Hines Drive also recorded six crashes (three injury
41 crashes). Of the 33 segment crashes, 15 were single vehicle accidents, and 12 were rear-end accidents. Of
42 the 15 single vehicle accidents, nine were snowy/icy/wet conditions, six were deer related, and two
43 involved alcohol. Five of the 12 rear-end crashes were between Concourse Drive and Airport Road
44 which are likely due to the northbound queues from the Ellsworth Road intersection.

45
46 In conjunction with the anticipated increase in traffic, the number of crashes in the project area is
47 anticipated to increase. This is particularly true for rear-end crashes, as the amount of congestion (see
48 Table 6) and the number of left turning vehicles increases.



1 **Table 7. Crash Summary**

Intersection	Crash Type							Severity		Total
	Head-on	Single Vehicle	Angle	Head-on/Left Turn	Rear-end	Sideswipe	Other	PDO	Injury	
Airport					4			4		4
Concourse		5	1		11			14	3	17
Runway		1				1		2		2
Morgan		2	3		7			9	3	12
Avis			1	1	4			4	2	6
Lavender		2			1		1	4		4
Payeur		4			1			4	1*	5
Hines		1	2		1			3	1	4
Textile		2	3	1	8	2	2	15	3	18
Old State		6		1	1			8		8
Campus			2		8			10		10
Intersection Totals	8	23	12	3	38	3	3	77	13	90
Segment										
Between Airport & Concourse		3			5		2	8	2	10
Between Concourse & Runway					1			1		1
Between Runway & Morgan		2	1		2			5		5
Between Avis & Lavender		1			1		1	3		3
Between Hines & Textile		4		1	1			3	3	6
Between Textile & Whitmore		2						2		2
Between Whitmore & Old State		3			2		1	5	1	6
Segment Totals		15	1	1	12		4	27	6	33

2*Incapacitating injury

3

4 **1.3.5 Pittsfield Township Master Plan**

5 Currently, transportation facilities in the project area are primarily designed to accommodate automobile
 6 traffic only. As noted in Section 1.3.3, the *Pittsfield Township Master Plan* has identified the need to
 7 improve the compatibility and connectivity between land uses and the transportation network (for all
 8 transportation modes) within the township. The plan also identifies the project area as a prime location
 9 for development or redevelopment as dense, mixed-use development. In order to meet this need the
 10 master plan identified several key concepts that apply to the project area. They include the following:

11

- 12 • Provide motorized and non-motorized connections between land uses wherever feasible.
- 13 • Integrate all modes of transportation into the transportation network to reduce or
 14 eliminate crash conflicts between modes (e.g., rail, auto, transit, and non-motorized
 15 modes).
- 16 • Develop roadways that accommodate mixed-use developments along the State Road
 17 Corridor
- 18 • Promote connectivity through non-motorized transportation
- 19 • Develop complete streets
- 20 • Provide public transportation routes and facilities



1.4 Conclusion

1
2
3 The information presented in this chapter supports the need for the project. Specifically, anticipated
4 traffic increases due to existing and planned growth will lead to congestion resulting in more crashes on
5 the existing roadway by the year 2035. The project area will suffer serious congestion and delays without
6 improvements. Additionally, there is a need to develop this section of State Road as a “complete street”
7 by providing or supporting non-motorized and transit facilities. Last, the Pittsfield Township Master Plan
8 identifies a number of goals and objectives that could be accomplished through transportation
9 improvements in the project area. The proposed improvements analyzed in subsequent chapters of this
10 document address these needs.

11

CHAPTER 2 - ALTERNATIVES

1
2
3 This chapter describes the transportation improvement alternatives considered as part of the State Road
4 Improvement Project, as well as the process used to develop and evaluate these alternatives. Some of the
5 alternatives considered have been eliminated from further consideration, and this chapter provides the
6 justification for dismissing these alternatives. Additionally, this chapter provides a detailed description of
7 the Preferred Alternative and the No Build Alternative as required by NEPA.
8
9

10 **2.1 Project Development Process**

11
12 The project development process includes the process of studying, designing, and constructing
13 transportation improvements that will be funded with Federal money or require Federal approval.
14 Typically, this process includes the following main phases:
15

- 16 **1. Preliminary Studies** - includes feasibility studies and other initial investigations to define
17 problems, receive public input, and identify possible solutions.
- 18 **2. Environmental Compliance** – includes more detailed studies to specifically define problems,
19 develop and compare alternatives, identify likely benefits and negative impacts, and select a
20 “Preferred Alternative” that can be carried forward into later phases of the process. This phase
21 addresses all relevant environmental regulations (including NEPA) and includes public
22 involvement activities. It also typically includes early conceptual engineering.
- 23 **3. Design** – results in preparation of preliminary and final engineering designs for the Preferred
24 Alternative. Required environmental permits are obtained, and additional coordination with the
25 public occurs.
- 26 **4. ROW Acquisition** – property required to accommodate improvements is acquired from owners
27 at fair market value. This phase includes negotiations with property owners.
- 28 **5. Construction** – A construction contractor is selected through the bidding process, and the project
29 is built.
30
31

32 **2.2 Illustrative Alternatives**

33
34 During the early stages of the study, three transportation improvement concepts (Illustrative Alternatives)
35 were developed that satisfied the project’s purpose and need. The Illustrative Alternatives provided a
36 range of options in terms of benefits, relative costs, and negative impacts. Early preliminary engineering
37 was performed on the Illustrative Alternatives to identify proposed transportation improvements. They
38 were also evaluated based on a variety of criteria, and this comparative analysis has been summarized in
39 the text below and in Table 8. The analysis performed on the Illustrative Alternatives was limited only to
40 the level necessary to determine if each warranted further consideration or if enough information existed
41 to eliminate an alternative from further consideration. The descriptions below also provide an
42 explanation as to why some Illustrative Alternatives were eliminated from further consideration.
43

44 **2.2.1 Illustrative Alternative 1 – Five-Lane Roadway with Traffic Signal Intersections**

45 This alternative consisted of a five-lane roadway for the entire length of the project area. This alternative
46 included two travel lanes in each direction, a continuous left-turn only lane, and improvements to the
47 State Road intersections with Morgan Road, Textile Road, and Old State Road. These intersections
48 would be controlled by traffic signals. On-street bikes lanes, and a ten-foot wide multi-use path would
49 also be provided on both sides of the roadway. Additionally, this alternative would accommodate future
50 transit facilities (i.e., bus stops/shelters) should the township and/or AATA decide to build facilities along

1 the corridor. This alternative would also require the lengthening of the culvert for the Pittsfield-Junction
2 drain and reconstruction of the existing railroad crossing near Payeur Road.

3
4 This alternative was eliminated from consideration because it would not reduce injury crashes to the same
5 degree as the Preferred Alternative; is not fully consistent with the Pittsfield Township Master Plan; does
6 not improve traffic operations to the same degree as the Preferred Alternative; and does not accommodate
7 pedestrians and bicyclists as safely as the Preferred Alternative.

8 9 **2.2.2 Illustrative Alternative 2 – Narrow Median with Roundabout Intersections**

10 This alternative consisted of a four-lane roadway (two travel lanes in each direction) with a 20-foot
11 median for the entire length of the project area. As part of this alternative, two-lane roundabouts would
12 be constructed at the State Road intersections with Morgan Road, Textile Road and Old State Road.
13 Median turnarounds would also be provided at locations throughout the corridor. On-street bikes lanes,
14 and a ten-foot wide multi-use path would also be provided on both sides of the roadway. Additionally,
15 this alternative would accommodate future transit facilities (i.e., bus stops/shelters) should the township
16 and/or AATA decide to build facilities along the corridor. This alternative would also require the
17 lengthening of the culvert for the Pittsfield-Junction drain and the railroad crossing near Payeur Road.

18
19 This alternative was selected as the Preferred Alternative. For more details regarding this Alternative, see
20 Section 2.4.

21 22 **2.2.3 Illustrative Alternative 3 – Wide Median with Traffic Signal Intersections**

23 This alternative consisted of a four-lane roadway (two travel lanes in each direction) with a 60-foot
24 median for the entire length of the project area. As part of this alternative, the State Road intersections
25 with Morgan Road, Textile Road, Old State Road, and Campus Drive would be signalized with indirect
26 left turns (i.e., “Michigan Lefts”). Median turnarounds would also be provided throughout the corridor.
27 On-street bikes lanes, and a ten-foot wide multi-use path would also be provided on both sides of the
28 roadway. Additionally, this alternative would accommodate future transit facilities should the township
29 and/or AATA decide to build facilities along the corridor. This alternative would also require the
30 lengthening of the culvert for the Pittsfield-Junction drain and the railroad crossing near Payeur Road.

31
32 This alternative was eliminated because, relative to the Preferred Alternative, it resulted in significantly
33 higher ROW impacts, impacts to SEE resources, and cost.

34 35 **2.2.4 Illustrative Alternative 4 – Intersection Improvements Only**

36 This alternative consisted of improving only the project area intersections (e.g., geometric changes,
37 conversion to roundabouts, addition of turn lanes, etc.) in order to provide acceptable traffic operations
38 (i.e., LOS D or better) with year 2035 traffic volumes. Under this alternative, the roadway segments
39 between the intersections would not be improved/widened. Non-motorized facilities would not be
40 constructed between the intersections as part of this alternative.

41
42 This alternative was eliminated from consideration because it does not improve traffic operations to the
43 same degree as the Preferred Alternative; it would not reduce injury crashes to the same degree as the
44 Preferred Alternative; is not fully consistent with the Pittsfield Township Master Plan; and it does not
45 accommodate pedestrians and bicyclists as safely as the Preferred Alternative. Specifically with regard to
46 traffic operations, with the existing lane configurations and future traffic volumes, the Textile Road to
47 Old State Road segment of State Road is predicted to fail during the AM peak hour, and the Ellsworth
48 Road to Morgan Road and Morgan Road to Textile Road segments are predicted to fail during the PM
49 peak hour (Table 6). Between Campus Parkway and Old State Road, the distance between these
50 intersections is relatively short. When accounting for the storage lengths and tapers needed to widen/drop
51 lanes at these intersections on either end of the segment, the length of road that would actually be two

lanes (one lane in each direction) is less than 500 feet. From the perspective of lane continuity for the traveling public, this segment of road should have two through travel lanes in each direction (i.e., it is undesirable for drivers to merge from two lanes to one lane and a short distance later have the road widen back to two lanes).

2.3 Other Alternatives Considered

Several other alternatives were also considered as part of preliminary studies. All of these were ultimately eliminated from consideration as noted below.

2.3.1 Transportation System Management (TSM) Alternative

TSM improvements usually consist of relatively low cost projects that can increase the capacity of a road system without major upgrades. Typically, TSM improvements include: Intelligent Transportation Systems (ITS), turn lanes at traffic signals, traffic signal timing improvements, access management, promotion of ride sharing, promotion of flexible work hours, and incident management. Relevant guidance indicates that TSM alternatives are usually relevant only for major projects in urbanized areas with populations of over 200,000 persons (FHWA 1987), such as the City of Ann Arbor. According to the 2010 Census, Pittsfield Township has a population of less than 40,000 people.

Considering the severity of the problems identified in Chapter 1 of this document (the purpose and need), it is not reasonable to believe that TSM measures alone would adequately address these concerns. Even using optimistic assumptions about the effectiveness of TSM measures, this alternative would not accommodate projected future traffic volumes. Additionally, in order to be successful, this alternative would require people to make major changes to established travel habits and patterns. As a result of these factors, the TSM alternative was eliminated as a stand-alone alternative. However, TSM measures will be incorporated into the Preferred Alternative where they offer cost-effective benefits.

2.3.2 Mass Transit Alternatives

This alternative would assume a travel mode shift from the automobile to mass transit (i.e., bus or rail). No transit routes currently exist in the project area. The *Washtenaw County Transit Master Plan* (AATA August 2011) calls for future bus service along the corridor into the City of Saline. There are no future commuter rail plans for this corridor. In order to be successful, this alternative would require people to make major changes to established travel habits and patterns. Since such changes are not viewed as realistic for the project area and would not meet the project's purpose and need, mass transit was dismissed as a stand-alone alternative. However, the Preferred Alternative will be designed so as to accommodate the future AATA route planned along State Road.

Table 8. Illustrative Alternatives Evaluation

Evaluation Criteria	Comments	Illustrative Alternatives		
		Illustrative Alternative 1 Five-Lane Road with Traffic Signals	Illustrative Alternative 2 Narrow Median with Roundabouts	Illustrative Alternative 3 Wide Median with Traffic Signals-Indirect Lefts
Safety	Comparison of safety for autos.	Signalized intersections have significantly higher injury rates when compared to roundabouts. Anticipated that injury crash rate will be about twice as high as Alternative 2. Property Damage Only (PDO) crashes similar to Alternative 2.	Would result in greater safety benefits than Alternatives 1 & 3 as the injury crash rate will be about half as high as Alternative 1. Median would also eliminate potential for left turn crashes. PDO crashes similar to Alternatives 1 & 3.	Results in safety benefit by eliminating left turns at intersections and driveways. PDO crashes similar to Alternative 2.
Traffic Operations	Seconds of delay per vehicle (average) and Level of Service (LOS) for AM and PM peak hours for the year 2035 at the major project area intersections.	<p><u>Morgan Road</u> AM Delay = 7.1 sec (LOS A) / PM Delay = 30.8 sec (LOS C)</p> <p><u>Textile Road</u> AM Delay = 28.7 sec (LOS C) / PM Delay = 17.6 sec (LOS B)</p> <p><u>Old State Road</u> AM Delay = 19.2 sec (LOS B) / PM Delay = 6.1 sec (LOS A)</p>	<p><u>Morgan Road</u> AM Delay = 3.5 sec (LOS A) / PM Delay = 4.6 sec (LOS A)</p> <p><u>Textile Road</u> AM Delay = 4.3 sec (LOS A) / PM Delay = 4.3 sec (LOS A)</p> <p><u>Old State Road</u> AM Delay = 3.2 sec (LOS A) / PM Delay = 3.2 sec (LOS A)</p>	<p><u>Morgan Road</u> AM Delay = 7.0 sec (LOS A) / PM Delay = 19.4 sec (LOS B)</p> <p><u>Textile Road</u> AM Delay = 15.6 sec (LOS B) / PM Delay = 10.6 sec (LOS B)</p> <p><u>Old State Road</u> AM Delay = 11.7 sec (LOS B) / PM Delay = 6.0 sec (LOS A)</p>
Additional Auto Capacity*	Amount of traffic increase that alternative could accommodate beyond 2035 traffic projections.	Low	Moderate	Moderate
Environmental Impacts*	Degree (relative to other alternatives) to which alternatives will impact surrounding resources (e.g., wetlands, cultural resources, streams, biotic communities, etc.)	Low	Low to Moderate	Moderate
Consistency with Pittsfield Township Master Plan	Degree to which scenario meets the goals of the Pittsfield Township Master Plan	Not fully consistent with township vision for the corridor	Consistent with township master plan	Consistent with township master plan
Planning Level Construction Cost	Includes construction cost, engineering costs, and ROW cost. All opinions in year 2011 dollars.	Total Cost – \$25,000,000	Total Cost - \$ 29,000,000	Total Cost – \$33,000,000
Long Term Operational Cost*	Relative to other alternatives' cost of ongoing operations including electricity (lighting), signal adjustment, bulbs/other equipment, mowing, maintenance, pavement markings, etc.	Low to moderate	Low to moderate	Moderate
Right-of-Way Acquisition	Impacts to businesses and residences caused by construction of project, and area of ROW acquisition.	<ul style="list-style-type: none"> • 0 relocations • 7 acres 	<ul style="list-style-type: none"> • 0 relocation • 12 acres 	<ul style="list-style-type: none"> • 2 potential residential relocations • 22 acres
Complete Streets – Pedestrians	Comparison of accommodation and safety factors for pedestrians.	<p>Pedestrians fully accommodated.</p> <p>Pedestrians less safely accommodated than Alternatives 2 & 3 as pedestrians have to travel across wide expanse of pavement and traffic is traveling in two directions.</p>	<p>Pedestrians fully accommodated.</p> <p>Pedestrians experience a reduction in the number of crashes and the severity of crashes when compared with other types of controlled intersections. Median design provides pedestrian refuge and allows two-staged crossing. Minor concerns related to visually impaired pedestrians.</p>	<p>Pedestrians accommodated.</p> <p>Median design provides pedestrian refuge and allows two-staged crossing, but the wide expanse may discourage crossing.</p>
Complete Streets – Bicyclists	Comparison of accommodation and safety factors for bicyclists.	<p>Bicyclists fully accommodated.</p> <p>Bicyclists less safely accommodated than Alternatives 2 & 3 as five-lane cross section may lead to higher speeds, which is less comfortable for most bicyclists</p>	<p>Bicyclists fully accommodated.</p> <p>Bicyclists are at least as safe at a properly designed roundabout as they are at a signalized intersection, provided they do not ride in the circulating roadway. Removal of left-turning traffic will also increase bicyclist safety</p>	<p>Bicyclists fully accommodated.</p> <p>Removal of left-turning traffic will increase bicyclist safety</p>
Complete Streets – Transit	Degree to which scenario provides for transit facilities	Fully accommodates all transit service and facilities.	Fully accommodates all transit service and facilities.	Fully accommodates all transit service and facilities.
Context Sensitive Design	Opportunities for aesthetic enhancements.	Limited opportunities for additional landscaping	Median provides area for landscaping; allows room for stormwater detention; supports the business park environment, but requires more signage in roundabouts or at indirect access points	Median provides area for landscaping; provides greatest room for stormwater detention; supports the business park environment, but requires the most ROW.
Access	Degree to which scenario safely provides for efficient ingress and egress.	Allows direct access to all driveways and side streets/roads but would result in left-turn and other conflicts.	Some moderate impacts to accessibility due to median (drivers would need to use the roundabouts/turnarounds for access). Would increase safety by eliminating left-turn conflicts.	Some moderate impacts to accessibility due to median (drivers would need to use the turnarounds for access). Would increase safety by eliminating left-turn conflicts.

*The low/moderate rankings provide a qualitative comparison of relative impacts among the alternatives. These rankings were based on the professional judgment of the interdisciplinary project team.

2.3.3 Non-motorized Alternatives

Several non-motorized alternatives were evaluated as part of the alternatives development process. These included the following:

- No new non-motorized facilities within the project corridor
- Ten-foot multi-use paths on both sides of road without on-street bike lanes
- Ten-foot multi-use path on one side of road without on-street bike lanes
- Ten-foot multi-use path on one side of road with on-street bike lanes
- Six-foot sidewalks without on-street bike lanes
- Six-foot sidewalks with on-street bike lanes

These alternatives would be inconsistent with the Township's master plan as the Township has mandated the implementation of complete streets throughout the Township in order to meet the needs of all users. Additionally, as noted in the Township's coordination letter (Appendix B), it is preferable that multi-use paths be provided on both sides of State Road. Therefore, these alternatives were eliminated as they did not meet the purpose of and need for the project for the following specific reasons:

- On-street bike lanes are needed to serve experienced bicyclists, many of whom are commuters. Two separate bicycle advocacy groups have provided input on this project and indicated the need for on-street bike lanes to separate experienced riders from less experienced and recreational riders. These bike groups have also indicated that advanced riders will not use multi-use paths and will ride on the roadway with or without on-street bike lanes.
- Ten-foot multi-use paths are needed to accommodate different uses that may occur simultaneously (e.g., walking, jogging, biking by less experienced/recreational users who are not comfortable using on-street bike lanes, etc.).
- Ten-foot multi-use paths are needed on both sides of State Road to provide full access to all origins/destinations on both the west and east sides of State Road. Full paths on both sides of the road also reduce the need for non-motorized users to cross mid-block at undesignated locations (this would be a safety concern). Also, full length paths on both sides of the road will facilitate optimal access to transit stop locations, should these be constructed in the future.

2.4 Preferred Alternative

2.4.1 Selection of the Preferred Alternative

Selection of the Preferred Alternative was primarily based on the criteria and information shown in Table 8. Selection of the Preferred Alternative also considered comments expressed by Pittsfield Township representatives, government agencies with jurisdiction in the project area, local business owners and the general public. Alternative 2 – Narrow Median with Roundabout Intersections was selected as the Preferred Alternative for the following reasons (comparisons are relative to the other Illustrative Alternatives that were considered):

- Provides the best traffic operations
- Provides the greatest increase in vehicular and pedestrian safety
- Accommodates pedestrians and bicyclists at least as well as other alternatives
- Consistency with Pittsfield Township Master Plan
- Relatively low environmental impacts
- Reasonable cost

1 The Preferred Alternative would improve safety by reducing vehicle queues at the intersections and by
2 providing left turn lanes/bays or crossovers/indirect left turns onto the side roads via the median. These
3 improvements would likely reduce the rear-end crashes along the corridor. Additionally, numerous
4 studies have indicated that roundabouts typically reduce total crashes by 40 percent and injury crashes by
5 40 to 80 percent relative to other intersection types. Last, the boulevard median will reduce crashes by
6 providing access control and eliminating direct left turns at many project area drives.

7 **2.4.2 Elements of the Preferred Alternative**

8 **2.4.2.1 Roadway Cross Section and Alignment**

9
10 The Preferred Alternative, shown in Figures 2 and 3, would consist of a variable 12 to 20-foot wide
11 median, four 11-foot wide travel lanes (two in each direction), and five-foot wide on-street bike lanes in
12 both directions. Beyond the roadway, a five-foot wide green space/buffer zone and ten-foot wide multi-
13 use paths would be provided on both sides of the road. At the north end of the project area, the proposed
14 roadway would be designed to tie into the State Road/Ellsworth Road roundabout intersection to be
15 constructed in 2013. At the south end of the project area, the median would taper down into an eleven-
16 foot center left turn lane and match the existing five-lane cross section just north of the State Road and
17 Campus Parkway intersection. The existing road crossing at the Ann Arbor Railroad would be widened
18 by approximately 65 feet. The Preferred Alternative has been designed to accommodate a semi-truck
19 with a wheelbase of 62 feet (WB-62).

20
21
22 For the majority of the corridor, the Preferred Alternative would maintain the existing roadway centerline.
23 The roadway would be shifted off its current alignment adjacent to the Ann Arbor Airport to avoid
24 impacting the developed portion of the airport and to provide adequate clearance for the existing and
25 future Runway Protection Zone (RPZ). It would also be shifted to the west to avoid impacting the two
26 residential homes near Payeur Road.

27
28 The speed limits for the proposed roadway are expected to remain the same as the current limits: 50 mph
29 from just north of Campus Parkway to the Ann Arbor Railroad crossing; 45 mph from the railroad
30 crossing to Concourse Drive; and 35 mph north of Concourse Drive. Per Michigan statute, future speed
31 limits will be consistent with the 85th percentile speeds and established jointly with the Michigan State
32 Police and Pittsfield Township.

33
34 All road segments are expected to operate at LOS D or better.

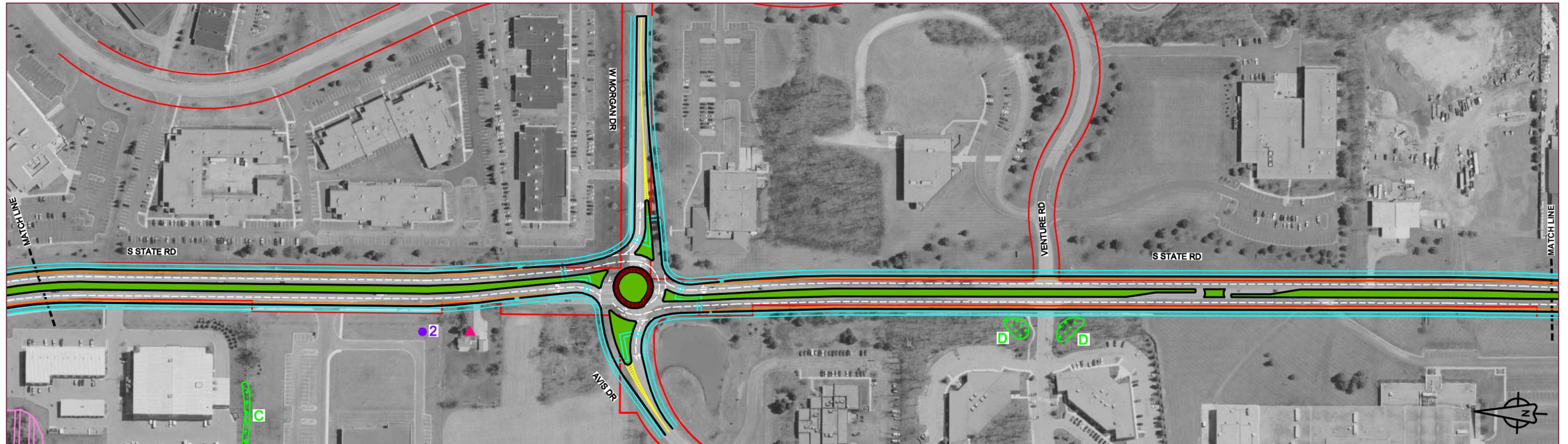
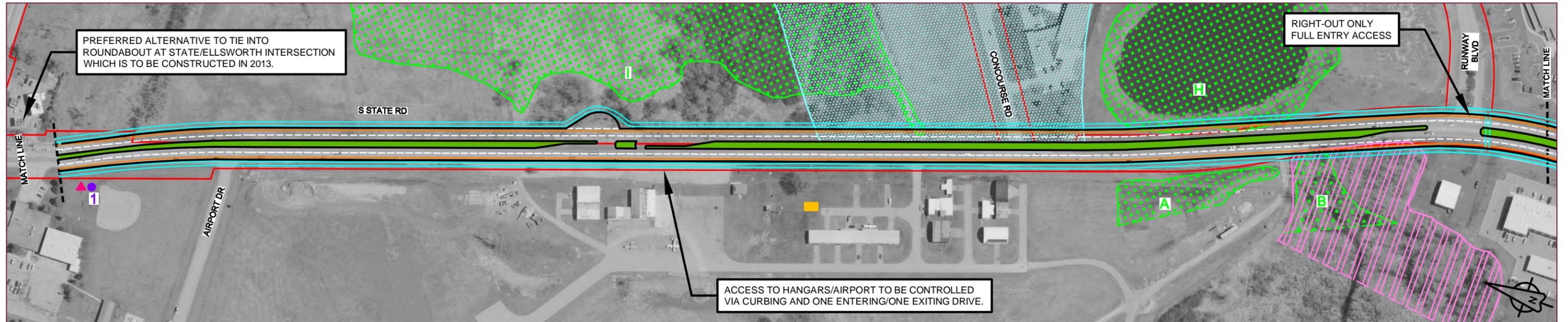
35
36 Figure 3 provides the proposed typical cross section for the Preferred Alternative.

37 **2.4.2.2 Non-Motorized and Transit**

38 On-street bikes lanes and a ten-foot wide multi-use path would be provided on both sides of the roadway.
39 Experienced cyclists can utilize the on-street bike lanes. The ten-foot multi-use paths would allow less
40 experienced and recreational riders to ride off of the roadway and provide adequate width for sharing with
41 pedestrians.

42
43 The Preferred Alternative would be designed to accommodate future transit facilities (i.e., bus
44 stops/shelters) should AATA eventually expand service to the corridor. During the design phase of the
45 project, coordination with AATA will be undertaken to determine specific design elements for transit
46 accommodations.

47
48
49 At each roundabout intersection, Z-style crosswalks would be provided. This style of crosswalk can
50 accommodate Pedestrian Hybrid Beacon (PHB) signals should they be needed in future. Mid-block
51 pedestrian crossings would include hatched ten-foot crosswalks across State Road in conjunction with



Existing Features		Proposed Features	
	Right of Way (ROW)		Proposed Edge of Pavement
	Potential Indiana Bat Habitat		Proposed Pavement Marking
	100-Year Floodplain		Proposed Bike Lane
	Sensitive Noise Receivers		Proposed Non-Motorized Path
	Railroad		
	Wetlands		
	Potentially Contaminated Site (extent of contamination unknown)		
	Noise Monitoring Location		

NOTES:
 1) All median turnarounds are preliminary and will be revisited as the project moves through the design process.
 2) All driveways/roads connecting to State Road to be accommodated in current configuration unless otherwise noted.

Sources:
 Aerial Photo Date - 2010

Figure 2
 Preferred Alternative
 Sheet 1 of 3

State Road Environmental Assessment
 Washtenaw County, Michigan



Existing Features	
	Right of Way (ROW)
	Potential Indiana Bat Habitat
	100-Year Floodplain
	Sensitive Noise Receivers
	Railroad
	Wetlands
	Potentially Contaminated Site (extent of release unknown)
	Noise Monitoring Location

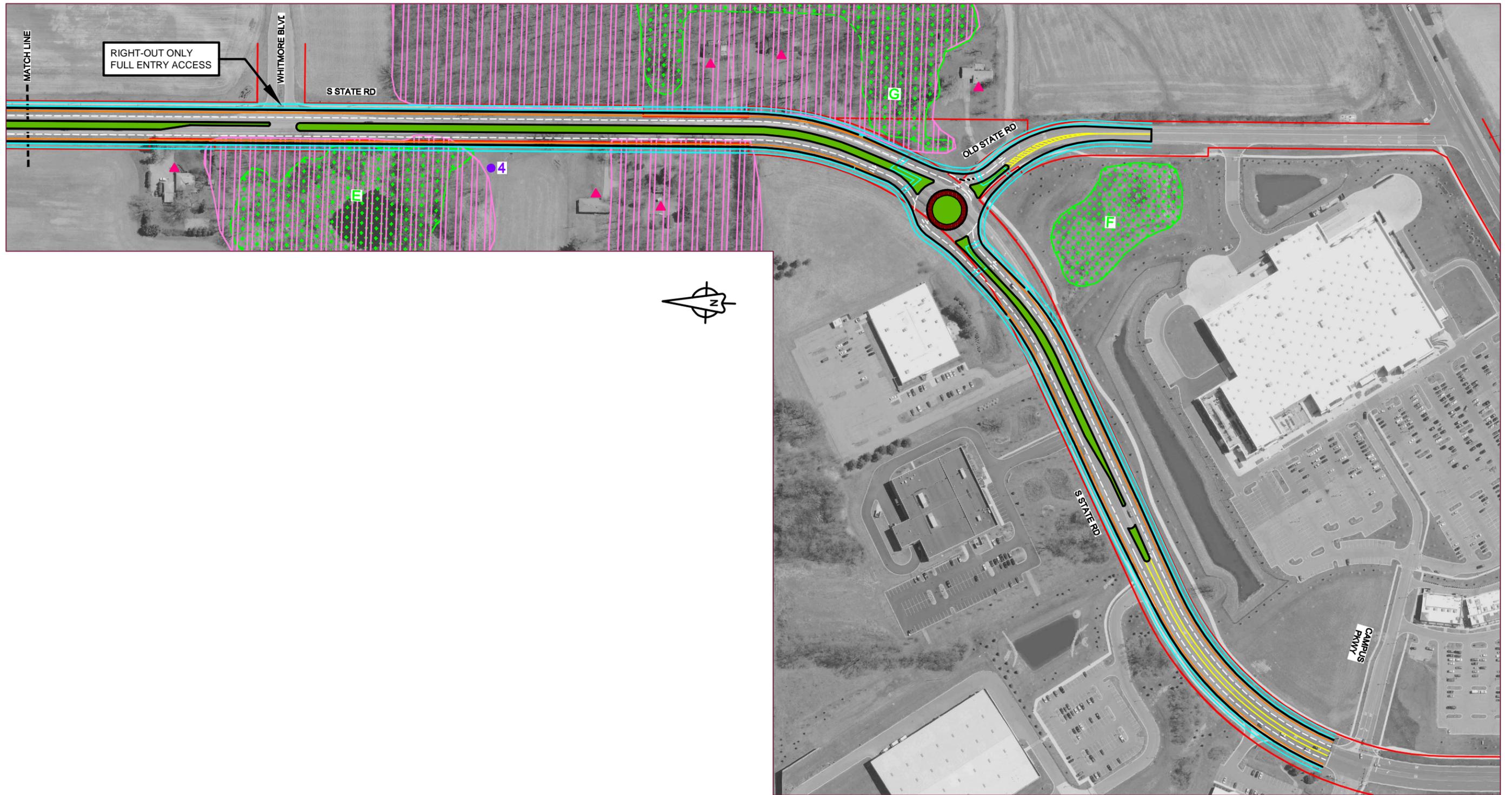
Proposed Features	
	Edge of Pavement
	Pavement Marking
	Bike Lane
	Non-Motorized Path

NOTES:
 1) All median turnarounds are preliminary and will be revisited as the project moves through the design process.
 2) All driveways/roads connecting to State Road to be accommodated in current configuration unless otherwise noted.

Sources:
 Aerial Photo Date - 2010

Figure 2 *Sheet 2 of 3*
Preferred Alternative

State Road Environmental Assessment
 Washtenaw County, Michigan



Existing Features	
	Right of Way (ROW)
	Potential Indiana Bat Habitat
	100-Year Floodplain
	Sensitive Noise Receivers
	Railroad
	Wetlands
	Potentially Contaminated Site (extent of release unknown)
	Noise Monitoring Location

Proposed Features	
	Edge of Pavement
	Pavement Marking
	Bike Lane
	Non-Motorized Path

NOTES:
 1) All median turnarounds are preliminary and will be revisited as the project moves through the design process.
 2) All driveways/roads connecting to State Road to be accommodated in current configuration unless otherwise noted.

Sources:
 Aerial Photo Date - 2010

Figure 2 *Sheet 3 of 3*
Preferred Alternative

State Road Environmental Assessment
 Washtenaw County, Michigan

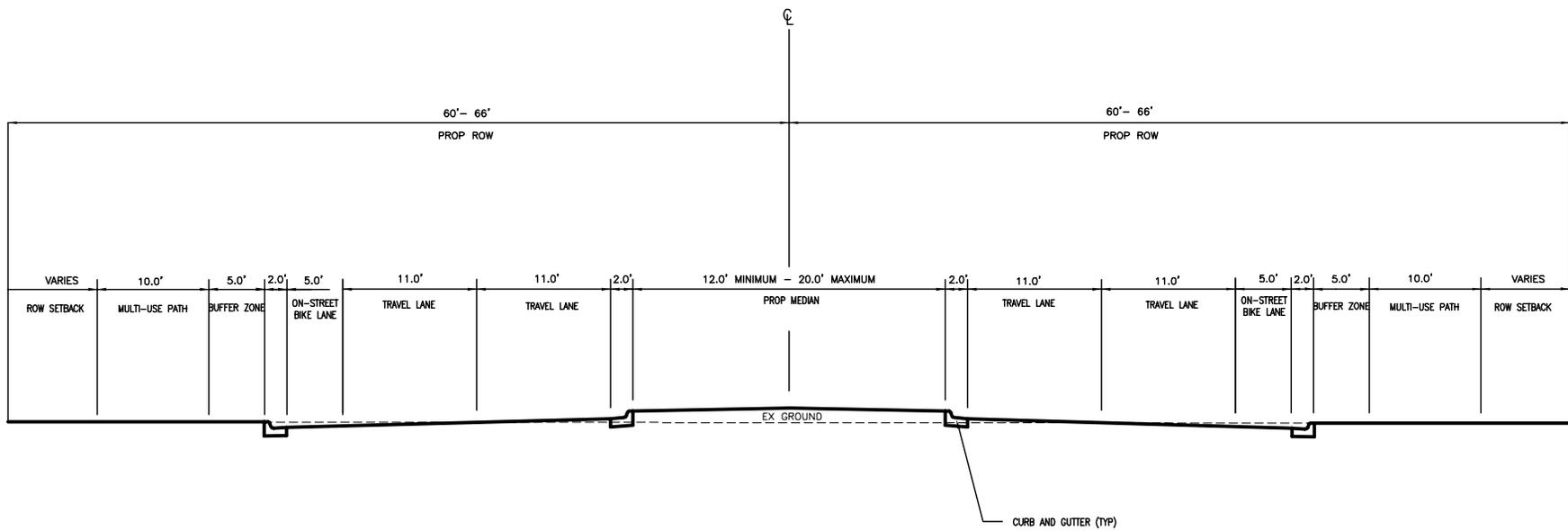


Figure 3
Typical Cross Section

State Road Environmental Assessment
 Washtenaw County, Michigan



1 either PHBs or Rectangular Rapid Flashing Beacons (RRFBs). The median would serve as a pedestrian
 2 refuge, allowing pedestrians to navigate one direction of traffic at a time.

3
 4 **2.4.2.3 Intersections**

5 As shown in Figure 2, two-lane roundabouts would be constructed at the State Road intersections with
 6 Morgan Road, Textile Road, and Old State Road. The roundabouts would be approximately 165 feet in
 7 diameter (outside diameter of roundabout circulating road). As shown in Table 9, all roundabout
 8 intersections would operate at LOS A. The State Road and Campus Parkway intersection would remain
 9 under traffic signal control. No other intersections in the project area would be under traffic signal
 10 control. As shown in Table 9, all of the non-roundabout intersections would operate at a peak hour LOS
 11 of C or better in the year 2035. Additionally, all crossovers would operate at an acceptable LOS (LOS D
 12 or better) during the peak traffic hours in the year 2035. These levels of service indicate that even during
 13 peak traffic conditions, the Preferred Alternative would adequately accommodate the projected traffic
 14 volumes noted in Table 5.

15
 16 **Table 9. Preferred Alternative LOS for State Road Intersections (Year 2035)**

Intersection	AM Peak Hour LOS					PM Peak Hour LOS				
	NB	SB	EB	WB	Overall	NB	SB	EB	WB	Overall
State Road/Concourse Drive*	A	A	-	C	A	A	A	-	D	A
State Road/Runway Drive*	A	A	-	C	A	A	A	-	C	A
State Road/Morgan Road **	A	A	A	A	A	A	A	A	A	A
State Road/Lavender Drive*	A	A	A	-	A	A	A	C	-	A
State Road/Textile Road**	A	A	A	A	A	A	A	A	A	A
State Road/Old State Road**	A	A	-	A	A	A	A	-	A	A
State Road/Campus Parkway***	C	C	D	C	C	C	C	C	C	C

17 EB=Eastbound traffic, WB=Westbound traffic, NB=Northbound traffic, SB=Southbound traffic
 18 *Unsignalized Intersection, **Roundabout Intersection. ***Signalized Intersection

19
 20 **2.4.2.4 Culverts/Drainage/Stormwater System**

21 The Preferred Alternative would include curb and gutter and an enclosed stormwater system for the entire
 22 length of the project. The system would be designed to meet the guidelines set forth in the Washtenaw
 23 County Water Resources Commission’s (WCWRC) *Procedures and Design Criteria for Storm Water*
 24 *Management Systems* (WCWRC 2000) per the Memorandum of Understanding (MOU) dated January 16,
 25 2007 between the WCRC and WCWRC.

26
 27 The use of stormwater detention ponds is not anticipated in conjunction with the Preferred Alternative.
 28 All stormwater will be accommodated in the median or via prefabricated stormwater systems (e.g.,
 29 Stormceptor®, StormVault®, or similar products). The Preferred Alternative would include the use of
 30 water quality Best Management Practices (BMPs) to pre-treat stormwater before it enters receiving water
 31 bodies. During the design phase of the project detailed hydraulic studies will be conducted to determine
 32 which BMPs will be used to accommodate stormwater. All BMPs will be designed in accordance with
 33 the *Procedures and Design Criteria for Storm Water Management Systems*. The Preferred Alternative
 34 would also require the Pittsfield-Junction Drain culvert to be extended by approximately 65 by feet. The
 35 culvert will be designed in accordance with the *Procedures and Design Criteria for Storm Water*
 36 *Management Systems*. Required hydraulic and hydrology studies will be conducted during the design
 37 phase of the project to determine proper the culvert size.

38
 39 **2.4.2.5 Access Changes**

40 The proposed median would no longer allow direct left turn access to and from the majority of driveways
 41 or side streets within the corridor. As shown in Figure 2, median crossovers would be constructed to
 42 allow for vehicles to make U-turns and provide access to the opposite side of the corridor. In addition to

1 the crossovers, the roundabouts would also allow U-turns so that motorists can access businesses,
2 driveways, and side streets on the opposite side of the road. Larger trucks would make U-turns at the
3 roundabout intersections or at the median turnaround with a “bump out” provided in the northern portion
4 of the project area near the airport. All median turnarounds are preliminary and will be revisited as the
5 project moves through the design process.

6 7 **2.4.2.6 Utility Relocations**

8 As part of the Preferred Alternative, utilities would be relocated. Relocation of publicly owned utilities
9 may be eligible for federal-aid participation or they will be paid for by Pittsfield Township, while
10 franchise utilities within existing road right-of-way by permit would be relocated at the owner’s expense.
11 If franchise utilities are within a private easement, WCRC would pay for relocation costs.

12 13 **2.4.2.7 Maintenance of Traffic during Construction**

14 Construction of the Preferred Alternative would likely occur in phases over a ten- to twenty-year period
15 based on the availability of funding. Phase 1 of construction would be from the northern project limits to
16 just south of Morgan Road, Phase 2 would be from just south of Morgan Road to just south of Textile
17 Road, and Phase 3 would be just south of Textile to the southern project limits.

18
19 One through lane of traffic would be maintained in each direction of State Road during the construction
20 period. In order to avoid the use of detours, a “partial width” construction process would likely be used.
21 As part of this process, temporary paved lanes may be required. To assure that emergency vehicles are
22 not unreasonably delayed, local emergency providers will be contacted prior to the construction period to
23 alert them of the potential for delays along the construction route.

24 25 **2.4.2.8 Cost Estimate**

26 The estimated construction cost for the Preferred Alternative is approximately \$21,200,000, in year 2011
27 dollars. ROW acquisition cost is estimated to be approximately \$3,400,000, and associated engineering
28 costs were estimated to be \$4,200,000. The total cost for the Preferred Alternative would be
29 approximately \$28,800,000.

30
31 The Preferred Alternative would likely be constructed in three separate phases. Therefore, a construction
32 cost estimate by year of expenditure was developed. The construction cost by phase and year of
33 expenditure would be as follows:

- 34
- 35 • Phase 1 Construction Cost: \$9,303,000 (Year 2016 dollars)
- 36 • Phase 2 Construction Cost: \$10,040,000 (Year 2021 dollars)
- 37 • Phase 3 Construction Cost: \$9,620,000 (Year 2026 dollars)
- 38
- 39
- 40

CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

1
2
3
4 This chapter describes the existing SEE conditions within the project area. The chapter is organized by
5 topic and only includes information related to relevant issues or regulatory requirements. Issues and
6 topics involving minimal or no impacts as a result of the alternatives have been omitted unless discussion
7 is warranted based on regulatory requirements or an issue has been specifically identified by project
8 stakeholders or members of the public.
9

10 After the description of the existing conditions and regulatory requirements, this chapter then describes,
11 by topic, the potential SEE impacts that would likely be caused by implementing the Preferred Alternative
12 described in Chapter 2. The descriptions include *direct*, *indirect*, *construction*, and *cumulative impacts*,
13 and are followed by a listing of *mitigation measures*. These terms are defined as follows:
14

- 15 • **Direct Impacts** – These impacts occur as a direct result of the Preferred Alternative. Examples of
16 direct impacts include filling wetlands, ROW acquisition, and noise increases.
- 17 • **Indirect Impacts** – Also referred to as “secondary” impacts, these are indirectly caused by the
18 Preferred Alternative. These impacts often occur at a later time and are usually located farther away
19 from the project area than the direct impacts. Examples of indirect impacts include induced land use
20 changes and downstream sedimentation of streams caused by stormwater runoff.
- 21 • **Construction Impacts** – These are the temporary effects that occur during construction. This could
22 include impacts such as increased noise, dust, and construction detours.
- 23 • **Cumulative Impacts** – Cumulative impacts result from combining the direct, indirect, and
24 construction impacts of an alternative with other past, present, and reasonably foreseeable future
25 impacts.
- 26 • **Mitigation Measures** - These are actions that will be implemented to avoid, reduce, or compensate
27 for the impacts of the Preferred Alternative. Examples of mitigation measures include wetland
28 creation, noise walls, and assistance to residents being relocated as a result of a project.
29

30 This chapter only describes impacts where mitigation may be needed or such discussions are relevant.
31 Typically, discussion is not provided when: (1) impacts would not occur, (2) there are no specific
32 regulatory requirements that pertain to the issue, and (3) the issue has not been identified as a concern by
33 citizens or a government agency during the course of the project. Examples of omitted topics and issues
34 include: coastal zone management, wild and scenic rivers, and energy. Beyond these items, the level of
35 detail provided is related to the severity of potential impacts for each topic.
36

37 The only exception to this general guideline is for the No Build Alternative. Because this alternative
38 serves as the baseline against which the Preferred Alternative impacts are compared, impacts are
39 discussed even when none are expected.
40

41 Similar to impacts, mitigation measures are only discussed where: (1) they may be warranted based on
42 impacts or (2) are required by regulations. As a result, they are not discussed for some of the topics in
43 this chapter.
44
45

46 3.1 Topography & Soils

47

48 The topography of Washtenaw County ranges from relatively flat to gently rolling areas. The climate is
49 favorable for most agricultural crops including corn, wheat, oats, soybeans, and grass-legume hay. The

1 project area is included in the Ann Arbor Moraines Sub-Subsection of the Michigan Regional
2 Ecosystems. The Sub-Subsection consists of a narrow band of fine and medium textured end and ground
3 moraines bordered by flat lake plains to the east and by sandy outwash, end moraine and ice-contact
4 features to the west. Historically, agricultural development has been relatively extensive, but some
5 lowlands remain forested.

6
7 Soil characteristics within the project area region consist of loam, clay loam, and silty clay loam glacial
8 till. Morley-Blount soil association represent nearly level to steep, well drained to somewhat poorly
9 drained soils that have a moderately fine textured and fine textured subsoil and moderately fine textured
10 underlying material on till plains and moraines. Most of this association is used for crops, mainly corn,
11 soybeans, small grain, and hay. Some areas, mostly of steeper soils and undrained soils, are in woodland
12 or permanent pasture. The larger concerns of management are controlling erosion and improving
13 drainage. The project area includes areas of Blount loam, Morely loam, Pewamo clay loam, and Fox
14 sandy loam. The Blount and Pewamo series consist of very poorly drained soils which may require
15 special construction techniques.

16 17 18 **3.2 Land Use**

19 20 **3.2.1 Existing Conditions**

21 Washtenaw County is located in the southeastern part of the lower peninsula of Michigan. The cities of
22 Ann Arbor, the county seat, and Ypsilanti are the main commercial, industrial and educational centers of
23 the county. The total area of the county is approximately 458,000 acres or about 716 square miles.
24 Figure 1 shows the project location in relation to the larger regional context.

25
26 Due to its location adjacent to the cities of Ann Arbor and Ypsilanti, northern Pittsfield Township (where
27 the project area is located) has undergone higher intensity development than the southern portion of the
28 township. The township has transformed from a primarily rural, agricultural community that existed
29 through the 1960s and 1970s, to a predominantly residential and commercial one intermixed with farming
30 activities taking place within the southern portions of the township. Historically, the township consisted
31 of large, stable, and cohesive agricultural areas on highly productive soils. However, many of the
32 township's productive agricultural lands have been converted to non-agricultural uses. This conversion
33 has reduced the amount of high-quality, available, agricultural lands in production. The future of
34 Pittsfield Township is primarily dependent on its setting within the economic regions of southeast
35 Michigan and the Ann Arbor/Ypsilanti urban area.

36
37 Currently land use in the corridor consists of business parks and office development, with one large retail
38 node at the south terminus and a few single family homes. Information and technology firms are attracted
39 to the corridor due to the location and proximity to I-94, Ann Arbor, University of Michigan, a pool of
40 researchers and engineers, and residential concentrations near the corridor. Enhancement in the corridor
41 is a township priority to continue providing attraction for these business interests.

42
43 Per the township's recently adopted master plan, future land uses in the project area are expected to be of
44 similar character to the existing uses, with the addition of a mixed use area planned near the Textile Road
45 intersection. According to the master plan the designated mixed use area will transition from
46 predominately single-use sites and buildings into areas with a compact mix of residential, business
47 centers, retail, arts and cultural centers, and services. Mixed use areas are to be designed at a human scale
48 and must support accessibility through multiple modes of transportation.

1 The current configuration of the roadway is not consistent with the desired corridor characteristics of
2 being a complete street as specified in the master plan, nor does it meet the desired facility improvements
3 recommended under the township master plan.
4

5 **3.2.2 Environmental Consequences**

6 **3.2.2.1 No Build Alternative**

7 The No Build Alternative would have minor impacts on land use in the project area. The project area has
8 already transformed from agricultural and low-density residential to primarily commercial and industrial
9 land uses. The current rate of new development is anticipated to continue under this alternative and
10 would likely occur on many of the undeveloped parcels in the project area by the year 2035.
11

12 **3.2.2.2 Preferred Alternative**

13 It is expected that the Preferred Alternative would have land use impacts identical to the No Build
14 Alternative.
15

16 The Preferred Alternative would be consistent with local land use plans. The Preferred Alternative would
17 complement the desired land use characteristics specified in the township master plan. The Preferred
18 Alternative would enhance and reinforce the existing road network configuration, and allow for the
19 continued development of business and office centers along the corridor without unduly burdening
20 through traffic. The Preferred Alternative’s median design is well suited for Pittsfield Township’s
21 planned business district environment. The controlled access that the Preferred Alternative would create
22 is well suited for the proposed mixed-use development along the corridor and allows for future expansion
23 of mixed use development at other key locations on the corridor. Development of accommodations for
24 alternate modes of travel is also in keeping with the township master plan. The Preferred Alternative’s
25 planned sidewalk, bike lane connections, and median crossings should also increase transit ridership
26 along the corridor (once AATA service is eventually provided), meeting another plan objective.
27
28
29

30 **3.3 Farmland**

31 **3.3.1 Existing Conditions**

32 The Farmland Protection Policy Act (FPPA) requires that all Federal agencies identify and take into
33 account the adverse effects of Federal programs on the preservation of farmland and consider alternatives
34 that would lessen those effects. This act is implemented by the U.S. Department of Agriculture’s Natural
35 Resources Conservation Service (NRCS) and regulates farmlands that are designated as “prime”,
36 “unique”, “statewide important”, and “local important”. The NRCS has identified specific soil types that
37 make up these special categories. The FPPA specifically excludes land already in or committed to urban
38 development or water storage from these protected categories. Correspondence received from NRCS
39 indicated that prime and unique farmland soils are located in the project area (see NRCS letter in
40 Appendix B).
41

42 Part 361 of Public Act 451, Michigan’s Natural Resources and Environmental Protection Act (NREPA)
43 (formally PA 116, the Farmland and Open Space Preservation Act) protects properties enrolled as
44 farmland or “open space”. Under this act, the owner of the property may enter into an agreement
45 temporarily restricting the development rights of a parcel. In some instances, this provides tax relief for
46 the property owner. Coordination was conducted with the Michigan Department of Agriculture to
47 determine if there are any properties within the project area that are enrolled in this program (Appendix
48 B). Based on this coordination, it was determined the project area does not contain any properties
49 enrolled in this program.
50
51

3.3.2 Environmental Consequences

3.3.2.1 No Build Alternative

The No Build Alternative would not affect any prime, unique, local important, or statewide important farmland soils. The No Build Alternative would not impact lands protected under Part 361 of Public Act 451. As discussed in the land use section of this chapter, development and farmland impacts would occur throughout the project area under the No Build Alternative. Cumulatively, the conversion of farmlands to other uses would reduce farming in the project area. The degree to which this occurs would be mainly influenced by economic conditions and local land use and zoning regulations

3.3.2.2 Preferred Alternative

The Preferred Alternative would impact approximately 0.77 acres of prime, unique, local important, or statewide important farmland soils. The impacts would occur at the State Road intersections with Textile Road (several quadrants) and Avis Drive/Morgan Road (northwest quadrant). The Preferred Alternative would not impact any lands protected under Part 361 of Public Act 451, as there are none located within the project area. No mitigation would be required to mitigate the farmland soil impacts. The roundabout located at the State Road and Textile Road intersection was located at the center of the intersection to reduce impacts to the northwest, southwest, and southeast quadrants to the greatest extent possible and at the same time control the entry speed on all legs. The roundabout located at the State Road and Avis Drive /Morgan Road intersection was shifted slightly to the north, and the westbound exit was designed as a single lane to reduce farmland impacts to the greatest degree possible while at the same time controlling the entry speed on all legs.

As discussed in the Land Use section of this chapter, development would occur throughout the project area whether or not State Road is improved (i.e., impacts of the No Build Alternative and the Preferred Alternative would be the same). Cumulatively, the conversion of farmlands to other uses would reduce farming in the project area. The degree to which this occurs would be mainly influenced by economic conditions and local land use and zoning regulations.

3.4 Relocations & ROW Impacts

3.4.1 No Build Alternative

The No Build Alternative would not result in any business relocations or ROW impacts to residents or businesses in the project area.

3.4.2 Preferred Alternative

Construction of the Preferred Alternative would not result in any residential or business relocations. The Preferred Alternative would require ROW from 45 parcels along State Road, totaling approximately 12 acres of ROW fee acquisition. ROW impacts would occur at the State Road intersections with Morgan Road, Textile Road, and Old State Road where ROW would be acquired at the corners of the intersections. At most of the other impacted properties, a relatively narrow strip of property would be acquired adjacent to the existing ROW. Current property uses would not be substantially affected by the Preferred Alternative. No total parcel acquisitions would occur. Some easements and/or temporary grading permits may also be needed. The locations and size of easements/grading permits are not currently known and would be determined during the design phase of the project once more detailed engineering work is completed. All ROW impacts are shown on Figure 2.

1 The roadway would be shifted east from its current alignment adjacent to the Ann Arbor Airport, to avoid
2 impacting existing airport facilities on the west side of State Road and to provide adequate clearance for
3 the existing and future RPZ. Additionally, the Preferred Alternative has been designed to meet the 15-
4 foot clearance requirement for the existing airport approach slope. The alignment of the Preferred
5 Alternative has also been shifted to the west to avoid impacting the two residential homes near Payeur
6 Road.

7
8 The Preferred Alternative would require the purchase of property on the east side of State Road adjacent
9 to the airport. The purchase of airport property from the City of Ann Arbor Airport may require a land
10 release approval from MDOT Aeronautics and the Federal Aviation Administration (FAA) during the
11 design phase of the project. The Preferred Alternative may also require the relocation of one approach
12 light pole on the east side of State Road. The lighting system is currently owned and operated by the
13 FAA. Relocation of the approach light would be coordinated with the airport and FAA, and details will
14 be determined during the design phase of the project. All airport, MDOT, and FAA requirements for
15 acquisition of property will be followed throughout the process.

16 **3.4.3 Measures to Mitigate ROW Acquisition Impacts**

17 **3.4.3.1 Compliance with State and Federal laws**

18
19 Acquisition assistance and advisory services will be provided by WCRC and/or the Michigan Department
20 of Transportation (MDOT) in accordance with the Federal Uniform Relocation Assistance and Real
21 Property Acquisition Policies Act of 1970, as amended; Act 149, Michigan P.A. 1911, as amended; and
22 Act 87, Michigan P.A. 1980, as amended.
23

24 **3.4.3.2 Purchasing Property**

25 WCRC and/or MDOT will pay just compensation for fee purchase or easement use of property required
26 for transportation purposes. “Just compensation” as defined by the courts is the payment of “fair market
27 value” for the property rights acquired plus allowable damages to any remaining property. “Fair market
28 value” is defined as the highest price estimated, in terms of money, the property would bring if offered for
29 sale on the open market by a willing seller, with a reasonable time allowed to find a purchaser, buying
30 with the knowledge of all the uses to which it is adapted and for which it is capable of being used.
31

32 **3.4.3.3 Property Acquisition Information**

33 A booklet entitled “Public Roads & Private Property” detailing the purchase of private property can be
34 obtained from the Michigan Department of Transportation, Real Estate Division, P.O. Box 30050,
35 Lansing, Michigan 48909 or phone (517) 373-2200.
36

37 **3.5 Social Impacts**

38 **3.5.1 Existing Conditions**

39 Currently the project area consists of mainly business parks and office development, with one large retail
40 node at the south terminus and a few scattered single family homes throughout the corridor. A senior
41 center and baseball fields are located near the north terminus of the project area close to the State
42 Road/Ellsworth Road intersection. No high density residential neighborhoods are located within the
43 project area.
44
45
46
47
48
49
50

1 **3.5.2 Environmental Consequences**

2 3 **3.5.2.1 No Build Alternative**

4 The No Build Alternative would not affect any neighborhoods or community functions. However, the
5 existing problems identified in Chapter 1 would still remain. As traffic volumes on State Road approach
6 capacity, traffic congestion would occur on local roads. Additionally, as congestion worsens the number
7 of crashes would also increase. These problems may reduce the perceived quality of life for some
8 residents.
9

10 The No-Build Alternative would provide full access to properties/driveways for left-turn movements
11 across traffic. As congestion along the corridor grows, undivided access will continue to contribute to a
12 lowering of the level of service for through traffic and turning movements, and increase the potential for
13 crashes. This increase in congestion will also eventually limit access to driveways and side streets due to
14 the inability of motorists to turn into/out of the drives and side streets.
15

16 **3.5.2.2 Preferred Alternative**

17 This alternative would not negatively affect any community functions or neighborhoods. The alternative
18 would not sever existing neighborhoods, result in substantial changes to local access (i.e., changes that
19 fundamentally alter travel patterns), interfere with community functions, or alter the character of any
20 communities or neighborhoods.
21

22 The Preferred Alternative could be perceived as providing less convenient access to most properties and
23 driveways in the project area due to the boulevard median which precludes most direct left turns. This
24 situation would be mitigated by providing median crossovers and roundabouts to allow for U-turns.
25 However, most motorists are accustomed to boulevards and U-turn configurations and would not likely
26 consider this significantly less convenient access than other alternatives. On balance, the Preferred
27 Alternative is expected to improve overall travel times. The number and severity of crashes along the
28 corridor are expected to be significantly reduced through roundabouts and a divided median roadway,
29 both of which studies show have much lower crash rates and severity than signalized intersections and
30 non-divided roadways. Through a continued policy of limiting and consolidating driveway access,
31 inclusion of left-turn bays at key developments, roundabouts, and continued emphasis by the township's
32 regulations on interconnection of business parcels, the Preferred Alternative would provide reasonable
33 access to the uses along the corridor. In some cases additional median cuts may be needed for future high
34 traffic or truck generators. Such median cuts should be warranted in terms of volume and spacing from
35 existing crossovers or roundabouts.
36

37 The Preferred Alternative may impact the perceived quality of life of some residents living along State
38 Road. Specifically, residents living adjacent to State Road would experience impacts such as construction
39 delays, minor changes to visual conditions, etc. At most locations, these negative impacts would not
40 result in major changes compared to the existing conditions (i.e., residences located close to the roadway
41 would still be located close to the roadway). At the same time, residents could perceive an improvement
42 in the quality of life due to new pavement, reduced traffic congestion, convenient pedestrian and bicycle
43 facilities, and improved and safer access to State Road. Motorists, bicyclists, and pedestrians traveling
44 through the project area would also enjoy an improved quality of life as a result of improved facilities,
45 better traffic flows, reduced delays, and a safer roadway.
46

47 During construction, residents of the project area would experience a temporary decrease in their quality
48 of life due to access restrictions, travel delays, and construction noise. During construction, at least one
49 through lane of traffic would be maintained in each direction on State Road. However, some delays are
50 likely to occur. These delays and detours would affect local traffic, emergency vehicles, and school
51 buses.

3.6 Population Demographics / Environmental Justice

3.6.1 Population Demographics

As shown in Table 10, the populations of both Washtenaw County and Pittsfield Townships have been increasing over the past three decades and are expected to continue this trend in the future. The average household size in Pittsfield Township (2.43) is consistent with the U.S. average (2.59).

Table 10. Population Information within Project Area

Area	1970	1980	1990	2000	2010	2035*
Pittsfield Township	8,185	12,986	17,650	30,167	34,663	36,870
Washtenaw County	234,103	264,740	282,937	322,895	344,791	380,170

*SEMCOG projection

3.6.2 Environmental Justice

Executive Order 12898 on Environmental Justice directs Federal agencies to identify and address disproportionately high and adverse human health or environmental effects to minority and low-income populations caused by their programs, policies, and activities. In compliance with this Executive Order, environmental documents first identify the presence or absence of Environmental Justice populations within their project limits. Secondly, the document notes any disproportionately high and adverse human health or environmental effects to minority and low-income populations. The analysis conducted to determine the presence or absence of Environmental Justice populations and the identification of any disproportionately high and adverse human health or environmental effects to minority and low-income populations are found below.

Executive Order 13166, "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies to examine the services they provide, identify any need for services to those with limited English proficiency (LEP), and develop and implement a system to provide those services so LEP persons can have meaningful access to them. It is expected that agency plans will provide for such meaningful access consistent with, and without unduly burdening, the fundamental mission of the agency. The Executive Order also requires that the Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

3.6.3 Existing Conditions

3.6.3.1 Minority Populations

Two different census tracts are located within the project area (Table 10). Census tract 4154 lies east of State Road, while tract 4156 lies west of State Road. According to the 2010 U.S. Census data, minority populations range between 16.3 and 27.7 percent in these tracts.

3.6.3.2 Low-Income Populations

According to FHWA guidance, "low-income" is defined as a household that is at or below the U.S. Department of Health and Human Services' poverty guidelines. Based on the 2010 census, census tract 4154 has 6.2 percent of its population in poverty, while census tract 4156 has zero percent of its population in poverty.

1 **Table 11. Minority and Low-Income Census Information for the Project Area**

Area	Population	Median Household Income	Percent Households with Limited English Proficiency*	Percent of Persons in Poverty	Percent Minority Population
Census Tract 4154	2,074	\$49,844	Data not available	6.2%	27.7%
Census Tract 4156	2,275	\$96,035	Data not available	0.0%	16.3%
Pittsfield Township	34,663	\$61,262	Data not available	9.1%	37.1%
Washtenaw County	344,791	\$51,990	2.2%	11.1%	27.9%
State of Michigan	9,883,640	\$60,635	1.6%	10.5%	25.5%

2 Source: 2010 U.S. Census

3 * US census category - No one in household age 14 and over speaks English only or speaks English "very well"

4
5 In addition to census data, other information sources were used to identify minority and low income
6 populations. These included visual inspections of the project area, discussions with officials from WCRC
7 and Pittsfield Township, and public outreach efforts. Several public outreach efforts were undertaken as
8 part of this study. These efforts involved local government officials, regulatory agencies, property
9 owners, citizens, and business owners. On September 14, 2011, a Public Information Meeting was held
10 to present the project to the public and collect public input. The public involvement program conducted
11 as part of the project solicited input from potentially affected minority and low-income populations as
12 well as other interested parties. During this process, the public had opportunities to view and comment on
13 all of the alternatives being considered. Thus, low-income and minority residents had opportunities to
14 provide input for consideration by the project's decision-makers. Additional details regarding public
15 involvement are included in Chapter 4 of this document. During the EA public comment period, a
16 hearing will be held to solicit input from the public regarding the project and its potential impacts.

17
18 The majority of the project area is commercial with nine residential homes dispersed along the corridor.
19 The impacts and benefits of the Preferred Alternative would be felt by all populations. No minority or
20 low-income populations were identified during this process. Additionally, no requests were made for
21 materials in other languages beside English, and there were no requests for the use of an interpreter.

22 **3.6.4 Environmental Consequences**

23 **3.6.4.1 No Build Alternative**

24
25 Since the No Build Alternative would not include any changes to the existing roadway or the project area,
26 it would not result in disproportionately high and adverse effects on minority and low-income
27 populations.
28

29 **3.6.4.2 Preferred Alternative**

30
31 Due to the very limited number of homes and the low percentage of low-income and minority populations
32 (Table 11) in the project area, it is unlikely that any minority or low-income populations are located
33 within the project area. Additionally, no low-income or minority populations, or minority businesses
34 owners were identified or came forth during the public involvement process. Therefore, it is unlikely the
35 Preferred Alternative would impact any minority or low-income populations.
36

37 Implementation of the Preferred Alternative would result in a variety of benefits that would be enjoyed by
38 all residents, business owners, and motorists, including minority or low-income populations. These
39 benefits include convenient non-motorized facilities, reduced traffic congestion, and improved motorist
40 safety
41

42 While there are no specific environmental justice adverse impacts anticipated with the Preferred
43 Alternative, in accordance with Executive Order 12898 and Departmental Order 5610.2(a), Actions to
44 Address Environmental Justice in Minority Populations and Low-Income Populations, a continuing effort

1 will be made to identify minority or low-income populations and any adverse impacts to these
2 populations during the Public Hearing for the EA, a Public Information Meeting prior to construction, and
3 construction activities. If potential impacts are identified, every effort will be made to involve impacted
4 groups in the project development process and to avoid or mitigate impacts in accordance with Executive
5 Order 12898 and Departmental Order 5610.2(a).
6
7

8 **3.7 Economic Conditions**

9 **3.7.1 Existing Conditions**

10 Pittsfield Township has been and is currently transitioning from agricultural to commercial and residential
11 land uses. Due its close proximity to Ann Arbor, Saline, I-94 and US-23, most of the project area has
12 already been converted from farmland to other uses. The majority of revenue from the project area
13 attributable to property taxes to local governments and schools and the majority of job creation comes
14 from commercial uses located along State Road.
15
16

17 Economic activity is also influenced by the existing transportation system. Businesses that can be easily
18 accessed have a competitive advantage over similar establishments that are more difficult to access. As a
19 result, access conditions influence business revenue, which in turn affects property values and tax
20 revenue. Currently, access to most businesses within the project area is somewhat impaired by traffic
21 congestion. Pursuant to the township's future land use plan, the area is expected to continue developing
22 into a business district with some high density mixed-use development also.
23

24 **3.7.2 Environmental Consequences**

25 **3.7.2.1 No Build Alternative**

26 The No Build Alternative would not result in direct impacts to economic conditions in the project area.
27 Because traffic congestion would increase under the No Build Alternative, access to project area
28 businesses could become more difficult during peak traffic hours. This would result in slightly less
29 economic activity than would otherwise occur in the project area. Because economic activity and
30 business revenue would be below their full potential, tax revenue and property values could also be below
31 potential levels.
32
33

34 **3.7.2.2 Preferred Alternative**

35 The Preferred Alternative would not directly result in substantial changes to economic conditions because
36 it would not change the fundamental economic characteristics in the project area. By supporting
37 development that is planned by the township, the Preferred Alternative would provide enhanced economic
38 opportunities for the area. Based on this information, business activity and employment would not be
39 negatively affected by this alternative, and may be positively supported.
40
41
42

43 It is not possible to predict what impact this alternative would have upon residential and business property
44 values. While parcels adjacent to project area roads could decrease in value due to the proximity of the
45 widened roadway, it is also possible that these parcels could increase in value because of reduced
46 congestion and better access to a major arterial road with non-motorized facilities. While these factors
47 are important, it is more likely that property values will depend upon market conditions, zoning
48 ordinances, and parcel-specific building conditions.
49

50 Most businesses in the project area would be temporarily impacted by construction activities. Economic
51 impacts could include temporary congestion related to lane closures, detoured traffic (including potential

1 customers), and inconvenient access for business owners, employees, and customers. Despite these
2 impacts, access to all businesses would be maintained during construction. Because most of the details
3 regarding construction will not be known until the design phase of this project, it is not possible to
4 determine how long these temporary construction impacts will last.

7 **3.8 Pedestrians, Bicyclists, & Transit**

9 **3.8.1 Existing Conditions**

10 Currently there are limited non-motorized facilities and few designated pedestrian crossings in the project
11 area. However, some developments constructed within the last 10-15 years have included sidewalks or
12 wider multi-use paths along the State Road frontage, which has resulted in segmented routes within the
13 project area. No on-street bike lanes or multi-use paths exist within the project area.

14
15 Land uses within the project area have historically been oriented towards automobile traffic. These land
16 uses include agricultural operations, transportation related commercial, business/research parks, and light
17 industrial operations. There is currently an active and noticeable community of walkers and bicyclists
18 using the corridor. Some of those bicyclists use the sidewalk or multi-use paths where available and the
19 narrow shoulder otherwise. Pedestrians have created several self-made pathways to connect areas on the
20 corridor that lack pedestrian facilities.

21
22 Transit services in the Ann Arbor/Pittsfield Township area are provided by AATA. Currently, AATA
23 does not have routes within the project area. The AATA master plan calls for a future bus route and
24 parking facilities along the State Road corridor into the City of Saline.

26 **3.8.2 Environmental Consequences**

28 **3.8.2.1 No Build Alternative**

29 Under the No Build Alternative, pedestrian and bicycle facilities would likely remain scattered in the
30 project with the network being incomplete. When considered in conjunction with projected traffic
31 congestion, pedestrian and bicycle opportunities would be limited in the project area. Future traffic
32 congestion associated with the No Build Alternative may reduce the efficiency of future public transit in
33 the project area.

35 **3.8.2.2 Preferred Alternative**

36 The Preferred Alternative would provide a five-foot wide on-street bike lane on both sides of the road in
37 the project area. Additionally, a ten-foot wide multi-use path would be provided on both sides of the
38 roadway. The Preferred Alternative would improve the environment for non-motorized traffic by
39 including multi-use paths and bicycle lanes/routes. With roundabouts included in the design,
40 intersections would be designed for the safe movement of both bicycles and pedestrians through the use
41 of ADA compliant pedestrian crosswalks and pedestrian/bicycle activated crossing devices where needed.
42 The median included in the design will improve non-motorized crossings of State Road by providing
43 pedestrian refuge. The Preferred Alternative would also accommodate future transit routes and facilities.

46 **3.9 Air Quality**

48 **3.9.1 Existing Conditions**

49 Under the direction of the Clean Air Act Amendments (CAAA) of 1990, the U.S. Environmental
50 Protection Agency (EPA) has established health-based National Ambient Air Quality Standards
51 (NAAQS) for six pollutants. These six “criteria” pollutants are lead (Pb), ozone (O₃), sulfur dioxide



1 (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), and particulate matter (PM₁₀, 10-micron and
2 smaller along with PM_{2.5}, 2.5 micron and smaller). The project area is in attainment for lead, sulfur
3 dioxide, nitrogen dioxide, carbon monoxide and PM₁₀. For this project, pollutants of principle concern
4 are ozone and PM_{2.5}.

5
6 The seven-county SEMCOG region (including Washtenaw County) is currently designated nonattainment
7 for both the annual and 24-hour PM_{2.5} NAAQS. The SEMCOG Task Force on Air Quality and the
8 MDEQ have developed a strategy for attaining the annual standard. This strategy was submitted to the
9 U.S. EPA in May, 2008 as part of the PM_{2.5} State Implementation Plan (SIP) for Southeast Michigan.
10 The strategies included in this plan were also expected to help attain the new 24-hour PM_{2.5} standard.
11 Current monitoring data shows Southeast Michigan is attaining both standards, and the State has
12 submitted a request for EPA to re-designate Southeast Michigan as a PM_{2.5} attainment area.

13
14 On June 26, 2009, the U.S. Environmental Protection Agency (EPA) announced that Southeast Michigan
15 (including Washtenaw County) area has met the national ozone standard and been officially re-designated
16 as an ozone attainment/maintenance area. The region had previously been designated as marginal
17 nonattainment.

18
19 Since 1999, the entire SEMCOG area has been designated attainment for the carbon monoxide NAAQS.

20
21 Based on the requirements of the CAAA of 1990 and Federal transportation statutes, proposed
22 transportation projects in non-attainment/maintenance areas must be included in a long range plan (LRP)
23 and Transportation Improvement Plan (TIP) that conform to state air quality plans as outlined in the SIP.
24 Specifically, “regionally significant” transportation projects must be included in a LRP and TIP that have
25 undergone an emissions analysis to demonstrate “conformity” with the SIP. This approach is intended to
26 assure that transportation projects do not result in violations of the NAAQS. This project is currently on
27 the 2035 SEMCOG RTP and the 2035 WATS LRTP and has been requested for inclusion on the 2040
28 RTP and LRTP. Additionally, preliminary engineering for the State Road segment between Morgan
29 Road and Ellsworth Road is included in the 2014-2017 WATS/SEMCOG TIP that is currently under
30 development. Conformity has been demonstrated for all of these plans. Therefore, the project conforms
31 to state air quality plans as outlined in the SIP.

32
33 **3.9.2 Environmental Consequences**

34
35 **3.9.2.1 No Build Alternative**

36 The No Build Alternative would not increase the capacity of the roadway or increase traffic volumes.
37 The No Build Alternative would result in significant delays and traffic congestion throughout the project
38 area. Due to the additional delays and congestion, the No Build Alternative could result in negative local
39 air quality impacts.

40
41 **3.9.2.2 Preferred Alternative**

42 As shown in Chapter 2, the Preferred Alternative would significantly reduce delays and associated
43 emissions when compared to the No Build Alternative. Traffic volumes and vehicle miles traveled are
44 not expected to increase as a result of the Preferred Alternative. Additionally, the future traffic volumes
45 projected for the Preferred Alternative would not reach the level that typically results in concerns with
46 regard to PM_{2.5} ambient levels. Therefore, the Preferred Alternative is not anticipated to result in negative
47 air quality impacts, and a PM_{2.5} hotspot analysis is not warranted. Due to these factors, the Preferred
48 Alternative would not result in any localized air quality concerns. Additionally, the Preferred Alternative
49 has been included in the conforming LRP and TIP. Therefore, regional conformity has been
50 demonstrated.

1 Construction activities associated with the Preferred Alternative could cause short-term, localized impacts
2 to air quality within the project area. A temporary increase in vehicle emissions is expected as a result of
3 heavy equipment activity, hauling materials, and idling vehicles. Additionally, fugitive dust would be
4 generated through construction activities such as excavation, heavy equipment operation, and other traffic
5 activity. Fugitive dust emissions would vary depending on the level of activity, specific construction
6 techniques, soil characteristics, and weather conditions.

7
8 Cumulative impacts to air quality are accounted for by demonstrating regional air quality conformity.
9 This is accomplished by the MPO through the use of a computer model that incorporates all
10 transportation projects in the approved LRP and TIP. The project has been included in these plans, and
11 regional conformity has been demonstrated.

12
13 All construction contractors that work on this project will be required to comply with relevant Federal,
14 state, and local laws governing the control of air pollution. Contractors will also be responsible for
15 adequate dust control measures to protect public health and welfare. All bituminous plants, Portland
16 cement concrete proportioning plants, and crushers must meet the requirements of Part 55 of NREPA.
17 Portable bituminous or concrete plants will also be required to obtain permits from the MDEQ. Dust
18 collectors will be provided on all bituminous and concrete proportioning plants. Dry, fine aggregate
19 material removed by the dust collector will be returned to the dryer discharge. These requirements will
20 assure that air quality impacts are minimized during construction.

21 22 23 **3.10 Noise Analysis**

24 25 **3.10.1 Background Information**

26 Traffic noise studies for road projects in Michigan are performed in accordance with 23 Code of Federal
27 Regulations 772 (July 13, 2010), FHWA's *Highway Traffic: Analysis and Abatement Guidance* (January
28 2011) and MDOT's *Noise Analysis and Abatement Handbook* (dated July 13, 2011). There are six main
29 steps comprising traffic noise studies. These are: (1) identify noise sensitive receivers, (2) determine
30 existing ambient peak noise levels, (3) predict future peak noise levels, (4) identify traffic noise impacts,
31 (5) evaluate mitigation measures for sensitive receivers where traffic noise impacts occur, and (6) public
32 involvement.

33
34 The unit of measurement used in sound measurement is the decibel (dB), and the unit of measurement
35 used for traffic noise is the dB on the A-weighted scale dB(A). The A-weighted scale most closely
36 represents the response of the human ear to sound. The measurement that is most commonly used to
37 express dB(A) levels for traffic noise is the Hourly Equivalent Sound Level [$L_{eq}(h)$]. The $L_{eq}(h)$ describes
38 the cumulative exposure experienced at a location from all noise-producing events over a 1-hour period.

39 40 **3.10.2 Noise-Sensitive Receivers and Existing Noise Conditions**

41 Noise-sensitive receivers are those locations, within 500 feet of the proposed roadway edge, where
42 activities occur that could be affected by increased traffic noise levels (e.g., residences, motels, churches,
43 schools, parks, libraries, etc.). Noise-sensitive receivers are located throughout the project area. Ten
44 residential homes are present at several locations in the project area. Figure 2 shows the locations of
45 these noise sensitive receivers.

46
47 In order to determine existing sound levels, noise measurements were taken in the study area at five
48 representative monitoring locations or Common Noise Environments (CNEs). The CNEs were selected
49 to best represent the existing sensitive noise receivers. Noise measurements were taken using a handheld
50 Quest 2900 Sound Level Meter during the AM and PM peak traffic hours. See Figure 2 for noise

1 monitoring locations. Measured noise levels [L_{eq}(h)] in the project ranged from 58.8 dB(A) to 67.9
 2 dB(A) during the AM peak hour and from 59.9 dB(A) to 66.9 dB(A) during the PM peak hour.

3
 4 Existing peak hour noise levels were also predicted for sensitive receivers in the project area. To predict
 5 existing L_{eq}(h) noise levels, FHWA’s TNM2.5® software was used. The purpose of modeling the
 6 existing noise levels is to determine if the modeling software is accurately predicting noise levels
 7 compared to the field measurements. Thereby, it can be assumed that the noise model would accurately
 8 predict future noise levels. In the project area, existing AM peak hour noise levels at noise sensitive
 9 receivers were predicted to range from 55.7 dB(A) to 63.7 dB(A), while existing PM peak hour levels
 10 ranged from 55.5 dB(A) to 64.2 dB(A).

11
 12 As shown in Table 12, when comparing the measured noise levels versus the predicted noise levels during
 13 the AM peak hour, the majority of measurements are within 3.0 decibels of each other. In the two
 14 instances where the difference was greater than 3.0 decibels, the higher measured levels were likely
 15 caused by overhead aircraft associated with the Ann Arbor Airport. Therefore, it appears the noise model
 16 is accurately predicting the existing noise levels during the AM peak hour.

17
 18 **Table 12. Calculated Noise Levels**

Receiver Number	Existing 2011dB(A)				No Build dB(A)		Preferred Alternative	
	AM*	PM*	AM**	PM**	AM**	PM **	AM **	PM **
1	67.9	66.9	63.7	63.7	64.8	65.4	65.3	65.8
2	58.8	59.9	60.2	60.7	61.6	62.1	64.5	64.6
3	63.2	66.6	63.5	64.2	64.7	64.8	66.6	65.9
4			62.9	63.7	64.0	64.3	66.2	65.5
5	61.5	65.0	59.5	60.9	59.7	61.6	61.4	63.5
6			58.9	57.1	59.3	59.0	58.8	59.1
7			60.9	58.0	61.5	61.4	61.1	61.7
8			57.9	57.9	58.5	59.8	60.5	58.2
9			56.4	56.4	56.9	58.5	58.6	56.9
10			55.7	55.5	56.2	57.6	56.9	55.8

19 All measurements are Leq(h). *Field measured. **Calculated

20
 21 When comparing the PM levels, the majority of noise monitoring locations are more than 3.0 decibels
 22 higher than the predicted noise levels. The measured noise levels are likely higher than the predicted
 23 noise levels as result of a rain storm (wet pavement) prior to the PM noise measurements and aircraft
 24 operations while the noise measurements were being taken. Since the noise model does not account for
 25 these ambient noise sources (wet pavement, overhead airplanes) the predicted noise levels in this situation
 26 were lower than the measurements taken in the field. Based on the accuracy of the AM model compared
 27 to the measured AM levels, it was assumed that the model was also accurately predicting the PM levels.

28
 29 **3.10.3 Environmental Consequences**

30 Future L_{eq}(h) noise levels were predicted for the design year (2035) using the TNM2.5® software. This
 31 software takes into account projected traffic volumes, vehicle types, vehicle speeds, roadway locations,
 32 terrain surface, and noise sensitive receiver locations to calculate future traffic-generated noise levels.
 33 Noise receptors in the model were placed at outdoor activity areas for each receiver. Noise levels were
 34 predicted for each sensitive receiver using the worst traffic conditions likely to occur on a regular basis
 35 during the design year (during either the AM or PM peak traffic hour). Future traffic-generated noise
 36 levels were predicted using conceptual designs for the Preferred Alternative and the No Build Alternative.

37
 38 According to FHWA and MDOT noise policies, a traffic noise “impact” occurs when either of the
 39 following conditions occurs at a receiver:
 40

- The future predicted $L_{eq}(h)$ noise level approaches (is within 1 dB(A)) or exceeds the Noise Abatement Criteria (NAC) shown in Table 13.
- The future predicted $L_{eq}(h)$ noise level substantially exceeds (by 10 or more dB(A)) the existing $L_{eq}(h)$ noise level.

Table 13. FHWA Noise Abatement Criteria.

Activity Category	$L_{eq}(h)$	Description of Activity Category
A	57 dB(A) (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 dB(A) (exterior)	Residential, including multifamily units
C	67 dB(A) (exterior)	Active sport areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, television studios, trails, and trail crossings.
D	52 dB(A) (interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 dB(A) (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: U.S. Department of Transportation, FHWA *Highway Noise Control Standards and Procedures*, 23 CFR Part 772.

3.10.3.1 No Build Alternative

The No Build Alternative (2035) would result in noise increases ranging from 0.2 dB(A) to 3.4 dB(A), relative to existing levels during the AM and PM peak hours. A three dB(A) change is considered the minimum change that can be distinguished by the human ear. Overall noise levels would range from 56.2 dB(A) to 64.8 dB(A) for the AM peak hour and from 57.6 dB(A) to 65.4 dB(A) for the PM peak hour. The No Build Alternative would not result in any noise “impacts” (as defined by applicable noise regulations) within the project area. See Table 12 for No Build noise calculations.

3.10.3.2 Preferred Alternative

Overall, peak hour ambient sound levels for the Preferred Alternative during the AM peak hour would result in a change ranging from a decrease of 0.1 dB(A) (receiver 6) to an increase of 4.3 dB(A) (receiver 2), relative to existing levels. During the PM peak hour, an increase of 0.3 dB(A) (receivers 8 and 10) to an increase of 3.9 dB(A) (receiver 2) would occur. Predicted noise levels range from 56.9 dB(A) to 66.6 dB(A) for the AM peak hour and from 55.8 dB(A) to 65.9 dB(A) for the PM peak hour. See Table 12 for the Preferred Alternative noise calculations.

The Preferred Alternative would result in a noise impact (as defined by the NAC in Table 13) to receivers 3 and 4 (residential homes) as the predicted noise level is within one decibel of the prescribed dB level for Activity Category B.

3.10.3.3 Mitigation

The MDOT and FHWA noise abatement policies require that when noise impacts have been identified, at a minimum, noise barriers need to be considered, with a determination of whether they are reasonable and

feasible. Construction of a noise barrier between the road and receivers 3 and 4 would not be feasible as the barrier would eliminate vehicular access via the existing driveways. Breaks in the noise barrier, to allow vehicular driveway access, would substantially reduce the effectiveness of the barrier and would make it impractical.

Besides barriers, additional abatement alternatives can be considered where applicable, including:

- Use of earthen berms
- Reduction of speed limits
- Restriction of truck traffic to specific times of the day
- Total prohibition of trucks
- Alteration of horizontal and vertical alignments
- Property acquisition for construction of noise barriers or berms
- Acquisition of property to create buffer zones to prevent development that could be adversely impacted
- Noise insulation of NAC Category D facilities

WCRC has considered possible implementation of these alternative abatement measures, and has determined that that none would be applicable along State Road. Therefore, they were eliminated from consideration.

3.11 Water Resources

3.11.1 Existing Conditions

3.11.1.1 Surface Water

The northern portion of the project area is located within the Mallets Creek watershed which is a sub-watershed of the Huron River watershed. Mallets Creek drains an 11 square mile watershed that includes northern Pittsfield Township. It flows into the Huron River at South Pond, on Huron River Drive. An unnamed tributary to Mallets Creek lies east of State Road and north of Concourse Drive. The State Road corridor does not cross over the tributary. As part of the *Mallets Creek Restoration Plan* (Environmental Consulting & Technology Inc, et.al. 2000) several key problems exist within the Mallets Creek watershed. These included water quality issues, increased peak quantity and peak water velocity, channel and bank erosion, isolated flooding associated with increased flow and culvert restrictions, high phosphorus and sedimentation levels, increased water temperature, structural problems (headwalls/endwalls, bridge abutments), and diminished habitat (lack of bank vegetation/degraded stream beds).

The Pittsfield-Junction Drain flows from east to west through the project area near Payeur Road. This drain conveys water under State Road through a culvert and discharges into the Wood Outlet approximately 0.5 miles west of the project area. This drain receives water from light industrial facilities, residential properties, and agricultural lands along State Road and Payeur Road. The flow in the ditch is seasonally intermittent.

3.11.1.2 Groundwater

Water that is stored in and slowly filtered through geologic formations is considered to be groundwater. A geologic formation that contains sufficient ground water to supply wells, lakes, springs, streams and/or wetlands is called an aquifer. A land surface which readily permits water to percolate downward into an aquifer is referred to as a groundwater recharge area. Portions of the Ann Arbor Municipal well field and

1 the Steer Farm Aquifer are located within the project area. Portions of the project area have also been
2 identified as a groundwater recharge area. The project area does not contain any Sole Source Aquifers or
3 Critical Aquifer Protection Areas as defined by the EPA under the authority of the Safe Drinking Water
4 Act.

6 **3.11.1.3 Floodplains**

7 National Flood Insurance Program (NFIP) maps prepared by the Federal Emergency Management
8 Agency (FEMA) identify flood hazard zones along Mallets Creek (See Figure 2). FEMA is currently in
9 the process of revising the Flood Insurance Rate Maps (FIRMs) for Washtenaw County. Final revised
10 floodplain maps will go into effect in April 2012. The revised maps will likely change the flood
11 elevations and boundaries of the Mallets Creek floodplain.

13 **3.11.2 Environmental Consequences**

15 **3.11.2.1 Surface Water**

17 **3.11.2.1.1 No Build Alternative**

18 The No Build Alternative would not result in negative impacts to water quality in the project area other
19 than that which is currently occurring via introduction of road salt and sediment.

21 **3.11.2.1.2 Preferred Alternative**

22 The Preferred Alternative would not result in direct impacts to Mallets Creek. The Preferred Alternative
23 would increase the amount of impervious surfaces within the project area which could indirectly impact
24 the creek if mitigation measures are not implemented. However, as noted below, such impacts are
25 unlikely since mitigation will be included. The Preferred Alternative would require the Pittsfield-Junction
26 Drain culvert to be extended approximately 65 by feet. The required hydraulic study will be conducted
27 during the design phase of the project to determine proper culvert sizes. Permits will also be required for
28 the culvert extension. See Section 3.20 for permit details.

30 **3.11.2.1.3 Mitigation**

31 The Preferred Alternative stormwater system will be designed to meet the requirements in the WCWRC's
32 *Procedures and Design Criteria for Storm Water Management Systems* per the MOU between the WCRC
33 and WCWRC. The use of stormwater detention ponds is not anticipated in conjunction with the Preferred
34 Alternative. All stormwater will be accommodated in the median or via prefabricated stormwater systems
35 (e.g., Stormceptor®, StormVault®, or similar products). Location of the stormwater systems will be
36 determined during the design phase of the project. The Preferred Alternative would include the use of
37 water quality Best Management Practices (BMPs) to reduce flooding within the watershed, pre-treat
38 stormwater before it enters receiving bodies, and reduce stormwater flow. During the design phase of the
39 project detailed hydraulic studies will be conducted to determine which BMPs will be used to
40 accommodate stormwater. All BMPs will be designed in accordance with the *Procedures and Design
41 Criteria for Storm Water Management Systems* and applicable recommendations set forth in the *Mallets
42 Creek Restoration Plan*.

44 The culvert for the Pittsfield-Junction Drain would be designed to meet the requirements set forth in
45 applicable regulations and the *Procedures and Design Criteria for Storm Water Management Systems*.
46 Required hydraulic and hydrology studies will be conducted during the design phase of the project to
47 determine proper culvert sizes.

1 **3.11.2.2 Groundwater**

2
3 **3.11.2.2.1 No Build Alternative**

4 The No Build Alternative would not result in negative impacts to groundwater in the project area.

5
6 **3.11.2.2.2 Preferred Alternative**

7 The Preferred Alternative would not negatively affect groundwater in the project area. The Preferred
8 Alternative would not require major excavations, alter existing drainage patterns, or create new potential
9 pathways whereby contaminants could reach any aquifer.

10
11 **3.11.2.2.3 Mitigation**

12 In order to protect groundwater quality, all disturbed sewer lines will be addressed in accordance with
13 WCWRC specifications that will be imposed upon the construction contractor. If abandoned water wells
14 or septic systems are encountered during construction, they will be addressed in accordance with standard
15 construction specifications. Beyond these items, the contractor will need to meet all other Michigan
16 Department of Community Health (MDCH), local health department, and MDEQ requirements designed
17 to protect groundwater quality.

18
19 **3.11.2.3 Floodplains**

20 Executive Order 11988 and a number of supporting Federal regulations and guidelines address the issue
21 of floodplains. These regulations and guidelines reduce the risk of property damage and injury as a result
22 of flooding. Additionally, they are intended to protect natural floodplain benefits. In general, floodplain
23 “encroachments” (placing fill material, culverts, bridge piers, etc. within a floodplain) must be avoided
24 and minimized where practical. Where these impacts cannot be avoided, specific studies are required to
25 demonstrate that floodwater elevations would not be altered as a result of encroachments. Beyond these
26 items, floodplain encroachments require a permit from the MDEQ.

27
28 **3.11.2.3.1 No Build Alternative**

29 The No Build Alternative would not result in negative impacts to floodplains in the project area.

30
31 **3.11.2.3.2 Preferred Alternative**

32 The Preferred Alternative would result in impacts to approximately 1.06 acres of 100-year floodplains for
33 Mallets Creek. At this location (See Figure 2) fill would be placed within the 100-year floodplain. As
34 noted above, the FIRM maps are currently in the process of being revised. The revised maps will likely
35 reduce the footprint of the floodplain, thereby reducing floodplain impacts to less than one acre.
36 Floodplain impacts are expected to be minor (less than one acre and little effect on floodwater elevations).

37
38 These floodplain impacts are regulated by MDEQ under Part 31 of NREPA as Mallets Creek has an
39 upstream drainage area of more than two square miles. During the design phase of the project, exact
40 floodplain impacts will be calculated and a hydraulic study will be conducted to assure that the project
41 will not cause flooding problems (harmful interference with flood elevations) upstream or downstream
42 from the project area. In addition, WCRC will comply with Parts 31 and 301 of NREPA and the related
43 administrative rules.

44
45 **3.11.2.3.3 Mitigation**

46 Mitigation for fill within 100-year flood storage areas, if needed, will be accomplished by a compensating
47 cut in the same vicinity and the same volume as the area of fill to ensure that there is no change in 100-
48 year flood elevations. In the event that there are impacts and mitigation to 100-year floodplains, a Letter
49 of Map Amendment will be prepared for submittal and review by FEMA.

3.12 Wetlands

3.12.1 Existing Conditions

Michigan's wetlands are currently regulated under the jurisdiction of Part 303 of Michigan's NREPA (P.A. 451 of 1994, as amended). Unavoidable impacts to wetlands within the project area are subject to the requirements of this Public Act, Section 404 of the Clean Water Act, and Executive Order 11990, Protection of Wetlands. The Executive Order requires the avoidance of direct and indirect impacts to wetlands caused by construction activities that are Federally undertaken, financed, assisted, or approved. Where unavoidable impacts are present, an evaluation and mitigation for the impacts must be performed, regardless of size or regulatory status.

Field reconnaissance and wetland determination were conducted by wetland scientists during June 2011 to determine the presence and approximate boundaries of wetlands within the project area. The wetland determination was based on the methodology described in the United States Army Corps of Engineers January 1987 Wetland Delineation Manual, and appropriate regional supplements (Northcentral and Northeast Supplement). Prior to the fieldwork, background information was reviewed to establish the probability and approximate location of wetlands in the project area. A general reconnaissance of the project area was completed to determine site conditions. The project area was then walked with the specific intent of determining wetland boundaries. Data stations were established at locations within the wetland areas to document soil characteristics, evidence of wetland hydrology, and dominant vegetation. Soils were examined to a depth of at least 18 inches to assess general soil characteristics and hydrology. The boundaries of the wetlands within the potential development areas of the project were delineated, flagged, and surveyed in the field using Global Positioning System (GPS) survey equipment with sub-meter accuracy. Each wetland was assigned a class following the *Classification of Wetlands and Deepwater Habitats of the United States System* (Cowardin et al. 1979).

Additionally, the quality of each wetland was assessed and given a quality rating of poor, fair, or good. The quality of each wetland was assessed based on the best professional judgment of the investigating wetland scientists and based on obvious visual conditions and diversity of functions and values within each wetland. Considerations affecting the quality evaluation included: hydrology, plant diversity, presence and quantity of exotic species, diversity of wildlife habitat, stormwater treatment and storage functions, aesthetics, and proximity to other habitats.

Nine wetlands were identified within the project area (Figure 2). **Wetland A** is a small emergent wetland located near the south end of the airport that is partially within the perimeter fence of the airport. The portion within the perimeter fence appears to be regularly mowed. The dominant wetland vegetation included giant reed (*Phragmites australis*, FACW+), reed canary grass (*Phalaris arundinacea*, FACW-), wool-grass (*Scirpus cyperinus*, OBL), sedge (*Carex* sp., FAC-OBL), late goldenrod (*Solidago gigantea*, FACW), glossy buckthorn (*Rhamnus frangula*, FAC+), and joe-pye weed (*Eupatorium maculatum*, OBL). The feature had evidence of recent inundation in some areas and was nearly saturated throughout. The hydrology for this wetland appears to be supported by drainage from the adjacent airport property and State Road.

Wetland B is a scrub-shrub and forested wetland located just south of the airport on the west side of State Road immediately opposite a perimeter roadway for the airport from Wetland A. A search of the area found no obvious connection via a culvert, but one could be present and not evident. The dominant wetland vegetation included sandbar willow (*Salix exigua*, OBL), Eastern cottonwood (*Populus deltoides*, FAC+), black willow (*Salix nigra*, OBL), glossy buckthorn, reed canary grass, stinging nettle (*Urtica dioica*, FAC+), spotted touch-me-not (*Impatiens capensis*, FACW), American elm (*Ulmus americana*, FACW-), and water-plantain (*Alisma plantago-aquatica*, OBL). The feature had evidence of recent

1 inundation in some areas and areas to the west were inundated. The hydrology for this wetland appears to
2 be supported by drainage from the surrounding area with no obvious watercourses entering or exiting.

3
4 **Wetland C** is a narrow wetland swale on the west side of State Road located near the NOAA building
5 and comprised of woody vegetation. The dominant wetland vegetation included glossy buckthorn, green
6 ash (*Fraxinus pennsylvanica*, FACW), Eastern cottonwood, and boxelder (*Acer negundo*, FACW). The
7 wetland had evidence of inundation to a depth of several inches. The hydrology for the wetland appears
8 to be supported by local drainage.

9
10 **Wetland D** is an emergent/scrub-shrub wetland on the west side of State Road across from Venture
11 Drive. The dominant wetland vegetation included narrowleaf cattail (*Typha angustifolia*, OBL), sedge,
12 glossy buckthorn, spike-rush (*Eliochorus* sp., FACW to OBL), black willow, fox sedge (*C. vulpinoidea*,
13 OBL), curly dock (*Rumex crispus*, FAC+), water-plantain, reed canary grass, and dark bulrush (*Scirpus*
14 *atrovirens*, OBL). The wetland had evidence of recent inundation. The hydrology for the wetland is
15 partially supported by drainage from State Road and the adjacent right-of-way.

16
17 **Wetland E** is a scrub-shrub/forested wetland located in the southern portion of the project area on the
18 west side of State Road across from Whitmore Boulevard. Much of the wetland extends to the west
19 outside the project area. The dominant wetland vegetation within the project area included silver maple
20 (*Acer saccharinum*, FACW), red maple (*A. rubrum*, FAC), green ash, reed canary grass, bur oak (*Quercus*
21 *macrocarpa*, FAC-), buttonbush (*Cephalanthus occidentalis*, OBL), giant reed, and sandbar willow. The
22 wetland was inundated at the time of the investigation and appears to have a large permanent pool area.
23 The hydrology for the wetland is likely supported by a combination of overland runoff and groundwater.

24
25 **Wetland F** is an emergent wetland located in the southeast quadrant of the State and Old State Road
26 intersection. The dominant wetland vegetation included cattails and giant reed, with a fringe of mowed
27 turf grasses. The wetland had no evidence of recent inundation. The hydrology for the wetland is likely
28 provided by overland and road runoff.

29
30 **Wetland G** is a scrub-shrub/forested wetland located in the northeast quadrant of the State Road and Old
31 State Road intersection. The dominant wetland vegetation included glossy buckthorn, poison ivy
32 (*Toxicodendron radicans*, FAC+), bur oak, American elm, cattail, reed canary grass, red maple, and
33 Eastern cottonwood. The wetland had secondary indicators of hydrology, including water stained leaves
34 and vegetation drift lines and is likely seasonally inundated. The hydrology for the wetland is likely
35 overland runoff and direct precipitation.

36
37 **Wetland H** is an emergent wetland located between Runway Boulevard and Concourse Drive adjacent to
38 a large open water area. The dominant wetland vegetation included giant reed, reed canary grass, and
39 cattail. The wetland had saturated soils near the surface. The hydrology for the wetland appears to be
40 supported a combination of runoff, precipitation, and groundwater.

41
42 **Wetland I** is an emergent/scrub-shrub wetland on the east side of State Road across from the airport. The
43 dominant wetland vegetation was reed canary grass, with some shrubs starting to establish. Extensive
44 portions of the northern part of the wetland are mowed to support airport operations. The wetland had no
45 inundation or saturation during the inspection, but aerial photographs show extensive areas of shallow
46 inundation that are seasonal and also likely exist following precipitation events.

47
48 Based on field reviews and observations made during the wetland delineation, the larger wetlands in the
49 area are dependent on groundwater to maintain wetland hydrology. Other wetlands receive some
50 stormwater runoff from the adjacent developed (residential and commercial) properties' impervious
51 surfaces as a supplemental source of hydrology. The wetlands in the project area are rather limited in size

1 but perform a variety of functions. The functions of each wetland were assigned based on the best
2 professional judgment of the wetland scientists who performed the inventory. These functions include the
3 following: flood flow alteration (reducing flood volumes and peak flood flows), sediment/toxicant
4 retention (keeping sediments and contaminants within the wetland), sediment stabilization (making
5 sediments less likely to be washed away and into other water bodies), nutrient removal/transformation
6 (processing or using nutrients that could cause water quality problems elsewhere), waterfowl migration
7 (providing habitat for migrating waterfowl), aquatic diversity/abundance (supporting a diverse range of
8 aquatic plants, insects, and animals), and groundwater recharge/discharge (recharging groundwater
9 aquifers). Also, they provide some recreational opportunities (e.g., wildlife watching, hiking, etc.), but
10 these are limited because all of the wetlands are privately owned and are difficult to access. Additionally,
11 these wetlands provide an aesthetic viewing value that can be enjoyed by the general public as they travel
12 on project area roads. Most of the wetlands in the project area contain invasive and/or exotic species that
13 are undesirable.

14 **3.12.2 Environmental Consequences**

15 **3.12.2.1 No Build Alternative**

16
17
18 The No Build Alternative would not result in negative impacts to regulated wetlands nor would it cause
19 secondary impacts to wetlands or contribute to cumulative wetland impacts.

20 **3.12.2.2 Preferred Alternative**

21
22 The Preferred Alternative would result in approximately 0.45 acres of regulated wetlands being filled.
23 Approximately 0.15 acres of impacted wetlands would be palustrine scrub-shrub/palustrine forested
24 (PSS/PFO) wetlands. These impacts would occur at Wetlands B and E. PSS wetlands are dominated by
25 woody shrub species, while PFO wetlands are dominated by tree species such as silver/red maples and
26 willow trees. PSS/PFO wetlands contain a mix of PSS and PFO plant types. Approximately 0.3 acres of
27 impacted wetlands would be palustrine emergent (PEM) wetlands and emergent/schrub-shrub wetlands.
28 PEM wetlands are characterized by the presence of erect, rooted, herbaceous plants. PEM/PSS wetlands
29 contain a mix of PEM and PSS plant types. At most of these locations, a strip of wetland would be filled
30 adjacent to the existing road, with the majority of the wetland remaining. The centerline of the Preferred
31 Alternative was maintained on the current alignment to the greatest extent possible to minimize wetland
32 impacts. The roundabout at State Road and Old State Road was shifted to the west to avoid wetland H.

33
34 Based on the professional judgment of the wetland scientists who performed the study, the following
35 wetland functions would be impacted: flood flow alteration; sediment/toxicant retention; nutrient
36 removal/transformation; sediment stabilization; and groundwater recharge/discharge. A small portion of
37 each wetland along the roadway would be impacted, leaving the majority of the wetlands and their
38 functions intact. Because detailed engineering has not yet been performed for the Preferred Alternative, a
39 “worst case” approach to wetlands impacts was used. Wetland impacts resulting from the Preferred
40 Alternative are shown on Table 14 and Figure 2.

41
42 The Preferred Alternative would not result in any indirect/secondary impacts to wetlands as a result of
43 land use changes. As described in Section 3.2, the Preferred Alternative would have the same secondary
44 land use impacts as the No Build Alternative. The current rate of land use changes and new development
45 is anticipated to continue under both alternatives, and the Preferred Alternative is not anticipated to
46 induce any secondary development that would not otherwise occur with the No Build Alternative. Thus,
47 secondary wetland impacts, if they occur, would not be attributable to the Preferred Alternative.

48
49 Wetland impacts related to other projects such as residential/commercial developments could occur
50 within the project area in the future, but at this time no developments are currently under construction or
51 proposed (i.e., no proposed site plans are pending with Pittsfield Township) within the project area.

1 The Preferred Alternative would add 0.45 acres of wetland impacts to the cumulative impacts in the
 2 project area. Although it is not possible to calculate the precise amount of wetlands that have been
 3 historically impacted within the Township, the Preferred Alternative would increase the acreage of
 4 cumulative wetland impacts in the county by an insignificant amount (less than 1/10 of one percent). The
 5 project area has historically transformed from agricultural and low-density residential to primarily
 6 commercial and industrial land uses. These developments have resulted in the reduction of wetlands in
 7 the project area. The functions lost as a result of the Preferred Alternative are typical of those provided
 8 by wetlands in Washtenaw County, southeastern Michigan, and the Great Lakes region, and the
 9 remaining portions of impacted wetlands would continue to provide functions similar to those currently
 10 provided. Wetland impacts due to the Preferred Alternative would be mitigated as noted below with lost
 11 functions being replaced.

12
 13 **Table 14. Wetlands within the Project Area**

Wetland	Type of Wetland	Quality	Total Wetland Size (Acres)	Wetland Impacts (Acres)	Wetland Mitigation (Acres)	Functions/ Values
A	emergent	Poor	0.7	0.0	0.0	2,4
B	scrub-shrub/forested	Fair	0.6	0.03	0.06	2,4,7
C	scrub-shrub	Fair	0.1	0.0	0.0	4
D	emergent/scrub-shrub	Fair	0.1	0.0	0.0	2,4
E	scrub-shrub/forested	Good	7.2	0.12	0.24	1,2,4,5,6,7,9
F	emergent wetland	Poor	1.5	0.0	0.0	1,2,4
G	scrub-shrub/forested	Good	7.9	0.0	0.0	2,4,7
H	emergent	Poor	7.5	0.28	0.42	1,2,4,5,9
I	emergent/scrub-shrub	Fair	42.6	0.02	0.03	1,2,4
Total			68.2	0.45	0.75	

14 1 flood flow alteration, 2 sediment/toxicant retention, 3 sediment stabilization, 4 nutrient removal/transformation, 5 waterfowl
 15 migration, 6 aquatic diversity/abundance, 7 groundwater recharge/discharge, 8 recreational opportunities, 9 aesthetic viewing

16
 17

18 **3.12.3 Mitigation**

19 In order to compensate for the approximately 0.45 acres of impacts to regulated wetlands caused by the
 20 Preferred Alternative, 1.00 acre of wetland mitigation credits will be purchased from the Whitney Farm
 21 Mitigation Wetland (located on Jennings Road, Webster Township, Washtenaw County). This acreage
 22 reflects the minimum wetland size allowable under MDEQ regulations when purchasing credits from a
 23 wetland mitigation bank. A wetland mitigation bank is a site where wetlands are restored or created as
 24 prior replacement for wetlands that are expected to be unavoidably impacted by development within a
 25 watershed. The objective of mitigation banking is to provide for the replacement of chemical, physical,
 26 and biological wetland functions that are lost as a result of authorized impacts.

27

28 In accordance with MDEQ Administrative Rules for Wetland Mitigation Banking (R 281.951 - 281.961),
 29 all wetland functions and values lost (based on assessment in Section 3.12.1), as a result of the Preferred
 30 Alternative, will be replaced in-kind. Mitigation wetland credits will be purchased prior to commencing
 31 construction unless a concurrent schedule is agreed upon between WCRC and MDEQ. Per MDEQ
 32 regulations, a wetland permit under Part 303 of NREPA will be obtained prior to purchase of any wetland
 33 credits.

34

35 During the design phase of the project, WCRC will also investigate the feasibility and reasonableness of
 36 steepened fill embankments, minor alignment shifts, and/or retaining walls to avoid wetland impacts to
 37 reduce or obviate the need for mitigation.

38

39

3.13 Threatened, Endangered and Species of Special Concern

3.13.1 Existing Conditions

Section 7 of the Endangered Species Act, as amended, requires each Federal agency to ensure that “any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species.” Part 365 of the Michigan Natural Resources and Environmental Protection Act authorizes the MDNR to establish a list of species that are threatened or endangered in the state in cooperation with the Federal government, pursuant to the Endangered Species Act of 1973. This act protects species that are threatened or endangered in the state and makes it unlawful to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect any animal protected under this statute, or attempt to engage in any such conduct.

A field investigation was conducted to identify existing habitat and determine the likelihood of Threatened and Endangered (T&E) species existing within the project area. The “project area” includes all areas that would be impacted directly by the Preferred Alternative. Specifically, the project area includes all property within the potential construction limits (construction limits are defined as within a 5-foot offset of the proposed multi-use paths shown on Figure 2). All field investigations and habitat analysis were conducted by qualified biologists. For additional details regarding the field investigations and habitat analysis, see Appendix C.

Prior to the field investigation, coordination with the Michigan Department of Natural Resources (MDNR) and the United States Fish and Wildlife Service (USFWS), in conjunction with a review of the Michigan Natural Features Inventory (MNFI) Heritage database, was conducted to determine the potential for occurrence of threatened, endangered, or species of special concern within or near the project area.

Table 15 identifies the threatened, endangered, or species of special concern listed in the MNFI Heritage database that have been identified within or near the project area. The majority of Federally and state threatened and endangered species and state species of special concern listed above are either presumed extirpated (burying beetle) or have not been observed in the project area since the late 1920s, with the majority of species being last observed in the late 1800s. Therefore, it is highly unlikely that these species exist within the project area.

Based on analysis of the MNFI data four species have potential to exist within the project area. These include the Indiana bat, Henslow’s sparrow, grasshopper sparrow, and ginseng. The “project area” includes all areas that would be impacted directly by the Preferred Alternative. Due to the age of the records (50 years and older), the other species noted in Table 15 are assumed to no longer exist within the project area, and no additional field investigations were conducted for these species.

1 **Table 15. Threatened, Endangered and Species of Special Concern**

Species Common Name (<i>Scientific Name</i>)	Classification	Status
Indiana bat (<i>Myotis sodalis</i>)	Vertebrate Animal	Federally/State Endangered
Henslow's sparrow (<i>Ammodramus henslowii</i>)	Vertebrate Animal	State Endangered
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	Vertebrate Animal	State Species of Special Concern
Kirtland's snake (<i>Clonophis kirtlandii</i>)	Vertebrate Animal	State Endangered
Least shrew (<i>Cryptotis parva</i>)	Vertebrate Animal	State Threatened
American burying beetle (<i>Nicrophorus americanus</i>)	Invertebrate Animal	Federally Endangered
Depressed ambersnail (<i>Oxyloma peoriense</i>)	Invertebrate Animal	State Species of Special Concern
Showy orchids (<i>Galearis spectabilis</i>)	Vascular Plant	State Threatened
White gentian (<i>Gentiana flavida</i>)	Vascular Plant	State Endangered
Pale avens (<i>Geum virginianum</i>)	Vascular Plant	State Threatened
Goldenseal (<i>Hydrastis canadensis</i>)	Vascular Plant	State Threatened
Red mulberry (<i>Morus rubra</i>)	Vascular Plant	State Threatened
Ginseng (<i>Panax quinquefolius</i>)	Vascular Plant	State Threatened
Prairie buttercup (<i>Ranunculus rhomboideus</i>)	Vascular Plant	State Threatened
Compass plant (<i>Silphium laciniatum</i>)	Vascular Plant	State Threatened
Edible valerian (<i>Valeriana edulis var. ciliate</i>)	Vascular Plant	State Threatened
Whiskered sunflower (<i>Helianthus hirsutus</i>)	Vascular Plant	State Species of Special Concern

2

3 **3.13.1.1 Indiana Bat**

4 Biologists surveyed the project area on June 14, 2011 for suitable trees with roost structure and potential
 5 foraging habitat within the potential construction limits (construction limits include all areas within a 5-
 6 foot offset of the proposed multi-use paths shown on Figure 2). The habitat assessment was based on the
 7 potential for use of the area by Indiana bats, including a combination of needs of the species: roost trees,
 8 foraging habitat, travel corridors, and water. Trees were inspected on both sides of the roadway within
 9 the construction limits. Potential roost trees were photographed and georeferenced using GPS. An
 10 inventory of the tree health, bark characteristics, and size of individual trees (dbh = diameter at breast
 11 height) was compiled. Trees deemed unsuitable as potential roost habitat include those that lack
 12 appropriate landscape context, are not suitable tree species, lack suitable tree structure, or are too small in
 13 size (i.e., less than 9-inch diameter).

14

15 These field investigations identified 42 potential roost trees within the construction limits based on tree
 16 size, species, and bark condition. These trees exhibit structural characteristics that are attractive to
 17 Indiana bats and are located adjacent to or within Wetlands B, E, and G (See Figure 2). All other areas
 18 within the potential construction limits either do not have any trees present or have been determined by
 19 field observations to not have potential roost trees.

20

21 Of the potential roost trees identified, only a small number are located within overall habitats that could
 22 be deemed suitable. These habitats were deemed low to poor quality based on an overall lack of suitable
 23 roost trees that have both proper structure and adequate solar exposure. The north-south orientation of
 24 State Road limits the solar exposure of most trees within the construction limits to a short time period in
 25 the morning and late afternoon. This is because in the construction limits, open “edges” of forested areas
 26 run primarily north-south, resulting in most trees being shaded by other trees to some degree during much
 27 of the day.

28

29 Additionally, the overall landscape context in the project area is not ideal for Indiana bat use. Foraging
 30 habitat in and near the project area is limited due to the fragmentation and size of the remaining woodlots
 31 and distance to the nearest river. The lack of a water feature is considered a limiting factor because the
 32 closest significant water body (the Huron River) is about 4.5 miles to the north. Indiana bats typically
 33 stay within 0.5 miles of their roost for foraging distances (Humphrey et al. 1977). The Ann Arbor

1 Railroad line and a gas pipeline through the project area provide travel corridors, so this habitat criterion
2 is likely not a limiting factor. A drainage ditch is present within the project area, but is not located within
3 a woodlot. There are several wetlands and ponds adjacent to the project area that would be considered
4 foraging habitat for bats.

5
6 Considering the information presented above, there are four areas of potential Indiana bat habitat within
7 the project area, and these are shown on Figure 2. The quality of these habitat areas is low to poor based
8 on the professional judgment of the biologists who performed the inventory. See Appendix C for
9 additional details.

10 11 **3.13.1.2 Henslow's Sparrow and Grasshopper Sparrow**

12 These are small sparrows that are found in Michigan during the summer breeding season and inhabit
13 grasslands, prairies, and open fields. Both species are relatively uncommon inconspicuous birds. The
14 birds forage on the ground in vegetation, mainly eating insects and seeds. Population numbers of both
15 species have declined steadily over the past few decades, largely because of habitat loss.

16
17 The presence of these species has been confirmed by the Washtenaw Audubon Society during their
18 annual counts at the Ann Arbor Airport. Based on the counts from 2006 to 2008, both species have been
19 observed on two separate occasions. Both species inhabit the grassy meadow areas south of the main
20 runway, and one observation was located in a wetland on airport property. The grassland areas on airport
21 property are maintained in an agreement with the local Washtenaw Audubon Society. Several
22 observations of the sparrows were also noted in Washtenaw County on eBird.org (eBird is a real-time,
23 online checklist program, launched in 2002 by the Cornell Lab of Ornithology and National Audubon
24 Society. eBird allows recreational and professional bird watchers to submit their observations to an
25 online database). Of these eBird observations, one sighting of the grasshopper sparrow was noted near
26 the project area at the Ann Arbor Airport. The airport property habitat is located approximately 500 feet
27 from the project area. The project area immediately east of the airport and west of State Road is
28 maintained as gravel parking or mowed turf grass.

29
30 Biologists investigated the project area on June 14, 2011 to determine habitat types within the project
31 area. In general, the majority (over 85%) of the non-roadway project area is maintained as mowed turf
32 grass and/or landscaping. Other habitat types within the project area include wetlands, forested areas, and
33 active farm fields

34
35 Based on the field observations, no suitable habitat for this species is present within the project area.
36 Although not specially surveyed, no Henslow's sparrows or grasshopper sparrows were heard singing or
37 observed during the field visit.

38 39 **3.13.1.3 Ginseng**

40 This plant species is predominantly found in rich shaded hardwood forests with loamy soils and heavy
41 canopies and may range into wetland portions. The Michigan Ginseng Act was passed in 1994 to regulate
42 the harvest, sale, and distribution of American Ginseng in Michigan. This act covers both cultivated and
43 wild ginseng, and makes it unlawful to take American ginseng from the wild without a permit from the
44 MDNR. Ginseng was last observed in the project area in 1980.

45
46 Based on the field investigation, two forested areas were located in the southern portion of the project
47 area (just north of Old State Road). The forested areas are made up of silver maple, red maple, green ash,
48 reed canary grass, bur oak, buttonbush, giant reed, sandbar willow, glossy buckthorn, poison ivy,
49 American elm, and Eastern cottonwood. Potential habitat within the project area is limited as result of
50 extensive tree clearing and mowing/landscaping. The forested areas within the project area lack the

1 canopy cover and tree or plants species typically associated with ginseng habitat. Additionally, ginseng
2 was last observed in the area in 1980. Based on the field observations, no suitable habitat for this species
3 is present within the project area.

4 **3.13.2 Environmental Consequences**

5 **3.13.2.1 No Build Alternative**

6
7 The No Build Alternative would not result in direct impacts to any special status species or their habitat.
8 Secondary and cumulative impacts to habitat that could potentially be used by special status species
9 would not occur under the No Build Alternative as the project area is developed.

10 **3.13.2.2 Preferred Alternative**

11 **3.13.2.2.1 Henslow's and Grasshopper Sparrow**

12 The Henslow's or Grasshopper sparrow will not be impacted as the majority of the Preferred Alternative
13 would be constructed within the existing ROW which does not encompass suitable habitat. Likewise,
14 areas impacted by the Preferred Alternative outside of the existing ROW are highly disturbed and are not
15 suitable habitat (mowed/maintained turf grass, landscaping, and crop fields) for these species.

16 **3.13.2.2.2 Indiana Bat**

17 The Preferred Alternative would impact approximately 1.5 acres of potential Indian bat habitat. As noted
18 above, Indiana bat habitat quality within the project area would be considered low to poor. Therefore, the
19 Preferred Alternative would not affect high quality Indiana bat habitat. Correspondence from USFWS is
20 included in Appendix B.

21 **3.13.2.2.3 Ginseng**

22 Ginseng habitat or individual plants would not be impacted as the areas affected by the Preferred
23 Alternative are disturbed and not suitable habitat (mowed/maintained turf grass, landscaping, and crop
24 fields) for this plant.

25 **3.13.3. Mitigation Measures**

26 Given that the project area is within the region of Indiana bat activity, tree removal activities proposed as
27 part of the construction project will be restricted to seasons when the bats are not active. Therefore, tree
28 removal activities will not occur from April 15 to September 14. The bats are not active in Michigan
29 from the second week in September to the first of May. Tree removal restrictions will be included in all
30 construction plans.

31 **3.14 Vegetation & Wildlife**

32 **3.14.1 Existing Conditions**

33 Based on general field observations, the vegetation communities in the project area provide fair to poor
34 wildlife habitat value (See Appendix C for habitat assessment). The remnant green space areas have been
35 highly impacted by past land use activities. In such areas, the species that are present are tolerant of high
36 levels of human activity and related disturbances. The general habitat identified three habitat types in the
37 project area. The habitat types are old field, wetlands, and second growth woodlands. The remaining
38 land is developed or in turf grasses and not considered wildlife habitat as any wildlife usage would be
39 very transient.

40 The majority of the old-field habitat is found in fence rows around agricultural fields and in transitional
41 areas along property boundaries. Occasionally an agricultural field will develop old-field characteristics

1 as it becomes fallow prior to being converted to commercial or residential use. Most old field habitats are
2 now vegetated with brome grass (*Bromus inermis*), tall fescue (*Festuca arundinacea*) and various
3 broadleaved weeds. These areas currently provide little wildlife habitat value due to the lack of foraging
4 plants and cover. Older fields that have been fallow for a longer period are dominated by tall fescue
5 (*Festuca elatior*), timothy (*Phleum pratense*), bluegrass (*Poa pratense*), clovers (*Trifolium spp.*), bush
6 honeysuckle (*Lonicera maackii*), hackberry (*Celtis occidentalis*) and white ash (*Fraxinus americana*), and
7 broadleaved weeds such as Canada thistle (*Cirsium arvense*) and sweet clovers (*Melilotus spp.*). These
8 areas also provide limited habitat value for wildlife use.

9
10 A few isolated woodland habitats are located throughout the project area and include primarily
11 transitional forest species. Larger tree species present included shagbark hickory (*Carya ovata*),
12 basswood (*Tilia cordata*), red oak (*Q. rubra*), green ash, American elm, and black cherry (*Prunus*
13 *serotina*).

14
15 During several field visits investigating other resources, the following species were observed in old-field
16 habitats: Whitetail deer (*Odocoileus virginianus*), woodchuck (*Marmota monax*), eastern cottontail
17 (*Sylvilagus floridanus*), European starling (*Sturnus vulgaris*), red-winged blackbird (*Agelaius*
18 *phoeniceus*), and eastern turkey (*Meleagris gallopavo*). Airport staff has also reported coyote sighting on
19 airport property. Woodland habitats species included: Whitetail deer (*Odocoileus virginianus*), red
20 squirrel (*Tamiasciurus hudsonicus*), fox Squirrel (*Sciurus niger*), northern cardinal (*Cardinalis*
21 *cardinalis*), American crow (*Corvus brachyrhynchos*), and blue jay (*Cyanocitta cristata*).

22
23 Pittsfield Township conducted a herpetological survey in 2004 at three Township parks (Mifsud and
24 Barton Ecological Consultants, 2005). Based on this survey the following species were found: Midland
25 painted turtle (*Chrysemys picta*), snapping turtle (*Chelydra serpentina*), leopard frog (*Rana pipiens*), green
26 frog (*Rana clamitans melanota*), wood frog (*Rana sylvatica*), western chorus frog (*Pseudacris triseriata*
27 *triseriata*), spring peeper (*Pseudacris crucifer crucifer*), gray tree frog (*Hyla versicolor*), bullfrog (*Rana*
28 *catesbeiana*) American toad (*Bufo americanus sirtalis*), eastern garter snake (*Thamnophis sirtalis*
29 *sirtalis*), Butler's garter snake (*Thamnophis butleri*), northern ribbon snake (*Thamnophis sauritus*
30 *septentrionalis*), and blue-spotted salamander (*Ambystoma laterale*). It is likely that these species would
31 inhabit the woodlands and wetlands (Section 3.12.) throughout the project area.

33 **3.14.2 Environmental Consequences**

34 **3.14.2.1 No Build Alternative**

35
36 The No Build Alternative would result in minimal impacts to vegetation and wildlife. The main impact
37 caused by this alternative would be wildlife road kills.

38 **3.14.2.2 Preferred Alternative**

39
40 This alternative would directly result in minor impacts to vegetation and wildlife in the project area.
41 Because impacted areas are adjacent to existing roads, the vegetation communities that would be
42 eliminated are of minimal value as wildlife habitat. Wildlife species that would be affected are common
43 in the surrounding area, tolerant of noise and visual disturbances, and easily displaced to similar habitats.
44 The Preferred Alternative would not result in the fragmentation or isolation of any wildlife habitat, and
45 the Preferred Alternative would not affect long-term survival of any species in the project area.

3.15 Cultural Resources

3.15.1 Existing Conditions

Cultural resources include above ground structures and archaeological sites that are eligible for listing or listed on the National Register of Historic Places (NRHP). Eligibility for the NRHP for road projects funded using federal money is determined by FHWA in consultation with the State Historic Preservation Officer (SHPO). As part of this project, an investigation was performed to identify cultural resources within the Area of Potential Effect (APE). The APE includes the entire project corridor (approximately 16,000 feet) with a total width of 200 feet (100-foot from the existing centerline on each side of the roadway). A two-hundred foot wide APE was chosen to ensure all potential historical properties that may be impacted by the project were identified. The cultural resources investigation was conducted by a qualified cultural resource specialist and included background research and field investigations. In addition to the cultural resources investigation, an early coordination letter was sent to SHPO, and the SHPO Section 106 application was completed and submitted to SHPO for review.

Coordination letters were also sent to Native American Tribes throughout the State of Michigan inviting formal consultation (see Section 4.3 for list of Tribes). No letters were received from any tribal entities requesting additional consultation.

Based on the cultural resources investigation, coordination with SHPO and tribal coordination, no cultural resources were identified, and no NRHP-eligible cultural resources are located within the APE. Details regarding the cultural resource investigation are contained in *Cultural Resource Inventory Survey: Proposed Improvements to the State Street Corridor* (Great Lakes Research, Inc. 2012).

3.15.2 Environmental Consequences

3.15.2.1 No Build Alternative

The No Build Alternative would not affect cultural resources within the APE.

3.15.2.2 Preferred Alternative

In accordance with Section 106 of the National Historic Preservation Act, the effects of the project on cultural resources have been evaluated. The evaluation did not identify the presence of any cultural resources in the APE. Therefore the Preferred Alternative would have no effect upon any properties that are listed on or eligible for the NRHP. See Appendix B for SHPO concurrence letter.

3.16 Section 4(f) Properties

3.16.1 Existing Conditions

In accordance with 49 USC Section 303(c), Section 4(f), a project may require the use of publicly-owned park land, recreation areas, or wildlife and waterfowl refuges, or land of a historic site only if 1) there is no prudent and feasible alternative that would avoid using those resources, and 2) the project includes all possible planning to minimize harm resulting from such use.

There is one publicly-owned park within the project area that meets the definition of protected sites under Section 4(f). The Pittsfield Township Park is located just south of the State Road and Ellsworth Road intersection. The park is seven acres and has a pavilion, softball field, three t-ball fields, playground, and picnic tables with grills. The park hosts youth t-ball, softball practices, summer day camp, pre-school programs, adult kickball league, and other special programs. (See Figure 2). The park is used from early spring into early fall.

1 Parking for the fields is currently provided along Airport Drive and at the township-owned building to
2 the north of the baseball fields. The baseball fields are owned by Pittsfield Township and are
3 identified in the township master plan.

4
5 There are no other National Register of Historic Places (NRHP) eligible sites, publicly-owned parks,
6 waterfowl refuges, or wildlife refuges within the project area that qualify for protection under Section
7 4(f).

8 **3.16.2 Environmental Consequences**

9 **3.16.2.1 No Build Alternative**

10 The No Build Alternative would not affect any Section 4(f) properties.

11 **3.16.2.2 Preferred Alternative**

12 The Preferred Alternative was designed to avoid impacts to the Pittsfield Township Park and would not
13 require any ROW acquisition (i.e., direct use) from the baseball fields, facilities would remain in use, and
14 the activities associated with them would not be altered. Access to the park would be altered or impeded
15 by the construction of the proposed median by making Airport Road right-in/right-out only. The
16 Preferred Alternative would require northbound traffic entering the park to use the roundabout at State
17 Road and Ellsworth Road (being constructed in 2013) to make a U-turn and travel southbound to make a
18 right turn onto Airport Road. Traffic leaving the park via Airport Road and desiring to go northbound
19 would be require to travel southbound on Airport Road to the median turnaround just south of Airport
20 Road. Enclosed drainage would be used adjacent to the park. Therefore, the project limits would not
21 extent beyond the multi-use path. No temporary or construction impacts to the park are anticipated. The
22 Preferred Alternative would relocate the roadway approximately 10 feet closer to the fields but would not
23 significantly alter the surrounding or setting (i.e., the closest field is currently located near the roadway
24 and will remain located near the roadway).

25 Additionally, as shown in Table 12, the noise levels at the fields (Receiver 1) are not predicted to rise to a
26 level that would constitute an “impact.” Therefore, the Preferred Alternative would not result in a direct
27 use or constructive use of the property.

28 **3.17 Hazardous Materials**

29 **3.17.1 Existing Conditions**

30 Federal statute 42 USC Section 9601, Sections 101, 102, 103, 105, 107, and 120 defines hazardous
31 substances and requires Federal agencies to comply with the Comprehensive Environmental Response
32 Compensation and Liability Act (CERCLA), defines liabilities of potentially responsible parties for
33 contamination, limits liability under “due diligence” provisions, and establishes criteria for recovery,
34 clean-up, and response plans. Coordination is through the U.S. Environmental Protection Agency (EPA).

35 A review was completed of readily available regulatory database information to assess the possible risk
36 for environmental liabilities from regulatory action, hazardous material spills, or documented hazardous
37 waste disposal in the project area. This information was obtained from a review of information included
38 in the Environmental FirstSearch™ regulatory database report. Databases reviewed included various
39 Resource Conservation and Recovery Acts lists, National Priority List, the Comprehensive Environmental
40 Response Compensation and Liability Information System, the Emergency Response Notification
41 System, the Facility Index System, the Toxic Release Inventory System, and the State of Michigan Part
42 201 and 213 facility lists.

1 Based on the review of these databases, one known hazardous materials site is located within the project
2 area (Figure 2). Known contaminated sites are those where documented releases of hazardous materials
3 have taken place and cleanup may not be completed.

4
5 This site was identified as Ann Arbor Air Service, Inc. (4320 South State Road). This site was identified
6 as having an undisclosed release in March of 1989 and gasoline release in June of 1996. Both releases are
7 identified as “closed” (all releases identified as closed have been remediated in accordance with MDEQ
8 requirements). Additionally, an underground gasoline tank was removed in May of 1996.

9
10 Several other sites were identified in the project area as generating, storing, or using hazardous
11 materials. Based on the database search, no contamination, spills or releases have occurred at these sites.
12 Therefore, they are not considered contaminated.

13 **3.17.2 Environmental Consequences**

14 **3.17.2.1 No Build Alternative**

15
16 The No Build Alternative would not affect any contaminated sites.

17 **3.17.2.2 Preferred Alternative**

18
19 The Preferred Alternative would not require acquisition of ROW, vegetation clearing, earth disturbance,
20 grading, or filling at the one site known to have previous contamination based on documented releases of
21 hazardous materials. At this location, the roadway was shifted to the east (away from the potentially
22 contaminated site). As a result, the proposed improvements would not impact properties to the west of
23 State Road at this location.

24
25 Due to the lack of detailed information about the contaminated site, specific mitigation strategies may
26 eventually need to be developed. If needed, the strategies will include the following measures:

- 27
28
- 29 • All known and potentially contaminated sites will be investigated prior to finalizing plans for adjacent
30 construction.
 - 31 • All known and potentially contaminated sites will be managed in accordance with applicable State
32 and Federal laws. Where appropriate, site-specific investigations will be completed to evaluate
33 potential contamination and to determine if mitigation is necessary. If site-specific corrective action
34 plans are needed, these plans may include the following mitigation strategies: (1) documenting
35 properties using design and construction documents, (2) educating workers to identify potential
36 contamination sources, (3) using appropriate personal protective equipment during construction,
37 and/or (4) remediation (clean-up) of contaminated soil or groundwater.
 - 38 • A Worker’s Health and Safety Plan may be developed to address worker protection and general
39 mitigation measures depending on contamination found.
 - 40 • The MDEQ will be consulted regarding UST and LUST properties adjacent to construction areas to
41 assure that new exposure pathways are not created.
 - 42 • A contingency plan will be developed to address the removal of unregistered USTs and the cleanup of
43 any associated contamination, as well as to address other types of previously undocumented
44 contamination found during the construction operations.
 - 45 • Properly close and abandon all monitoring wells.
 - 46 • Evaluate if new subsurface utility cuts could create contamination pathways.
- 47
48
49
50

1 **3.18 Visual Conditions**

2 3 **3.18.1 Existing Conditions**

4 In most ways, visual conditions in the project area are typical of suburban-rural areas in Southeastern
5 Michigan. The southern portion of the project area includes a small number of residential homes and
6 agricultural fields with business/industrial buildings. The northern portion of the project area includes
7 business/industrial buildings, airport and business office parks.

8
9 Key viewpoints are from the motorists' perspective, from inside buildings along project area roads and
10 from pedestrians' views along the limited sidewalks and pathways. Panoramic views are not present in
11 the project area due to buildings, trees, and the lack of elevation changes. Therefore, most views are
12 limited to the immediate foreground (within 0.25 mile), with mid-ground views (0.25 to 4 miles) only
13 occurring when looking down project area roads. The project area does not contain unique or outstanding
14 visual features. Undeveloped lots, landscaping, and wetland areas do provide some visual variety, but in
15 general, various forms of development dominate visual conditions.

16 17 **3.18.2 Environmental Consequences**

18 19 **3.18.2.1 No Build Alternative**

20 Visual conditions would not be affected by the No Build Alternative.

21 22 **3.18.2.2 Preferred Alternative**

23 Despite some changes, the overall visual setting in the project area would remain very similar to its
24 current condition as a result of the Preferred Alternative. Visual changes would consist of additional
25 pavement and vegetation removal. Considered within the context of the existing setting, these would not
26 constitute a major change in visual conditions.

27 28 29 **3.19 Additional Mitigation Measures**

30
31 This section provides information for additional mitigation measures that were not discussed in the
32 preceding sections of this chapter.

33 34 **3.19.1 Construction Detours**

35 Disruption of traffic and detours during construction will be minimized to the extent possible. During
36 construction, reasonable access will be maintained to all residences and businesses. Additionally,
37 emergency service providers will be contacted prior to construction and alternative routes will be clearly
38 marked for use by emergency vehicles.

39 40 **3.19.2 Disposal of Surplus or Unsuitable Materials**

41 Surplus or unsuitable material generated by excavation or removal of structural components will be
42 disposed of in accordance with the following provisions:

- 43
44 • When such material is to be disposed of outside the ROW, the contractor shall be responsible for
45 obtaining written permission from the owner of the property onto which the material will be placed.
46 In addition, no such material will be disposed of within wetland areas, watercourses, or designated
47 floodplains (regardless of ownership) without prior approval and permits from all relevant resource
48 agencies and the FHWA.
- 49 • All MDEQ regulations governing disposal of solid waste will be followed by the contractor.

3.20 Permits

As a result of the Preferred Alternative, the following permits will be required:

- Joint NREPA Permit: Because the Preferred Alternative will result in wetland, floodplain, and stream impacts, a Joint NREPA Permit is required under Part 31 Floodplain/Water Resources Protection, Part 301 Inland Lakes and Streams, and Part 303 of NREPA (in lieu of a CWA Section 404 Permit as Michigan has assumed jurisdiction over wetlands from the Federal Government). This permit will be obtained from the MDEQ.
- Construction Site NPDES Permit: Because the project will disturb more than 5 acres of soil, a Notice of Coverage form will be sent to MDEQ, Water Division prior to construction. As required, a certified stormwater operator will conduct weekly inspections (and/or within 24 hours of a storm event) and maintain documentation to be available upon request.

Other permits may also be required, including permits from the Washtenaw County Water Resources Commissioner or other public agencies. These requirements will be further investigated during the design phase.

CHAPTER 4 – COORDINATION & CONSULTATION

4.1 Introduction

Throughout the course of this project, substantial coordination and consultation were conducted with members of the public and government agencies. This chapter describes the coordination and consultation that was conducted. Additionally, this chapter also describes the decision that will need to be made by FHWA regarding this project.

4.2 Public Involvement

Several public involvement activities have been undertaken as part of this study. These efforts involved local government officials, regulatory agencies, property owners, citizens, and business owners. The input received through these public involvement activities influenced decisions that were made regarding alternatives. Throughout the duration of the project, several meetings with Pittsfield Township staff were undertaken, and information regarding the project was posted on the WCRC and township's websites.

Shortly after the project began, a meeting was held in April, 2011 with local business owners along State Road to solicit their input. At this meeting, an overview of the project was presented, and questions from business owners were answered. Approximately 15-20 business owners attended the meeting. The business owners agreed with the purpose and need of the proposed project as delays and queues negatively affect access to their businesses. The businesses owners also identified a need (based on employees' concerns) to provide a variety of modes of transposition to/from the State Road corridor.

On September 14, 2011 four separate meetings were conducted. They included a governmental agencies meeting (15 attendees), local business owner meeting (four attendees) a Public Information Meeting (eight attendees), and a presentation to the Pittsfield Township Board of Trustees. The purpose of the meetings was to present the Illustrative Alternatives that were considered as part of the EA and solicit input from all attendees. As part of the meetings, a presentation was conducted to provide project details, illustrate the alternatives considered, and explain the study process. The public was informed about methods for providing comments. The final meeting included a presentation and questions and answer session with the Pittsfield Township Board of Trustees. These meetings were held at the Pittsfield Township Hall. One comment regarding the proposed project was received during the public meeting (opposed to the project in general). See Appendix B for this public comment.

During the EA public comment period (March 22, 2013 to May 7, 2013), a Public Hearing was held on April 24, 2013 to solicit input from the public regarding the EA, the project, and its potential impacts. The Public Hearing was held at the Pittsfield Township Hall and attended by six members of the public. Copies of the public notices can be found in Appendix B. During the hearing, the attendees were informed about methods for providing comments on the project, and comment forms and a court reporter were available for members of the public to officially record their comments.

After the Public Hearing, a presentation was also given to the Pittsfield Township Board of Trustees on April 24, 2013. The presentation provided a summary of the overall study process, milestones, a description of the EA, reasons for selection of the Preferred Alternative, potential impacts, and the public involvement process.

1 Written comments (comment forms, emails, and/or letters) and verbal comments received during the
2 Public Hearing and EA review period have been summarized below in Section 4.5 –“Comments and
3 Responses.” Copies of the written comments can be found in Appendix B. No comments were provided
4 to the court reporter at the Public Hearing, so no transcript exists for that particular method of input.
5
6

7 **4.3 Agency Coordination**

8

9 Early coordination letters, which included maps and aerial photographs of the project area, were mailed to
10 potentially interested agencies in July of 2011. These letters informed the agencies that the project was
11 underway and requested that they identify issues of concern and that they note any specific requirements
12 for impact assessment or permitting. Letters from those agencies that responded are included in
13 Appendix B. The list of early coordination letter recipients includes:
14

- 15 • Federal Aviation Administration
 - 16 • U.S. Army Corps of Engineers-Detroit District
 - 17 • U.S. Department of Agriculture, Office of the Secretary
 - 18 • U.S. Department of Agriculture, Natural Resource Conservation Service
 - 19 • U.S. Department of Interior, Fish & Wildlife Service
 - 20 • U.S. Department of Interior, National Park Service
 - 21 • U.S. EPA Region 5, Office of Strategic Environmental Analysis
 - 22 • U.S. Department of Housing and Urban Development
 - 23 • Federal Emergency Management Agency
 - 24 • Advisory Council on Historic Preservation
 - 25 • Michigan Department of Agriculture
 - 26 • Michigan Department of Environmental Quality
 - 27 • Michigan Department of Community Health
 - 28 • Michigan Department of Transportation, Bureau of Aeronautics
 - 29 • Michigan Department of Natural Resources
 - 30 • Michigan State Housing Development Authority, State Historic Preservation Office
 - 31 • Southeast Michigan Council of Governments
 - 32 • Michigan United Conservation Clubs, Inc.
 - 33 • Michigan Environmental Council
 - 34 • Southeast Michigan Council of Governments
 - 35 • Pittsfield Township
 - 36 • Washtenaw Area Traffic Study
 - 37 • Washtenaw County Water Resources Commission
 - 38 • Ann Arbor Transit Authority
 - 39 • City of Saline
 - 40 • Saline Area School District
 - 41 • Ann Arbor Bicycle Touring Society
 - 42 • Ann Arbor Chamber of Commerce
 - 43 • Ann Arbor Railroad
 - 44 • Ann Arbor SPARK
 - 45 • Washtenaw Biking and Walking Coalition
- 46

47 An early coordination letter and notice of availability were sent to the following Native American tribes:
48

- 1 • Bay Mills Indian Community
- 2 • Grand River Bands of Ottawa Indians
- 3 • Grand Traverse Band of Ottawa and Chippewa Indians
- 4 • Hannahville Potawatomi Indian Community
- 5 • Keweenaw Bay Indian Community
- 6 • Lac Vieux Desert Band of Lake Superior Chippewa Indians
- 7 • Little River Band of Ottawa Indians
- 8 • Little Traverse Bay Band of Odawa Indians
- 9 • Match-E-Be-Nash-She-Wish Band of Potawatomi Indians
- 10 • Nottawaseppi Band of Huron Potawatomi
- 11 • Pokagon Band of Potawatomi Indians
- 12 • Saginaw Chippewa Indian Tribe
- 13 • Sault Ste. Marie Tribe of Chippewa Indians

14

15 No letters we received from any tribal entities requesting additional consultation.

16

17

18 **4.4 EA Recipients**

19

20 During the EA review period, the EA was made available for review at five locations near the project area
21 including: the Pittsfield Township Hall, Pittsfield Township Community Center, Ann Arbor District
22 Library (Pittsfield Township Branch), WATS, and the Washtenaw County Road Commission. The EA
23 was also available in PDF format at www.weroads.org and www.pittsfieldtwp.org. Additionally, the
24 agencies, organizations, and persons listed above (in section 4.3) received a notice of availability and/or
25 copies of the EA for review and comment. A summary of the comments and responses is provided below
26 in Section 4.5. Comments regarding the EA can be found in Appendix B.

27

28

29 **4.5 Comments and Responses**

30 Relevant comments that were received during the comment period from government agencies and
31 members of the public are listed under the appropriate categories below with responses. Letters and
32 emails from members of the public, Public Hearing comment forms, and verbal comments provided
33 during the Public Hearing are addressed under “Public Comments Regarding the EA”. Responses are
34 provided for all comments which are relevant to the EA. Other comments which are not relevant to the
35 EA have been excluded. With regard to the public comments, similar comments have been paraphrased
36 and merged together into one comment with one response.

37

38 All comment letters are included in Appendix B.

39

40 **4.5.1 Public Comments Regarding the EA**

41

42 **Comment #1**

43 *The project team should consider whether on-street bike lanes could be eliminated since the number of*
44 *bicyclists in the corridor is relatively low and there will be multi-use paths that can be used by bicyclists.*
45 *This will reduce project construction cost and still provide acceptable bicycle facilities.*

46

47 **Response to Comment #1**

48 Including both on-street bike lanes and multi-purpose paths as part of the Preferred Alternative
49 results in a comprehensive non-motorized network that meets the needs of different types of
50 bicyclists. Combining pedestrians and children cycling with adult advanced cyclists creates
51 conflicts and the potential for high speed collisions. Most advanced cyclists travel at speeds that

1 rival autos on the adjacent roadway, and a bicycle-pedestrian collision at this speed can be very
2 dangerous. This is why a separate on-street bike lane was included by request from the Ann Arbor
3 cycling community. The Pittsfield Township Master Plan vision for mixed use nodes of
4 development along the corridor, along with the existing Research and Development businesses in
5 the area, are expected to increase cycling volumes in the future. If the project only included a
6 multi-use pathway, it is likely the experienced or commuter cyclists would ride on the road, and
7 thus could disrupt traffic flow. Because of these factors, the American Association of State
8 Highway and Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities*
9 (AASHTO 1999) specifically notes that, "shared use paths should not be used to preclude on-road
10 bicycle facilities but rather to supplement a system of on-road bike lanes, wide outside lanes, paved
11 shoulders and bike routes." Section 2.3.3 provides additional details regarding the selection and
12 elimination of non-motorized options.
13
14

15 **Comment #2**

16 *A median could negatively affect access and safety for existing and potential future drives and minor side*
17 *streets. Concerns include the location of median turnarounds, whether drivers might attempt illegal turns*
18 *through median breaks, and how potential future drive locations are factored into the design process.*
19

20 **Response to Comment #2**

21 The FHWA strongly encourages the use of raised medians in curbed sections of multi-lane
22 roadways in urban and suburban areas, particularly in areas where there are high volumes of traffic
23 (more than 12,000 vehicles per day) and intermediate- or high-travel speeds (both of these factors
24 apply to the project area). Studies in Michigan and elsewhere have demonstrated medians can
25 provide more capacity and significantly reduce crashes, since left-turn conflicts are eliminated. The
26 specific location of median turnarounds relative to driveways and minor side streets will be
27 carefully studied during the design phase of the project. By applying best practices for access
28 management, the medians will provide a more functional and safer roadway relative to the same
29 road without a median. In terms of preventing drivers from attempting illegal u-turns, signing and
30 design of the turnarounds will be consistent with all applicable standards, and will discourage such
31 movements. To the extent possible, WCRC will consider likely future drive locations when
32 determining the location of median turnarounds. WCRC will also consider existing driveway and
33 future turnaround locations when reviewing requests for new drives in the future. Decisions
34 regarding signage, lane striping, or driveway design and spacing will be carefully considered by
35 WCRC. These reviews focus on safety first, which will remain a priority for future decisions. As
36 needed, these decisions will be made in conjunction with Pittsfield Township.
37

38 The median turnaround locations shown on Figure 2 of the EA are conceptual and will be studied
39 and revised as part of the design phase of the project. As a general rule, turnarounds will be spaced
40 so that no motorist has to travel farther than 1,000 feet before reaching a turnaround or roundabout.
41 During the design phase of the project, residents and business owners will have an opportunity to
42 express their desires regarding these turnaround locations.
43
44

45 **Comment #3**

46 *The project team should consider how potential ROW impacts could be reduced as detailed design*
47 *progresses.*
48
49
50
51

1 **Response to Comment #3**

2 During the design phase of the project, design measures will be evaluated to potentially reduce
3 ROW impacts. Techniques to reduce impacts could include shifting of the roadway, reduced
4 median width, using guardrail, steeper side slopes, etc.

5
6
7 **Comment #4**

8 *The Preferred Alternative would be very beneficial and is a needed facility.*

9
10 **Response to Comment #4**

11 Comment acknowledged.

12
13
14 **Comment #5**

15 *What funding sources will be used for the project, and how does this affect the timing of construction?*

16
17 **Response to Comment #5**

18 At this time, all phases of the State Road corridor are in the 2035 and proposed 2040 RTP. A small
19 amount of federal funds has been programmed toward the preliminary engineering and construction
20 of Phase I. The WCRC and Pittsfield Township are in the initial stages of identifying and securing
21 funding sources including establishment of a Corridor Improvement Authority. Phase I (Morgan
22 Road to Ellsworth Road) construction is anticipated to begin prior to 2020 while Phases 2 and 3
23 would likely occur between 2020 and 2030.

24
25
26 **Comment #6**

27 *What steps are followed in the real estate acquisition process, and will landowners be compensated for
28 private property purchased for the project?*

29
30 **Response to Comment #6**

31 Acquisition assistance and advisory services will be provided by WCRC in accordance with the
32 Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as
33 amended; Act 149, Michigan P.A. 1911, as amended; and Act 87, Michigan P.A. 1980, as
34 amended.

35
36 WCRC will pay just compensation for fee purchase or easement use of property required for
37 transportation purposes. “Just compensation” as defined by the courts is the payment of “fair
38 market value” for the property rights acquired plus allowable damages to any remaining property.
39 “Fair market value” is defined as the highest price estimated, in terms of money, the property would
40 bring if offered for sale on the open market by a willing seller, with a reasonable time allowed to
41 find a purchaser, buying with the knowledge of all the uses to which it is adapted and for which it is
42 capable of being used.

43
44 A booklet entitled “Public Roads & Private Property” detailing the purchase of private property can
45 be obtained from the Michigan Department of Transportation, Real Estate Division, P.O. Box
46 30050, Lansing, Michigan 48909 or phone (517) 373-2200.

1 **Comment #7**

2 *Construction of the Preferred Alternative will alter land uses, will increase the development value of*
3 *property within the project area, and will promote urban sprawl, when compared to the No Build*
4 *Alternative. The proposed project is not consistent with sustainable development practices.*

5 **Response to Comment #7**

6 Land use changes along State Road have historically occurred regardless of road capacity. These
7 trends are expected to continue regardless of whether the Preferred Alternative is constructed or
8 not. It is not possible to definitively predict the impact of the Preferred Alternative upon property
9 values, as noted in Section 3.7.2.2 of the EA. WATS, the organization charged with coordination
10 of transportation in the Ann Arbor area, has long demonstrated an understanding of the link
11 between transportation, land use, and smart growth (i.e., growth that is sustainable). Smart growth
12 does not mean the roads should never be changed, but rather that changes should be made in
13 consideration of realistic expectations of land use, not speculation or traffic conditions alone.
14 Similarly, existing and future anticipated development patterns in the project area are consistent
15 with Pittsfield Township's Future Land Use Plan. This planning process is focused upon
16 sustainable development,
17

18 **4.5.2 Letters from Government Agencies Regarding the EA**

19
20 **Comment #1 – Michigan Department of Natural Resources**

21 *The Michigan Department of Natural Resources (DNR) is, unfortunately, no longer able to conduct*
22 *Environmental Reviews (ER) and ceased acceptance of review requests September 16, 2011. Funding for*
23 *the program was not included in the state budget for the fiscal year that began October 1, 2012, and*
24 *issuance of clearance letters will no longer be done. Project review requests can be sent to Michigan*
25 *Natural Features Inventory (MNFI), a program of Michigan State University Extension.*
26

27 **Response to Comment #1**

28 As noted in Section 13.3 and Appendix C, as part of the EA, a detailed investigation of the project
29 area was conducted by qualified biologists to determine existing vegetation and wildlife habitat and
30 the potential for T & E species presence in the project area. This included a review of the MNFI
31 database, field investigations, and a habitat assessment. Based on the analysis described in the EA,
32 there are no T & E species or potential T & E habitat located in the project area.
33
34

35 **Comment #2 – Michigan Department of Agriculture**

36 *This more detailed plan (referencing the Preferred Alternative) indicates there may be direct or indirect*
37 *impacts, either during construction or through altered surface drainage flows after project completion, to*
38 *the Pittsfield-Junction Drain and subsequently the Wood Outlet. We expect that you will coordinate with*
39 *the office of Evan Pratt, Water Resources Commissioner, Washtenaw County, regarding construction*
40 *plans and the potential for work that may impact drainage infrastructure.*
41

42 **Response to Comment #2**

43 Coordination with the WCWRC has been undertaken, with applicable comments noted below.
44 Also, correspondence with the WCWRC is included in Appendix B.
45
46

47 **Comment #3 – U.S. Department of Agriculture – Natural Resources Conservation Service**

48 *In reviewing the proposal to widen State Road from two lanes to four or five lanes from West Ellsworth*
49 *Road to US-12, it was determined that prime and unique farmland exceeding a total of one acre could be*

1 converted to non-farm uses in this proposal (see enclosed Farmland Classification Report – Washtenaw
2 County, Michigan).

3
4 Because of the possibility of converting prime and unique farmland into other non-farm uses with this
5 proposed project, Parts I, III, VI and VII of the enclosed Farmland Conversion Impact Rating for
6 Corridor Type Projects (NRCS-CPA-106) should be completed and mailed to the address below to help
7 determine if the above areas are still rated as prime farmland.

8
9 **Response to Comment #3**

10 As shown in Figure 2, the vast majority of the parcels in the project area have been converted to
11 residential, commercial, or industrial uses (i.e., “urban development” uses). The Farmland
12 Protection Policy Act (FPPA) specifically excludes land already in or committed to urban
13 development from being considered as protected farmland. For the remaining undeveloped prime
14 farmland parcels (as noted in Section 3.3 of the EA), the Preferred Alternative would convert
15 approximately 0.77 acres of prime, unique, local important, or statewide important farmland soils to
16 non-farmland uses. Since this total impact acreage is less than one acre, the NRCS-CPA-106 form
17 has not been completed.

18
19
20 **Comment #4 – Michigan Department of Environmental Quality**

21 *Pittsfield Drain crossing under State Road - On page 15 of the EA it states that the existing culvert will be*
22 *extended by approximately 65 feet. Adding this onto the existing culvert would result in a long enclosure*
23 *of the stream. It would entail a fair amount of stream bottom excavation and side slopes for placement of*
24 *culvert bedding material, and reduces hydraulic effectiveness. Also, long stream enclosures tend to*
25 *impede fish movement.*

26
27 *It is understandable that the proposed project will unavoidably affect the drain to a certain extent. In*
28 *order to minimize negative affects to the drain, consideration should be given to keep the culvert*
29 *extension as short as practical. This may be done by narrowing the median through this area if feasible*
30 *and prudent, and placing a headwall, guardrail, or some type of barrier at the culvert ends as opposed to*
31 *projected ends. Preferably, I would encourage looking into a separate pedestrian bridge in lieu of the*
32 *filled 10 foot wide path. This would allow a shorter culvert extension and an open stream beneath the*
33 *bridge.*

34
35 **Response to Comment #4**

36 During the design phase of the project, options to reduce the length of the culvert extension will be
37 considered. Additionally, a pedestrian bridge over the drain in lieu of a filled path will be
38 considered. These issues will be coordinated in detail with MDEQ as part of the wetland/waterway
39 permitting process during the design phase of the project.

40
41
42 **Comment #5 – Michigan Department of Environmental Quality**

43 *If the path will be crossing through a regulated wetland, I recommend that elevated boardwalks be used.*
44 *This would reduce the square feet of wetland take, and thus lower the overall wetland impact.*

45
46 **Response to Comment #5**

47 During the design phase, elevated boardwalks/pedestrian bridges will be considered to reduce wetland
48 impacts where practical. This issue will be coordinated in detail with MDEQ as part of the
49 wetland/waterway permitting process during the design phase of the project.

1 **Comment #6 – Michigan Department of Environmental Quality**

2 *When the DEQ permit application is submitted, please include documentation that there are adequate*
3 *credits allowable to use from the Whitney Farm Mitigation Bank.*

4
5
6 **Response to Comment #6**

7 As part of the wetland permitting process, WCRC will include documentation detailing the number
8 of credits available at the Whitney Farm Mitigation Bank.
9

10
11 **Comment #7 – U.S. Environmental Protection Agency**

12 *EPA recommends that, in the vicinity of Runway Blvd. and State Road, the alignments and improvements*
13 *be shifted to the east in order to further minimize or avoid impacts to Wetland B (which is potential*
14 *Indiana Bat habitat) and minimize the risk of impacts to Wetland A. This would push the project further*
15 *into Wetland H, but Wetland H appears to be a retention basin (and potentially not a natural wetland)*
16 *and as such, may not be regulated as a wetland by Michigan Department of Environmental Quality*
17 *(MDEQ).*

18
19 **Response to Comment #7**

20 Wetland H was definitively identified as a regulated wetland during the wetland determination
21 conducted for the EA. Shifting the roadway in this location would require the roadway to traverse
22 over Wetland H for a greater length compared to Wetlands A and B. Also, in this location, there is
23 a significant slope down to Wetland B. Shifting the road towards Wetland B would require
24 additional fill to build the road bed up to existing grade. As a result, a net increase in wetland
25 impacts would occur. Therefore, shifting the roadway in this location is not practical.
26

27 Additionally, the potential Indiana bat habitat in this location was deemed low to poor quality based
28 on an overall lack of suitable roost trees that have both proper structure and adequate solar
29 exposure.
30

31
32 **Comment #8 – U.S. Environmental Protection Agency**

33 *The Draft EA states that “field reconnaissance” and a “wetland determination” were undertaken – but*
34 *the Draft EA is not clear if a formal wetland delineation was completed and reviewed by MDEQ. This*
35 *should be clarified in the Final EA, and a copy of the full wetland delineation should be provided as an*
36 *appendix to the Final EA.*
37

38 **Response to Comment #8**

39 A formal wetland delineation was not conducted for this stage of the project. As noted in Section
40 3.12, the boundaries of the wetlands in the project area were determined, flagged, and surveyed in
41 the field using Global Positioning System (GPS) by qualified wetland scientists. These boundaries
42 are very close to what they will be once a formal delineation is completed. It is likely that the
43 formal delineation boundaries will be slightly smaller than those identified in the EA. Thus, the EA
44 provides a worst-case scenario of potential wetland impacts. This methodology is commonly used
45 for NEPA-stage studies and documentation in Michigan and is accepted by MDEQ. MDEQ has
46 reviewed the EA and provided no comments regarding the wetland determination. Wetland
47 delineation and a wetland delineation report will be undertaken and presented to MDEQ during the
48 design and permitting phase of the project. Since a delineation report does not presently exist, it is
49 not attached to this EA.
50
51

1 **Comment #9 – U.S Environmental Protection Agency**

2 *Review of aerial photography indicates a potential wetland at the northeast corner of State Road and*
3 *Textile Road. This was not noted in the Draft EA as a wetland area. Without having a wetland*
4 *delineation report to review, EPA cannot confirm if this area was investigated and if wetland information*
5 *was gathered here. EPA requests that this area be investigated if it was not already investigated as part*
6 *of delineation.*

7
8 **Response to Comment #9**

9 Field reconnaissance and a wetland determination were conducted by qualified wetland scientists
10 during June 2011 to determine the presence and approximate boundaries of wetlands within the
11 project area. This particular area was evaluated in detail. No wetlands are present in this area.
12

13
14 **Comment #10 – Environmental Protection Agency**

15 *Wetland E appears to be high quality forested swamp. EPA strongly suggests that impacts to this wetland*
16 *be fully avoided. The multi-use path in this area could be elevated via a boardwalk, or perhaps the road*
17 *median could be eliminated to reduce the road right-of-way and path width.*

18
19 **Response to Comment #10**

20 Based on the wetland determination, Wetland E was defined as a high quality wetland. During the
21 design phase of the project, efforts will be made to reduce and/or avoid wetland impacts in this
22 location, to the extent practical. Reasonable avoidance measures such as elevated
23 boardwalks/pedestrian bridges, roadway alignment shifts, narrower median, etc. will be evaluated.
24 This evaluation will be reflected in the permit application submitted to MDEQ.
25

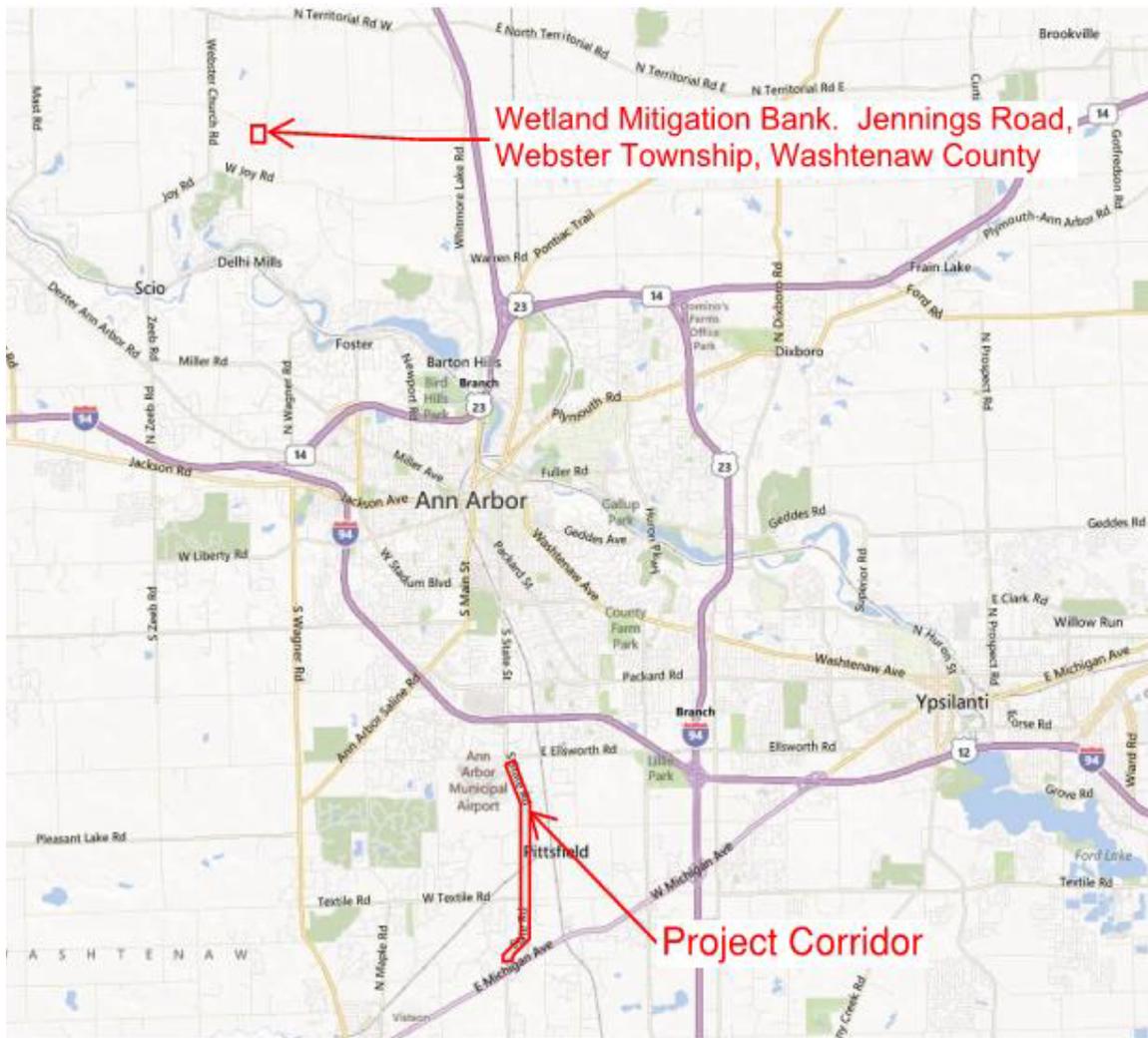
26
27 **Comment #11 – U.S Environmental Protection Agency**

28 *EPA requests that the Final EA include a map of the wetland mitigation bank in relation to the location of*
29 *the proposed project. The Final EA should clarify if the proposed wetland mitigation bank is within the*
30 *same 8-digit watershed, and should include information on how the purchase of credits meets the U.S.*
31 *Army Corps of Engineers (USACE) 2008 Mitigation Rule (33 CFR 332).*

32
33 **Response to Comment #11**

34 The northern portion of the State Road project area lies in the Huron River watershed (04090005),
35 while the southern portion is in the River Raisin watershed (04100002). The majority of the
36 wetland impacts caused by the Preferred Alternative occur in the northern portion of the project
37 area. The Whitney Farm Mitigation Bank is located in the Huron River watershed (04090005).
38 The Whitney Farm Mitigation Bank has been reviewed in detail and approved by the MDEQ for
39 use as an official mitigation bank. Credits from the mitigation bank have been previously sold as
40 mitigation for other projects in the watershed. Based on the review and formal approval of the
41 mitigation bank by MDEQ, the bank meets all requirements set forth in the *U.S. Army Corps of*
42 *Engineers 2008 Mitigation Rule*. Additionally, MDEQ has reviewed the EA and had no objections
43 or concerns regarding use of this proposed wetland mitigation bank.
44

45 A map of the wetland mitigation bank location has been included below



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Comment #12 – U.S. Environmental Protection Agency

The Draft EA states that there will be floodplain impacts associated with the proposed project, but did not discuss floodplain mitigation. The Final EA should include information on floodplain mitigation, including acreage, location, and any other permitting requirements.

Response to Comment #12

During the design phase of the project, exact floodplain impacts will be calculated and a hydraulic study will be conducted to assure that the project will not cause flooding problems (harmful interference with flood elevations) upstream or downstream from the project area. In addition, WCRC will comply with Parts 31 and 301 of NREPA and the related administrative rules. Mitigation for fill within 100-year flood storage areas, if needed, will be accomplished by a compensating cut in the same vicinity and the same volume as the area of fill to ensure that there is no change in 100-year flood elevations. In the event that there are impacts and mitigation to 100-year floodplains, a Letter of Map Amendment will be prepared for submittal and review by FEMA. This information has been added to Section 3.11.2.3 of the Amended EA.

1 **Comment #13 – U. S Environmental Protection Agency**

2 *The Final EA should consider various forms of green infrastructure with respect to best management*
3 *practices (BMPs) for stormwater, including but not limited to: bioretention, cisterns, and bioswales.*

4
5 **Response to Comment #13**

6 Where practical and economically feasible, green infrastructure and or BMPs such as bioretention,
7 cisterns, bioswales, etc. will be considered during the design phase of the project. All requirements
8 set forth by the WCWRC for stormwater will be met as part of the final stormwater system design.
9

10
11 **Comment #14 – U. S. Environmental Protection Agency**

12 *The Final EA should state if receiver numbers 3 and 4 are applicable to activity category “C.” If so, then*
13 *these values are within 1 db of the 67 db level prescribed for category “C.” Consequently, the first traffic*
14 *noise impact criterion on page 30 of the Draft EA would indicate that such an “impact” exists. If not, the*
15 *Final EA should indicate what activity categories apply to receiver numbers 3 and 4 and include the*
16 *“hourly equivalent sound level” values associated with such activity categories.*

17
18 **Response to Comment #14**

19 Section 3.16 (noise) of the EA has been revised to indicate that receivers 3 and 4 would be
20 impacted by traffic noise as a result of the Preferred Alternative. Receivers 3 and 4 have been
21 identified as category B (residential) receivers. Mitigation measures considered to reduce noise
22 impacts have also been included.
23
24

25 **Comment #15 – U.S. Environmental Protection Agency**

26 *There is one Section 4(f) site associated with the plan. Section 4(f) sites fall under activity category “C.”*
27 *The Final EA should state whether the Section 4(f) site associated with the plan has an existing or*
28 *predicted noise level. If not, the Final EA should demonstrate why there are no measured or calculated*
29 *noise level values for the Section 4(f) site.*

30
31 **Response to Comment #15**

32 The noise levels in relation to the Section 4(f) site are described in Section 3.16. The Section 4(f)
33 site is identified as receiver #1 in Section 3.10 of the EA and monitoring location #1 in the Figure 2.
34

35 **Comment #16 – U.S. Environmental Protection Agency**

36 *The Final EA should specify which BMPs are in place for controlling erosion and improving drainage.*
37

38 **Response to Comment #16**

39 During the design phase of the project, various BMP’s will be evaluated and implemented when
40 feasible for controlling erosion. Specific soil erosion BMPs to be evaluated may include
41 construction staging to limit the amount of area cleared and exposed to erosion, construction of
42 gravel access roads, and seeding and mulching of areas soon after construction is completed.
43 Sedimentation control BMPs may include installation of silt fencing, construction of temporary
44 sediment basins, and preservation of buffer strips.
45

46 During the design phase of the project, reasonable techniques will be evaluated and implemented
47 when feasible for improving drainage. Specific drainage improvement BMPs to be evaluated may
48 include bioswales, infiltration basins/trenches, pervious concrete, bioretention, catch basin inserts,
49 vegetated filter strips, etc. BMP’s will also be consistent with the mitigation measures noted in
50 Section 3.11.2.1.3 of the EA.
51

1 **Comment #17 – U. S. Environmental Protection Agency**

2 *The Final EA should specify the particular construction techniques to be used such that issues with the*
3 *Blount and Pewamo series will be addressed.*

4
5 **Response to Comment #17**

6 Construction techniques will be determined during design phase of the project once the final
7 alignment has been determined, soil borings have been taken, and a full geotechnical engineering
8 analysis has been completed. In areas determined to be within these soil series, appropriate
9 construction techniques will be identified in accordance with MDOT's Road Design Manual and
10 industry best practices.

11
12
13 **Comment #18 – U. S. Environmental Protection Agency**

14 *In section 3.4.2, the Draft EA states, "Some easements and/or temporary grading permits may also be*
15 *needed. The location and size of easements/grading permits are not currently known and would be*
16 *determined during the design phase of the project once more detailed engineering work is completed."*

17
18 *The Final EA should include communications with the appropriate agencies regarding the requisite*
19 *permits.*

20
21 **Response to Comment #18**

22 Grading permits are legal instruments used by WCRC to allow temporary construction access to
23 and/or grading at properties located outside the existing ROW that will not be acquired as
24 permanent ROW. Therefore, no outside agency has permit authority for these easements/permits
25 (i.e., WCRC is the only agency involved). Conditions and locations of the grading permits will be
26 developed during the design phase of the project. All grading permits will be conducted in
27 accordance with applicable state and Federal requirements as noted in Section 3.4 of the EA.

28
29
30 **Comment #19 – U.S. Environmental Protection Agency**

31 *In addition to the control measures stated in the Draft EA, the Washtenaw County Road Commission*
32 *should commit to the following clean diesel strategies during construction activities.*

- 33
34
- 35 • Using ultra-low sulfur diesel fuel (less than 15 parts per million sulfur).
 - 36 • Retrofitting engines with an exhaust filtration device to capture diesel particulate matter
before it enters the construction site.
 - 37 • Positioning the exhaust pipe so that diesel fumes are directed away from the operator and
38 nearby workers, thereby reducing the fume concentration to which personnel are exposed.
 - 39 • Using catalytic converters to reduce carbon monoxide, aldehydes, and hydrocarbons in
40 diesel fumes (these devices must be used with low sulfur fuels).
 - 41 • Attaching a hose to the tailpipe of diesel vehicles running indoors and exhaust the fumes
42 outside, where they cannot reenter the workspace. Inspect hoses regularly for defects and
43 damage.
 - 44 • Using enclosed, climate-controlled cabs pressurized and equipped with high efficiency
45 particulate air (HEPA) filters to reduce the operator's exposure to diesel fumes.
 - 46 • Regularly maintaining diesel engines, which is essential to keep exhaust emission low.
 - 47 • Reducing exposure through work practices and training, such as turning off engines when
48 vehicles are stopped for more than a few minutes, training diesel equipment operators to
49 perform routine inspections, and maintaining filtration devices.

- 1 • Purchasing new vehicles that are equipped with the most advanced emissions control
- 2 systems available.
- 3 • Using electric starting aids, such as block heaters, to warm the engines of older equipment
- 4 and vehicles, thereby reducing diesel emissions.
- 5 • Using respirators, which are only an interim measure to control exposure to diesel
- 6 emissions.
- 7

8 **Response to Comment #19**

9 WCRC will require the selected contractor to follow applicable standard specifications from
10 MDOT. The contractor will be responsible for following all applicable laws and regulations,
11 including those published by OSHA and MIOSHA. Additional requirements beyond these are
12 optional and can be implemented at the discretion of the contractor.

15 **Comment #20 – Washtenaw County Water Resources Commission**

16 *The impacts to wetlands identified are being mitigated at an almost 2 to 1 ratio.*

18 **Response to Comment #20**

19 Comment acknowledged.

22 **Comment #21 – Washtenaw Area Transportation Study**

23 *It's not clear how the numbers were derived for Table 9 (page 15).*

25 **Response to Comment #21**

26 The levels of service noted in Table 9 were based on analysis of the projected 2035 peak hour
27 traffic volumes (Table 5). Similar to the existing conditions traffic analysis, stop and signal
28 controlled intersections and crossovers were analyzed using SYNCHRO, while the roundabout
29 intersections were analyzed using RODEL. RODEL software is an interactive program that
30 facilitates the design and analysis of all kinds of roundabouts.

33 **Comment #22 – Pittsfield Township**

34 *The only comment the Township has is to reiterate the point made by DLZ in that the proposed State*
35 *Road improvement project is defined as low-impact. Given that it is a \$30M project and has minimal*
36 *environmental and other negative impacts makes this a very unique project.*

38 **Response to Comment #22**

39 Comment acknowledged.

42 **4.6 Decision To Be Made**

44 After considering public and agency input, FHWA will make the final decision regarding this project.
45 Based on the analysis of potential impacts presented in this document, public and agency comments, and
46 relevant statutes and regulations, FHWA will decide the following:



-
- 1 • Whether or not the Preferred Alternative would generate significant impacts to the natural or
2 human environment;
3 • Whether or not to approve some or all of the components of the Preferred Alternative; and
4 • What mitigation measures will apply to the project, if approved.
5

6 If the FHWA determines that the Preferred Alternative would not cause significant impacts to the human
7 or natural environment and approves some or all of the components of the Preferred Alternative, a FONSI
8 will be issued. The FONSI will document the FHWA's decision and the rationale for that decision. The
9 FONSI will also include, either explicitly or by reference to the EA, a description of the mitigation
10 measures or other actions that would be required as conditions of approval. Upon issuance of a FONSI,
11 the project will be cleared to proceed on to the design phase. If the FHWA determines that the Preferred
12 Alternative may cause significant impacts to the human or natural environment, preparation of an EIS
13 documenting a more detailed analysis will be required.
14

REFERENCES

- AASHTO. 1994. A Policy on Geometric Design of Highways and Streets. American Association of State Highway and Transportation Officials. Washington, D.C. 1994.
- AASHTO. 1999. Guide for the Development of Bicycle Facilities. American Association of State Highway and Transportation Officials. Washington, D.C. 1999.
- Ann Arbor Transit Authority. Washtenaw County Transit Draft Master Plan. Washtenaw County August 2011.
- Cowardin, L. M., V. Carter, F. C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. Office of Biological Services, U.S. Fish and Wildlife Service. Washington, D.C.
- Environmental Consulting & Technology, Inc. (et al.). Mallet Creek Restoration Plan, Best Management Practice Evaluation Report Prepared for Malletts Creek Restoration Project. Washtenaw County Water Resources Commission, 2000.
- Environmental Consulting & Technology, Inc. (et al.). Malletts Creek Restoration Project, Malletts Creek Restoration Plan. Washtenaw County Water Resources Commission, 2000.
- FHWA. 1987. Technical Advisory T 6640.8A. U.S. Department of Transportation, Federal Highway Administration, Washington, D.C. October 30, 1987.
- Great Lakes Research, Inc. (GLRI). 2011. Cultural Resource Inventory Overview: Proposed Improvements to the State Road Corridor. Washtenaw County, Michigan, 2011.
- Humphrey, S.R., A.R. Richter, and J.B. Cope. 1977. Summer habitat and ecology of the endangered Indiana bat, *Myotis sodalis*. *Journal of Mammalogy* 58: 334-346
- MDOT. 2003. Procedures for Implementation of State Transportation Commission Policy 10136.
- MDOT. 2000. Michigan Design Manual; Road Design. Michigan Department of Transportation. Lansing, Michigan. Revised March 8, 2000.
- Mifsud and Barton Ecological Consultants, L.L.C. 2005. Pittsfield Township Herpetological Survey Report. Pittsfield Charter Township.
- Pittsfield Township. 2010. Pittsfield Charter Township Comprehensive Plan.
- SEMCOG. 2011. 2035 SEMCOG Regional Transportation Plan
- U.S. Census 2010. United States Census Bureau. Database search using the U.S. Census Bureau website.
- U.S. Fish and Wildlife Service (USFWS). 2007. Indiana Bat (*Myotis sodalis*) Draft Recovery Plan: First Revision. U.S. Fish and Wildlife Service, Fort Snelling, MN. 258 pp.
- Washtenaw Area Transportation Study. 2011. 2035 WATS Long Range Transportation Plan for Washtenaw County.



Washtenaw County Water Resources Commission. Procedures and Design Criteria for Storm Water Management Systems. Washtenaw County, 2000.

Appendix A - Traffic Forecast



OFFICE MEMORANDUM

Date: 7/26/12
To: Sheryl Soderholm Siddall, P.E.
From: Wes Butch
Subject: State Road Corridor Traffic Forecast Information

Based on comments received from FHWA after their review of the State Road Environmental Assessment (EA), DLZ was requested to prepare a brief memo summarizing the methods used in developing the traffic forecast for the State Road Corridor. It is our understanding that this memo may be forwarded to WATS and/or SEMCOG so that they are aware of the information and so that they may consider this information (if applicable) in future traffic modeling for the area.

The Preferred Alternative for this project is shown in the attached Figure 2 which has been extracted from the draft EA (please note that this is subject to change). More specific information about the Preferred Alternative is available upon request and will be provided when the EA is circulated for public comments later in 2012.

The general steps in the traffic forecasting process were as follows:

1. Collect and assess existing information – this included historic ADT counts, peak hour turning movement counts, local land use and zoning plans, local transportation plans, transit plans, and information from the existing WATS/SEMCOG travel models for the area.
2. Review and evaluation of traffic growth rates from WATS/SEMCOG travel models
3. Development of potential alternate growth rates based on very specific local conditions in the corridor, land use plans, development patterns, etc. – the attached memo prepared by our subconsultant LSL Planning, Inc. provides considerable detail about this process and the results.
4. Selection of growth rate for the corridor for the year 2035 (the planning horizon year)
5. Application of growth rate to existing peak hour traffic volumes

The above process resulted in the selection of the following growth rates by WCRC:

- North limits to Morgan Drive = 27% total growth from current to 2035
- Morgan Drive to Textile Road = 22% total growth from current to 2035
- Textile Road to South limits = 22% total growth from current to 2035

These rates have been reviewed by MDOT's Planning Group, and they have provided concurrence that the growth rates appear reasonable.

If there are any questions after reviewing this information, we are available for discussion as needed.

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June 3, 2011

Technical Memorandum

To: DLZ Corp.
Wes Butch, Jason Whitten

From: LSL Planning
Brad Strader, Sherrin Hood

Re: Traffic Generation Projections for State Road

This memo is in response to your request for traffic projections for the State Road Corridor, between Ellsworth Road and Michigan Avenue, as part of the design process. Our projections are based on data available; professional assumptions are based on our experience and familiarity with corridor development trends. We have outlined our methodology, findings and recommendations below.

WATS/SEMCOG TRAVEL MODEL PROJECTIONS

First, we reviewed the Washtenaw Area Transportation Study (WATS) traffic projections for State Road. Those projections are derived from the travel demand model maintained by the Southeast Michigan Council of Governments (SEMCOG).

The WATS/SEMCOG model projections, shown in Table 1, predict a very modest increase in traffic volumes (7% overall). While the model is based on sound practices and data, our experience is that the regional model tends to under-predict actual travel in parts of Washtenaw and Livingston Counties. The population and employment projections for each of the Transportation Analysis Zones (TAZs) along the corridor, as shown in Table 2, indicates that population and employment are projected to grow by 14% and 59% respectively (much higher than the 7% traffic increase). The employment and population projections in the WATS model are generally consistent with the numbers we derived after reviewing the Township’s Master Plan, development trends, and our knowledge of the corridor. However, each of our projection methods predict a higher trip increase than the model predicts.

TABLE 1: WATS/SEMCOG MODEL TRAFFIC PROJECTIONS BY ROAD SEGMENT

State Corridor Segment	2010 Model Estimate	2035 Model Estimate	Approx. % increase
Ellsworth to Morgan	20,000	20,900	4.5%
Morgan to Textile	14,375	15,350	6.5%
Textile to Michigan Ave	10,750	12,050	12%
Average Growth			7%

Source: WATS

TABLE 2: SEMCOG POPULATION AND EMPLOYMENT PROJECTIONS BY TAZ

TAZ	Pop 05	Pop 35	Change	Emp 05	Emp 35	Change
42101	518	821	303	467	1,275	808
42111	180	181	1	348	460	112
42112	412	453	41			0
42141	82	139	57	1,166	1,935	769
42150	907	794	-113	1,603	2,046	443
Totals	2,099	2,388	14%	3,584	5,716	59%

Source: SEMCOG



OTHER METHODS TO ESTIMATE FUTURE TRAFFIC

There are a number of methodologies that can be used to estimate traffic, each using different input data or variables. The various methods conducted for State Road, including evaluation of historic traffic counts, estimated travel associated with future development, and comparison of existing traffic-to-development ratios, are described below.

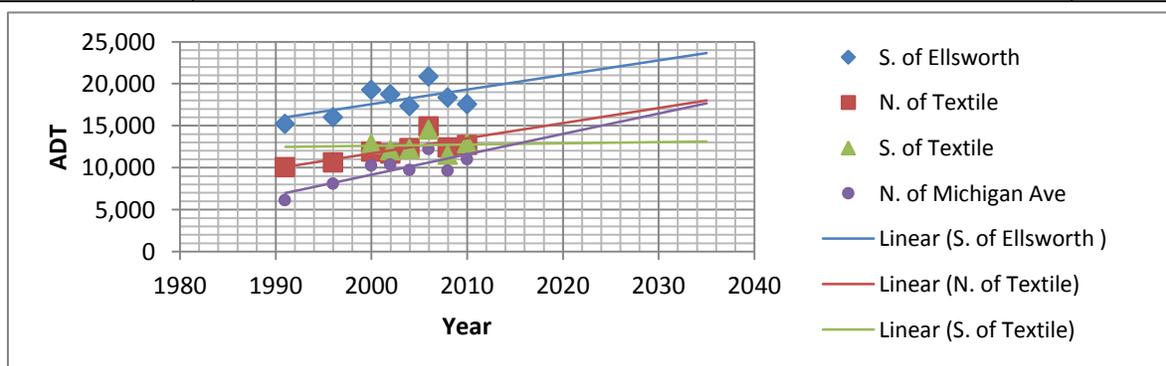
We also reviewed the travel forecasts in the 2006 State Road Corridor Study that were made for the AM and PM peak hours for a design year of 2025, but those projections were made before the economic downturn that caused VMT along the corridor to drop by almost 20% two years after that study was completed. Those projections, which LSL was involved with, were made using the WATS travel demand model but added specific planned developments. Those projections showed an average growth of 150-200%+ for the AM peak with more modest increases in the PM peak, at 60-70% between Ellsworth and Textile, and around 120-130% in the southern segments. We no longer anticipate that the corridor and its traffic will grow at those rates.

1. Historic Traffic Data¹

Assuming that development along the corridor, and the increases from traffic that passes through it (i.e. trips with an origin and/or destination from outside the corridor) will generally follow past trends, traffic counts along State Road at three intersections along the corridor were plotted to establish a trend line (see Table 3 and chart below). The traffic counts from 2010 suggest an average daily traffic counts on State Road varied from 17,500 at the north end to 11,000 to 12,000 for most of the corridor. When projecting a trend, at some point, traffic volumes level off as vacant land is developed and depleted along a corridor. However, in this case, there is sufficient vacant land so that the full build-out is not expected to occur until beyond the project design year (2035), so it can be reasonably assumed that traffic could continue to increase at the historic rates at least until the design year.

This method projects an average increase in overall traffic of 29% between 2010 and 2035, significantly more than the WATS/SEMCOG model forecast. The slope of the trend line was lowered by the drop in counts (by an average of 17%) between 2006 and 2008 due to economic conditions that led to a network-wide reduction in travel (VMT). The recession dropped 2010 counts back to levels from 5 to 6 years prior. But, it is expected traffic volumes will gradually lead to a return to the long term growth trend line.

	1991	1996	2000	2002	2004	2006	2008	2010	2035 Projected
S. of Ellsworth	15,225	16,007	19,284	18,729	17,337	20,880	18,377	17,566	23,658
N. of Textile	10,051	10,631	11,915	11,709	12,346	14,916	12,420	12,737	18,000
S. of Textile			12,846	12,070	12,228	14,542	11,540	12,909	13,135
N. of Michigan	6,122	8,097	10,238	10,372	9,731	12,216	9,640	11,025	17,676



¹ Note: The historic counts may have been influenced by road construction activity, such as the improvement at the Textile Road intersection a few years ago. Even so, the count trend line, as discussed in this section, has been fairly consistent.

2. Future Development Trip Generation.

Existing development along the corridor is in the form of office and business parks which generally contain corporate and professional offices. The Pittsfield Township Master Plan envisions continued “Business Park” development along State Road, which indicates that development, and the resulting traffic, should follow established patterns.

Using assessment data provided by Pittsfield Township, the established average floor-to-area ratio (FAR) was calculated for established business parks along the study segment. Existing business parks within the five TAZs were calculated to be 12%, meaning about 12% of the typical site is developed, with remaining land used for parking, stormwater facilities, landscaping, reserved land for future expansion, or other purposes. This average established FAR was then applied to vacant sites, and those planned for more intensive uses along the rest of the corridor, to estimate the building square footage that would result. This calculation indicates that, at full build-out, the corridor could absorb over one million additional square feet of office development, as shown in Table 4.

	Site Acreage	Building S.F.
Existing Built Sites	162	843,059
Future Development²	143 ³	1,132,507
Total	387	1,975,566

¹ This table includes shows the total projected building area, not the reduced area for trip generation analysis.
² Future Development includes the total projected building size for vacant sites and those expected to develop into a more intensive use, based on a review of the Pittsfield Township Master Plan.
³ 134 acres of the total future development area are vacant sites, and 91 acres are sites expected to change use according to the Master Plan.

The future development projected in Table 4 was used to calculate the expected number of trips associated with office uses (the planned land use along State Road). The current development occurred over a 30+ year timeframe. As noted, given the ample amount of vacant land along State Road and recent development trends, not all vacant and transition sites are expected to develop by the project design year (2035). Therefore, the calculation assumes approximately 1/2 of the projected future development on vacant sites will actually be realized by 2035. In addition, because of the recent economic conditions, it is not expected that the sites planned for different land uses will be redeveloped at a rate that may have been anticipated in the past. The trip generation calculations below assume only 1/3 of those sites will redevelop by 2035.

Table 5 summarizes the anticipated number of trips expected to be generated by future development, based on the most recent ITE Trip Generation Manual. It indicates that more than 18,000 new trips could be generated along the corridor, more than the 15,000 trips estimated for existing corridor development.

	Site Area	Building Area ²	Projected Trips ¹		
			AM PEAK	PM PEAK	DAILY
Existing Built Sites	162	843,059			15,238 ³
Transition Sites ⁴	30	118,149	774	853	5,886
Future Development ⁵	67	343,430	1,712	1,888	13,025
		1,304,638			

¹ Assuming development along State Road will be of a similar office type (ITE Code 750).
² Building area was considered the GFA for existing built sites, and was projected for transition and future development sites using the average established FAR among the existing built sites.
³ Daily trips for existing built sites used the average of the 2010 traffic counts at S. of Ellsworth and S. of Textile, as shown in Table 3.
⁴ “Transition sites” are those that are expected to change use along the corridor, as determined by comparing the Existing Land Use and Future Land Use Maps contained in the Pittsfield Township Master Plan. One-third of the potential gross square footage was used since full build out is not expected to occur before 2035.
⁵ One-half of the potential gross square footage was used to calculate future development since full build out is not expected to occur before 2035.

3. Relationships Between Existing Development and Traffic.

The trip generation estimates in Table 5 utilize ITE rates for office buildings, based on traffic counts studied across the country. The result yields a fairly high number of new trips per square foot of building, but in Ann Arbor, planned uses along State Road are expected to include some mixed uses, which are expected to reduce the number and length of vehicle trips. For example, an employee may be able to walk to a restaurant for lunch, rather than drive. Also, employment trends in the Ann Arbor area tend to include more flexible work hours, staff working from home, more square feet per employee, etc, which can reduce traffic. So, to test the ITE standards to the Ann Arbor “context,” we compared the existing building square feet to existing traffic volumes.

	Site Area	Building Area ¹	Projected Trips
Existing Built Sites	162	843,059	21,835
Transition Sites ²	30	118,149	14,316
Future Development ³	67	343,430	15,716
		1,304,638	

¹ Building area was considered the GFA for existing built sites, and was projected for transition and future development sites using the average established FAR among the existing built sites.

² “Transition sites” are those that are expected to change use along the corridor, as determined by comparing the Existing Land Use and Future Land Use Maps contained in the Pittsfield Township Master Plan. One-third of the potential gross square footage was used since full build out is not expected to occur before 2035.

³ One-half of the potential gross square footage was used to calculate future development since full build out is not expected to occur before 2035.

The established development-to-traffic ratio is 28:1 (meaning each 28 square feet of gross office space is associated with roughly one trip along State Road). Table 6 shows how application of this ratio to the future development areas (using the same 1/2 of total development for vacant sites and 1/3 total redevelopment of “transition” sites) suggests that almost 16,000 additional trips could be generated by the project design year (2035) if the corridor continues to develop according to the established patterns. This is only slightly less than what the typical ITE rates yielded.

SUMMARY OF FINDINGS

Table 7 below summarizes all of the methods discussed above. The figures shown include the total projected traffic for the year specified.

	Actual 2010 Counts and WATS 2035 Model Projections			Comparison Projection Methods						Average of Comparison Projection Methods ¹	
	2010 Counts	2035 WATS Model		2035 Trend Line Projection		2035 ITE Trip Generation		2035 Ratio Method		#	% change
		#	% change	#	% change	#	% change	#	% change		
S. of Ellsworth	17,566	20,900	19%	23,658	35%	24,913	42%	21,835	24%	23,469	34%
N. of Textile	12,737	15,350	21%	18,000	41%	15,454	21%	14,316	12%	15,923	25%
S. of Textile	12,909	12,050	-7%	13,135	2%	17,686	37%	15,716	22%	15,512	20%

¹ Calculation of the average considered the 2035 Trend Line Projection, 2035 ITE Trip Generation and 2035 Ratio Methods only.

Traffic projections have always been discretionary and based in part on facts known at the time, assumptions and professional judgment. Increase in through traffic volumes is best predicted by network models such as the WATS/SEMCOG model. But a finer grain corridor-specific prediction is generally more accurate when focused on future land use. The methodology for the land use trip generation was, in the interest of time and budget, very broad, and is

based on a set of educated assumptions. This provides a reasonable “snap shot” of future traffic when factored with the trend line projection and the WATS/SEMCOG travel demand model estimate.

The unexpected economic downturn, widely varying opinions of economic forecasters, recent dips in corridor volumes, and recent fluctuations in gas prices makes it even more difficult to predict with confidence. But the three methods used all result in similar figures. Typical practice is to add a contingency to the forecast numbers since it is preferable to build in extra capacity than not have enough.

Table 8 is a simplified version of Table 7, prepared for discussion purposes. It shows the total percentage of growth estimated by each projection method, including the original WATS Model projections for 2035. The average of the comparison methods show that traffic is likely to increase more than what the WATS model projects. Therefore, the Washtenaw County Road Commission should consider use of an alternative growth rate when projecting future traffic volumes for State Road.

	2035 WATS Model	Comparison Projection Methods			Average of Comparison Projection Methods ¹
		2035 Trend Line Projection	2035 ITE Trip Generation	2035 Ratio Method	
S. of Ellsworth	19%	35%	42%	24%	34%
N. of Textile	21%	41%	21%	12%	25%
S. of Textile	-7%	2%	37%	22%	20%

¹ Calculation of the average considered the 2035 Trend Line Projection, 2035 ITE Trip Generation and 2035 Ratio Methods only.

Appendix B - Agency and Public Coordination

Public Review Period Coordination and Comments

PUBLIC NOTICE
NOTICE OF AVAILABILITY – ENVIRONMENTAL ASSESSMENT
STATE ROAD IMPROVEMENT PROJECT
WASHTENAW COUNTY ROAD COMMISSION

The Washtenaw County Road Commission (WCRC) has conducted an Environment Assessment (EA) pursuant to federal and state environmental laws for proposed improvements along State Road from just south of Ellsworth Road to Campus Parkway located in Pittsfield Township. The proposed project includes road widening to four lanes; construction of a narrow median; installation of roundabout intersections at three locations; construction of non-motorized facilities; right-of-way acquisition; and drainage improvements.

The EA will be released for public review by March 22, 2013 and will be available for review and comment until May 7, 2013.

The EA, project maps/drawings, written comments received from local/state/federal agencies, and all other pertinent information will be available for public review and inspection at the following locations:

Pittsfield Township Community Center, 701 W. Ellsworth Road, Ann Arbor, MI 48108
Washtenaw Area Transportation Study, 705 N. Zeeb Road, Ann Arbor, MI 48103
Washtenaw County Road Commission, 555 N. Zeeb Road, Ann Arbor, MI 48103
Pittsfield Charter Township Hall, 6201 W. Michigan Ave. Ann Arbor, MI 48108
Ann Arbor District Library - Pittsfield Branch, 2359 Oak Valley Drive, Ann Arbor, MI 48103

The EA will also be available at the following web addresses – www.pittsfieldtwp.org and www.wcroads.org.

Written comments regarding the EA can be sent to the following location and must be received no later than May 7, 2013: Ms. Sheryl Soderholm Siddall, Washtenaw County Road Commission, 555 N. Zeeb Road, Ann Arbor, MI, 48108 or siddalls@wcroads.org. Questions can also be directed to Ms. Sheryl Soderholm Siddall at (734) 761-1500.

A Public Hearing will be held at the Pittsfield Township office located at 6201 W. Michigan Avenue, Ann Arbor, MI, 48108 on April 24, 2013 from 4:00 to 6:30 pm. At the hearing, information about the project, the tentative right-of-way acquisition and construction schedule, and the WCRC relocation assistance program will be explained, and members of the public can provide comments regarding the EA.

With an advance notice of seven days, WCRC can make most of the materials for this hearing available in alternative formats such as large print or audiotape, and can make accommodations for translation, sign language interpretation and/or assisted listening devices. Please call (734) 761-1500 to request accommodations.

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Publish March 21 & 28, April 4, 11, 18 & 25 & May 2, 2013

STATE OF MICHIGAN,

ss.

County of Wayne

Lorraine L. Logsdon

, being duly sworn

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Ann Arbor Journal

a newspaper printed and circulated in said State and County, and that said notice was published in said newspaper on

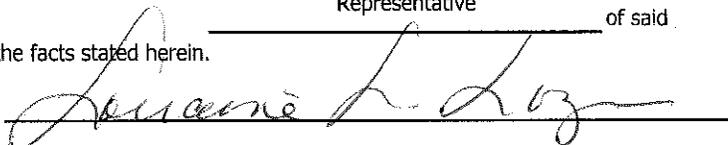
the 21st day of March

A.D.2012

newspaper and knows well the facts stated herein.

Representative

of said



Subscribed and sworn to before me

21st

day of

March

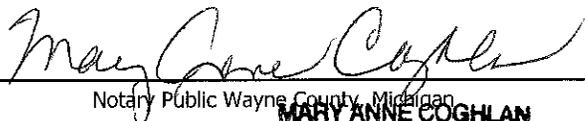
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Publish March 21 & 28, April 4, 11, 18 & 25 & May 2, 2013

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A.D.2012

Representative

of said

newspaper and knows well the facts stated herein.

Laurie L. Logsdon

Subscribed and sworn to before me

16th

day of

April

A.D.2012

Mary Anne Coghlan

Notary Public Wayne County, Michigan
MARY ANNE COGHLAN
 State of Michigan

My Commission Expires on

My Commission Expires 2-27-2014

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County of Washtenaw

Lorraine L. Logsdon, being duly sworn

deposes and says the annexed printed copy of a notice was taken from

Ann Arbor Journal

a newspaper printed and circulated in said State and County, and that said notice was published in said newspaper on

the 4th day of April

A.D. 2012

Representative of said

newspaper and knows well the facts stated herein.

Lorraine L. Logsdon

Subscribed and sworn to before me

8th

day of

April

A.D. 2012

Mary Anne Coghlan
Notary Public Wayne County, Michigan
MARY ANNE COGHLAN
State of Michigan

My Commission Expires on

My Commission Expires 2-27-2014

PRINTER'S BILL

Folios _____ Insertions _____

Notary Fees _____

Total _____

HERITAGE NEWSPAPERS
ONE HERITAGE PLACE, Ste. 100
SOUTHGATE, MI 48195
(734) 246-0800

From: Johnson Robert [<mailto:#####@sbcglobal.net>]

Sent: Tuesday, May 07, 2013 12:45 PM

To: Siddall, Sheryl

Subject: Environmental Assessment - State Road Improvement Project Ellsworth Road to Michigan Avenue (US_12)

With regard to the

Environmental Assessment

State Road Improvement Project Ellsworth Road to Michigan Avenue (US_12)

CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Page 19.

The assessment of the effect of the preferred alternative on land use lacks credibility. The stated aim of the project – widening State Street to four lanes in order to facilitate automobile traffic - will inevitably alter the development value of property near the new higher speed road. Thus the statement on page 19 must be incorrect:

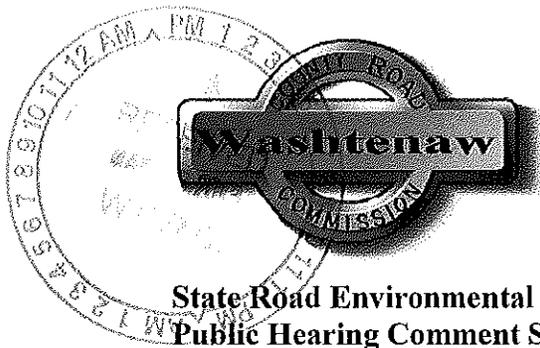
3.2.2.2 Preferred Alternative

It is expected that the Preferred Alternative would have land use impacts identical to the No Build Alternative.

This appears to be an error in assessing the wider environmental impacts of this project. There is much discussion in Ann Arbor and the surrounding communities about the importance of limiting sprawl development, which uses open space and other resources in a way that is non-sustainable in the long run. Sprawl development also requires new infrastructure development, making it more costly than more compact development.

It is tragic that Washtenaw County is undertaking this road widening project, which will promote the kind of land use that is making Washtenaw less efficient and less in accord with the environmental values often praised by County officials. I hope that the Road Commission and the County Board will reconsider this environmentally undesirable project.

Robert M. Johnson



Wes Butch
DLZ

555 N Zeeb Rd
AZ 48103



State Road Environmental Assessment
Public Hearing Comment Sheet
April 24, 2013

Pittsfield Township Hall

Please use the space below to provide your comments, thoughts, and ideas on the project. Please submit your comments in the comment box located near the exit. Attach additional sheets of paper if you need more space.

Name: BARBARA PERKINS
Address: 1316 King George Blvd
City: Ann Arbor State: MI Zip: 48108
Email: gperkins@umich.edu

Comments:
Ms. Sheryl Siddall and Mr. Wes Butch were very helpful to me in understanding the State Road Improvement Project. The project seems to me to be well engineered for solving the traffic congestion problem on what has become a heavily traveled road.

By straightening ^{and widening} State Road leading to the soon-to-be installed traffic circle at the State/Elkworth intersection, the project will enable smoother traffic flow in both directions. I look forward to the completion of this well-designed road project.

BARBARA PERKINS



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
LANSING



KEITH CREAGH
DIRECTOR

March 26, 2013

Ms. Sheryl Soderholm Siddall
Washtenaw County Road Commission
555 North Zeeb Road
Ann Arbor, Michigan 48103

Dear Ms. Soderholm Siddall:

The Michigan Department of Natural Resources (DNR) is, unfortunately, no longer able to conduct Environmental Reviews (ER) and ceased acceptance of review requests September 16, 2011. Funding for the program was not included in the state budget for the fiscal year that began October 1, 2012, and issuance of clearance letters will no longer be done. Project review requests can be sent to Michigan Natural Features Inventory (MNFI), a program of Michigan State University Extension.

Michigan Natural Features Inventory will review projects for potential impacts to endangered species, but there will now be a cost to the requestor for MNFI's services. For information on environmental reviews, please contact Mr. Ed Schools, Senior Conservation Scientist, at 517-373-0798, or at schools@msu.edu. Requests will no longer be accepted through the DNR Endangered Species Assessment website.

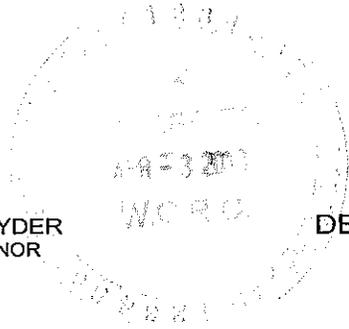
Endangered species and wetland laws remain in place. Under Part 365 of Public Act 451, people are not allowed to take or harm any endangered or threatened fish, plants, or wildlife. The DNR will still be responsible for issuing permits and enforcement relative to the take of endangered and threatened species.

Thank you for contacting the DNR. Should you have any questions, please contact Ms. Lori Sargent, Wildlife Biologist at sargentl@michigan.gov.

Sincerely,

Russ Mason
Russ Mason, Ph.D., Chief
Wildlife Division
517-373-1263

cc: Mr. Keith Creagh, Director, DNR
Dr. William E. Moritz, Natural Resources Deputy, DNR
Ms. Lori Sargent, DNR



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF AGRICULTURE
AND RURAL DEVELOPMENT

JAMIE CLOVER ADAMS
DIRECTOR

March 28, 2013

Ms. Sheryl Soderholm Siddall, P.E.
Director of Engineering
Washtenaw County Road Commission
555 N. Zeeb Road
Ann Arbor, MI 48103

Re: State Road Improvement Project: Ellsworth to Michigan Ave (US-12) – Environmental Assessment

Dear Ms. Siddall:

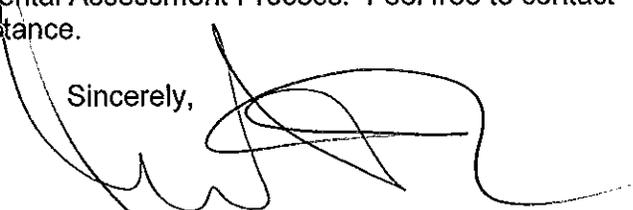
I received your request for review and comment on the proposed improvement project for State Road between Ellsworth and Michigan Avenue (US-12) in Pittsfield Township, Washtenaw County.

As noted previously as part of the Early Coordination process, our primary concern, as it relates to this project, would be potential impacts the project could have on properties enrolled under Part 361 of the Natural Resources and Environmental Protection Act (formerly Public Act 116, the Farmland and Open Space Preservation Act) and on established intra- and inter-county drains. We maintain that there will be no impacts to Part 361 lands. This more detailed plan indicates there may be direct or indirect impacts, either during construction or through altered surface drainage flows after project completion, to the Pittsfield-Junction Drain and subsequently the Wood Outlet. We expect that you will coordinate with the office of Evan Pratt, Water Resources Commissioner, Washtenaw County, regarding construction plans and the potential for work that may impact drainage infrastructure.

We do not anticipate additional social, economic and/or environmental impacts from the potential project, as they relate to agriculture and the various functions of the department.

We appreciate being included in this Environmental Assessment Process. Feel free to contact me at 517-241-3933, if I can be of further assistance.

Sincerely,



Abigail S. Eaton
Environmental Resource Specialist
Environmental Stewardship Division

cc: Evan Pratt, Water Resources Commissioner, Washtenaw County

United States Department of Agriculture



Helping People Help the Land

Natural Resources Conservation Service
3001 Coolidge Road, Suite 250
East Lansing, MI 48823
T (517) 324-5270/ F (517) 324-5171/ www.mi.nrcs.usda.gov



March 26, 2013

Ms. Sheryl Soderholm Siddall, P.E.
Director of Engineering
Washtenaw County Road Commission
555 N. Zeeb Road
Ann Arbor, Michigan 48103

RE: Early Coordination Notification: State Road Environmental Assessment, Washtenaw County, Michigan

Dear Ms. Soderholm Siddall:

In reviewing the proposal to widen State Road from two lanes to four or five lanes from West Ellsworth Road to US - 12, it was determined that prime and unique farmland exceeding a total of one acre could be converted to non-farm uses in this proposal (see enclosed Farmland Classification Report-Washtenaw County, Michigan).

Because of the possibility of converting prime and unique farmland into other non-farm uses with this proposed project, Parts I, III, VI and VII of the enclosed Farmland Conversion Impact Rating for Corridor Type Projects (NRCS-CPA-106) should be completed and mailed to the address below to help determine if the above areas are still rated as prime farmland.

Mr. Steve Olds, District Conservationist
NRCS - 7203 Jackson Road
Ann Arbor, Michigan 48103-9506

Thank you for this opportunity to review your proposal.

Sincerely,


GARRY LEE
State Conservationist

Enclosures:

NRCS-CPA-106
Farmland Classification-Washtenaw County

cc: w/o attachments:

Steve Olds, District Conservationist, NRCS, Ann Arbor, MI
Albert Jones, Area Conservationist, NRCS, Flint, MI

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

An Equal Opportunity Provider and Employer

**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

PART I (To be completed by Federal Agency)	3. Date of Land Evaluation Request	4. Sheet 1 of _____
---	------------------------------------	---------------------

1. Name of Project	5. Federal Agency Involved
2. Type of Project	6. County and State

PART II (To be completed by NRCS)		1. Date Request Received by NRCS	2. Person Completing Form
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated Average Farm Size	
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: _____ %	7. Amount of Farmland As Defined in FPPA Acres: _____ %	
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS	

PART III (To be completed by Federal Agency)	Alternative Corridor For Segment _____			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly				
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres In Corridor				

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				

PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)

PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))	Maximum Points				
1. Area in Nonurban Use	15				
2. Perimeter in Nonurban Use	10				
3. Percent Of Corridor Being Farmed	20				
4. Protection Provided By State And Local Government	20				
5. Size of Present Farm Unit Compared To Average	10				
6. Creation Of Nonfarmable Farmland	25				
7. Availability Of Farm Support Services	5				
8. On-Farm Investments	20				
9. Effects Of Conversion On Farm Support Services	25				
10. Compatibility With Existing Agricultural Use	10				
TOTAL CORRIDOR ASSESSMENT POINTS	160	0	0	0	0

PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100	0	0	0	0
Total Corridor Assessment (From Part VI above or a local site assessment)	160	0	0	0	0
TOTAL POINTS (Total of above 2 lines)	260	0	0	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>
-----------------------	---	-----------------------	--

5. Reason For Selection:

Signature of Person Completing this Part: _____ DATE _____

NOTE: Complete a form for each segment with more than one Alternate Corridor

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

More than 90 percent - 15 points
90 to 20 percent - 14 to 1 point(s)
Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?

More than 90 percent - 10 points
90 to 20 percent - 9 to 1 point(s)
Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

More than 90 percent - 20 points
90 to 20 percent - 19 to 1 point(s)
Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site is protected - 20 points
Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ?

(Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)
As large or larger - 10 points
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available - 5 points
Some required services are available - 4 to 1 point(s)
No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment - 20 points
Moderate amount of on-farm investment - 19 to 1 point(s)
No on-farm investment - 0 points

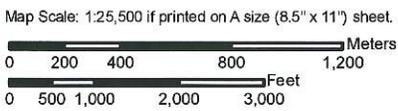
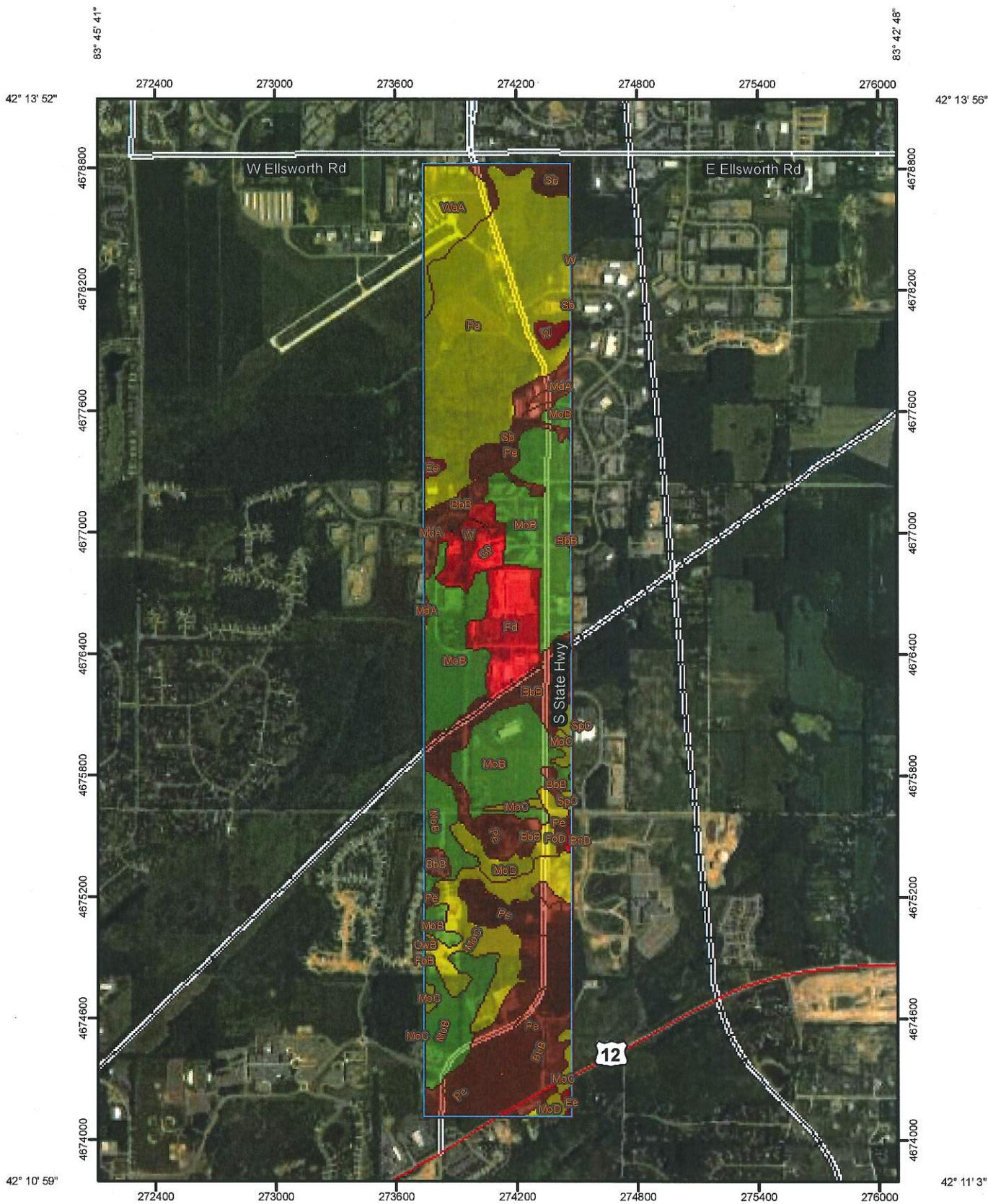
(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted - 25 points
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

Farmland Classification—Washtenaw County, Michigan



MAP LEGEND

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

Soils
 Soils

Soil Map Units

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsided, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

Political Features

 Cities

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes

 Major Roads

MAP INFORMATION

Map Scale: 1:25,500 if printed on A size (8.5" x 11") sheet.
 The soil surveys that comprise your AOI were mapped at 1:20,000.

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 17N NAD83

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

Soil Survey Area: Washtenaw County, Michigan
 Survey Area Data: Version 11, Sep 27, 2012

Date(s) aerial images were photographed: 7/10/2005

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

Farmland Classification

Farmland Classification— Summary by Map Unit — Washtenaw County, Michigan (MI161)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BbB	Blount loam, 2 to 6 percent slopes	Prime farmland if drained	115.8	13.7%
BnD	Boyer loamy sand, 12 to 18 percent slopes	Not prime farmland	1.3	0.2%
Ee	Edwards muck, shallow variant	Not prime farmland	3.3	0.4%
Fd	Fill land	Not prime farmland	40.2	4.8%
FoB	Fox sandy loam, 2 to 6 percent slopes	All areas are prime farmland	0.0	0.0%
FoD	Fox sandy loam, 12 to 18 percent slopes	Farmland of local importance	7.3	0.9%
Gp	Gravel pit	Not prime farmland	19.7	2.3%
MdA	Matherton sandy loam, 0 to 4 percent slopes	Prime farmland if drained	13.4	1.6%
MoB	Morley loam, 2 to 6 percent slopes	All areas are prime farmland	232.3	27.5%
MoC	Morley loam, 6 to 12 percent slopes	Farmland of local importance	64.0	7.6%
MoD	Morley loam, 12 to 18 percent slopes	Farmland of local importance	14.3	1.7%
OwB	Owosso-Miami complex, 2 to 6 percent slopes	All areas are prime farmland	0.2	0.0%
Pa	Palms muck	Farmland of local importance	190.0	22.5%
Pe	Pewamo clay loam	Prime farmland if drained	79.2	9.4%
Sb	Sebewa loam	Prime farmland if drained	22.0	2.6%
SpC	Spinks loamy sand, 6 to 12 percent slopes	Farmland of local importance	3.2	0.4%
W	Water	Not prime farmland	8.0	0.9%
WaA	Wasepi sandy loam, 0 to 4 percent slopes	Farmland of local importance	31.5	3.7%
Totals for Area of Interest			845.8	100.0%

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The majority of soil attributes are associated with a component of a map unit, and such an attribute has to be aggregated to the map unit level before a thematic map can be rendered. Map units, however, also have their own attributes. An attribute of a map unit does not have to be aggregated in order to render a corresponding thematic map. Therefore, the "aggregation method" for any attribute of a map unit is referred to as "No Aggregation Necessary".

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

-----Original Message-----

From: Sanchez, Alex (DEQ) [<mailto:SANCHEZA@michigan.gov>]

Sent: Tuesday, May 07, 2013 1:55 PM

To: Siddall, Sheryl

Subject: State Road Improvement Project

Hello Sheryl,

I have just completed my review of the February 2013 Environmental Assessment (EA) for the proposed State Road Improvement project located in Pittsfield Township, Washtenaw County. I'd like to offer a few comments, which are in addition to our initial MDEQ letter dated July 27, 2011, and is in Appendix B of the EA document.

1) Pittsfield Drain crossing under State Road - On page 15 of the EA it states that the existing culvert will be extended by approximately 65 feet. Adding this unto the existing culvert would result in a long enclosure of the stream. It would entail a fair amount of stream bottom excavation and side slopes for placement of culvert bedding material, and reduces hydraulic effectiveness. Also, long stream enclosures tend to impede fish movement.

It is understandable that the proposed project will unavoidably affect the drain to a certain extent. In order to minimize negative affects to the drain, consideration should be given to keep the culvert extension as short as practical. This may be done by narrowing the median through this area if feasible and prudent, and placing a headwall, guardrail, or some type of barrier at the culvert ends as opposed to projected ends. Preferably, I would encourage looking into a separate pedestrian bridge in lieu of the filled 10 foot wide path. This would allow a shorter culvert extension and an open stream beneath the bridge.

2) If the path will be crossing through a regulated wetland, I recommend that elevated boardwalks be used. This would reduce the square feet of wetland take, and thus lower the overall wetland impact.

3) When the DEQ permit application is submitted, please include documentation that there are adequate credits allowable to use from the Whitney Farm Mitigation Bank.

Your thoughtful consideration of the above comments/recommendations are much appreciated. Should you have any questions, please feel free to contact me.

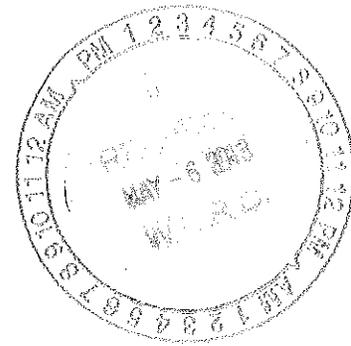
Thank you,

Alexander Sanchez
Department of Environmental Quality
Water Resources Division
Transportation and Flood Hazard Unit
sancheza@michigan.gov
517-335-3473 - Office
517-373-9958 - Fax



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAY 02 2013



REPLY TO THE ATTENTION OF:
E-19J

Ms. Sheryl Soderholm Siddall
Washtenaw County Road Commission
555 N. Zeeb Road
Ann Arbor, Michigan. 48103

**RE: Draft Environmental Assessment: State Road Improvement Project,
Ellsworth Road to Michigan Avenue (US-12), Washtenaw County,
Michigan**

Dear Ms. Soderholm Siddall:

The United States Environmental Protection Agency (EPA) has received the Washtenaw County Road Commission's correspondence dated March 13, 2013, requesting EPA's comments on a Draft Environmental Assessment (Draft EA) for the proposed State Road Improvement construction project on US 12 between Ellsworth Rd. and Michigan Ave. in Washtenaw County, Michigan.

The overall goals of the project are to accommodate existing and projected 2035 traffic volumes, accommodate other transportation modes, increase safety along the corridor, and meet the goals of the Pittsfield Township Master Plan. The Washtenaw County Road Commission proposed four major alternatives to meet the project's goals. The Preferred Alternative identified in the Draft EA was Alternative 2. The Draft EA describes the benefits of Alternative 2 as including the following: provides best traffic operations, provides the greatest increase in pedestrian and vehicular safety, accommodates pedestrians and bicyclists at least as well as the other alternatives, maintains consistency with the Pittsfield Township Master Plan, has relatively low environmental impacts, and is reasonably cost effective.

EPA has reviewed the Draft EA for this project. This letter provides our comments on the Draft EA and are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.

Water Resources

EPA has the following recommendations concerning the proposed plan for water resources.

Recommendations:

Wetlands

- EPA recommends that, in the vicinity of Runway Blvd. and State Road, the alignments and improvements be shifted to the east in order to further minimize or avoid impacts to Wetland B (which is potential Indiana Bat habitat) and minimize the risk of impacts to Wetland A. This would push the project further into Wetland H, but Wetland H appears to be a retention basin (and potentially not a natural wetland) and as such, may not be regulated as a wetland by Michigan Department of Environmental Quality (MDEQ).
- The Draft EA states that “field reconnaissance” and a “wetland determination” were undertaken – but the Draft EA is not clear if a formal wetland delineation was completed and reviewed by MDEQ. This should be clarified in the Final EA, and a copy of the full wetland delineation should be provided as an appendix to the Final EA.
- Review of aerial photography indicates a potential wetland at the northeast corner of State Rd. and Textile Rd. This was not noted in the Draft EA as a wetland area. Without having a wetland delineation report to review, EPA cannot confirm if this area was investigated and if wetland information was gathered here. EPA requests that this area be investigated if it was not already investigated as part of a delineation.
- Wetland E appears to be high quality forested swamp. EPA strongly suggests that impacts to this wetland be fully avoided. The multi-use path in this area could be elevated via a boardwalk, or perhaps the road median could be eliminated to reduce the road right-of-way and path width.
- EPA requests that the Final EA include a map of the wetland mitigation bank in relation to the location of the proposed project. The Final EA should clarify if the proposed wetland mitigation bank is within the same 8-digit watershed, and should include information on how the purchase of credits meets the U.S. Army Corps of Engineers (USACE) 2008 Mitigation Rule (33 CFR 332).

Floodplain

- The Draft EA states that there will be floodplain impacts associated with the proposed project, but did not discuss floodplain mitigation. The Final EA should include information on floodplain mitigation, including acreage, location, and any other permitting requirements.

Surface Waters

- The Final EA should consider various forms of green infrastructure with respect to best management practices (BMPs) for stormwater, including but not limited to: bioretention, cisterns, and bioswales.

Noise Analysis

The Draft EA modeled calculated noise levels for the Preferred Alternative as being 66.6 and 66.2 decibels (db) at the respective receiver numbers 3 and 4. These predicted noise levels are within 1 db of Activity Category “C” in Table 13 on page 30 of the Draft EA.

Recommendations:

- The Final EA should state if receiver numbers 3 and 4 are applicable to activity category “C.” If so, then these values are within 1 db of the 67 db level prescribed for category “C.” Consequently, the first traffic noise impact criterion on page 30 of the Draft EA would indicate that such an “impact” exists. If not, the Final EA should indicate what activity categories apply to receiver numbers 3 and 4 and include the “hourly equivalent sound level” values associated with such activity categories.
- There is one Section 4(f) site associated with the plan. Section 4(f) sites fall under activity category “C.” The Final EA should state whether the Section 4(f) site associated with the plan has an existing or predicted noise level. If not, the Final EA should demonstrate why there are no measured or calculated noise level values for the Section 4(f) site.

Soil Erosion Control

In Chapter 3.1 (Topography and Soils), the second paragraph states, “The larger concerns of management are controlling erosion and improving drainage. The project area includes areas of Blount loam, Morely loam, Pewamo clam loam, and Fox sandy loam. The Blount and Pewamo series consist of very poorly drained soils which may require special construction techniques.”

Recommendations:

- The Final EA should specify which BMPs are in place for controlling erosion and improving drainage.
- The Final EA should specify the particular construction techniques to be used such that issues with the Blount and Pewamo series will be addressed.

Permit Communications

In section 3.4.2, the Draft EA states, “Some easements and/or temporary grading permits may also be needed. The locations and size of easements/grading permits are not currently known and would be determined during the design phase of the project once more detailed engineering work is completed.”

Recommendations:

- The Final EA should include communications with the appropriate agencies regarding the requisite permits.

Diesel Emissions

In addition to the control measures stated in the Draft EA, the Washtenaw County Road Commission should commit to the following clean diesel strategies during construction activities.

Recommendations:

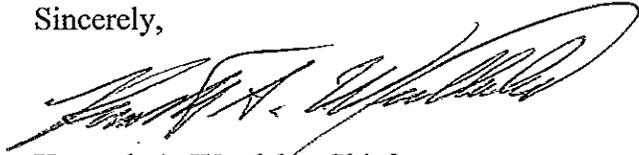
- Using ultra-low sulfur diesel fuel (less than 15 parts per million sulfur).
- Retrofitting engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Positioning the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, thereby reducing the fume concentration to which personnel are exposed.
- Using catalytic converters to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes (these devices must be used with low sulfur fuels).
- Attaching a hose to the tailpipe of diesel vehicles running indoors and exhaust the fumes outside, where they cannot reenter the workspace. Inspect hoses regularly for defects and damage.

Recommendations(cont.)

- Using enclosed, climate-controlled cabs pressurized and equipped with high efficiency particulate air (HEPA) filters to reduce the operator's exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any incoming air is filtered first.
- Regularly maintaining diesel engines, which is essential to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance. For example, blue/black smoke indicates that an engine requires servicing or tuning.
- Reducing exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel equipment operators to perform routine inspection, and maintaining filtration devices.
- Purchasing new vehicles that are equipped with the most advanced emissions control systems available.
- Using electric starting aids, such as block heaters, to warm the engines of older equipment and vehicles, thereby reducing diesel emissions.
- Using respirators, which are only an interim measure to control exposure to diesel emissions. In most cases, a N95 respirator is adequate. Workers must be trained and fit-tested before they wear respirators. Depending on the work being conducted, and if oil is present, concentrations of particulates present will determine the efficiency and type of mask and respirator. Personnel familiar with the selection, care, and use of respirators must perform the fit testing. Respirators must bear a National Institute of Occupational Safety and Health (NIOSH) approval number. Do not use paper or surgical masks without NIOSH approval numbers.

Thank you for the opportunity to review and comment upon this Draft EA. We are available to discuss our comments with you in further detail if requested. We look forward to reviewing future NEPA documents prepared for this project. If you have any further questions about this letter, please contact me or Robert O'Brien of my staff at 312-886-3283, or via e-mail at obrien.robert@epa.gov.

Sincerely,



Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Enforcement and Compliance Assurance

cc: Charles Uhlarik, United States Army Corps of Engineers
Chris Mensing, United States Fish and Wildlife Service
David Williams, Federal Highway Administration
Kristin Schuster, Michigan Department of Transportation
Gerald Fulcher, Michigan Department of Environmental Quality (MDEQ)
Alex Sanchez, MDEQ

From: Dennis Wojcik [<mailto:Wojcikd@ewashtenaw.org>]
Sent: Thursday, May 16, 2013 8:46 AM
To: Evan Pratt; Siddall, Sheryl
Cc: wbutch@dlzcorp.com; jwhitten@dlzcorp.com
Subject: RE: State Road Environmental Assessment - Public Comment Period

Evan and Sheryl,

I did not think comment was necessary due to the fact that the report recognizes the MOU between this office and the WCRC and notes that this will be followed in the preferred alternative. I typically do not comment on wetland impacts since this is not a subject that I have expertise in. I do note however that the impacts to wetlands identified are being mitigated at an almost 2 to 1 ratio.

Dennis

From: Evan Pratt
Sent: Wednesday, May 15, 2013 5:51 PM
To: siddalls@wcroads.org
Cc: wbutch@dlzcorp.com; jwhitten@dlzcorp.com; Dennis Wojcik
Subject: RE: State Road Environmental Assessment - Public Comment Period

Thanks, I had passed along to Dennis, as he normally reviewed these. Did not hear anything, but had lost track of the dates. Will double check

Sent from my Verizon Wireless 4G LTE Smartphone

----- Original message -----

From: "Siddall, Sheryl" <siddalls@wcroads.org>
Date: 05/15/2013 12:23 PM (GMT-05:00)
To: Evan Pratt <pratte@ewashtenaw.org>
Cc: "Butch, Wesley" <wbutch@dlzcorp.com>, "Whitten, Jason" <jwhitten@dlzcorp.com>
Subject: State Road Environmental Assessment - Public Comment Period

Evan-

The public comment period for the State Road Environmental Assessment closed on May 7, 2013. I just wanted to make sure that you had an opportunity to provide comment before we make any changes and submit our request for a Finding Of No Significant Impact. No comment is certainly acceptable, I just wanted to confirm that we are not missing anything significant.

Please let me know if you have any questions.

Thanks,

Sheryl

Sheryl Soderholm Siddall, P.E.
Director of Engineering

Washtenaw County Road Commission

Phone: 734.761.1500

Direct: 734.327.6687

Fax: 734.761.3737

From: Mandy Grewal [<mailto:GrewalM@pittsfield-mi.gov>]
Sent: Thursday, May 16, 2013 9:33 AM
To: Siddall, Sheryl
Cc: Trish Reilly
Subject: State Road EA Statement

Hi Sheryl:

The only comment the Township has is to reiterate the point made by DLZ in that the proposed State Road improvement project is defined as low-impact. Given that it is a \$30M project and has minimal environmental and other negative impacts makes this a very unique project.

Let me know if you need anything else.

Best,

Mandy Grewal, Ph.D.
Supervisor, Pittsfield Charter Township
734.945.2072

From: Palombo, Carmine [<mailto:palombo@semcog.org>]
Sent: Wednesday, May 15, 2013 12:44 PM
To: Siddall, Sheryl
Subject: Re: State Road Environmental Assessment - Public Comment Period

Sheryl
Sorry. We received the assessment and have no comment
Cp

Sent from my Verizon Wireless 4G LTE DROID

"Siddall, Sheryl" <siddalls@wcroads.org> wrote:

Carmine-

The public comment period for the State Road Environmental Assessment closed on May 7, 2013. I just wanted to make sure that you had an opportunity to provide comment before we make any changes and submit our request for a Finding Of No Significant Impact. No comment is certainly acceptable, I just wanted to confirm that we are not missing anything significant.

Please let me know if you have any questions.

Thanks,

Sheryl Soderholm Siddall, P.E.
Director of Engineering

Washtenaw County Road Commission
Phone: 734.761.1500
Direct: 734.327.6687
Fax: 734.761.3737

-----Original Message-----

From: Ryan Buck [<mailto:buckr@miwats.org>]

Sent: Wednesday, May 15, 2013 2:06 PM

To: Siddall, Sheryl

Subject: RE: State Road Environmental Assessment - Public Comment Period

Hi, Sheryl,

No comments, but one recommendation to consider. Table 9 on page 15 is critically important to the identification of the preferred alternative however, it's not clear how those numbers were derived. I'm assuming this is a synchro analysis using the projected 2035 volumes but it doesn't say that in the document (that I found) or underneath the table.

Ryan

From: Siddall, Sheryl [siddalls@wcroads.org]

Sent: Wednesday, May 15, 2013 12:19 PM

To: Ryan Buck

Cc: Butch, Wesley; Whitten, Jason

Subject: State Road Environmental Assessment - Public Comment Period

Ryan-

The public comment period for the State Road Environmental Assessment closed on May 7, 2013. I just wanted to make sure that you had an opportunity to provide comment before we make any changes and submit our request for a Finding Of No Significant Impact. No comment is certainly acceptable, I just wanted to confirm that we are not missing anything significant.

Please let me know if you have any questions.

Thanks,

Sheryl

Sheryl Soderholm Siddall, P.E.

Director of Engineering

Washtenaw County Road Commission

Phone: 734.761.1500

Direct: 734.327.6687

Fax: 734.761.3737

From: Gary Loonsfoot [<mailto:gloonsfoot@kbic-nsn.gov>]

Sent: Tuesday, March 26, 2013 8:41 AM

To: Siddall, Sheryl

Subject: Pittsfield road project

I am responding to your public notice letter concerning the State Road project from south of Ellsworth Road to Campus Parkway in Pittsfield Township. We here at the KBIC see no problems with moving forward with this project. We ask to be notified if any cultural or historical Native American remains or artifacts are uncovered during any portion of this project. Thank you for your time and consideration.

GARY F. LOONSFOOT, JR.

**KBIC DIRECTOR OF CULTURAL RESOURCES
1 6429 BEARTOWN RD.
BARAGA, MI 49908
(906)353-4178**

From: Mensing, Chris [chris_mensing@fws.gov]
Sent: Tuesday, May 28, 2013 10:15 AM
To: Jason Whitten
Subject: Fwd: State Road Environmental Assessment

Jason,

Thank you for the opportunity to review the State Road EA. We have reviewed the document and have no comments. If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Chris

Chris Mensing, Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
East Lansing Field Office
2651 Coolidge Road, Suite 101
East Lansing, MI 48823
517-351-8316 (office)
517-351-1443 (fax)
chris_mensing@fws.gov

----- Forwarded message -----

From: **Jason Whitten** <jwhitten@dlz.com>
Date: Thu, May 16, 2013 at 10:41 AM
Subject: State Road Environmental Assessment
To: "Scott_Hicks@fws.gov" <Scott_Hicks@fws.gov>
Cc: "Jack_Dingledine@fws.gov" <Jack_Dingledine@fws.gov>

Mr. Hicks,

The Washtenaw County Road Commission (WCRC) is proposing improvements along State Road in Pittsfield Township. An Environmental Assessment (EA) was conducted for the project and recently made available for public and agency review. Per the attached coordination letter, the EA was sent out on March 13, 2103 for review and comment. The public comment period for the State Road EA closed on May 7, 2013.

We wanted to make sure that you had an opportunity to provide comment before the Amended EA and a request for a Finding Of No Significant Impact is submitted.

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

Respectfully,

Jason

Jason Whitten | Project Manager/Senior Planner

517-393-6800 x4977 (office) | 517-272-7390 (fax)
jwhitten@dlz.com | www.dlz.com

Please consider the environment before printing this e-mail

Early Coordination



Pittsfield Charter Township

6201 West Michigan Avenue, Ann Arbor, MI 48108

Phone: (734) 822-3135 • Fax: (734) 944-6103

Website: www.pittsfield-mi.gov

Mandy Grewal

Township Supervisor

grewalm@pittsfield-mi.gov

Barbara Ryan Fuller

Deputy Supervisor

fullerb@pittsfield-mi.gov

Office of the Supervisor

July 23, 2012

We are writing this letter to voice our support and desire for the inclusion of non-motorized facilities as part of the Preferred Alternative that WCRC is proposing for the State Road Corridor between Ellsworth Road and US-12. The State Road corridor is an important transportation route through Pittsfield Township. This corridor is a primary north-south road that runs through the center of the Township. In addition to providing a route through the Township and a connection to many varied land uses adjacent to the corridor, it provides access to a large number of business, office, light industrial, and research and development centers within the Township. In fact, the State Road corridor is the 'heart' of Pittsfield Township's business district with regional and community supported commercial centers located at both ends.

Pittsfield Township's 2010 Master Plan, Ann Arbor Transportation Authority's (AATA) Five Year Transit Master Plan along with Washtenaw Area Transportation Study and Washtenaw County Road Commission all recognizing the need to develop this corridor as a 'complete street.' Specifically, the 2010 Pittsfield Master Plan envisions a robust multi-modal transportation cross section in the State Road corridor region and has, just last month, inaugurated the completion of the 10 foot wide non-motorized pathway in its vicinity (Lohr-Textile Roads). With the success of such pathways in the Township and the overwhelming public support and use of the same, there is a revision of the 2010 Pittsfield Master Plan being undertaken in order to designate, among other things, the State Road corridor as having a 10-15 foot sidewalk, preferably on both sides of the road.

As noted above, there is regional consensus to move in this direction. For instance, Washtenaw County Transit Master Plan from AATA as well as the 2010 Pittsfield Master Plan call for transit service along the State Road corridor. In order to facilitate the use of this corridor for transit, adjacent pedestrian facilities must be installed along the roadway. Additionally, based on the desire of the community, non-motorized transportation is being proposed throughout the Township. For instance, it has been identified that while some established bicyclists are confident, comfortable, and, in fact prefer on-street bike lanes, many members of the community feel safer and prefer to use non-motorized pathways, thereby requiring a 10 foot wide sidewalk on both sides of the road.

Based on the existing and potential usership of this route for both motorized and non-motorized transportation, providing for appropriate vehicular lane widths including on street bike lanes along with a 10 foot wide non-motorized path is the most appropriate design solution for this corridor. Ultimately, the proposed Master Plan revision to the future State Road cross section and the one being put forth as the preferred design alternative as part of the Environmental Assessment study is consistent with the goals espoused in the 2010 Pittsfield Master Plan, both locally and regionally.

Sincerely,

A handwritten signature in blue ink, appearing to read "M. Grewal", is written over a blue horizontal line.

Mandy Grewal, PhD
Supervisor



RECEIVED
FEB 28 2012

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY
STATE HISTORIC PRESERVATION OFFICE

GARY HEIDEL
EXECUTIVE DIRECTOR

February 21, 2012

DAVE WILLIAMS
FEDERAL HIGHWAY ADMINISTRATION
315 W ALLEGAN STREET
LANSING MI 48933

RE: ER12-172 State Road Improvements – US-12 to Ellsworth Road, T3S, R6E, Sections 16,17,21 &28, Pittsfield Township, Washtenaw County (FHWA)

Dear Mr. Williams

Under the authority of Section 106 of the National Historic Preservation Act of 1966, as amended, we have reviewed the above-cited undertaking at the location noted above. Based on the information provided for our review, it is the opinion of the State Historic Preservation Officer (SHPO) that no historic properties are affected within the area of potential effects of this undertaking.

The views of the public are essential to informed decision making in the Section 106 process. Federal Agency Officials or their delegated authorities must plan to involve the public in a manner that reflects the nature and complexity of the undertaking, its effects on historic properties and other provisions per 36 CFR § 800.2(d). We remind you that Federal Agency Officials or their delegated authorities are required to consult with the appropriate Indian tribe and/or Tribal Historic Preservation Officer (THPO) when the undertaking may occur on or affect any historic properties on tribal lands. In all cases, whether the project occurs on tribal lands or not, Federal Agency Officials or their delegated authorities are also required to make a reasonable and good faith effort to identify any Indian tribes or Native Hawaiian organizations that might attach religious and cultural significance to historic properties in the area of potential effects and invite them to be consulting parties per 36 CFR § 800.2(c-f).

This letter evidences the FHWA's compliance with 36 CFR § 800.4 "Identification of historic properties", and the fulfillment of the FHWA's responsibility to notify the SHPO, as a consulting party in the Section 106 process, under 36 CFR § 800.4(d)(1) "No historic properties affected."

The State Historic Preservation Office is not the office of record for this undertaking. You are therefore asked to maintain a copy of this letter with your environmental review record for this undertaking. If the scope of work changes in any way, or if artifacts or bones are discovered, please notify this office immediately.

If you have any questions, please contact Brian Grennell, Cultural Resource Management Specialist, at (517) 335-2721 or by email at grennellb@michigan.gov. **Please reference our project number in all communication with this office regarding this undertaking.** Thank you for this opportunity to review and comment, and for your cooperation.

Sincerely,


Brian G. Grennell
Cultural Resource Management Specialist

for Brian D. Conway
State Historic Preservation Officer

SAT:BGG:ses

Copy: Jason Whitten, DLZ Michigan Inc.





RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR
RECEIVED

AUG 01 2011

WASHTENAW COUNTY
ROAD COMMISSION

July 27, 2011

Ms. Sheryl Soderholm Siddall, P.E.
Assistant Director of Engineering
Washtenaw County Road Commission
555 N. Zeeb Road
Ann Arbor, Michigan 48103

Subject: State Road Improvement Study
T3S, R6E, Sections 16, 21, & 28, Pittsfield Township, Washtenaw County
Michigan Department of Environmental Quality Preliminary File
Number 11-81-5002 (DIR 00295)

Dear Ms. Siddall:

The Michigan Department of Environmental Quality (MDEQ), Water Resources Division, has completed a preliminary review of your Early Preliminary Engineering (EPE) study for improvements to an approximately 3 mile stretch of State Road between Ellsworth Road and Michigan Avenue (U.S.-12) in Pittsfield Township, Washtenaw County, Michigan. Your May 5, 2011 correspondence indicates the study is examining the existing traffic congestion and safety problems along this two-lane roadway. Improvements being considered include widening the road to a four-lane boulevard or a five-lane boulevard with a center left turn lane. Non-motorized facilities, transit upgrades, and intersection improvements are also under consideration.

Our review was conducted under the provisions of Part 301, Inland Lakes and Streams, and Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). Other federal, state, county, or local permits may be required at a later date as the project's total impacts are more adequately identified.

During an on-site review by our staff, two streams were observed adjacent to or across State Road. One of the streams noted is located approximately 2,375 feet south of the intersection of Ellsworth Road. The stream appears at the end of a culvert under the east side of the road and runs diagonally in a northeast direction. It appears to be enclosed on the west side of road next to the Ann Arbor Municipal Airport. The other stream runs parallel to the south side of the Ann Arbor Railroad and just north of Payeur Road, in Section 21.

Should the culvert conveying the stream under the road be replaced, consideration should be given to size the new culvert where the opening will span the bankfull width of the channel. At a minimum it is recommended that it be sized so that the opening spans the base flow channel width. The culvert should align with the natural flow characteristics of the stream. The length of the culvert shall be as short as reasonably possible to minimize disruption to the stream. This can be achieved by steepening the roadside slopes as safety guidelines allow, and incorporating a headwall at each end of the culvert. The culvert invert shall be recessed below the channel bottom to allow migration of natural substrate throughout the interior of the structure.

Several wetland complexes along the roadway were also observed. As the project moves forward, we recommend the services of a wetland consultant be considered to properly characterize and identify their boundaries adjacent to the road. Under Part 303 of NREPA, all feasible and prudent alternatives should be used to avoid impacts to wetland areas. If a wetland cannot be avoided, all practical means must be exercised to minimize impacts to this resource. Should the project ultimately result in unavoidable impacts to the wetlands, compensating mitigation is required. For public road safety projects that meet the Part 303 General Permit criteria for road safety projects the mitigation ratio is 1.0 to 1.0. For all other wetland impacts the following mitigation ratios apply: 1.5 to 1 for emergent and scrub-shrub wetlands; 2 to 1 for forested wetlands and those bordering an inland lake; and 5 to 1 for rare or imperiled wetlands. Please note that if a project utilizes federal funding which involves wetland impacts, compensation through mitigation is required, regardless of size.

It is recommended that wetland mitigation occur on site in the vicinity of the project area. If it is demonstrated that mitigation cannot occur on site, then it shall take place within the same watershed. Restoration of previously existing wetlands is preferred over the creation of wetlands on upland areas. Enhancement of an existing wetland is not acceptable as a mitigation effort.

For wetland impacts totaling up to 0.33 acre, mitigation shall be identified prior to or at the time of permit issuance, and constructed within a specified time determined by the MDEQ. For wetland impacts of 0.33 acre or greater, a conceptual or final mitigation and monitoring plan must be submitted prior to or at the time of the permit application and approved by the MDEQ. The plan must include, but is not limited to, a description of the botanical composition of the impacted wetlands, its functions and values, and performance criteria to monitor the progress and success of the mitigation site. Also required is a description of the baseline conditions at the proposed mitigation site (e.g., existing topography, hydrology, soils, and vegetation). The water supply should be identified (e.g., will it involve excavation, impoundment, or breaking drain tiles). The enclosed Part 303 – Wetland Data Form must be completed for each wetland complex that will be impacted.

Unless a previous agreement is made, mitigation construction activities shall be completed before the actual construction begins. If mitigation cannot be completed prior to construction activities, a financial assurance instrument shall be executed prior to permit issuance. Also, a conservation easement over the wetland mitigation area must be submitted that provides for the permanent protection of the natural resource functions and values.

The proposed road upgrading includes enclosed storm sewers incorporated into a curb and gutter section. Efforts should be made to route storm water into detention basins and other treatment facilities to adequately filter out sediment and other pollutants. Direct discharges of storm water into wetlands, drains, streams, and lakes should be avoided.

Generally, when a road footprint is proposed to be widened, every effort should be made to design minimum-width lanes, shoulders, limiting road grade lifts, using guardrail sections to allow steeper slopes, or the use of retaining walls. Your letter states that the existing two lane road may be widened to a four lane boulevard or a five-lane cross-section with a center turn lane. The width of the boulevard was not specified. From an environmental standpoint, it is difficult to determine which design will be least impactful until the actual impacts to the streams and wetlands are identified.

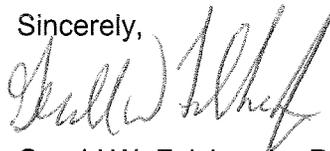
Land disturbances of 5 acres or more with a discharge to waters of the state will require the submittal of a Notice of Coverage and a fee to the MDEQ's Water Resources Division. One acre through 5 acres has automatic coverage if Soil Erosion and Sedimentation authorization has been obtained under Part 91 of NREPA.

The purpose and need for the project, including supporting documentation, should be provided. It should adequately address the provisions of the above-mentioned statutes, which requires demonstration that the project is in the public interest, is necessary, and will not cause unacceptable disruption to water quality, wetlands, and aquatic resources. All feasible and prudent alternatives should be presented that will meet present and future traffic needs.

Environmental documents and plans submitted with the permit application should include a project location map, existing and proposed plan, profiles, elevations, and cross-sections, wetland impact information, mitigation plans and monitoring proposal, storm water control runoff details, soil erosion and sedimentation control symbols and details, and earthwork stabilization staging plan.

Thank you for the opportunity to review and provide preliminary comments on this proposal. Should you have any questions, feel free to contact me, or you may contact Alex Sanchez of my staff at 517-335-3473.

Sincerely,



Gerald W. Fulcher Jr., P.E., Chief
Transportation and Flood Hazard Unit
Water Resources Division
517-335-3172

cc: Mr. Wes Butch, DLZ Michigan, Inc.
Mr. Justin Pung, DEQ, Water Resources Division
Ms. Laura Smith, DEQ Water Resources Division
Mr. Alex Sanchez, DEQ, Water Resources Division

RECEIVED

JUL 15 2011

WASHTENAW COUNTY
ROAD COMMISSION



CITY OF ANN ARBOR, MICHIGAN

100 North Fifth Avenue, P.O. Box 8647, Ann Arbor, Michigan 48107-8647

<http://www.ci.ann-arbor.mi.us>

Public Services Area
Project Management Unit

June 30, 2011

Ms. Sheryl Soderholm Siddall, P.E.
Assistant Director of Engineering
Washtenaw County Road Commission
555 N. Zeeb Road
Ann Arbor, MI 48103

Re: State Road Environmental Assessment

Dear Ms. Soderholm Siddall:

Thank you for contacting the City regarding concerns for State Road as it enters the City. We look forward to the results of the environmental assessment for the corridor. .

At this time we are not aware of any issue of note near the corridor terminus aside from the recurring congestion at State / Ellsworth during peak periods. We are committed to partnering with the WCRC on future improvements to the State / Ellsworth intersection. Issues related to impacts on the City of Ann Arbor Airport were sent under separate cover and represent the City's major concerns on the State Road corridor.

We appreciate the opportunity to comment on this important project and look forward to continuing dialogue as the project moves forward. Please feel free to contact me with any additional questions or comments.

Very truly yours,

City of Ann Arbor

Project Management Services Unit

Homayoon Pirooz, PE
Project Management Services Manager

Cc: Patrick Cawley, Sr. Project Manager
Les Sipowski, Sr. Project Manager



United States Department of the Interior

FISH AND WILDLIFE SERVICE

East Lansing Field Office (ES)
2651 Coolidge Road, Suite 101
East Lansing, Michigan 48823-6316

IN REPLY REFER TO:

June 29, 2011

Ms. Sheryl Soderholm Siddall, P.E.
Assistant Director of Engineering
Washtenaw County Road Commission
555 N. Zeeb Road
Ann Arbor, Michigan 48103

Re: Proposed Improvements along State Road between Ellsworth Road and Michigan Avenue (US-12), Pittsfield Township, Washtenaw County, Michigan

Dear Ms. Soderholm Siddall:

We are responding to your May 5, 2011 request for early coordination regarding proposed improvements to State Road in Washtenaw County, Michigan. We submit these comments in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act), the Migratory Bird Treaty Act (MBTA), and the National Environmental Policy Act (NEPA).

Wetlands

Pursuant to the federal Clean Water Act, the State of Michigan regulates certain activities in wetlands. Development that would impact wetlands may require a permit for which this office may have review authority. In the review of these permit applications, we may concur (with or without stipulations) or object to permit issuance depending whether the proposed work may impact public trust fish and wildlife resources. We encourage you to avoid and minimize impacts to wetlands to the maximum extent feasible.

Migratory Birds

Under the MBTA of 1918, as amended, it is unlawful to take, capture, kill, or possess migratory birds, their nests, eggs, and young. For proposed projects that may contain habitat suitable for nesting by migratory bird species, we recommend you schedule construction activities or remove potential habitat or nesting structures before birds initiate spring nesting or after the breeding season has ended to avoid take of migratory birds, eggs, young, and/or active nests. Generally, we recommend that any habitat disturbance occur before April 15 or after August 15 to minimize potential impacts to migratory birds, but please be aware that some species may start nesting before April 15.

Endangered Species

For endangered and threatened species list requests and section 7 consultations with the U.S. Fish and Wildlife Service, please refer to our endangered species and technical assistance website, located at <http://www.fws.gov/midwest/endangered/section7/index.htm>. In some cases, you may be able to conclude the endangered species review process without contacting this office.

We appreciate the opportunity to provide comments at this early stage of project planning. If you have any questions regarding these comments, please contact Chris Mensing of this office at 517-351-8316 or chris_mensing@fws.gov.

Sincerely,



Scott Hicks
Field Supervisor

RECEIVED

JUL 07 2011



CITY OF ANN ARBOR, MICHIGAN WASHTENAW COUNTY COMMISSION

100 North Fifth Avenue, P.O. Box 8647
Ann Arbor, Michigan 48107-88647
Phone (734) 994-2841 • Fax (734) 997-1133
<http://www.ci.ann-arbor.mi.us>

**Municipal Airport
Public Services Area**

June 29, 2011

Ms. Sheryl Soderholm Siddall, PE
Assistant Director of Engineering
Washtenaw County Road Commission
555 N. Zeeb Road
Ann Arbor, MI 48103

Re: State Road Environmental Assessment – Early Coordination

Dear Ms. Soderholm Siddall,

I appreciate the opportunity to provide comments for the early coordination of the Environmental Assessment (EA) being prepared by the Washtenaw County Road Commission for State Road. The Airport is a proponent for improving traffic flow and safety on State Road and has been following the concept since the State Road Corridor Study was released in July, 2006. The airport, through our Airport Layout Plan process, has been working to address and minimize impacts between our two modes of transportation ever since.

There are a number of potential issues that will likely arise during your EA preparation. I have broken them down into the following four areas:

- 1) Integration of flight safety and compliance with Federal Aviation Administration (FAA) standards.
 - a) State Road is immediately east of our primary runway and any widening or increase of elevation of State Road would negatively impact the approach to Runway 6/24.
 - b) The FAA has navigational aids on either side of State Road that may be impacted with any widening or shifting of State Road.

- c) the airport owns property on both sides of State Road, any easement or right of way requests will be subject to an approval process through the Michigan Department of Transportation and the FAA.
- 2) The airport has a number of improvements and structures that are in reasonably close proximity to State Road in its current configuration. Any widening or shifting of State Road should maintain access and parking for these structures. Many of these structures are older construction, including the original terminal building which I understand dates back to the 1920's. Some of these hangars along State Street are also privately owned.
 - 3) Soils in this area are mucky and maintain water which may indicate wetlands in this area.
 - 4) The City of Ann Arbor has a number of drinking water wells on the airport property which is also within a wellhead protection area.

These are items that come to mind for work along State Road adjacent to the airport. I look forward to working with you throughout the development of the EA and your project. If you have any questions or need additional information, please feel free to contact me at 734.994.9124. or via email at mjkulhanek@a2gov.org.

Sincerely,



Matthew J. Kulhanek
Airport Manager

cc: Molly Lamrouex, MDOT
Carol Aldrich, MDOT
Neil Billedeaux, JJR
Jon Van Duinen, URS
Pat Cawley, City of Ann Arbor
Airport Advisory Committee



STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

RICK SNYDER
GOVERNOR

KIRK T. STEUDLE
DIRECTOR

June 7, 2011

Ms. Sheryl Soderholm Siddall, P.E.
Assistant Director of Engineering
Washtenaw County Road Commission
555 N. Zeeb Road
Ann Arbor, MI 48103

**SUBJECT: Early Coordination, State Road Environmental Assessment
Washtenaw County, Michigan**

Dear Ms. Soderholm Siddall:

The Michigan Department of Transportation, Airports Division (MDOT), has received your request for early coordination comments pertaining to proposed improvements to State Road in Pittsfield Township. MDOT has the following comments.

- 1) MDOT is facilitating an Environmental Assessment (EA) for a proposed runway extension and shift at the Ann Arbor City Airport (ARB). The State Road project is adjacent to ARB on the east side. The ARB EA indicates that there are currently no known constraints to ARB related to State Road, however, if State Road is ever widened it could negatively affect the approach to the existing runway. Completion of the ARB EA is currently pending comments and/or approval from the Federal Aviation Administration (FAA).
- 2) Fifteen feet of vertical clearance over State Road is required for the approach slope to the airport. The planned shift of the runway to the west will allow for State Road to be widened approximately 12', while still providing for the 15' of vertical clearance. Please coordinate with the airport during selection of the preferred alternative for the State Road project to ensure that the airport's design objectives are met.
- 3) Please be aware that if the preferred alternative for the State Road project results in the need for any easements and/or right away from ARB, a land release approval from MDOT and the Federal Aviation Administration (FAA) will be required.

Sheryl Soderholm Siddall

June 7, 2011

Page 2

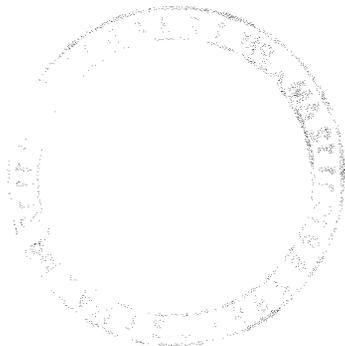
We appreciate the opportunity to provide comments. Please note that coordination with FAA was completed for this letter, but that the FAA may elect to send its own comments in the future. Please do not hesitate to contact me at (517) 335-9866 or via email at lamrouxm@michigan.gov if you have any questions regarding MDOT comments.

Sincerely,



Molly Lamrouex, Environmental Specialist
Bureau of Aeronautics
Michigan Department of Transportation

cc: Wes Butch, DLZ
Matt Kulhanek, ARB
Ernest Gubry, FAA
Jon Van Duinen, URS
Neal Billetdeaux, JJR
George Masinda, MDOT
Bob Batt, MDOT
MDOT File





United States Department of Agriculture

Office of the Secretary
Washington, D.C. 20250

RECEIVED

JUN 08 2011

WASHTENAW COUNTY
ROAD COMMISSION

JUN -6 2011

Ms. Sheryl Soderholm Siddall, P.E.
Project Manager and
Assistant Director of Engineering
Washtenaw County Board of
County Road Commissioners
555 North Zeeb Road
Ann Arbor, Michigan 48103

Dear Ms. Siddall:

Thank you for your letter of May 5, 2011, to the Department of Agriculture, requesting comments on the improvements to the State road between Ellsworth Road and Michigan Avenue, in Pittsfield Township, Washtenaw County, Michigan.

The mission of the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) is to provide leadership in a partnership effort with private agricultural landowners and other private landowners to help conserve, maintain, and improve our natural resources and environment. Thus, we provide comments on other Federal and State agency actions that may affect areas of our expertise, including potential impacts to agricultural soils, easements, prime and unique farmland, etc.

Based on the description of the project, and the attached map, we do not have comments at this time. If the project scope changes and there are issues that impact areas of our expertise, please contact us and we would be happy to review and provide comments.

Again, thank you for writing.

Sincerely,

Harris D. Sherman
Under Secretary
Natural Resources and Environment

Siddall, Sheryl

From: Lee.D.Soule@uscg.mil on behalf of Soule, Lee <Lee.D.Soule@uscg.mil>
Sent: Friday, May 20, 2011 8:41 AM
To: Siddall, Sheryl
Cc: William.B.Stanifer@uscg.mil; Striffler, Scot
Subject: RE: State Road Corridor Study - Washtenaw County, Michigan

Sheryl,

As I stated in my phone message; this office will not have any comments for the proposed work to this portion of the State Road Corridor. Please continue to solicit our comments for future projects. If you require a formal letter in reply to your request for comments please contact me and I will be happy to provide this for you.

Lee

Lee D. Soule
Bridge Management Specialist
9th Coast Guard District (DPB)
1240 East Ninth Street
Cleveland, OH 44199-2060
Office: (216) 902-6085
Fax: (216) 902-6088

-----Original Message-----

From: siddalls@wcroads.org [mailto:siddalls@wcroads.org]
Sent: Thursday, May 19, 2011 8:34 AM
To: Soule, Lee
Subject: State Road Corridor Study - Washtenaw County, Michigan

Lee-

Thanks for the various phone messages. Hopefully, email communication will be more effective.

I look forward to hearing from you regarding the State Road corridor or the environmental assessment process.

Sheryl

Sheryl Soderholm Siddall, P.E.

Assistant Director of Engineering



PART 303 – WETLAND DATA FORM

This information is collected pursuant to Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

Applicant: _____	For DEQ Use: File: _____
County: _____ T _____ R _____ S _____	Date: ____/____/____
Form Completed By: _____	Wetland Area: _____

INSTRUCTIONS:

Fill out all pertinent information on the following worksheets to substantiate your review. All methods should be in accordance with the *MDEQ Wetland Identification Manual: A Technical Manual for Identifying Wetlands in Michigan* and Part 303. Nomenclature shall follow Voss (1972, 1985, and 1996) or Gleason and Cronquist (2004).

SITE REVIEW:

_____(Y/N) Is the site significantly disturbed? If yes, describe: _____

_____(Y/N) Is there a potential Problem Area as described in the MDEQ Wetland Identification Manual?
If yes, describe: _____

VEGETATION AND AQUATIC LIFE:

Dominant Vegetation on Wetland Side of the Boundary (use additional sheets if necessary)			
<u>Genus/Species</u>	<u>Common Name</u>	<u>Stratum*</u>	<u>Indicator Status</u>

Aquatic Life Observed _____

Dominant Vegetation on Upland Side of the Boundary (use additional sheets if necessary)			
<u>Genus/Species</u>	<u>Common Name</u>	<u>Stratum*</u>	<u>Indicator Status</u>

*Stratum: H = Herbaceous (woody and herbaceous plants <3.2 ft. tall); S = Sapling/Shrub (≥3.2 ft. tall AND <3" DBH); O = Overstory (≥3" DBH)

HYDROLOGY (Requires One Primary or Two Secondary Indicators):

<p>Primary Indicators:</p> <input type="checkbox"/> (✓) Visible observation of inundation (Depth ____ in.) <input type="checkbox"/> (✓) Visible observation of soil saturation (Depth ____ in.) <input type="checkbox"/> (✓) Hydric soils (✓ below) <input type="checkbox"/> (✓) Watermarks <input type="checkbox"/> (✓) Drift lines <input type="checkbox"/> (✓) Sediment deposits <input type="checkbox"/> (✓) Drainage patterns within wetlands <p>Other: _____</p>	<p>Secondary Indicators:</p> <input type="checkbox"/> (✓) Oxidized rhizospheres in upper 12" <input type="checkbox"/> (✓) Water stained leaves <input type="checkbox"/> (✓) Confirm soil profile matches hydric soil list <input type="checkbox"/> (✓) FAC-Neutral test <input type="checkbox"/> (✓) Bare soil areas <input type="checkbox"/> (✓) Morphological plant adaptations (✓ below)
<p>Hydric Indicators for <u>Non-Sandy</u> Soils</p> <input type="checkbox"/> (✓) Organic soils (Histosols) <input type="checkbox"/> (✓) Histic epipedon <input type="checkbox"/> (✓) Sulfidic material (H ₂ S odor) <input type="checkbox"/> (✓) Soil color (immediately below A-horizon or within 10 inches of the surface, whichever is shallower) <input type="checkbox"/> (✓) Gleyed (gray) soil (i.e. matches Gley page) <input type="checkbox"/> (✓) Matrix chroma of 2 or less in mottled soils <input type="checkbox"/> (✓) Matrix chroma of 1 or less in unmottled soils <input type="checkbox"/> (✓) Black mineral soil with gray mottles at ≤ 10 inches <input type="checkbox"/> (✓) Confirm soil profile matches local hydric soil list <input type="checkbox"/> (✓) Iron and manganese concretions <input type="checkbox"/> (✓) Reducing soil conditions (ferrous iron test) <input type="checkbox"/> (✓) Aquic or peraquic moisture regime	<p>Additional Hydric Indicators for <u>Sandy</u> Soils</p> <input type="checkbox"/> (✓) High organic matter in the surface horizon <input type="checkbox"/> (✓) Streaking of subsurface horizons by organic matter <input type="checkbox"/> (✓) Organic pans: at depth of _____ inches
<p>Supplemental Indicators of Hydric Soils: (e.g., NRCS Field Indicators of Hydric Soils):</p> <p>_____</p> <p>_____</p> <p>_____</p>	
<p>Morphological Plant Adaptations Observed(✓): _____ Adventitious roots _____ Shallow root system _____ Floating leaves _____ Inflated leaves, stems, or root _____ Polymorphic leaves _____ Oxygen pathway to roots _____ Floating stem _____ Hypertrophied lenticels _____ Multiple trunks or stooling _____ Buttressed tree trunks _____ Pneumatophores</p>	

SOIL PROFILE NOTES:

Soil Profile on <i>Wetland</i> Side of the Boundary				
Map Unit from Soil Survey:				
Depth (inches)	Matrix color (hue/value/chroma)	Mottle Color (if present)	Texture (e.g., sandy loam, etc.)	Notes
Soil Profile on <i>Upland</i> Side of the Boundary				
Map Unit from Soil Survey (if different than above):				
Depth (inches)	Matrix color (hue/value/chroma)	Mottle Color (if present)	Texture (e.g., sandy loam, etc.)	Notes

WETLAND DETERMINATION

- (✓) Predominance of wetland vegetation (Fac, Fac+, FacW-, FacW, FacW+, OBL) or aquatic life
- (✓) Wetland hydrology and/or hydric soil present
- (Y/N) Is the area wetland (both wetland hydrology/soils and a predominance of wetland vegetation present)?
- (Y/N) Is the area REGULATED wetland (refer to Part 303 - Wetland Jurisdictional Determination Form)?

Wetland Types (✓ all that are present):			
<input type="checkbox"/> (✓) Emergent Marsh	<input type="checkbox"/> (✓) Deciduous Swamp	<input type="checkbox"/> (✓) Fen	<input type="checkbox"/> (✓) Shrub Swamp
<input type="checkbox"/> (✓) Wet Meadow	<input type="checkbox"/> (✓) Coniferous Swamp	<input type="checkbox"/> (✓) Bog/Muskeg	<input type="checkbox"/> (✓) Floodplain Forest
<input type="checkbox"/> (✓) Wet Prairie	<input type="checkbox"/> (✓) Deciduous Forest	<input type="checkbox"/> (✓) Great Lakes Marsh	<input type="checkbox"/> (✓) Submergent Marsh
Other (e.g. rare and imperiled community, reed canary grass dominated, highly disturbed): _____			

Comments: _____



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF AGRICULTURE
AND RURAL DEVELOPMENT

RECEIVED

MAY 25 2011

WASHTENAW COUNTY
ROAD COMMISSION

KEITH CREAGH
DIRECTOR

May 19, 2011

Ms. Sheryl Soderholm Siddall, P.E.
Assistant Director of Engineering
Washtenaw County Road Commission
555 N. Zeeb Road
Ann Arbor, MI 48103

Re: State Road Environmental Assessment – Early Coordination Notification

Dear Ms. Siddall:

I received your request for comment on the proposed improvements to State Road between Ellsworth and Michigan Avenue (US-12) in Pittsfield Township, Washtenaw County.

Our primary concern, as it relates to this project, would be potential impacts the project could have on properties enrolled under Part 361 of NREPA (formerly PA 116, the Farmland and Open Space Preservation Act) and on established intra- and inter-county drains. This area, however, is a highly urbanized corridor. We find no impacts to Part 361 lands. Although limited in detail at this point, the project map indicates that the improvements may impact, directly or indirectly, a county drain. It is anticipated that you will coordinate with the office of Janis Bobrin, Water Resources Commissioner, Washtenaw County, regarding any potential for work that may impact drainage infrastructure.

At this point we do not anticipate other Social, Economic and/or Environmental impacts from the potential project, as they relate to agriculture and the various functions of the Department.

We appreciate being included in this Early Coordination Process. Feel free to contact me at 517-241-3933, if I can be of further assistance on this project.

Sincerely,

Abigail S. Eaton
Environmental Resource Specialist
Environmental Stewardship Division

cc: Janis Bobrin, Water Resources Commissioner, Washtenaw County

Early Coordination Comments-Pottawatomi Indians.txt

From: Monte Davis [mrrdavis@mbpi.org]
Sent: Thursday, June 16, 2011 1:40 PM
To: puenteg@michigan.gov
Subject: comments on widening of State Road

Dear Mr. Puente

We thank you for the information on the proposed widening of State Road in Washtenaw County, Michigan. The Area in question is among the ceded territories of the Pottawatomi Bands of Indians of Michigan who formerly inhabited all of southern Michigan. While we are not familiar with any specific location within the proposed site that would be of archeological or specific historic significance, the area in general continues to hold overall spiritual, cultural and historic significance. That being the case, we ask that you list us as an interested party under Section 106 of the National Historic Preservation Act. We are not necessarily looking for formal consultation but to be informed if any native cultural or historical items are found. Again thank you for your notification and we look forward to hearing from you in the future.

Monte Ray Ross Davis
Environmental Specialist
Match-E-Be-Nash-She-Wish
Band of Pottawatomi Indians

616-681-8830 Office
616-885-2156 Cell
mrrdavis@mbpi.org

Early Coordination Comments-Sag.Chip Indians.txt

From: Esther Helms [EHelms@sagchip.org]
Sent: Tuesday, July 19, 2011 9:53 AM
To: puenteg@michigan.gov
Subject: Widening from 2 to 5 lanes of 3.0 miles of State Road from Michigan Ave. to Ellsworth Rd. in Pittsfield Twp., Washtenaw County, MI

July 19, 2011

Mr. Gonzalo Puente
State of Michigan
Dept. of Transportation

RE: Widening from 2 to 5 lanes of 3.0 miles of State Road from Michigan Ave. to Ellsworth Rd. in Pittsfield Twp., Washtenaw County, MI

Dear Mr. Puente;

This letter is in response to the above referenced project.

At this time we do not have any information concerning the presence of any Indian Traditional Cultural Properties, Sacred Sites or other Significant Properties to the projected project area(s). This is not to say that such a site may not exist, just that this office does not have any available information of the area(s) at this time.

This office would be willing to assist if in the future or during the construction there is an inadvertent discovery of Native American human remains or burial objects. Feel free to call my office if you have any questions or requests at 989-775-4730.

We thank you for including this Tribe in your plans.

Sincerely,

William Johnson /elh
Curator
Ziibiwing Center of Anishinabe Culture & Lifeways
Saginaw Chippewa Indian Tribe of Michigan

6650 E. Broadway Mt. Pleasant, MI 48858 Phone (989)775-4750 or (800)225-8172
Fax (989) 775-4770
www.sagchip.org/ziibiwing
www.nativedirect.com

From: Siddall, Sheryl [siddalls@wcroads.org]
Sent: Tuesday, October 04, 2011 2:40 PM
To: Wes Butch
Cc: Jason Whitten
Subject: FW: Widening state road from Michigan Ave. to Ellsworth Rd., Washtenaw County, Michigan

Wes-

Here is an early coordination response.

Sheryl

Sheryl Soderholm Siddall, P.E.
Assistant Director of Engineering

Washtenaw County Road Commission
555 N. Zeeb Road
Ann Arbor, MI 48103
phone: 734.761.1500
direct: 734.327.6687
fax: 734.761.3239

From: Puente, Gonzalo (MDOT) [<mailto:PUENTEG@michigan.gov>]
Sent: Thursday, August 25, 2011 8:00 AM
To: Siddall, Sheryl
Subject: FW: Widening state road from Michigan Ave. to Ellsworth Rd., Washtenaw County, Michigan

From: Chris Chosa [<mailto:cchosa@kbic-nsn.gov>]
Sent: Thursday, July 28, 2011 3:17PM
To: Puente, Gonzalo (MDOT)
Subject: Widening state road from Michigan Ave. to Ellsworth Rd., Washtenaw County, Michigan

Dear Mr. Puente,

I apologize for the tardiness in response to your requests for comments and other interests concerning Section 106 of the National Historic Preservation Act, to the effect on historic and cultural sites within your proposed project area. The KBIC Tribal Historic Preservation Office has identified no properties of interest regarding religious or cultural sites documented at this time in you proposed location. If the scope of the work changes in any way, or if artifacts or human remains are discovered, please notify the KBIC THPO immediately so we can assist in making an appropriate determination.

Please forward any future consultation requests for review of project proposals pursuant to Section 106 of the National Historic Preservation Act to KBIC THPO, Keweenaw Bay Indian Community Tribal Historic Preservation Office or through email at cchosa@kbic-nsn.gov or jloonsfoot@kbic-nsn.gov and keep us informed of future projects as we continue our efforts to identify and document historic, archaeological, and traditional cultural sites in the area.

The KBIC THPO charges a fee of \$50.00 for review of project proposals, which covers a preliminary in-house review of records for the presence of cultural sites in the proposed project area. Please submit a check for \$50.00 to the KBIC THPO, 16429 Beartown Road, Baraga, Michigan 49908, if you have already done so, thank you, we appreciate your support. Fees help us cover costs of research and other consultation activities.

Thank you again for your patience ,

Chris Chosa
Interim THPO
Keweenaw Bay Indian Community
16429 Beartown Rd
Baraga, MI 49908
(906) 353-6623 ex. 4272

Appendix C - Habitat Assessment



OFFICE MEMORANDUM

Date: July 26, 2012
To: Project File
From: Stephen G. Metzger, AICP, PWS; Jason Whitten
Subject: Threatened & Endangered Species Analysis
State Road Environmental Assessment, Washtenaw County, Michigan

INTRODUCTION

As part of the Environmental Assessment (EA) for State Road, DLZ conducted a field investigation to identify existing habitat and determine the likelihood of Threatened and Endangered (T&E) species existing within the project area. The “project area” includes all areas that would be impacted directly by the Preferred Alternative. Specifically, as defined in this memo, the project area includes all property within the potential construction limits (construction limits are defined as within a 5-foot offset of the proposed non-motorized paths shown on Figure 2 from the EA which is also attached to this memo).

All field investigations and analysis were conducted by qualified biologists. Biographies for the biologists have been included at end of this memo.

THREATENED & ENDANGERED SPECIES ANALYSIS

Coordination and Records Search

Prior to the field investigation, coordination with the Michigan Department of Natural Resources (MDNR) and the United States Fish and Wildlife Service (USFWS), in conjunction with a review of the Michigan Natural Features Inventory (MNFI) database, was conducted to determine the potential for occurrence of threatened, endangered, or species of special concern within or near the project area. The Table 1 identifies the threatened, endangered, or species of special concern listed in the MNFI database that have been identified within or near the project area.

Except for the Indiana bat, Henslow’s sparrow, grasshopper sparrow, and ginseng all of the Federally and state threatened and endangered species and state species of special concern listed in Table 1 are either presumed extirpated or have not been observed in the project area since the late 1920s, with the majority of species being last observed in the late 1800s. Therefore, it is highly unlikely that these species exist within the project area.

Table 1. Threatened, Endangered and Species of Special Concern

Species Common Name (<i>Scientific Name</i>)	Classification	Status
Indiana bat (<i>Myotis sodalis</i>)	Vertebrate Animal	Federally/State Endangered
Henslow's sparrow (<i>Ammodramus henslowii</i>)	Vertebrate Animal	State Endangered
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	Vertebrate Animal	State Species of Special Concern
Kirtland's snake (<i>Clonophis kirtlandii</i>)	Vertebrate Animal	State Endangered
Least shrew (<i>Cryptotis parva</i>)	Vertebrate Animal	State Threatened
American burying beetle (<i>Nicrophorus americanus</i>)	Invertebrate Animal	Federally Endangered
Depressed ambersnail (<i>Oxyloma peoriense</i>)	Invertebrate Animal	State Species of Special Concern
Showy orchids (<i>Galearis spectabilis</i>)	Vascular Plant	State Threatened
White gentian (<i>Gentiana flavida</i>)	Vascular Plant	State Endangered
Pale avens (<i>Geum virginianum</i>)	Vascular Plant	State Threatened
Goldenseal (<i>Hydrastis canadensis</i>)	Vascular Plant	State Threatened
Red mulberry (<i>Morus rubra</i>)	Vascular Plant	State Threatened
Ginseng (<i>Panax quinquefolius</i>)	Vascular Plant	State Threatened
Prairie buttercup (<i>Ranunculus rhomboideus</i>)	Vascular Plant	State Threatened
Compass plant (<i>Silphium laciniatum</i>)	Vascular Plant	State Threatened
Edible valerian (<i>Valeriana edulis var. ciliate</i>)	Vascular Plant	State Threatened
Whiskered sunflower (<i>Helianthus hirsutus</i>)	Vascular Plant	State Species of Special Concern

Indiana Bat

In general, the majority (over 85%) of the non-roadway project area is maintained as mowed turf grass and/or landscaping. Other habitat types within the project area include wetlands, forested areas, and active farm fields.

Habitat

Indiana bat habitat generally falls into three categories: roosting habitat, maternity roosts, and foraging habitat.

- *Roosting Habitat*
 When they are in Michigan during the spring and summer, Indiana bats typically roost under the loose bark of dead trees (typically oak, maple, elm, and ash trees). However, at times, crevices or the bark of living trees are used. Trees that are not obstructed by vines or branches are preferred, and favored roost trees frequently receive large amounts of sunlight, presumably creating a warm microclimate for the bat. Primary roosts usually receive direct sunlight for more than half the day. Roost trees are typically within canopy gaps in a forest, in a fenceline, or along a wooded edge.
- *Maternity Roosts*
 Maternity roost habitats typically occur within riparian zones, bottomland and floodplain habitats, wooded wetlands, and upland communities (USFWS 2007). Maternity colonies concentrate their roosting in large trees, particularly those that are greater than nine inches in diameter. Maternity roosts are typically located in forests with a low to moderate sub-canopy, and often are in or near riparian woodlands or other wetlands.
- *Foraging Habitat*
 Indiana bats forage along river shorelines and over and around many types of woody and woodland vegetation.

Field Observations/Habitat Assessment

Biologists investigated the project area on June 14, 2011 for suitable trees with roost structure and potential foraging habitat. The habitat assessment was based on the potential for use of the area by Indiana bats, including a combination of needs of the species: roost trees, foraging habitat, travel corridors, and water. Trees were inspected on both sides of the roadway within the project area. Potential roost trees were photographed and georeferenced using GPS (see the attached photolog). An inventory of the tree health, bark characteristics, and size of individual trees (dbh = diameter at breast height) was compiled. Trees deemed unsuitable as potential roost habitat include those that lack appropriate landscape context, are not suitable tree species, lack suitable tree structure, or are too small in size (i.e., less than 9-inch diameter).

These field investigations identified 42 potential roost trees within the project area based on tree size, species, and bark condition. These trees exhibit structural characteristics that are attractive to Indiana bats and are located adjacent to or within Wetlands B, E, and G (Figure 2).

Wetland B is a scrub-shrub and forested wetland located just south of the airport on the west side of State Road immediately adjacent to a perimeter roadway for the airport. The dominant wetland vegetation included sandbar willow (*Salix exigua*, OBL), Eastern cottonwood (*Populus deltoides*, FAC+), black willow (*Salix nigra*, OBL), glossy buckthorn (*Rhamnus frangula*, FAC+), reed canary grass (*Phalaris arundinacea*, FACW-), stinging nettle (*Urtica dioica*, FAC+), spotted touch-me-not (*Impatiens capensis*, FACW), American elm (*Ulmus americana*, FACW-), and water-plantain (*Alisma plantago-aquatica*, OBL). The feature had evidence of recent inundation in some areas and areas to the west were inundated.

Wetland E is a scrub-shrub/forested wetland located in the southern portion of the project area on the west side of State Road across from Whitmore Boulevard. Much of the wetland extends to the west outside the project area. The dominant wetland vegetation within the project area included silver maple (*Acer saccharinum*, FACW), red maple (*A. rubrum*, FAC), green ash (*Fraxinus pennsylvanica*, FACW), reed canary grass, bur oak (*Quercus macrocarpa*, FAC-), buttonbush (*Cephalanthus occidentalis*, OBL), giant reed (*Phragmites australis*, FACW+), and sandbar willow. The wetland was inundated at the time of the investigation and appears to have a large permanent pool area.

Wetland G is a scrub-shrub/forested wetland located in the northeast quadrant of the State Road and Old State Road intersection. The dominant wetland vegetation included glossy buckthorn, poison ivy (*Toxicodendron radicans*, FAC+), bur oak, American elm, cattail (*Typha angustifolia*, OBL), reed canary grass, red maple, and Eastern cottonwood.

All other areas within the project area either do not have any trees present or have been determined by field observations to not have potential roost trees.

Of the potential roost trees identified, only a small number are located within overall habitats that could be deemed suitable for bat use, and these are only marginally so. This statement is based on an overall lack of suitable roost trees that have both proper structure and adequate solar exposure. The north-south orientation of State Road limits the solar exposure of most trees within the project area to a short time period in the morning and late afternoon. This is because in the project area, open "edges" of forested areas run primarily north-south, resulting in most trees being shaded by other trees to some degree during much of the day.

The overall landscape context in the project area is not ideal for Indiana bat use. Foraging habitat in and near the project area is limited due to the fragmentation and size of the remaining forested areas and

distance to the nearest river. The lack of a water feature is considered a limiting factor because the closest significant water body (the Huron River) is about 4.5 miles to the north. Indiana bats typically stay within 0.5 miles of their roost for foraging distances (Humphrey et al. 1977). The Ann Arbor Railroad line and a gas pipeline through the project area provide travel corridors, so this habitat criterion is likely not a limiting factor. A drainage ditch is present within the project area, but is not located within a forested area. There are several wetlands (Wetlands B, E, and G, Figure 2) and ponds adjacent to the project area that would be considered foraging habitat for bats.

Conclusion

Considering the information presented above, there are four areas of potential Indiana bat habitat within the project area, and these are shown on Figure 2. The quality of these habitat areas is low to poor based on the professional judgment of the biologists who performed the inventory.

The Preferred Alternative would impact approximately 1.5 acres of potential Indiana bat habitat. The Preferred Alternative would not affect any high quality Indiana bat habitat.

Given that the project area is within the region of Indiana bat activity, tree removal activities proposed as part of the construction project will be restricted to seasons when the bats are not active. Therefore, tree removal activities will not occur from April 15 to September 14. The bats are not active in Michigan from the second week in September to the first of May. Tree removal restrictions will be included in all construction plans.

Henslow's Sparrow and Grasshopper Sparrow

These are small sparrows that are found in Michigan during the summer breeding season and inhabit grasslands, prairies, and open fields. Both species are relatively uncommon, inconspicuous birds. The birds forage on the ground in vegetation, mainly eating insects and seeds. Population numbers of both species have declined steadily over the past few decades, largely because of habitat loss.

Habitat

As noted in the MNFI species abstract, the Henslow's sparrow is an obligate grassland species. Historically, in the Midwest and Great Plains regions, Henslow's sparrows would breed in tallgrass prairie with some forbs and shrubs. Today, they are restricted to neglected grassy fields, pastures and meadows with a scattered shrub presence, and hayfields with dense cover (Whitney et al. 1978, Johnsgard 1979). They are often found in damp/moist low-lying locations, but can also be found in drier habitats. Regardless of location and type of grassland, the breeding habitat of these birds has several necessary features: tall, dense grass; a well-developed litter layer; standing dead vegetation; available perches; and little to no woody vegetation (Pruitt 1996). Habitat size also is extremely important to Henslow's Sparrows. Herkert (1994) reports that habitat area is the most important factor influencing Henslow's sparrow numbers. They are rarely encountered in grasslands under 250 acres in size (MNFI 2001).

Grasshopper sparrows breed in grassland, upland meadow, pasture, hayfield, and old field habitats. Nesting grasshopper sparrows may occur on agricultural lands and airports where such habitats occur. Although grasshopper sparrows may use small grasslands, open areas of over 40 hectares (100 acres) are favored. Optimal habitat for these sparrows contains short- to medium-height bunch grasses interspersed with patches of bare ground, a shallow litter layer, scattered forbs, and few shrubs. Clumped grasses, such as poverty grass (*Danthonia spicata*) and broom-sedge (*Andropogon virginicus*), provide cover and foraging areas and are consequently favored over sod or matting grasses. In addition, orchardgrass (*Dactylis glomerata*), alfalfa (*Medicago sativa*), red clover (*Trifolium pratense*), lespedeza (*Lespedeza*

spp.), and dewberry (*Rubus* spp.) provide sparrow habitat. Shrubs, fence posts, and tall forbs are used as song perches. However, habitats may become unsuitable for nesting grasshopper sparrows if shrub cover becomes too dense. Consequently, the presence and density of grasshopper sparrows at breeding sites varies annually due to habitat changes. Habitat use during the nonbreeding season is similar, although less restrictive, to that of the breeding season, as these sparrows may inhabit thickets, weedy lawns, vegetated landfills, fence rows, open fields, or grasslands (NJDFW 2012).

Field Observations/Habitat Assessment

The presence of these species has been confirmed by the Washtenaw Audubon Society during their annual counts at the Ann Arbor Airport. Based on the counts from 2006 to 2008, both species have been observed on two separate occasions. Both species inhabit the grassy meadow areas south of the main runway, and one observation was located in a wetland on airport property. The grassland areas on airport property are maintained in an agreement with the local Washtenaw Audubon Society. Several observations of the sparrows were also noted in Washtenaw County on eBird.org. Of these eBird.org observations, one sighting of the grasshopper sparrow was noted near the project area at the Ann Arbor Airport. The airport property habitat is located approximately 500 feet from the project area. The project area immediately east of the airport and west of State Road is maintained as gravel parking or mowed turf grass.

Biologists investigated the project area on June 14, 2011 to determine habitat types within the project area. In general, the majority (over 85%) of the non-roadway project area is maintained as mowed turf grass and/or landscaping. Other habitat types within the project area include wetlands, forested area, and active farm fields

Two wetlands (A and B) are located immediately south of the airport (Figure 2). Wetland A is a small emergent wetland located near the south end of the airport that is partially within the perimeter fence of the airport. The portion within the perimeter fence appears to be regularly mowed. The dominant wetland vegetation included giant reed, reed canary grass, wool-grass (*Scirpus cyperinus*, OBL), sedge (*Carex* sp., FAC-OBL), late goldenrod (*Solidago gigantea*, FACW), glossy buckthorn, and joe-pye weed (*Eupatorium maculatum*, OBL).

Wetland B is described above in the Indiana bat section of the memorandum.

Wetland H is an emergent wetland located between Runway Boulevard and Concourse Drive (east of State Road) adjacent to a large open water area. The dominant wetland vegetation included giant reed, reed canary grass, and cattail. The wetland had saturated soils near the surface.

Wetland I is an emergent/scrub-shrub wetland on the east side of State Road across from the airport. The dominant wetland vegetation is reed canary grass, with some shrubs starting to establish. Extensive portions of the northern part of the wetland are mowed to support airport operations. The wetland had no inundation or saturation during the inspection, but aerial photographs show extensive areas of shallow inundation that are seasonal and also likely exist following precipitation events.

No grassland, upland meadow, pasture, hayfield, or old field habitats were identified within the project area. Although not specially surveyed, no Henslow's sparrows or grasshopper sparrows were heard singing or observed during the field visit.

Conclusions

Habitat within the project area is marginal at best for either sparrow species. The repeated disturbance of mowing/landscaping and lack of preferred habitat makes it unlikely that either the grasshopper or Henslow's sparrows utilize the project area. As noted above, higher quality habitat lies outside of the project area, and the sparrows have been observed in these locations.

The Henslow's or Grasshopper sparrow is unlikely to be impacted as the project area does not encompass preferred habitat.

Ginseng

The Michigan Ginseng Act was passed in 1994 to regulate the harvest, sale, and distribution of American Ginseng in Michigan. This act covers both cultivated and wild ginseng, and makes it unlawful to take American ginseng from the wild without a permit from the MDNR.

Habitat

Per the MNFI species abstract, this species is predominantly found in rich hardwoods, often on slopes or ravines, ranging even into swampy portions. It also occurs in wooded dune hollows and leeward slopes along the Lake Michigan shoreline. According to Duane Honsowetz, a long time ginseng hunter in Michigan, Floyd Swink provides the best description of its habitat in *Plants of the Chicago Region* (1974): "in rich woods, with greater occurrence on northfacing slopes. Associates include sugar maple (*Acer saccharum*), white baneberry (*Actaea pachypoda*), maidenhair fern (*Adiantum pedatum*), rattlesnake fern (*Botrychium virginianum*) (known in the south for its ability to indicate "seng" habitat), bitternut hickory (*Carya cordiformis*), blue cohosh (*Caulophyllum thalictroides*), toothwort (*Dentaria* spp.), Dutchman's breeches (*Dicentra cucullaria*), running strawberry bush (*Euonymus obovata*), sharp-lobed hepatica (*Hepatica acutiloba*), red oak (*Quercus rubra*), bloodroot (*Sanguinaria canadensis*), false Solomon's seal (*Smilacina* spp.), basswood (*Tilia americana*), and bellwort (*Uvularia grandiflora*)." Honsowetz adds red maple (*Acer rubrum*) and white ash (*Fraxinus americana*) to the list of associates. He further states that ginseng grows best in heavy soils (clay mixed with gravel) covered with leaf mold or rotted wood. It also grows in clay, sandy-loam or sometimes silt; however, the roots of plants growing in these soils may be considered lower in quality by ginseng collectors (MNFI 1996).

Field Observations/Habitat Assessment

Based on the field investigation, two forested areas were located in the southern portion of the project area (just north of Old State Road). Portions of the forested areas are associated with Wetlands E and G and have also been identified as potential Indiana bat habitat. The forested areas are made up of silver maple, red maple, green ash, reed canary grass, bur oak, buttonbush, giant reed, sandbar willow, glossy buckthorn, poison ivy, American elm, and Eastern cottonwood.

Conclusions

Potential habitat within the project area is limited as result of extensive tree clearing and mowing/landscaping. The forested areas within the project area lack the canopy cover and tree or plants species typically associated with ginseng habitat. Additionally, ginseng was last observed in the area in 1980. Therefore, it is unlikely that ginseng is located within the project area.

Ginseng habitat or individual plants are unlikely to be impacted by the Preferred Alternative as the areas affected are disturbed and not suitable habitat for this plant.

BIOLOGISTS

Stephen G. Metzger, AICP, PWS, Biologist.

B.S. Biology, Central Michigan University, 1986

Mr. Metzger has broad experience related to ecological investigations with over 25 years of experience in this work area. Mr. Metzger is a degreed biologist and has performed many dozens of habitat, wildlife and botanical inventories throughout his career. He has also performed inventories for a variety of special concern species, including mammals, reptiles, birds, and plants. He has extensive training and college coursework in botany, plant taxonomy, and ornithology.

Relevant training/Professional Memberships/Certifications

Professional Wetland Scientist #000473, Society of Wetland Scientists
Michigan Wetland Association
American Institute of Certified Planners
Association of State Wetland Managers
Airport Wildlife Hazard Management, Embry Riddle Aeronautical University
Wetland Soils & Hydrology Course, Wetland Training Institute

Natalie A. Dingledine, Planner/Ecologist

M.S. Zoology, The Ohio State University, 1996

B.S. Zoology, Michigan State University, 1987

Associate of Arts Degree, Liberal Arts, Northwestern Michigan College, 1985

Ms. Dingledine has more than 20 years of professional experience in aquatic and terrestrial ecology including fisheries ecology, invertebrate biology, stream and wetland ecology, and natural resource management. Her specialized skills include biological and water quality sampling, plant and invertebrate taxonomy, Threatened Endangered Species (T&E) habitat reviews, project management, and technical writing. She has extensive experience in the management and implementation of various types of projects for federal and state agencies including ecological surveys, ecological restorations and NEPA compliance projects.

Relevant training/Professional Memberships/Certifications

Wetland Delineation, Northcentral and Northeast Supplement, Michigan Wetland Association

REFERENCES

- Currier, C. 2001. Special animal abstract for *Ammodramus henslowii* (Henslow's Sparrow). Michigan Natural Features Inventory. Lansing, MI.
- Humphrey, S.R., A.R. Richter, and J.B. Cope. 1977. Summer habitat and ecology of the endangered Indiana bat, *Myotis sodalis*. *Journal of Mammalogy* 58: 334-346
- New Jersey Division of Fish and Wildlife (NJDFW). Grasshopper Sparrow, *Ammodramus savannarum*. 7/19/2012. <http://www.nj.gov/dep/fgw/ensp/pdf/end-thrtened/grasshoppersparrow.pdf>
- Penskar, M.R. and P.J. Higman. 1996. Special plant abstract for *Panax quinquefolius* (ginseng). Michigan Natural Features Inventory, Lansing, MI.
- U.S. Fish and Wildlife Service (USFWS). 2007. Indiana Bat (*Myotis sodalis*) Draft Recovery Plan: First Revision. U.S. Fish and Wildlife Service, Fort Snelling, MN. 258 pp.

Indiana Bat Habitat Survey
Photo Log



Photo 1. Eastern cottonwood (*Populus deltoides*)



Photo 2. Black walnut (*Juglans nigra*)



Photo 3. Shagbark hickory (*Carya ovata*)



Photo 4. Shagbark hickory



Photo 5. Snag

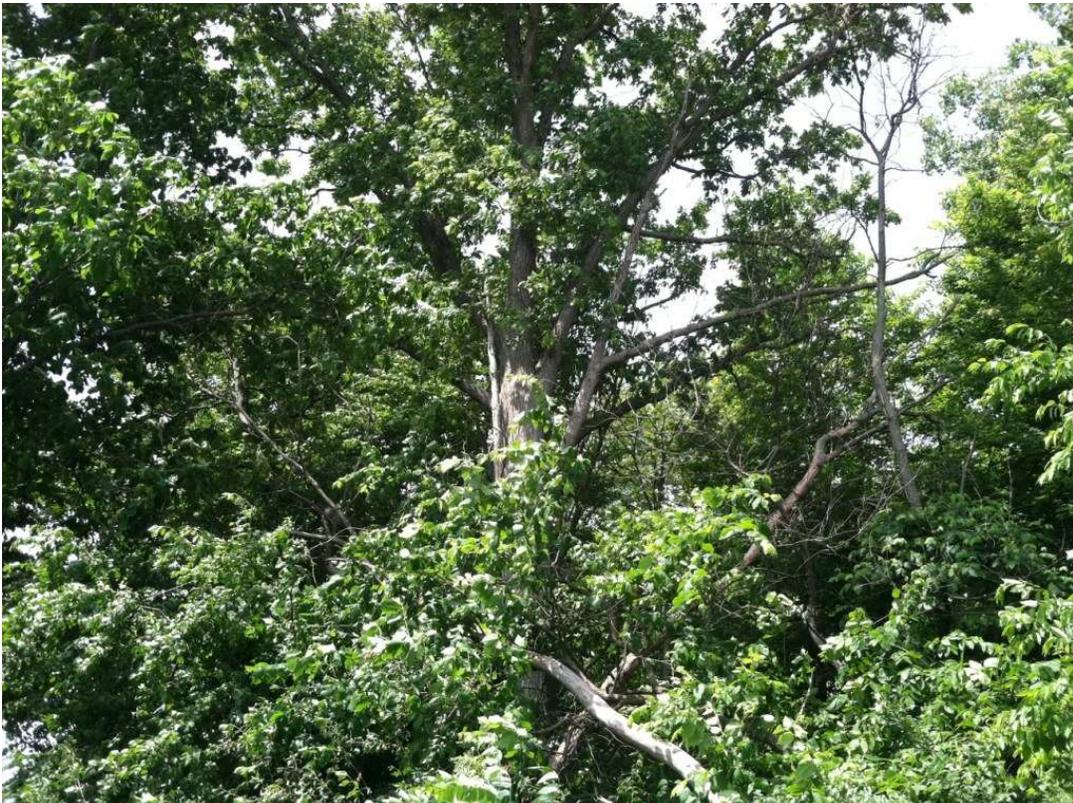


Photo 6. Burr oak (*Quercus macrocarpa*)



Photo 7. Shagbark hickory



Photo 8.



Photo 9.



Photo 10.



Photo 11. Snag



Photo 12.



Photo 13. Burr oak



Photo 14. Burr oak

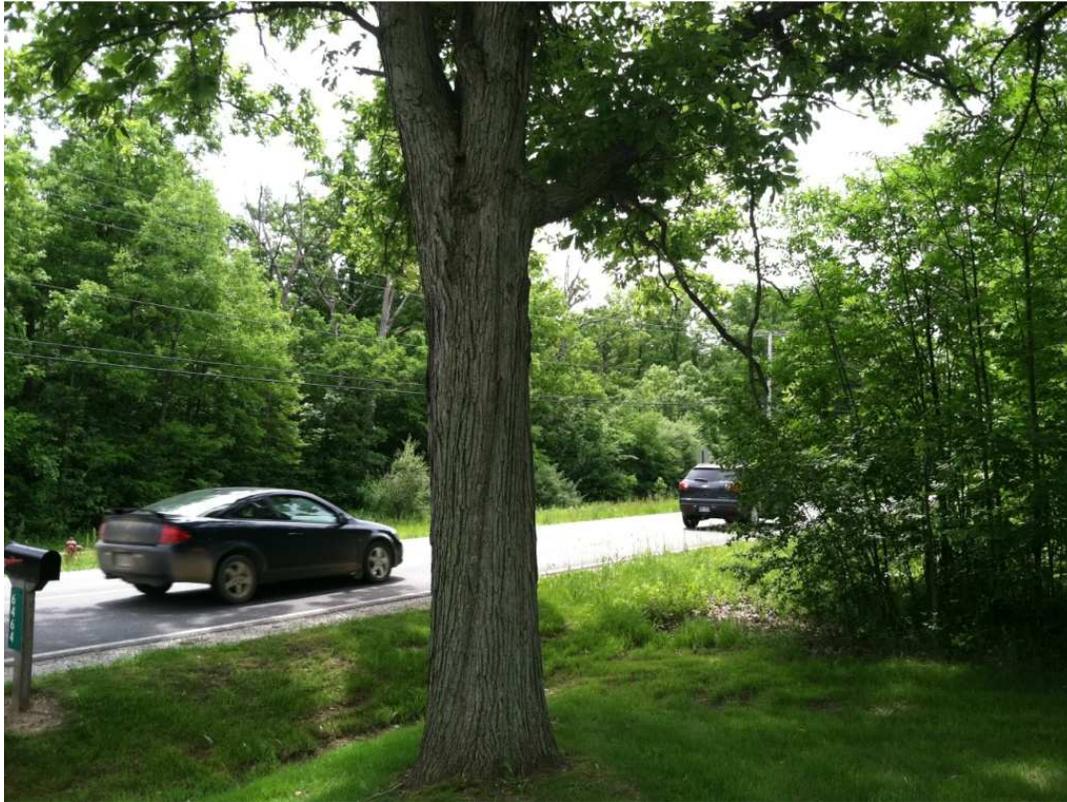


Photo 15. Burr oak



Photo 16. Shagbark hickory



Photo 17.



Photo 18. Shagbark hickory



Photo 19. Shagbark hickory



Photo 20. Shagbark hickory



Photo 21. Eastern cottonwood



Photo 22.

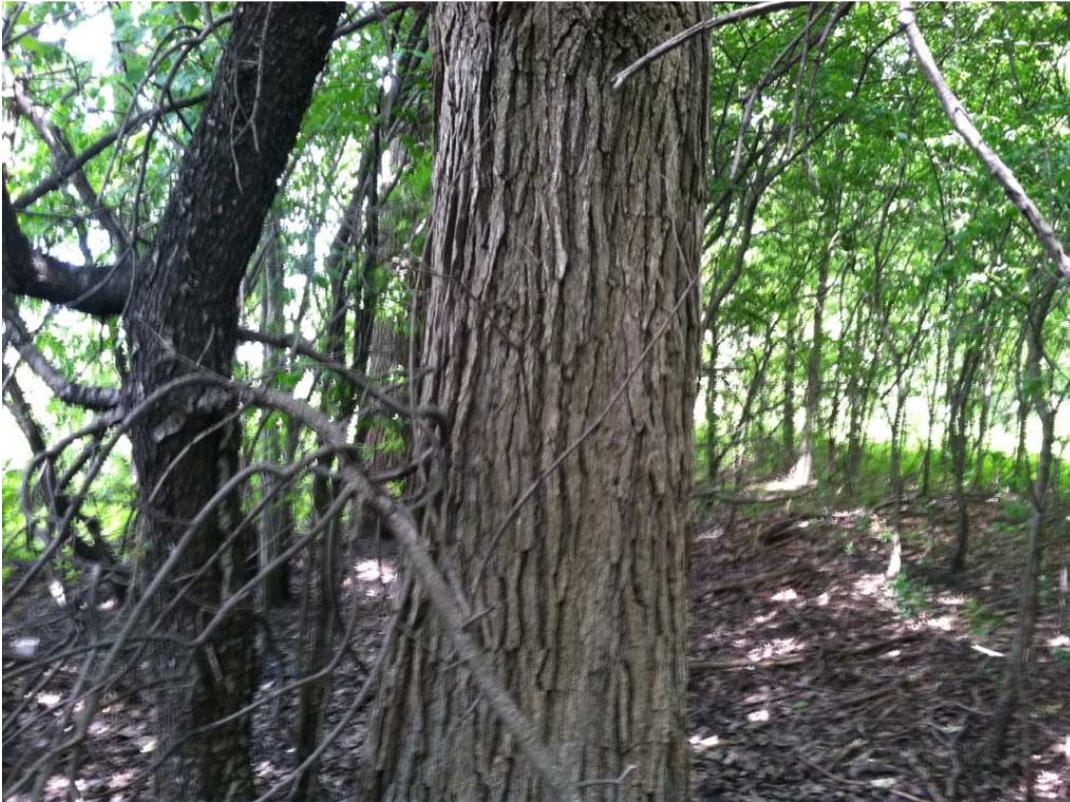


Photo 23. Elm?



Photo 24. Burr oak



Photo 25. Eastern cottonwood



Photo 26. Burr oak



Photo 27. Shagbark hickory



Photo 28. Shagbark hickory



Photo 29. Snag

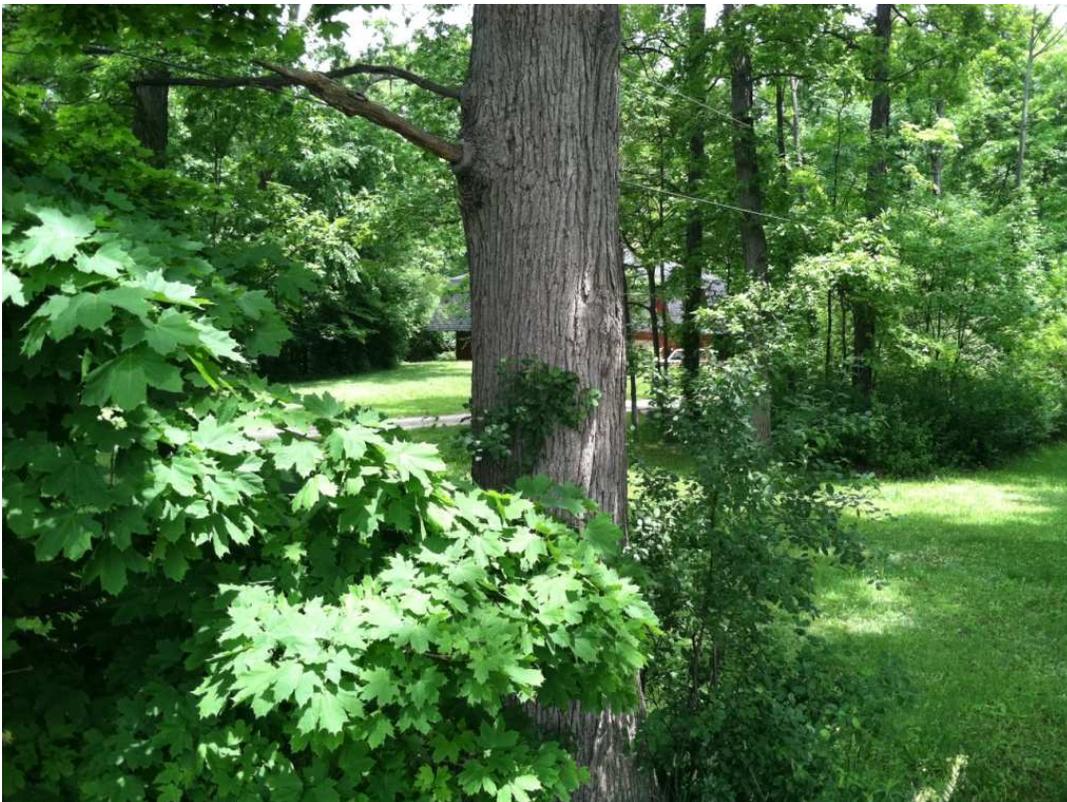


Photo 30. UK



Photo 31. White oak



Photo 32. Eastern cottonwood



Photo 33. Sugar maple (*Acer saccharum*)



Photo 34. Red oak