

Screening of Jackson and Five Corners' Bypasses

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Introduction

This memorandum summarizes the alternatives development process that the project team has shared with agencies and the public at the June 2012 public information meetings in Jackson and Grafton and the September 2012 meeting in Jackson. It constitutes the first step in a multi-step screening process that will lead to the determination of the project's preferred alternative. The focus of the screening decisions in this memorandum is whether the bypasses of Jackson and Five Corners proposed by the project team and a north and south bypass recommended by the public after the June public information meeting are reasonable alternatives that should be considered further at the next Project Advisory Committee meeting and public information meetings.

The project's preliminary range of alternatives was presented to the Project Advisory Committee on April 19, 2012, and to the public on June 20, June 27, and September 13, 2012. Among the preliminary alternatives are north and south bypasses in Jackson and a north bypass at the Five Corners intersection in the Town of Cedarburg. In Jackson and the Town of Cedarburg, the bypasses were developed to allow the public and agencies to evaluate the costs and benefits of avoiding impacts to residential and commercial properties along WIS 60 by moving the proposed improvements away from the existing highway.

At the April 19 meeting, committee members took neither a strong stand of support nor opposition to the bypass alternatives. There was general recognition that the preliminary alternatives constituted a starting point in the alternatives development and screening process, and that alternatives that would not meet the project purpose and need or that had excessive impacts would be eliminated.

Comments received at and after the three public meetings concerning the bypasses were overwhelmingly opposed to them. Of 296 comments received at and after the June 20 meeting in Jackson, 93 were opposed to the south Jackson bypass, 98 were opposed to the north Jackson bypass, and 62 were opposed to both bypasses. In addition, 482 people signed a petition opposing both bypasses. The Village's resolution of August 14, 2012, dismissed the bypasses as infeasible. The resolution of Town of Jackson's August 8, 2012, strongly urged WisDOT to eliminate consideration of the bypass alternatives. At the September 13 meeting in Jackson, which was conducted to obtain input from residents living along the bypasses who did not receive an invitation to the June meeting, 42 of the 70 comments received were opposed to the Jackson bypasses.

In the Town of Cedarburg, there was similar opposition to the Five Corners bypass. Of 176 comments received at and after the June 27 meeting in Grafton, 69 were opposed to the bypass. The Town's resolution of August 1, 2012, "adamantly opposed" the Five Corners bypass.

Alternatives Screening Background

The American Association of State Highway and Transportation Officials' (AASHTO's) *Practitioner's Handbook* (No. 7 August 2007) notes that the term "alternatives screening" is commonly used to refer to the process for reviewing a range of preliminary alternatives or concepts and deciding which ones to carry forward for detailed study. The primary function of an alternatives screening process is to determine reasonableness; that is, screening separates unreasonable alternatives (which can be eliminated without detailed study) from reasonable

1 alternatives (which must proceed to detailed analysis). If there are many reasonable alternatives, the screening
2 process serves to define a reasonable range that represents the full spectrum of reasonable alternatives.

3 NEPA's reasonable alternative test can be applied to the Jackson bypasses and Five Corners bypass alternatives to
4 determine whether the alternatives should be carried forward for further consideration. The Council on
5 Environmental Quality (CEQ) regulations does not define a "reasonable" alternative. The CEQ's guidance states that
6 "[i]n determining the scope of alternatives to be considered, the emphasis is on what is 'reasonable' rather than on
7 whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable
8 alternatives include those that are practical or feasible from the technical and economic standpoint and using
9 common sense, rather than simply desirable from the standpoint of the applicant" (CEQ, Question 2a, *Forty Most
10 Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, March 16, 1981). Alternatives can
11 be eliminated in the screening process based on any factor relevant to reasonableness. An alternative that does not
12 meet the defined purpose and need is by definition unreasonable, and for that reason, it can be eliminated in the
13 screening process. An alternative that *does* meet the purpose and need can still be rejected as unreasonable based
14 on other factors, including environmental impacts, engineering, and cost. For example, if two alternatives both meet
15 the purpose and need to a similar degree but one has much higher impact and is more costly, those factors can be
16 cited as a basis for rejecting the higher impact alternative as unreasonable (AASHTO Practitioner's Handbook 7,
17 *Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects*, August 2007).

18 WisDOT's North and South Jackson Bypasses

19 North Bypass

20 The west terminus of the north bypass is the WIS 60 and County P intersection. The bypass generally would follow
21 the County P alignment north to NW Passage Drive, where it would be aligned northeast through an undeveloped
22 parcel in the Jackson Industrial Park and tie into County C (Cedar Creek Road). The bypass would follow County C
23 until the Jackson Drive intersection, where it would be located on new alignment between residential
24 development on the west and the Jackson Marsh on the east. The north bypass would remain on new alignment
25 until it joins WIS 60 east of the WIS 60 and Maple Road intersection (Exhibit 1).

26 **Natural Resource Impacts.** Just south of NW Passage Drive, the north bypass would cross an unnamed tributary
27 to Cedar Creek and wetlands adjacent to the tributary. Just east of Dry Gulch Drive, the north bypass would cross
28 a wetland on the north side of Cedar Creek Road. East of Jackson Drive, the north bypass would be aligned
29 through a primary environmental corridor and would affect 13 acres of the corridor. Most of the 12.8 acres of
30 wetland impacts and 40.8 acres of floodplain impacts associated with the north bypass, including the elimination
31 of 2 ponds adjacent to the residential development on Creekside Drive, would occur in the area adjacent to the
32 Jackson Marsh between the Jackson Drive intersection and Highland Road. South of Highland Road, the north
33 bypass would be aligned on top of another unnamed tributary to Cedar Creek, and before joining WIS 60, it would
34 cross Cedar Creek. Southeast of Highland Road, the north bypass would sever a large farm separating the
35 residence on Highland Road from the outbuildings to the south. As the north bypass rejoins WIS 60 east of the
36 County G intersection, it would affect 4.5 acres of the Jackson Marsh State Wildlife Area administered by the DNR.
37 Exhibit 1 indicates the natural resource features.

38 **Residential, Commercial, and Community Facility Impacts.** Focusing solely on displacements rather than on
39 residential properties where strip acquisition of new right-of-way would be required, the north bypass would
40 displace 19 residences and 4 undeveloped residential lots in English Oaks Subdivision north of Highland Road. The
41 service station in the northwestern quadrant of the WIS 60 and County P intersection and the Wisconsin Pharmacal
42 plant in the southwestern quadrant also would be affected. The north bypass could adversely affect businesses
43 along WIS 60 like service stations, restaurants and other businesses that are not destination businesses by removing
44 pass-by traffic that would make "impulse purchases" from those businesses.

45 South of Highland Road, the north bypass would acquire 1.75 acres of recreational open space from the north side of
46 the Living Word Lutheran High School property, including the edge of the baseball field. *The Village and Town of
47 Jackson Comprehensive Plan: 2035* recommends the construction of a multi-use path on the north side of Cedar
48 Creek Road to Jackson Drive and south to Creekside Drive. The Village recommended the multi-use path on Cedar

1 Creek Road before the development of the north bypass and as such, it might abandon the plan if the north bypass
2 were selected because of the changed character of Cedar Creek Road.

3 **Neighborhood Impacts.** Beyond the residential displacements noted above, the north bypass could affect nearby
4 neighborhoods. Examples of this are the segments of the north bypass aligned along Cedar Creek Road and
5 adjacent to the neighborhoods along Cameros Way (Appellation Ridge Subdivision—Phase 1) and Hidden Creek
6 Court (Weinands Hidden Creek Subdivision), and the segment of the bypass between the Jackson Marsh and the
7 neighborhood along Creekside Drive. In the case of the neighborhoods along Cedar Creek Road, the north bypass
8 would replace a low-volume 2-lane road with a wider road that would be closer to all residences along Cameros
9 Way and Hidden Creek Court than Cedar Creek Road. The bypass, which would displace several residences on
10 both streets, would increase noise levels and potentially change how the neighborhood residents use the road for
11 pedestrian purposes and bicycling, especially for children.

12 The segment of the bypass adjacent to Creekside Drive (Highland Creek Farms Subdivision) would increase noise
13 levels for the adjacent neighborhood and replace the expansive natural area to the east with a new road. The
14 north bypass would also alter neighborhood development adjacent to Creekside Drive by severing the
15 undeveloped parcel between the Creekside Drive neighborhood and the English Oaks Subdivision to the east. It
16 would appear from the street layout in the Creekside Drive neighborhood that additional residential development
17 is expected between Creekside Drive and English Oaks Drive.

18 According to information on the Village and Town Subdivision Map in *A Joint Parks, Recreation & Open Space Plan*
19 *For The Village of Jackson and The Town of Jackson* (March 2009), the north bypass would acquire property from
20 or displace residences in seven subdivisions in the Village and Town.

21 **Consistency with Regional and Local Plans.** The Jackson bypasses are not included in *The Village and Town of*
22 *Jackson Comprehensive Plan: 2035*, SEWRPC's regional land use or transportation plan, SEWRPC's Planning Report
23 No. 23, *A Jurisdictional Highway System Plan for Washington County*, or SEWRPC's Community Assistance
24 Planning Report No. 287 *A Multi-Jurisdictional Comprehensive Plan for Washington County: 2035*. All the plans
25 recommended improvements along WIS 60 in Jackson. In fact, SEWRPC Planning Report No. 23, *A Jurisdictional*
26 *Highway System Plan for Washington County*, indicated that the agency considered but dismissed a bypass of
27 Jackson. No information was presented in the plan about the impact analysis conducted on a bypass alternative.
28 Clear evidence of the inconsistency of the north bypass with local and regional planning efforts is the number of
29 subdivisions from which the north bypass would acquire new right-of-way and displace residences. If the north
30 bypass had been an established feature in local and regional planning documents, the Village and Town could
31 have reserved a bypass corridor and set back residences or other development beyond the right-of-way needed
32 for the bypass. As a result of the lack of planning for the north bypass, it conflicts with planned development
33 creating the impacts described above.

34 South Bypass

35 The west terminus of the south bypass is the WIS 60 and County P intersection. The bypass generally would follow
36 the County P alignment south to a point about a half mile north of Sherman Road. At that point, it would be
37 aligned southwest on new alignment and tie into Sherman Road at the intersection with Glen Brooke Road.
38 Continuing east along Sherman Road, the south bypass has two different alignments beginning at the Jackson
39 Drive intersection. One alignment (South 2) generally follows Sherman Road to the Maple Road intersection
40 before bending northeast on new alignment and joining WIS 60 at the County G intersection. The second south
41 bypass option (South 1) bends northeast on new alignment along an unnamed tributary to Cedar Creek. The new
42 alignment crosses Hickory Lane and Maple Road before joining WIS 60 at the County G intersection (Exhibit 2).

43 **Natural Resource Impacts.** South of WIS 60, the common segment of the south bypass would cross an unnamed
44 tributary to Cedar Creek within a wetland corridor. The wider footprint of the south bypass would require a wider
45 bridge over the tributary and impacts to the wetland. Where the south bypass leaves County P, it would sever a
46 farm field, cross an unnamed tributary to Cedar Creek, and cross the edge of another farm field as it heads toward
47 Sherman Road. As the south alignment joins Sherman Road, it would cross the south edge of a farm field. East of
48 the Jackson Drive intersection, there is a large wetland complex and floodplain on both sides of Cedar Creek that

1 extends northeast toward WIS 60. The segment of the south bypass aligned along Cedar Creek (Alternative
2 South 1) would be located in that wetland/floodplain corridor until a point northeast of Hickory Road. According
3 to mapping provided in *The Village and Town of Jackson Comprehensive Plan: 2035*, Alternative South 1 would be
4 located in the Cedar Creek floodway between about Sherman Road and Hickory Road. Northeast of Hickory Road,
5 the south bypass would deviate from the Cedar Creek wetland complex and sever another large wetland complex
6 that begins on the east side of Maple Road and extends northeast to WIS 60. The south bypass (Alternative
7 South 1), including the common stem between WIS 60 and the Jackson Drive and Sherman Road intersection
8 would fill 39.3 acres of wetland and 77 acres of floodway/floodplain. Given the amount of wetland and floodplain
9 impacts associated with Alternative South 1, it is highly unlikely that this alternative would meet the criteria the
10 U.S. Army Corps of Engineers and the Department of Natural Resources use to issue the required permits to
11 construct this alternative. Exhibit 2 shows the natural resources along the south bypass.

12 While Alternative South 1 would affect primarily wetlands and floodway/floodplain, the segment extending
13 farther east along Sherman Road (Alternative South 2) would affect primarily agricultural land. East of Maple
14 Road, where Alternative South 2 leaves Sherman Road and is aligned northeast toward WIS 60, it crosses a large
15 block of agricultural land. In this area, the south bypass would sever 6 farms and acquire 52.3 acres of farmland.
16 *The Village and Town of Jackson Comprehensive Plan: 2035* classifies most of the farmland Alternative South 2
17 would affect on new alignment as Tier 1 and Tier 2 farmland. Tier 1 farmland is "agricultural lands identified as
18 best suited for long-term farmland protection for consideration by county and local officials. Tier 2 farmland is
19 "agricultural lands identified as best suited for long-term farmland protection for consideration by county and
20 local officials on a case by case basis." A new roadway along Alternative South 2 would not only have substantial
21 direct impacts on farmland, but also open up the area to development thereby jeopardizing the agricultural
22 preservation recommendations in *The Village and Town of Jackson Comprehensive Plan: 2035*.

23 Including the common stem of the south bypass between WIS 60 and the Jackson Drive and Sherman Road
24 intersection, Alternative South 2 would also affect 15.5 acres of wetland and 40.8 acres of floodplain.

25 **Residential, Commercial, and Community Facility Impacts.** Alternative South 1 would displace 17 structures and
26 24 residential units, and Alternative South 2 would displace 16 residences. According to *A Joint Parks, Recreation
27 & Open Space Plan For The Village of Jackson and The Town of Jackson* (March 2009), the Village is proposing to
28 construct a bicycle and pedestrian trail along Cedar Creek between Sherman Road and a point along the creek a
29 few thousand feet north of WIS 60. The segment of Alternative South 1 between Sherman Road and a point east
30 of Hickory Road would be located in the trail corridor. Although the construction of Alternative South 1 may not
31 preclude the construction of the trail, it would increase the width and impacts of Alternative South 1 and create a
32 trail that would have a distinctly different character than envisioned by the Village in its park plan. In addition,
33 SEWRPC has designated Sherman Road as a regional bicycle route. Because it would increase the traffic along
34 Sherman Road, the south bypass may preclude SEWRPC's designation.

35 Like the north bypass, the south bypass would affect part of the Wisconsin Pharmacal property in the
36 southwestern quadrant of the WIS 60 and County P intersection. The common segment of the south bypass
37 would sever Lammscapes (Landscape Services and Garden & Design Center), which is located on Sherman Road
38 just east of the Glen Brooke Drive intersection. The severance may require the acquisition of the entire property.
39 In addition, the eastern segment of the south bypass would displace the Town of Jackson recycling center in the
40 southwestern quadrant of the WIS 60 and County G intersection. Like the north bypass, the south bypass may
41 adversely affect businesses along WIS 60 that rely, in part, on impulse customers.

42 **Neighborhood Impacts.** Beyond residential displacements, the south bypass would affect neighborhoods north
43 and south of it. Some residences in Twin Creek Subdivision and Sherman Park Subdivision, south of Sherman
44 Road, and Cedar Run Subdivision and Cedar Run Condos Subdivision, north of Sherman Road, would experience
45 an increase in noise levels as a result of the bypass. The north bypass would replace a low-volume 2-lane road
46 with a wider road that would carry substantially more traffic. This change would adversely affect the ambience
47 that many people sought in moving to the subdivisions mentioned above. The loss of the wetlands and open
48 space along Cedar Creek would adversely affect the aesthetics for neighborhoods adjacent to the creek. The lost
49 natural area, like the expanded roadway, would detract from the character of the area that attracted residential

development adjacent to Sherman Road. The south bypass would acquire property from or displace residences in nine subdivisions in the Village and Town. Development has not begun in two of the nine subdivisions.

Consistency with Regional and Local Plans. Like the north bypass, the south bypass is not included in *The Village and Town of Jackson Comprehensive Plan: 2035*, SEWRPC's regional land use or transportation plan, SEWRPC Planning Report No. 23, *A Jurisdictional Highway System Plan for Washington County*, or SEWRPC Community Assistance Planning Report No. 287 *A Multi-Jurisdictional Comprehensive Plan for Washington County: 2035*. The potential impacts of the south bypass on nine subdivisions are one indicator of the level of inconsistency with local and regional planning documents. Because of the amount of farmland the south bypass, particularly Alternative South 2, would cross on new alignment, and the new development that could follow, the south bypass has the potential to completely undo the land use plans and planning that the Village and Town engaged in to develop their joint comprehensive plan.

Are the Jackson Bypasses Reasonable Alternatives?

As noted under "Alternatives Screening Background," alternatives can be eliminated in the screening process based on any factor relevant to reasonableness. An alternative that does not meet purpose and need is by definition unreasonable and can be eliminated. An alternative that meets the purpose and need can still be rejected as unreasonable based on other factors, including environmental impacts, engineering, and cost.

As noted, the primary purpose of the WIS 60 project is twofold:

- To improve the safety of the WIS 60 corridor between the project termini by addressing roadway deficiencies, such as substandard intersection sight distance, atypical intersection configurations, and insufficient intersection turn lanes that contribute to the crash experience in the corridor.
- To improve existing and future travel efficiency in the study area by providing additional capacity to accommodate growing traffic volumes.

The need to evaluate improvements along WIS 60 is based on a combination of factors, with safety and traffic demand/traffic operations being the key deficiencies in Jackson. These need factors are summarized below.

- Safety
 - Excluding deer crashes, there are more crashes in Jackson than in any other project segment.
 - The crash rates in Jackson for incapacitating injuries, property damage only, and total crashes exceed the statewide rate for comparable facilities.
 - The crash rate at the Jackson Drive intersection is approaching 1.0 which is the rate Wisconsin's Traffic Operations and Safety Laboratory uses to identify intersections with a crash problem that should be addressed.
- Traffic Demand/Operations
 - Traffic volumes between County P and Eagle Drive are predicted to increase by up to 58 percent by 2040.
 - Levels of service E and C between County P and Eagle Drive in the evening peak period will degrade to level of service F in the 2040 evening peak period. Level of service F is characterized by stop and go movements with long backups and delays.
 - The level of service at the Jackson Drive intersection will degrade from current level of service D in the evening peak period to level of service F in the evening peak period in 2040. Level of service F in 2040 would result in the complete breakdown in operations at this important intersection in the Village.
 - Anecdotal evidence from Jackson's Project Advisory Committee members indicates that traffic volumes reach a level that makes it difficult for vehicles to exit and enter driveways on Main Street during peak periods.
 - The nonstandard intersection configuration at Jackson Drive (stop bars set back) interferes with efficient traffic operations and create safety issues.

1 With the north or south bypass alternatives, no improvements would be made to WIS 60 in Jackson. The ability of
 2 either bypass alternative to address the safety and traffic deficiencies in Jackson, to meet the project’s purpose
 3 and need, would depend on the ability of the bypass to divert enough traffic from WIS 60 to address the safety
 4 and traffic deficiencies without making physical improvements to WIS 60.

5 From the point east of Maple Road, where the north bypass would rejoin WIS 60 to its west terminus at the
 6 County P intersection, the north bypass would be 3.7 miles long. The distance along WIS 60 between those points
 7 is 2.5 miles, or 1.2 miles shorter than the north bypass. Between the County G intersection and the WIS
 8 60/County P intersection the south bypass (Alternative South 1) would be about 3.8 miles long and Alternative
 9 South 2 would be 3.9 miles long. The distance along WIS 60 between the County G intersection and County P is
 10 2.8 miles, or about 1 mile shorter than the bypass options.

11 Using the posted speed of WIS 60 (25 mph) and the assumed posted speeds of the north and south bypasses
 12 (45 mph), and assuming that for most of the day, traffic would travel through and around Jackson at those
 13 average speeds, travel time along the bypasses would be slightly faster than travel through Jackson (see table).

14 The simple speed calculation in the table to the right does not
 15 address an important question in determining the feasibility of the
 16 north and south bypasses, how much of the traffic is “bypassable?”
 17 Although an origin and destination study has not been completed as
 18 part of this study to answer that question and the issue of which
 19 bypass would attract more of the traffic that wants to bypass
 20 Jackson, SEWRPC’s *A Jurisdictional Highway Plan for Washington*
 21 *County*, Planning Report No. 23 (second edition) sheds light on the
 22 issue. SEWRPC’s report notes that “Review of the traffic volumes
 23 and patterns on STH 60 indicates that a significant part of the traffic
 24 on STH 60 has one trip end in the Village of Jackson.” Even without
 25 knowing exactly where in the Village the trip ends are located, the
 26 fact that a significant part of the WIS 60 traffic in Jackson wants to
 27 be in Jackson suggests that a bypass may not draw enough traffic off WIS 60 to address the safety and traffic
 28 operation deficiencies noted on page 5. The inability to draw enough traffic off WIS 60 to reduce the crash rate to
 29 below the statewide average or allow Main Street residents to safely exit and enter their driveway or improve traffic
 30 operations at the Jackson Drive intersection would mean that the bypasses would be unable to meet the project’s
 31 purpose and need. The inability to meet purpose and need alone is sufficient reason to eliminate the bypasses from
 32 further consideration.

	Miles	Speed (mph)	Time (min.)
North Bypass			
Distance on WIS 60	2.5	25	6.1
Bypass distance	3.8	45	4.9
South Bypass			
Distance on WIS 60	2.8	25	6.7
Inner bypass (South1)	3.8	45	5.0
Outer bypass (South2)	3.9	45	5.2

33 As noted, alternatives can be eliminated in the screening process based on any factor relevant to reasonableness.
 34 The original intent behind developing the Jackson bypasses was to create alternatives that showed the benefits
 35 and costs of avoiding the displacements and other impacts on Main Street in the Village. While the north and
 36 south bypasses do have fewer residential impacts than some alternatives along Main Street, they are no more
 37 effective at avoiding residential impacts than other alternatives along Main Street. What is notable about the
 38 bypass alternatives is the level of natural resource impacts that are not shared by alternatives along Main Street.
 39 In attempting, and failing, to reduce substantial residential and commercial displacements along Main Street, the
 40 Jackson bypasses adversely affect a large number of acres of wetlands, floodways/floodplains, and farmland.
 41 Overall, the Jackson bypasses have a greater level of direct impact than alternatives that would improve WIS 60.
 42 Beyond the greater direct natural resource impacts of the bypass alternatives, the indirect impacts of the
 43 bypasses and unplanned development following a new roadway have the ability to invalidate past Village and
 44 Town planning efforts intended to create relatively dense development that could be efficiently served by Village
 45 sewer and water that was consistent with the community character.

46 Screening Recommendations

47 Given SEWRPC’s assessment that traffic volumes and patterns on WIS 60 indicate that a significant amount of
 48 traffic on WIS 60 has one trip end in the Village of Jackson, it is unlikely that a sufficient amount of traffic would

1 use the bypass to address existing and future safety and traffic operations deficiencies in the Village. It should be
 2 noted that to serve uses on existing roads that would be part of the bypasses (e.g. County P on the north bypass
 3 and Sherman Road on the south bypass) and to prevent land locking properties, the north and south bypasses would
 4 have a number of access points that would increase the potential for conflicts between turning traffic and through
 5 traffic. While some traffic would benefit from a bypass, the inability to address the deficiencies caused by the traffic
 6 remaining on WIS 60 means the bypasses would not meet the project purpose and need, nor would the bypasses
 7 meet purpose and need as fully as alternatives that directly address the transportation deficiencies on Main Street.

8 The inability to meet purpose and need is sufficient reason to eliminate the Jackson bypasses from further
 9 consideration. It should be noted, however, that the substantial natural and socioeconomic impacts of the bypasses
 10 are contributing reasons for eliminating the alternatives. The Jackson bypasses have residential and commercial
 11 displacement impacts similar to the alternatives on Main Street, and it is likely they will have some adverse impact
 12 on the businesses on Main Street because of the loss of impulse customers. In addition, the bypass alternatives
 13 separate themselves from alternatives along Main Street in their impacts to wetlands, floodplains, floodway, and
 14 farmland. The level of the bypasses' direct natural resource impacts, particularly impacts to waters of the U.S.,
 15 makes them unreasonable alternatives, and alternatives that regulatory agencies would find very difficult to permit
 16 given other improvement options in the study area.

17 The bypass alternatives' complete lack of consistency with local planning decisions is evidenced in their level of
 18 overall impacts and the opposition to the bypasses by the Village and Town and the public, who have made location
 19 decisions based on past planning.

20 For the reasons noted above, the north and south Jackson bypasses are considered unreasonable alternatives, and it
 21 is recommended that they be eliminated from consideration.

22 **Five Corners Bypass**

23 The west terminus of the Five Corners bypass is County Y. About 1,300 feet east of County Y, the two bypass
 24 alternatives split. The north alignment (Alternative North 2) would leave WIS 60 and be aligned about 1,200 feet
 25 north of WIS 60. At County NN, the north alignment would bend slightly northeast to create better intersection
 26 angles with County NN and Covered Bridge Road. East of Covered Bridge Road, the north alignment would be
 27 aligned southeast crossing through Covered Bridge Airport and the south edge of North Shore United's Airport
 28 practice soccer fields before rejoining WIS 60 at County I (Exhibit 3).

29 The south alignment (Alternative North 1) would be located along WIS 60 from County Y to a point 1,200 feet east
 30 of Horn's Corners Road, where it would run northeast on new alignment, cross through Johnson's Gardens parcel
 31 and continue northeast to County NN where it would create a new intersection just south of the intersection
 32 created by Alternative North 2. Continuing northeast, Alternative North 1 would join Alternative North 2 at the
 33 Covered Bridge Road intersection and follow that alignment to County I (Exhibit 3).

34 **Natural Resource Impacts**

35 Between County Y and County NN, both alternatives would affect large wetlands and cross several unnamed
 36 tributaries to Cedar Creek. Alternative North 1, which is aligned along WIS 60 for a greater distance than Alternative
 37 North 2, would affect 16.3 acres of wetland. Alternative North 2 would affect 10.3 acres. As a point of comparison,
 38 the on-alignment alternatives would affect 8.3 to 10.3 acres of wetland. West of Horns Corner Road, Alternative
 39 North 1 would affect 2.6 acres of primary environmental corridor and Alternative North 2, 3.8 acres. Both
 40 alternatives would sever agricultural fields west of County NN, and east of County NN, where the alternatives share
 41 a common alignment. Both would sever the agricultural land east of Covered Bridge Airport and the farmed parcels
 42 within the airport property. Exhibit 3 shows the natural resources along the Five Corners bypass alternatives.

43 **Residential/Commercial/Community Facility Impacts**

44 Alternative North 1 (located along WIS 60) would displace five residences and Alternative North 2 would displace
 45 six. Both alternatives would displace a potentially historic residence on the east side of County NN. Alternative
 46 North 1 would have two commercial displacements, including Johnson's Gardens, and Alternative North 2 would

1 have one. Like the Jackson bypass alternatives, the Five Corners bypasses may draw traffic away from the
2 businesses along WIS 60 in the Five Corners intersection area. Compared to the on-alignment alternatives, the
3 Five Corners bypass would have similar residential impacts but six to eight fewer commercial displacements.

4 Both alternatives would cross the southern portion of a 30-acre undeveloped property owned by St. Francis
5 Borgia Parish immediately adjacent to the parish's developed property. According to information provided by the
6 parish, there are plans to build a 60,000-square-foot school, parking areas, and athletic fields on the undeveloped
7 property beginning in 2014 (Exhibit 4). In the longer term, the parish may also construct a new church on the
8 undeveloped parcel. The school, parking area, and athletic fields are estimated to cost \$9.5 million. The parish
9 thus far has raised \$5 million toward the cost of the school and has spent nearly \$1 million on surveys, tests and
10 plans for the project. The Five Corners bypass would cross through the area where the school and future church
11 would be built. Not only would the bypass create a barrier between the two halves of the church property, but
12 also the amount of property it would acquire would likely prevent development of all of the facilities proposed by
13 the parish. Because of wetlands on the undeveloped parcel and the need to construct a mound system, there are
14 undevelopable areas on the north half of the church property that prevent re-arranging the parish's facilities on
15 the remaining land north of the bypass. At a meeting in February 2013 with representatives from St. Francis
16 Borgia, they indicated the Five Corners bypass would preclude their planned development.

17 Both bypass alternatives cross two of the Covered Bridge Airport Field's runways, which may cease airfield
18 operations. The aviation community is very concerned about losing the airport, which serves as an emergency
19 landing area and is used extensively for training student pilots.

20 Finally, the bypass alternatives would acquire a strip of right-of-way from the south edge of the North Shore
21 United Soccer Club's Airport fields, including the parking lot. The Grob family, which owns Covered Bridge Airport
22 Field, also owns the soccer fields. The soccer club indicated the fields are extensively used and with a shortage of
23 fields in the general project area, the loss of field space would be a severe impact on its overall program.

24 **Neighborhood Impacts**

25 Of the two Five Corners bypass options, Alternative North 2, located north of WIS 60, would have greater impacts
26 on neighborhoods than Alternative North 1. Because Alternative North 2 is about 1,200 feet north of WIS 60, it is
27 aligned near the subdivisions that developed away from WIS 60 and it would have proximity impacts on
28 neighborhoods between County Y and Covered Bridge Road. From west to east, Alternative North 2 would be
29 aligned near the neighborhoods on Lawndale Drive, Pheasant/Oakridge Lane, Emerald Court/Malone Court, and
30 in Covered Bridge Estates subdivision. Like the Jackson bypasses, the Five Corners bypass would increase noises
31 levels in the neighborhood, replace open space and natural areas with a highway, and, in general, change the
32 character of the neighborhood.

33 **Consistency with Regional and Local Plans**

34 The Five Corners bypass is not identified in the regional land use or transportation or the following SEWRPC plans:

- 35 • Amendment to Planning Report No. 17, *Amendment to Ozaukee County Jurisdictional Highway System Plan:*
36 *2010* (January 1993)
- 37 • *A Multi-Jurisdictional Comprehensive Plan for Ozaukee County: 2035* SEWRPC Community Assistance Planning
38 Report No. 285 (SEWRPC 2008, amended May 2009).

39 In fact, the regional transportation plan and the two planning reports above call for capacity expansion along WIS 60.

40 At the local level, the Five Corners bypass was not included in The Town of Cedarburg's *Town Comprehensive Plan:*
41 *2035* or the *Five Corner's Master Plan* (2007). The bypass would be contrary to the purpose of the *Five Corner's*
42 *Master Plan*, which is to create a vibrant and pedestrian-friendly "town center," along WIS 60 featuring mixed-use
43 development and providing a focal point and gathering place for the town. The bypass, particularly Alternative 1
44 North, would either eliminate or conflict with proposed local roads north of WIS 60 and west of County NN
45 designed to provide access to new development and circulate traffic within the town center without using WIS 60.
46 Both bypass options would also eliminate planned development parcels on the west side of County NN. It is

1 possible that the bypass' impact on the road network and development parcels as well the diminished importance
 2 of existing WIS 60 could greatly alter the master plan recommendations in the northwest quadrant of Five Corners
 3 or potentially prevent the recommendations from being implemented at all.



105_Wis60PN

4 Source: Five Corners Master Plan, Town of Cedarburg

4

5 Is the Five Corners Bypass a Reasonable Alternative?

6 As noted, the purpose of the WIS 60 project is to improve the safety of the WIS 60 corridor and to improve
 7 existing and future travel efficiency. The need to evaluate improvements along WIS 60 is based on a combination
 8 of factors, with safety and traffic demand/traffic operations being the key deficiencies in the Five Corners bypass
 9 area as they are in Jackson. The need factors in the Five Corners area are summarized below:

- 10 • Safety
- 11 – The Five Corners intersection has the highest intersection crash rate in the project area. The intersection's
 12 nonstandard configuration in part accounts for the crash rate.
- 13 – The segment of the Five Corners bypass between County Y and the west side of Five Corners is part of the
 14 project's rural area. The crash rate in the rural area for all crash types, including fatal crashes, exceeds the
 15 statewide average for comparable facilities.
- 16 • Traffic Demand/Operations
- 17 – Traffic volumes between County Y, where the Five Corners bypass begins and County I, where the bypass
 18 ends, are predicted to increase 74 percent by 2040.
- 19 – The level of service C at the Five Corners intersection will degrade to level of service F in 2040. While level
 20 of service C results in a 20- to 35-second delay per vehicle passing through the intersection, level of
 21 service F would result in a delay of greater than 80 seconds per vehicle, meaning that some vehicles
 22 would not clear the intersection in one signal cycle.

1 With relocated state highways, WisDOT implements access control using State Statute 84.295. This would be the
 2 case for the new alignment of the Five Corners Bypasses. Even with substantially limited access on the new
 3 alignment, there would still be traffic and other issues in the general Five Corners intersection area to consider.
 4 Although an intersection with Covered Bridge Road is shown on Exhibit 3, it is likely that, for intersection spacing
 5 reasons, WisDOT would not allow an intersection there. Restricted access to the bypass route on Covered Bridge
 6 Road likely would require the Town's Fire Department, on Covered Bridge Road just north of the Five Corners
 7 intersection, to travel to the proposed County NN intersection to serve calls to the east and west. The time spent
 8 to reach the proposed bypass intersection would increase response time. Restricted access on Covered Bridge
 9 Road likely also would mean that residential development north of St. Francis Borgia Church would experience
 10 out-of-direction travel when traveling west. Residential traffic likely would have to travel north to Cedar Creek
 11 Road and then south on County NN to reach the bypass. Although not related to implementing access control on
 12 Covered Bridge Road, residential development south of WIS 60 west of Horns Corners Road would also experience
 13 out-of-distance travel when traveling west on WIS 60. Access control on the Five Corners bypass would require
 14 some residents with access to existing WIS 60 to travel east to Horns Corners and north to the proposed bypass
 15 intersection before traveling west.

16 Future WIS 60 traffic traveling to and from the industrial park in the southeast quadrant of the Five Corners
 17 intersection (or other businesses between the access-controlled Five Corners bypass tie-in points) and to
 18 destinations in the City of Cedarburg south along Washington Avenue (WIS 143) would have to travel through two
 19 intersections (Five Corners and the proposed County NN intersection) to access WIS 60. Beyond the issue of extra
 20 travel, passing through two intersections increases the potential for conflict and potential safety issues. Although
 21 less traffic would be routed through the Five Corners intersection with the Five Corners bypass, the
 22 unconventional intersection configuration would still pose safety issues for traffic that must travel through the
 23 intersection to access the bypass.

24 Finally, the Five Corners Bypasses could adversely affect non-destination businesses on WIS 60 between the
 25 access-controlled Five Corners bypass tie-in points because of the reduction in pass-by traffic as compared to an
 26 on-alignment alternative. This situation would be comparable to the adverse effects the proposed Jackson
 27 bypasses could affect businesses in Jackson. This is a different issue than the likelihood that the bypasses would
 28 preclude the new development envisioned in the Five Corners Town Center planning. See inset on page 9.

29 As in Jackson, the intent behind developing the Five Corners bypass was to create alternatives that showed the
 30 benefits and costs of avoiding the displacements along WIS 60, particularly commercial displacements east of Five
 31 Corners. The Five Corners bypass would have fewer commercial displacements than on-alignment improvement
 32 alternatives, but it would have a greater level of impacts to wetlands and Covered Bridge Field Airport. The Five
 33 Corners bypass would also have substantially greater impacts to planned development on the St. Francis Borgia
 34 Church property and the town-center development envisioned by the Town of Cedarburg. The bypass' impacts to
 35 the St. Francis Borgia property, the town-center concept and the airport, which would not occur with
 36 improvements along WIS 60, would transform the Five Corners area in a way contrary to the Town of Cedarburg's
 37 vision as expressed in local planning documents.

38 **Screening Recommendations**

39 For the reasons listed below the Five Corners bypasses would not meet purpose and need as fully as the on-
 40 alignment alternative:

- 41 • The bypasses would create out-of-distance travel for commercial/industrial uses and residents whose access
 42 would be on existing WIS 60 between each end of the access-controlled Five Corners bypass, including the
 43 Town of Cedarburg Fire Department.
- 44 • The bypasses could adversely affect businesses on existing WIS 60 between each end of the access-controlled
 45 Five Corners bypass due to the reduction in pass-by traffic (as compared to an on-alignment alternative).

- 1 • The access-controlled bypasses would reduce the amount of traffic passing through the Five Corners
2 intersection, but they would not eliminate the atypical intersection configuration and the potential safety
3 problems it would pose even with reduced traffic volumes.
- 4 • The bypasses would not address geometric deficiencies along existing WIS 60 between each end of the
5 access-controlled bypasses.

6 In addition, the natural and socioeconomic impacts of the Five Corners bypass alternative are notably greater than
7 impacts associated with improvements along WIS 60. The potential of the bypass alternative to preclude the
8 planned development on St. Francis Borgia's property, terminate operations at Covered Bridge Airport Field, and
9 substantially alter the Town of Cedarburg's town-center development vision at the Five Corners intersection
10 represents a major deviation from the careful planning the Town has conducted in the central business area of the
11 community. The inconsistency of the Five Corners bypass with local planning goals, and its natural resource and land
12 use impacts, make it an unreasonable alternative. As a result, it is recommended the Five Corners bypass
13 alternatives be eliminated from further consideration.

14 **Bypasses Recommended by the Public**

15 **Far South Bypass (Western Avenue)**

16 As a means of avoiding Jackson's businesses on WIS 60, a project-area resident suggested using Maple Road,
17 which is located east of Eagle Drive and on the east edge of the Village, and Western Avenue as a connection to
18 County P and US 45 (Exhibit 5). Western Avenue is about 1 mile south of Sherman Road and 2 miles south of WIS 60.
19 It does not have an interchange with US 45. While there is less development along Western Avenue than Sherman
20 Road that would be affected by a bypass, the out-of-distance travel associated with this alternative makes it
21 unlikely that it would draw traffic from WIS 60 through Jackson. The distance between Maple Road and US 45
22 along WIS 60 is about 2.25 miles. Using the Western Avenue bypass, the distance between Maple Road and US 45
23 would be about 6.25 miles. The unattractiveness of this alternative from a travel time standpoint would almost
24 certainly guarantee that most through traffic on WIS 60 would continue to use Main Street through the Village.
25 Beyond the issue of travel time, this alternative's ability to divert traffic from WIS 60 is compromised, like the
26 North and South Jackson Bypasses, by SEWRPC's finding that a significant part of the traffic on STH 60 has one trip
27 end in the Village of Jackson. See page 6 for more information. As a result, the Far South Bypass would not address
28 the worsening transportation deficiencies in the Village that would be expected with increased traffic volumes.

29 For the reasons noted above, the Far South Bypass using Western Avenue is considered unreasonable, and it is
30 recommended that it be eliminated from consideration.

31 **Far North Bypass (County NN)**

32 To avoid impacts to historic resources in the heart of the Village of Jackson, several project area residents
33 recommended that WisDOT sign County NN between US 45 and the Five Corners intersection in the Town of
34 Cedarburg as WIS 60. Under this concept, existing WIS 60 in Jackson and to the east would be designated
35 Business 60. Critical to this concept would be the need to extend County NN to US 45 and to construct an
36 interchange there (Exhibit 6). County NN currently terminates at County P. The need to construct a new US 45
37 interchange at County NN extended is perhaps the most serious flaw with this alternative. Beyond the issue of the
38 cost to construct the interchange, an interchange at County NN would not meet minimum interchange spacing
39 guidelines for rural areas. The American Association of State Highway and Transportation Officials' *A Policy on*
40 *Geometric Design of Highways and Streets* (2011 Green Book) states that generally there should be at least
41 2 miles between interchanges in rural areas. An interchange at County NN would be about 2 miles south of the
42 Paradise Drive interchange in West Bend, but it would be only about 1 mile north of the Pleasant Valley Road
43 interchange. It is highly unlikely that an argument could be developed to justify the need for a County NN
44 interchange given its inability to meet minimum spacing standards.

45 In addition to not meeting minimum spacing requirements, there is a question of how much traffic the bypass
46 option would draw from WIS 60. Traffic from the West Bend area bound for the Town of Cedarburg or points east,
47 and the return trip, likely would use the County NN bypass. However, northbound traffic on US 45 destined for

1 the Town of Cedarburg or Grafton/Cedarburg traffic destined for Jackson or US 41 likely would not use the bypass.
2 It is nearly 14 miles from the US 45/WIS 60 interchange to Five Corners using the County NN bypass and about 9
3 miles using WIS 60. As with the other Jackson bypass alternatives evaluated in this memorandum, this
4 alternative's ability to divert traffic from WIS 60 is compromised not only by out-of-distance travel, but also by
5 SEWRPC's finding that a significant part of the traffic on WIS 60 has one trip end in the Village of Jackson. Therefore,
6 it is reasonable to expect that the County NN bypass would be unable to draw a sufficient amount of traffic from
7 WIS 60 within the Village to resolve the existing and future crash experience and to lower volumes to address
8 expected declines in the level of service on WIS 60. As such, it would not address the need for the project and
9 should be eliminated from further consideration.

10 **Summary**

11 This memorandum describes the reasons for eliminating the north and south Jackson bypasses and the Five
12 Corners bypasses in the Town of Cedarburg. Because the project's preliminary range of alternatives would
13 displace a notable number of residential and commercial properties, the project team developed the bypasses to
14 show the public and resource agencies the benefits and costs of avoiding the displacements along WIS 60 in the
15 Village of Jackson and Town of Cedarburg. Although the Jackson and Five Corners bypasses have different impacts
16 they share similar characteristics that explain why WisDOT is recommending they be eliminated from further
17 consideration. The Village of Jackson and Five Corners bypasses do not fully address transportation deficiencies on
18 the segments of WIS 60 that would be bypasses and, therefore, do not fully address the project's purpose and
19 need. In addition, the bypasses have substantial displacements and they have a level of natural resource impacts
20 not associated with improvements along WIS 60. The bypass alternatives' complete lack of consistency with local
21 planning decisions is evidenced in their level of overall impacts and the opposition to the bypasses by the Village and
22 Town of Jackson, the Town of Cedarburg and the public, who have made location decisions based on past planning.

23 This memorandum also recommends the elimination of a far south bypass alternative of the Village of Jackson
24 and a far north bypass of the Village that would extend from near US 45 to the Five Corners intersection in the
25 Town of Cedarburg. In addition to other flaws, both alternatives are so removed from the WIS 60 corridor that
26 would be expected to remove less traffic from WIS 60 than the north and south Jackson bypasses and the Five
27 Corners bypasses. As a result, these alternatives would also not meet the project's purpose and need.



Exhibit 1
Jackson North Bypass



Exhibit 2
Jackson South Bypass

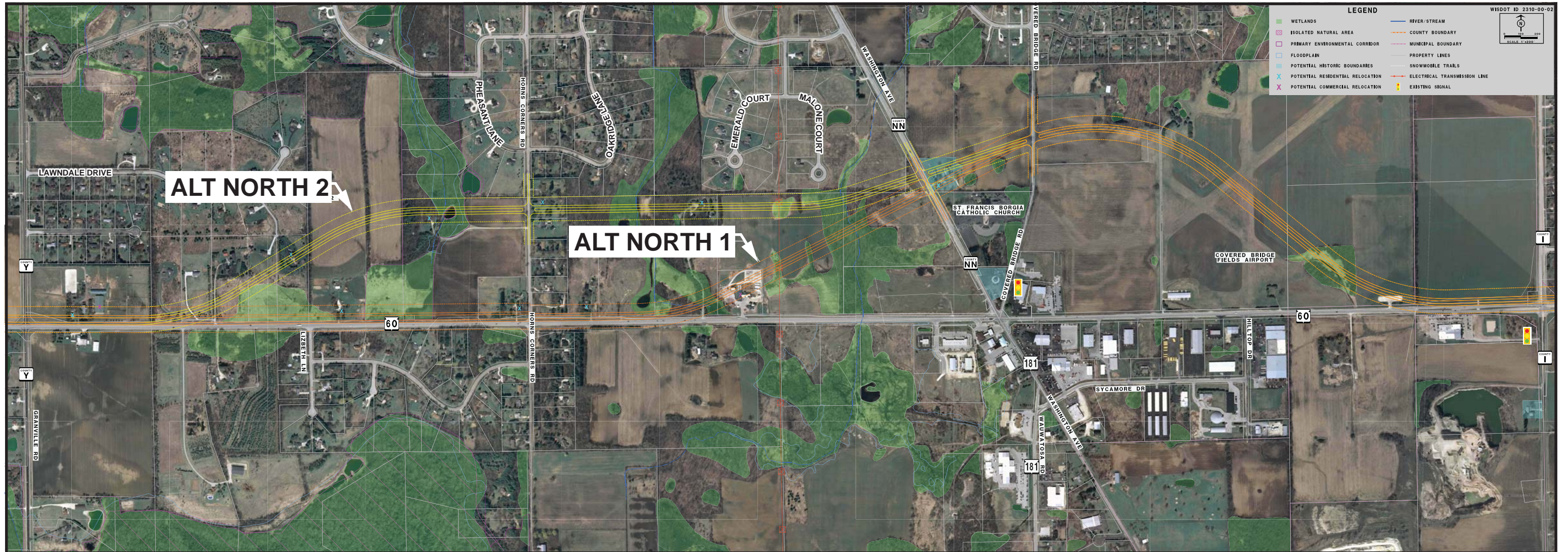
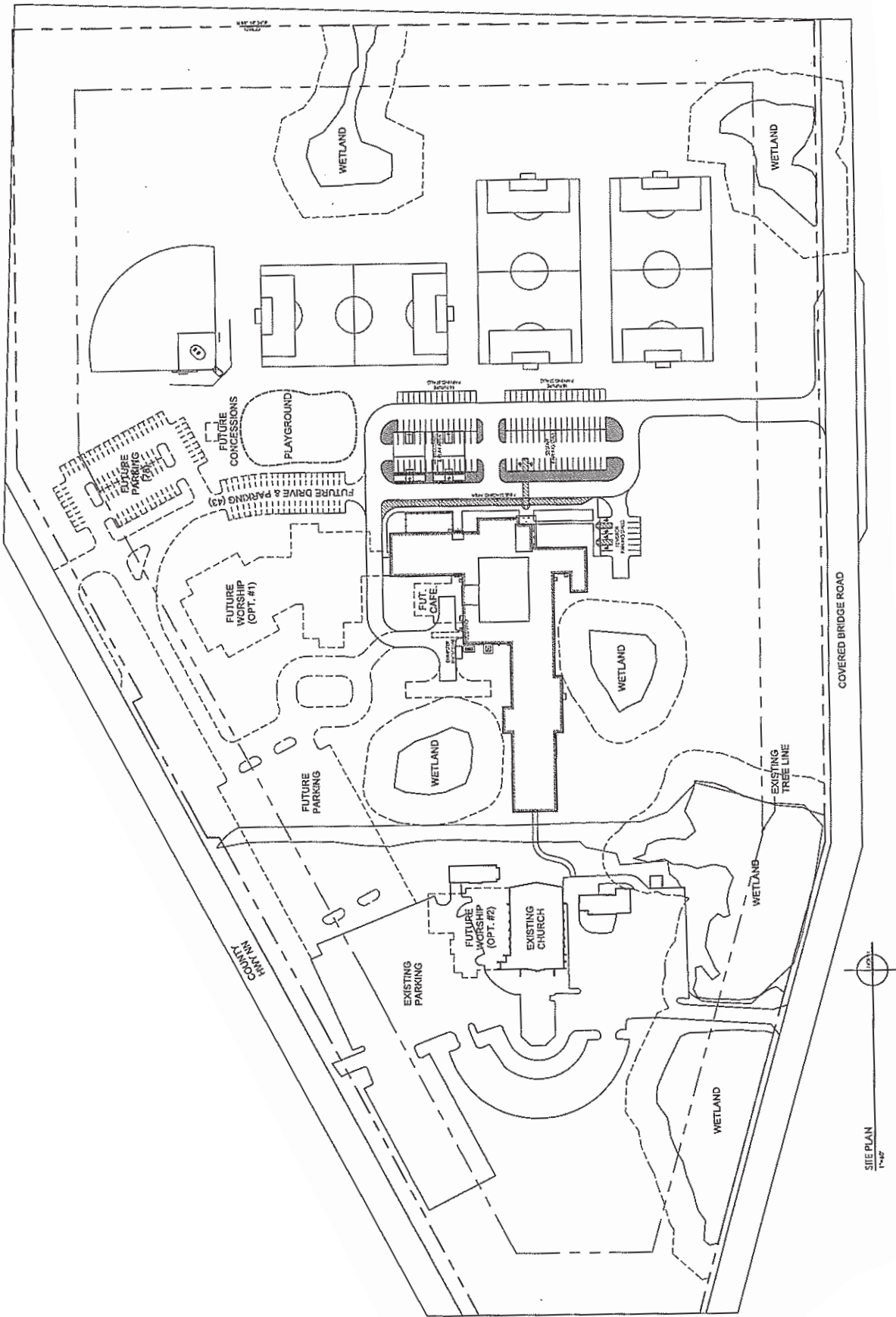


Exhibit 3
Five Corners Bypass



Source: Groth Design Group, August 5, 2010

Exhibit 4
St. Francis Borgia Education and Activity Center

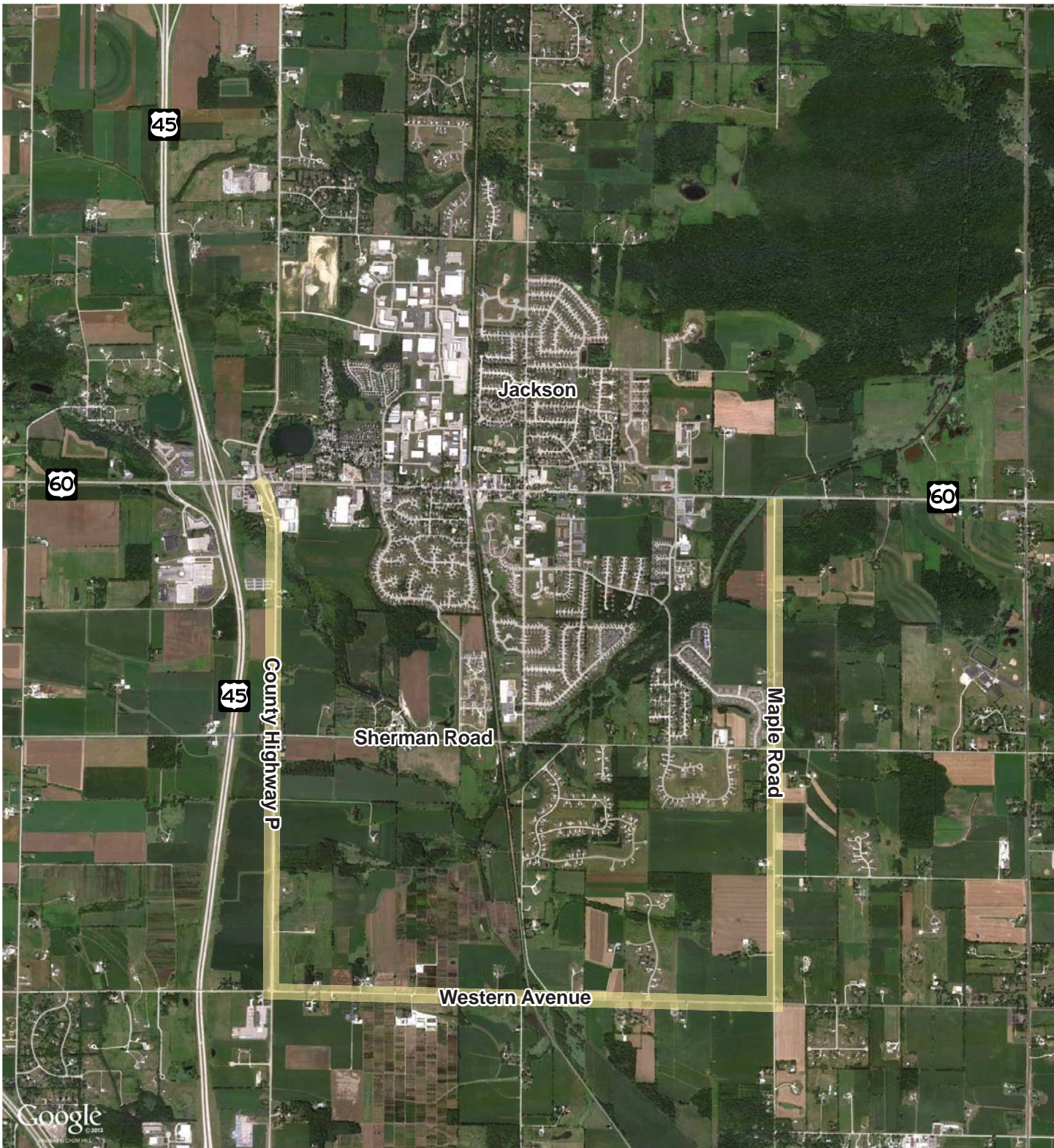


Exhibit 5
Far South Bypass
(Western Avenue)

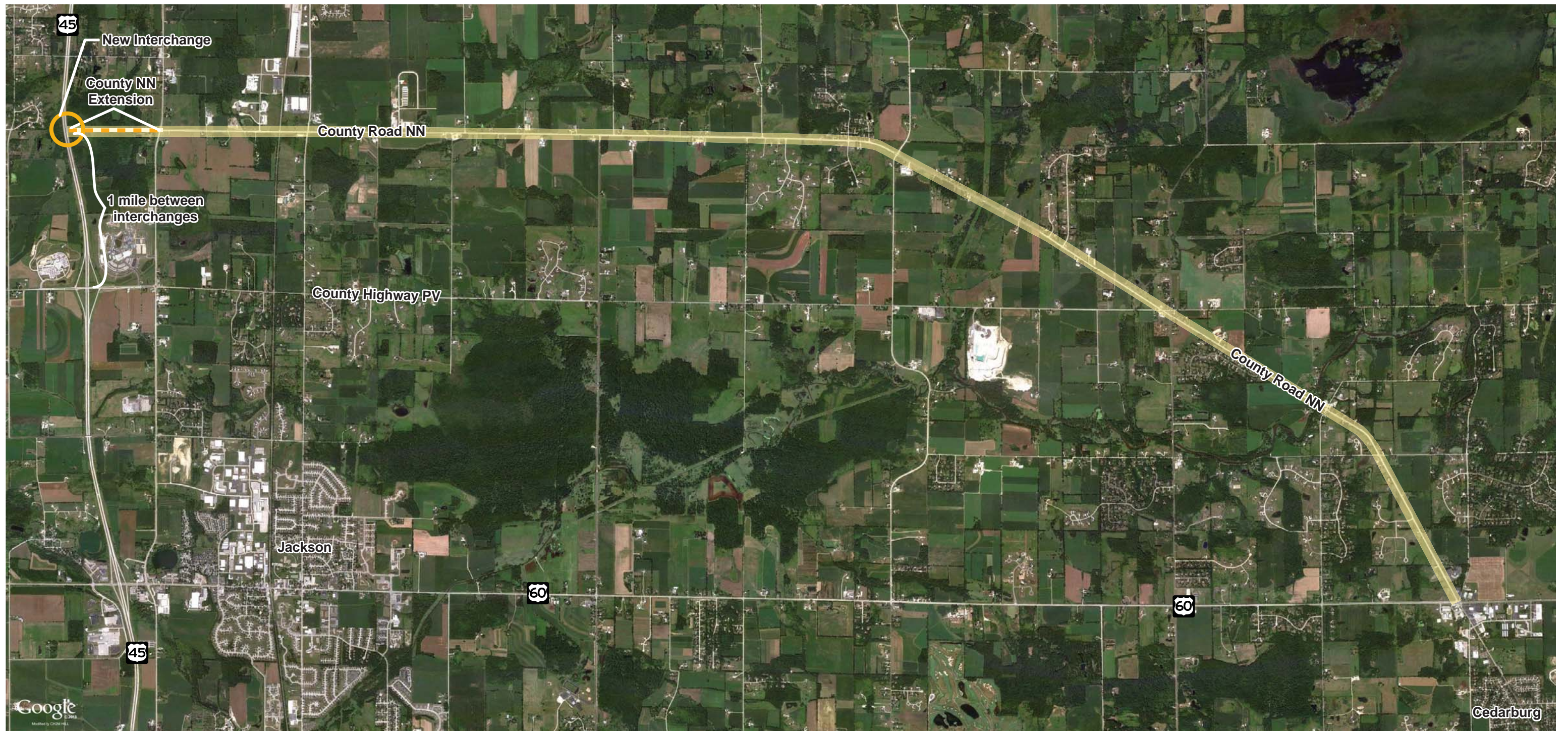


Exhibit 6
Far North Bypass
(County NN)