

To

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Date

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Subject
US 12 Fort Atkinson EIS
Dismissal of Alternative 7

WisDOT Project Number

3575-09-01

Technical Memorandum

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Introduction

In 2005 the Wisconsin Department of Transportation (WisDOT) published a Draft Environmental Impact Statement (Draft EIS) studying alternatives for improvements to US 12 in Fort Atkinson. Initially 18 alternatives were considered. Six alternatives including a no-build and Transportation System Management (TSM) alternative were studied in the Draft EIS. Two of the Draft EIS alternatives were bypasses. These routes were designated Alternative 7 and Alternative 7a and are both southern bypasses of the City of Fort Atkinson. In December 2007, WisDOT announced it proposes to officially map one of the southern bypass alternatives and construct the bypass when traffic warrants a four-lane facility. Traffic studies indicate that a four-lane bypass would be warranted by 2035.

After the Draft EIS was circulated, a value engineering study was conducted that added another bypass option – referred to as Option J. That alternative was studied and dismissed due to a large amount of relocation impacts and no added benefits over Alternatives 7 and 7a.¹

Since 2005 further studies have been conducted to help WisDOT choose the best bypass route. Following these studies, WisDOT determined that Alternative 7a was the preferred alternative for a number of reasons. The intent of this Technical Memorandum is to document the evidence supporting WisDOT's decision to dismiss Alternative 7 from further consideration.

The analysis and supportive evidence for elimination of this alternative from further study is in keeping with or greater than the level of analysis and evidence that served as the basis for elimination of other alternatives considered and dismissed earlier in the Environmental Impacts Study process.

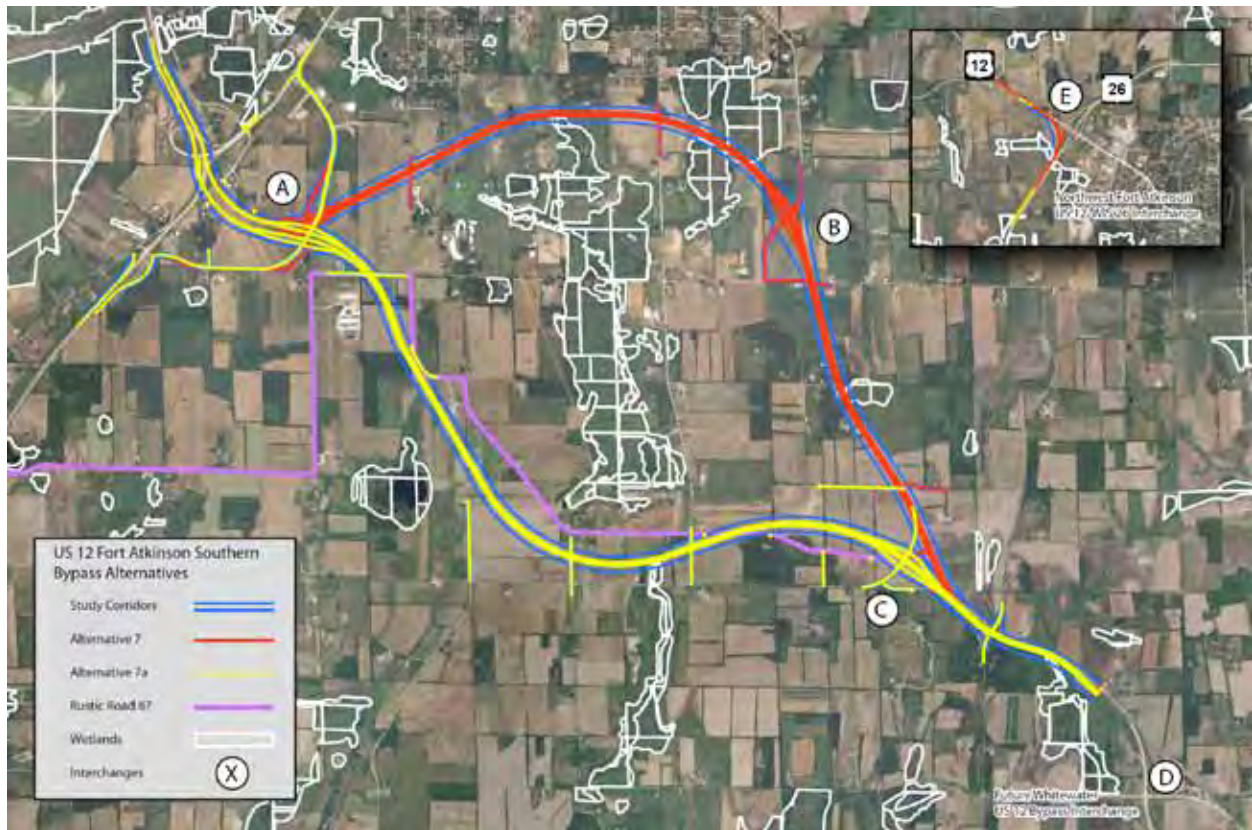
Development of the Bypass Alternatives

The Draft EIS was circulated to the agencies and public in late 2005. In response to public and agency comments and to minimize impacts identified in the Draft EIS and subsequent studies, adjustments were made to the bypass alternatives' mainlines as well as the interchange at WIS 26/Janesville Avenue and Commerce Parkway (Interchange "A" on Figure 1). This enabled a more detailed and equal comparison of the impacts.

The following sections of this report describe the alternative development process and the features of the two remaining bypass alternatives as they now stand. Both routes begin at the Whitewater bypass and end at the US 12/WIS 26 bypass on the northwest side of Fort Atkinson. The two bypass routes are shown in Figure 1.

¹ *US 12 Fort Atkinson EIS Concept J Preliminary Environmental Analysis and Alternatives Analysis*. March 2008.

Figure 1: US 12 Fort Atkinson Bypass Alternatives



Aerial Photograph 2005

Alternative 7

Alternative 7, located within the Town of Koshkonong, is generally located about one half mile south of the city limits. The route was based largely on previous conceptual level planning studies and was the route indicated in the City of Fort Atkinson's 1989 Master Plan. The route would be a four-lane facility beginning at the Whitewater Bypass proceeding northwest along the existing US 12 alignment for approximately 2.8 miles before heading west at a new interchange (Interchange "B" on Figure 1) onto approximately 3 miles of new right-of-way that would connect to the existing WIS 26 interchange (Interchange "A"). US 12 then would run northerly and concurrent with the WIS 26 bypass of Fort Atkinson to the end of the project at the US 12/WIS 26 interchange on the northwest side of Fort Atkinson. US 12 continues westerly on the existing alignment west toward Cambridge and Madison.

The route would have a design speed of 70 mph and be posted for a maximum speed limit of 55 mph.

The Department of Natural Resources (DNR) indicated concern that Alternative 7 passed through and impacted too many acres of wetlands. In consultation with the DNR, the mainline of the bypass was redesigned to curve to the north to minimize impacts to wetland areas as seen in Figure 1. The revised alignment could not avoid 7.1 acres of the wetland complex that is bisected along this portion of the route. The total wetland impact along the route of Alternative 7 was reduced to 11 acres.

The length of Alternative 7 from the Whitewater Bypass to the WIS 26 interchange northwest of Fort Atkinson would be 10.7 miles.

As designed, most at-grade driveway and intersection accesses remain along the 2.8 mile portion of Alternative 7 that would follow existing US 12 north of the Whitewater Bypass. The study team concluded that constructing frontage and/or backage roads to consolidate access would be necessary to convert the section to a freeway. Extra real estate and construction costs were not calculated but would be significant, and would make Alternative 7 more costly than Alternative 7a. Alternative 7a, as proposed, has no at-grade access points.

From the point where the bypass goes off existing alignment, access on the new right of way would be by interchange only. Interchanges would be constructed at US 12 just north of Star School Road (Interchange "B") and at Commerce Parkway (Interchange "A"). The interchange at WIS 26 and Janesville Avenue (Bus 26) would be reconfigured (Interchange "A"). The northwest Fort Atkinson WIS 26 interchange (Interchange "E") could be modified to provide a free flow connection from eastbound US 12 to southbound WIS 26. See Figure 1.

US 12 is also designated WIS 89 in most of the study area. A study of the options for jurisdictional transfers indicated that rerouting WIS 89 along the future bypass, concurrent with US 12 is an option. If it is decided that WIS 89 is to remain on the current route it will need to be reconstructed at some time in the future. This would likely be done as a separate two-lane reconstruction project from the point where the bypass diverges west to the connecting limit at South Third Street in Fort Atkinson. This distance is approximately three miles.

Alternative 7a

Since bypass Alternative 7 impacted over 11 total acres of wetlands, WisDOT sought out practicable alternatives that converted less wetland and that would not discharge pavement runoff into the waters of the U.S. or that discharged into an alternative aquatic site with potentially less damaging consequences (40 CFR Section 230.10(a)). The project team developed an alternative southern bypass option that met engineering design standards while avoiding as much wetland area as possible, that was the least environmentally damaging practicable alternative (LEDPA), and that still met the project's purpose. This is Alternative 7a, which was included as an alternative in the Draft EIS. There would still be some wetland impacts along existing US 12 and at the crossing of Allen Creek, similar to Alternative 7 in those locations. However, the alignment would not cut across any large wetland areas and the total amount of wetlands impacted is reduced to 2 acres. Alternative 7a is two miles further south than Alternative 7 and generally follows the alignments of Creamery/Hoge Roads, McIntyre Road, Poeppel Road and Groeler Road. See Figure 1.

Alternative 7a, also located wholly within the Town of Koshkonong, begins at the Whitewater Bypass, then proceeds northwest along the existing US 12 alignment for approximately 0.8 mile before heading west on new right-of-way to connect with the existing WIS 26 interchange approximately 4.5 miles further west. US 12 would then run northerly and concurrent with the WIS 26 bypass of Fort Atkinson to the end of the project at the US 12/WIS 26 interchange on the northwest side of Fort Atkinson. US 12 continues westerly on the existing alignment toward Cambridge and Madison.

Access on Alternative 7a would be by interchange only along the length of the project. New interchanges would be constructed at US 12, 1.76 miles north of the Whitewater Bypass (Interchange "C") and at Commerce Parkway (Interchange "A"). The interchange at WIS 26 and Janesville Avenue (Bus 26) would be reconfigured (Interchange "A"). The northwest Fort

Atkinson WIS 26 interchange (Interchange “E”) could be modified to provide a free flow connection from eastbound US 12 to southbound WIS 26.

The distance between the easternmost interchange of Alternative 7a (Interchange “C”) and the nearest interchange to the east, which is the westernmost future interchange of the Whitewater bypass (Interchange “D”) is 1.76 miles, which is less than the desirable minimum distance of 2 miles. See Figure 2.

In Alternative 7a, local roads are largely left in place to provide property access, with some redirection and dead ends created. The freeway passes over or under local roads. An auto salvage yard and the Luebke farm currently have access to US 12 along the 0.8 mile stretch from the Whitewater Bypass to where the bypass goes off existing alignment. The two access points will be relocated to local roads. These access points would also be relocated under Alternative 7.

This route would have a design speed of 70 mph in case an extensive segment of US 12 is eventually converted to four lanes and posted for a maximum speed limit above the current 55 mph. The new roadway would be a four-lane facility from the US 12 bypass of Whitewater to the reconfigured WIS 26 interchange.

US 12, is also designated WIS 89 in most of the study area. A study of the options for jurisdictional transfers for this project indicated that rerouting WIS 89 along the future bypass, concurrent with US 12 should be considered. However, if it is decided that WIS 89 is to remain as is, it will continue to be a state highway. Either way, it will need to be reconstructed at some time in the future as a separate two-lane reconstruction project from the point where the bypass diverges west, to South Third Street in Fort Atkinson. This distance is approximately 5.5 miles. For purposes of this evaluation, WisDOT assumes the upgrades would occur prior to construction of a bypass. For this reason, the cost is shown as coming from the 3R program rather than as jurisdictional transfer work funded from the Majors program.

The Draft EIS cited the potential for impacts to a springs complex located near the intersection of Creamery Road and McIntyre Road, just north and outside of the proposed Alternative 7a study corridor. To minimize the chances of any potential effects, the alignment was adjusted south to stay further away from the springs complex.

It should also be noted that in the Draft EIS under Alternative 7a, WisDOT would purchase enough right of way to accommodate four lanes in the future, but would build only 2 lanes at first. After the traffic study was updated it was found that by 2035, four lanes would be warranted. If selected as the preferred alternative, Alternative 7a would be built at 4 lanes from the start, since it would not be constructed until traffic warrants four lanes. This change will also address many comments made by the public concerned with the safety of the highway, comparing it to the Whitewater bypass, which is currently built at two lanes, with an ultimate plan to build two more at a later date.

Figure 2: US 12 Bypass Interchange Spacing



Impact Analysis

A more detailed comparison of the two remaining bypass alternatives was made by considering the potential impacts within a 400-foot study corridor for each proposed alignment. This 400-foot corridor is shown in Figure 1. A 400-foot study corridor was also used in the Draft EIS. Potential direct impacts were determined by examining aerial photographs and electronic land cover layer files provided by the Wisconsin Department of Natural Resources and Jefferson County. Table 1 shows a summary of the anticipated impacts within the 400-foot study corridor.

Residential Impacts

Since the Draft EIS, further adjustments were made to the alignment to avoid relocations to the extent possible and the proposed interchange at WIS 26/US 12/Commerce Parkway was refined, which further reduced the total number of potential relocations reported in the Draft EIS.

There are currently 22 residences within Alternative 7's 400-foot wide study corridor compared to 12 within the Alternative 7a study corridor. The residences within each alternative's study corridor are considered as relocations under this comparison analysis. The Alternative 7 corridor follows existing US 12 for a greater distance, where most of the existing homes are close to the roadway and difficult to avoid, resulting in a greater number of relocations.

Table 1: Impact Summary Chart

Environmental Issue	Unit Measure	Alt 7 Near South Bypass	Alt 7a South Bypass
Project Characteristics			
Length to be constructed including the mainline plus ramps and other new roads not including length of WIS 89	Miles	14.2	13.7
Travel distance between the easternmost project terminus (Whitewater Bypass) and the WIS 26 interchange northwest of Fort Atkinson	Miles	10.7	10.3
Length of WIS 89 remaining to be reconstructed	Miles	3.0	5.5
Remaining at-grade access points (Driveways and crossroads)	Number	6	0
Stream Crossings	Number	3	3
Cost			
Construction	Million \$	36.9	41.5
Real Estate	Million \$	10.0	6.4
<i>Total US 12 Project Costs</i>	<i>Million \$</i>	<i>46.9</i>	<i>47.9</i>
WIS 89 Remaining 3R improvement construction	Million \$	3.0	5.5
<i>Total US 12 Costs plus WIS 89 Costs</i>	<i>Million\$</i>	<i>49.9</i>	<i>53.4</i>
Land Conversions to Right of Way			
Total Area	Acres	408	386
Wetland Area	Acres	11	2
Hydric Soils (may include wetland or upland areas)	Acres	115	69
Upland Area (Woodland)	Acres	31	27
Other Area: Including Multi- and Single Family Residential, Commercial, Industrial, Landfill, Open Space/Vacant, Public/Quasi-Public, Surface Water, and Transportation	Acres	110	84
Farms			
Number of Farms Affected	Number	23	28
Agricultural area	Acres	256	273
Farm Unit Relocations	Number	0	0
Farm Severances	Number	13	13
Relocations			
Residential Unit Relocations	Number	22	12
Business/Government Bldg Unit Relocations	Number	2	1
Indirect Impacts			
Potential for unanticipated growth inducing impacts	High/Medium/Low	Medium	Low

Business Impacts

Alternative 7 and Alternative 7a both require the relocation of one business, Saxe’s Restaurant at existing US 12 and Twinkling Star Road. Alternative 7 would also require the relocation of the Koshkonong Town Hall.

Both bypass alternatives would alter access to a salvage yard (Prisk Auto Salvage) at the easternmost end of the study area. Ultimately, with full build-out of the Whitewater Bypass, redirection would be over one and a half miles. Customers would need to drive south of the business along US 12 to the future Tri-County Road interchange of the Whitewater Bypass and then back north on local roads. Although the business appears to have significantly reduced

inventory in recent years, finding a place to relocate an auto salvage yard would likely be difficult, as would purchase of the property by the state, since the probability of finding hazardous materials onsite is high.

Compatibility with Local Comprehensive Plans

Wisconsin's Comprehensive Planning and Smart Growth law requires local governments to adopt a comprehensive plan that complies with certain state standards by January 1, 2010. The communities within the indirect impact study area have recently updated their comprehensive plans. These land use plans have planning horizons out to when a bypass can be expected to be constructed for this project. The City of Fort Atkinson's plan included the Alternative 7a bypass route in its planning process and it is considered in their land use and transportation planning goals and policies. The Town of Koshkonong plan indicates the Town does not want a bypass. The Town's goals center on agricultural and open space preservation. Jefferson County's plan indicates the possible location of a future bypass of Fort Atkinson, although the County's plan is based on the primary goal of agricultural preservation.

Conclusions were made in the Indirect Effects Study about potential induced development. WisDOT found that the likelihood of spurring unplanned development is slightly greater for Alternative 7 than Alternative 7a based on the introduction of new access (an interchange) into an area not planned for development, but located adjacent to the City's Urban Service Area. This topic is discussed further under the Indirect Land Use Effects Section below.

Impacts to Community Character

The town values its rural and historic character as described clearly in their recently adopted comprehensive plan.² Relevant resources identified as valuable include the rustic road, the town hall, and a bike route.

The town hall, although determined not eligible for the National Register of Historic Places, is identified as historic by the Town in their comprehensive plan. The town hall is located within the footprint of Alternative 7's interchange at US 12 near Star School Road. Due to the alignment's juxtaposition to wetlands, the location of the interchange and mainline could not be adjusted to avoid the town hall without greater impacts to wetlands. The town hall is the only publicly owned meeting facility in the vicinity. Alternative 7a does not require acquisition of the town hall property.

The town identifies a bike route along McMillen and McIntyre Roads, which would be crossed by both alternatives.

The town would like to preserve the rustic road designation of Creamery and McIntyre Roads, one of three rustic roads designated in Jefferson County. Alternative 7a would bisect and interrupt the rustic road. A freeway in the area would also disrupt the qualities that make it a rustic road. The location of Rustic Road 87 can be seen in Figure 1.

Agricultural Impacts

Both bypass alternatives will impact agricultural lands, acquiring a similar amount of right-of-way. Alternative 7a requires right-of-way from 28 farms while Alternative 7 would require right-of-way from 23 farms. Both alignments sever 13 farms each. These severances cause

² *Town of Koshkonong Comprehensive Land Use Plan 2010-2035*. 2010.

difficulties for farmers to access their fields and may cause some farmers to travel circuitous routes. This could affect the efficiency and profitability of the farming operations.

DATCP is particularly concerned with the indirect impacts of land use development and the resulting conversion of agricultural lands to urban uses. As discussed in the Indirect and Cumulative Effects³ study for this project, Alternative 7a is anticipated to create less opportunity for development than Alternative 7. This is primarily because Alternative 7's alignment is closer to Fort Atkinson's City Limits and Urban Service Area and because the east interchange is within the City's sphere of influence. Alternative 7a is farther from Fort Atkinson, and the east interchange for Alternative 7a is outside the service area of both Fort Atkinson and Whitewater.

Impacts to the Natural Environment

It is estimated that Alternative 7's study corridor passes through approximately 11 acres of wetlands and 31 acres of woodlands. Comparatively, the Alternative 7a study corridor passes through approximately 2 acres of wetlands and 27 acres of woodlands. Alternative 7 also crosses a much greater area of hydric soils (about 115 acres) as compared to Alternative 7a (about 69 acres).⁴

Section 404 (a) (40 CFR 230.10(a)) states that no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. In other words, a Section 404 permit cannot be issued where a less environmentally damaging practicable alternative for the proposed discharge exists.

Each alternative has three stream crossings along their proposed alignment. Both Alternative 7 and 7a cross Galloway Creek and another unnamed stream at the same place near the southern project terminus. Both alternatives also cross Allen Creek, which is considered an "exceptional resource water" by the WDNR.

Alternative 7 would cross Allen Creek near Poepfel Road and Briar Lane in an area where much of the stream has been channelized and where little in-channel habitat exists. Cover of various kinds are absent for fish and the riparian zone offers little diversity.

Alternative 7a would cross Allen Creek near County K and Creamery Road in an area that is characterized as a wide, high gradient reach where the stream has undergone historic straightening and manipulation and exists in an over-widened, shallow state. The area appears fairly well drained, and the trees in the area are likely not the native vegetation pattern.⁵ Open bottom crossings seem feasible at all stream crossings.

Alternative 7 and 7a would likely require the relocation of overhead electric that runs along the east side of existing US 12. Relocation of the utility would likely consist of setting back the utility poles outside of the future clear zone. A crude oil pipeline also runs through the center of the

³ *Indirect and Cumulative Impacts Report Update 2010 (Draft)*. February 2010.

⁴ Note that discrepancies between acreage impacts presented in the DEIS and this analysis are a direct result of analyzing new data and the resulting impacts of design alterations to Alternatives 7 and 7a.

⁵ Selle, Andy. *Channel Reconnaissance of Allen Creek, Jefferson County, WI*, 2008. p. 21-22, 42

project area. Either alternative would cross over the pipeline, although no relocation work is expected. The topography in the project area would enable the highway to be constructed over the top of the pipeline. Impacts to the creeks from utility work are not expected with either alternative.

If WisDOT were to select Alternative 7, with its greater acreage of direct wetland impacts, a finding must be made that there is no practicable alternative to the wetland acquisition. As proposed, WisDOT finds Alternative 7a to be a practicable alternative.

EPA and DNR both expressed concern that the indirect impacts of land use development may make Alternative 7 preferable to 7a. They were concerned that a new bypass would become the new development boundary for Fort Atkinson and therefore, Alternative 7a would induce more development and result in greater wetland loss than would Alternative 7 in the long run. The Indirect and Cumulative Effects study update indicated that some of the focus group members and interviewees felt that neither of the alternatives was likely to stimulate unplanned growth. WisDOT found that if unplanned growth were to occur, Alternative 7 would be slightly more likely to induce development, primarily due to the location of the Alternative 7 alignment adjacent to the City's urban services and because it creates new access within the City's sphere of influence

DNR also voiced concern that the indirect impacts of induced land development and conversion of non-urban lands to urban uses would potentially result in water quality degradation in the watershed. Again, as discussed in the indirect and cumulative effects study for this project, Alternative 7a is anticipated to create less opportunity for development than Alternative 7.

Concern about the presence of Blanding's turtle habitat prompted a post DEIS study of select locations in the study area. This study was inconclusive on the presence of turtles; however some habitat was identified outside of the study corridors. There is no indication at this time that there would be direct loss of habitat; however, Blanding's turtles migrate from wetlands to uplands to lay their eggs. Potentially, mitigation measures such as turtle crossings may be needed for either bypass option. Studies have indicated no discernable difference between bypasses 7 and 7a with regard to potential impacts to turtle habitat.

Design Issues

There are a total of 15 driveways and eight crossroads on Alternative 7 along the 2.8-mile stretch of highway between the Whitewater bypass and Alternative 7's planned easternmost interchange. Eleven of the driveways provide access to homes that would need to be relocated due to the conversion to a 4-lane divided roadway. Two other driveways would be relocated to adjacent streets. This would leave access to two residential driveways. Grade separated crossings could be provided at four intersections (Twinkling Star, Buckingham, Star School and Carnes Roads) and would require two grade separations due to the consolidation of nearby access points. Four other crossroads would be difficult to grade-separate while maintaining adequate access to the local road system and adjacent properties. Doing so would result in significant redirection. These roads include Creamery, Hoge, Smiley and Cheesebrough Roads.

Alternative 7a utilizes the existing US 12 alignment for only 0.8 mile, and in that distance it intersects four existing driveways and two cross streets (Twinkling Star and Buckingham Road). Two of the driveways provide access to homes that would be relocated. The remaining two driveways, which are proposed to be relocated to side streets, include a farm and a business. The cross streets could become a grade separated crossing redirecting access to one of the nearest interchanges.

Alternative 7a is also slightly better geometrically where it connects with the preferred WIS 26/Commerce Parkway interchange because Alternative 7 curves more as it approaches the interchange.

Alternative 7a's easternmost interchange is less than the standard two-mile separation from the next nearest interchange at Tri-County Road at 1.78 miles. This is not a fatal flaw however in that the relatively low traffic-volume (15,100 ADT) projected between the two interchanges indicate it will operate safely and efficiently.

Traffic management during construction of each alternative will likely be minimal because the majority of construction will be done off existing alignment. Construction that would be done on alignment will require either the shifting of traffic on US 12 from areas under construction to temporary lanes or the detouring of traffic to a relief route. Alternative 7 will be built on existing alignment for 2.8 miles between the Whitewater bypass and Alternative 7's planned easternmost interchange. Comparatively, Alternative 7a will be built on existing alignment for only 0.8 miles, and therefore would cause substantially less traffic disruption. Traffic management along and near WIS 26 would also be required for either alternative during construction of the WIS 26 and US 12 interchange on the south side of Fort Atkinson.

Cost

Estimated construction costs are greater for Alternative 7a (\$41.5 million) than Alternative 7 (\$36.9 million) because there is more earthwork to be done and bridges to be built when constructing 7a. More earthwork is needed for Alternative 7a because 4.5 miles of the alignment will have to be constructed on undeveloped lands compared to only 3.5 miles for Alternative 7. Estimates indicate that constructing Alternative 7 would require 700,000 cubic yards of fill, while Alternative 7a would require 1 million cubic yards of fill.

Estimated real estate costs for Alternative 7 (\$10 million) are more than Alternative 7a (\$6.4 million). The total right-of-way acquisition costs for non-residential land uses are similar between the two alternatives and are about \$3.9 million for alternative 7 and \$3.8 million for Alternative 7a. The main difference in real estate costs is attributed to the greater number of residential relocations needed to construct Alternative 7 (22) compared to Alternative 7a (12). Residential and business land acquisition costs for Alternative 7 were estimated at \$4.9 million and an additional \$1.2 million for relocation costs. Residential and business land acquisition and relocation costs for Alternative 7a are about half the cost of Alternative 7 with \$2.1 million needed for land acquisition and \$500,000 needed for relocation costs. All real estate costs for the preferred alternative will be revised once the remaining design refinements are completed.

US 12, is also designated WIS 89 in most of the study area. A study of the options for jurisdictional transfers for this project indicated that rerouting WIS 89 along the future bypass, concurrent with US 12 should be considered. However, if it is decided that WIS 89 is to remain as is, it will continue to be a state highway. Either way, it will need to be reconstructed at some time in the future as a separate two-lane reconstruction project from the point where the bypass diverges west, to South Third Street in Fort Atkinson. This distance is approximately 5.5 miles.

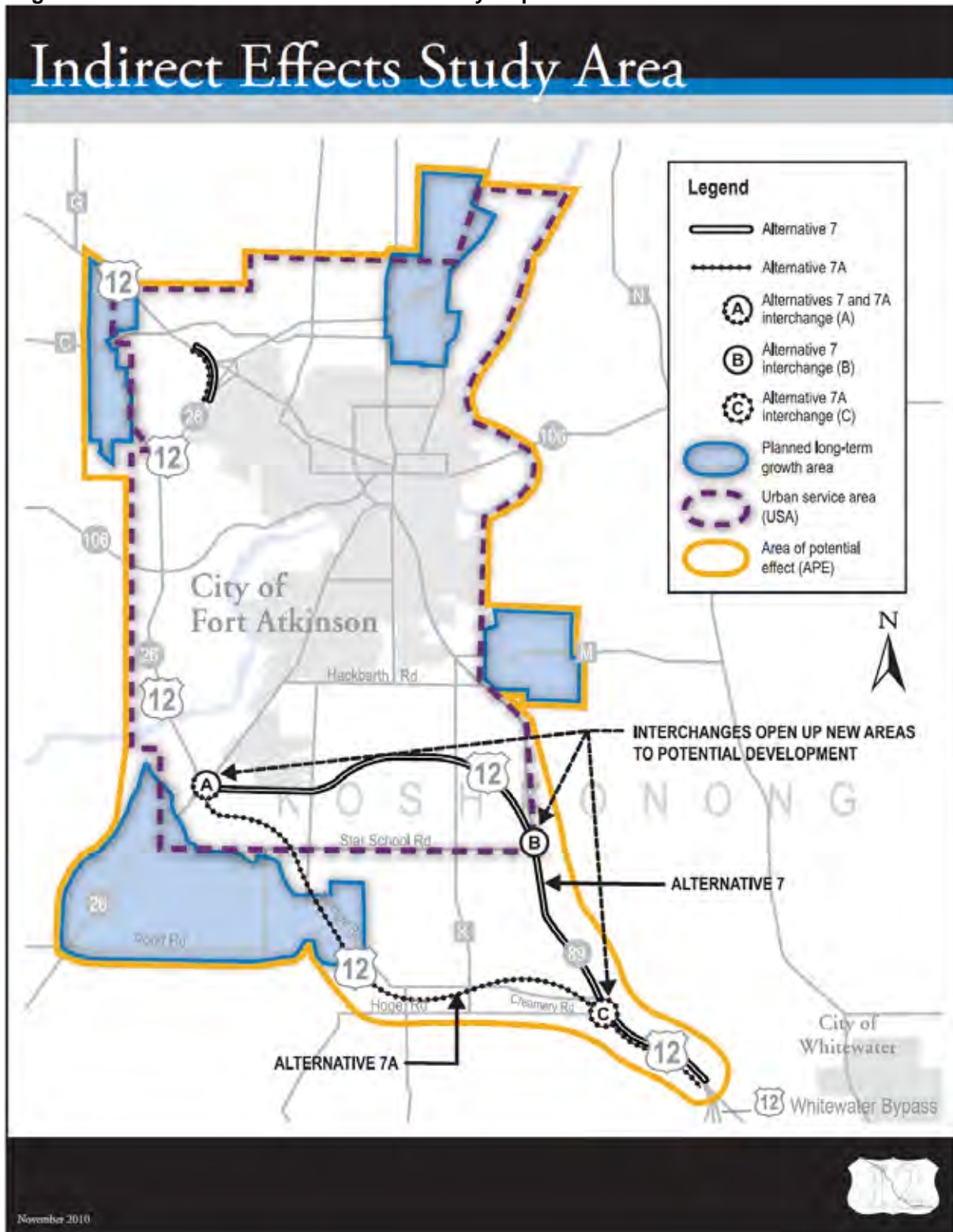
For purposes of this evaluation, WisDOT assumes the upgrades would occur prior to construction of a bypass. For this reason, the cost is shown as coming from the 3R program rather than as jurisdictional transfer work funded from the Majors program. Reconstruction costs for Alternative 7 are estimated to be \$3 million while Alternative 7a would be \$5.5 million.

Indirect Land Use Effects

Concern has been expressed by DNR and DATCP that a bypass could become the new boundary for land development. The concern is that additional land development would negatively impact the wetlands or the hydrology of the wetlands and water resources present in the study area. In 2009, WisDOT conducted a study of the indirect effects of the bypass alternatives. A summary of the conclusions of that report are presented here. This summary focuses on the easternmost interchange of both alternatives because the remaining interchanges of each route are essentially the same.

- Existing adopted plans do not indicate a desire for urban development to the south of Fort Atkinson on lands between the city limits and either bypass alignment. See Figure 3 for a map detailing the planned long-term growth areas.
- Regardless of land use plans, new interchanges can be an impetus for new land development; however, the section of mainline highway on new alignment is not likely to spur new development because the adjacent lands would not have direct access to the new highway. Almost the entire Alternative 7a route is on new alignment, unlike Alternative 7, which remains on existing alignment for 2.8 miles.
- Both alternatives include two interchanges, one at WIS 26 and Commerce Parkway (designated Interchange “A” on Figure 1) and the other at the easternmost point of the bypass at existing US 12 (Interchanges “B” and “C”). Interchange “B”, Alternative 7’s easternmost interchange, is located just outside of and adjacent to Fort Atkinson’s urban service area boundary, but in an area not currently planned for future growth. Unplanned development at Alternative 7’s easternmost interchange would be plausible due to its proximity to the urban service area. If, post-construction of the new Alternative 7 interchange (Interchange “B”), the city would experience interest from developers, it is conceivable that city officials may rethink the desirability of this area as a growth area.
- Alternative 7a’s easternmost interchange, Interchange “C”, is located over two miles south of the urban service area boundary. The prospect of providing sewer service to areas surrounding the interchange is not likely given its distance from existing sewer service from both Fort Atkinson and Whitewater. Limitations set by the county’s zoning ordinance on development in the agriculture exclusive zoning district, as well as the Town’s policies to limit non-agricultural development will also hinder development.

Figure 3: Indirect and Cumulative Effects Study Map



Source: Draft Indirect and Cumulative Effects Report Update 2010. US 12 Fort Atkinson Bypass EIS. Jefferson County, Wisconsin, HNTB Project No. 37358, WisDOT ID 3575-09-01.

Purpose & Need

The stated purpose of this project is to:

- Improve current and future regional traffic flow to serve inter-state and inter-regional travelers;
- Improve safety for users; and
- Accommodate traffic so that the roadway meets the role of a Corridors 2020 (now Connections 2030) and National Highway System (NHS) route.

Improve Traffic Flow

Both alternatives will improve traffic flow. Alternative 7a is slightly more effective because it has 2 fewer miles with at-grade intersections where traffic enters and exits and crosses, which can, to some extent, interfere with through-traffic-flow.

Safety

It is WisDOT's policy to manage access on Wisconsin's state trunk highway system.⁶ According to AASHTO's *Policy on Geometric Design of Highways and Streets* (2004), the most significant design factor contributing to safety is the provision of full access control. It reduces the number, frequency and variety of events to which drivers must respond. Alternative 7a meets this design consideration better than Alternative 7 resulting largely from the fact that Alternative 7 remains on existing alignment for a greater distance than does Alternative 7a.

As a regional route, US 12 can be expected to be used by unfamiliar drivers for whom changes in access control can be confusing. This confusion could affect the flow and safety of the route. Alternative 7 does not provide continuity with regard to access management through the length of US 12 in this region. Alternative 7a, however, does provide access control along the ultimate Whitewater Bypass of US 12 through a future Fort Atkinson Bypass of US 12 and through the future WIS 26 Bypass of Fort Atkinson. Driving would be simpler because of fewer lane changes, less signage, and less need for drivers to search for directional signing. Also, if access management is exercised, traffic flow can be enhanced because drivers will not be slowed by traffic entering and exiting at intersections and driveways.

Regional Transportation Needs

The state's updated long range multi-modal transportation plan *Connections 2030*, designates US 12 in the study corridor a "Connector" and a "Tier 2A" route. WisDOT intends to maximize interregional traffic movement on these designated routes.

Many community uses, including the high school, grocery, hotel, and other businesses are located in Fort Atkinson's northwest quarter and the City plans to continue developing that area. People living in southeast Fort Atkinson may find it easier to use the Alternative 7 bypass to get from their homes to the northwest side rather than driving through town. Alternative 7 may in this way attract more local traffic than Alternative 7a, since 7a's access point is further south of the urban area.

⁶ *Connections 2030 Statewide Long Range Transportation Plan*. Wisconsin Department of Transportation. October 2009.

Findings and Recommendations

Alternative 7a Advantages

- **Access management is easier.** Alternative 7 requires multiple access points along existing US 12. Frontage and backage roads could be considered, however the remaining access to the frontage and backage roads as well as to remaining driveways would preclude this portion of US 12 from becoming a free flow section as preferred for regional transportation systems. In addition, the construction of frontage and backage roads would only add to the cost. Alternative 7a provides consistent access control along the corridor from Whitewater to the north side of Fort Atkinson and would advance this goal.
- **Design is safer.** Alternative 7a's fewer access conflicts can be expected to result in fewer crashes.
- **Fewer residential relocations.** Alternative 7's impacts to residential properties would create greater real estate relocation and acquisition costs than Alternative 7a.
- **Design is better.** The road alignment of Alternative 7a is preferred at the tie-in to the WIS 26 interchange. Alternative 7a's connection to the WIS 26/Commerce Parkway interchange is smoother than Alternative 7, which has a sharper curve.
- **Less potential to stimulate unplanned development.** Alternative 7's easternmost interchange is adjacent to Fort Atkinson's urban service area and the city limits resulting in a greater chance of land development pressure. It is generally agreed that Alternative 7a's interchange is too far away and local planning and zoning is too restrictive to expect it to spur any significant development.
- **Does not impact the Town Hall.** Alternative 7a, unlike Alternative 7, does not require the acquisition of the Koshkonong Town Hall located on the corner of Star School Road and US 12. The town hall is considered historic by the locals and serves as a community meeting place.
- **Fewer wetland and woodland impacts.** Alternative 7a passes through much fewer woodlands and wetlands than Alternative 7. USACE has indicated that WisDOT should select an alternative that requires conversion of fewer wetlands, given that alternative meets purpose and need and does not have other undue or excessive environmental impacts. Alternative 7a is a practicable alternative.

Alternative 7 Advantages

- **Fewer impacts to existing farm operations.** However, although Alternative 7 impacts fewer farm operations; the long term impacts of potential future land development to be converted for development could be somewhat greater than Alternative 7a. The number of farm severances is the same for each alternative.
- **Interchanges meet standard separation distance requirements.** Minimum separation between interchanges on alignment 7 exceeds the desirable minimum of 2 miles. The easternmost interchange on Alternative 7a is less than the standard 2 mile distance from the nearest interchange (1.76 miles).

- **Overall cost.** Alternative 7 is estimated to be 5.6% less costly. It is believed however that the benefits presented by Alternative 7a outweigh the minor additional cost of its construction.
- **Does not impact Creamery and McIntyre Road, a designated rustic road.**

Conclusion

Based on the findings herein, Alternative 7a has fewer overall impacts, meets Section 404 requirements better, and meets the purpose and need better than Alternative 7.