I-94 East-West Corridor
70th Street to 16th Street
Milwaukee County, Wisconsin

Wisconsin DOT Project I.D. 1060-27-00

Record of Decision

U.S. Department of Transportation
Federal Highway Administration

September 2016

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RECORD OF DECISION
I-94 EAST-WEST CORRIDOR
70th Street to 16th Street

Decision

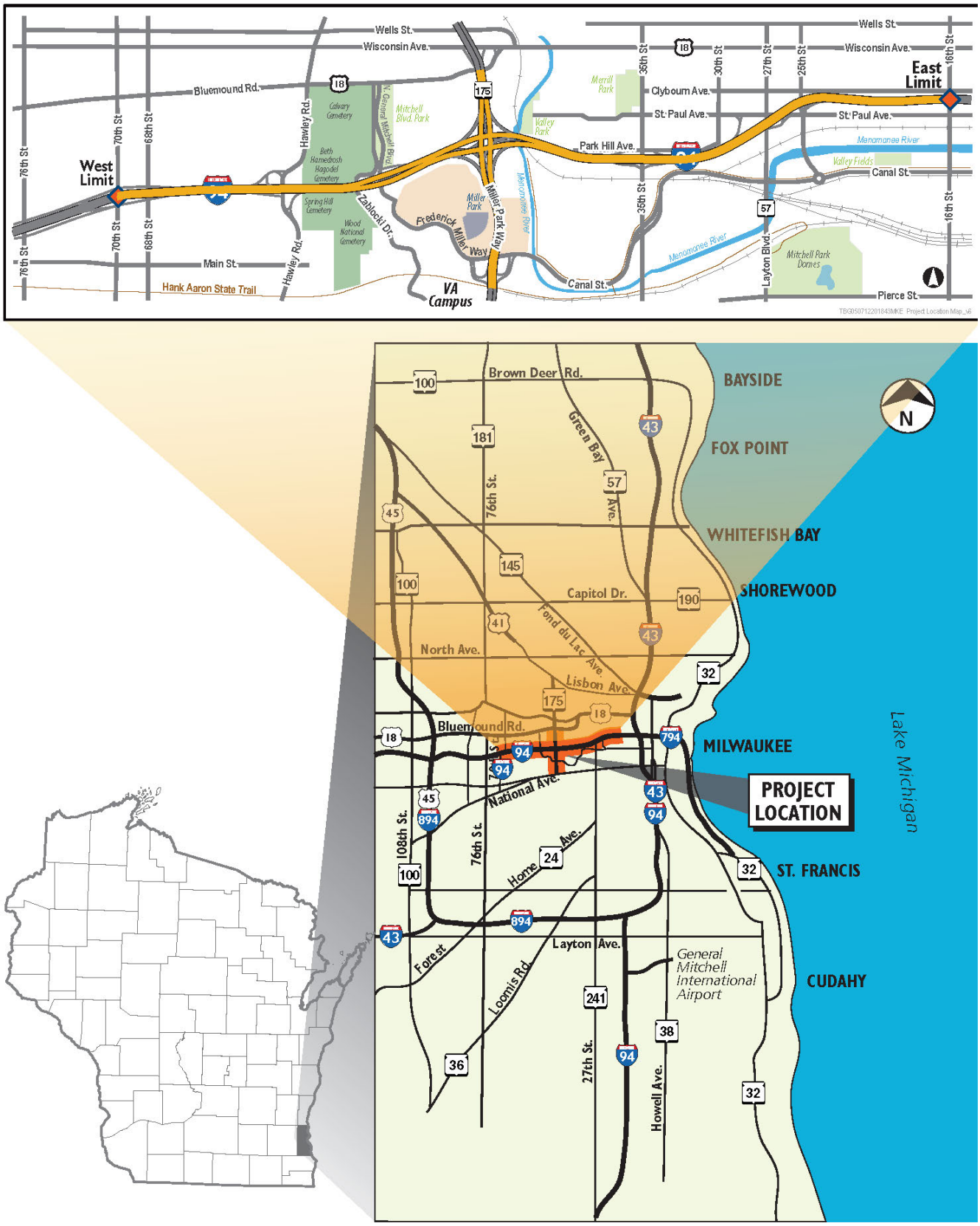
The purpose of the proposed reconstruction of the Interstate 94 (I-94) East-West Corridor is to address the deteriorated condition of I-94, obsolete roadway and bridge design, existing and future traffic demand, and high crash rates. The project termini are 70th Street on the west and 16th Street on the east and include 3.5 miles of I-94 (**Exhibit 1**). The existing I-94 East-West Corridor includes service interchanges along I-94 at 68th Street/70th Street, Hawley Road, Mitchell Boulevard, 35th Street, and 25th/26th/28th Street, and the Stadium Interchange (I-94/WIS 175[1]/Miller Park Way). The Bluemound Road/Wisconsin Avenue/Wells Street service interchange with WIS 175 is also included in this study. At each interchange, the project limits extend north/south[2] until each crossroad ties in to the existing alignment. The termini for the study generally match the termini for two previously completed studies of the southeastern Wisconsin freeway system: the Zoo Interchange study, located west of the I-94 East-West Corridor, and the Marquette Interchange study, located to the east. For planning and design purposes, the corridor is divided into a west segment (70th Street to Yount Drive) and an east segment (Yount Drive to 16th Street).

The need for the project is based on an aggregation of factors, including regional land use and transportation planning, system linkage and route importance, high crash rates, existing freeway condition and deficiencies, and existing and future traffic volumes. I-94 is a major east-west freeway link across the northern United States and a critical link in Milwaukee County's freeway system. In addition to serving long-distance travelers and regional and national freight movement, the study area freeway system is an important commuter route for many of the employees who work in Milwaukee and Waukesha County. The underlying physical condition of the roadway is declining, and the condition of bridges has deteriorated over the years due to age, heavier than expected traffic, road salt, and freeze-thaw cycles. There are also functional deficiencies, such as inadequate ramp spacing, closely spaced service interchanges and a combination of left- and right-hand entrance and exit ramps. Most crash rates in the I-94 East-West Corridor are currently at least twice the statewide average for similar roadways (large urban freeways) and several sections are more than 4 times higher than the statewide average. As traffic increases, safety and traffic operations on this corridor will continue to deteriorate. By 2040 under the No-build alternative, increased traffic volumes will cause nearly this entire section of I-94 to operate at level of service D to F during peak periods. Assuming a free-flow speed of 55 mph, the theoretical capacity of the I-94 East-West Corridor would be exceeded for approximately 9 hours per day in 2040. Even if drivers are able to adjust their travel times to before or after the peak hours, and with a doubling of transit ridership, the analysis shows that there could be approximately 15 hours (5 AM to 8 PM) of the average weekday where this section of I-94 would operate at or near capacity in 2040.

[1] In 2015 WisDOT and FHWA modified route designations for the freeway between the Stadium Interchange and Lisbon Avenue from US 41 to State Highway 175 (WIS 175). The Final EIS referred to it as US 41. The Record of Decision refers to this same freeway as WIS 175.

[2] Project limits extend east/west until each crossroad ties in to the existing alignment for the Bluemound Road/Wisconsin Avenue/Wells Street service interchange with WIS 175.

EXHIBIT 1
Project Location Map



Project Location Map

The Wisconsin Department of Transportation (WisDOT) and the Federal Highway Administration (FHWA) identified the At-grade alternative with the half interchange at Hawley Road in the west segment, and the On-alignment alternative in the east segment (summarized on pages 9 through 22) as the Preferred Alternative for addressing project purpose and need in the Final Environmental Impact Statement (Final EIS). This ROD selects the Preferred Alternative for implementation. As part of the Selected Alternative in the west segment, WisDOT would construct some off-interstate improvements to mitigate the traffic impacts of partially closing the Hawley Road interchange. The Selected Alternative also includes several design refinements made following the Final EIS approval to reduce impacts or project costs (discussed below).

Selection of the At-grade alternative with the half interchange at Hawley Road in the west segment and the On-alignment alternative in the east segment was based on evaluation and consideration of all comments received during the public involvement process, including comments on the Draft (approved November 2014) and Final EIS (approved January 2016), input received as a result of the December 2014 public hearings, comments from state and federal review agencies, environmental and engineering factors, cost, and documentation on how the proposed improvements will address the project purpose and needs.

Corrections

A few items in the Final EIS require correction or clarification, based on comments received during public and agency review of the document. These corrections do not change the analysis or conclusions in the Final EIS.

1. Table S-1, the Impact Summary Table in the Final EIS Summary, shows the total Potential Contaminated Sites for the Preferred Alternative as 39. The total number of contaminated sites for the individual segments were updated in the Final EIS in Table S-1, to match those shown in Table 3-34 (Section 3.21.1). The total for the West Segment At-grade (half Hawley Road interchange) entry should be 21. The total for the Preferred (Selected) Alternative should be 59, which is the sum of the West Segment At-grade (half Hawley Road interchange) and East Segment On-alignment alternatives and includes the off-interstate improvements.
2. The frontage road on the north side of I-94 between Yount Drive and Mitchell Boulevard was referred to as a one-way westbound roadway in the Final EIS (Sections 2.2.2.1 and 4.3.2.1). The frontage road will be a 3-lane, two-way roadway, except during events at Miller Park, when it may operate as a one-way road.
3. The Milwaukee Kennel Club is a tenant at 2501 W. St. Paul Avenue, a property that WisDOT will fully acquire in order to construct the Selected Alternative in the east segment. This building is also home to Central Bark Doggy Day Care and noted as such in the Final EIS. WisDOT met with a representative of the Milwaukee Kennel Club in 2015. The Milwaukee Kennel Club was not listed as a commercial displacement in the Final EIS because it is a club rather than a business. The club has no employees. However, WisDOT will provide displacement assistance to the club, for which the club is eligible under the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970, as amended.
4. Table 3-6 of the Final EIS states the At-grade (no Hawley Road interchange) is predicted to have a total of 1,870 crashes between 2021 and 2040. This number of total crashes should be 2,058 as noted in the *Predictive Safety Analyses, I-94 East/West* (December 2014) memo. As a result, page 2-22 and 3-19 of the Final EIS incorrectly stated that over a 20-year period the At-grade alternative with no Hawley Road interchange would have 31 percent more crashes than the Double Deck alternative. The At-grade alternative with no Hawley Road interchange would have 44 percent more crashes than the Double Deck alternative. As a result of this update, Tables 3-5 and 3-6 of the Final EIS are updated as follows (updated numbers in ***bold italic text***).

TABLE 3-5
Estimated Crashes for the West Segment Alternatives, over a 20 Year Period (2021—2040)

West Segment Alternative	Crashes on Freeway	Crashes on Ramps	Increased Crashes on Local Roadways due to Traffic Diversion	Total Crashes
Replace-in-Kind	1,550	113	0	1,663
At-grade (no Hawley Road interchange)	1,160	26	***872***	***2,058***
At-grade (half interchange at Hawley Road)	1,220	58	356	1,634
Double Deck[a]	1,124	299	0	1,423

TABLE 3-6
Estimated Type of Crashes for the West Segment Alternatives, over a 20-Year Period (2021—2040)

	Crash Type			
Alternative	Fatal	Injury	Property Damage Only	Total Crashes
Replace-in-Kind	6	486	1,171	1,663
At-grade (no Hawley Road interchange)	6	698	***1,353***	***2,058***
At-grade (half interchange at Hawley Road)	6	524	1,104	1,634
Double Deck[a]	6	449	968	1,423

[a] Number of crashes is the same for all up and partially down option

5. Sections 3.8.1.1 and 3.9.2.1 of the Final EIS provided information regarding the number and percentage of minority population in the study area. Tables 3-11 and 3-17 presented the I-94 East-West Corridor minority population and Tables 3-12 and 3-18 further broke down the minority population by race/ethnicity.

   In determining the minority population in the Final EIS, the project team used the U.S. Census "race" category. This does not provide a specific category for Hispanics/Latinos and many Hispanic or Latinos identify themselves as "white" or "some other race". Thus, the "white" category was overstated. To accurately account for the minority population of the various study corridors, the study team should have used the "Not Hispanic or Latino, White alone" data provided by the U.S. Census. Given the overlap of "white" and "Hispanic/Latino," the minority population percentage generally increases in the various project corridors when using the "Not Hispanic or Latino, White alone" data.

   Additionally, while reviewing demographic data, it was determined that the buffers used for the 1-mile, 0.5-mile, and 1,000-foot corridors for minority population analysis used 25th Street as the eastern terminus and not 16th Street as intended. The eastern end of the project corridor was extended east to 16th Street in June 2013. Expanding the buffer area incorporates additional census and community survey data into the socioeconomic analysis. Using the "Hispanic or Latino and Race" data and the expanded buffer area generally increases the minority population percentage in the corridor.

   Based on the fact that the 2010 Census data is 6 years old as of 2016, the project team reviewed and updated the socioeconomic data for the I-94 East-West Corridor. WisDOT used the most recent demographic data from the U.S. Census Bureau, the 2010-2014 American Community Survey (ACS) 5-year Estimate data. This data provides a more accurate snapshot of the current socioeconomic conditions in the project corridor. **Appendix B** of this ROD provides a comparison of the socioeconomic data from the Final EIS and the updated socioeconomic data using the 2014 ACS 5-year data set and also provides updates to the various locations in the Final EIS where 2010 Census data was used. Updates to **Exhibits 3-24 and 3-25** using the 2010-2014 ACS data are included in Appendix B. The updated analysis does not change the determination of impacts to minority populations as described in the Final EIS (discussed below in Environmental Justice on Page 31).

The minority population percentages calculated in the Indirect Effects section (Section 3.28 of the Final EIS) did use the "Not Hispanic or Latino, White alone" U.S. Census data when calculating minority population. The minority population data listed in this section of the Final EIS is accurate.

New Information Following Final EIS Publication

This section of the Record of Decision documents new information that became available or new analyses that occurred after publication of the Final EIS.

Updated Traffic Forecast Review

Most of the new information relates to traffic forecasting for the I-94 East-West Corridor Study. WisDOT has reconfirmed its initial acceptance of forecasts provided by the Southeastern Wisconsin Regional Planning Commission (SEWRPC) and updated its traffic forecasts in light of an update to SEWRPC's regional travel demand model. These updates do not substantially affect the analysis found in the Final EIS and continue to support the Selected Alternative. Further information is included in Appendix D of this ROD.

Reconfirmation. Throughout the course of this study, SEWRPC has provided traffic forecasts, analysis and travel demand model information. SEWRPC's travel demand model follows nationally researched best practices for travel demand modeling. As such, WisDOT relies on SEWRPC's expertise.

WisDOT did and continues to engage in several efforts to ensure it is reasonable to rely on SEWRPC's forecasts. First, WisDOT plays a role in developing, reviewing, and updating the regional travel demand model, outside of the context of any specific project. WisDOT, along with other regional planning and transportation agencies, engages in collaborative efforts led by SEWRPC to ensure the travel demand model is well calibrated and is consistent with regional and local planning efforts. By playing a role in developing the regional SEWRPC travel demand model, WisDOT ensures a solid starting point for traffic forecasts based on that model.

Second, WisDOT ensures individual forecasts are reasonable by comparing a forecast provided by SEWRPC to other sources of information. To do so, WisDOT draws from its accepted best practices outlined in Chapter 9 of its Transportation Planning Manual. In 2012, WisDOT confirmed that SEWRPC's forecasts for the I-94 East West Corridor Study were reasonable by comparing SEWRPC's forecast to TAFIS, another forecasting tool based on historical traffic count information. In July 2016, WisDOT reconfirmed this analysis by using several other techniques. The details of the July 2016 reconfirmation are found in Appendix D. WisDOT's reconfirmation concluded that the forecasts provided by SEWRPC for the I-94 East West corridor study were reasonable.

Updated Travel Demand Model. SEWRPC's forecasts for the I-94 East West Corridor Study were based on SEWRPC's 4th generation travel demand model (the "2035 TDM"). In January 2016, SEWRPC released a 5th generation travel demand model (the "2050 TDM"). WisDOT conducted an analysis, detailed in Appendix D, to verify whether forecasts from the 2035 TDM remain valid in light of the updated 2050 TDM.

To complete this analysis, WisDOT compared a forecast produced from the 2035 TDM to a similar forecast produced from the 2050 TDM. The 2050 TDM forecast compared favorably to the 2035 TDM forecast. For segments on the I-94 corridor, the 2050 TDM forecast varied by only 1.6 percent to 4 percent from the 2035 TDM forecast of average weekday daily traffic volumes. Based on these results, WisDOT concluded that the analysis in the Final EIS that is based on forecasts produced from the 2035 TDM remains valid.

Land Use Plan Assumptions Related to No-Build Traffic Forecast

SEWRPC advised WisDOT in July 2016 that the 2035 land use plan assumed the I-94 East-West project would be implemented. This raises the possibility that the design year 2040 no-build forecast that WisDOT received from SEWRPC—which is in part based on the 2035 land use plan—could reflect some induced demand from the I-94 East-West project.

To assess whether it is reasonable to proceed with the design-year 2040 no-build forecast from SEWRPC, WisDOT looked at several factors (see Appendix D for more detail):

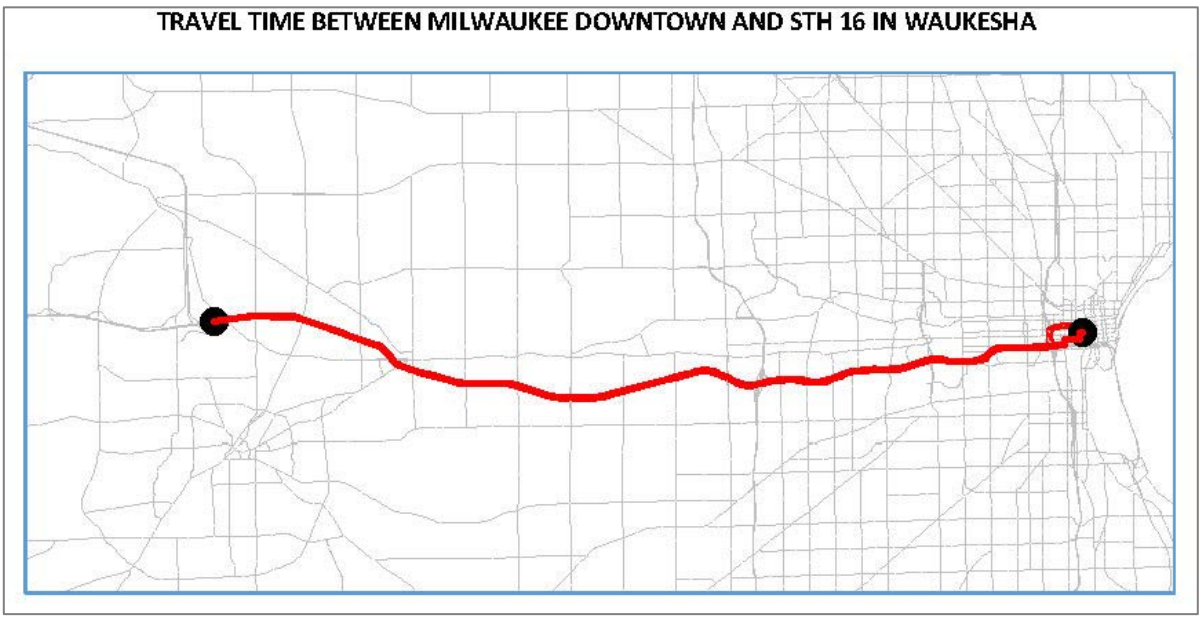
1. The I-94 East-West project lies in a very well developed transportation corridor. The freeway has been in place for 50 years, and an inter-urban streetcar was located in this corridor before the freeway was built.
2. The project will be built on its existing alignment, rather than in "greenfield" area where new development could reasonably be expected to spring up adjacent to the freeway
3. The indirect and cumulative effects analysis for this study, which included input from land use planners and developers, concluded that the land use impact of additional lanes on this segment of I-94 is not expected to be substantial (see Sections 3.28 and 3.29 of the Final EIS).
4. Per the indirect and cumulative effects analysis (see Section 3.28 and 3.29 of the Final EIS) the travel time savings that would result from adding new travel lanes to an existing freeway are not expected to be great enough to substantially change current land use pattern trends. This was confirmed by SEWRPC's July 2016 estimation of cumulative travel time savings from this project as well as past and future freeway reconstruction and widening projects in the I-94 corridor from downtown Milwaukee to Highway 16 in Waukesha County (discussed below).
5. WisDOT reviewed the low, intermediate and high projections of population, employment and households from SEWRPC's 2035 land use plan. SEWRPC ultimately used the intermediate growth scenario for these variables. The low growth projections of population, employment and households are 7 to 8 percent lower than the intermediate projections for Milwaukee and Waukesha Counties (the secondary study area). WisDOT then applied an 8 percent reduction to the 2040 design year no-build traffic forecast to assess whether the level of service on this segment of I-94 would meet level of service D (the agreed upon operational design goal). This is a very conservative approach, because this one project would not account for the entire 8 percent difference between the low and intermediate projections for the seven-county area. The results of this analysis indicate that many segments of the I-94 East-West corridor would still operate at level of service E or F in 2040 under the No-build alternative.

The results of this analysis, as well as the other reasons cited above, give WisDOT reasonable assurance that it is appropriate to rely on the design year 2040 no-build forecast received from SEWRPC in assessing the purpose and need for the project.

Cumulative Travel Time Savings

Based on a public comment on the Final EIS, WisDOT asked SEWRPC to estimate cumulative travel time savings on the I-94 east-west corridor in Milwaukee and Waukesha Counties. Cumulative peak hour travel time savings would occur for motorists travelling between downtown Milwaukee and WIS 16 in Waukesha County (Exhibit 2) after reconstruction of the I-94 East-West project, the Marquette Interchange (completed in 2008), the Zoo Interchange (the I-94 portion of which is expected to be completed in 2018), and a potential future reconstruction of I-94 in Waukesha County. SEWRPC estimated cumulative travel time savings to be 5 minutes eastbound and 11 minutes westbound in 2050 compared to 2001 travel times. The purpose and need for the project does not rely on travel time savings. See Section 1 of the Final EIS for a complete description of the project's purpose and need, also summarized on page 1 of the Record of Decision.

EXHIBIT 2
Cumulative Travel Time Analysis



	Peak-Hour Travel Time (minutes)	
Direction	**2001**	**2050**
Eastbound	**34**	**29**
Westbound	**36**	**25**

The indirect effects analysis in the Final EIS (Section 3.28.4.2) notes that many practitioners who study transportation-related indirect effects believe at least 10 minutes of travel-time savings is needed before intraregional land use patterns are substantially affected. 2050 is ten years beyond the 2040 window of the project's cumulative effects analysis. If all of the freeway reconstruction projects in the I-94 corridor are implemented by 2050, land use impacts of the cumulative travel time savings could be mitigated by some or all of the mitigation measures noted in the Final EIS cumulative impact analysis (Section 3.29.2.7).

Alternatives Considered

The No-Build Alternative and range of build alternatives presented in the Final EIS are summarized below. Section 2 of the Final EIS contains detailed information.

No-Build Alternative

The No-Build Alternative does not include any pavement replacement, safety or capacity improvements. Only maintenance and minor improvements would be performed. The No-Build Alternative is not a feasible course of action because it would not address the project's purpose and need. This alternative serves as a baseline of comparison to the build alternatives.

Transportation System Management Alternative

Transportation System Management (TSM) includes measures to maximize the efficiency of the highway system to help alleviate or postpone the need to expand freeway capacity. The TSM element of the SEWRPC regional transportation plan recommends measures such as freeway traffic management (ramp meters, bus, and high-occupancy vehicle lanes on entrance ramps) and intelligent transportation systems (advanced traveler information for transit and highway travel conditions). Almost all of the recommended TSM elements are already implemented, and congestion is still expected to reach level of service E and F in the design year 2040. Therefore, TSM is not a reasonable course of action as a stand-alone alternative.

Region-wide Public Transit and Transportation Demand Management Alternative

Region-wide Public Transit and Transportation Demand Management (TDM) include ways to reduce personal and vehicular travel or to shift such travel to alternative times and routes, allowing for more efficient use of the existing transportation system's capacity through increased transit ridership and other strategies. The public transit system element of the long range transportation system plan in *VISION 2050: A Regional Land Use and Transportation System Plan for Southeastern Wisconsin* (*VISION 2050*) recommends several ways to expand public transit in Milwaukee County and adjacent counties. However, only the East West Bus Rapid Transit (BRT) project being studied by Milwaukee County and the initial Milwaukee Streetcar lines have reasonably expected or secured sources of funding and are included in the fiscally constrained version of the plan, titled the *Federally Recognized Transportation Plan (FRTP) for VISION 2050*.

Despite transit improvements, the travel demand modeling analysis in the *VISION 2050* Regional Transportation System Plan forecasts a continuing, though modest, increase in overall travel through the year 2050, given projected increases in population, households, and employment, and the vast majority of travel is likely to continue to be by car. Analysis by WisDOT further shows that TDM, as a standalone alternative, will not address the project's purpose and need (see also Comment No. 8 below under Public Comments). Therefore, it was eliminated from consideration by WisDOT and FHWA as a standalone alternative.

Build Alternatives

Replace-in-Kind Alternative

The Replace-in-Kind alternative would replace the I-94 East-West Corridor in its current configuration with 3 lanes in each direction, left-hand entrance and exit ramps, and closely spaced interchanges. It would address the deteriorating pavement and bridges, but would not address safety concerns, design deficiencies, or future traffic volumes. The Replace-in-Kind alternative is projected to operate at a level of service D to F during peak traffic hours by 2040. Furthermore, it would be inconsistent with regional transportation system plans that document the importance of I-94 for the safe and efficient movement of people, goods, and services and a regional transportation system designed to meet the travel needs of southeastern Wisconsin. Because it would not fully address the project's purpose and need, it was removed from consideration.

Spot Improvement Alternatives

Spot Improvements would replace the existing roadway and bridges at selected locations in or close to their existing configuration, while addressing safety issues that can be fixed with little or no new right-of-way acquisition. It would meet some, but not all, current design standards. While the spot improvements (separate or combined) would replace deteriorated pavement, they would not address congestion along I-94, would not correct all safety issues, and would not maintain an acceptable existing or future level of service. The Spot Improvement Alternative was removed from consideration because it does not address future traffic volumes, and only partly addresses safety concerns and design deficiencies.

Modernization Alternatives

Modernization alternatives would replace the existing roadway and bridges and completely reconfigure I-94 to address the safety issues and functional deficiencies. TSM measures are included as part of the alternative. Two options of Modernization were considered: a 6-lane option, with no added capacity, and an 8-lane option that would add one new lane in each direction to address the congestion issues. Various alternatives to improve I-94 and interchange design could be implemented using either the 6-lane or the 8-lane options.

The 6-lane Modernization Alternative would meet most purpose and need elements by addressing deterioration and safety concerns, correct the obsolete design of the I-94 East-West corridor to improve safety and decrease crashes, and at least partially meet the need to maintain a key link in the transportation network. The 6-lane alternative was eliminated because it would not meet the project's purpose and need to accommodate existing and future traffic volumes at an acceptable level of service in the design year 2040. Some areas would still operate at level of service E or F. The 8-lane option would meet all the purpose and need elements and was carried forward.

For planning and design purposes, the corridor was divided into two segments: West segment (70th Street to Yount Drive, just west of the Stadium Interchange), and East segment (Yount Drive to 16th Street). The east segment alternatives are interchangeable with the west segment alternatives. After an extensive alternatives development and refinement process that is documented in Section 2 of the Final EIS, and other supporting documentation referenced in Section 2, the following 8-lane alternatives were evaluated in detail in the Final EIS.

- **West segment**
  - **The At-grade alternative** would add a fourth lane in each direction. The At-grade alternative would include an interchange at 68th Street/70th Street and either no interchange at Hawley Road or a half interchange at Hawley Road. The half interchange would have an entrance ramp to westbound I-94 and an exit ramp from eastbound I-94 to Hawley Road. This alternative avoids direct impacts on the cemeteries that flank both sides of I-94 between Hawley Road and Mitchell Boulevard (Beth Hamedrosh Hagodel Cemetery, Spring Hill Cemetery, and Wood National Cemetery) using narrow lanes and shoulders through this section. The existing interchange at Mitchell Boulevard would be removed and replaced with a new local road interchange within the Stadium Interchange (part of the East segment alternatives).
  - **The Double Deck alternative** would also add a fourth lane in each direction. This alternative would include full movement interchanges at 68th Street/70th Street and Hawley Road. This alternative avoids direct impacts on the cemeteries by stacking the freeway lanes, with eastbound lanes elevated over the westbound lanes, through the cemetery area. I-94 would transition back to a side-by-side configuration east and west of the cemeteries. The existing interchange at Mitchell Boulevard would be removed and replaced with a new local road interchange within the Stadium Interchange (part of the East segment alternatives).
- **East segment**
  - **The On-alignment alternative** would add a fourth lane in each direction, and I-94 would remain nearly on-alignment east of 32nd Street. This alternative includes a modified single-point interchange at the Stadium Interchange, a new local road interchange within the Stadium Interchange (to replace Mitchell Boulevard interchange), and interchanges at 35th Street and at or near 27th Street. Although this alternative is referred to as "On-alignment," the On-alignment alternative's centerline/median would be located about 50 feet south of the existing I-94 centerline near 29th Street.
  - **The Off-alignment alternative** would also add a fourth lane in each direction, but I-94 would move off the existing alignment east of 32nd Street to smooth the roadway curve. This alternative would also include a modified single-point interchange at the Stadium Interchange, a new local road interchange within the Stadium Interchange (to replace Mitchell Boulevard interchange), and interchanges at 35th Street and at or near 27th Street. At its greatest extent, the Off-alignment alternative's centerline/median would be located about 400 feet south of the existing I-94 centerline near 25th Street.

Selected Alternative

After carefully evaluating project purpose and need, cost, engineering factors, impacts to the human/natural environment, compliance with federal and state laws, and public and agency comments received throughout the NEPA process and in direct response to the Draft and Final EIS, WisDOT and FHWA identified the At-grade alternative with the half interchange at Hawley Road in the west segment and the On-alignment alternative in the east segment as the Selected Alternative (see Final EIS Section 2.3.1, listing of design refinements below and **Exhibits 3 and 7**). The Selected Alternative is the "environmentally preferable alternative" providing a balance of sound engineering design, addressing long-term mobility needs and safety concerns, and minimizing impacts to the existing built environment and natural resources to the maximum extent practicable.

The **west segment Double Deck alternative** was eliminated for the following reasons:

- Cost: The Double Deck alternative would cost between $295 million to $345 million (2014 dollars) compared to about $125 million for the At-grade alternative. The Double Deck alternative would also add about $25 million to the cost of the East segment.
- Displacements: The Double Deck alternative would affect 10 residences, 9 single-family residences and an apartment above a business, compared to 3 total for the At-grade alternative.
- Utilities: The Double Deck alternative would require shifting a row of electrical towers to make room for a collector-distributor road.
- Historic properties: The Double Deck alternative would have an adverse effect on Section 106 historic properties (namely, the Soldiers' Home National Historic Landmark and Soldiers' Home Historic District) and result in a Section 4(f) use.
- Maintenance: The Double Deck alternative would pose unique maintenance challenges and would cost approximately $1.2 million more per year to maintain than the At-grade alternative.

The **west segment At-grade alternative with no Hawley Road interchange** was eliminated largely in response to input from the City of West Allis, who was more supportive of the At-grade alternative with a half interchange at Hawley Road than the At-grade alternative with no Hawley Road interchange. The City also supported an extension of Washington Street (described below) to provide convenient access to and from Hawley Road from the 68th Street/70th Street interchange for traffic that would no longer be able to enter I-94 eastbound or exit I-94 westbound at Hawley Road.

The **east segment Off-alignment alternative** was eliminated for the following reasons:

- Cost: The Off-alignment alternative would cost about $785 million compared to $710 million (2014 dollars) for the On-alignment alternative.
- Right-of-way: The Off-alignment alternative would acquire two more acres of right-of-way than the On-alignment alternative.
- Displacements: The Off-alignment alternative would displace four businesses south of the freeway, compared to three businesses displaced by the On-alignment alternative.

Following publication of the Final EIS, FHWA and WisDOT identified several design refinements to reduce project costs, impacts, or both. The Selected Alternative is consistent with the Preferred Alternative as presented in the Final EIS with the specific refinements that are described below. None of the refinements require additional right-of-way or affect historic properties, Section 4(f) properties, wetlands, or waterways. The refinements reduce right-of-way acquisition and commercial displacements at several locations and also reduce wetland impacts.

Design Refinements following the Final EIS

West Segment

West Project Construction Limit

Hawley Road Re-alignment

Washington Street Extension

East Segment

Auxiliary Lane along Eastbound I-94 between 35th Street and 27th Street

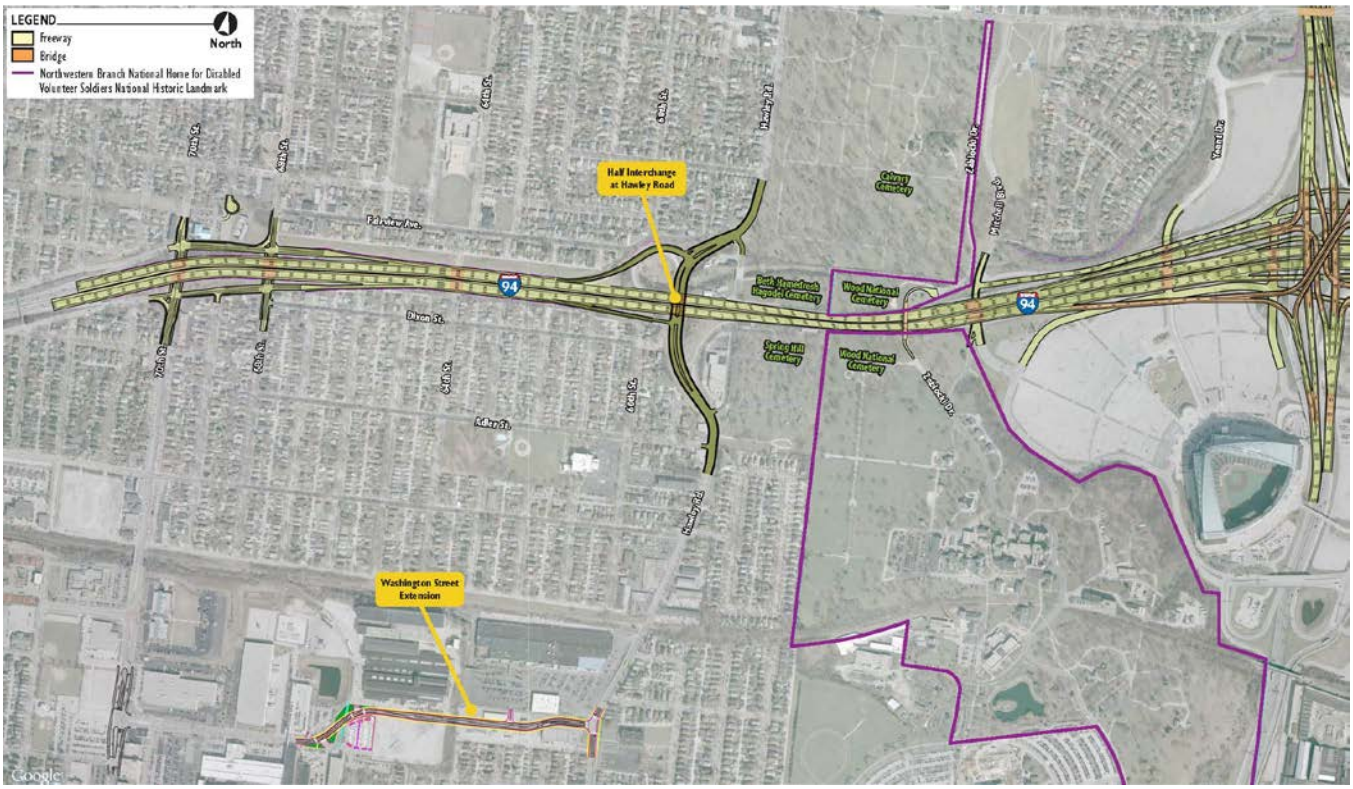
Local Roadway Improvements at 25th, 26th, 27th Streets, and West St. Paul Avenue

I-94 Alignment East of 25th Street

West Segment

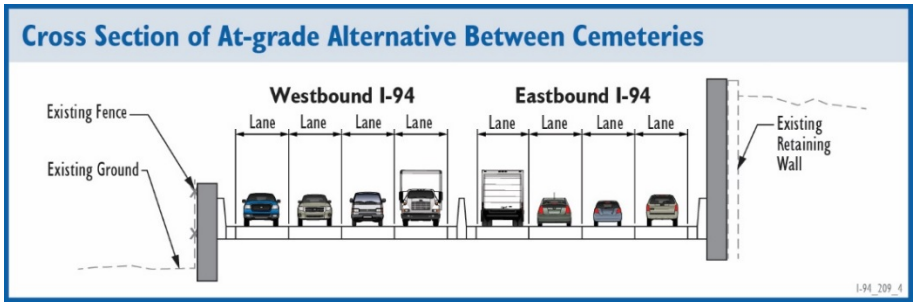
The Selected Alternative would reconstruct I-94 to 8 travel lanes (4 in each direction) at essentially the same elevation as the existing freeway (**Exhibit 3**).

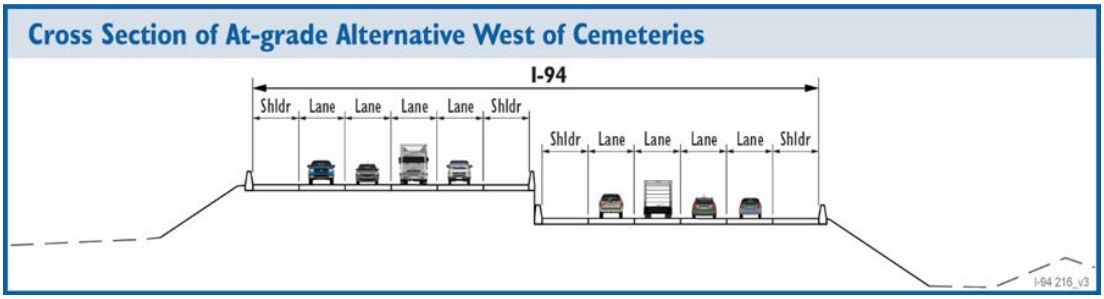
EXHIBIT 3
Selected West Segment Alternative



The reconstructed I-94 would have less than 12-foot driving lanes and narrow shoulders in the approximate 2,000-foot segment from Hawley Road to Zablocki Drive, to avoid encroachment on the adjacent cemeteries (**Exhibit 4**). East and west of the cemeteries, the freeway would transition to standard 12-foot lanes and 12-foot shoulders.

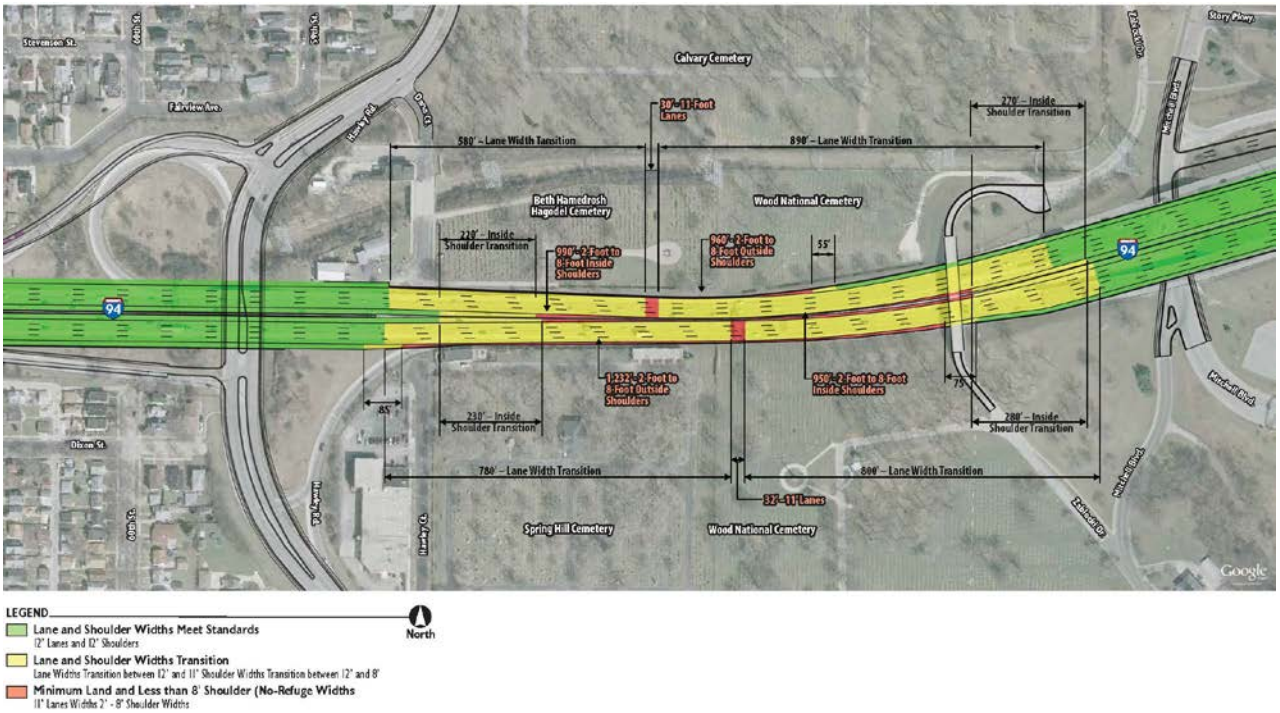
EXHIBIT 4
Selected West Segment Alternative Cross Sections





For eastbound traffic, the lanes would narrow to less than 12 feet (to as narrow as 11 feet) and the shoulders would narrow to less than 12 feet (to as narrow as 2 feet) for about 1,610 feet. Similarly, for westbound traffic, the lanes would narrow to less than 12 feet (to as narrow as 11 feet) and the shoulders would narrow to less than 12 feet (to as narrow as 2 feet) for about 1,500 feet. **Exhibit 5** provides a visual summary of these distances along this section.

EXHIBIT 5
Selected West Segment Alternative Lane and Shoulder Widths



Dynamic traffic management tools to warn drivers of closed lanes in the narrow segment, advance warning signs alerting drivers to the narrow lanes and narrow shoulders, and other tools like reflectors on the center median barrier wall and the outside barrier wall would be implemented to make the narrow lane/narrow shoulder segment as safe as possible.

West Project Construction Limit *(Reflects Refinement)*

The west limits of construction will likely extend about 1,000 feet west of 70th Street, the western limit of this study. This will allow the project to effectively tie into the existing freeway. I-94 west of 70th Street to 124th Street is currently being reconstructed by WisDOT as part of the Zoo Interchange project. 70th Street was the east limit of the Zoo Interchange EIS (Final EIS was approved in October 2011 and the ROD was approved in February 2012). WisDOT decided to end its Zoo Interchange-related reconstruction of I-94 about 1,000 feet west of 70th because the design of the I-94 East-West reconstruction at 70th Street was not finalized. Extending the I-94 East-West construction limit design west of 70th Street will allow it to match into the Zoo Interchange improvements. The reconstruction of the short segment of I-94 west of 70th Street as part of this project will not incur any impacts beyond those documented in the Zoo Interchange Final EIS and ROD.

The 68th Street/70th Street Interchange

The 68th Street/70th Street interchange would be reconstructed in its current configuration. Entrance and exit ramps would be longer than the existing ramps to provide more room for traffic entering and exiting the freeway, improving safety and traffic operations. 64th Street would continue to pass under I-94.

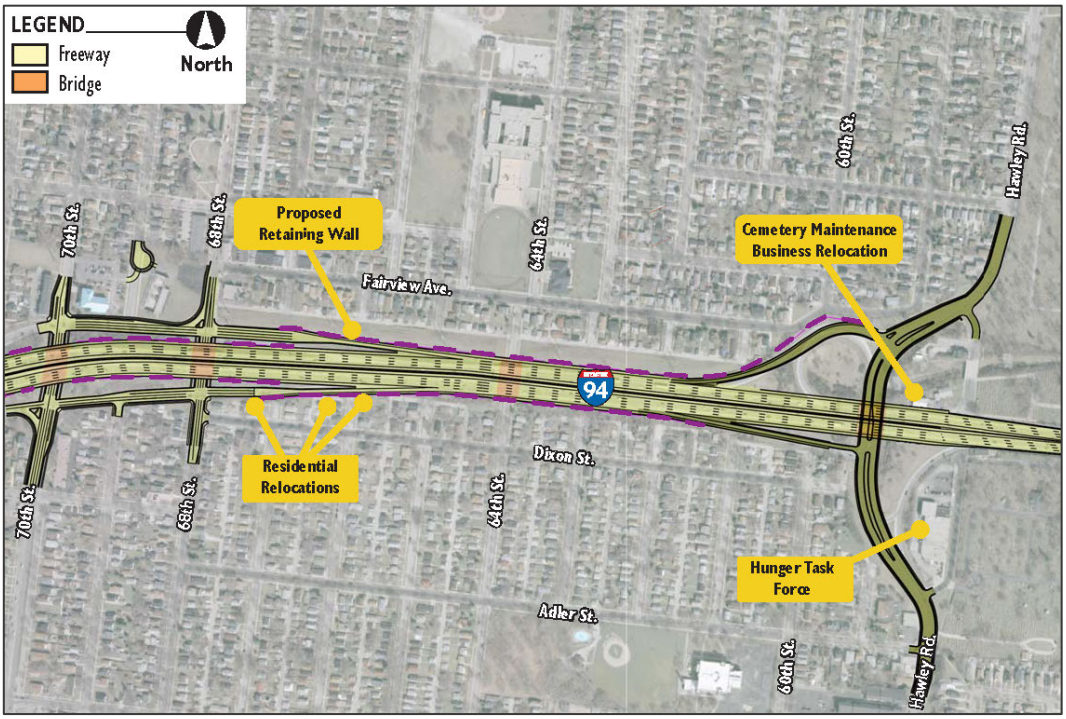
Hawley Road Interchange *(Reflects Refinement)*

The half interchange at Hawley Road would have an entrance ramp to westbound I-94 and an exit ramp from eastbound I-94 to Hawley Road. There would be no westbound exit ramp or eastbound entrance ramp, to avoid impacts to the cemeteries east of the interchange.

The half Hawley Road interchange design presented in the Final EIS would displace three residences adjacent to the south side of I-94 between 68th Street and 65th Street, a stand-alone single-family residence on Dana Court, an adult entertainment nightclub on Dana Court, one apartment above the nightclub, and a cemetery maintenance business on Dana Court (**Exhibit 6**). The Final EIS design would have re-aligned Hawley Road to the east in the vicinity of I-94.

EXHIBIT 6
Hawley Road Half Interchange

Hawley Road half interchange design in Final EIS



Refined Hawley Road half interchange design

The Hawley Road was re-designed to remain on its current alignment to reduce project impacts. This refinement:

1. Avoids one commercial and two residential displacements on Dana Court, and reduces the right-of-way acquisition at the interchange. Residential displacements between 68th Street and 65th Street will still be required.
2. Avoids moving Hawley Road closer to the Hunger Task Force property, a non-profit, food pantry distribution center.
3. Eliminates impacts to the ATC utility corridor at the westbound entrance ramp from Hawley Road because the ramp will remain on its existing alignment in this area.
4. Shifts I-94 south to avoid the ATC utility corridor near 68th Street.
5. Avoids the relocation of a cellular phone tower west of I-94 between Hawley Road and Dana Court.

This refinement shortens the weave distance between the Hawley Road entrance ramp and the 68th Street exit ramp, but the auxiliary lane would be extended beyond the exit to improve merging distance for entering traffic.

Mitchell Boulevard Interchange

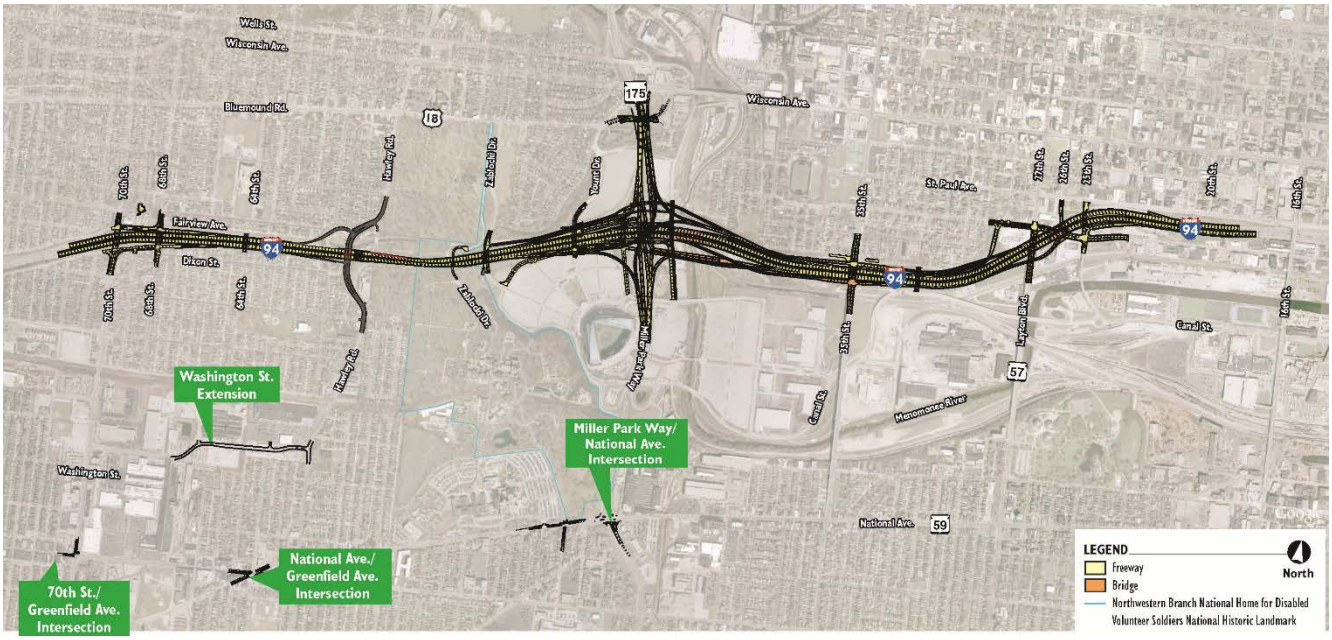
The freeway entrance and exit ramps at the Mitchell Boulevard interchange would be removed to avoid impact to the cemeteries and very short and unsafe merge distances on the interstate. The Mitchell Boulevard interchange would be replaced by a new local road interchange under the Stadium Interchange, with a new frontage road that connects to Mitchell Boulevard (described below under East Segment). A short segment of Mitchell Boulevard will be reconstructed.

Zablocki Drive would remain at its present location, and its bridge over I-94 would be replaced and raised, requiring reconstruction of short segments of Zablocki Drive on each side of the new bridge.

Off-Interstate Improvements *(Reflects Refinement)*

The partial removal of the Hawley Road interchange would redirect some traffic to local roadways. To mitigate these traffic impacts, WisDOT would construct some off-interstate improvements. The off-interstate improvements include upgrades at three local road intersections (70th Street/Greenfield Avenue, National Avenue/Greenfield Avenue, and Miller Park Way/National Avenue) to provide for the additional traffic volumes (**Exhibit 7**). The off-interstate improvements will also help to reduce crash frequency on the local roads.

EXHIBIT 7
Off-Interstate Improvements for Selected Alternative

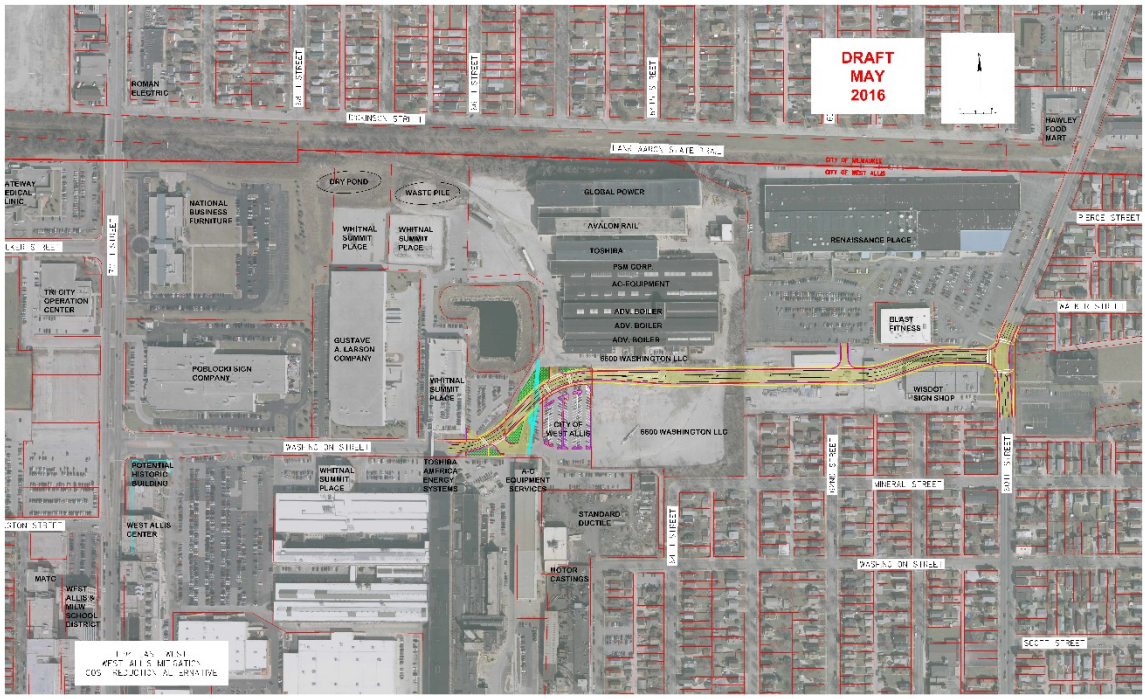


A new Washington Street extension would be constructed in West Allis to provide an efficient connection between the 68th Street/70th Street interchange and Hawley Road/60th Street. In the Final EIS, the alignment of Washington Street would have intersected 70th Street about 1,000 feet north of the existing intersection. The extension was redesigned after the Final EIS to reduce project impacts and construction costs. As currently designed, the Washington Street extension will tie into the existing Washington Street about 1,500 feet east of 70th Street (see **Exhibit 8**). Modifying the alignment will avoid 0.5 acre of wetland impacts (a wet detention pond and a dry detention pond), reduce utility and railroad impacts, avoid the need to widen the 70th Street bridge over the Hank Aaron State Trail, and substantially reduce the area of right-of-way acquisition.

WisDOT met with the City of West Allis on June 1, 2016 to discuss the change in the Washington Street Extension, and West Allis concurred with the refined design.

EXHIBIT 8
Washington Street Extension Refinements

Final EIS Washington Street extension design



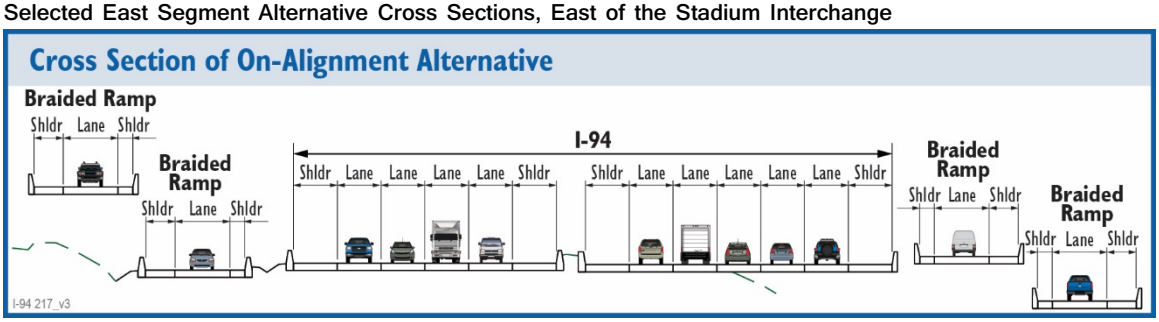
Refined Washington Street extension design

East Segment

In the east segment, I-94 would remain close to its current alignment and be widened to the south to allow for the additional through lane in each direction (**Exhibits 9 and 10**). The centerline of reconstructed I-94 would be about 50 feet south of the existing freeway centerline. The Selected Alternative would improve sight distance compared to the existing freeway by widening the shoulders beyond the standard 12 feet (where possible) to meet the AASHTO minimum stopping sight distance criterion.

EXHIBIT 9
Selected East Segment Alternative

EXHIBIT 10
Selected East Segment Alternative Cross Sections, East of the Stadium Interchange

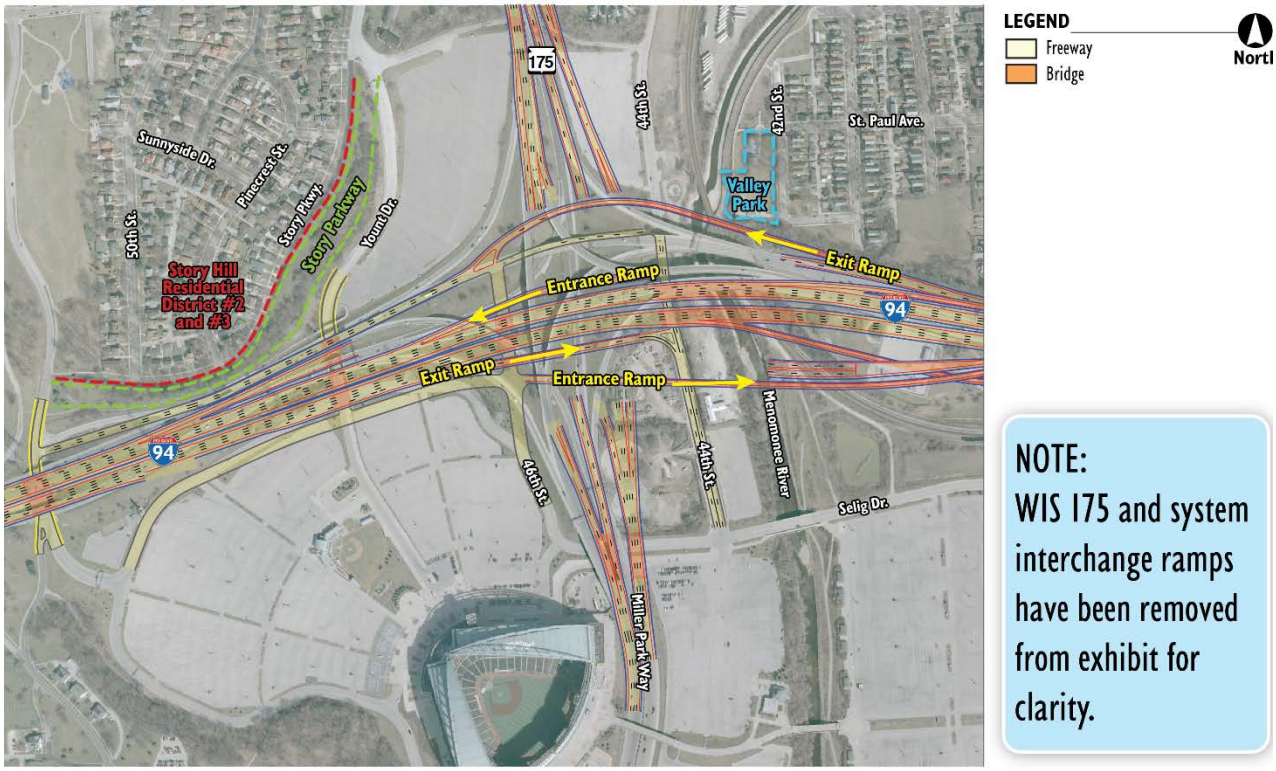


Stadium Interchange

The Stadium Interchange would be reconstructed as a hybrid between a service interchange and a system interchange (**Exhibit 11**). All of the exit ramps from I-94 to WIS 175/Miller Park Way would be free-flow ramps (no signals). The ramps from southbound WIS 175 to eastbound I-94 and from northbound Miller Park Way to westbound I-94 would be controlled by traffic signals. A traffic signal on WIS 175/Miller Park Way would control through-traffic on WIS 175/Miller Park Way and left turns onto I-94 from WIS 175/Miller Park Way. The reconstructed interchange would have a smaller footprint than the existing interchange.

EXHIBIT 11
Stadium Interchange Reconfiguration

Proposed reconfiguration of the Stadium Interchange (looking at the Stadium Interchange from the northeast)



Relocated Mitchell Boulevard Interchange (44th/46th Street)

Beneath the Stadium Interchange, new entrance and exit ramps to 44th Street and a new north-south local street (tentatively referred to as 46th Street) would be constructed to replace the Mitchell Boulevard interchange (**Exhibit 11**). The new interchange would connect to the existing Miller Park ring road and a new 3-lane frontage road north of I-94. The new north frontage road would pass over Yount Drive and connect to Mitchell Boulevard near the existing westbound I-94 exit ramp at Mitchell Boulevard. For drivers on westbound I-94, these connections would provide similar access to existing Miller Park parking, the Veterans Administration (VA) campus, and the Story Hill neighborhood.

As part of the reconstructed Stadium Interchange, there would be no access from northbound Miller Park Way to the Wisconsin Avenue interchange on WIS 175. Those exiting I-94 to WIS 175 would continue to be able to exit at Wisconsin Avenue. Additionally, those entering WIS 175 southbound from Wisconsin Avenue would continue to be able to access I-94 in both directions and travel south along WIS 175/Miller Park Way. As part of the reconstructed Stadium Interchange, there would be no direct access from WIS 175 or Miller Park Way to the 35th Street interchange via I-94. Traffic on WIS 175/Miller Park Way would access 35th Street from Wisconsin Avenue north of I-94 or National Avenue south of I-94. Access to the 35th Street interchange would continue to be provided for motorists on I-94. WIS 175/Miller Park Way would generally operate at level of service C or better in the design year (2040) during the morning and afternoon peak hours.

35th Street and 27th Street Interchanges

East of the Stadium Interchange, the 35th Street interchange would be reconstructed. The entrance and exit ramps near 27th Street (WIS 57) would remain at 25th, 26th, and 28th Streets and St. Paul Avenue. The 32nd Street underpass will remain under I-94.

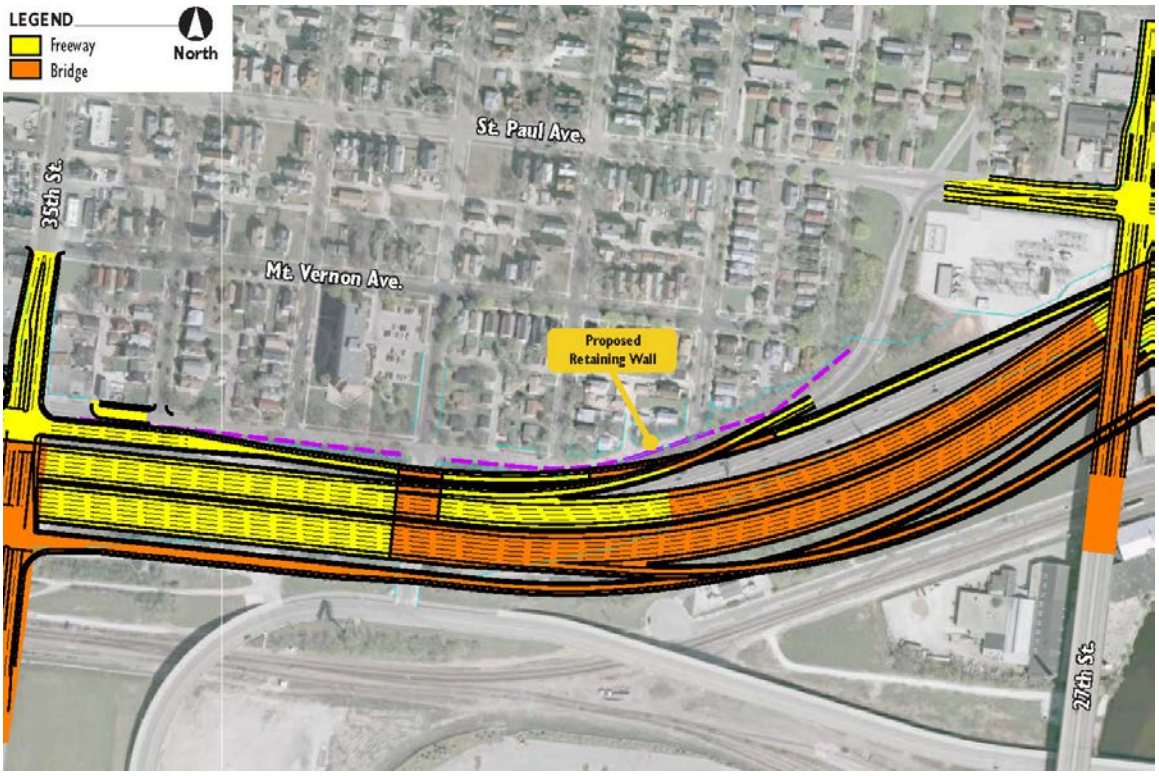
Left-and right-turn lanes would be added at the 27th Street/St. Paul Avenue intersection to accommodate additional traffic to and from the I-94 interchange.

Auxiliary Lane along Eastbound I-94 between 35th Street and 27th Streets *(Reflects Refinement)*

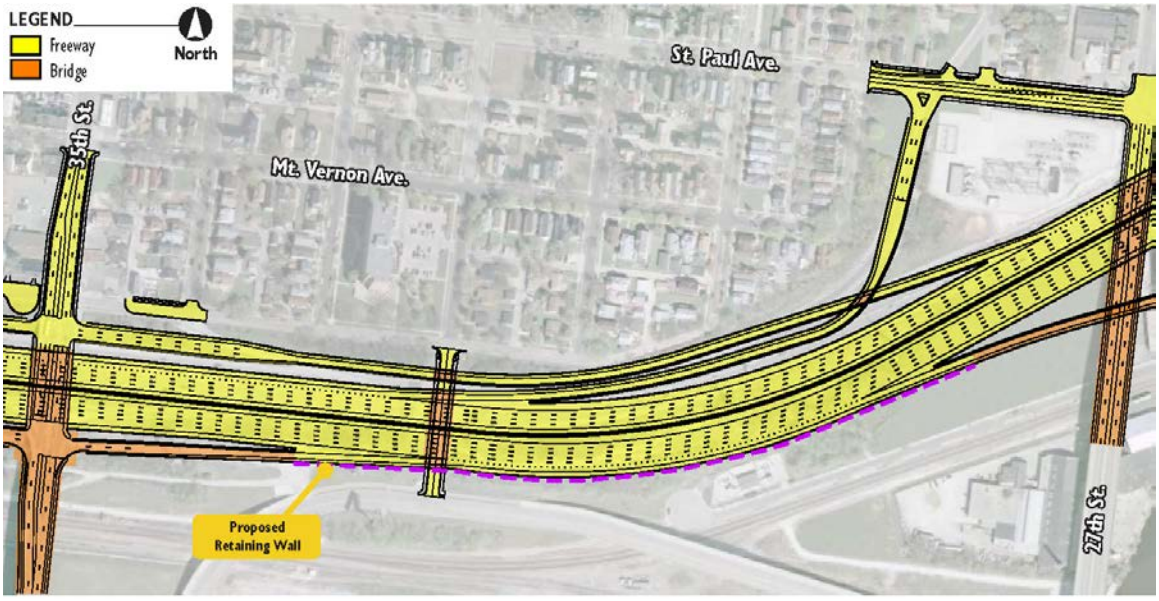
The Final EIS design included a braided ramp arrangement along eastbound I-94 between the eastbound entrance ramp from 35th Street and exit ramp to 26th Street, which requires lengthy elevated structures (**Exhibit 12**). To reduce project costs, the braided ramps were changed to a shared auxiliary lane (entrance and exit merging lane).

The refined design allows for a 1,100-foot weave between the 35th Street entrance ramp and 26th Street exit ramp so that traffic flow and safety would be maintained. The refinement will reduce construction costs by approximately $20 million by reducing the number and lengths of the structures.

EXHIBIT 12
Eastbound Ramp Reconfiguration, 35th Street to 26th Street



Braided eastbound ramp configuration between 35th Street and 27th Street in Final EIS



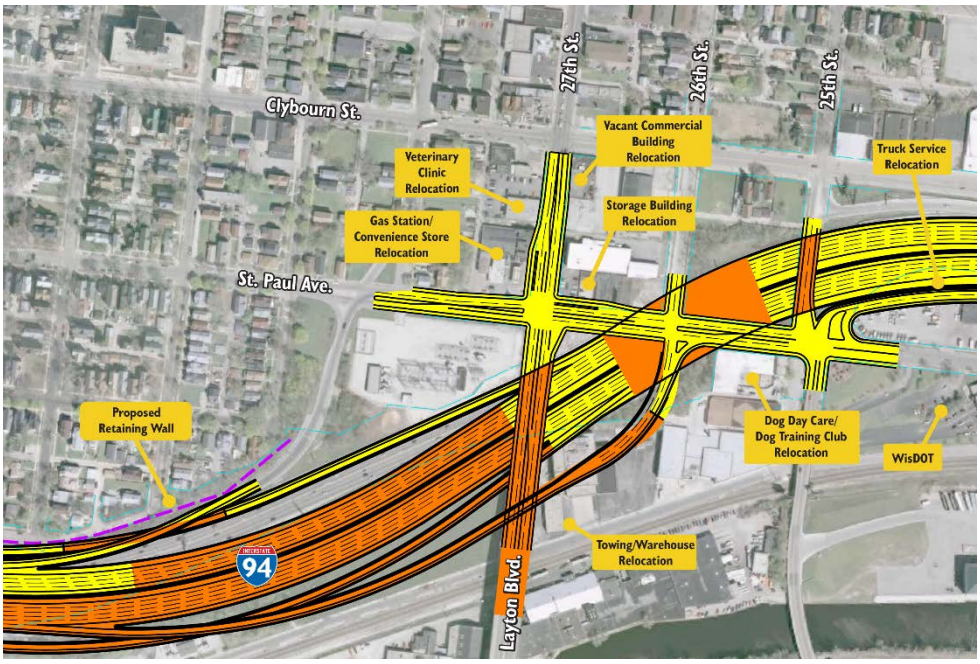
Refined eastbound ramp configuration using an auxiliary lane between 35th Street and 27th Street

Local Roadway Improvements at 25th, 26th, 27th Streets and West St. Paul Avenue *(Reflects Refinement)*

The Preferred Alternative, as described in the Final EIS, would expand 27th Street and West St. Paul Avenue near the interchange. This improvement would require commercial displacements around the 27th Street interchange including a dog day care and dog training club (St Paul at 25th Street); a veterinary clinic (431 N 27th); a truck service center (2326 W St. Paul Avenue); a towing business/warehouse (2640 W Greves Street); a gas station/convenience store (405 N 27th); and a storage building (2628 W St. Paul Avenue) (**Exhibit 13**).

To reduce project impacts, the design has been refined to minimize changes to 27th Street north of St. Paul Avenue and modify the alignment of 26th Street and 25th Street between St. Paul Avenue and Clybourn Street. These changes will reduce right-of-way acquisition and avoid displacement of the veterinary clinic and the gas station/convenience store along 27th Street. No displacements would be required along 25th Street or 26th Street. St. Paul Avenue would be modified at the intersection with 25th Street, but that change will not increase project impacts or affect any additional properties.

EXHIBIT 13
27th Street and West St. Paul Avenue Refinements



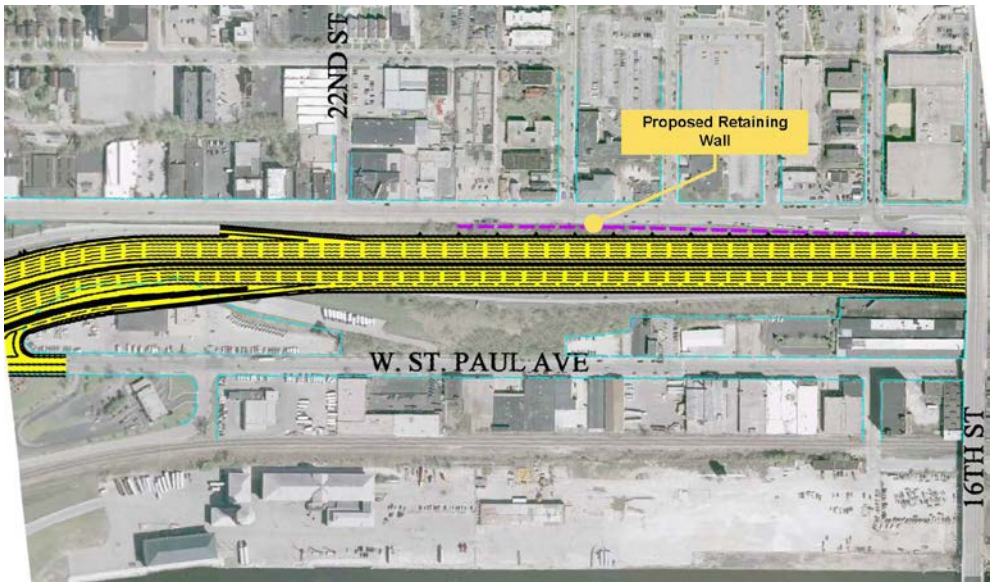
Reconstruction of 27th Street and West St. Paul Avenue in Final EIS

Refined 27th Street and West St. Paul Avenue Reconstruction

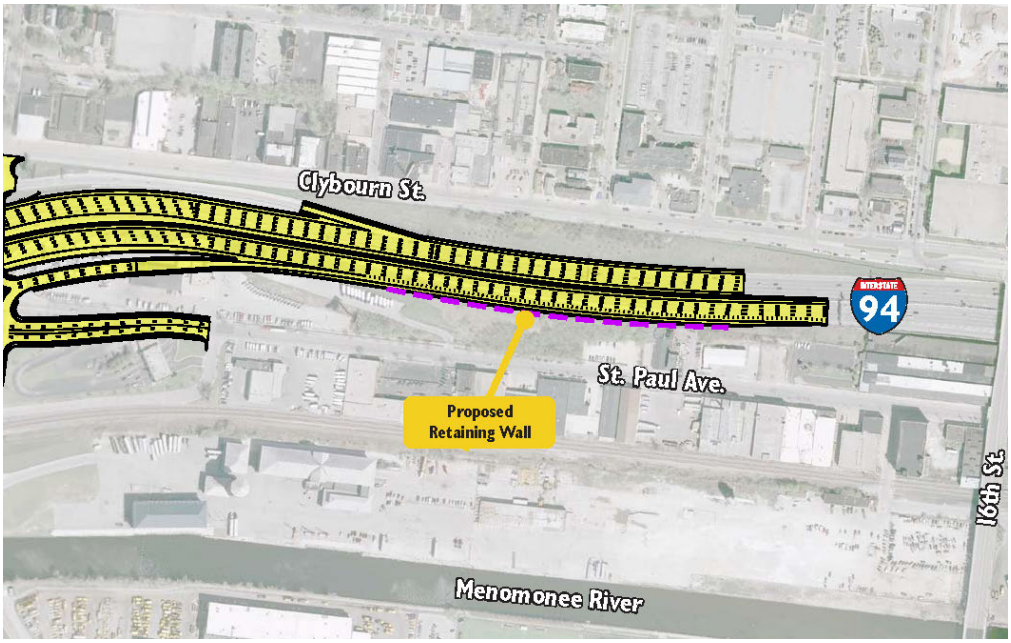
I-94 Alignment East of 25th Street *(Reflects Refinement)*

The Final EIS shows the alignment of I-94 at the eastern project terminus to be straightened to remove a slight curve between 25th Street and 16th Street (**Exhibit 14**). This change in the alignment will no longer be included in order to reduce construction costs. I-94 will remain on its existing alignment in this section. This refinement will keep existing walls built with the recent, adjacent Marquette Interchange project, and match the roadway near the Marquette project construction limits. It also reduces the retaining wall along the westbound side, although a wall will now be needed along the eastbound side. It will provide approximately $22 million in construction cost savings.

EXHIBIT 14
Realignment of I-94 at the Eastern End of the Project



Reconstruction of I-94 between 27th Street and 16th Street in Final EIS



Refinement to retain existing I-94 alignment in this section

TSM and TDM Measures

Appropriate TSM and TDM measures are included in the Selected Alternative. TSM measures such as ramp metering, traffic detectors, freeway monitoring/advisory information, and incident management are already in place along or near the I-94 East-West corridor and will remain in place as part of the Selected Alternative. Additional TSM elements, such as dynamic lane control along the corridor in advance of the segment with narrow lanes, may be added to the freeway during the final design phase. TDM measures that are currently in use and would be implemented as part of the Selected Alternative include preferential treatment for HOVs at metered freeway entrance ramps, park-and-ride lots, and rideshare promotion to encourage alternatives to single occupancy vehicle travel.

Environmental Impacts of the Selected Alternative

Table 1 lists the environmental impacts for the Preferred Alternative as presented in the Final EIS, and the Selected Alternative, including the design refinements following the Final EIS approval. Additional information can be found in Section 3 of the Final EIS.

All practicable means to avoid or minimize environmental harm from the Selected Alternative that are within the jurisdiction of the FHWA and WisDOT to implement have been adopted. Impact reductions due to the design refinements are discussed in footnotes and under each topic in Measures to Minimize Harm and Environmental Commitments. A monitoring and enforcement program will be adopted, as described on pages 45 to 46.

TABLE 1
Environmental Impacts Summary for the Selected Alternative

Environmental Factors	Preferred Alternative Total, including off interstate improvements, as reported in Final EIS	Selected Alternative Total, including off interstate improvements
Total Cost (2014 dollars in millions)	$852[b] ($1.106 billion YOE)	$852[b] ($1.106 billion YOE)
New Right-of-Way (acres)[a]	73	68
Residential Displacements (housing units)	8	6[c]
Commercial Displacements	11[d]	8[d]
Vacant Commercial Building Displacements	2	1
Institutional Displacements	1[e]	1[e]
100-year Floodplain Crossings (no new crossings)	1	1
Floodplain (acres)	0	0
Stream Crossings (no new crossings)	1	1
Wetland (acres)	0.6	0.1
Parkland (acres)	0	0
Threatened and Endangered Species (Yes/No)	Yes	Yes
Primary Environmental Corridor (acres)	0	0
Adverse Effects to Historic Properties	0	0
Archaeological Sites Affected	0	0
Environmental Justice Issues (Yes/No)	No	No[f]
Air Quality Permit	No	No
Noise Receptors Impacted (Design Year 2040)	270[g]	270[g]
Potential Contaminated Sites (sites recommended for additional field testing)	59[h]	52

TABLE 1
Environmental Impacts Summary for the Selected Alternative

NOTES:

[a] In addition to right-of-way acquisition, easements (not included as part of the right-of-way total in this table) may be required. The reduced right-of-way impact of the Selected Alternative is due primarily to the design refinements at the Hawley Road interchange and the Washington Street extension.

[b] The cost estimates include the cost of off-interstate improvements and adjustments to the overall cost based on the FHWA Cost Estimate Review session in 2015. The total estimated cost represented known details and project risks as of the date of the Cost Estimate Review. Final committed project costs are determined prior to development of the project's Financial Plan and are validated through a second Cost Estimate Review completed prior to construction.

[c] Design refinements following the Final EIS approval reduced residential displacements by 2.

[d] These totals include a dog training club (collocated with the dog day care) that was identified in public comments following the Final EIS. Design refinements following the Final EIS approval (Selected Alternative) reduced commercial displacements by 3, two in the east segment and one in the west segment.

[e] The institutional relocations are the same for the Selected Alternative as in the Final EIS. The WisDOT Southeast Region Service Facility on 60th Street/Hawley Road would be relocated as a result of the Washington Street extension.

[f] Updated analysis using most current socioeconomic data is included in Appendix B.

[g] This number includes 112 receptors in the west segment, 61 receptors in the east segment, and 97 receptors near the Washington Street extension. The total presented in Table S-1 of the Final EIS did not include the 97 receptors along the Washington Street extension.

[h] See bullet 1 under Corrections above.

Cost

The west segment At-grade alternative with the half Hawley Road interchange would cost approximately $125 million (2014 dollars) to construct. The east segment On-alignment alternative is estimated to cost $710 million (2014 dollars), and off-interstate improvements approximately $17 million. Including the off-interstate improvements, the Selected Alternative total cost is estimated to be about $1.106 billion in year-of-expenditure (YOE) dollars.

Design refinements following Final EIS approval that are part of the Selected Alternative (discussed above) would reduce construction costs in several areas. However, the project construction has been delayed by at least 1 year due to the results of the 2015-2017 Wisconsin biennial budget. The delayed construction schedule will likely increase costs due to inflation. If further delays to the planned dates for construction occur, additional increased project costs could result. The design refinements will help to offset any inflation of construction cost, but may not result in overall reduction of the total project cost. Because overall state transportation funding can only be committed one biennium at a time, this can impact the timing of planned construction funding throughout the construction phase of the project. As such, WisDOT and FHWA have not revised the cost estimate for the project at this point in time. The cost will be updated on a regular cycle during final design and construction.

The maintenance costs under the Selected Alternative would be less than for the No-build alternative because the pavement and bridges would be new. Snow removal costs may be higher for the Selected Alternative than for the No-build alternative because of the increase in pavement area.

Section 404 of the Federal Clean Water Act

The Selected Alternative is compatible with the Clean Water Act's Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material, which state that dredged or fill material should not be discharged into aquatic ecosystems (including wetlands), unless it can be demonstrated that there are no practicable alternatives to such discharge, that such discharge will not have unacceptable adverse impacts, and that all practicable measures to minimize adverse effects are undertaken. The U.S. Army Corps of Engineers (Corps of Engineers) concurred that the Preferred Alternative met the requirements of Section 404 prior to the Final EIS.

The Selected Alternative further reduces impacts to wetlands. Design refinements to the Washington Street extension will avoid impacts to two stormwater basins, thereby reducing wetland impacts by 0.5 acre. Wetland

impacts of the Selected Alternative will be limited to a 0.1-acre wetland in the Stadium Interchange (discussed below in Measures to Minimize Harm and Environmental Commitments).

National Historic Preservation Act

Sections 106 and 110(f) of the National Historic Preservation Act as amended (54 USC 306108 and 54 USC 306107, respectively) requires federal agencies "to the maximum extent possible undertake such planning and actions as may be necessary to minimize harm" to historic properties and to afford the Advisory Council on Historic Preservation (ACHP) reasonable opportunity to comment on such undertakings. WisDOT and FHWA entered into a Programmatic Agreement with the ACHP, the State Historic Preservation Officer (SHPO) and other signatories to stipulate measures to avoid adverse effects to the Soldiers' Home NHL and other identified historic properties in the project area (Appendix C). These stipulations include future design coordination and reviews with SHPO, the National Cemetery Administration, National Park Service, the Advisory Council on Historic Preservation and other consulting parties; specifications for protection during construction; actions if there are unanticipated discoveries; monitoring; and reporting requirements.

Regional Transportation Planning

This project is included in SEWRPC's long range transportation plan in *VISION 2050,* which recommends "widening and/or other improvement to provide significant additional capacity" to the section of I-94 from western Waukesha County to the Marquette Interchange. *VISION 2050* was approved on July 28, 2016. The next phase of the I-94 East-West Corridor project (final design) is included in a July 2016 amendment to SEWRPC's 2015-2018 *Regional Transportation Improvement Program* (TIP).

Section 4(f) Findings

The U.S. DOT's Section 4(f) law (49 USC 303 and 23 USC 138) states that FHWA and other U.S. DOT agencies cannot approve the use of land from significant publicly owned parks, recreation areas, wildlife or waterfowl refuges, or significant public and private historic sites unless it is determined that there is no feasible and prudent alternative to the use of land from such properties, and the action includes all possible planning to minimize harm to the property resulting from such use or the use is *de minimis*. Section 4(f) helped guide the decision making process for the Selected Alternative.

Analysis performed for the Final Section 4(f) Evaluation (Section 4 of the Final EIS) resulted in the following findings regarding use resulting from project actions:

- *De minimis* impact determination for the Soldiers' Home NHL
- *De minimis* impact determination for the Soldiers' Home Historic District

Other Section 4(f) properties located in the study area for which it was concluded there would be no Section 4(f) uses as a result of project actions are listed below:

- Calvary Cemetery (eligible for listing on the National Register)
- Soldiers' Home Reef National Historic Landmark
- Story Hill Residential Historic District 1 (eligible for listing on the National Register)
- Story Hill Residential Historic District 2 and 3 (eligible for listing on the National Register)
- Doyne Park
- Oak Leaf Recreational Trail
- Valley Park
- Mitchell Boulevard Park
- Former Paradise Theater, (eligible for listing on the National Register)

With regard to Story Parkway, there would be no use of this Section 4(f) property with the Selected Alternative. However, it is important to note that FHWA has preliminarily determined that there would be no more than *de minimis* impacts to Story Parkway **if** a noise barrier were to be built. A final decision on the construction of a noise barrier in this area will be made after the issuance of this ROD during the final design phase, with input from Story

Hill Residential Historic District 2 and 3 residents. If a noise barrier were to be built, the Section 106 Programmatic Agreement for this project includes a stipulation to prepare a Noise Barrier Design Plan in consultation with the consulting parties and signatories to the Programmatic Agreement (Appendix C). In this event, as stipulated, the FHWA and WisDOT would consult with the consulting parties and signatories regarding the appearance of the wall and other measures to avoid and minimize its effect. FHWA will re-evaluate Section 4(f) determinations for Story Parkway and Story Hill Residential Historic District 2 and 3 based on the results of the noise wall decision. At that time, FHWA will also coordinate with Milwaukee County as the official with jurisdiction over Story Parkway in accordance with the *de minimis* provisions.

Impacts to the two Section 4(f) resources where *de minimis* determinations have been made (Soldiers' Home NHL and Soldiers' Home Historic District) are summarized below.

Northwestern Branch, National Home for Disabled Volunteer Soldiers' National Historic Landmark (Soldiers' Home NHL)

Approximately 0.20 acres of Soldiers' Home NHL property near the Miller Park Way/National Avenue intersection would be acquired to provide a right-turn lane to the VA Campus from National Avenue, as requested by the VA. The acquisition would not be a significant impact to the NHL, as the affected area is the far southern boundary of the NHL, and the impact will not be visible from Wood National Cemetery, nor from the buildings and structures that make up the Soldiers' Home NHL complex.

The existing Zablocki Drive bridge would be replaced by a longer bridge in the same location. Short segments of Zablocki Drive on each side of the new bridge, within the Soldiers' Home NHL boundary, would be reconstructed. Replacing the bridge on Zablocki Drive and reconstructing Mitchell Boulevard south of I-94 under the Selected Alternative would require a temporary easement consisting of about 2 acres of Soldiers' Home NHL property.

Increasing the elevation of I-94 and the Zablocki Drive bridge by three to five feet would have a minor impact to the setting and feeling of the Soldiers' Home NHL. The slightly elevated roadway would alter the viewscape across I-94 between the two parts of the Wood National Cemetery, a contributing element of the NHL, but would maintain a visual connection between the two parts of the cemetery.

The project included the following measures to minimize harm with respect to the Soldiers' Home NHL:

- WisDOT and FHWA met regularly with the Section 106 consulting parties between July 2013 and June 2016 in the development and evaluation of alternatives. The At-grade (Selected) alternative was designed to avoid taking any land from the Wood National Cemetery.
- No graves would be disinterred from Wood National Cemetery, and none of the identified heritage trees would be impacted.
- As part of the project, a low wall would be constructed adjacent to Wood National Cemetery on both the north and south sides of I-94 within WisDOT right-of-way, by request of the National Cemetery Administration. A low wall would not be an adverse effect on the NHL.
- Connectivity between the two sides of Wood National Cemetery (north and south of I-94) would be provided during construction and would be stipulated in the Construction Staging Plan, in accordance with the Programmatic Agreement.
- WisDOT and FHWA will continue to consult with applicable parties in accordance with the Programmatic Agreement. To ensure the No Adverse Effect finding, the Programmatic Agreement includes minimization measures that include plans for: freeway design review, construction staging, Wood National Cemetery wall design, landscaping, and signage.
- No gravesites or other formal areas of the NHL would be impacted by the temporary construction activities.
- WisDOT would restore all landscaping after construction is completed.

Section 4(f) Determination

The Wisconsin SHPO, National Park Service, and Advisory Council on Historic Preservation have concurred with FHWA's Section 106 finding that the Selected Alternative would have No Adverse Effect at the Soldiers' Home NHL (see Section 3.24.2.1 and the Section 106 consultation documentation in the Final EIS). Based on this finding, and after a consideration of measures to minimize harm, FHWA has determined the project will have a *de minimis* impact on the Soldier's Home NHL under Section 4(f). The Wisconsin SHPO, National Park Service, and Advisory Council for Historic Preservation have concurred in writing with this *de minimis* impact determination.

Northwestern Branch, National Home for Disabled Volunteer Soldiers' Historic District (Soldiers' Home Historic District)

The Selected Alternative would not result in a permanent incorporation of property from the Soldiers' Home Historic District. Short sections of Zablocki Drive would be reconstructed in the Historic District to match the new bridge over I-94. The reconstruction of Mitchell Boulevard and its intersection with the new frontage road would necessitate a temporary occupancy of about 3 acres of the Historic District during construction. No formal areas of the Soldiers' Home Historic District would be permanently or temporarily impacted by the temporary construction activities. FHWA and WisDOT will coordinate with Milwaukee County Parks regarding the temporary occupancy of portions of Mitchell Boulevard Park (overlapping the Historic District).

There would be no appreciable visual impact to the Soldiers' Home Historic District from the 3- to 5-foot increase in elevation of I-94 and the Zablocki Drive bridge. The Selected Alternative will elevate I-94 3 to 5 feet higher than it is currently between the two sections of the NHL north and south of I-94. The slightly elevated roadway would alter the viewscape from one side of the Wood National Cemetery to the other, but the district would retain integrity of design, association, materials, workmanship, and location. No graves will be disinterred from Wood National Cemetery.

Measures to minimize harm with respect to the Soldiers' Home District are the same as those noted for the Soldiers' Home NHL.

Section 4(f) Determination

The Wisconsin SHPO and the Advisory Council on Historic Preservation have concurred with FHWA's Section 106 finding that the Selected Alternative would have No Adverse Effect at the Soldiers' Home Historic District (see Section 3.24.2.1 and the Section 106 consultation documentation in the Final EIS). Based on this finding, and after a consideration of measures to minimize harm, FHWA has determined the project will have a *de minimis* impact on the Soldier's Home Historic District under Section 4(f). The Wisconsin SHPO and Advisory Council for Historic Preservation have concurred in writing with this *de minimis* impact determination.

Section 6(f) Findings

No park/recreational properties in the project study area have used funds provided through the Land and Water Conservation Fund Act (LWCF) as amended (16 USC 4601). Therefore, LWCF Section 6(f) requirements do not apply to the project.

Measures to Minimize Harm and Environmental Commitments

Transportation Service

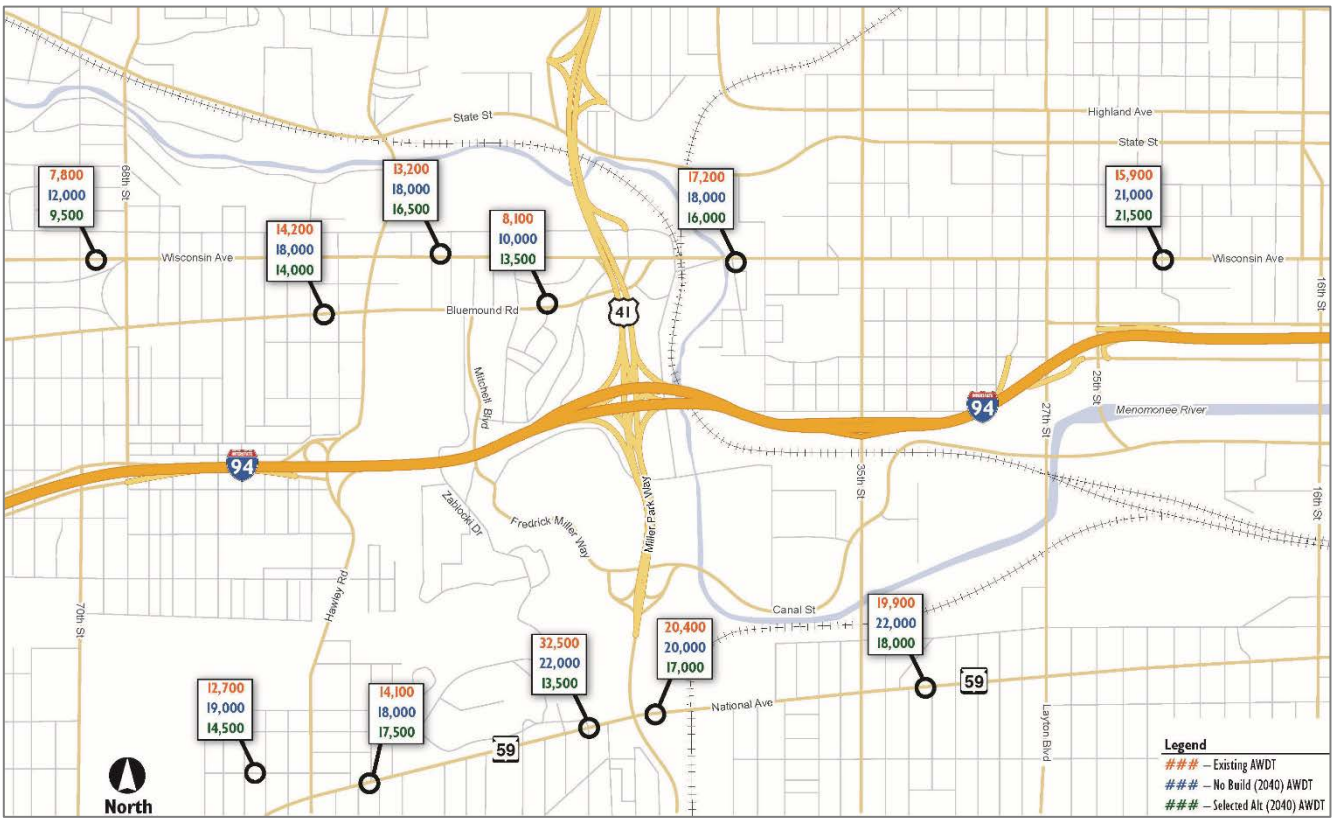
The improved roadway design and removal of interchange ramps with the Selected Alternative will substantially reduce crash frequency on I-94 compared to existing conditions or a Replace-in-Kind alternative. The At-grade alternative with half interchange at Hawley Road would have 23 percent fewer crashes on I-94 than the Replace-in-Kind option.

The Selected Alternative would improve traffic flow by adding an additional traffic lane in each direction. The west segment of I-94 would generally operate at a level of service D or better in the design year (2040) peak hour,

compared to E and F under the No-build alternative. The east segment of I-94 would operate at level of service C to D in the design year.

Several public comments on the Final EIS focused on traffic impacts to local roadways. In general, the Selected Alternative would provide additional capacity on I-94, resulting in less traffic diverting to local roads, and less congestion on local roads. Section 3.3.2.3 of the Final EIS discusses impacts to local roadways. The Selected Alternative would result in a modest decrease in congestion along Bluemound Road, Wisconsin Avenue, National Avenue, and other parallel east-west arterials compared to the No Build Alternative. **Exhibit 15** shows the expected reduction in traffic volumes on several of these arterials. The off-interstate improvements will improve traffic flow on several roadways to compensate for changes at the Hawley Road interchange.

EXHIBIT 15
Existing and Design Year 2040 Average Weekday Traffic Volumes



As part of the Selected Alternative in the west segment, WisDOT would construct some off-interstate improvements to mitigate the traffic impacts of partially closing the Hawley Road interchange (see Page 13). The improvements include extending Washington Street to make it easier for drivers in the Hawley Road corridor to access the 68th Street/70th Street interchange. WisDOT would modify the I-94 signage along key arterials to direct drivers to the 68th Street/ 70th Street interchange or the Stadium Interchange. If needed, traffic calming measures could be installed along residential streets adjacent to the Hawley Road interchange, such as Main Street and Adler Street south of I-94 and Dixon Street north of I-94. The need for these measures will be determined during the next stage of design.

The Selected Alternative also includes improvements at three local road intersections that would see a modest increase in traffic volumes as a result of the access change at Hawley Road (**Exhibit 7**):

- 70th Street/Greenfield Avenue
- National Avenue/Greenfield Avenue
- Miller Park Way/National Avenue

The improvements at these intersections include adding turn lanes and improved traffic signals.

Existing Washington Street is about 0.5-mile south of I-94 and currently intersects with 70th Street and dead ends a few blocks to the east. It provides access to several businesses. The new Washington Street extension would provide a connection between 70th Street and Hawley Road/60th Street and convenient access to and from Hawley Road from the 68th Street/70th Street interchange for traffic that would no longer be able to enter I-94 eastbound or exit from I-94 westbound at Hawley Road.

At the 70th Street/Greenfield Avenue intersection, WisDOT would restripe the existing lane configuration to extend the southbound left-turn lane and improve the traffic signals to improve traffic operations. No right-of-way would be required for the improvements.

At the National Avenue/Greenfield Avenue intersection, WisDOT would restripe the existing lane configuration and improve the traffic signals. Along National Avenue, northeast-bound National Avenue would be restriped to provide for a combined left and through lane, along with a right-turn lane. This improvement would eliminate approximately 100 feet of on-street parking (about five parking spots). For southwest-bound National Avenue, a combined left and through lane, along with a right-turn lane, would be provided. This improvement would eliminate approximately 150 feet of on-street parking (about 8 parking spots). Along Greenfield Avenue, a left-turn lane and a combined through and right-turn lane would be provided in each direction. This would result in the loss of about 70 feet of parking (about 4 parking spots) along westbound Greenfield Avenue.

At the Miller Park Way/National Avenue intersection, WisDOT would restripe traffic lanes and improve traffic signals. A second left-turn lane would be added to both northbound Miller Park Way and westbound National Avenue. Along National Avenue, west of Miller Park Way, the second westbound through lane would be extended by 500 feet to a spot between 45th Street and 46th Street. In addition, a right turn lane would be provided from westbound National Avenue to the VA entrance at General Mitchell Boulevard/47th Street. The right turn lane was requested by the VA to improve access to its campus, and it would improve traffic operations along National Avenue.

WisDOT and FHWA will coordinate with Canadian Pacific Railway to minimize interruptions to rail service while replacing the I-94 bridge over the Canadian Pacific Railway. WisDOT and FHWA will also work with the Milwaukee County Transit System (MCTS) to minimize disruption to its routes during construction.

Utilities

WisDOT will compensate utilities for relocating their facilities, if required. WisDOT and FHWA will continue to coordinate with utilities, municipalities, and Milwaukee County to avoid or minimize interruptions in service during construction.

Residential Development

The Selected Alternative would displace a total of six residences. The Selected Alternative would affect three single-family residences in the west segment. Design refinements following the Final EIS approval would avoid impact to an apartment and a single-family residence at the Hawley Road interchange (see **Exhibit 6** and **Table 1**). The apartment that will no longer be displaced is located above a minority-owned business. In the east segment, the Selected Alternative would displace three residences, consisting of a duplex and an apartment above a business.

Federal property acquisition law provides for payment of just compensation for residences displaced for a federally-funded transportation project (Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended). Acquisition price, replacement dwelling costs, moving expenses, increased rental or mortgage payments, closing costs, and other relocation costs are covered for residential displacements.

Under state law, no person may be displaced unless a comparable replacement dwelling is provided. Compensation is available to all displaced persons without discrimination. Before appraisals are made and property is acquired, an authorized relocation agent will interview each owner and renter to be relocated to determine their needs, desires, and unique situations associated with relocating. The agent will explain the relocation benefits and services each owner may be eligible to receive.

Before initiation of property acquisition, WisDOT provides information explaining the acquisition process and the state's Eminent Domain Law under Section 32.05, Wisconsin Statutes. A professional appraiser inspects the property to be acquired. Property owners are invited to accompany the appraiser to ensure that full information about the property is taken into consideration. Property owners may also obtain an independent appraisal. Based on the appraisal, the value of the property is determined and that amount offered to the owner. If agreement on fair market value cannot be reached, the owner would be advised of the appropriate appeal procedure.

A search of available housing from local realtor listings in June 2015 reported over 70 homes of similar price ($50,000 to $200,000) to those that would be displaced within roughly 1 mile of I-94 west of WIS 175/Miller Park Way. A search of replacement rental housing revealed 25 rental properties similar to the units that would be displaced in the east segment. One, two, and three bedroom units are available within study area ZIP codes, starting at $400 per month. Available replacement rental housing includes duplexes and apartment buildings.

Any septic tanks, drain fields, or wells on acquired properties will be abandoned in accordance with state regulations and local zoning standards. WisDOT will survey all buildings to be demolished to determine whether asbestos or lead paint is present. Appropriate and applicable engineering and regulatory controls will be followed during the handling and disposal of asbestos-containing material and lead-based paint. Contractors must comply with U.S. Environmental Protection Agency (U.S. EPA) regulations; National Emission Standards for Asbestos; the Occupational, Safety, and Health Administration regulations on asbestos removal; local government regulations; and other applicable regulations. The most recent editions of all applicable standards, codes, or regulations shall be in effect. Persons performing asbestos abatement must comply with training certification requirements, rules, regulations, and laws of the State of Wisconsin regarding asbestos removal.

Before a contractor demolishes a building that may contain or is known to contain asbestos, the contractor must notify DNR and Wisconsin Department of Health and Family Services at least 10 working days before starting the work, using DNR Form 4500-113: "Notification of Demolition and/or Renovation and Application for Permit Exemption."

Demographic data for areas in which residential displacements will occur do not indicate age, disability or income characteristics that would require special relocation consideration or services. WisDOT also coordinated with potential relocated residents prior to and during public meetings and no special relocation considerations or services were identified at those times. If unusual circumstances arise during real estate activities, WisDOT real estate personnel will provide appropriate relocation services.

During the project's final design phase, WisDOT will design lighting in such a way to minimize the amount of freeway lighting that enters adjacent residential neighborhoods.

Commercial Development

Alternatives were designed to stay within existing right-of-way as much as possible to minimize the impact on surrounding commercial and industrial properties.

The Selected Alternative with the design refinements would displace a total of eight active businesses. Design refinements following the Final EIS approval reduced commercial displacements by three; two in the east segment and one in the west segment (**Exhibits 6 and 13** and **Table 1**). All three of these commercial properties are minority-owned businesses. In the west segment, design refinements to the Hawley Road interchange would avoid impacts to the adult entertainment nightclub, a minority-owned business, as reported in the Final EIS. The cemetery maintenance business located on Dana Court would still be displaced. In the east segment, the displacements include a collocated dog day care and dog training club (see Corrections), a walk-in health clinic, a truck service center, a bar, a towing business, and a storage building. Design refinements at the 27th Street interchange will avoid impacts to a gas station/convenience store (minority-owned), a veterinary clinic (minority-owned), and a vacant commercial building as reported in the Final EIS.

Commercial acquisitions and displacements will be done in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. In addition to providing just compensation for property acquired, other benefits are available to eligible displaced businesses, including relocation advisory

services, reimbursement of moving expenses, and down-payment assistance. Under state law, no person would be displaced unless a comparable business location or other compensation (when a suitable business location replacement is not practical) is provided. Compensation is available to all displaced businesses without discrimination.

Before initiating property acquisition activities, property owners would be contacted and given a detailed explanation of the acquisition process and Wisconsin's Eminent Domain Law under Section 32.05, Wisconsin Statutes. Acquired property will be inspected by one or more professional appraisers. The property owner will be invited to accompany the appraiser during the inspection to ensure that the appraiser is informed of every aspect of the property. Property owners will be given the opportunity to obtain an appraisal by a qualified appraiser that will be considered by WisDOT in establishing just compensation. Based on the appraisal, the value of the property would be determined and that amount offered to the owner.

Before a contractor demolishes a building that may contain or is known to contain asbestos, the contractor must notify DNR and Wisconsin Department of Health and Family Services at least 10 working days before starting the work, using DNR Form 4500-113: "Notification of Demolition and/or Renovation and Application for Permit Exemption."

There is no known age, ethnic, handicapped, or minority characteristics that will require special consideration for any business displacement. No unusual requirements are expected that would preclude successful relocation. Design refinements following the Final EIS approval will avoid impacts to the adult entertainment nightclub at the Hawley Road interchange. Badger Truck Center, Inc. and Central Bark Doggy Day Care are franchisee establishments that operate within a designated territory. As part of their franchise agreements, they are not allowed to relocate within a specified distance of another franchisee.

A search of a commercial realty website in June 2015 listed more than 32 commercial/industrial locations in the City of Milwaukee that would be adequate replacement sites for the businesses that would be displaced by the project. There is one walk-in medical clinic (Concentra Urgent Care, 35th Street) that would be displaced. A search of a commercial realty website in June 2013 listed 12 medical offices available for lease. Based on the listings, there is a sufficient amount of available properties for displaced businesses. However, the availability of vacant commercial and industrial locations is always in flux. As businesses relocate in the future, the number of business and commercial listings may change, but it appears likely that sufficient replacement business buildings will be available when required.

Off-interstate improvements (Washington Street extension and intersection improvements) will help mitigate the impacts to local businesses of partially closing the Hawley Road interchange.

Institutional and Public Services

Alternatives were designed to stay within the existing right-of-way as much as possible to minimize the impact on surrounding institutions and public services.

The Washington Street extension will displace WisDOT's Southeast Region Service Facility on South 60th Street in West Allis. WisDOT will likely build a Service Facility in the Milwaukee area to replace the 60th Street building.

The project may require a narrow strip of land from the Girl Scouts of Wisconsin Southeast Service and Resource Center on 70th Street. The need for acquisition will be determined during final design. WisDOT and FHWA will compensate Girl Scouts of America for land acquired as part of the project, if any.

WisDOT and FHWA will replace or compensate the Stadium District for Miller Park parking spaces that are lost (approximately 480 spaces for fans and 600 spaces for staff) and compensate the Stadium District for land that is acquired. Some impact to the Miller Park parking lots could be mitigated through the construction of parking structures onsite or building more of the proposed roadways over the parking lots on structure (bridges) and allowing parking under the bridges. Additional new parking spaces, about 400 spaces, could be located on existing open land or existing WisDOT right-of-way that would no longer be required. WisDOT and FHWA will continue working with the Stadium District and the Milwaukee Brewers to develop a plan to efficiently unload the parking lots after games, and compensate for lost parking.

As requested by the VA, WisDOT and FHWA will maintain the Zablocki Drive connection between Bluemound Road and the VA Campus. Additionally, the VA asked that the Zablocki Drive access remain separate from Mitchell Boulevard due to conflicts during Miller Park events. All alternatives maintain this northern connection separate from Mitchell Boulevard. Additional mitigation measures for the VA Campus are described under Historic Properties and Section 4(f) Findings.

The Washington Street extension would help to mitigate the traffic impacts of partially closing the Hawley Road interchange on the VA, cemeteries, the Hunger Task Force, and emergency services by making it easier for drivers in the Hawley Road corridor to access the 68th Street/70th Street interchange.

Socioeconomics

Based on extensive public input received during the study, WisDOT and FHWA committed to maintaining existing cross streets and access points in order to minimize impacts to neighborhoods, residences and businesses. Although traffic operations and safety could have been most improved with the elimination and/or combination of access points, the design recognizes a balance of safety and travel efficiency with maintaining community access and cohesion. WisDOT and FHWA developed alternatives to minimize socioeconomic impacts and modified the alternatives to further reduce socioeconomic impacts based on public input.

The Selected Alternative includes the following features that minimize impacts on residences, businesses, community facilities, and access points:

- The Selected Alternative maintains current cross streets and access points to and from I-94 and connectivity east of the Stadium Interchange.
- The Selected Alternative in the east segment requires less right-of-way acquisition than the Off-alignment alternative.
- The Selected Alternative maintains local access by replacing the Mitchell Boulevard interchange with a new local road interchange in the Stadium Interchange and a frontage road that extends to Mitchell Boulevard from the interchange.
- The Selected Alternative provides a half interchange at Hawley Road to maintain access to I-94 for a number of area businesses, even though removing the interchange would reduce conflict points along mainline I-94. The refined half interchange design requires relocating one business, but avoids displacing another, minority-owned business.
- Design refinements to the 27th Street interchange will avoid displacing two businesses.
- The Washington Street extension would mitigate the traffic impacts of partially closing the Hawley Road interchange. Refinement of the Washington Street extension will avoid right-of-way acquisition from a number of businesses.

WisDOT will continue to coordinate with communities during future design phases of the Selected Alternative for opportunities to further minimize impacts. Improved travel reliability and safety in the study corridor can also support local economic development efforts, which can help offset unavoidable impacts to the local tax base.

Environmental Justice

As part of public outreach for the I-94 project, WisDOT provided engagement opportunities for minority and/or low-income populations early and often in the planning and development process. The public involvement process was open to all residents and population groups in the study area with targeted outreach efforts to specifically attract input from persons of low-income and/or minority status.

The I-94 East-West Corridor project would not result in disproportionately high and adverse effects under Executive Order 12898, DOT Order 5610.2(a), and FHWA Order 6640.23A as a result of the implementation of the Selected Alternative. Most project impacts would be limited in scope and others would be mitigated through the implementation of effective mitigation measures. The Selected Alternative meets the project purpose and need and would provide substantial benefits that positively affect minority and low-income populations as well as the

overall population within the project area. Coordination will continue during design and construction with adjacent municipalities, landowners and residents to refine mitigation measures for issues including stormwater management, noise walls, traffic management, and vibration.

Based on comments received from the public on the I-94 East-West Corridor Final EIS, FHWA updated the demographic and income data presented in the Final EIS (see **Appendix B**). The new analysis included updating the methodology for calculating minority populations as well as updating the socioeconomic data. The updated information and analysis does not differ greatly from the information and analysis presented in the Final EIS. FHWA has re-confirmed that the project will not have a disproportionately high and adverse effect on low-income or minority populations.

In fact, the design refinements presented in this Record of Decision will lessen the project's impact on environmental justice populations. The design refinements for the I-94 East-West Corridor were undertaken in an effort to balance project purpose and need and minimize impact on the social, economic, and environmental resources, while taking into account public comments. As a result of these design refinements, three minority-owned businesses would no longer be displaced by the project.

These businesses are:

- St. Paul Veterinary Clinic, 27th Street
- BP Pantry 41 Gas Station, 27th Street
- Monreal's Encore Gentlemen's' Club, Dana Court (just off Hawley Road)

Only one minority-owned business will be displaced by the Selected Alternative: TJ's on 35th Street.

In addition to the project's design refinements reducing the number of minority-owned business displacements, an apartment located above Monreal's Encore Gentlemen's club will no longer be displaced.

Visual Character/Aesthetics

The Selected Alternative minimizes the visual impact of the project in the west segment. In the east segment, because many of the views in the area already include views of transportation infrastructure and many are from elevated areas, the visual and aesthetic impacts would be negligible.

The reconstructed Stadium Interchange would have tall bridges adjacent to the southern edge of the Story Hill neighborhood. The bridges would include high elevated freeway lanes and ramps that would be seen to varying degrees. The highest portion of the reconstructed Stadium Interchange would be about 25 feet higher than the existing interchange. Components of the reconstructed Stadium Interchange would be seen from parts of the Story Hill neighborhood during leaf-off conditions.

The reconstructed Stadium Interchange would not greatly change the visual quality of outward views from the neighborhood or block views of vivid or memorable elements, such as Miller Park. Views from much of Story Parkway are blocked during leaf-on times of the year by trees and shrubs planted along Story Parkway. Changes associated with the reconstructed Stadium Interchange would not reduce the visual quality ratings of views by one or more categories. The impact of the reconstructed Stadium Interchange on views from the Story Hill Neighborhood towards I-94 and the Stadium Interchange area would be of negligible intensity.

Surface Water and Fishery

The Menomonee River flows across the I-94 East-West corridor. The Selected Alternative will not directly affect the river, but will increase impervious area and therefore increase the amount of stormwater runoff from I-94 and the local roadway system. The increase in pavement area from adding through lanes, auxiliary lanes, and system ramps will lead to an increase in the volume of stormwater runoff and pollutants, including road salt, that are carried in the stormwater. There would be about 25 percent more pavement with the Selected Alternative compared to the No-build or a Replace-in-Kind alternative. Likewise, stormwater volume and pollutants from the pavement would also increase by approximately 25 percent. However, the alternatives will also provide the opportunity to treat the runoff and bring I-94 and the local roadway system in compliance with Wisconsin's stormwater management regulations that limit the amount of pollution in runoff.

WisDOT will work with communities and Milwaukee Metropolitan Sewerage District (MMSD) during the project's final design phase to calculate stormwater measurements and to address stormwater management, both from a water quality and water quantity standpoint. The Cooperative Agreement between WisDOT and the Wisconsin Department of Natural Resources (WDNR) contains the *Memorandum of Understanding on Erosion Control and Stormwater Management* addressing stormwater discharges to waters of the state. The Memorandum of Understanding requires WisDOT to implement a stormwater management program for its projects that is consistent with Section 402(p) of the Clean Water Act, Chapter 283 of the State Statutes, and Chapter NR 216 Wisconsin Administrative Code, and Wisconsin Administrative Code TRANS 401.

In the study phase, various stormwater best management practices (BMPs) were evaluated. During the next project design phases, BMPs will be further refined in coordination with WDNR, local municipalities and MMSD to meet all required guidelines for a federally funded project.

Several BMP options are under consideration, as described in the following list:

- Retention Basins (Wet Detention Basins)—Retention basins have a permanent pool of water year-round. The permanent pool allows pollutant particles in stormwater runoff to settle over an extended period of time. Nutrient uptake also occurs through increased biological activity.
- Dry Detention Basins—A dry detention basin typically is designed to store runoff and discharge it slowly to reduce the peak discharge downstream. As normally designed, the basins typically have little effect on the volume of stormwater released to the receiving water. Peak flow reduction is often accomplished through use of a multistage outlet structure that allows increased discharge as water levels in the basin increase.
- Infiltration Devices—Infiltration can be achieved through use of trenches or grass swales. Infiltration devices are used to slow the water flow so that more water is absorbed into the ground and more pollutants are removed from runoff. Due to the potential extent of contaminated soils throughout this project area, the use of infiltration devices may be discouraged.
- Grass-lined Ditches—This BMP generally helps reduce suspended solids to meet the regulatory goal of TRANS 401, which outlines stormwater management and erosion control procedures for WisDOT projects.
- Trapezoidal Swale through Infield—This BMP combines grass ditch treatment with peak flow reduction and is considered the same level of suspended solid control as grass ditches.
- Vegetated Rock Filters—This BMP may be used at outfalls to waterways or anywhere concentrated runoff leaves the right-of-way. It is similar in concept to a level spreader, which attempts to reintroduce sheet flow and also provides a small amount of peak flow and volume reduction.
- Swale Blocks/Ditch Checks—Swale blocks/ditch checks are small earthen berms constructed in the bottom of a ditch at regular intervals to detain runoff from frequent storms. This BMP provides peak flow reduction and may provide infiltration benefits depending on soil conditions.
- In-line Storage—This method is not desirable from a water quality standpoint, but would manage water quantity. Storm sewer pipes would be designed larger than normal to provide storage in the sewer during rain, then the water is gradually released after the rain ends.
- Biofiltration Basins—Biofiltration basins are similar to infiltration devices and appear from the surface to look like a garden area. They use engineered soil, underdrains, native vegetation, and shallow detention to allow flows to be stored on the surface and slowly infiltrate to the subsoils or in cases of contaminated or poorly drained soils, drain through underdrain to a storm sewer. In narrow or restricted land space areas, stormwater biofiltration systems may be used within ditch areas, between mainline and frontage road lanes, or within ramp areas.

To address concerns raised by MMSD, WisDOT, and FHWA are investigating retention/detention basins to manage stormwater from the proposed improvements. The retention/detention ponds would also improve water quality

by allowing solid pollutants (sand, grit, etc.) to settle out of the water before it flows into storm sewers or streams. Potential locations for retention/detention basins include the following:

- West segment—Biofiltration basins or retention basins may be placed between the ramps at the 68th Street/70th Street interchange. A few opportunities for retention are provided at the Hawley Road interchange, within the infields, east of Hawley Road, north of I-94, and potentially south of I-94. Stormwater from I-94 in the area through the cemeteries would be best served using storm sewer conveyance to the ponds at Hawley Road.
- East segment —Stormwater retention basins within the Stadium Interchange may be located between the freeway and ramps or under bridges within the WisDOT right-of-way. Two vacant MMSD parcels east of the Stadium Interchange may serve as potential locations for retention basins. East of the Stadium Interchange, stormwater retention basins may be located within areas of the existing I-94 alignment where the proposed roadway is off-alignment. Areas under bridges may also be used for stormwater retention and also provide the additional benefit of shading and reducing thermal pollution to the streams. WisDOT will evaluate with the Stadium District the possibility of using permeable pavement in areas of the Miller Park parking lot that need to be reconstructed as a result of the project.

The MMSD is developing TMDL limits on behalf of WDNR for the Menomonee River and other watersheds within the Milwaukee area, including fecal coliform bacteria, phosphorus, and sediment. In evaluating the proposed stormwater retention and/or biofiltration device locations, special consideration will be given to address the removal of these three pollutants.

The Marquette Interchange Project introduced the stormwater management strategy (Marquette Approach) of separating the “first flush” or low flows of storm events to the combined sewer and allowing the higher and cleaner flows to discharge to the river. This was seen as a win-win approach because MMSD would still treat the portion of stormwater runoff with the highest pollutant levels, but not be overtaxed with the higher flows. This example may be evaluated for this project during a later phase when the extent of contamination within the Menomonee Valley can be more adequately assessed. MMSD has encouraged WisDOT to follow the Marquette Interchange approach. TMDL’s may offer a new challenge that should be evaluated with the Marquette Approach, as well as the costs involved in installing additional storm sewer to route the higher flows to the river.

Environmental Corridors and Natural Areas

In the I-94 East-West Corridor, the only primary environmental corridor is located along the Menomonee River where it crosses under I-94 east of 44th Street. The primary environmental corridor is very narrow within the study area, consisting basically of the Menomonee River and a few feet on either side of the river. There are no secondary environmental corridors, natural areas, or isolated natural resource areas within the I-94 East-West Corridor.

There are no alternatives that could completely avoid impact to the linear primary environmental corridor. The Selected Alternative is designed to minimize impacts to the primary environmental corridor in this location by clear spanning both the Menomonee River and associated primary environmental corridor. No additional mitigation is needed beyond standard protection measures that will be implemented during construction of the facility.

Floodplains and Hydraulics

The Selected Alternative is designed to span the Menomonee River floodplain and minimize impacts to the floodplain in accordance with the WisDOT/WDNR Cooperative Agreement and local floodplain management goals and objectives. No mitigation measures are needed beyond standard protection measures that will be implemented during construction of the facility.

Groundwater and Water Supply

The Selected Alternative is not expected to adversely affect drinking water supply or localized shallow groundwater. No mitigation is needed beyond standard protection measures that will be implemented during construction of the facility.

Wetlands

Presidential Executive Order 11990, Protection of Wetlands, requires federal agencies to avoid, to the extent practicable, long- and short-term adverse impacts associated with the destruction or modification of wetlands. More specifically, the order directs federal agencies to avoid new construction in wetlands unless there is no practicable alternative. The order states that where wetlands cannot be avoided, the proposed action must include all practicable measures to minimize harm to wetlands.

The Clean Water Act's Section 404(b)(1) *Guidelines for Specification of Disposal Sites for Dredged or Fill Material* (40 CFR Part 230) are administered by U.S. EPA and the Corps of Engineers. The guidelines state that dredged or fill material should not be discharged into aquatic ecosystems (including wetlands), unless it can be demonstrated that there are no practicable alternatives to such discharge; that such discharge will not have unacceptable adverse impacts; and that all practicable measures to mitigate adverse effects are undertaken.

In accordance with state and federal agency policies and regulations for wetland preservation, including the Section 404(b)(1) *Guidelines*, the following sections summarize wetland mitigation strategies for the I-94 East-West Corridor study.

Avoid and Minimize Wetland Impacts

Because wetlands are scattered along the I-94 East-West Corridor, including in the ditches that drain the freeway, it is not possible to avoid wetland impacts completely during freeway reconstruction.

The Selected Alternative maintains the roadway within the existing right-of-way to the extent possible. While wetlands can and do occur in the right-of-way, this alternative limits impacts to wetlands that have historically been affected by roadway construction and operation. The improvements at the Stadium Interchange have been designed to avoid higher-quality wetlands, such as fringe wetlands along the Menomonee River, which will be bridged. The Washington Street extension design has been refined to avoid impacts to two stormwater ponds, thereby avoiding impacts to wetlands in the west segment and reducing the overall impact of the project to wetlands to 0.1 acre.

WisDOT will investigate additional measures to minimize wetland impacts during final design, such as keeping roadway side slopes as steep as practicable, disposing of excavated material on new roadway side slopes or in upland areas, minimizing sedimentation and siltation into adjacent wetlands by using strict erosion control measures, and using detention ponds, where allowed, to reduce pollutant loading and protect cold-water streams from sedimentation.

Wetland Compensation

Compensation for unavoidable wetland loss will be carried out in accordance with the *Wisconsin Department of Transportation Wetland Mitigation Banking Technical Guideline* developed as part of the WisDOT/WDNR Cooperative Agreement on Compensatory Wetland Mitigation and the regulations for compensatory wetland mitigation issued jointly by the Corps of Engineers and the U.S. EPA in May 2008. A wetland mitigation plan will be developed during the project's final design phase in consultation with state and federal agencies.

The guideline provides ratios for wetland replacement versus wetland loss depending on where the mitigation is to be provided. The replacement ratios increase with the mitigation site's distance from the impacted wetland. The guideline specifies a replacement ratio of 1.5 acres of replacement wetland for each acre lost when wetland mitigation is performed onsite or nearby for a specific project. Onsite or near-site opportunities were not considered for this project because it is not cost-effective to develop a 0.1-acre wetland mitigation site.

For cases in which onsite or near-site opportunities for wetland mitigation are not available, WisDOT can debit the wetland loss at the closest established wetland mitigation bank. WisDOT has an established statewide wetland mitigation bank in Walworth County that has remaining acreage available for credit. Debiting wetland acreage credits from this bank will be used to mitigate the wetland losses from the project, which would be in accordance with the terms of the guideline. The Walworth County site is not in the same watershed as the project.

Wetland Finding

Based upon the above factors and considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands of the project and that the Selected Alternative includes all practicable measures to minimize harm to the wetlands that may result from such use.

The Corps of Engineers has concurred that the Preferred Alternative as presented in the Final EIS meets the requirements of Section 404 of the Clean Water Act (see Final EIS Appendix E, page E-2). The Selected Alternative further reduces impacts to wetlands.

Wildlife

The Selected Alternative is designed to stay within existing right-of-way as much as possible to minimize the impact on wildlife habitats along the I-94 corridor. The project will limit tree removal to what is required to implement the project safely, and areas to be cleared will be marked to stay within limits. The Menomonee River crossing under I-94 will continue to provide room for wildlife to cross under the freeway adjacent to the river.

Bridges and culverts will be inspected to determine if any migratory birds are present. If swallows are present in the study area, WisDOT will remove their nests from the underside of bridges prior to construction, between August 20 and May 15. The nests are unoccupied during this period. After swallow nests are removed, WisDOT will place nets under the bridge to keep swallows from re-establishing nests on bridges that are going to be removed.

As measures to generally protect wildlife and habitats, WisDOT will implement erosion, sediment, and stormwater controls to protect water quality, wetlands, and streams. Where feasible, vegetated swales will be used to assist with filtering sediment and other pollutants from roadside drainage. Temporarily disturbed areas created from construction activities will be revegetated. To minimize potential effects on air quality, construction contractors will use proactive measures to prevent discharges of dust into the atmosphere that may interfere with the public and adjacent properties or may be harmful to plants and animals.

Threatened and Endangered Species

Alternatives were designed to stay within existing right-of-way as much as possible to minimize the impact on potential threatened and endangered species' habitats along the I-94 corridor.

The Final EIS identifies the northern long-eared bat as the only federal listed species that may occur in the project area. An effect determination was made that the project "may affect, not likely to adversely affect" the northern long-eared bat. Avoidance and minimization measures to limit impacts to the northern long-eared bat include modifying all aspects of the project to avoid tree removal in excess of what is required to implement the project safely. Tree removal in areas of potential habitat will occur outside of the active season of the bat, and areas will be clearly marked to stay within limits. Bridge surveys will be conducted no more than 7 days prior to the start of construction to ensure northern long-eared bats do not inhabit the structure.

Prior to construction, WisDOT will consult with WDNR in accordance with the *DOT/DNR Cooperative Agreement Memorandum of Understanding On Endangered and Threatened Species Consultation* to develop appropriate measures to mitigate potential adverse impacts to state listed species, oak woodland/southern dry-mesic forest, and fish within the Menomonee River. During final design, the area of impact to potential habitats as identified in the field survey will be determined. WisDOT and WDNR will consult on additional species surveys, as needed. If a listed threatened or endangered species is present and cannot be avoided, WisDOT and WDNR will initiate incidental take consultation in accordance with the Wisconsin Statute 29.604, "Endangered and threatened species protected." The statute requires a consideration of mitigation measures to reduce the impact and a public notice before the permit can be issued.

Noise

Based upon the requirements of 23 CFR 772 and within the framework of *Facilities Development Manual*, Chapter 23, Noise, various methods were reviewed to mitigate the noise impact of the proposed improvements. Among those considered were restricting truck traffic to specific times of the day, prohibiting trucks, altering horizontal

and vertical alignments, property acquisition for construction of noise barriers or berms, property acquisition to create buffer zones to prevent development that could be adversely impacted, soundproofing public use or nonprofit institutional buildings (Land Use Activity Category D only), berms, and sound barriers.

Restricting or prohibiting trucks is counter to the project's purpose and need. Design criteria and recommended termini for the proposed project preclude substantial horizontal and vertical alignment shifts that would produce noticeable changes in the projected acoustical environment. Due to right-of-way limitation, the construction of noise berms is neither feasible nor reasonable. Sound-proofing was not considered because there are reasonable and feasible exterior measures. Therefore, only the construction of noise barriers was reviewed. Abatement is recommended only when it is feasible and reasonable to construct a noise barrier.

Facilities Development Manual, Chapter 23, Noise, has established the following criteria for determining feasibility and reasonableness:

- The barrier must provide at least 5-dB reduction to be considered feasible.
- One receptor or common use area must meet the 9-dB design goal for the noise barrier to be considered for reasonableness.
- A noise barrier must reduce noise levels by at least 8 decibels for a receptor or common use area to be considered as benefited for the purposes of determining reasonableness. The total cost of the barrier may not exceed $30,000 per benefitted receptor.

If a common noise environment exists within the project termini, cost-averaging of multiple barriers within the common noise environment may occur as part of the reasonableness determination. Noise barriers exceeding $60,000 per benefited receptor cannot be included in the cost averaging. The order of cost averaging of eligible multiple barriers will start with the most cost-effective noise barrier increasing to the second most cost-effective barrier to the third, etc., until the average cost approaches or equals but does not exceed $30,000 per benefited receptor. The noise barriers included in the cost averaging may be carried forward for a determination of whether they will be incorporated into the project. The department must receive a vote of support for the project from a simple majority of all votes cast by the owners or residents of the benefitted receptors.

A total of 10 noise barriers were analyzed for seven residential areas and three cemeteries abutting the corridor for the Selected Alternative. Six were found to be feasible and reasonable (**Table 2**).

TABLE 2
Feasible and Reasonable Noise Barriers

Barrier Number	Location
1	North of I-94, between 70th Street and Hawley Road
2	South of I-94, between 70th Street and Hawley Road
5	North of I-94, between General Mitchell Blvd. and Yount Dr. (Along Story Parkway)
7	West of WIS 175, South of Bluemound Road
9	North of I-94, between 35th Street and Stadium Interchange
10	North of I-94, between 27th Street and 35th Street

Barrier 2 (south of I-94, between 70th Street and Hawley Road) is reasonable if extended across the bridge. However, a full height noise barrier constructed on a bridge using a barrier product that meets the AASHTO Load Resistance Factor Design (LRFD) Bridge Design Specifications would increase the cost per benefited receptor above WisDOT's reasonableness criteria. Therefore, this barrier would not be installed.

WisDOT will incorporate the feasible and reasonable noise barriers for the Selected Alternative, less the noise barrier sections on structure, into the project for each barrier receiving a simple majority of positive votes for construction by the benefitted receptors. During the final design phase of the project as the roadway profiles, bridge parapets, and retaining walls are more accurately defined relative to the surrounding areas, the location of

feasible and reasonable noise mitigation will be reassessed. Other priority noise barriers meeting AASHTO LRFD Bridge Design Specifications could be developed, tested and approved, along with an updated, less expensive version of the existing proprietary noise barrier that currently meets the AASHTO LRFD Bridge Design Specifications, before final design is completed and construction commences for this project. During final design all options to meet the AASHTO recommendations will be explored in an attempt to install noise barriers on the bridges where reasonable. If final design results in substantial changes in roadway design from the conditions modeled for the Draft EIS or Final EIS, noise abatement measures will be reviewed. A final decision on the installation of abatement measures will be made upon completion of the project's final design and through coordination with the benefitted receptors.

Sections 3.19.2 and 3.19.3 of the Final EIS contain more information on noise impacts and mitigation measures.

Air Quality

Based on the air quality impact analysis conducted in accordance with WisDOT, FHWA, and U.S. EPA technical guidance and procedures, this project will not contribute to any violation of the National Ambient Air Quality Standards (NAAQS). The project was specifically included in the current SEWRPC transportation plan (*VISION 2050*) and the 2015-2018 TIP, which were determined by FHWA and FTA to conform on July 28, 2016. Having considered public comments and based on the analysis included in the Final EIS and concurrence among the agencies involved in consultation under 40 CFR 93.105, FHWA and FTA determined that the project is not a project of local air quality concern under 40 CFR 93.123(b)(1). The U.S. EPA has determined such projects meet the requirements of the Clean Air Act and 40 CFR 93.116 without a PM2.5 hot-spot analysis. Mobile source air toxics (MSAT) emissions will decrease with any of the Modernization Alternatives, and neither carbon monoxide (CO) nor fine particulate matter ($PM_{2.5}$) levels will exceed the air quality standards. Therefore, no project-level air quality mitigation measures are required with respect to long-term operation of vehicles on the study-area freeway system after its reconstruction. With respect to short-term construction, see the Construction section on page 42 for potential air quality mitigation measures during construction.

Hazardous Materials

Potential Contaminated Sites

The design refinements at 27th Street will avoid two potentially contaminated sites. The design refinement of the Washington Street extension will avoid five potentially contaminated sites, reducing the total to 52 sites that would require investigation and possibly remediation for the Selected Alternative.

In the east segment, the Selected Alternative would impact a capped former landfill near Miller Park and a capped contaminated area. Hazardous materials may be encountered during construction in these areas.

The bridges to be demolished on this segment of I-94 contain asbestos containing materials. Additionally, WisDOT considers all paint on bridges to be lead-based paint. Buildings to be acquired under the Selected Alternative could also contain asbestos containing materials or lead-based paint.

During design, WisDOT will develop remediation measures for contaminated sites that cannot be avoided. Disturbance near potentially contaminated sites will be minimized to the extent possible and practicable. As applicable, the contract special provisions will include a Notice to Contractor describing the potential contamination with names and locations of sites. The areas of potential contamination will be marked on the plan sheets with reference to check the Notice to Contractor in the special provisions.

The WisDOT region office will work with concerned parties to ensure that disposition of any petroleum contamination is resolved to the satisfaction of WDNR, WisDOT and FHWA before acquisition.

During the project's real estate acquisition phase, WisDOT will survey all buildings and structures that need to be demolished to determine whether asbestos or lead-based paint is present. All appropriate and applicable engineering and regulatory controls will be followed during the handling and disposal of asbestos containing materials and lead-based paint. Contractors must comply with U.S. EPA regulations; National Emission Standards for Asbestos; the Occupational, Safety, and Health Administration regulations on asbestos removal; local government regulations; and all other applicable regulations. The most recent editions of all applicable standards,

codes, or regulations shall be in effect. Additionally, any person performing asbestos abatement must comply with all training certification requirements, rules, regulations, and laws of the State of Wisconsin regarding asbestos removal.

Special provision 203-005, bid item 203.0210s will be included in the construction plans to address asbestos abatement. The contractor will be responsible for completion of the Notification of Demolition and/or Renovation (WDNR Form 4500-113).

Cemeteries

The Selected Alternative was developed to avoid direct impacts to the cemeteries and avoid relocating any graves.

Measures to minimize and mitigate impacts to the Wood National Cemetery (as a contributing element of the Soldiers' Home NHL) and Calvary Cemetery (eligible for listing on the National Register of Historic Places) are discussed below under Historic Properties.

No mitigation measures are planned for the Beth Hamedrosh Hagodel, Spring Hill, or Anshai Lebowitz cemeteries; however, coordination with all cemeteries near the project will continue throughout the design process and into construction.

Per the project's Section 106 Programmatic Agreement (Appendix C), if human remains are inadvertently/accidentally discovered during implementation of the project, all ground disturbing activities in the immediate area of the discovery shall halt until the following actions have been carried out, in accordance with Wisconsin Statute 157.70 and the Native American Graves Protection and Repatriation Act, as required. SHPO will be contacted immediately after work stoppage. WisDOT shall immediately implement measures to protect the human remains from inclement weather and vandalism, and notify appropriate law enforcement officials to determine whether or not the remains are subject to a criminal investigation by local or federal authorities. The VA's National Cemetery Administration will be notified and consulted if human remains are discovered within or adjacent to Wood National Cemetery.

Historic Properties

As part of the Section 106 consultation, appropriate measures to avoid, minimize, and mitigate adverse effects on historic properties were discussed prior to identification of a preferred alternative. The identification of the At-grade alternative as the Selected Alternative minimizes harm to historic properties, because the At-grade alternative would have No Adverse Effect on historic properties; in contrast, the Double Deck alternative would have had an adverse effect on historic properties.

The Selected Alternative would stay within the existing interstate footprint as much as possible. In the area of the Story Hill Residential Historic District 2 and 3, the Selected Alternative would move I-94 south, reducing noise and visual impacts to the district. If a noise wall is built adjacent to Story Hill Residential Historic District 2 and 3, it could have an adverse effect on the district. Story Hill Residential Historic District 2 and 3 is eligible for the construction of a noise barrier to reduce noise levels if benefitted receptors vote for it. While a noise wall could visually diminish the integrity of setting and feeling in the southern portion of the district, FHWA and WisDOT believe that the visual effect could be minimized aesthetically. The decision to install the noise wall will be made during the final design phase in coordination with the benefitted receptors, and the wall will be designed in consultation with the consulting parties and signatories to the Section 106 Programmatic Agreement (Appendix C). See also Section 4(f) Findings above.

To reduce impacts to Wood National Cemetery and the Soldiers' Home NHL and Soldiers' Home Historic District, WisDOT and FHWA determined from the beginning of the design process that no graves would be moved as a result of this project. The Selected Alternative will continue to provide access to Wood National Cemetery (and the VA Campus in general). WisDOT would maintain Zablocki Drive access across I-94. Westbound I-94 traffic would still be able to reach Mitchell Boulevard directly via a new frontage road north of I-94, which would pass over Yount Drive and connect to Mitchell Boulevard near the existing westbound I-94 exit ramp. For drivers on westbound I-94, this connection would provide access to Wood National Cemetery that is similar to the existing access. Eastbound traffic will exit to 44th Street, and then reach Mitchell Boulevard by way of Selig Drive. A wall

would be built on the south side of I-94 to partially screen views of I-94 from Wood National Cemetery (see Final EIS Section 3.24.3). The existing wood fence on the north side of I-94 would be replaced with a fence/wall of a similar height.

In addition, the following minimization and enhancement measures are included in the Section 106 Programmatic Agreement to avoid and minimize effects from the project to the Soldiers' Home NHL and Historic District. Each element will be submitted to Signatories and Consulting Parties for review and comment prior to finalization and construction.

- A Design Coordination Plan in order to ensure that the Project is designed in a way that will not adversely affect historic properties. The draft Design Coordination Plan will include the following:
  - Zablocki Drive bridge and approaches
  - Height of I-94 adjacent to Wood National Cemetery of the Soldiers' Home NHL and Historic District
  - Continued access to Soldiers' Home NHL and Historic District
  - Benchmarks and timeframes for review
  - Definition of design review process
- A Construction Staging Plan for construction in the vicinity of historic properties. The Construction Staging Plan will cover the locations of the construction staging areas for storage and staging of active construction, both within and outside WisDOT right-of-way, in order to avoid impacts to historic properties. The Construction Staging Plan will include the parameters and goals for up to two preconstruction walk-through(s) with the Signatories and Consulting Parties.
- The following measures are proposed at Wood National Cemetery:
  - A Landscape Plan for areas adjacent to I-94 adjacent to the Wood National Cemetery.
  - A wall would be constructed adjacent to Wood National Cemetery on both the north and south sides of I-94 within WisDOT right-of-way, as requested by the National Cemetery Administration. The specific materials, design, appearance, and height and size of the walls will be determined through consultation and a Wall Design Plan, as stipulated in the Programmatic Agreement. The low wall would not be an adverse effect on the NHL.
  - A signage plan will include the following: the location and design of signage, taking into account the visual aspects of the NHL; minimization of Type 1 highway signage where I-94 passes through Wood National Cemetery.
  - A Monitoring Plan to address concerns about construction related vibration impacts adjacent to the Soldiers' Home NHL and Historic District. The Monitoring Plan will include a raise and align survey for grave markers within Wood National Cemetery.

Archaeological Resources

Alternatives were designed to stay within existing right-of-way as much as possible to avoid the impact on archaeological resources adjacent to I-94. No adverse impacts to archaeological resources were identified. The Section 106 Programmatic Agreement includes stipulations regarding inadvertent discoveries during construction activities, as well as the discovery of human remains (discussed above under Cemeteries).

Recreational Resources / Public Use Land

Alternatives were designed to stay within existing right-of-way as much as possible to minimize the impact on recreational resources/public use land near I-94. If 44th Street is closed during construction, WisDOT and WDNR will develop a detour route for the Hank Aaron State Trail (HAST) Extension that follows 44th Street. WisDOT would purchase a temporary easement from Milwaukee County in order to access Mitchell Boulevard to reconstruct it. All sidewalks and landscaping along Mitchell Boulevard affected by the reconstruction would be restored.

Construction

Transportation Management

During construction, two lanes of traffic will be maintained in each direction on I-94. However, some traffic would be diverted from this segment of I-94, especially if interchange ramps are closed for extended periods. Other freeways and local streets such as National Avenue, Greenfield Avenue, Wisconsin Avenue, and Bluemound Road will temporarily experience increased traffic volumes as a result.

Local street closures and entrance and exit ramp closures may require temporary bus route modifications. MCTS routes that pass over or under I-94 on local streets may be modified if the local streets are closed during construction. Pedestrians and bicyclists that cross over or under I-94 may need to temporarily modify their routes during construction.

Measures to mitigate impacts to transit service during freeway construction include funding shuttles for special events, such as the State Fair; providing funds to MCTS to add buses to fixed routes and freeway flyer routes to maintain headways during construction; reimbursing MCTS on a per-rider basis to provide free bus rides around closed roadways and/or bridges; and other funding-related measures to encourage transit use and expansion in the Milwaukee area.

Over the long term, WisDOT is financially participating in Milwaukee County's Bus Rapid Transit (BRT) study to connect major employment centers along a route parallel to I-94. The department is also committing traffic mitigation funding for local intersection investments that would support the incremental investment in a sustainable BRT system, which could be available as a transportation option during I-94 construction.

WisDOT will develop a Transportation Management Plan (TMP) during the design phase. It will identify coordinated traffic management strategies and how they will be used to minimize construction impacts to the traveling public and surrounding communities. WisDOT and FHWA will evaluate the diversion routes to determine if improvements to those routes are necessary. In addition to roadway improvements, signal timing modifications, temporary signals, parking restrictions, intersection improvements, incident management, and demand management options may be instituted during construction to ease potential congestion and delay. Freeway and local street lane closures would be staged to ease disruptions to the extent possible. Other mitigation measures may include:

- Encouraging people to use transit or carpool through advertising, temporarily reduced rates, additional routes, and expanded or new park-and-ride lots. As has been done with other large-scale projects in the Milwaukee area, WisDOT will fund additional transit routes, as warranted, to mitigate impacts to traffic within the project area during the construction phase of the project.
- Holding workshops to determine methods to reduce the effects of construction on area businesses, residents, commuters, community services, and special events.
- Implementing a community involvement plan to inform the public, including radio, internet, print, and television.
- Encouraging businesses to modify their work schedules and/or shipping schedules to avoid peak traffic hours.

WisDOT will keep the public informed about the construction schedule, staging, road closures, and other aspects through their website (http://wisconsindot.gov/Pages/projects/).

Noise

Construction noise would be controlled in accordance with WisDOT *Facilities Development Manual* Procedure 23-40-1.

To reduce the potential impact of construction noise, special WisDOT provisions would require operation of motorized equipment in compliance with all applicable local, state, and federal laws and regulations relating to noise levels permissible within and adjacent to the project construction site. All motorized construction equipment would be required to have mufflers constructed in accordance with the equipment manufacturer's

specifications or a system of equivalent noise-reducing capacity. WisDOT would also require that mufflers and exhaust systems be maintained in good operating condition, free of leaks and holes.

In addition, where possible, noise walls will be constructed prior to most mainline construction.

Vibration

Groundborne vibration has the potential to affect nearby buildings. Blasting and impact pile driving are associated with high levels of vibration. Excavation and backfilling can generate vibration that is perceptible or noticeable in nearby buildings.

Vibration created by the movement of construction vehicles such as graders, loaders, dozers, scrapers, and trucks generally is the same order of magnitude as the vibration caused by heavy vehicles traveling on streets and highways. In general, groundborne vibration from vehicles on streets is not sufficient to impact adjacent buildings.

Buildings that are in good structural condition would likely not be affected by construction-related vibration. WisDOT will coordinate with adjacent property owners prior to construction to determine if any buildings near construction areas are in poor structural condition. WisDOT will meet City of Milwaukee vibration ordinances.

WisDOT and FHWA, in coordination with Section 106 consulting parties, will prepare a Monitoring Plan to address concerns about construction related vibration impacts adjacent to the Soldiers' Home NHL and Historic District. The Monitoring Plan will include a raise and align survey for grave markers within Wood National Cemetery.

Air Quality

Air-quality impacts during construction would be generated by motor vehicle, machinery, and particulate emissions resulting from earthwork and other construction activities. Construction vehicle activity and the disruption of normal traffic flows may result in increased motor vehicle emissions within certain areas. Construction vehicle emission impacts could be mitigated through implementing and maintaining a comprehensive traffic control plan, enforcing emission standards for gasoline and diesel construction equipment, and stipulating that unnecessary idling and equipment operation is to be avoided.

Several air-quality construction mitigation best practices are available to assist in reducing diesel emission impacts from construction equipment. Off-road diesel engines can contribute significantly to the levels of particulate matter and nitrogen oxides in the air. In recent years, U.S. EPA has set emissions standards for engines used in most new construction equipment. However, construction equipment can last for a long time, and it may take several years before all equipment is furnished with engines that meet U.S. EPA standards. To address this, WisDOT and FHWA can implement several strategies to reduce emissions from the older engines that are in operation today.

Reducing pollutant emissions from older off-road diesel engines can occur through a variety of strategies, including the following: reducing idling, properly maintaining equipment, using cleaner fuel, and retrofitting diesel engines with diesel-emission control devices. By reducing unnecessary idling at the construction site, emissions will be reduced, and fuel will be saved. Proper maintenance of the diesel engine will also allow the engine to perform better and emit less pollution through burning fuel more efficiently. Switching to fuels that contain lower levels of sulfur reduces particulate matter. Using ultra-low sulfur diesel does not require equipment changes or modification. Using fuels that contain a lower level of sulfur also tends to increase the effectiveness of retrofit technologies. Retrofitting off-road construction equipment with diesel-emission control devices can reduce particulate matter, nitrogen oxides, carbon monoxide, or hydrocarbons, in addition to other air pollutants. Diesel particulate filters can be used to physically trap and oxidize particulate matter in the exhaust stream, and diesel oxidation catalysts can be used to oxidize pollutants in the exhaust stream. In the final design phase, WisDOT will consider including the measures on a voluntary or mandatory basis. U.S. EPA's comments on the Draft EIS, and reiterated in their comments on the Final EIS, suggested several measures to reduce diesel emissions from construction equipment during construction. WisDOT will coordinate with WDNR to consider these additional measures for inclusion in contract specifications.

Fugitive dust impacts generated by construction would be mitigated by standard dust control measures. Dust control during construction would be accomplished in accordance with WisDOT's *Standard Specifications for Road*

and Bridge Construction, which requires applying water or other dust control measures during grading and on haul roads. Other measures may include watering debris generated during the demolition of existing structures, washing construction vehicle tires before they leave construction sites, and securing and covering equipment and loose materials prior to travel.

The location and operation of concrete batch plants would be in accordance with the Standard Specifications, and any special provisions developed during coordination with WDNR regarding air-quality standards and emissions. Any portable-material plants would be operated in accordance with WDNR air-quality requirements/guidelines.

Demolition and disposal of residential or commercial buildings is regulated under WDNR's asbestos renovation and demolition requirements (Wisconsin Administrative Code, Chapter NR 447).

Water Quality/Erosion

There is potential for erosion during construction as soils are disturbed by excavation and grading. Construction in and near waterways would be performed in accordance with WisDOT's Standard Specifications for Road and Bridge Construction, Wisconsin Administrative Code Chapter TRANS 401—Construction Site Erosion Control and Stormwater Management Procedures, and the WisDOT/WDNR Cooperative Agreement.

WisDOT's construction contractor would use standard erosion control devices and BMPs, as described in the WisDOT *Facilities Development Manual*, would be employed to prevent erosion and to minimize siltation to environmentally sensitive resources in the project area. The construction contractor would be required to prepare an erosion control implementation plan that includes all erosion control commitments made by WisDOT while planning and designing the project. The construction plans and contract special provisions must include the specific erosion control measures agreed on by WisDOT in consultation with WDNR. WDNR will review the Erosion Control Implementation Plan, and specified measures will be deployed before erosion-prone construction begins. The following measures may be used during construction:

- Minimizing the amount of land exposed at one time
- Silt fencing
- Sedimentation traps
- Dust abatement
- Turbidity barriers
- Street sweeping
- Inlet protection barriers
- Temporary seeding
- Erosion mats
- Ditch or slope sodding
- Seeding and mulching exposed soils

Under revisions to the WisDOT/WDNR Cooperative Agreement, *Memorandum of Understanding on Erosion Control and Stormwater Management*, following construction, disturbed land would be re-seeded with a mix of fast-growing grasses. Drainage systems would be maintained, restored, or re-established in a manner that would not impound water.

Additional impact mitigation techniques during construction would include the following, as needed, at a particular location:

- If dewatering were required, dirty water would be pumped into a stilling, or settling, basin before it would be allowed to re-enter a stream.
- Trenched-in erosion bales would be installed in areas of moderate velocity runoff; clean-aggregate ditch checks would be installed in ditches with moderate- to high-velocity runoff during and after construction; and ditches would be protected with erosion bales and matting in conjunction with seeding.
- Storing and fueling construction equipment would be done in upland areas, away from environmentally sensitive areas. Accidental spills during refueling at construction sites or as a result of an accident involving

hazardous material haulers would be handled in accordance with local government response procedures. First response would be through local fire departments and emergency service personnel to ensure public safety and to contain immediate threats to the environment. Depending on the nature of the spill, WDNR would then be notified to provide additional instructions regarding cleanup and restoration of any affected resources. The cost of cleanup operations is the responsibility of the contractor or carrier involved in the spill. Further, WisDOT's Standard Specifications state that public safety and environmental protection measures shall be enforced by the construction contractor.

- Contractors would be required to follow WDNR guidelines for ensuring that construction equipment used in or near waterways is adequately decontaminated for zebra mussels and plant exotics, including purple loosestrife and Eurasian milfoil.

Additional information regarding water quality mitigation and BMPs is provided under "Surface Water and Fishery."

Material Source/Disposal Sites

The construction contractor is responsible for selecting material source sites for gravel and soil. Material would most likely be obtained from local quarry sites. Unusable excavated material would be disposed of by the contractor in accordance with WisDOT's *Standard Specifications for Road and Bridge Construction*, or special provisions to ensure protection of wetlands and waterways. Local zoning, reclamation plans, and other approvals may be needed for material source/disposal sites.

Soil and excavated material (including vegetation) would be stockpiled or disposed of in an upland area, away from wetlands, streams, and other open water. Where applicable, silt fence would be placed between the disposal area and wetland and open water areas.

If any material sources are necessary to construct the project, appropriate erosion control measures would be applied to these sites during and following construction; and following use, such sites would be properly seeded, mulched, and protected from erosion.

Any portable materials plants would be properly treated to prevent erosion, and WDNR would be able to review site plans, including any gravel-washing operations, high-capacity wells, and site closure/restoration.

Indirect and Cumulative Effects

WisDOT policies and practices include measures to mitigate potential adverse indirect and cumulative effects, as noted in Sections 3.28 and 3.29 of the Final EIS. The Selected Alternative was developed with a sensitivity to avoid and minimize impacts in a densely developed urban setting that includes resources important to the community such as parks, natural resources, historic resources and established neighborhoods and commercial centers. In addition to mitigation measures described above for direct impacts, the project also addresses the following potential indirect and cumulative impacts.

Potential indirect impacts to the local roadway network from modifying interchanges are being addressed with local roadway improvements. Traffic currently using local streets to avoid freeway congestion would also divert back to I-94, potentially reducing congestion on local streets. Maintaining safety, access, and traffic operations can help support existing and planned commercial development in the area, which in turn helps offset business displacements and maintain the municipal tax base. Improved local traffic operations reduce emissions, which benefits air quality.

Stormwater quality best management practices that will be implemented as part of the Selected Alternative will mitigate the direct effects of existing and increased stormwater runoff from the project, but also reduce the cumulative effects of past projects and other reasonably foreseeable future roadway projects.

Management of some potential indirect impacts, notably long term land use effects, are the responsibility of local jurisdictions. Land use effects associated with induced development are best managed through the jurisdiction of local governments. Municipalities in the project area already use a number of land use and development policies to manage development within their communities. All communities within the primary study area have plan

commissions, comprehensive planning documents, and zoning regulations in place to direct the amount, type, and density of all development within their communities. In turn, land use planning can maintain housing stock and neighborhoods, sustain land values and tax revenues, support the use of mass transit, and protect environmental features. In addition, most local governments within the primary study already take measures to protect properties that are historically significant to their communities. The cities of Milwaukee, West Allis, and Wauwatosa have historic preservation commissions to review plans and make recommendations prior to local approval. To manage stormwater from developments that may be facilitated by the project, all communities within the primary study area are part of the MMSD service area and are required to follow the MMSD Chapter 13 Surface Water and Storm Water Rules to control stormwater runoff and minimize the risk for flooding.

Monitoring and Enforcement Program

The following actions will occur as the project progresses through engineering design and construction:

- WisDOT and FHWA will monitor project development to ensure compliance with the mitigation commitments made in the EIS before authorization of Federal-Aid highway funds for subsequent phases.
- During design, WisDOT will coordinate with FHWA to determine whether there have been any substantive changes in the project, affected environment, selected alternative, impacts, mitigation measures, or environmental commitments as presented in the Final EIS and ROD that could warrant reevaluation.
- Before construction that requires discharge of fill material into waters of the United States, including wetlands, begins, authorization will be obtained from the Corps of Engineers under Section 404 of the Clean Water Act. Such authorization is contingent on obtaining water quality certification from DNR under Section 401 of the Clean Water Act, and Wisconsin Administrative Code Chapter NR 299.
- Property acquisition and residential or business displacements will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended). A Relocation Assistance Plan under Section 33.25, Wisconsin Statutes, will be required for displaced residences and businesses, subject to approval by the Wisconsin Department of Commerce.
- Coordination with DNR and the Corps of Engineers will continue in the design phase concerning the stormwater management plan, erosion control implementation plan, wetland mitigation, and in-stream construction constraint dates.
- WisDOT will coordinate with the US Fish and Wildlife Service to develop appropriate mitigation measures for any federally-listed species, specifically in regards to the federally-protected northern long-eared bat. To limit impacts to the northern long-eared bat, all aspects of the project will be evaluated during design to minimize tree removal. Tree removal to potential habitat will occur outside of the active season and areas will be clearly marked to stay within limits. Bridge surveys will be conducted no more than 7 days prior to the start of construction to ensure northern long-eared bats have not started to use any of the structures.
- Prior to construction, WisDOT will consult with WDNR in accordance with the *DOT/DNR Cooperative Agreement Memorandum of Understanding On Endangered and Threatened Species Consultation* to develop appropriate measures to mitigate potential adverse impacts to state listed species, oak woodland/southern dry-mesic forest, and fish within the Menomonee River. During final design, the area of impact to potential habitats as identified in the field survey will be determined. WisDOT and WDNR will consult on additional species surveys, as needed. If a listed threatened or endangered species is present and cannot be avoided, WisDOT and WDNR will initiate incidental take consultation in accordance with the Wisconsin Statute 29.604 “Endangered and threatened species protected.”
- Bridges and culverts will be inspected to determine if any migratory birds are present. If swallows are present in the study area, WisDOT will remove their nests from the underside of bridges prior to construction when the nests are unoccupied. After swallow nests are removed, WisDOT will place nets under the bridge to keep swallows from re-establishing nests on bridges that are going to be removed.
- Contractors must carry out project construction in accordance with WisDOT contract special provisions.

- WisDOT would monitor performance of its water quality protection measures during construction through its WisDOT-WDNR cooperative agreement.
- WisDOT will have an appropriate archaeological field identification survey(s) conducted for borrow, batch plants, waste sites, stormwater/erosion areas, and staging areas to be used for this project. If significant discoveries of non-burial related archaeological properties are discovered, Section 106 procedures pursuant to 36 CFR 800 will be followed or another area will be obtained for borrow, batch plants, waste sites and staging areas.
- Per the project's Programmatic Agreement (Appendix C), if human remains are inadvertently/accidentally discovered during implementation of the project, all ground disturbing activities in the immediate area of the discovery shall halt. SHPO will be contacted immediately after work stoppage. WisDOT shall immediately implement measures to protect the human remains from inclement weather and vandalism, and notify appropriate law enforcement officials to determine whether or not the remains are subject to a criminal investigation by local or federal authorities. The VA's National Cemetery Administration will be notified and consulted if human remains are discovered within or adjacent to Wood National Cemetery.
- WisDOT and FHWA, in coordination with Section 106 consulting parties, will prepare a Monitoring Plan to address concerns about construction related vibration impacts adjacent to the Soldiers' Home NHL and Historic District. The Monitoring Plan will include a raise and align survey for grave markers within Wood National Cemetery.

WisDOT is responsible for ensuring that environmental commitments made during the NEPA project phase are communicated and carried out in the subsequent design and construction phases. A design study report is prepared at the outset of the final design phase. It serves as the bridging document between the preliminary design/NEPA phase and preparation of final construction plans. Its purpose is to document decisions and rationale with respect to design criteria, geometric and safety aspects, exceptions to standards, real estate acquisition needs, utility adjustments, and environmental commitments and approvals. The design study report for the I-94 East-West Corridor project will include an attachment that summarizes the environmental commitments presented in the Final EIS and this Record of Decision. It serves as a reference document throughout the final design and construction phases. It is communicated to multidisciplinary WisDOT staff involved in design, maintenance, utilities, real estate acquisition, construction, and environmental monitoring activities. As applicable, environmental commitments in the design study report may also be the basis for developing contract special provisions. The design study report is provided to FHWA under its Federal Oversight Agreement with WisDOT.

Following award of the construction contract, a preconstruction meeting will be held at which such topics as the contractor's plan of operations, environmental commitments, permits, erosion control measures, and other requirements are reviewed and discussed. Environmental permits will be compared to the contractor's plan of operations to ensure those operations are covered.

WisDOT holds frequent meetings with multidisciplinary staff during final design to ensure that environmental commitments are carried forward and reflected in the final plans, specifications, and estimates before finalizing the construction contract documents. Meetings are also held with outside agencies such as the Corps of Engineers and WDNR during Clean Water Act permit activities to ensure that additional environmental commitments that may be identified are included in the final plans.

Comments on Final Environmental Impact Statement

Notice of availability of the Final EIS was published in the *Federal Register* on February 12, 2016. The 30-day review period was extended to 60 days by notice in the Federal Register on March 4, 2016. The review period ended on April 15, 2016.

Agency and Local Government Comments

Comments on the Final EIS from governmental agencies and responses as applicable are provided in Appendix A. The comments are briefly summarized as follows.

U.S. EPA

U.S. EPA noted that the Final EIS satisfactorily addressed its comments on environmental justice. U.S. EPA acknowledged changes in the state budget that limit funding for community sensitive solutions, which had been used to provide aesthetic enhancements on previous southeast Wisconsin freeway reconstruction projects. U.S. EPA urged WisDOT and FHWA to work with community groups to identify funding for similar design features in the future.

U.S. EPA's letter stated that utility displacements would not be required under the Preferred Alternative. FHWA followed up with U.S. EPA to clarify that utilities will be relocated, including electrical transmission lines. However, the Selected Alternative will not require displacement of electrical transmission lines in the cemetery segment, which was the focus of U.S. EPA's concern on the topic.

U.S. EPA encouraged WisDOT and FHWA to commit to green stormwater management measures in the Record of Decision. U.S. EPA noted the reference to its suggested diesel emission reduction measures and encouraged WisDOT and FHWA to commit to these measures in the Record of Decision.

City of Milwaukee Department of Public Works

The City of Milwaukee is opposed to capacity expansion but is pleased that the at-grade alternative in the west segment and the on-alignment alternative in the east segment were identified as the Selected Alternative as it comes closest to the City's goal of minimizing property takings and intrusion on adjacent neighborhoods.

The City of Milwaukee has concerns over traffic diverting to other exits due to the half interchange at Hawley Road and the impact this may have on other interchanges. The City would like to know if the potential traffic impacts from the half interchange were analyzed and if mitigation options were considered north of I-94. The City of Milwaukee would like to verify that the new frontage road immediately west of the new Stadium Interchange would not have an adverse impact on the Story Hill neighborhood.

City of West Allis

The City of West Allis expressed concern over water quality and quantity runoff from the increase in impervious surface from the project. The City of West Allis encouraged WisDOT to comply with local stormwater regulations to reduce the risk of flooding, improve water quality, and assist the local municipalities in complying with new pollutant regulations.

Milwaukee Metropolitan Sewerage District

MMSD, in the interest of improved stormwater quality, appreciates WisDOT's commitment to limiting runoff release rates, however, they encourage WisDOT to commit to controlling the volume of stormwater runoff as well. MMSD encourages WisDOT to comply with local runoff management standards. MMSD supports the implementation of porous pavement in portions of the Miller Park parking area and the example set by the Marquette Interchange to separate stormwater from combined sewers.

Additional Public Outreach Following the Final EIS

On May 23, 2016, WisDOT met with the Story Hill Neighborhood Association. The project team made a presentation addressing comments from the SHNA in their letter dated April 15, 2016. A handout with information on access to and from Story Hill with the Selected Alternative was provided. The ensuing discussion addressed numerous questions regarding access during normal times and on game days; transit and other transportation modes; funding; design details (lane widths, elevation in the interchange area); impacts to Miller Park parking; impacts to the adjacent power lines; and impacts on property values in Story Hill. The discussion also included the need, effectiveness, design and alternatives to a noise barrier along Story Parkway, and how the decision would be made to install it. A separate meeting will be held at a later date to resolve the noise barrier along Story Parkway.

On July 12, 2016 WisDOT met with the Merrill Park Neighborhood Association board of directors and executive director at their regularly scheduled meeting. WisDOT provided an update on the Selected Alternative, project schedule, and the recent design refinements. Questions from the board of directors included length of construction, whether I-94 will remain open during construction, business relocations on 35th Street in Merrill Park, and what the minority-owned business participation goal will be during the construction. The executive director said that the neighborhood is generally supportive of the project but has concerns about traffic increasing in the neighborhood during construction and condition of streets in the neighborhood deteriorating as a result.

WisDOT invited the members of the Technical and Community Advisory Committees to an open house on July 20, 2016. The committees were invited to hear about:

- design changes at Hawley Road, Mitchell Boulevard, and near 35th Street since the Final EIS was published,
- planning and design for the Washington Street area in West Allis,
- the anticipated Record of Decision, and
- the project schedule.

Eighteen committee members attended the open house, representatives included municipalities, utilities, the regional planning commission, neighborhood groups and area civic organization. Information shared included: design modifications, updated socioeconomic data, local road modifications, the latest project newsletter and renderings of the stadium area. Discussions with committee members included:

- general project updates and committee members interest in the project schedule
- design and traffic operations in the Stadium Interchange
- options for relocating the Park Hill substation near 38th Street
- the freeway moving south near the Story Hill neighborhood, and
- traffic operations on the frontage road between Miller Park and south of the Story Hill neighborhood.

On August 1, 2016 WisDOT provided a project update to the Bluemound Heights neighborhood at their regularly scheduled meeting. WisDOT provided an update on the project schedule, progress to date on the study, upcoming milestones, and reviewed the Selected Alternative. About 30 people attended the meeting. Questions from attendees included lane width through the cemetery segment, the project's relationship to Milwaukee County's BRT study, the length of construction, whether roundabouts will be built on 70th Street, and access to/from Wisconsin Avenue and WIS 175 (just north of the Stadium Interchange). One person commented that the project is not needed, another commented that the project is needed due to congestion.

Public Comments

The following is a summary of and responses to substantive comments related to the project's purpose and need; alternatives analysis; social, economic, or environmental impact analysis; or public involvement received during the Final EIS availability period. The public provided comments via 224 form letter emails, 664 mailed form letters, and 24 individual mailed letters. An additional 105 persons signed petitions circulated by the Coalition for More Responsible Transportation (CMRT) in opposition to adding capacity to I-94.

Many of the comments received were similar to ones submitted on the Draft EIS, including concerns about project funding, calls to address safety without capacity expansion, incorporation of more mass transit options in addition to or instead of adding capacity, concerns for impacts to environmental justice populations (minorities and low income persons), and concerns for increases in water and air pollution.

Purpose and Need

1. **The purpose and need statement disregards several of WisDOT's own responsibilities that are detailed in Connections 2030 and explicitly ignores portions of SEWRPC's transportation vision for the region.**

This comment was received on the Draft EIS and responded to in the Final EIS Section 6.4, comment No. 12. The statewide Connections 2030 plan's support for transit as a key mode of transportation does not mean that every project WisDOT implements must have a transit element or that every goal of the Plan needs to be met by every

project. The I-94 improvements are consistent with foundational elements of WisDOT's Connections 2030 long-range plan, including the following:

- Preserving the existing and future transportation system
- Optimizing investment in the system for continued safety, enhanced mobility, and efficiency
- Responding to local, regional, national, and international economic trends to maintain state economic competitiveness[3]

The Selected Alternative is consistent with and included in SEWPRC's 2035 regional transportation plan and the recently approved *VISION 2050* regional transportation plan. SEWRPC's 2035 regional transportation plan evaluated the effectiveness of only implementing transit improvements in the region, while foregoing highway improvements. That plan determined that, even with a 100 percent increase in transit service, I-94 still needs to be reconstructed with added capacity to accommodate existing and future traffic volumes at an acceptable level of service. SEWRPC's review of the regional transportation plan in *VISION 2050* reaffirmed the regional transportation planning process and the vision for a greater than 100 percent increase in transit service, while acknowledging that the increase in transit is not likely to happen without a change in funding levels.

Therefore, the focus of the I-94 East-West Corridor study was to identify the best alternative for meeting the transportation needs along this segment of I-94, including added capacity. WisDOT does acknowledge the need for a strategy that combines a doubling of transit service with capacity improvements to the freeway itself. Most importantly, I-94 is an interstate highway that provides regional and inter-state travel, not a County Trunk Highway or local road where many transit projects would occur. Per AASHTO Policy on Design Standards Interstate System, "The National System of Interstate and Defense Highways is the most important in the United States. It carries more traffic per kilometer (mile) than any other comparable national system and includes the roads of greatest significance to the economic welfare and defense of the nation. The highways of this system must be designed in keeping with their importance as the backbone of the nation's highway systems. To this end, they must be designed to ensure safety, permanence, utility and flexibility to provide for predicted growth in traffic." The purpose and need for the project reflects this importance.

The I-94 East-West project does not preclude any transit service from occurring or future transit projects from being developed. WisDOT will implement a Transportation Management Plan, which has the purpose of improving safety, minimizing congestion and adverse impacts, and providing for improved public satisfaction with traffic operations during construction. Depending on additional coordination with local officials, WisDOT will fund additional transit routes, as warranted, to mitigate impacts to traffic within the project area during the construction phase of the project. WisDOT is also financially participating in Milwaukee County's BRT study so that a sustainable BRT system can be developed and available as a transportation option during I-94 construction and for the long term.

WisDOT continues to work with local communities and encourages the implementation of transit. WisDOT does coordinate with transit providers. For example, WisDOT provides a subsidy for the Amtrak Hiawatha train route between Milwaukee and Chicago and recently upgraded the train shed at the Milwaukee Intermodal Station. WisDOT is also a member on SEWRPC's Advisory Committee on Regional Transportation System Planning, working with communities and local municipalities.

Independent of the I-94 East-West project, WisDOT is co-sponsoring a Transportation Summit. This Greater Milwaukee regional area Summit is being co-sponsored by WisDOT, FHWA, FTA and SERWPC. The theme of the Summit is "How Are Our Community's Values Reflected in the Transportation Solutions We Provide?" Stated goals for the Summit are to bring together key partners to better understand issues, learn about transportation investments and funding, and define an action plan that captures roles and responsibilities across all groups. The Summit is anticipated to occur in fall 2016.

[3] http://wisconsindot.gov/Documents/projects/multimodal/conn2030/2030-1.pdf

2. The Final EIS makes clear in the purpose and need discussion that the project is intended to provide connections to downtown Milwaukee for workers from "a large regional area" – not the central city.

The purpose and need of the project is not to provide connections to downtown Milwaukee and "a large regional area" at the expense of the central city. The purpose and need statement, in Section 1, does not include access to downtown as an element of the project's purpose and need statement. The phrase from "a large regional area" does not appear in Section 1, Purpose and Need for the Project. Lastly, I-94 passes through a portion of Milwaukee's central city, thereby enhancing access to downtown for central city residents that work downtown.

Safety

3. The Preferred Alternative does not adequately address safety issues. Many of the crashes along the corridor have not occurred during congested rush hour periods, but rather are the result of impaired drivers at night-time. The added lanes and reduced congestion during rush hours will not affect those types of accidents. The design exceptions, such as 11-foot lanes through the cemeteries, will increase the crash frequency.

Comments on safety issues and crashes were received on the Draft EIS and responded to in the Final EIS Section 6.4, comment No. 4.

As noted in Section 1.3.3 of the Draft and Final EIS, the most common types of crashes on the study area freeway system are primarily attributable to obsolete design (minimal shoulders, sharp curves, substandard ramp spacing, presence of both left- and right-hand entrance and exit ramps, and short weaving distances, etc.), and not to excessive speed. Congestion does play a part in safety. For example, speed differentials (due to merging and diverging, acceleration and deceleration due to short weaves and congestion, etc.) contribute to increased crashes and crash severity.[4] The Selected Alternative would improve safety by reducing large speed differentials by increasing acceleration and deceleration lengths, providing right-hand exit and entrance ramps, and longer weave distances. In addition, added capacity provides a consistent higher level of service and reduces speed differential as a result of congestion.

As noted in Section 3.3.2.4 of the Final EIS, all the Modernization Alternatives retained for detailed evaluation would reduce crashes on I-94 compared to the existing condition. In the west segment, lower anticipated crash rates are due in part to improved roadway design, improved traffic operations on I-94, and removing the Mitchell Boulevard interchange and half of the Hawley Road interchange for the Selected Alternative. Removing the ramps would eliminate potential conflicts between I-94 traffic and traffic that is entering and exiting. In the east segment, lower crash rates result from improved design and improved traffic operations on I-94.

WisDOT conducted a predictive crash analysis for the corridor (see *I-94 East-West Stadium Interchange Study Crash Analysis Technical Memorandum* on the CD at the back of the Final EIS). This report distinguished between the number of crashes that were fatal, injury, or property damage only crashes as well as crash type (i.e. angle, rear-end, sideswipe, etc.). Based on the ISATe predictive safety analysis, in the west segment, the At-grade alternative with half interchange at Hawley Road (Selected Alternative) would have 23 percent fewer crashes on I-94 than the Replace-in-Kind, or No-build, option.

The design of the Selected Alternative through the cemetery section is in response to the constrained environment; however, it is still safe, will provide a higher level of safety compared to existing conditions, and will incorporate enhanced safety measures. The Selected Alternative meets the purpose and need of the project, specifically in regards to safety. See Section 2.3.1 of the Final EIS for more information on how the Selected Alternative addresses safety. The narrow lanes through the cemetery area are needed in order to avoid impacting any of the graves adjacent to I-94. Additionally, through thorough consultation with the Section 106 consulting parties, FHWA determined that the At-grade alternative with a half interchange at Hawley Road can be constructed to result in no adverse effect under Section 106 and 110(f) on all historic properties in the study area. The alternative also results in no more than a *de minimis* impact to Section 4(f) properties.

[4] AASHTO. Highway Safety Manual, 1st Edition. Volume 1, 2010. page 2-15.

To summarize what is discussed in Section 2.2.1 of the Final EIS, for eastbound traffic, there would be less than 12-foot lanes for about 1,610 feet, less than 12-foot inside shoulder for 1,460 feet, and less than 12-foot outside shoulder for 1,390 feet. For westbound traffic, there would be less than 12-foot lanes for about 1,500 feet, less than 12-foot inside shoulders for 1,480 feet, and less than 12-foot outside shoulders for 1,010 feet. Exhibit 5 in this ROD and Exhibit 2-3 of the Final EIS provides a visual summary of the distances described in this section.

The Final EIS does acknowledge that narrow lanes and shoulders generally result in an increase in crashes; however, the 11-foot lane segment is short (30 feet long), with transitions to 12-foot lanes on each end. This segment would have narrow shoulders for approximately 1,500 feet. In order to make the narrow lanes and shoulders segment as safe as possible, dynamic traffic management tools to warn drivers of closed lanes in the narrow segment, advance warning signs alerting drivers to the narrow lanes and narrow shoulders, and other tools like reflectors on the center median barrier wall and the outside barrier wall will be investigated in final design and implemented as appropriate to make the narrow lane/narrow shoulder segment as safe as possible. Reducing the length of the 11-foot lanes and narrow shoulders, and implementing additional safety measures, makes their presence more acceptable and results in the At-grade alternative meeting the project's purpose and need element of addressing safety on I-94.

4. **The Final EIS states that the Half Interchange at Hawley Road will worsen safety at that location. WisDOT does not make any reference to the type of severity of the crashes that will increase on local streets. This is particularly worrying as these crashes may disproportionately involve pedestrians and bikers.**

Traffic volumes on local streets will be reduced due to the added capacity on the freeway. This will reduce crashes on local roads compared to existing conditions. The half interchange at Hawley Road will have more crashes on local roadways compared to the full interchange due to traffic diversions at that location, however, there will still be 23 percent fewer crashes on I-94 with the half interchange compared to the Replace-in-Kind option. Table 3-6 of the Final EIS lists the projected type of crashes (fatal, injured, or property damage only) for the west segment alternatives. These numbers include the crashes on ramps and local roadways due to traffic diversion from I-94. Due to the half interchange, local road improvements are included in the Selected Alternative to help traffic flow. These improvements will be designed to meet safety standards.

As noted in Section 3.2.2.6 of the Final EIS, pedestrian and bicycle accommodations are provided, and improved, where possible within the corridor to provide safe access. For example, on Hawley Road there are no existing bicycle accommodations and sidewalk on the west side of the street. The proposed sidewalk will be on both sides of the street from Adler Street to Dana Court and bicycle accommodations will be provided. See updated Table 3-6 on Page 4 of this document for more information. These improvements will make pedestrian and bicycle travel safer in the project corridor. Additionally, diverting traffic to the interstate, due to expanded capacity, from many other local streets will decrease the opportunities for crashes in those locations, including those that involve pedestrians or bicycles.

5. **Despite acknowledged design deficiencies, such as narrow lanes and shoulders, stopping sight distance exceptions, and less-than-minimum weave distance, the Final EIS states in a footnote on page 2-26 that the preferred alternative "was determined to now 'meet' the safety element of the project's purpose and need." It is questionable whether that determination is reasonable.**

The At-grade alternative with a half interchange at Hawley Road would improve safety over the existing condition (no-build alternative). The At-grade alternative with half interchange at Hawley Road (preferred alternative) would have 23 percent fewer crashes on I-94 than the Replace-in-Kind option (no-build alternative).

In the I-94 East-West Corridor Draft EIS, the At-grade alternative was listed as "partially" meeting the safety element of the project's purpose and need due to the presence of the 11-foot lanes and narrow shoulders. The extent of 11-foot lanes was reduced from those noted in the Draft EIS due to refined design; specifically, maximizing the lane width transitions to keep the lanes as wide as possible, given available space. Reducing the length of the 11-foot lanes and narrow shoulders, and implementing additional safety measures, makes their presence more acceptable and results in the At-grade alternative meeting the project's purpose and need element of addressing safety on I-94. While the At-grade alternative would have narrow lanes and shoulders

between the cemeteries, mitigation measures, such as dynamic traffic management tools to warn drivers of closed lanes in the narrow segment, advance warning signs alerting drivers to the narrow lanes and narrow shoulders, and other tools like reflectors on the center median barrier wall and the outside barrier wall will be investigated in final design and implemented as appropriate to make the narrow lane/narrow shoulder segment as safe as possible.

Alternatives

6. Adding highway capacity, by widening existing roads or building new highways, does not solve congestion; instead, added capacity produces more traffic, and leads more drivers to spend more time behind the wheel.

The shift of some traffic from congested local roads to I-94 due to increased capacity on the interstate is taken into account when forecasting future traffic volumes. The traffic forecasts used for this study to determine future traffic volume and level of service are based upon the SEWRPC travel demand model. This model explicitly accounts for potential changes in travel route, changes in travel distance and location, changes in travel mode, induced travel, and changes in the timing of travel that may occur in response to the potential of additional capacity on I-94. This is noted in a letter to the City of Milwaukee located in Appendix D (D-58) of both the Draft and Final EIS. SEWRPC's travel demand model considers and includes the changes in travel behavior that may be expected in response to the additional freeway lanes. This accounts for changes in travel route, travel distance and location, travel mode, and timing of travel. Furthermore, as stated in Section 1.3.5.1 of the Final EIS, portions of the I-94 corridor currently operate at level of service E or lower, indicating that additional capacity is warranted even with existing traffic levels.

Section 1.3.5 of the Final EIS noted that FHWA guidance generally calls for level of service C for new construction and reconstruction projects on Interstate Highways in order to meet FHWA requirements to adequately serve the existing and planned future traffic (23 Code of Federal Regulations [CFR]625.2(a)(1)). This does not imply that there is a required standard that defines a minimum Level of Service that must be met for new construction and reconstruction projects on the Interstate System. (Note: This is consistent with FHWA's May 6, 2016 memo[5] that clarified level of service requirements on National Highway System (NHS) Routes.) Since there is general guidance, as defined in the American Association of State Highway and Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets, 2011 Edition* (also known as the AASHTO *Green Book*), and since FHWA requires that NHS routes adequately serve existing and planned future traffic, WisDOT has developed level of service guidelines in their Facilities Development Manual (FDM). These guidelines, approved by FHWA, are included in FDM Section 11-5-3 and show level of service C as the typical threshold for major improvement projects on the Interstate system (part of WisDOT's Backbone System). However, since there is some flexibility in determinations of acceptable level of service that consider other factors, such as impacts and cost, justifiable adjustments can be made. To define the purpose and need screening criteria for an acceptable level of service to accommodate existing and future traffic volumes, FHWA and WisDOT agreed to the use of level of service D since potential impacts to the surrounding natural or built environment resulting from achieving level of service C would be extensive and costly. This is a fairly common practice for these types of projects in major urban areas like Milwaukee County. The level of service guidance for this project was documented in the *DHV and LOS for the I-94 East-West Stadium Interchange Study* technical memorandum from September 2012, located on the CD at the back of the Final EIS.

Traffic forecasts for the I-94 East-West Corridor included a 100 percent increase in transit service, and take into account potential increases in traffic with and without capacity expansion. Even with implementation of the 2035 regional plan's transit recommendations, the future level of service for the corridor would be E or lower on many segments. This indicates that capacity expansion would be needed to achieve the level of service D criteria. Traffic projections take into account that some traffic currently on local streets will shift to I-94 if capacity is added, as

[5] http://www.fhwa.dot.gov/design/standards/160506.cfm

well as new trips that are taken due to roadway improvements. These projections, taking into account shifting traffic patterns, indicate that the future traffic levels will be at level of service D.

7. WisDOT's evaluation of reasonable alternatives was inadequate.

The focus of the I-94 East-West Corridor study is to determine the appropriate course of action for the future of I-94 between 70th Street and 16th Street. The purpose of the I-94 East-West Corridor study is to identify the best alternative to address the deteriorated condition of I-94, obsolete roadway and bridge, existing and future traffic demand, and high crash rates. Evaluating projected traffic volumes and congestion on I-94 is an appropriate element in evaluating transportation needs and solutions on a corridor basis. WisDOT did assess the impacts of freeway reconstruction and widening on adjacent arterials like Bluemound Road and Greenfield Avenue. Those alternatives which did not meet the project's purpose and need were eliminated from detailed study.

As part of the I-94 East-West corridor study, WisDOT took various modes of transportation into consideration when developing alternatives. Section 2 of the Draft and Final EISs outline the alternatives considered for this project. Section 2.4 of the Final EIS establishes the foundation upon which WisDOT and FHWA developed the range of alternatives considered for the project. The section looks at the project in the context of the regional transportation planning process and how the alternatives considered for the project build upon that process and the recommendations made in *A Regional Transportation System Plan for Southeastern Wisconsin: 2035 SEWRPC Planning Report No. 49* (SEWRPC 2006a, updated and reaffirmed in June 2014). Section 2.5 of the Final EIS describes alternatives developed and evaluated by FHWA and WisDOT but ultimately dismissed from detailed consideration. The alternatives were assessed based on their ability to meet the project's purpose and need, as well as their cost, impacts, and public input.

WisDOT did assess reconstructing the freeway without capacity expansion and relying upon transit improvements to meet travel demand. Section 2.5 of the Final EIS describes alternatives developed and evaluated by WisDOT and FHWA, but ultimately dismissed from consideration. Section 2.5.5.1 of the Final EIS documents WisDOT and FHWA's analysis of a 6-lane reconstruction alternative. This alternative was eliminated from detailed study because it did not meet the project's purpose and need. Therefore, it is not shown as one of the reasonable alternatives evaluated in the Final EIS. As noted in Section 1 and 2 of the Final EIS, the forecasted traffic volumes assume a robust increase in transit service in the region, much as CMRT suggests. Section 2.5.6.1 of the Final EIS documents WisDOT's analysis of a combination of non-capacity expansion alternatives. WisDOT evaluated the transit projects included in the 2035 regional transportation plan to assess whether implementing them could satisfy the need to add capacity on I-94 in the study area. WisDOT evaluated this by assessing traffic operations on a 6-lane Modernization Alternative to determine if it would operate at an acceptable level of service (D or better) in the design year peak hour, assuming all the regional plan's recommended transit projects were included. The results of that analysis indicate that several segments of I-94 would operate at level of service E and F if a 6-lane Modernization Alternative and all transit projects from the regional transportation plan were implemented (see Section 2.5.5.1 of the Final EIS).

8. WisDOT failed to develop and evaluate the effects of a reasonable alternative that reconstructs the highway and makes prioritized safety improvements without expanding highway capacity, while using the savings to expand public transportation, such as the rapid transit lines adjacent to the corridor in the Coalition for More Responsible Transportation (CMRT) alternative.

Similar comments regarding the evaluation of non-capacity alternatives analysis were received on the Draft EIS and were responded to in the Final EIS Section 6.4, comments No. 1 and No. 5.

WisDOT did assess reconstructing the freeway without capacity expansion and relying upon transit improvements to meet travel demand. This alternative was eliminated from detailed study because it did not meet the project's purpose and need. Therefore, it is not shown as one of the reasonable alternatives evaluated in the Final EIS. WisDOT evaluated the transit projects included in the 2035 regional transportation plan to assess whether implementing them could avoid the need to add capacity on I-94 in the study area. WisDOT evaluated this by assessing traffic operations on a 6-lane Modernization Alternative to determine if it would operate at an acceptable level of service (D or better) in the design year peak hour, assuming all the regional plan's

recommended transit projects were included. The results of that analysis indicate that several segments of I-94 would operate at level of service E and F if a 6-lane Modernization Alternative and all transit projects from the regional transportation plan were implemented (see Section 2.5.5.1 of the Final EIS). Portions of the I-94 corridor currently operate at a level of service E or lower, indicating that additional capacity is warranted even with existing traffic levels. See Section 1.3.5.1 of the Final EIS for more information.

Section 2.5 of the Final EIS, Other Alternatives Considered and Dismissed, describes alternatives developed and evaluated by WisDOT and FHWA, but ultimately dismissed from consideration. Section 2.5 further discusses how none of the alternatives, alone or in combination, adequately addresses the full range of purpose and need objectives. As a result, the alternatives were not considered to the same level of detail as the alternatives retained for detailed evaluation.

Section 2.4.1, Region-wide TSM Elements, of the Draft EIS (Section 2.5.2 of the Final EIS) discusses why Transportation System Management (TSM) does not meet the project's purpose and need as a standalone alternative. TSM strategies aim to reduce congestion, primarily through improving transportation system capacity and efficiency. Given that almost all of the SEWRPC TSM elements are already implemented in the corridor and congestion is still expected to reach level of service E and F in the design year, TSM as a standalone alternative will not address the project's purpose and need. TSM measures will be implemented as part of the Selected Alternative.

Sections 2.5.2 and 2.5.3 of the Final EIS discuss a Travel Demand Management (TDM) alternative. TDM strategies include ways to reduce personal and vehicular travel or to shift such travel to alternative times and routes, allowing for more efficient use of the existing transportation system's capacity. TDM measures, as a standalone alternative, would not address any of the project's purpose and need elements. TDM measures currently in place will remain as part of the Selected Alternative.

Section 2.5.4.2, Spot Alternatives, of the Final EIS evaluates the Spot Improvement alternative that would replace I-94's pavement and bridges in or close to their existing configuration, while addressing safety issues that can be fixed with little or no new right-of-way acquisition. While the spot improvements (separately, or in combination) would replace deteriorated pavement, have fewer environmental impacts, and cost less than the Selected Alternative, the Spot Improvement alternative would not meet several purpose and need elements.

Section 2.5.5.1, Comparison of 6-lane and 8-lane Modernization Alternative, of the Final EIS evaluates a 6-lane Modernization Alternative. This alternative would address the obsolete design of I-94, but would not add capacity. While the alternative would improve traffic operations compared to the No-build alternative, the 6-lane Modernization Alternatives were eliminated from consideration because they would not meet the project's purpose and need related to providing level of service D or better traffic operations in the 2040 design year. The decision to eliminate the alternative is consistent with the 2035 regional transportation plan that recommends adding capacity to I-94.

Section 2.5.6.1 of the Final EIS discusses a combination of the non-capacity expansion alternatives. WisDOT assessed whether a combination of non-capacity expansion alternatives could, together, address the purpose and need of the project. This included assessing whether TSM and TDM in combination with either the No-build, Replace-in-kind, or Spot Improvements would meet the purpose and need of the project. Further, WisDOT assessed whether a 6-lane Modernization Alternative combined with region-wide TSM and TDM measures recommended in the 2035 regional transportation plan could eliminate the need to add capacity to I-94. Based on WisDOT's analysis, all non-capacity expansion alternatives failed to meet the purpose and need of the project.

Section 6.4 of the Final EIS, comment No. 9 provides a detailed response to the CMRT Rehab/Transit Option. WisDOT and FHWA reviewed this proposal and obtained input from SEWRPC and the Milwaukee County Transit Service (MCTS). As noted in Section 2.3.1.3 of the Draft EIS (Section 2.4.1.3 of the Final EIS), the Transportation Systems Management plus Highway Plan Scenario (the TSM scenario evaluated in SEWRPC's regional transportation plan) assessed whether a 100 percent increase in transit service throughout the region would address existing and projected future congestion within the region without adding any capacity to highways. SEWRPC determined that a 100 percent increase in transit was not enough to address congestion. The 100

percent increase in transit (including a BRT route along Wisconsin Avenue parallel to I-94) and adding capacity to a small number of roadways (I-94 in the study area was specifically mentioned) is required to address congestion in the region.

Offering the Rehab/Transit alternative as a way to avoid expending $1.106 billion (year of expenditure dollars) on the Selected Alternative also fails to acknowledge the relatively modest amount of the program cost—approximately 10-12 percent—that is attributed to the capacity expansion element of the Selected Alternative, and/or identify what such a proposal would cost, itself.

The rehab/transit alternative would provide other transportation options for travelers in Milwaukee's East-West Corridor. It would not preclude the need for an additional lane on this segment of I-94 based on current traffic volumes and anticipated future forecasts, which assume a doubling of transit service. As noted previously, as of January 2015, there is an express bus service in this corridor, though not to the extent described in the CMRT alternative.

Nonetheless, the proposed alternative would need to be fully studied and documented in the same context and under the same regulatory and statutory requirements as any single-mode or multi-modal project. It should be noted that such an analysis was prepared as part of a Major Investment Study conducted by WisDOT, FHWA, and the FTA in the 1990s. While a multi-modal solution was recommended (including freeway, arterial, bus, and rail components), there was no consensus among local elected officials regarding its implementation or funding. As a result, it was left to the various local and regional authorities to identify, study, and implement components of that and other plans, as needs dictated. In June 2015, Milwaukee County announced plans to study BRT in the East-West Corridor. SEWRPC is working with Milwaukee County on this study. SEWRPC's August 2015 newsletter on the topic[6] notes, "Now is the time to advance BRT in the East-West Corridor. A BRT line, if completed and put in service over the next few years, will provide needed mitigation of traffic congestion during the anticipated reconstruction of IH 94 between 70th and 16th Streets. Moreover, even upon reconstruction, this segment of IH 94 may be expected to experience among the worst congestion in the Region, and BRT will provide a desirable travel alternative."

To facilitate SEWRPC's recommendation, WisDOT is financially participating in Milwaukee County's BRT study connecting downtown Milwaukee with the Milwaukee Regional Medical Center. In addition, WisDOT has committed to using traffic mitigation funding before and during construction of the I-94 East-West corridor to invest in local intersection infrastructure. The intent of this investment is to incrementally implement BRT so that a sustainable BRT system is developed and available as a transportation option during I-94 construction.

9. We question WisDOT's projections of future traffic volumes in the I-94 East-West Corridor as well as the Department's traffic projection methodology. Projections of increasing traffic congestion and drive times ignore recent statistics and studies that show traffic volumes are actually decreasing.

A similar comment was received on the Draft EIS, and responded to in the Final EIS Chapter 6, comment No. 2. As stated in Section 1.3.5.1 of the Final EIS, portions of the I-94 corridor currently operate at level of service E or lower, indicating that additional capacity is warranted even with existing traffic levels. See also Appendix D of this Record of Decision.

It is erroneous to conclude that any drop in traffic volumes along I-94 in the study area demonstrates a fundamental and/or long-term change in travel patterns and demand. As explained in the text box in Section 1.3.5 of the Draft and Final EIS, WisDOT and FHWA used 2009 as the "base year" for this project, given the significant, traffic-diverting work that has occurred within and adjacent to this corridor since 2003. The ongoing projects that have affected traffic along I-94 include the Marquette Interchange reconstruction between 2003 and 2007, emergency repairs to three Zoo Interchange bridges in 2010, resurfacing of I-94 between the Zoo and Marquette interchanges in 2011 and 2012, and reconfiguring westbound I-94 between the Marquette and Stadium interchanges in 2013. As a result, recent actual count data in this corridor is highly volatile, and is not representative

[6] http://campaign.r20.constantcontact.com/render?ca=a9825550-3247-46aa-a8f7-501e9f74a00e&c=fbae8110-014b-11e4-a9f3-d4ae5292c3f3&ch=fbb3ff50-014b-11e4-a9f3-d4ae5292c3f3

of the historically consistent growth in travel demand and traffic volume increases seen along this corridor and around the Milwaukee metropolitan area over many years.

Many of the reports that stakeholders have cited as being representative of traffic volume trends are broadly based, rather than being specific to a particular roadway type. They cite trends that lump interstates, arterials, and local streets into a single data set. As explained in the text box in Section 1.3.5 of the Final EIS, vehicle miles traveled (VMT) is a regional measurement or estimate of travel demand; however, it is not used for traffic projections. As the chart shows, VMT on "Interstates, Freeways, and Expressways, Combined" has in fact steadily increased in the Milwaukee Federal-Aid Urbanized Area since a minimal drop in 2008 (and a minimal drop in 2013). This increase has averaged approximately 0.55 percent per year. As a point of reference, SEWRPC's regional model, using accepted methodology, has proven to be accurate to the levels required for certification by FHWA. Traffic forecasts for this study are produced by SEWPRC. When creating the forecasts, SEWRPC takes into account a wide range of factors that affect travel demand, including changes in demographics and growth rates. The updated technical memorandum titled *Travel Forecasting Methodology for I-94 East-West Corridor Study*, located in Appendix D of this Record of Decision, summarizes the process of developing forecasts of future traffic volumes on the I-94 East-West Corridor. **Exhibit 1-12** of the Final EIS provides a graphical representation of the travel demand forecasting, WisDOT's review of the travel demand forecast, and how the project team incorporates the forecast in to the project. SEWRPC and WisDOT use a modest annual growth rate of 0.4 percent for traffic on I-94.

Further, national statistics from the U.S. DOT indicate that VMT is once again rising nationally, showing a reversal of the downward trend noted since the start of the economic downturn in 2007-2008. According to FHWA's Office of Highway Policy Information, traffic volumes rose by 3.5 percent for all of 2015 compared to 2014.[7] Cumulative travel for 2016 through June has increased 3.3 percent compared to 2015[8].

10. The Level of Service of all alternatives is being evaluated on the basis of the 200th peak hour, meaning that there will be 200 rush hour peaks per year with worse congestion than the rated LOS applied to each alternative. Since there are roughly 250 workdays in each year, rush-hour commuters should not be misled into expecting that any of the alternatives will result in routinely congestion-free commuting experiences.

As noted in Section 3.3.2.3 of the Final EIS, in consideration of the tight urban corridor in which the project is located and the frequent occurrences of special event traffic (for example, baseball games), WisDOT and FHWA agreed to analyze level of service calculations on the 200th highest hour of traffic in a year instead of the 30th highest hour of traffic in a year, as specified by the regulation for Interstate Design (23 CFR 625.4(a)(2)). The design hour volume guidance for this project was documented in the *DHV and LOS for the I-94 East-West Stadium Interchange Study* technical memorandum from September 2012 located on the CD at the back of the Final EIS. This impact minimization effort allowed the design team to narrow shoulders and reduce some elements of the interchange designs to minimize construction footprint and property acquisition. As noted in the technical memo on the CD at the back of the Final EIS, according to WisDOT's FDM, there may be unique circumstances where using the 30th highest hour of traffic in a year is not realistic to use because of exceptionally high hourly volume peaking characteristics. According to the FDM, peaking characteristics "may occur on highly recreational routes, or routes that are in close proximity to a stadium or seasonal shopping mall. Additionally, higher design hour volumes may be justified when the LOS using K30 cannot be achieved because of social, environmental, or financial constraints." WisDOT and FHWA agreed to use this standard from the beginning of the project to minimize impacts through the urban corridor.

The comment points out that "there will be 200 rush hour peaks per year with worse congestion than the rated LOS applied to each alternative. Since there are roughly 250 workdays in each year, rush-hour commuters should not be misled into expecting that any of the alternatives will result in routinely congestion-free commuting

[7] http://www.fhwa.dot.gov/policyinformation/travel_monitoring/15dectvt/15dectvt.pdf

[8] https://www.fhwa.dot.gov/policyinformation/travel_monitoring/16juntvt/16juntvt.pdf

experiences." It should be noted that there are two rush hour peaks per day. Using the 200th peak hour takes into account frequent special event traffic (for example, Brewers games) in the corridor.

11. The preferred alternative, as proposed, is not likely to be able to satisfy the project's stated purpose and need criteria, including the stated goal of achieving and maintaining a Level of Service D (LOS D), a measurement of congestion. Nor will it achieve anything resembling free flowing rush hour traffic. As a result, reasonable alternatives that were improperly dismissed by WisDOT from full consideration because they would not achieve LOS D must also be given serious consideration. Such alternatives, and their cost and impacts, need to be fully described, analyzed, and compared to the 8 lane at grade expansion that has been selected by the agency.

As noted in various locations throughout the Final EIS, the preferred alternative (At-grade alternative with half-Hawley Road interchange/On-alignment alternative) would meet level of service D during both the morning and afternoon peak hours. As a result, the preferred alternative would satisfy the project's stated purpose and need criteria of level of service D being appropriate for this project. Specifically, Section 2.2.3.2 (pg. 2-23) of the Final EIS notes "By meeting level of service D during both the morning and afternoon peak hours, the At-grade alternative with the half Hawley Road interchange option (preferred alternative) would meet the project's purpose and need goal of improving traffic operation."

Additionally, Section 3.3.2.3 and table 3-3 of the Final EIS notes "The At-grade alternative with the half interchange at Hawley Road (preferred alternative) would operate at numeric level of service value 4.88, technically level of service D but only slightly better than level of service E, in the same location because the number of vehicles exiting I-94 at Hawley Road (100 to 150 vehicles during the design year peak hours) would be enough to reduce traffic density to just below the level of service E threshold." Thus, the preferred alternative will achieve and maintain a level of service D.

Level of service D is not intended to allow for "free flowing rush hour traffic". According to the AASHTO Green Book, level of service D is "approaching unstable flow; drivers have little freedom to select their own speeds." At level of service D there is a high-density flow of traffic in which speed and freedom to maneuver are severely restricted and comfort and convenience have declined even through flow remains stable. This is displayed visually on Exhibit 1-13 in the Final EIS.

Section 2.2 of the Final EIS discusses the No-build alternative and the four build alternatives that remained under consideration after an extensive alternatives development and refinement process. Additionally, Section 2.5.1 provides the definition of a reasonable alternative.

12. In order to achieve project goal of level of service D, transit usage must triple.

Several commenters incorrectly stated that the project would only achieve a level of service D if transit usage triples. The congestion levels predicted in the design year under the Modernization Alternatives do not assume transit usage will triple. Section 2.5.3 of the Final EIS states that transit usage on I-94 would need to triple in order to preclude the need to add a 4th lane to this segment of I-94. The traffic forecast for the Selected Alternative (and all alternatives) does not assume transit usage on I-94 will triple. Traffic forecasts, using SEWRPC's model, assume that transit service in the region will double.

13. The July 30, 2014 *Assessment of Additional Measures to Maximize the 8-Lane At-Grade Alternative's Ability to Meet Purpose and Need* technical memorandum located on the CD at the back of the Final EIS noting that the 8 lane At-grade alternative would operate at level of service E along a short segment adjacent to the cemeteries.

This technical memo discusses the 8-lane At-grade alternative with no Hawley Road interchange. At the time this memo was completed, the At-grade alternative with a half interchange at Hawley Road was not fully designed or evaluated.

As noted in Section 2.2.3.2 of the Final EIS, approved January 2016, the preferred alternative (At-grade alternative with half-Hawley Road interchange/On-alignment alternative) would meet level of service D during both the morning and afternoon peak hours.

14. **WisDOT has publically stated that one reason it did not include a transit option was that it was not recommended by the Southeastern Wisconsin Regional Planning Commission (SEWRPC). SEWRPC has been seeking public input on its Vision 2050 planning effort, and has found overwhelming support throughout the region for increased public transit service, and very little support for adding highway lanes. The City of Milwaukee has also requested that WisDOT consider bus rapid transit (BRT) alternatives and retention of HOV lanes, and that was summarily ignored.**

WisDOT and FHWA recognize that SEWRPC recommends additional transit service in the region in their regional plans. WisDOT and FHWA assess in the Final EIS whether a transit alternative combined with reconstruction of I-94 between 16th and 70th streets could meet the project's purpose and need and determined that it cannot (see Section 2.2.5.6.1 of the Final EIS). This assessment took place regardless of WisDOT's ability to implement a transit alternative, in accordance with FHWA guidance on this topic. To facilitate implementation of SEWRPC's recommendation, WisDOT is financially participating in Milwaukee County's BRT study connecting downtown Milwaukee with the Milwaukee Regional Medical Center.

15. **WisDOT has publically stated that Federal funds for this project could not be used to consider transit as part of DEIS hearings, and argued that the project alternatives under consideration would not preclude future transit. This is seemingly not true. …It is our understanding that WisDOT could, if it chose to, recommend that some federal Surface Transportation Program dollars which might be used for highway construction instead be used on public transit improvements under federal law (See 23 U.S.C. § 133(b)(5),(12)), such as the fixed guideway or Bus Rapid Transit proposals suggested by SEWRPC in the 2035 Plan, or other alternatives not yet considered.**

While FHWA funds can be used to support transit-based capital improvements, in this case, a transit-only alternative would not meet all elements of the project's purpose and need. WisDOT is financially participating in the planning process of Milwaukee County's BRT study connecting downtown Milwaukee with the Milwaukee Regional Medical Center.

16. **The Final EIS does not clearly indicate what if any access/egress points have been included for Story Hill. It would appear that there is a way for neighbors to move about when coming from the west, WisDOT has not notified Story Hill residents as to the proposed plan for eastbound traffic.**

Due to the removal of the Mitchell Road Interchange, traffic travelling eastbound on the freeway may exit at the Hawley Road interchange and use Bluemound Road to access the Story Hill Neighborhood. On May 23, 2016, WisDOT met with the Story Hill Neighborhood Association to address access to the neighborhood.

17. **The I-94 freeway corridor must be designed and rebuilt within the existing footprint to maintain and preserve the quality of life and housing stock in Story Hill. We continue to oppose freeway lane expansion in either direction. This means no cutting into Bluff Park north of the freeway, and no removal of homes.**

Please see comment No. 20 of Section 6.4 of the Final EIS for more detail. The preferred alternative would not encroach upon Bluff Park. All widening would be to the south, and no residential displacements and no right-of-way acquisition will be required in the Story Hill neighborhood.

18. **Losing half of the Hawley Road entrance/exit ramps after giving up the General Mitchell Boulevard interchange causes concern, not only for Story Hill neighbors but for the continued viability of the Hunger Task Force, and for businesses on Bluemound Road and in the City of West Allis.**

This comment was received on the Draft EIS and addressed in comment No. 16 in Section 6.4 of the Final EIS.

The Hawley Road interchange lies less than 0.5-mile east of the 68th Street/70th Street interchange. It will be approximately 1 mile west of the reconfigured Stadium Interchange, which will include a new local road interchange that would replace the access removed from the Mitchell Boulevard interchange, each of which would provide connections with I-94 and downtown Milwaukee to the Story Hill neighborhood, Hunger Task Force, Soldiers' Home NHL, VA Campus, and other nearby neighborhoods, businesses, and attractions.

WisDOT and FHWA have worked with the City of West Allis and adjacent stakeholders to identify off-freeway improvements that would offer alternative routes to I-94. The concepts include the extension of Washington Street between 70th Street and Hawley Road, and improvements to other nearby intersections to handle diverted traffic. Access from the Hunger Task Force to eastbound I-94 would be achieved by following a number of other options, including driving south on Hawley Road to the Washington Street extension, turning west on Washington Street, and then driving north on 70th Street to the freeway entrance ramp at that location. Access to the freeway from the Renaissance Faire office building on the west side of Hawley Road would also be provided via the new Washington Street extension. Travel time from the Renaissance Faire office building to eastbound I-94 would increase by about 2 minutes compared to using the Hawley Road interchange.

Additionally, WisDOT conducted a survey of businesses in the vicinity of the Hawley Road interchange, and assessed the economic impacts associated with modified access at Hawley Road (see the *Economic Impact of the Proposed Hawley Road Interchange Closure* report on the CD at the back of the Final EIS). The survey was given to business owners in Milwaukee and West Allis, located between 70th Street to the west, US 41/Miller Park Way to the east, State Street to the north, and National Avenue to the south. The survey provided business owners an opportunity to predict consumer behavior and to estimate the impact of complete Hawley Road interchange removal on their revenue, customer base, and employment. The survey and associated analysis found that a potential loss of seven jobs, and a loss of approximately 0.02 percent of Milwaukee County's gross regional product, might result from the access change. The assessment assumed that the Hawley Road interchange was completely removed. Because two of the four ramps will stay in place, the economic impacts of closing only two of the four ramps is likely less than those quantified in the analysis.

19. The communities adjacent to the project corridor, and most affected by the proposed project, have clearly expressed their opposition to expanding the number of lanes on the highway. Even the City of West Allis, which weighed in in favor of the double-deck expansion proposal, did so if that was the only way to keep the City's access to the interstate at Hawley Road.

Local community input was considered throughout the environmental study process. At no point during their correspondence with WisDOT regarding the I-94 East-West Corridor Draft or Final EIS did the West Allis city council express opposition to expanding the number of lanes on I-94. The City of West Allis' main concern was potential closure or partial closure of the Hawley Road interchange. Additionally, the Village of West Milwaukee did not express opposition to expanding the number of lanes on I-94. Much like West Allis, West Milwaukee's main concern was potential closure or partial closure of the Hawley Road interchange. Although the City of Milwaukee opposed expansion, they indicated a preference for the Selected Alternative.

Impacts

20. The Final EIS fails to meaningfully evaluate the racially disparate impact of increasing highway capacity while transit capacity declines.

As noted in Section 3.9.6 of the Final EIS, Interstate Investment Effects on Transit, the 2014 *Review and Update of the Year 2035 Regional Transportation System Plan* Appendix B, *Evaluation of the Impacts of the Fiscally Constrained Plan on Minority and Low-Income Populations in Southeastern Wisconsin* is a robust assessment of the region-wide impacts of the fiscally constrained regional transportation plan in the context of its implementation to date and likely future implementation. After publication of the Final EIS, SEWRPC's *VISION 2050: A Regional Land Use and Transportation System Plan for Southeastern Wisconsin* was approved on July 28, 2016. Appendix N of *VISION 2050*—Equitable Access Analysis of the Federally Recognized Transportation Plan—evaluates accessibility for minority and low-income populations by transit and automobile to jobs and other activity centers, minority and low-income populations served by transit, transit service quality for minority and low-income populations, benefits and impacts of new and widened arterial streets and highways on minority and low-income populations, and transportation related air quality impacts on minority and low-income populations for the FRTP for *VISION 2050*. The analysis found that because the segments of freeway proposed to be widened under the FRTP would directly serve areas of minority and low-income populations, these populations would be utilizing and experiencing benefit from the expected improvement in accessibility associated with the proposed widenings.

Further, Section 3.9.6 and 3.29.2.7 of the Final EIS characterize WisDOT's role in transit funding and implementation and discuss the project in the context of the regional transportation plan. The Final EIS states that transit investments alone will not meet the project's purpose and need. According to the 2010-2014 ACS Data, for Milwaukee County and the City of Milwaukee, about 82 and 80 percent, respectively, of the minority population drives alone or carpools to work. Approximately 11 percent of the minority population uses public transit to travel to and from work in Milwaukee County. For workers below the poverty level in Milwaukee County and the City of Milwaukee, about 70 and 68 percent, respectively, use an automobile to travel to and from work. Most workers not driving to work used public transportation or walked. In the I-94 East-West Corridor study area, about 81 percent of workers drive alone or carpool to work (2010-2014 ACS data). About 79 percent of the minority population within the study area drives alone or carpools to work. Census or American Community Survey data on non-work trips by mode and by race and/or income are not available. Analysis presented in Appendix N of SEWRPC's VISION 2050 found that in general, no minority or low-income community, would be expected to disproportionately bear the impact of the highway improvements.

The fact that some low-income and/or minority persons (an environmental justice population) do not own vehicles and would not use the freeway as often as those persons who do own vehicles does not mean that the project will have a disproportionately high and adverse effect on that environmental justice population. The improved level of service along I-94 will benefit transit users as the Selected Alternative will reduce traffic on local roads. According to Appendix N of *VISION 2050*, over 100,000 jobs would be accessible within 30 minutes by transit to minority and low-income populations. In addition, over 99 percent of minority and low-income populations have reasonable access to health care facilities by automobile while approximately 50 percent of minority populations and 49 percent of families in poverty have reasonable access to health care facilities by transit. Public technical college and university are accessible by transit to approximately 27 and 28 percent of minority population and families in poverty, respectively. See also Appendix B of this Record of Decision.

Moreover, capacity expansion represents only about 10-12 percent of the project's cost. This is about $85-$100 million, or about what WisDOT contributes to MCTS operating costs during each biennial budget. Unlike the continuing transit operating cost contributions which have remained relatively constant, the capacity expansion is a one-time cost. To put this figure in context, WisDOT will invest $179 million in local roads in Milwaukee County between 2012 and 2020. The once-in-75-year investment of $85-$100 million for additional capacity on I-94 is about half of what WisDOT invests in local roads in a typically 8-year period.

Independent of the I-94 East-West project, WisDOT is co-sponsoring a Transportation Summit. This Greater Milwaukee regional area Summit is being co-sponsored by WisDOT, FHWA and SERWPC. The theme of the Summit is "How Are Our Community's Values Reflected in the Transportation Solutions We Provide?" Stated goals for the Summit are to bring together key partners to better understand issues, learn about transportation investments and funding, and define an action plan that captures roles and responsibilities across all groups. The Summit is anticipated to occur in mid-October.

21. Spending up to $1 billion to expand I-94 will limit funding for maintaining and repairing the existing highway infrastructure and for other public transportation infrastructure, including rapid transit, bike and pedestrian infrastructure. Funding this highway may also require using general funds that pay for programs like education, public safety and non-highway capital projects.

Project prioritization is an interactive process between WisDOT and the local Metropolitan Planning Organization, with public involvement at each step of approval. Projects are prioritized based on how well they meet the primary transportation goals of mobility, choice, safety, efficiency, and connectivity. Prioritization also considers several additional values including economic development, environmental responsibility, and community livability. All of these topics are multi-modal in scope, including roadway, transit, bicycle, and pedestrian modes of travel.

The funding sources dedicated to freeway projects such as the I-94 East-West Corridor are separate and distinct in the state budget from the funding sources used to construct local streets. There is no opportunity to apply

"savings" from a freeway reconstruction/modernization project to city street repaving, reconstruction, traffic calming, and/or bike facilities separated from the freeway project itself (Final EIS Section 6.4, comment No. 8). As indicated in the Final EIS Section 6.4 comment No. 6, approximately 10-12 percent of the project cost is related to adding a fourth lane in each direction. Approximately 35 percent of the cost is related to the replacement of pavement and bridges, while over 50 percent is associated with safety and design improvements.

Highway and transit funding levels are set by the legislative and congressional budgeting process, not by WisDOT or FHWA. For more information on how transit is funded see "How is Transit in Milwaukee Funded and What is WisDOT's Role?" in Section 2.5.3 of the Final EIS.

The outcome of the I-94 East-West Corridor decision will not affect highway or transit funding levels. For example, if the Replace-in-Kind alternative was selected, the $370 million (2014 dollars) saved between the Replace-in-Kind alternative and the Selected Alternative could not be spent by WisDOT on transit services without authorization from the state legislature through the state's biennial budget process, including steps to ensure all applicable federal requirements are met. Whether the No-build or the Selected Alternative is implemented, it will not directly increase or decrease transit funding levels.

As for the use of general funds for the I-94 East-West project, highway funding is established through the regional transportation plan (RTP) and transportation improvement program (TIP) prepared by SEWRPC. Federal regulations require that the RTP and TIP be "fiscally constrained." In order to satisfy the fiscal constraint requirement, the RTP and TIP can only include projects that can be funded through existing funding sources and potential funding sources that are reasonably expected to be available in the future. The funding estimates must also take into account the expected limitations on funding.

As part of the *VISION 2050: A Regional Land Use and Transportation System Plan For Southeastern Wisconsin* (SEWRPC, 2016), SEWRPC performed a funding analysis of the recommendations in the transportation plan, given the existing and reasonably expected available funding. The fiscally constrained version of the plan, titled the *Federally Recognized Transportation Plan (FRTP) for VISION 2050*, includes those projects with reasonably expected funding according to federal and state law. The analysis indicates there may be enough revenue to fund the proposed highway and arterial system improvements during the plan period, assuming that the State will continue to provide the necessary level of funding for these improvements. Therefore, the FRTP has been determined to include all of the highway and arterial transportation elements, including the I-94 East West Corridor project.

Funding for all transportation improvements has been challenged by the fact that the federal motor fuel tax has not changed since 1993, the elimination of State motor fuel tax indexing (the primary source of State transportation funding) in 2006, and the failure of regional transit authority legislation. However, the analysis concludes that it is reasonable to expect the State will address the long-term funding issues during the plan period. Some of the proposed solutions to funding have included indexing the State's motor fuel tax based upon the wholesale price of fuel sold in Wisconsin, increasing the tax rate on diesel fuel, creating a Highway Use Fee based on a percentage of the manufacturer's suggested price for new vehicles in Wisconsin, and increasing the annual registration fee for hybrid and electric powered vehicles to ensure owners pay their fair share of the construction and operating costs of infrastructure.

Given that TSM, TDM, and bicycle and pedestrian facility costs are primarily included in the costs for surface arterial streets and highways, and typically represent a fraction of the cost to reconstruct an arterial facility, the analysis concludes that there will likely be enough revenue to fund these improvements as included in *VISION 2050*. The analysis points out that the majority of TSM and bicycle and pedestrian improvements in the year 2035 RTP have already been implemented.

22. The Final EIS fails to meaningfully evaluate land use and development effects, or to avoid, minimize or mitigate the cumulative, racially disparate effects on minority populations.

Section 3.29 of the Final EIS assesses the cumulative land use impacts of the project in the context of past, present, and reasonably foreseeable future projects in the region. Section 3.29.2.7 specifically discusses regional

land use patterns. The indirect and cumulative effects analysis conducted by WisDOT included input from land use and planning officials, stakeholders in the study area, and developers that work in Milwaukee and Waukesha Counties. WisDOT's indirect and cumulative effects analysis is documented in a stand-alone report and is based, in part, on interviews with land use officials from Milwaukee and Waukesha County and developers who are active in the region. See the *I-94 East-West Corridor Study Indirect and Cumulative Land Use Effects-Influencing Factors* report located on the CD at the back of the Final EIS.

Based on a public comment on the Final EIS, WisDOT and FHWA assessed cumulative travel time savings to motorists on I-94 in Milwaukee and Waukesha Counties from the recent reconstruction of the Marquette interchange, the current reconstruction of the Zoo Interchange, the planned reconstruction of I-94 between 16th and 70th Streets as part of this project, and a potential future reconstruction and possible expansion of I-94 in Waukesha County out to WIS 16. See New Information Since Final EIS Publication in this Record of Decision.

Stakeholder feedback gathered for the Indirect and Cumulative Effects Analysis (located on the CD at the back of the Final EIS) indicated that existing congestion along I-94 reduces the area's accessibility, which diminishes the economic development potential of the primary study area. At the June 6, 2013, focus group meeting, several economic development professionals and a real estate developer who represent areas in West Allis, Wauwatosa, West Milwaukee and Milwaukee, stated capacity expansion was needed because congestion along I-94 makes it harder to market properties within the primary study area and to compete with other locations in the region that have less congestion. After a large group discussion period, the focus group participants were divided into five smaller working groups and asked a series of questions to obtain more in depth feedback on indirect and cumulative effects topics. One of the questions (Question #4) specifically asked: "*How would the freeway project affect local arterial routes? Would it affect traffic patterns and/or land use/development patterns? What arterial corridors may be affected?*" The feedback obtained from the participant responses to this question, along with feedback from the meeting in general, helped the study team to determine potential land use effects for the primary study area as discussed in Section 3.28.4.1 for the Modernization Alternatives.

Follow-up interviews with other local private-sector real estate professionals also found that additional capacity on the freeway would help attract more development to the primary study area. Based on stakeholder feedback, the study team determined that improved mobility along I-94 from new travel lanes would facilitate development within the primary study area because people and businesses would not be detracted from the area by traffic congestion. As a result, improved mobility could encourage redevelopment of former industrial areas and underutilized parcels, improve the business environment along local arterial streets, maintain the economic competiveness of the existing business districts and neighborhoods, and support the vitality of the numerous regional cultural, recreational and entertainment venues within the study area. A summary of the meeting is included in the *I-94 East-West Corridor Study Indirect and Cumulative Effects Analysis* report (WisDOT 2016) located on the CD at the back of the Final EIS document.

Section 3.29.2.7 of the Final EIS discusses potential mitigation measures evaluated by WisDOT and FHWA that could address cumulative land use-related issues in the region. Construction mitigation measures cited in the Final EIS are provided as examples of measures WisDOT may implement. While the project may contribute to a cumulative air quality impact, it will also have some beneficial impacts. Thus, it is not expected to be a substantial contributor, as measured by current pollutant standards.

23. The proposed expansion would only benefit drivers in the region; the tens of thousands of Milwaukee-area residents who do not have access to a car would remain cut off from the places they have to go. The state should prioritize maintenance and repair of the existing transportation infrastructure and pursuing transportation options that benefit everyone, including communities of color, people with disabilities and transit riders, as well as drivers.

This comment was also received on the Draft EIS and responded to in the Final EIS Section 6.4, comments No. 9 and No. 22.

The I-94 East-West project does not preclude any transit service from occurring or future transit projects from being developed. WisDOT assessed reconstructing the freeway without capacity expansion and relying upon

transit improvements to address congestion. Section 2.5.5.1 of the Final EIS documents WisDOT and FHWA's analysis of a 6-lane reconstruction alternative. This alternative was dropped from consideration because it would not meet the project's purpose and need.

As noted in Section 1 and 2 of the Final EIS, the forecasted traffic volumes assume a robust increase in transit service in the region. Section 2.5.6.1 of the Final EIS documents WisDOT's analysis of a combination of non-capacity expansion alternatives. WisDOT evaluated the transit projects included in the SEWRPC regional transportation plan to assess whether implementing them could satisfy the need to add capacity on I-94 in the study area. The results of that analysis indicate that several segments of I-94 would operate at level of service E and F if a 6-lane Modernization Alternative and all transit projects from the regional transportation plan were implemented (see Section 2.5.5.1 of the Final EIS).

Section 3.9.6 of the Final EIS addresses the benefits of the project for all users. SEWRPC has recommended widening of the southeast freeway system in the context of its overall transportation plan. In a sequential process, SEWRPC begins by considering public transit facilities and services, bicycle and pedestrian facilities, and travel demand and transportation systems management measures. Highway system capacity improvement and expansion is considered to address highway traffic volume and congestion, which cannot be expected to be alleviated by public transit, bicycle, and pedestrian, and travel demand and transportation systems management measures (SEWRPC 2006b). SEWRPC's recommended regional transportation plan in *VISION 2050* reaffirmed the regional transportation planning process as outlined in the previous plan, and proposes improvements and expansion of public transit that would increase transit service levels by approximately 117 percent of the service existing in 2014. The *VISION 2050* document does acknowledge that this increase in transit is not likely to happen without a change in funding levels. Also according to *VISION 2050*, public transit carries about 2 percent of total weekday travel in southeastern Wisconsin, while approximately 30 percent of the estimated capital and operating costs of the *VISION 2050* plan are devoted to public transit.

As noted in Section 6.4 of the Final EIS, WisDOT is financially participating in Milwaukee County's BRT study connecting downtown Milwaukee with the Milwaukee Regional Medical Center. In addition, WisDOT has committed to using traffic mitigation funding before and during construction of the I-94 East-West corridor to invest in local intersection infrastructure. The intent of this investment is to incrementally implement BRT so that a sustainable BRT system is developed and available as a transportation option during I-94 construction and for the long term. Independent of the I-94 East-West project, WisDOT is co-sponsoring a Transportation Summit. This Greater Milwaukee regional area Summit is being co-sponsored by WisDOT, FHWA and SERWPC. The theme of the Summit is "How Are Our Community's Values Reflected in the Transportation Solutions We Provide?" Stated goals for the Summit are to bring together key partners to better understand issues, learn about transportation investments and funding, and define an action plan that captures roles and responsibilities across all groups. The Summit is anticipated to occur in mid-October.

According to the 2010-2014 ACS Data, for Milwaukee County and the City of Milwaukee, about 82 and 80 percent, respectively, of the minority population drives alone or carpools to work. Approximately 11 percent of the minority population uses public transit to travel to and from work in Milwaukee County. For workers below the poverty level in Milwaukee County and the City of Milwaukee, about 70 and 68 percent, respectively, use an automobile to travel to and from work. Most workers not driving to work used public transportation or walked. In the I-94 East-West Corridor study area, about 81 percent of workers drive alone or carpool to work. About 79 percent of the minority population within the study area drives alone or carpools to work. The data also noted that while minority populations generally use transit more for traveling to work in Milwaukee County and the City of Milwaukee, most commuting by minority populations is by car. Additionally, data collected for this study concluded that 76 percent of the traffic on I-94 during the peak hours in the I-94 East-West Corridor enter or exit I-94 within the corridor (between 70th Street and 16th Street) (Skycomp 2012). Therefore, improvements to I-94 would substantially benefit access within and to and from the study area. Improvements to I-94 would also benefit those living in and doing business in the study area. Improvements to safety and reductions in congestion along I-94, part of the project's purpose and need, will make it more convenient for people to access the study

area and easier for local residents to use I-94 to access opportunities both within and outside the I-94 East-West Corridor. Further, the improved level of service and safety on I-94 will benefit buses (Freeway Flyers) using I-94. As discussed above in Comment No. 6, local arterial street traffic volumes may be lower under the Selected Alternative because some trips along arterials may shift to I-94, which may improve bus transit service.

24. SEWRPC's studies repeatedly show racially disparate impact of failing to provide transit. The Final EIS claims that SEWRPC's *Regional Freeway Reconstruction Plan* justifies its position that expanding I-94 E/W to eight lanes would "have no disproportionately high and adverse impacts on minority or low-income populations;" however, the Final EIS waters down the findings *of that same plan* related to public transit.

SEWRPC does recommend additional transit service in the region according to their 2035 regional transportation plan and the recently approved 2050 regional transportation and land use plan. SEWRPC's plans, as well as the Final EIS, note the heavier reliance on transit among low-income and minority residents.

As noted in Section 3.9.6 of the Final EIS, SEWRPC prepared its *Review and Update of the Year 2035 Regional Transportation System Plan*, Appendix B, *Evaluation of the Impacts of the Fiscally Constrained Plan on Minority and Low-Income Populations in Southeastern Wisconsin* in 2014 which is a robust assessment of the region-wide impacts of the fiscally constrained regional transportation plan in the context of its implementation to date and likely future implementation. After publication of the Final EIS, SEWRPC's VISION 2050: *A Regional Land Use and Transportation System Plan for Southeastern Wisconsin* was approved on July 28, 2016. Appendix N of VISION 2050—Equitable Access Analysis of the Federally Recognized Transportation Plan—assesses the plan's impact on low-income and minority populations and reaches the same conclusion.

WisDOT and FHWA rely upon this analysis to assess the effects of regional freeway reconstruction and expansion on low-income and minority residents.

WisDOT and FHWA assess in the Final EIS whether a transit alternative combined with reconstruction of I-94 between 16th and 70th streets could meet the project's purpose and need and determined that it cannot (see Section 2.2.5.6.1 of the Final EIS). This assessment took place regardless of WisDOT's ability to implement a transit alternative, in accordance with FHWA guidance on this topic. However, in the context of implementing a transit alternative, WisDOT's inability to unilaterally implement a transit alternative is relevant. The comment that WisDOT is neglecting the transit expansion components of the regional transportation plan ignores two key issues: 1) state and federal budget allocations for transit and highway funding and 2) legislative direction on WisDOT's role in providing transit, which is limited to providing transit operating funds and funding only those transit capital expenditures authorized by the legislature. In addition, program-level implementation of transit elements need not fall exclusively to this project, which is based on the need to replace deteriorated pavement, improve safety and address congestion in the I-94 East-West corridor. Section 3.9.6 of the Final EIS documents WisDOT's transit investments in the region.

25. WisDOT fails to appropriately consider and adequately evaluate the social, economic, and interrelated indirect and cumulative effects of the project, especially on communities of color. Benefits must accrue only to low-income or minority populations to be considered an off-setting benefit.

The Final EIS comprehensively reviews the direct, indirect, and cumulative effects of the reasonable alternatives on resources in the study area, including communities of color. The environmental justice analysis adequately assesses impacts to low-income and minority residents in the environmental justice study area. Final EIS Section 3.9.2 identifies low-income and minority residents in the study area (3.9.2.1 discusses the extent and location of minority populations in the study area, and 3.9.2.2 discusses the extent and location of low-income populations in the study area. An updated Section 3.9.2.1 is provided in Appendix B of this Record of Decision). Section 3.28 and 3.29 take into account the full indirect and cumulative effects of the project. For more detailed indirect and cumulative effects analysis regarding the I-94 East-West Corridor project, see the *I-94 East-West Corridor Indirect and Cumulative Effects Analysis* located on the CD at the back of the Final EIS.

WisDOT and FHWA's methodology to assess cumulative effects for the I-94 East-West Corridor Study is based on the Council on Environmental Quality's 11-step process identified in the handbook titled *Considering Cumulative Effects under the National Environmental Policy Act* (Council on Environmental Quality 1997), and WisDOT's

Guidance for Conducting a Cumulative Effects Analysis (WisDOT 2007b). The process's 11 steps were organized into the following three main steps: scoping, describing the affected environment, and determining the environmental consequences. Section 3.29.1 describes the cumulative effects scoping process and Section 3.29.2 describes the affected environment and environmental consequences for each resource.

Following FHWA Order 6640.23A, FHWA determines whether a project has disproportionately high or adverse effects on a minority or low-income population and has determined the East-West Freeway Corridor study alternatives do not have a disproportionately high and adverse effect on low-income or minority populations. SEWRPC's finding in its 2014 review and update of the 2035 long range plan confirms this finding at a regional level (*Review and Update of the Year 2035 Regional Transportation System Plan*, Appendix B, *Evaluation of the Impacts of the Fiscally Constrained Plan on Minority and Low-Income Populations in Southeastern Wisconsin*). The 2014 review and update is cited in Section 3.9.6 of the Final EIS, Interstate Investment Effects on Transit. After publication of the Final EIS, SEWRPC's *VISION 2050: A Regional Land Use and Transportation System Plan for Southeastern Wisconsin* was approved on July 28, 2016. Appendix N of VISION 2050—Equitable Access Analysis of the Federally Recognized Transportation Plan—assesses the plan's impact on low-income and minority populations and reaches the same conclusion.

Neither FHWA nor U.S. EPA guidance on environmental justice indicate that benefits of a proposed action must accrue only, or primarily, to persons of color or low-income persons to be considered an off-setting benefit (*Addressing Environmental Justice through Reviews Conducted Pursuant to the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act*, US EPA April 19, 2011 and *Guidance on Environmental Justice and NEPA*, December 2011, and *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, FHWA June 2012). Benefits that accrue to the community as a whole will, by definition, be experienced by environmental justice populations.

26. The Final EIS fails to evaluate social, economic and other issues related to racial segregation in accordance with Title VI of the Civil Rights Act.

WisDOT and FHWA's evaluation of alternatives and other project development activities did not discriminate against any person based on race, color, or national origin. Title VI applies to all activities undertaken by receipts of federal aid, like WisDOT, including project development. FHWA is currently developing a public Title VI technical assistance manual which is expected to be released in calendar year 2017. The Title VI handbook mentioned by one commenter was never finalized and is not official FHWA guidance or policy at this time.

The environmental justice analysis presented in the Final EIS was prepared consistent with FHWA Order 6640.23A. WisDOT conforms to 23 CFR 200.9(a)(1) that no person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the recipient receives Federal assistance from the Department of Transportation, including the Federal Highway Administration. WisDOT collects statistical data (race/ethnicity) of Relocatees through Residential Questionnaires – Individual Needs Inventory forms and collects statistical data (names and addresses) of Public Involvement Meeting participants through Sign-In Sheets.

FHWA approved WisDOT's Title VI annual implementation plan on December 14, 2015. FHWA concluded that WisDOT's Title VI Implementation Plan meets the FHWA guidelines for the contents of an Implementation Plan. The WisDOT Title VI Program reviews 11 federal program areas (Planning, Environment, Design, Right-of-Way, Contract Administration, Transit, Construction, Maintenance, Research, Safety, and Human Resources) and 17 sub-recipients (metropolitan planning organizations and regional planning commissions) annually through online surveys. These surveys are used to identify environmental justice activities, limited English proficiency activities, training needs, and complaints. Results of these reviews are recorded in the WisDOT Title VI/Nondiscrimination Annual Work Plan and Accomplishment Report.

These sub-recipients must submit their Title VI Plan and Assurances annually to the Title VI Program Officer. Each plan includes a policy statement, assurances, implementation procedures, discrimination complaint procedures, and sanctions. Sub-recipient Title VI Plans and Assurances must be signed by the sub-recipient's executive officer and by the WisDOT Title VI Program Officer.

The WisDOT Title VI Program re-established the interdisciplinary Title VI Advisory Committee in February 2015. The Committee was approved by the WisDOT Secretary and has representatives from each region and FHWA. The committee has developed a 2-year work plan that includes education for employees, an online Title VI Training module for all WisDOT employees, a department-wide four-factor analysis, and a department survey. WisDOT Title VI staff also met with the Administrator and Senior Managers of each division from 2012 – 2015 and identified Title VI/Nondiscrimination requirements for each program area.

On December 12, 2012, the FHWA formally notified WisDOT that it was no longer in Title VI/Nondiscrimination deficiency status. FHWA Wisconsin Division Office also reviewed and formally accepted WisDOT's FY 2012 Title VI/Nondiscrimination Work Plan and Accomplishment Report, which contained WisDOT's Corrective Action Plan to resolve deficiencies in accordance with 23 C.F.R. § 200.9(a)(3). Since 2012, FHWA has formally approved WisDOT's Title VI/Nondiscrimination Plan and Assurances in 2014 and 2016 in accordance with 23 C.F.R. § 200.9(b)(11). FHWA has also acknowledged receipt of WisDOT's Title VI/Nondiscrimination Annual Work Plan and Accomplishment Report in 2012, 2013, 2014, and 2015 in accordance with 23 C.F.R. § 200.9 (b)(10). Additionally, FHWA ensures that federally funded WisDOT projects comply with federal law, regulation and guidance.

27. The Final EIS does not effectively evaluate issues as required to meet Title VI and Environmental Justice Requirements.

The purpose of the I-94 East-West Corridor study is to identify the best alternative to address the deteriorated condition of I-94, obsolete roadway and bridge, existing and future traffic demand, and high crash rates. Section 3.9.4 of the Final EIS assesses each impact of the proposed action and the extent to which it would affect environmental justice populations and non-environmental justice populations. The Final EIS assesses low-income populations and minority populations separately and does not assume that low-income people are minority or vice versa. FHWA re-assessed the impact on environmental justice populations after the Final EIS publication and determined that the project would not result in any effects that would be considered disproportionately high and adverse under Executive Order 12898, DOT Order 5610.2(a), and the FHWA Order 6640.23A. As noted in Section 3.9.4, WisDOT and FHWA followed FHWA's 2011 *Guidance on Environmental Justice and NEPA* as well as FHWA Order 6640.23A, *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, which requires WisDOT and FHWA to conduct an environmental justice analysis (FHWA 2012a). WisDOT and FHWA completed an environmental justice analysis for this project to determine whether the proposed project has the potential to incur disproportionately high and adverse effects upon minority populations or low-income populations. WisDOT and FHWA:

- assessed the location and extent of low-income population and minority population in the study area, as well as minority-owned businesses,
- disseminated information and solicited input from minority and low income populations, and
- determined the impacts of this project on the general population and natural resources, and then assessed if the impacts could be disproportionately borne by low-income populations or minority populations.

The Final EIS notes several examples of WisDOT's transit funding but does not imply or express that all of those transit investments would benefit environmental justice populations The process of determining which transit routes would most effectively mitigate traffic congestion during construction will be assessed during development of the Transportation Management Plan (TMP). WisDOT will begin developing the TMP during preliminary design.

WisDOT has committed to financially participate in the planning process of Milwaukee County's BRT study connecting downtown Milwaukee with the Milwaukee Regional Medical Center. In addition, WisDOT has committed to using traffic mitigation funding before and during construction of the I-94 East-West Corridor to invest in local intersection infrastructure. The intent of this investment is to incrementally implement BRT so that a sustainable BRT system is developed and available as a transportation option during I-94 construction.

WisDOT has quantified the number of vehicles expected on adjacent east-west arterials with and without the proposed action. The proposed action will generally decrease the amount of traffic on these arterials, which by its nature will reduce congestion and decrease travel times. This will accrue to transit users as well as drivers. Section 3.9.5 states that "Modernization Alternatives will reduce the number of vehicles that use local roadways to

circumvent congestion on I-94." Moreover, WisDOT's empirical data show that most trips on this segment of I-94 enter or exit the freeway on one of the several interchanges within the study limits.

28. The FEIS fails to adequately evaluate racial, environmental justice and cumulative effects of the project; there is a long history of racial segregation and discrimination in the Milwaukee area that the FEIS should document.

The environmental justice analysis presented in the Final EIS is consistent with FHWA Order 6640.23A. FHWA re-assessed the impact on environmental justice populations after the Final EIS publication and determined that the project would not result in any effects that would be considered disproportionately high and adverse under Executive Order 12898, DOT Order 5610.2(a), and the FHWA Order 6640.23A.

WisDOT and FHWA's methodology to assess cumulative effects for the I-94 East-West Corridor Study is based on the Council on Environmental Quality's 11-step process identified in the handbook titled *Considering Cumulative Effects under the National Environmental Policy Act* (Council on Environmental Quality 1997), and WisDOT's *Guidance for Conducting a Cumulative Effects Analysis* (WisDOT 2007b). The process's 11 steps were organized into the following three main steps: scoping, describing the affected environment, and determining the environmental consequences. Section 3.29.1 describes the cumulative effects scoping process and Section 3.29.2 describes the affected environment and environmental consequences for each resource.

Section 3.29.2.7 of the Final EIS states the outcome of post-World War II land use development: "Low-income and minority residents became concentrated in central city locations as people with economic means moved to suburban locations. Also, as jobs decentralized, it became increasingly difficult for transit-dependent, low-skilled workers to obtain employment in areas of the region not served by public transportation."

The Council on Environmental Quality (CEQ) regulations support WisDOT and FHWA's approach to documenting past actions in the Final EIS's cumulative effects analysis. CEQ regulations state that, "Agencies shall focus on significant environmental issues and alternatives and shall reduce paperwork and the accumulation of extraneous background data. Statements shall be concise, clear, and to the point, and shall be supported by evidence that the agency has made the necessary environmental analyses" (40 CFR 1502.1). In addition, "The CEQ regulations, however, do not require agencies to catalogue or exhaustively list and analyze all individual past actions. Simply because information about past actions may be available or obtained with reasonable effort does not mean that it is relevant and necessary to inform decision making." (CEQ, *GUIDANCE ON THE CONSIDERATION OF PAST ACTIONS IN CUMULATIVE EFFECTS ANALYSIS* June 2005).

Section 3.29 of the Final EIS assesses the cumulative impact of the project.

29. The Final EIS relies on inconsistent and inaccurate racial data, which undercounts minority residents in the study area.

The source data and basis for calculating the minority population percentage is explained in Section 3.9.2.1 of the Final EIS. Footnote 8 on page 3-46 of the Draft EIS and footnote 15 on page 3-63 of the Final EIS explain how WisDOT accounted for the Hispanic population. The footnote states:

> Population by race was taken from data indicating race alone or in combination with other races. These data came from the 2010 U.S. Census Data Table P9 from SF1 entitled *Hispanic or Latino, and Not Hispanic or Latino: Total Population by Race*. As a result of these categories not being mutually exclusive, the population obtained by summing all of the racial categories may exceed the total population for any given area. It should also be noted that "Hispanic or Latino" is an ethnic group and not a race category, and is expressed separately from race in the data. Thus, Hispanic or Latino persons are also White, Black, etc., in addition to being Hispanic or Latino. Total minority population was calculated as the sum of all non-white race groups, plus Hispanics or Latinos indicating their race as "White."

In determining the minority population percentages in the Final EIS, the project team used the U.S. Census "race" category. This does not provide a specific category for Hispanics/Latinos and many Hispanic or Latinos identified themselves as "white" or "some other race." Thus, the "white" category was overstated. To accurately account for the minority population of the various study corridors (1,000-foot, 0.5-mile, 1-mile, etc.) the study team should

have used the "Hispanic or Latino and Race" data provided by the U.S. Census. Using the "Not Hispanic or Latino, White Alone" category allows for a more accurate representation of the population in the project study corridors. Thus, the study team reassessed the minority population percentage for the various study corridors using the "Hispanic or Latino and Race" data. See Corrections section of this Record of Decision. Appendix B of this document presents the results of this analysis and includes updated minority and low-income data.

As the Final EIS notes in Section 3.9.7, the original study area calculations did identify populations, including minority and/or low-income, that would experience both direct and indirect impacts. However, the updated calculations described above will not result in any new effects that would be considered disproportionately high and adverse under Executive Order 12898, DOT Order 5610.2(a), and the FHWA Order 6640.23A as a result of the implementation of the preferred alternative. Most project impacts remain limited in scope and others would be mitigated through the implementation of effective mitigation measures.

30. The Final EIS did not properly assess where persons with disabilities live or meaningfully analyze the effect of the project on the needs and circumstances of persons with disabilities.

WisDOT developed a public involvement program to assess the project's effect on several social groups, including persons with disabilities. The No-build alternative would not directly affect elderly or handicapped residents or any facility that serves or houses the elderly or handicapped. Changing access at the Hawley Road and Mitchell Boulevard Interchanges under the Selected Alternative may change how some elderly and handicap patients access the VA Medical Center; however, because there are multiple access points, it would not prevent their use of the facility. See Section 3.8.2.6 of the Final EIS for more information.

Percentages of residents with disabilities are only available at the census block level. This is a broad area, which does not provide additional insight into whether persons with disabilities are adjacent to I-94.

31. The Final EIS fails to adequately address the cumulative impacts of the I-94 project and other highway expansion projects on the quantity and quality of the stormwater runoff within the Menomonee River watershed. The 1-94 Project should include runoff controls that address the rate, volume and quality of runoff from the highway for the full range of storms.

Similar comments were provided on the Draft EIS, and are addressed in Section 6.2 of the Final EIS, Comments No. 32 and No. 33.

Section 3.29.2.2 of the Final EIS discusses the cumulative impact of the project and other past, present, and reasonably foreseeable actions (noted in Section 3.29.1.4 of the Final EIS) on surface water and water quality. This includes the Marquette Interchange and Zoo Interchange projects. WisDOT and FHWA believe that implementing best management practices for stormwater control under the Selected Alternative can mitigate the direct effects of existing and increased stormwater runoff, which reduces the cumulative effects of past projects and other reasonably foreseeable future roadway projects. These measures would include stormwater retention, with a focus on stormwater quality, but have and would have a secondary benefit of managing stormwater volume.

As discussed in Section 3.11, Surface Water and Fishery Impacts, WisDOT and FHWA are evaluating several best management practices to minimize the amount of runoff that enters water bodies, reduces flow velocity, and improves the water quality of the runoff. While runoff volumes would increase under the Selected Alternative, the water quality analysis notes that the use of best management practices would reduce the level of pollutants in stormwater runoff compared with existing conditions and provide the opportunity to bring I-94 and the local roadway system in compliance with Wisconsin's stormwater management regulations. Standards have changed and all runoff will be taken into account, not just the incremental increase as a result of this project.

WisDOT will continue to work with communities and MMSD during the project's design phase to calculate stormwater runoff and to address stormwater management, both from a water quality and water quantity standpoint. WisDOT is subject to the stormwater management provisions in Wisconsin Administrative Code TRANS 401. Per TRANS 401, WisDOT uses peak flow rate to assess the extent of required stormwater management. The combination of SEWRPC's regional land use plan and MMSD management would result in limited likelihood of a cumulative effect to the corridor. WisDOT would monitor performance of its control

measures through its WisDOT-WDNR cooperative agreement ("Memorandum of Understanding on Erosion Control and Stormwater Management"). This memorandum of understanding requires WisDOT to implement a stormwater management program for its projects that is consistent with Section 402(p) of the Clean Water Act, Chapter 283 of the State Statutes, and NR 216 (WDNR 2014).

WisDOT's conceptual stormwater plan will control peak flows to reduce the likelihood of increasing the Menomonee River flood elevations and will also improve the water quality of the stormwater run-off before it reaches the Menomonee River. Section 3.11.3 of the Final EIS presents a long list of potential BMP options that WisDOT and FHWA will investigate for inclusion into the project during future design phases. The use of retention/detention basins to manage stormwater from the proposed improvement is being evaluated along all sections of the project as the most practical and efficient practice. Potential temporary effects from construction would be avoided and minimized by using WisDOT's Standards and complying with TRANS 401. Unique strategies that will be investigated include use of the Marquette Interchange's first flush element and the use of permeable pavements in selected locations (for example, Miller Park parking lots), in addition to retention/detention ponds.

32. The Final EIS does not address the cumulative impact of construction, highway operations, and induced vehicle travel on air quality from the I-94 project and the other projects that are adding lanes to the region's expressway system. This is inconsistent with state and national policies and international agreements addressing climate change.

Greenhouse gasses (GHGs) are different from other air pollutants evaluated in environmental reviews because their impacts are not localized or regional, but rather the affected environment for CO_2 and other GHG emissions is the entire planet. In addition, from a quantitative perspective, global climate change is the cumulative result of numerous and varied emissions sources (in terms of both absolute numbers and types), each of which makes a relatively small addition to global atmospheric GHG concentrations. In contrast to broad-scale actions such as actions involving an entire industry sector or very large geographic areas, it is difficult to isolate and understand the GHG emissions impacts for a particular transportation project.

Comment No. 28 of Section 6.4 of the Final EIS addresses this comment. Quantifying GHG emissions are best evaluated at a regional, or larger, scale where significant policies affecting GHG are most effectively quantified. Therefore, project-level analysis of GHG emissions is not required, although the Final EIS does acknowledge the potential for GHG emissions. And as the indirect effects analysis points out, induced travel resulting from the Selected Alternative is not expected to substantially increase in a region with a mature transportation infrastructure that already provides a high degree of accessibility, and limited travel time savings in a corridor with established land use patterns.

Section 3.29.2.8, Cumulative Effects—Air Quality, assesses the cumulative effects of GHG emissions. The section notes GHG emissions are also a concern in the I-94 East-West Corridor air quality study area. Currently, the primary way to reduce emissions of GHGs from transportation is to reduce the amount of fuel consumed. This can be accomplished by reducing congestion (more efficient driving conditions), reducing driving, and more fuel-efficient vehicles. Induced travel resulting from the Modernization Alternatives is not expected to substantially increase in a region with a mature transportation infrastructure that already provides a high degree of accessibility and limited travel time savings in a corridor with established land use patterns.

Local governments can help manage and reduce GHGs by utilizing appropriate land use and zoning policies that reduce travel demand within individual communities and southeast Wisconsin. A study published by the Urban Land Institute indicates that the continuing growth of VMT may offset emissions reduction gained through technological improvements in vehicles and fuels (Ewing, et al. 2007). The study points to the importance of reducing vehicle miles of travel by managing growth and land use patterns.

The air quality analysis in Section 3.20 of the Final EIS states that MSAT pollutants will decrease by 70 to 87 percent by 2040. The air quality section also states that the magnitude and the duration of these potential increases compared to the No-build alternative cannot be quantified reliably due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. Council on Environmental Quality regulations

have a provision for incomplete and unavailable information (40 CFR 1502.22). This is discussed in more detail in Appendix C of the Final EIS.

Section 93.123(c)(5) of EPA's Transportation Conformity regulation states that CO, PM10, and PM2.5 hot-spot analyses are not required to consider construction-related activities which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established "Guideline" methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site. Since construction is not planned to be located at one spot for more than 5 years construction related air quality analysis was not necessary.

According to SEWRPC's *VISION 2050*, regardless of whether or not the Plan is implemented, transportation air pollutant emissions are projected to significantly decline by 2050 due to Federal fuel and vehicle fuel economy standards and improved vehicle emissions controls, even with forecast increases in regional travel and traffic. The project was specifically included in the current SEWRPC transportation plan (*VISION 2050*), which was determined by FHWA and FTA to conform on July 28, 2016.

Final EIS Sections 3.20 (Air Quality), 3.28 (Indirect Effects), and 3.29 (Cumulative Effects) each touch on emissions and health standard issues, focusing on those issues that are more reliably modeled and quantified at the project or regional level.

33. The Final EIS does not indicate that any consideration whatsoever was given to the impact on highway travel demand of any additional efforts to reduce carbon dioxide emissions, such as a carbon tax or other impositions on fossil fuel use, which will increase the cost of automobile travel.

The focus of the I-94 East-West Corridor study is to determine the appropriate course of action for the future of I-94 between 70th Street and 16th Street. Studies on issues such as a carbon tax or other impositions on fossil fuel use are beyond the scope of this study.

34. The FEIS fails to address the many other health problems caused or contributed to by vehicular air emissions. These include heart disease, premature birth, low birthweight, and premature death, among others.

As noted in Section 3.20.2.4, based on the air quality analyses completed for the proposed improvements, this project will not contribute to any violation of the NAAQS. MSAT emissions will decrease with any of the Modernization Alternatives that were evaluated in the Final EIS, and neither CO nor $PM_{2.5}$ levels will exceed the air quality standards.

A detailed Health Impact Assessment was not completed for this study as noted in Section 6.4, comment 30. WisDOT and FHWA met with a number of stakeholders, including UWM Children's Environmental Health Center and others who were specifically concerned with this issue. Health Impact Assessments are not required by NEPA or the Clean Air Act. Although Health Impact Assessments are not required, the Draft and Final EIS assess air quality, water quality, noise, and socioeconomic impacts. While that information was not prepared under the title of a "Health Impact Assessment," it was included in the Draft and Final EIS for review and comment. All of these components are part of a Health Impact Assessment and can help inform transportation planning and decision-making.

The Final EIS notes that air emissions from the I-94 East-West corridor could have a cumulative effect on air quality, which could, along with other contributing environmental factors, trigger asthma episodes. However, since the I-94 East-West Corridor would meet air quality standards, this effect is expected to be minimal with the build alternative due to reduced traffic congestion.

35. As a result of the continued push to expand the freeway, some neighbors who live in Story Hill are afraid that their property values will decrease, and are preparing to sell their homes now to avoid the real future possibility of selling their homes at a loss due to consequences from an expanded freeway.

As stated in Section 3.8.2.3 of the Final EIS, under the preferred alternative, the location of I-94 would be similar to where it is today. Determining a net change to property values due to the wider right-of-way is difficult to

predict given the variables. As part of any large transportation project, WisDOT evaluates the impacts that may lead to diminishing property values and mitigates for specific impacts, such as noise and visual impacts, to minimize the impacts on property values. The mitigation measures are developed with community input during the final design stage.

Conclusion

Based on the analysis and evaluation documented in the EIS, and after consideration of all social, economic, and environmental factors, including comments received on the EIS, it is FHWA's decision to adopt the Selected Alternative described in this ROD as the proposed action for the project.

Michael Davies, P.E.
Division Administrator
Federal Highway Administration, Wisconsin Division

9/9/14
Date

Appendix A
Agency Comments on Final EIS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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MAR 10 2016

REPLY TO THE ATTENTION OF:

E-19J

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Federal Highway Administration
525 Junction Road, Suite 8000
Madison, Wisconsin 53717

Re: Final Environmental Impact Statement for the I-94 East-West Corridor from 70th Street to 16th Street, Milwaukee County, Wisconsin - CEQ#20160028

Dear Mr. Davies:

The U.S. Environmental Protection Agency has reviewed the Final Environmental Impact Statement (EIS) for the I-94 East-West Corridor from 70th Street to 16th Street in Milwaukee County, Wisconsin as provided by the Federal Highway Administration (FHWA) and the Wisconsin Department of Transportation (WisDOT). Our comments 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.

FHWA and WisDOT identified the At-Grade alternative with the half-interchange at Hawley Road (West segment/70th Street to Stadium Interchange) and On-Alignment alternative (East Segment/Stadium Interchange to 16th Street) as the preferred alternative; EPA provided concurrence on the preferred alternative on March 17, 2016.

EPA provided comments on the Draft EIS on January 16, 2015, assigning a rating of Lack of Objections. However, we identified several issues that needed to be clarified in the Final EIS and mitigation measures that should committed to in the Record of Decision (ROD). Based on our review of the Final EIS, including the response to comments found in Appendix E, we note the following:

- **Environmental Justice**: EPA finds the additional information provided in the Final EIS and response to comments satisfactory. We have no further comment or recommendation on this issue.
- **Visual and Aesthetics:** EPA previously commented on WisDOT and FHWA's commitment to community-sensitive design (CSD) to minimize impacts and identify mitigation measures. Per the response to comments, we acknowledge that funding no longer exists for CSD efforts, based on the 2015-2017 State of Wisconsin budget. However, we recommend WisDOT and FHWA consider pursuing auxiliary sources of funding for CSD. We also recommend WisDOT and FHWA work with community 1

Response to USEPA

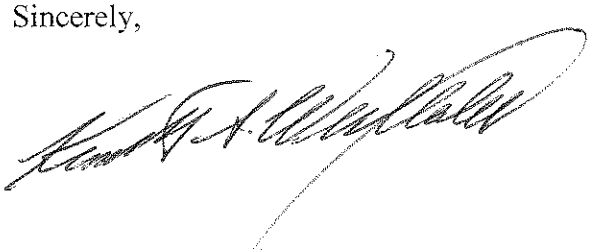
1. At this time, WisDOT is not pursuing other funding sources; however there will be continued consultation regarding visual and aesthetic impacts. Should state funding for CSD efforts change prior to construction WisDOT will consider implementing CSD measures.

groups to identify potential sources of funding for similar design features for the project area. 1

- **Utility Impacts:** EPA notes that because the preferred alternative does not require movement of the utility lines, there will be no impacts related to utility line relocation. We have no further comment or recommendation on this issue. 2
- **Surface Water:** EPA previously commented on potential opportunities for green stormwater management, such as in the parking facilities at Miller Park. We acknowledge and commend that this has been conceptually discussed with the Southeast Wisconsin Professional Baseball District, with final design to be completed after the ROD is finalized. EPA strongly encourages commitment to green stormwater management efforts be included in the ROD, even if the discussion is still conceptual at the point. 3
- **Diesel Emission:** EPA notes the reference to our diesel emission reduction measures in the Final EIS in section 3.27.4.3; we strongly encourage WisDOT and FHWA include these measures in the ROD and eventual contract specifications, as appropriate. 4

Thank you in advance for your consideration of our comments. Please send us a copy of the Record of Decision once it becomes available. If you have any questions, please do not hesitate to contact me or Elizabeth Poole of my staff at 312-353-2087 or poole.elizabeth@epa.gov.

Sincerely,



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

cc (via email): Bethaney Bacher-Gresock, Federal Highway Administration
Rebecca Graser, U.S. Army Corps of Engineers
Jill Utrup, U.S. Fish and Wildlife Service
Bill Jankowski, Department of Veterans Affairs
Michele Curran, National Park Service
Dobra Payant, Wisconsin Department of Transportation
Michael Thompson, Wisconsin Department of Natural Resources
Jim Draeger, Wisconsin Historical Society

Response to USEPA (continued)

2. After this comment was submitted there was follow up to clarify that there will be utility relocations as part of the project; however, US EPA does not change their stance on this issue as no relocations would occur in the cemetery segment. Several overhead electrical transmission lines and the electrical substations just east of the Stadium Interchange (Park Hill) and at Greves street will be moved. Transmission lines and towers adjacent to the I-94 corridor will remain but may have to be shifted within the corridor. Several smaller electrical lines, phone lines, cable lines, storm sewers, and sanitary sewers would likely need to be relocated. See Section 3.4.2 of the Final EIS for more information.

3. WisDOT will continue to implement stormwater best management practices where possible. WisDOT continues to coordinate with WDNR, local municipalities, and MMSD to refine and finalize stormwater BMPs. This includes coordination with the Southeast Wisconsin Professional Baseball District on using permeable pavement in the Miller Park parking lot. Further stormwater management design will occur during final design stages.

4. WisDOT will continue to coordinate with WDNR to consider additional appropriate measures for diesel emission reduction in the next design phases of the project.

City of Milwaukee

Department of Public Works
Infrastructure Services Division

Ghassan Korban
Commissioner of Public Works

Preston Cole
Director of Operations

Jeffrey S. Polenske
City Engineer

April 15, 2016

Mr. Jason Lynch
Wisconsin Department of Transportation
Southeastern Wisconsin District
141 N.W. Barstow Street
P.O. Box 798
Waukesha, WI 53187-0798

Subject: Project I.D. 2060-27-00
I-94 East-West Freeway Corridor Study
Final EIS Comments

Dear Mr. Lynch:

The City of Milwaukee has reviewed the final EIS documents for the I-94 East-West Corridor (70th Street to 16th Street). Although the City is on record as being opposed to capacity expansion along this segment of I-94, we are pleased to see that the preferred alternative for this project includes the at-grade alternative in the cemetery area west of Miller Park and the on-alignment alternative on the east segment of this project. Of the alternatives that had been advanced through the Draft EIS phase of the project, the preferred alternative comes closest to the City's goal of minimizing property takings and minimizing the intrusion on adjacent neighborhoods.

With that said, one of the unfortunate consequences of the at-grade alternative is inadequate right-of-way to accommodate a westbound off-ramp and an eastbound on-ramp at the Hawley Road interchange. The elimination of these ramps in the east leg of the Hawley Road interchange will require some motorists to find alternative routes to compete their trips. In an effort to mitigate the elimination of these ramps, the preferred alternative includes traffic mitigation recommendations south of I-94 in the City of West Allis to improve access to the remaining ramps to I-94. While we believe that the mitigation measures in West Allis are reasonable efforts to mitigate the effects of the half interchange access reduction, we feel that mitigation options should also be considered north of I-94. Motorists currently utilizing the Hawley Road Interchange east leg ramps will likely shift their routes to the Wisconsin Avenue ramps at WI 175 north of the stadium interchange and to the 68th/70th Street ramps at I-94. We would like to verify that any potential traffic impacts resulting from these travel shifts have been fully considered and addressed with appropriate mitigation measures as a part of the Final EIS. 1

The Final EIS also introduced a new frontage road immediately west of the new Stadium Interchange and north of the freeway. From what has been described in the Final EIS, it looks like the new north frontage road will functionally replace the existing westbound off-ramp to General Mitchell Boulevard that is eliminated in the preferred alternative for E-W I-94. We would like to verify that this new frontage road will remain within the footprint of the existing Stadium Interchange and will not have an adverse impact on the adjacent Story Hill neighborhood. 2

841 N. Broadway, Room 701, Milwaukee, WI 53202
Phone (414) 286-2400 • Fax (414) 286-5994 • TDD (414) 286-2025 • www.milwaukee.gov/mpw

MILWAUKEE

Response to City of Milwaukee

1. WisDOT studied the full potential traffic impacts resulting from the half interchange at Hawley Road, including traffic shifting to different ramps and local streets (see *I-94 East-West Corridor Study Half Interchange at Hawley Road* located on the CD at the back of the Final EIS). The studies found that having partial access at Hawley Road would slightly increase traffic at the 68th /70th Street interchange and the Stadium interchange. The only movement at the 68th/70th Street interchange that would significantly change between having full or partial freeway access at Hawley Road is the through movement on O'Connor Street. The northbound exit ramp from WIS 175 (formerly US 41) at Wisconsin Avenue is not expected to see an increase in traffic while the southbound exit from WIS 175 is expected to increase from 4,000 to 4,750 vehicles per day under the half interchange at Hawley compared to a full interchange. Around the WIS 175 interchange, Wisconsin Avenue currently carries over 15,500 vehicles per day.

Some traffic will divert to local streets both to the north and south of I-94. Bluemound Road is located roughly 0.4 miles north of the freeway. The ease of access and capacity that Bluemound Road and Wisconsin Avenue (0.6 miles north) provide do not warrant any further mitigation measures to the north. In contrast, the closest east-west arterial south of I-94 is National Avenue or Greenfield Avenue located approximately 1 mile away. Providing a closer east-west connection south of the freeway, through the Washington Street Extension and local intersection improvements, would help mitigate the shifting traffic due to the half interchange.

2. The new frontage road was included in the preferred alternative to optimize access and traffic operations with the new Stadium Interchange and help mitigate the loss of the freeway service ramps at General Mitchell Boulevard. The frontage road is located within the highway right-of-way and will not impact the pedestrian path at the base of the Story Parkway bluff or impact the bluff itself. The new connection will be below the top of the bluff and its elevation will be comparable to how the freeway goes over Yount Drive today. The mainline freeway and Stadium Interchange system ramps will be located farther from the Story Hill neighborhood than they are today. The frontage road begins at 46th St. and ends at Gen. Mitchell Blvd. Existing entrance points into the Story Hill neighborhood from Yount Drive and Mitchell Blvd will not be affected.

The frontage road was developed and designed in response to comments from Story Hill residents to provide access to the neighborhood and Bluemound Road businesses. It is also designed to be responsive to traffic considerations at Miller Park while avoiding impacts to the bluff. The frontage road design will be completed through an iterative process, adjusted through preliminary design, final design and construction. WisDOT met with Story Hill residents on May 9, 2016 to discuss the frontage road.

Mr. Jason Lynch
Wisconsin Department of Transportation
April 15, 2016

We thank you for the opportunity to provide input on this project throughout the study process and appreciate your efforts to respond to our questions and concerns. While we may not completely agree on the need for additional freeway capacity and the need for a broader corridor approach that includes transit improvement options as a part of the preferred alternative, we do look forward to continued involvement in the project development process in hopes that resulting impacts from this project can be minimized and mitigation measures can be identified, including transit improvements, that will not only benefit the project during construction but also provide long term benefits to the City of Milwaukee residents and businesses. If you should have any questions concerning this matter, please do not hesitate to contact us. 3

Sincerely,

Jeffrey S. Polenske, P.E.
City Engineer

Ghassan Korban, P.E.
Commissioner of Public Works

RMB:clm

Response to City of Milwaukee (continued)

3. Your comments have been noted. Coordination with the City of Milwaukee will continue throughout the design process and updates will be provided as they become available.

MMSD
PARTNERS FOR A CLEANER ENVIRONMENT

Kevin L. Shafer, P.E.
Executive Director

March 25, 2016

Mr. Jason Lynch, P.E.
Department of Transportation
Post Office Box 798
Waukesha, Wisconsin 53187-0798

Subject: I-94 between 70th Street and 16th Street

Dear Mr. Lynch:

The Milwaukee Metropolitan Sewerage District (District) has the following comments regarding the Final Environmental Impact Statement (EIS) for the reconstruction of I-94 between 70th Street to 16th Street (I-94 Project). I appreciate the consideration by the Department of Transportation (DOT) of the District's comments regarding the Draft EIS and the commitment in the final EIS to collaborate with the District and other local stakeholders to mitigate the adverse consequences of the I-94 Project. The District will continue to support the efforts of DOT to implement measures to control runoff.

The I-94 Project will increase impervious surface by 23% in the west segment and 67% in the east segment (Final EIS, Table 3-24). The total new area of impervious surface may be as much as 56 acres (Final EIS, Table 3-44). With every storm, local surface water will receive more volume and more pollution, unless the I-94 Project includes runoff controls that are effective for the complete range of storms.

While the Final EIS commits to limiting runoff release rates, controlling the volume released also is important. In addition, controls need to address the complete range of storms. Without controls on both rate and volume for the complete range of storms, the I-94 Project will decrease stream bank stability, increase erosion, exacerbate dangerous conditions, and increase sediment loads, as I indicated in my comments dated January 13, 2015, regarding the Draft EIS for the I-94 Project. 1

The size and density of the community around the I-94 Project make it unique. As you know, the District and its tributary communities have committed much money and effort to address local flooding and water quality issues. These efforts include local runoff management requirements, the regional runoff management requirements of MMSD Rules, Chapter 13, and the development of Total Maximum Daily Loads for phosphorus, sediment, and bacteria for the Menomonee River. While I remain concerned that DOT remains unwilling to have the I-94 Project support local runoff management standards, I hope that the continuing collaboration between the District and DOT will produce a final project that protects our local surface water. 2

Specifically, the Final EIS stated that the I-94 Project may include porous pavement in replacement parking areas at Miller Park and may separate stormwater from combined sewers in the combined sewer area. The Marquette Interchange Project successfully separated stormwater from combined sewers. For the I-94 Project, the District supports a similar approach in the combined sewer area of the I-94 Project.

The Final EIS also stated that basins for detention or retention would be considered to improve water quality. These project elements are commendable, and the DOT needs to go further to address the rate and volume of runoff. Additional information regarding all of these elements is necessary for the District's analysis of the I-94 Project. Please provide this information to the District as soon as it is available. 3

Response to MMSD

1. Stormwater best management practices continue to be refined during the project design phases. WisDOT will continue to work with communities and MMSD during the project's final design phase to calculate stormwater runoff and to address stormwater management, both from a water quality and water quantity standpoint. Per TRANS 401, WisDOT uses peak flow rate to assess the extent of stormwater management. WisDOT's conceptual stormwater plan will control peak flows to reduce the likelihood of increasing the Menomonee River flood elevations and will also improve the water quality of the stormwater run-off before it reaches the Menomonee River.

2. WisDOT will continue to work with MMSD and local communities to address stormwater management. Although TMDL's offer a new challenge, a similar approach to the Marquette Interchange Project may be implemented for the I-94 East-West project. Further commitments are still being discussed and will continue to be refined during the next project design phases, such as having areas of permeable pavement in the Miller Park parking lot.

3. Your comments have been noted. WisDOT will comply with TRANS 401. Coordination with MMSD will continue throughout the design process and updates will be provided as they become available.

If you have questions, please contact Debra Jensen of my staff at 414-225-2143 or djensen@mmsd.com. Thank you for considering these comments.

Sincerely yours,

Kevin L. Shafer, P.E.
Executive Director

From: Joseph Burtch [mailto:jburtch@westalliswi.gov]
Sent: Thursday, April 07, 2016 12:55 PM
To: Lynch, Jason - DOT <Jason.Lynch@dot.wi.gov>
Subject: Storm water Impact From I-94 East-West Corridor

Jason,

I have a concern regarding water quality and quantity in the receiving waters of the State, due to the major increase in impervious area from the proposed project. In this region of the State we have storm water regulation that goes beyond the requirements of the State of Wisconsin for developments increasing the impervious area and/or disturb over two acres. This rule not only helps reduce the risk of increased flooding, but it also helps improve the overall water quality.

I understand that the D.O.T. is not required to follow local storm water regulation, but I believe the municipalities in this area will suffer if these regulations are not followed. New storm water regulations are coming that will force MS4s to reduce pollutants to compliant levels of Total Maximum Daily Limits. (TMDL) If the storm water run-off from this project is not handled properly, it will make these limits increasingly hard to meet. That could cost surrounding municipalities a great deal of extra money and effort. 1

Joseph M. Burtch, P.E.
Assistant City Engineer
City of West Allis, WI
414-302-8379

Response to City of West Allis

1. Stormwater best management practices continue to be refined during the project design phases. WisDOT will continue to work with the City of West Allis and MMSD during the project's final design phase to calculate stormwater runoff and to address stormwater management, both from a water quality and water quantity standpoint. Per TRANS 401, WisDOT uses peak flow rate to assess the extent of stormwater management. Although TMDL's offer a new challenge, WisDOT will work with the City of West Allis on these issues as the proposed Washington Street extension, the portion of the project within the City of West Allis, moves forward. Refinements to the design of the Washington Street extension since the FEIS will avoid impacts to the existing stormwater basin, utilize more of existing Washington Street, and substantially reduce the additional area of impervious surface from the Washington Street extension. WisDOT's conceptual stormwater plan will control peak flows to reduce the likelihood of increasing the Menomonee River flood elevations and will also improve the water quality of the stormwater run-off before it reaches the Menomonee River.

Appendix B
Demographic Information Update

MEMORANDUM

Date: August 25, 2016

To: Bethaney Bacher-Gresock/FHWA
Dobra Payant/WisDOT

From: Charlie Webb/CH2M
Ben Goldsworthy/CH2M
Kelly Nickodem/CH2M

Subject: **Updated Demographic Data for I-94 East-West Corridor**

INTRODUCTION

Based on comments received from the public on the I-94 East-West Corridor Final Environmental Impact Statement (EIS), the project team reviewed and updated the demographic and income data presented in the document. Sections 3.8.1.1 and 3.9.2.1 of the Final EIS provided information regarding the number and percentages of minority population and Sections 3.8.1.3 and 3.9.2.2 provided information regarding low-income populations in the I-94 East-West Corridor. In the Draft and Final EIS for the I-94 East-West Corridor, WisDOT uses 2010 U.S. Census data for race and ethnicity categories and 2007-2011 American Community Survey (ACS) 5-year estimates for income data. In October 2015, the study team compared the data presented in the Final EIS to the most recent data at the time (2009-2013 ACS 5-year estimates) to evaluate if the 2010 Census data was still accurate (see *Demographic Data Sources: Comparison of Census Data* on the CD at the back of the Final EIS). The analysis indicated that the data presented in the Final EIS did not differ greatly from the updated data. The information presented in this memo reviews and updates the methodology for calculating minority population as well as the October 2015 memo using the most recent data available.

MINORITY POPULATION IN THE I-94 EAST-WEST CORRIDOR USING 2010 DATA

In determining the minority population percentages in the Final EIS, the project team used the U.S. Census "race" category. This does not provide a specific category for Hispanics/Latinos and many Hispanic or Latinos identified themselves as "white" or "some other race." Thus, the "white" category was overstated. To accurately account for the minority population of the various study corridors (1,000-foot, 0.5-mile, 1-mile, etc.) the study team should have used the "Hispanic or Latino and Race" data provided by the U.S. Census. Using the "Not Hispanic or Latino, White Alone" category allows for a more accurate representation of the population in the project study corridors. Thus, the study team reassessed the minority population percentage for the various study corridors using the "Hispanic or Latino and Race" data. This data comes from the 2010 Census Summary File 1: Table P5, Hispanic or Latino Origin by Race.

While reviewing demographic data, it was determined that the buffers used for the 1-mile, 0.5-mile, and 1,000-foot corridors for minority population analysis used 25th Street as the eastern terminus and not 16th Street as intended. The eastern terminus of the project corridor was extended from 25th to 16th Street in June 2013. The updated calculations using "Hispanic or Latino and Race" data also includes the appropriate, expanded buffers, using 16th Street as the eastern terminus. Table 1 shows how the minority population percentages in 2010 changed for the various municipalities and corridors using the updated methodology.

TABLE 1
I-94 East-West Corridor Minority Population Percentages

Location	2010 Minority Population Percentage	
	Using Race data, as shown in the Final EIS	Using Hispanic or Latino and Race and other minority data
City of Milwaukee	55.2	63.0
City of West Allis	13.3	18.0

Study Area	47.4	58.7
1-Mile Corridor	42.5	40.8
.5 Mile Corridor	38.5	40.1
1,000 Foot Corridor	36.5	46.3

When using the "Hispanic or Latino and Race" data and the appropriate study area terminus, the minority population percentage generally increases. The minority population percentage increases by 11.3 percent for the study area and 9.8 percent for the 1,000-foot corridor. This leads to a conclusion that there is a sizable percentage of Hispanics living in the 1,000-foot corridor and the study area. The minority population percentage for the one-mile corridor decreased by 1.7 percent using the updated methodology. The City of West Allis had a minority population percentage of 18 percent in 2010 (4.7 percent greater than reported in the EIS) and the City of Milwaukee had a minority population percentage of 63 percent in 2010 (7.8 percent greater than reported in the EIS).

In order to understand how the two variables (changing the project terminus and the methodology) individually affect the total and minority population in the corridor, the study team calculated the minority population using 2010 Census Data with the 16th Street terminus and the "Race" data as presented in the Final EIS. The results are presented in Table 2. Going from the first column (25th Street terminus using "Race" data) to the second column (16th Street terminus using "Race" data) shows the change in population due to shifting the eastern terminus only. The total population and total minority population increased, however the percent minority generally decreased.

Comparing the second column to the third column (16th Street terminus using "Hispanic or Latino and Race" data) indicates the change in methodology to calculate minority population, as described above. The total population remains the same, however the minority population increases as it accounts for the entire Hispanic or Latino population within the corridors. There was a greater increase in total minority population when extending the termini to 16th Street than when the methodology changed.

Table 2
Comparing 2010 Census Data by termini and methodology

	25th Street Terminus Using "Race" data, as shown in the Final EIS			16th Street Terminus Using "Race" data (same methodology as Final EIS)			16th Street Terminus Using "Hispanic or Latino and Race data		
Location	Total Population	Minority Population	Percent Minority	Total Population	Minority Population	Percent Minority	Total Population	Minority Population	Percent Minority
Study Area[1]	121,173	57,451	47.4	121,173	57,451	47.4	121,173	71,151	58.7
1-mile	20,670	8,778	42.5	30,045	10,835	36.1	30,045	12,248	40.8
.5 mile	8,910	3,432	38.5	13,102	4,573	34.9	13,102	5,255	40.1
1000 Foot	3,565	1,303	36.5	4,475	1,776	39.7	4,475	2,070	46.3

[1]The Study Area boundary always went to 16th Street

2014 Minority Population Percentage Data

The demographic data used in the Draft and Final EISs was from the 2010 U.S. Census. As the Record of Decision for the I-94 East-West Corridor study was prepared in 2016, the study team reviewed the most recent demographic information provided by the U.S. Census Bureau. The most recent data available for race and ethnicity is the 2010-2014 American Community Survey (ACS) 5-year estimates.

For the 1-mile corridor, 0.5-mile corridor, and 1,000-foot corridor, a direct comparison of minority population percentages between 2010 U.S Census data and 2010-2014 ACS 5-year Estimate data is not possible because the ACS is available only in census block groups, and those block groups extend well beyond the 1,000 foot, 0.5 mile and 1-mile corridors. The 2010 Census data is available at the block level, which does conform to the 1,000 foot, 0.5 mile and 1-mile corridors. Therefore, the study team uses the

2010 Census data for the 1,000-foot, 0.5-mile, and 1-mile corridors while using the 2014 data for the study area and cities of Milwaukee and West Allis. See Table 3 for a comparison of the minority population percentages as reported in the Final EIS and the 2010/2014 minority population percentages using the "Hispanic or Latino and Race" data and 16th Street as the eastern terminus. Table 3 was used for further analysis because it represents the most recent data applicable to the various study corridors. Based on the information presented in this memo, updating the data to the 2010-2014 ACS had less influence over the change in minority population compared to changing the project limits or changing the methodology for calculating minority population.

TABLE 3

I-94 East-West Corridor Minority Population Percentages 2010/2014

Location	2010/2014 Minority Population Percentage	
	Using Race data, as shown in the Final EIS	Using Hispanic or Latino and Race data, 2014 ACS, and 16th Street east limit
City of Milwaukee	55.2	63.4 (2014 ACS)
City of West Allis	13.3	19.9 (2014 ACS)
Study Area	47.4	60.2 (2014 ACS)
1-Mile Corridor	42.5	40.8 (2010 census)
.5 Mile Corridor	38.5	40.1 (2010 census)
1,000 Foot Corridor	36.5	46.3 (2010 census)

The following figures compare census blocks versus block groups for the 1-mile, 0.5-mile, and 1,000-foot corridors.

FIGURE 1

Census Blocks versus Block Groups for 1-mile Corridor

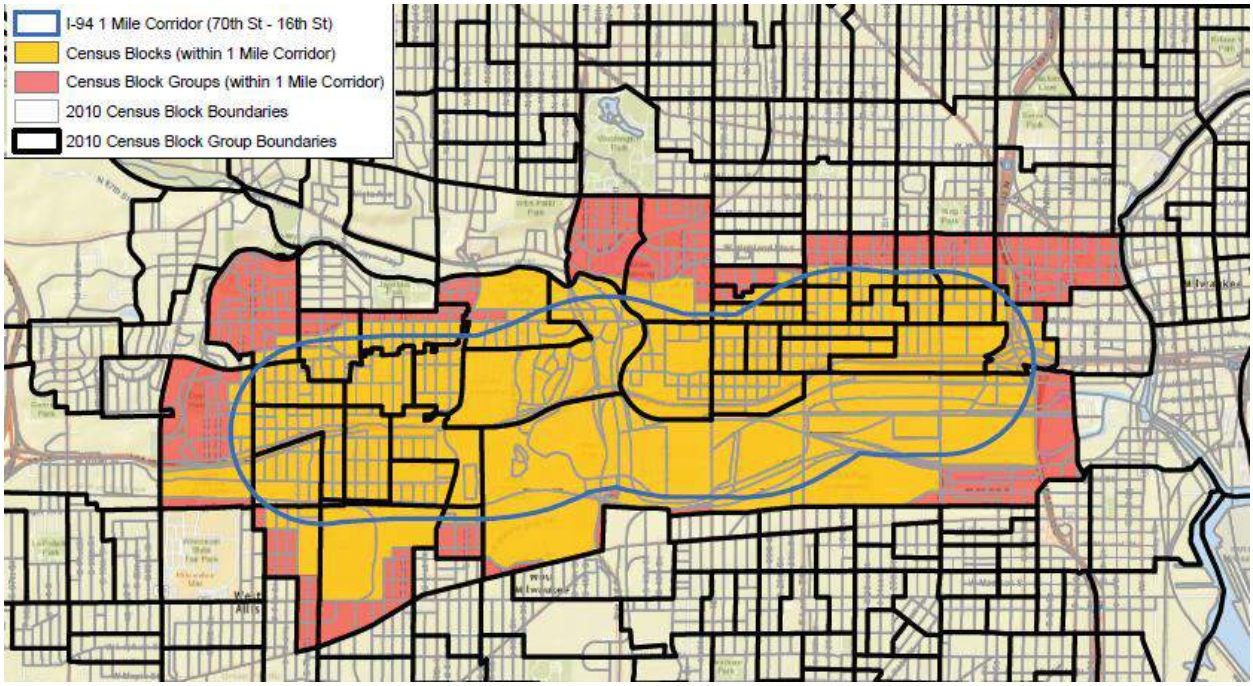


FIGURE 2

Census Blocks versus Block Groups for 0.5-mile Corridor

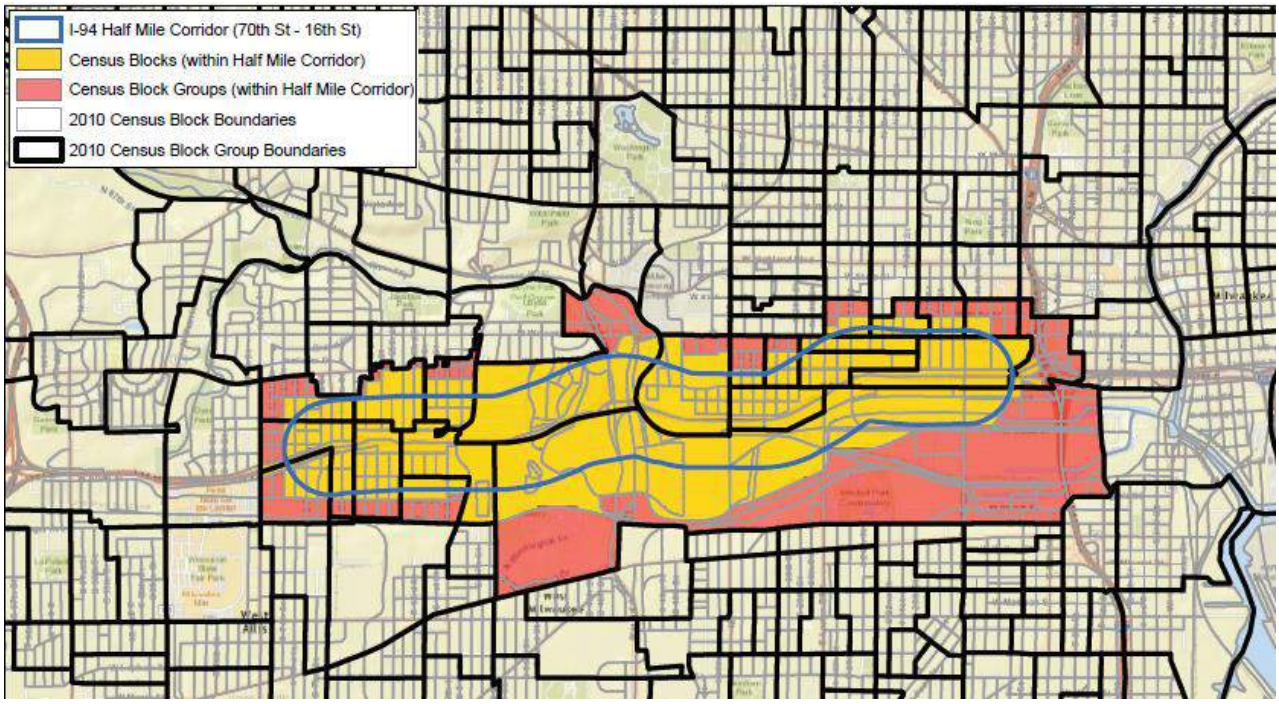
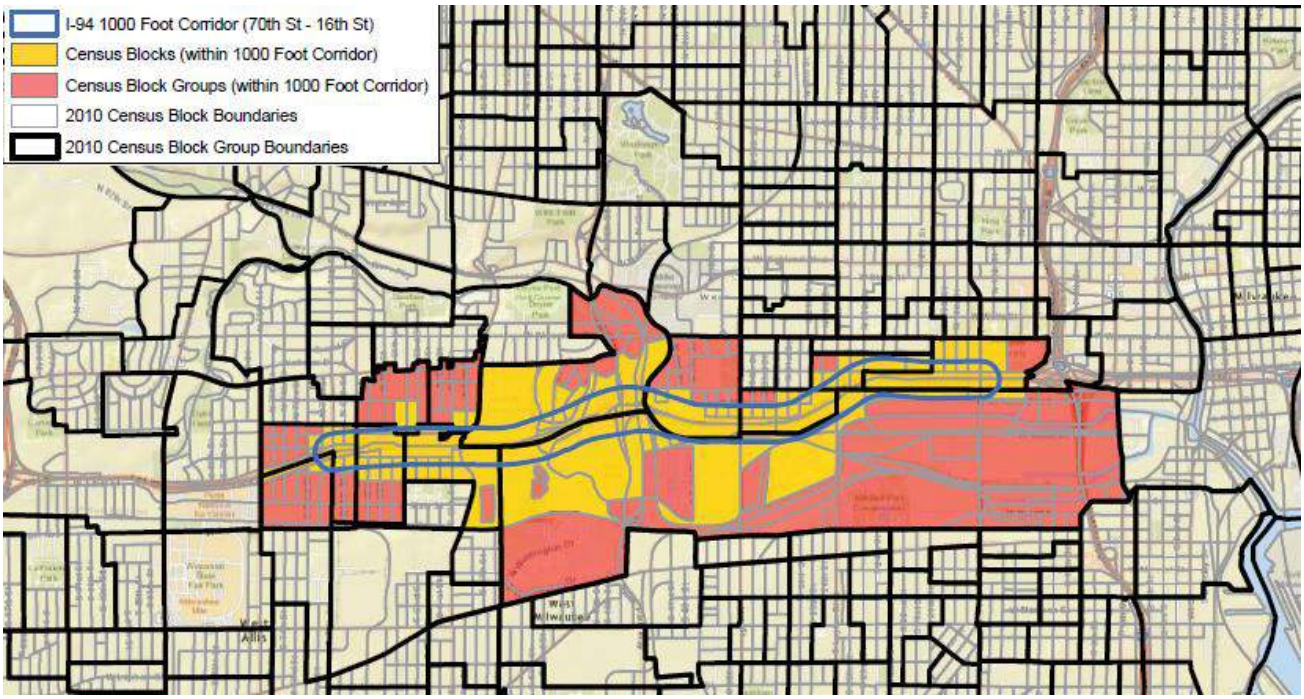


FIGURE 3
Census Blocks versus Block Groups for 1,000-foot Corridor



UPDATED SECTION 3.9.2.1 OF THE FINAL EIS

Based on the data discussed in this document, Section 3.9.2.1, Minority Populations, of the Final EIS has been revised, below to indicate new minority percentages. Areas where text has changed is shaded in gray. In the Final EIS, the area south of I-94 and east of Hawley Road was shown as having no population in Exhibits 3-24 and 3-25. Due to the change from blocks to block groups as explained above and updated data, this area now includes block groups containing a residential population. The area is still largely industrial and includes Miller Park and the VA Campus.

3.9.2.1 Minority Populations

Within the study area, 1-mile corridor, 0.5-mile corridor, and 1,000-foot corridor of I-94, minorities composed 60.2 percent, 40.8 percent, 40.1 percent, and 46.3 percent of the population in 2010/2014, respectively (**Table 3-17**). The percentage of minority residents in these corridors is less than the City of Milwaukee as a whole (63.4 percent).

TABLE 3-17

I-94 East-West Corridor Minority Population 2010/2014

Location	Total Population	Minority Population	Percent of Total Population
City of Milwaukee (2014)	598,078	379,467	63.4%
West Allis (2014)	60,595	12,070	19.9%
Study Area (2014)	120,107	72,329	60.2%
1-mile corridor (2010)	30,045	12,248	40.8%
0.5-mile corridor (2010)	13,102	5,255	40.1%
1,000-foot corridor (2010)	4,475	2,070	46.3%

Source: U.S. Census Bureau Census 2010; Summary File 1: Table P5, Hispanic or Latino Origin by Race.; U.S. Census Bureau 2010 – 2014 ACS 5-year Estimates; Table DP05

The study-area minority population percentage grew between 2010 and 2014 from 58.7 percent to 60.2 percent. Within study area communities, minority populations experienced different levels of growth. In the City of Milwaukee, the percentage of minority population grew from 63.0 percent to 63.4 percent and in the City of West Allis the minority population percentage grew from 18.0 percent to 19.9 percent. **Exhibit 3-24** shows the areas where minorities make up the greatest percent of the total population along the corridor. These areas are generally located east of the Stadium Interchange and north of I-94. The east segment of the I-94 East-West Corridor contains a greater percentage of minority residents than the west segment.

In the study area in 2014, 27.1 percent of the population is Hispanic or Latino of any race, while 23.8 percent of the population is African American. The Hispanic or Latino population is generally located south of I-94, east of the Stadium Interchange, and the African American population is generally located north of I-94 and east of the Stadium interchange. The African American population percentage in the study area is less than in the City of Milwaukee (38.8 percent); while the percentage of Hispanic or Latino population in the study area is greater than that of the percentage in the City of Milwaukee (17.7 percent). In the City of Milwaukee, the largest minority population is African American at 38.8 percent (**Table 3-18**). This information shows that the I-94 East-West Corridor study area is inhabited by a greater percentage of Hispanics or Latinos than the City of Milwaukee as a whole and by a lower percentage of African Americans than the City of Milwaukee. While African Americans are the largest minority group in the City of Milwaukee, Hispanics or Latinos are the largest minority group in the I-94 East-West Corridor study area.

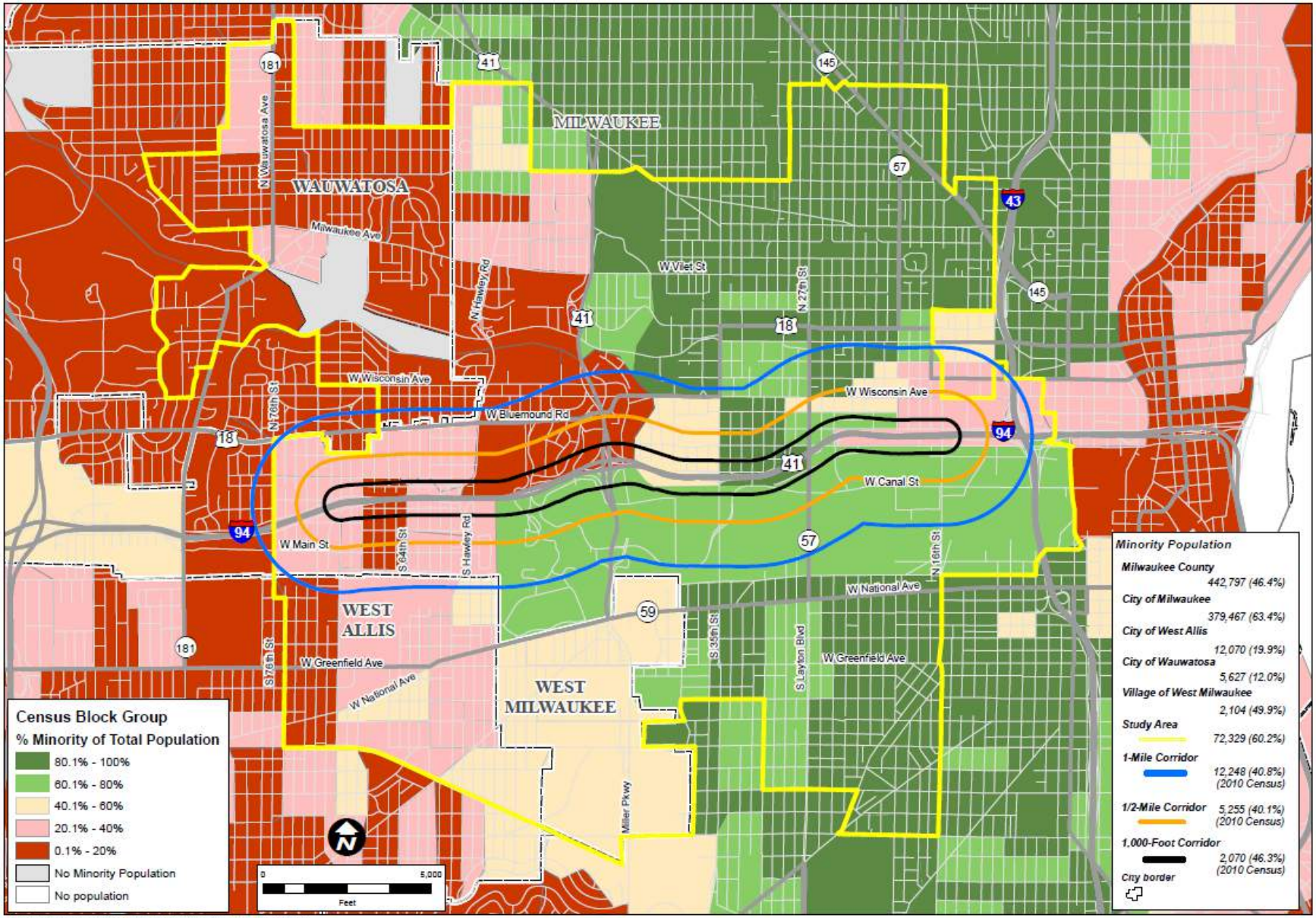
TABLE 3-18

Population by Race/Ethnicity, 2010/2014

Area	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some Other Race	Two or More Races	Hispanic or Latino (of any Race)	Total Population
Milwaukee County (2014)[1]	510,604 (53.6%)	248,347 (26.0%)	4,483 (0.52%)	34,151 (3.6%)	195 (<0.1%)	960 (0.1%)	23,188 (2.4%)	131,473 (13.8%)	953,401
City of Milwaukee (2014)	218,611 (36.6%)	232,196 (38.8%)	2,690 (0.4%)	21,986 (3.7%)	178 (<0.1%)	666 (0.1%)	15,665 (2.6%)	106,086 (17.7%)	598,078
City of West Allis (2014)	48,525 (80.1%)	2,439 (4.0%)	441 (0.7%)	1,598 (2.6%)	19 (<0.1%)	32 (0.1%)	1,162 (1.9%)	6,388 (10.5%)	60,595
City of Wauwatosa (2014)[1]	41,211 (88.0%)	1,946 (4.2%)	76 (0.2%)	1,238 (2.6%)	0 (0.0%)	11 (<0.1%)	1,008 (2.2%)	1,348 (2.9%)	46,838
Village of West Milwaukee (2014)[1]	2,110 (50.1%)	469 (11.1%)	0 (0.0%)	216 (5.1%)	0 (0.0%)	0 (0.0%)	186 (4.4%)	1,233 (29.3%)	4,214
Study Area (2014)	47,778 (39.8%)	28,554 (23.8%)	1,074 (0.9%)	6,243 (5.2%)	53 (<0.1%)	150 (0.1%)	3,677 (3.1%)	32,598 (27.1%)	120,107
1-mile corridor (2010)	17,797 (59.2%)	6,832 (22.7%)	22 (0.7%)	1,234 (4.1%)	18 (0.1%)	40 (0.1%)	713 (2.4%)	3,209 (10.7%)	30,045
0.5-mile corridor (2010)	7,847 (59.9%)	2,469 (18.8%)	89 (0.7%)	726 (5.5%)	10 (0.1%)	17 (0.1%)	369 (2.8%)	1,575 (12.0%)	13,102
1,000-foot corridor (2010)	2,405 (53.7%)	943 (21.1%)	42 (0.9%)	254 (5.7%)	3 (0.1%)	11 (0.2%)	114 (2.5%)	703 (15.7%)	4,475

[1]Table 3-18 in the Final EIS included only areas directly adjacent to the I-94 East-West Corridor. Milwaukee County, City of Wauwatosa and Village of West Milwaukee are included in here to provide the updated demographics for all communities within the study area.

Source: U.S. Census Bureau Census 2010; Summary File 1: Table P5, Hispanic or Latino Origin by Race.; U.S. Census Bureau 2010 – 2014 ACS 5-year Estimates; Table DP05



Data source: ACS 5-year estimates (2010-2014)

Note: According to the 2010-2014 ACS, the areas of no population have no persons living in them.

EXHIBIT 3-24
Minority Population in the Study Area and Surrounding Communities

LOW-INCOME POPULATIONS USING 2010 DATA

Sections 3.8.1.3 and 3.9.2.2 of the Final EIS present information on low-income populations within the I-94 East-West Corridor. The data presented in these sections uses 2007-2011 American Community Survey (ACS) 5-year estimates. The methodology used to calculate the low-income populations in the Final EIS is correct as it accounts for the entire study area, using 16th Street as the eastern terminus. Therefore, Section 3.8.1.3, Income, and Section 3.9.2.2, Low-income Populations, of the Final EIS is still accurate based on the 2007-2011 ACS Data.

2014 LOW-INCOME POPULATION DATA

Since the low-income information presented in the Final EIS used 2007-2011 ACS data, the study team reviewed and updated the income information using the most recent data provided by the U.S. Census Bureau, 2010-2014 ACS data. The updated data compared to the data presented in the Final EIS are shown in Tables 4 and 5. Both the 2007-2011 ACS and 2010-2014 ACS datasets used block groups to calculate low-income population.

TABLE 4

Mean Household Income

Community	2007 2011 ACS 5 year estimate, as shown in the Final EIS[1]	2010 2014 ACS 5 year estimate
Wisconsin	$66,693	$68,319
Milwaukee County	$58,861	$59,527
City of Milwaukee	$47,445	$48,775
City of West Allis	$52,975	$53,922
City of Wauwatosa	$84,604	$85,808
Village of West Milwaukee	$44,073	$43,013
Study Area	$42,848	$43,464
1-mile Corridor	$43,592	$43,139
0.5-mile Corridor	$34,791	$34,771
1,000-foot Corridor	$41,933	$40,600

[1]This table provides updated income information for all communities presented in Tables 3-14 and 3-19 of the Final EIS.
Source: Dataset: DP03; Selected Economic Characteristics; Mean Household Income, ACS 2007-2011, 5-year estimates and ACS 2010-2014, 5-year estimates; S1902, Mean Income, ACS 2007-2011, 5-year estimates; ACS 2010-2014, 5-year estimates

TABLE 5

Median Household Income In Census Block Group Nearest to I-94

Location of Block Group	2007 2011 ACS 5 year estimate, as shown in the Final EIS	2010 2014 ACS 5 year estimate
West Segment		
North of I-94 between 68th Street and Hawley Road	$42,200 - $48,000*	$44,100 - $45,900*
South of I-94 between 68th Street and Hawley Road	$37,000 - $48,200*	$44,100 - $45,900*
North of I-94 between Hawley Road and Stadium Interchange (Story Hill)	$82,700	$82,600
East Segment		
North of I-94 between Stadium Interchange and 35th Street	$29,600	$28,800
North of I-94 between 35th Street and 27th Street	$24,600	$25,200
North of I-94 between 27th Street and 16th Street	$10,000 - $16,100*	$8,600 - $16,000*

Source: US Census, American Fact Finder; 2010-2014 American Community Survey (ACS) 5-YR

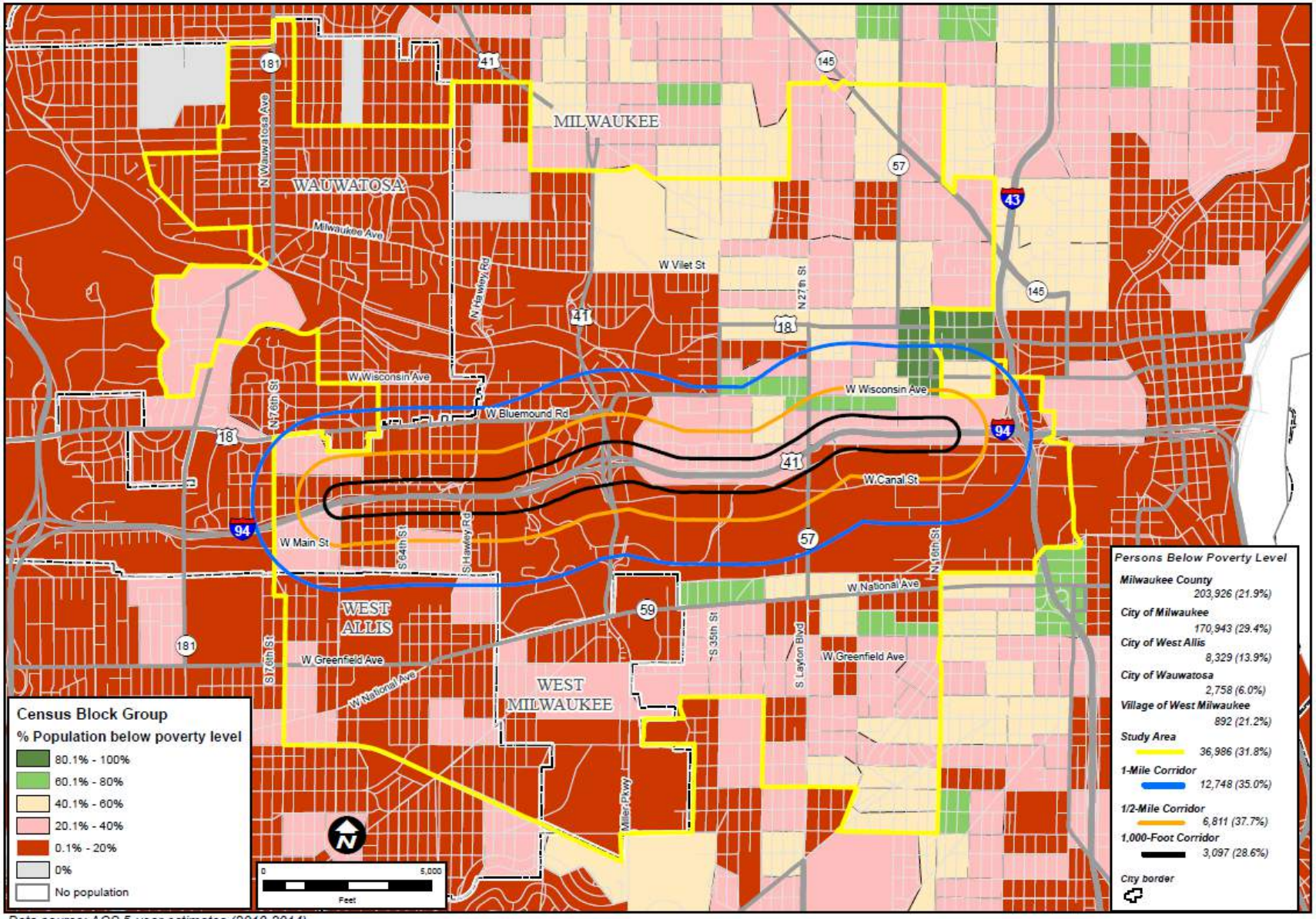
* The range indicates that more than one census block represents this portion of the study area, so both low and top range of median household income are presented.

The U.S. Department of Health and Human Services (HHS) annually publishes poverty guidelines to determine financial eligibility for certain programs. The poverty guidelines are updated periodically in the Federal Register by HHS under the authority of 42 USC 9902(2) (U.S. Census Bureau 2012). The HHS guidelines are a simplification of the U.S. Census Bureau's poverty thresholds for administrative purposes. For instance, determining financial eligibility for certain federal programs (U.S. Census Bureau 2013). According to the HHS guideline, in 2016 a family/household containing four persons is considered to be living in poverty if the total income of the family/ household is less than $24,300 (this number was $24,250 in 2015). **Exhibit 3-25** of the Final EIS, shows the areas where poverty rates are greatest along the corridor. These areas are typically east of the Stadium Interchange. This exhibit has been updated below to show the 2010-2014 ACS data. Based on the 2010-2014 ACS data, 31.8 percent of the population within the study area is living in poverty; an increase of 0.8% from the data presented in the Final EIS. Both datasets used block groups to calculate low-income population, therefore the differences are due primarily to updates in the dataset rather than differences in methodology or geographical boundaries. See Table 6 for a comparison of the low-income population percentages as reported in the Final EIS and the updated low-income population percentages using the 2010-2014 ACS data.

TABLE 6
I-94 East-West Corridor Low-Income Populations 2010/2014

Location	2010 Census Data, as presented in the Final EIS	2010 2014 ACS 5 year estimate
City of Milwaukee	26.2%	21.4%
City of West Allis	11.8%	13.9%
Study Area	31.0%	31.8%
1-Mile Corridor	34.7%	35.0%
.5 Mile Corridor	30.1%	37.7%
1,000 Foot Corridor	25.0%	28.6%

Source: US Census, American Fact Finder; ACS 2007-2011, 5-year estimates; ACS 2010-2014, 5-year estimates



Data source: ACS 5-year estimates (2010-2014)

Note: According to the 2010-2014 ACS, the areas of no population have no persons living in them.

EXHIBIT 3-25
Percent of Population Living Below Poverty Level
in the Study Area and Surrounding Communities

IMPACTS TO MINORITY AND LOW-INCOME POPULATIONS

Section 3.9.4, Identification of Disproportionately High and Adverse Effects on Environmental Justice Populations, of the Final EIS discusses impacts to minority and low-income populations. Based on the review and update of the socioeconomic data presented here, the impacts remains largely unchanged. Although there are a higher percentage of minority and low-income populations in the corridor based on the review and update, the direct, indirect, and cumulative effects on minority and low-income populations do not increase. Table 7 summarizes where changes have occurred since the Final EIS. The updates in impacts to Residential and Business Displacements are described below, refer to the Final EIS for impacts in all other sections.

Table 7
Changes from Final EIS

Final EIS Section		Changes from the Final EIS	Impacts
3.9.4.1	Freeway Access Change	No	Short-term inconvenience due to access changes, but there are numerous other access points within the corridor. Off-interstate improvements included to mitigate changes. Since there are no changes from the Final EIS, high and adverse effects not disproportionately borne by minority and/or low-income populations.
3.9.4.2	Residential and Business Displacements	Yes	One minority business will be displaced (4 listed in the Final EIS) and 7 non-minority businesses displaced (7 listed in the Final EIS[1]). Residential displacements affect primarily non-minority and non-low income populations. One apartment over a minority-owned business will no longer be displaced.
3.9.4.3	Institutional and Public Services	No	Impacts on institutional and public services would stem from the change in access to or from I-94 and include creating a half interchange at Hawley Road and moving the Mitchell Boulevard interchange. Since there are no changes from the Final EIS, high and adverse effects not disproportionately borne by minority and/or low-income populations.
3.9.4.4	Noise	No	Noise impacts are localized and confined to areas adjacent to I94. Where feasible and reasonable per existing WisDOT policy, noise barriers would be constructed in areas where residences are next to I-94. Since there are no changes from the Final EIS, the noise impacts would not result in disproportionately high and adverse effects on minority and/or low-income populations.
3.9.4.5	Construction Impacts	No	Construction impacts are temporary in nature, and would be experienced primarily by residents and businesses adjacent to I-94. Since there are no changes from the Final EIS, the impacts associated with construction would affect all populations to the same degree and mitigation measures have been identified to minimize impacts.
3.9.4.6	Indirect and Cumulative Impacts	No	The Selected Alternative is not expected to have substantial effects on land use patterns or air quality. The project has potential for business encroachment but are not expected to be substantial. Since there are no changes from the Final EIS, high and adverse effects not disproportionately borne by minority and/or low-income populations.

RESIDENTIAL AND BUSINESS DISPLACEMENTS

The Selected Alternative with the design refinements were able to lessen the project's impact on environmental justice populations. The Selected Alternative would displace a total of eight active businesses and six residences (the Final EIS listed 11[1] business and 8 residential displacements). Design refinements reduced commercial displacements by three; two in the east segment and one in the west segment. All three of these commercial properties that would no longer be displaced are minority-owned businesses.

[1] These totals include a dog training club that was identified in public comments following the Final EIS. The design refinements reduced commercial displacements by 3.

These businesses are:

- St. Paul Veterinary Clinic, 27th Street
- BP Pantry 41 Gas Station, 27th Street
- Monreal's Encore Gentlemen's Club, Dana Court (just off Hawley Road)

Based on the design refinements, only one minority-owned business displacement remains as a result of the Selected Alternative, TJ's on 35th Street. A summary of the minority and non-minority-owned business displacements are summarized in Table 8 below. Those listed in bold are businesses that will no longer be displaced due to design refinements.

Table 8
Minority and Non-Minority-Owned Business Displacements

Business	Relocated under the Preferred Alternative (Final EIS)	Relocated under the Selected Alternative (ROD)
Minority-Owned Business		
Monreal's Encore Gentlemen's Club	**Yes**	**No**
TJ's on 35th	Yes	Yes
St. Paul Veterinary Clinic	**Yes**	**No**
BP Pantry 41 Gas Station	**Yes**	**No**
Non-Minority-Owned Business		
Central Bark Doggy Day Care	Yes	Yes
Milwaukee Kennel Club	Yes[2]	Yes
Concentra Urgent Care 35th Street	Yes	Yes
Badger Truck Service	Yes	Yes
Storage/Warehouse Building	Yes	Yes
Cemetery Maintenance Business	Yes	Yes
All-Star Towing	Yes	Yes
TOTAL	**11**[2]	**7**

In addition to the project's design refinements reducing the number of minority-owned business displacements, an apartment located above Monreal's Encore Gentlemen's club would no longer be displaced. The design refinements reduced residential displacements by two, both in the west segment.

PROJECT BENEFITS

The project benefits, discussed in Section 3.9.5 of the Final EIS, remain unchanged based on the review and update. Minority and low-income populations will benefit from the improved traffic operations along the corridor due to the reduced congestion. The improved level of service along I-94 will benefit transit users as the Selected Alternative will reduce traffic on local roads. These improvements would benefit all transit users, including those who are depend on transit, which often includes low-income populations.

Additionally, the project will improve bicycle and pedestrian accommodations in the corridor. The safety improvements of the project will benefit everyone: drivers, passengers, commuters, and commercial deliveries; all which can benefit environmental justice populations. Construction of the I-94 East-West Corridor project would provide economic benefits that would be most experienced by service and labor workers, which can include low-income and minority populations.

[2] These totals include a dog training club that was identified in public comments following the Final EIS. The design refinements reduced commercial displacements by 3.

INTERSTATE INVESTMENT EFFECTS ON TRANSIT

The majority of Section 3.9.6, Interstate Investment Effects on Transit, in the Final remains unchanged. However, the study team has updated the impact the proposed freeway widening will have on minority and low- income population as well as the information regarding mode of travel to work by minority and low-income populations.

As part of the Vision 2050 Report[3], SEWRPC looked at the impacts of the recommended freeway system reconstruction plan on minority and low-income populations. The I-94 East-West Corridor with eight lanes was included as part of the existing environment. Analysis presented in Appendix N of Vision 2050 found that in general, no minority or low-income community, would be expected to disproportionately bear the impact of the highway improvements. The analysis further states that should highway improvements—new roadways and highway widening—not be implemented, access to jobs and other activities using automobiles would be expected to decline for residents of the region, particularly by the Milwaukee County, and as well as to minority and low-income populations.

According to the 2010-2014 ACS Data, for Milwaukee County and the City of Milwaukee, about 82 and 80 percent, respectively, of the minority population drives alone or carpools to work. Approximately 11 percent of the minority population uses public transit to travel to and from work in Milwaukee County. For workers below the poverty level in Milwaukee County and the City of Milwaukee, about 70 and 68 percent, respectively, use an automobile to travel to and from work. Most workers not driving to work used public transportation or walked. In the I-94 East-West Corridor study area, about 81 percent of workers drive alone or carpool to work. About 79 percent of the minority population within the study area drives alone or carpools to work.

CONCLUSION

Based on the review and update of the socioeconomic data presented in this memo, the impacts of the project on minority and low-income populations do not change. The percentage of low-income populations within the study area remained similar based on the updated data presented in the memo (Table 6). Although the percentage of minority populations in the I-94 East-West Corridor has increased (Table 3), this does not change the impacts incurred by minority populations. Impacts from the project on minority and low-income populations listed in the Final EIS remain largely unchanged; the impacts are substantially mitigated, and the benefits offset the short-term residual impacts that may occur. In addition, due to design refinements presented in the ROD the number of minority business displacements has decreased, therefore reducing impacts to minority populations.

Non-minority and non-low-income populations would be impacted to the same degree as minority and low-income populations; the impacts are substantially mitigated, and the benefits offset the short-term residual impacts that may occur.

The I-94 East-West Corridor project would not result in any effects that would be considered disproportionately high and adverse under Executive Order 12898, DOT Order 5610.2(a), and the FHWA Order 6640.23A as a result of the implementation of the Selected Alternative. For the most part, project impacts would be limited in scope and others would be mitigated through the implementation of effective mitigation measures. The Selected Alternative meets the project purpose and need and would provide substantial benefits that positively affect minority and low-income populations as well as the overall population within the project area.

[3] http://www.sewrpc.org/SEWRPCFiles/LUTranSysPlanning/2016-06-29-mtg/VISION2050-EquitableAccessAnalysisoftheFRTP.PDF

Appendix C
Section 106 Programmatic Agreement

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
AND
ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

WHEREAS, the Federal Highway Administration (FHWA) proposes to improve the Interstate 94 (I-94) East-West Corridor, Milwaukee, Wisconsin, described as the Preferred Alternative in the *Environmental Impact Statement Interstate 94 East-West Corridor*; and

WHEREAS, FHWA proposes to make improvements to I-94 to 3.5 miles of I-94 in Milwaukee, Wisconsin, from 70th Street (west terminus) to 16th Street (east terminus), which includes the Stadium Interchange (Project), as illustrated in Attachment 1; and

WHEREAS, off-interstate intersection improvements are included in this Project at the intersections of National Avenue and Miller Park Way, National and Greenfield avenues, and Greenfield Avenue at 70th Street intersections, as well as the Washington Street extension; and

WHEREAS, FHWA is the lead agency on this Project and is, therefore, responsible for compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and its implementing regulations provided in 36 Code of Federal Regulations (CFR) Part 800; and

WHEREAS, FHWA as the lead agency on this Project is responsible for compliance with Section 110 of the NHPA, particularly Section 110(f) regarding National Historic Landmarks (NHL); and

WHEREAS, FHWA has established the Project's area of potential effects (APE), as defined at 36 CFR 800.16(d), in consultation with the Wisconsin State Historic Preservation Officer (SHPO) and Consulting Parties; the APE includes the properties adjacent to I-94, US 41/Miller Park Way, and other roads crossing over or under I-94 that would be reconstructed, and encompasses the entirety of the identified historic properties that intersect with or are adjacent to I-94 (see Attachment 2); and

WHEREAS, FHWA has determined that the development of a Programmatic Agreement (PA), in accordance with 36 CFR 800.14(b)(1)(ii), is warranted because some details of the Project cannot be determined until final design and the effect on historic properties is conditional, based on completion of the stipulations contained herein; and

WHEREAS, FHWA has identified the following historic properties within the APE: Northwestern Branch, National Home for Disabled Volunteer Soldiers' National Historic Landmark (Soldiers' Home NHL); Northwestern Branch, National Home for Disabled Volunteer Soldiers' National Register Historic District (Soldiers' Home Historic District); Soldiers' Home Reef NHL; Calvary Cemetery; Story Hill Residential Historic District 1; Story Hill Residential Historic District 2 and 3; and Paradise Theater; and

WHEREAS, FHWA has determined that the Project will have no adverse effect on the Soldiers' Home Reef NHL; Calvary Cemetery; Story Hill Residential District 1; Story Hill Residential District 2 and 3; and the Paradise Theater; and

WHEREAS, FHWA has determined that the Project will have no adverse effect on the Soldiers' Home NHL and the Soldiers' Home National Register Historic District based on implementation of the conditions in this agreement; and

WHEREAS, the purpose of this PA is to ensure the Project will have no adverse effect on historic properties as determined by FHWA in the *Revised Assessment of Adverse Effects for the I-94 East-West Corridor Project,* dated September 24, 2014 and the Addendum to that document, dated November 02, 2015; and

WHEREAS, Story Hill Residential Historic District 2 and 3 is eligible for the construction of a noise barrier to reduce noise levels at benefitted receptors, and effects related to Section 106 regarding the construction of a noise barrier have not been determined; and

WHEREAS, letters describing the Project and its objectives and inviting participation were sent to the following federally-recognized Indian Tribes: Bad River Band of Lake Superior, Chippewa Indians of Wisconsin; Sac & Fox Nation of Oklahoma; Sokaogon Chippewa Community, Mole Lake Band; Forest County Potawatomi, Community of Wisconsin; Ho-Chunk Nation; Lac Vieux Desert Band of Lake Superior Chippewa Indians; Menominee Nation; Prairie Band Potawatomi Nation; Red Cliff Band of Lake Superior, Chippewa Indians of Wisconsin; Sac & Fox Nation of Mississippi in Iowa; and Sac & Fox Nation of Missouri in Kansas and Nebraska; and

WHEREAS, the Forest County Potawatomi, Community of Wisconsin has participated in Section 106 consultation and has been invited to sign this PA as a Concurring Party to this PA; and

WHEREAS, FHWA has consulted with the Advisory Council on Historic Preservation (Council), SHPO, National Park Service, National Trust for Historic Preservation, City of Milwaukee Historic Preservation Commission, Archdiocese of Milwaukee Catholic Cemeteries, Beth Hamedrosh-Hagodel Cemetery, Wood National Cemetery, Department of Veterans Affairs Medical Center, Department of Veterans Affairs National Cemetery Administration, and Milwaukee Preservation Alliance in accordance with 36 CFR Part 800.6(b)(2); and

WHEREAS, the Council has elected to participate in the Section 106 consultation process and is a Signatory to this PA; and

WHEREAS, as the agency having oversight of the Soldiers' Home NHL, the National Park Service has participated in consultation and is an Invited Signatory to this PA; and

WHEREAS, Wisconsin Department of Transportation (WisDOT) participated in the Section 106 consultation and is an Invited Signatory to this PA; and

WHEREAS, the National Cemetery Administration (NCA) participated in the Section 106 consultation and is an Invited Signatory to this PA; and

WHEREAS, the Department of Veteran Affairs (VA) Medical Center has participated in the Section 106 consultation, and is an Invited Signatory to this PA; and

WHEREAS, the following are Consulting Parties, have participated in the Section 106 consultation process, and have been invited to sign this PA as Concurring Parties, in accordance with 36 CFR 800.6(c)(3): Milwaukee Preservation Alliance, Archdiocese of Milwaukee Catholic Cemeteries, National Trust for Historic Preservation, City of Milwaukee Historic Preservation Commission, and Beth Hamedrosh-Hagodel Cemetery; and

WHEREAS, in this PA, "Signatories" refers to: Signatories, as defined in 36 CFR 800.6(c)(1) and Invited Signatories, as defined in 36 CFR 800.6(c)(2); and

NOW, THEREFORE, FHWA, SHPO, the Council, and WisDOT agree that, upon FHWA's decision to proceed with the Project, FHWA shall ensure that the following stipulations are implemented in order to take into account the effects of the Project on historic properties, and that these stipulations shall govern the Project:

STIPULATIONS

FHWA in coordination with WisDOT shall ensure the following stipulations are implemented to ensure adverse effects from the Project to the Soldiers' Home NHL, the Soldiers' Home National Register Historic District and the other identified historic properties are avoided.

I. DESIGN REVIEW

A. Design Coordination Plan

WisDOT or its agent will create a Design Coordination Plan in order to ensure the Project is designed in a way that will not adversely affect historic properties. The draft Design Coordination Plan will be submitted to Signatories and Consulting Parties for review and comment in accordance with Stipulation VI prior to implementation and will include:

1. Zablocki Drive Bridge and approaches
2. Height of I-94 adjacent to Wood National Cemetery of the Soldiers' Home NHL and Historic District
3. Access to Soldiers' Home NHL and Historic District
4. Locations covered by the plan
5. Benchmarks for review
6. Timeframe for review
7. Definition of design review process

B. Implement Design Coordination Plan

II. PREPARE CONSTRUCTION STAGING PLAN

WisDOT or its agent will prepare a Construction Staging Plan prior to initiation of construction in the vicinity of historic properties. The Construction Staging Plan will cover the locations of the construction staging areas for storage and staging of active construction in order to avoid impacts to historic properties. The draft Construction Staging Plan will be submitted to Signatories and Consulting Parties for review and comment in accordance with Stipulation VI prior to implementation of the plan and will include, but not be limited to:

A. Identification of locations and sizes of staging areas for storage of construction materials and equipment outside WisDOT right-of-way to avoid adverse effects to historic properties

B. Staging of active construction activities within WisDOT right-of-way

1. Location and timing of staging activities
2. Connectivity between the two sides of Wood National Cemetery (north and south of I-94) will be provided during construction and stipulated in the plan.

C. If any staging area or construction activity is located within a cemetery boundary WisDOT will submit the state Request to Disturb a Human Burial Site form, in accordance with Wisconsin Statute 157.70.

D. The Construction Staging Plan will be incorporated into appropriate documents

E. Implement the Construction Staging Plan

III. PRE-CONSTRUCTION WALK THROUGH

WisDOT or its agent will define the parameters and goals for up to two pre-construction walk-through(s) with the Signatories and Consulting Parties to this PA prior to the commencement of construction activities. Criteria for pre-construction walk through parameters include:

A. Goals of the walk through(s)

B. Area(s) covered by the walk through(s)

C. Participants of the walk through(s)

D. Timeframe for the walk through(s)

IV. SOLDIERS' HOME NATIONAL HISTORIC LANDMARK AND NATIONAL REGISTER HISTORIC DISTRICT

A. Wood National Cemetery

1. Landscape Plan

WisDOT or its agent will prepare a Landscape Plan for areas adjacent to I-94 for adoption prior to completion of the freeway design for the portion of the Project adjacent to Wood National Cemetery. WisDOT or its agent will submit the draft Landscape Plan to Signatories and Consulting Parties for review and comment in accordance with Stipulation VI prior to implementation of the plan. The Landscape Plan will include, but not be limited to:

a. Area covered by the Plan

b. Landscape Plan will be consistent with the historic character of the Soldiers' Home NHL and Historic District landscape as defined in the Soldiers' Home Historic American Landscape Survey

c. Implement the Landscape Plan

2. Wall Design Plan

Create a Design Plan for the walls on the north and south sides of I-94. The draft plans will be submitted to Signatories and Consulting Parties for review and comment in accordance with Stipulation VI prior to implementation.

a. Create a Design Plan for the walls that will include specifications for the design, height, size, materials, and appearance of the walls. The draft Design Plan for the Wood National Cemetery walls will be submitted to Signatories and Consulting Parties for review and comment, in accordance with Stipulation VI, prior to implementation.

b. Implement the Wall Design Plan.

3. Prepare Signage Plan

WisDOT or its agent will prepare a Signage Plan prior to completion of the of the freeway design. The draft Signage Plan will be submitted to Signatories and Consulting Parties for review and comment, in accordance with Stipulation VI, prior to implementation of the plan and will include, but not be limited to:

a. Area covered by the Plan

b. Types of signage covered by the Plan

i. Type 1 highway signage

ii. NHL/Wood National Cemetery signage

c. Location of signage

d. Minimize Type 1 highway signage where I-94 passes through Wood National Cemetery

e. Design of signage

f. Implement the Signage Plan

4. Prepare Monitoring Plan

WisDOT or its agent will prepare a Monitoring Plan prior to completion of I-94 design for the segment of the Project adjacent to the NHL and Historic District. The draft Monitoring Plan will be submitted to Signatories and Consulting Parties for review and comment in accordance with Stipulation VI prior to implementation of the Plan. The Monitoring Plan will include:

a. Area(s) covered by the Plan

b. Construction activities covered under the Plan

c. Obtain proper permits and authorizations

d. Assess appropriate vibration criteria, if applicable

e. Monitoring provisions

f. Determine if any buildings or structures would be included in the Plan

g. Raise and align survey for grave markers within Wood National Cemetery

h. Implement the Monitoring Plan

B. National Avenue at Miller Park Way Improvements Plan

As part of the off-interstate intersection improvements, WisDOT will prepare a plan for the improvements to National Avenue. The draft Plan will be submitted to Signatories and Consulting Parties for review and comment in accordance with Stipulation VI prior to implementation of the Plan. The plan will ensure no adverse effects on the Soldiers' Home NHL from on the off-interstate intersection improvements at National Avenue and General Mitchell Drive, and will include measures to:

1. Minimize the footprint of the widening

2. Minimize impacts to identified heritage trees within the Soldiers' Home NHL, as defined in the Soldiers' Home Historic American Landscape Survey

3. Minimize visual impact on the Soldiers' Home NHL through additional landscaping features, in accordance with the Historic American Landscape Survey

4. Implement the Improvements Plan

V. STORY HILL RESIDENTIAL HISTORIC DISTRICT 2 AND 3

A. Noise Barrier Design Plan

WisDOT or its agent will prepare a Noise Barrier Design Plan after execution of this PA. The draft Noise Barrier Design Plan will be submitted to Signatories and Consulting Parties for review and comment in accordance with Stipulation VI prior to voting by the benefitted receptors. Should the benefitted receptors vote in favor of a noise barrier, the FHWA and WisDOT shall assess its impacts to the Story Hill Residential Historic Districts, consider means to avoid or minimize any adverse effects, and as appropriate develop and carry out a

treatment plan in consultation with the Signatories and Consulting Parties consistent with the provisions of 36 CFR 800.

1. The Noise Barrier Design Plan will address the visual effects of the noise barrier on the setting of the historic district. The plan will include, at a minimum:
    a. Area covered by the noise barrier.
    b. Visual effects on the setting of the historic district.
    c. Range of aesthetics options to be presented at the noise barrier public involvement meeting.
    d. Noise barrier will be sited outside of the boundaries of the historic district.
2. If a simple majority of the benefitted receptors vote in favor of the noise barrier, implement noise barrier plan.
3. If there is not a simple majority of the benefitted receptors in favor of the noise barrier, the barrier will not be constructed.

VI. CONSULTATION AND REVIEW

A. FHWA will consult with the Signatories and the Consulting Parties as required by the stipulations of this PA.

B. FHWA will submit reports and plans to the Signatories and Consulting Parties for review and comment. Respondents will have thirty (30) calendar days to review and comment on submissions.
    1. FHWA will respond in writing to written comments.
    2. There will be an opportunity for Signatories and Consulting Parties to review the responses to the comments submitted under VI.B.

C. In the event of unresolved disagreement among the parties regarding the comments on a particular stipulation, the matter will be addressed in accordance with Stipulation X, Dispute Resolution.

VII. UNANTICIPATED DISCOVERIES AND UNANTICIPATED EFFECTS

A. WisDOT will insert into all contracts for excavation, construction, or other ground-disturbing activities during the Project the procedures described below for the treatment of unanticipated discoveries and effects to archeological resources. WisDOT will ensure the processes described below are followed in order to minimize the risk of construction delay if archaeological sites that are eligible for listing in the NRHP are discovered during project implementation.
    1. If significant archaeological resources are discovered during construction within the APE, WisDOT shall halt all work involving ground disturbance in the immediate area of the discovery until the archeological resources can be identified, documented, and an appropriate mitigation strategy is developed for consultation. WisDOT will consult with the Consulting Parties regarding the findings and recommendations.
    2. Upon making the discovery, WisDOT shall notify the Consulting Parties regarding the following:
        a. Assessment of whether the data available permit a determination of eligibility for the NRHP, and, if not, plans to complete an archeological report of investigations of the identified resources, or

b. If the resources are eligible for listing in the NRHP, the actions that WisDOT proposes to resolve the potential adverse effects

3. Interested parties shall have five (5) business days (not including a federal holiday) from receipt of written notification to respond to WisDOT.

4. WisDOT shall take into account recommendations provided by the Consulting Parties. FHWA shall make a final decision on proposed actions.

B. Disputes regarding the final decision will be resolved in accordance with Stipulation X Dispute Resolution.

VIII. DISCOVERY OF HUMAN REMAINS

A. WisDOT will insert into all contracts for excavation, construction, or other ground-disturbing activities in the (Project) the procedures described below for the treatment of inadvertent/accidental human remain discoveries. WisDOT will ensure the processes described below are followed in order to minimize harm and damage/disturbance to human burial sites.

B. If human remains are inadvertently/accidentally discovered during implementation of the Project, all ground disturbing activities in the immediate area of the discovery shall halt until the following actions have been carried out, in accordance with Wisconsin Statute 157.70 and the Native American Graves Protection and Repatriation Act, as required. SHPO will be contacted immediately after work stoppage. WisDOT shall immediately implement measures to protect the human remains from inclement weather and vandalism, and notify appropriate law enforcement officials to determine whether or not the remains are subject to a criminal investigation by local or federal authorities. NCA will be notified and consulted if human remains are discovered within or adjacent to Wood National Cemetery.

C. WisDOT shall provide sufficient information to allow law enforcement to determine if the remains are or are not subject to a criminal investigation by local or federal authorities.

1. If it is determined the human remains are not subject to a criminal investigation by local or federal authorities, FHWA/WisDOT shall obtain the services of qualified cultural resource professionals to comply with all applicable federal (Native American Graves Protection and Repatriation Act when relevant), state (Wisconsin Statute 157.70), and local laws governing the discovery and disposition of human remains.

2. If it is determined Native American human remains or funerary objects have been discovered in a parcel/land owned by the federal government, FHWA/WisDOT shall immediately notify the appropriate federal land manager, affected Indian tribes, and consulting parties of this PA (within 24 to 48 hours; not including a holiday).

3. If it is determined human remains have been discovered on state, state sub-division, or private lands FHWA/WisDOT shall immediately notify the SHPO, and the consulting parties of this PA (within 24 to 48 hours; not including a holiday).

D. Before making any final decision regarding the treatment of human remains, FHWA/WisDOT shall within five (5) business days (not including a federal holiday) after discovery of such remains initiate consultation with the Council, SHPO, Indian tribes (if applicable), and Consulting Parties to prepare and implement treatment measures and treatment plans in accordance with applicable federal, state (Wisconsin Statute 157.70) and local laws.

IX. REPORTING

A. Bi-annual Reports. In order to monitor completion of the stipulations contained in this PA, WisDOT, on behalf of FHWA, will prepare and submit two (2) reports per year to Signatories

and Consulting Parties summarizing the actions taken to fulfill the stipulations of this PA. The Signatories may agree to change the frequency of the reports to annually.

B. Annual Meetings. WisDOT will hold annual meetings with the Signatories and Consulting Parties to discuss activities carried out pursuant to this PA during the preceding year and activities scheduled for the coming year. Bi-annual reports, as described in Stipulation IX.A., shall be distributed to the Signatories and Consulting Parties at least fifteen (15) calendar days prior to the annual meeting.

C. Schedule. The timeframe for the annual reports and annual meetings will commence from the execution date of this PA.

D. Final Report. A final report describing the completion of the stipulations contained in this PA will be submitted to Signatories and Consulting Parties three (3) months prior to the PA expiration date.

X. DISPUTE RESOLUTION

A. Should any Signatory to this PA object within thirty (30) calendar days to any documentation or materials submitted for review, actions proposed, or review comments submitted pursuant to this PA, FHWA shall consult with the objecting party and/or parties to resolve the objection.

B. If FHWA determines that the objection cannot be resolved, FHWA shall forward documentation relevant to the dispute and request comment from the Council. Within forty-five (45) days after receipt of pertinent documentation, the Council will either provide FHWA with comments that FHWA will take into account in reaching a final decision regarding the dispute, or notify FHWA that it will comment pursuant to 36 CFR 800.7(c), and proceed to comment. Any Council comment provided in response to such a request shall be taken into account by FHWA in accordance with 36 CFR 800.7(c)(4) with reference to the subject of the dispute. Any Council recommendation or comment will be understood to pertain only to the subject of the dispute; FHWA's responsibility to carry out other actions under this PA that are not subjects of the dispute will remain unchanged.

C. FHWA shall notify the Signatories and Consulting Parties of its final decision.

XI. AMENDMENTS

Any Signatory to this PA may propose that it be further amended, whereupon the Signatory shall consult with the other Signatories within thirty (30) calendar days of the proposal to consider an amendment. Any such amendment shall be effective on the date a fully executed copy is filed with the Council.

XII. TERMINATION

A. If any Signatory to the PA determines that the PA's terms will not or cannot be carried out, that party shall immediately consult with the other Signatories to attempt to develop an amendment, per Stipulation XI. If an amendment cannot be reached, any Signatory may terminate the PA upon written notification to the other Signatories.

B. Once the PA is terminated, and prior to work continuing on the Project, FHWA must either: 1) execute a subsequent agreement pursuant to 36 CFR 800.6, or 2) request, take into account, and respond to the comments of the Council under 36 CFR 800.7.

C. FHWA shall notify the Signatories and Consulting Parties of its final decision.

XIII. MONITORING

Signatories may request to monitor activities carried out pursuant to this PA. If FHWA determines that monitoring will cause safety and scheduling concerns, FHWA will cooperate with the Signatories to carry out their monitoring and review requests.

XIV. PERSONNEL QUALIFICATIONS

All historic properties work performed pursuant to this PA will be carried out by or under the direct supervision of historians, architectural historians, historic landscape architects, and/or archeologists, as appropriate to the affected resource(s), who meet or exceed the *Secretary of the Interior's Historic Preservation Professional Qualification Standards* set forth in 62 Fed. Reg. 33,707 (June 20, 1997), as they may be amended.

XV. PRINCIPLES AND STANDARDS

FHWA and WisDOT agree that historic properties investigations performed pursuant to this PA shall be conducted in a manner consistent with the principles and standards contained in *Secretary of the Interior's Standards for the Treatment of Historic Properties* (36 CFR Part 68), *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (1983, as amended), and *Recommended Approach for Consultation on Recovery of Significant Information from Archeological Sites* (ACHP May 18, 1999, 64 FR 27085-27087), and Chapter 26 of WisDOT's Facilities Development Manual.

XVI. ELECTRONIC COPIES

A. Programmatic Agreement: FHWA or WisDOT shall provide each Signatory and Concurring Party with one legible, full-color, electronic copy of the fully-executed PA and its attachments no more than thirty (30) days after execution. If the electronic copy is too large to send via e-mail, FHWA or WisDOT shall provide each Signatory and Concurring Party with a copy of the executed PA via a compact disc. Parties may request hard copies of the executed PA.

B. Reports and Plans: Draft and final reports and plans stipulated in this agreement to be submitted for review and comment shall be submitted to the appropriate parties, in accordance with each stipulation, in electronic format. Signatories and Consulting Parties may request hard copies of the reports and plans.

XVII. DURATION

The terms of this PA shall commence on the date the last signature is affixed hereto and shall expire when all Stipulations are completed, or ten (10) years from the date of execution, whichever occurs first, unless the Signatories agree in writing to an extension, or the PA is otherwise terminated.

Execution of this PA by FHWA, SHPO, the Council, and WisDOT prior to FHWA approval of this Project, and implementation of its terms, evidences that FHWA has taken into account the effects of this Project on historic properties and has afforded the Council an opportunity to comment on the Project.

SIGNATORY PAGE

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
AND
ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

Federal Highway Administration

By: Michael Davies
Signature

Print Name: MICHAEL DAVIES

Date: 07/11/2016

SIGNATORY PAGE

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
AND
ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

Wisconsin State Historic Preservation Officer

By: _____
Signature

Print Name: Jim Draeger

Date: 7/11/16

SIGNATORY PAGE

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
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ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

Advisory Council on Historic Preservation

By: John M. Fowler
Signature

Print Name: JOHN M. FOWLER

Date: 8/23/16

INVITED SIGNATORY PAGE

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
AND
ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

Invited Signatory:

Wisconsin Department of Transportation

By: Sheri Schmit P.E.
Signature

Print Name: SHERI SCHMIT

Date: 7/8/16

By: Steven W. Krebs
Signature

Print Name: Steven W. Krebs

Date: July 11, 2016

INVITED SIGNATORY PAGE

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
AND
ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

Invited Signatory:

National Park Service

By: _____
Signature

Print Name: _____

Date: _____

INVITED SIGNATORY PAGE

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
AND
ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

Invited Signatory:

Department of Veterans Affairs Zablocki Medical Center

By: _____
Signature

Print Name: Daniel S. Zoncheck

Date: 8/1/16

INVITED SIGNATORY PAGE

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
AND
ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

Invited Signatory:

National Cemetery Administration

By: Diana J Ohman, Dir. MWD
Signature

Print Name: Diana J Ohman

Date: 7/25/2016

CONCURRING PARTY SIGNATURE PAGE

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
AND
ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

Concurring Party:

Forest County Potawatomi, Community of Wisconsin

By: _____
Signature

Print Name: _____

Date: _____

CONCURRING PARTY SIGNATURE PAGE

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
AND
ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

Concurring Party:

Archdiocese of Milwaukee Catholic Cemeteries

By: _____
Signature

Print Name: _____

Date: _____

CONCURRING PARTY SIGNATURE PAGE

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
AND
ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

Concurring Party:

Beth Hamedrosh-Hagodel Cemetery

By: _____
Signature

Print Name: _____

Date: _____

CONCURRING PARTY SIGNATURE PAGE

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
AND
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WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

Concurring Party:

City of Milwaukee Historic Preservation Commission

By: _____
Signature

Print Name: _____

Date: _____

CONCURRING PARTY SIGNATURE PAGE

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
AND
ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

Concurring Party:

Milwaukee Preservation Alliance

By: _____
Signature

Print Name: _____

Date: _____

CONCURRING PARTY SIGNATURE PAGE

PROGRAMMATIC AGREEMENT
AMONG
FEDERAL HIGHWAY ADMINISTRATION,
WISCONSIN STATE HISTORIC PRESERVATION OFFICER,
AND
ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT ID #1060-27-00
WHS #13-0065

I-94 EAST-WEST CORRIDOR STUDY
(70th Street to 16th Street)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

Concurring Party:

National Trust for Historic Preservation

By: _____
Signature

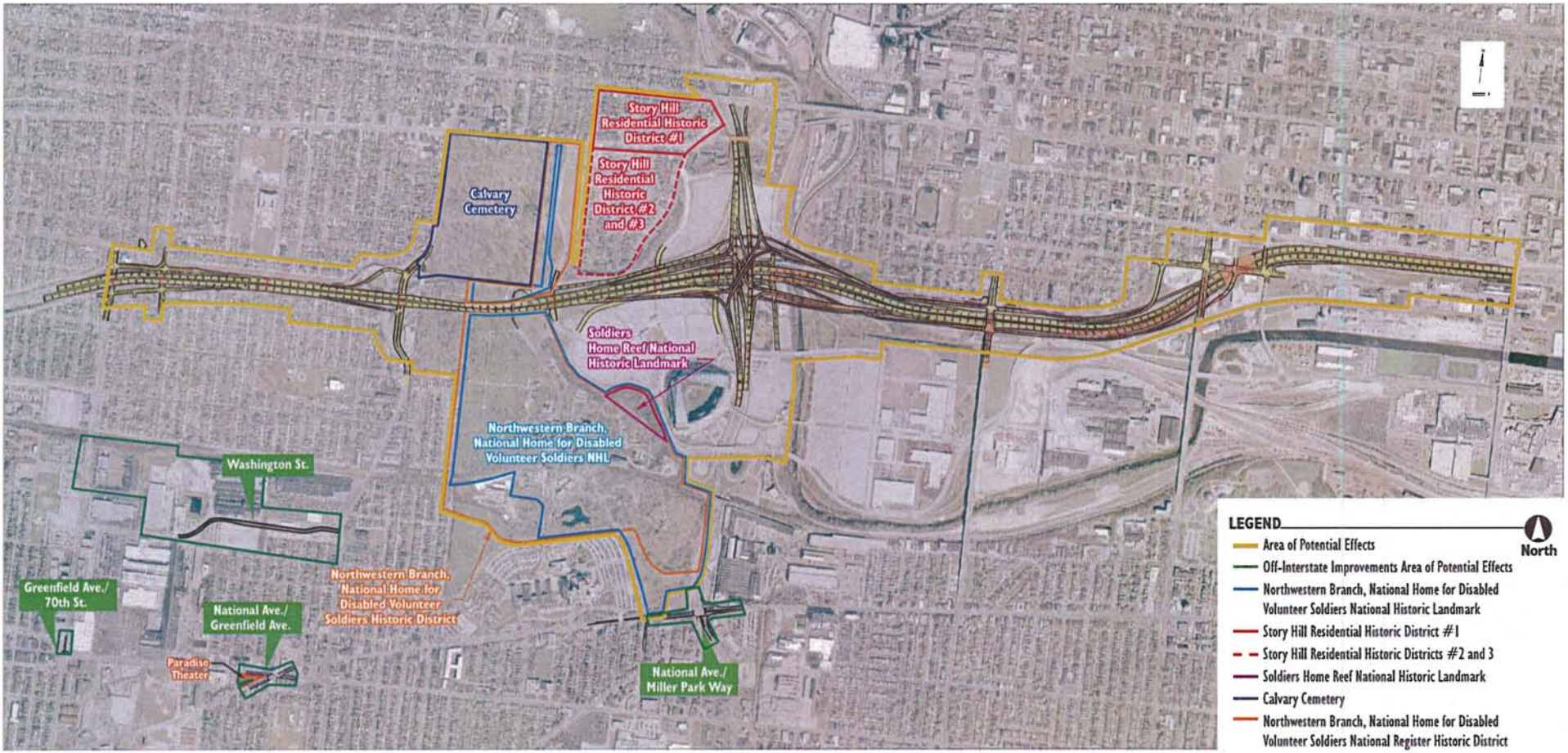
Print Name: _____

Date: _____

Attachment 1
Preferred Alternative


Washington St. Extension
Miller Park Way/ National Ave. Intersection
National Ave./ Greenfield Ave. Intersection
70th St./ Greenfield Ave. Intersection
Wells St.
Wisconsin Ave.
Bluemound Rd.
Fairview Ave.
Dixon St.
Washington St.
National Ave.
St. Paul Ave.
Canal St.
Menomonee River
Layton Blvd
Miller Park Way
Hawley Rd.
Zablocki Dr.
Young Dr.
70th St.
68th St.
64th St.
35th St.
27th St.
24th St.
16th St.
94
41
18
57
59

Attachment 2
Area of Potential Effects Map



Historic Properties Located in the Area of Potential Effect

Appendix D
Traffic Forecast Methodology

Wisconsin Department of Transportation
Division of Transportation System Development
Southeast Regional Office
P.O. Box 798
Waukesha, WI 53187-0798

Scott Walker, Governor
Mark Gottlieb, P.E., Secretary
Internet: www.dot.wisconsin.gov

Telephone: (262) 548-590
Fascimile (FAX): (262) 548-5662

E-mail: serdtsd@dot.wi.gov

TRAVEL FORECASTING METHODOLOGY FOR I-94 EAST-WEST CORRIDOR STUDY

To: Bethaney Bacher-Gresock/FHWA

From: WisDOT I-94 East-West Study Team

Date: January 26, 2016

Updated August 23, 2016

The purpose of this memo is to summarize the process of developing forecasts of future traffic volumes on the I-94 East-West corridor (between 70th to 16th Streets) in Milwaukee, Wisconsin. WisDOT utilized forecasts developed by the Southeastern Wisconsin Regional Planning Commission (SEWRPC) for a variety of purposes on this project. This memo was prepared to address FHWA Wisconsin Division comments on the preliminary Final Environmental Impact Statement (EIS) for this project. This memo was updated in the summer of 2016 to provide further information and clarifications. The updates and clarifications stem from new information provided by SEWRPC and additional explanations on traffic forecasting procedures that arose as part of WisDOT/FHWA meetings.

BACKGROUND

The I-94 East-West Corridor study is within the Southeastern Wisconsin Regional Planning Commission, or SEWRPC, planning area. SEWRPC serves as the area's regional planning commission and metropolitan planning organization. Part of SEWRPC's regional planning activities includes the development of land use and transportation plans.

To develop its long range plans, SEWRPC begins with the land use planning effort. The transportation plan and long range travel demand forecasting is completed after the land use plan is complete. All future needs for transit, street and highway, and other transportation improvements considered in the regional transportation planning process are derived from the future growth proposed in the regional land use plan. SEWRPC first develops regional population, household, and employment forecasts which identify reasonable and desirable expectations for total growth in the region[1]. In developing the year 2035 land use plan, SEWRPC considered community and county land use plans during the allocation of the forecast population and employment throughout the Region. The 2035 regional transportation plan (Planning Report 49, page 365) states that "The final recommended year 2035 regional transportation system plan was designed to serve, and to be consistent with, the year 2035 regional land use plan. Future needs for public transit, street and highway, and other

[1] The population, household, and employment forecasts used to develop the year 2035 land use and transportation plans are documented in the 4th editions of SEWRPC Technical Reports 10 and 11.

transportation improvements considered in the regional transportation planning process were derived from the projected travel based upon the regional land use plan."

However, SEWRPC's development of the land use plan and transportation plan is an iterative process. SEWRPC advised WisDOT in July 2016 that the 2035 regional land use plan assumed the I-94 East-West project would be implemented. This raises the possibility that the design year 2040 no-build forecast WisDOT received from SEWRPC could reflect some induced demand from the I-94 East-West project.

To assess whether it is reasonable to proceed with the design-year 2040 no-build forecast from SEWRPC used to support the no-build analysis in the EIS, WisDOT looked at several factors:

1) The I-94 East-West project lies in a very well developed transportation corridor. The freeway has been in place for 50 years, and an inter-urban streetcar was located in this corridor before the freeway was built.

2) The project will be built on its existing alignment, rather than in "greenfield" area where new development could reasonably be expected to spring up adjacent to the freeway

3) The indirect and cumulative effects analysis for this study, which included input from land use planners and developers, concluded that the land use impact of additional lanes on this segment of I-94 is not expected to be substantial. This is documented in Section 2.2.2 of the January 2016 Indirect and Cumulative Effects report update.

4) Per the ICE analysis (see Section 3.28 and 3.29 of the Final EIS) the travel time savings that would result from adding new travel lanes to an existing freeway are not expected to be great enough to substantially change current land use pattern trends. This was confirmed by SEWRPC's July 2016 estimation of travel time savings of this project as well as past and future freeway reconstruction and widening projects in the I-94 corridor from downtown Milwaukee to Highway 16 in Waukesha County.[2]

5) WisDOT reviewed the low, intermediate and high projections of population, employment and households from SEWRPC's 2035 land use plan (Tables 51, 54 and 55)[3]. SEWRPC ultimately used the intermediate growth projection for these variables. The low growth projections of population, employment and households are 7 to 8 percent lower than the intermediate projections for Milwaukee and Waukesha Counties (the secondary study area). WisDOT then applied an 8 percent reduction to the 2040 design year no-build forecast to assess whether the level of service on this segment of I-94 would meet level of service D (the agreed upon operational design goal). This analysis used Highway Capacity Software, consistent with how level of service was determined throughout the study. This is a very conservative approach, because this one project would not account for the entire 8 percent difference between the low and intermediate projections for the seven-county area. The results of this analysis indicate that 18 of 36 segments of the mainline freeway in the I-94 East-West corridor would still operate at level of service E or F in 2040 under the No-build alternative (Table 1).

[2] The purpose and need for the project does not rely on travel time savings. See Section 1 of the Final EIS for a complete description of the project's purpose and need, also summarized on page 1 of the Record of Decision.
[3] The high projections are not relevant for this analysis.

Table 1

Level of Service	No Build Forecast			
	AM Peak		PM Peak	
	Intermediate Projection (Aug 2012 forecast)	Low Growth Projection (8% Reduction)	Intermediate Projection (Aug 2012 forecast)	Low Growth Projection (8% Reduction)
A	0	0	0	0
B	0	0	0	0
C	2	2	2	3
D	8	16	6	15
E	18	13	20	13
F	8	5	8	5

The results of this analysis, as well as the other reasons cited above, give WisDOT reasonable assurance that it is appropriate to rely on the design year 2040 no-build forecast received from SEWRPC in August 2012 in assessing the purpose and need for the project. WisDOT did not take this analysis any further because there is no need to further document the traffic congestion element of the project's purpose and need statement. Existing traffic volumes (2009) already result in level of service E and F on several segments of I-94 in the study area as documented in the Final EIS Exhibits 1-15 and 1-16.

TRAVEL DEMAND FORECASTING

To estimate transportation use on the region's facilities, SEWRPC utilizes a regional travel demand model. Like all major travel demand models, the greater Southeast Wisconsin region is subdivided into transportation analysis zones, or TAZs. The SEWRPC model consists of several thousand TAZs. The population, household, and employment data developed in the land use plan are applied to TAZs throughout the region in the initial trip generation step to develop the number of trips to and from a particular zone. Travel demand models used by SEWRPC follow a sequence of four main steps (SEWRPC Planning Report No. 49, p 176):

1. **Trip generation**, in which the total number of trips generated in each TAZ of the planning area for the time period under analysis is determined by using relationships established to exist between land use and travel by analyses of the land use and travel inventory data. The output from this step is the total number of trips entering and leaving each TAZ within the model limits.
2. **Trip distribution**, in which the trips generated in each TAZ are linked with trip ends in other TAZs, thereby defining the universe of trips by point of origin and point of destination. The output from this step is the number of trips made between each TAZ.
3. **Modal choice**, in which the number of trips between each TAZ is divided among the travel modes, primarily public transit and automobile. The output of this step is the number of trips made between each TAZ by each mode, also known as trip tables.
4. **Traffic assignment**, in which the TAZ transit trip tables are assigned to existing or proposed alternative future transit system networks and the TAZ vehicle trip tables are assigned to existing or proposed alternative arterial street and highway facility networks. The output of this step is the number of people utilizing the routes and facilities of the existing or proposed public transit system and the number of vehicles utilizing each segment of the existing or proposed public transit and arterial street and highway systems.

Upon completing the four steps, the model describes the use of the entire regional transportation system, including arterial streets, highways and transit lines. To establish forecast future year traffic volumes, SEWRPC first compares model estimated traffic volumes to current and historic traffic count data. Differences between

model's estimated traffic volumes and ground count data are taken into account as SEWRPC develops the future year forecasts based on model estimated future year traffic assignments.

SEWRPC's forecast at the start of the I-94 East-West Corridor study represented 2035 as the horizon year. WisDOT's Facilities Development Manual recommends using a horizon year 20 years after construction as the "design year." At the beginning of the I-94 East-West Study, WisDOT estimated that construction year would be 2020 and the design year would be 2040. To develop a 2040 forecast, which was five years beyond the horizon year of the year 2035 plan, SEWRPC ran the full travel demand model for the year 2030 using the population, household, and employment levels envisioned in the 4th edition of SEWRPC Technical Reports 10 and 11. The vehicle trip tables developed based on the year 2030 socioeconomic conditions were then compared to year 2035 vehicle trip tables to determine a 5 year increment of growth in vehicle trips. This five year increment was then added to the year 2035 vehicle trip table to estimate 2040 vehicle trips and travel patterns. SEWRPC assigned (step 4) the 2040 vehicle trip tables to the highway networks taking into account each alternative being considered. The 2040 vehicle assignments then served as the basis of the year 2040 forecast traffic volumes developed by SEWRPC.

Based on requests from WisDOT and the project team, several alternative model scenarios were developed by SEWRPC to represent proposed alternatives. They included:

- No changes to current design and capacity , commonly known as the No-build[4] alternative
- Eight lanes at-grade with no I-94 access to/from Hawley Road,
- Eight lanes at-grade with partial I-94 access to/from Hawley Road (to/from I-94 west) (preferred alternative), and
- Eight lanes grade separated with full I-94 access to/from I-94, commonly known as the "double deck" alternative.

SEWRPC's 4th generation travel demand models were estimated and calibrated using new data provided by a major origin and destination travel survey completed within the region in 2001. The models were validated for years 2000–2001 by using U.S. Census data and 2001 transportation network data, and comparing model estimates of trip generation, trip distribution, highway traffic, and transit ridership to estimates derived from travel surveys and actual traffic and transit ridership counts. The validation indicated that the models were able to accurately replicate not only observed trip generation, travel patterns, modal choice, and VMT data, but also model-estimated individual arterial street traffic volumes within 10 percent of the observed average weekday vehicular traffic. The models were validated again in 2011 for the year 2008 using year 2008 estimates of households, population, employment, and transportation network data, and comparing estimates of arterial VMT and transit ridership to model estimates derived from actual traffic and transit ridership and found to be within 10 percent. (http://www.sewrpc.org/SEWRPCFiles/Publications/mr/mr-205-assessment-of-conformity-air-quality-standards.pdf; pages 37-38 and Appendix E).

For more detail on the development and use of the travel demand models, refer to Chapter VI of SEWRPC Planning Report No. 49: A Regional Transportation System Plan for Southeastern Wisconsin: 2035.

In July 2016 SEWRPC approved the VISION 2050 regional transportation and land use plan. SEWRPC's regional travel demand model was updated as part of its transportation plan development and now represents the 5th

[4] Other projects included in the 2035 regional transportation plan are assumed to be implemented and land use assumptions/recommendations in the 2035 land use plan are also assumed to be implemented. The no-build scenario is just for this segment of I-94.

generation of the model. WisDOT asked SEWRPC to develop a 2040 build forecast[5] for the I-94 East-West corridor using the 5th generation model (also referred to as the 2050 model, as opposed to the 4th generation model used to develop the 2035 regional transportation plan). The purpose of this request was so WisDOT could assess whether the 5th generation model provided a similar forecast. The 5th generation model's forecast of average weekday daily traffic volumes for 2040 are 1.6 percent to 4 percent lower than the 4th generation model's build forecast (received from SEWRPC in 2014). WisDOT accepts the 4th generation build forecast as valid after considering the 5th generation build forecast and the minimal differences in data between the two forecasts.

WISDOT REVIEW OF TRAVEL DEMAND FORECAST

WisDOT reviews and accepts forecasts developed by the Metropolitan Planning Organization (MPO), in this case SEWRPC, consistent with Chapter 9 of the WisDOT *Transportation Planning Manual* (http://wisconsindot.gov/Pages/projects/data-plan/plan-res/tpm.aspx). Southeast Wisconsin (SEWRPC specifically) is identified (Chapter 9, Section 10, subject 7) as an area where WisDOT does not need to operate the travel demand model application because of SEWRPC's demonstrated expertise in this area. Because of SEWRPC's expertise, the WisDOT Southeast Region Planning unit reviewed the forecasts to confirm they were reasonable. Additional information that documents how WisDOT's process was consistent with Chapter 9 was provided to FHWA on August 2016. The review performed by WisDOT's Southeast Region Planning Unit consisted of 3 checks for reasonableness. The first checked consistency between SEWRPC forecasts, the second checked SEWRPC with TAFIS[6], the third checks growth rates.

1. **WisDOT compared older SEWRPC TDM forecasts to newer SEWRPC TDM forecasts.**
   WisDOT compared the SEWRPC September 2014 Preferred Alternative Build forecast to the SEWRPC July 2012 Build forecast**.**

2. **WisDOT compared recent SEWRPC TDM forecasts to TAFIS**
   WisDOT compared the SEWRPC forecast to WisDOT TAFIS volumes through 2 different tests. The first test compared the SEWPRC's 2012 TDM no build forecast to 2012 TAFIS base counts. The second test compared SEWRPC's 2014 TDM build forecast to the 2012 TAFIC and 2015 TAFIS forecast**.**

3. **WisDOT checked growth rates.**
   WisDOT calculated growth rates between July 2012 TAFIS existing count data points and the corresponding 2014 SEWRPC Build forecast volumes.

A full description of the reasonableness checks performed by WisDOT is documented in project memo titled "Procedural Approach for Comparing TAFIS to TDM" sent to FHWA WI Division in August, 2016.

In addition to the Southeast Region Planning Unit review, the WisDOT project team reviewed the forecast and findings. Based on these reviews, WisDOT and the project team asked SEWRPC to remove its assumption that

[5] This forecast used the preferred alternative as its basis, including the half interchange at Hawley Road. Other design refinements that occurred after the Final EIS publication noted in the Record of Decision are not included in this forecast. These design refinements are largely related to surface streets and would not affect the forecast.

[6] The Traffic Analysis Forecasting and Information System (TAFIS) is a computerized tool that compiles historical traffic volumes at a specific state trunk highway traffic count site and then performs a statistical regression in order to predict future traffic at that site. TAFIS produces forecasts for 40 years into the future. WisDOT has programmed TAFIS as a series of equations where the best fit equation is selected based on available historical traffic volumes at or surrounding each site. TAFIS does not account for roadway classification data or land use development data. TAFIS does not account for the number of lanes on a roadway.

capacity expansion will occur on National Avenue and Greenfield Avenue in West Allis. Through coordination with West Allis, the project team ascertained that capacity additions are unlikely to occur on these roadways through elimination of on-street parking. SEWRPC revised their forecasts accordingly.

The forecast was accepted after the WisDOT project team's request was resolved by SEWRPC.

As noted on page 4, WisDOT asked SEWRPC to use its recently developed 2050 travel demand model to assess whether the forecast is comparable to the forecast received in 2012 from the 2035 travel demand model.

PROJECT TEAM'S USE OF SEWRPC TRAVEL DEMAND FORECAST

After review and approval, WisDOT's project team utilizes the design year daily no-build forecast volumes for the Purpose and Need statement. In addition to the daily volume forecasts, WisDOT's project team utilized and applied SEWRPC peak hour forecasts to be used in the various parts of the study for summarization within the EIS. A summary of the process follows.

As noted, the peak hour data from SEWRPC were provided in the form of a trip table that was specific to the study area. The study-specific trip tables are a summary of trips on the network in to and out of the study area. There are trip tables for the morning and evening peak hours for the base year and each alternative in the design year.

For each of the alternatives noted on page 4, WisDOT and the project team assessed the rate of change in traffic volumes between the base year and design year from the respective SEWRPC forecasts. The assessment included both the percent change and relative change in traffic volumes. The design year peak hour, study-specific trip tables were then assigned to the study area roadway using a microsimulation model. Results from the model are used to establish alternative-specific design year peak hour traffic volumes for the study area. These traffic volume forecasts were then used in various analyses for the EIS.

The Build Alternative forecasted volumes were used for several analyses within the study, including:

- Traffic microsimulation and capacity analysis determines the operational characteristics of the traffic interacting with the alternative networks.
- The air quality analysis estimates the impacts on air quality of the alternatives in the design year
- The noise impact analysis estimates noise levels in the design year and determines where noise barriers may be justified for installation.
- The safety analysis estimates the change in crashes for each of the alternatives.
- The construction traffic management plans utilize traffic volumes to estimate any necessary improvements to impacted locations due to construction traffic.

None of the results of these analyses affect the assessment of the project's ability to meet the purpose and need. More detailed steps on the development of peak hour volumes for microsimulation modeling can be found in the attached memo, *I-94 E-W Corridor Studies Traffic Volume Forecasting Methodology* (January 2013).

I-94 E-W

TRAVEL FORECASTING METHODOLOGY

1: TRAVEL DEMAND FORECASTING

Land Use Plan → Transportation Plan

Travel Demand Model

How many trips are occuring? — Trip Generation (TG)

+

Where are trips going to and coming from? — Trip Distribution (TD)

+

What method of travel? — Modal Choice (MC)

What route are trips taking? — Traffic Assignment (TA)

Trip tables generated

Design Year Forecast Traffic Volumes

What goes into SEWRPC's forecast?

When creating a forecast, WisDOT recommends using a design year 20 years or more after the start of construction.

Base Year	+	≥20 Years	=	Design Year
Construction begins				*At least 20 years after construction begins*
2020		**I-94 E-W Project**		**2040**

For the I-94 E-W project, WisDOT estimated a base year of 2020 and a design year of 2040.

Using trip tables (TT) information from their existing 2035 Plan, SEWRPC was able to create TTs for the I-94 E-W project design year of 2040.

SEWRPC assigned the 2040 trip tables to the highway networks, taking into account each alternative being considered.

TA	TA	TA	TA
No-Build Alternative	Eight lanes at-grade; no I-94 access	Eight lanes at-grade; partial I-94 access	Double deck alternative
No changes to current design and capacity	*No access to/ from Hawley Rd*	*Access to/from Hawley Rd and I-94 west*	*Eight lanes grade separated with full access to/ from I-94*

SEWRPC → WisDOT → SEWRPC → WisDOT

SEWRPC provides forecast to WisDOT

WisDOT reviews and provides comments to SEWRPC

SEWRPC addresses comments and resubmits forecast to WisDOT

WisDOT accepts forecast

2: WisDOT REVIEW of TRAVEL DEMAND FORECAST

WisDOT reviews and accepts forecasts developed by the Metropolitan Planning Organization (MPO). In the case of the I-94 E-W project, the MPO is SEWRPC.

Accepted Travel Demand Forecast

SEWRPC Growth

The growth between the base year and the design year

Peak hour-based

→

WisDOT Traffic Volumes

Traffic volumes as established by WisDOT

Alternative specific | Peak hour | Design year

Study Analyses

3: PROJECT TEAM'S USE of SEWRPC TRAVEL DEMAND FORECAST

After approval, WisDOT and the project team utilize the accepted travel demand forecast volumes for several analyses within the study.

- Traffic microsimulation and capacity *analysis*
- Safety *analysis*
- Air quality *analysis*
- Noise impact *analysis*
- Construction *analysis*

To: Keegan Dole, I-94 East-West Traffic
Ertan Ornek, Diodos Engineering

From: Rob Beuthling, PE,
Marty Hawley, PE

Subject: I-94 E-W Corridor Studies Traffic Volume Forecasting Methodology

Date: September 28, 2012
Updated January 29, 2013

1. INTRODUCTION

Following the establishment of the existing calibrated Paramics models, the next step is to forecast traffic volumes to represent future year conditions. The main objective of the traffic forecasts is to provide insight into the traffic volumes that can be expected on the network as well as the turning movements and operations at the interchange intersections.

The peak hour microsimulation forecasts are based on the growth in travel volumes established by the demand model for each origin-destination pair in the modeled area. The main advantage of this process is to capture traffic increases in specific areas where a general, model-wide rate may under or over-estimate growth.

To forecast traffic for use in evaluation of alternatives, HNTB utilizes Paramics and travel demand models and the underlying trip tables that load traffic on to the roadway network. The first process is to forecast the trip tables for input in the Paramics models that represent future volume conditions. The second process utilizes the output of the future Paramics models, typically in segment and turning movement counts and develops design traffic volumes. The two processes are explained below.

2. FUTURE YEAR PARAMICS TRIP TABLE FORECASTING PROCESS

In the first process, HNTB utilizes three methodologies to forecast trip tables for input into Paramics. The result of each method is reviewed for each trip pair in the trip table in context of volume and trip ends of the trips being represented. Each method starts with the existing (base), calibrated Paramics trip table.

In Method A, the percent and actual difference between the base and future year travel demand model trips are applied to the calibrated base year Paramics trip table for each individual origin-destination trip pair. The average of the percent difference forecast and the absolute difference forecasts is consider the result of method A.

Method B incorporates any adjustments made during existing Paramics model calibration and applies the adjustments to the future base travel demand model trip tables for the AM and PM peak.

Method C applies the corridor-wide travel demand growth rates to the calibrated base year Paramics trip table. The specific growth rate will be established is established for each peak hour based on the final SEWRPC forecasts.

For each origin-destination trip pair in the entire matrix, the engineer evaluates the result of each method manually and applies a forecast method for each trip pair. The resulting forecasted value for that trip pair (and every other trip pair) is then used as input for the future year Paramics model run.

3. Peak Hour Design Traffic Forecasting Process

After the future input trip tables are complete and accepted, they are input in a "free flow network." A free flow network typically is the no-build network with any intersection control removed and mainline capacity temporarily added. This removal of control and additional capacity allows all traffic to complete their trip within Paramics and therefore be fully assigned to the network. Subsequent analysis of no-build traffic operations with Paramics restores the traffic control and original capacity.

The assigned mainline, ramp and intersection volumes are extracted from the free flow network and used to begin the future design volumes. The volumes are compared with the existing volumes in several checks that incorporate the calibration of the model and associated growth. These include:

- characteristics such as calibrated level (within a GEH[1] 5 of the existing balanced count),
- if the modeled volume is greater than the existing balanced count, and
- if the future volume is greater than the existing Paramics model volume and the balanced count.

Based on the aforementioned parameters, there are essentially four different scenarios used to determine forecast volumes for planning and design purposes for the future horizon year. They are described below. The flowchart shown in **Figure 1** diagrams the process.

<u>Case 1:</u>

In cases where:

- the existing Paramics model assignment matches is within GEH 5 of the existing balanced count, and
- the future modeled volume is greater than the existing modeled volume, and
- both the existing and future modeled volumes are greater than the existing balanced count,

The future Paramics modeled volume is accepted as the future forecast volume.

The future forecast volume is used in this situation because as expected the future Paramics model volume is showing growth over the existing Paramics model volume which was already higher than the balanced count. Thus, a somewhat conservative forecast is attained.

<u>Case 2:</u>

In cases where:

- the existing Paramics model assignment matches is within GEH 5 of the existing balanced count, and

[1] The GEH statistic is calculated using the following equation:

$$\text{GEH} = \sqrt{\frac{(M-C)^2}{(M+C)*0.5}}$$

Where: M = Modeled Flow (vehicles / hour)
C = Target Flow (vehicles / hour)

- the future Paramics modeled volume is greater than the existing Paramics modeled volume,
- but the future Paramics modeled volume and existing Paramics modeled volume are both not greater than the existing balanced count,

The growth rate between the existing and future modeled volumes is applied to the existing balanced count and accepted as the future forecasted volume.

In this case, the Paramics model growth rate is used because even though the future model volume is higher than the existing Paramics model volume, they are not both higher than the balanced count. Therefore, the Paramics model growth rate is applied to the count to attain a more conservative forecast volume.

Case 3:

In cases where:

- the Paramics future modeled volume is not greater than the existing Paramics modeled volume, OR
- the existing Paramics model assignment is not within GEH 5 of the existing balanced count AND the future Paramics modeled volume is not greater than the existing balanced count,

The corridor-wide annual growth rate (specific peak rate) is applied to the existing balanced count.

The Paramics model is verified to ensure no calibration or validation errors are made at these locations. In these cases, the Paramics future model is not showing the volume growth that is expected; therefore the average corridor growth rate is applied instead.

Case 4:

In cases where:

- the existing Paramics model assignment is not within GEH 5 of the existing balanced count, and
- the future Paramics modeled volume is greater than both the existing Paramics modeled volume and the balanced count,

The growth rate between the existing and future Paramics modeled volumes is applied to the existing balanced count and accepted as the future forecasted volume.

The Paramics model growth rate is used and applied in these cases because even though it is not calibrated within GEH 5, the demand model growth is still represented.

Each of the mainline, ramp and turning volumes go through the above process and each are reviewed for consistency. The entire set is then balanced for use in design and analysis purposes. The results are not typically integrated back into the Paramics model.

4. SKYCOMP DATA USE

In the previously approved forecasting methodology for the I-94 East-West project, the processes to calibrate the existing models and forecast future volumes include the use of trip tables from SEWRPC.

For the existing model calibration, the intended use of these trip tables is to provide a “seed” from which to start the volume calibration process. Since the project collected field-based origin-

destination information via Skycomp for the study area, the results of that data collection will replace the SEWRPC trip tables as the seed.

For the forecasting process, the SEWRPC trip tables will still be used to compare the growth for each trip pair within study area. No other changes to the overall calibration and forecasting process are necessary.

It is anticipated that the use of the field based data will provide efficient and accurate delivery of the existing and future conditions in the I-94 East West Corridor Study.

5. CONVERGE TO SEWRPC FORECAST

The approved forecasting methodology created 2040 peak hour ramp, mainline, and turning movement volumes that differed from SEWRPC's approved peak hour forecasts. It is desired that both forecasts complement each other. To converge both forecasts, HNTB enhanced the approved forecasting methodology, to represent SEWRPC's ramp and mainline forecasts, by the following three steps:

- Step 1: SEWRPC's forecasts are based on a design alternative with access options that do not match the current design alternatives. This requires manipulation of SEWRPC's ramp and mainline forecasts to account for access changes in the two design alternatives.
- Step 2: Modify the HNTB forecasted peak hour OD matrices to match the design alternative specific SEWRPC ramp and mainline forecasts developed in step 1.
- Step 3: Forecast peak hour turn movements based on Paramics modeled volume using HNTB's enhanced OD matrices developed in Step 2.

<u>Step 1:</u>

The SEWRPC ramp and mainline forecasts represent a design alternative that does not match the proposed access points of the two design alternatives. SEWRPC's approved forecasts are adjusted to represent each design alternative and considers route changes based on a vehicles ability to travel between study area O-D pairs. The two principals for developing the SEWRPC based design specific forecasts are:

- Trips are created if access increases from SEWRPC's design alternative. The quantity of trips that increase is based on OD pairs from HNTB's original forecast.
- Trips decrease if access decreases. The quantity of trips that decrease for forecasts is based on OD pairs from SEWRPC's balanced OD matrices.

<u>Step 2:</u>

After SEWRPC based forecasts are developed for each design alternative, the O-D matrices forecasted by HNTB's approved methodology were enhanced to represent SEWRPC's adjusted ramp and mainline forecasts (developed in Step 1). The O-D matrices are modified by determining the O-D pairs associated with each mainline access point and iteratively assigning factors to converge the forecasted matrices. Since SEWRPC's forecast volumes are only assigned to the mainline and ramps, any O-D pair that does not enter the freeway system is not adjusted from HNTB's original forecast.

<u>Step 3:</u>

The turning movement forecasts use the Paramics modeled volumes from the enhanced O-D matrices for each design alternative and then are balanced to the ramp forecasts. The process described in section 3 of this document is not used for forecasting turn movements based on the Enhanced OD matrices.

Figure 1: Traffic Forecasting Methodology