Illinois Department of Transportation

Approval of Design Variance

Project Identification

Local Agency: Marshall County Highway Department (County, Municipality, Road District / Township) County: Marshall

Section No.: 99 - 00080 - 00 - FP Route: F.A.S. 372

Street/Road Name: CH 6 / Western Avenue

Project Limits: Project begins approximately 2.5 miles west of the CH 6 intersection with IL 29, and proceeds west for 1.042 miles, ending approximately 3.5 mi. east of the intersection of CH 7 with CH 6.

Project Length: 5500 ft (1.042 mi.) Functional Classification: Collector

Design Year: 2040 Design Traffic: ☐ DHV _____ ☒ ADT 850

Existing Structure No.: _____ Proposed Structure No.: 062-3095

Project Scope of Work

a. Is this project located on the NHS? ☐ Yes ☒ No

b. Is this project on a Strategic Regional Arterial (SRA) route? ☐ Yes ☒ No

c. Funding ☐ MFT/State Assistance ☒ Federal

d. Type of Work ☒ New Construction ☒ Reconstruction ☐ 3R

e. Design Guidelines ☐ Urban ☐ Suburban ☒ Rural ☐ 3R ☐ Other _____

f. Provide a brief project description (major construction elements):
The proposed improvement consists of the new construction of 1.042 miles of Western Avenue on a new horizontal and vertical alignment, thus eliminating a winding and steep portion of the existing roadway. The design speed for the new construction is 50 MPH. The project is in a rural location and an open roadway section will be used. The new pavement will be designed for 80,000 lb. trucks. The proposed roadway for Western Ave will consist of a 24' wide, HMA pavement (striped for 22', one 11' lane in each direction) with 5' aggregate shoulders (6' total shoulder width). There will be no parking, bicycle or turn lanes, sidewalks, or multi-use paths present along the proposed improvement. The roadway foreslopes will be 3:1 H:V, with 3:1 H:V back slopes and a two-foot bottom ditch

District Coordination Meetings

Has project been previously discussed at district coordination meetings? ☒ Yes ☐ No
(If yes, attach minutes of variance approvals)

Dates: 9/13/2001, 12/5/2007

Level One Design Variance Approval

Local Agency: Marshall County Highway Department Section No.: 99-00080-00-FP

Design Criteria for Project (Provide numerical value where indicated)	BLR&S Criteria	Variance Yes	Variance No	Summary of Variance and Justification
1. Design Speed: 50 mph	40 mph	☐	☒	
2. Level of Service (Mainline): N/A	C	☐	☒	
3. Lane Widths				
a. Through Lanes: 11 feet	11'	☐	☒	
b. Turn Lanes: N/A feet	11'	☐	☒	
c. Parking Lanes: N/A feet	11'	☐	☒	
d. Bike Lanes: N/A feet		☐	☒	
4. Through Travel Lane Cross Slopes				
Inside Lane: 2.0 %	1.5%-2%	☐	☒	
Outside Lane: N/A % (if more than 2 lanes)		☐	☒	
5. Shoulder Widths: 5 feet	4'-6'	☐	☒	
6. Horizontal Curvature (Minimum Radius)				
2,864.79 feet	758'	☐	☒	
List curves not meeting criteria				
Sta. Radius Design Speed				
		☐	☒	
		☐	☒	
		☐	☒	
7. Superelevation Rates				
e_{max} 8.0 %	8.0	☐	☒	
List curves for which e does not meet criteria				
PI Sta. Radius e Design Speed				
		☐	☒	
		☐	☒	
		☐	☒	
8. Maximum Grade: 6.0 %	7.0%	☐	☒	
9. Minimum Intersection Sight Distance				
700 feet	555'	☐	☒	
List locations not meeting the criteria				
Cross Road Distance				
		☐	☒	
		☐	☒	
		☐	☒	
10. Minimum Stopping Sight Distance				
425' feet	425'	☐	☒	
a. Crest Vertical Curves – Min. K_{value} 88	84	☐	☒	
List curves not meeting the criteria				
VPI Sta. Sight Distance Design Speed Curve Length				
		☐	☒	
		☐	☒	
		☐	☒	
b. Sag Vertical Curves – Min. K_{value} 100	96	☐	☒	
List curves not meeting the criteria				
VPI Sta. Sight Distance Design Speed Curve Length				
		☐	☒	
		☐	☒	
		☐	☒	

Level One Design Variance Approval

Local Agency: Marshall County Highway Department Section No.: 99-00080-00-FP

c. Inside of Horizontal Curves **List curves not meeting the criteria** Sta. Sight Distance Design Speed Radius		☐ ☐ ☐	☒ ☒ ☒	
11. Clear Roadway Bridge Widths: 34 feet	28'	☐	☒	
12. Freeboard Above Design High Water: N/A feet	1'	☐	☒	
13. Vertical Clearances: ☐ Over Roadway/RR _____ feet ☐ Under Structure _____ feet		☐ ☐	☒ ☒	
14. Accessibility Criteria for Disabled Persons **List any feature not meeting ADA Criteria**		☐	☒	
15. Roadside Clear Zone: a. Tangent 12 feet b. Outside of Curve 12 **List criteria for each radius** Radius (ft) Clear Zone (ft)	12' 12'	☐ ☐ ☐ ☐ ☐	☒ ☒ ☒ ☒ ☒	
16. Intersection(s) Level of Service: N/A		☐	☒	
17. Warrants for Stop Signs or Signals Cross Road Warrant		☐ ☐ ☐	☒ ☒ ☒	
18. Pavement Design (list any variance to policy)		☐	☒	

Prepared By: [signature] Date: 05-12-21
Designer (Local Agency or Consultant)
for HLR, Inc

When Prepared by Consultant
Local Agency Concurrence: [signature] Date: 5-13-2021

IDOT Regional Engineer Concurrence Date Central BLR&S Approval Date

Exhibit E-23

Level Two Design Variance Approval

Local Agency: Marshall County Highway Department Section No.: 99-00080-00-FP

Design Criteria for Project (Provide numerical value where indicated)	BLR&S Criteria	Variance Yes	Variance No	Summary of Variance and Justification
1. Design Period: 20 years	20 years	☐	☒	
2. Horizontal Alignment (Mainline)				
a. Minimum Superelevation Transition Lengths: 113 feet	113	☐	☒	
b. Superelevation Distribution Between Tangent and Curve: 2/3	2/3 : 1/3	☐	☒	
3. Vertical Alignment (Mainline)				
a. Minimum Grade of Urban Cross Section 2.00 %	0.3%	☐	☒	
b. Minimum Length of Vertical Curves 300 feet	150	☐	☒	
c. Maximum K value of Vertical Curves (for curbed facilities) N/A	167	☐	☒	
4. Cross Section Elements (Mainline)				
a. Design of Parking Lanes				
• Cross Slope: N/A %		☐	☒	
b. Design of Sidewalks				
• Width: N/A feet	4 feet	☐	☒	
• Buffer Distance: N/A feet	2 feet	☐	☒	
• Cross Slope: N/A %	2% max.	☐	☒	
• Longitudinal Grades: N/A %	5% max.	☐	☒	
c. Median				
• Type: N/A		☐	☒	
• Width: N/A feet		☐	☒	
d. Shoulder Cross Slopes: 4.0 %	4.0%-6.0%	☐	☒	
e. Rollover Factor 8 %	8%	☐	☒	
f. Curb and Gutter Type N/A		☐	☒	
g. Roadway Element				
• Steepest Front Slopes: 3:1 (H:V)	3:1	☐	☒	
• Steepest Back Slopes: 2:1 (H:V)	3:1	☒	☐	2:1 back slopes will be constructed from Station 32+00 RT to 33+50 RT and from 82+00 RT to 84+00 RT. These slopes match the existing back slopes and are located at the beginning and ending limits of the project where proposed Right-of-Way is not being purchased.
5. Drainage (Flood Frequency)				
a. Pavement: 20 years	20 years	☐	☒	
b. Structure: 20 years	20 years	☐	☒	
c. Storm Sewer: N/A years		☐	☒	

Level Two Design Variance Approval

Local Agency: Marshall County Highway Department Section No.: 99-00080-00-FP

6. Intersections				
a. Level of Service for Individual Movement:				
• Through Lanes: N/A		☐	☒	
• Turn Lanes: N/A		☐	☒	
b. Skew Angle: 10 Degrees	15 Degrees	☐	☒	
c. Approach Grades: 1.10 / 2.70 %	<5.00%	☐	☒	
d. Design Vehicle: WB-50	WB-50	☐	☒	
e. Turning Radius for Design Vehicle: 45'	45'	☐	☒	
f. Minimum Corner Island Size: N/A		☐	☒	
g. Minimum Turn Lane Length N/A feet		☐	☒	
• Approach Taper: N/A_____ feet		☐	☒	
• Departure Taper: N/A_____ feet		☐	☒	
• Bay Taper: N/A_____ feet		☐	☒	
h. Entrances				
Entrance Type / Max. Width (ft.) / Min. Width (ft.) / Max. Grade(%)				
Commercial N/A N/A N/A		☐	☒	
Residential N/A N/A N/A		☐	☒	
7. RR Crossings				
a. Type of Railroad Protection: N/A		☐	☒	
b. Crossing Width (at 90° angle) N/A feet		☐	☒	
8. Lighting				
a. Illuminance N/A lux		☐	☒	
b. Uniformity Ratio N/A		☐	☒	
9. Other Items				
_____		☐	☒	

Prepared By: [signature] Date: 5-12-21
Designer (Local Agency or Consultant)
for HLR Inc

When Prepared by Consultant
Local Agency Concurrence: Pat G. [signature] Date: 5-13-2021

[signature] 11-18-2021
IDOT Regional Engineer Concurrence Date

Central BLR&S Approval Date

CROSS SECTION ELEMENTS (MAINLINE)
PROPOSED 2:1 DITCH BACK SLOPES

A variance is requested to allow the ditch back slopes from station 32+00 RT to 33+50 RT and from station 82+00 RT to 84+00 RT to be constructed at a 2:1 H:V slope. These sections are located at the beginning and ending limits of the project where the proposed roadway is matching into existing Western Avenue's alignment and right-of-way.

The required design for the proposed new alignment of Western Avenue, a rural two-lane collector with design ADT between 400 and 2000, is 3:1 H:V back slopes (BLR Figure 32-2B). The back slopes in the ditches along the existing Western Avenue in these two areas are as steep as 2:1 H:V, and the proposed improvements will be constructed to meet existing back slope conditions. The elevation of the embankment within these two isolated areas is higher than the embankment immediately up station and down station. This causes the existing backslopes to be steeper within these station ranges than the surrounding areas. From station 82+00 to 84+00 RT, constructing a 3:1 backslope would encroach on the crop line of the farm field which runs along the top of the back slope. Further, in order to maintain positive drainage within these areas, the elevation of the ditch bottom cannot be raised to alleviate the steeper back slopes. Approval of this Level II Design Variance would eliminate the need to chase the existing grade of the back slopes within these isolated areas and eliminate impacts to the current land use outside of the existing right-of-way. See attached cross sections for more information.

These small areas are located within the existing Western Avenue alignment at the beginning and ending of the proposed project. They are only 150' to 200' feet in length and are estimated to be only 0.02 to 0.04 acres. The area on the west end of the proposed project (from station 82+00 to 84+00 RT) will involve right-of-way purchase from a property owner who is currently not involved in the right-of-way acquisition process for this project. Approval of this Level II Design Variance would eliminate the need for, and costs associated with, additional meetings with the property owners, negotiations and actual cost of additional right-of-way purchase, and the platting of additional right-of-way.

The remainder of the ditches to be built on this project will be 2 foot bottom ditches with 3:1 H:V front slopes and back slopes. See the attached plan and profile sheets for the proposed alignment, limits of construction, and limits of proposed right-of-way.

APPENDIX

APPENDIX

A-1	Class of Action Determination Document (May 2010 PDR)
A-2	Bridge Condition Report Approval
A-3	Coordination with Local & Emergency Service Agencies (May 2010 PDR)
A-4	Coordination with ACOE
A-5	Noise Analysis Report

Illinois Department of Transportation

Class of Action Determination Record

Route: FAS 372 (CH6 Western Ave.)

Section: 99-00080-00-RS

Location/Termini: Project begins 2.5 miles west of Henry and extends westerly for 1.42 miles to the top of the bluff.

County: Marshall

Job Number:

Date of Field Review:

Date of Initial Presentation:

Date of Latest Revision:

Appendix /
Sheet of

BDE 2314 (Rev. 8/00)

Resource & Issues	Potential Involvement (MM,DD,YY)		Analysis and Results		Impacts Present (MM,DD,YY)		Status
	Yes	No	Date	Use Journal Type of Description	Yes	No	
I. Social/Economic							
1. Relocations - Business and Residential		12/20/07	12/20/07	No relocations required			
2. Changes in Travel Patterns	12/20/07		12/20/07	Local residents will no longer be able to travel west on existing Western Ave. To access Western Ave. the local residents will need to travel east on existing Western Ave. to the new intersection with the proposed portion Western Ave. A cul-de sac will be constructed at the western termination point of existing Western Ave.			
3. Economic Impacts		12/20/07	12/20/07	No impacts			
4. Change in Land Use & Economic Development		12/20/07	12/20/07	No changes			
5. Community Cohesion		12/20/07	12/20/07	Residences will have less thru traffic passing by.			
6. Public Facilities and Services	12/20/07		5/21/10	Mail routes and school bus routes will be altered as the existing portion of Western Ave. within the proposed project limits will be limited to one location for access to the proposed portion of Western Ave. Letters sent to agencies on 5/21/2010			
7. Title VI and Other Protected Groups		12/20/07	12/20/07	The project will follow "American with Disabilities Act Accessibility Guidelines for Buildings and facilities," 36 CFR part 1191 to ensure the project meets the goals of the Americans with Disabilities Act (ADA).			
8. Environmental Justice		12/20/07	12/20/07	NA			
9. Pedestrian & Bicycle Facilities		12/20/07	12/20/07	The project is rural in nature and no provisions for special facilities to accommodate pedestrians, bicyclists, or the handicapped are planned. The facility should be able to accommodate the occasional non-motorized user because of the low traffic volumes and good site distance.			
II. Agricultural							
	12/20/07		12/20/07	24 acres of ROW are required for this project of which 4.9 acres are prime & unique farmland. Coordination with the IDOA and NRCS has been initiated on 5/6/2010 and compliance received on 5/18/2010.		5/18//10	
III. Cultural							
1. Archaeological Sites			12/20/07 5/6/10	ESR submitted on 11/15/2007 USER submitted			
2. Historic Bridges			12/20/07 5/6/10	ESR submitted on 11/15/2007 USER submitted			
3. Historic Districts and Buildings			12/20/07 5/6/10	ESR submitted on 11/15/2007 USER submitted			

Resource & Issues	Potential Involvement (MM,DD,YY)		Analysis and Results		Impacts Present (MM,DD,YY)		Status
	Yes	No	Date	Use Journal Type of Description	Yes	No	
IV. Air Quality							
1. Attainment/Nonattainment Status		12/20/07	12/20/07	Project is in an attainment area			
2. Microscale Analysis		12/20/07	12/20/07	NA as traffic ADT is less than 16,000.			
V. Noise							
		12/20/07	12/20/07	The proposed project is on a new alignment. There is one residence and the closest building corner is 300 feet from the centerline of the proposed roadway. The building corner is 300.24 ft right of station 59+33.14. This same building corner is 329 feet from the existing roadway. The new alignment should not significantly increase the noise level.			
VI. Energy							
		12/20/07	12/20/07	Construction of the proposed improvement will require indirect consumption of energy for processing materials, construction activities and maintenance for the lane kilometers (miles) to be added within the project limits. Energy consumption by vehicles in the area may increase during construction due to possible traffic delays. Construction of the proposed improvement will reduce traffic congestion and turning conflicts along the route and thereby reduce vehicular stopping and slowing conditions. Additional benefits would be realized from increased capacity and smoother riding surfaces. This will result in less direct and indirect vehicular energy consumption for the build alternative than for the no-action alternative. Thus, in the long term, post-construction operational energy requirements should offset construction and maintenance energy requirements and result in a net savings in energy usage.			
VII. Natural Resources							
		12/20/07	12/20/07	ESR submitted on 11/15/2007. Biological and Wetland clearance received on 11/20/2007			
VIII. Water Quality/Resources							
1. Surface Water Resources/Quality		12/20/07	12/20/07	ESR submitted on 11/15/2007. A tributary to Crow Creek which is a permanent stream is located within the project limits.			
2. Permits	12/20/07		12/20/07	Work will be covered by a Individual 404 permit. A NPEDS permit will be required.			
3. Groundwater Resources/Quality		12/20/07	12/20/07	This project will not create any new potential "routes" for ground water pollution or any new potential "sources" of groundwater pollution as defined in the Illinois Environmental Protection Act (415 ILCS 5/3, et seq.) Accordingly, the project is not subject to compliance with the minimum setback requirements for community water supply wells or other potable water supply wells, as set forth in 415 ILCS 5/14, et seq.			

Resource & Issues	Potential Involvement (MM,DD,YY)		Analysis and Results		Impacts Present (MM,DD,YY)		Status
	Yes	No	Date	Use Journal Type of Description	Yes	No	
IX. Flood Plains							
1. 100-Year Flood Plain		12/20/07	12/20/07	Proposed work does encroach on the 100 year high water level of an unnamed tributary to Crow Creek, which is within the boundaries of Zone C on the FEMA FIRM.			
2. Regulatory Floodway		12/20/07	12/20/07	Proposed work does not cross or encroach upon a a regulatory floodway			
X. Wetlands							
		12/20/0	12/20/0	ESR submitted on 11/15/2007. Biological and Wetland clearance received on 11/20/2007		11/20/07	
XI. Special Waste							
		12/20/0	12/20/0	Based on application of the Special Waste Assessment Screening Criteria, it has been determined this project will not involve nor impact any CERCLIS sites, or other sites potentially impacted with regulated substances. The most recent screening of the project area was completed in 9/07			
XII. Special Lands							
1. 4(F)		12/20/0	12/20/0	No lands of this type are involved with this project.			
2. 6(F)		12/20/0	12/20/0	No lands of this type are involved with this project.			
3. Open Space Lands Acquisition and Development (OSLAD) Act Lands		12/20/0	12/20/0	No lands of this type are involved with this project.			
XIII. Other Issues							
		12/20/07	12/20/07	There are no others issues involved with this project.			

Resource & Issues	Potential Involvement (MM,DD,YY)		Analysis and Results		Impacts Present (MM,DD,YY)		Status
	Yes	No	Date	Use Journal Type of Description	Yes	No	

XIV. Permits Required (Check each that applies.)

404 - Individual	x	See Resource and Issues # _____ for discussion.
404 - Nationwide		See Resource and Issues # _____ for discussion.
NPDES	X	See Resource and Issues # _____ for discussion.
Coast Guard		See Resource and Issues # _____ for discussion.
IDNR - Office of Water Resources		See Resource and Issues # _____ for discussion.
		See Resource and Issues # _____ for discussion.
		See Resource and Issues # _____ for discussion.
		See Resource and Issues # _____ for discussion.

XV. List of Preparers

Initials	Name	Organization
LFS	Louis Stauder	Hampton Lenzizi & Renwick Inc. Springfield Illinois

Attention: Central Office BD&E
Environment Section
Room 330

Environmental Survey Request

A. Project Information ☑ Bio ☐ Cultural ☐ Wetlands ☐ Special Waste

Submittal Date: 11/15/2007 Sequence No: 14124
District: 4 Requesting Agency: Local Project No:
Contract #: Job No.:
Counties: Marshall
Route: FAS 372 Marked:
Street: Western Avenue (CH 6) Section: 99-00080-00-FP
Municipality(ies) Project Length: 1.674 km 1.04 miles
FromTo (At): Station 30+00 to Station 85+00
Quadrangle: Lacon Township-Range-Section: T13N, R9E, 4th P.M., Sec. 13 & 14
Anticipated Design Approval: 01/01/2009

B. Reason for Submittal: (Check all that apply)

☑ Acquisition of additional ROW or easement 9.5910345 ha/ 23.7 acres
☑ In-Stream Work Stream Name: Tributary to Crow Creek
☐ Other:

C. Project Description: Construction of 1.04 mi. of roadway on new alignment. Pavement surface to be 24' in width with 4' shoulders. 8' x 6' double RC box culvert constructed for Crow Creek trib. Pipe & ditches to maintain drainage patterns. Remove exist SN 062-3087

Proposed Work: ☑ Highway ☐ Bridge ☐ Bike Trail ☐ Other

D. Tree Removal?: Yes Number?: 145 ha/ acres

Existing Bridge(s) Structure Number:	062-3087	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	062-3088	On Historic Bridge List:	No

Historic District Involved? No Historic Buildings Involved? Don't Know
Section 4(f) Lands Involved? Don't Know Section 6(f) Lands Involved? Don't Know
Wetland delineation performed by: BDE End. Species Consultation performed by: BDE

E. Funding: ☑ Federal ☐ State ☐ TBP ☐ MFT ☐ Local Non-MFT
☐ 404 Permit Required Anticipated Processing: ECAD

F.

Contact Person:	Scot LaSalle	Local Contact Person:	George Meister
Telephone #:	(309) 671-3690 ext.	Telephone #:	(309) 246-6401 ext.
Env.Contact:	Tony Sassine	E-Mail:	byteme@joysta.com
Telephone #:	309-671-3696	Title/Company:	

☐ Field Sign Off (Bio & Cultural Only) ☑ Received in CO 11/20/2007 ☐ SW Received

BIOLOGICAL & WETLAND RESOURCES
NO SURVEY OR FURTHER COORDINATION REQUIRED
11-20-07
Thomas C. Brooks
SIGNED (SED) DATE

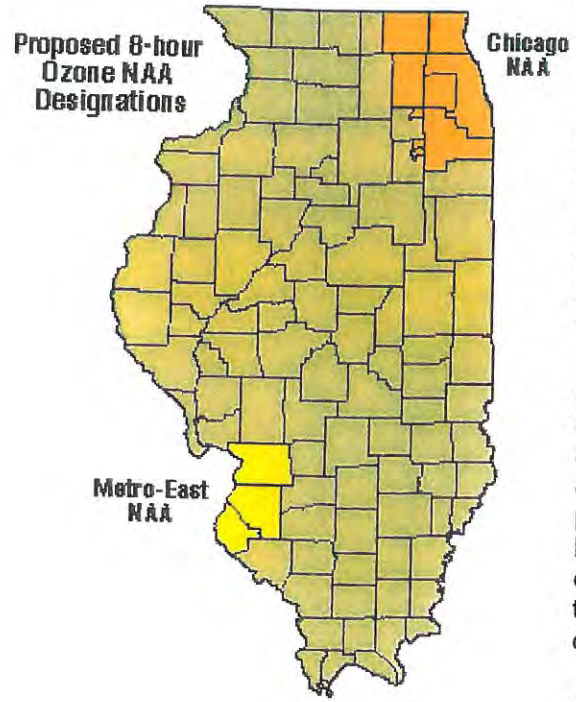
Illinois Environmental Protection Agency

www.epa.state.il.us

Rod R. Blagojevich, Governo

Air Quality Information

Designation of 8-hour Ozone Nonattainment Areas



In July 1997, the U.S. Environmental Protection Agency (EPA) revised the National Ambient Air Quality Standard (NAAQS) for ozone by changing the level of the standard from 0.12 ppm to 0.08 ppm, and changing the 1-hour averaging time of the standard to an 8-hour averaging time. Following promulgation of a new or revised air quality standard, the Clean Air Act (CAA) requires the Governor to recommend initial designations of the attainment status for all areas of the State. Areas can be classified as nonattainment (does not meet, or contributes to a nearby area that does not meet the NAAQS), attainment (meets the NAAQS), or unclassifiable (cannot be classified based on available data).

Although the U.S. Court of Appeals for the D.C. Circuit remanded the 8-hour ozone standard in May 1999 and the U.S. Supreme Court has agreed to review the case, the Appellate Court affirmed EPA's authority to make designations. Illinois is, therefore, required to provide recommendations for attainment/nonattainment area boundaries for the 8-hour ozone standard. The EPA is expected to act on the State's recommendations by either affirming and promulgating the recommended designation boundaries, or by promulgating new designations sometime in early 2001.

A report submitted to EPA on June 30, 2000 provides the basis for recommendations by the Illinois Environmental Protection Agency (IEPA) for attainment/nonattainment designation boundaries for all areas in the State of Illinois for the revised 8-hour ozone standard. In this report, the IEPA considered current (1997-99) ozone air quality data, as well as other factors, including projected air quality considering planned emission reduction strategies such as included in or required by the NOx SIP Call, spatial patterns of precursor emissions near and upwind of the monitors not meeting the standard, and projected economic and population growth patterns as they relate to expected growth of precursor emissions.

Based on this analysis, the IEPA recommends that the boundaries of the existing attainment/nonattainment areas, which were promulgated for the previous 1-hour standard, remain the same for the revised 8-hour standard. A table listing the proposed attainment/nonattainment area designations is provided below.

Recommended Attainment/Nonattainment Designations

County	Designation	Name of Area
Cook	Nonattainment	Chicago
DuPage	Nonattainment	Chicago
Kane	Nonattainment	Chicago
Lake	Nonattainment	Chicago
Will	Nonattainment	Chicago

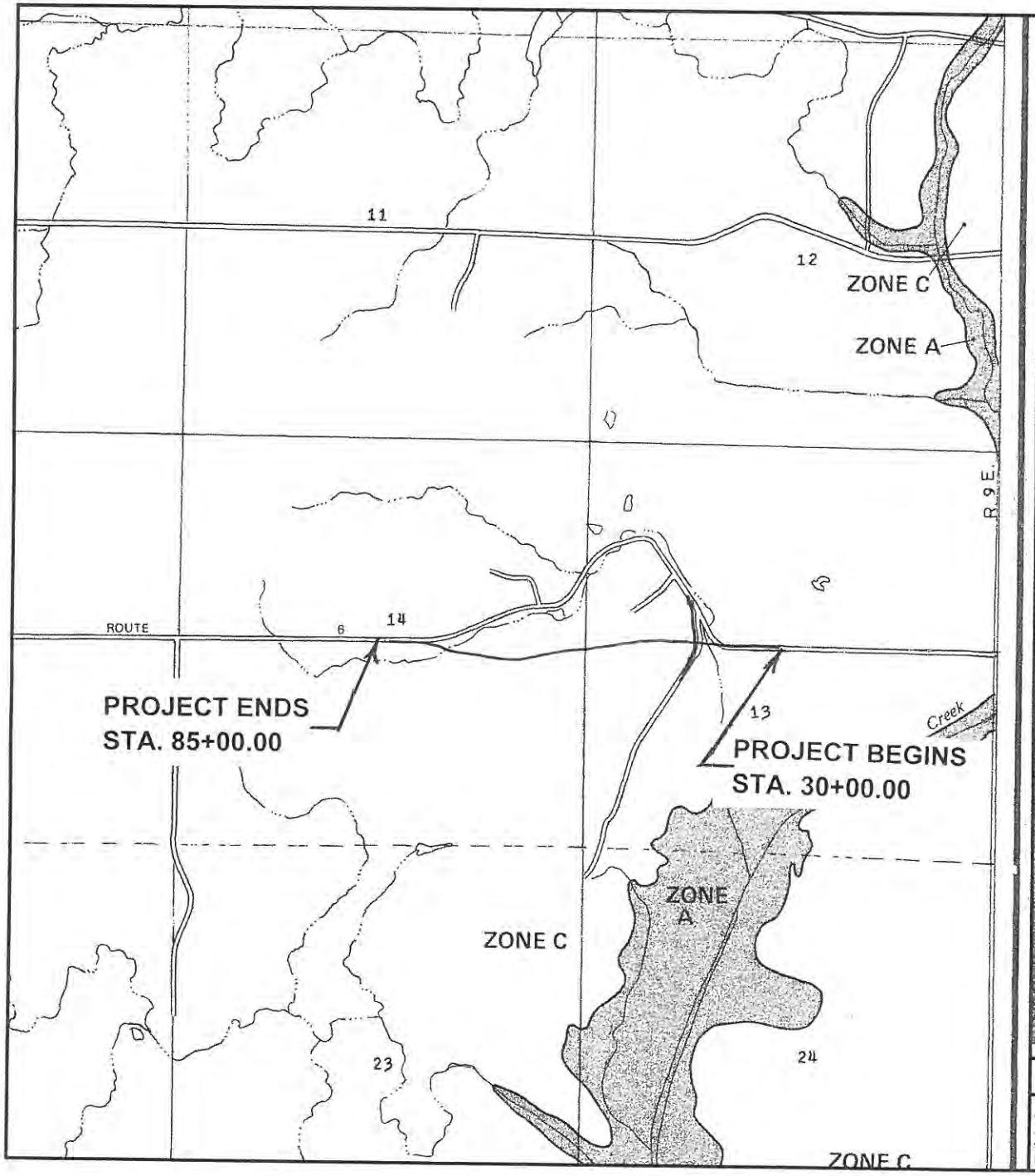
Exhibit E12-1

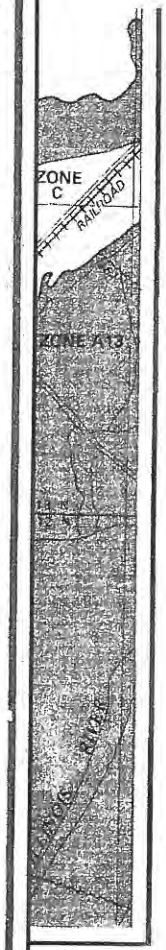
McHenry	Nonattainment	Chicago
Kendall: Oswego Township	Nonattainment	Chicago
Grundy: Aux Sable Township	Nonattainment	Chicago
Grundy: Goose Lake Township	Nonattainment	Chicago
Madison	Nonattainment	Metro-East
Monroe	Nonattainment	Metro-East
St. Clair	Nonattainment	Metro-East
Kendall: All Other Townships	Attainment	n/a
Grundy: All Other Townships	Attainment	n/a
All Other Counties	Attainment	n/a

Exhibit E12-2

RIGHT OF WAY SUMMARY

NAME	Parcel #	ROW Required. Acres	Temporary Easement Required. Sq. Ft.	ROW Required. Cultivated Acres	ROW Required. Pasture Acres	ROW Required. Timber Acres
Alan C Hare & Sandra Hare	02-14-300-004	0.17		0.169		
David Kocher & Jovonna L.Kocher	02-14-400-005	14.75				14.753
Steven R Getman & Anya Getman	02-14-200-006	0.35				0.351
Kevin K Huck	02-13-100-011	1.23				1.228
David Kocher & Jovonna L.Kocher	02-13-300-003	5.77		0.476	0.253	5.042
Roberta A Bogner	02-13-100-012	1.40				1.397
Harry Leffers A Bogner	02-13-100-014	0.04				0.038
Total Acres		23.707	0.000	0.645	0.253	22.809





APPROXIMATE SCALE

2000 0 2000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

COUNTY OF
MARSHALL,
ILLINOIS
UNINCORPORATED AREAS

PANEL 25 OF 150

COMMUNITY-PANEL NUMBER
170994 0025 B

EFFECTIVE DATE:
FEBRUARY 1, 1984

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

National Priorities List

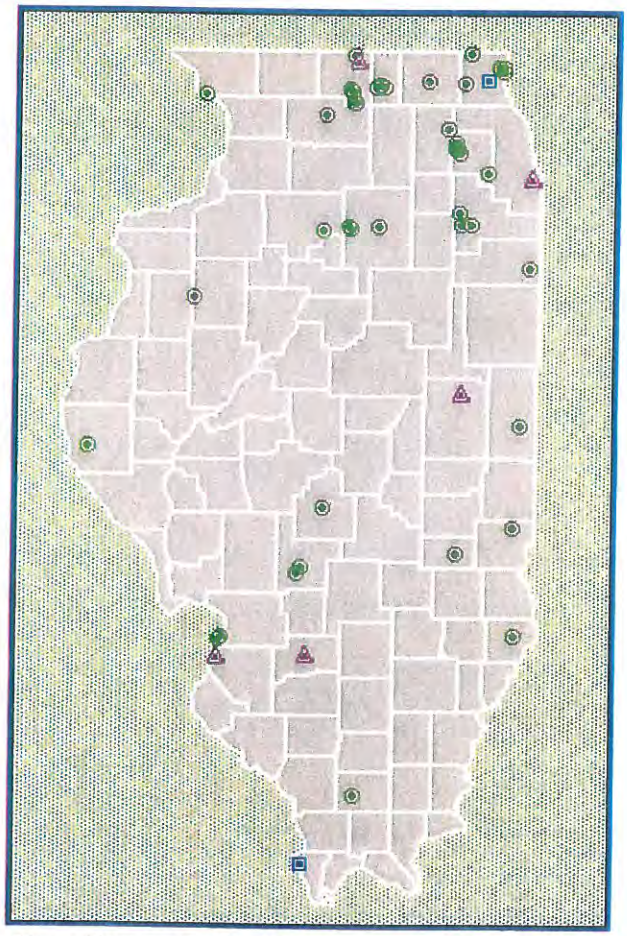
http://www.epa.gov/superfund/sites/npl/il.htm
Last updated on Wednesday, September 19th, 2007.

You are here: EPA Home Superfund Sites National Priorities List (NPL) Locate NPL Sites NPL Sites in the US NPL Sites in Illinois

National Priorities List Sites in Illinois

Site-specific resources available from this page include fact sheets, site narratives, and Federal Register notices.

Access these resources ...
- by map, click on the site of interest.
- by list, of all NPL sites in Illinois by county



Map Key: Proposed: 6 Final: 43 Deleted: 2

NPL Sites in Illinois by County

To access the fact sheet for each site, select the site name.
For the NPL Site Narrative, select the CERCLIS ID.
Federal Register notices can be accessed by selecting the date of each action listed.

ADAMS COUNTY

Illinois Environmental Protection Agency

www.epa.state.il.u

Rod R. Blagojevich, Governo

L.I.T. Search

The following LUST incidents matched your search criteria. To display additional information about a selected incident, click on the hyperlinked IEMA #.

IEMA #	Site Name	Street	City	ZIP Code
992508	Henry Service Center	300 School	Henry	61537
982932	1st National Bank of Lacon	109 5th St.	Lacon	61540
980947	Mattingly Trucking	400 Railroad Ave.	Henry	61537
972298	Lake Wildwood Association	R.R. 2, Box 1875	Varna	61375

-- -- > >| [1/8]

Title Page Search Page

Agency Site Map | Privacy Information | Kids Privacy | Web Accessibility | Agency Webmaster

Illinois Environmental Protection Agency

www.epa.state.il.u

Rod R. Blagojevich, Governo

Site Remediation

The following SRP sites matched your search criteria. To display additional information about a selected site, click on the hyperlinked LPC #.

IEPAID	NAMESITE	STREET	CITY	ZIPCODE
1230055006	Agrium US, Inc.	Richards Road	Henry	61537-0213
1110600003	Modine Manufacturing	Ringwood Road	McHenry	60050-
1110605002	Circuit Etching	4415 Hi Pointe Road	McHenry	60050-
1110605014	Red Hawk Rubber Company	3911 Dayton Street	McHenry	60050-
1110605017	Illinois Coil Spring	1415 Industrial Drive	McHenry	60050-
1110605018	Mr. Don's Cleaners	1207 North 3rd Street	McHenry	60050-
1110605019	120 Cleaners	4400 West Elm Street	McHenry	60050-
1110605027	Mastercoil Springs	920 North Front Street	McHenry	60050-
1110605036	Gary Lang Pontiac Cadillac	1109 North Front Street	McHenry	60050-
1110605049	McHenry Township Road District	3703 North Richmond Road	McHenry	60050-
1110605094	Better Graphics, Inc.	4512 Hi Point Road	McHenry	60050-
1110605095	Shamrock Cleaners	4720 West Elm Street	McHenry	60050-
1110605123	Hans Property	1503 West Lincoln Road	McHenry	60050-
1110605163	Adams, Rich	3004 West Elm Street	McHenry	60050-
1110605192	McHenry County Glass & Mirror, Inc.	921 North Front Street	McHenry	60050-

03-64-0001

Illinois Department of Transportation

Division of Highways / Bureau of Bridges and Structures
2300 South Dirksen Parkway, Springfield, Illinois 62764

RECEIVED
NOV 12 2010
HLR-SPFLD

November 10, 2010

Federal Funds
Marshall County
Section 99-00080-00-FP
CH 6 (FAS 372) over Crow Creek Tributary

SN 062-3095
(Proposed-No
Existing SN)

Mr. George P. Meister
County Engineer
Marshall County
552 State Rt. 26, P.O. Box 242
Lacon, Illinois 61540

Dear Mr. Meister:

The bridge condition report for the above-designated bridge replacement project is hereby approved. Please note that this BCR approval is for the use of federal funds. However, this structure is not eligible for the use of federal Highway Bridge Program (HBP) funds.

Approval of the project is contingent on approval by others of the proposed geometry, obtaining environmental signoffs, and any required historic structure coordination and other approvals required by statutes or the policies of the Department.

One copy of the approved report is being returned to you and to the consultant, Hampton, Lenzini & Renwick, Inc.

Very truly yours,

Ralph E. Anderson
Engineer of Bridges and Structures

By: Carl Puzey
Engineer of Structural Services

TC/kt0623095-20101110
cc- Hampton, Lenzini & Renwick, Inc.
Joseph E. Crowe/ District 4/ Attn: Tanios S. Sassine

BRIDGE CONDITION REPORT

Marshall County
FAS 372 / CH 6 / Western Avenue
Section 99-00080-00-FP
Sta 146+62.40

Prepared by: Hampton, Lenzini and Renwick, Inc.
Date Prepared: November 2, 2010

JUSTIFICATION FOR BRIDGE REPLACEMENT

The existing single span bridge has a reinforced concrete deck with concrete railings and curbs on closed concrete abutments and wingwalls. The bridge is 17.9' long fc-fc of the abutments and 26.0' wide o-o of the deck. The bridge has a clear roadway width of 23.0' between the curbs. The existing structure is in satisfactory condition.

Marshall County is proposing to build 1.06 miles of roadway on a new alignment to eliminate the steep, sharp curves and poor sight distance of the existing alignment and reduce the number of accidents. The proposed improvement will upgrade the last remaining section of Western Ave. (CH6) to an 80,000 lbs truck route that is used for transporting grain, aggregate, and other materials to the Illinois River port in Henry Illinois.

Total replacement of the existing bridge is recommended for the following reasons:

1. The existing structure is not located on the newly proposed alignment.

2. The existing structure is not adequate to support the loading for an 80,000 lbs truck route. The structure cannot be economically rehabilitated to support this loading without complete replacement.

Hampton, Lenzini and Renwick, Inc.
Civil Engineers • Structural Engineers • Land Surveyors
www.hlrengineering.com

May 21, 2010
Springfield, Illinois

Marshall County E 9-1-1
520 South Sixth Street
Lacon, Illinois 61540-1250

Re: Marshall County
FAS 372 (Western Avenue\CH12)
Section 99-00080-00-FP

Dear Administrator:

We are hereby providing notice that the Marshall County Highway Department is planning to realign and reconstruct a portion of FAS 372 (Western Ave.\CH6) that goes over the bluff. The proposed improvement begins approximately 2.5 miles west of the CH6 intersection with IL 29 in Henry and proceeds in a westerly direction for 1.042 miles ending approximately 3.5mi. east of the intersection of CH 7 (Yankee Lane) with FAS 372 (Western Avenue\CH 6). This project is only in the planning stages and no funding or construction timetable has been established at this time.

The proposed improvement is needed to provide a safe roadway for the motoring public, as well as improved roadway width and improved drainage. A portion of existing Western Avenue will remain open thus providing access for all of the property owners. Access to existing Western Avenue will be limited to one location which is at the intersection of TR 1130 with the proposed alignment of Western Avenue. There is no connection proposed at the western end of the project to tie the existing roadway into the relocated proposed roadway. A cul-de-sac will be constructed at a location on the western end of the project to allow for vehicles to turn around.

We realize the improvement may cause some unavoidable problems for you, but we feel the importance and benefits of the project outweigh these inconveniences.

We have enclosed a location map for this project. We would appreciate any comments you may have at this time, so we may address them at this stage of the design process.

Sincerely,

HAMPTON, LENZINI AND RENWICK, INC.

Lou Stauder

Louis F. Stauder, P.E. jab

LFS:jab
Enclosure
Cc: George Meister
P:\03\03640001\Docs\PDR\001 Marshall County E 9-1-1.docx

380 Shepard Drive
Elgin, Illinois 60123-7010
Tel. 847-697-6700
Fax 847-697-6753

3085 Stevenson Drive, Suite 201
Springfield, Illinois 62703
Tel. 217-546-3400
Fax 217-546-8116

Hampton, Lenzini and Renwick, Inc.
Civil Engineers • Structural Engineers • Land Surveyors
www.hlrengineering.com

May 21, 2010
Springfield, Illinois

Marshall County Sheriff's Department
520 South Sixth Street
Lacon, Illinois 61540

Re: Marshall County
FAS 372 (Western Avenue\CH12)
Section 99-00080-00-FP

Dear Administrator:

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Sincerely,

HAMPTON, LENZINI AND RENWICK, INC.

Lou Stauder

Louis F. Stauder, P.E. jab

LFS:jab
Enclosure
Cc: George Meister
P:\03\03640001\Docs\PDR\002 Marshall County Sheriff.docx

380 Shepard Drive
Elgin, Illinois 60123-7010
Tel. 847-697-6700
Fax 847-697-6753

3085 Stevenson Drive, Suite 201
Springfield, Illinois 62703
Tel. 217-546-3400
Fax 217-546-8116

Hampton, Lenzini and Renwick, Inc.
Civil Engineers • Structural Engineers • Land Surveyors
www.hlrengineering.com

May 21, 2010
Springfield, Illinois

Henry-Senachwine Unit District #5
1023 College Street
Henry, Illinois 61537

Re: Marshall County
FAS 372 (Western Avenue\CH12)
Section 99-00080-00-FP

Dear Administrator:

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Sincerely,

HAMPTON, LENZINI AND RENWICK, INC.

Louis F. Stauder, P.E. jah

LFS:jab
Enclosure
c: George Meister
P:\03\03640001\Docs\PDR\003 Henry-Senachwine.docx

380 Shepard Drive
Elgin, Illinois 60123-7010
Tel. 847-697-6700
Fax 847-697-6753

3085 Stevenson Drive, Suite 201
Springfield, Illinois 62703
Tel. 217-546-3400
Fax 217-546-8116

Hampton, Lenzini and Renwick, Inc.
Civil Engineers • Structural Engineers • Land Surveyors
www.hlrengineering.com

May 21, 2010
Springfield, Illinois

Marshall County ESDA
PO Box 243
Lacon, Illinois 61540

Re: Marshall County
FAS 372 (Western Avenue\CH12)
Section 99-00080-00-FP

Dear Administrator:

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Sincerely,

HAMPTON, LENZINI AND RENWICK, INC.

Lou Stauder
Louis F. Stauder, P.E. jah

LFS:jab
Enclosure
c: George Meister
P:\03\03640001\Docs\PDR\004 ESDA.docx

380 Shepard Drive
Elgin, Illinois 60123-7010
Tel. 847-697-6700
Fax 847-697-6753

3085 Stevenson Drive, Suite 201
Springfield, Illinois 62703
Tel. 217-546-3400
Fax 217-546-8116

Hampton, Lenzini and Renwick, Inc.
Civil Engineers • Structural Engineers • Land Surveyors
www.hlrengineering.com

May 21, 2010
Springfield, Illinois

Henry Community Ambulance Service
218 Railroad Avenue
Henry, Illinois 61537-1325

Re: Marshall County
FAS 372 (Western Avenue\CH12)
Section 99-00080-00-FP

Dear Administrator:

We are hereby providing notice that the Marshall County Highway Department is planning to realign and reconstruct a portion of FAS 372 (Western Ave.\CH6) that goes over the bluff. The proposed improvement begins approximately 2.5 miles west of the CH6 intersection with IL 29 in Henry and proceeds in a westerly direction for 1.042 miles ending approximately 3.5mi. east of the intersection of CH 7 (Yankee Lane) with FAS 372 (Western Avenue\CH 6). This project is only in the planning stages and no funding or construction timetable has been established at this time.

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Sincerely,

HAMPTON, LENZINI AND RENWICK, INC.

Lou Stauder

Louis F. Stauder, P.E. jh

LFS:jab
Enclosure
c: George Meister
P:\03\03640001\Docs\PDR\005 Henry Ambulance.docx

380 Shepard Drive
Elgin, Illinois 60123-7010
Tel. 847-697-6700
Fax 847-697-6753

3085 Stevenson Drive, Suite 201
Springfield, Illinois 62703
Tel. 217-546-3400
Fax 217-546-8116

Hampton, Lenzini and Renwick, Inc.
Civil Engineers • Structural Engineers • Land Surveyors
www.hlrengineering.com

May 21, 2010
Springfield, Illinois

Henry Fire Protection District
220 Railroad Avenue
Henry, Illinois 61537-1325

Re: Marshall County
FAS 372 (Western Avenue\CH12)
Section 99-00080-00-FP

Dear Administrator:

We are hereby providing notice that the Marshall County Highway Department is planning to realign and reconstruct a portion of FAS 372 (Western Ave.\CH6) that goes over the bluff. The proposed improvement begins approximately 2.5 miles west of the CH6 intersection with IL 29 in Henry and proceeds in a westerly direction for 1.042 miles ending approximately 3.5mi. east of the intersection of CH 7 (Yankee Lane) with FAS 372 (Western Avenue\CH 6). This project is only in the planning stages and no funding or construction timetable has been established at this time.

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Sincerely,

HAMPTON, LENZINI AND RENWICK, INC.

Lou Stauder

Louis F. Stauder, P.E. jah

LFS:jab
Enclosure
c: George Meister
P:\03\03640001\Docs\PDR\006 Henry Fire Dist.docx

380 Shepard Drive
Elgin, Illinois 60123-7010
Tel. 847-697-6700
Fax 847-697-6753

3085 Stevenson Drive, Suite 201
Springfield, Illinois 62703
Tel. 217-546-3400
Fax 217-546-8116

Hampton, Lenzini and Renwick, Inc.
Civil Engineers • Structural Engineers • Land Surveyors
www.hlrengineering.com

May 21, 2010
Springfield, Illinois

U. S. Post Office
505 Main Street
Henry, Illinois 61537-1400

Re: Marshall County
FAS 372 (Western Avenue\CH12)
Section 99-00080-00-FP

Dear Administrator:

We are hereby providing notice that the Marshall County Highway Department is planning to realign and reconstruct a portion of FAS 372 (Western Ave.\CH6) that goes over the bluff. The proposed improvement begins approximately 2.5 miles west of the CH6 intersection with IL 29 in Henry and proceeds in a westerly direction for 1.042 miles ending approximately 3.5mi. east of the intersection of CH 7 (Yankee Lane) with FAS 372 (Western Avenue\CH 6). This project is only in the planning stages and no funding or construction timetable has been established at this time.

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Sincerely,

HAMPTON, LENZINI AND RENWICK, INC.

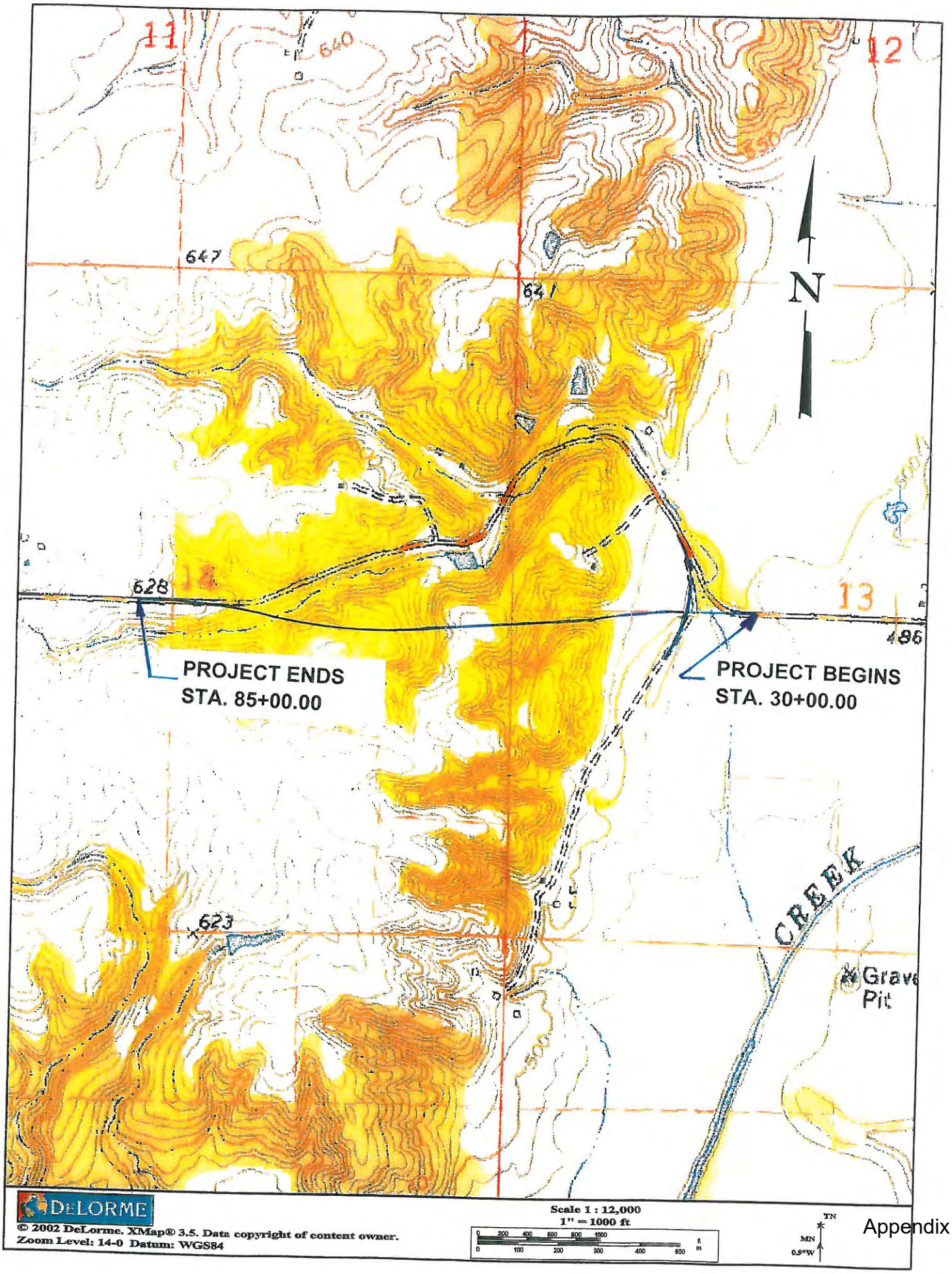
Lou Stauder

Louis F. Stauder, P.E. jab

LFS:jab
Enclosure
c: George Meister
P:\03\03640001\Docs\PDR\007 Henry Post Office.docx

380 Shepard Drive
Elgin, Illinois 60123-7010
Tel. 847-697-6700
Fax 847-697-6753

3085 Stevenson Drive, Suite 201
Springfield, Illinois 62703
Tel. 217-546-3400
Fax 217-546-8116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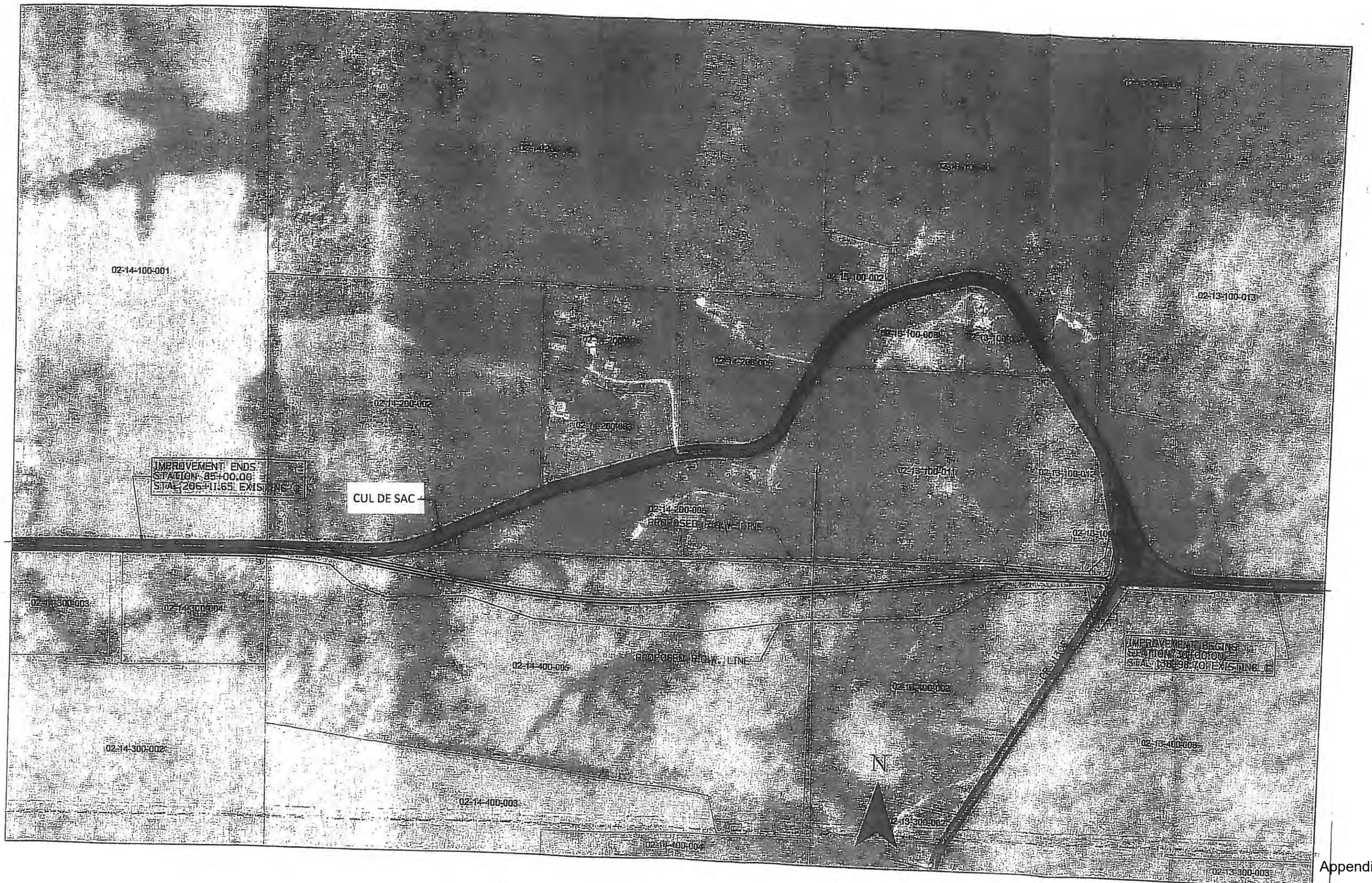
Appendix A-3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IMPROVEMENT ENDS
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02-14-300-004
02-14-400-005
PROPOSED R.O.W. LINE
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02-14-400-003
02-13-100-013
02-13-100-012
IMPROVEMENT BEGINS
STATION 301+00.00
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02-13-300-002
02-13-300-003
N

LOCATION OF WATERS OF U.S. DISTURBANCE		LENGTH FOOT	W S AREA SQ FT	W S AREA ACRE	BANK AREA SQ FT	BANK AREA ACRE	AVE. DEPTH FOOT	AVE. WIDTH FOOT	AVE. AREA ACRE
Double 10X6.5' Box Culvert	STA. 35+68	127	369.07	0.0085	1845.5	0.0424	3	30	0.0875
5'X5' Box cCulvert	STA. 71+10.18	611	2488	0.0571	25038	0.5748	3	20	0.2805
42" Culvert pipe	STA. 70+67.55	90	409.73	0.0094	1640.2	0.0377	3	15	0.0310
ditch	RT. STA. 69+00 TO RT. STA. 71+30	95	405.09	0.0093	3718.21	0.0854	3	20	0.0436
TOTAL		923	3671.89	0.0843	32241.91	0.7403			0.4426

Appendix A-4

This project is designed to comply with the terms and conditions of the Nationwide Permit Number 14, Linear Transportation Projects, of the Department of Army Corps of Engineers Regulatory Program, effective March 19, 2017. There will be no discharge into special aquatic sites, including wetlands, there is no record or threatened or endangered species near the project location, the project does not involve a historic property, the loss of waters of the U.S. will be less than ½ -acre, and the channel is not a navigable waterway. Authorization with the Army Corps of Engineers and a case specific water quality certification, if required, will be updated in Phase 2, prior to construction.

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

REPLY TO
ATTENTION OF

September 23, 2010

Operations Division

SUBJECT: CEMVR-OD-P-2010-1012

Mr. George Meister
Marshall County Highway Department
552 State Route 26
Lacon, Illinois 61540

Dear Mr. Meister:

Our office reviewed all information provided to us concerning the road construction project over four tributaries of Crow Creek in Sections 13 and 14, Township 13 North, Range 9 East, Marshall County, Illinois.

The State of Illinois has not issued state water quality certification under Section 401 of the Clean Water Act for the nationwide permit as described under Item 14 of the enclosed Fact Sheet No. 6(IL) for linear transportation projects affecting more than 100 linear feet of stream channel as measured along the stream corridor. This is the nationwide permit under which your road construction activities will be covered after you obtain either water quality certification or waiver from the Illinois Environmental Protection Agency (IEPA) for your project. The decision regarding this action is based on information found in the administrative record, which documents the District's decision-making process, the basis for the decision, and the final decision.

You must comply with any additional IEPA water quality certification conditions and furnish us a copy of IEPA's certification. If IEPA has not responded to you within 60 days from the date of this letter, the Section 401 water quality certification requirement will be considered waived for your project. We based this determination on the information furnished us.

Marshall County is within the known breeding range of the federally endangered Indiana bat (*Myotis sodalis*). The Corps has made a determination of not likely to adversely affect federally threatened and endangered species provided no habitat or potential habitat for listed species will be impacted by the project. If habitat may be affected, then further coordination with the US Fish and Wildlife Service will be necessary.

You are encouraged to conduct your construction activities during a period of low water. You are required to remove all fill material used as a temporary crossing, causeway, or work pad to an upland, non-wetland site, to seed all disturbed areas with native grasses, and to implement appropriate measures to insure that sediments are not introduced into waters of the United States during construction of this project.

This verification is valid until March 19, 2012, unless the nationwide permits are modified, reissued or revoked. It is your responsibility to remain informed of changes to the nationwide permit program. We will issue a public notice announcing any changes if and when they occur. Furthermore, if you commence or are under contract to commence these activities before the date the nationwide permits are modified or revoked, you will have twelve months from this date to complete your activities under the present terms and conditions of these nationwide permits.

Our office has completed a Preliminary Jurisdictional Determination concerning your project area. A copy of our jurisdictional determination is enclosed. A Preliminary Jurisdictional Determination is not appealable.

Although an individual Department of the Army permit will not be required for the project, this does not eliminate the requirement that you must still acquire other applicable Federal, state, and local permits. If you have not already coordinated your project with the Illinois Department of Natural Resources – Office of Water Resources, please contact them at 217/782-3863 to determine if a floodplain development permit is required for your project.

You are required to complete and return the enclosed "Completed Work Certification" upon completion of your project, in accordance with General Condition No. 26 of the enclosed Fact Sheet.

The Rock Island District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete the attached postcard and return it or go to our Customer Service Survey found on our web site at http://per2.nwp.usace.army.mil/survey.html. (Be sure to select "Rock Island District" under the area entitled: Which Corps office did you deal with?)

Should you have any questions, please contact our Regulatory Branch by letter, or telephone me at 309/794-5674.

Sincerely,

Original Signed By

Gene W. Walsh
Project Manager
Enforcement Section

When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

_____ _____
Transferee Date

Enclosures

Copies Furnished: (w/o enclosures)

Mr. Mike Diedrichsen, P.E.
Office of Water Resources
IL Department of Natural Resources
One Natural Resources Way
Springfield, Illinois 62701-1271

Mr. Dan Heacock
Illinois Environmental Protection Agency
Watershed Management Section, Permit Sec. 15
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

U.S. Army Corps of Engineers
Illinois Waterway Project Office
257 Grant Street
Peoria, Illinois 61603

Mr. Joseph W. Frazee, P.E.
Hampton, Lenzini, and Renwick, Inc.
380 Shepard Drive
Elgin, Illinois 60123-7010

Hampton, Lenzini and Renwick, Inc.
Civil Engineers • Structural Engineers • Land Surveyors • Environmental Specialists
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November 20, 2019

Mr. Mark Otten
Illinois Department of Transportation
District 4 BLR Field Engineer
401 Main St
Peoria, Illinois 61602-1111

Re: Western Avenue Noise Analysis Report- Section 99-00080-00-FP
Western Avenue (CH 6), Marshall County, Illinois

Dear Mark:

The attached noise analysis report has been completed for the horizontal realignment of Western Avenue (CH 6). No sensitive noise receptors approached, met or exceeded FHWA residential NAC for existing, no build 2040, or build 2040 conditions. Therefore, no traffic-noise abatement measures were considered for the Western Avenue realignment project.

If you have any questions, please call me at (847) 697-6700.

Sincerely,

HAMPTON, LENZINI AND RENWICK, INC.

By: Erica Spolar

Erica Spolar
Executive Vice President

Enclosure

Western Avenue Marshall County Noise Report (Section 99-00080-00-FP)

380 Shepard Drive
Elgin, Illinois 60123-7010
Tel. 847.697.6700
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Woodridge, Illinois 60517
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323 W. Third Street, P.O. Box 160
Mt. Carmel, Illinois 62863
Tel. 618.262.8651
Fax 618.263.3327

Reitz, Mark A

From: Hurley, Felecia A
Sent: Wednesday, November 17, 2021 3:04 PM
To: Reitz, Mark A
Cc: Shebib, Al-Barrae R.
Subject: RE: SEQ #14124B - Noise Report - Western Ave (CH 6): 99-00080-00-FP / Marshall Co.

We have no additional comments and all comments were adequately addressed. Thanks.

From: Reitz, Mark A <Mark.Reitz@illinois.gov>
Sent: Tuesday, November 16, 2021 8:45 AM
To: Hurley, Felecia A <Felecia.Hurley@illinois.gov>
Cc: Shebib, Al-Barrae R. <AlBarrae.Shebib@Illinois.gov>
Subject: FW: SEQ #14124B - Noise Report - Western Ave (CH 6): 99-00080-00-FP / Marshall Co.

Felecia – updated noise report and disposition of comments attached for your review and approval. Let me know if you need additional information. Thanks
Mark

From: Shebib, Al-Barrae R. <AlBarrae.Shebib@Illinois.gov>
Sent: Monday, November 15, 2021 4:16 PM
To: Reitz, Mark A <Mark.Reitz@illinois.gov>
Subject: SEQ #14124B - Noise Report - Western Ave (CH 6): 99-00080-00-FP / Marshall Co.

Good afternoon Mark,

Attached Noise Report for SEQ #14124B, Section 99-00080-00-FP Western Ave (CH6) in Marshall County.

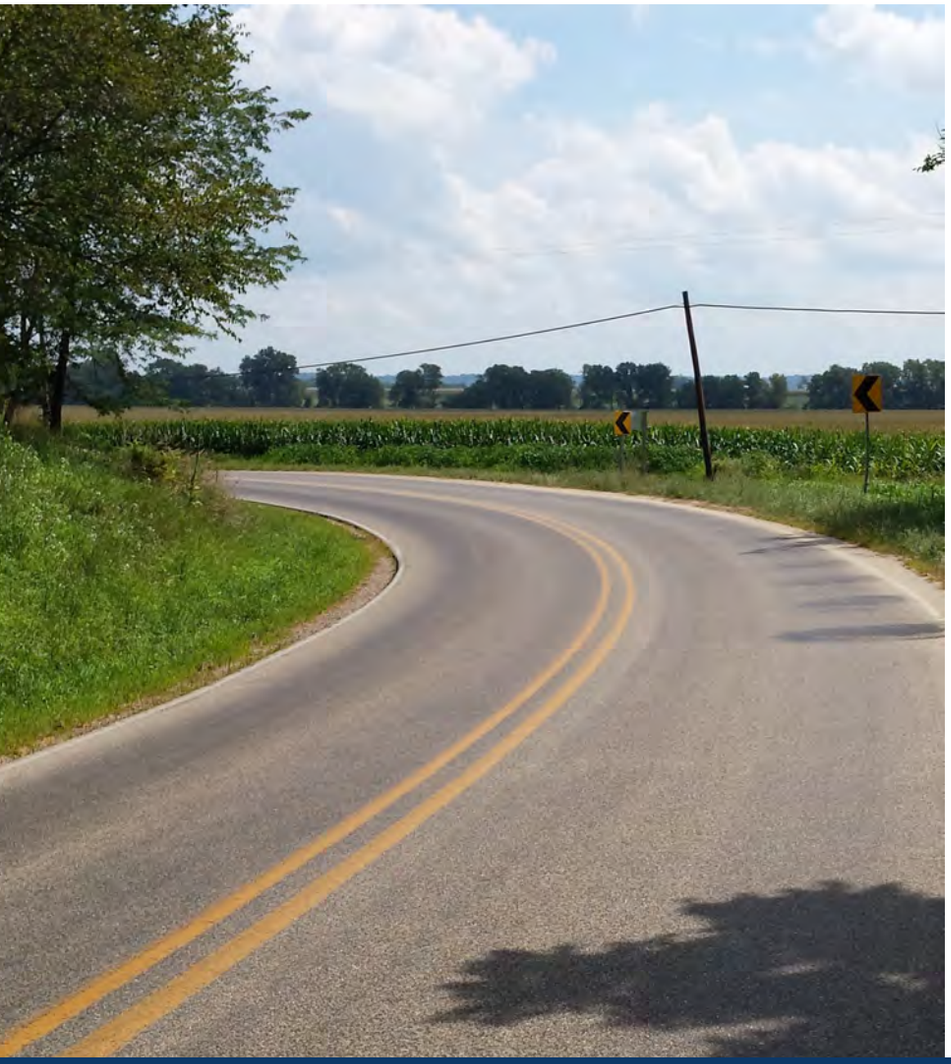
Please let me know if you have any additional questions or comments.

Thank you,
Al-Barrae R. Shebib, P.E
Local Roads & Streets
IDOT – District 4 Peoria IL
(309) 671-3698 albarrae.shebib@illinios.gov

Noise Analysis Report for CH 6 Western Avenue Replacement

Section# 99-00080-00-FP

October 2019



Prepared for:
Mr. Patrick G. Sloan, PE
Marshall-Putnam County Engineer
552 State Route 26
Lacon, Illinois 61540

Prepared by:
Hampton, Lenzini and Renwick, Inc. (HLR)
380 Shepard Drive
Elgin, Illinois 60123
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Fax (847) 697-6753

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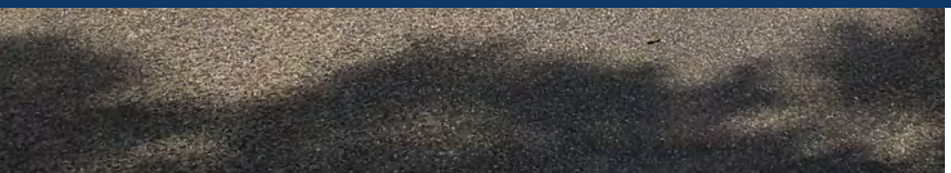

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1.0 PROJECT DESCRIPTION

A one-mile section of Western Avenue (County Highway 6), west of Henry, Illinois, will be horizontally realigned. This will move the traffic noise both closer and farther from individual residences. The terrain around the existing roadway does not match that of the proposed roadway, and vertical realignment is also proposed. This project is categorized as a Type I project.

Western Avenue will be realigned to straighten the corridor. The existing road, with single family residences and farms along it, will have maintained access from the east side. The west end will be converted into a cul-de-sac and the western portion of the roadway will be removed. The eastern intersection with County Road 1130E will be realigned to be more perpendicular to Western Avenue.

A noise analysis is being conducted to evaluate existing, no build, and proposed noise levels, determine if potential noise levels meet the definition of a noise impact under the federal and state regulations, and evaluate noise abatement, if warranted. The project location is depicted in Figure 1.

The Updated 2017 Illinois Department of Transportation (IDOT) Noise Policy Manual and Federal Highway Administration (FHWA) 23 CFR 772 (Updated July 2010) was followed. Traffic Noise Model (TNM) Version 2.5 was used to model existing and proposed conditions and to evaluate potential noise abatement. This report summarizes the noise analysis and abatement evaluation for the Western Avenue (County Highway 6) realignment.

2.0 NOISE FUNDAMENTALS

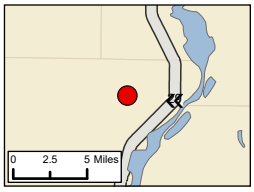
Sound is produced by the vibration of air molecules as pressure waves and is measured on a logarithmic scale using units of decibels (dB). Sound is composed of a wide range of frequencies; however, the human ear is not uniformly sensitive to all frequencies. The average human with normal hearing can only hear sounds with frequencies ranging from 20 to 20,000 hertz. Therefore, the “A” weighted scale was devised to correspond with the human ear’s sensitivity. The resulting unit of measurement is the dB(A). If the time period is one hour, the descriptor is the hourly equivalent sound level or Leq (h), which is widely used by state highway agencies as a descriptor of traffic noise.

Noise is measured using decibels (dB) that are established on a logarithmic scale because the human ear reacts to logarithmic changes in sound pressure levels. A change of 3 dB(A) is a barely perceivable change in noise, while an increase of 10 dB(A) is perceived as being twice as loud.

Highway noise generation is dependent on three main factors including traffic volume, traffic speed, and the number of trucks. The dominant noise source is dependent upon speeds and vehicle type. Noise from cars occurs from the tire interaction with the pavement and is characterized by a higher-frequency “whine”. Truck noise is made up of three components including tire interaction, engine noise, and noise from the exhaust. The exhaust height of a truck ranges anywhere from 8 to 12 feet. This requires higher noise abatement structures for effective mitigation, especially when heavy trucks are a large percentage of the traffic mix.

1 inch = 1,042 feet

560 280 0 560 Feet



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USDA-FSA-APFO Aerial Photography Field Office, USGS, US Census, IDOT

Imagery: 2019 National Agriculture Imagery Program

Project Description

Project Area

Road Type

Proposed Road

Existing Road

Figure 1

Marshall County CH 6 Western Avenue

Project Location Map
Scale: 1:12,500

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3.0 FEDERAL AND STATE NOISE REGULATIONS

3.1 Federal Highway Administration Regulations

Seven separate noise-abatement criteria (NAC) based upon land use are used by the FHWA to assess potential noise impacts. A traffic noise impact occurs when noise levels approach or exceed the NAC listed in Table 4.1 within a Type I project (See note below).[1]

In determining the applicable noise activity category for the study area, existing land use was reviewed. The applicable NAC for all residential noise receptors evaluated is 67 dBA.

TABLE 3.1
NOISE ABATEMENT CRITERIA* – HOURLY WEIGHTED SOUND LEVEL

Activity Category	L_{eq}(h), dBA	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Residential
C	67 (Exterior)	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurant/bars, and other developed lands, properties, or activities not included in A-D or F.
F	---	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	---	Undeveloped lands that are not permitted.

*Title 23 Code of Federal Regulations Part 772 (23 CFR 772), effective date July 13, 2010.

NOTE: The Noise Abatement Criteria are noise impact thresholds for considering abatement. (Abatement must be considered when predicted traffic noise levels for the design year approach (i.e., within 1 decibel of) or exceed the noise abatement criteria, or when the predicted traffic noise levels are

[1] 23 Code of Federal Regulations Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise.

substantially higher (i.e., more than 15 decibels greater) than the existing noise level for a Type I project.) The Noise Abatement Criteria are **not** attenuation design criteria or targets. The goal of noise abatement measures is to achieve the feasibility noise reduction criteria and the noise reduction goal. The reductions may or may not result in design year noise levels at or below the Noise Abatement Criteria.

3.2 Illinois Department of Transportation Policy

IDOT defines noise impacts to occur at adjacent properties in the following two situations:[2]

- Design-year traffic noise levels approach, meet, or exceed the NAC, with approach defined as 66 dBA for the residential NAC of 67 dB(A) for a Type I project.
- Design-year traffic noise levels are a substantial increase over existing traffic- generated noise levels, defined as an increase of greater than 15 dB(A) for a Type I project.

IDOT, in conformance with 23 CFR Part 772, evaluates noise abatement for projects when noise impacts are identified for a Type I project. The evaluation includes a feasibility and reasonableness analysis of noise abatement options.

There are three components of reasonableness that need to be evaluated. The first criterion of reasonableness is achieving the noise reduction goal for highway noise abatement measures. The noise reduction design goal is to achieve a traffic noise reduction of at least eight (8) dB(A) for at least one benefited receptor and as many other receptors as is possible while still achieving the cost effectiveness criterion.

The second criterion is that noise abatement is considered to be economically reasonable if the option is cost effective. A cost-effective noise-abatement option achieves the IDOT policy value of $30,000 per benefited residence. Benefited residences are quantified according to the number of residences afforded a five-dB(A) or greater traffic-noise reduction. The base value of $30,000 per benefitted receptor will be adjusted considering the three factors outlined in Table 4.2 below. Only one value from each of the three factors may be used for each receptor, resulting in a potential maximum allowable noise abatement cost of $45,000 per benefitted receptor.

TABLE 3.2
FACTORS FOR ADJUSTING THE ALLOWABLE NOISE ABATEMENT COST PER BENEFITED RECEPTOR BASE VALUE OF $30,000 USING OTHER REASONABLENESS FACTORS

Absolute Noise Level Consideration

Predicted Build Noise Level Before Noise Abatement	Dollars Added to Base Value Cost per Benefited Receptor
Less than 70 dB(A)	$0
70-74 dB(A)	$1,000
75-79 dB(A)	$2,500
80 dB(A) or greater	$5,000

[2] Illinois Department of Transportation, Division of Highways, Bureau of Design and Environment Manual, Section 26-6.

Increase in Noise Level Consideration

Incremental Increase in Noise Level Between the Existing Noise Level and the Predicted Build Noise Level Before Noise Abatement	Dollars Added to Base Value Cost per Benefited Receptor
Less than 5 dB(A)	$0
5-9 dB(A)	$1,000
10-14 dB(A)	$2,500
15 dB(A) or greater	$5,000

New Alignment/Construction Date Consideration

Project is on New Alignment OR the Receptor Existed Prior to the Original Construction of the Highway	Dollars Added to Base Value Cost per Benefited Receptor
No for both	$0
Yes for either	$5,000

NOTE: No single optional reasonableness factor shall be used to determine that a noise abatement measure is unreasonable.

The third component of reasonableness is obtaining viewpoints of benefited receptors. The viewpoints of benefited receptors shall be solicited for noise abatement measures (e.g., noise barriers) determined to be feasible, cost-effective, and achieving the noise reduction design goal. In order for a proposed noise abatement measure to be implemented, greater than 50% of the votes need to be in favor of the proposed abatement measure. If no votes are received, another attempt to solicit votes is made. If again, no votes are received the barrier will not be recommended for construction. A response from front row benefitted receptors will be counted and weighted compared to non-front row receptor responses.

4.0 NOISE RECEPTOR SELECTION

An area, a group, or cluster of noise sensitive receptors within the same activity category that are exposed to similar noise sources, traffic volumes, traffic mix, speed, and topographic features is referred to as the Common Noise Environment (CNE). For purposes of modeling and abatement concept evaluation, the CNE represents a collection of apartments or houses with similar noise levels. Selected representative receptors for this project include seven single family residences.

Receptor selection is based on changes in traffic noise levels as a result of changes in traffic volumes, speed, composition (trucks and cars), roadway alignment (horizontal and vertical), number of lanes, background noise, shielding, and ground cover. Distance to Western Avenue was the main component used to select receptors for this project. The receptors represent the worst-case scenario for existing conditions.

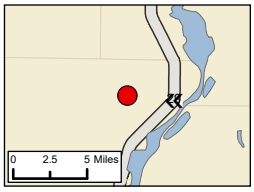
Table 4.1 lists the receptor number, the CNE number, type of receptor, the address, the number of receptors represented, and the approximate distance to the existing edge of pavement of Western Avenue. Figure 2 depicts the receptor locations. These receptors are associated with a designated CNE.

TABLE 4.1
SUMMARY OF NOISE RECEPTORS

Receptor #/ CNE #	Type of Receptor	Address or Location	# of Receptors Represented	Distance to Existing Western Avenue Edge of Pavement (Feet)
R1/CNE 1	Single Family Residence	1068 Western Avenue	3	330
R2/CNE 2	Single Family Residence	1116 Western Avenue	1	113
R3/CNE 3	Single Family Residence	1091 Western Avenue	2	243
R4/CNE 4	Single Family Residence	1117 Western Avenue	2	129
R5/CNE 5	Single Family Residence	1271 CR 1130E	1	752
R6/CNE 6	Single Family Residence	1033 Western Avenue	1	124
R7/CNE 7	Single Family Residence	1261 CR 1130E	1	2,025

1 inch = 1,042 feet

560 280 0 560 Feet



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USDA-FSA-APFO Aerial Photography Field Office, USGS, US Census, IDOT

Imagery: 2019 National Agriculture Imagery Program

Project Description

- Project Area
- CNE: Common Noise Environment
- Modeled Receptor Location
- Monitored Receptor Location
- Represented Receptors

Road Type

- Proposed Road
- Existing Road

Figure 2

Marshall County CH 6 Western Avenue

Noise Receptor Location Map
Scale: 1:12,500

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5.0 NOISE MONITORING

To assess existing noise conditions within the Western Avenue project study area, noise measurements were conducted on October 1, 2019 at R1, R2, and R6. Measurements were conducted in areas of noise-sensitive or proposed noise-sensitive land uses. The measurements characterized existing noise levels in the project area during the peak hour of the day and included noise from other sources including human activity and other noise sources.

Measurements were conducting using a Bruel and Kjaer Type 2270 noise meter. Measurements were 10 minutes in duration and were conducted at a height of approximately 5 feet from the ground surface. A wind shield was used during the measurements. On October 1, 2019, wind speeds were 9 miles per hour, the temperature was 83 degrees, the relative humidity was 65 percent, and the pavement was dry. Traffic volumes were counted for each individual monitoring location. The noise monitoring field sheets are included in Appendix A.

TABLE 5.1
MONITORED NOISE LEVELS

Monitor Location	Represents Receptors	Date	Time	Monitored Noise Level, Leq (dBA)	Modeled Noise Level, Leq (dBA) *	Other Noise Sources
R1	R1	10-1-19	4:04 - 4:14 PM	48	44	Birds, crickets, barking
R2	R2	10-1-19	4:46 – 4:56 PM	50	50	AC unit
R6	R6	10-1-19	4:25 – 4:35 PM	47	50	None

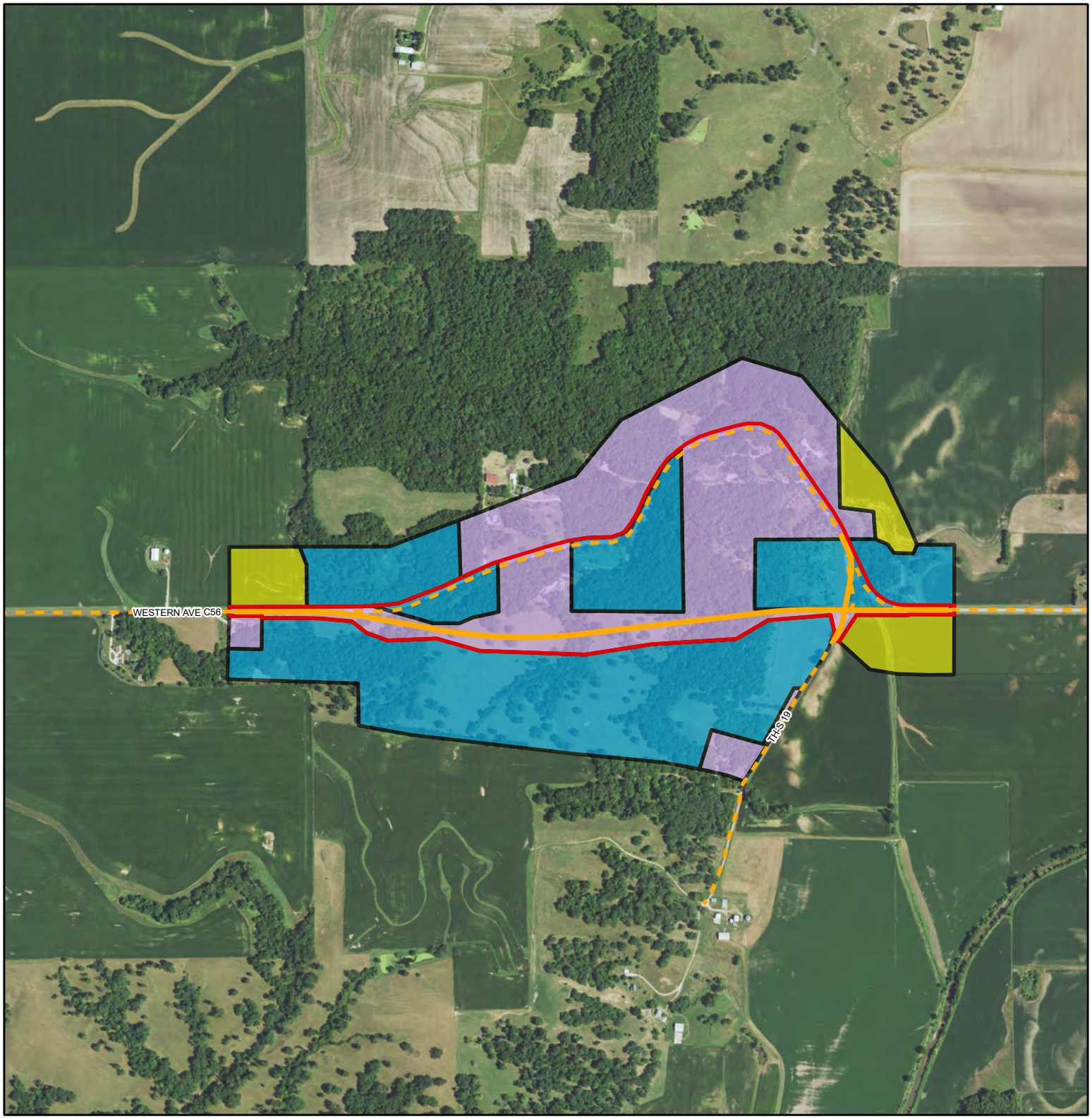
* From Table 7.1

Table 5.1 summarizes the monitored noise level results. Monitored noise levels ranged from 47 dB(A) at R6 to 50 dB(A) at R2. At least 25% of the monitored noise levels were within three decibels of the existing modeled noise levels (R2 and R6). The noise monitored at R1 was largely due to non-traffic related noises such as birds and barking dogs. These are not modelled in the TNM 2.5 model and may be the reason that R1 was not within 3 dB(A) of the modelled noise level.

6.0 NOISE ANALYSIS METHODOLOGY

Modeling of the traffic noise levels at the seven receptors located within the project limits was conducted utilizing the FHWA approved TNM 2.5. Selected representative receptors for this project include seven existing single-family residential areas. Figure 3 shows the land use designations along Western Avenue. Traffic noise levels for the seven receptor sites were predicted using existing (2020), no build (2040), and future build (2040) traffic volumes.

Inputs into TNM include traffic volume, traffic mix (cars, heavy trucks, and medium trucks), receptor distance, elevation, and average speeds during free-flowing conditions. Information sources used in the analysis are briefly described in the following subsections.



1 inch = 1,042 feet

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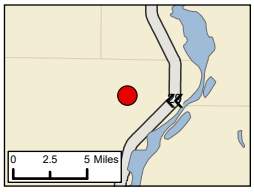

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USDA-FSA-APFO Aerial Photography Field Office, USGS, US Census, IDOT

Imagery: 2019 National Agriculture Imagery Program

Project Description

- Project Area
- Activity Category B
- Activity Category F
- Activity Category G

Road Type

- Proposed Road
- Existing Road

Figure 3

Marshall County CH 6 Western Avenue

Land Use Categories
Scale: 1:12,500

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6.1 Traffic Volumes

HLR consulted IDOT's "Getting Around Illinois" website to provide Average Daily Traffic (ADT) for Western Avenue. HLR used the ADT to developed year 2020 and year 2040 traffic volumes for Western Avenue. A 2% growth rate was used for each year between 2014, when data was collected, and 2040, the design year. Peak hourly volumes along Western Avenue were 57 vehicles per hour (vph) for the existing condition and 86 vph in the proposed condition.

6.2 Traffic Composition

Three types of vehicles, including cars, medium trucks, and heavy trucks, are input into TNM. The percentage of automobiles is estimated at 86 percent for Western Avenue, with medium and heavy trucks accounting for 7 percent and 7 percent, respectively.

6.3 Receptor Distance/Elevation

Table 4.1 summarizes the distances of the receptors from the Western Avenue existing edge of pavement. The selected representative receptors include single-family homes. The distance and elevation of each receptor directly affects the predicted traffic noise level. These distances varied from 113 feet at Receptor R2 to 2,025 feet at Receptor R7 in the existing condition.

6.4 Speed Conditions

The average speed during free-flow conditions for Western Avenue was used for the noise analysis and has been input into the model as the posted speed limit. The existing and proposed speed limit of Western Avenue modeled are 55 and 45 mph, respectively.

7.0 NOISE MODELING RESULTS

Table 7.1 presents the existing (2020), no build (2040), and future build (2040) traffic-noise levels predicted for the seven representative receptors utilizing TNM. The input and output tables for TNM are included in Appendix B.

TABLE 7.1
NOISE SUMMARY – TNM MODELING RESULTS

Receptor Number	Receptor Description	Distance from the Edge of Pavement (Feet)	Number of Represented Receptors	Existing 2020 Noise Level (dBA)	No Build 2040 Noise Level (dBA)	Future 2040 Noise Level (dBA)	Impacted?
R1	Single Family Residence	330	3	44	45	40	No
R2	Single Family Residence	113	1	50	52	30	No
R3	Single Family Residence	243	2	48	49	44	No
R4	Single Family Residence	129	2	46	48	34	No
R5	Single Family Residence	752	1	38	40	43	No
R6	Single Family Residence	124	1	50	52	52	No
R7	Single Family Residence	2,025	1	28	30	33	No

Boldface indicates the noise levels approach, meet, or exceed the NAC.

Existing traffic noise levels range from 28 dB(A) at R7 to 50 dB(A) at R2 and R6. The monitored noise levels were within three decibels of the existing modeled noise levels for at least 25 percent of receptors along Western Avenue.

No Build 2040 traffic-noise levels range from 30 dB(A) at R7 to 52 dB(A) at R2 and R6. No Build 2040 noise levels range from 1 to 2 dB(A) higher than existing levels. The increase in traffic-noise levels is due to the increase in traffic volumes.

Projected build 2040 traffic-noise levels range from 30 dB(A) at R2 to 52 dB(A) at R6. Projected build noise levels range from 20 decibels lower to 5 decibels higher than existing levels. The change in traffic-noise levels is due to the increase in traffic volumes and change in the distance from source to receptor.

No receptors approached, met or exceed FHWA residential NAC for any of the three conditions. No receptors experienced a substantial increase in noise over the existing condition. Therefore, no traffic-noise-abatement measures were considered for the Western Avenue realignment project.

8.0 COORDINATION WITH LOCAL OFFICIALS FOR UNDEVELOPED LANDS

Figure 3 depicts the land use and zoning within the project limits. There is undeveloped land, currently used for agriculture, along Western Avenue. Marshall County was contacted regarding the potential future use of this land. There are no long-term plans for the undeveloped land. NAC 66 and NAC 71 contours were analyzed. NAC 66 and NAC 71 were not reached at 15 feet or further from existing edge of pavement. Building within 15 feet of edge of pavement would be developing within the proposed right-of-way and would be prohibited, so approaching NAC 66 or 71 is not a concern.

9.0 CONSTRUCTION NOISE

Trucks and machinery used for construction produce noise which may affect some land uses and activities during the construction period. Residents along the alignment will at some time experience perceptible construction noise from implementation of the project. To minimize or eliminate the effect of construction noise on these receptors, mitigation measures have been incorporated into the Illinois Department of Transportation's Standard Specifications for Road and Bridge Construction as Article 107.35.

11.0 CONCLUSION

This traffic noise study has been coordinated to evaluate traffic noise impacts for the proposed project**.** Existing traffic noise levels range from 28 dB(A) at R7 to 51 dB(A) at R6. The monitored noise levels were within three decibels of the existing modeled noise levels for at least 25 percent of receptors along Western Avenue. No Build 2040 traffic-noise levels range from 30 dB(A) at R7 to 52 dB(A) at R2 and R6. Projected build 2040 traffic-noise levels range from 30 dB(A) at R2 to 52 dB(A) at R6. No Build 2040 noise levels range from 1 to 2 dB(A) higher than existing levels. Projected noise levels range from 20 decibels lower to 5 decibels higher than existing levels. The change in traffic-noise levels is due to the increase in traffic volumes and change in the distance from source to receptor.

12.0 SUMMARY

This report summarizes the noise analysis conducted for the Western Avenue realignment located in Marshall County, Illinois. The Illinois Department of Transportation (IDOT) and Federal Highway Administration (FHWA) noise policy was followed. Seven noise-sensitive receptors were selected and modeled using Traffic Noise Model (TNM) Version 2.5. Selected representative receptors for this project included single family residences.

Existing traffic noise levels range from 28 dB(A) at R7 to 51 dB(A) at R6. The monitored noise levels were within three decibels of the existing modeled noise levels for at least 25 percent of receptors along Western Avenue.

No Build 2040 traffic-noise levels range from 30 dB(A) at R7 to 52 dB(A) at R2 and R6. No Build 2040 noise levels range from 1 to 2 dB(A) higher than existing levels. The increase in traffic-noise levels is due to the increase in traffic volumes.

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No receptors approached, met or exceed FHWA residential NAC for any of the three conditions. No receptors experienced a substantial increase in noise over the existing condition. Therefore, no traffic-noise-abatement measures were considered for the Western Avenue realignment project.

REFERENCES

Federal Highway Administration (FHWA) Traffic Noise Model (TNM) Version 2.5

Illinois Department of Transportation, Division of Highways, Bureau of Design and Environment Manual, Section 26-6.

Updated 2017 Illinois Department of Transportation (IDOT) Noise Policy.

U.S. Department of Transportation - Federal Highway Administration, Highway Traffic Noise: Analysis and Abatement Guidance, June 2010, as revised January 2011.

U.S. Government, 23 Code of Federal Regulations Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise.