LONGMEADOW PARKWAY CORRIDOR DESIGN REPORT

Prepared for Kane County and the Illinois Department of Transportation

September 2012

Prepared by: McDonough Associates Inc.

LONGMEADOW PARKWAY
Corridor Design Repot

Route: FAP 361

Local Agencies: **Kane County**

LA Section No. 01-00286-00-EG

Federal Project No. **DPC-M-0019(008)**

Street Name: Longmeadow Parkway

Termini: Huntley Road to IL Route 62 (Algonquin Road)

☐ Design Approval Recommended
(Check Box)

_____ _____
For Kane County Date

_____ _____
IDOT Regional Engineer Date

☐ Design Approval
(Check Box)

_____ _____
Central Bureau of Local Roads & Streets Date

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EXECUTIVE SUMMARY

This design report opens with the development, need and existing conditions of the LONGMEADOW PARKWAY project. This material is primarily adapted and summarized from the Environmental Impact Statement (EIS), signed November 1, 2001, and the Record of Decision (ROD), signed May 13, 2002, for this project. These documents also developed the broad alternatives that were evaluated and then selected. The alternative selection at that point involved alignment selection and the number of lanes in the proposed improvement. At that time specific detailed geometrics, drainage, and structure design had not been developed.

With approval of the EIS and ROD, any decision that changed the base roadway configuration would require reopening the evaluations of the EIS. Since additional through lanes would not be acceptable due to an increase in impacts, the base number of lanes of the EIS and the choice of year 2020 traffic of the EIS were to be used for subsequent plan development.

With the signing of the ROD, detailed geometric design, drainage and structural design proceeded. On March 31, 2004, geometric approval was granted based upon developed plan and profile sheets and upon the intersection design sheets.

In June 2009, a Technical Memorandum was prepared to focus on the environmental issues that would potentially be affected by constructing and operating a toll system located along the proposed Longmeadow Corridor between Illinois Route 31 and Illinois Route 62. The purpose of the toll system would be to provide funding for construction of the improvement.

On November 20, 2009, the FHWA concluded that there would be no substantive changes in impacts with the Longmeadow Parkway Bridge Corridor tolling scenario compared to those disclosed in the final EIS and that a supplemental EIS is not required.

Following geometric approval, the geometrics have been changed slightly. These changes were due, in part, to a re-evaluation of the intersection capacities using year 2040 traffic projections. As part of the re-evaluation, the dual left turn lanes on IL Route 31, IL Route 25, and IL Route 62 were eliminated because it was found that dual left turns were not warranted at these locations.

The proposed project is the construction of a new crossing of the Fox River at the north end of Carpentersville by a four lane roadway. Extensive approach road and cross-road work is also part of the project to provide logical termini and regional access to the bridge. While the main crossing is and will be responsibility of Kane County as a Kane County highway, the cross-roads and approach roads involve roads on the State system that will remain on the State system, and on the local system of other agencies, notably the Villages of Carpentersville and Algonquin. The result is the procedures for review and acceptance for the structures and the drainage vary by under whose jurisdiction they fall. In the case of drainage, the implementation of this approach means that the local agency will review and be responsible for the proposed drainage on the local system. The proposed project satisfies the purpose and need for the project while minimizing environmental impacts.

1.0 INTRODUCTION

1.1 Project Description and Location

The proposed action consists of the construction of a new highway between Huntley Road and Illinois Route 62 and a new bridge crossing over the Fox River in Kane County. The proposed bridge corridor is Longmeadow Parkway in the Villages of Algonquin, Carpentersville, Barrington Hills and in unincorporated Kane County (see Exhibit 1 for project location map). The majority of the length of the proposed roadway and bridge crossing improvement is located in the Village of Carpentersville. The Algonquin section of the improvement is on the west side of the Fox River and the Barrington Hills section is on the east side of the Fox River, east of the Village of Carpentersville. The proposed Longmeadow Parkway typical cross section consists of two 12-foot lanes in each direction separated by a landscaped barrier median. Signalized intersection improvements would be provided at Huntley/Boyer Road, Randall Road, Sleepy Hollow Road, IL Route 31, Old Bolz Road Connector, IL Route 25 and Illinois Route 62 (Algonquin Road). Sandbloom Road would pass under the new bridge over the Fox River and intersect with Old Bolz Road. The existing tee intersection of Huntley Road and Boyer Road would be reconstructed as a four-legged intersection. The proposed roadway would transition into Huntley Road on the west terminus into a two-lane cross section. The length of this improvement from western terminus to eastern terminus is approximately 5.6 miles, with another 3.7 miles of intersecting road improvements.

1.2 Project Status and History

The Longmeadow Parkway corridor was one of the three bridge and roadway corridors recommended in the Environmental Impact Statement (EIS) signed by the Federal Highway Administration (FHWA) in November of 2001. This corridor was subsequently one of the three recommended for construction in the Record of Decision signed by the FHWA in May 2002. The roadway configuration analyzed and recommended in the environmental documents is the one described in the project description above.

The concept of additional bridges across the Fox River has been included in county and municipal planning and transportation studies at least since the 1960's. In 1969, the Fox River Valley Transportation Study recommended two bridges for construction by the year 1985: Fabyan Parkway in Batavia and Illinois Route 25/McLean in the community of Valley View. Of these, only the Fabyan Parkway Bridge was built.

In 1990, this project was initiated by the Fox River Bridge Advisory Committee, which produced the *Fox River Bridge Study*, due to the ongoing growth of development on the west side of the Fox River. This study analyzed approximately 20 crossings within Kane, McHenry, and Kendall counties. Nine remaining corridors were evaluated as part of the *Corridor Analysis Document* (May 1994). The remaining five corridors including the Longmeadow Parkway corridor, after agreement from the Kane County Board, were evaluated in more detail in the Environmental Impact Statement.

Public meetings and hearings have been conducted with the general support of the public for the proposed corridor. Environmental concerns with agricultural areas, upland forests and other sensitive issues are more fully discussed in the Environmental Impact Statement.

In June 2009, a technical analysis was performed and a technical memorandum was prepared based on a proposal to build a toll system for funding construction of the preferred alternate improvement alignment. In November 2009, the FHWA determined that there would be no substantive changes in impacts for the Longmeadow Bridge Corridor tolling scenario and that a supplemental Environmental Impact Statement would not be required.

1.3 Design Criteria

For the most part the project involves new construction of a suburban arterial on new alignment. At locations where the project is within an existing corridor, the project will be reconstruction to improve capacity.

2.0 PURPOSE AND NEED FOR THE PROJECT

2.1 Purpose of the Project

The purpose of the Longmeadow Parkway corridor is to provide transportation improvements, which would increase access across the Fox River in the North Region of Kane County. The Fox River represents a physical barrier, which limits east-west access in this region. The purpose recognizes this barrier and refines the objectives to address it more precisely in terms of land use and transportation issues. The three objectives as stated in the Environmental Impact Statement are:

- Enhance the transportation network by reducing congestion and providing alternate and more direct routes;
- Serve existing land use in the region through efficient access to central business districts, public services, and employment and commercial centers; and
- Serve proposed land use in conformance to local and county land use and resource management plans, which encourage compact, contiguous growth for in the eastern portion and preserve the rural qualities of the western portion of the region.

2.2 Need for the Project

Access

There are no major river crossings within the 5.1 miles from the Illinois Route 72/Main Street Bridge in the Cities of East and West Dundee to Illinois Route 62/Algonquin Road in the Village of Algonquin. The Illinois Route 72/Main Street Bridge in East and West Dundee serves both local and regional traffic. Illinois Route 72/Main Street is congested through East and West Dundee with numerous driveways and businesses fronting the road. The Illinois Route 62/Algonquin Road Bridge through Algonquin is congested due to lack of capacity through the intersection of Algonquin Road and Illinois Route 31 on the west side of the Fox River. The Huntley Road/Main Street Bridge in Carpentersville is a two-lane bridge that serves primarily local traffic and terminates at Lord Avenue four blocks east of the Fox River. Also, Main Street has a truck restriction for the bridge. Providing highway improvements will enhance travel by reducing travel times and providing safer travel conditions.

Traffic (Existing and Projected)

The need for the Longmeadow Parkway corridor is for access across the Fox River to reduce congestion and providing alternate and more direct routes. As documented in the EIS, the need is for more than relief to an existing roadway or bridge; the traffic demand for crossings of the Fox River in the immediate project area will exceed the effective capacity available. Therefore, the benefit to the roadway network will be diffuse. In the design year the benefit would not be immediately evident by a reduction in volume on nearby links due to redistribution impacts. Instead, network modeling by the Chicago Metropolitan Agency for Planning (CMAP) indicated that the network will be more efficient, since trips will be more direct on a slightly less congested network. Also, through traffic will be diverted outside of downtown Carpentersville, downtown Algonquin and the downtowns of East and West Dundee. Modeling indicated with or without new bridges, traffic will continue to grow, resulting in further congestion of the roadway network, as a result of continued growth of population, employment, and automobile usage.

The need is evident from an examination of the existing and projected traffic in the project corridor (s**ee** Exhibit 2). With projected traffic ranging from 8,000 to 33,000 vehicles per day, the driving public will benefit from a more direct regional corridor that allows crossing of the Fox River with minimal delays.

Land Use

The Villages of Carpentersville and Algonquin, as well as unincorporated Kane County are experiencing rapid growth in residential development west of the Fox River. East of the Fox River the Villages of Carpentersville and Algonquin have seen residential development occur north of Bolz Road from the Fox River to Illinois Route 25. The proposed Longmeadow Parkway corridor will support and complement the existing development and the expected growth.

Roadway Deficiencies and Safety

There is an existing 3-leg intersection at Huntley Road and Boyer Road. When Longmeadow Parkway is constructed, it will form the fourth leg of the intersection. In a recent three year period, there were 4 rear end accidents, 4 fixed object accidents and 4 various other accident types for a total of 12 accidents.

The Huntley-Boyer intersection will be reconstructed as a signalized intersection according to current standards.

There is an existing 3-leg intersection at Randall Road and Longmeadow Parkway. This is currently an unsignalized T-intersection. There were 14 accidents at the intersection during a recent 3 year period. Seven of the accidents were rear-end and the remaining 7 accidents were an assortment of various types.

This intersection will be reconstructed as a four-leg signalized intersection in accordance with current standards.

There is no existing intersection of Longmeadow Parkway with Illinois Route 31, Illinois Route 25, or Illinois Route 62. Therefore, no accident analysis has been performed for this report.

3.0 EXISTING SETTING/CONDITIONS

3.1 Topography

The major defining topographic feature of the project corridor is the Fox River Valley, occupied by a winding Fox River (see Exhibit 1 for a map of the corridor and Appendix B for aerial photography). On the east bank of the river, the land slopes steeply down toward the river with a narrow flood plain adjoining the river (see also Exhibit 4 for flood plain maps). On the west side, the flood plain is also narrow as the ground slopes gently down toward the Fox River. Throughout the project length the land form has been disturbed by farming operations, construction of subdivisions, quarry operations and the construction of roads.

The area from Boyer Road to Karen Lane is relatively flat and rolling terrain. East of Karen Lane the topography drops steeply down to IL Route 31. From IL Route 31 to the Fox River the topography is rolling farmland and at the river valley changes to gentle floodplain.

On the east side of the river the land is flat from the Fox River to Sandbloom/Williams Road. East of Sandbloom/Williams Road the topography steeply rises. From Sandbloom/Williams Road to IL Route 25, however, on the north side of Bolz Road the topography has been lowered by quarry operations while on the south side of Bolz Road the topography is level.

3.2 Adjoining Land Use

Residential development in proximity to the Longmeadow Parkway corridor consists of single-family detached housing and multi-family apartment complexes. West of the Fox River, within the Village of Algonquin, there are several single family residential developments with housing on average size suburban lots. Some areas have not been developed and are still farmland. East of the Fox River, within the Village of Carpentersville, there are single family homes on small lots along the south side of the corridor and multi-family residential housing along the north side of the corridor. There is an existing quarry northeast of the intersection of Bolz Road and Sandbloom Road. From IL Route 25 to

IL Route 62, there are single family homes on small lots along the south side of the corridor. There is wooded land and a few large homes along the north side of the corridor.

The only businesses along the corridor consist of Target Manufacturing located on the southeast corner of Bolz Road and Williams Road, and a quarry located northeast of Sandbloom Road/ Bolz Road intersection.

Randall Road has emerged in the last decade as a major commercial corridor throughout its length in Kane County. Commercial areas are found on Randall Road approximately ½ mile north of Longmeadow Parkway and one mile south of Longmeadow Parkway.

Another major land use is forest preserve land. The 741.4 acre Brunner Family Forest Preserve is located between the west side of the Fox River and IL Route 31. A portion of the Fox River Shores Forest Preserve is located on the east bank of the Fox River.

3.3 Transportation Network

Roadway Network

Illinois Route 62 (Algonquin Road) is the only bridge crossing in this area that provides regional east-west access. A bridge in downtown Carpentersville (Main Street) serves primarily local traffic because it does not provide a direct connection to east-west arterials.

The east-west Strategic Regional Arterial (SRA) arterial south of Longmeadow Drive is IL Route 72 in the City of West Dundee, 5 miles away and the east-west SRA north of Longmeadow Drive is IL Route 62, two miles away**.** There are two north-south SRAs in the area; Illinois Route 25 and Randall Road. In addition, Illinois Route 62, which runs northwest-southeast, is a Strategic Regional Arterial.

Roadway Classifications

Major highways which traverse the project area are: Randall Road, Illinois Route 31, Illinois Route 25, and Illinois Route 62. Illinois Route 31 is classified as a Minor Arterial (urban) and Huntley Road is classified as a Minor Arterial. Randall Road, Illinois Route 25, and Illinois Route 62 are classified as Other Principal Arterials. Randall Road has limited access control under the jurisdiction of Kane County. Otherwise, none of the remaining roads are access-controlled.

Other roadways intersecting Longmeadow Parkway corridor are: Huntley-Boyer Road, Stonegate Road, Barrett Drive, Sleepy Hollow Road, Sedgewood Trail, White Chapel Lane, Karen Drive, Sandbloom-Williams Road, Bolz Road connector, and Autumn Trail.

The current posted speed limits along the Longmeadow Parkway Corridor are listed in the following table.

Roadway Name	Northbound Posted Speed Limit	Southbound Posted Speed Limit	Eastbound Posted Speed Limit	Westbound Posted Speed Limit
Huntley-Boyer Road	40 mph	50 mph		50 mph
Randall Road	50 mph	50 mph	NA	NA
Stonegate Road	NA	NA	35 mph	35 mph
Barrett Drive	30 mph	30 mph	NA	NA
Sleepy Hollow Road	35 mph	35 mph	NA	NA
Illinois Route 31	50 mph	50 mph	NA	NA
Sandbloom – Williams Road	35 mph	35 mph	NA	NA
Bolz Road Connector	NA	NA	35 mph	35 mph
Illinois Route 25	45 mph	45 mph	NA	NA
IL 62 – Algonquin Road	55 mph	55 mph	NA	NA

Roadway Right-Of-Way
The right-of-way for Huntley Road west of Boyer Road is 110 ft. The Boyer Road right-of-way north of Huntley Road is 66 ft. and south of Huntley Road is 88 ft.

The right-of-way on Randall Road varies from approximately 150 ft. north of Longmeadow Parkway, to 180 ft. south of Longmeadow Parkway. The existing right-of-way for Longmeadow Parkway at Randall Road is 60 ft. wide.

The right-of-way on Sleepy Hollow Road is 80 ft. wide. The right-of-way on Longmeadow Parkway is 140 feet wide west of Sleepy Hollow Road and 80 feet wide east of Sleepy Hollow Road. The existing right-of-way on Illinois Route 31 north of the proposed intersection with Longmeadow Parkway is 75 feet wide. South of the proposed intersection, the existing right-of-way on Illinois Route 31 is 134 feet wide.

The existing right-of-way on Bolz Road at Illinois Route 25 is 100 feet wide. The existing right-of-way on Illinois Route 25 north of the Bolz Road intersection is approximately 105 feet wide. South of the intersection, the Illinois Route 25 right-of-way is 120 feet wide.

The existing right-of-way for Illinois Route 62 is 100 feet wide at the proposed Longmeadow Parkway intersection.

Roadway Typical Sections
The existing roadway sections for Huntley Road, Boyer Road, Illinois Route 31 and Illinois Route 62 each consist of two lanes with shoulders. Randall Road and Illinois Route 25 have four lanes with a painted median and shoulders. Sleepy Hollow Road has two lanes with curb and gutter. Existing Longmeadow Drive has two lanes with curb and gutter.

Railroads
There are no railroads located in the project corridor.

Pedestrian/Bicycle Access
The Fox River Trail crosses the Longmeadow Parkway Corridor on the east side of the Fox River.

3.4 Structures

A new 8 span bridge will be constructed to carry Longmeadow Parkway over the Fox River. Five spans will each be approximately 120 ft. to 124 ft. long, two spans will be 200 ft. long and the longest span over the main channel will be 300 ft. long. The bridge will carry two lanes of traffic in each direction, separated by a 12 ft. curbed median. A 10 ft. wide sidewalk will be constructed on one side of the bridge and connect to the multiuse path on each side of the river**.**

3.5 Utilities

Since Longmeadow Parkway is a new corridor, most of the affected utilities will be crossing the corridor. A full utility investigation will be needed during the design phase of this project.

3.6 DRAINAGE

A Location Drainage Study has been prepared for the Longmeadow Parkway Corridor. The proposed roadway passes through two principal watersheds. West of Randall Road, the project is in the Kishwaukee River watershed. East of Randall Road, the project is in the Fox River watershed.

The Fox River has a designated floodway.

Kane County has a storm water management ordinance requiring detention with a controlled release rate for new impervious areas.

3.7 Environmental Factors Affecting Design

A more extensive discussion of environmental features can be found in the Environmental Impact Statement. The aerial plan sheets (Appendix B) highlight the locations of these features.

Wetlands

Initially, six wetlands were identified in the Longmeadow corridor. Of these, one (Wetland 6) is a deep lake, not a wetland. Another (Wetland 5) is no longer considered a wetland. Two wetlands are classified as moderate to poor natural quality and two are classified as poor natural quality. The locations of these wetlands are shown in Exhibit 2.2-6 in Volume 2 of the Final Environmental Imacp\t Statement and Section 4(f) evaluation. None of the remaining wetlands are affected by the proposed construction.

Threatened and Endangered Species

No federally listed species were observed in the project corridor during the biological surveys.

On May 6, 2005, the Illinois Department of Natural Resources signed off on the project as not potentially adversely affecting state listed threatened/endangered species or Natural Areas.

On August 4, 2010, the Biological Survey was approved.

Flood Plains
Within the Longmeadow corridor, the Fox River has a regulatory floodway (see Exhibit 4).

Resources
There are a number of public recreational facilities throughout the corridor. These include:

Fox River Shores
Brunner Family Forest Preserve

The Brunner Family Forest Preserve is a new acquisition by the Kane County Forest Preserve District. The Kane County Department of Transportation executed an agreement with the Forest Preserve District of Kane County on April 14, 2009, to acquire property for the highway through the Brunner Family Forest Preserve.

Cultural Resources - Historic Resources & Archaeological

One site within the project corridor has been identified as eligible for inclusion on the National Register of Historic Places. (The location is known to Kane County and IDOT, but withheld here to protect the site from poaching). Preliminary plans for mitigation of the adverse effects due to construction will be prepared and the County will work with the IDOT minimize the adverse effects. Otherwise, the site is not expected to affect the project implementation.

Special Waste

A Preliminary Environmental Site Assessment (PESA) was performed for this project by the State of Illinois, dated December 28, 2010. The report lists 12 sites with Recognized Environmental Conditions (REC's). The PESA response and Preliminary Site Investigations will be performed in Phase 2, the design phase.

4.0 ALTERNATIVES CONSIDERED

4.1 No-Action

The No-Action Alternative will require no new construction. Traffic volumes on the existing roadway network will continue to increase as development continues, resulting in inadequate capacity, as well as increased congestion, delays, and accident rates. As development occurs away from existing crossings, vehicle miles of travel will continue to grow from new trips having to travel further to a river crossing. Maintenance costs on existing bridges north and south of the Longmeadow corridor will increase as necessary roadway repairs become more extensive and frequent due to excessive traffic loads. The continued congestion along Illinois Route 62, Main Street (Huntley Road) and Illinois Route 72 will have a negative effect on the provision of goods and services along the central business districts of Algonquin, Carpentersville, East Dundee and West Dundee. Existing and proposed land uses, as well as employment, will be negatively affected by the increase in congestion.

Pressure to improve traffic flow by widening existing bridges and approach roads will increase, although this action will not be possible without major impacts to the surrounding areas.

The limited access across the river also acts as a restriction on community cohesion.

For the above cited reasons, the No-Action alternative does not meet the needs of the project.

4.2 Other Modes of Transportation

Bus service is limited along the corridor. As part of the EIS, Congestion Management Strategies (CMS) were investigated. CMS, including transit, was identified as not having the potential to address the need for this project.

4.3 Base roadway configuration

Alignment

The Longmeadow Corridor is approximately 5.6 miles in length. The corridor passes through portions of the villages of Algonquin, Carpentersville, and Barrington Hills, as well as unincorporated areas of Kane County.

The western terminus of the corridor is located at Huntley Road, west of Randall Road, approximately 1300 feet northwest of the Huntley-Boyer intersection. From Huntley Road the corridor traverses developing properties crossing Boyer Road, Randall Road, Sleepy Hollow Road, and Illinois Route 31 on its way to the Fox River. After crossing the river on a new structure, the corridor parallels existing Bolz Road; crossing over Sandbloom/ Williams Street on structure. It then intersects the Bolz Road Connector, Illinois Route 25, and proceeds to its eastern terminus at Illinois Route 62.

Intersection Locations and Base Roadway Configurations.

All proposed intersections will be at-grade; no interchanges are proposed. The possibility of an intersection between Longmeadow Parkway and Sandbloom/ Williams Road on the east side of the Fox River was investigated. Longmeadow Parkway will be constructed on a high embankment to allow construction of a bridge over the Fox River. Extensive reconstruction with additional right-of-way would be needed to provide an intersection with Sandbloom-Williams Road, therefore, the existing roadway network will be utilized to access from Longmeadow Parkway to Sandbloom/Williams Road.

The highway capacity analyses performed as part of the Intersection Design Studies and during the EIS development established the base number of lanes and auxiliary lanes for the sections at signalized intersections and subsequently away from intersections. The following is the list of proposed signalized intersections and a description of each intersection configuration:

North-South Intersection Leg	East-West Intersection Leg	North-South Leg Base Lane Configuration	East-West Leg Base Lane Configuration
Boyer Road	New Longmeadow Parkway	single through lane each direction dual left turns lane northbound single left turn lane southbound single right turn lane northbound	dual through lanes each direction single left turn lane single right turn lane
Randall Road	Longmeadow Parkway	3 through lanes each direction dual left turn lanes single right turn lane	dual through lanes each direction dual left turn lanes single right turn lanes
Sleepy Hollow Road	Longmeadow Parkway	shared through/right lane single left turn lane	dual through lanes each direction single left turn lanes single right turn lanes
Illinois Route 31	New Longmeadow Parkway	dual through lanes each direction single left turn lanes single right turn lanes	dual through lanes each direction single left turn lanes single right turn lanes
Bolz Road Connector	New Longmeadow Parkway	shared through-right turn lane each direction single left turn lane both legs	dual through lanes each direction single left turn lane – both legs single right turn lane-both legs

North-South Intersection Leg	East-West Intersection Leg	North-South Leg Base Lane Configuration	East-West Leg Base Lane Configuration
Illinois Route 25	New Longmeadow Parkway	dual through lanes each direction single left turn lane, both directions single right turn lane (southbound)	dual through lanes each direction single left turn lane single right turn lane
Illinois Route 62	New Longmeadow Parkway	dual through lanes each direction single left turn lane (northbound) single right turn lane (southbound)	single left turn lane (eastbound) free flow right turn lane (eastbound)

Access Alternates

To maintain safe, efficient operation and protect the investment in a major new roadway facility, Longmeadow Parkway will have access limited to existing roads and a limited number of driveways between Huntley Road on the west and Illinois Route 62 on the east. Total access control is not practical because of the lack of suitable alternate access adjoining the properties in this area. The exact placement and number of access points along the non-State system component of this improvement will be determined in negotiations between the County and property owners prior to the finalization of development plans by the property owners.

Pedestrian/Bicycle Alternates

A multiuse path is proposed for this entire project. This path will follow the alignment of Longmeadow Parkway throughout the length of the project. The proposed bridge over the Fox River will be designed to accommodate the path. At the east end of the project, the path will terminate at the entrance to Hickory Hill Park, operated by the Dundee Township Park District.

Longmeadow Parkway will be constructed on a structure over the Fox River and over Sandbloom / Williams Road. A connecting trail from Sandbloom Road to the Bolz Road connector will be constructed along the south side of Longmeadow Parkway to provide a connection between the Fox River Trail and the Longmeadow Parkway Trail.

5.0 PROPOSED ALTERNATE

5.1 General Description

Huntley Road was selected as the western terminus of Longmeadow Parkway because it serves to collect traffic from many residential subdivisions to the northwest in the Huntley area. Much of this traffic currently continues southeast to cross the Fox River using Illinois Route 72. Furthermore, the proposed western terminus is one-half mile west of Randall Road, a north-south Strategic Regional

Arterial. Traffic coming from the north using Randall Road will also be able to use the new Longmeadow Parkway corridor to cross the Fox River.

The east terminus of the Longmeadow Parkway is at Illinois Route 62, a Strategic Regional Arterial. Illinois Route 62 will then carry traffic further southeast to its intersection with Illinois Route 59. The overall length of the Longmeadow Parkway Corridor is approximately 5.6 miles.

Typical Sections

The proposed typical section for the mainline roadway improvement is two lanes in each direction plus median and auxiliary lanes at intersections (see Exhibit 3) Due to restricted right-of-way, the proposed mainline roadway will have combination concrete curb and gutter. Besides limiting right-of-way impacts, the combination concrete curb and gutter will provide the benefit of allowing salt laden roadway runoff to be diverted around sensitive wetland areas, and directed to detention ponds. Since a multi-use path parallels the proposed roadway, the combination curb and gutter, with a setback provides positive separation from the road and the path.

Intersection/Interchange Types

All the intersections are at-grade. As noted in Section 4.3, no direct intersection will be provided between Longmeadow Parkway and Sandbloom/Williams Road. Intersection design studies were prepared for all proposed signalized intersections to establish configurations (see Appendix B, section 3).

5.2 Design Criteria

The County proposes to designate Longmeadow Parkway as a County Road and incorporate it into the Strategic Regional Arterial network.

Design criteria and standards were gathered from a variety of sources. The principal sources used for the project are based on the Illinois Department of Transportation (IDOT) Bureau of Design and Environment (BDE) Manual, the IDOT Highway Standards, the IDOT Bureau of Local Roads and Streets Manual, the Manual on Uniform Traffic Control Devices and the IDOT Drainage Manual. The complete list of criteria used for this project is too extensive to list as part of this report. The governing criteria and some critical criteria are listed below.

Name of Road	Functional Classification	Design Speed (mph)	Design Vehicle	Construction Class
Huntley Road	Minor Arterial	50	WB 55	New Construction
Boyer Road	Local	40	WB 55	New Construction
Randall Road	Other Principal Arterial	55	WB 65	New Construction
Stonegate Road	Local	30	SU	New Construction
Barrett Drive	Local	30	SU	New Construction
Sleepy Hollow Rd.	Local	40	WB 40	New Construction
Sedgewood Drive	Local	30	SU	New Construction

White Chapel Lane	Local	30	SU	New Construction
Illinois Route 31	Minor Arterial	55	WB 65	New Construction
Boltz Road South	Local	30	SU	New Construction
Illinois Route 25	Other Principal Arterial	50	WB 65	New Construction
Autumn Trail	Local	30	SU	New Construction
Illinois Route 62	Other Principal Arterial	60	WB 65	New Construction

Other important criteria for the project are:

Criterion	Value
Vertical Clearance over Roadway**	14' 9"
Minimum Clearance low beam of bridge and Design (50 year) natural high water (State system)	2'
Minimum Clearance low beam of bridge and Design (30 year) natural high water (Local Agency system)	1'
Minimum Freeboard Roadway above Design high water	3'
Preferred Freeboard from water impoundments to maximum design storage elevation (min. 100 year flood)	2'
Traffic Signal Sight distance for 45 mph design speed - from vehicle to stop bar	460'

5.3 Pavement Recommendations

Pavement design will be developed in Phase II design. The project is new construction. New pavement will generally be placed throughout the project.

Base course widening and resurfacing will be used in the transition sections from the full improvement to the existing pavement.

5.4 Geometric Design

The proposed plan sheets (on aerial photography) and profile sheets (Appendix B, section 1 and 2) illustrate the centerline alignments, roadway profile, lane widths, storage lengths and tapers. The centerline alignments and profiles were developed to comply with the above listed controlling criteria and critical criteria. Lane widths are standard 12 foot lanes and tapers are as appropriate to the design speed.

Geometrics were reviewed and approved by the Illinois Department of Transportation on March 31, 2004 (see Appendix A - Geometric Approval). Following this approval, there were minor geometric changes to eliminate dual left turn lanes which were not warranted on IL Route 31, IL Route 25, and IL Route 62.

5.5 Intersection Design Studies (IDSs)

As noted in Chapter 4 Intersection Design Studies have been prepared for each of the proposed signalized intersections (see Appendix B section 4). The proposed lane configurations and storage

lengths are the result of the highway capacity analyses performed for the intersection design studies. The Intersection Design Studies were also part of the approval granted March 31, 2004. Since that approval, the capacity analyses have been updated using projected traffic data for year 2040.

5.6 Utilities

Utility coordination for this project will be required at the beginning of the design phase**.** In general the proposed improvements will avoid major utilities on private property. Utilities in public right-of-way, other than municipal utilities, will be required to relocate at their own expense under the conditions of their permit.

5.7 Pedestrian/Bicycle Access

As noted in Chapter 4, a multi-use path will be constructed along Longmeadow Parkway, from the west project limit to Hickory Hill Park at the east project limit. Connecting multi-use paths will be provided along Illinois Route 31 and Illinois Route 25. A multi-use connecting path will also be provided to connect the Longmeadow Trail to the Fox River Trail.

5.8 Structural Recommendations

A new bridge is proposed to be constructed over the Fox River, as follows:

Description of Bridges	Proposed Owner	Proposed Structure Number	Comments
Longmeadow Parkway over the Fox River	Kane County	045-3024	New bridge, including multi-use path, spanning over the Fox River, the Fox River multi use trail and Sandbloom/Williams Road

Retaining walls are proposed at two locations. A 200 ft. retaining wall is proposed along the north side of Longmeadow Parkway between Sta. 2094+70 and Sta. 2096+70. Construction of this wall is necessary to avoid impacting an existing detention pond located on the northwest corner of Longmeadow Parkway and Sleepy Hollow Road. A second retaining wall, approximately 490 ft. long, is proposed along the south side of Longmeadow Parkway, from Sta. 2150+12 to Sta. 2155+00. At this location, Longmeadow Parkway is in a deep excavation. The proposed retaining wall is necessary to avoid impacting an existing local residential street that is adjacent to the proposed highway corridor.

5.9 Drainage Recommendations

For this project, the typical roadway cross section consists of combination concrete curb and gutter due to right-of-way restrictions and multi-use path proximity on one side of the roadway. Therefore,

an enclosed drainage system is proposed. When the road is in a cut section, swales will be provided behind the curb. In compliance with the Kane County storm water management ordinance, the enclosed drainage system will outfall to detention ponds located throughout the project.

More details are available in the Location Drainage Study.

5.10 Environmental Findings/Recommendations

The Natural Resources Unit has reviewed this project. The project does not require biological surveys. There are no records of listed species, natural areas, or nature preserves within the project corridor. The Biological Survey was approved on August 4, 2010. Biological Clearance was renewed for two years on September 10, 2012 and a "consultation termination" letter was furnished by the Illinois Department of Natural Resources."

5.11 Design Variances

Design variances from standard for the State system are the responsibility of the Bureau of Design and Environment (BDE) and design variances on the local system are the responsibility of the Bureau of Local Roads and Streets (BLRS). The following design variances were approved at the July 10, 2012 FHWA/IDOT Coordination Meeting:

The design variances on the State system are as follows:

Intersection of Lathrop Lane and Il Route 31:

For the left turn from northbound IL Route 31 to Lathrop Lane, a 480 ft. deceleration lane is required. A 240 ft. deceleration lane is provided due to the close proximity of the Longmeadow Parkway intersection. Lathrop Lane is a low volume residential street. Variance granted for reduced lane deceleration taper for the Lathrop Lane approach.

Intersection of Longmeadow Parkway and Il Route 31

For the southbound right turn lane on IL Route 31, a 12 ft. wide lane is required. Due to right-of-way constraints, an 11 ft. lane will be constructed. Variance granted to reduce width of right turn lane from 12 ft to 11 ft.

Bicycle Path along IL Route 62

A separate bicycle path will not be provided along IL Route 62 due to right of way restrictions. There are no county or local plans to tie into a bicycle path along IL Route 62. The 10 ft. wide shoulders on each side of IL Route 62 will be designed to accommodate bicycles. Variance granted for use of proposed 10 ft. wide shoulder to accommodate bicycles.

The design variances on the local system are as follows:

LEVEL I:

Grade on Longmeadow Parkway
To minimize earthwork, a 5% grade in proposed on Longmeadow Parkway east of the Fox River. Based on a 50 mph design speed, stopping sight distance is adequate. Variance granted.

Intersection Level of Service at Huntley-Boyer Road
Intersection level of service "D" is proposed for the Huntley-Boyer Road intersection. This is due to anticipated development patterns and potential changes in traffic patterns resulting in more through traffic on Longmeadow Parkway after construction. Variance Granted.

Level II:

Bolz Road 7% Grade
A 7% grade is proposed to match the existing grade and avoid excessive earthwork for Bolz Road. The stopping sight distance is adequate for 35 mph. Variance granted.

Bolz Road Connector – Storage Lengths
The required storage lengths on the Bolz Road connector at the proposed signalized intersection with Longmeadow Parkway cannot be met. There is limited right-of-way available. Any backups will only affect Bolz Road which primarily feeds to the Bolz connector. Other area roads will not be affected. Variance Granted

The issue of curbs was discussed on May 10, 2005. Since the roadway will have barrier curb and the design speeds are 45 mph or less, 1.5 foot of clearance from face of curb is sufficient. Since more clearance will be provided, there is no design exception.

5.12 Right-Of-Way

As shown on the attached plan sheets, right-of-way will be required throughout the project. The right-of-way requirements are dictated by the roadway section and the proposed mitigation measures. Right-of-way will be purchased as the opportunity arises, depending upon funding availability and staging. An agreement was executed to transfer property from the Kane County Forest Preserve District, (KCFPD) to Kane County in exchange for appropriate turn lanes on Illinois Route 31 at the KCFPD site.

Approximately 113 acres will be acquired in fee from 70 property owners. The right-of-way acquisition will result in three residential displacements. In addition, buildings at the site of a former farm stand (currently used for storage) will be displaced**.**

5.13 Cost Estimate

The estimated cost of construction for the total project, including contingencies is $ 102 M. See Exhibit 5 for the more detailed project cost estimate.

5.14 Staging and Maintenance of Traffic Recommendations

It is anticipated that this project can be divided into at least two phases if necessary for funding purposes. The most essential and most costly part of the project is construction of the bridge over the Fox River, therefore the following phasing can be used:

Phase I – Construct the bridge for Longmeadow Parkway over the Fox River and construct all roadway pavement from Illinois Route 31 on the west to Illinois Route 62 on the east. The overall length of this construction project is approximately 2.7 miles.

Phase II – Construct the western portion of Longmeadow Parkway from Huntley Road to Illinois Route 31. The overall length of this segment of highway is approximately 2.7 miles.

Since most of the construction is on new alignment, there will not be a need for staging along Longmeadow Drive. Additional construction phasing alternatives may be considered in the future depending on funding availability.

Seven signalized intersections will be constructed for this project. The construction of each intersection will be staged, with detailed staging to be developed during the design phase of this project.

5.15 Conclusions

The above described proposed alternative is the recommended alternative. While there are potential impacts associated with the project, the proposed mitigation addresses them while satisfying the purpose and need for the project.

6.0 COMMENTS AND COORDINATION

6.1 Coordination

Coordination with local, state, and federal agencies is required for this project. All environmental documentation is included in the EIS (Appendix A). Remaining correspondence that has been received to date is included in this section.

IDOT/FHWA/LA Coordination Meetings
There have been several meetings on this project since approval of the Record of Decision. For the most part, they related to administrative and funding issues. The ones that do not are described below and listed in Appendix A.

A meeting was held on January 26, 2010 to update the status of the study for IDOT.

The March 9, 2010 FHWA Coordination Meeting was held to reintroduce the project and verify direction towards design approval.

A meeting was held on September 9, 2011 to discuss and clarify IDOT comments on the previous Intersection Design Study submittal.

Geometric Approval
Geometric approval for this project was granted in an email dated March 31, 2004. Since that time, the design of three intersections was modified to eliminate dual left turn lanes. Those intersections were Longmeadow Parkway at Illinois Route 31, Longmeadow Parkway at Illinois Route 25, and Longmeadow Parkway at Illinois Route 62. These intersections will function at Level of Service C or better based on Design Year 2040.

Technical Advisory Committee Meetings

A Technical Advisory Committee was established during the course of the project to facilitate coordination on NEPA/404 merger issues. Meetings were held and documented prior to the signing of the Record of Decision (ROD) to verify impacts and agree upon mitigation. The ROD documents the May 17, 2001 meeting.

Threatened and Endangered Species
The biological survey was approved on August 10, 2010.

6.2 Public Involvement

All public involvement prior to the signing of the ROD is documented in the EIS (Record of Public Hearings, Comments to the Release of the Draft EIS and Responses). Following approval of the EIS and ROD, a Public Hearing was held on March 26, 2009. The purpose of this hearing was to present Longmeadow Parkway as a toll highway facility, thereby using tolls to fund construction of the facility. The toll facility would be electronic collection and there would be no changes to the geometry as previously proposed. Other public involvement activities have been limited to clarifying the impacts to individual property owners. The documentation of this Public Hearing is contained in the "Technical Memorandum for the Fox River Bridge Crossings Final Environmental Impact Statement and Section 4f Evaluation" dated November 2009.

6.3 Other Coordination

Parks:
A major coordination effort in the EIS was devoted to Section 4(f) issues involving the Kane County Forest Preserve District and the Illinois Department of Natural Resources. (See EIS for details). The Kane County Forest Preserve has been an active participant in the process, including attending internal status meetings. Continued involvement will be required for right-of-way acquisition.

Local Agencies:
Besides Kane County, the proposed improvement involves the Villages of Algonquin, Barrington Hills, and Carpentersville. These communities along with the Villages of West Dundee, East Dundee, Gilberts, Huntley, Lake in the Hills, Sleepy Hollow and McHenry County have been involved in the project throughout its duration.

6.4 Commitments

Kane County will coordinate with the Illinois State Historic Preservation Officer regarding construction work in the vicinity of the site that is eligible for inclusion on the National Register of Historic Places.

Utility coordination for the entire corridor will be initiated at the start of Phase II (Design).

Additional survey is needed
Illinois 62, extend topographic survey and profile northwest and southeast
Topography: Provide additional survey where needed at new signalized intersections.

The PESA/Preliminary Site Investigation will be performed during Phase II, the Design Phase.

Socio-Economic:
Three residential properties are being acquired for this project. This project will not displace a disproportionate number of minority individuals.

Transportation:
Bicycle Facilities
Kane County has an approved bicycle plan and a map showing county bicycle facilities. In addition, Kane and Kendall Counties jointly maintain a bicycle planning map that incorporates the existing and planned facilities of both counties, municipalities, and other local agencies.

Transit
The relevant portions of the Phase I plans will be sent to Pace (the local bus service provider) and Metra (the suburban rail transit provider) for their review to ensure that the plans do not hinder, and may in fact contribute, to transit usage. The County will perform this at the appropriate time.

It is noted that the nearest Metra Commuter Rail lines are located approximately 5 miles north and 5 miles south of the Longmeadow Corridor. In addition, the Metra Star line, a long range proposed circumferential transit line would be located approximately 3.5 miles east of the Longmeadow corridor. Construction of Longmeadow Parkway will not preclude any future plans by Metra.

Cultural Resources:

Cultural clearance was granted on May 13, 2011. Kane County will coordinate design in front of one residence that is eligible for inclusion on the National Register of Historic Places.

Storm Water Management

Kane County Storm Water Management requirements will be implemented as prudent. This is a commitment to Kane County and is reflected in the proposed design, which will be reviewed by the County for compliance.

Biology

Restoration

- All land areas will be restored to turf or other vegetative cover. Native grasses and wildflowers will be plant where appropriate. This will be reflected in the design phase of the project.
- Plantings, including trees, will be coordinated with local officials, where applicable.

6.5 Permits

A number of permits are required prior to construction of this project. These permits are:

NPDES - This project will disturb in excess of 1 acre of land. As part of the NPDES requirement, the construction contracts will include a Stormwater Pollution Prevention.

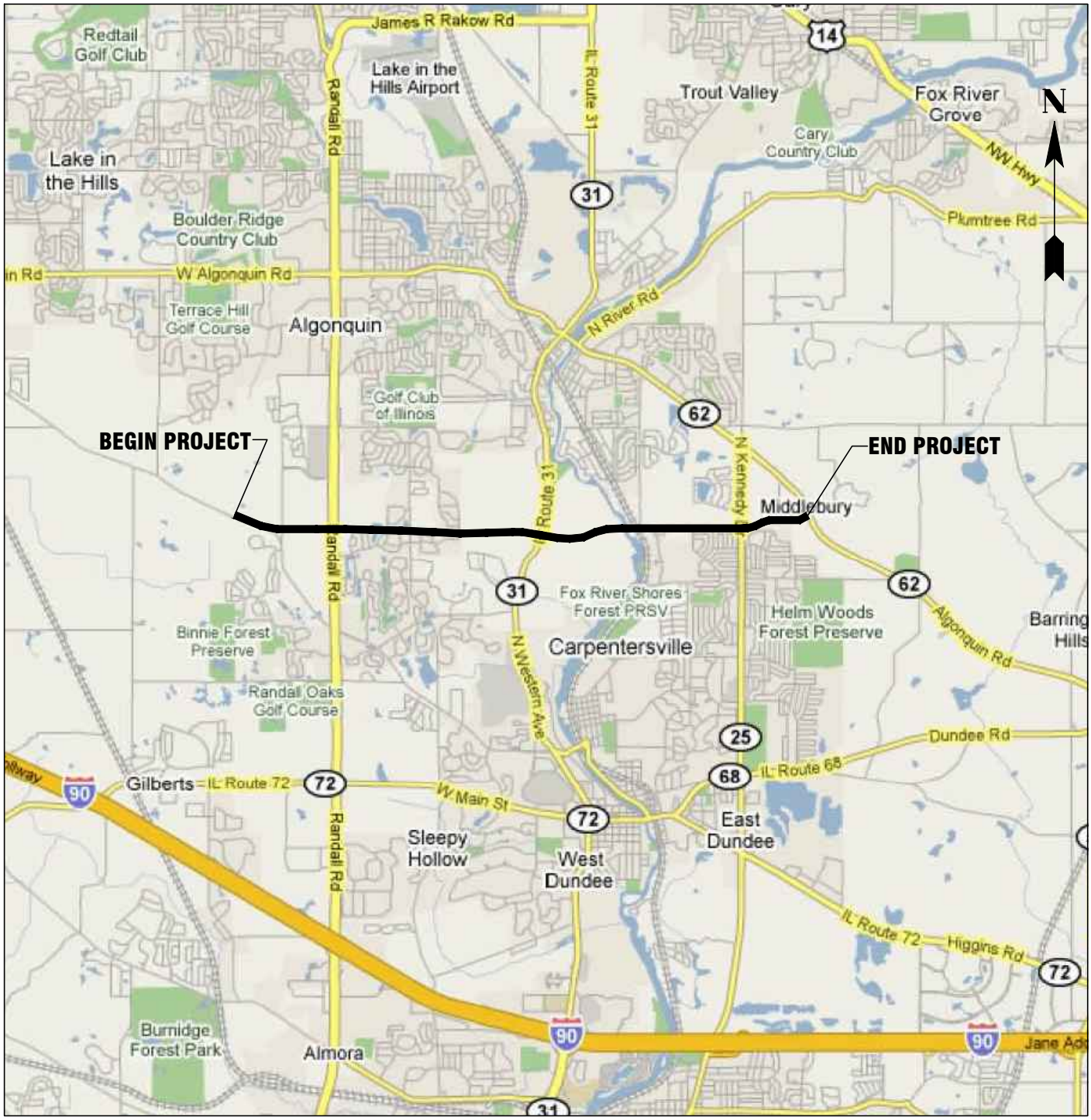
Section 404 - This project involves the filling of wetlands and public waters of the US. This permit will be complete before construction. As the project will use a common mitigation site, the intent is to have approval of the mitigation plan relative to overall impacts before initiating construction of the mitigation site.

IDNR - OWR. This project involves construction in floodways, both designated and not, in Northeastern Illinois (Part 3708 and 3700 rules, respectively) and construction in a Public Water- the Fox River (Part 3704 rules).

Kane County Stormwater Management Permit.

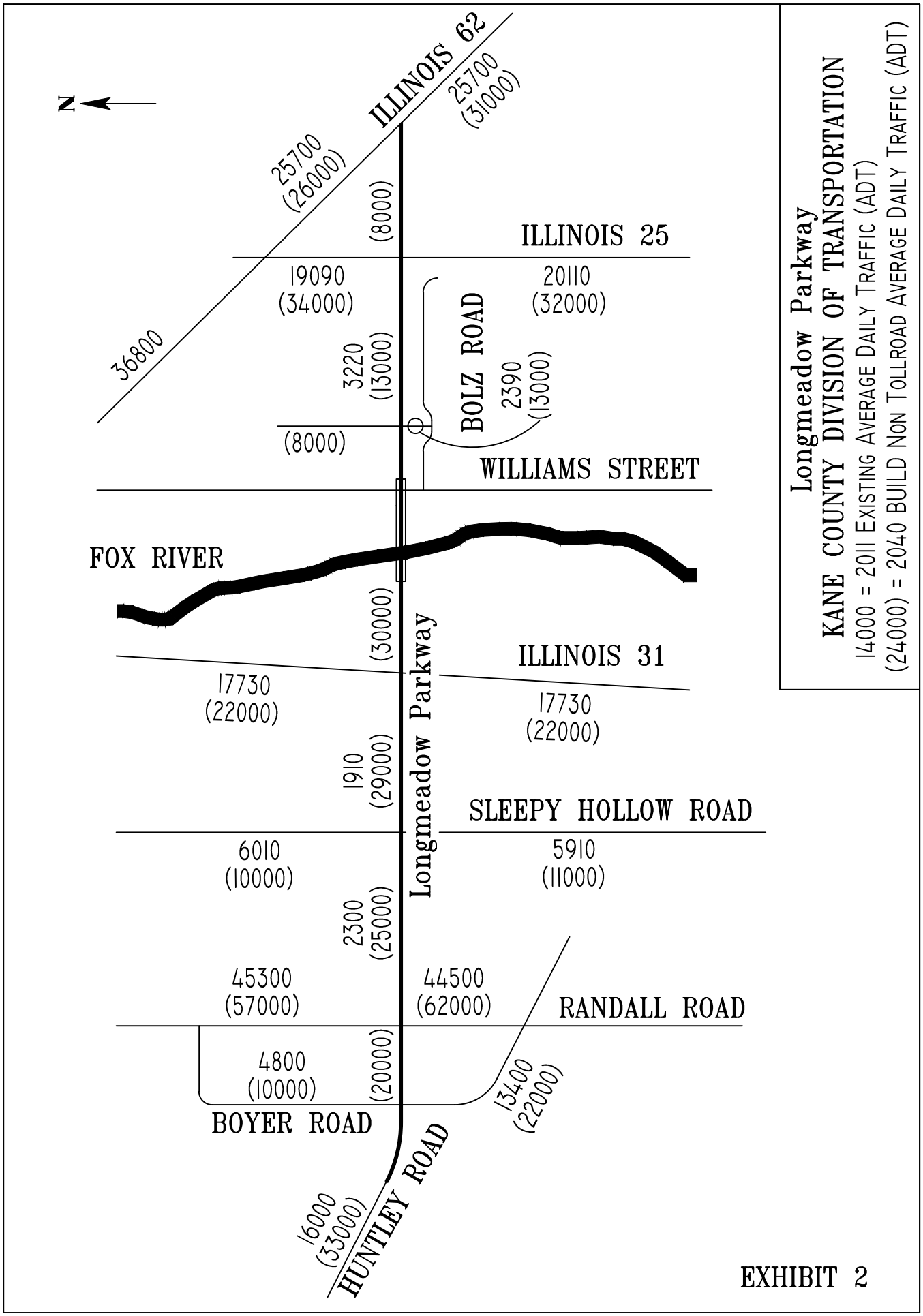
EXHIBITS

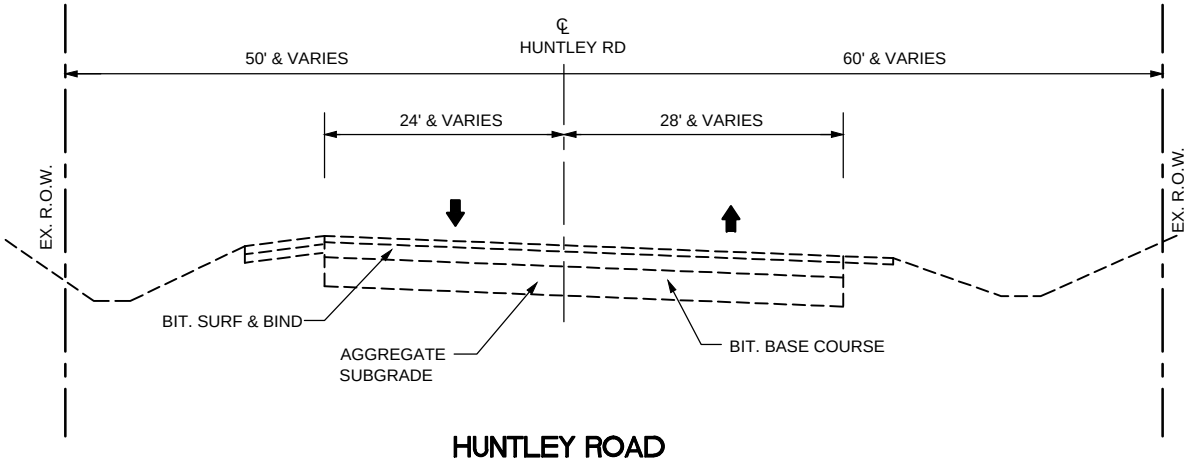
LOCATION MAP



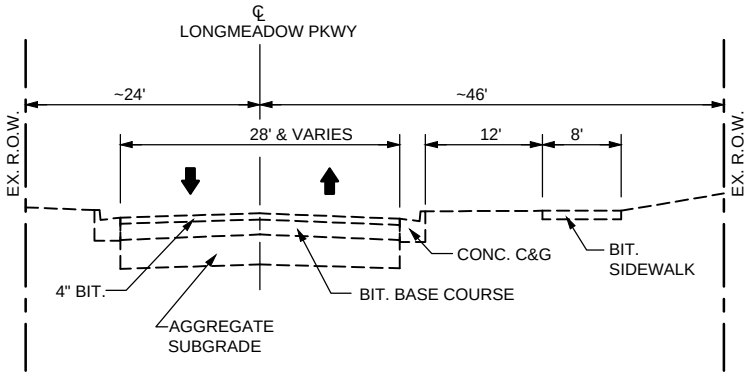
LONGMEADOW PARKWAY
94-00215-01-ES
BOYER ROAD TO IL 62

EXHIBIT 1

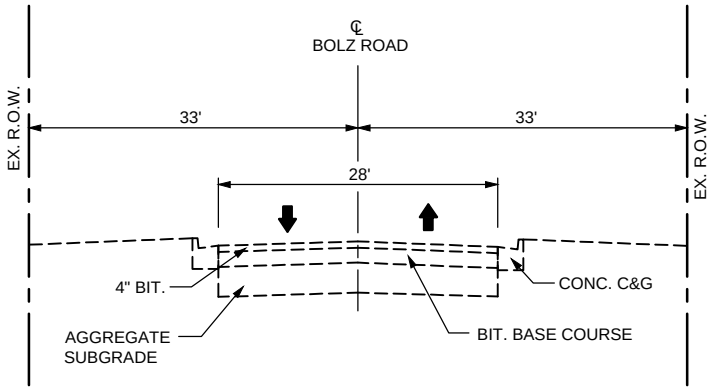

N
ILLINOIS 62
25700
(31000)
25700
(26000)
(8000)
ILLINOIS 25
19090
(34000)
20110
(32000)
36800
3220
(13000)
BOLZ ROAD
2390
(13000)
(8000)
WILLIAMS STREET
FOX RIVER
(30000)
ILLINOIS 31
17730
(22000)
17730
(22000)
1910
(29000)
Longmeadow Parkway
SLEEPY HOLLOW ROAD
6010
(10000)
5910
(11000)
2300
(25000)
45300
(57000)
44500
(62000)
RANDALL ROAD
4800
(10000)
(20000)
13400
(22000)
BOYER ROAD
16000
(33000)
HUNTLEY ROAD
Longmeadow Parkway
KANE COUNTY DIVISION OF TRANSPORTATION
14000 = 2011 EXISTING AVERAGE DAILY TRAFFIC (ADT)
(24000) = 2040 BUILD NON TOLLROAD AVERAGE DAILY TRAFFIC (ADT)
EXHIBIT 2



HUNTLEY ROAD
BEGIN TO STA. 2031+50



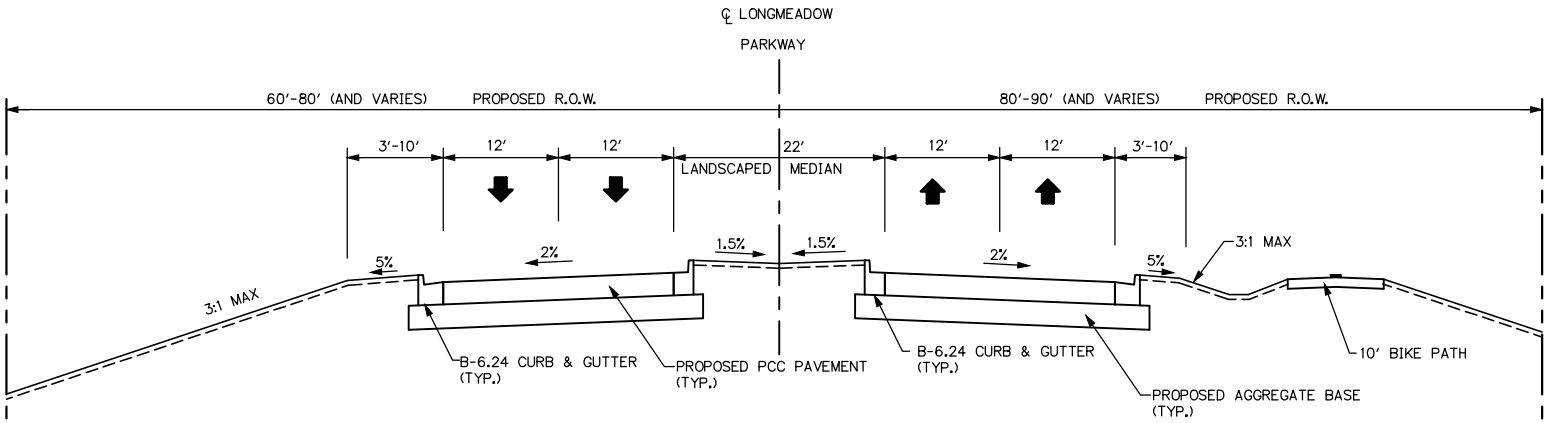
LONGMEADOW PARKWAY
STA. 2058+00 TO STA. 2124+75



BOLZ RD
STA. 2245+00 TO STA. 2270+00

EXISTING TYPICAL SECTION NOTES:
1) NO ROADWAY EXISTS BETWEEN STA. 2031+50 TO STA. 2058+00
2) NO ROADWAY EXISTS BETWEEN STA. 2124+75 TO STA. 2245+00
3) NO ROADWAY EXISTS BETWEEN STA. 2270+00 TO END

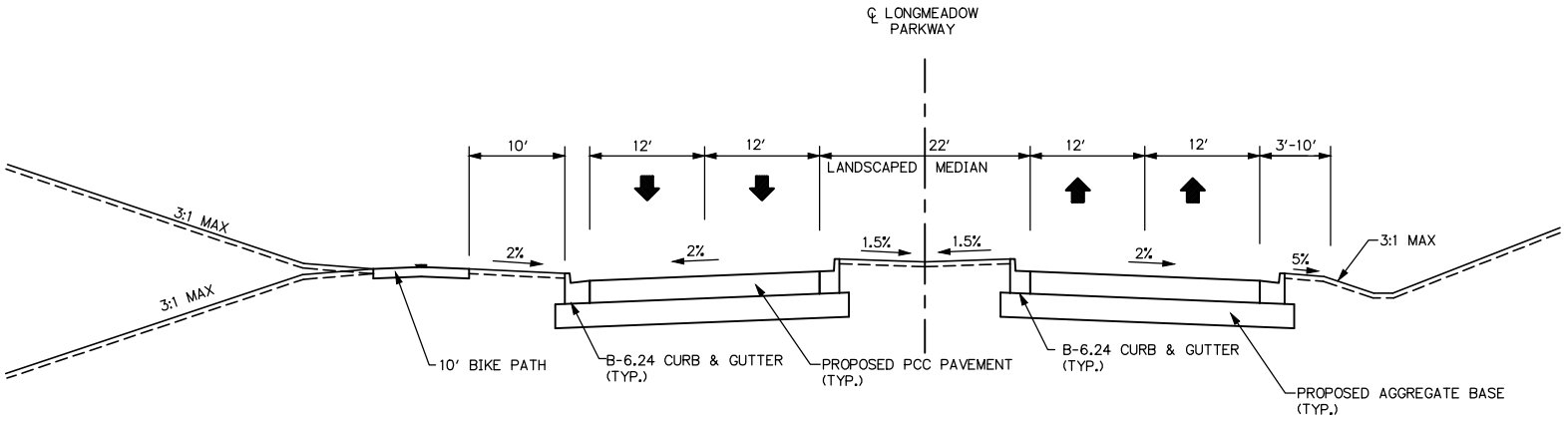
EXISTING TYPICAL SECTIONS



LONGMEADOW PARKWAY
PROPOSED TYPICAL SECTION

STA. 2013+50 TO STA. 2135+66.68
STA. 2237+51.35 TO STA. 2271+00

NOTES:
1) FROM STA. 2013+50 TO 2019+00 MEDIAN TRANSITIONS FROM 0' TO 22'
2) SUPER ELEVATION IS 2.75% ON CURVE 2



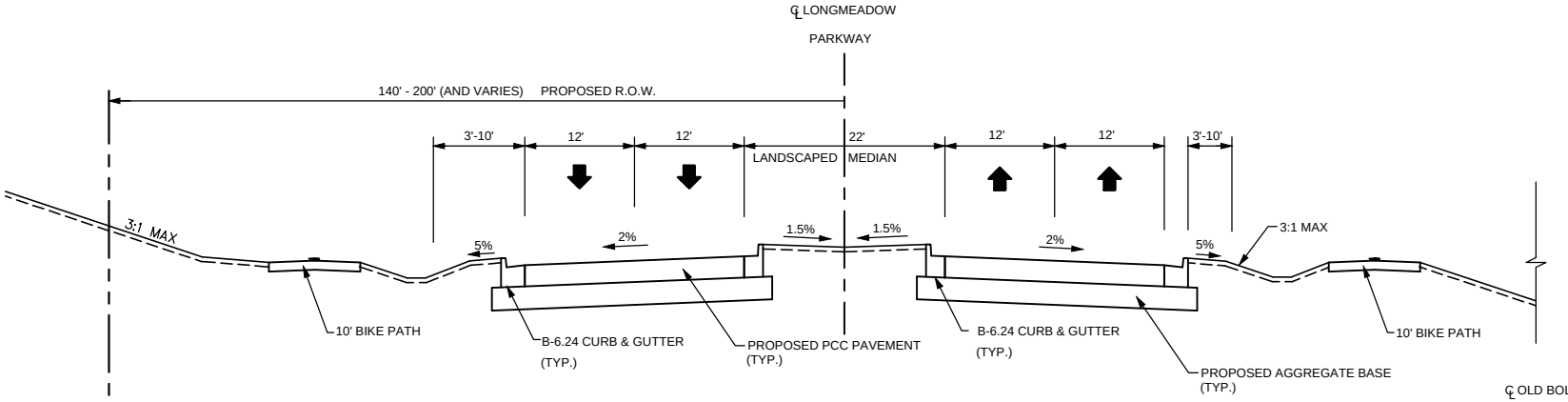
LONGMEADOW PARKWAY
PROPOSED TYPICAL SECTION

STA. 2135+66.68 TO STA. 2186+72.50

PROPOSED TYPICAL SECTIONS

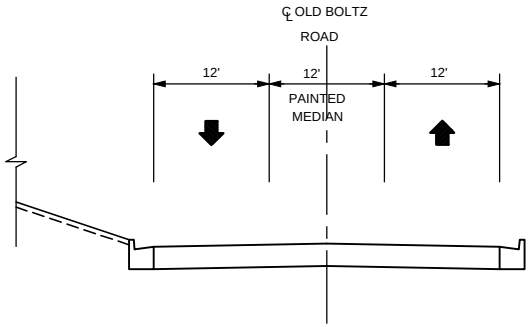
EXHIBIT XX

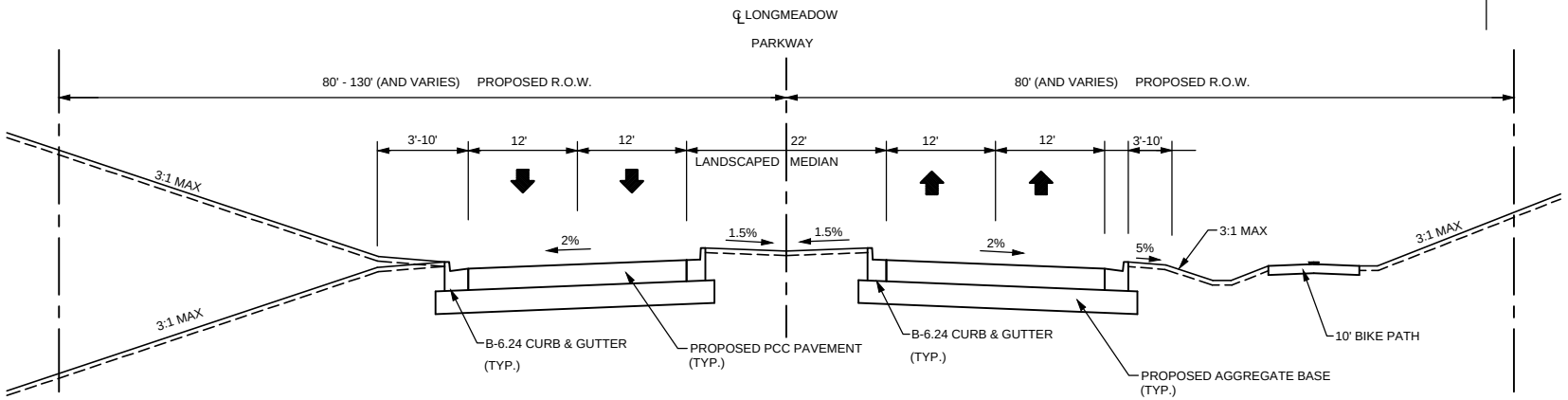
FOR STA. 2205+50 TO STA. 2221+00 SEE BRIDGE TS&L



LONGMEADOW PARKWAY
PROPOSED TYPICAL SECTION

STA. 2227+48 TO STA. 2237+51.35
STA. 2245+00 TO STA. 2271+00





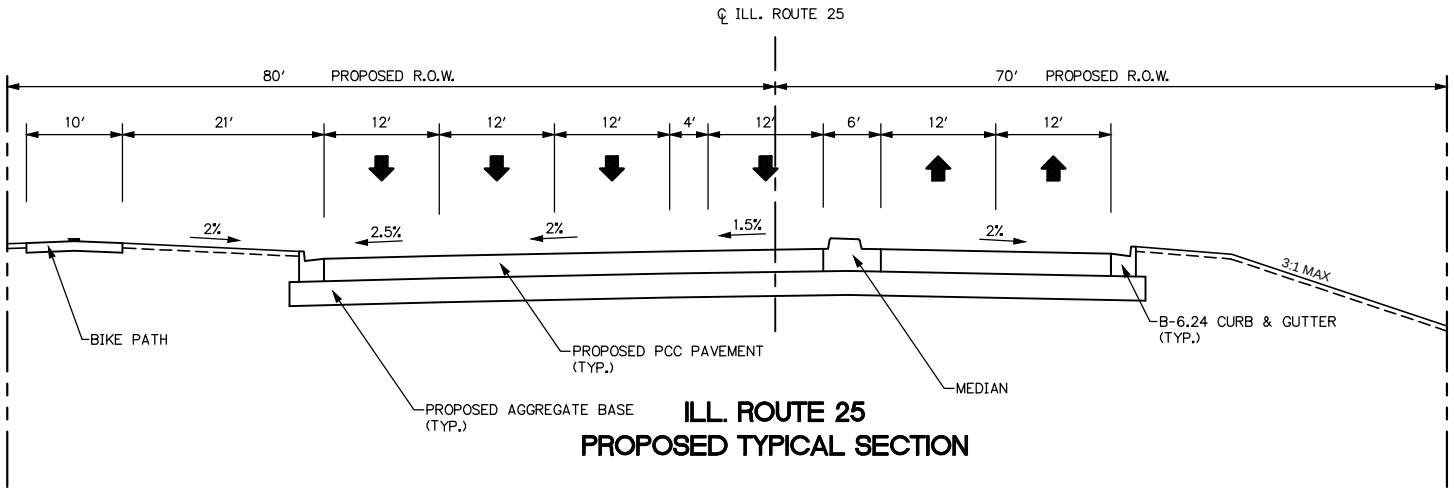
LONGMEADOW PARKWAY
PROPOSED TYPICAL SECTION

STA. 2271+00 TO END

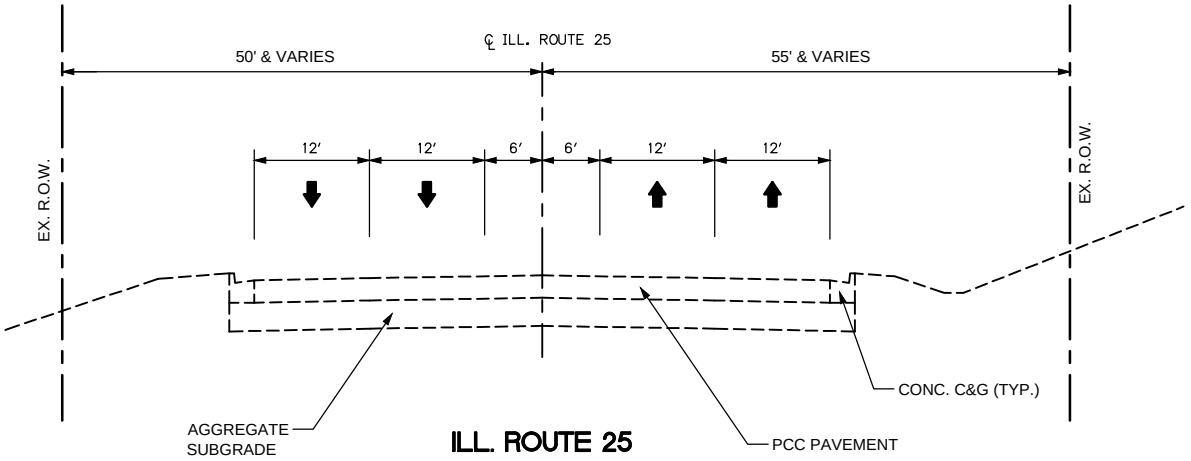
NOTES:
1) SUPER ELEVATION IS 4.00% ON CURVE 13,14
2) SUPERELEVATION IS 3.75% ON CURVE 15

EXHIBIT XX

PROPOSED TYPICAL SECTIONS

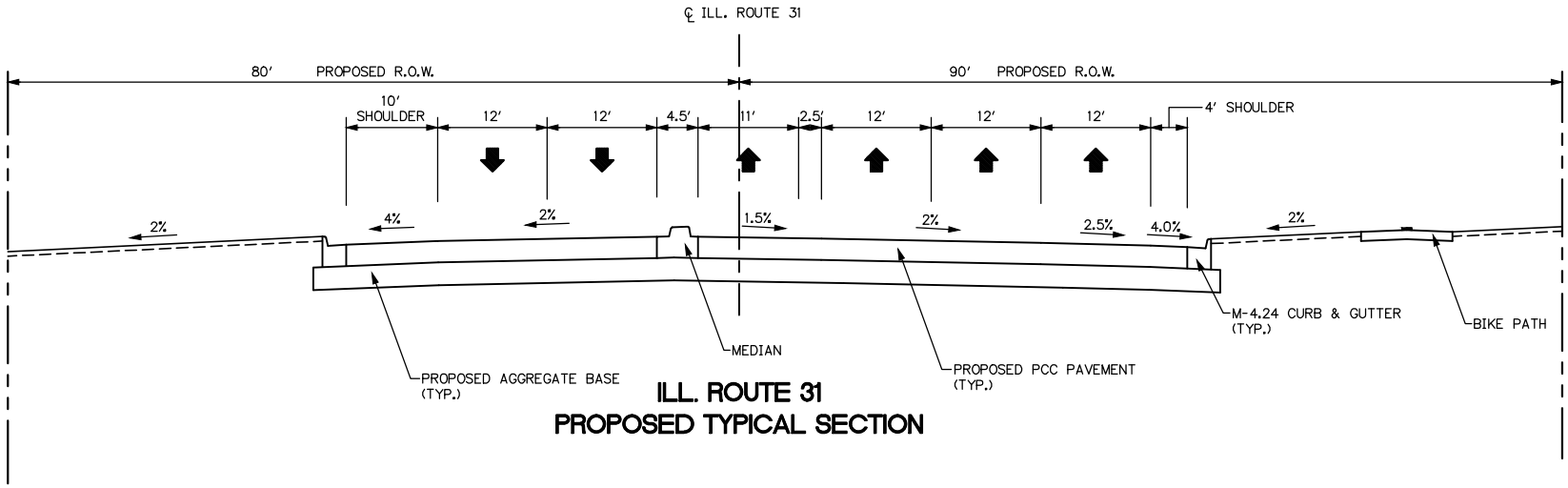


ILL. ROUTE 25
PROPOSED TYPICAL SECTION

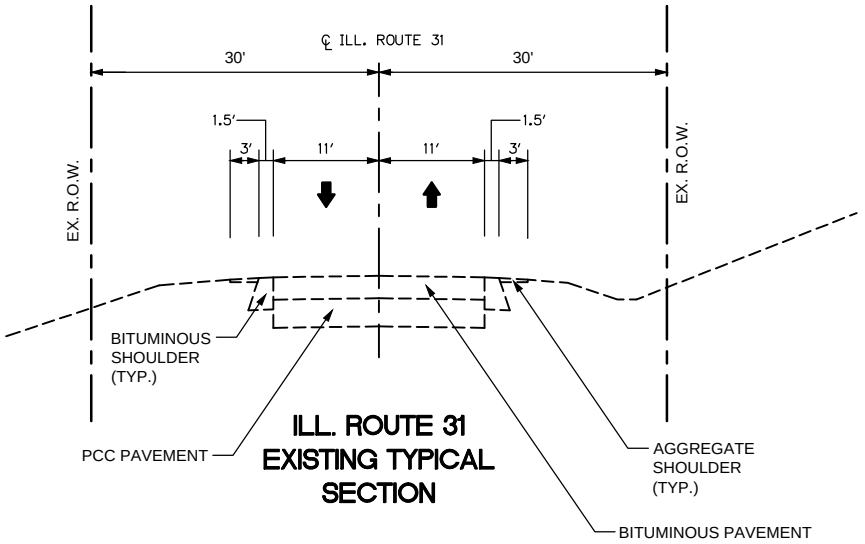


ILL. ROUTE 25
EXISTING TYPICAL SECTION

EXHIBIT XX

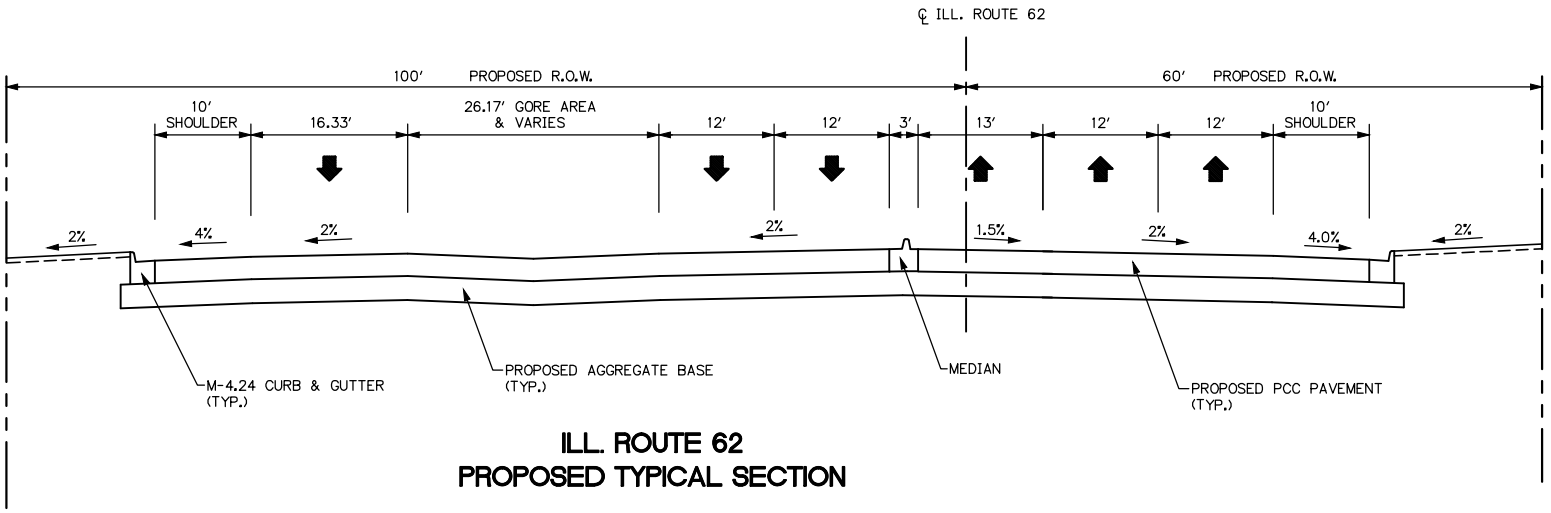


ILL. ROUTE 31
PROPOSED TYPICAL SECTION



ILL. ROUTE 31
EXISTING TYPICAL SECTION

EXHIBIT XX



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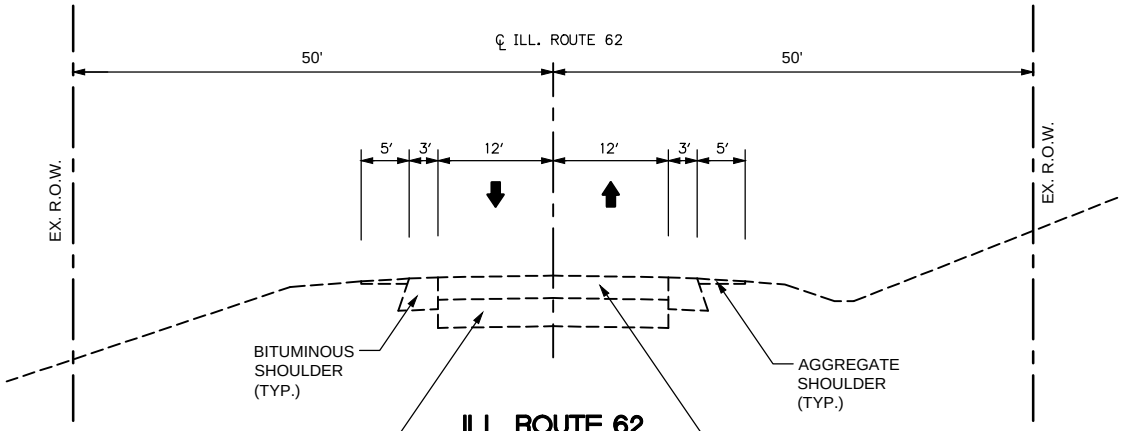
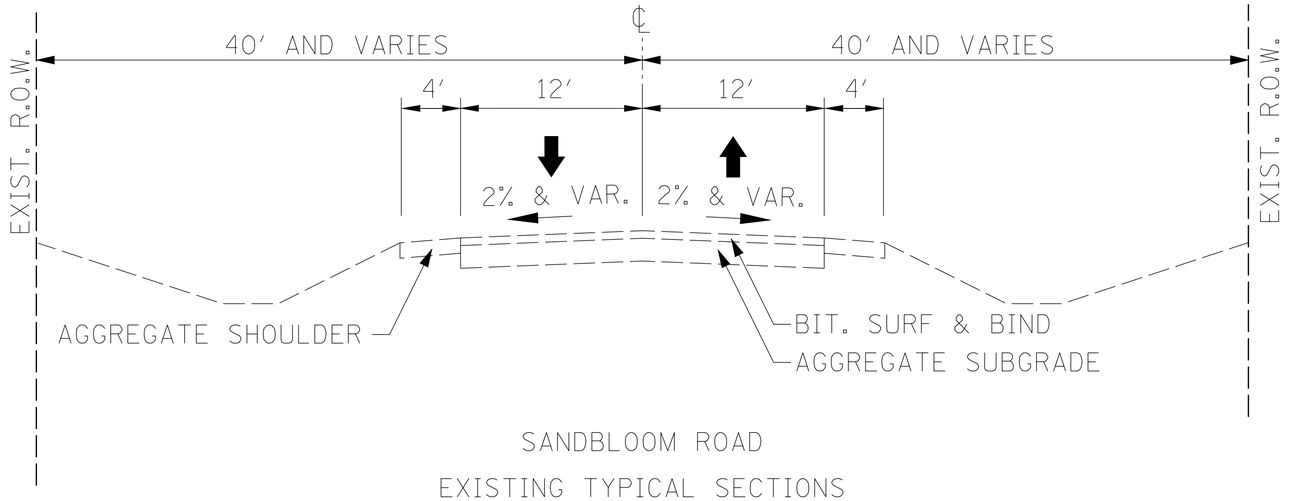
PROPOSED TYPICAL SECTION



ILL. ROUTE 62
EXISTING TYPICAL SECTION

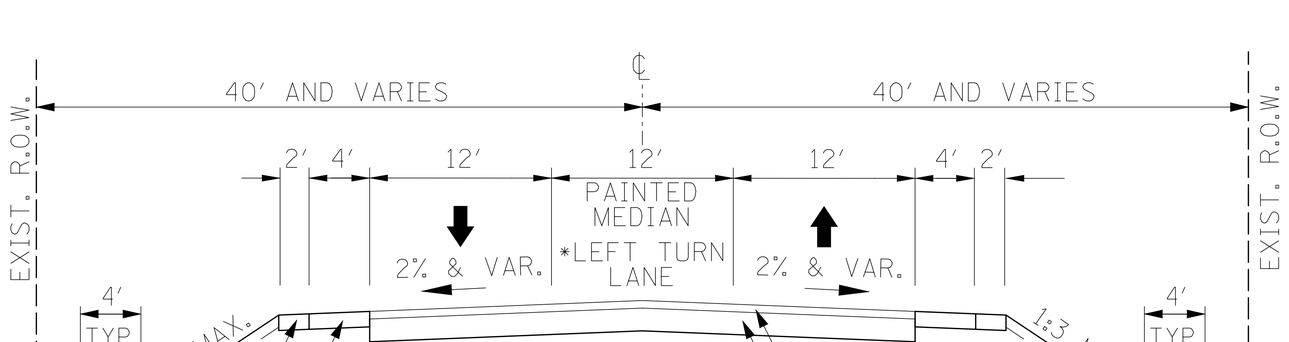
EXHIBIT XX



SANDBLOOM ROAD

EXISTING TYPICAL SECTIONS

STA. 902+40.36 TO STA. 908+93.90



SANDBLOOM ROAD

PROPOSED TYPICAL SECTIONS

STA. 902+40.36 TO STA. 908+93.90

McDonough Associates Inc.
Engineers / Architects
180 N. Stetson Ave. Suite 1500, Chicago, Illinois 60601

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE - $SUBDATE$	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SANDBLOOM ROAD
TYPICAL SECTION

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.$ RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
RTE	$SECT$	$CNTY$	TOT	SHT
	TYPICAL	CONTRACT NO. CON		
	ILLINOIS FED. AID PROJECT			

$SUBTYPE$

MAP SCALE 1" = 1000'

0 1000 2000 FEET

METE

PANEL 0070H

FIRM

FLOOD INSURANCE RATE MAP

KANE COUNTY, ILLINOIS

AND INCORPORATED AREAS

PANEL 70 OF 410

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALGONQUIN, VILLAGE OF	170474	0070	H
BARRINGTON HILLS, VILLAGE OF	170058	0070	H
CARPENTERSVILLE, VILLAGE OF	170322	0070	H
KANE COUNTY	170896	0070	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
17089C0070H

MAP REVISED
AUGUST 3, 2009

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

NFIP

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

AREA SHOWN ON THIS
OCATED WITHIN
42 NORTH, RANGE 8 EAST.

JOINS PANEL 0156

JOINS PANEL 0157

EXHIBIT 5

PRELIMINARY COST ESTIMATE

Longmeadow Parkway

EARTHWORK		
Huntley Road to Fox River		
500,000 cy @ $12=	$ 6,000,000	
Fox River to Il Route 62		
496,000 cy @ $12=	$ 5,952,000	
		$ 11,952,000
SIDEWALK, CURB AND GUTTER		$ 1,460,000
PAVEMENT		$ 19,100,000
DRAINAGE		$ 3,400,000
TRAFFIC SIGNALS		
7 signalized intersections		$ 1,400,000
MAINTENANCE OF TRAFFIC		$ 1,700,000
STRUCTURE OVER FOX RIVER		$ 46,200,000
SUBTOTAL		**$ 85,212,000**
CONTINGENCY (20%)		$ 17,000,000
TOTAL		**$ 102,212,000**

Cost of Right-of-Way acquisition and cost of engineering services are not included in the above total.

APPENDIX A

Appendix A - Coordination Documentation
IDOT/FHWA/Local Agency Coordination

Appendix A - Coordination Documentation
Geometric Approval

Appendix A - Coordination Documentation
Technical Advisory Committee Coordination

Appendix A - Coordination Documentation
Threatened and Endangered Species Coordination

Appendix A - Coordination Documentation
Railroad Coordination

Appendix A - Coordination Documentation
Park Coordination