



HAMPTON, LENZINI, AND RENWICK, INC.

Civil Engineering ▪ Structural Engineering ▪ Environmental Services ▪ Land Surveying

TO: Janel Veile, IDOT Bureau of Design and Environment

FROM: Mike Zakosek, Kane County Division of Transportation

DATE: March 3, 2016

SUBJECT: Proposed Longmeadow Parkway – Tree Impacts and Proposed Mitigation

Summary of Impacts

The proposed Longmeadow Parkway Extension project will impact approximately 61.25 acres containing approximately 5,765 trees. This number includes the trees to be removed at Raging Buffalo Park. Of the 5,765 trees surveyed, approximately 4% were dead. The project limits begin west of Boyer Road on Huntley Road and continue east to Illinois Route 62 (Algonquin Road) in Kane County, Illinois. Impacts have been minimized to the greatest extent possible, but the bridge construction and road widening will result in impacts that cannot be completely avoided. Figure 1 shows the project location and overview of tree impact locations.

This project will be constructed in stages; therefore, the tree replacement will occur as each stage is constructed. The following is a breakdown of tree impacts per stage:

Section A (Western limit to west of Randall Road)	366 trees
Section B (West of Randall Road to East of Route 31).....	1,695 trees
Section C (East of Route 31 to East of Route 25).....	2,274 trees
Section D (East of Route 25 to IL Route 62).....	1,195 trees
Raging Buffalo Park	235 trees
Total tree impacts.....	5,765 trees

Mitigation Requirements

Mitigation will be provided along the existing right-of-way throughout the length of the Longmeadow Parkway to replace trees that will be impacted by the proposed project. Kane County proposes to plant at a 2:1 mitigation ratio for a total of 11,530 trees. A 2:1 mitigation ratio is proposed to replace impacted trees as well as to provide northern long eared bat habitat. This number of trees will not be able to be accommodated for entirely within the right-of-way and therefore other options are discussed below.

Mitigation will be provided for impacts to forest resources which are potential northern long-eared bat habitat. Kane County is responsible for accomplishing the mitigation according to the commitments made to the local communities, regulatory agencies, and natural resource agencies. Generally, trees removed for this project will be replaced as close as possible to the areas from which they were removed. However, this may not be possible in all areas depending on the availability of land suitable for tree planting. Kane County shall mitigate impacts to suitable northern long-eared bat habitat. Suitable habitat for this species was identified within the project footprint associated with large forested areas, woodlots, and forested riparian areas adjacent to the Fox River.

A total of 29 acres of suitable habitat (including upland forest, floodplain forest and forested wetlands) are present within the project footprint. Habitat creation will occur on land that does not already provide suitable habitat for this species. In order to create suitable habitat for the northern long-eared bat, selected species of trees will be planted at a suitable

density on lands protected in perpetuity by easement. A land manager shall also be identified for the site(s) to ensure that long-term management is provided. Habitat creation sites will be located near the proposed project, but outside the right-of-way footprint and adjacent to existing summer habitat and flight corridors. The County or subsequent land manager(s) shall provide maintenance and monitoring of the habitat creation site(s) for up to ten years or until agreed by the service. The frequency at which each site will be inspected during the maintenance and monitoring period will be coordinated with and approved by the service and included in the final mitigation plan for each site. Additionally, ecological performance measures shall be required to ensure the habitat creation meets the objective of habitat replacement. These ecological performance measures will be coordinated with and approved by the Service prior to the completion of a final mitigation plan. For mitigation of the 5,765 trees impacted, Kane County proposes to plant at a 2:1 mitigation ratio for a total of 11,530 trees. The trees would be 5-gallon, matted, mulched, caged, and staked with a warranty for 1 growing season according to IDOT policy. Kane County and IDOT are working with the Service, Forest Preserve District of Kane County (FPDKC), and other local stakeholders including the FPDKC to develop the habitat creation plan. The habitat creation approach is to develop larger sites that include suitable habitat, particularly for the northern long-eared bat; wetland and upland forests; and stream enhancements where practical.

The County or the identified land manager(s) shall be responsible for monitoring and maintaining the northern long-eared bat habitat creation areas while they are being established, for up to ten years. This maintenance and monitoring period may be extended if ecological performance measures have not been met at the end of ten years, and may be shortened if the site has met ecological performance measures before ten years. After the final locations have been selected, the County shall provide maintenance and monitoring plans and ecological performance measures for Service approval and review. The maintenance and monitoring plans will not be conceptual, but rather will contain detailed descriptions for each phase of mitigation including 1) initial construction and establishment, 2) post-construction monitoring phase, and 3) long-term management. The maintenance and monitoring plans will address and/or establish the following: quantifiable criteria and methods for assessing success of all mitigation plantings, approved lists of tree/plant species to be planted (and their relative abundance/percent), proposed construction schedules, annual post-construction monitoring schedules, and a long-term, on-going management strategy. Reports will be provided to the Service during the maintenance and monitoring period for the habitat creation sites documenting conditions and performance measure monitoring at the habitat creation sites. The frequency at which inspections will occur and reports will be provided will be coordinated with and approved by the Service prior to the completion of the final mitigation plan.

Mitigation Proposed

The following number of trees will be planted along the existing right-of-way (ROW):

Section A (Western limit to west of Randall Road)	5 trees
Section B (West of Randall Road to East of Route 31).....	2,416 trees
Section C (East of Route 31 to East of Route 25).....	1,000 trees*
Section D (East of Route 25 to IL Route 62).....	636 trees
Raging Buffalo Park	0 trees
Total Trees to be Planted within the ROW	4,057 trees

**The landscaping plan has not been finalized for Section C. We anticipate at least 1,000 trees being proposed for planting in this section but this number is subject to change.*

Only part of the mitigation would be satisfied by planting trees along the right-of-way. The number of trees required for mitigation will exceed the space available within the right-of-way, therefore, other adjacent area must be considered. In reviewing the land adjacent to the corridor, the most beneficial place to mitigate for the 7,500 remaining trees and to provide for Northern Long-eared bat habitat would be to plant trees on the west side of the Fox River within Brunner Forest Preserve. The goal would be to extend the existing tree line west, this would extend the riparian corridor, increase

habitat and improve overall water quality into the Fox River. There is a large non-wooded area that extends west to Illinois Route 31 on both sides of the proposed Longmeadow Parkway. Kane County has contacted the FPDKC and they have committed to mitigation occurring in this area. Figure 2 shows the general area of tree mitigation. This will provide tree mitigation and creation of bat habitat immediately adjacent to where the impacts are occurring. With it being FPDKC lands, the trees will be preserved and maintained in perpetuity.

In reviewing the composition of the adjacent wooded parcel and considering NLEB habitat, the following tree species are proposed to be planted within this FPDKC area pending FPDKC approval:

Oaks [Black (*Quercus velutina*), White (*Quercus alba*), Bur (*Quercus macrocarpa*), Swamp White (*Quercus bicolor*)]
Basswood (*Tilia Americana*)
Black Walnut (*Juglans nigra*)
Shagbark Hickory (*Carya ovata*)
Eastern Hophornbeam (*Ostrya virginiana*)

Coordination with the Forest Preserve District will occur prior to planting.

Another option being considered by Kane County is planting trees within the adjacent municipalities that have been affected by Emerald Ash Borer. Specific tree locations and types would be coordinated with the municipalities.