143rd Street Phase I Engineering Study - Response to Questions

This document provides responses to questions posed to the project team during the 143rd Street Phase I Engineering Study, including the Public Information Meeting held on December 17, 2020, which presented the preferred improvement design for public review and comment. All materials presented at the Public Information Meeting were posted on the Public Information Meeting website at www.143rdStreetProject.com. Additional information can be found about the project throughout the duration of project development on the Village's project webpage at: https://www.orlandpark.org/departments/engineering-programs-and-services/143rd-street-widening-project. If there are any additional questions pertaining the project, you can reach out to the Village of Orland Park Engineering Programs and Services at 708-403-5003 or at eps@orlandpark.org.

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General Project Questions

1. Why is the Village studying 143rd Street?

The Village leadership is taking part in a multi-jurisdictional effort to improve the 143rd Street corridor to widen it to 5-lanes from I-355 on the west to Cicero Avenue on the east, a distance of 15.1 miles. Currently, 8.9 miles of the corridor have been improved to 5-lanes, 2.6 miles of which are within Orland Park (Beacon Avenue just west of the Southwest Metra Service Line to the Village limits on the east). West of Beacon Avenue to Will-Cook Road (the west Village municipal limits), 143rd Street remains a 2/3 lane roadway and experiences significant congestion, safety issues, mobility deficiencies, roadway flooding, and lacks continuous sidewalk/bike paths. Several key needs for the 143rd Street corridor, include:

- Travel demand is projected to increase 58% by year 2040.
- By 2040, if no improvements are made, delays along the corridor will increase 370% in the morning rush hour and 290% in the evening rush hour.
- 490 crashes occurred along the corridor from 2014-2018.
- By 2040, if no improvements are made, injury crashes are projected to increase by 82%.
- With traffic increasing, access onto and off of the 41 access points along 143rd Street will continue to decline.
- Gaps in sidewalk network and lack of bicycle accommodations.
- Non-motorized access to 143rd Street Metra station.
- Operational deficiencies.
- Pavement flooding between Wolf Road and 108th Avenue.
- Other drainage issues.

The Village is leading the engineering effort for two of the three remaining segments of 143rd Street corridor that have not been widened to 5-lanes, the Will-Cook Road to Wolf Road segment (1 mile) and Wolf Road to Southwest Highway segment (1.7 miles).

Will County Division of Transportation initiated Phase II Engineering and Land Acquisition for the other remaining segment from Lemont Road/State Street to Bell Road (west of Will/Cook Road) within the limits of the Village of Homer Glenn (3.5-miles). More information is located on the Project Website https://www.143rdstreetproject.com/

2. What is a Phase I Study?

The federal project development process includes three phases:

- Phase I is preliminary engineering, environmental studies, and public coordination.
- Phase II is contract plan preparation and land acquisition.
- Phase III is roadway construction.

The 143rd Street Phase I Study is following the Federal National Environmental Policy Act (NEPA) as the Village received federal funding for a portion of the Phase I Study. This also allows for the project to receive future federal or state funding for subsequent phases of project implementation. Following this process will allow the study team to balance the need for safe and efficient transportation improvements with any potential impact to the human and natural environment.

The specific Phase I Study process consists of data collection, developing the project purpose and need, identifying a range of alternatives, screening the range of alternatives down to a preferred alternative, and then performing preliminary engineering on the preferred alternative. The project is overseen and approved by the Illinois Department of Transportation (IDOT) and the Federal Highway Administration (FHWA).

3. What is the history of this project?

The Village of Orland Park initiated Phase I Engineering for improvements to 143rd Street from Wolf Road to Southwest Highway in September 2000. The project progressed along and evaluated a variety of alternatives, which resulted with a recommendation of a 5-lane roadway section. The project was significantly delayed due to discussions with the Cook County Forest Preserve District about acquisition of property along the frontage of McGinnis Slough to reduce impacts to the residential properties along the south side of 143rd Street. In 2011 the Village secured 17-foot permanent easement from the Forest Preserve District as part of a larger deal with multiple parties. Due to the elapsed time, a new Phase I Engineering Study was initiated in 2014, with consultant Christopher B. Burke Engineering.

4. What is the schedule for this project?

The Phase I Study is anticipated to be completed in early 2023. The Village will be advancing the project into Phase II Engineering shortly following completion of Phase I Engineering. Phase II Engineering consists of detailed design and contract plan preparation. At this time, the Village has not identified funding for land acquisition and construction. When land acquisition funding is identified that process typically takes 18 to 24 months, and is targeted to begin later in 2023 or early 2024. The Village continues to work on identifying construction funding for the project and is consistently applying for available federal grants, working with legislative representatives, as well as coordinating with IDOT for potential funding participation. If the Village secures funding for land acquisition and construction, construction could initiate in late 2024. Depending on the amount funding secured, the Village may stage implement the project, with Stage 1 being from West Avenue to Southwest Highway and Stage 2 being Wolf Road to West Avenue.

5. How is the project being funded and what is the construction cost?

The Phase I Engineering and Environmental Study is being funded with federal and local funds. Phase II Engineering (design engineering) with a combination of federal and local funds. The Village is actively pursuing every possible federal funding opportunity, which is typically at 80%. The remaining cost (or match funding) would be shared between IDOT and the Village, which is also to be determined.

The current project funding can be found on the Chicago Metropolitan Agency for Planning (CMAP) website under the Transportation Improvement Program (TIP) page (https://etip.cmap.illinois.gov/).

The Phase I Engineering construction cost is approximately $49 million.

Proposed Roadway Improvement Questions

6. What improvements are proposed?

143rd Street is proposed to be widened from 2/3 lanes to a 5 lane curb and gutter roadway with improved signalized intersections, new signal at Crystal Tree Drive, multi-use path (north side), sidewalk (south side), profile adjustments to address sight distance issues, providing roadway flood protection, and a new drainage system. A barrier median will be installed along portions of the project corridor to provide safer roadway

operations. Proposed improvement plans can be viewed on the project website https://www.143rdstreetproject.com/

7. Is a flush median is proposed between Highland and West, or a barrier median?

Yes. A flush two-way left turn lane is proposed from Ridge Avenue to Highland Avenue to provide improved accessibility and address safety issues. A barrier median is located from West Avenue east through the Southwest Highway intersection, and also from Beacon Avenue to Crystal Tree Drive. The two-way left turn lane provides a dedicated space for vehicles to make turning movements off of and on to 143rd Street, which improves safety, mobility and operations.

8. What will happen on the south side of 143rd Street between Ridge Avenue and Southwest Highway, which includes residents, businesses, a school, and church?

Overall, the roadway design requires property acquisition along the entire 143rd Street corridor. The current design balances the impacts along the north and south side of 143rd Street. No businesses or homes are physically impacted or displaced, however, property acquisition is needed numerous properties along 143rd Street. Letters were sent out to all property owners ahead of the Public Information Meeting held on December 17, 2020, informing them of the proposed acquisition.

For the portion of the 143rd Street design between Ridge Avenue and West Avenue, the roadway design is shifted as far north as possible, which utilizes a previously obtained 17-foot easement from the Cook County Forest Preserve District. Several blocks along the south side of 143rd Street require approximately 10-feet for permanent right-of-way acquisition, including Raneys Lane to Highland Avenue, and also along a portion of St. Michael. 143rd Street is proposed to be widened nearly equally on both sides, and the curb line will move approximately 12-feet to the north and south. The existing parking within the St. Michael property is not impacted and access will be maintained, and will be improved with a center bi-directional turn lane allowing space for vehicles to turn left from 143rd Street to Highland Avenue and St. Michael's driveway entrances. Refer to the project information located on www.143rdstreetproject.com for exhibits showing the proposed property acquisition.

9. Is West Avenue going to be widened at the 143rd Street intersection?

No. The lane configuration of West Avenue will remain the same at the 143rd Street intersection, which consists of a 14-foot southbound lane, an 11-foot northbound left turn lane, and an 11-foot northbound right turn lane.

10. How will this project impact and maintain the historic walkways/lighting within Old Orland?

The project will remove and replace existing sidewalks adjacent to the proposed improvement, and will also include streetscape enhancements. The existing decorative lighting will be removed and re-installed where it is impacted. The existing decorative light pole in front of 14306 South Union Avenue will be removed and reinstalled with a new sidewalk. The decorative lighting along the north side of 143rd Street, east of the railroad tracks is impacted and will be removed and reinstalled in a new location due to the widened roadway. The proposed improvement will include streetscape elements that will align with the historic character of Old Orland, which will be designed in during Phase II Engineering.

11. Was a 3-lane roadway considered as an alternative?

Providing 1-lane in each direction, which is the existing condition, does not address the capacity needs for existing and future 2040 traffic. As part of the alternative evaluation, a "No-Build" analysis was conducted, which evaluated the "do nothing" option with future projected 2040 traffic. This alternative was dismissed from consideration for not meeting the purpose and need of the project.

Access and Accessibility Questions

12. What access improvements are being made with the proposed improvement?

With the proposed improvement, accessibility improvements being made, including:

- New signal at Crystal Tree Drive
- Inclusion of additional turn lanes at intersections at Wolf Road and Southwest Highway intersections.
- Deer Haven Lane intersection changed to full access from an existing right-in-right-out, with a dedicated left turn lane turning from 143rd Street to Deer Haven Lane.
- Dedicated left turn lane added at the Old Tamerack Lane intersection.
- Center flush bi-direction (i.e. two-way) turn lane will be provided from Ridge Avenue to Highland Avenue, providing dedicated space for vehicles turning left onto Ridge Avenue, Oakley Avenue, Raneys Lane, Greenlane Avenue, Woodland Avenue and Highland Avenue.

13. Are there any access changes from full access to right-in-right-out?

There are access modifications in several locations which are currently full access and will be changed to right-in-right-out as a result of current roadway safety design standards, which typically is the result of inclusion of barrier median, and includes:

- Addition of barrier median along 143rd Street, changing full access to right-in-right-out at private entrances east of Compton Court (west of Wolf Road) to Crystal Tree Drive. There are breaks in the median at existing roadway intersections, so all public roadways are full access. Vehicular u-turns are allowed at Wolf Road and 108th Avenue intersections.
- Addition of barrier median between West Avenue and Southwest Highway/Union Avenue, which changes access at Brook Street to right-in-right-out.
- The consolidation of the two signals at Union Avenue and Southwest Highway, allows for full access at North Union Avenue and is included as part of the signal. South Union Avenue will be right-in only and will remain one-way traffic southbound, and will not be a part of the signal. Left turns from 143rd Street to South Union Avenue will be eliminated. Vehicles coming from the east along 143rd Street or from the north along Southwest Highway wishing to access the Old Orland commercial district south of 143rd Street between West Avenue and South Union Avenue, will need to utilize West Avenue to access 143rd Place and Brook Street.

14. How will the proposed improvement affect access to North Union Avenue, which is the only access to Orland Park Elementary School?

The proposed improvement will improve accessibility to North Union Avenue and Orland Park Elementary School by providing a consolidated intersection with North Union Avenue, Southwest Highway and 143rd Street, which will simplify operations from the existing condition with two separate signals. Additionally, increased turn lane storage will be provided for the eastbound left turn movement with dual left turn lanes. Access during

construction will be challenging, but full access will be provided during construction of the project. Improved pedestrian accommodations will be provided, which will benefit children that walk to school and cross 143rd Street.

Pedestrian & Bicycle Questions

15. What pedestrian and bicycle accommodations are included with the project?

A separated 10-foot multi-use path is included along the north side of 143rd Street for the entire length of the project, and also along the west side of Wolf Road. A 5-foot sidewalk is included along the south side of 143rd Street, and also along Union Avenue, Southwest Highway, West Avenue, 108th Avenue, and Wolf Road.

16. Could the 10-foot multi-use path be eliminated along the north side of 143rd Street to reduce roadway widening?

The Village's bike plan includes a path along 143rd Street and a separated multi-use path will be included with this project, which will connect to the existing path along Wolf Road as well as the 143rd Street Metra Station and the existing Village bike/pedestrian network. The location of the path will be along the north side of 143rd Street, which is the same side proposed for the 143rd Street Will-Cook Road to Wolf Road project. A sidewalk will be included along the south side to provide pedestrian access along the 143rd Street corridor.

17. Where will pedestrians and bicyclists be able to cross 143rd Street to access the proposed multi-use path and sidewalk?

Crosswalks are provided at all signalized intersection within the improvement at Wolf Road, 108th Avenue, Crystal Tree Drive (new signal), West Avenue, and Southwest Highway/Union Avenue. There are no proposed uncontrolled crossings of 143rd Street with the proposed improvement.

18. Can a new pedestrian crossing of 143rd Street be added at Ridge Avenue?

A pedestrian crossing at Ridge Avenue was requested to access the McGinnis Slough Forest Preserve property. The project team evaluated including new marked pedestrian crossings at Ridge Avenue and all side streets between Crystal Tree Drive and West Avenue. Pedestrian crossings at Ridge Avenue, Oakley Avenue, Raneys Lane, and Greenland Avenue do not meet pedestrian sight distance requirements, which assures that pedestrians have appropriate sight lines to see oncoming vehicles and have enough time to safely cross the street. As such, an uncontrolled pedestrian crossing at Ridge Avenue, Oakley Avenue, Raneys Lane, and Greenland Avenue is not feasible. A traffic signal is also not warranted at Ridge Avenue or the other side streets. Pedestrians wishing to access the McGinnis Slough Forest Preserve or multi-use path along the north side of 143rd Street, must cross at the new signal and crosswalk at Crystal Tree Drive 900 feet to the west.

19. Are any crosswalks being removed?

Yes, one existing crosswalk is being removed at Beacon Avenue, which is just east of the railroad crossing and utilized to access the 143rd Street Metra Station. This crossing is being removed with the proposed improvement as it does not meet pedestrian sight distance requirements, and is a safety concern.

20. How can residents south of 143rd Street within Old Orland access the Metra Station from the south?

Pedestrians are directed to cross 143rd Street at the crosswalks as part of the Southwest Highway intersection to the west or Ravinia Avenue intersection to the east, both which are signalized and protected crossings. The Village is not pursuing an underpass or overpass of 143rd Street at this time.

Drainage Improvement Questions

21. What drainage improvements are being made with the proposed improvement?

The existing roadway consists of a mix of curb and gutter with storm sewer and shoulder with ditch. There are two main areas or watersheds, and generally stormwater travels to one of two locations: Long Run Creek Tributary (west) or McGinnis Slough (east), both north of 143rd Street. The roadway drainage design accommodates the stormwater within the roadway right-of-way and also conveys offsite stormwater that flows towards the roadway. The project includes a new roadway storm sewer system and curb and gutter along the entire length of 143rd Street, and follows IDOT design requirements as 143rd Street is under IDOT jurisdiction.

Generally, existing drainage patterns are maintained for the improvement. In addition to a new storm sewer and drainage inlets within the new roadway, there will be outfall consolidation, new inlets outside the roadway to drain low spots adjacent to the roadway, and new cross road culvert of Long Run Creek Tributary A (between 108th Avenue and Wolf Road). Known existing drainage issues are addressed to the extent possible as part of this transportation project.

22. What is being done to address the roadway flooding between Wolf Road and 108th Avenue?

A significant improvement will be made by providing flood protection of 143rd Street between Wolf Road and 108th Street, which is currently within the Long Run Creek floodplain. 143rd Street has previously experienced roadway closures due to flooding and the roadway is proposed to be raised approximately 5-feet so that it has flood protection accordingly to current roadway design standards. As a result of this specific improvement along with the roadway widening, the Long Run Creek floodplain will be filled in and impacted, and requires mitigation. The fill in the Long Run Creek floodplain, which creates loss of flood storage areas, will be mitigated by excavating an area adjacent to the existing floodplain to replace the lost flood storage area due to the proposed improvement, and maintain existing floodplain elevations. This is called compensatory storage, which will be provided northeast of the 143rd Street and Wolf Road intersection, within a current Village owned property. The compensatory storage volumes follow Village requirements.

23. Will the drainage issues on 143rd Street, west of 108th Avenue be addressed?

Yes, drainage improvements will be made to address the issues west of 108th Avenue. Currently, there is an overgrowth of cattails within this area due to poor or ineffective roadside drainage, which affects use of the existing path along the north side of 143rd Street.

24. What are the Long Run Creek floodplain compensatory storage requirements?

The proposed roadway improvement requires 1.19 acre-feet within the normal water elevation to 10-year flood elevation and 8.39 acre-feet within the 10-year and 100-year flood elevations. The regulatory requirements break the fill in the floodplain into two categories, normal flood elevation to the 10-year flood elevation and

from the 10-year flood elevation to the 100-year flood elevation. Evaluation of the fill of the proposed improvement within these two elevation ranges is conducted, and mitigation is provided accordingly. Per the Village requirements, a 1.5 compensation factor is included to help improve existing stormwater flooding. The floodplain mitigation will be permitted through the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC).

Compensatory Storage Site Questions

25.How was the Long Run Creek floodplain compensatory storage site initially selected?

The 143rd Street (IL Route 7) reconstruction project has been under preliminary planning for over twenty years. In 2007, the 143rd Street Location Drainage Study (LDS) and Long Run Creek Hydraulic Report (HR) was completed on behalf of the Village. Within these 2007 drainage studies, compensatory storage excavation was planned partially within the currently proposed site at 11100 West 143rd Street and also the parcel adjacent to the east, and overlaps with the currently proposed compensatory storage site. The prior site is noticeably smaller and extended further to the east on the adjacent property owned by the Village. The current compensatory storage site increased in size from the 2007 design due to higher requirements in drainage design requirements, established by the State of Illinois and MWRDGC, and is nearly contained within the western parcel as the eastern parcel was determined to have wetlands and topographic elevations were not suitable. At this time in 2007, the western property was privately owned (4.89 acres) and the eastern property (8.0 acres) was owned by the Village. In 2014, the western property was up for auction and was acquired by the Village via their Open Lands Fund Commission. The Village of Orland Park holds title to this property and has the legal authority to modify the site with the proposed use of a natural depressional storage area, which also provides floodplain compensatory storage for the 143rd Street project.

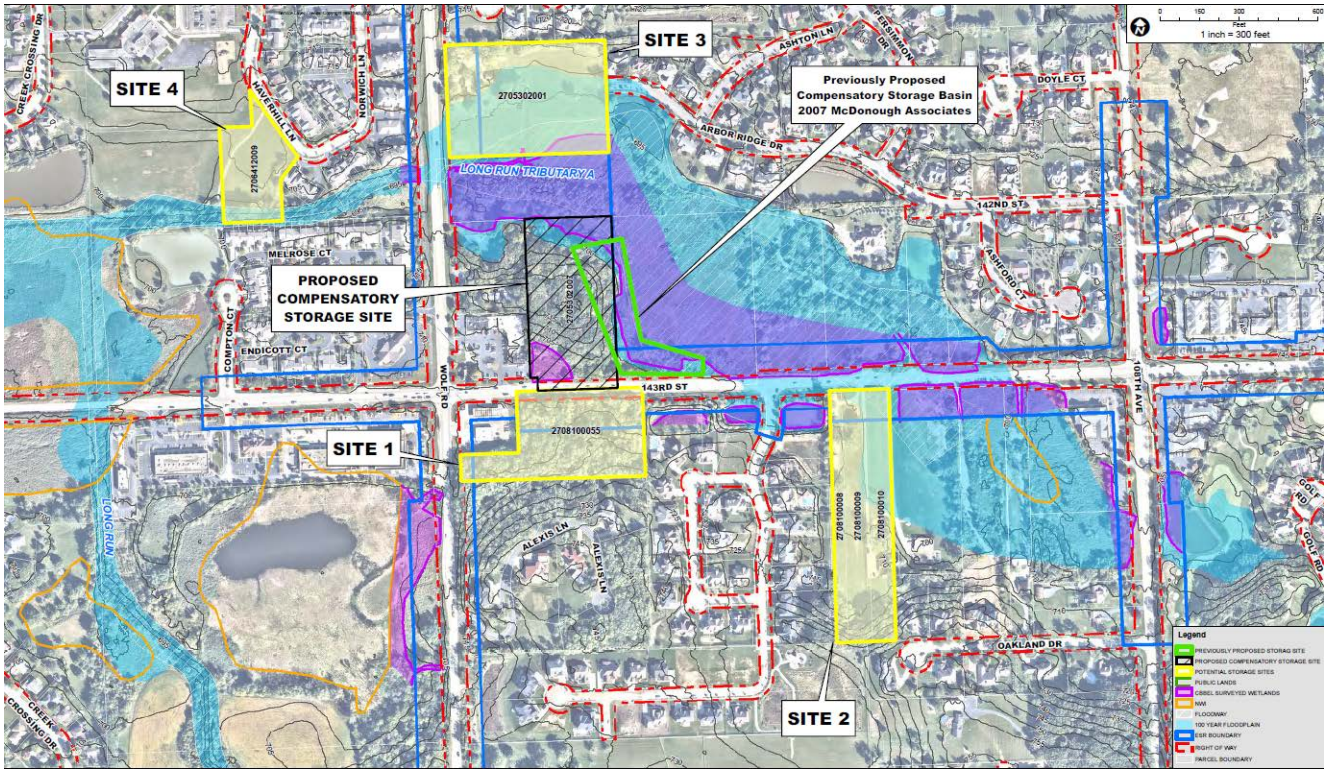
2018 Aerial (Cook County GIS) – Village Owned Property (11100 W. 143rd Street)

The parcel was previously a residential property with numerous out-lot structures, all of which have since been demolished, and dated back to the 1930s. In 2017, the drainage studies were re-evaluated and updated for the currently proposed roadway design and current design requirements. The prior 2007 compensatory storage

design was utilized as a basis and updated. Wetland delineations, current topographic survey, and County LiDAR mapping were utilized to update the compensatory storage design, which aimed at minimizing existing wetland impacts as much as possible. The currently proposed design was shifted west to avoid significant impacts to delineated wetlands to the east. This area is included in the project environmental survey boundary to be environmentally cleared, which includes wetland delineations, tree survey, biological surveys, and coordination with IDNR and USFWS to assure adherence to State and Federal environmental regulations.

26. What other compensatory storage sites were considered?

Following the December 2020 Public Information Meeting, concerns were raised by stakeholders about use of the Village owned parcel for the proposed compensatory storage site, which is forested with some mature, specimen trees. The Village re-evaluated other potential options for the compensatory storage site. A total of four alternative sites were further evaluated (in yellow) that had possible connection to the Long Run Creek floodplain (light blue). The below exhibit also shows the prior 2007 compensatory storage site in green and currently proposed site in black hatch. The light blue areas is floodplain, purple area is delineated wetland, and dark blue boundary is the project environmental survey boundary.



Below is a summary of main conclusion points from the alternative compensatory storage site assessment:

- None of the four site alternatives singularly provide the required compensatory storage for the 143rd Street project.
- Site 1 is nearly double the cost per acre-foot as compared to the current site, provides half the compensatory storage needed, and is a highly inefficient. Site 1 is recommended to be dropped from further consideration.
- Site 2 is 0.38 ac-ft from meeting the required compensatory storage (per Village requirements), has a similar cost per acre-foot of compensatory storage to the current site, and has two residential

impacts. Site 2 is recommended to be dropped from further consideration due to the two residential property displacements.

- Site 3 is 1.94 ac-ft short of the required compensatory storage, is an efficient site, is the lowest cost per acre-foot, and has one structure displacement. Site 3 is recommended to be dropped from further consideration due to the one residential property displacement.
- Site 4 is 7.22 ac-ft from meeting the required compensatory storage, is the smallest of all the alternative sites considered, is Village owned, has the second highest cost per acre-foot, and is the least efficient site. Site 4 is recommended to be dropped from further consideration.

The currently proposed compensatory storage site is the only site that provides all the required compensatory storage. This site has no building impacts (as compared to Sites 2 and 3), has the second lowest cost per ac-ft, and is a Village owned site. The current site is recommended to be carried forward as the preferred compensatory storage site location, however, the Village is actively pursuing other acquisitions and improvements along the Long Run Creek to implement the Long Run Creek Watershed-Based Plan. If acquisitions and other Village led improvements occur, it is possible that compensatory storage can be provided within those other sites during the restoration process and compensatory storage could be reduced at the current site.

27. What will the compensatory storage site look like?

In addition to the site providing the floodplain compensatory storage, the proposed compensatory storage site will be pursued as a wetland mitigation site to mitigate a portion of the wetlands impacted with this project. The Village desires to include a multi-purpose path/trail within the site that will connect to the proposed multi-use path along the north side of 143rd Street and sidewalk along the east side of Wolf Road. The stormwater from the 143rd Street storm sewer system will outlet into the new compensatory storage site, which will help provide natural infiltration before reaching Long Run Creek Tributary Area to the north. These elements will be further evaluated during Phase II Engineering when the detailed site grading is finalized, soil/geotechnical analysis performed, landscaping/environmental wetland design will be prepared, and resource agency permitting. Coordination will be required with the U.S. Army Corps of Engineers.

28. Could the currently proposed compensatory storage site be modified during Phase II Engineering design?

The Phase I Engineering Study currently shows the proposed grading on the site to accommodate the needs for the 143rd Street improvement. The final grading and site design will occur during Phase II Engineering design, when the project will be permitted. The Village has been actively pursuing strategic acquisitions along the Long Run Creek watershed to preserve and restore property aligning with the 2014 Long Run Creek Long Run Creek Watershed-Based Plan. If allowed by the permitting agency, it is possible that compensatory storage can be provided within other sites within the Long Run Creek Tributary Area floodplain and compensatory storage could be reduced at the currently proposed site.

29. Was underground compensatory storage considered?

Yes, and it was determined to not be a feasible option based on design constraints.

30. What is the cost associated with grading the compensatory storage site?

It is anticipated that a portion of the excavated soil from the compensatory storage site can be stock piled and utilized for raising 143rd Street nearly 5-feet above the floodplain between Wolf Road and 108th Avenue. Some

of the soil will need to be hauled off site and disposed of. The total Phase I level cost for the earth excavation and removal of soils for the proposed compensatory storage site is approximately $1.7 million dollars.

31. What are the impacts associated with the proposed compensatory storage site on the Village owned property, and how will the impacts be mitigated?

The proposed compensatory storage site on the Village owned property will require significant grading and there will be tree and wetland impacts. A tree survey and wetland delineation have been performed for the site, along with clearance for archeological, cultural/historic and threatened/endangered species, and clearances have been obtained to complete the Phase I Engineering Study. Additional design and evaluation will be performed during Phase II Engineering, and various resource agencies will be involved with various permitting requirements.

A total of 349 trees are impacted, with 52 being exempt from mitigation requirements according to the Village of Orland Park Land Development Code and 297 requiring mitigation. A tree mitigation plan will be developed during Phase II Engineering.

A total of 0.14 acres of wetlands are impacted with the proposed compensatory storage site, which occurs around the fringe of the compensatory storage site in order interface the grading. The elevation of the proposed compensatory storage site will be a similar elevation to the existing wetlands along Long Run Creek Tributary A. On-site wetland mitigation will be pursued within the proposed compensatory storage site during Phase II Engineering. For wetlands not able to be mitigated on-site, wetland credits will be purchased (i.e. wetland banking).

To avoid any potential impacts of the endangered Northern Long Eared Bat, trees three (3) inches or greater in diameter at breast height shall not be cleared from April 1 through September 30 of any construction year.

Environmental Questions

32. What environmental regulations must this project follow?

The federal National Environmental Policy Act, known as NEPA, requires that the significance of a project's environmental impact be evaluated for all federally funded projects. Additionally, all State environmental laws must be followed. The significance of the project's impact, not its size or cost, determines the necessary class of action as well as its process and documentation requirements. The FHWA has determined that this project is to proceed with a Categorical Exclusion processing, and will not have significant environmental impacts based on the environmental evaluations conducted as part of Phase I Engineering. The categories of the various environmental studies conducted as part of Phase I Engineering, include:

- Wild and Scenic Rivers evaluation
- Wetlands
- Floodplain/Floodway Encroachment
- Archeological
- Historical preservation sites
- Threatened or Endangered Species
- Stream Modifications & Wildlife Impacts
- Public lands impacts

- Air Quality
- Noise

Further environmental analysis will be performed during Phase II Engineering when agency permitting is performed. The various environmental survey results are partially included in the proposed improvement exhibits, such as wetlands, floodplains, floodways, noise, and trees. Historic property impacts and public lands impacts are specifically documented as separate reports and were posted on the Public Information Meeting website for public review and comment. Other detailed surveys, such as biological and archeological, can be requested by stakeholders and the information request will be reviewed by IDOT to determine what information can be provided.

33. How were environmental impacts taken into consideration as part of this project?

The 143rd Street corridor is very constrained, and the project team evaluated various alignment shifts and modification of the roadway elements, to balance transportation performance and safety with impacts. The projected roadway traffic volumes require a minimum two through lanes in each direction, which is the regional plan for the 143rd Street corridor. Bike path and sidewalk are also included. In order to minimize impacts narrower lane and median widths were utilized along with 33 retaining walls. Extensive coordination occurred with the Forest Preserve District of Cook County pertaining effects of McGinnis Slough.

As part of the detailed analysis, all environmental impacts are further defined and addressed in a hierarchal structure:

- Avoid
- Minimize
- Mitigate

The project has obtained biological clearance by IDOT, which requires concurrence from IDNR and USFWS, according to their programmatic agreements. Additionally, the State Historic Preservation Officer has conditionally stated this project will not have an adverse effect of historic properties. The Forest Preserve District of Cook County has approved the proposed easements within their property.

Additional project design reviews will be required to obtain necessary permits during Phase II Engineering with the following agencies: U.S. Army Corps of Engineers (USACE), State Historic Preservation Office (SHPO), Illinois Department of Natural Resources (IDNR), U.S. Fish and Wildlife Service (USFWS), Soil & Water Conservation District, Illinois Environmental Protection Agency (IEPA), Will-South Cook Soil & Water Conservation District (SWCD) and the Cook County - Metropolitan Water Reclamation District (MWRD).

34. Is there a water quality impact study planned for the runoff into Long Run Creek or nearby wetlands?

There are no water quality impacts anticipated with the proposed improvement. As part of the Section 401 Clean Water Act Individual Water Quality Certification process through the IL EPA and Section 404 Clean Water Act Individual Permit process through U.S. Army Corps of Engineers during Phase II Engineering, a water quality certification will be required. As part of the Individual CWA permitting process during Phase II Engineering for the overall project corridor, a water quality pollutant loading analysis will be prepared using the Stochastic Empirical Loading and Dilution Model (SELDM) developed by the U.S. Geological Survey (USGS), or equivalent based on agency coordination. The pollutant loading analysis will contemplate pollutant loadings from both the

overall tributary watersheds to McGinnis Slough and Long Run as well as the local tributary areas from the 143rd Street drainage system. Pre-construction and one postconstruction scenarios will be evaluated for receiving waters (including Long Run and McGinnis Slough) to determine the incremental water quality impact of the proposed project, for which applicable BMP measures will be considered as appropriate.

Several Best Management Practices (BMPs) will be implemented at sensitive wetland outlets, which are types of systems designed to remove suspended solids and other pollutants, in addition to limiting the chances of erosion and sedimentation. Several of these areas are within McGinnis Slough and coordination has occurred during Phase I Engineering to include several permanent easements for water quality enhancements, and further coordination will occur during Phase II Engineering. Water quality BMPs will be included throughout the project where practical and feasible, and based on further analysis during Phase II Engineering.

There are commitments in the Phase I Project Development Report to coordinate with the Forest Preserves of Cook County and the US Army Corps of Engineers during the permitting and design phase of the project pertaining potential water quality Best Management Practices (BMPs). Pollutant load reduction to McGinnis Slough shall be approached on a sub-watershed basis in accordance with NPDES permit requirements (i.e., ILR40). BMPs shall include (but are not limited to) enhanced employee training and public education/outreach specific to the McGinnis Slough sub-watershed area.

35.Is the project team aware of the Long Run Creek Watershed Basin Plan (2014)?

Yes, the project team is aware of the Long Run Creek Watershed Basin Plan and will implement site specific management measurers action plan to the extent possible within the roadway improvement project.

36.What are the wetland impacts and how will they be mitigated?

The total wetland impacts for the project are 2.293 acres, requiring 5.1595 acres of mitigation. Wetland are targeted to be mitigated on-site within the proposed compensatory storage site, and will be further evaluated during Phase II Engineering. For wetlands not able to be mitigated on-site, wetland credits will be purchased from the Mill Creek Wetland mitigation Bank, located within the Des Plaines River Watershed. The proposed design utilizes narrower roadway elements such as narrower lanes and median widths along with retaining walls to minimize wetland impacts.

37.How will trees be mitigated?

During Phase II Engineering, additional tree impact evaluation will be completed as necessary to avoid/minimize tree impacts, and a tree mitigation plan will be developed. Impacted trees will be replaced where practical and feasible.

38.Are historic properties impacted with the proposed improvement?

Property acquisition is required from six historic resources, including one local historic district and five properties. The project has been reviewed by the State Historic Preservation Officer (SHPO) and it was determined that the proposed improvement will not adversely affect the resource's activities, features or attributes. Further coordination with the SHPO will occur during Phase II Engineering.

Traffic, Safety, and Speed Limit Questions

39. What is the proposed speed limit on 143rd Street following the completion of the project?

The existing posted speed limits will be utilized for purposes of roadway design, which consists of 45 mph from the west project limit west of Wolf Road; 40 mph from Wolf Road to east of 108th Avenue; 35 mph from east of 108th Avenue to east of Crystal Tree Drive to west of West Avenue; 30 mph from west of West Avenue to east of Southwest Highway at the east project limits. The existing speed limits meet current design criteria for this classification of roadway and was utilized for purposes of the Phase I Engineering Study. The proposed speed limits will remain as existing. A speed study could be conducted following construction of the improvement to re-evaluate the posted speed limits.

40. What traffic volumes were utilized for design of the 143rd Street improvement?

For reconstruction projects like this one, projected traffic is utilized for the design of the improvement, which is a requirement by IDOT and FHWA. The objective is to implement an improvement that addresses current traffic/congestion problems and also can accommodate future traffic growth to the required design year, which is provided by the Regional Metropolitan Planning Organization, CMAP (Chicago Metropolitan Agency for Planning). The currently projected traffic utilized for roadway design is for year 2040. The existing daily traffic along 143rd Street is 14,600 vehicles per day and is projected to increase to 23,000 vehicles per day by the year 2040, nearly a 58% increase. During the Phase I Study, 2050 traffic projections were released. The project team requested the 2050 traffic projections, which were similar to the 2040 traffic projections. This traffic growth is expected without the proposed improvement and if nothing is done, vehicular congestion and safety will continue to worsen.

41. Will the traffic signals be coordinated together to optimize traffic flow?

Yes, all of the signals within the proposed improvement at Wolf Road, 108th Avenue, Crystal Tree Drive, West Avenue, and Southwest Highway/Union Avenue will be coordinated together to optimize traffic flow. The Village implemented an interim improvement for the existing signals and was completed in 2021 to improve the traffic signal coordination.

42. Why are traffic analyses based in peak travel periods only?

Evaluation of the movement of people, goods, and services during peak morning and evening travel periods is required by IDOT and FHWA as part of the transportation planning and design process.

43. Has the COVID-19 pandemic affected the analysis and development of this project, specifically related to traffic?

The pandemic significantly affected travel patterns and behaviors, with many places being shut down and people working from home. At this time, traffic has generally returned to pre-pandemic levels, however, there are some changes in travel behavior. With more people working from home, drivers are making different trips and has translated to an increase in mid-day travel. Metra and commuter rails are down significantly. Because people might be going into the office only a few days a week or working from home, they are not buying their monthly passes on Metra, they are driving. As a result of this, there is congestion out on the highways.

For this project we are required to utilize year 2050 traffic projections based on regional population and employment growth projections, provided by the Chicago Metropolitan Agency for Planning (CMAP). We are

looking at a longer range horizon, so it's not just the next couple of years, but our roadways are designed for a 20-30 year horizon, so we must plan and design for the long-term.

44. Will vehicular safety be improved with the additional lanes being added with this project?

Crash predication analysis was conducted as part of the Phase I Engineering Study, which evaluates the predicted crashes if no improvements are made by the design year (2040) and with the proposed improvements. If no improvements are made to 143rd Street with future year 2040 traffic growth, the total predicted annual crashes is projected to increase 83% from existing conditions. The proposed improvement will decrease the total annual crashes by approximately 36%. Some of the main contributing factors for the proposed improvement improving safety is the reduction of the number of fixed objects within 30 feet of the proposed edge of roadway and providing a two-way left turn lane at many of the minor intersections between Crystal Tree Drive to West Avenue.

45. Does adding additional lanes on 143rd Street decrease safety due to new interactions with lane changes between lanes?

While including additional through lanes in each direction on 143rd Street allows for additional interaction with vehicles changing lanes, the new lanes also provides space to accommodate the number of vehicles traveling along the roadway and the associated movements onto and off of 143rd Street. Currently there are backups along 143rd Street as there is only a single travel lane, which creates "stop-and-go" movements, and tends to generate more rear-end crashes. Additionally, there are turning movement issues where vehicles stop in the through lane to make a left turn off of 143rd Street and also for vehicles wishing to turn onto 143rd Street from side streets or driveways. Providing the additional through lanes increase capacity to better accommodate the number of cars that are traveling on 143rd Street, and therefore provides more efficient vehicle travel flow. Also, having multiple travel lanes allows for vehicles to platoon, and can allow for more gaps in traffic for vehicles to turn onto and off of 143rd Street. From the crash prediction analysis for the 2040 condition, the segment crash rates with two lanes versus one lane is generally lower for nearly all roadway segments, with exception of the West Avenue to Southwest Highway and Southwest Highway to Beacon Avenue segments that are nearly the same.

46. What is being done to improve pedestrian and bicyclist safety?

All signalized intersections are being improved and modernized, which includes new marked, protected cross walks with count down timers. Separated multi-use path and sidewalk is being provided along the entire 143rd Street corridor, which connects to other path and sidewalks along connecting side streets.

47. Will the sight distance issues be resolved at the Ridge Avenue intersection due to the hill to the west of the intersection on 143rd Street.

Yes, sight distance will be improved for the Ridge Avenue intersection by lowering the hill west of the Ridge Avenue intersection by approximately 3-feet.

48. How will cut through traffic be addressed for vehicles that want to avoid signals and the train crossing?

The proposed improvement will alleviate backups that are currently occurring along 143rd Street specially within the Old Orland area between Ridge Avenue and Southwest Highway. With the vehicle backups being addressed,

it should minimize one of the main reasons drivers decide to try and find a faster route. The train crossing of 143rd Street will be improved with new crossing equipment and the at-grade crossing will remain.

49. Was closing off some of the local side streets considered that intersect with 143rd Street between Crystal Tree Drive and West Avenue to reduce cut through traffic into the residential area?

Closing off some of the local side streets to 143rd Street would require providing a way for vehicles to turn around at the end of the street, which typically consists of a cul-de-sac. To allow for garbage trucks and school busses the space to turn around within a cul-de-sac, the space required would cause additional private property acquisition and potential displacement of residential homes due to the smaller lot size and proximity to the existing roadway. For this reason, closing off the local side streets was not considered.

50. Can a traffic signal be added to one of the side streets between Crystal Tree Drive and West Avenue?

No, the traffic volumes on the side streets between Crystal Tree Drive and West Avenue do not have high enough traffic volumes to warrant a traffic signal.

51. Can a traffic signal be installed at the intersection of Compton Court and 143rd Street, which is the entrance to The Courtyards subdevelopment?

No, a traffic signal at the Compton Court intersection does not meet traffic signal warrants requirements, and is not included with this project.

52. Can all-way stop signs be added along 144th Street at Ridge Avenue and Woodland Avenue, south of 143rd Street?

Adding top signs at these locations is outside the scope of the 143rd Street project study. To add all-ways stop signs at these intersections, the Village would need to conduct a separate study to change the type of intersection control at these two intersections. These types of requests can be made to the Village via their website: https://www.orlandpark.org/.

53. Can guardrails be added along 143rd Street to protect homes between Ridge Avenue and West Avenue?

Guardrails are included within the 143rd Street design to protect vehicles from hitting fixed objects within the designated roadway clear zone and also to protect vehicles from unrecoverable roadway side slopes/grades. There is currently no guardrail proposed along the south side of 143rd Street between Ridge Avenue and West Avenue.

Construction Questions

54. How would the project be constructed and how long would it take?

Due to the size and cost of the project, and the amount of funding secured for construction of the project, the Village may stage implement the project. Stage 1 includes improving 143rd Street from the West Avenue intersection through the Southwest Highway intersection. Stage 2 includes improving 143rd Street from the Wolf Road intersection to the West Avenue intersection.

The Village also plans to enhance the 143rd Street Metra Station Southwest Highway commuter parking lot as an advanced project. The existing front row of parking within the Southwest Highway commuter parking lot is impacted by the proposed improvement and needs to be relocated. In additional to relocating the existing parking stalls, the Village plan to include nearly 250 additional parking stalls and maximize use of the entire property.

Depending on when construction starts, construction of the entire project would take approximately 24 to 30 months. Prior to roadway construction starting, private utility companies will need to relocate their infrastructure to remove any conflicts. If the project is constructed in stages, Stage 1 it is anticipated to take approximately 12 to 18 months and Stage 2 is anticipated to take approximately 18 to 24 months.

55. Will access be maintained during construction?

Yes, property access will be maintained during construction and coordinated with property owners during Phase II Engineering. Coordination will occur with St. Michael and Orland Elementary School to coordinate effects to the school drop off/pick-up to minimize disruptions.

56. What can be done to minimize cut-through traffic during construction, specifically for Ridge Avenue to Highland Avenue?

Detailed design for maintaining traffic during construction will be conducted during Phase II Engineering. Signage can be included to restrict street use to local traffic to try and minimize cut-through traffic. When the project goes to construction, the Village can evaluate other measurers to minimize cut-through traffic.

Public Involvement Questions

57. How will public input be taken into consideration?

Stakeholder involvement is critical to project success, and the involvement process strives to achieve the following:

- Understand stakeholders' key issues and concerns.
- Obtain stakeholder feedback in the decision-making process.
- Address all modes of transportation.
- Apply flexibility in design to address stakeholders' concerns whenever possible.

A Public Information Meeting for the 143rd Street project was held on December 17, 2020, in an open house format at www.143rdStreetProject.com with a live Virtual Project Presentation (via Zoom). The Virtual Public Information Meeting allowed interested persons to also view the project website at any time where attendees had the opportunity to review exhibits, provide input on the proposed improvement plan, and submit questions or comments from December 10, 2020 to January 11, 2021. The information posted on the Public Information Meeting website are the same exhibits presented during the live Public Information Meeting.

58. How can stakeholders find out additional information about the 143rd Street project?

Stakeholders can reach out to the project team with any additional questions or concerns throughout the project development process. Additional coordination will take place during Phase II Engineering as the project further develops the proposed improvement plan. The Village has a webpage dedicated to the proposed

improvement located at: https://www.orlandpark.org/departments/engineering-programs-and-services/143rd-street-widening-project

Traffic Noise and Noise Wall Questions

59. Why was a Traffic Noise Study completed?

A traffic noise assessment was required to comply with State and Federal regulations because Federal funds are being used for this project and due to the project scope. The scope of this project includes proposed roadway reconstruction with the addition of through traffic lanes. If any part of the project meets the requirements for a noise analysis, the entire project must be evaluated for traffic noise according to the IDOT Highway Traffic Noise Assessment Manual (2017). The entire project area was evaluated for traffic noise and based on the analysis, only one location warranted noise abatement (i.e., noise wall) per the IDOT Noise Policy.

60. Where are the noise walls being implemented as part of the 143rd Street project?

One noise wall is being included with the project, located west of Wolf Road along about a 400-foot frontage of The Courtyards subdevelopment, and will provide noise mitigation to 10 residential units. The wall will be 10-feet in height. The style and look of the retaining wall will be similar to the walls constructed along La Grange Road as part of that improvement. Further coordination will occur with The Courtyards subdevelopment during Phase II Engineering.

61. What are the criteria that must be met for noise mitigation to be considered?

A noise barrier may be proposed when a traffic noise impact occurs, and a noise barrier is determined to be feasible and reasonable.

Based on the IDOT Noise Policy, for a residential area, a traffic noise impact occurs when the design year (2050) build condition traffic noise levels are predicted to be 66dB(A) or greater. A traffic noise impact also occurs if the design year (2050) build condition traffic noise levels are predicted to substantially increase (15 dB(A) or greater) over existing conditions. Traffic noise levels are determined by computer modeling.

A noise barrier is determined to be feasible if it achieves at least a 5 dB(A) traffic noise reduction for at least two impacted receptors. A traffic noise reduction of ±5 dB(A) is a readily perceivable change in noise.

A noise barrier must also be reasonable, which includes the following three criteria:

- It must meet the noise reduction design goal of achieving at least an 8 dB(A) reduction for at least one benefited receptor. A benefited receptor is the recipient of an abatement measure that receives a noise reduction of 5 dB(A) or greater. A benefited receptor does not need to be an impacted receptor.
- The estimated build cost per benefited receptor must be less than or equal to the allowable cost per benefited receptor. The base allowable cost is $30,000 per benefited receptor. The allowable cost may be adjusted based on a number of factors. Refer to the IDOT Highway Traffic Noise Assessment Manual (2017) for additional information.

  For example, if a noise barrier will benefit 10 residences, and the total cost of the noise barrier is $270,000, then the cost per benefited receptor would be $27,000 (which is less than the allowable cost of $30,000 per benefited receptor) and the noise barrier would be considered economically reasonable.

- If noise abatement measures are determined to be feasible and achieve the first two reasonableness criteria, the benefited receptor viewpoints must be considered. If the majority of the viewpoints are in favor of the noise barrier, then the noise barrier would be considered "likely to be implemented."

If a noise barrier is not considered feasible or reasonable for an area, the noise barrier abatement measure will not be implemented as part of the project.

62.Can a berm be used instead of a noise wall?

Earth berms can be considered for noise abatement. However, the use of berms depends on the space available. For maintenance reasons, the slope of the berm should not be steeper than 3(Horizontal):1(Vertical). For this project, there is limited available space to build a berm that would achieve the necessary noise reduction. For example, a 10-15 foot tall berm would be about 60-90 feet wide. The available area for noise abatement would need to accommodate this base width.

63.How was the height of the wall determined?

As part of the traffic noise analysis, a computer noise model was used to evaluate different wall heights. As part of the analysis, many iterations are conducted to determine a noise wall height that meets the feasibility and reasonableness requirements mentioned above. The proposed wall height is 10-feet.

64.What is the main source of noise generated from vehicles?

Noise from vehicles occurs from tire interaction with the pavement and is characterized as the "whine" of traffic noise. Propulsion noise (engine, exhaust, and intake) is typically the dominant noise source when a vehicle is traveling at low speeds. Tire-pavement noise typically becomes the dominant noise source when a vehicle travels at higher speeds. Tire-pavement noise will still exist with electric vehicles.

We discussed the issue of electric vehicles with FHWA. FHWA is aware that Traffic Noise Model has limitations. FHWA is evaluating priorities and will continue to improve TNM as funding allows.

65.Why can't a speed reduction be a solution for increased noise level?

Reduction of speed has the potential to reduce traffic noise levels. Generally, a reduction of 20 mph would be needed to reduce the traffic noise level by 5 dB(A). Speed reductions of this magnitude may have adverse impacts on the ability to achieve the purpose of the project. Speed limits must adhere to established design guidelines and policies.

66.Will the wall reflect noise?

There is the potential that some noise reflection could happen with the noise wall. However, the distance that the noise would travel is longer therefore once it bounces, the noise levels decrease. The amount that it would bounce back is typically not perceivable because it's only a couple decibels.

Property Acquisition Questions

67.How much property is being affected with this project?

Property acquisition is required to implement the proposed improvements. Detailed analysis was conducted to minimize or avoid private property acquisition. To minimize impacts, 33 retaining walls are proposed throughout the project. A total of 85 properties require acquisition, with 47 requiring permanent right-of-way acquisition

(2.80 acres), 47 properties requiring permanent easement acquisition (6.35 acres), and 76 properties requiring temporary easements (9.27 acres).

68. Are there any residential or business displacements with the proposed improvement?

No, there are no residential or business displacements with the proposed improvement.

69. What are the types of property acquisition?

There are three types of property acquisition:

1. Fee Simple Acquisition – or the acquisition of all rights and interest of real property (i.e. right-of-way or ROW)
2. Permanent Easement – when underlying ownership is retained by the property owner, but access is permanently allowed during and after construction for maintenance or facilities such as drainage structures.
3. Temporary Easements - where underlying ownership is retained by the property owner but access is temporarily allowed only during construction for items such as grading work, driveway construction, and other minor improvements.

70. How is property acquired for the project?

Federal land acquisition procedures will be followed for all temporary and permanent property acquisition associated with this project, which occurs during the next phase of engineering. The general land acquisition process consists of:

1. Finalizing the proposed acquisition and preparation of the plat of highway.
2. An appraisal and review appraisal are performed to establish a property value and any damages.
3. Property owners are informed of the appraised value of the proposed acquisition.
4. The Village and their right-of-way agent will provide an offer to the property owner.
5. The owner will have time to consider the offer.

Fair market value of your property will be assessed just as if you sold your property under normal conditions. There will be no settlement expenses as the Village will cover all title evidence, documentation, recordings, and fees.

71. How will the project affect property values?

The effect of a roadway project on property values is difficult to discern since there are a number of factors that could lead to an individual's perception including improved transportation and accessibility, proximity, or other factors. IDOT and FHWA do not reimburse or collect from property owners for any positive or negative changes to property values which may or may not have been caused by roadway projects.

72. Regarding fences and trees along the roadway right-of-way, who will be responsible for removing and replacing them?

A fence or tree that is located on private property where there is proposed property acquisition will be removed as part of the roadway construction project. Costs associated with impacts to the property such as fences, landscaping, and trees are factored into the property appraisal and damages, and the owner will be compensated. The owner can then hire their own contractor of their choosing to replace a fence, landscaping,

or re-plant trees. Coordination with the property owner about compensation for impacted private property will occur during the land acquisition process in the next phase of engineering.