2024

Villa Park

GRADE SEPARATION FEASIBILITY REPORT

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Section 1
Executive Summary

This executive summary presents the key findings and recommendations of the Villa Park Grade Separation Feasibility Study, conducted to assess the viability of implementing a permanent grade separation for motorized and non-motorized users in the Village of Villa Park, Illinois (Villa Park). The objective of this study is to evaluate the potential benefits, costs, and other considerations associated with constructing a grade separation structure to enhance safety and convenience for users crossing the Union Pacific Railroad (UPRR). Grade separations enhance safety by preventing direct interactions between pedestrians, motorists, and trains, while also reducing congestion and promoting smooth traffic flow. However, grade separations also come with initial capital and ongoing maintenance costs. Overall, stakeholders, including the local community and emergency services, have shown support for these structures due to their safety and accessibility benefits.

This feasibility study focuses on a number of pivotal locations within Villa Park. Specifically, the intersections of Westmore Avenue, Addison Road, Ardmore Avenue, and Villa Avenue with the UPRR were analyzed. Each location presents unique challenges and opportunities, ranging from current traffic volumes, existing infrastructure, proximity to community hubs, and the presence of pedestrian pathways like the Salt Creek Greenway Trail. In addition to evaluating vehicular crossings, the study gives considerable attention to pedestrian and cyclist-only grade separations. This approach ensures that the solutions proposed not only cater to the needs of motorists but also prioritize the safety and convenience of pedestrians and cyclists, ensuring a holistic enhancement to Villa Park's transportation landscape.

The study includes a feasibility-level analysis of key existing conditions, stakeholder engagement, concept-level technical assessments, and a summary of potential funding opportunities. For the technical assessments, preliminary designs were considered for both underpass and overpass options at each location considered. Adhering to current engineering standards, the extent of each structure was estimated based on criteria such as minimum vertical clearance and permissible grade inclines. Subsequently, the number of parcels impacted by the proposed solutions were identified. This ensures the suggested grade separations are technically sound and considerate of local property concerns.

The key findings of this study are summarized as follows:

- Underpasses typically offer better aesthetics, minimize noise pollution, and tend to have lower maintenance costs. However, they can be susceptible to flooding, might require additional infrastructure like drainage or pumping systems, and could entail more extensive land acquisitions.

- Overpasses are generally less prone to water-related issues, might offer a vantage point for users, and could require less land acquisition in certain cases. However, they can be visually obtrusive, might necessitate higher maintenance particularly in areas with heavy snowfall or other weather-related concerns, and can present challenges for users with mobility issues unless adequately equipped with ramps or elevators.
- **Addison Road:** The underpass at Addison Road, designed to cater to the area's higher traffic, might enhance connectivity benefits, especially for those heading to the Iowa Community Center. This solution could be the costliest, given its extensive design specifications to accommodate the 4-lane cross section of the roadway. It might disrupt access to certain regions and potentially impact 13 parcels. The overpass is also tailored to accommodate 4 lanes, and due to the significant structural framework, it could interfere with train conductors' crucial sightlines. This option is anticipated to affect up to 34 parcels.

- **Ardmore Avenue:** The underpass at Ardmore Avenue brings forth potential connectivity improvements, especially given its proximity to the Canadian National Railway (CN) track bridge. A total of 16 parcels would be impacted, and ongoing redevelopment could further complicate access dynamics. The vicinity of Villa Park fire stations and a transit-oriented development underscores the area's significance. An extended version of the underpass to maintain Terrace Street's east-west connection could alleviate some connectivity issues but would affect two additional parcels. Conversely, the overpass option, while impacting a similar number of parcels, raises aesthetic concerns as it might disrupt views for existing and future developments.

- **Villa Avenue:** An underpass at Villa Avenue offers potential construction advantages due to the favorable elevation south of Beach Street. However, the limited space because of nearby CN tracks and disruption to approximately 26 parcels, including those fronting Beach Street, are concerns. Utility challenges, especially regarding sewer lines, also emerge as potential obstacles. On the other hand, the overpass solution would involve significant land utilization, impacting 48 parcels. Access closures, such as the one for Beach Street, may be inevitable. In both alternatives, north-south connectivity enhancements appear limited.

In summary, grade separations present a compelling solution to enhance safety and reduce congestion. However, the choice between underpasses and overpasses will depend on the specific constraints and preferences of each location.

Based on the findings, the following recommendations are made:

- Funding: Explore various funding options, including state and federal grants.
- Proceed with Phase I: Given the level of stakeholder support and safety benefits of the identified improvements, it is recommended to move forward with initiating National Environmental Protection Act (NEPA) studies, or Phase I, to further evaluate the recommended non-motorized underpass at the Metra Station and the Ardmore Avenue motorized underpass grade separations.

In conclusion, the feasibility study supports the implementation of two grade separations at Ardmore Avenue and the Villa Park Metra at-grade rail crossings. These grade separations would significantly enhance safety, accessibility, and convenience for pedestrians and motorists while providing a valuable community asset. With strategic planning and design, securing available funding, and robust engagement of project stakeholders, the construction of the recommended alternatives can be successfully executed, ensuring a safer and more efficient transportation infrastructure for the community.

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Section 2
Introduction

2.1 Background

The Village of Villa Park, bisected by the Union Pacific Railroad (UPRR) with three at-grade crossings, grapples with daily delays and safety concerns due to the heavy freight and passenger train traffic. For years, the community has advocated for a grade separation to enhance safety and reduce travel time inconsistencies. While some of the safety concerns have been addressed in recent years with the installation of anti-trespassing fences and other safety measures, concerns over the delay due to train blocking events have been left unaddressed. The purpose of this study is to review the feasibility of implementing a grade separation of the UPRR within Villa Park and identify the next steps required for implementation. The grade separation options may include accommodation for vehicular and pedestrian/cyclist traffic or support only accommodation for pedestrian/cyclist.

2.2 Study Area

The Village of Villa Park is in DuPage County, Illinois, about 20 miles west of the City of Chicago. The population of the Village of Villa Park was approximately 21,791 in 2022. This study area includes three existing at-grade UPRR crossings at Addison Road, Ardmore Avenue, and Villa Avenue. The study also includes a potential crossing at Westmore Avenue, although there is not currently a crossing of the UPRR tracks at that location.

There are two highways in the vicinity of the project area. IL Route 64 (North Avenue) is a primary east-west highway crossing through the north end of Villa Park, and IL Route 83 (Kingery Highway) is a primarily north-south highway that borders on the east of the Village between Villa Park and Elmhurst. See FIGURE 2-1 for the study area map.

FIGURE 2-1 Study Area Map

A major component to this study is Metra's Union Pacific West (UP-W) commuter rail line operated by UPRR located near the Ardmore Avenue at-grade crossing. This east-west route provides service from Elburn, IL to downtown Chicago, IL. The entire length of the line is 43.8 miles with 19 stations.

More detail regarding the Villa Park Metra Station is included in Section 3.

2.3 Goals and Objectives of the Study

The purpose of this feasibility study is to investigate the possibility of a new grade separation structure (underpass or overpass) across UPRR in the Village of Villa Park. This effort includes a review of four potential locations—Westmore Avenue, Addison Road, Ardmore Avenue, and Villa Avenue—for potential vehicle and cyclist/pedestrian grade-separated crossings. In addition, this effort includes a review of grade separation options for pedestrians only at three locations including Addison Road, the Village's Metra station (located between Ardmore and Illinois avenues), and at Villa Avenue.

The UPRR railroad divides the community, limiting connectivity and access across the Village. Further, the existing crossings in the Village experience congestion, safety, and travel time reliability concerns, including for emergency vehicles. A grade-separated structure is anticipated

to improve safety, travel times, reliable access, and air quality, while reducing delays for all users. In addition to these primary benefits, a grade separation could also serve larger Village goals, such as encouraging economic development in priority locations and facilitating overall traffic circulation along preferred routes through the Village.

2.4 Overview of the Planning Process

The feasibility study embarked upon by the Village of Villa Park set out to comprehensively analyze the potential for grade separation within the village. This study's planning process can be broken down into several steps:

- **Existing Conditions Data Collection:** The study began with a comprehensive review of the existing conditions within the Village of Villa Park. Key data, such as land use, zoning, vehicular and train traffic volumes, historical crash statistics, and utility mapping, were examined. By understanding the current context, a foundation was laid to identify challenges and determine the areas requiring additional investigation.
- **Development of Alternatives:** Drawing from safety assessments, operational insights, and stakeholder input, various alternatives were proposed for both vehicular and pedestrian/cyclist considerations.
- **Evaluation of Feasible Alternatives:** Each alternative was evaluated using specific criteria set by Villa Park staff and stakeholders. This included a review of pedestrian, cyclist, roadway, railroad, drainage, and environmental evaluation criteria along with direct and indirect impacts to adjacent properties. This process ensured the alternatives met the study's objectives, and only the most suitable options were retained for further consideration.
- **Stakeholder and Public Engagement:** A stakeholder meeting was held for local officials and staff to share their views on the project. This workshop better defined the project purpose and identified clear priorities for the grade separations as well as other contextual objectives to inform the planning process. Additionally, a public engagement period allowed the community to provide feedback through an online survey, as well as the opportunity to provide comment at two of the Village's Meetings of the Whole.

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Section 3
Existing Conditions

3.1 Description of Project Area

The Village of Villa Park is considering an overpass or underpass grade separation crossing on the UPRR Union Pacific West (UP-W) rail line. There are three existing at-grade crossings that serve vehicular and pedestrian/cyclists. These include Addison Road, Ardmore Avenue, and Villa Avenue. There is also one pedestrian/cyclist only at-grade crossing at the UP-W Metra Station located between Ardmore and Villa avenues. While Westmore Avenue is included in the initial data collection effort, it does not currently provide access across the UPRR. See FIGURE 2-1 for the Study Area Map and FIGURE 3-1 for the Roadway Functional Classification Map.

3.1.1 Villa Park Station

The Villa Park Metra Station, opened in 1908 and rebuilt in 1979, is located 17.8 miles from the eastern terminus, Ogilvie Transportation Center in downtown Chicago. In 2018, Metra identified Villa Park as the 59th busiest station out of Metra's 236 outlying stations with the 8th highest ridership on the UP-W line.[1] Ridership data provides a clear picture of the station's consistent usage over the years. In 2006, the station had 835 riders, which increased slightly to 841 in 2014. The count was 828 in 2016 and rose to 870 by 2018.[2] This steady growth in ridership reinforces the station's importance in the UP-W line and its role in serving the commuting needs of the community.

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[1] Commuter Rail System Station Boarding/Alighting Count, April 2019, https://metrarail.com/sites/default/files/assets/planning/ridership/2018_summary_results_report_final.pdf

[2] Metra Station Ridership (Boarding & Alighting Survey), rtams.org

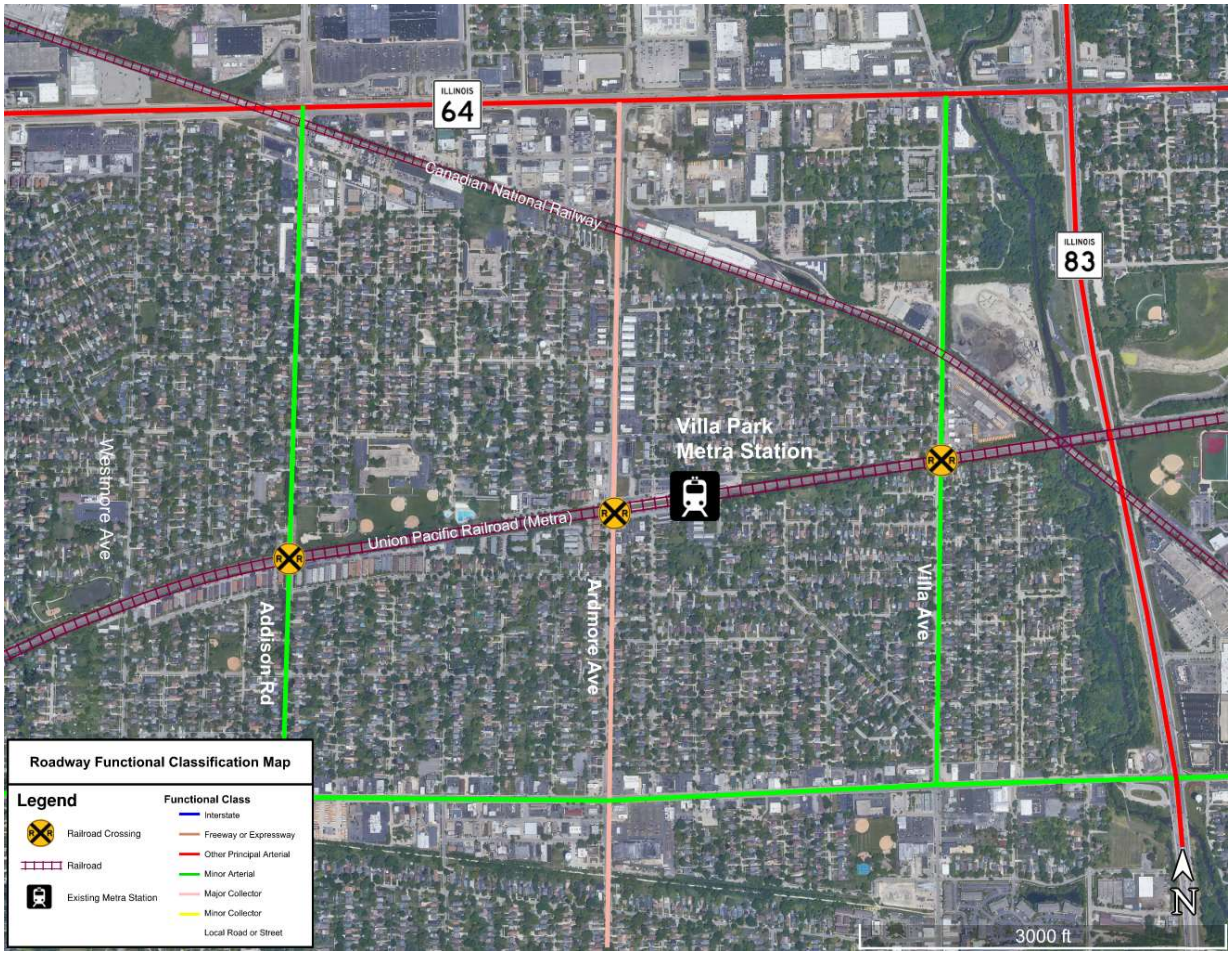

FIGURE 3-1 Roadway Functional Classification Map

3.2 Land Use

The Village of Villa Park boasts a diverse land use mix, which can be visualized through the Zoning Map as displayed in FIGURE 3-2. The immediate vicinity of the study area predominantly consists of zones dedicated to mixed-use transit-oriented development (TOD), an array of residential categories from mixed residential 1 and 2 to single-dwelling units with a standard plot size of 7,500 sq. ft. There is also a notable presence of light industrial zones and planned unit development industrial parcels.

In the immediate context of the Villa Avenue crossing, the landscape is predominantly residential. However, there are various industrial and commercial facilities in the northeast quadrant, encompassing businesses from metalwork and linen suppliers to machining, construction materials suppliers, and auto repair shops.

Various trip generators are scattered around the study area, including schools, parks, municipal facilities, and emergency services, all contributing to the dynamic flow of people and vehicles in the area. FIGURE 2-1 Study Area Map provides a comprehensive view of these locations.

Two pivotal emergency service points near the study area deserve special mention. The Villa Park Police Department, located at 40 Ardmore Avenue, is situated south of the UPRR, while the Villa Park Fire Station 82 stands to the north at 102 W Plymouth Street. Their strategic locations around the UPRR underscore their importance in ensuring swift response times and community safety.

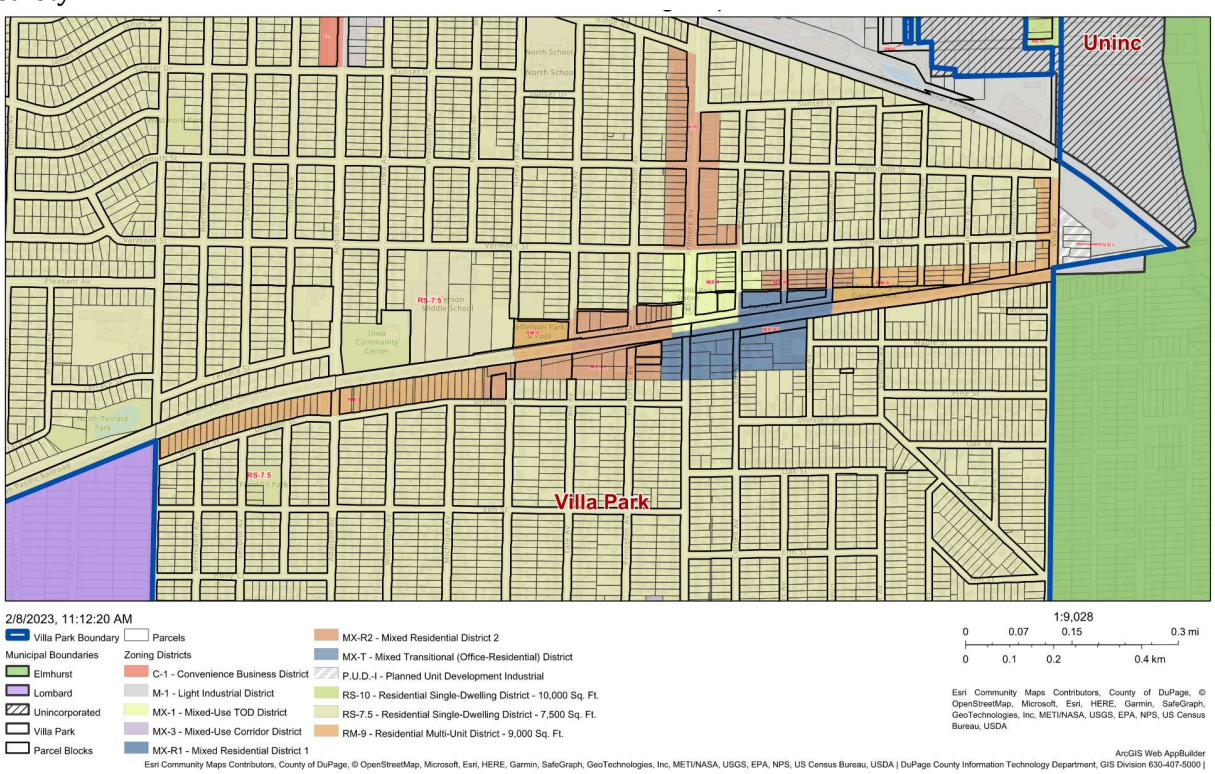

FIGURE 3-2 Zoning Map

3.3 Project History and Previous Studies

Past studies in Villa Park have consistently highlighted the need for a grade separation to address transportation challenges. This feasibility study synthesizes these insights, identifying current issues and evaluating potential solutions. Among these, the Villa Park Bicycle & Pedestrian Master Plan emphasized improving the Salt Creek Trail connection. This study evaluates this and other community needs, weighing the benefits and costs of each proposed alternative. Below is a summary of the relevant existing plans and studies.

3.3.1 Villa Park Comprehensive Plan Update (2009)

The Village's Comprehensive Plan Advisory Committee conducted a public forum to draft vision statements and goals. A key policy issue and recommended community improvement was to create an under/overpass for Addison Road over the Metra tracks. This initiative aligns with the Village's overarching goal of promoting "complete streets," ensuring holistic and comprehensive accommodations for all modes of transportation, including biking, walking, and transit throughout the Village.

3.3.2 Villa Park Bicycle & Pedestrian Master Plan (2018)

Villa Park currently lacks dedicated on-street bikeways, with the notable Salt Creek Regional Greenway Trail running north/south through Villa Park, Elmhurst, and nearby areas. A survey conducted as part of the master plan emphasized intersection improvements, with over 70% of respondents seeking general enhancements, especially at trail crossings.

Villa Avenue stood out during public outreach, mainly due to the gap on the Salt Creek Greenway. Cyclists pointed out challenges like needing two street crossings to access the west sidewalk and the presence of two at-grade railroad crossings.

Moreover, the community expressed a strong desire for more north/south bike routes. Ardmore Avenue was the top-requested route, with several other streets also highlighted. Both cyclists and drivers called attention to confusion at crossings on the Prairie Path and Great Western Trail, indicating a need for clear right-of-way guidelines.

In summary, the master plan indicates a community drive for improved intersections and trail connectivity, particularly on Villa and Ardmore Avenues.

3.3.3 Eco Terra Planned Mixed Use Residential Project (2021)

The Village of Villa Park is seeking to develop the area around the Villa Park Metra Station into transit-oriented development. As part of this effort, Hawthorne Development has proposed a $120 million mixed-use market rate residential project at the southeast corner of Ardmore Avenue and Vermont Street, immediately adjacent to Villa Park's Metra station. Hawthorne Development is currently seeking financing to begin construction.

The proximity to a potential grade separation at Ardmore may raise concerns by the developer due to aesthetic considerations. There may also be some additional considerations to address any elevation differences for site development. This underscores the importance of integrating infrastructure decisions with ongoing development plans.

3.3.4 Villa Avenue Improvements Phase I Study (2023)

The Village of Villa Park conducted a preliminary study to investigate the Villa Avenue corridor between Wildwood Avenue and IL Route 64 (North Avenue). The analysis recommends resurfacing Villa Avenue and constructing a shared-use path on the west side. Considering this, the west side of Villa Avenue presents a more viable option for a potential grade separation if a pedestrian/cyclist-only separation was preferred at this location.

3.4 Traffic Volumes

3.4.1 Vehicular Traffic

Existing traffic counts were initially obtained through IDOT's *Getting Around Illinois* website; however due to variations in the years that data was collected, this study used CMAP's *Northeastern Illinois At-Grade Railroad Crossing Motorist Delay, 2018* to compare Annual Average Daily Traffic (AADT) at each of the at-grade crossings. The table below depicts AADT from the CMAP delay study for the roads within the study limits:

TABLE 3-1 AADT (2018)[3]

Street	AADT
Westmore Ave	N/A
Addison Rd	9,450
Ardmore Ave	7,550
Villa Ave	6,200

3.4.2 Train Traffic

As of January 2023, there is an average of 98 trains per day on the UPRR with an average of 52 passenger trains per day (27 inbound, 25 outbound).[4] The train speed listed on the timetable is 70 mph, with the minimum likely being 25 mph and maximum likely being 50 mph.

North of the UPRR tracks is a Canadian National Railway (CN) track with traffic averaging 2–4 trains per day.

TABLE 3-2 Vehicle Delay per Weekday (Vehicle-Hours), (2018)

Street	Vehicle-Hours of Delay
Westmore Ave	N/A
Addison Rd	159.04
Ardmore Ave	133.90
Villa Ave	106.14

3.5 Crash Statistics

3.5.1 Vehicular Crash Data

Vehicular crash data from 2017 to 2022 was pulled from the IDOT GIS database and covers crashes within the project limits. There has been a total of 200 crashes in the 6-year period, with no crashes resulting in a fatal injury. Most crashes (80 percent) had no injuries or were a property damage-only crash. Parked vehicle, angle, and turning were the most common types of crashes. Additionally, most crashes (79 percent) happened when the weather was clear and around 3–4 p.m. Crash data is summarized in APPENDIX A.

3.5.2 Railroad Collision History

Train crash data is provided by Illinois Commerce Commission and covers all the accident data recorded at the at-grade intersections as shown in APPENDIX B. In total, there have been 18 fatalities and 7 injuries since 1958, with the most recent in 2022.

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[3] Chicago Metropolitan Agency for Planning, August 2022, https://www.cmap.illinois.gov/documents/10180/29236/NEIL_2018RRCrossingMotoristDelay_CMAP_20221019.pdf/e9d1944e-68c9-7e12-3e61-630f2325128e?t=1666223803477

[4] Illinois Commerce Commission, January 2023. https://icc.illinois.gov/rail-safety/crossing/174935X/inventory

3.6 Utilities

Each potential corridor was reviewed to determine the type and size of utilities that could become a conflict for a potential over/underpass structure. All locations have existing water lines crossing the tracks, with Villa Avenue also having two sanitary sewer lines. A summary of the utilities identified is attached in APPENDIX C.

Section 4
Identification and Evaluation of Alternatives

Based on the findings of the crash evaluation and operational analysis regarding vehicle-hours of delay, along with stakeholder input, the concepts development focused on safety enhancements for all users and potential operational improvements. The alternatives emphasized minimizing impacts while maximizing the utility of any improvement. The study included developing and evaluating six vehicular (underpass and overpass) alternatives at the three existing at-grade locations and three pedestrian/cyclist-only grade separations. While the study originally included four potential locations for a grade separation (Westmore, Addison, Ardmore, and Villa), Westmore Avenue was eliminated from further consideration due to the limited benefits of improvements identified early in the study.

For the development of alternatives, project-specific design criteria were developed in accordance with Illinois Department of Transportation (IDOT)'s Bureau of Design and Environment (BDE) manual and Bureau of Local Roads and Street (BLRS) manual, as well as the UPRR Public Projects Manual.

Graphic representations of the alternatives can be found in APPENDIX D.

4.1 Grade Separation Concepts

4.1.1 General Considerations

Underpasses, while providing a clear path without impeding the road or pedestrian traffic, tend to be more costly than overpasses. The need to excavate and reinforce the railroad infrastructure below ground can escalate construction expenses. Moreover, underpasses frequently face issues with over-height vehicle bridge strikes. This occurs when trucks or other oversized vehicles collide with the underside of the bridge, leading to potential infrastructure damage and safety concerns. Design standards for underpasses often require more intricate drainage solutions to prevent flooding, especially in areas prone to heavy rainfall or water accumulation.

On the other hand, overpasses, while generally less expensive, come with their own set of challenges. To ensure safe vertical clearance for rail vehicles passing below, vertical clearance requirements for train traffic are typically five to seven feet greater than clearances required for underpass traffic (e.g., trucks), making overpasses more visible within a landscape. This visibility means that aesthetics become a significant concern, as a prominent structure might not be well-received in all communities or environments. Designing to meet these aesthetic considerations can drive up costs. Additionally, the approach for an overpass may be lengthier due to the need for a gradual incline for vehicles and pedestrians, further extending the footprint and potentially affecting more properties or natural habitats, due to the greater vertical clearance requirements over the railroad tracks.

At present, the UPRR does not typically prefer the use of underpass grade separation structures and requests every effort should be made to consider an overpass structure.

4.2 Motorized Alternatives

Three locations were evaluated for a motorized grade-separated crossing. All motorized alternatives include accommodation for both pedestrians and cyclists. Generalized property impacts of the alternatives are shown in APPENDIX D.

4.2.1 Addison Road

Addison Road is a four-lane minor arterial with a two-way left turn lane (TWLTL) with sidewalks on both sides. The roadway serves approximately 9,450 vehicles per day. The existing UPRR crossing has overhead signals and gates. Adjacent land use is zoned as mixed-use transit-oriented development and mixed residential. Since, Addison Road, boasting the highest capacity out of the four proposed grade-separation locations, would greatly benefit from a grade-separated crossing to alleviate vehicular/train delay, though such an enhancement would also entail higher costs due to the wider, four-lane section of the roadway.

Addison Road Underpass

An underpass at Addison Road would start 100 feet south of Division Street and would end 350 feet south of Vermont Street. There are no existing driveways on the east side north of the UPRR tracks. The Iowa Community Center is currently served by Iowa Avenue. An underpass would provide better connectivity for those traveling to use the community center and athletic fields. This location is the most heavily traveled crossing evaluated. East access to Terrace Avenue and Division Street off Addison would be impacted by this alternative. Limited parcels would be impacted by this alternative.

Addison Road Overpass

An overpass at Addison would start north of Elm Street and would end 300 feet south of Vermont Street. An overpass could potentially block the view for conductors relying on the signal bridge located on the east side of the Addison at-grade crossing. This alternative impacts approximately double the parcels of the underpass alternative.

4.2.2 Ardmore Avenue

Ardmore Avenue is a two-lane major collector with a TWLTL present near the grade crossing. The roadway serves approximately 7,550 vehicles per day. The existing roadway currently provides sidewalks on both sides of the roadway, but does not provide on-street bike lanes. Adjacent land use is primarily commercial and residential. Approximately half a mile north of the UPRR at-grade crossing is the Ardmore Avenue bridge that provides a grade separation over the Canadian National Railway (CNRR). Ardmore Avenue serves as access to the retail district along the corridor. A grade-separation crossing would further provide north-south continuity.

Ardmore Avenue Underpass

An underpass at Ardmore Avenue would start north of Division Street and end about 200 feet south of Vermont Avenue. The underpass would remove access between Terrace Avenue and west entrance of the Villa Park Metra station permit lot. The west entrance of the Villa Park Metra station south lot would also be removed. Limited parcel impacts would result in this alternative. Additionally, on-street parking would be affected in the vicinity.

A mixed-used residential project is currently proposed at the southeast corner of Ardmore and Vermont avenues, directly adjacent to the Metra Station. The ongoing redevelopment plans remove access along Ardmore Avenue, redirecting entering traffic onto Vermont and Beverly Avenues. By removing these access points, there is no longer a concern regarding grading issues for driveways along Ardmore, simplifying construction and design considerations.

An underpass would strengthen north-south connectivity, as further north is the Ardmore Avenue bridge over CN tracks. In addition, a grade-separated crossing at this location could improve the reliability of emergency response times, as Villa Park Fire Station 81 and Station 82 are located along Ardmore Avenue.

Ardmore Avenue with Terrace Street Connection

To address concerns with connectivity, a sub-alternative was developed to extend the underpass below Terrace Street. This extension maintains access between the Villa Park Metra Station permit lot and Terrace Street via an east-west bridge running parallel to the tracks. Compared to the Ardmore Avenue underpass alternative, this alternative would affect two additional parcels. The cost for this alternative would be higher than an Ardmore Avenue underpass without Terrace Street connection, due to the additional highway bridge to support Terrace connection and larger footprint of the underpass.

Ardmore Avenue Overpass

An overpass along Ardmore Avenue would start north of Division Street and end about 100 feet south of Vermont Avenue. The overpass has slightly larger impacts than the underpass alternatives. Main concerns for the overpass alternative would be aesthetics since an overpass would likely disrupt the view for existing buildings and may seem out of place in the current context. The overpass alternative would typically cost less than its underpass counterpart, as it usually requires less railroad coordination efforts and simpler construction phasing. An overpass would also eliminate the safety risk of vehicle collisions with the railroad bridge.

4.2.3 Villa Avenue

Villa Avenue is a two-lane minor arterial along the east boundary of Villa Park. The roadway serves about 6,200 vehicles per day. The warning device at the at-grade crossing is 2-quadrant and pedestrian gates. There is currently only sidewalk on the west side of Villa Avenue, requiring pedestrians to cross the street to access the at-grade crossing. There are currently no bike lanes, however a segment of Villa Avenue serves as the on-street connection to the Salt Creek Greenway Trail. Adjacent land use is primarily industrial and residential. Approximately 850 feet north of the UPRR at-grade crossing is the CNRR at-grade crossing. Approximately a quarter mile to the east of Villa Avenue is IL 83, which provides a grade separation of the UPRR tracks. Current conditions of Villa Avenue provide an elevation difference that could require less excavation for an underpass option. Both an underpass and overpass alternative will require additional coordination with the City of Elmhurst that boarders Villa Park east of Villa Avenue. Elmhurst could potentially serve as a project partner and assist with project support and local funding requirements.

Villa Avenue Underpass

An underpass at Villa Avenue would start just south of Beach Street and would end north of Vermont Street. The current elevation on the south side of Villa Avenue is lower than the current

location of the UPRR tracks. This difference allows for a potential reduction in impacts as it is easier to meet the necessary vertical clearance without requiring additional excavation. Access impacts with the Villa Avenue underpass option include properties along Villa Avenue and along Beach Street. Villa Avenue also has the highest utility impacts of any alternative considered, with sanitary sewer lines crossing the tracks. Villa Avenue does not significantly address concerns of a more centralized north-south connection due to its proximity to the existing grade separation along IL 83, located approximately a quarter mile to the east of Villa Avenue.

Villa Avenue Overpass

An overpass along Villa Avenue would start north of Pine Street and end at Plymouth Street. This alternative would have significant access and property impacts compared to an underpass at Villa as well as comparted to the alternatives at Ardmore Avenue and Addison Road. The elevation south of Villa Avenue would require additional impacts as more space is needed to reach the required vertical clearance based on the UPRR standards. Access to Beach Street would be permanently closed due to the potential structure. Villa Avenue does not significantly address concerns of a more centralized north-south connection due to its proximity to the existing grade separation along IL 83, located approximately a quarter mile to the east of Villa Avenue.

4.3 Non-Motorized Alternatives

Non-motorized, grade-separated crossings provide access for pedestrians and cyclists only. Three locations were evaluated for non-motorized alternatives, including Addison, Ardmore Avenue/Villa Park Metra Station, and Villa Avenue.

4.3.1 Addison Road Non-Motorized Crossing

The Addison Road pedestrian crossing aims to connect the residential area to the south with a community center, church, and middle school to the north. The current warning systems in place are gates for pedestrians. Grade separation at this location faces more complex challenges due to a higher number of impacted residential units, especially the multi-family buildings south of the grade crossing.

Addison Road Non-Motorized Underpass

In this alternative, the current pedestrian at-grade crossing would be replaced with an underpass situated to optimize connectivity between the residential and community areas. This underpass would be ADA compliant and primarily serve pedestrians and cyclists. The design takes advantage of lower clearance requirements, resulting in shorter ramps compared to an overpass alternative. Consequently, the underpass option presents a smaller footprint, minimizing property impact. This choice would likely deter pedestrians and cyclists from taking risks by crossing the tracks at grade, thereby enhancing safety.

Addison Road Non-Motorized Overpass

Alternatively, an overpass could be installed to replace the existing pedestrian at-grade crossing. The design would be ADA compliant and focus on serving pedestrians and cyclists. This option would require more than 600 feet of ramps to gain the necessary vertical clearance to cross over the tracks. The extent of the ramps could tempt pedestrians and cyclists to risk crossing at grade to save time. Additionally, the overpass might conflict with the existing UPRR signal bridge, necessitating further coordination with UPRR for signal relocation. Despite these challenges, this

alternative would provide a grade-separated crossing that improves safety and reliability for those crossing the tracks.

4.3.2 Ardmore Avenue/Villa Park Metra Station Non-Motorized Crossing

The Villa Park Depot pedestrian crossing is located 850 feet east of the Ardmore Avenue at-grade crossing. Current warning systems are pedestrian gates. A pedestrian underpass in the vicinity of a Metra commuter station has been a popular alternative to address frequent resident and customer complaints about parking and the ability to cross the tracks. Site design for this crossing would include ADA compliance. The surrounding area is zoned as transit-oriented development. Installation of a grade-separated crossing at this location would improve pedestrian access to the area and the passenger rail line.

Ardmore Avenue/Villa Park Metra Station Non-Motorized Underpass

In this alternative, the current pedestrian at-grade crossing on the east end of the station would be removed and an underpass would be moved west, closer to the station building. The underpass would be ADA compliant and would primarily serve pedestrians and cyclists using the station. In this alternative, the design uses a switchback design to meet necessary vertical clearance for the ramp. This switchback design reflects a conservative footprint to reflect a worse-case impact scenario. Elevator access could also be provided, to reduce the footprint of the alternative. Stair connections will also be provided to access street and track level. The required footprint for the switchback ramp could result in parking loss at the station and a potential reconfiguration of the parking lot. This alternative would enhance safety for Metra riders by offering a crossing while trains are stationed, thereby increasing reliability for commuters accessing the opposite platform.

Ardmore Avenue/Villa Park Metra Station Non-Motorized Overpass

Like the underpass option, this alternative would remove the existing pedestrian at-grade crossing on the east end of the station and an overpass would be located closer to the station building. The overpass would be ADA compliant and would primarily serve pedestrians and cyclists using the station. In this alternative, the design uses a switchback design to meet necessary vertical clearance for the ramp. This switchback design reflects a conservative footprint to reflect a worse-case impact scenario. Elevator access could also be provided, to reduce the footprint of the alternative. Stair connections will also be provided to access street and track level. The required footprint for the switchback ramp could result in parking loss at the station and a potential reconfiguration of the parking lot. This alternative would enhance safety for Metra riders by offering a crossing while trains are stationed, thereby increasing reliability for commuters accessing the opposite platform.

4.3.3 Villa Avenue Non-Motorized Crossing

Villa Avenue serves as an on-street connection for the Salt Creek Greenway Trail. The Salt Creek Greenway Trail serves as a key link to the Illinois Prairie Path and the Great Western Trail. Current conditions require pedestrians to cross onto the west side sidewalk and cyclists to ride on-street, putting the user at risk with vehicle conflicts. As such, this location was a prime candidate for review of a pedestrian/cyclist-only grade separation.

Both sides of Villa Avenue were considered for a non-motorized alternative. A review of an on-going Phase I study discussing potential improvements to Villa Park recommended a shared-use path on the west side of Villa Avenue. The east side of Villa Avenue would require extensive infrastructure improvements to accommodate pedestrian and cyclists; therefore, only non-motorized alternatives for the west side of Villa Avenue were developed. The Villa Avenue non-motorized alternatives have more utility impacts compared to the Villa Park Metra Station and Addison Road alternatives.

Villa Avenue Non-Motorized Underpass

The non-motorized underpass alternative would run parallel along Villa Avenue. An 8-foot shared-use path would be developed on the west side of the roadway, while maintaining the existing roadway conditions. This alternative minimizes the need for additional infrastructure improvements outside the study area as there is existing sidewalk on the west side. Salt Creek Greenway Trail users will gain protection and safety at the railroad crossing; however, they will still be required to cross at Thomas Street and 2nd Street.

This alternative could require additional coordination with the City of Elmhurst.

4.4 Technology Applications

Railroad crossing challenges extend beyond infrastructure modifications. While overpasses and underpasses remain vital solutions, their significant costs and potential disruptions during construction may lend to considering additional options to relay crossing blockage information. Technology-focused solutions, in this context, emerge as both cost-effective and less intrusive.

For first responders, any delay can be critical. Blocked crossings present immense challenges to emergency services. However, with the integration of artificial intelligence and data analytics, there is a shift from reactive to proactive management of such situations.

Artificial intelligence systems monitor train movements in real-time, predicting blockages and their expected duration. This crucial information allows traffic systems and drivers, especially emergency services, to efficiently reroute, minimizing delays.

Smart notification systems, using global positioning systems and mobile technology, offer real-time alerts about imminent blockages. This immediate knowledge aids in providing alternate routes, particularly essential for emergency responses.

Harnessing predictive analytics with historical data and train schedules enables the anticipation of blockages, assisting emergency services in route planning.

In summary, while infrastructure solutions play a pivotal role, technology offers a versatile and efficient strategy for providing additional options to relay crossing blockage information. Technology applications should be considered in future project phases. . While the use of technology is a low-cost application, it does not fully satisfy the purpose and need of a grade separation project, but could serve as a tool to assist emergency service providers and general traffic in understanding travel options prior to committing to a travel path when beginning a trip.

4.5 Evaluation Matrix

Alternatives were evaluated based on criteria identified by the project team along with Villa Park staff and stakeholders. The development and evaluation of these alternatives included a review encompassing aspects such as pedestrian, cyclist, roadway, railroad, drainage, and environmental evaluation criteria, along with direct and indirect impacts to adjacent properties. If an identified location did not meet the goals of the project, it was not considered feasible and it was eliminated from further consideration, prior to quantification of impacts.

Quantification of impacts were summarized based on the footprint of the proposed improvements. The impacts analysis is summarized in the evaluation matrix attached in APPENDIX E.

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Section 5
Public Involvement

Implementing grade separation projects represents a significant investment of funds and will create impacts to surrounding properties and travel patterns. The project may also affect future development patterns, resulting in potential changes to land use or community character. As such, this study included stakeholder engagement to understand how the alternatives developed would resonate with the Village. A description of the engagement activities is listed below. Stakeholder engagement materials are included in Appendix F.

5.1 Stakeholder Meeting (5/31/2023)

After collection and review of the existing data sets, CDM Smith conducted a workshop with Village staff and officials to understand Village context relative to gaining access across the UPRR corridor. This workshop better defined the project purpose and identified clear priorities for the grade separations as well as other contextual objectives to inform the planning process.

The Stakeholder meeting was held in person with a virtual option on May 31, 2023. The meeting included various Village officials including the Village president, Village manager, assistant Village manager, public works director, economic development director, community development director, police chief, deputy fire chief, assistant village engineer, chairperson of the environmental concerns commission, chairperson of the traffic safety commission, and environmental concerns commissioner. The preference indicated by the stakeholders was to construct a vehicular underpass at Ardmore Avenue or a pedestrian underpass at the Metra Station.

5.2 Public Survey

Comments from the public were made over a two-week comment period from May 8–19, 2023 through an online survey. No crossing location emerged as a clear priority for improvement.

Themes are summarized below:

- Need for improved north-south vehicle access across railroad
- Need for improved access to community destinations (e.g., Iowa Recreation Center and schools)
- Need for pedestrian crossing improvements at Metra station (potentially as under/overpass)
- Poor pavement conditions at Villa Avenue crossing

5.3 Committee of the Whole

CDM Smith met with the Village Board's Committee of the Whole on two occasions during the study. In the first meeting, on April 10, 2023, CDM Smith delivered a presentation detailing the grade separation evaluation process, including the projected timeline and anticipated costs

spanning from the feasibility stage through to construction. Notably, no public comments were made during this session, and the board's inclination at that time was toward a pedestrian/cyclist grade separation.

The second presentation to the Village Board's Committee of the Whole was on September 11, 2023. The presentation focused on the developed alternatives and the associated impacts. One representative from the community mentioned issues stemming from trains blocking the crossing including:

- Delay in travel for first responders
- Preventing commuters from reaching the final leg of their trip once they have detrained
- Encouraging risky behavior to avoid delays from approaching trains
- Preventing Villa Park from building Metra ridership and associated revenue
- Consideration by Pace to reroute the current 313 route serving the Metra station

Any further evaluation of the alternatives should consider public comment brought up during this stage.

Section 6
Summary

As mentioned in the introduction, Villa Park typically follows the Illinois Department of Transportation (IDOT) planning process, particularly when state routes are involved, or federal funding is being sought. This includes a three-phased process for project implementation. This study was conducted in preparation to understand feasible alternatives to advance into the next phase of project development which is considered Phase I. Phase I consists of preliminary engineering and evaluates the project corridor, determines environmental impacts, further develops and analyzes alternatives, and selects a preferred alternative.

6.1 Recommendations

Based on the impacts evaluation of alternatives investigated during this study and the results of the stakeholder engagement, two separate projects are suggested for additional evaluation in Phase I. These projects include:

- Villa Park Metra Station Non-motorized Underpass
- Ardmore Avenue Motorized Underpass

The Villa Park Metra Station Non-Motorized Underpass was selected due to the opportunity to provide additional reliability specifically for transit users, minimization of parcel impact, and minimization of utility impact. This option also has one of the lower overall construction costs relative to other alternatives.

The Ardmore Avenue Motorized Underpass was selected based on the minimization of overall parcel and utility impacts, continuous route connectivity through Villa Park, adjacent grade separation of the CN railroad to the north, proximity to fire stations, and the location provides a centralized location for multiple user types.

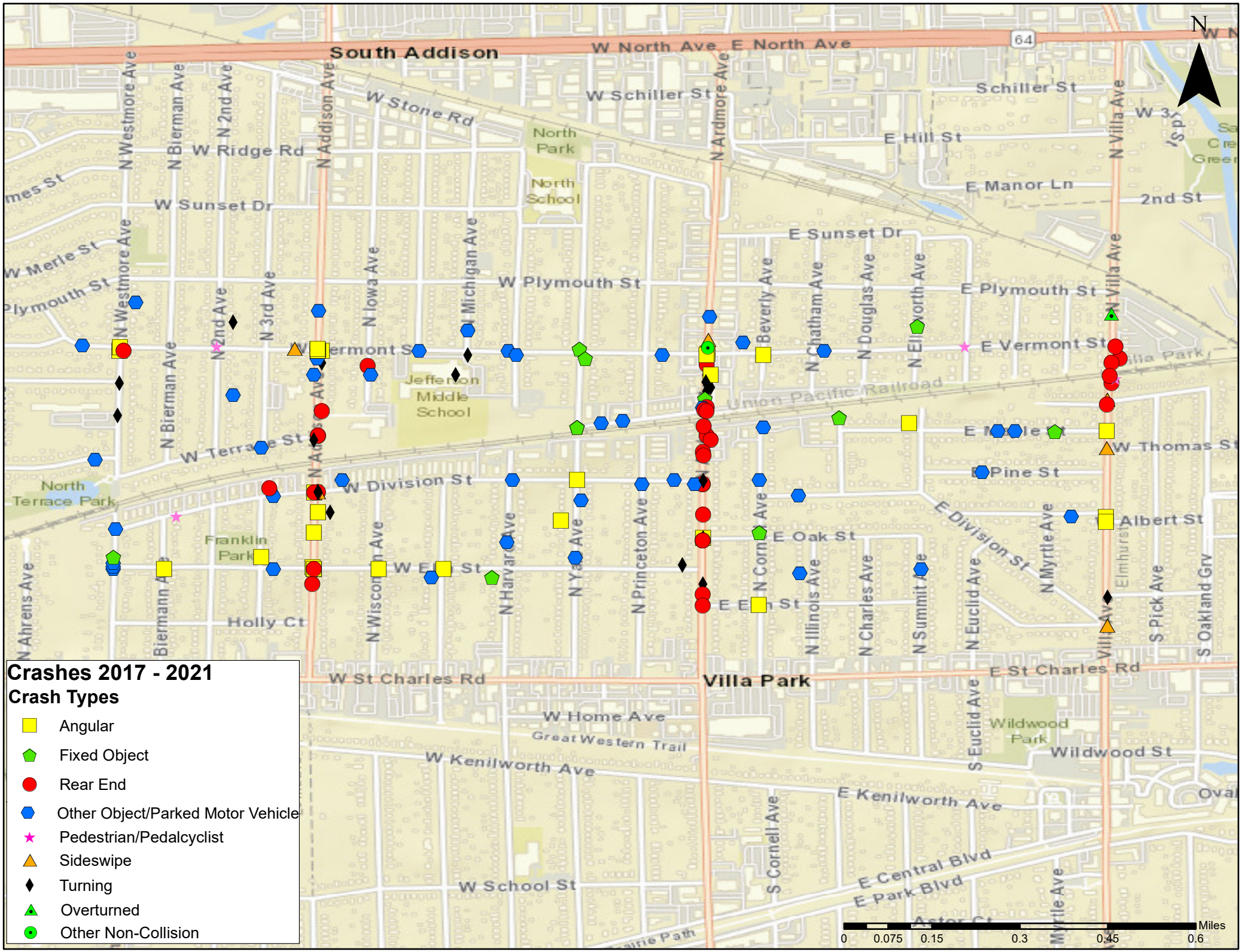
6.2 Next Steps

As noted during the public engagement occurring on September 11, 2023, next steps for this project include providing input to the on-going Villa Park Comprehensive Plan update. While there is still unknown economic development potential within Villa Park, recommendations of this study should avoid preclusion of any future development.

Villa Park should also move forward to develop a demonstrated commitment and funding plan. This would include identify funding opportunities that support the project purpose and need.

As noted above, the study findings recommend moving the grade-separation project into the next phase of project development. By doing so, this shows funding providers a level of commitment to the project and can assist in securing funding. This phase provides additional investigation of the feasible alternatives recommended to be carried forward. Phase I can be developed to include a tiered approach that may identify a near term recommendation for pedestrian only grade separation while also investigating a potential longer-term recommendation for motorized grade separation.

Appendix A:
Vehicle Crash Data


Crashes 2017 - 2021
Crash Types
Angular
Fixed Object
Rear End
Other Object/Parked Motor Vehicle
Pedestrian/Pedalcyclist
Sideswipe
Turning
Overturned
Other Non-Collision
South Addison
Villa Park
W North Ave
E North Ave
W Stone Rd
W Schiller St
Schiller St
W Ridge Rd
E Hill St
E Manor Ln
2nd St
W Sunset Dr
E Sunset Dr
W Merle St
W Plymouth St
E Plymouth St
E Vermont St
Jefferson Middle School
Union Pacific Railroad
W Terrace St
W Division St
E Division St
E Oak St
W Thomas St
E Pine St
Albert St
North Terrace Park
Franklin Park
Holly Ct
W St Charles Rd
E St Charles Rd
W Home Ave
Great Western Trail
W Kenilworth Ave
E Kenilworth Ave
Wildwood Park
Wildwood St
W School St
E Central Blvd
E Park Blvd
North Park
North School
N Westmore Ave
N Bierman Ave
N 2nd Ave
N Addison Ave
N 3rd Ave
N Iowa Ave
N Michigan Ave
N Ardmore Ave
N Beverly Ave
N Chatham Ave
N Douglas Ave
N Elmhurst Ave
N Villa Ave
N Ahrens Ave
N Wisconsin Ave
N Harvard Ave
N Yale Ave
N Princeton Ave
N Cornell Ave
N Illinois Ave
N Charles Ave
N Summit Ave
N Euclid Ave
N Myrtle Ave
S Pick Ave
S Oakland Grv
S Euclid Ave
S Cornell Ave
Myrtle Ave
Elmhurst
Villa
Miles
0
0.075
0.15
0.3
0.45
0.6
N

Appendix B:
Railroad Crash Data

Historic Crossing Accident Data

Date / Time	Reported By	Fat.	Inj.	RR-Equip	Vehicle	Accident Type	Warning Device	Weather
Villa Ave / 174935X								
1/31/2022 6:30	UPME	1	0	Unk	Ped	Ped	Gates	Unknwn
5/28/2019 7:38	UPME	1	0	Pass<	Auto	Veh-Trn	Gates	Cloudy
6/8/2004 2:00	UP / CNWA	0	0	Frght	Auto	Trn-Veh	Gates	Clear
2/18/1981 1:12	CNW / A	0	1	Frght	Auto	Veh-Trn	Gates	Fog
12/7/1977 10:12	CNW / A	1	0	Other	Auto	Trn-Veh	Unk	Clear
2/3/1977 0:25	CNW / A	0	0	Frght	Auto	Trn-Veh	Unk	Cloudy
11/15/1958 0:18	CNW / A	1	0	Pass<	Auto	Veh-Trn	Unk	Unknwn
Ardmore Ave / 174937L								
5/4/2016 11:15	UPME	1	0	Unk	Ped	Ped	Gates	Unknwn
12/28/1994 12:15	CNW / A	0	0	Other	Auto	Veh-Trn	C & G	Clear
8/20/1989 17:02	CNW / A	2	0	Frght	Auto	Trn-Veh	Gates	Clear
10/6/1982 15:27	CNW / A	0	0	Frght	Auto	Trn-Veh	Gates	Cloudy
6/30/1973 6:35	CNW / A	0	0	Frght	Auto	Veh-Trn	Unk	Clear
Addison Rd / 174938T								
9/29/1995 10:55	CNW / A	0	0	Frght	Auto	Trn-Veh	C & G	Clear
2/3/1988 15:33	CNW / A	1	2	Pass<	Ped	Ped	Gates	Snow
1/11/1988 0:10	CNW / A	0	1	Frght	Auto	Trn-Veh	Gates	Clear
7/25/1985 16:43	CNW / A	0	0	Frght	Truck	Trn-Veh	Gates	Cloudy
9/22/1983 22:02	CNW / A	0	0	Pass<	Other	Trn-Veh	Gates	Clear
6/6/1980 5:40	CNW / A	3	0	Pass<	Auto	Trn-Veh	Unk	Clear
1/14/1977 10:16	CNW / A	0	0	Pass<	Auto	Trn-Veh	Unk	Clear
10/25/1968 10:30	CNW / A	0	3	Pass<	Auto	Trn-Veh	Unk	Unknwn
2/15/1965 12:01	CNW / A	0	0	Other	Auto	Trn-Veh	Unk	Unknwn
7/17/1962 9:40	CNW / A	0	0	Frght	Other	Trn-Veh	Unk	Unknwn

Villa Park Depot / 174936E (Pedestrian Crossing)								
6/27/2022 22:16	UP / CNWA	1	0	Comm<	Ped	Ped	Gates	Clear
6/16/2021 21:37	UP / CNWA	1	0	Frght	Ped	Ped	Gates	Clear
12/29/2020 17:07	UP / CNWA	1	0	Comm<	Ped	Ped	Gates	Snow
Westmore Ave								
3/17/2004 8:40	UPME	1	0	Unknwn	Ped	Ped	None	Fog
2/11/2006 22:55	UPME	1	0	Unknwn	Ped	Ped	None	Unknwn
2/21/2010 21:37	UPME	1	0	Freight	Ped	Ped	None	Unknwn

Appendix C:
Utilities

Utilities Memo

The Village of Villa Park has provided CDM Smith with a GIS database with utility information. Pertinent utility information such as the type and size of utilities within the corridor that could become a conflict for a potential over or underpass has been summarized below.

Westmore Ave

- 12” separated line along Division at Westmore
- 8”, 10”, & 15” sanitary line along Terrace at Westmore
- 15” sanitary line along Westmore
- 12” combination line along Westmore
- 36” storm sewer line along Terrace at Westmore
- 21” storm sewer line along Westmore
- 30” storm sewer line along Division at Westmore
- 6” water line along Terrace St and Division St at Westmore
- 10” water line crossing UPRR

Addison Rd

- 10” separated line along Addison
- 15” separated line along Division at Addison
- 8” & 18” sanitary line along Terrace at Addison
- 18” sanitary sewer line along north of UPRR
- 8” & 10” sanitary sewer line along Addison
- 36” storm sewer line along Terrace at Addison
- 24” & 30” storm sewer line along Division at Addison
- 42” storm sewer line along Addison (north side)
- 12” storm sewer line along Addison (south side)
- 6” water line along Terrace St at Addison Rd
- 8” water line crossing to Iowa Community Center
- 4” & 6” water line along Division St at Addison Rd
- 6” water line crossing UPRR

Ardmore Rd

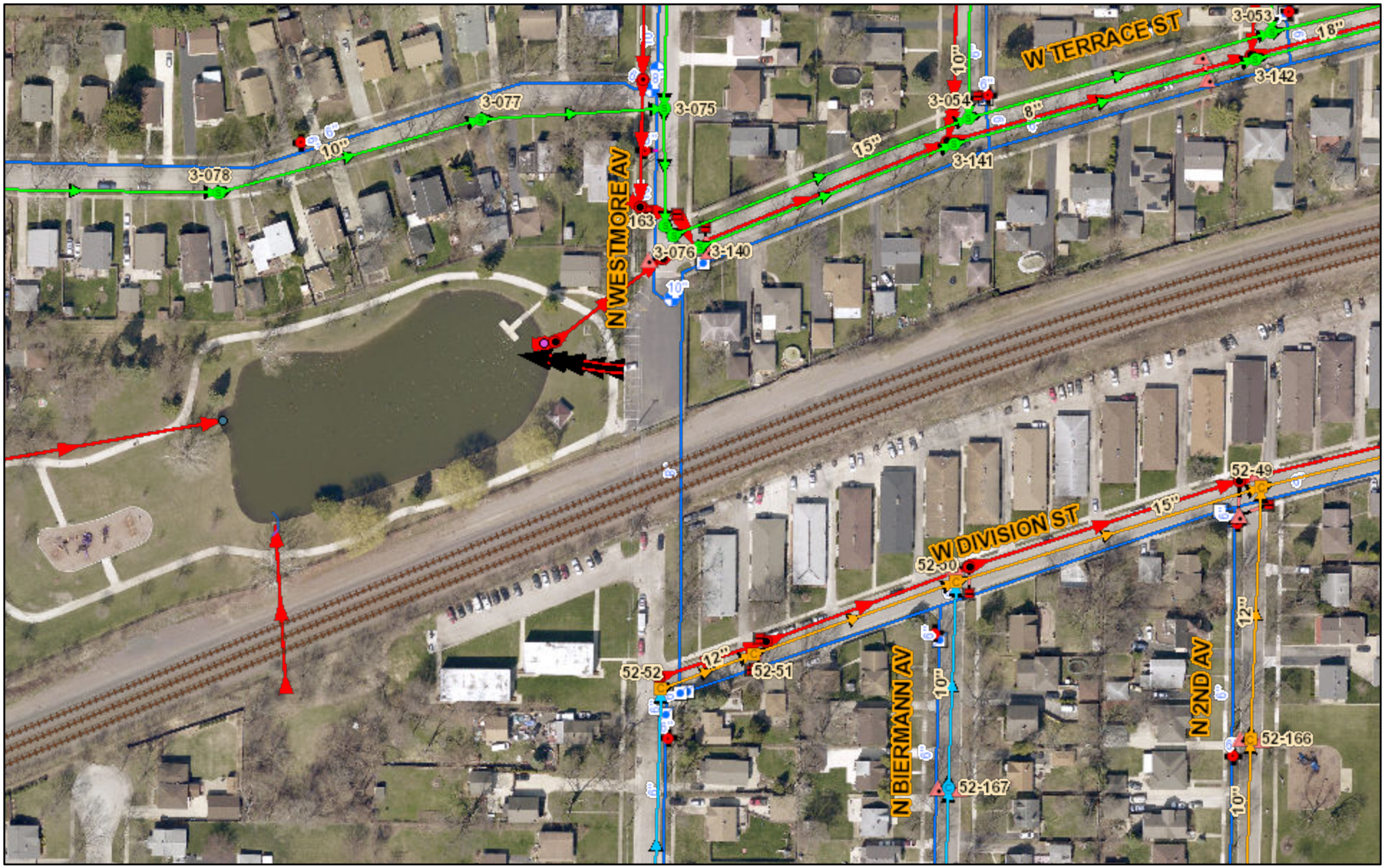
- 21” sanitary line along Terrace St and Metra Parking North Lot at Ardmore Rd
- 10” & 21” separated line along Ardmore Rd
- 18” separated line along Division St at Ardmore Rd
- 10” sanitary sewer line along Ardmore Rd north of UPRR
- 36” storm sewer feeder line across Metra Parking South Lot at Ardmore
- 12” storm sewer line along Ardmore (north side)
- 6” water line along Terrace St and Division St at Ardmore Rd
- 6” water lines across Metra Parking South Lot at Ardmore
- 10” water line crossing UPRR

Villa Ave

LOTS OF SANITARY AT VILLA

- 18” separated line along Vermont St at Villa Ave
- 8” separated line along Beach St at Villa Ave
- 15” separated line along Maple St and Pine St at Villa Ave
- 8”, 18” & 21” separated line along Villa Ave
- **21” & 24” sanitary sewer line along Villa crossing UPRR**
- **18” sanitary sewer overflow (SSO) along Villa crossing UPRR**
- 8” private sanitary sewer line along Villa Ave
- **24” storm sewer line along UPRR tracks**
- 66” storm sewer line along Vermont St at Villa Ave
- 12” storm sewer line along Beach St at Villa Ave
- 12” and 15” storm sewer line along Villa (north side)
- 18” and 24” storm sewer line along Villa (south side)
- 6” water line along Beach St and Maple St at Villa Ave
- 8” waterline along Vermont St at Villa Ave
- 8” private waterline along Villa Ave
- **10” water line crossing UPRR**

Westmore



5/3/2023

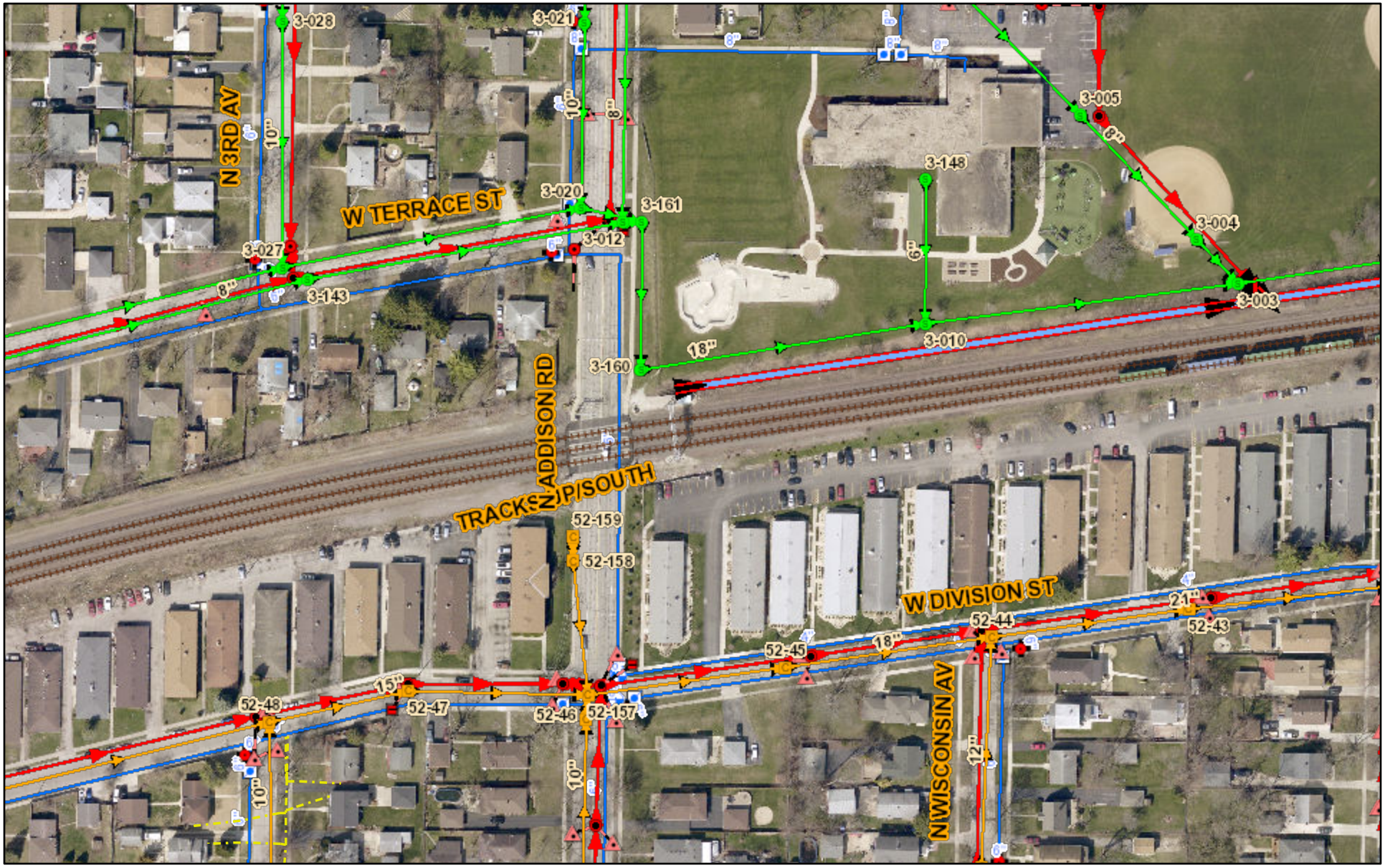
- Private Sanitary Sewer Manholes
- Sanitary Sewer Structures
  - LIFT STATION
- DIVERSION STRUCTURE
- Sanitary Sewer Manholes
  - Combined
- CSO
- Separated
- Sanitary
- WWFTF OUTFLOW
- SSO
- Private Sanitary Sewer Lines

1:2,400

0 0.01 0.03 0.06 mi

0 0.02 0.04 0.09 km

Addison



5/3/2023

Unmapped Utilities Lines
- Gas
- Private Sanitary Sewer Manholes

Sanitary Sewer Structures
- LIFT STATION
- DIVERSION STRUCTURE

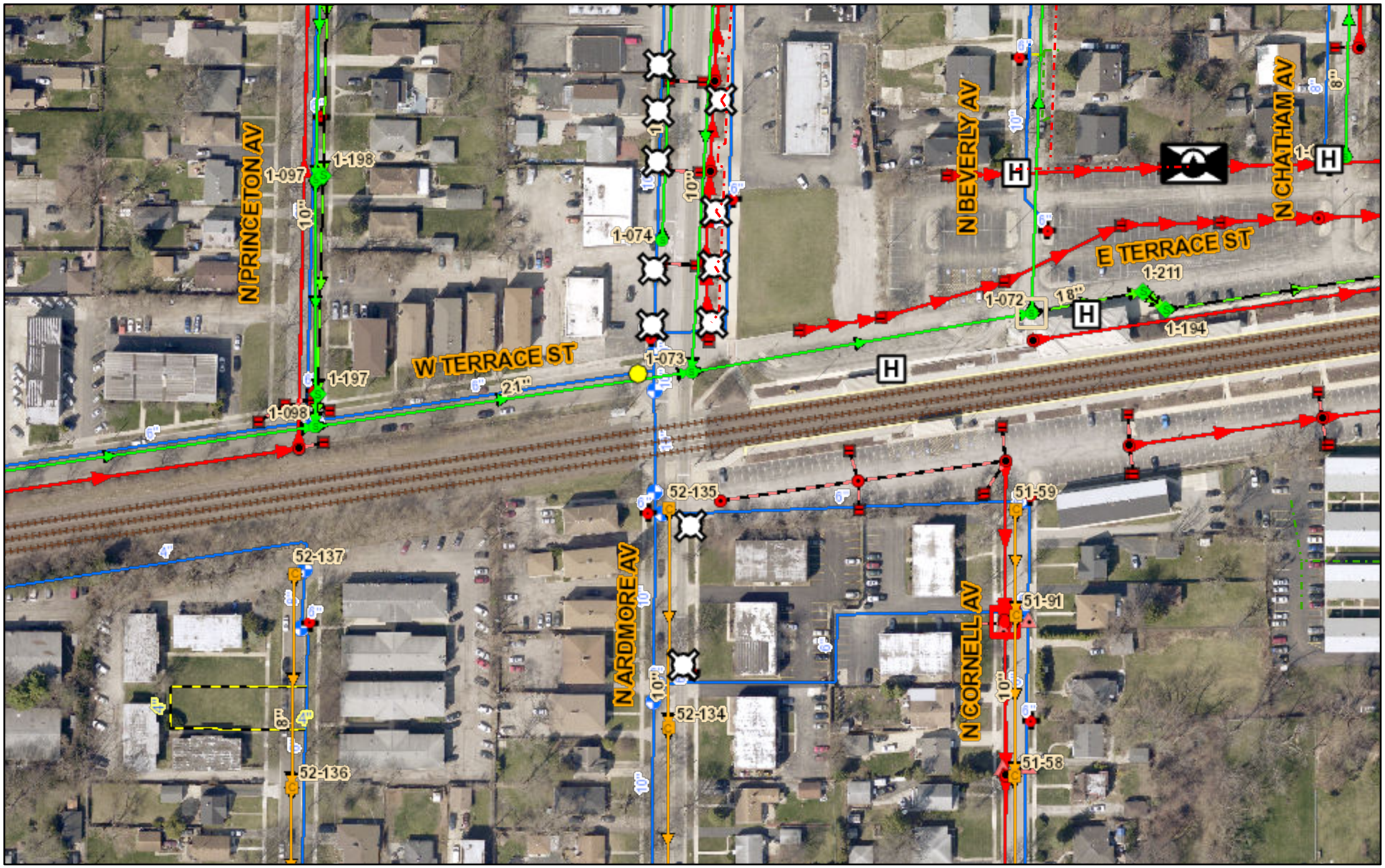
Sanitary Sewer Manholes
- Combined
- CSO
- Separated
- Sanitary
- WWFTF OUTFLOW

1:2,400

0 0.01 0.03 0.06 mi

0 0.02 0.04 0.09 km

Ardmore



5/3/2023

Unmapped Utilities Lines
- Electric
- Gas
- Sewer
- Water

Utilities Electric Points
- Controller
- Handhole

- Lighting Unit
- Service Meter
- <all other values>

- Private Sanitary Sewer Manholes

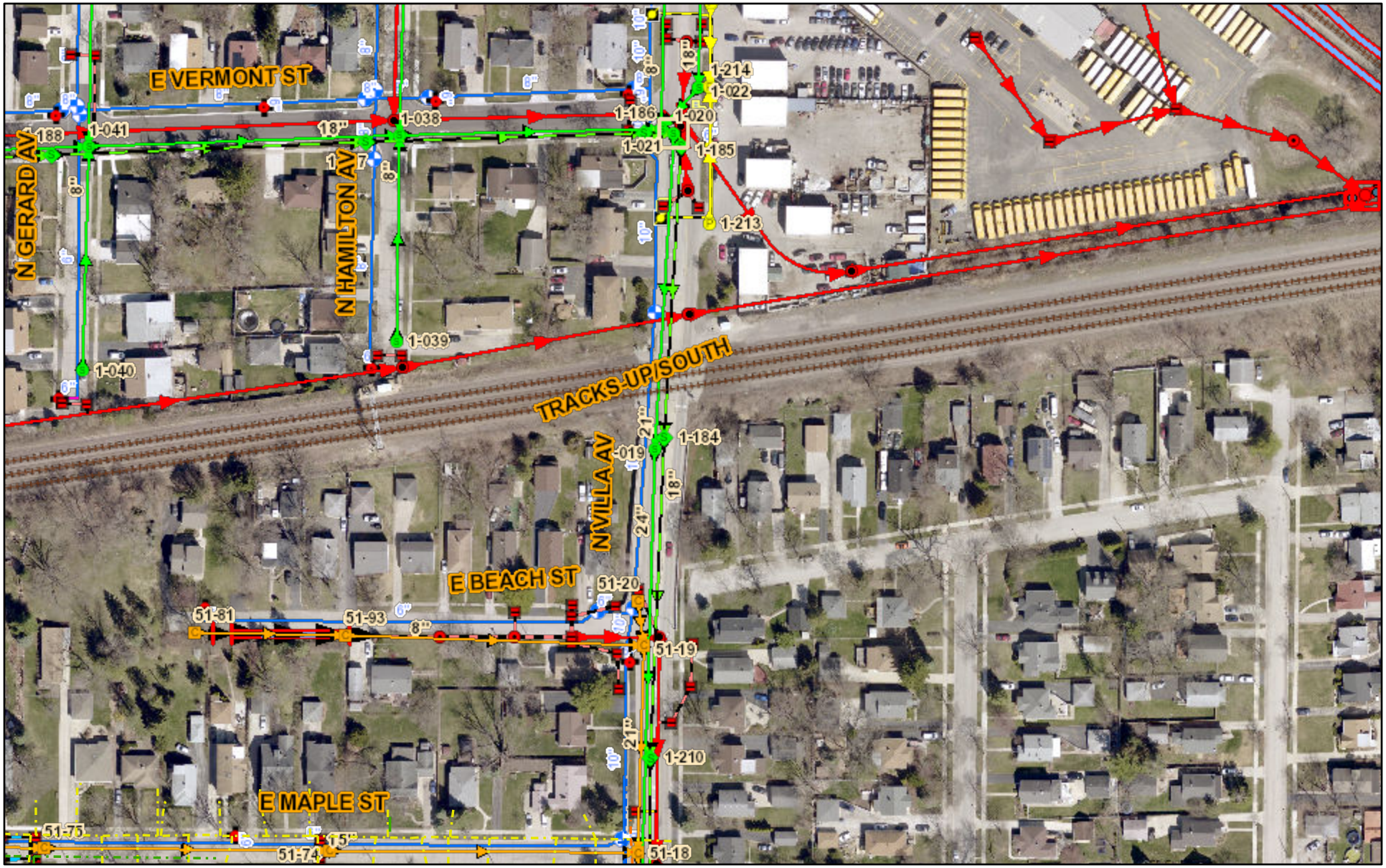
Sanitary Sewer Structures
- LIFT STATION

1:2,400

0 0.01 0.03 0.06 mi

0 0.02 0.04 0.09 km

Villa



5/3/2023

Unmapped Utilities Lines
- Communication
- Gas
- Sewer
- Water
- Private Sanitary Sewer Manholes

Sanitary Sewer Structures
- LIFT STATION
- DIVERSION STRUCTURE

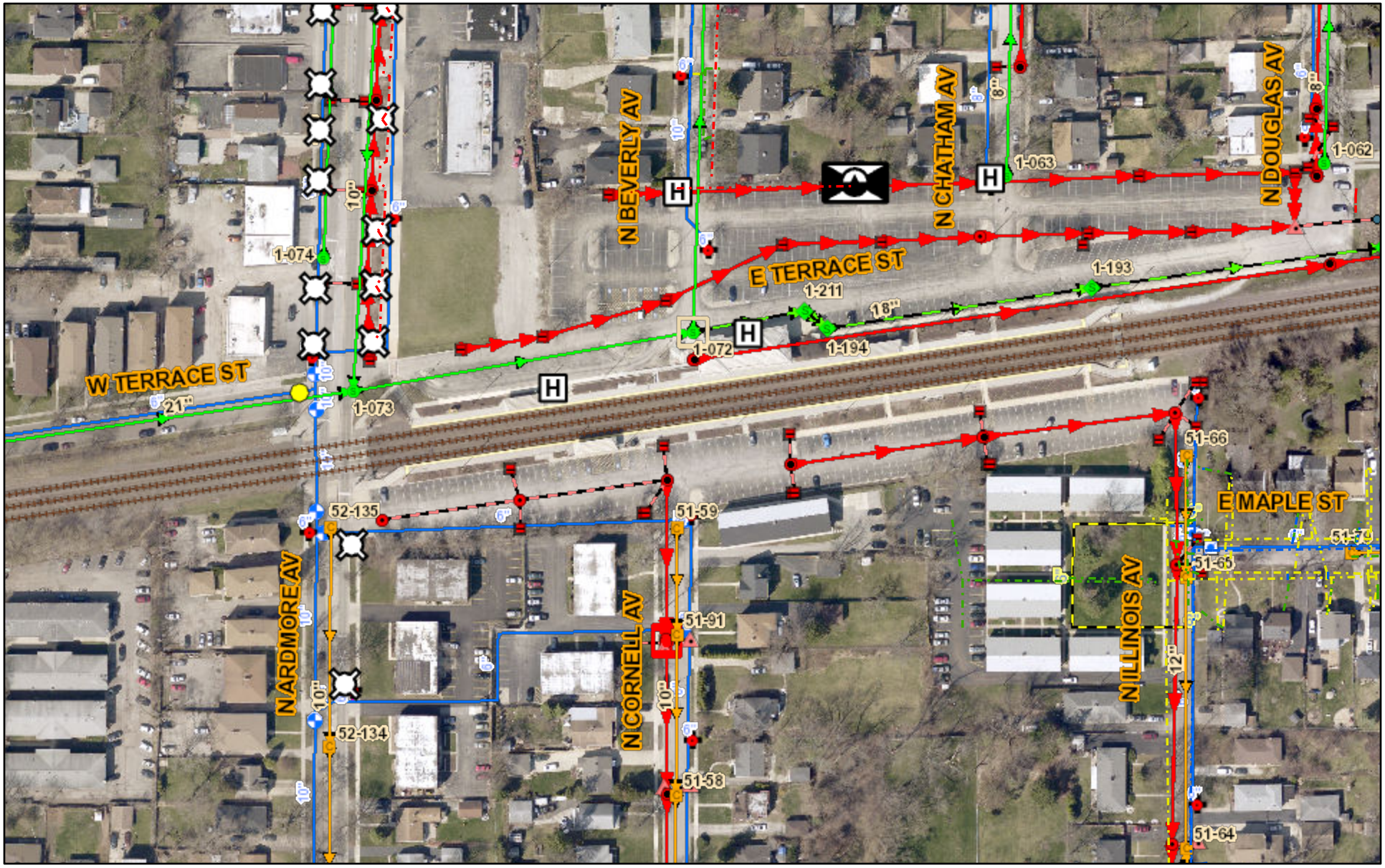
Sanitary Sewer Manholes
- Combined
- CSO

1:2,400

0 0.01 0.03 0.06 mi

0 0.02 0.04 0.09 km

Villa Park Metra Station



5/3/2023

Unmapped Utilities Lines
- Electric
- Gas
- Sewer
- Water

Utilities Electric Points
- Controller
- Handhole

- Lighting Unit
- Service Meter
- <all other values>

- Private Sanitary Sewer Manholes

Sanitary Sewer Structures
- LIFT STATION

1:2,400

0 0.01 0.03 0.06 mi

0 0.02 0.04 0.09 km

Appendix D:
Alternative and Property Impact Exhibits

LEGEND

- Exist. Right-of-Way/Parcels
- Retaining Wall
- Proposed Bridge
- Impacted Driveways
- Impacted Access
- Impacted Parcels

0 40 80 120
SCALE IN FEET

N

Church

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Iowa Community Center

IOWA AVE

ADDISON RD

2ND AVE

3RD AVE

TERRACE ST

UNION PACIFIC RAILROAD (UPRR)

Multi-Family

Multi-Family

MODEL: Addison [Sheet]
FILE NAME: pw://cdmsmith-ad22-pw.bentley.com:pw_p41/Documents/287171/281284/10 Transportation/02 Engineering Services/01 Roadway/10 BIM - CADD/01 Working/Addison Overpass.dgn

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	DRAWN - ----------	REVISED - ----------	
PLOT SCALE = 49.99990000 ' / in.	CHECKED - ----------	REVISED - ----------	
PLOT DATE = 8/28/2023	DATE - ----------	REVISED - ----------	

ADDISON RD OVERPASS ALTERNATIVE
NORTH SECTION

SCALE: _____ SHEET __ OF __ SHEETS STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
____	---------- Section	----------	____	____
		CONTRACT NO. ____		
	ILLINOIS	FED. AID PROJECT		

Long Section Number

LEGEND

- Exist. Right-of-Way/Parcels
- Retaining Wall
- Proposed Bridge
- Impacted Driveways
- Impacted Access
- Impacted Parcels

UNION PACIFIC RAILROAD (UPRR)

Multi-Family

Multi-Family

Multi-Family

DIVISION ST

DIVISION ST

WISCONSIN AVE

2ND AVE

3RD AVE

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

0 40 80 120

SCALE IN FEET

N

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	DRAWN - ----------	REVISED - ----------	
PLOT SCALE = 49.99990000 ' / in.	CHECKED - ----------	REVISED - ----------	
PLOT DATE = 8/28/2023	DATE - ----------	REVISED - ----------	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ADDISON RD OVERPASS ALTERNATIVE
SOUTH SECTION

SCALE: ---------- SHEET __ OF __ SHEETS STA. ---------- TO STA. ----------

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
____	_____Section	_____	____	____
		CONTRACT NO. ____		
	ILLINOIS	FED. AID PROJECT		

Long Section Number

LEGEND

- Exist. Right-of-Way/Parcels
- Retaining Wall
- Proposed Bridge
- Impacted Driveways
- Impacted Access
- Impacted Parcels

Retail
Retail
Single Family Residential
Single Family Residential
Retail
Retail
ARDMORE AVE
PRINCTON AVE
TERRACE ST
UNION PACIFIC RAILROAD (UPRR)
Proposed Development
BEVERLY AVE
VILLA PARK METRA STATION PERMIT LOT
CHATHAM AVE
VILLA PARK METRA STATION SOUTH LOT
CORNELL AVE
Multi-Family
Multi-Family
Multi-Family
Multi-Family
Multi-Family
Single Family Residential
Single Family Residential
Single Family Residential
Multi-Family
Multi-Family
Multi-Family
Single Family Residential
Single Family Residential

0 10 80 120
SCALE IN FEET
N

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PLOT DATE = 8/28/2023	DATE - ----------	REVISED - ----------	

ARDMORE AVE OVERPASS ALTERNATIVE

SCALE: ---------- SHEET __ OF __ SHEETS STA. ---------- TO STA. ----------

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
___	___Section	----------	___	___
		CONTRACT NO. ___		
	ILLINOIS FED. AID PROJECT			

Long Section Number

LEGEND

- Exist. Right-of-Way/Parcels
- Retaining Wall
- Proposed Bridge
- Impacted Driveways
- Impacted Access
- Impacted Parcels

SCALE IN FEET 0 40 80 120

N

GERARD AVE

HAMILTON AVE

VILLA AVE

VERMONT ST

UNION PACIFIC RAILROAD (UPRR)

OAKLAND GROVE

ALEXANDER BLVD

Single Family Residential

Duplex

Duplex

Duplex

Duplex

Duplex

Duplex

Duplex

Duplex

Single Family Residential

Single Family Residential

Single Family Residential

Multi-Family

Commercial/ Industrial

Commercial/ Industrial

Commercial/ Industrial

Commercial/ Industrial

Commercial/ Industrial

Commercial/ Industrial

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

Single Family Residential

MODEL: Villa Overpass [Sheet]
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PLOT DATE = 8/28/2023	DATE - ----------	REVISED - ----------	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLA AVE OVERPASS ALTERNATIVE
NORTH SECTION

SCALE: ---------- SHEET ___ OF ___ SHEETS STA. ---------- TO STA. ----------

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
____	----------Section	----------	____	____
		CONTRACT NO. ____		
	ILLINOIS	FED. AID PROJECT		

Long Section Number

LEGEND

- Exist. Right-of-Way/Parcels
- Retaining Wall
- Proposed Bridge
- Impacted Driveways
- Impacted Access
- Impacted Parcels

0 40 80 120
SCALE IN FEET

N

HAMILTON AVE

UNION PACIFIC RAILROAD (UPRR)

ALEXANDER BLVD

BEACH ST

MAPLE AVE

ALBERT ST

PICK AVE

OAKLAND GROVE

VILLA AVE

Single Family Residential

MODEL: Villa Overpass-S [Sheet]
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PLOT DATE = 8/28/2023	DATE - ----------	REVISED - ----------	

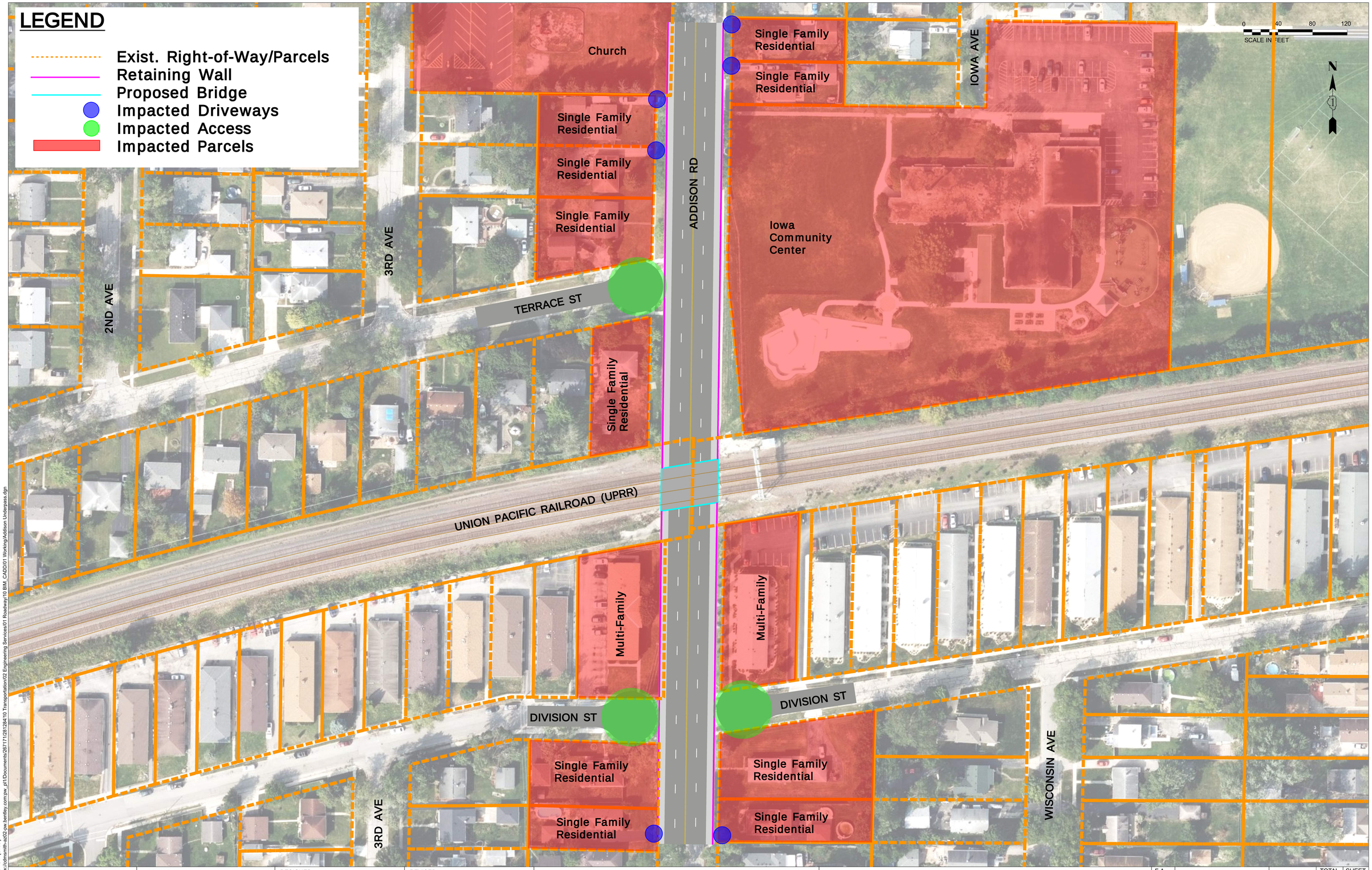
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILL AVE OVERPASS ALTERNATIVE
SOUTH SECTION

SCALE: ---------- SHEET __ OF __ SHEETS STA. ---------- TO STA. ----------

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
___	___Section	----------	___	___
		CONTRACT NO. ____		
	ILLINOIS	FED. AID PROJECT		

Long Section Number



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PLOT DATE = 8/28/2023	DATE - ----------	REVISED - ----------

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ADDISON RD UNDERPASS ALTERNATIVE

SCALE: ---------- | SHEET ___ OF ___ SHEETS | STA. ---------- | TO STA. ----------

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
___	___Section	_____	___	___
		CONTRACT NO. ____		
	ILLINOIS	FED. AID PROJECT		

Long Section Number

LEGEND

- Exist. Right-of-Way/Parcels
- Retaining Wall
- Proposed Bridge
- Impacted Driveways
- Impacted Access
- Impacted Parcels

0 0 80 120
SCALE IN FEET

N

ARDMORE AVE

PRINCTON AVE

BEVERLY AVE

CHATHAM AVE

CORNELL AVE

TERRACE ST

UNION PACIFIC RAILROAD (UPRR)

Single Family Residential

Single Family Residential

Retail

Retail

Proposed Development

VILLA PARK METRA STATION PERMIT LOT

VILLA PARK METRA STATION SOUTH LOT

Multi-Family

Multi-Family

Multi-Family

Multi-Family

Multi-Family

Single Family Residential

Single Family Residential

Multi-Family

Multi-Family

Multi-Family

Single Family Residential

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PLOT DATE = 8/28/2023	DATE - ----------	REVISED - ----------	

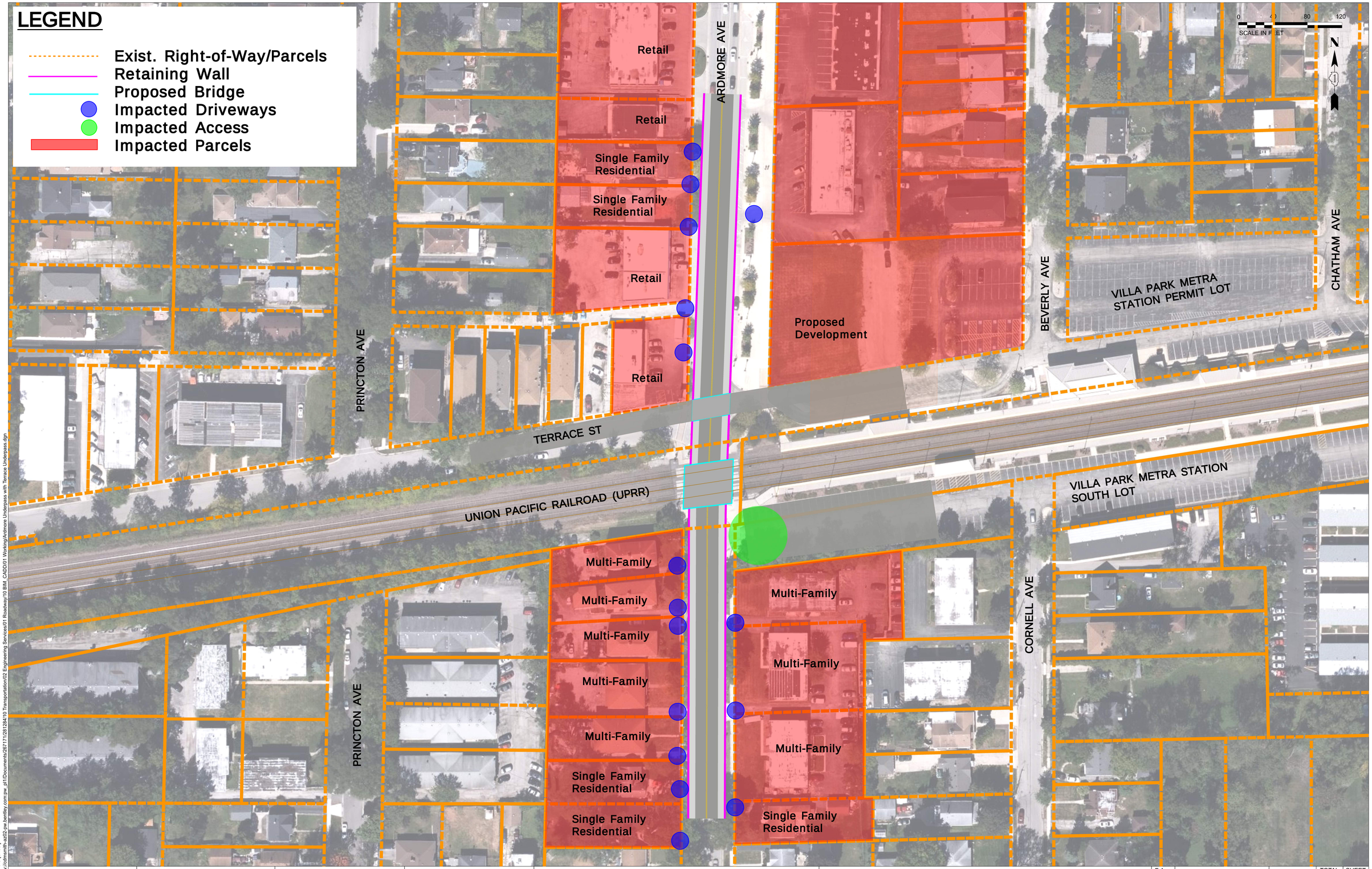
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARDMORE AVE UNDERPASS ALTERNATIVE

SCALE: ---------- SHEET __ OF __ SHEETS STA. ---------- TO STA. ----------

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
____	____Section	----------	____	____
		CONTRACT NO. ____		
	ILLINOIS	FED. AID PROJECT		

Long Section Number



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PLOT DATE = 8/28/2023	DATE - _____	REVISED - _____	

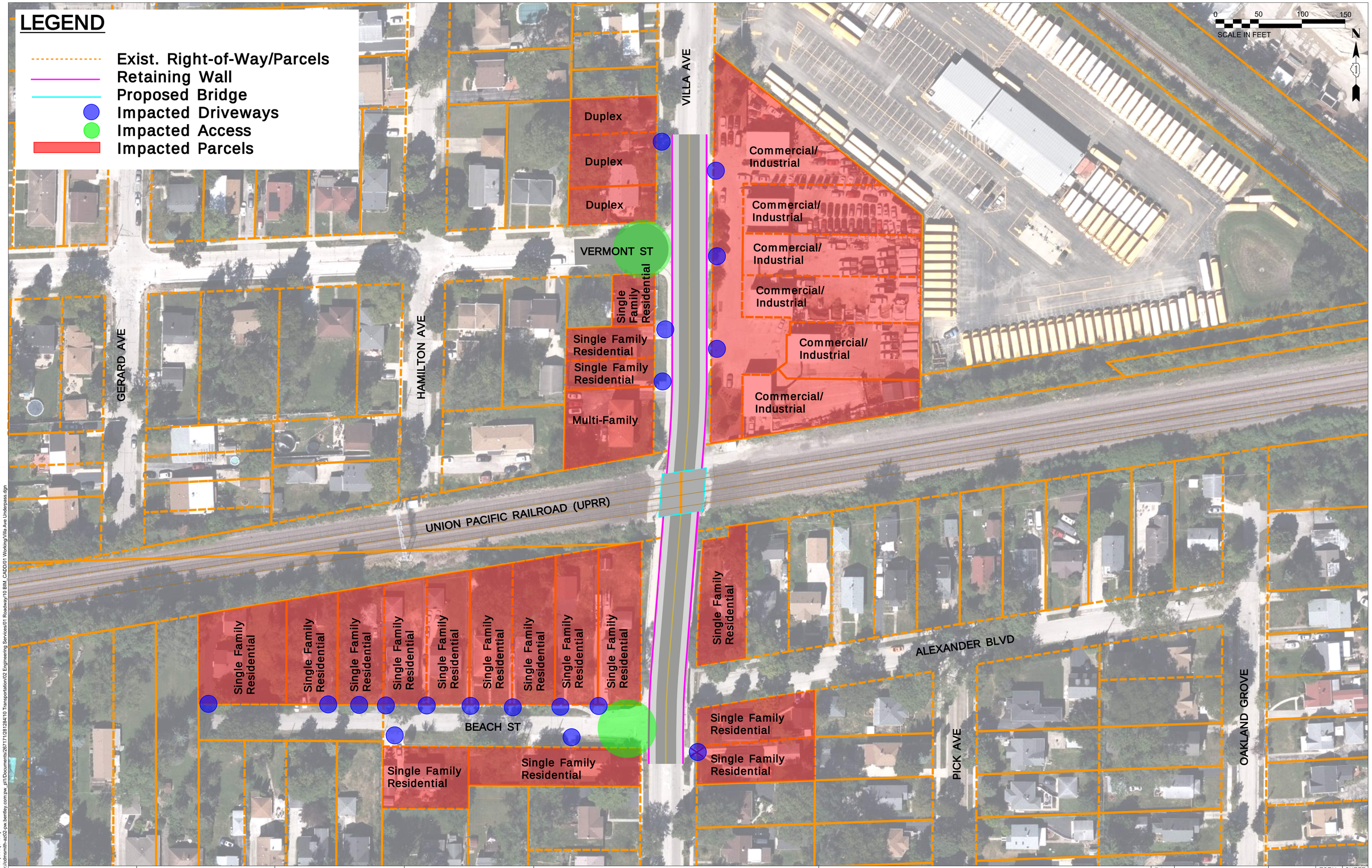
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARDMORE AVE UNDERPASS ALTERNATIVE
WITH TERRACE ST CONNECTION

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
____	_____Section	_____	____	____
		CONTRACT NO. ____		
	ILLINOIS	FED. AID PROJECT		

Long Section Number



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PLOT DATE = 8/28/2023	DATE - ----------	REVISED - ----------	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLA AVE UNDERPASS ALTERNATIVE

SCALE: _____ SHEET __ OF __ SHEETS STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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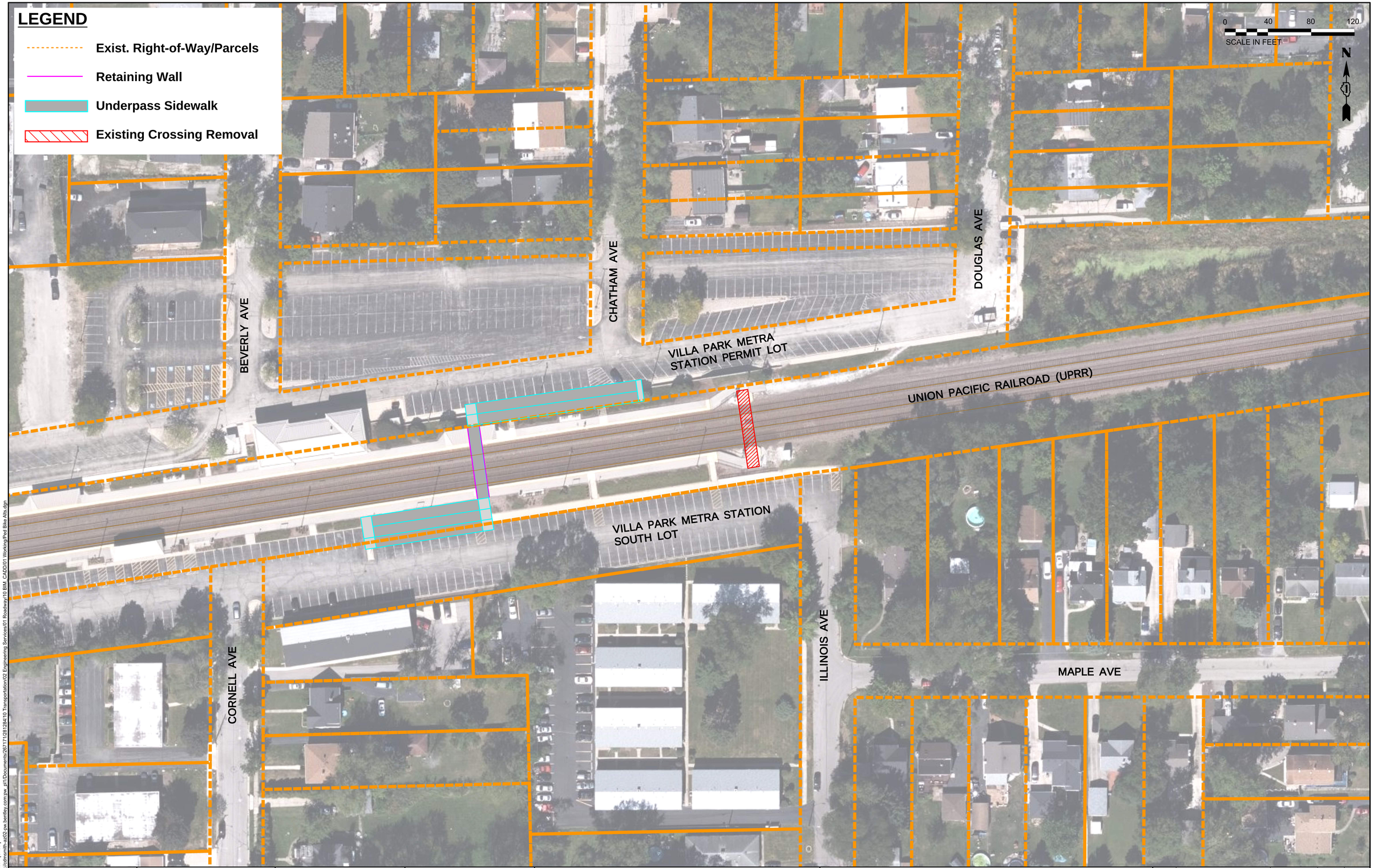
	----------	CONTRACT NO. ____		
	ILLINOIS	FED. AID PROJECT		

Long Section Number



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	DRAWN - _____	REVISED - _____	NON–MOTORIZED UNDERPASS ALTERNATIVE VILLA PARK STATION DEPOT
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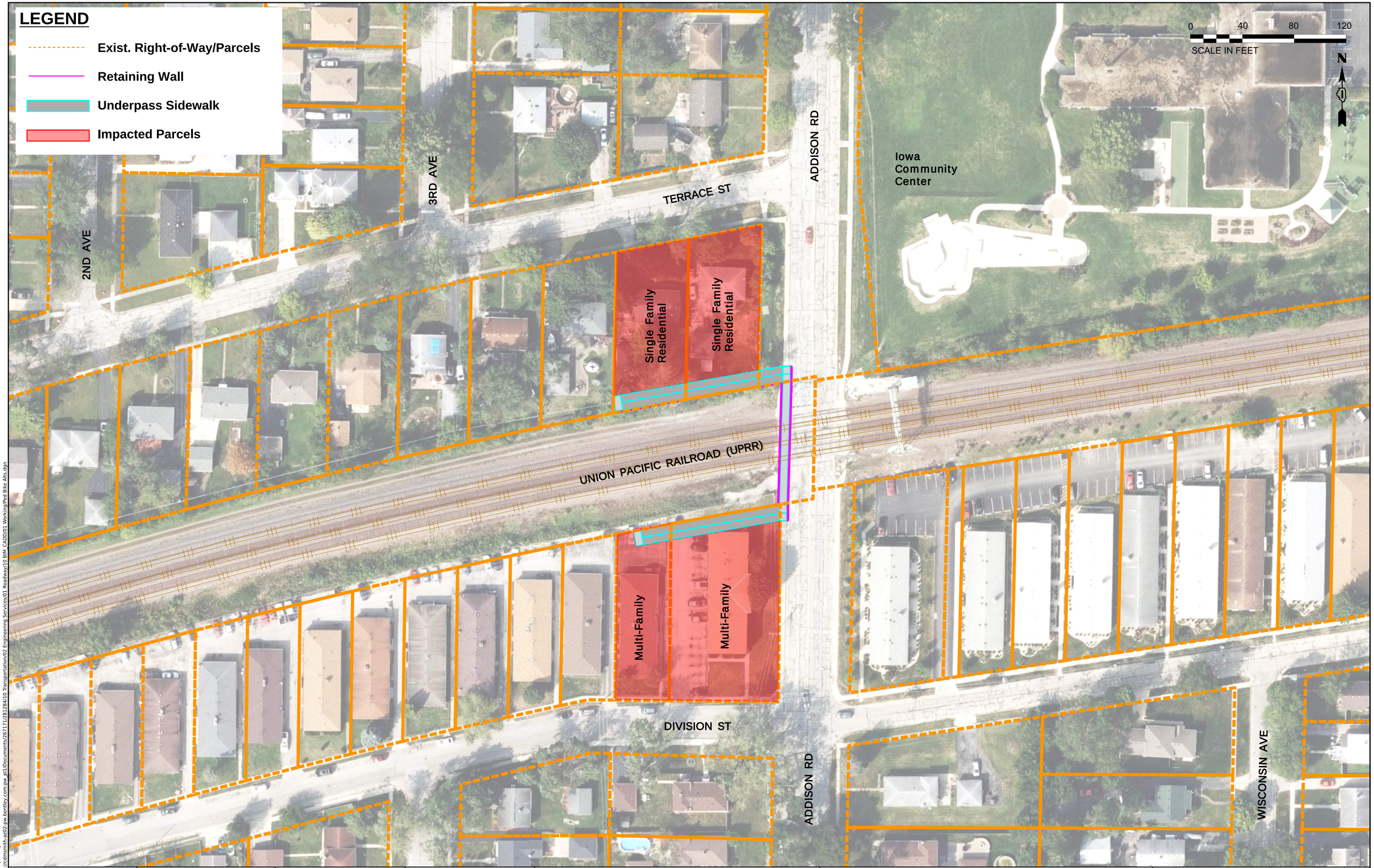
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
____	_____Section	_____	____	____
		CONTRACT NO. ____		
	ILLINOIS FED. AID PROJECT			

Long Section Number



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	DRAWN - _____	REVISED - _____	
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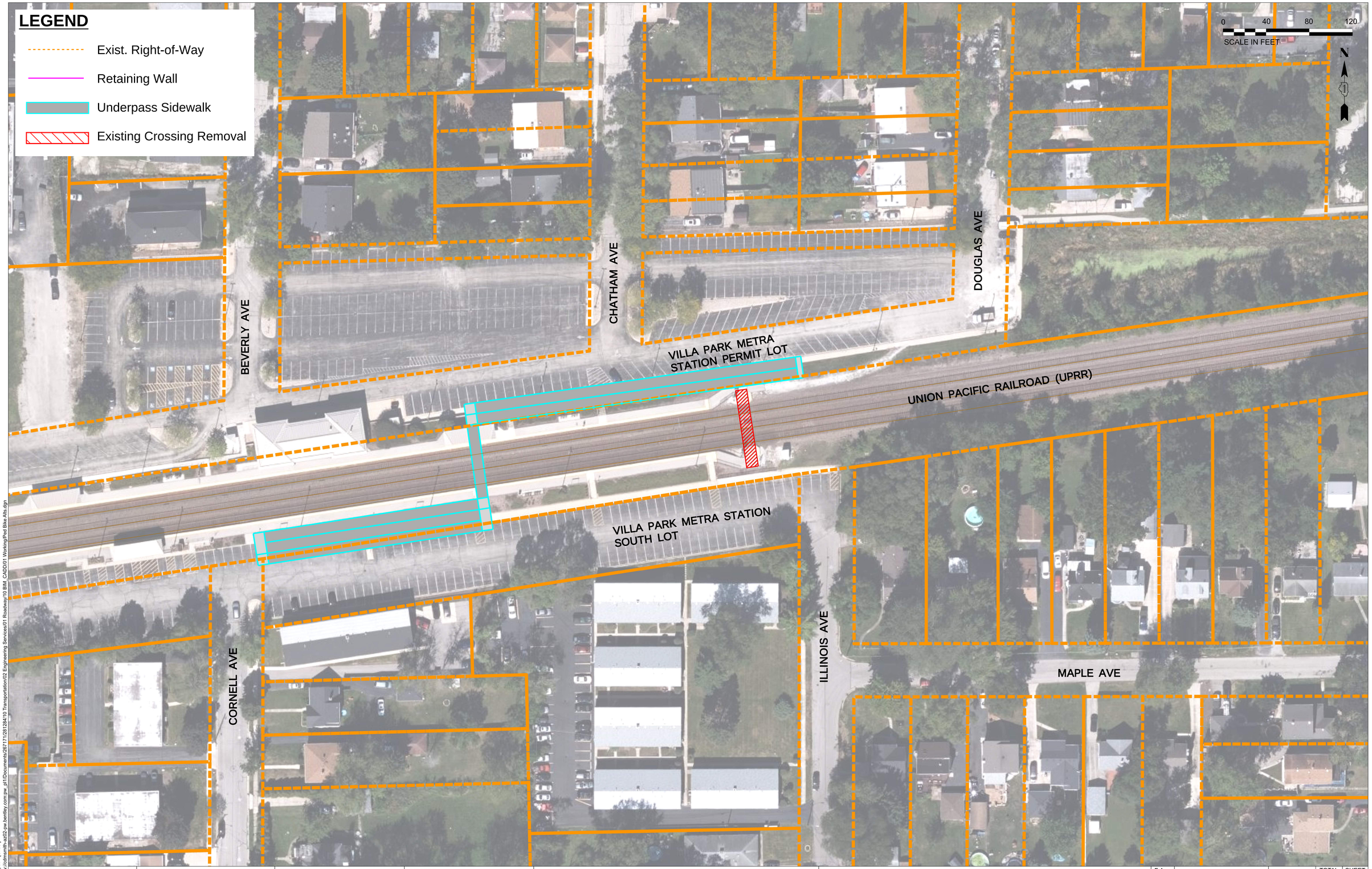
PLOT DATE = 9/5/2023	DATE - _____	REVISED - _____	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NON–MOTORIZED ALTERNATIVE
ADDISON RD UNDERPASS

SCALE: | SHEET 0 OF 1 SHEETS | STA. ___+__.__ | TO STA. ___+__.__

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ROUTE	SECTION	COUNTY	1	1
		CONTRACT NO. CNT. NO.		
	ILLINOIS	FED. AID PROJECT		



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	DRAWN - _____	REVISED - _____	
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PLOT DATE = 9/5/2023	DATE - _____	REVISED - _____	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NON–MOTORIZED UNDERPASS ALTERNATIVE
VILLA PARK STATION DEPOT OVERPASS

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
___	_____Section	_____	___	___
		CONTRACT NO. ___		
	ILLINOIS	FED. AID PROJECT		

Long Section Number

LEGEND

- Exist. Right-of-Way/Parcels
- Retaining Wall
- Overpass Sidewalk
- Impacted Parcels

0 40 80 120
SCALE IN FEET

N

2ND AVE
3RD AVE
TERRACE ST
ADDISON RD
Iowa Community Center
Single Family Residential
Single Family Residential
UNION PACIFIC RAILROAD (UPRR)
Multi-Family
Multi-Family
DIVISION ST
ADDISON RD
WISCONSIN AVE

MODEL: Addison [Sheet]
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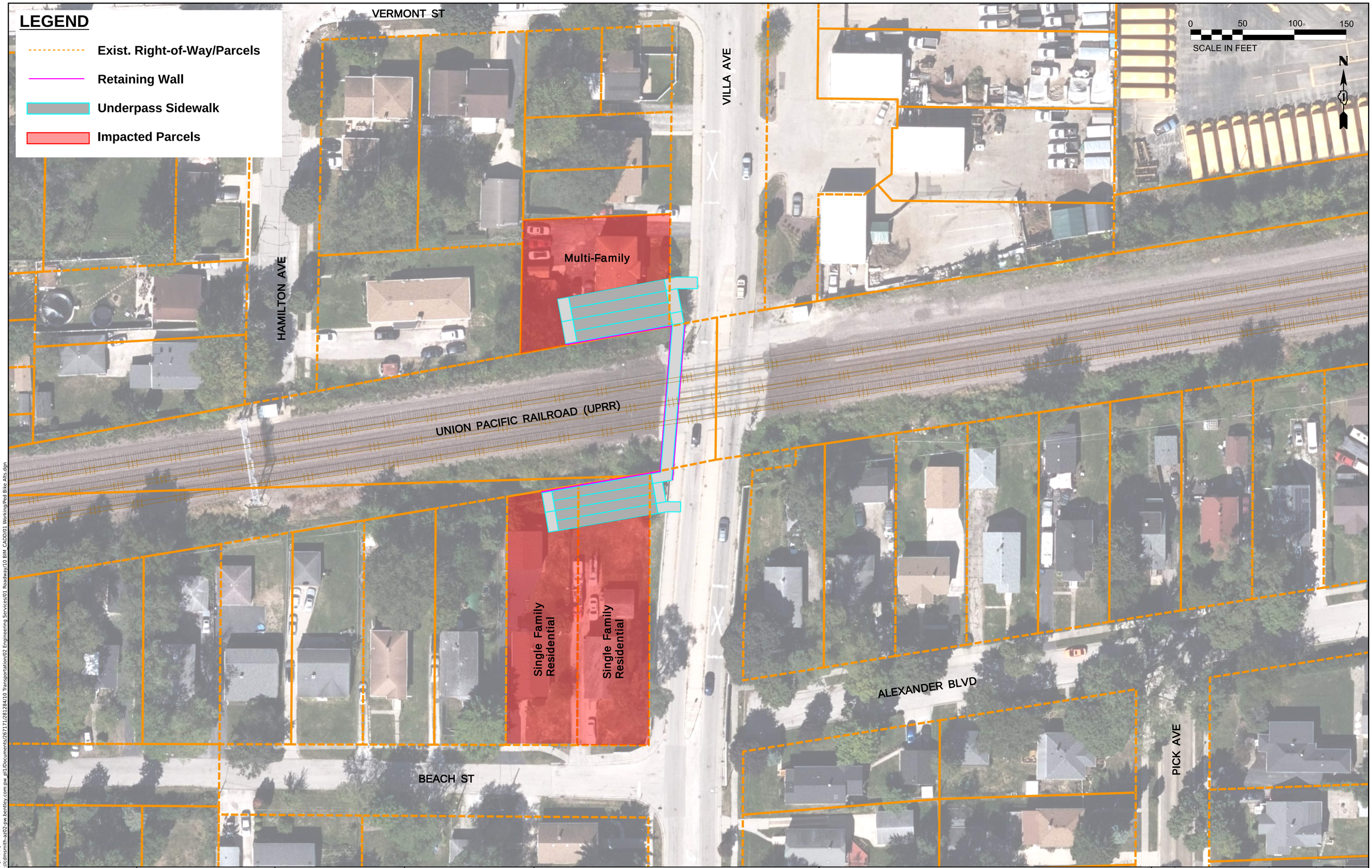
	DRAWN - ----------	REVISED - ----------	
PLOT SCALE = 0.08333317 ' / in.	CHECKED - ----------	REVISED - ----------	
PLOT DATE = 9/5/2023	DATE - ----------	REVISED - ----------	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NON–MOTORIZED ALTERNATIVE
ADDISON RD OVERPASS

SCALE: | SHEET 0 OF 1 SHEETS | STA. ___+__.__ | TO STA. ___+__.__

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ROUTE	SECTION	COUNTY	1	1
		CONTRACT NO. CNT. NO.		
	ILLINOIS	FED. AID PROJECT		



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PLOT DATE = 8/28/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NON–MOTORIZED ALTERNATIVE
VILLA AVE WEST UNDERPASS

SCALE: | SHEET 0 OF 1 SHEETS | STA. ___+__.__ | TO STA. ___+__.__

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ROUTE	SECTION	COUNTY	1	1
		CONTRACT NO. CNT. NO.		
	ILLINOIS	FED. AID PROJECT		

LEGEND

- Exist. Right-of-Way/Parcels
- Retaining Wall
- Underpass Sidewalk
- Additional Sidewalk Connection
- Impacted Parcels

VERMONT ST

VILLA AVE

HAMILTON AVE

Multi-Family

UNION PACIFIC RAILROAD (UPRR)

Single Family Residential

BEACH ST

ALEXANDER BLVD

PICK AVE

0 50 100 150

SCALE IN FEET

N

MODEL: VillaAve [Sheet]
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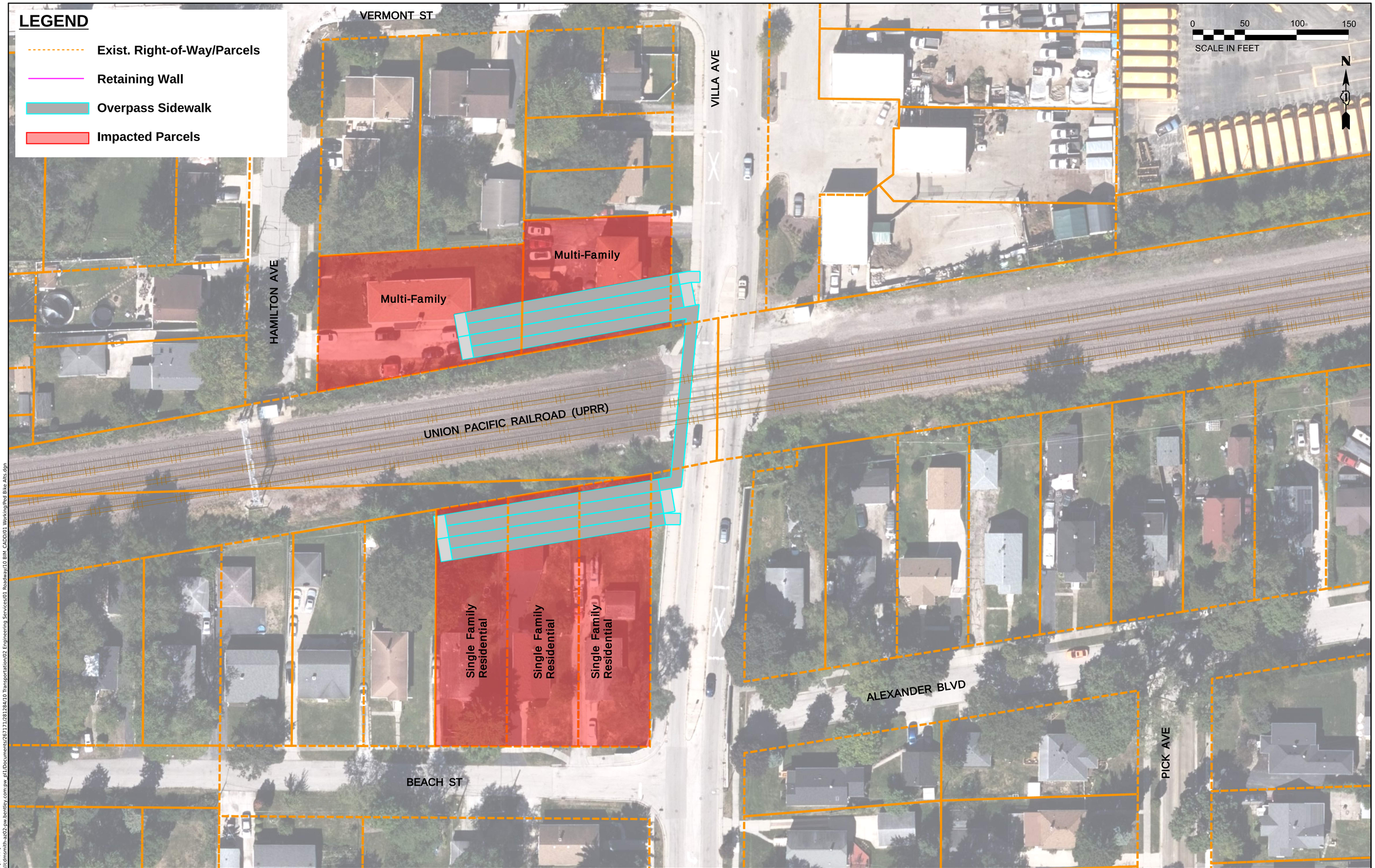
	DRAWN - _____	REVISED - _____	
PLOT SCALE = 0.08333317 ' / in.	CHECKED - _____	REVISED - _____	
PLOT DATE = 8/28/2023	DATE - _____	REVISED - _____	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NON–MOTORIZED ALTERNATIVE
VILLA AVE WEST UNDERPASS

SCALE: | SHEET 0 OF 1 SHEETS | STA. ___+__.__ | TO STA. ___+__.__

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ROUTE	SECTION	COUNTY	1	1
		CONTRACT NO. CNT. NO.		
	ILLINOIS	FED. AID PROJECT		



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PLOT DATE = 8/28/2023	DATE - ----------	REVISED - ----------	

NON–MOTORIZED ALTERNATIVE
VILLA AVE WEST OVERPASS

SCALE: | SHEET 0 OF 1 SHEETS | STA. ___+__.__ | TO STA. ___+__.__

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ROUTE	SECTION	COUNTY	1	1
		CONTRACT NO. CNT. NO.		
	ILLINOIS	FED. AID PROJECT		

Appendix E:
Evaluation Matrix

	Addison		Ardmore			Villa		Non-Motorized Option - Addison Rd		Non-Motorized Option - Metra Station		Non-Motorized Option - Villa Ave - West Side	
	Option 1A - Underpass	Option 1B- Overpass	Option 2A - Underpass	Option 2B - Underpass with Terrance Connection	Option 2C - Overpass	Option 3A - Underpass	Option 3B - Overpass	Option 4A - Ped Underpass	Option 4B - Ped Overpass	Option 5A - Ped Underpass	Option 5B - Ped Overpass	Option 6A - Ped Underpass	Option 6B - Ped Overpass
Cost (Million)													
Engineering Cost	$8-12	$4-8	$6-10	$8-12	$3-6	$6-10	$4-8	$2-3	$1.5-2.5	$2-3	$1.5-2.5	$2-3	$1.5-2.5
Construction Cost	$40-60	$20-40	$30-50	$40-60	$15-30	$30-50	$20-40	$10-15	$7-12	$10-15	$7-12	$10-15	$7-12
Property Impacts													
Parcel Impacts	14	36	16	18	20	27	**48**	4	5	0	0	2	5
Approximate Residential Units (apartments in	25	47	53	53	55	27	52	16	20	0	0	5	9
Commercial/Retail	1	1	5	10	10	6	7	0	0	0	0	0	0
Mixed Use	1	1	0	0	0	0	0	0	0	0	0	0	0
Planned Development	0	0	1	1	1	0	0	0	0	0	0	0	0
Metra Property (Villa Park Owned - parking,	N	N	Y?	Y?	Y?	N	N	N	N	Y?	Y?	N	N
Access Impacts													
Streets or alleys	3	**3**	**3**	**1**	**3**	**3**	**7**	**0**	**0**	**0**	**0**	**0**	**0**
Residential driveways	14	34	12	12	12	10	30	3	4	0	0	4	4
Commercial/Retail driveways	3	1	2	2	2	3	5	0	0	0	0	0	0
Mixed Use driveways	0	0	0	0	0	0	0	0	0	0	0	0	0
Metra Property (Villa Park Owned - parking,	N	N	Y?	Y?	Y?	N	N	N	N	Y?	Y?	N	N
Parking Impacts (loss of on-street spaces)	0	0	8	6	6	0	0	0	0	0	0	0	0
Parking Impacts (parking lots)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y (Metra)	Y (Metra)	Y	Y
Utility Impacts	5	**5**	**5**	**5**	**5**	**5**	**7**	**1**	**1**	**1**	**1**	**3**	**2**
Communication	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N
Aerial Utility	Y	Y	Y	Y	Y	N	Y	N	N	N	N	N	N
Storm Sewer	N	N	Y	Y	Y	Y	Y	N	N	N	N	Y	Y
Electric	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N
Water	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	Y	Y
Sanitary	Y	Y	N	N	N	Y	Y	N	N	N	N	N	N
Gas	N	N	N	N	N	N	Y	N	N	N	N	N	N
Stakeholder Support	Notes												
Environment													
Site Remediation Program	N	N	Y	Y	N	N	N	N	N	N	N	N	N
LUST	N	**N**	**Y**	**Y**	**Y**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**
PM 2.5 Screen	N	N	N	N	N	N	N	N	N	N	N	N	N
EcoCAT Screen	N	N	N	N	N	N	N	N	N	N	N	N	N
Historical Screen	N	N	N	N	N	N	N	N	N	N	N	N	N
Floodplain	N	N	N	N	N	N	N	N	N	N	N	N	N
Wetland Impacts	N	N	N	N	N	N	N	N	N	N	N	N	N
Adjacent CN Grade Separation	N	N	Y	Y	Y	N	N	N	N	N	N	N	N
UP Preferred Grade Separation Type (Y/N)	**N**	**Y**	**N**	**N**	**Y**	**N**	**Y**	**N**	**Y**	**N**	**Y**	**N**	**Y**
Other Comments													
Proximity to existing grade separation	**N**	**N**	**N**	**N**	**N**	**Y (IL-83)**	**Y (IL-83)**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
*Westmore dropped from consideration based on stakeholder feedback 5/31/23													

*suggest including Westmore, adding no for stakeholder support and then dropping it out from there (level 1 screen

Y (Hazardous Waste N. Addison)

Appendix F:
Stakeholder Engagement

Villa Park | Grade Separation Feasibility Study

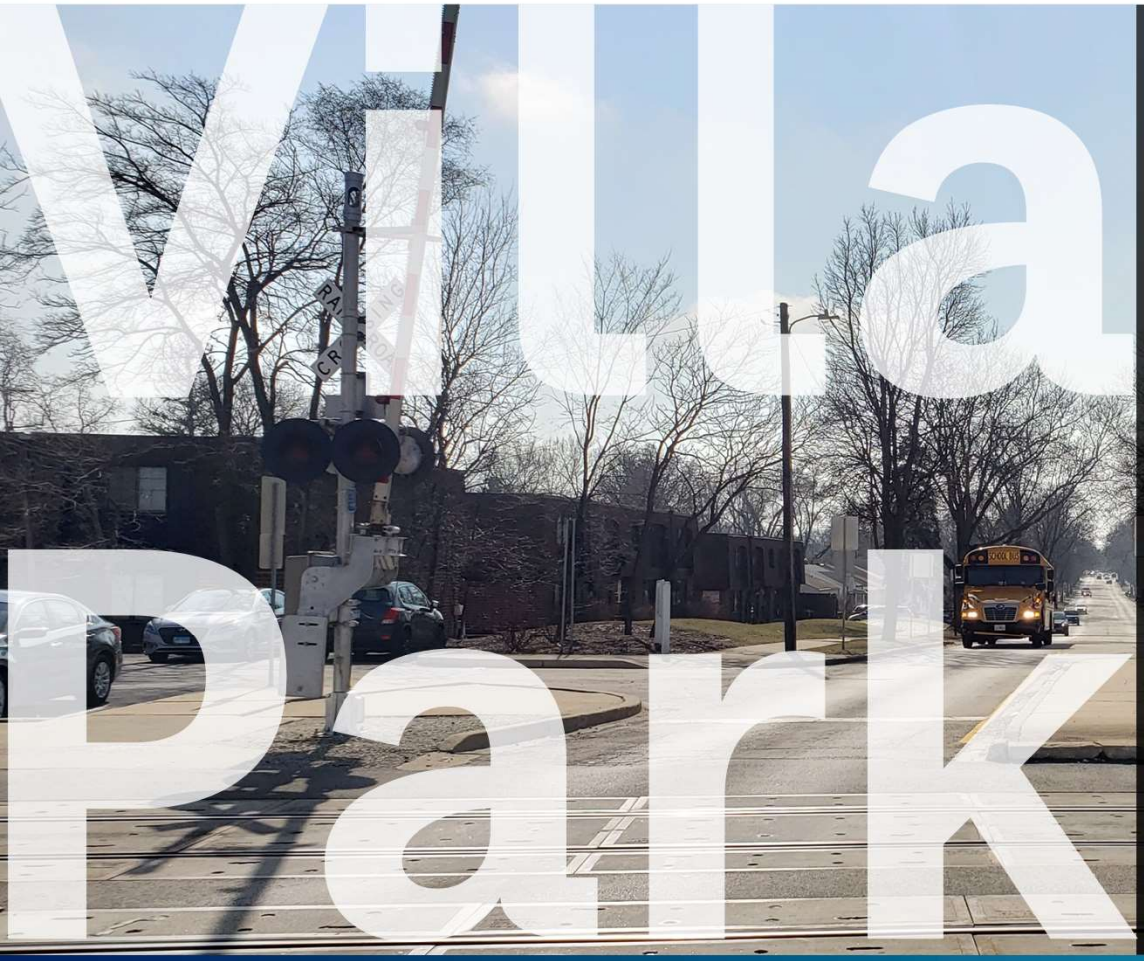
Project Introduction

The Why, What, When, and How Much.

April 10, 2023

CDM Smith

Today's Meeting



Agenda

- Team Introductions
- Study Overview
- Current Schedule
- Purpose of the Study
- Process + Phasing
- Next Steps

Team Introduction

VILLA PARK
Project Manager

PROJECT PRINCIPAL
Steve Pasinski PE

PROJECT MANAGER
Jessica Carroll PE, PTOE, PMP

QA/QC
Karl Fry PE, PMP

PROJECT ENGINEER
Kim Jarosz PE

ENGINEERING LEAD
Antonio Cerda PE

PLANNING LEAD
Alex Beata AICP

UNDERPASS/OVERPASS CONCEPTS
Pete Sarich PE, SE

TRAFFIC STUDIES
Ybette Ochoa PE, PTOE

BIKE/PED STUDIES
Jesse Thomas AICP

PED TUNNEL/WALLS
Irvin Lopez PE

SITE STUDIES
Janet Jue EIT

GIS
Lindsay Maki GISP

FUNDING STRATEGIES
Jacki Murdock AICP

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OUR FIRM

5,500 employees | **130** offices worldwide | **$1.4B** annual revenue

- Employee-Owned Independence -

2022 Engineering News Record DESIGN/TRANSPORTATION TOP FIRMS

- TOP 500 **#23** Design Firm
- TOP 50 **#26** Transportation
- TOP 25 **#17** Highways
- TOP 25 **#16** Mass Transit + Rail
- TOP 50 **#18** Global Design Firm

SOURCE: **ENR**, 2022

Similar Work Experience

Glen Ellyn Metra Station + Multimodal Access Improvements Program + UPRR Underpass

Elmhurst Metra Station + Pedestrian-Bicycle UPRR Underpass

Feasibility Study Overview

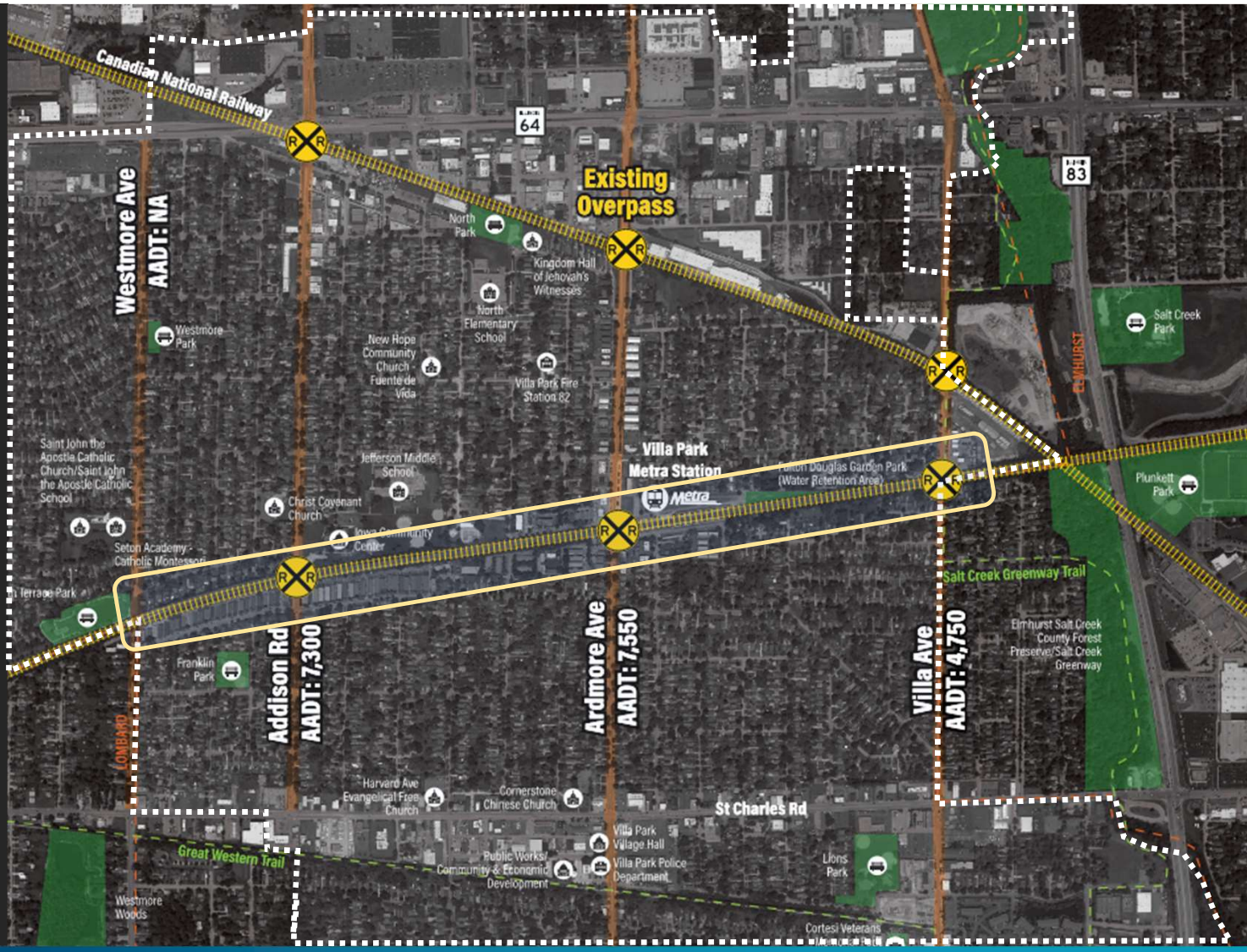
The intent of the study is to assess the nature and demand of user access across the Union Pacific Railroad (UPRR) within the Village limits and to identify feasible means to grade separate permanent access for motorized and non-motorized users.

Purpose of the Project

- Assess overall travel for motorized vehicles, in particular emergency services
- Improve user safety and access for all modes
- Reduce UPRR crossing delays
- Identify preferred routing of traffic
- Provide additional circulation
- Encourage economic development

Feasibility Study Area

- **Vehicular**
  - Underpass
  - Overpass
- **Ped/Bike**
  - Underpass
  - Overpass



Feasibility Criteria

- Evaluation criteria to include:

Business impacts

Residential impacts

Emergency Response

Roadway, Path, or Sidewalk access

Parking impacts

Environmental impact

Potential railroad acceptance

Stakeholder support

Vehicles

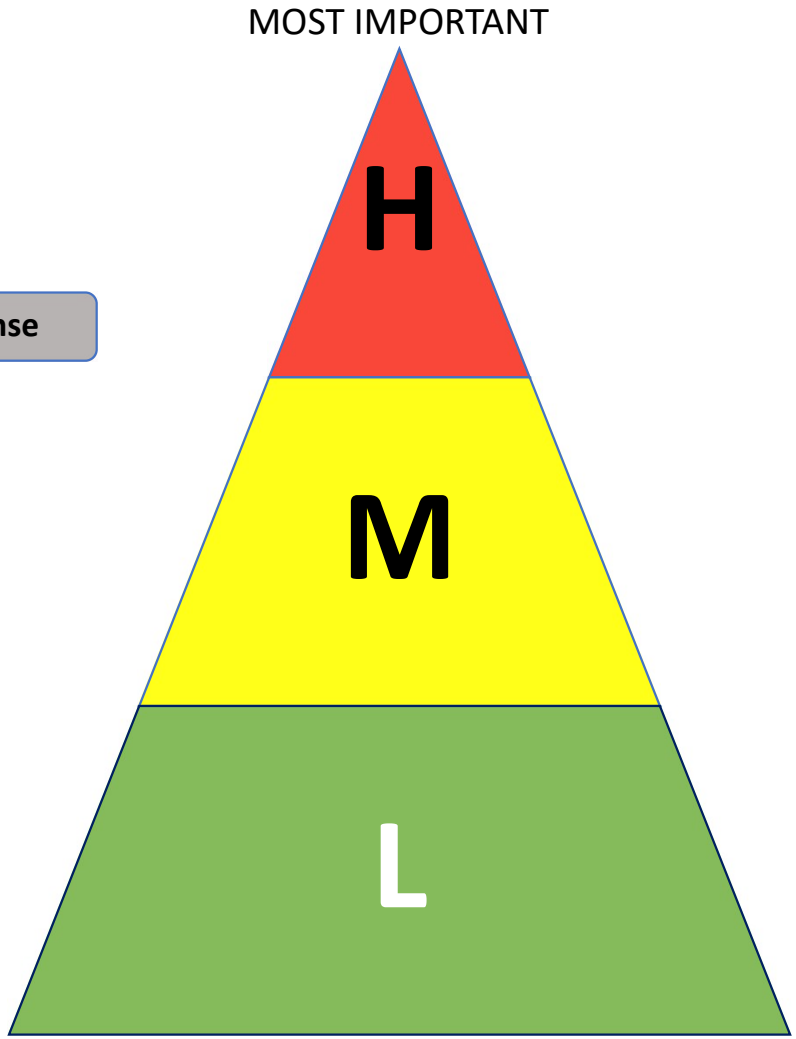
Bikes/Peds

Utility impacts

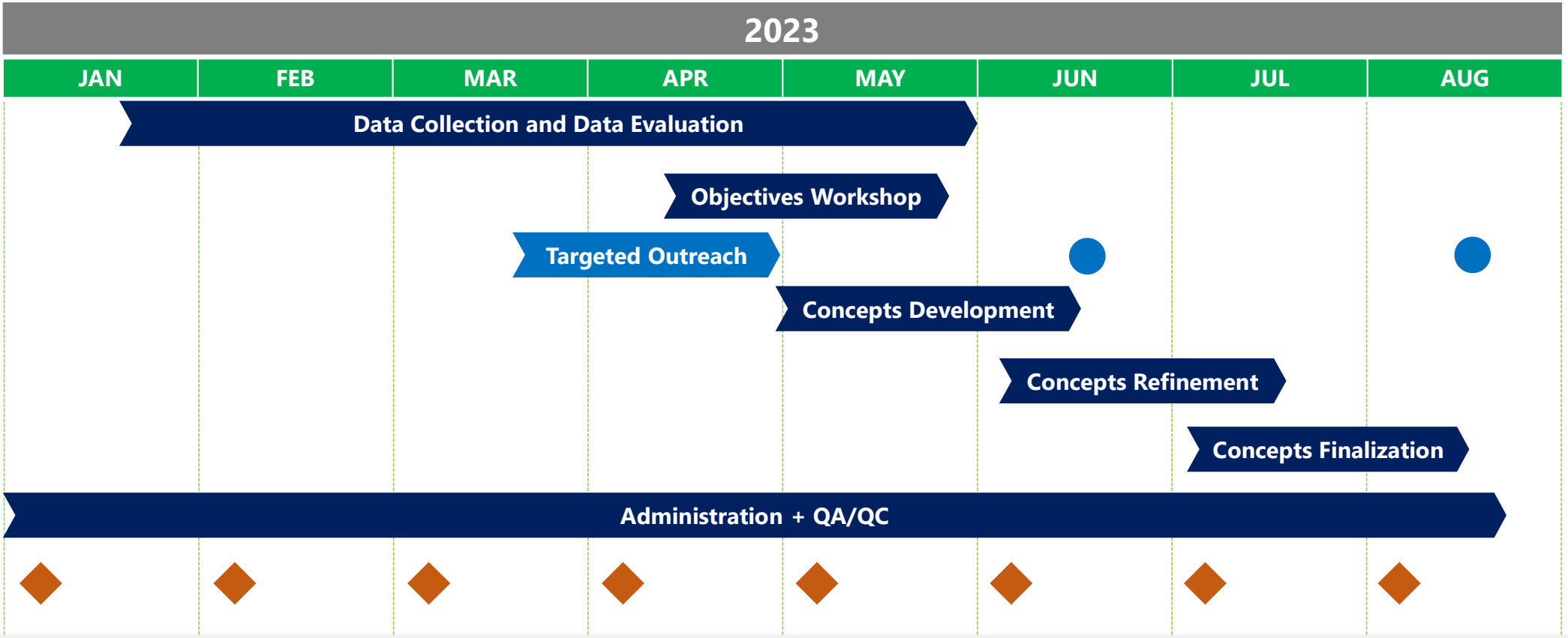
Other 1

Other 2

Public Survey – April 2023



Current Schedule (Feasibility Study)



KEY: Project Management Progress Meeting Village Board Meeting Outreach/Support

Project Process + Phasing

Feasibility

- **Phase:** Currently in the Feasibility Phase
- **Timeline:** 8–9 month process
- **Goals of this phase:**
  - Collect and analyze pertinent data
  - Receive public and stakeholder input
  - Define project need
  - Identify feasible alternatives
- **Outcomes of this phase:**
  - Understanding of alternatives pro's and con's
  - Identify alternatives to carry forward to next phase
- **Cost of this phase:** $97.6k (approved)
- **Potential Risks**: Limited

Project Process + Phasing

Phase I / NEPA

- **Phase:** Phase I/National Environmental Protection Act (NEPA)
- **Timeline:** 18-24 month process
- **Goals of this phase:**
  - Approved environmental clearances
  - RR, agency, utility coordination
  - Identify ROW Needs
  - Public Input & Buy-In
  - Geometric Alternatives Analysis
- **Outcomes of this phase:**
  - Purpose and Need Statement
  - Identification of Preferred Alternative/Approved NEPA Document
  - RR/Agency/Utility agreements
  - Identify / begin to secure funding
- **Cost of this phase:** $600k -800k
- **Potential Risks:** IDOT and UPRR coordination

Project Process + Phasing

Phase II / Design

- **Phase:** Phase II/Design
- **Timeline:** 12-24 month process
- **Goals of this phase:**
  - Final design plans and details
  - Agency agreements
  - Utility coordination
  - ROW acquisition

- **Outcomes of this phase:**
  - Construction Documents
    - Final plans, specifications, and cost estimates
    - Finalize funding commitment(s)
- **Cost of this phase:** $1.75M-$3M
- **Potential Risks**: ROW Acquisition, cost increases

Project Process + Phasing

Phase III / Construction

- **Phase:** Phase III/Construction
- **Timeline:** 16-24 month process
- **Goals of this phase:**
  - Build preferred alternative
- **Outcomes of this phase:**
  - Constructed project
- **Cost of this phase:** $20-25M
- Potential Risk: Overall schedule, material and labor costs.

Next Steps

- 123 Survey (April 2023)
- Internal Village Project Objectives Meeting
- Developing Criteria Matrix
- Begin Development of Alternatives
  - Over/Under
  - Ped only
  - Safety improvements
  - Technology alternatives
- Initial Evaluation of Alternatives
- Return to Committee of the Whole
- Finalize Alternatives
- Develop Recommendations

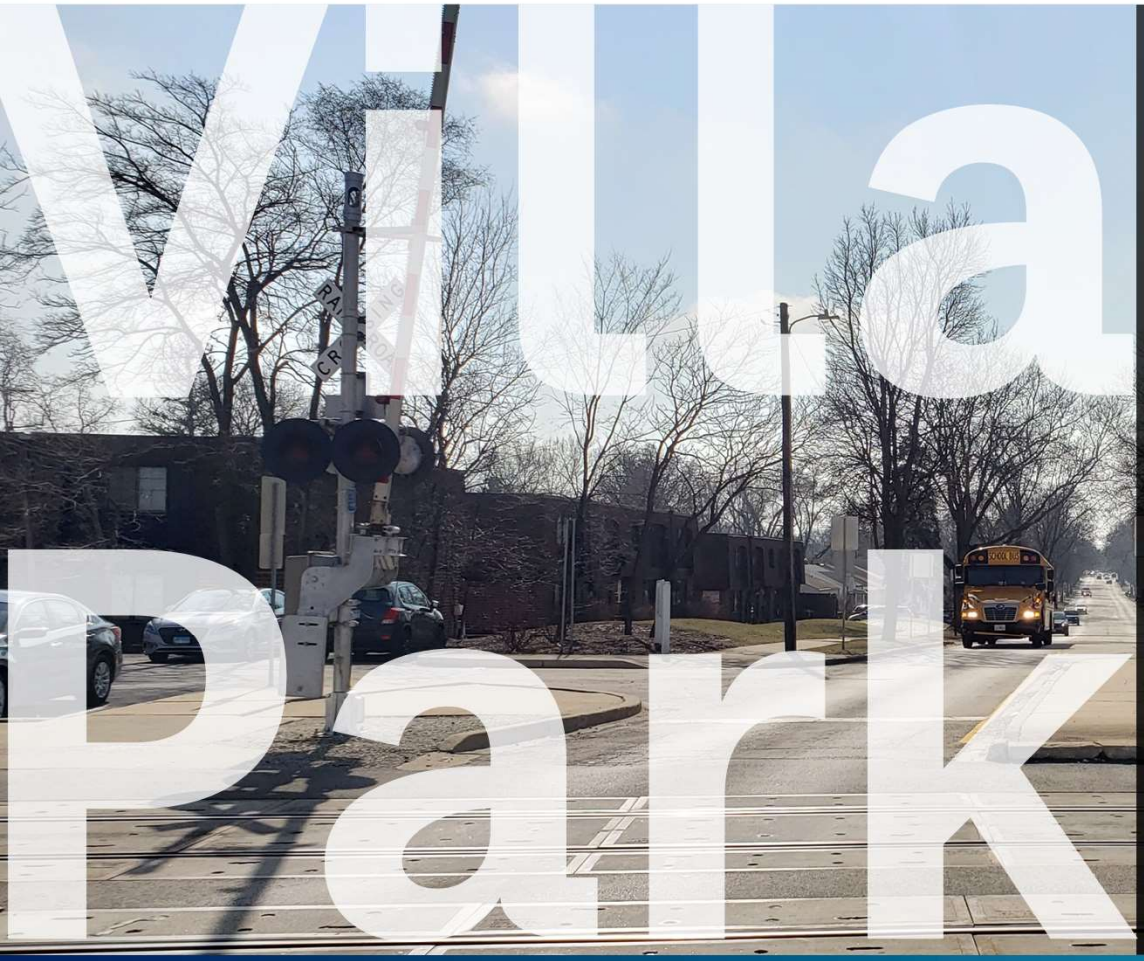
Project Process + Phasing

Villa Park | Grade Separation Feasibility Study

Project Objectives Meeting

May 31, 2023

CDM Smith



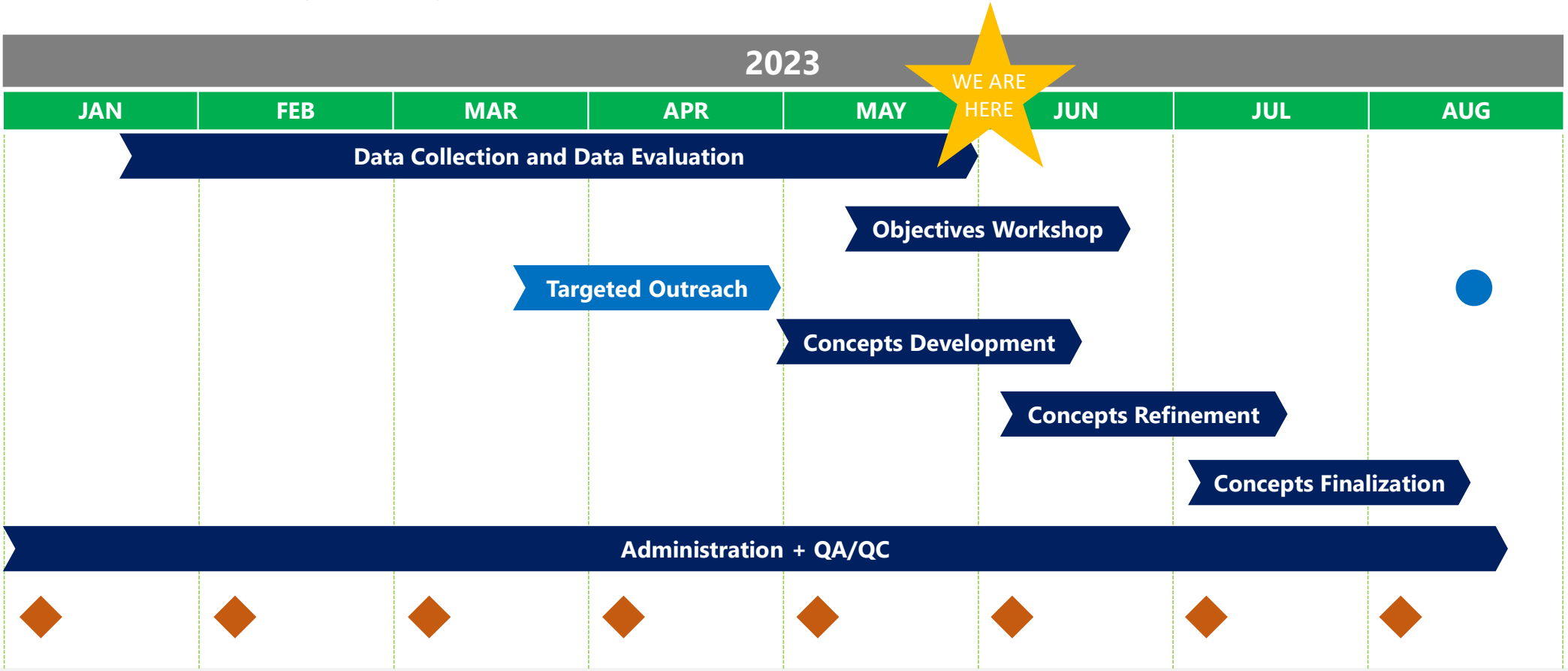
Agenda

- Study overview
- Existing conditions analysis
- Survey results
- Assessment of potential impacts
- Open discussion

Study Overview

The intent of the study is to assess the nature and demand of user access across the Union Pacific Railroad (UPRR) within the Village limits and to identify feasible means to grade separate permanent access for motorized and non-motorized users.

Feasibility Study - Project Schedule



KEY: Project Management Progress Meeting

Village Board Meeting Outreach/Support

Project Process + Phasing

Feasibility

- **Phase:** Currently in the Feasibility Phase
- **Timeline:** 8–9 month process
- **Goals of this phase:**
  - Collect and analyze pertinent data
  - Receive public and stakeholder input
  - Define project need
  - Identify feasible alternatives
- **Outcomes of this phase:**
  - Understanding of alternatives pro's and con's
  - Identify alternatives to carry forward to next phase
- **Cost of this phase:** $97.6k (approved)
- **Potential Risks**: Limited

Project Process + Phasing

Phase I / NEPA

- **Phase:** Phase I/National Environmental Protection Act (NEPA)
- **Timeline:** 18-24 month process
- **Goals of this phase:**
  - Approved environmental clearances
  - RR, agency, utility coordination
  - Identify ROW Needs
  - Public Input & Buy-In
  - Geometric Alternatives Analysis
- **Outcomes of this phase:**
  - Purpose and Need Statement
  - Identification of Preferred Alternative/Approved NEPA Document
  - RR/Agency/Utility agreements
  - Identify / begin to secure funding
- **Cost of this phase:** $600k -800k
- **Potential Risks:** IDOT and UPRR coordination

Project Process + Phasing

Phase II / Design

- **Phase:** Phase II/Design
- **Timeline:** 12-24 month process
- **Goals of this phase:**
  - Final design plans and details
  - Agency agreements
  - Utility coordination
  - ROW acquisition

- **Outcomes of this phase:**
  - Construction Documents
    - Final plans, specifications, and cost estimates
    - Finalize funding commitment(s)
- **Cost of this phase:** $1.75M-$3M
- **Potential Risks**: ROW Acquisition, cost increases

Project Process + Phasing

Phase III / Construction

- **Phase:** Phase III/Construction
- **Timeline:** 16-24 month process
- **Goals of this phase:**
  - Build preferred alternative
- **Outcomes of this phase:**
  - Constructed project
- **Cost of this phase:** $20-25M
- Potential Risk: Overall schedule, material and labor costs.

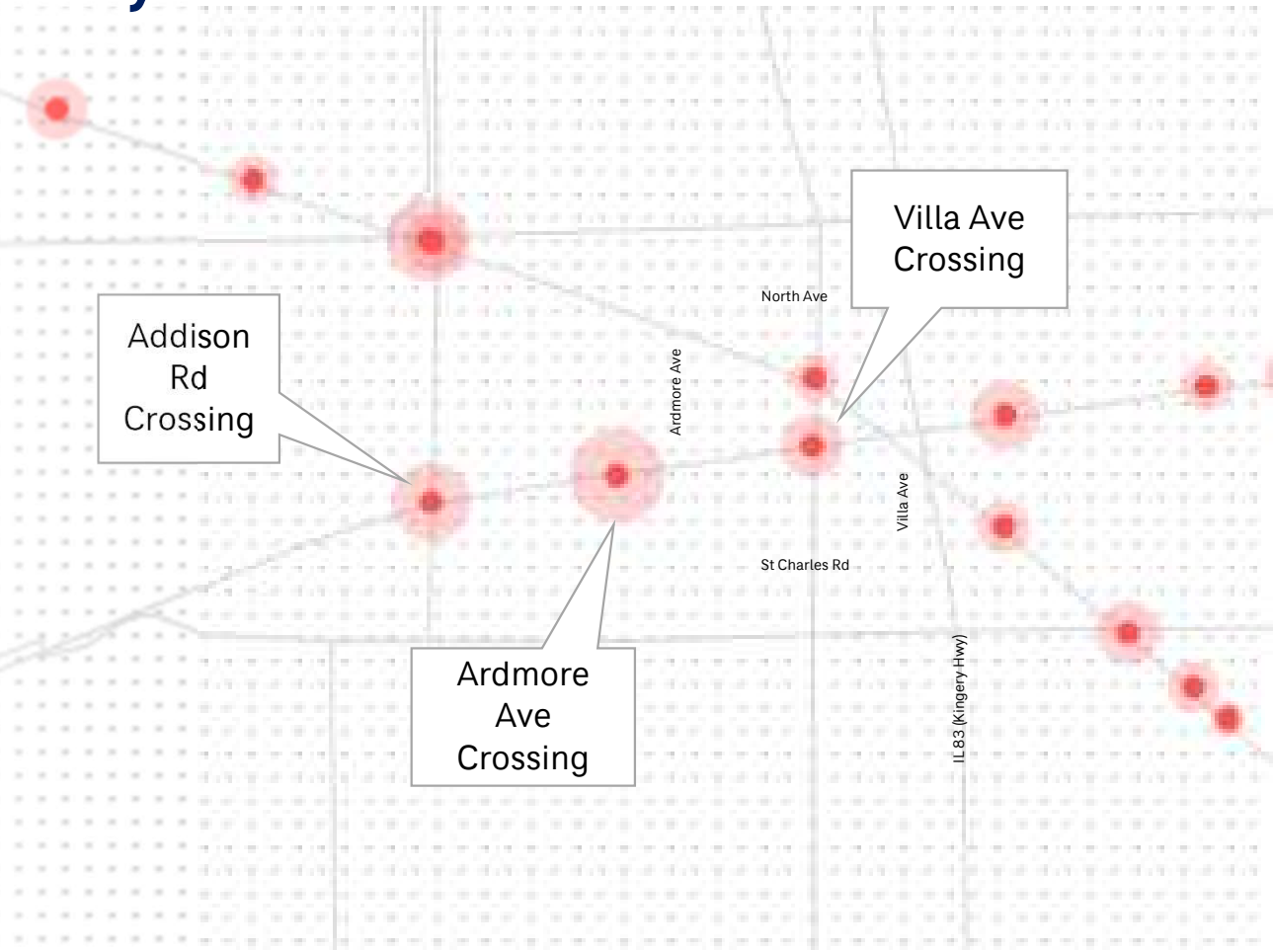
EXISTING CONDITIONS ANALYSIS

Local Traffic Profile

- Villa Ave
  - Minor arterial
  - ADT: 4,750
  - Two-lane cross section
- Ardmore Ave
  - Major collector
  - ADT: 7,550
  - Two-lane cross section
- Addison Rd
  - Minor arterial
  - ADT: 7,300
  - Four-lane cross section
- Westmore Ave
  - Local road
  - No current crossing
  - Two-lane cross section
- Villa Park Depot (At-Grade Pedestrian Crossing)
  - Between Ardmore Ave and Villa Ave

2018 Average Motorist Delay

- UPRR Line
  - Avg. 100 trains per day
  - 59 Metra trains
- Addison Rd
  - 159.04 total hours of delay
- Ardmore Ave
  - 133.90 total hours of delay
- Villa Ave
  - 106.14 total hours of delay

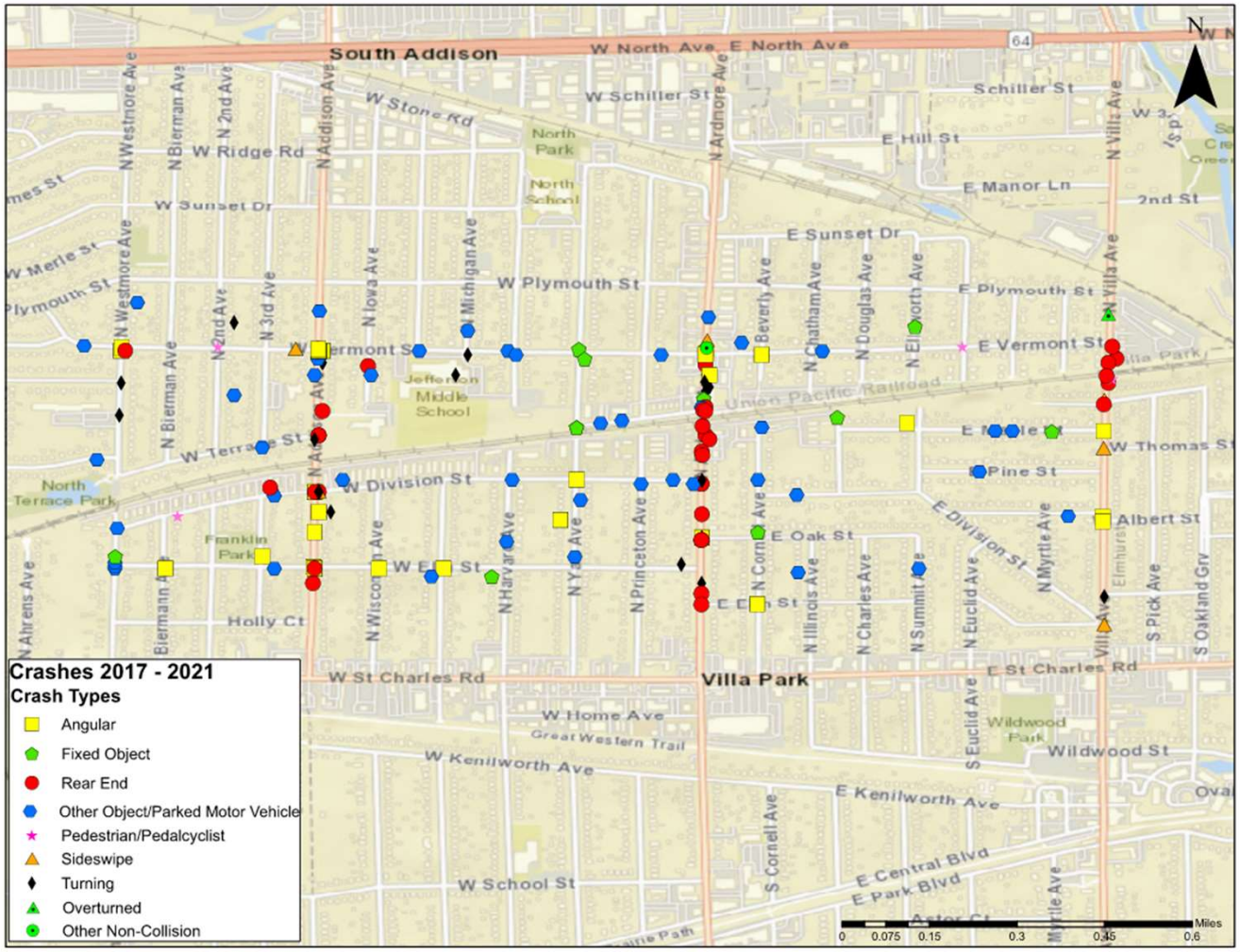


*CMAP NEIL At-Grade Railroad Crossing Motorist Delay, 2018

https://www.cmap.illinois.gov/mobility/explore#/topic/freight/crossing-delay

5 Year Crash History

- Vehicular Crash Data:
  - Evaluated last 5 years of available crash data (2017-2021)
  - 169 total crashes in the project area
  - No fatalities



Environmental screening results

- Low environmental risks
  - Low risk of flooding
  - No critical habitats within the proposed project area
  - No Historic & Architectural Resources in study area
- Potential environment issues
  - Wastewater discharge could be a potential issue (EJ Screening)
  - North Terrace Park Freshwater Pond along Westmore Ave (Wetland)
  - Potential 4(f) Impact at the Villa Park Skatepark (Addison) or North Terrace Park (Westmore)

SURVEY RESULTS

Preliminary Survey Results – Key Take Aways

Available in April 2023
130 responses

- No clear preferred location for improvements
- Share of respondents indicating "very concerned" or "concerned" for the following topics:
  - Emergency response times: 92 percent
  - Vehicle delay: 91 percent
  - Reliable travel times: 85 percent
  - Bike/ped safety: 82 percent
  - Bike/ped delay: 76 percent
  - Vehicle safety: 69 percent
  - Metra station access: 63 percent
  - Air quality: 58 percent
- Common themes in open-response items
  - Need for improved north-south vehicle access across railroad
  - Need for improved access to community destinations (e.g., Iowa Rec Center and schools)
  - Need for pedestrian crossing improvements at Metra station (potentially as under/overpass)
  - Poor pavement conditions at Villa Avenue crossing

ASSESSMENT OF POTENTIAL IMPACTS

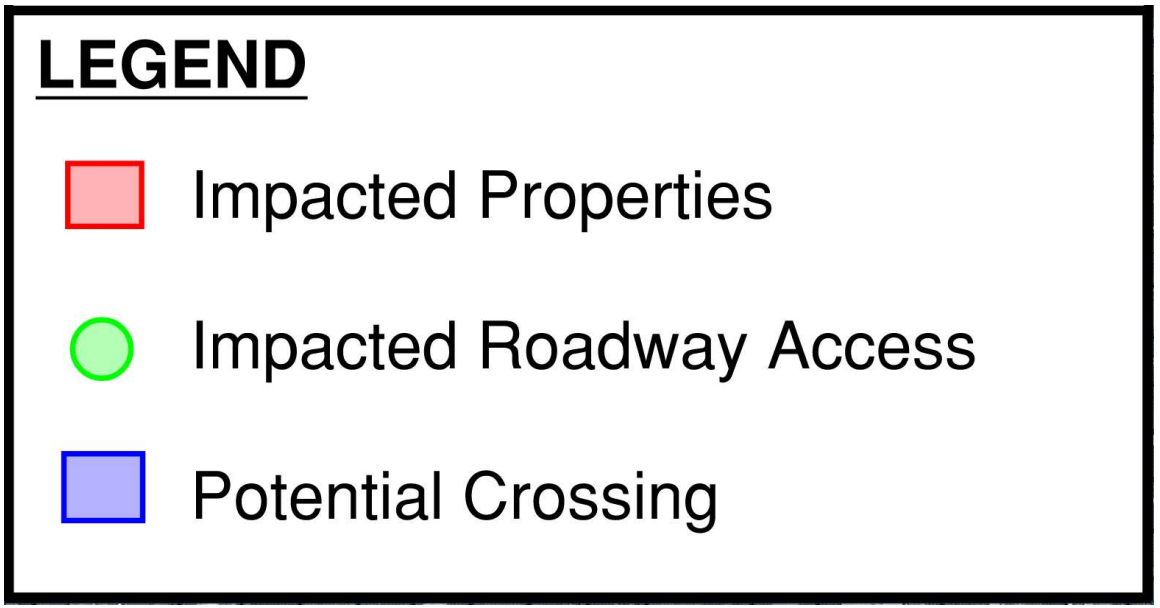
Proposed Roadway Section Alternatives

- Two Lanes
- Shared Ped/Bike Path

- Four Lanes
- Shared Ped/Bike Path

Impacts to Property and Access: Overview

- Left side of the graphic - Vehicular Underpass
- Right side of the graphic - Vehicular Overpass



Impacts to Property and Access: Villa Ave

Left:
Vehicular Underpass
Right:
Vehicular Overpass

LEGEND

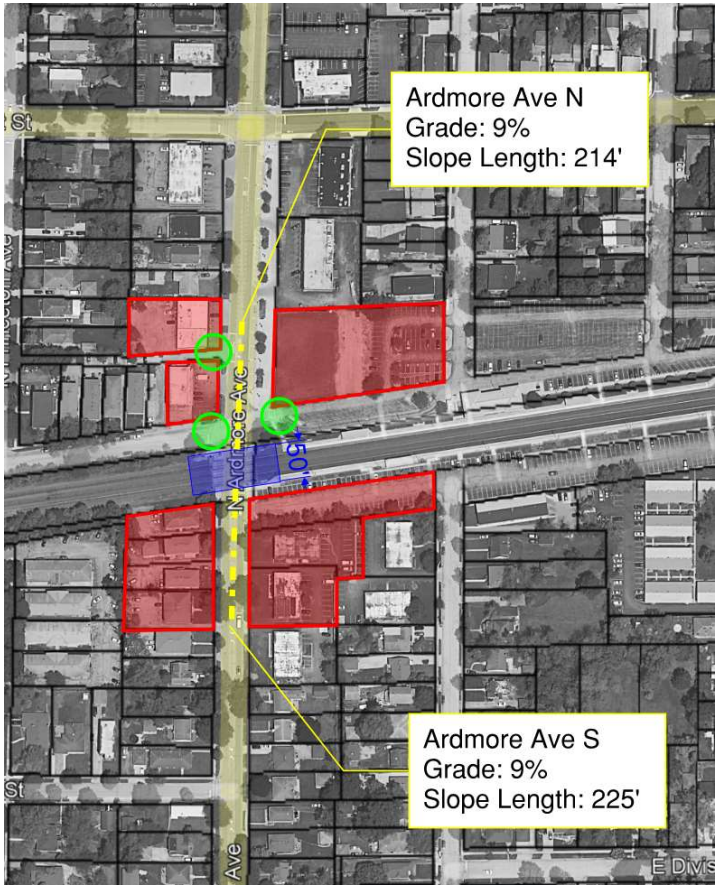
- Impacted Properties
- Impacted Roadway Access
- Potential Crossing

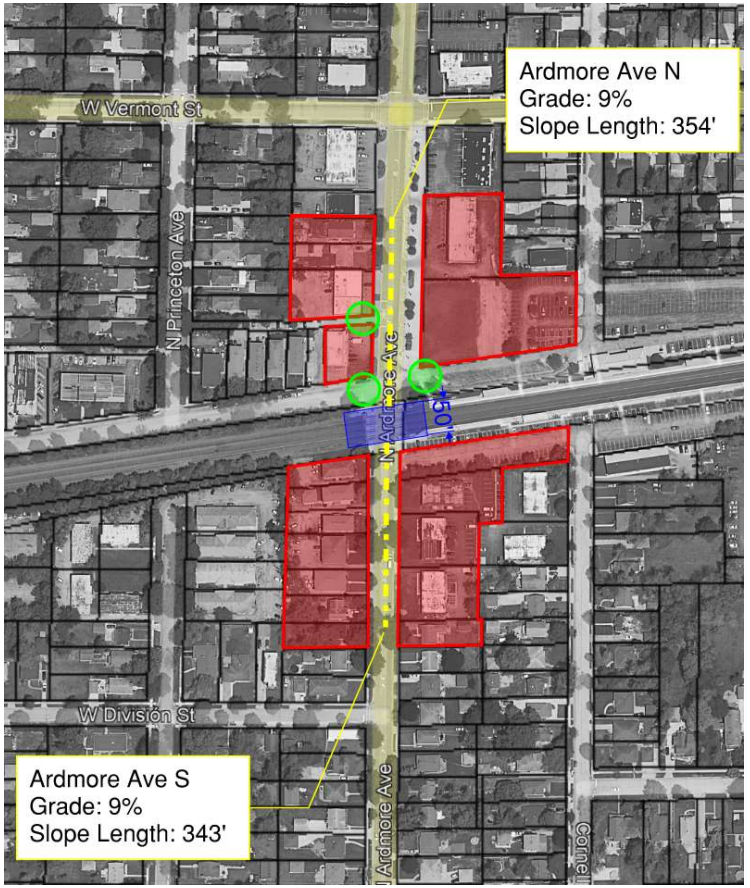
Impacts to Property and Access: Ardmore Ave

Left:
Vehicular Underpass
Right:
Vehicular Overpass

LEGEND

- Impacted Properties
- Impacted Roadway Access
- Potential Crossing





Impacts to Property and Access: Addison Rd

Left:
Vehicular Underpass
Right:
Vehicular Overpass

LEGEND

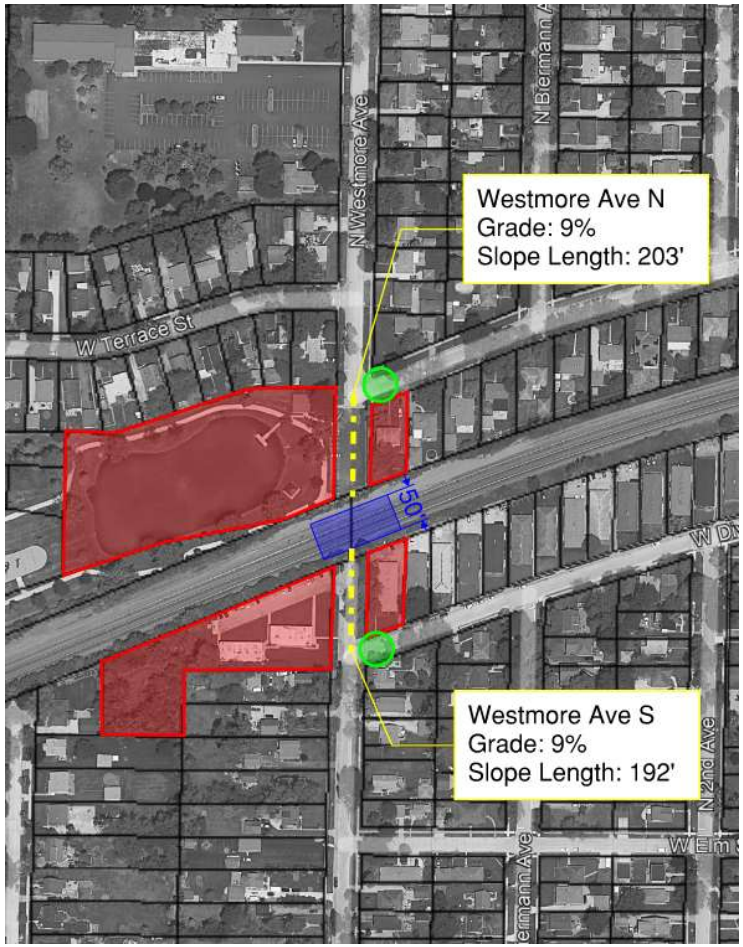
- Impacted Properties
- Impacted Roadway Access
- Potential Crossing

Impacts to Property and Access: Westmore Ave

Left:
Vehicular Underpass
Right:
Vehicular Overpass

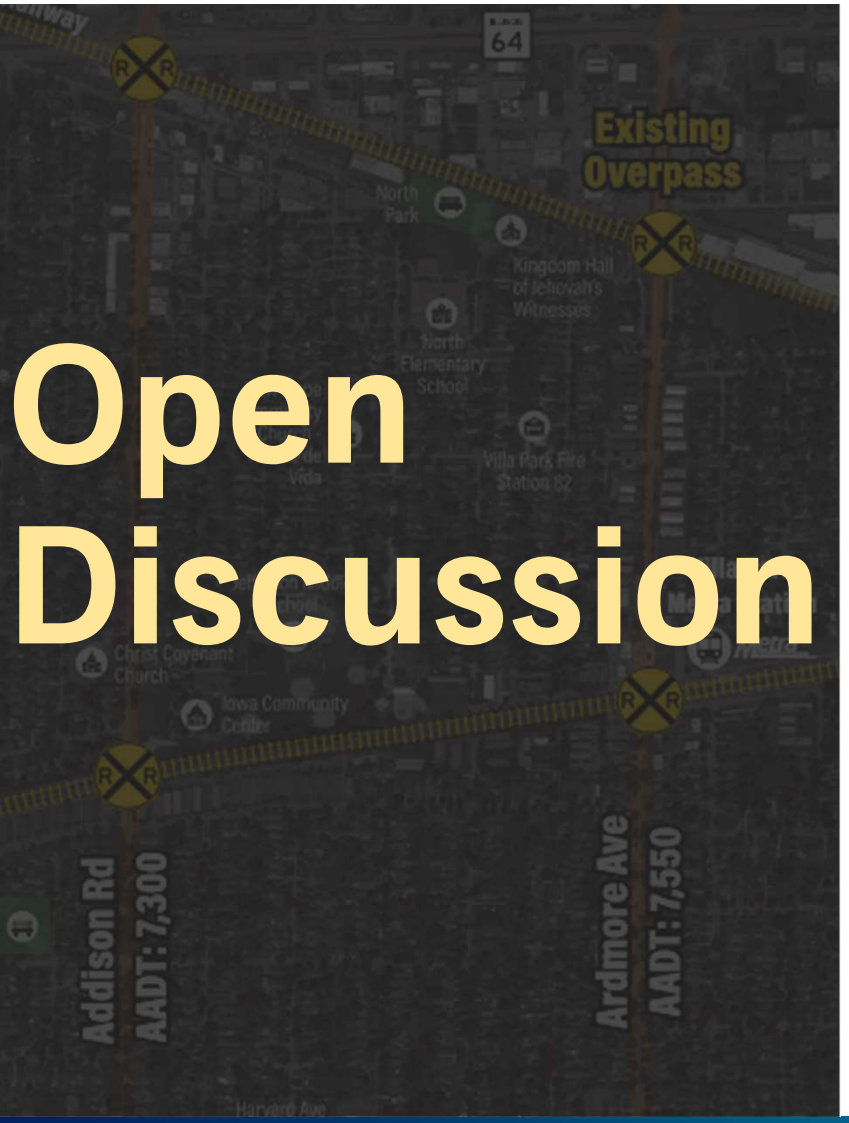
LEGEND

- Impacted Properties
- Impacted Roadway Access
- Potential Crossing



Cost Estimates

	Vehicular Overpass	Vehicular Underpass	Pedestrian Overpass	Pedestrian Underpass
ROW/Land Acquisition/Property Displacements	$$$	$$$	$	$
Utility Impact	$	$$$	$	$$
Engineering	$$	$$$	$	$$
Construction	$$	$$$	$	$$
Preliminary Project Cost	$$	$$$	$	$
Cost Ranges ($ mill)	$20 – 30	$30 – 50	$3 – 8	$3 – 8



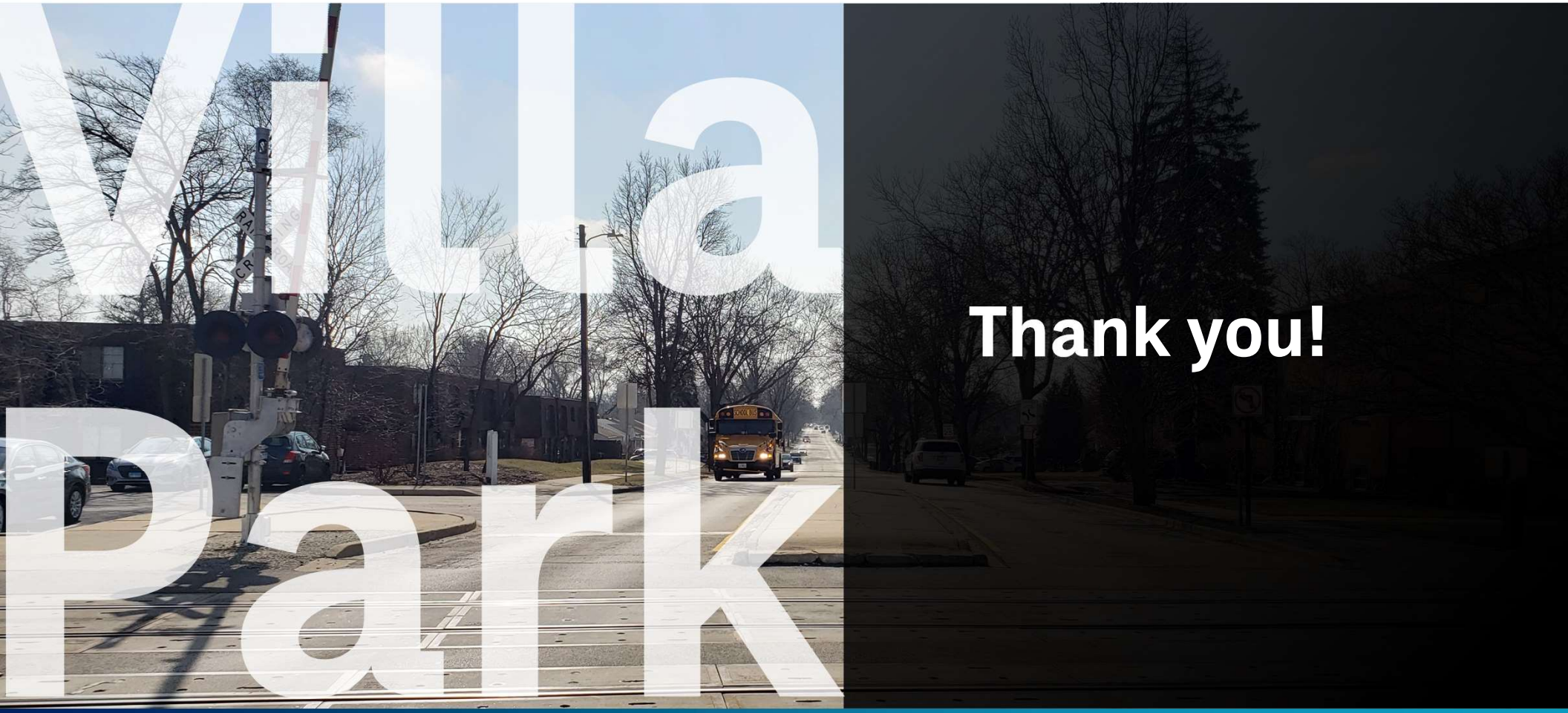
Open Discussion

Potential evaluation criteria

- Business impacts
- Roadway, Path, or Sidewalk access
- Stakeholder support
- Environmental impact
- Potential railroad acceptance
- Residential impacts
- Parking impacts
- Bikes/Peds
- Reduced delay
- Cost
- Safety
- Emergency response
- Utility impacts
- Other 1
- Other 2

Next Steps

- Initial evaluation of alternatives
- Return to Committee of the Whole
- Finalize alternatives
- Develop recommendations

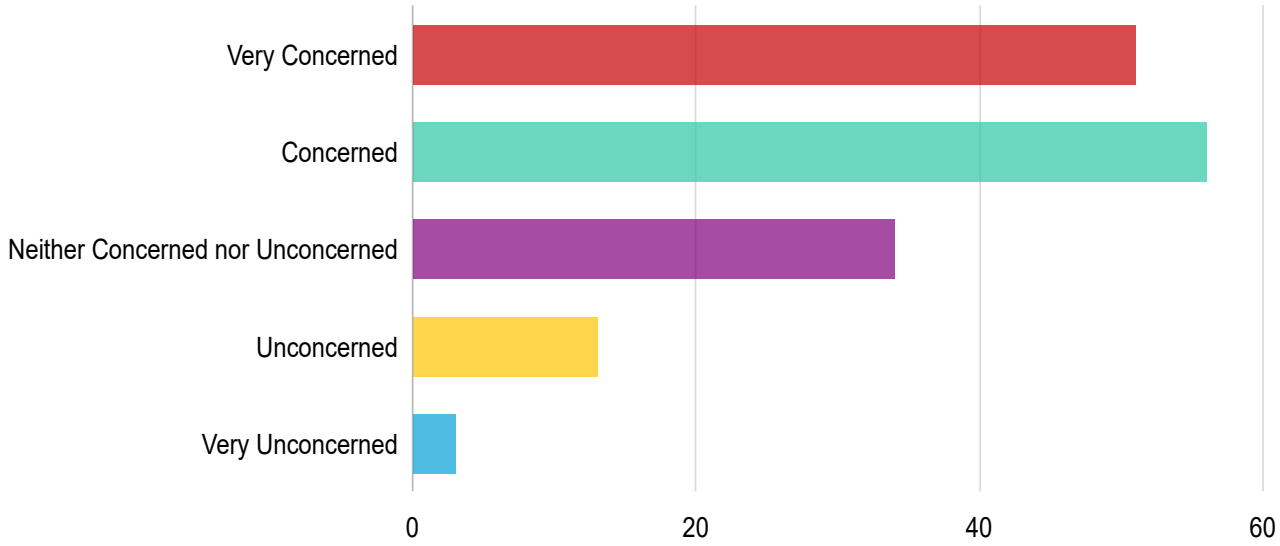


Thank you!

Grade Separation Feasibility Study Survey
Survey Statistics 6/13/2023

RAILROAD CROSSING NEEDS IN THE VILLAGE

Vehicular Safety *

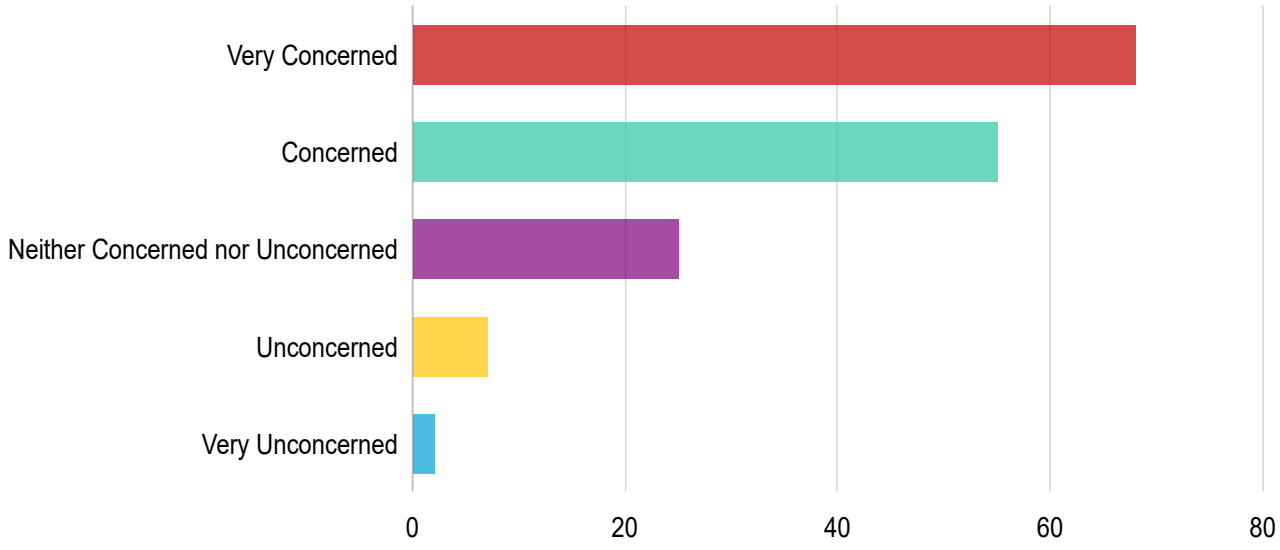


Answers	Count	Percentage
Very Concerned	51	32.48%
Concerned	56	35.67%
Neither Concerned nor Unconcerned	34	21.66%
Unconcerned	13	8.28%
Very Unconcerned	3	1.91%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

Bicycle/Pedestrian Safety *

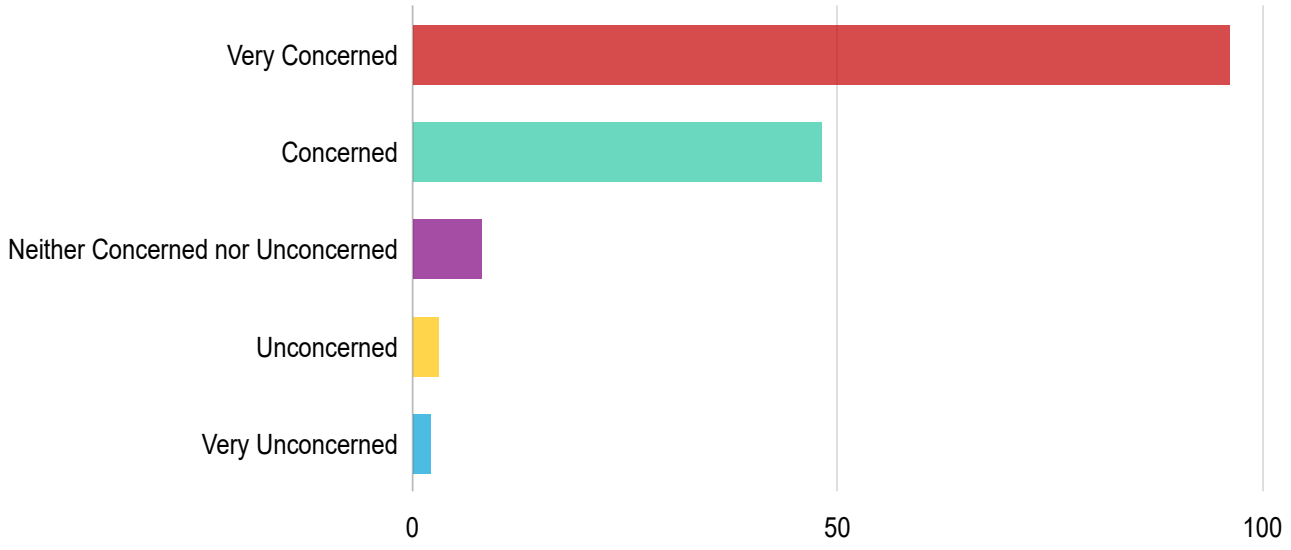


Answers	Count	Percentage
Very Concerned	68	43.31%
Concerned	55	35.03%
Neither Concerned nor Unconcerned	25	15.92%
Unconcerned	7	4.46%
Very Unconcerned	2	1.27%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

Vehicle Delay *

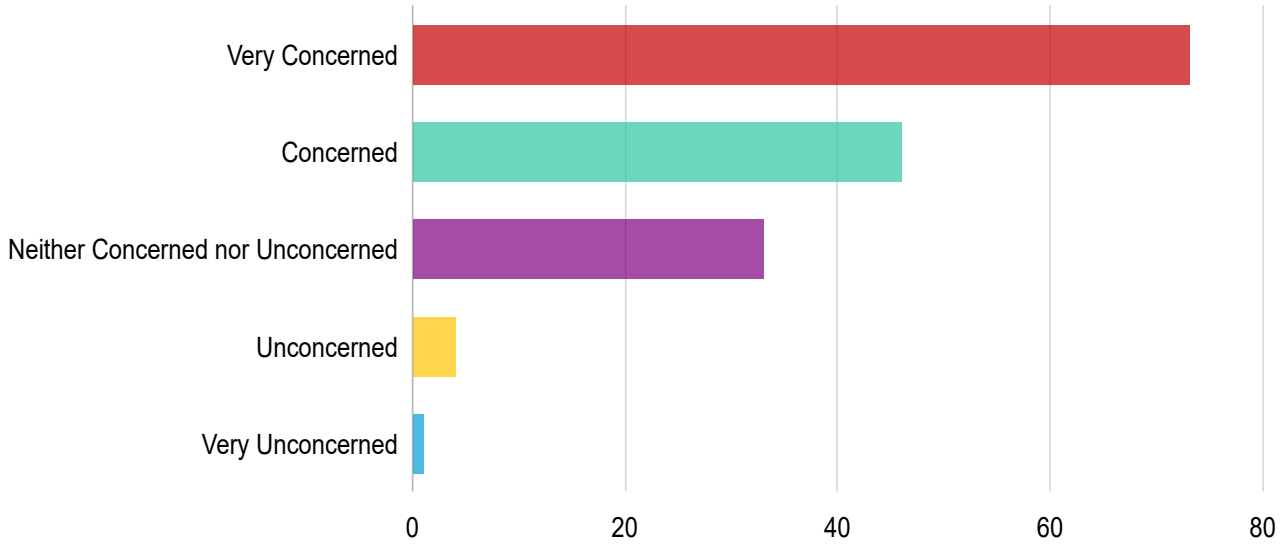


Answers	Count	Percentage
Very Concerned	96	61.15%
Concerned	48	30.57%
Neither Concerned nor Unconcerned	8	5.1%
Unconcerned	3	1.91%
Very Unconcerned	2	1.27%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

Bicycle/Pedestrian Delay *

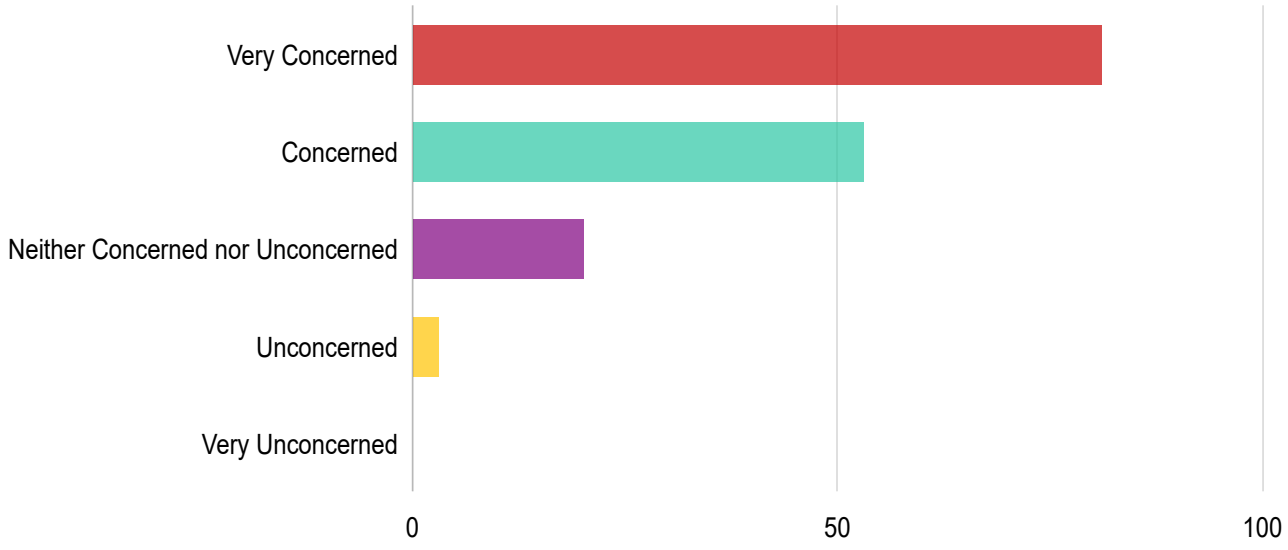


Answers	Count	Percentage
Very Concerned	73	46.5%
Concerned	46	29.3%
Neither Concerned nor Unconcerned	33	21.02%
Unconcerned	4	2.55%
Very Unconcerned	1	0.64%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

Reliable Travel Times *

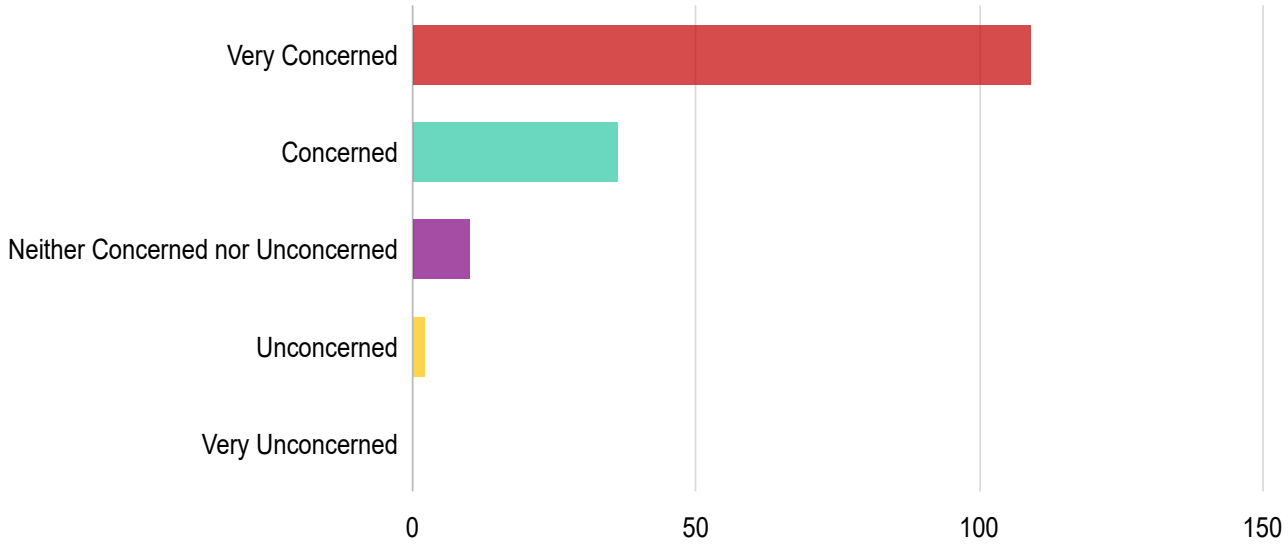


Answers	Count	Percentage
Very Concerned	81	51.59%
Concerned	53	33.76%
Neither Concerned nor Unconcerned	20	12.74%
Unconcerned	3	1.91%
Very Unconcerned	0	0%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

Impacts on Emergency Response Times *

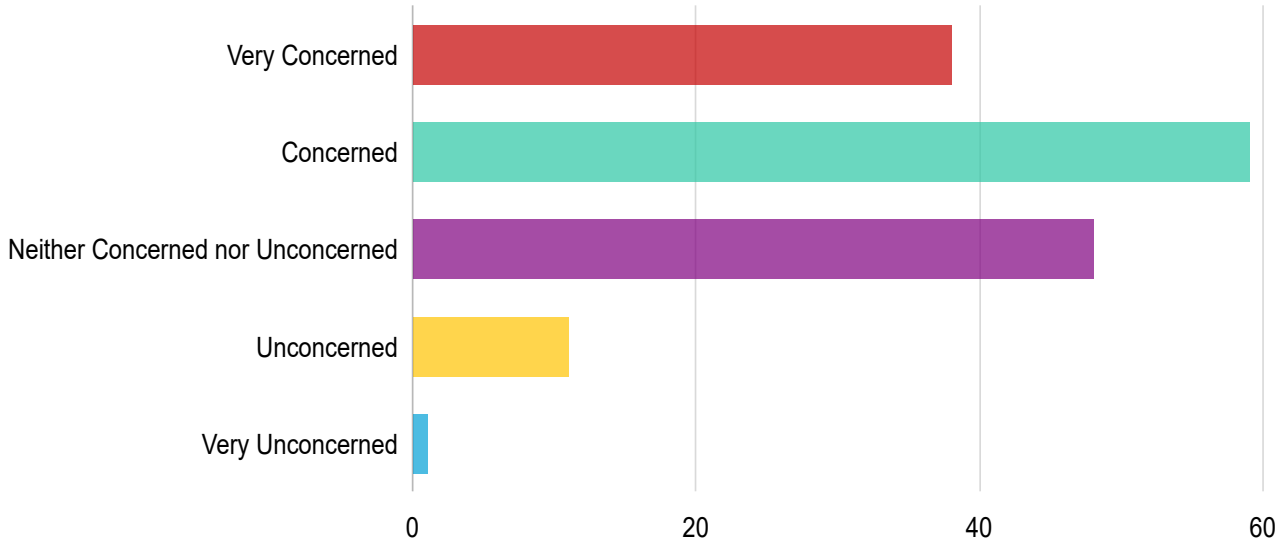


Answers	Count	Percentage
Very Concerned	109	69.43%
Concerned	36	22.93%
Neither Concerned nor Unconcerned	10	6.37%
Unconcerned	2	1.27%
Very Unconcerned	0	0%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

● **Air Quality (e.g., emissions from idling vehicles)** *

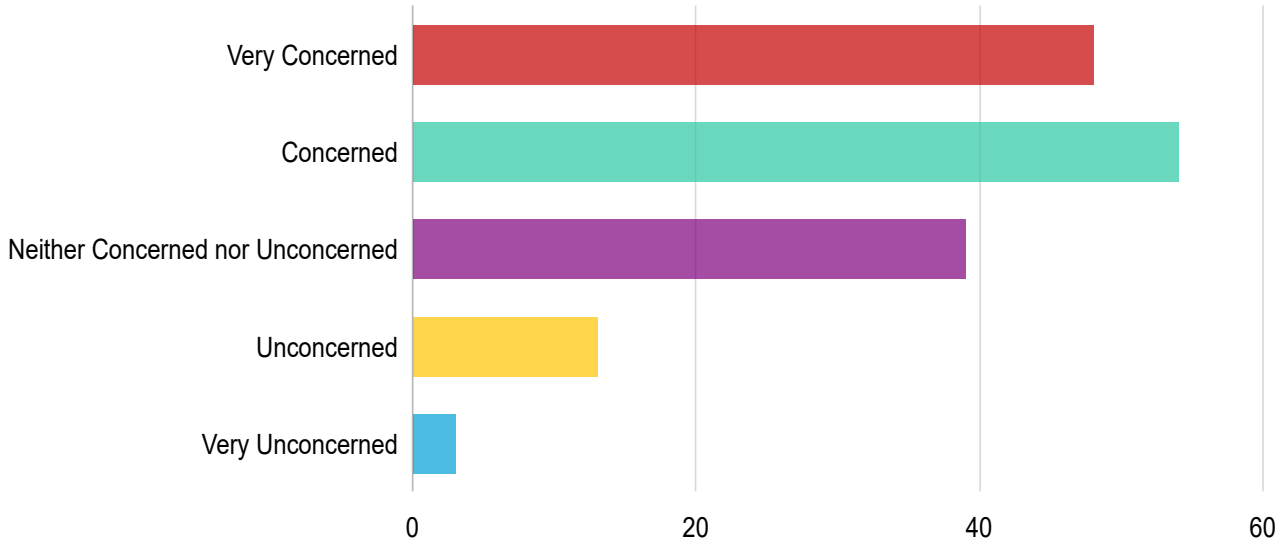


Answers	Count	Percentage
Very Concerned	38	24.2%
Concerned	59	37.58%
Neither Concerned nor Unconcerned	48	30.57%
Unconcerned	11	7.01%
Very Unconcerned	1	0.64%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

Metra Station Access *

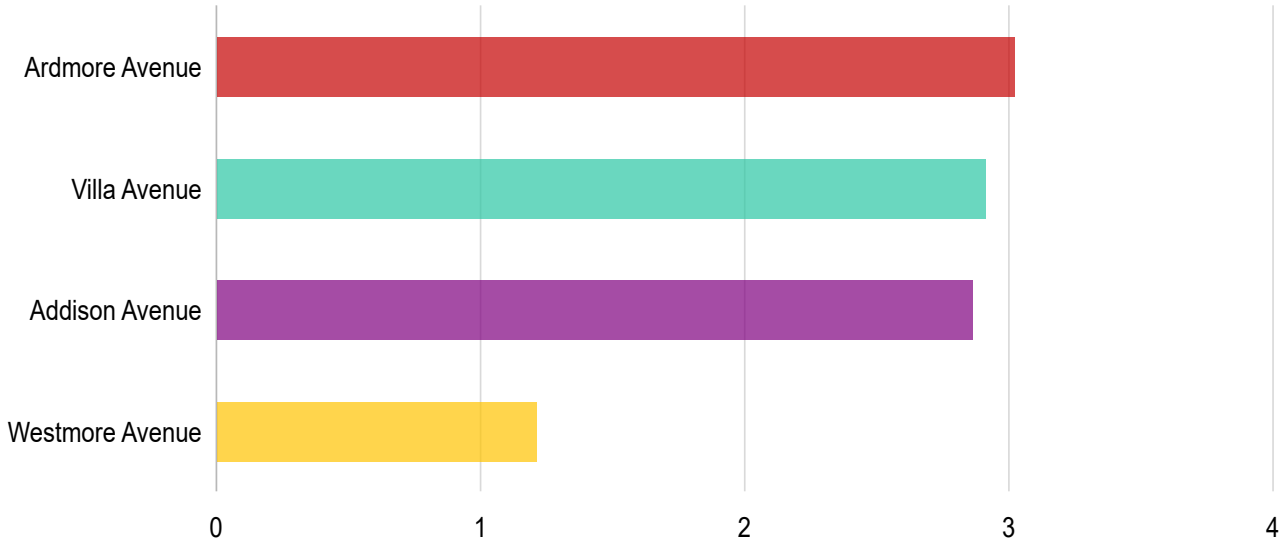


Answers	Count	Percentage
Very Concerned	48	30.57%
Concerned	54	34.39%
Neither Concerned nor Unconcerned	39	24.84%
Unconcerned	13	8.28%
Very Unconcerned	3	1.91%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

● **Please indicate which at-grade crossings are in the greatest need for…** *



Rank	Answers	1	2	3	Average score
1	Ardmore Avenue	44.59% 70	17.83% 28	32.48% 51	3.02
2	Villa Avenue	37.58% 59	18.47% 29	41.4% 65	2.91
3	Addison Avenue	14.01% 22	60.51% 95	22.93% 36	2.86
4	Westmore Avenue	3.82% 6	3.18% 5	3.18% 5	1.21

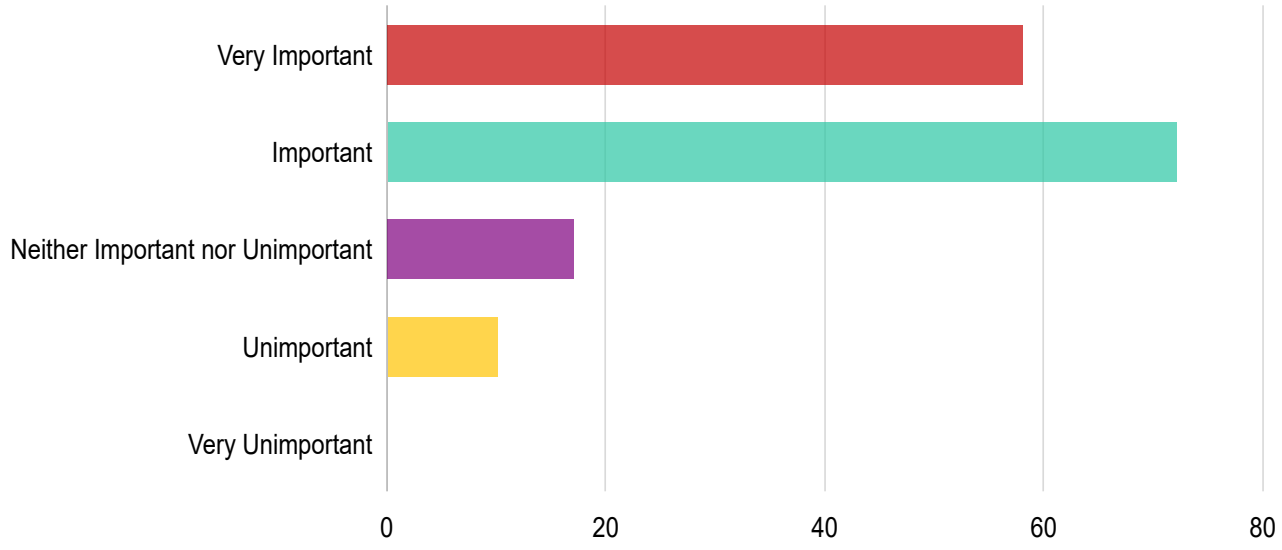
5.1%
8

2.55%
4

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

Impacts to Residential Properties *

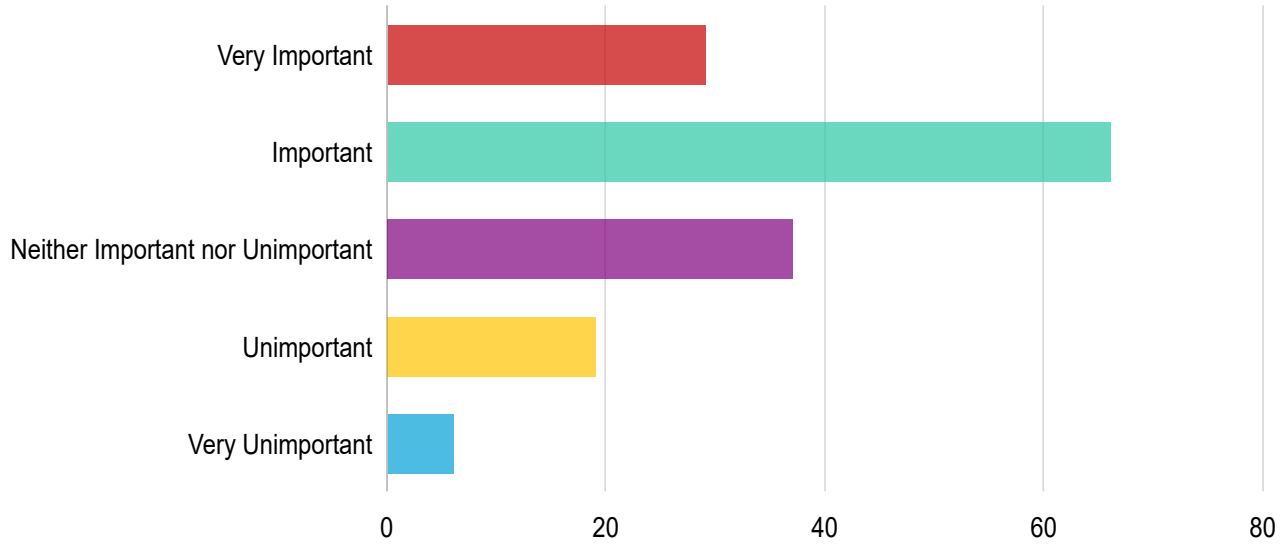


Answers	Count	Percentage
Very Important	58	36.94%
Important	72	45.86%
Neither Important nor Unimportant	17	10.83%
Unimportant	10	6.37%
Very Unimportant	0	0%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

● **Impacts to Commercial Properties** *

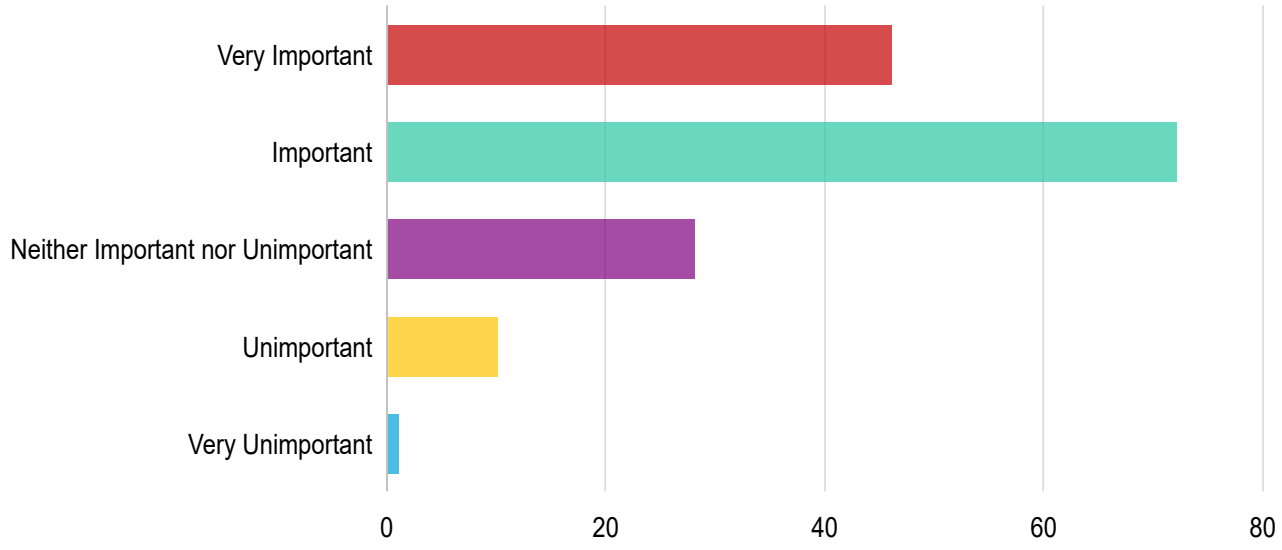


Answers	Count	Percentage
Very Important	29	18.47%
Important	66	42.04%
Neither Important nor Unimportant	37	23.57%
Unimportant	19	12.1%
Very Unimportant	6	3.82%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

Impacts to Public Properties (e.g., parks) *

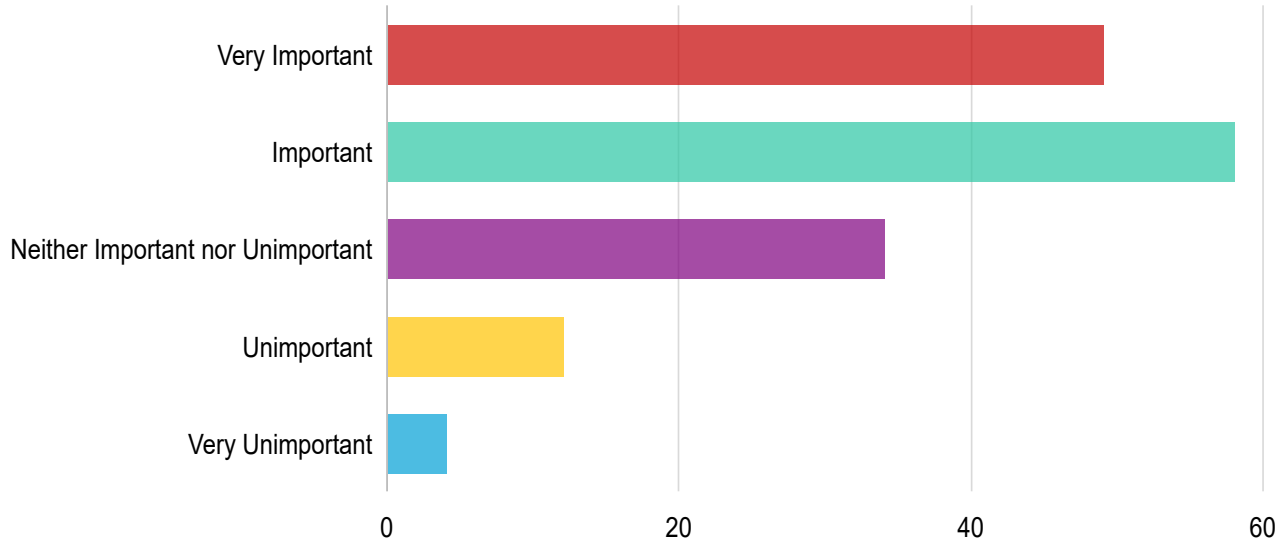


Answers	Count	Percentage
Very Important	46	29.3%
Important	72	45.86%
Neither Important nor Unimportant	28	17.83%
Unimportant	10	6.37%
Very Unimportant	1	0.64%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

● **Loss of Local Access (e.g., closure of side streets or driveways)** *

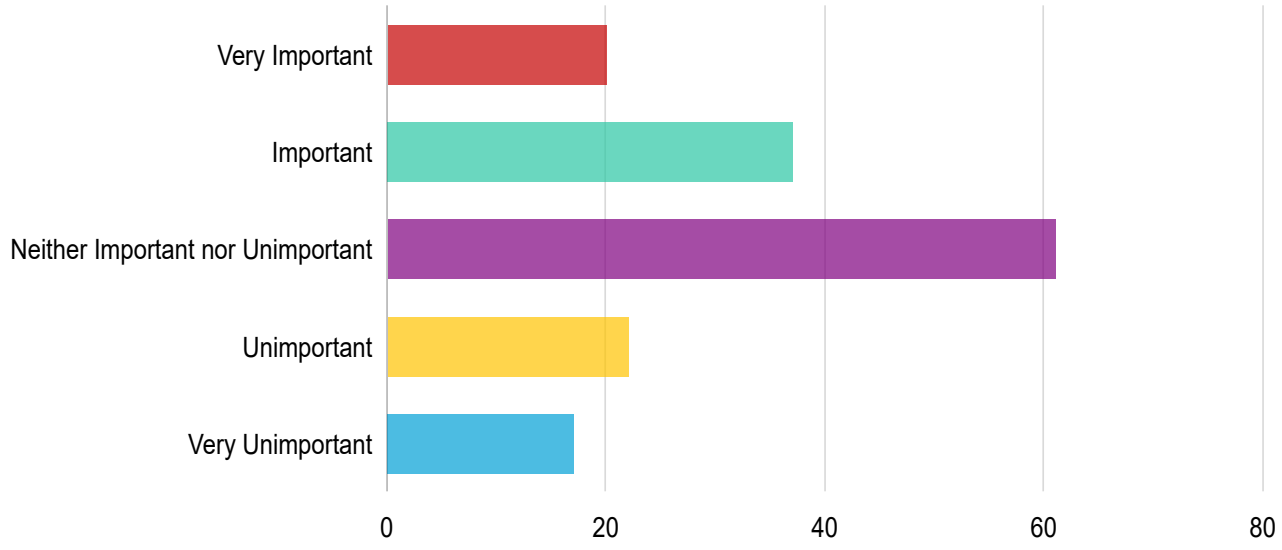


Answers	Count	Percentage
Very Important	49	31.21%
Important	58	36.94%
Neither Important nor Unimportant	34	21.66%
Unimportant	12	7.64%
Very Unimportant	4	2.55%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

● **Parking Impacts (e.g., loss of on-street parking spaces)** *

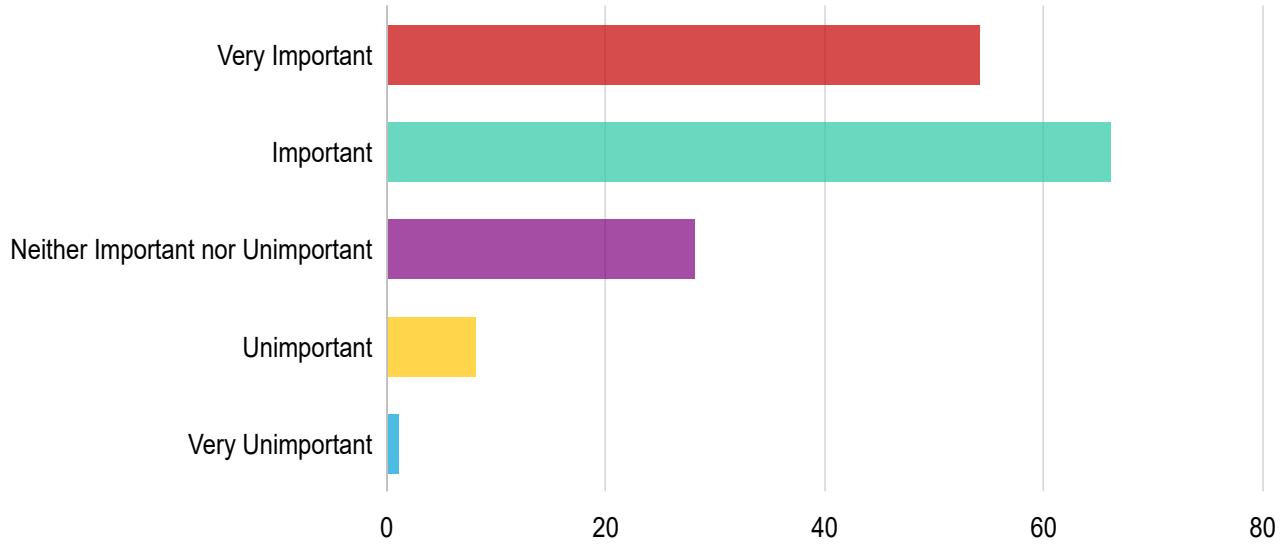


Answers	Count	Percentage
Very Important	20	12.74%
Important	37	23.57%
Neither Important nor Unimportant	61	38.85%
Unimportant	22	14.01%
Very Unimportant	17	10.83%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

● **Environmental Impacts (e.g., hazardous materials, stormwater impacts,…** *

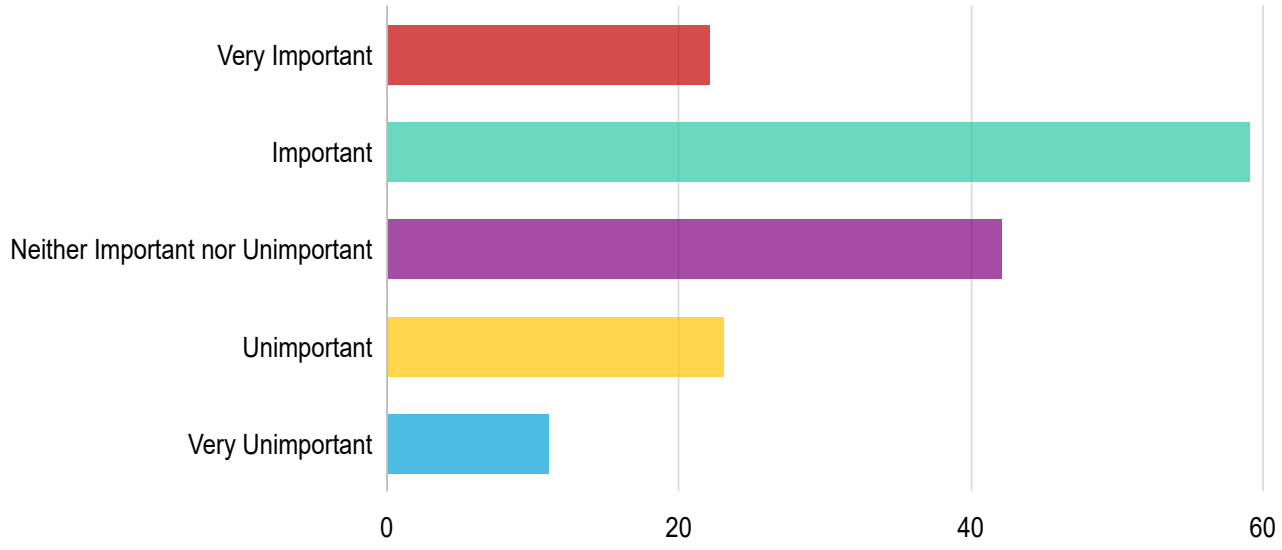


Answers	Count	Percentage
Very Important	54	34.39%
Important	66	42.04%
Neither Important nor Unimportant	28	17.83%
Unimportant	8	5.1%
Very Unimportant	1	0.64%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

● **Visual Impacts (e.g., height of bridge or tunnel structures)** *

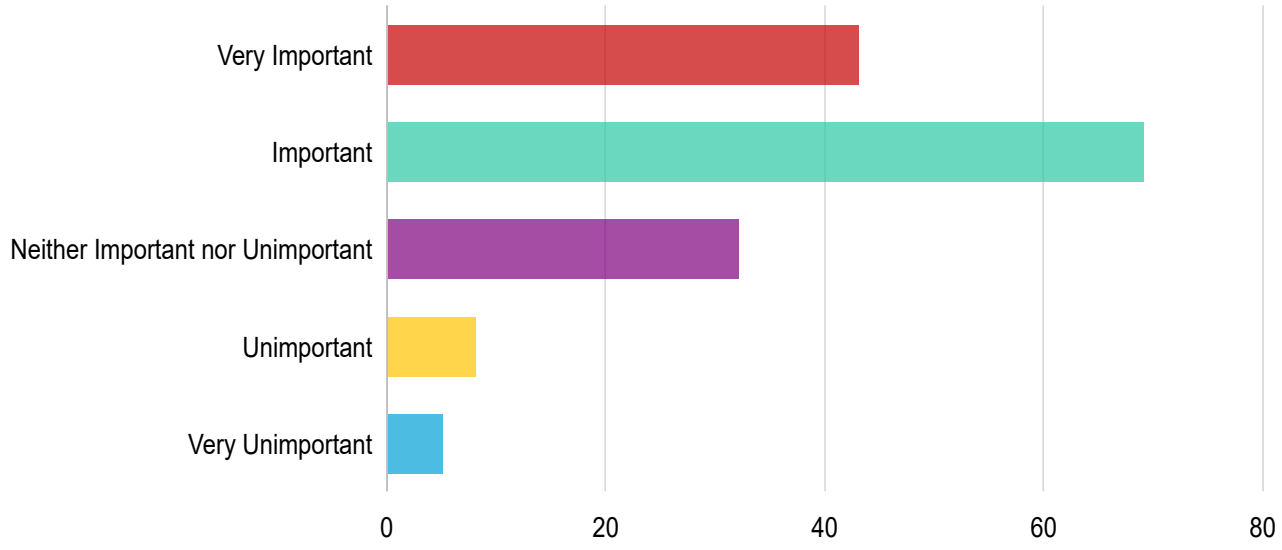


Answers	Count	Percentage
Very Important	22	14.01%
Important	59	37.58%
Neither Important nor Unimportant	42	26.75%
Unimportant	23	14.65%
Very Unimportant	11	7.01%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

● **Capital Costs** *

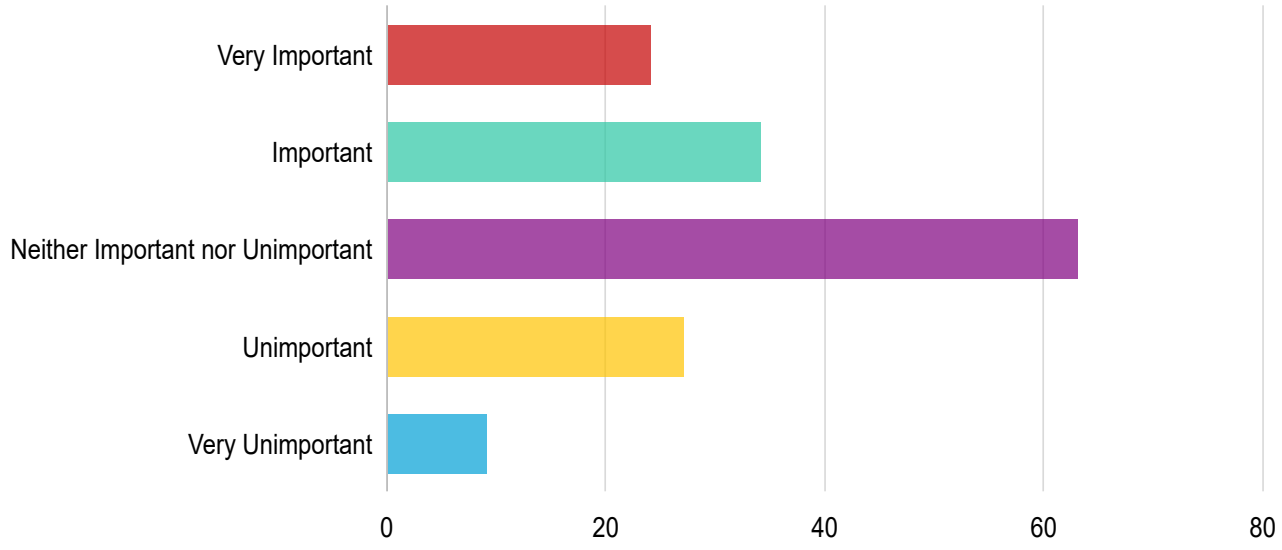


Answers	Count	Percentage
Very Important	43	27.39%
Important	69	43.95%
Neither Important nor Unimportant	32	20.38%
Unimportant	8	5.1%
Very Unimportant	5	3.18%

Answered: 157 Skipped: 0

RAILROAD CROSSING NEEDS IN THE VILLAGE

● **Construction Related Impacts (e.g., noise, temporary road closures)** *

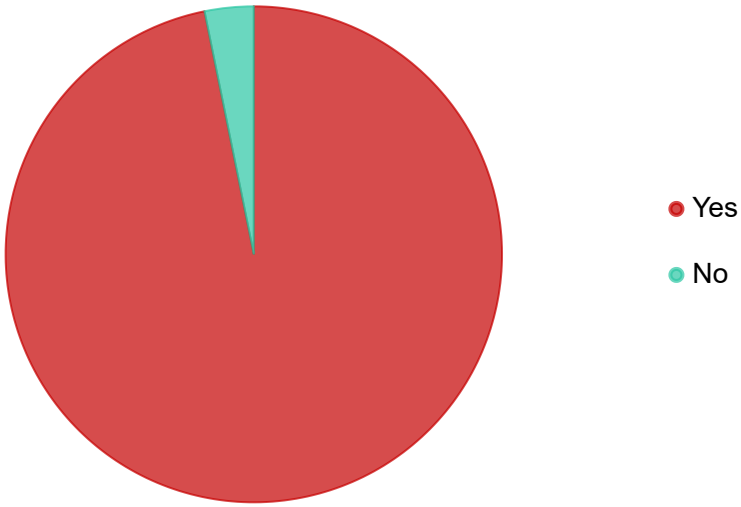


Answers	Count	Percentage
Very Important	24	15.29%
Important	34	21.66%
Neither Important nor Unimportant	63	40.13%
Unimportant	27	17.2%
Very Unimportant	9	5.73%

Answered: 157 Skipped: 0

ABOUT YOU

Are you a resident of Villa Park? *

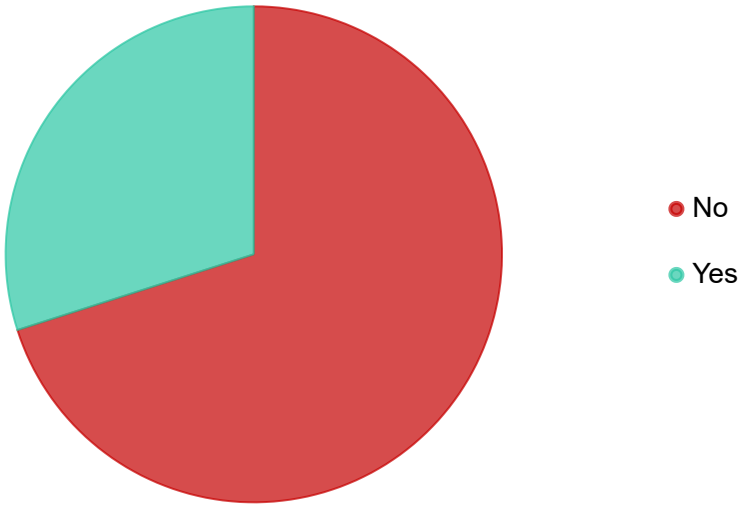


Answers	Count	Percentage
Yes	152	96.82%
No	5	3.18%

Answered: 157 Skipped: 0

ABOUT YOU

Do you work in Villa Park? *

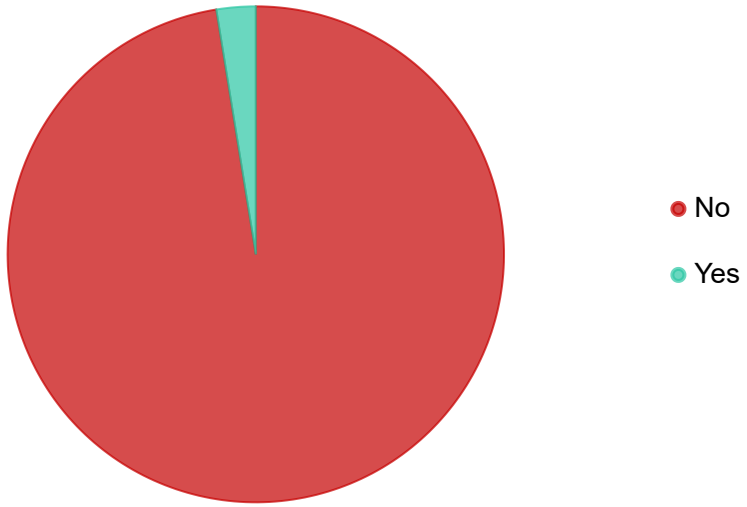


Answers	Count	Percentage
No	110	70.06%
Yes	47	29.94%

Answered: 157 Skipped: 0

ABOUT YOU

Are you a student attending school in Villa Park? *

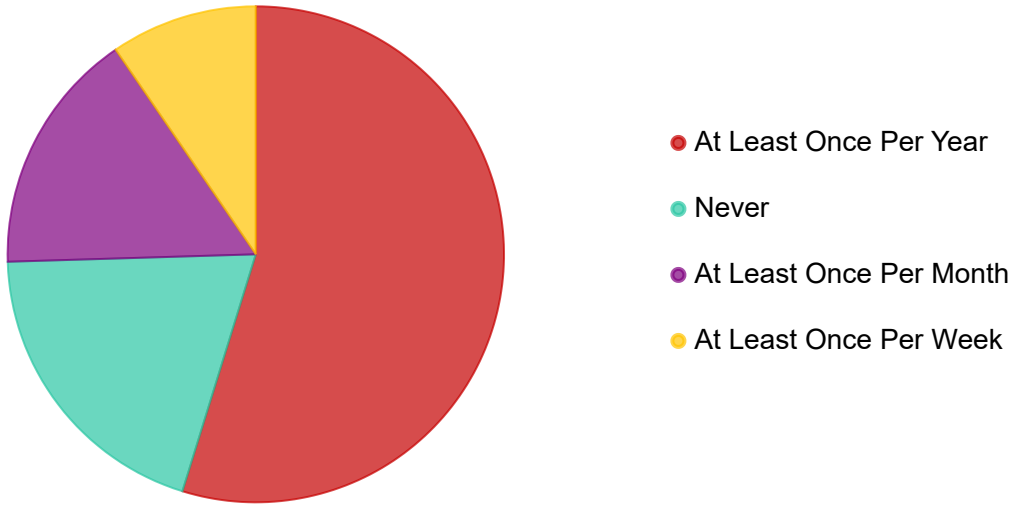


Answers	Count	Percentage
No	153	97.45%
Yes	4	2.55%

Answered: 157 Skipped: 0

ABOUT YOU

How often do you use the Villa Park Metra Station? *

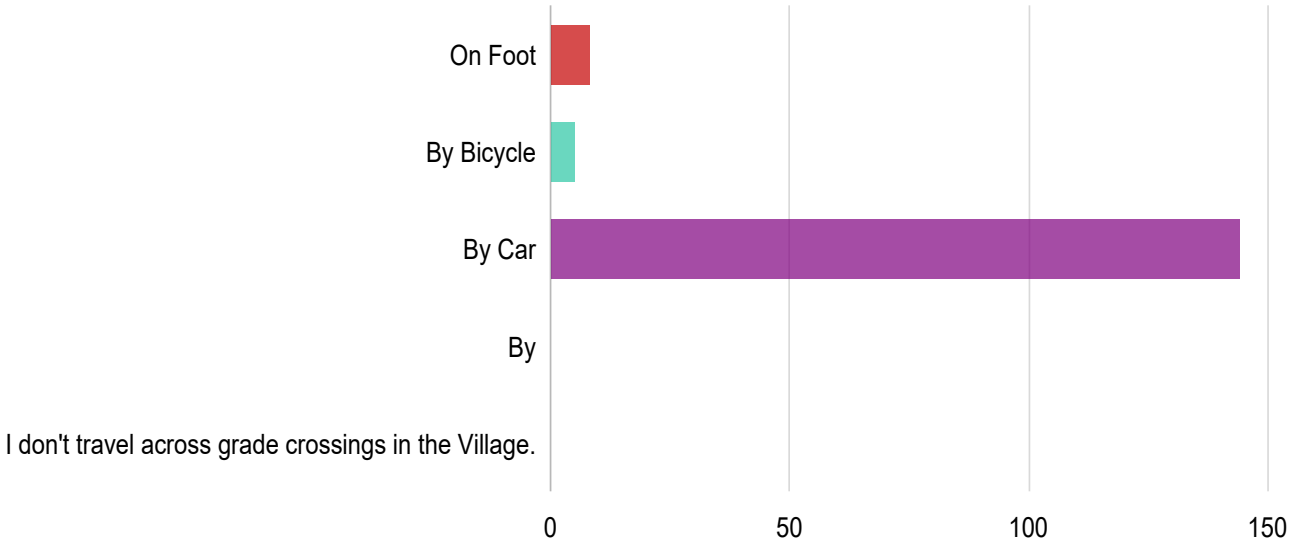


Answers	Count	Percentage
At Least Once Per Year	86	54.78%
Never	31	19.75%
At Least Once Per Month	25	15.92%
At Least Once Per Week	15	9.55%

Answered: 157 Skipped: 0

ABOUT YOU

How do you usually travel across grade crossings in the Village? *



Answers	Count	Percentage
On Foot	8	5.1%
By Bicycle	5	3.18%
By Car	144	91.72%
By Bus	0	0%
I don't travel across grade crossings in the Village.	0	0%

Answered: 157 Skipped: 0