

Draft - October 2026



Unionville Village Master Plan

East Marlborough Township, Chester County



Acknowledgments

East Marlborough Township Board of Supervisors extends its sincere appreciation to the individuals and organizations who contributed their time, expertise, and local knowledge to the development of this study. Their participation and thoughtful input were essential to shaping a document that reflects community priorities and supports the village's long-term safety, mobility, and quality-of-life goals. This plan was funded in part through a grant from the Vision Partnership Program sponsored by the Chester County Board of Commissioners.

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Plan Overview



A Blueprint for Unionville Village

Unionville is a small village within East Marlborough Township, Chester County, that functions as a community focal point for nearby residents, schools, recreational facilities, and local institutions. Anchored by Unionville Elementary School, the Unionville Recreation Association ballfields, residential and a modest collection of long-standing local businesses and civic uses, the village plays an important role in daily community life despite its compact size. Prior planning efforts at the township, county, and regional levels have consistently identified Unionville as a priority area for improved pedestrian safety, connectivity, and village-scale enhancements, while preserving the rural character and sense of place valued by residents. Prior planning recommendations, along with local interest in maintaining Unionville as a walkable, cohesive village, laid the groundwork for the development of a dedicated village master plan.

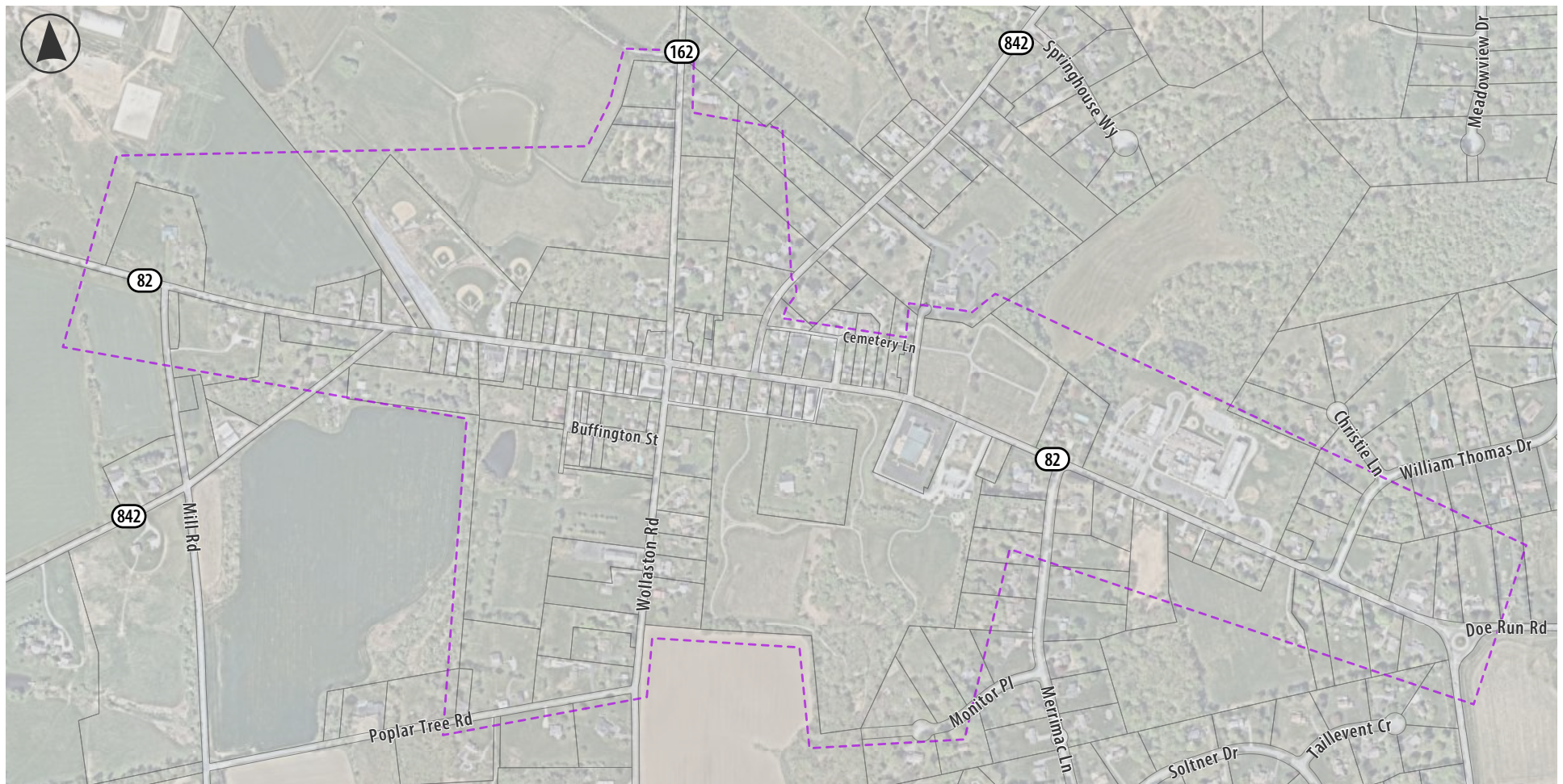
The Unionville Village Master Plan is a community-driven planning effort initiated by East Marlborough Township and supported through the Chester County Vision Partnership Program (VPP) and Friends of Unionville. The project follows a phased process that combines technical analysis with robust public engagement, beginning in early 2026 and continuing through plan adoption later in the year. Key elements of the effort included baseline analysis, an interactive community survey, and a multi-day, in-person design charrette held in May 2026, where residents and stakeholders worked directly with the planning team to identify challenges, explore concepts, and establish priorities. The result of these efforts is a clear, actionable master plan that outlines coordinated transportation, safety, parking, placekeeping, and placemaking strategies, supported by implementation tools such as phasing, cost considerations, and defined responsibilities to guide future decision-making within the village.



Study Area

The plan's study area centers on Unionville Village as a distinct community place rather than the township as a whole. Although the initial boundaries were informed by the Unionville Village Historic District, the Steering Committee refined the study area to ensure that it captured key sidewalk gaps and important recreation areas, including the Unionville Recreation Association (URA) Ball Fields, which are located on East Marlborough Township Property. The

final study area encompasses several significant locations within and adjacent to the village core, such as the Route 82 corridor, the intersection of Route 82 and Route 162, the eastern roundabout, and Unionville Elementary School. Together, these locations represent areas of concentrated activity and known safety concerns and are central to understanding how people move through and experience the village.



Supportive Plans

There are multiple county and regional planning efforts with relevance to the village of Unionville, including Landscapes3, Unionville Area Regional Comprehensive Plan, and Kennett Connects, as well as existing regulations and prior traffic calming guidance specific to East Marlborough Township that is of relevance.



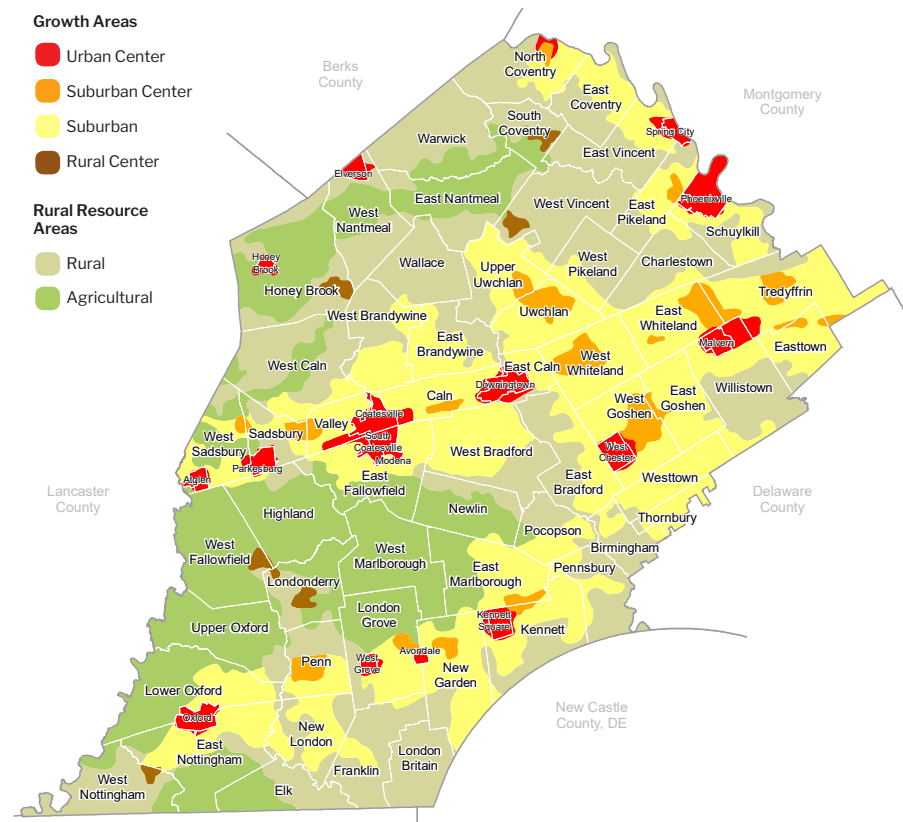
Landscapes3

Chester County Planning Commission, 2018

Within Landscapes3, Chester County's comprehensive plan, the location of the village of Unionville places it at the boundary of the Suburban and Agricultural landscapes. These designations reflect the existing development in the village and to the east and south, and the existing agricultural uses that are predominant to the west, as well as the future land uses in these areas. Landscapes3 also recognizes significant natural and historic resources in the county, and the Unionville Village National Register Historic District and unnamed tributaries to the West Branch Red Clay Creek are features of Unionville that are identified.



Landscapes Map



Unionville Area Regional Comprehensive Plan (2024)

East Marlborough, West Marlborough, and Newlin townships

Local municipality planning was undertaken with the Unionville Area Regional Comprehensive Plan, which includes East Marlborough, West Marlborough, and Newlin townships. The three townships first adopted a regional comprehensive plan in 2011.

In the 2024 regional plan, the Future Land Use Plan designates Unionville as Village Mixed-Use, with the following description: “... characterized by small-scale, family-run commercial enterprises and a variety of appropriately scaled housing that can all be accessed through an interconnected trail and sidewalk network. Adaptive reuse and preservation of historic structures is encouraged. Public spaces (village common, public parks, pocket parks, etc.) provide a sense of community and as gathering spaces for small-scale, place-based events.”

Within the future land use plan, the area to the east of Unionville village is designated as Site-Sensitive Suburban, while areas to the north, west, and south are designated as Rural Resource Preservation. These designations reflect a desire to continue existing land uses.

Given the multi-municipal scale of the Unionville Area Regional Comprehensive Plan, the village of Unionville was not addressed in significant detail. Recognizing the unique features, challenges, and opportunities of the village, and in response to public input during the planning process, the regional plan includes a specific strategy for the village:

Strategy 2-1: Undertake a comprehensive Village Master Plan for Unionville Village that seeks to preserve and enhance the small commercial center and local services, its scale, and sense of place,

including protecting and promoting its historic roots and character, while also addressing issues of traffic, parking, stormwater, pedestrian connectivity within the village and to local amenities, and creating a safe and attractive environment (both built and natural) for residents and visitors.

Strategy 2-1 was a primary initiator for this Unionville Village Master Plan, and the Unionville Area Regional Comprehensive Plan and its process provided foundational input and data regarding opportunities and challenges in the village that shaped this effort.

Unionville Area Regional Comprehensive Plan 2024

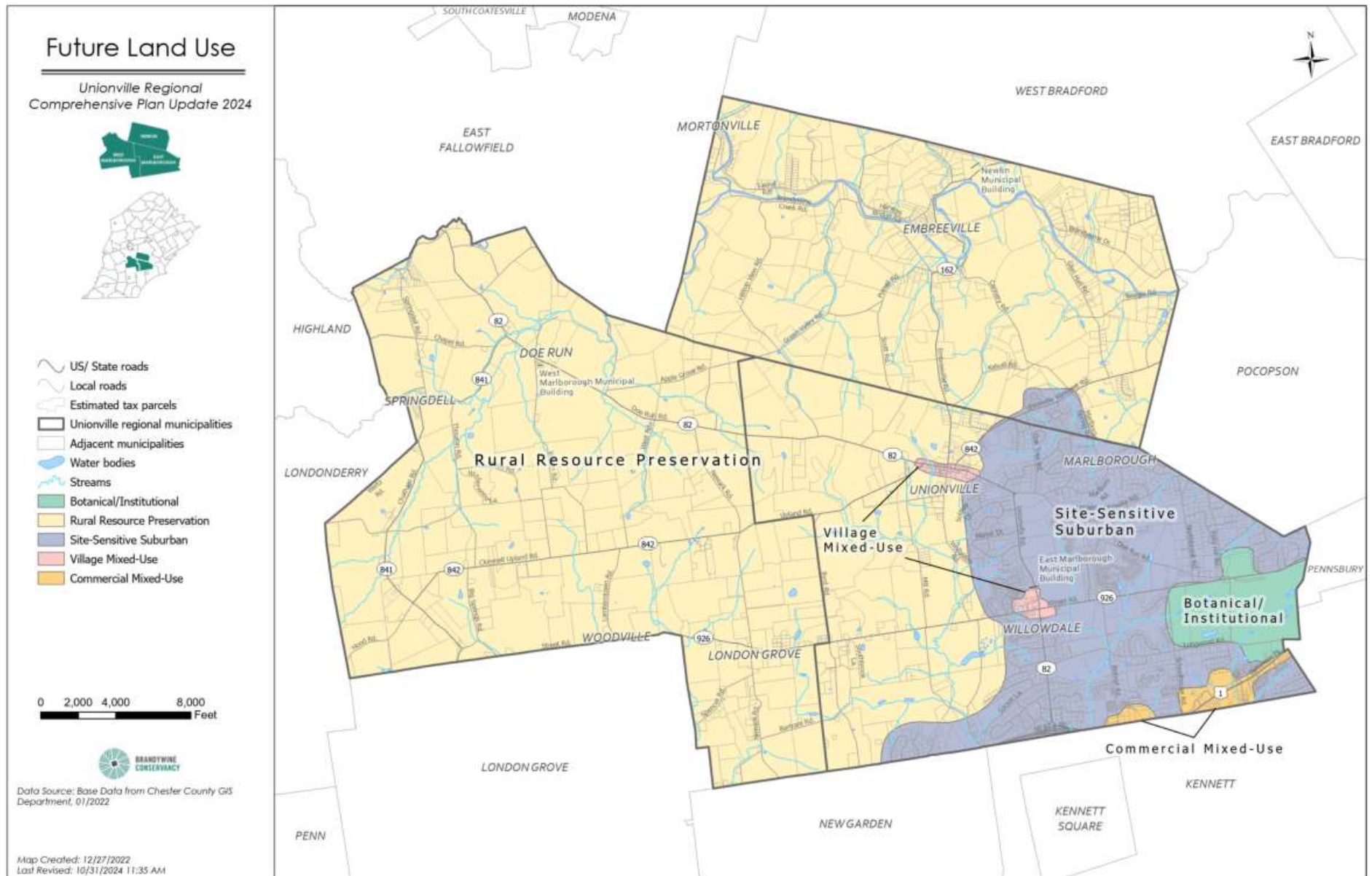
West Marlborough Township
East Marlborough Township
Newlin Township



Prepared by



Future Land Use Map: Unionville Area Regional Comprehensive Plan



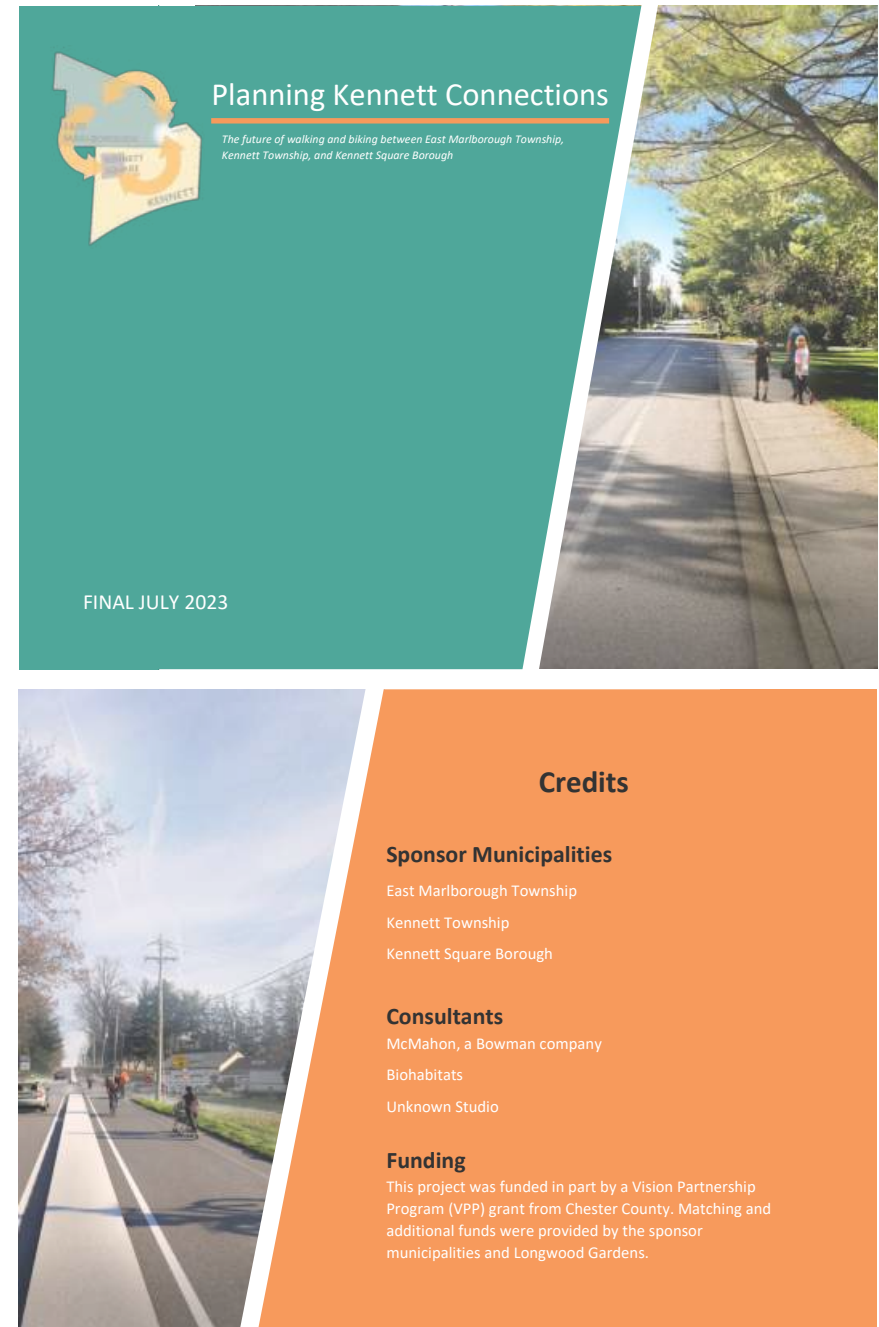
Planning Kennett Connections (2023)

McMahon/Bowman Consulting

Portions of East Marlborough Township, including Unionville, were addressed within Planning Kennett Connections (2023), which identified potential walking and biking improvements between the Township, Kennett Square Borough, and Kennett Township. Identified improvements related to the village of Unionville included:

- Key Crossing Improvements at Rt 82 Roundabout, Rt 82/Rt 842 East, Rt 82/Rt 162/Wollaston Rd, and URA Ball Fields
- URA Ball Fields Pedestrian Connections (C-1)
- Potential Sidewalk from the Rt 82 Roundabout to Unionville Elementary (C-2, existing connecting existing sidewalks)

Projects C-1 and C-2 were identified as catalyst projects, with additional detail provided to guide next steps. Next steps and potential improvements for the URA Ball Fields Pedestrian Connections (C-1) included development of a park master plan, coordination with PennDOT regarding the Rt 82 bridge, new sidewalk along Route 82, upgraded internal paths in the park, and an enhanced mid-block crossing of Rt 82 to Hood's BBQ (upgraded signage, pavement markings, and/or a flashing warning device). Next steps and potential improvements for the Rt 82 Sidewalk/Roundabout to Unionville Elementary (C-2) included sidewalk to connect around the roundabout and to the elementary school, coordination with property owners, survey and right-of-way research, design, and identification of funding (2023 estimates noted \$150,000 - \$250,000 for design and \$800,000 - \$950,000 for construction).





C-1

Pedestrian Connections: URA Ballfields



Potential Connections

- Sidewalk
- Pedestrian Path
- Shared Use Path
- Shared Roadway
- Sharrows
- Foot Path

Sidewalks

- Existing
- Design/Construction

Shared Use/Pedestrian Paths



C-2

Route 82 Sidewalk: Roundabout to Unionville Elementary School

PRIORITY PROJECT



Potential Connections

- Sidewalk
- Pedestrian Path
- Shared Use Path
- Shared Roadway
- Sharrows
- Foot Path

Sidewalks

- Existing
- Design/Construction

Shared Use/Pedestrian Paths

- Existing
- Design/Construction

Bikeways

- Bike Lane - Existing
- Sharrows - Design/Construction
- Kennett Greenway

Destinations



East Marlborough Township Ordinances

East Marlborough Township regulations that influence the village include Parks and Recreation Areas (Chapter 307, addressing Unionville Park regulations), Stormwater Management (Chapter 381), Subdivision and Land Development (Chapter 400), and Zoning (Chapter 450). With limited undeveloped areas in the village, the East Marlborough Zoning Ordinance is of greatest relevance, particularly the underlying zoning districts and associated regulations concerning use, area and bulk, design, and natural and historic resources.

Underlying zoning districts include Village Commercial (C-1), Residential (R-B), Agricultural Preservation (AP), and Educational, Scientific, and Institutional (ESI). The Village Commercial District includes multiple parcels with frontage along Route 82/West Doe Run Road, while the Residential District includes the residential parcels beyond those in the Village Commercial District. To the south and west of the village, lower density parcels are in the Agricultural Preservation District.

A limited number of properties (Unionville Elementary School, Unionville Cemetery, and Grace Fellowship Church) are in the Educational, Scientific, and Institutional District. Permitted uses and design standards in each district largely reflect existing conditions, with a notable exception in the Residential District, where smaller lot sizes typical of the village are addressed through non-conforming use regulations (Article XIX). Overall, zoning has not been identified as a significant issue to date and largely functions as intended for the village.

Route 82/West Doe Run Road Traffic Calming Memo (2013)

Traffic Planning and Design, Inc.

In 2013, Traffic Planning and Design, Inc. prepared a detailed memo on potential traffic calming for Route 82/West Doe Run Road. Limited data (speed and volume counts) were provided along with a “toolbox” of potential improvements for Township consideration. Since 2013 the Township has advanced multiple, but not all improvements identified in the memo. Past decisions to implement—or to forego implementation—should be considered in light of current conditions and best practices.

Traffic calming improvements implemented include:

- Painted crosswalk between the URA Ball Fields and Hoods BBQ.
- Signage for pedestrian crossings throughout the corridor.
- Painted crosswalks at multiple intersections (Rt 82 and Rt 162, Rt 842 East, and Cemetery Lane).
- Sidewalk along Unionville Park’s frontage on Rt 82.

Improvements NOT implemented include:

- Curbing at the Rt 82/Rt 162 intersection and the Rt 82/Rt 842 East intersection
- Painted pedestrian crosswalk across Rt 82 near Rt 842 East.
- Flashing signage for pedestrian crossings
- Sidewalk, curbing, and access management on the west/south side of Rt 82 between Rt 842 East and Jackson Street.
- Sidewalk along the Po-Mar-Lin frontage on Rt 82

See Appendix C for full memo and concept plans.





Unionville Village Today

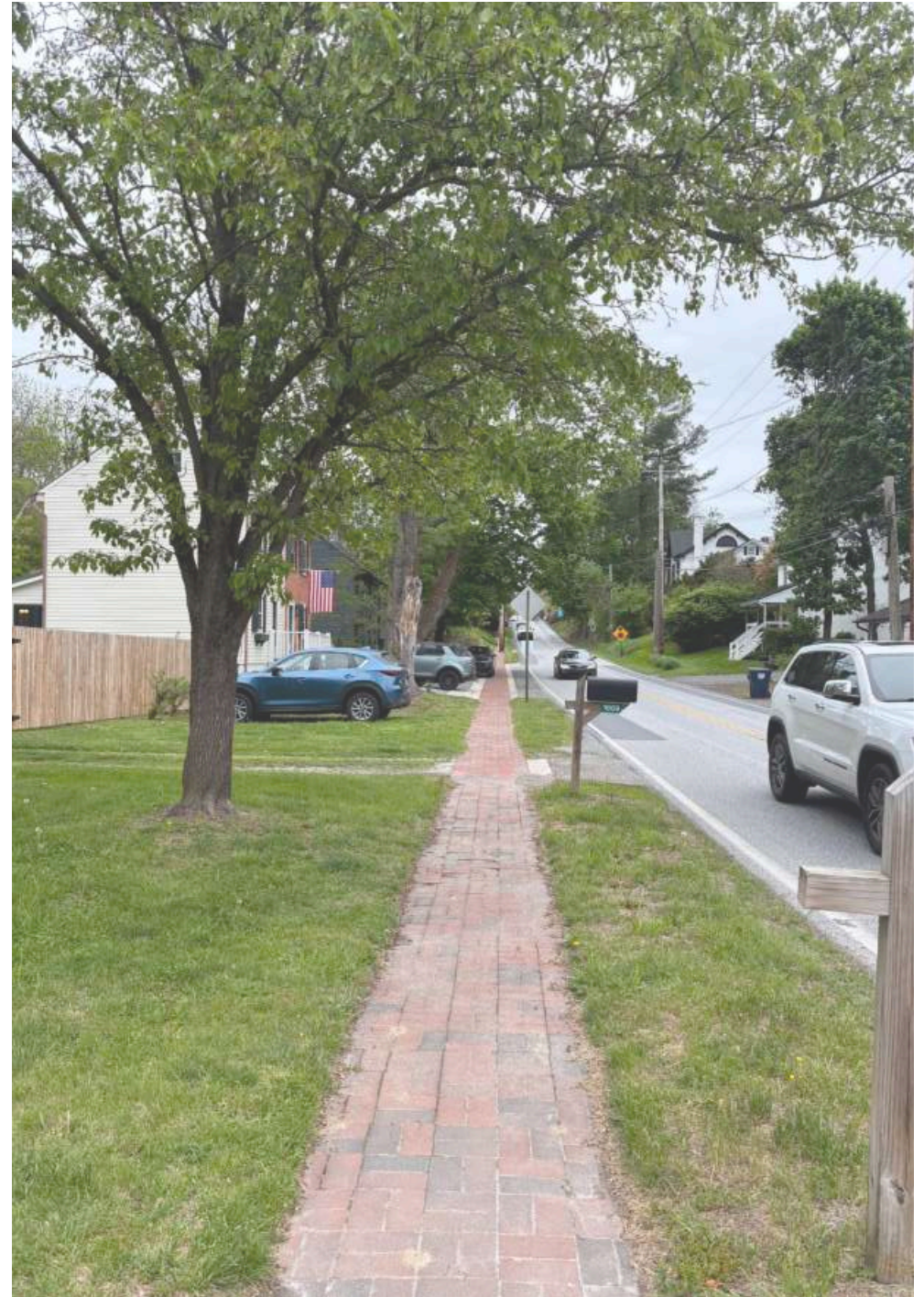
Existing Conditions

Demographics

Based on ACS 2020–2024 5-year estimates, Unionville has a population of approximately 652 residents across 294 households, with a median household income of \$132,313. The median age of residents is 60.7. The demographic profile reflects a highly educated population, with approximately 50.5 percent of residents age 25 and older holding a bachelor's degree or higher. These characteristics provide important context for understanding travel patterns, community priorities, and the scale of improvements appropriate for the village.

Land Use

Land use data (see map on following page) from the 2024 Regional Comprehensive Plan was mapped to better illustrate existing development patterns and land use conditions within the study area. The village is primarily residential but features a mix of land uses including multiple “Institutional” parcels that could present opportunities for community focused improvements.



Existing Conditions - Land Use

Existing Land Use

Unionville Regional
Comprehensive Plan Update 2024



- US/ State roads
- Local roads
- Estimated tax parcels
- Unionville regional municipalities
- Adjacent municipalities
- Water bodies
- Streams

Land Use

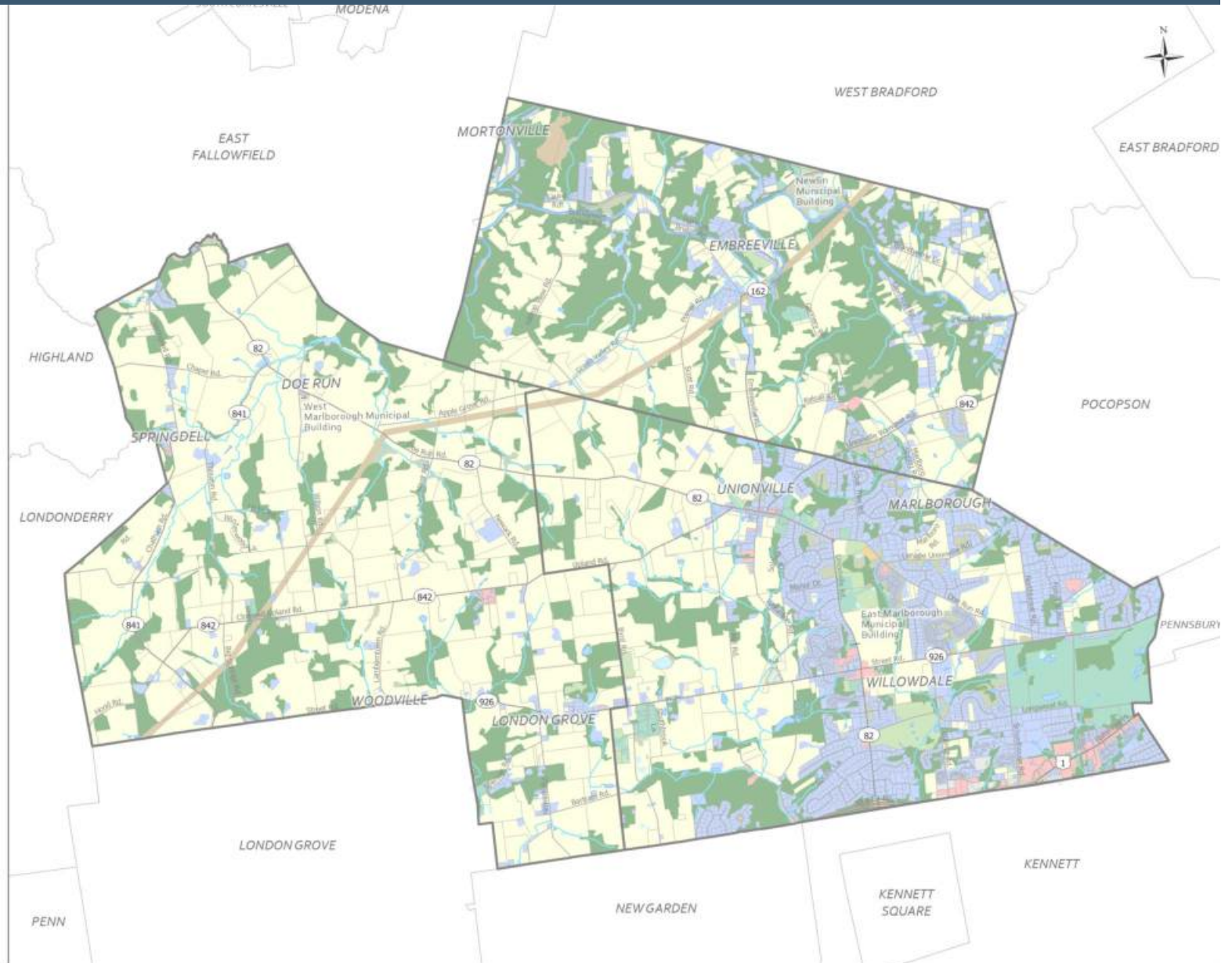
- Agriculture (15,569 ac., 54% of region)
- Commercial (217 ac., 1% of region)
- Industrial (32 ac., 0.1% of region)
- Institutional (670 ac., 2% of region)
- Recreation (267 ac., 1% of region)
- Residential (3,896 ac., 14% of region)
- Transportation (41 ac., 0.1% of region)
- Undeveloped (515 ac., 2% of region)
- Utility (373 ac., 1% of region)
- Water (245 ac., 1% of region)
- Wooded (6,811 ac., 24% of region)

0 2,000 4,000 8,000
Feet



Data Source: Base Data from Chester County GIS
Department, 01/2022

Map Created: 12/20/2022
Last Revised: 10/29/2024

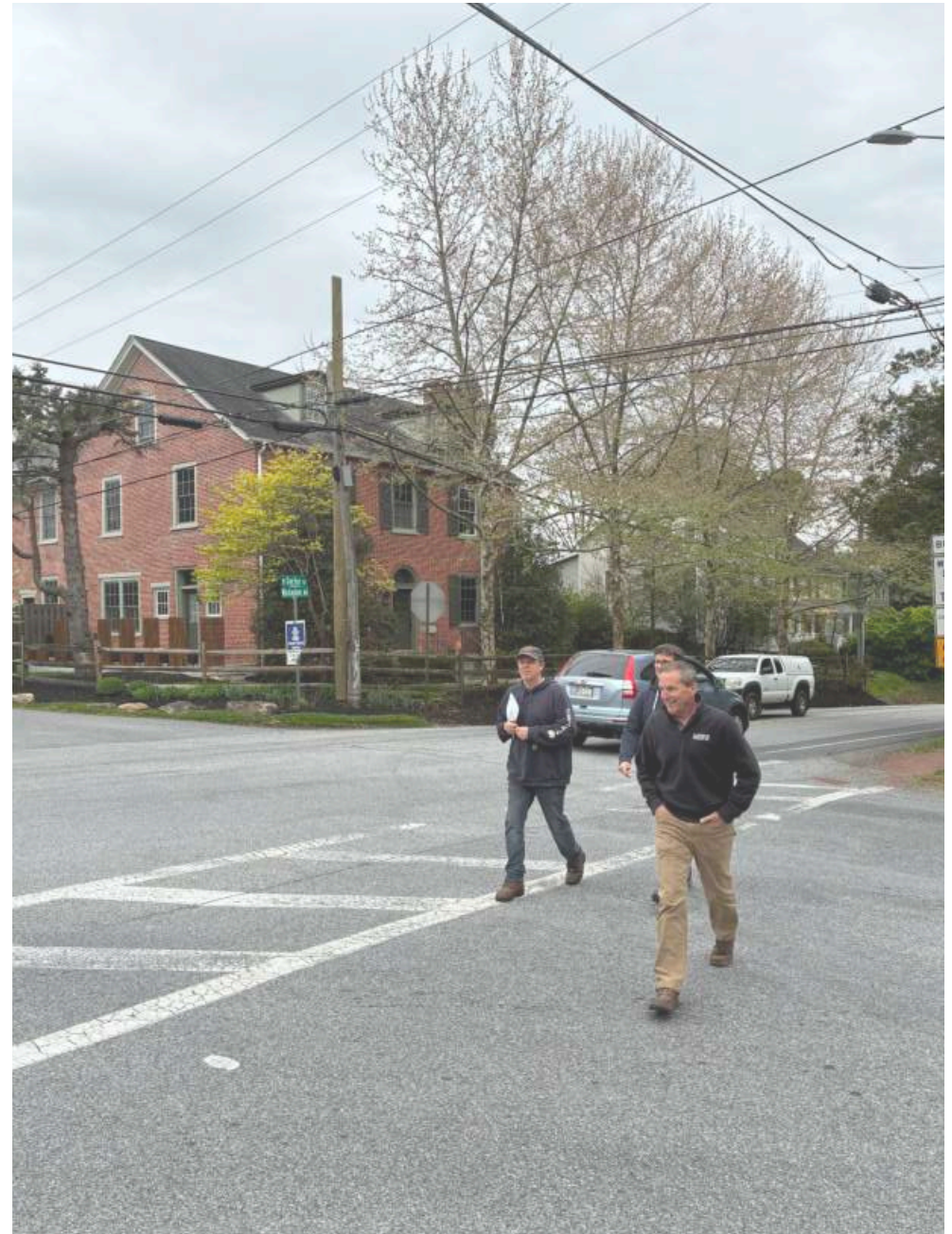


Crash data

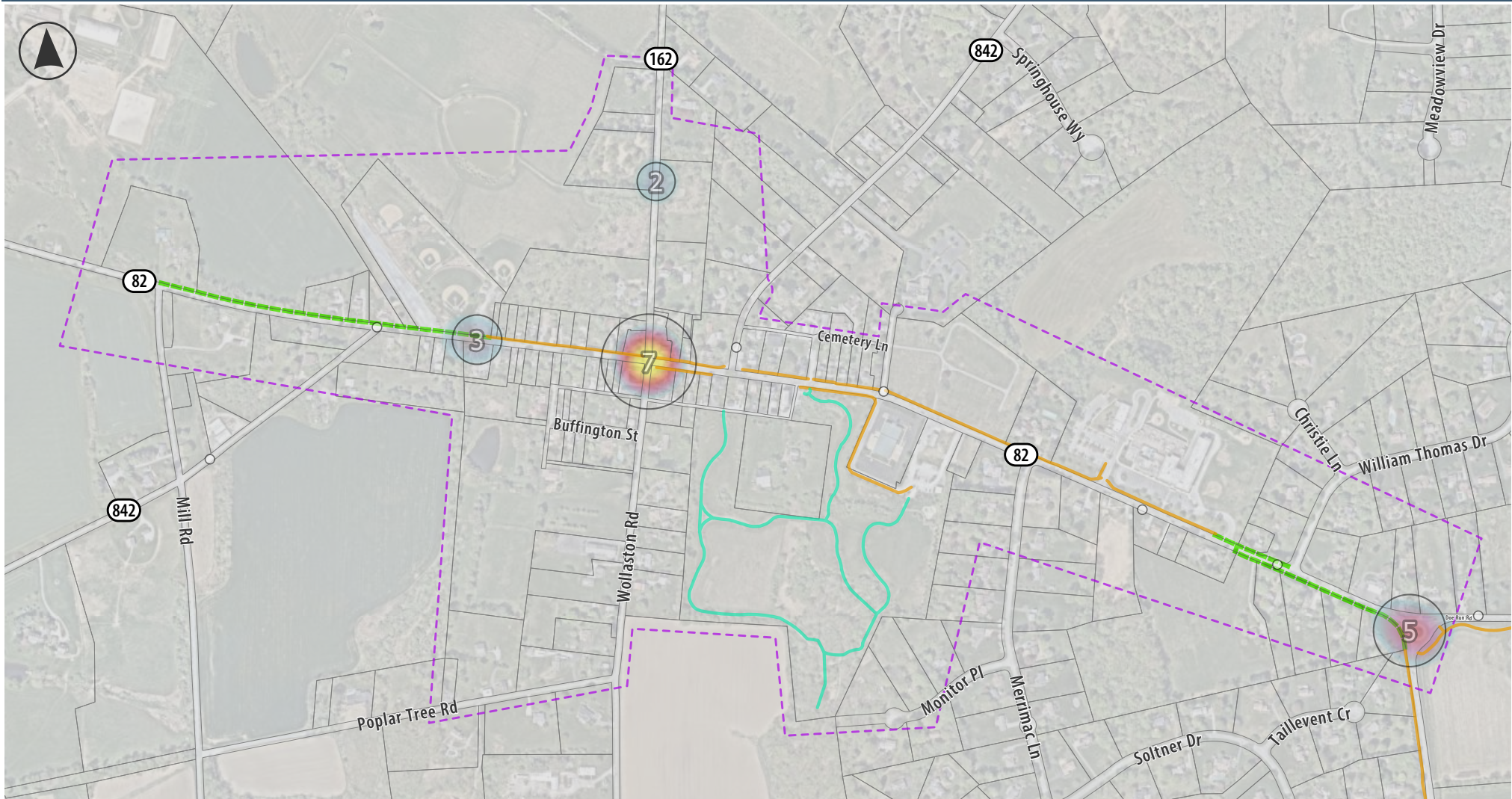
Using crash data from PennDOT's Pennsylvania Crash Information Tool (PCIT) database covering the period from January 2021 through December 2025, along with trail and pedestrian network data from the Chester County Planning Commission, an Existing Conditions Map was developed to better understand safety patterns and connectivity within Unionville village. This mapping effort highlights several notable trends, including a concentration of reported crashes at key locations such as the intersection of Route 82 and Route 162, the eastern roundabout, and the area surrounding the URA Ball Fields. These locations correspond with areas of higher traffic volumes, complex intersections, and increased pedestrian activity related to schools, recreation, and community destinations. When viewed collectively, the crash and trail data help illustrate how transportation safety concerns overlap with gaps and discontinuities in the existing walking and biking network within and around the village.

Pedestrian Facilities

The Existing Conditions Map also incorporates relevant pedestrian and bicycle facilities, proposed connections, and priority projects identified in Planning Kennett Connections, a county-supported active transportation planning effort focused on improving non-motorized connectivity between East Marlborough Township, Kennett Township, and Kennett Square Borough. Within Unionville, the Planning Kennett Connections plan identifies the village as a key focus area and includes several proposed projects intended to improve pedestrian safety and close critical sidewalk and trail gaps, particularly along Route 82 and near school and recreation facilities.



Existing Conditions Map



Legend

- Existing Sidewalks
- Existing Trails
- - - Proposed Projects (Kennett Connections)
- - - Study Area

Crash Density



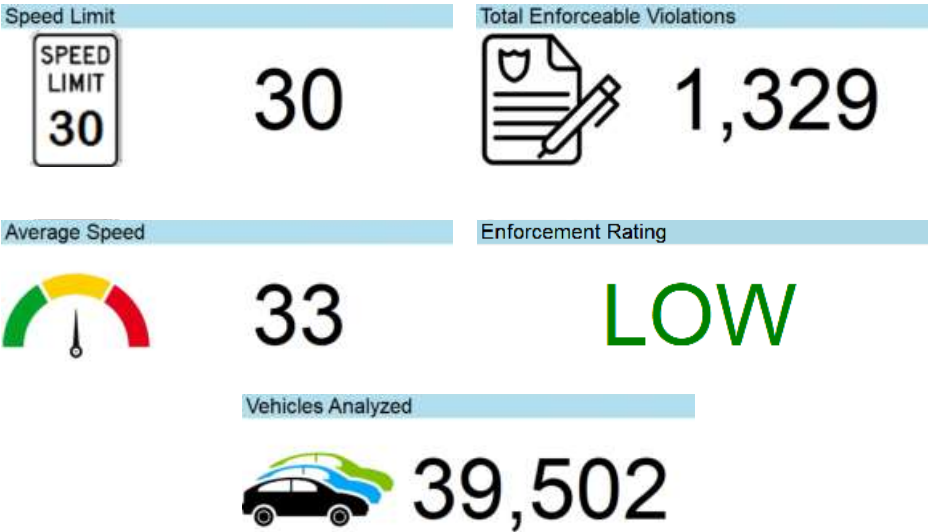
Crash Clusters

- Single Crash
- Few
- Many

Speed and Traffic

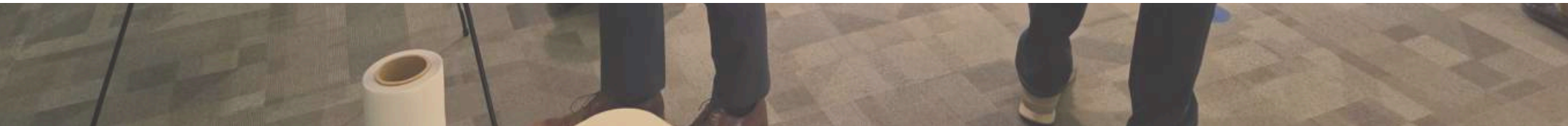
A recent speed study conducted by the East Marlborough Township Police Department at W. Doe Run Road and Cemetery Lane (April 23–29, 2026) provides additional insight into travel behavior within the village. The posted speed limit is 30 mph, with an observed average speed of 33 mph and an 85th percentile speed of 38 mph. A total of 1,329 enforceable violations (3% of vehicles) were recorded during the study period out of 39,502 vehicles, with the highest number of violations occurring during the evening hours. Overall, the enforcement rating for the location was categorized as low.

Traffic observations indicate notable congestion and queuing within the village, particularly at the PA 162 and PA 82 all-way stop. Parking limitations are also evident, especially along PA 82, where available space is constrained during peak activity periods. These conditions are documented in the accompanying photographs.





The Public Pulse



Steering Committee

The project began by bringing together key stakeholders to serve as the Steering Committee for the project. This included local residents, representatives from the East Marlborough Township, local organizations, area business owners, and other community partners.

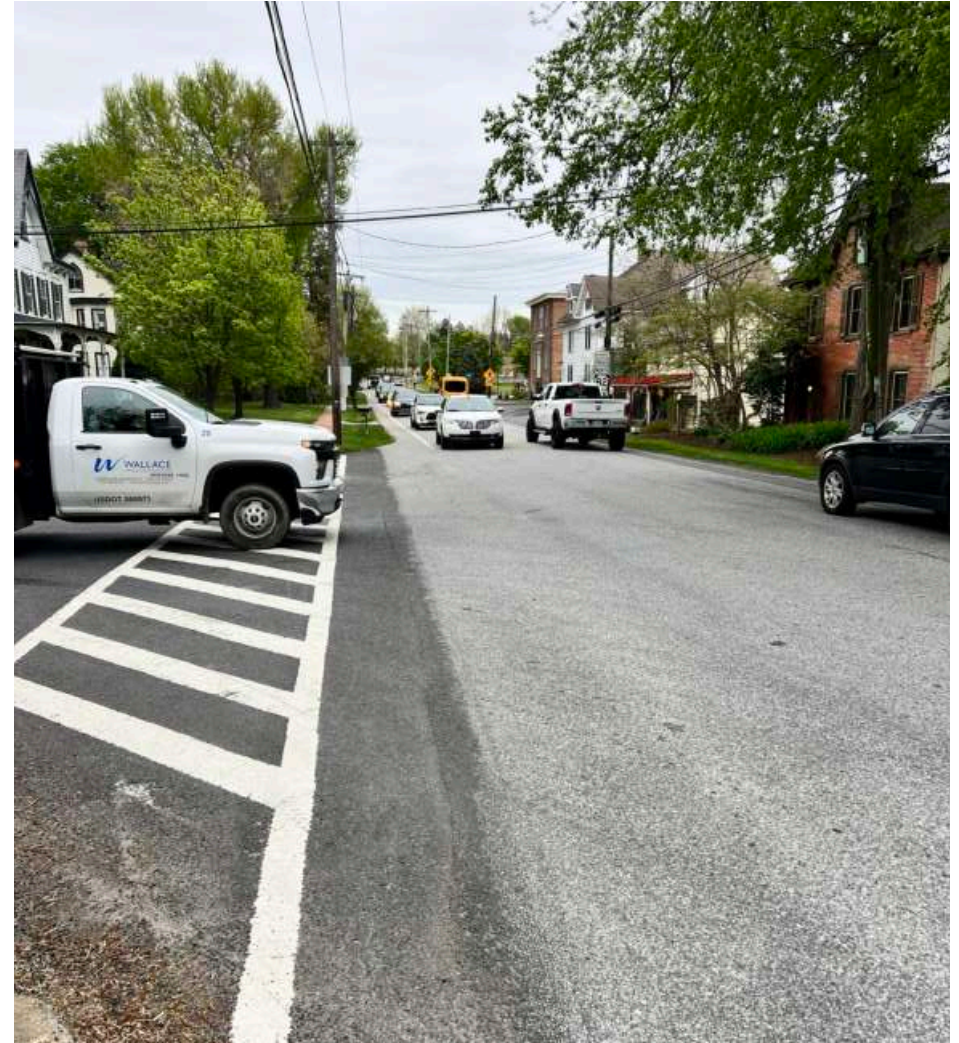
The initial Steering Committee meeting served as an overview of the project and how it fits in with past planning efforts within the village and region. It also set forth the expectations for committee's role throughout the project and provided an opportunity for the group to develop the plan's vision and goals. This meeting set the foundation for the work ahead and ensured that all voices were heard from the very beginning. The Steering Committee continued to meet regularly throughout the planning process to review materials, offer insights and recommendations, and help guide the development of the final plan.

Defining Project Success:

Committee members were asked to identify outcomes of the plan that they felt would make it a success or failure. These were then used to develop an overall Vision Statement for the plan supported by a set of implementable goals that can be tracked over time to gauge the success of the plan.

Successes:

- Residents feel heard and support the outcome
- Recommendations improve safety and connectivity
- Implementation strategies are coordinated, phased, and fundable
- The plan reflects Unionville's character



Failures / Risks:

- Recommendations are fragmented or unfundable
- Public input is insufficient
- Implementation responsibilities are overlooked
- Recommendations lack broad community support

Pedestrian Safety Audit

On April 28, 2026 the project team conducted a pedestrian safety audit with the Steering Committee as a way to observe the existing issues and potential opportunities to improve safety, access, and connectivity within the village. The group focused primarily on the PA 82 (Doe Run Road) corridor beginning at the URA Ballfields and continuing east past Unionville Elementary School to the roundabout.

The following section provides an overview of the pedestrian safety audit including a set of existing challenges and opportunities from participants. These findings helped highlight the existing conditions within the village and served as the foundation for the recommendations for improvements later in this report.

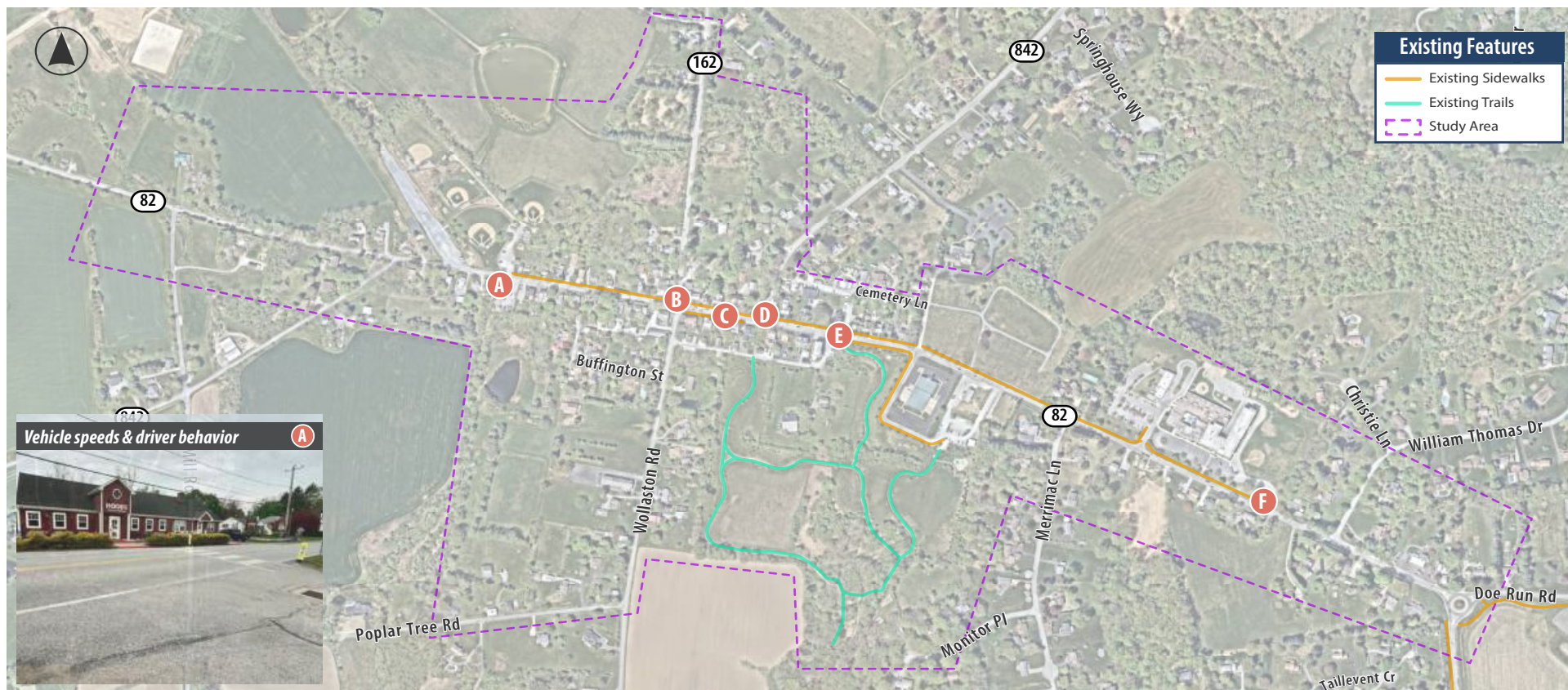


Participants observing historic character of village

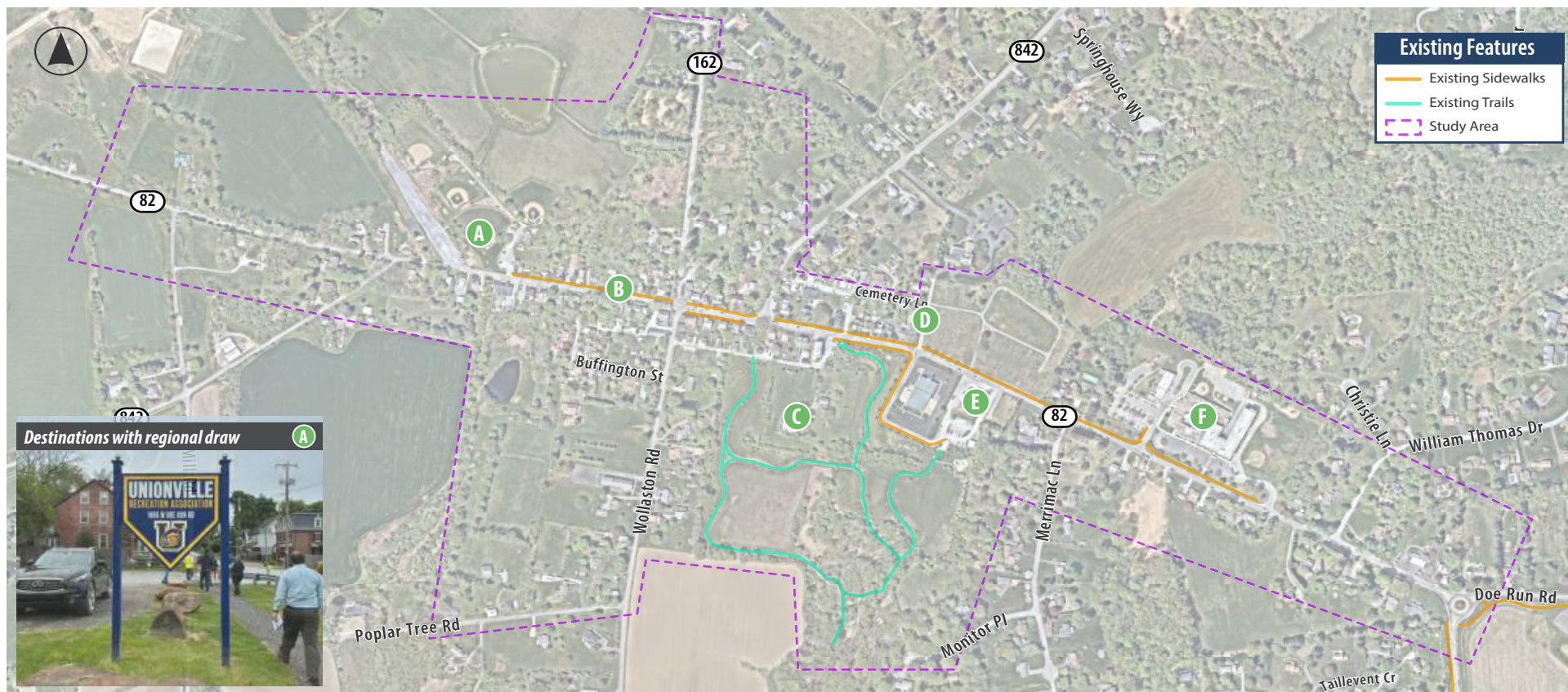


Audit group accessing crosswalk along their walking route

Existing Challenges



Existing Assets & Opportunities



Public Feedback Map

As part of the multifaceted public outreach approach, the Township hosted an online, interactive feedback map to gather input from residents regarding existing safety concerns, improvement ideas,

and key destinations/routes where they would like to travel. This map provided an important way for people who might not be able to attend in-person events to contribute to the plan.

Public Feedback Map Results



Key Takeaways

1. Walkability = #1 priority

- People want safe, convenient, and comfortable connections throughout the village

2. Addressing traffic speed

- Highlighted the top safety concern and improvement idea

3. Connectivity over expansion

- Linked sidewalks, trail networks, safer crossings as a interconnected effort not isolated improvements

4. Activate park as the community core

- Opportunity for events, trails, gathering spaces

Improvement Ideas

Sidewalk expansion & connectivity

- Fill existing gaps and explore new connections
- Focus along Route 82 to connect elementary school, middle school, high school to village

Community programming & placemaking

- Desire for activation, not just infrastructure
- Community park as potential hub for family friendly events and programming.

Traffic calming & pedestrian safety

- Speed bumps or other traffic calming measures
- Enhanced safety at crossings (updated crosswalks, pedestrian signals, flashing lights, etc.)

Safety Concerns

Speeding + driver behavior = need for traffic calming

- Biggest safety concerns highlights need for traffic calming along Route 82

People feel unsafe at existing crossings

- Issues with visibility, awareness, and driver behavior
- Combined with existing speeding issues and intersection design issues (blind corners, poor sight distances, etc.)

Sidewalk gaps = safety risk not just inconvenience

- Gaps lead to risky, unsafe walking conditions, especially for school children

Particular focus on safety around elementary school

- Sidewalks, turning lanes, crossings.

Preferred Routes

Trail creation & expansion

- Explore ways to connection neighborhoods to parks
- Formalize "informal" paths (need for easements/ landowner coordination)

Need to address existing sidewalk network gaps to connect key destinations within village.

Key Destinations

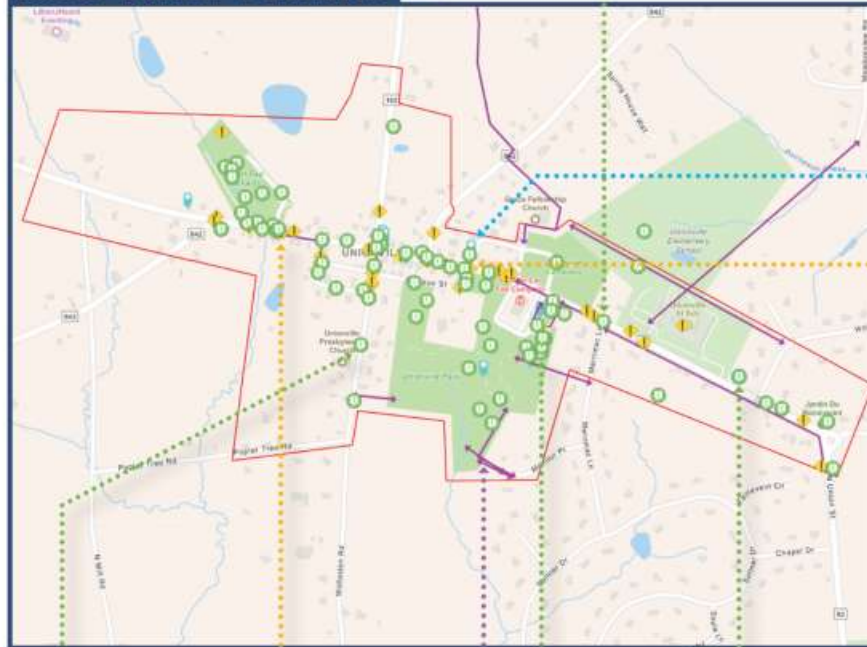
Existing anchors matter

- Farmer & Co highlighted as major draw
- Community Park viewed as natural focal point

Desire for new community gathering spaces

- Social/food destinations (e.g. ice cream)
- Multi-use family-oriented options

Most "Liked" Features



Community Design Charrette



Overview

The Unionville Village Master Plan incorporated a community design charrette as an alternative to a traditional public meeting to foster more meaningful and inclusive engagement. The two-night workshop brought residents, stakeholders, and planners together to collaboratively shape ideas and solutions in real time.

Night #1 featured a hands-on workshop where participants reviewed maps, developed a set of project goals, and brainstormed with the project team to come up with potential improvements. After the event, the project team developed a set of concepts to illustrate the ideas in a real word context. For the second night, the group reconvened to review the concepts and score them based on how well they met the project goals as well as indicate which projects should be prioritized.

By emphasizing dialogue and co-creation, the charrette helped strengthened community buy-in and resulted in more refined and locally informed project ideas. Ultimately, this approach enhanced both the quality of the master plan and the level of public support, ensuring that the vision for Unionville Village more accurately reflected the community's needs, values, and aspirations.

The graphic to the right provides an overview of the charrette process and the map spread on the following pages highlights the results of the concept prioritization exercise with the project ideas that people were most excited about making a reality. A more detailed overview of the full charrette process can be found in Appendix B.

Night#1 Participant Feedback & Ideas

Feedback and ideas from the community were used to develop a set of six project goals to guide the project.

Project Goals

Enhance Traffic Calming

Improve Walkability & Connectivity

Address Parking Needs Strategically

Foster Placemaking & Community Activation

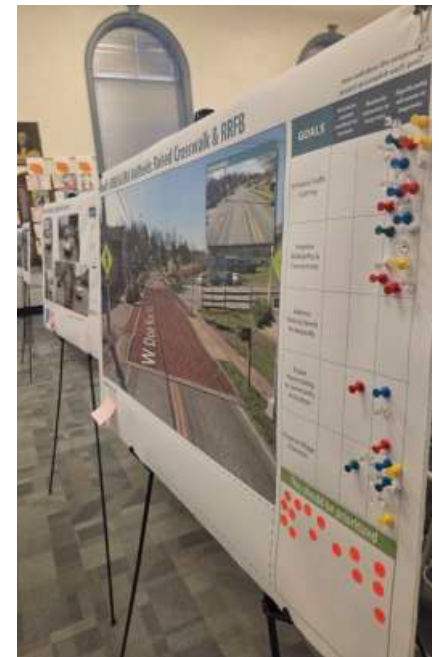
Preserve Village Character & Historic Feel

Integrate Green Stormwater Management

The goals helped the project team develop specific concepts that were highlighted during Night #2.

During Night #2, concepts were scored based on how well they accomplished each goal.

Night #2 Concepts



Number
of Priority
Votes

16

URA Ball
Fields

Doe Run Rd

842

125

16



82

115



Wollaston Rd

120



842

162

Jackson St

115



Concept Plan Prioritization Results

Concepts with Highest Number of Votes





Improvement Plan

Implementation Plan

The following chapter helps illustrate where and how potential improvements can be implemented throughout the village. Improvements are grouped by themes that were identified as priority goals during the charrette process. Each page presents a village-wide map with visual icons and descriptions to illustrate how the potential improvements could be realized.

The project team recognizes that in reality there will be overlap among themes and improvements that will need to be considered. This is particularly the case for the goals of Preserving Community Character/Historic Feel and Integrating Green Stormwater Management. In these cases each was viewed as an overarching goal to be considered and incorporated into each improvement project.

Some improvements will take more time and effort and focus on larger, long-term goals. Others are smaller in scale that can be completed sooner to help build excitement and maintain momentum. The final section of the chapter uses this distinction to put forth two sets of improvements: Near-Term Actions, and Medium & Long-Term Actions. The actions are presented spatially on a village-wide map as well as in an implementation matrix that can help the township and its partners strategically prioritize the next steps to move from planning to implementation.

Priority Goals



*Enhance
Traffic
Calming*



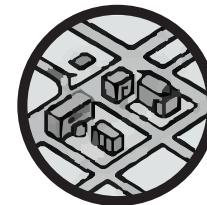
*Improve
Walkability &
Connectivity*



*Address
Parking Needs
Strategically*



*Foster
Placemaking
& Community
Activation*

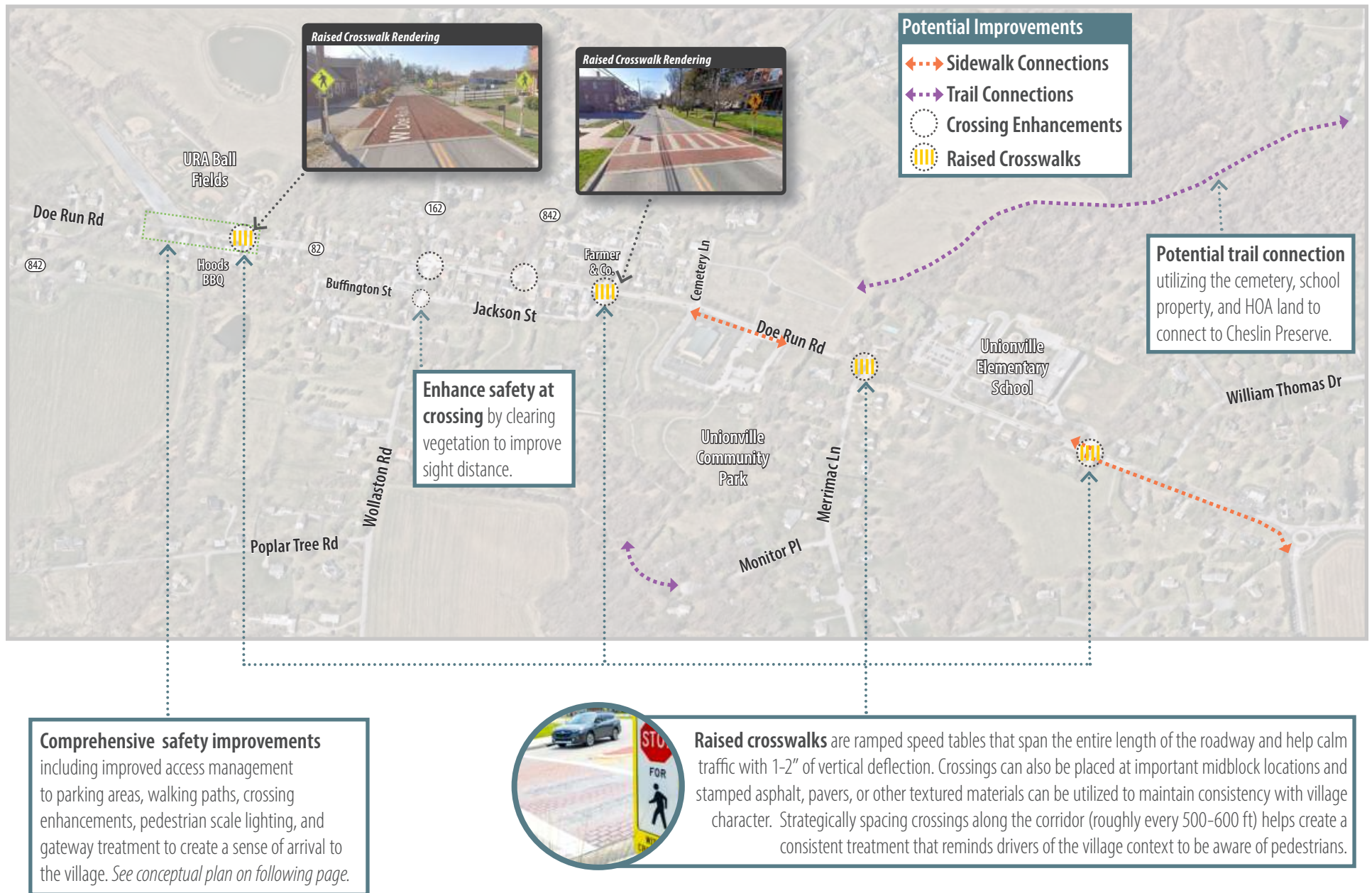


*Preserve
Community
Character/
Historic Feel*

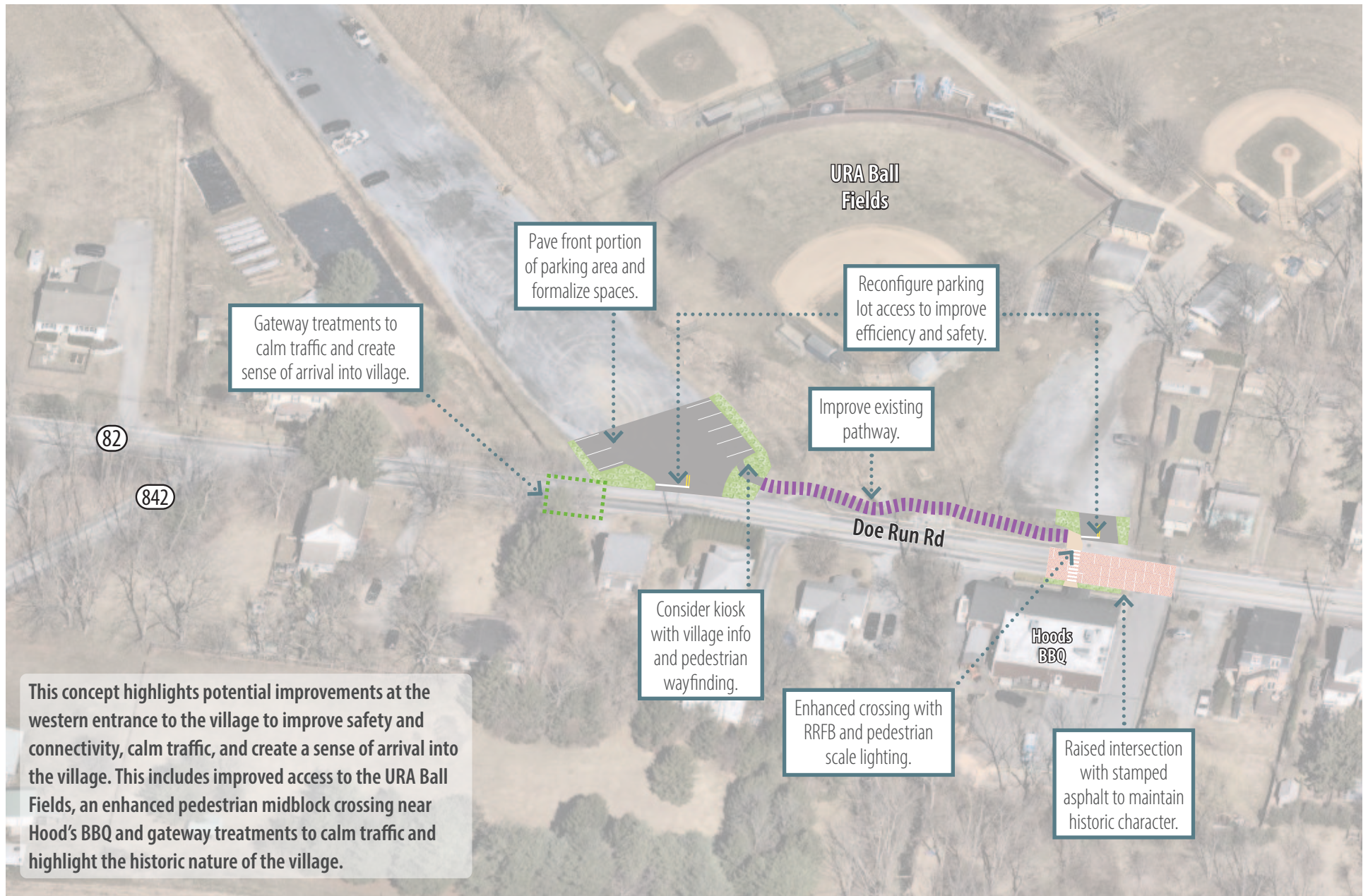


*Integrate
Green
Stormwater
Management*

Improve Walkability & Connectivity



Walkability & Connectivity - Concept Plan



Enhance Traffic Calming & Road Safety

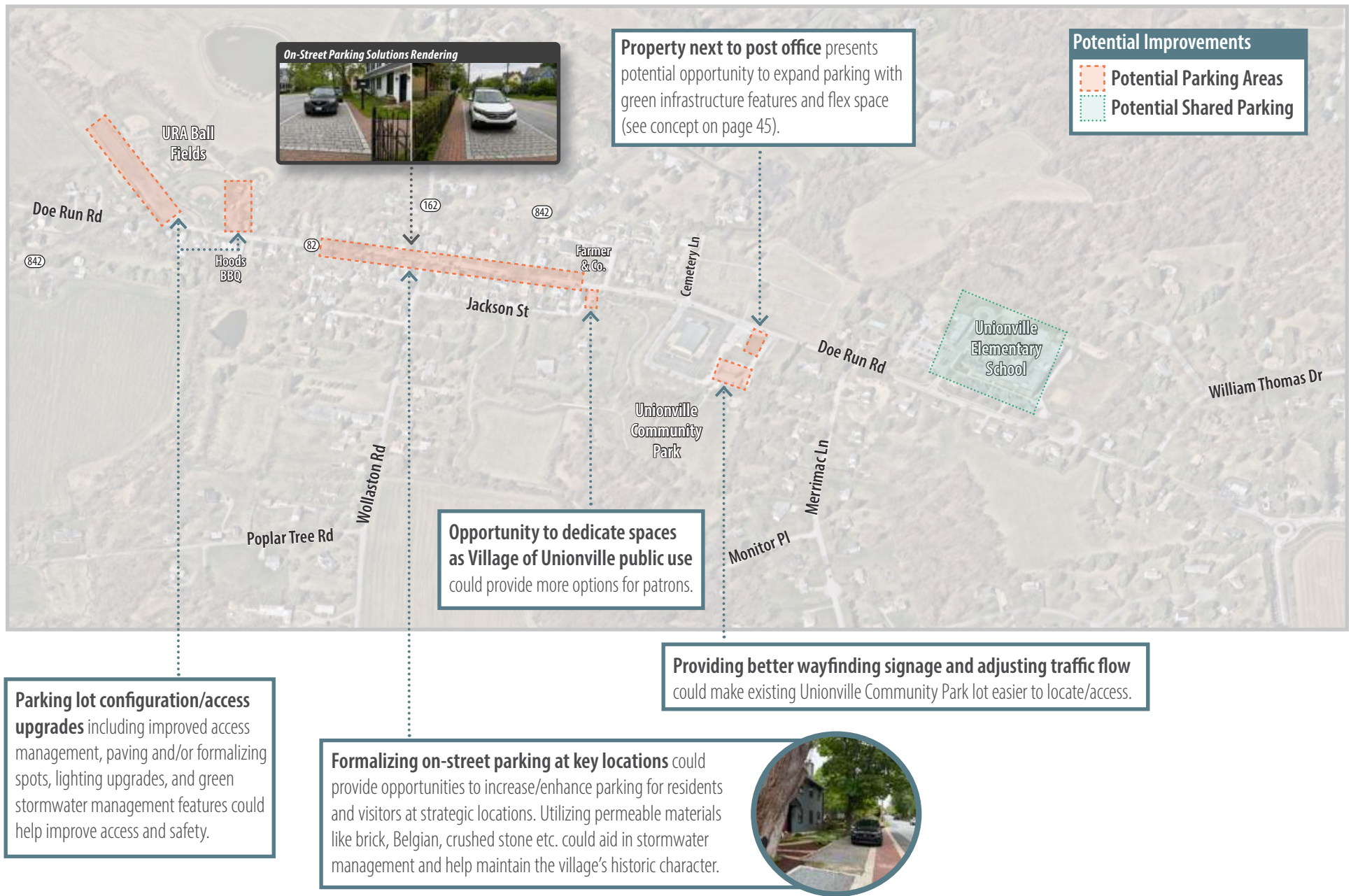


The PA 82 / PA 162 and PA 82 / PA 842 Intersections represent the two most challenging locations in the village in terms of congestion and traffic safety for all users. Safety enhancements at both locations could help calm traffic speeds, reduce congestion, and limit confusion not only at the intersection but for the corridor as a whole.

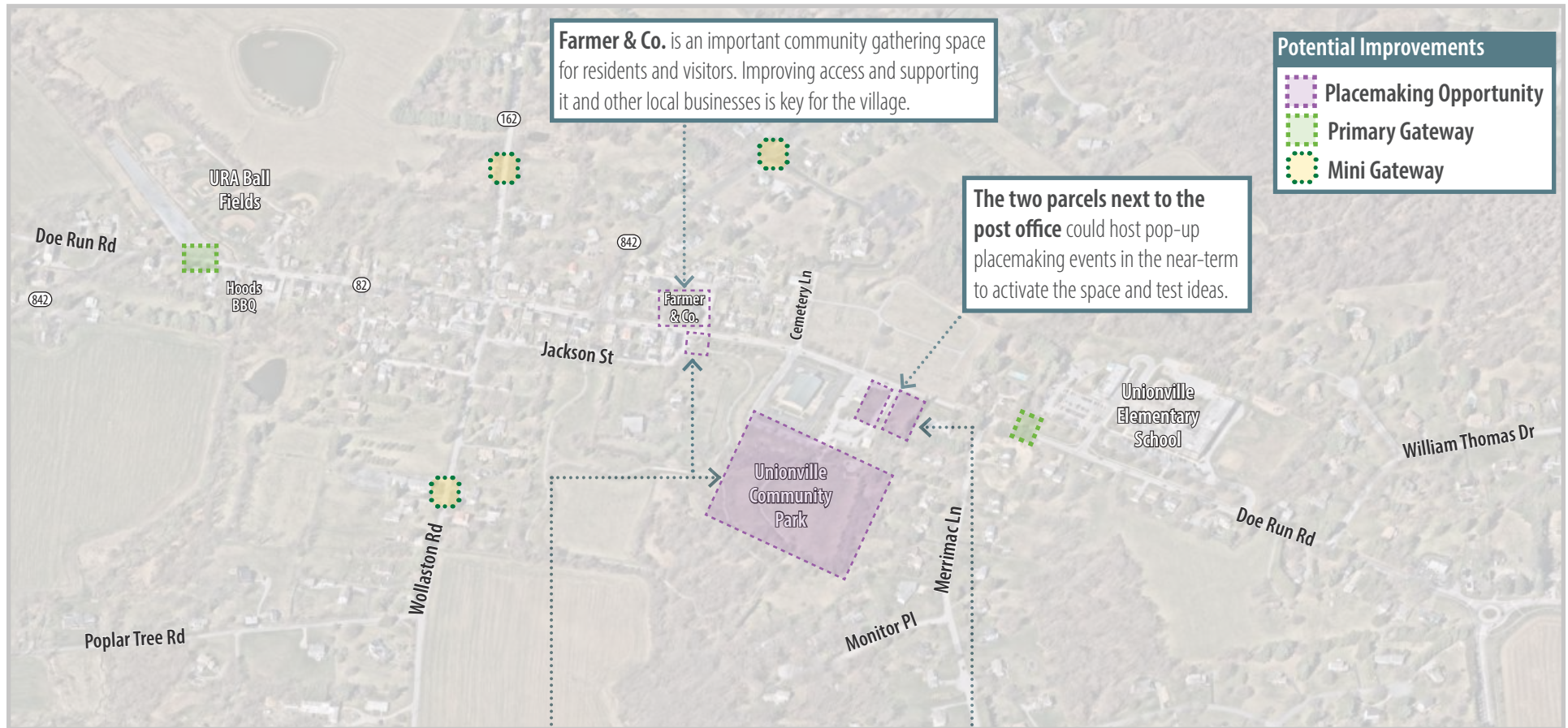


Gateway Treatments use a combination of special treatments at the entrance to the village to alert drivers to slow down due to a change in environment and creates a sense of arrival into the village. Treatments can include signage and landscaped areas on the roadside that create a cohesive look and feel that is consistent with the historic nature of the village. Where space is available, gateways can include landscaped medians or be integrated with pedestrian crossings to further enhance traffic calming.

Address Parking Needs Strategically



Foster Placemaking & Community Activation



Farmer & Co. is an important community gathering space for residents and visitors. Improving access and supporting it and other local businesses is key for the village.

The two parcels next to the post office could host pop-up placemaking events in the near-term to activate the space and test ideas.

Potential Improvements

- Placemaking Opportunity
- Primary Gateway
- Mini Gateway



Unionville Community Park is a vital resource for both recreation and as a community gathering place within the village. There are opportunities to enhance access, activate spaces, and expand community focused programming.



The parcel at 1756 W Doe Run Road and property next to Post Office are currently underutilized and represent an opportunity to develop the area into a flexible, community-minded gathering space that also increases the village parking supply.

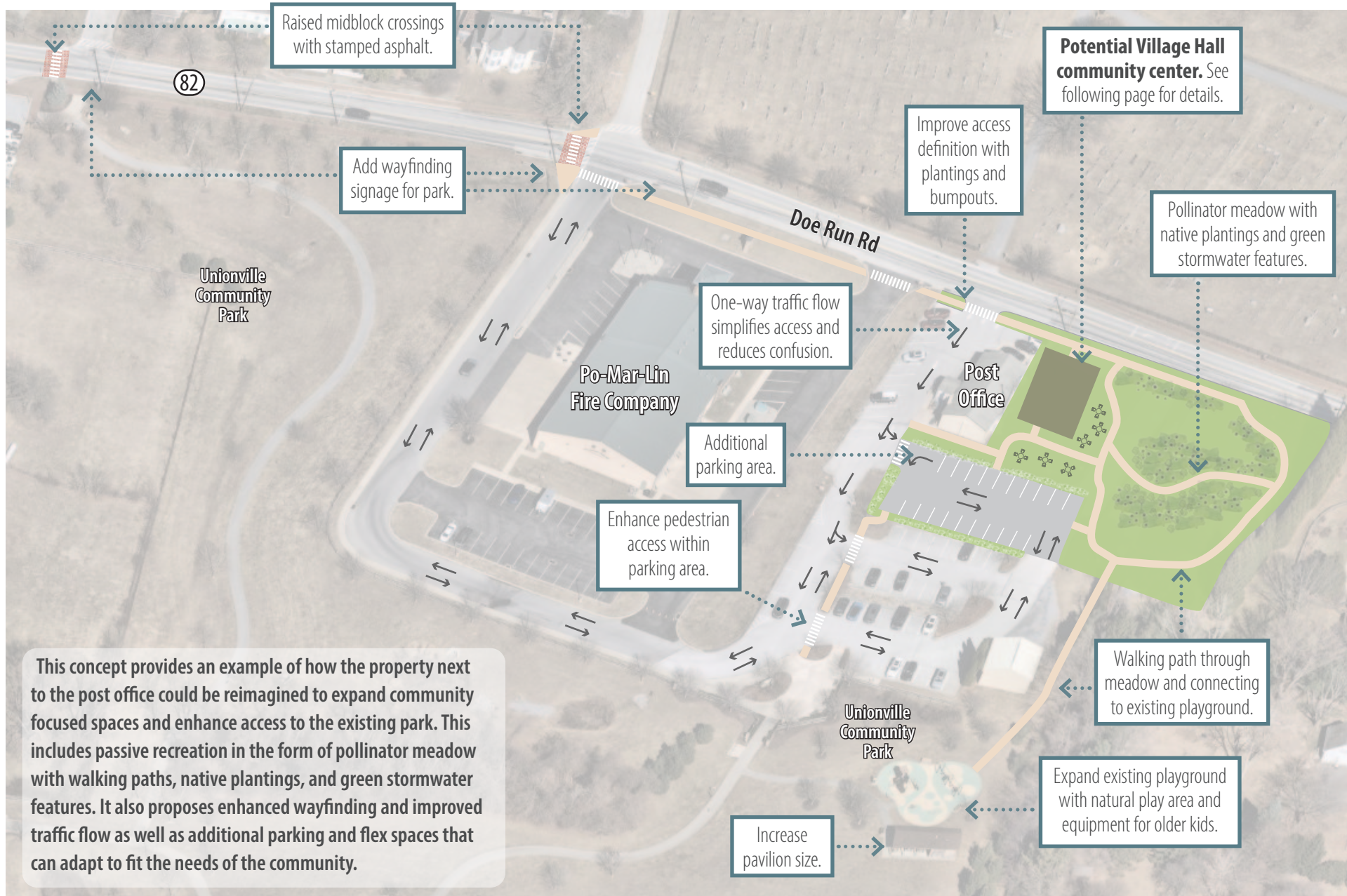
Near-term improvements:

- Eliminate secondary driveway to minimize confusion.
- Add wayfinding signage for park and parking areas.
- Develop interpretative signage explaining Unionville's history and resources
- Add benches and gathering space, visible from PA 82.

Medium & Long-term improvements:

- Consolidate access points and reconfigure traffic flow.
- Develop area as a flexible space that increases parking supply and community gathering spaces including a Village Hall community center.

Placemaking & Community Activation - Concept Plan



Village Hall Community Center

The idea of a centrally located Village Hall Community Center was a recurring theme throughout the various community engagement events. This was also highlighted as priority by project steering committee, particularly when brainstorming potential uses for the vacant, township owned properties next to the Post Office. Both groups pointed to the current lack of a dedicated community center as a major need within the village.

The Village Hall idea was viewed as an opportunity to provide a much needed community gathering place in the heart of the village. This multi-purpose facility would feature flexible space that could be adapted to the needs of the community. Some initial ideas for what this space could provide include:

- **Gallery space featuring local artists**
- **Museum showcasing village history**
- **Flexible co-working spaces**
- **Large meeting rooms**
- **Classroom space for community programs**
- **Outdoor gardens and trail access**
- **Commercial kitchen space**

Regional Examples



Ruston Conservation Center in Willistown Township provides flexible space for community gatherings, trails and outdoor resources, as well as rotating nature-based interactive educational exhibits.



The Gathering Place in Clarks Summit Borough features a community cafe, flexible work spaces, interactive art programs, neighborhood food pantry, and rotating gallery exhibits featuring local artists.

Project Phasing

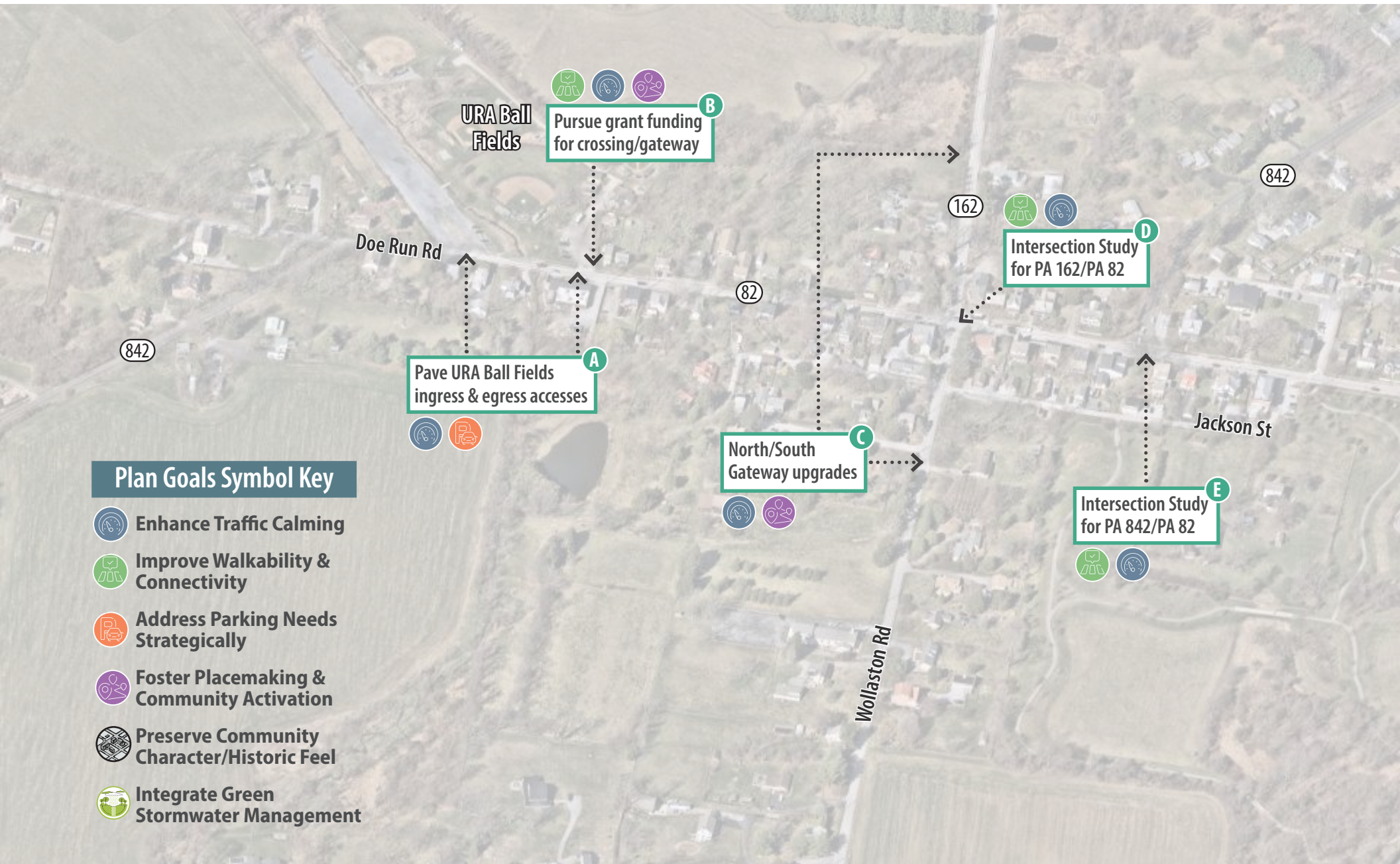
Some improvements will take more time and effort and focus on larger, long-term goals. Others are smaller projects that can be completed sooner and help build excitement and progress. Both types of improvements are important and creating a clear roadmap for how to move these projects forward is a key part of this plan.

The following section provides two sets of improvements based on project phasing and implementation to help the Township move from vision to reality.

- **Near-Term Actions:** improvements with shorter timelines and lower costs that can be community driven and help build momentum for the plan.
- **Medium & Long-Term Actions:** improvements that are more involved and may require additional studies, funding, and coordination to implement.

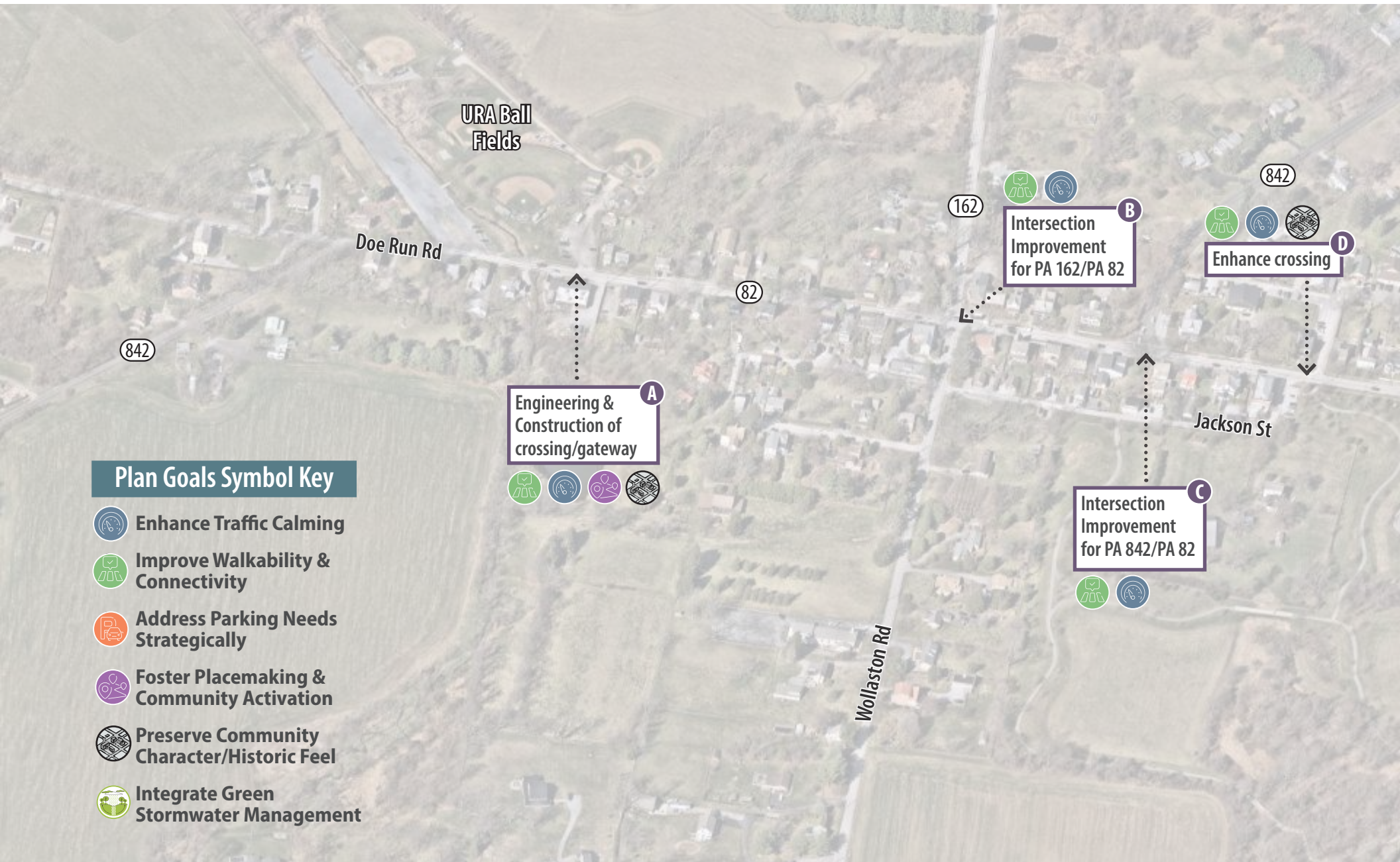
For each category there is an overview map that highlights the improvements as well as the **priority goals** they help accomplish. Following the maps is an action plan that provides additional information for each improvement including potential partners, the priority goals it meets, planning level cost estimates, and current status to track progress over time.





Near-Term Actions





Medium & Long-Term Actions





Action Plan

The following matrices can serve as a tool to identify improvements and track progress over time. Improvements are categorized into “Near-Term” (two years or less) that can be accomplished relatively quickly and help maintain positive momentum for the plan and “Medium & Long-term” (over three years) that may take more time, effort, and coordination to accomplish. Each improvement includes potential partners, the priority goals it meets, and planning level cost estimates to help future planning and prioritization efforts.

Plan Goals Symbol Key

-  **Enhance Traffic Calming**
-  **Improve Walkability & Connectivity**
-  **Address Parking Needs Strategically**
-  **Foster Placemaking & Community Activation**
-  **Preserve Community Character/Historic Feel**
-  **Integrate Green Stormwater Management**

Cost Range

\$	\$0 - \$100,000
\$\$	\$100,000 - \$250,000
\$\$\$	\$250,000 - \$1,000,000
\$\$\$\$	\$1,000,000 +

Time Frame

Near-Term	2 years or less
Medium & Long-Term	Over 3 years

Near-Term Improvements

ID	Description	Location	Partners	Goals	Cost
A	Pave URA Ball Fields ingress & egress to improve access and reduce confusion and potential conflicts.	PA 82 near URA Ball Fields	East Marlborough Township; URA	 	\$\$
B	Pursue grant funding for crossing/gateway to enhance pedestrian access, calm traffic, and create sense of arrival to village	PA 82 near URA Ball Fields and Hoods BBQ	East Marlborough Township; Friends of Unionville	  	\$*
C	North/South Gateway upgrades to calm traffic and signal entrance to the village.	PA162 northbound and southbound to village	East Marlborough Township; Friends of Unionville	 	\$
D	Intersection Study for PA 162/PA 82 to explore options to improve operations and enhance safety.	PA 162 & PA 82	East Marlborough Township; Friends of Unionville	 	\$*
E	Intersection Study for PA 842/PA 82. to explore options to improve operations and enhance safety.	PA 842 & PA 82	East Marlborough Township; Friends of Unionville	 	\$*
F	Improve park signage & wayfinding to increase awareness of park and improve access.	Cemetery Lane & PA 82	Friends of Unionville	 	\$
G	Add sidewalk connection to enhance safety and connectivity.	PA 82 in front of Fire Department & Post Office	East Marlborough Township		\$\$
H	Activate underutilized space through community events and placemaking.	East Marlborough Land Trust (1756 W Doe Run Rd)	Friends of Unionville		\$
I	Install Village Gateway Signage to calm traffic and signal entrance to the village.	PA 82 near Unionville Elementary School	East Marlborough Township; Friends of Unionville; UCFSD	 	\$
J	Secure grant funding for sidewalk connection to fill existing gap in the pedestrian network.	PA 82 from roundabout to Unionville Elementary School	East Marlborough Township; Friends of Unionville	 	\$*

Plan Goals Symbol Key



Enhance Traffic Calming



Foster Placemaking & Community Activation



Improve Walkability & Connectivity



Preserve Community Character/Historic Feel



Address Parking Needs Strategically



Integrate Green Stormwater Management

Cost Range

\$	\$0 - \$100,000
\$\$	\$100,000 - \$250,000
\$\$\$	\$250,000 - \$1,000,000
\$\$\$\$	\$1,000,000 +

*Cost for feasibility study only

Medium & Long-Term Improvements

ID	Description	Location	Partners	Goals	Cost
A	Engineering & Construction of crossing/gateway to enhance pedestrian access, calm traffic, and create sense of arrival to village	PA 82 near URA Baseball Fields	East Marlborough Township; Friends of Unionville	   	\$\$\$\$
B	Complete intersection improvements for PA 162/PA 82 to improve operations and enhance safety.	PA 162 & PA 82	East Marlborough Township	 	TBD
C	Complete intersection improvements for PA 842/PA 82 to improve operations and enhance safety.	PA 842 & PA 82	East Marlborough Township	 	TBD
D	Enhance pedestrian crossing to improve connection to park and local businesses and help calm traffic along PA 82.	Farmer & Co. and Unionville Community Park Entrance	East Marlborough Township; Friends of Unionville	  	\$\$\$
E	Park enhancements with parking expansion to reimagine currently underutilized space in a way that it flexible and meets the needs of the community.	Parcel next to Post Office	East Marlborough Township; Friends of Unionville	 	\$\$\$
F	Trail connection utilizing the cemetery, school property, and HOA land to connect to Cheslin Preserve.	Cemetery property, Unionville Elementary School and HOA property	East Marlborough Township; Friends of Unionville		TBD
G	Install sidewalk connection to fill existing gap in pedestrian network	PA 82 from roundabout to Unionville Elementary School	East Marlborough Township	 	\$\$\$
H	Village Hall Community Center	Parcel next to Post Office	East Marlborough Township; Friends of Unionville	   	\$*

Plan Goals Symbol Key



Enhance Traffic Calming



Foster Placemaking & Community Activation



Improve Walkability & Connectivity



Preserve Community Character/Historic Feel



Address Parking Needs Strategically



Integrate Green Stormwater Management

Cost Range

\$	\$0 - \$100,000
\$\$	\$100,000 - \$250,000
\$\$\$	\$250,000 - \$1,000,000
\$\$\$\$	\$1,000,000 +

* Cost for feasibility study only

Village-Wide and Programmatic Recommendations

In addition to location-specific improvements, several key recommendations apply broadly across Unionville Village, a national Register Historic District, and are not confined to a single site. These recommendations are intended to support implementation, strengthen the village identity, improve day-to-day function, and position the Township and community partners to pursue funding more effectively. Together, these actions complement the mapped capital projects by addressing operations, branding, maintenance, coordination, and long-range planning.

These recommendations should be considered ongoing or phased implementation tools rather than one-time projects. Some may be pursued immediately at relatively low cost, while others may require additional planning, inter-agency coordination, or outside funding. Similar to improvements, each programmatic recommendation is categorized as either Ongoing, Near-Term or Medium-Term, or Long-Term and includes a high level cost range to help the township plan for future implementation/phasing.

Time Frame			Cost Range	
	Ongoing	<i>Ongoing</i>	\$	\$0 - \$100,000
	Near-Term	<i>2 years or less</i>	\$\$	\$100,000 - \$250,000
	Medium-Term	<i>3 - 5 years</i>	\$\$\$	\$250,000 - \$1,000,000
	Long-Term	<i>Over 5 years</i>	\$\$\$\$	\$1,000,000 +

Wayfinding, Branding, & Sign Design

Unionville Village should establish a consistent visual identity for future wayfinding, gateway, and visitor-oriented signage that is in keeping with the historic nature of the village. A coordinated system of sign designs, colors, fonts, materials, and information hierarchy will help future improvements appear intentional, recognizable, and cohesive.



Example of historic wayfinding signage

This effort should include preparation of a Wayfinding and Sign Design Style Guide to inform all future signage investments. The guide should address vehicular gateway signs, pedestrian-oriented welcome signs, park and parking wayfinding, interpretive signage, kiosks, and other public information features. The purpose of this guidance is to create a cohesive village brand and avoid piecemeal signage that varies in style, legibility, or materials.

Visitor-oriented information features, such as kiosks, welcome signs, and pedestrian-scale maps, should be installed in key locations to help residents and visitors understand village destinations and travel routes. Signage should distinguish between motorist-oriented guidance and pedestrian-focused information, with pedestrian elements emphasizing village orientation, walking routes, public spaces, and community resources.

Implementation Considerations

- Prepare a village-wide wayfinding and branding style guide.
- Use consistent fonts, colors, sign forms, and materials across all public signs.
- Coordinate gateway, park, parking, and wayfinding under one visual identity.
- Consider kiosks or similar features in key gathering areas to support orientation and community identity.



Village Information, Orientation, and Visitor Resources

Unionville Village should develop a clear, adaptable system for communicating village information to residents and visitors, including information on the history of the village. This system should support orientation for people arriving in the village, particularly pedestrians and visitors unfamiliar with local destinations, trails, parking areas, and public spaces.



Example of informational kiosk with wayfinding

Village information may be provided through a kiosk, printed orientation materials, a publicly maintained village map, or a combination of formats. Because community information and destinations can change over time, mapping and informational resources should be designed for periodic updates.

This recommendation aligns with the broader branding and wayfinding effort and should be treated as part of a cohesive public communication strategy for the village.

Implementation Considerations



- Develop a village orientation resource for residents and visitors.
- Include walking routes, public destinations, and community assets as appropriate.
- Coordinate informational materials with the broader wayfinding and branding system.

Arts, Artisans, and Cultural Identity

Unionville Village should recognize and celebrate its tradition of artists and artisans as part of its broader placemaking strategy. Future public spaces, events, and interpretive features should create opportunities to highlight local creativity and reinforce this aspect of village character.



Art in the Park Installation

This recommendation should support public art, temporary installations, artisan-focused events, interpretive features, and other low- or moderate-cost placemaking strategies that reinforce the village's cultural identity. The intent is not to lock the village into a single program type, but rather to create a framework for celebrating local creativity as part of the public realm.

Implementation Considerations



- Incorporate arts and artisan identity into placemaking and community programming.
- Consider public art, temporary exhibits, and interpretive elements in public spaces.
- Use community events and gathering spaces to celebrate local cultural traditions.

Maintenance and Vegetation Management

Unionville Village should implement ongoing maintenance practices that preserve sidewalk function, pedestrian routes, visibility, and roadside vegetation. Regular attention to vegetation encroachment, sight distance, and crossing conditions will help sustain safe and comfortable pedestrian access throughout the village.



Overgrown vegetation along PA 82

This recommendation should call for a proactive village maintenance approach that preserves clear pedestrian passage, protects visibility for motorists and walkers, and maintains the intended function of sidewalks, paths, and crossings. Maintenance should be coordinated in a way that respects village character while still addressing safety concerns.

Informal or semi-formal pedestrian routes that serve practical community connections should be preserved and improved where appropriate. These routes may benefit from stabilization, clearer definition, drainage improvements, or surface upgrades without necessarily requiring full reconstruction.

Implementation Considerations



- Maintain clear sight distance at intersections, crossings, and driveway connections.
- Manage vegetation encroachment along sidewalks, paths, and roadside edges.
- Preserve pedestrian access along established village routes.
- Improve and stabilize informal walking paths where they serve a useful access function.

Utility Infrastructure and Undergrounding

Unionville Village should explore opportunities to reduce the visual and operational impacts of overhead utility lines. Where feasible, utility undergrounding should be considered as a long-term strategy to support village character, improve streetscape quality, and strengthen infrastructure reliability during severe weather events.



Existing overhead utility lines along PA 82

A utility undergrounding recommendation would not commit the Township to immediate construction, but it would formally establish the issue as part of the village improvement agenda. This would help support future funding discussions, infrastructure coordination, and incremental implementation if opportunities arise through roadwork, redevelopment, or utility system upgrades.

Because utility undergrounding is expensive and technically complex, the recommendation should be framed as a long-term initiative requiring feasibility review, coordination with utility providers, and prioritization of the most sensitive or visible areas first.

Implementation Considerations



- Evaluate the feasibility of burying overhead utilities in priority village segments.
- Coordinate utility planning with future roadway, streetscape, and placemaking projects.
- Consider utility burial as both a character-preservation and resilience strategy.

Stormwater and Resiliency Preparedness

Unionville Village should strengthen its long-term preparedness for stormwater, severe weather, and infrastructure disruptions by incorporating resilience considerations into future public improvements.

Future village projects should integrate stormwater management, green infrastructure, and resilient design practices wherever feasible. Potential strategies include rain gardens, landscape-based stormwater treatment, improved drainage design, and coordinated improvements that reduce localized flooding, protect public infrastructure, and support more reliable access during and after major storm events.

Roadway, utility, parking, streetscape, and pedestrian projects should be evaluated for opportunities to improve drainage performance and weather resilience. Addressing these needs early in project development can reduce long-term maintenance demands, improve community preparedness, and strengthen the competitiveness of future grant applications.



Green stormwater management example

Implementation Considerations



- Integrate stormwater and resilience considerations into all future capital projects.
- Evaluate green infrastructure opportunities as part of parking, streetscape, and public space improvements.
- Coordinate village improvements with broader planning for larger storm events and infrastructure reliability.

Park Planning and Future Master Planning

Unionville Village should prepare a broader planning framework for the Unionville Community Park area beyond the site-specific improvements shown on the plan maps. A future park master plan should guide long-term decisions about circulation, gathering spaces, age-appropriate recreation, new facilities, and connections between the frontage area and the remainder of the park.

The park master plan should test improvement concepts, establish priorities, define feasible project phases, and clarify how future investments fit together. Planning should consider expanded community gathering facilities, improved play opportunities for older children and teenagers, trail and natural play elements, and stronger integration between the frontage parcel and the existing park.

Before advancing major new facilities, the Township should complete due diligence on parcel conditions, prior grant obligations, and permitted uses within the park area. This review should inform the scope, phasing, and feasibility of future park improvements.



Implementation Considerations



- Prepare a master plan for the Unionville Community Park area to guide phased improvements.
- Evaluate facility needs, circulation, gathering space, trails, and recreation for a wider range of age groups.
- Confirm parcel limitations, prior grant restrictions, and permitted uses before advancing major capital improvements.

Investment in Open/Green Space

Preserving open/green space within the village remains critical to maintaining the rural character, scenic views, and historic setting that define the community. Although parcels that could be further developed are limited in number, the impact of development could be significant. The Township should continue to evaluate opportunities for open/green space preservation through conservation easements or fee-simple acquisition.



Investment in open/green space also provides important environmental benefits. Conserved lands help protect natural resources, support wildlife habitat, preserve agricultural landscapes, and maintain natural drainage patterns. Protecting key parcels can help reduce the impacts of future development and conserve the environmental features that contribute to the village's character.

Open space preservation also enhances quality of life by protecting viewsheds and reinforcing Unionville's historic atmosphere. Proactively identifying and preserving priority properties can help ensure that future growth respects community character while safeguarding valuable open lands for future generations.

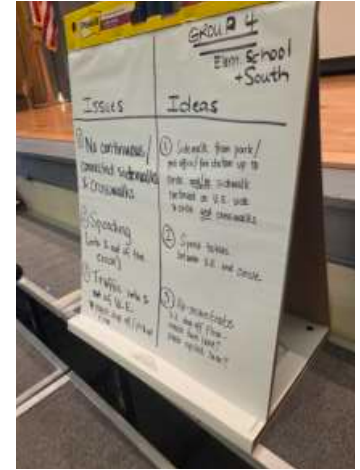
Implementation Considerations



- Identify and prioritize open space parcels that contribute to village character, scenic views, and environmental resources
- Pursue partnerships and funding opportunities to support long-term open space preservation efforts.
- Prioritize easements over fee-simple acquisition where possible for undeveloped parcels.

Regional Planning Efforts

Continued engagement in regional initiatives is important to ensuring that the Village of Unionville benefits from investments, planning efforts, and partnerships occurring throughout the surrounding area. Participation in these efforts helps ensure that local priorities are represented and that the village benefits from regional investments and partnerships.



Continued support for implementation of the Unionville Regional Comprehensive Plan and Kennett Connects Plan and participation in the Regional Trails Commission can enhance connectivity, expand recreation opportunities, and strengthen links between Unionville and surrounding communities. These initiatives can also help position the village for future funding opportunities.

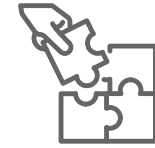
Ongoing coordination with the Unionville-Chadds Ford School District (UCFSD) is equally important to address shared transportation, safety, and community planning needs. Maintaining strong regional partnerships will help the village leverage resources, address common challenges, and pursue projects that benefit residents and businesses.

Implementation Considerations



- Participate in regional planning initiatives that support community goals and connectivity.
- Support implementation of the Kennett Connects Plan and regional trail projects.
- Maintain regular coordination with the UCFSD on transportation, safety, and community planning efforts.

Strategic Funding & Partnership Development



Seeking funding and implementation resources - organizational partners, funding programs, or technical assistance - should be a strategic consideration on a routine basis. Appropriately connecting proposed actions and projects with sources of funding and capacity (such as technical assistance or staff/volunteer time) is a critical part of implementation. Routine coordination should take place between the community and potential funding organizations that share overlapping interests (such as recreation, physical and mental wellbeing, or economic development), with discussion focusing on how resources could be matched to proposed actions and projects. Within the community, there should be a clear priority and lead entity that approaches a potential funding partner.

For existing programs with periodic application cycles, being mindful of timing for applications is essential, as is contacting the administrator of the programs to talk through what project or action best carries forward the intentions of the community and the funding program. At times a specific project or local implementing organization may not be ready to seek funding, but building relationships over time is an important part of consistently matching resources to needs. Other organizations and resource opportunities may be less consistently a fit but can play a vital role in closing funding gaps to bring a project across the finish line.

Resourcing projects requires consistently talking with partners, seeking new partners, being open to collaboration, and responding to the focus of the community and partners. The information that follows provides information on organizations and individual programs that are applicable to advancing the vision, goals, and actions of this plan.

National Programs

AARP is increasingly involved in community livability, offering guides and small grant programs on livability for all ages (housing, recreation, public spaces, accessibility, etc.), including the annual Community Challenge grant for quick-action projects

Main Street America leads a movement committed to strengthening communities through preservation-based economic development in older and historic downtowns and neighborhood commercial districts. They offer various programs and training events, and share information on various grant programs (their own, and others such as AARP and Project for Public Spaces).

Statewide

PA Downtown Center (the Main Street America affiliate) and PA Department of Community and Economic Development both offer technical resources and funding for community development projects (including the new Main Street Matters program), while the PA Department of Conservation and Natural Resources support is more specific to recreation (including the longstanding Community Conservation Partnerships Program-C2P2-program).

PA Historical and Museum Commission offers grant funding for construction projects and protection of historic resources. PA Humanities, an independent nonprofit, helps more Pennsylvanians experience the humanities and put them in action through civic engagement, education, and building community.

Local

Longwood Foundation welcomes grant applications from organizations seeking to improve the quality of life and future in Delaware or the Kennett Square area (specifically within a four-mile radius of Longwood Gardens; Unionville is within this radius). The deadlines for Spring and Fall grant cycles are March 1 and September 1.

Square Roots Collective is a social impact venture igniting systemic change in Southern Chester County, building local initiatives focused on catalyzing collaboration, opportunity, and transformation in our communities. Their Square Roots Community Initiative is focused on providing grants to non-profits and other community partners to ignite systemic change.

The E. Kneale Dockstader Foundation supports educational, charitable, and scientific activities that enhance and optimize the natural environment in southern Chester County (their service area includes East Marlborough Township). Proposals are accepted from February 1 – April 1 each year. The Dockstader Foundation nurtures programs that make connections with, and builds understanding of our environment in this region.

Chester County government, through both the Planning Commission and Parks + Preservation, may offer grants for planning purposes and enhancing access and use of public recreation areas.

PECO Green Region Open Space Program awards grants for southeastern Pennsylvania municipal efforts to preserve, protect, and improve open spaces.





Funding Opportunities

Leveraging diverse funding sources is a cornerstone of implementation. Federal, state, regional, county, and private funding programs each play a role in advancing pedestrian and bicycle investments. An implementable action plan positions the village to be competitive for grants, to coordinate improvements alongside roadway, utility, or redevelopment projects, and to maximize the impact of limited local resources.

Identifying funding is a critical next step to advance design or construction for any capital improvement. Some projects may be relatively low cost, implementable by staff or volunteers, or tied to another project. Others may require phasing and funding from multiple sources.

Information about potential funding options and opportunities is available as part of the PennDOT Connects initiative. There are a number of competitive grant funding programs that could be pursued, specifically for safety as well as bicycle and pedestrian improvements.

A summary of the current competitive grant programs is provided on the following pages. Each grant program has different eligibility for the type of project, use of funds, matching requirements, and timelines for implementation. Grant programs typically require the project sponsor to provide matching funds.

Summary of Current Competitive Grant Programs

Please refer to specific funding program for most recent guidance or eligibility criteria

	Program <i>Administering Agency</i>	Details	Eligible Project Phases				Anticipated Application Period
			Planning	Design	ROW	Construction	
1	Safe Streets and Roads For All • U.S. Department of Transportation	- Federal transportation funds 20% match requirement - Planning and Demonstration Grants: \$100,000 - \$10 million - Implementation Grants: \$2.5 - \$25 million; Projects must be identified in an Action Plan	●	●	●	●	Annual
2	Green Light – GO • Pennsylvania Department of Transportation (PennDOT)	- State funds (Act 101) - Grant funds improvements to existing traffic signals 20% match	●	●	●	●	Annual: November – February
3	Automated Red Light Enforcement (ARLE) • Pennsylvania Department of Transportation (PennDOT)	- Traffic signal upgrades and safety improvements - Funded by revenue from automated red light enforcement - No match required, no minimum or maximum request amounts	●	●	●	●	Annual: April – June
4	CFA/DCED – Multimodal Transportation Fund (MTF) • Commonwealth Financing Authority (CFA) with Department of Community and Economic Development (DCED)	- Annual competitive grant program for state funds (Act 89) 30% match (recently waived for municipalities); \$100,000 minimum, \$3 million maximum 2 – 3 year timeframe to complete the grant funded activities - Design and engineering cannot exceed 10% of the grant award		●	●	●	Annual: March – July

	Program <i>Administering Agency</i>	Details	Eligible Project Phases				Anticipated Application Period
			Planning	Design	ROW	Construction	
5	PennDOT – Multimodal Transportation Fund (MTF) Pennsylvania Department of Transportation (PennDOT)	- Annual competitive grant program for state funds (Act 89) 30% match (based on grant award); \$100,000 min; \$3 million max 3 year timeframe to complete the grant funded activities - Design and engineering cannot exceed 10% of the grant award		●		●	Annual: September – November
6	Transportation Alternatives Set Aside (TASA) Pennsylvania Department of Transportation (PennDOT)	- Federal transportation funds - Match requires funding all pre-construction activities \$50,000 minimum and \$1 – \$1.5 million maximum 2 year timeframe to complete design, right-of-way, and utility clearance				●	Biennial (Typical)
7	Local Share Account (LSA) – Statewide Commonwealth Financing Authority (CFA) with Department of Community and Economic Development (DCED)	- Competitive grant program for distribution of gaming revenues through the state - No match required; \$25,000 minimum; \$1 million maximum	●	●	●	●	Undefined
8	Greenways, Trails, and Recreation Program (GTRP) Commonwealth Financing Authority (CFA) with Department of Community and Economic Development (DCED) & Department of Conservation of Natural Resources (DCNR)	- Annual competitive grant program for state funds (Act 13) 15% match; \$250,000 maximum 2-3 year timeframe to complete the grant-funded activities - Design and engineering cannot exceed 10% of the grant award		●		●	Annual: February – May





Appendices

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Community Design Charrette



Overview

The Unionville Village Master Plan incorporated a community design charrette as an alternative to a traditional public meeting to foster more meaningful and inclusive engagement. The two-night workshop brought residents, stakeholders, and planners together to collaboratively shape ideas and solutions in real time.

Night #1 featured a hands-on workshop where participants reviewed maps, developed a set of project goals, and brainstormed with the project team to come up with potential improvements. After the event, the project team developed a set of concepts to illustrate the ideas in a real word context. For the second night, the group reconvened to review the concepts and score them based on how well they met the project goals as well as indicate which projects should be prioritized.

By emphasizing dialogue and co-creation, the charrette helped strengthened community buy-in and resulted in more refined and locally informed project ideas. Ultimately, this approach enhanced both the quality of the master plan and the level of public support, ensuring that the vision for Unionville Village more accurately reflected the community's needs, values, and aspirations.

The graphic to the right provides an overview of the charrette process and the map spread on the following pages highlights the results of the concept prioritization exercise with the project ideas that people were most excited about making a reality.

Charrette Night #1

The charrette took place May 18th-20th and was hosted at Unionville Elementary School. The first night of the Unionville Village Master Plan charrette set the foundation for a collaborative and productive process. Participants began by reviewing existing conditions, including land use, transportation patterns, community assets, and challenges. They also provided input on their current impressions of the village as well as their vision for the future to help define priorities for the plan.

Through facilitated discussions, residents and stakeholders identified key challenges such as traffic circulation, pedestrian safety, and preservation of community character, while also highlighting opportunities for improved connectivity and enhanced public spaces.

Participants then worked in small groups that focused on specific areas of the village to identify issues and prioritize potential opportunities for improvement that reflected community priorities. These priorities guided brainstorming exercises where attendees sketched ideas, mapped potential improvements, and explored alternative concepts for the Village's future. Each group then presented their findings and vision for their focus area to rest of the participants leading to further discussion among the group as a whole.

The interactive and informal format encouraged open dialogue and creativity, allowing participants to refine their thoughts and build on each other's ideas, ultimately generating a diverse set of preliminary ideas to be developed into fleshed out concepts by the project team.

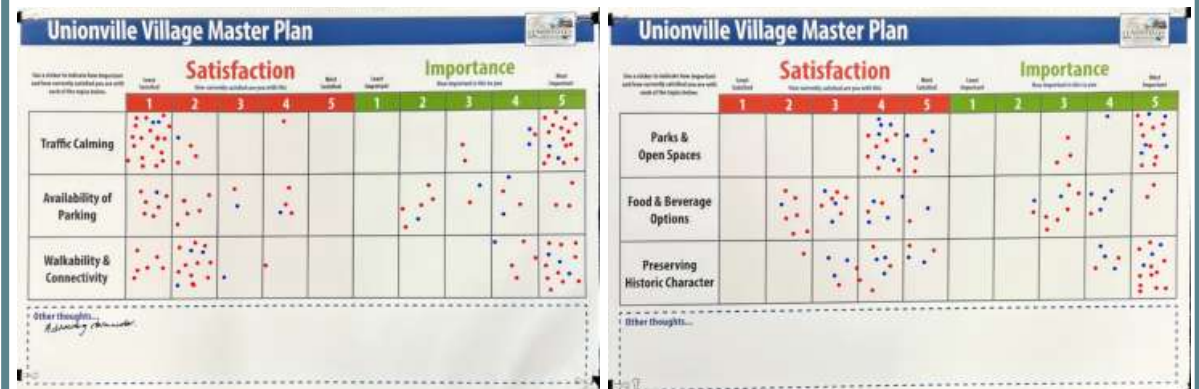


Key Takeaways

The following section highlights key takeaways from the interactive boards, visioning exercises, and community conversations that took place during the first night of the Community Design Charrette.

These insights and feedback helped inform both the overarching goals to guide the project as well as the specific concepts and recommendations that became the focal point of the second night.

Satisfaction/Importance Exercise



Overview

Participants were presented with various topics and asked to indicate how important and how currently satisfied they are with each. Topics that ranked high for importance and satisfaction represent strengths whereas those that were high importance but low satisfaction indicate priority opportunities to focus on improving.

Strengths

- Parks & Open Spaces
- Historic Character

Opportunities for Improvement

- Traffic Calming
- Walkability & Connectivity

Vision for the Village



Overview

Participants were asked about their current perception of the village as well as what they would like it look in the future. They were also asked what they would prioritize to improve the village.

Key Themes

- Enhance Traffic Calming & Road Safety
- Improve Walkability & Connectivity
- Address Parking Needs Strategically
- Foster Placemaking & Community Activation
- Preserve Village Character & Historic Feel
- Integrate Green Stormwater Management

Focus Area Concepts

Overview

Participants broke into groups to take a closer look at four specific locations throughout the village. This discussion and the resulting ideas formed the basis of the concepts developed for Night #2.

Group 1 North URA + Hoods	
Issues	Ideas
1. drivers are not stopping / driving slow in Hoods / URA	1. flashing crosswalk at crossing
2. no safe pedestrian crossing crossing road. Walk to rest of village	2. add sidewalks / pedestrian paths
3. improve the intersection of 82 and 842 W	3. 4-way stop? speed bump / bulb traffic calming lights to improve safety / speed

Group 2 PA 162 PA 842 (see map)	
Issues	Ideas
1. Intersection safety	• reduce speed limit from 45 to 35 on 162
2. Traffic Calming	• roundabout on 62 or speed bump
3. Walkability + Connectivity	• sidewalks along 162 down to Hoods
• Intersection noise	• bike paths 842
• Walkability to town center	• roundabout intersection 842 + 62 or 2
• speed limit on 162	• pedestrian safety spot
• visibility from 842 turn to 62	• speed bumps 62
• broken sidewalk to Hoods	• crosswalk flashers
• trees blocking crosswalk (former)	• power road / crosswalk to connection down street
• cyclists on road - unsafe	• more "landmarks" will improve parking + walkability
	• shared parking in park + walk

Group 3 Post Office Farmers' 6	
Issues	Ideas
- Crossings	
- Trees too large	
- Not enough	
- Traffic Speed	
- U-turn / stand	
- Land taking	
- Pedestrian Refuge	
- Enforcement - no police past 4:00pm	
- Bury electric lines for trees	
- Expanded Parking	→ left of Post Office
	→ Winter
	→ Safety
	→ Enlarge family area

Group 4 Elem. School + South	
Issues	Ideas
① No continuous / connected sidewalks & crosswalks	① Sidewalk from park / post office / bus station up to circle and sidewalk continued on U.E. side to circle and crosswalks
② Speeding (into & out of the circle)	② Speed tables between U.E. and circle
③ Traffic into & out of U.E.	③ Re-orchestrate U.E. drop off flow - create turn lane? create cycle lane?
	* parent drop off / pickup flow

Participant Feedback & Ideas

Feedback and ideas from the community were used to develop a set of five project goals to guide the project.

Project Goals

Enhance Traffic Calming

Improve Walkability & Connectivity

Address Parking Needs Strategically

Foster Placemaking & Community Activation

Preserve Village Character & Historic Feel

The goals helped the project team develop specific concepts that were highlighted during Night #2.

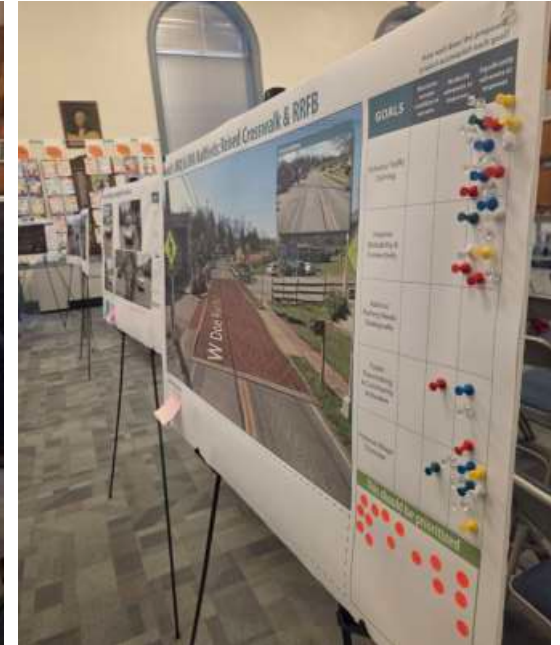
During Night #2, concepts were scored based on how well they accomplished each goal.

Night #2 Concepts

Charrette Night #2

Night #2 of the community design charrette took place on May 20th and served as the culmination of the process. Prior to the meeting, the project team compiled all the input, priorities, and ideas from the first evening's activities and synthesized them into a set of conceptual renderings highlighting potential improvement options throughout the village. The project team also developed a set of five goals that were identified by the group as top priorities for the village during Night #1. The goals are listed below:

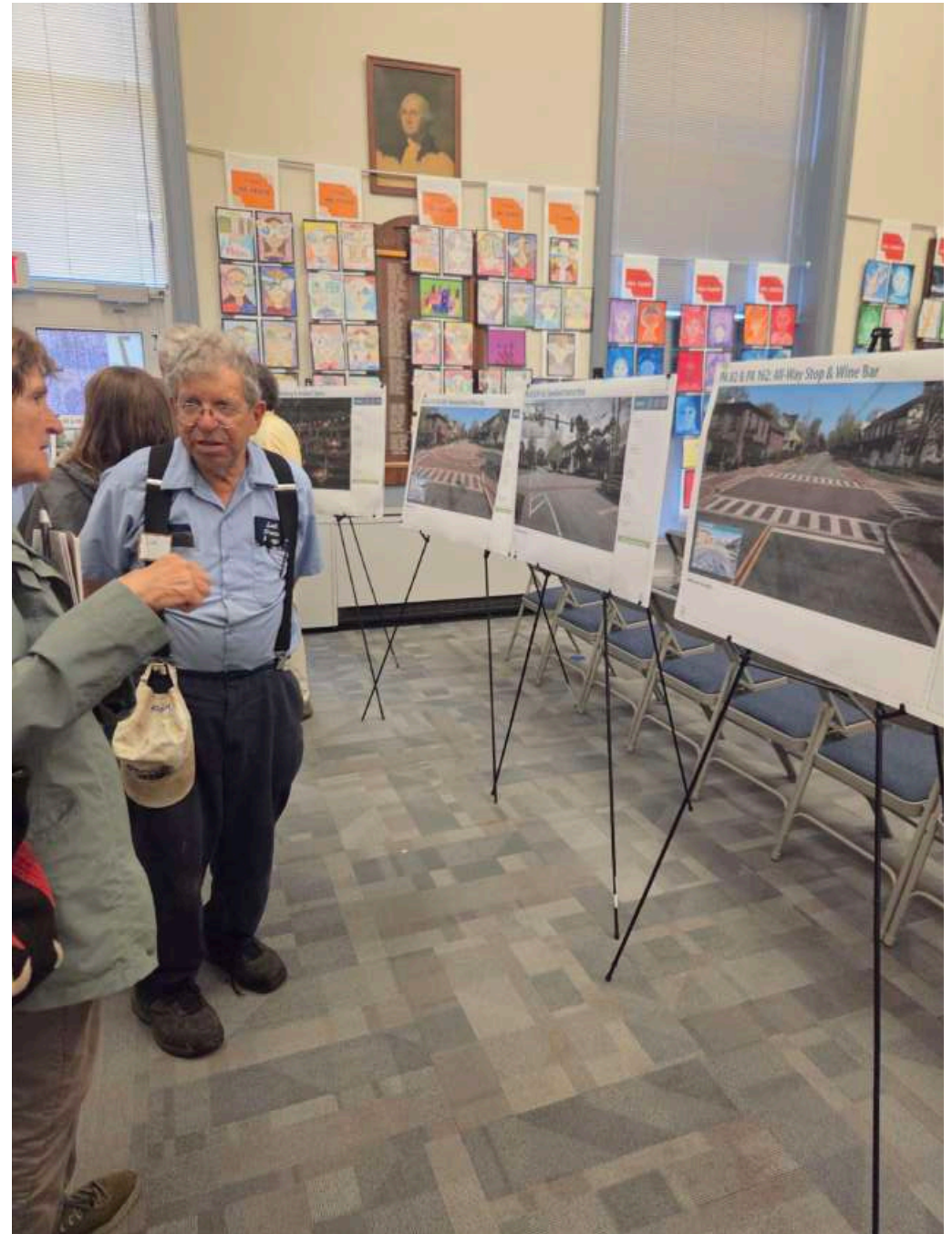
- 1. Enhance Traffic Calming**
- 2. Improve Walkability & Connectivity**
- 3. Address Parking Needs Strategically**
- 4. Foster Placemaking & Community Activation**
- 5. Preserve Village Character**



Concept Gallery

The room was set up in a gallery format showcasing each of the 17 concepts. Each concept had a matrix showing each of the five goals with space for participants to indicate whether they felt the concept “maintains conditions or worsens”, “modestly advances or improves”, or “significantly advances or improves” each goal.

In addition to the goals exercise, participants were also provided with 10 “priority dots” that they could add to concepts they felt deserved to be prioritized. The exercise was meant to mimic real world priority setting and attendees could choose to spread their dots out over a number of concepts, or focus their attention on 1-2 they were particularly passionate about to increase their influence.



Project Goals & Prioritization

The 17 conceptual renderings were broken down into 10 focus areas throughout the village. The following table shows the distribution of votes for how well each meets the project goals and which should be prioritized. Some focus areas had more than one option, which was important for the prioritization exercise where votes were spread relatively evenly among the options (e.g. 1756 W Doe Run Road).

1. PA 82 & PA 162 Intersection

- Signalized Intersection
- All-Way Stop
- Mini Roundabout

2. Post Office Property

- Ice Cream Shop
- Parking Lot

3. 1756 W Doe Run Road Property

- Pollinator Garden
- Village Green
- Pavillion & Community Space
- Community Garden

4. Farmer & Co. - Rectangular Rapid Flashing Beacon

5. Wood's BBQ & URA Ballfields - Raised Crosswalk & RRFB

6. PA 82 & PA842 Intersection -

- Mini Roundabout
- Sidewalk & Crossing Enhancements

7. East End of Village

- Doe Run Road Sidewalks (North)
- Doe Run Road Sidewalks (South)

8. On Street Parking (Village-Wide)

9. Western Gateway

↓ = Maintains current condition or worsens
 ↑ = Moderately Advances or improves
 ↑↑ = Significantly advances or improves

Goals	1. PA 82 & PA 162								
	Signalized Intersection			All-Way Stop			Mini Roundabout		
	↓	↑	↑↑	↓	↑	↑↑	↓	↑	↑↑
Enhance Traffic Calming	6	1	3	6	0	0	5	4	7
Improve Walkability & Connectivity	3	1	2	0	8	1	1	4	5
Address Parking Needs Strategically	0	0	0	1	0	0	1	0	0
Foster Placemaking & Community Activation	2	1	0	2	3	0	1	1	5
Preserve Village Character	7	0	0	4	4	0	0	0	8
This should be prioritized	0			16			15		
Comments	Light pollution and encourages honking (x2)			It is already 4-way stop. Zebra stripes are a good addition			I feel like people will stop I I feel like people will stop less because no stop signs, not safe for pedestrians unless because no stop signs, not safe for pedestrians		
	Horrible idea (x3)			I like the crosswalks but would include a ramping them at crosswalks			Awful idea. Too much traffic, eliminates stop signs, extremely small area for a roundabout. People would blow through the roundabout unless there is a prohibitively high center		
							Love it		

2. Post Office Property						3. 1756 W Doe Run Road Property												4. Farmer & Co.			5. Wood's BBQ & URA Ballfields		
Ice Cream Shop			Parking Lot			Pollinator Garden			Village Green			Pavilion & Community Space			Community Garden			Rectangular Rapid Flashing Beacon			Raised Crosswalk & RRFB		
↓	↑	↑↑	↓	↑	↑↑	↓	↑	↑↑	↓	↑	↑↑	↓	↑	↑↑	↓	↑	↑↑	↓	↑	↑↑	↓	↑	↑↑
3	1	0	0	0	0	2	0	1	5	0	0	2	4	0	5	0	0	1	3	8	0	0	15
0	4	2	1	6	0	2	2	0	1	4	0	1	3	5	1	3	0	0	0	13	0	0	10
7	0	0	0	0	14	1	0	0	5	0	0	4	1	0	3	0	0	1	0	0	0	0	0
0	0	6	3	2	5	2	1	2	0	2	4	0	1	12	1	3	3	1	1	3	0	2	3
3	3	1	2	3	3	1	0	5	1	0	6	1	1	6	2	2	5	8	1	0	0	1	9
4			15			9			3			7			7			15			25		
Increases parking difficulties for the park and village. Seasonal business only			Permeable pavers			Doable on this site, passive + calming, does not increase traffic or congestion			Can sidewalk be continuous from here all the way to the existing roundabout?			Will increase traffic congestion. We already have a nice park for this purpose with good access and safe parking. Make improvements to the park instead			Most residences in the village have their own gardens. Not necessary (x2)			Should be raised crosswalk (x2)			Flashing lights would help here		
Too much at this location, leave the business uses to private property			Do people who live here want tons of people here?			This should go in many places in existing par			Can this be combined with more parking?			Would have liked to have seen the Village Green by playground or an expanded play area for older kids. Too close to the road here			I like the idea of creatin an area for community gardens. Also thinking about the large meadow space within the park with connectivity.			Yes! How to make attractive? How to make it a part of historic village feel?			Would be nice to see proposal to improve appearance of parking lots by ballfields		
Love this, a compromise would be to have a spot for rotating food trucks			No more parking, more green, fewer parking spaces (but some:15)			Love!! But we can add more of this in the existing park			Should include sidewalk on south side			Expand these amenities in the existing park (pavilion + older kids play area)			Requires maintenance			Not sold on aesthetics. Something more vintage looking?			All crosswalks should be raised		
Add facilities to existing park			No more parking			Good idea - could be done within space inside park			Required maintenance			Need more parking first						So necessary with all the children in village & crossing customers					
Will bring tons of out of town people to village						Required maintenance			Would be a nice extension to the park			This is too much. People from all over will use the park						Ugly!					
Don't expand park						Should include sidewalk on south side						Put pavilion inside the park not next to the street (x2)											
Community Center instead												A space for a food truck would be nice. Maybe an outdoor stage for live music											

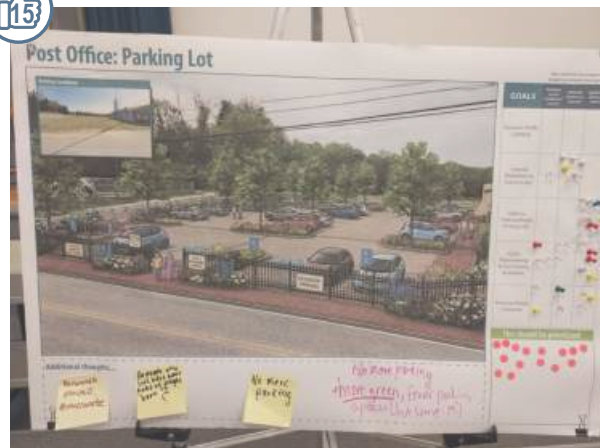
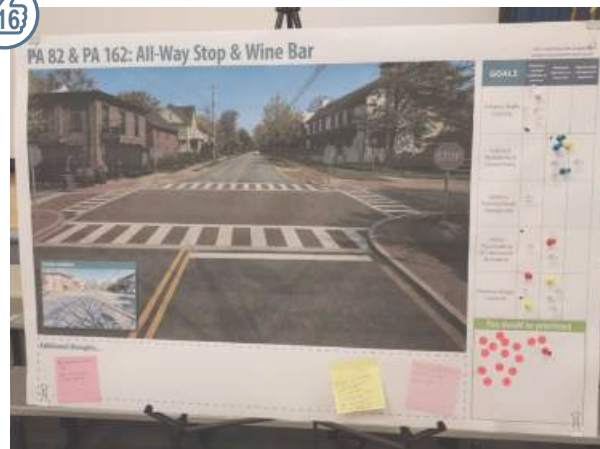
↓ = Maintains current condition or worsens
 ↑ = Moderately Advances or improves
 ↑↑ = Significantly advances or improves

Goals	6. PA 82 & PA 842						7. East End of Village						8. On-Street Parking			9. Western Gateway		
	Mini Roundabout			Sidewalk & Crossing Enhancements			Doe Run Rd Sidewalk (North)			Doe Run Rd Sidewalk (South)								
	↓	↑	↑↑	↓	↑	↑↑	↓	↑	↑↑	↓	↑	↑↑	↓	↑	↑↑	↓	↑	↑↑
Enhance Traffic Calming	2	1	6	4	5	1	0	0	1	0	0	2	4	2	0	5	0	0
Improve Walkability & Connectivity	0	0	7	0	4	0	0	0	7	0	0	11	1	4	0	7	0	0
Address Parking Needs Strategically	0	0	0	1	2	0	0	0	0	0	0	0	2	2	4	0	0	0
Foster Placemaking & Community Activation	0	2	3	1	1	0	0	0	3	0	0	3	2	0	2	2	0	0
Preserve Village Character	2	2	5	1	3	0	0	2	1	1	1	2	1	2	7	1	3	0
This should be prioritized	20			13			8			14			4			7		
Comments	Trucks need to turn			Remove the raised curb or flatten the curb			Sidewalks should be on both sides			Sidewalks on both sides (x2)			Sidewalk parking ruins historic			Lots of walkers/runners go all the way down W Doe run and turn on Upland. No space on side for them		
	All features should be flush			Tightens turn = slows speed			Sidewalks in different places from the neighborhoods to main streets			Easier (and better) connection and activating sidewalk on this side of 82 from the middle school and baseball fields. South side could be continuous through entire village			On the one hand I do not want to encourage the idea of street-parking, but the use of cobble parking areas would improve the visual character of the village if done in moderation it may help the overall parking share			Consider larger sign/arch. This is a "walking village" but there are still no sidewalks for pedestrians or a bike lane. Stop signs at West Doe Run/Upland (three-way stop)		
	Love			Yes walkways, no round about			North side sidewalk requires number crossings of streets			Raised crosswalks around circle (x2)			Integrate green stormwater (GSI)			Need better gateway nearer to URA Ball Fields		
							Potential pedestrian vehicle accidents						What other paving for cars? Grass pavers (2x)					
													Accommodate parking with back streets					
													No more street parking					

Concept Prioritization

Based on the priority voting exercise there were seven concepts that received 14 or more prioritization votes (listed below). People also used the comment section to provide additional suggestions and tweaks about how they would refine each concept to best fit local context (see following page).

1. **Wood's BBQ & URA Ballfields - Raised Crosswalk & RRFB (25)**
2. **PA 82 & PA 842 Intersection - Mini Roundabout (20)**
3. **PA 82 & PA 162 Intersection**
 - All-Way Stop (16)
 - Mini Roundabout (15)
4. **Farmer & Co. - Rectangular Rapid Flashing Beacon (15)**
5. **Post Office Property**
 - Parking Lot (15)
6. **East End of Village**
 - Doe Run Road Sidewalks (South) (14)





Active Transportation Toolbox

Overview

There are a variety of infrastructure features that form the building blocks for an active transportation network. The Active Transportation Toolbox presents facilities that may be appropriate in Unionville to serve the broad transportation needs of the community. The toolbox also helps to define terminology used in the plan and presents a brief description and illustrative photo for each facility. For some facilities, additional information is provided regarding design guidelines.

The following design guidelines and publications were used as references for development of the toolbox and can be helpful resources for the planning and design of active transportation infrastructure.

A Policy on Geometric Design of Highways and Streets (Green Book), Sixth Edition (2011), American Association of State Highway and Transportation Officials (AASHTO).

Roadside Design Guide, Fourth Edition (2011), American Association of State Highway and Transportation Officials (AASHTO).

Guide for the Development of Bicycle Facilities, Fourth Edition (2012), American Association of State Highway and Transportation Officials (AASHTO).

Guide for the Planning, Design and Operation of Pedestrian Facilities, Second Edition (2021), American Association of State Highway and Transportation Officials (AASHTO).

Manual of Uniform Traffic Control Devices (MUTCD) (2009), Federal Highway Administration (FHWA).

Bikeway Selection Guide (2019), Federal Highway Administration (FHWA).

Small Town and Rural Multimodal Networks (2016), Federal Highway Administration (FHWA).

Urban Bikeway Design (2011), National Association of City Transportation Officials (NACTO).

Design Manual, Part 2 (DM-2): Highway Design, Publication 13M (December 2025, Change 9), PennDOT.

Traffic Engineering Manual, Publication 46 (August 2009, Change 1 - March 2014), PennDOT.

Access Management: Model Ordinances for Pennsylvania Municipalities Handbook, Publication 574 (April 2005, Updated February 2006), PennDOT.

Pennsylvania Trail Design and Development Principles: Guidelines for Sustainable Non-motorized Trails (2013), Pennsylvania Department of Conservation and Natural Resources (DCNR).

Off-Road Pedestrian & Bicycle Facilities

Shared Use Path

Description

A combined bikeway and walkway that is designed for shared use by bicyclists and pedestrians of all abilities, as well as other non-motorized modes of transportation. Shared use paths along or adjacent to a roadway are physically separated from vehicular traffic by a verge, fencing, or other barrier.



Sidewalk

Description

Walkway parallel to the road that is intended for use by pedestrians, often with numerous access points to adjacent land uses. The walkway is typically physically separated from the roadway with a curb and/or verge. The verge may contain grass, vegetation, pavers, and sometimes street trees. Sidewalks are typically concrete, but can be constructed with asphalt, bricks, or pavers.



Pedestrian Path

Description

Walkway for use by pedestrians of all abilities. Walking paths may be adjacent to roadways and serve as an alternative design treatment to sidewalks. Walking paths are also prevalent in parks or within other developed sites to provide pedestrian connections and support active recreation.



Footpath

Description

Walkway for use by pedestrians, typically for recreation purposes. Natural paths are often through or adjacent to undeveloped land. Sometimes foot paths follow the natural landscape or include steep slopes, steps, and stairs that are not fully accessible.



Boardwalk

Description

Elevated walkway that is constructed as a series of low-height bridges through sensitive areas with seasonably variable water depths or low strength soils, such as wetlands. Boardwalks typically include a curb or handrail along at least one, often both, edges.

Target Users

Pedestrians; Bicyclists
(optional and dependent upon the design)

Dimensions

6-10 feet
wide (typical)

Surface Materials

Wood; Wood Composite;
Plastic Composite;
Concrete (for decking)



Wayfinding

Description

A range of signs, pavement markings, kiosks, or interpretative signs that are used to identify a facility and provide basic information, such as directional arrows, mileage, map, or narrative. Signage can be utilized to interpret local cultural, historical, and ecological themes.

Note of Accessibility

Tighter tolerances in place on surface, slopes, and smoothness for ADA. Signage should also consider accessibility of information and physical location.

On-Road Bicycle Facilities & Features

Bike Lane

Description

A portion of the roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive public use by bicyclists. Bicycle lanes are located directly adjacent to motor vehicle travel lanes and operate in the same direction as motor vehicle traffic.

Benefits

- Provides separate space dedicated for cyclists, which can offer added comfort for less experienced riders
- Allows bicycles to operate on a roadway without impeding motor vehicle traffic
- Encourages predictable positioning by bicyclists at intersections



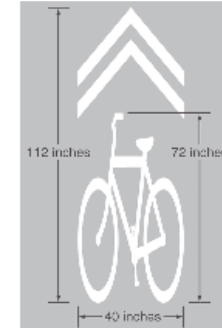
Shared Roadway/Bicycle Boulevard

Description

A roadway with signage and pavement markings to indicate the use of a travel lane by both bicycles and motor vehicles. Pavement markings may include a “sharrow,” which is a bicycle symbol with two chevron arrows denoting the direction of travel.

Benefits

- Alert motorists to the potential presence of bicyclists that may occupy the travel lane
- Recommend proper lateral position for bicyclists by indicating where bicyclist can ride within lane
- Encourage safe passing of bicyclists by motorists
- Reduce the incidence of wrong-way bicycling
- Provide wayfinding



Design Features

- Shared lane pavement marking or “sharrow” placed in accordance with MUTCD, Section 9C.07
- Bicycle May Use Full Lane Sign (R4-11) placed in accordance with MUTCD, Section 9B.06
- Should be limited to roadways with proper speed and traffic volumes (under 25 MPH and 2,500 AADT) to safely accommodate bicyclists



Paved Shoulder

Description

A portion of the roadway adjacent to the travel lane that can be enhanced with signage, striping, or coloring to serve as functional space for bicyclists and pedestrians to travel, particularly when other dedicated facilities are not feasible.

Dimensions

4 feet wide (minimum); provide greater width based on feasibility and traffic.

Pedestrian & Trail Crossings

Marked Crossing

Description

Pavement markings designating a location for pedestrians to cross a road, often connecting sidewalks, paths, or multi-use trails. Crosswalks must be a minimum of 6 feet wide. High visibility crosswalks, also known as continental design, are most visible to motorists.

Marked Crossing Variation: Mid-Block Crossing

A crosswalk that is not located at an intersection. Additional warning devices are required to increase pedestrian safety compared to typical crosswalks at intersections. A mid-block crosswalk can include advance signage and pavement markings. Other design treatments could include a pedestrian refuge island or raised crosswalk.



Pedestrian Signal

Description

Traffic signal equipment for pedestrians can include pedestrian pushbuttons, accessible pedestrian signals, passive detection for bicyclists or pedestrians, pedestrian signal heads, and pedestrian countdown signal heads. Accessible Pedestrian Signals (APS) communicate information about the WALK and DON'T WALK intervals for pedestrians who are blind or have low vision. Countdown pedestrian signal heads show how much time remains before the traffic signal changes.



Flashing Warning Device

Description

A flashing warning device can be used in combination with pedestrian crossing signs and a marked crosswalk at uncontrolled crossing locations. Signs and flashing warning devices can be side-mounted or overhead. Additionally, flashing warning devices can be user-activated. Rectangular Rapid Flashing Beacons (RRFBs) are one example of a flashing warning device.

Trail Crossing

Description

Trail crossings are locations where a multi-use trail crosses a roadway. Trail crossings may be within the area of an intersection, mid-block, or grade separated. Based on AASHTO guidelines, mid-block trail crossings can be considered a four-leg intersection. Mid-block trail crossings often involve mutual yielding, such that motorists must yield to pedestrians in the crosswalk and bicyclists/pedestrians must stop/yield to motorists if they cannot stop in time. Roadway trail crossings typically include marked crosswalks and ADA curb ramps corresponding to the width of the trail, along with warning signs. Flashing warning devices or signals may be considered for some trail crossings.





Median/Refuge Island

Description

Medians or raised islands between travel lanes can be designed with landscaping, hardscaping, welcome signs, and/or provide a mid-point refuge for pedestrian crossings. Medians help to slow traffic by defining travel lanes, shortening crossing distance and limiting pedestrian exposure to traffic and can be used to reduce conflicts by physically preventing left turns and restricting turning movements to specific locations.

Curb Extension/Bulb-out

Description

Areas of expanded curbing that extend across a parking lane and may narrow a travel lane. Curb extensions create shorter crossing distances for pedestrians and make them more visible to drivers while increasing available space for street furniture and plantings. Curb extensions can also serve as a traffic calming measure.



Pedestrian or Trail Bridge

Description

Bridge specifically for use by pedestrians and bicyclists to cross a stream, water body, steep grade, or other existing feature. The design of the bridge should be based on anticipated users, including maintenance or emergency vehicles. Steel, fiberglass, and wood are materials typically used for pedestrian or trail bridges.

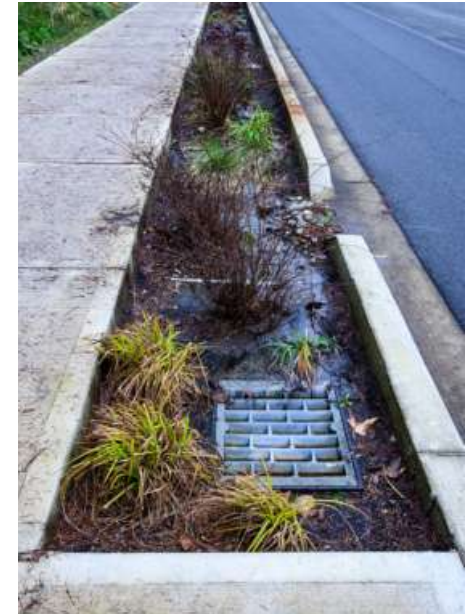
Enhancing Users' Experience

Landscaping and Green Infrastructure

Description

Landscaping and green infrastructure can provide shade for pedestrians, integrated stormwater management, reduce heat island effect, and help to create a sense of place. Trees and vegetation can also have a calming effect on traffic with the increased sense of enclosure. The type and location of landscaping should be chosen based on site conditions.

A diverse native plant palette can be used in the design of the landscape zones, including trees, shrubs, and groundcover where appropriate. A mix of flowering species can offer seasonal appeal while providing habitat for birds and other native wildlife. Landscaping and green infrastructure can be placed between a road edge and sidewalk or path.



Streetscape Amenities

Description

Benches, trash receptacles, and bicycle racks create a more comfortable and convenient environment for walking, biking, and enjoying the street. The design of the streetscape furniture or amenities should be consistent to convey the unique character of the community. Amenities should be placed so they do not obstruct pedestrian walkways, accessible through routes, building entrances, or fire hydrants.

Seating

Description

Seating areas can be provided along sidewalk, paths, or trails in downtown settings, park areas, transit spots, or at scenic vistas. Seating can include benches or seat walls and can incorporate public art or other creative design elements to create a sense of place. Seating can be created with natural materials reflecting the native geology or ecology of the region like boulders and/or logs. Space can also be provided for wheelchairs to stop (outside of minimum ADA walkway widths).



Pedestrian-Scale Lighting

Description

Pedestrian-scale street lights, 10-12 feet in height, help provide security along sidewalks, as well as help to provide aesthetic appeal to the streetscape. Lighting adjacent to natural areas should adhere to dark sky lighting recommendations to avoid impacting native habitat. For health and environmental reasons, consider using dark-sky-friendly designs and moderating intensity.

Bike Rack

Description

A frame that is permanently anchored to the ground and is used to secure bikes when not in use. Bicycle racks should be located in visible areas and near major destinations such as employment centers, business and retail districts, parks, and transit.

Placement

Placement of bicycle racks should be convenient, making riding more appealing. Dimensions when occupied and must maintain clear walkways, particularly when placed along sidewalks. Bicycle racks should be set back 2-3 feet from the curb when installed along a street and can be located under trees or building overhangs. Placement and design should allow for use by a variety of bike frame types.



Bike Repair Station

Description

A piece of equipment consisting of a simple bicycle stand and tools necessary to perform minor repairs and adjustments. The tools are typically securely attached to the stand, which can be used to hang the bike and allow the pedals and wheels to spin while making adjustments. Repair stations should be located in visible areas, particularly along bicycle routes or near recreational resources.

Public Art

Description

Public art may be incorporated into streetscapes through elements such as: planters and/or benches embellished by local artists, unique bike racks, or other art installations. Public art helps to provide character to streetscapes and can foster a sense of place and civic pride.



Banners

Description

Banners help to announce and publicize special events, as well as to create an identity and sense of place. Vertical banners may be attached to street light poles or may be freestanding.



Wayfinding and Interpretative Signs

Description

A range of signs, pavement markings, kiosks, or interpretative signs that are used to identify a facility and provide basic information, such as directional arrows, mileage, map, or narrative. Signage can be utilized to interpret local cultural, historical, and ecological themes.



Traffic Calming

Description

Traffic calming measures include physical changes to a roadway to reduce speeds and cut-through traffic. Traffic calming strategies are typically used to increase driver awareness of people walking, biking, and wheeling and reduce high speeds and high energy crashes. Traffic calming measures can be implemented in conjunction with bicycle and pedestrian infrastructure to slow traffic and create a safer and more comfortable environment for walking and biking.

The Active Transportation Toolbox includes several common traffic calming measures. Additionally, PennDOT's *Traffic Calming Handbook* (Publication 383) provides details regarding the appropriate placement and design of traffic calming measures.

Pavement Markings / Reduced Lane Widths

Description

Reducing excessive lane widths can help to slow traffic by providing a defined area for travel. Also, a reduction in lane widths can provide additional space for bicyclists and pedestrians. Lane widths can be defined by edge line striping, curbing, or other physical roadside treatments.



Roundabout

Description

An intersection design treatment that reduces conflict points and slows traffic. Traffic approaching the intersection yields to traffic circulating around the roundabout. Splitter islands at the entries help to slow and direct traffic and serve as pedestrian refuge areas. In some situations, roundabouts can provide increased capacity, reduced cost, and reduced delay when compared with traffic signals.



Roundabout Variation: Mini-Roundabout

A roundabout with a small diameter and traversable central island. Mini-roundabouts offer benefits similar to roundabouts, but with a smaller footprint and less cost. Mini-roundabouts are typically used in urban or small town settings on roadways with low speeds.



On-street Parking

Description

Provision of on-street parking on one or both sides that reduces roadway width. Parked vehicles also provide a buffer between traffic and pedestrians on the sidewalk.



Speed Hump or Speed Table

Description

Raised humps in the roadway, typically 3-4 inches high, intended for low volume and low speed roadways. Speed humps are most effective when placed in a series. Speed humps are the most popular traffic calming measure due to their effectiveness at reducing speeds, ease of implementation, and relatively low cost. Speed tables are speed humps with a longer, flat top that can be easier to construct and generally more acceptable to the traveling public.



Option

Speed humps or tables placed at a crosswalk create raised pedestrian crossings, or continuous sidewalks, which provide better visibility and accessibility for pedestrians.



Gateway Treatments

Description

A combination of special treatments used at the entrance to an area or neighborhood that alerts drivers to slow down due to a change in environment. Gateway treatments can include signage to identify the area or neighborhood. Other potential gateway treatments include landscaped medians or landscaped areas on the roadside.

Access Management

Description

Access management refers to means of controlling the ways that vehicles can access major roadways, using measures such as limiting the number of driveways and intersections with local roads. Properly managed access is vital to the safety and efficiency of a community's roadway network. The Active Transportation Toolbox includes a few common access management measures. In addition, PennDOT's *Access Management: Model Ordinances for Pennsylvania Municipalities Handbook* provides additional resources for access management strategies.

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Driveway Spacing

Description

Adequate spacing and aligning of driveways to reduce conflicts points and create a safer environment for walking and biking.

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Joint and Cross Access

Description

Providing joint or cross access between adjacent properties allows circulation between the properties and reduces the number of driveways and conflict areas along a roadway. Joint and cross access can be used in combination with shared parking.



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W Doe Run Road (Route 82) Traffic Calming Review



February 6, 2013 - Revised 4/24/13

Ms. Jane Laslo
Township Manager
East Marlborough Township
721 Unionville Road
Kennett Square, PA 19348

Re: W. Doe Run Road (Route 82) Traffic Calming Review
East Marlborough Township, Chester County
TPD# EMAT.A.00093

Dear Jane:

In our role as Township Traffic Engineer, Traffic Planning and Design, Inc. (TPD) has prepared a study of West Doe Run Road to identify potential traffic calming measures to address concerns about vehicles speeding along the road. This study focuses on the section of West Doe Run Road through the village of Unionville between William Thomas Drive and Upland Road.

In order to evaluate the need for traffic calming measures, TPD has reviewed the following information:

- Pennsylvania Publication 383, "Pennsylvania's Traffic Calming Handbook"
- Crash history
- West Doe Run Road speed and volume data

The results of this study are presented below.

EXISTING CONDITIONS

West Doe Run Road (Route 82) is a two-lane, Township Road that generally runs in an east-west direction through the study area. West Doe Run is designated as State Route 82 which generally runs in a north-south direction from the Delaware State Line to its intersection with Route 23 in Elverson Borough, Chester County, Pennsylvania. West Doe Run Road (Route 82) has a posted speed limit of 35 mph within the study area. The grades through the study area are relatively flat and the road is fairly straight with the exception of a sharp curve near the intersection with Cemetery Lane. Sidewalk is provided along the northern side of West Doe Run Road through most of the study area and no sidewalk is provided on the southern side except for a short section to the west of Wawaset Road. There are no turn lanes or traffic signals provided in the study area. The intersection of West Doe Run Road and Ebreeville Road (Route 162)/Wollastown Road is multiway stop controlled.

The study area land use is comprised largely of historic residential uses with a mix of office and commercial uses. The Unionville Elementary School and the Unionville Fire House are located at the western end of the study area. The areas along West Doe Run Road outside of the study area tend to be more rural in nature than within the study area.

The study area is shown in Attachment A.

DATA COLLECTION

Speed and Volume Counts

Twenty-four hour traffic counts and speed studies were conducted on West Doe Run Road by the East Marlborough Township Police Department utilizing Automatic Traffic Recorders (ATR). Twenty-four hour traffic data was collected at 1600 West Doe Run Road near the intersection with Upland Road between October 17, 2012 and October 25, 2012. Twenty-four hour traffic data was also collected near the firehouse driveway on West Doe Run Road from May 16, 2012 to May 22, 2012. Table 1 presents the 85th percentile speed (the speed exceeded by 15% of the drivers) and the average daily traffic for West Doe Run Road.

TABLE 1
SPEED AND VOLUME COUNTS ON WEST DOE RUN ROAD

Location	Direction	Posted Speed Limit (MPH)	85th Percentile Speed (MPH)	Average Daily Traffic (vpd)*
Near Upland Road	Southbound	35	42	2,533
	Northbound	35	43	2,568
				Total = 5,101
Near Firehouse	Southbound	35	38	3,025
	Northbound	35	40	3,837
				Total = 6,862

*(vpd) = vehicles per day

The speed study data sheets are contained in Attachment B. Based on a review of traffic count data published by PennDOT, it was determined that approximately 7% of the traffic using West Doe Run Road are trucks.

Crash Data Investigation

Crash data were requested from PennDOT for the segment of West Doe Run Road located between William Thomas Drive and Upland Road. The results were not received at the time this report was prepared. The crash data investigation will be provided after the data is received.

TRAFFIC CALMING ORDINANCE

East Marlborough Township does not have a traffic calming ordinance. It is recommended that an ordinance be adopted to establish a policy and guidelines for the evaluation of traffic calming measures. The purpose of the ordinance is to establish criteria for types of roads and conditions that must be satisfied before traffic calming is considered. Without an ordinance in place, it can be difficult for municipalities to address resident requests for traffic calming measures.

SUMMARY OF FINDINGS

Based on a review of the guidelines presented in the PennDOT Publication 383, "Pennsylvania's Traffic Calming Handbook", it is our opinion that West Doe Run Road is not a good candidate for traffic calming measures involving significant vertical or horizontal deflection. However, the study area findings were reviewed in order to develop a "Tool Box" of roadway improvements that could be implemented in the study area and that will have a secondary impact of calming traffic and lowering traffic speeds. The study area findings are summarized as follows:

- 85th percentile speed study results show that the speed limit is exceeded by 7 mph in the southbound direction and 8 mph in the northbound direction in the vicinity of Upland Road. The 85th percentile speeds in the vicinity of the firehouse exceed the posted speed limit by 3 mph in the southbound direction and 5 mph in the northbound direction. Typically, traffic calming measures are not considered unless the 85th percentile speeds exceed 10 mph above the posted speed limit.
- Average daily traffic (ADT) on West Doe Run Road varies from just over 5,000 vehicles per day to almost 7,000 vehicles per day based on the counts conducted by the East Marlborough Police Department.
- Truck percentages are 7% on West Doe Run Road, which is a fairly significant percentage of trucks and must be taken into consideration when choosing traffic calming measures. Traffic calming measures with significant vertical or horizontal deflection are not truck-friendly such as speed humps, traffic circles, chicanes, etc.
- There is a firehouse located on West Doe Run Road within the study area. The presence of the firehouse limits the types of traffic calming measures that can be implemented because traffic calming measures can increase the response time for emergency vehicles.
- The driveway sight distances are limited for several driveway movements at Firehouse Drive, the Post Office driveway and the vacant site to the east of the Post Office. The sight line is limited by a crest in the roadway that is just west of Merrimac Lane.
- Speed limits are posted at proper intervals for enforcement.
- Conditions along West Doe Run Road may warrant the reduction of the speed limit pending additional engineering study.

- The only existing marked crosswalk along West Doe Run Road within the study area is located at the access driveway for the ball fields. This crossing is at the bottom of a steep grade for both directions of approaching traffic.
- Sidewalk is provided along the northern side of West Doe Run Road through most of the study area. There is a short sidewalk segment located on the southern side of West Doe Run Road to the west of Wawaset Road. However, this segment ends midblock and does not extend to the intersection with Embreeville Road/Wollaston Road.
- The vertical crest curve just west of Merrimac Lane also limits visibility for pedestrians on the sidewalk on the northern side of West Doe Run Road. There is no curb in this location and a minimal grass buffer.
- There is a horizontal curve on West Doe Run Road with advance warning signs, chevron signs, and pavement legends indicating the presence of the curve. However, there are no advisory speed limits associated with the curve.
- The segment of West Doe Run Road located between Embreeville Road and Jackson Street has many driveways with uncontrolled access. There is no curbing provided to separate through traffic on West Doe Run Road and the pavement/gravel used for parking. In addition, utility poles are located within the paved/gravel areas with no curbing, grass, or other protection.
- The intersections of West Doe Run Road with Embreeville Road/Wollaston Road and Wawaset Road have large paved radii with parking located adjacent to the roadway. This makes the intersections much larger than necessary which can lead to higher speeds and erratic movements.
- There is an elementary school located at the southern limit of the study area. A school zone is provided with flashing warning lights on West Doe Run Road. Also, sidewalk is provided along the school frontage on the northern side of the West Doe Run Road. It is unknown at this time if students walk to school. For purposes of this study, it was assumed that all students are bussed due to the limited pedestrian facilities which are provided in the neighborhoods surrounding the school. If this assumption is incorrect and students walk to the elementary school, it is recommended that a more detailed “Safe Routes to School” study be conducted.

IMPROVEMENT TOOLBOX

Based on our review of West Doe Run Road and feedback obtained in our meetings with Township staff, TPD has prepared a Tool Box of traffic calming alternatives for consideration by the Board of Supervisors. In TPD’s opinion, the following measures could reduce travel speeds and improve safety and mode options along West Doe Run Road. The alternatives range from very simple, cost-effective, measures to more involved alternatives which offer benefit to the community and may be incorporated into future plans within the Township. Several of the improvements are shown on the conceptual plans in Attachment D.

1. Investigate the reduction of the speed limit to 30 mph (additional 85th percentile speed study data and engineering study is necessary to justify this posting).
2. Install a flashing warning sign assembly at each entrance to the village in order to advise motorists of conditions as they enter the village. The flasher could be combined with a pedestrian warning sign or a reduced speed ahead sign (pending further study of a speed limit reduction). A permit will be required from PennDOT for the installation of these devices.
3. As an alternative to Item #2 above, install a rectangular rapid flashing beacon warning device for the crosswalk in the vicinity of the ball fields. Flashing warning devices can be useful in warning drivers of the presence of crosswalks. In order to improve effectiveness, the device can be implemented with active pedestrian pushbuttons or passive presence detectors. This will ensure that the warning lights are not flashing at all times since they will only flash when activated by a pedestrian. Given the open roadway frontage at this location, in order for the flasher to be effective, it will be necessary to design a pathway to properly channel pedestrians to one location. This will require path construction and possible bollards and or fencing for pedestrian channelization.
4. Increase enforcement of the speed limit.
5. It appears the speed limit signs are provided at appropriate intervals along West Doe Run Road. However, the signs appear to be posted too low on the sign posts. The speed limit signs should be reposted at the appropriate height on the sign posts.
6. "Curve ahead" signs and pavement markings are provided in advance of the horizontal curve on West Doe Run Road in the vicinity of the intersection with Cemetery Lane. However, no advisory speed plaques are provided. It is recommended that the curve be test driven with a ball bank indicator to determine the appropriate advisory speed and the curve should be properly posted with advisory speed plaques as necessary.
7. Install portable radar speed signs. The signs measure and display the speed of approaching vehicles. They are portable and are available in solar models that do not require an electrical service connection. These signs tend to be effective when they are first installed and are less effective over time as drivers become accustomed to the signs. However, with portable signs, they can be used on roads throughout the Township and can be moved frequently to maintain their effectiveness.
8. In order to increase driver awareness of the edge of roadway where there is limited visibility, install reflective flexible delineators along the sidewalk. This applies to the sidewalk on the north side of West Doe Run Road and just west of Merrimac Lane.
9. Provide sidewalk along the southern side of West Doe Run Road to extend the existing sidewalk from midblock between Wawaset Road and Embreeville Road/Wollaston Road to the intersection with Embreeville Road/Wollaston Road. In addition, sidewalk can be provided on the southern side of West Doe Run Road between Wawaset Road and Cemetery

Lane in conjunction with the curbing improvements. While sidewalk is not a traffic calming measure, it can help to improve safety by keeping pedestrians out of the roadway.

10. Provide crosswalks and associated warning signs at intersections along West Doe Run Road where there is sidewalk on both sides of the road. Depending on where sidewalk is provided, crosswalks could be provided at the intersections with Embreeville Road (Route 162)/Wollastown Road, Wawaset Road (Route 842), and Cemetery Lane. The crosswalks could consist of painted lines or could consist of stamped, colored asphalt to emphasize their presence. In addition, appropriate lighting should be provided in conjunction with any crosswalks that are provided.

The 2009 FHWA “Manual on Uniform Traffic Control Devices” (MUTCD) offers the following guidance for crosswalks:

Section 7C.02, “Crosswalk Markings” provides the following guidance:

“Guidance:

Crosswalk lines should not be used indiscriminately. An engineering study considering the factors described in Section 3B.18 should be performed before a marked crosswalk is installed at a location away from a traffic control signal or an approach controlled by a STOP or YIELD sign. “

Per the MUTCD Section 3B.18:

“08 Crosswalk lines should not be used indiscriminately. An engineering study should be performed before a marked crosswalk is installed at a location away from a traffic control signal or an approach controlled by a STOP or YIELD sign. The engineering study should consider the number of lanes, the presence of a median, the distance from adjacent signalized intersections, the pedestrian volumes and delays, the average daily traffic (ADT), the posted or statutory speed limit or 85th-percentile speed, the geometry of the location, the possible consolidation of multiple crossing points, the availability of street lighting, and other appropriate factors.

09 New marked crosswalks alone, without other measures designed to reduce traffic speeds, shorten crossing distances, enhance driver awareness of the crossing, and/or provide active warning of pedestrian presence, should not be installed across uncontrolled roadways where the speed limit exceeds 40 mph and either:

- A. The roadway has four or more lanes of travel without a raised median or pedestrian refuge island and an ADT of 12,000 vehicles per day or greater; or*
- B. The roadway has four or more lanes of travel with a raised median or pedestrian refuge island and an ADT of 15,000 vehicles per day or greater.*

With a posted speed limit along West Doe Run of 35 mph and an AADT of 5,000 to 7,000 vehicles per day, the above MUTCD guidance in Section 3B.18 indicates West Doe Run

Road is a “candidate” location for marked crossings as Conditions A and B are not met. However, as specified in MUTCD section 7C.02, an engineering study should be completed for candidate crosswalk locations with uncontrolled vehicular approaches. Additional studies should be conducted before installing any crosswalks on West Doe Run Road.

11. Provide pedestrian signs on West Doe Run Road in the vicinity of Merrimac Lane to warn drivers of the potential presence of pedestrians. Crosswalk markings are not recommended at this location because there is no sidewalk provided on the southern side of West Doe Run Road.
12. Install transverse pavement markings. The markings consist of several layers of hot thermoplastic pavement markings that create a raised surface and act as rumble strips. The markings typically consist of five (5) transverse, six (6) inch wide stripes, installed two (2) feet on center, repeated every 100 feet. The markings can reduce speeds by 1 to 3 MPH, but may also create undesirable noise for nearby residents. Therefore, in our opinion, the only location where they should be considered is on northbound West Doe Run Road approaching the horizontal curve near Cemetery Lane. There are no residential uses in the vicinity of the curve and the pavement markings may help to reduce speeds as vehicles approach the curve.
13. Provide curbing along the radii at the intersections of West Doe Run Road with Embreeville Road/Wollaston Road and Wawaset Road. Curbing helps to define the intersection and creates narrower lanes which can be effective in reducing speed. An interim painted radius treatment could be considered; however, the painted radius will be much less effective than curbing.
14. Provide curbing along the southern side of West Doe Run Road between Embreeville Road and Jackson Street to control access along this road segment. The curbing can be effective in reducing travel speeds by making the travel lanes feel narrower. In addition, curbing helps to protect the utility poles and pedestrians. Please note that significant drainage improvements may be required in conjunction with curbing which could add significant cost to the project.
15. Install concrete medians at the approaches to intersections and midblock crosswalks. This measure could be used to create a gateway into the village or can be used to provide streetscape improvements. The medians work by narrowing lanes (or at least giving the appearance that the lanes narrow). Speed reductions can range from 1 to 5 MPH. Road widening and drainage improvements may be required to accommodate concrete medians.

Infeasible Traffic Calming Measures

Several other traffic calming measures were considered, but were determined to be infeasible for West Doe Run Road. A brief description of these alternatives is provided below:

1. Speed humps and speed tables were considered. However, vertical deflection is generally limited to use on roadways where the posted speed limit is 30 MPH or less and volumes are less than 3,500 ADT. West Doe Run Road exceeds these requirements for both speed and volume.

In addition, West Doe Run Road has a significant truck percentage and is an emergency route. Therefore, West Doe Run Road is not a candidate for speed humps, speed tables or other vertical deflection measures.

2. Multiway stop installation was considered for the intersections along West Doe Run Road. However, stop control is generally not recommended as a traffic calming measure. Use of stop control for traffic calming purposes can lead to undesirable results such as noncompliance and increased speeds between stop signs. In addition, it does not appear that the warrants for multiway stop control listed in the FHWA Publication, Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition are satisfied.

NEXT STEPS

Several improvement alternatives have been identified. If the Township determines that any of these measures should be implemented on West Doe Run Road, it is recommended that the Township start with low cost measures and evaluate their effectiveness before implementing the measures that are more involved and costly. In addition, in some cases measures can be combined to improve effectiveness.

Regardless if the Township decides to implement any traffic calming measures on West Doe Run Road, the following improvements are recommended:

1. Investigate the reduction of the speed limit to 30 mph (additional 85th percentile speed study data and engineering study is necessary to justify this posting).

If the speed limit can be reduced, new speed limit signs should be supplemented with “Reduced Speed Ahead” signs and fluorescent orange diamond “Conspicuity Plaques”, W16-102P, above each 30 mph speed limit posting and the “Reduced Speed Ahead” signs.

2. Consider one of the following treatments to address sight distance limitations due to the crest in the roadway near Merrimac Lane:
 - Post a “Hill Blocks View” (W7-6) warning sign with and “Advisory Speed” (W13-1P) plaque facing westbound traffic prior to the hill.
 - If additional mitigation of speeds becomes necessary, a flashing warning sign assembly can be installed on each West Doe Run Road entrance to the village in order to advise motorists of conditions as they approach. The flasher could be combined with a number of different warning signs such as “Pedestrians Ahead” or “Reduced Speed Ahead” warning signs. A permit would be required from PennDOT for the installation of these devices. These flashers can be pedestal mounted or placed above the roadway on a mast arm for improved visibility.
3. Consider the following treatments for the pedestrian crossing at the baseball fields at the western end of the village:

- Pedestrian crossing sign assemblies should be posted at the crosswalk facing both directions of approaching traffic: “Pedestrian”, W11-2, with “Diagonal Downward Pointing Arrow” plaque, W16-7P. The signs should be posted on both sides of the road and facing both directions of traffic for maximum visibility for approaching motorists.
 - Advanced pedestrian crossing sign assemblies should be posted on both sides of the roadway: “Pedestrian”, W11-2, with “Distance Ahead” Plaque, W16-103P.
 - Consider “Ped Xing Ahead” pavement markings on the approaches to the crossing.
 - Consider “In Street Pedestrian Crossing” signs, R1-6, which can be removed and placed only during ball field use. This can reduce the frequency of damage and replacement of these signs.
 - If measures beyond signing and pavement marking becomes necessary, installation of one of the two types of flashers is recommended:
 - a) A rectangular rapid flashing beacon warning device for the crosswalk in the vicinity of the ball fields. Flashing warning devices can be useful in warning drivers of the presence of crosswalks. In order to improve effectiveness, the device can be implemented with active pedestrian pushbuttons or passive presence detectors. This will ensure that the warning lights are not flashing at all times since they will only flash when activated by a pedestrian. Given the open roadway frontage at this location, it will be necessary to design a pathway to properly channelize pedestrians to one location. This will require path construction and possible bollards and or fencing in order to channelize pedestrians to a location that the flashers can detect their presence and activate the lights.
 - b) Alternately, an advanced flasher could be posted facing eastbound West Doe Run Road traffic on the downhill approach to the crossing and the village. The flasher could be combined with a number of different warning signs such as “Pedestrians Ahead” or “Reduced Speed Ahead” warning signs. A permit would be required from PennDOT for the installation of these devices. These flashers can be pedestal mounted or placed above the roadway on a mast arm for improved visibility.
4. In order to increase driver awareness of the edge of roadway where there is limited visibility, install reflective flexible delineators along the sidewalk. This applies to the sidewalk on the north side of West Doe Run Road and just west of Merrimac Lane.
 5. Post the speed limit signs on West Doe Run Road at the appropriate sign height.
 6. The horizontal curve on West Doe Run Road in the vicinity of Cemetery Lane should be test driven with a ball bank indicator to determine if advisory speed signs should be posted in advance of the curve.

If you have any questions, please do not hesitate to contact us.

Sincerely,
Traffic Planning and Design, Inc.



Gerald T. Baker, P.E.
Project Manager

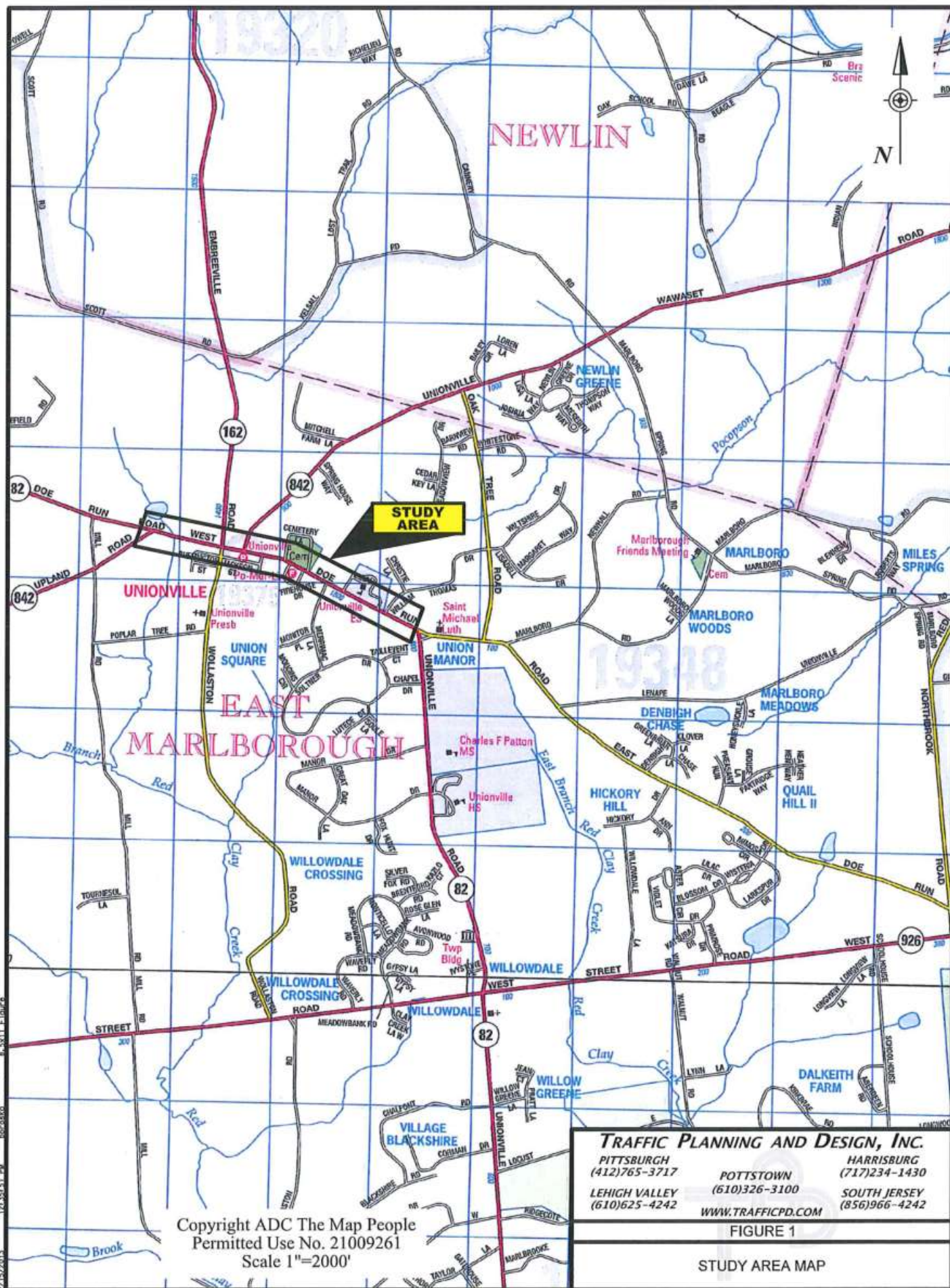


Christy Staudt, P.E.
Project Manager

Attachments:

- Attachment A – Project Location Map
- Attachment B – Speed Study Data
- Attachment C – Traffic Calming Examples
- Attachment D – Conceptual Plans

Attachment A
Project Location Map



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 Scale 1"=2000'

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FIGURE 1
 STUDY AREA MAP

Attachment B
Speed Study Data

EAST MARLBOROUGH TOWNSHIP POLICE

721 Unionville Rd
Kennett Square, PA 19348

Speed Enforcement Evaluator

Location:
**W. Doe Run Rd In front of
Fire Station 36**

Closest Cross Street:
Firehouse Dr

Analysis Dates:
Wednesday, May 16, 2012
Tuesday, May 22, 2012

Equipment Used:
J-Mar TraxPro E-Z Belt

Installed By:
Lt Robert Clarke

Requested By:
East Marlborough Township
Supervisors

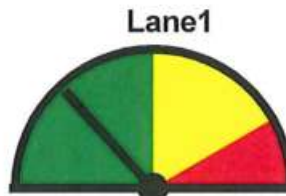
**Total Percentage of
Enforceable Violations**



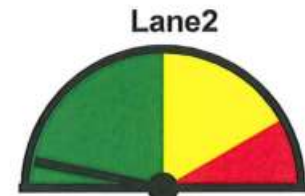
0%

12%

Posted Speed Limit: 35 MPH
Enforcement Tolerance: 10 MPH
Enforcement Limit: 46 MPH & Up
Percentage Above Limit: 2.0%
Enforcement Rating: **LOW**



Percent Above Limit: 3.2%
Enforcement Rating: **LOW**



Percent Above Limit: 0.8%
Enforcement Rating: **LOW**

Combined

1-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	>70
24	87	426	1652	4200	15512	17213	5785	780	98	16	3	1	0

85 percentile = 40

Lane1

1-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	>70
1	36	130	394	1603	6677	8952	3770	611	84	14	1	1	0

85 percentile = 40

Lane2

1-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	>70
23	51	296	1258	2597	8835	8261	2015	169	14	2	2	0	0

85 percentile = 38

EAST MARLBOROUGH TOWNSHIP POLICE

721 Unionville Rd
Kennett Square, PA 19348

Speed Enforcement Evaluator

Location:
1600 W. Doe Run Rd

**Total Percentage of
Enforceable Violations**

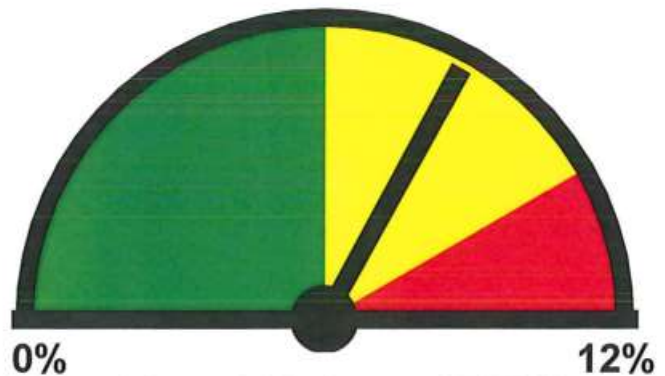
Closest Cross Street:
Upland Rd (Rt 842 West)

Analysis Dates:
Wednesday, October 17, 2012
Thursday, October 25, 2012

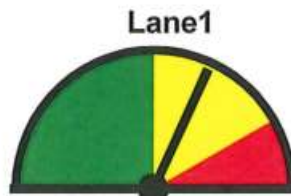
Equipment Used:
J-Mar TraxPro E-Z Belt

Installed By:
Lt Robert Clarke

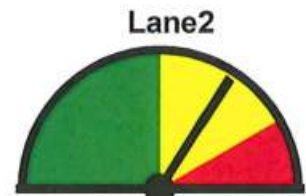
Requested By:
East Marlborough Township
Supervisors



Posted Speed Limit: 35 MPH
Enforcement Tolerance: 10 MPH
Enforcement Limit: 46 MPH & Up
Percentage Above Limit: 7.9%
Enforcement Rating: **MEDIUM**



Percent Above Limit: 7.6%
Enforcement Rating: **MEDIUM**



Percent Above Limit: 8.2%
Enforcement Rating: **MEDIUM**

Combined

1-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	>70
52	134	511	1193	3045	9595	12563	8587	2563	420	66	19	2	1

85 percentile = 42

Lane1

1-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	>70
42	93	304	708	1960	5223	5689	3586	1177	238	32	9	2	0

85 percentile = 42

Lane2

1-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	>70
10	41	207	485	1085	4372	6874	5001	1386	182	34	10	0	1

85 percentile = 43

Attachment C
Traffic Calming Examples



Radar Speed Sign



Textured Crosswalk



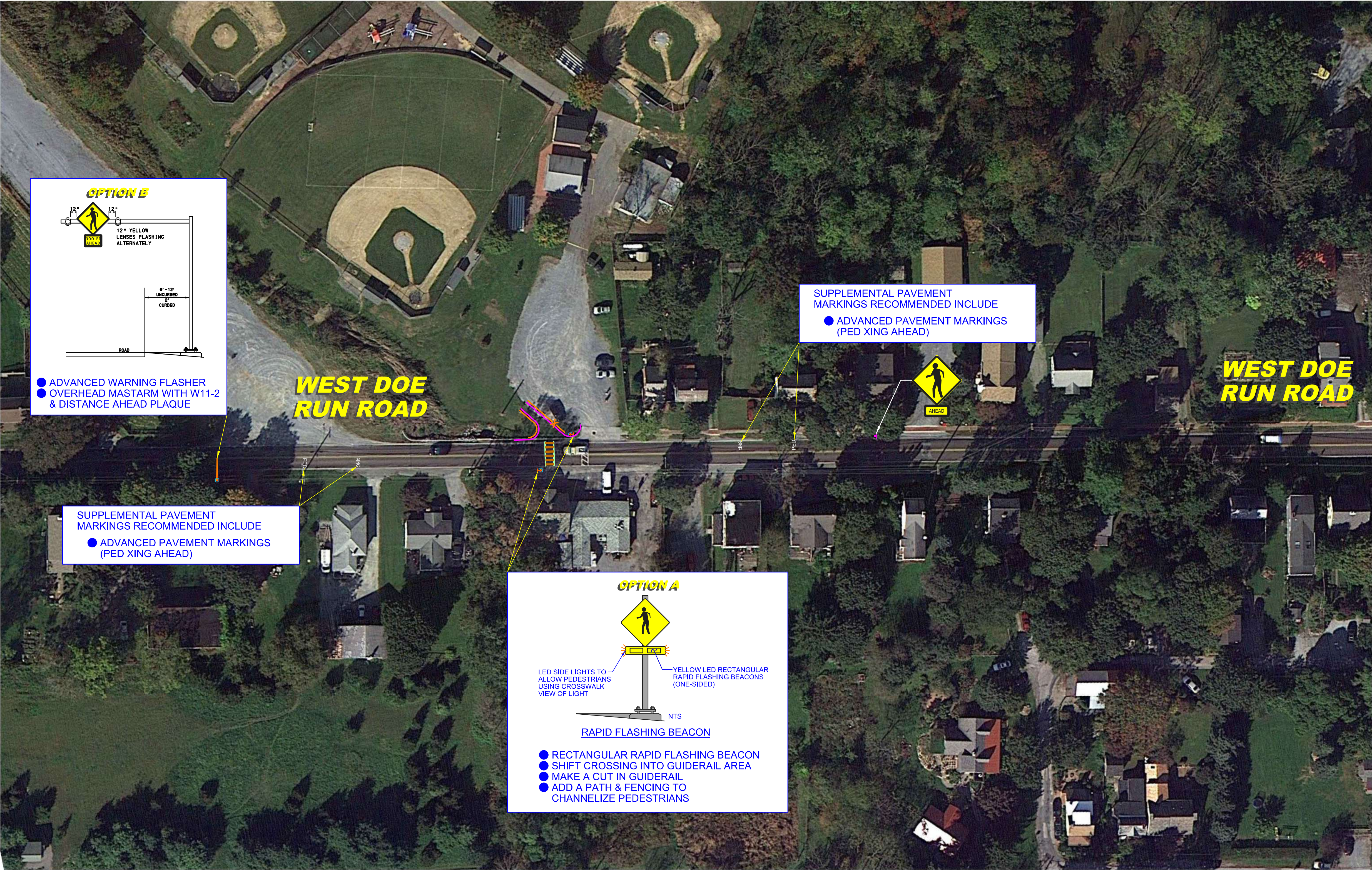
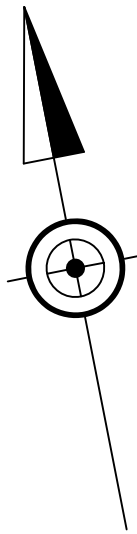
Transverse Pavement Markings



Raised Median

Attachment D
Conceptual Plans

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	CHESTER			1 OF 3	
EAST MARLBOROUGH TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY



LEGEND

- MINIMIZE PEDESTRIAN EXPOSURE: ACCESS MANAGEMENT IMPROVEMENTS/CURBING
- PROPOSED SIDEWALK

0 50 100 FEET

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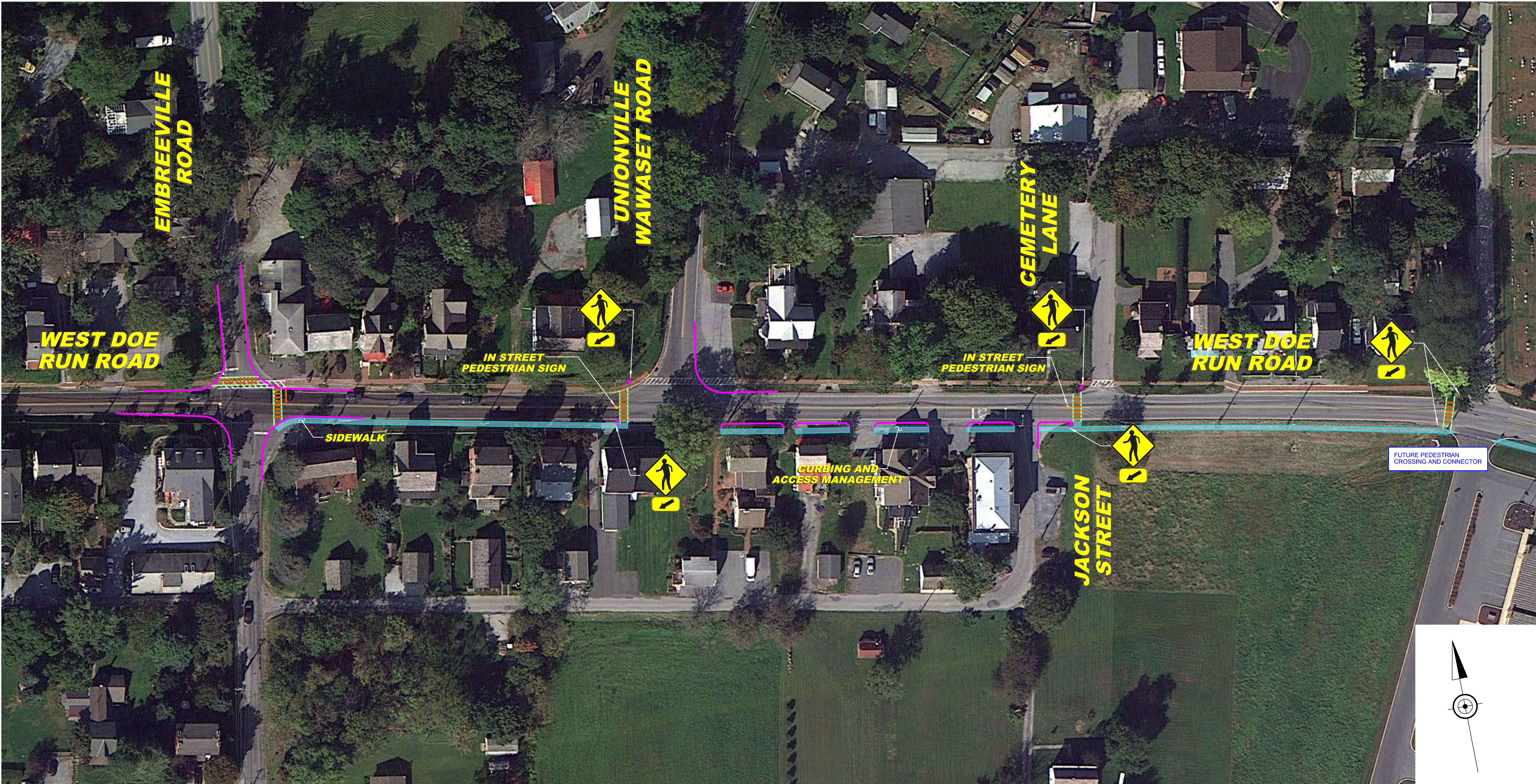
DATE: 02-06-13 PROJECT DESIGNER: MB JOB NO: EMAT.A.00093

WEST DOE RUN ROAD IMPROVEMENTS

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ORN BY: MB

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER			2 OF 3
EAST MARLBOROUGH TOWNSHIP				
REVISION NUMBER	REVISIONS			DATE BY



LEGEND

- MINIMIZE PEDESTRIAN EXPOSURE: ACCESS MANAGEMENT IMPROVEMENTS/CURBING
- PROPOSED SIDEWALK

0 50 100 FEET

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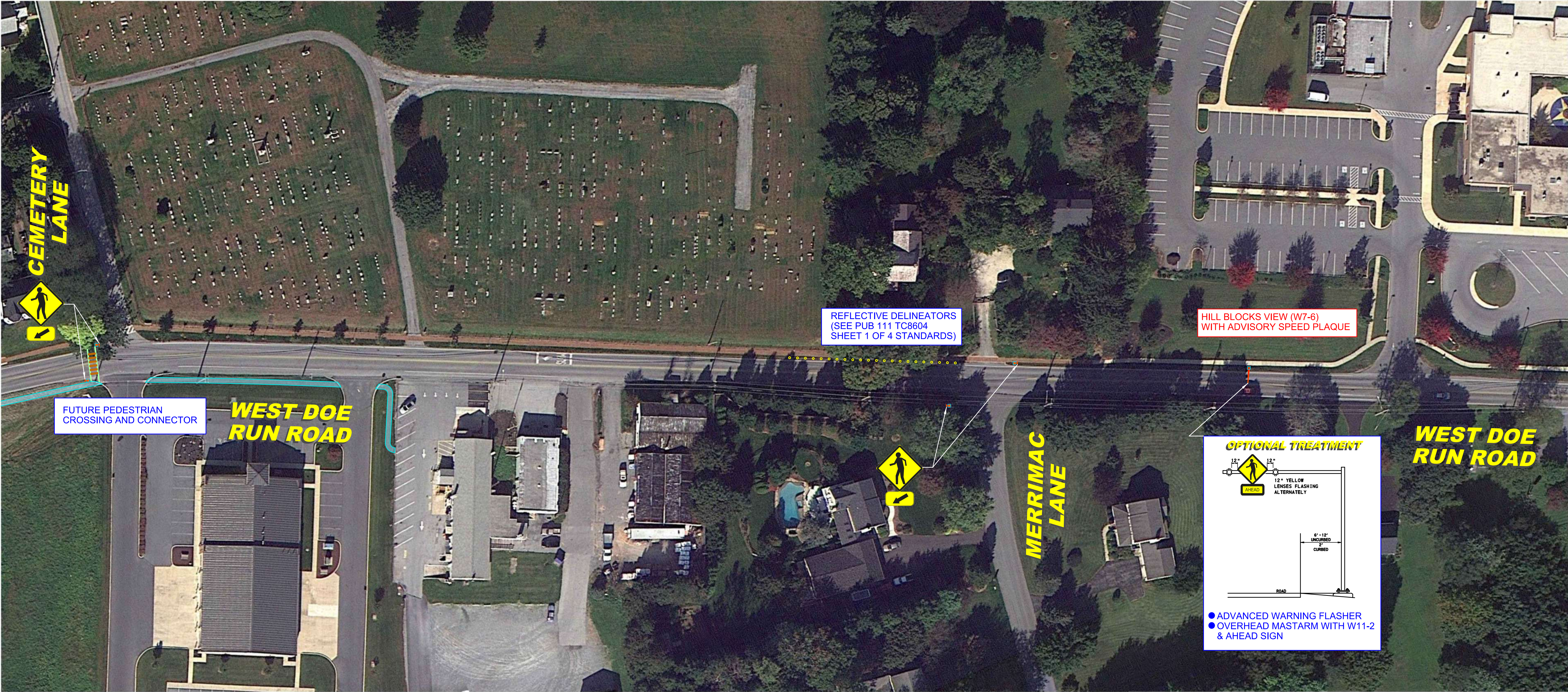
DATE: 02-06-13 PROJECT DESIGNER: MB JOB NO: EMAT.A.00093

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER			3 OF 3
EAST MARLBOROUGH TOWNSHIP				
REVISION NUMBER	REVISIONS			DATE BY

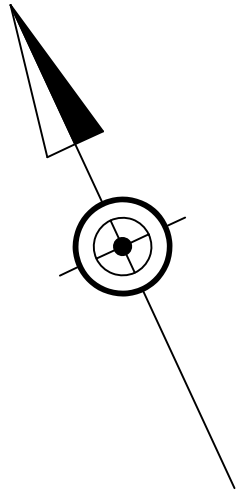


LEGEND

- MINIMIZE PEDESTRIAN EXPOSURE: ACCESS MANAGEMENT IMPROVEMENTS/CURBING

- PROPOSED SIDEWALK

0 50 100 FEET



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