

APPENDIX A

Virtual Public Meeting

Meeting Presentation
Meeting Summary
Public Comment Form
Summary of Survey Results
Full Survey Results

Pine Grove Mills Mobility Study

Virtual Public Meeting

October 14, 2021

*This meeting is being recorded.
Your participation indicates your consent to being recorded.*



1

Ground Rules



Please keep your microphone muted and video off during the presentation

Two ways to provide feedback or ask questions:



During facilitated discussion, please use the "raise hand" tool to have your microphone unmuted



During the rest of the meeting, please use the chat box to ask questions.

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Today's Presentation

- Introductions
- Review of the Pine Grove Mills Small Area Plan
- Origins of the Pine Grove Mills Mobility Study
- The Mobility Study Process
- Mobility Recommendations from the Pine Grove Mills Small Area Plan
- Opportunities for Public Feedback
- Next Steps
- Closing Remarks

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Presenter Introductions

- **Ron Seybert**
Ferguson Township
- **Jim May**
Centre Regional Planning Agency
- **Robert Watts**
McCormick Taylor

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Pine Grove Mills
Mobility Study
Working Group

- Ferguson Township
 - Staff
 - Planning Commission
 - Pine Grove Mills Small Area Plan Advisory Committee
- Centre Regional Planning Agency (CRPA)
- PennDOT District 2-0
- Centre Area Transportation Authority (CATA)
- McCormick Taylor

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Pine Grove Mills
Mobility Study Origins

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Small Area Plan (SAP)

- Community-led planning approach
- Facilitated by CRPA staff
- Developed a series of “themes”
- “Improve safety and provide for multiple modes of transportation” was a key theme
- Mobility map, goals, and objectives in the SAP represent the starting point for what should be refined in the Mobility Study as determined by the residents



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Small Area Plan

- Clearly identified mobility issues to be addressed
- Came from the Pine Grove community
- Safety, mobility, speeding, connectivity can be difficult, but impactful changes in Pine Grove Mills
- Residents eager to see action in these areas



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Small Area Plan

- Clearly identified mobility issues to be addressed
- Came from the Pine Grove community
- Small Area Plan link: <https://bit.ly/2YwzrKE>

The SAP is also linked from the Pine Grove Mills Mobility Study website.



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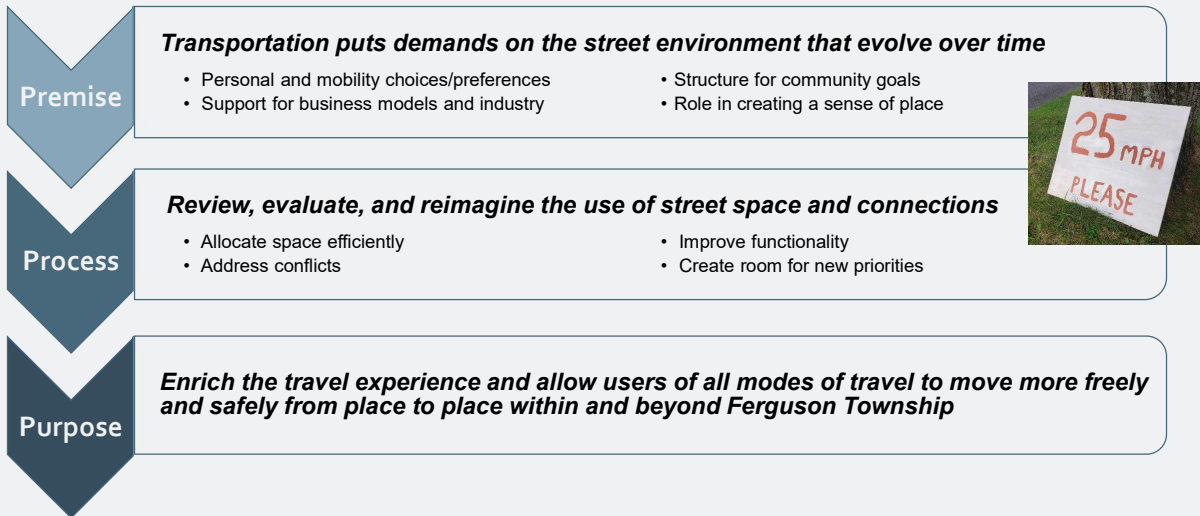
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The Mobility Study



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Transportation Mobility Study



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Stakeholders & Community Engagement

- First Public Meeting
- Working Group Meetings
- Final Public Meeting
 - February 2022
- Review by Working Group
- Review/Approval by Board of Supervisors
 - April 2022



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Data Collection & Analysis



- Transportation & Community Features – Mapping, GIS
- Travel Activity – Vehicles, Bicycles, Pedestrians, Transit



- Travel Safety – Crash history



- Street Cross Section - Travel lanes, Shoulder, Parking, Sidewalk
- Roadway Geometry - Sight distance



- Traffic Control – Signals, Signs, Pavement markings
- Pedestrian and Bike Roadway Safety Audits

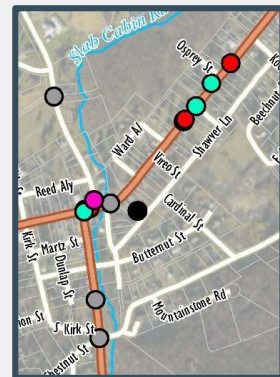


- Connectivity – Trails, Access to Rothrock State Forest

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Transportation Aspirations

- Where is the transportation network not performing?
 - Roadway audits, Analysis, Crash history
- What priorities do we have for transportation?
 - Complete Streets, Active Transportation, Vision Zero
- What do we want the network to look like in 25 years?
- What factors will go into prioritizing the ideas, policies, and projects for implementation?



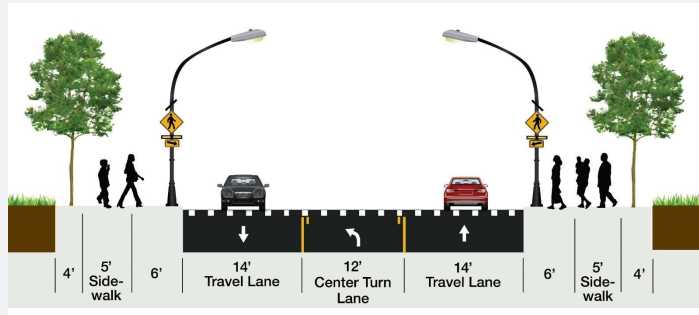
*Excerpt from crash point mapping
for the Pine Grove Mills Mobility Study,
2016-2020, prepared by Ferguson Township.*

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Solutions & Concept Illustrations

- Illustrate how the network could be changed
- Recognize various roadway interests, constraints, and limitations
- Traditional and innovative ideas
- Value is important for prioritizing projects
- Policy changes

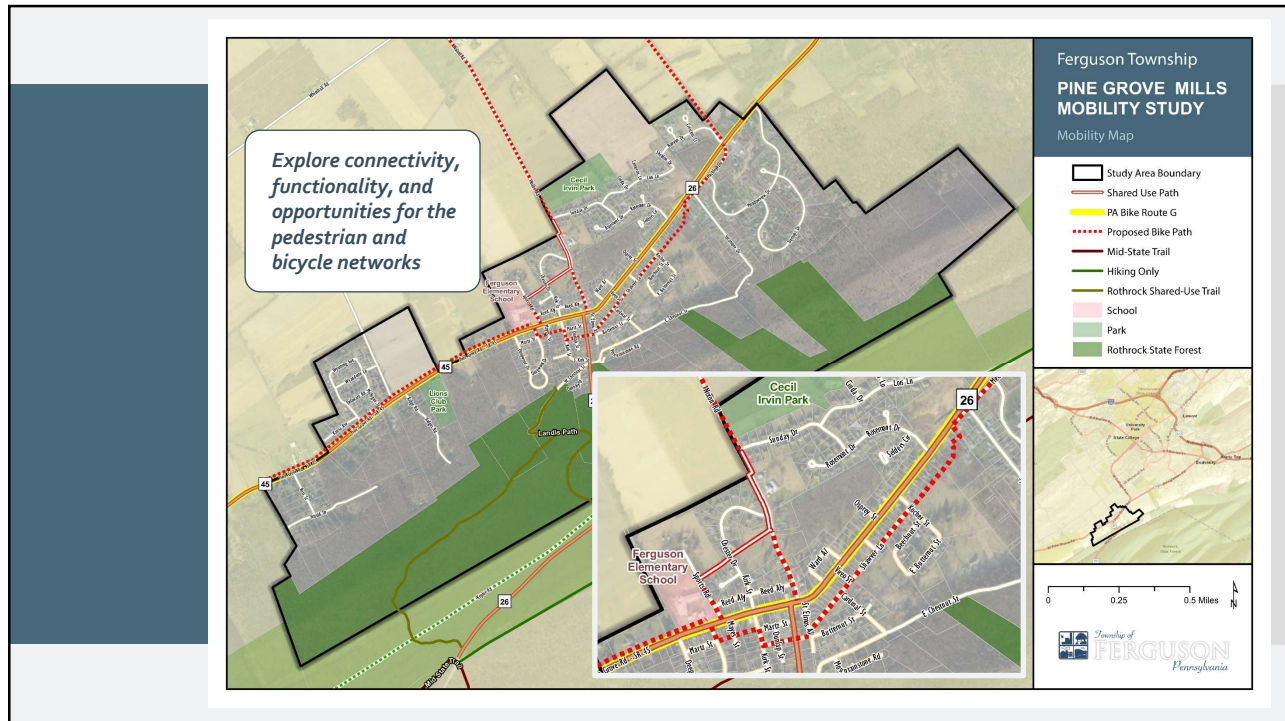


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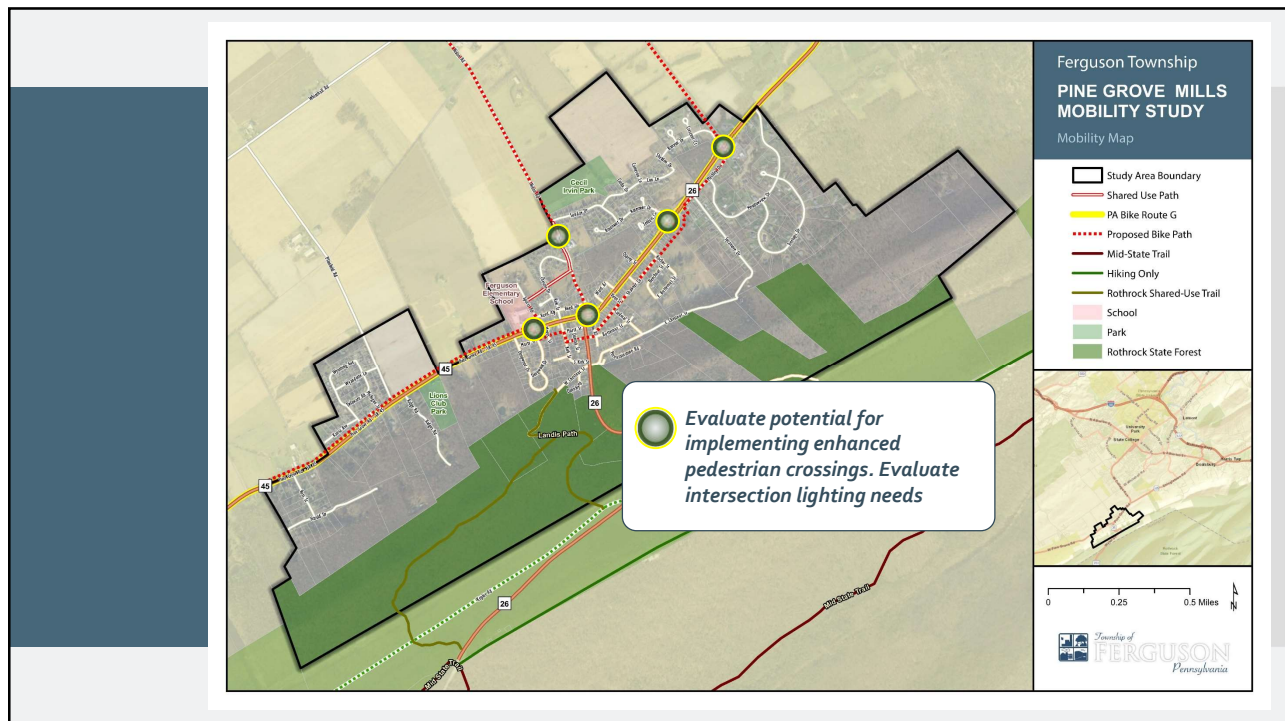
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Pine Grove Mills Small Area Plan Recommendations

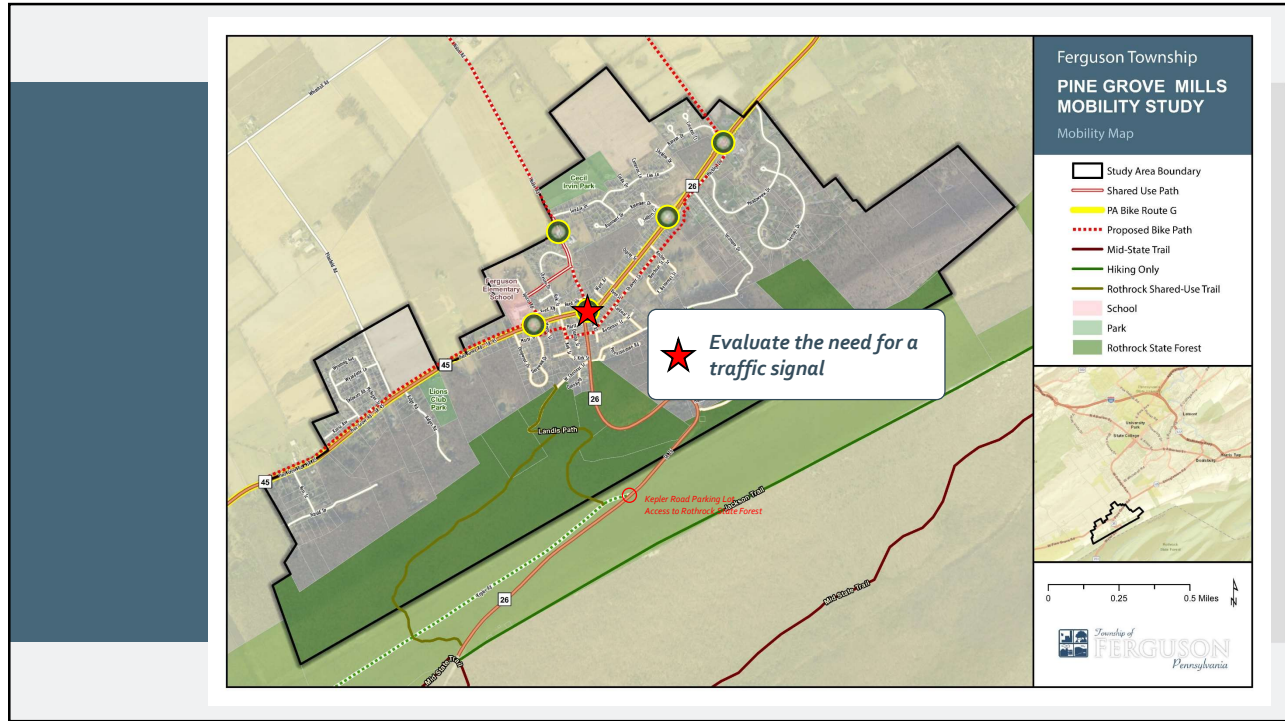
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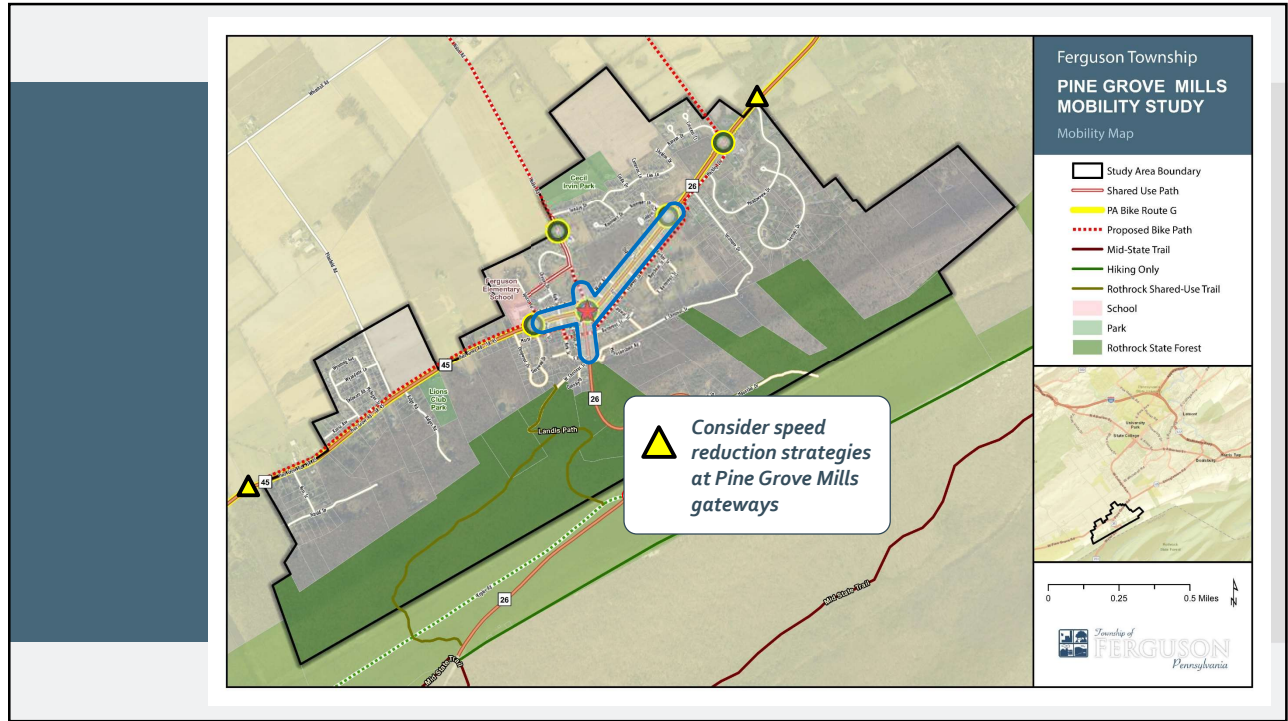
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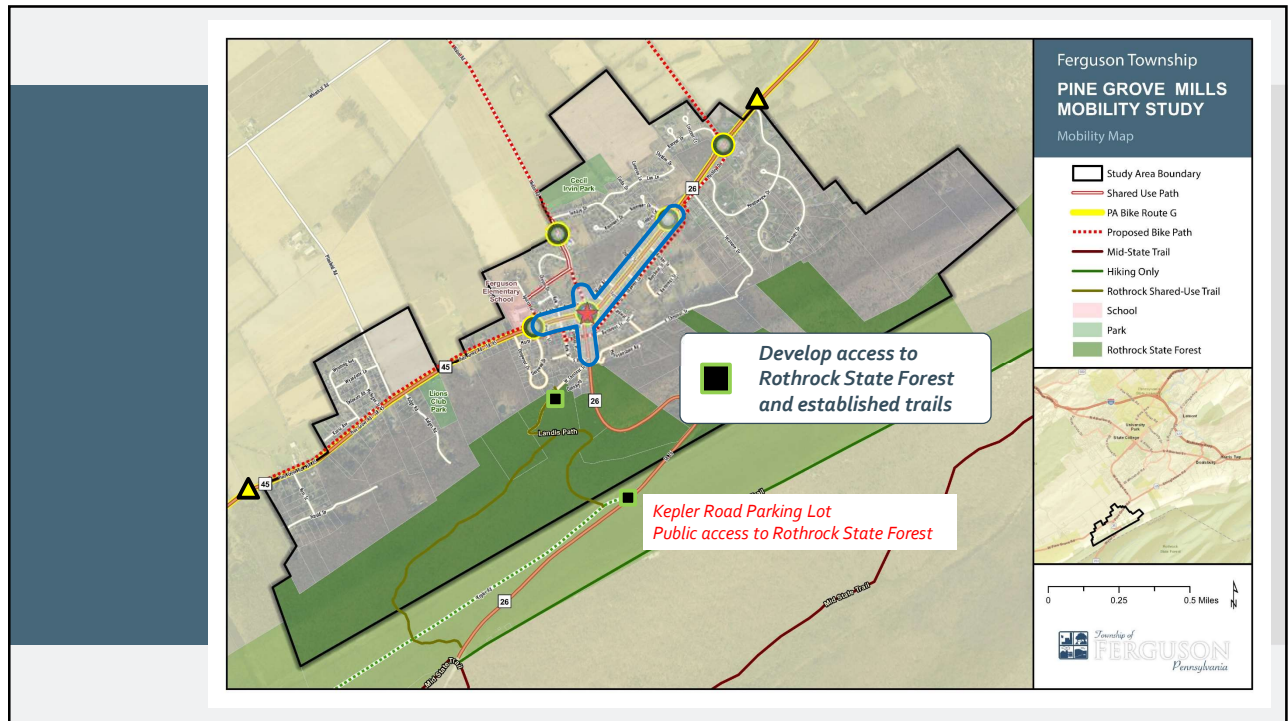
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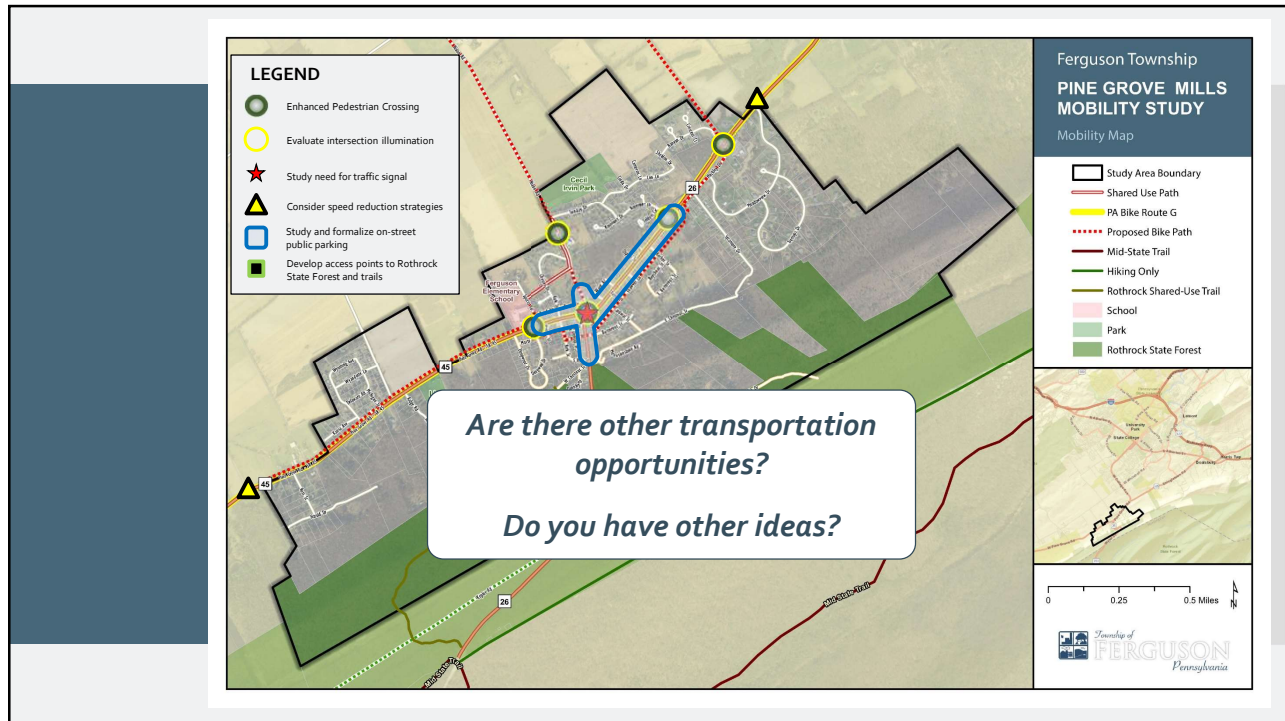
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Public Feedback

A photograph showing a roadside scene. In the foreground, there is a white guardrail. Behind it, a signpost holds several signs: a 'NORTH 26 EAST 45' directional sign, a 'DO NOT PASS' sign, and a large 'Pine Grove Mills Country Store' sign featuring an American flag graphic. The background shows a road, trees, and a cloudy sky.

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Public Feedback

Ways to Participate – tinyurl.com/PGMMobility



Watch and share presentation video



Review materials and maps



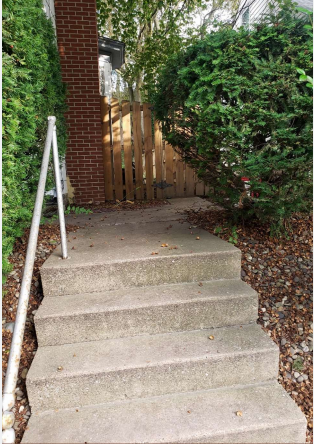
Take the survey – October 14-28



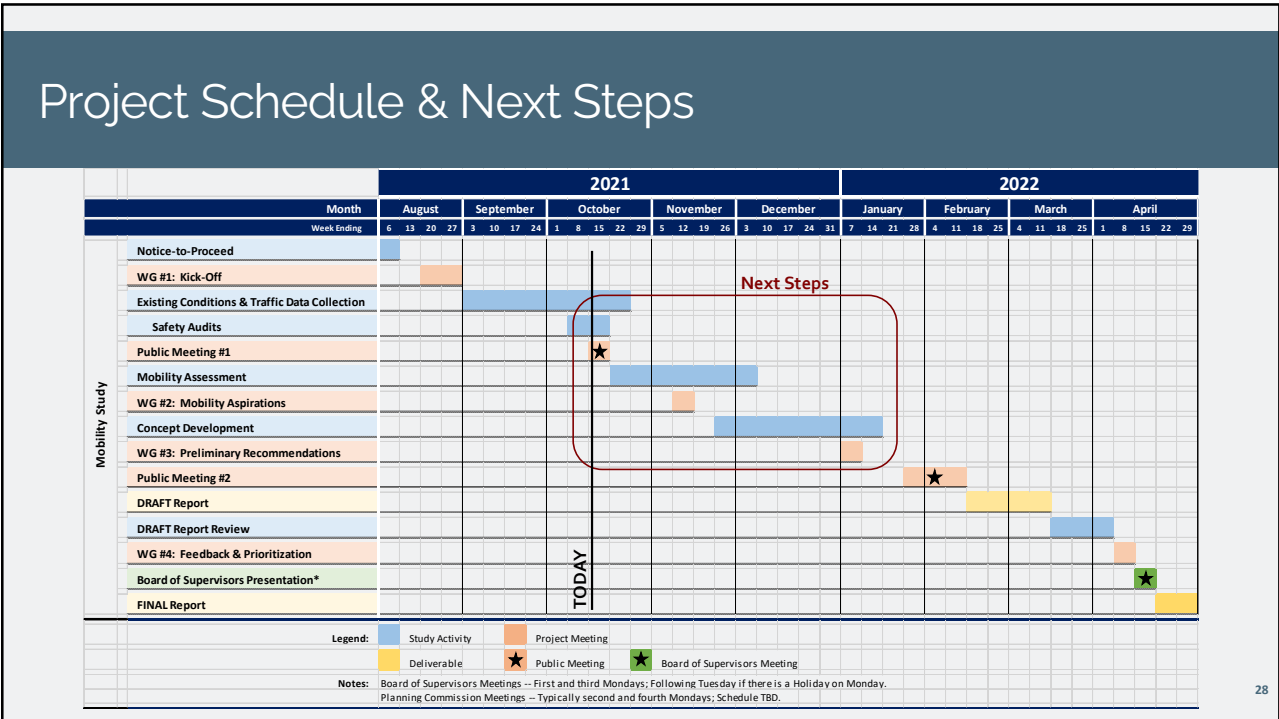
Project Website - tinyurl.com/PGMMobility

The screenshot shows the Township of Ferguson Pennsylvania website. The main content area is titled "Pine Grove Mills Mobility Study" with the subtitle "DO YOU RIDE, DRIVE, WALK, HIKE OR BIKE?". It includes a "Your Input Matters!" section with "Ways to Participate" options: "Virtual Presentation" (Thursday, October 14, 2021, 6:00 p.m.) and "Join on your computer or mobile app" (Thursday, October 14 at 6:00 PM). There is also a "Review Study Materials" section with links to Traffic Data Map, Crash Data Map, Mobility Map, Project Schedule, and Pine Grove Mills Small Area Plan. A "Take Our Survey" section at the bottom states the survey will be available until October 28, 2021.

Next Steps



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Closing Remarks

Mobility Study contacts:

Robert Watts
rjwatts@mccormicktaylor.com

Ron Seybert
rseybert@twp.ferguson.pa.us



Pine Grove Mills Mobility Study
Public Meeting #1
Meeting Summary

Meeting Details

Overview & Purpose

Ferguson Township conducted a public meeting to introduce the Pine Grove Mills Mobility Study to the community. Due to COVID-19 protocols, the meeting was held virtually, using the Microsoft Teams platform. Meeting materials, including a recording of the virtual meeting, a survey, maps and graphics, were shared on the Ferguson Township website to allow community members to review the material at any time during the two-week comment period (Oct. 14-28). Hard copies were also available at the Township building for the comment period.

Date: Thursday, October 14, 2021
Time: 6:00 p.m.
Format: Virtual, Microsoft Teams meeting

Attendees

Twenty-one (21) individuals attended the virtual meeting, including team members and presenters.

Topics Presented

Meeting presenters were Ron Seybert, Ferguson Township Engineer and Rob Watts, McCormick Taylor Project Manager. A PowerPoint presentation was utilized to present an overview of the Mobility Plan and related efforts:

- Review of the Pine Grove Mills Small Area Plan
- Origins of the Pine Grove Mills Mobility Study
- The Mobility Study Process
- Mobility Recommendations from the Pine Grove Mills Small Area Plan
- Opportunities for Public Feedback
- Next Steps

Meeting Materials

Several materials were made available on the [Ferguson Township website](#) and in hard copy at the township building during the two-week comment period.

- Mobility Map
- Traffic Data Map
- Crash Data Map
- Study Area Map
- Project Schedule
- Comment Form

Questions, Answers & Open Discussion:

The following questions and concerns were raised during the open discussion period of the meeting:

- Henry asked if Sunday Drive be added to the study area. There is a lot of high-speed, cut-through traffic because drivers can't make a left turn at the blinking light.
 - Ron clarified that Sunday Drive is included in the study area and thanked Henry for bringing the concerns about cut through traffic to the team.
- Henry also noted that mountain bikers, like himself, access the trails using Chestnut Street, but there is another access point near Deepwood Drive which is better to access the trails. At Chestnut Street, bikers have to climb Route 26, and that can be dangerous. They also tend to use the Kepler Road parking lot to start rides, not travelling through Pine Grove Mills. He also noted that PA Department of Conservation and Natural Resources (DCNR) is planning to build a trail across from Kepler Road down to the power lines which connects to Musser Gap.
- Laura D. confirmed that hikers use the Deepwood Drive access point because it is closer to on-street parking in the Village and it is a nicer, shorter walk up Deepwood than on Water Street.
- Laura D. also asked that any future renderings, streetscape plans, etc., include smaller scale, 'old timey' style fixtures to reinforce that drivers are travelling through a Village, as was described in the Pine Grove Mills Small Area Plan.
- Laura D. expressed a hope that this plan will include specific solutions to local barriers, including questions of ownership, to achieving the connections outlined in the Small Area Plan.
- Matt H. thanked the team for their analysis and presentation. He also confirmed Henry's concern about vehicle speed in the areas of Lois Lane and Sunday Drive. He wondered if there are 'low hanging fruit' (low cost safety improvements) to make pedestrian crossings at Water Street and South Nixon safer, where it is very difficult to cross. He encouraged any design for fixtures to reinforce the 'old timey' feel of the Village.
- Henry asked for clarification about traffic signal warrants and what criteria the intersection of Pine Grove Road and South Water Street does not meet to warrant a signal.
 - Rob explained that national guidelines include criteria related to traffic volumes, crash history, network, and railroad crossing data, and the team is currently evaluating the traffic volume, pedestrian, and crash warrants. The main turning movement is traffic turning right from Water Street to Pine Grove Road. The warrants require the team to evaluate the conflicts for that turning traffic, and in current conditions, there is not a lot of conflict for cars turning right. In other words, those cars can pull into the intersection and turn easily without waiting for traffic on Pine Grove Road to pass. Because of that lack of conflict, those vehicles that can approach the intersection and go through the intersection within five seconds (minimal conflict) must be excluded from the traffic counts. The remaining volume is not sufficient to warrant a signal.
 - Rob also noted that COVID-19 has dropped traffic volumes, and the team compared the team's recent traffic counts with similar counts before the pandemic, and the volumes are about 12% lower overall.
 - Henry noted that the main issue is the blind curve at the intersection, not the traffic volumes. He typically walks to the Post Office to cross the street rather than at the

blinking light, because it's easier to see traffic. Would a crosswalk at the Post Office help?

- Ron agreed that the intersection is hard to cross, and he noted that when the team was conducting their pedestrian safety audits, he saw someone cross in the middle of the curve, instead of at the intersection, so that they could see traffic coming both ways. A crosswalk was already discussed after the pedestrian audit, and Ron recognized that everyone in the Village needs to go to the Post Office to pick up mail and that is a safety concern that needs to be addressed.
- Ron also noted that the traffic signal can be added to the list of aspirational items in the study. The warrants could be met in the future if traffic volumes change. Designing the signal would be a challenge because of the limited sight distance. The intersection may be a better candidate for a four-way stop, and that option will be reviewed in the course of the study.
- Sherry S., who lives on St. Elmo's Lane, shared that drivers come down the mountain and try to avoid the blinking light and turn down Butternut then on St. Elmo's Lane at pretty high speeds.
- Sherry also asked if there is an option to install a traffic signal at Pine Grove Road and South Water Street that changes to a blinking light at off-peak times.
 - Ron clarified that warrants must be met to put the signal in at all, and even at the peak hours, the traffic volumes would not meet the warrants.
 - Municipalities, including Ferguson Township, are also getting away from the practice of changing signals at different times of the day, as more crashes are occurring at night when the signals are flashing. All Ferguson Township signals are actuated, so main line traffic gets the green light unless there is traffic on the side street.
 - Rob also noted that municipalities are eliminating night-time flashing signals for pedestrian safety. A real advantage of a signal is to regulate vehicle traffic and use things like leading pedestrian intervals or exclusive pedestrian phases to make crossing easier and safer.
- Vic S. noted that his top priority is safety, especially at the blinking light. He wished that there was more enforcement of the speed limit on Pine Grove Road. He asked if there were ways to physically change the roadway to forcibly slow people down (curves, flower beds, etc.).
 - Ron agreed that could be effective – this practice is called traffic calming. This can be done with things like speed humps or gateway treatments, as well, to make it clear that drivers are entering a neighborhood. There is a process to implement those kinds of measures on a state road, like Pine Grove Mills Road. He also agreed that safety is the top priority for the Township.
 - Ron noted that the curve near Pine Grove Hall does slow people down, and if the road was straightened to make it easier to see, traffic would drive even faster.
- Mel noted that he had recommended a series of crosswalks to be implemented in Pine Grove Mills, and it never happened. He was also told that there can't be a crosswalk at Pine Grove Hall because it would not meet requirements for crosswalks based on the width of the existing sidewalks in Pine Grove Mills.

- Ron noted that crosswalks will be considered during the study and the team will review all of the related requirements and regulations.
 - Rob also mentioned that the team has already discussed the possibility of establishing a standard way to implement crosswalks in the Village to direct pedestrians to the safest place to cross.
- Henry noted one other crosswalk in need of review by the team. The crosswalk at Nixon Road at the crest of the hill by Sunday Drive is a blind crosswalk, and drivers come up the hill very fast.
 - Ron noted that the crosswalk was identified in the Small Area Plan and will be reviewed during this study.
- Vicki posted a comment in the meeting chat: “Just past the Naked Egg the speed limit changes to 45 mph. That 45mph sign was there before the developments in Thistlewood and the one on the hill on the north side was there. Now there's more traffic pulling out onto Rte. 26. Any chance of removing that sign or replacing it with a slower speed?”
 - Ron stated that during the safety audits, the team noticed speed and sight distance at various locations, and they will review those concerns throughout the study area.

Virtual Public Meeting #1
Public Comment Form

Thank you for your participation in the Pine Grove Mills Mobility Study!

Please complete and submit this survey before October 28, 2021.

1. I travel in the Pine Grove Mills area for: *(Select all that apply)*

- | | |
|--|---|
| <input type="checkbox"/> Commuting to work | <input type="checkbox"/> Accessing State College/Penn State |
| <input type="checkbox"/> Accessing government services | <input type="checkbox"/> Accessing community resources
(school, social activities, church, etc.) |
| <input type="checkbox"/> Accessing stores, services, goods, healthcare | <input type="checkbox"/> Accessing recreational opportunities |
| <input type="checkbox"/> Other <i>(Please Explain)</i> : | |
-

2. Using what modes and how frequently do you travel in the Pine Grove Mills area?

MODE	FREQUENCY			
DRIVE	<input type="checkbox"/> Daily	<input type="checkbox"/> Weekly	<input type="checkbox"/> Monthly	<input type="checkbox"/> Less than Monthly
TRANSIT	<input type="checkbox"/> Daily	<input type="checkbox"/> Weekly	<input type="checkbox"/> Monthly	<input type="checkbox"/> Less than Monthly
WALK	<input type="checkbox"/> Daily	<input type="checkbox"/> Weekly	<input type="checkbox"/> Monthly	<input type="checkbox"/> Less than Monthly
BIKE	<input type="checkbox"/> Daily	<input type="checkbox"/> Weekly	<input type="checkbox"/> Monthly	<input type="checkbox"/> Less than Monthly

3. What are your top three transportation-related concerns in the Pine Grove Mills area? *(Select up to 3)*

- | | |
|--|---|
| <input type="checkbox"/> Lack of sidewalks/shoulder | <input type="checkbox"/> Excessive vehicle speed |
| <input type="checkbox"/> Pedestrians in the roadway | <input type="checkbox"/> Travel lanes are too narrow |
| <input type="checkbox"/> Lack of bicycle facilities | <input type="checkbox"/> Stopping or turning vehicles |
| <input type="checkbox"/> Cyclists in the roadway | <input type="checkbox"/> Lack of connectivity |
| <input type="checkbox"/> Other <i>(Please Explain)</i> : | |
-

4. In 2019, Centre Regional Planning Agency and Ferguson Township completed the Pine Grove Mills Small Area Plan. Please prioritize the transportation-related strategies from the Small Area Plan, as listed below, indicating 1 for the lowest priority and 5 for the highest priority.

SAP Transportation Strategies	1	2	3	4	5
Improve the intersection of State Routes 26 and 45 with a fully functioning traffic signal and crosswalks.					
Transition State Route 45 through Pine Grove Mills to a “complete street” with space for all users: drivers, pedestrians, bicyclists, and public transportation riders.					
Assess the need for additional on- and off-street parking in the Village area.					
Link Pine Grove Mills neighborhoods and community destinations by constructing safe bike paths, bikeways, and walkways.					
Create/identify/sign access points for established trails in Rothrock State Forest.					
Create an ADA-accessible streamside walking path and viewing point along Slab Cabin Run on East Chestnut Street.					
Create comprehensive and safe pedestrian and bike connectivity between regional points of recreation (Rothrock, Village, parks, State College).					

5. What transportation/mobility improvements would you suggest for the Pine Grove Mills area?

6. Is there any other information you would like to share about transportation/mobility in Pine Grove Mills?

7. Contact Information (*Optional*)

Name: _____

Address: _____

City/Town: _____ State: _____ Zip: _____

Email: _____

Please return completed comment forms to the address below by October 28, 2021:
 McCormick Taylor, Attn: Rob Watts, 329 Innovation Blvd, Suite 116, State College, PA 16803

Township of Ferguson Pine Grove Mills Mobility Study Working Group Meeting #2 Summary of Survey Results

November 18, 2021



1

Outreach

- **Virtual Meeting**
 - 21 attendees, including team members and presenters
- **Public Survey**
 - 76 participants
- **Webpage Video**
 - 57 views
- **Webpage Analytics**
 - 198 total pageviews
 - Average duration ~4 minutes



2

Travel Activity

I travel in the Pine Grove Mills area for: (select all that apply)	Responses	
	Total	%
Accessing recreational opportunities	52	69%
Accessing community resources	32	43%
Accessing State College/Penn State	30	40%
Accessing stores, services, goods, healthcare	30	40%
Commuting	21	28%
Other (please specify)	19	25%
Accessing Gov't Services	14	19%
Total	75	

** Note that users could select multiple choices*

3

Travel Activity (continued)

I travel in the Pine Grove Mills area for:

- **Other Responses**
 - I Live Here (8)
 - Visiting Friends/Family (3)
 - Biking for Health, Enjoyment/Recreation (2)
 - Farmers Market (2)
 - Naked Egg (1)
 - Post Office (1)
 - Alternate Route to Blair County (1)
 - Blood Drives (1)
 - Stich Your Art Out Store (1)



4



Travel Mode and Frequency

Using what modes and how frequently do you travel in the Pine Grove Mills area?	Less than Monthly		Monthly		Weekly		Daily		Not Used		Total	Weigh ted Avg.
	Total	%	Total	%	Total	%	Total	%	Total	%		
Drive	10	13%	14	19%	17	23%	33	44%	1	1%	75	3.0
Walk	11	18%	5	8%	12	20%	19	32%	13	22%	60	2.8
Bike	18	28%	11	17%	16	25%	3	5%	16	25%	64	2.1
Transit	9	18%	3	6%	2	4%	2	4%	33	67%	49	1.8

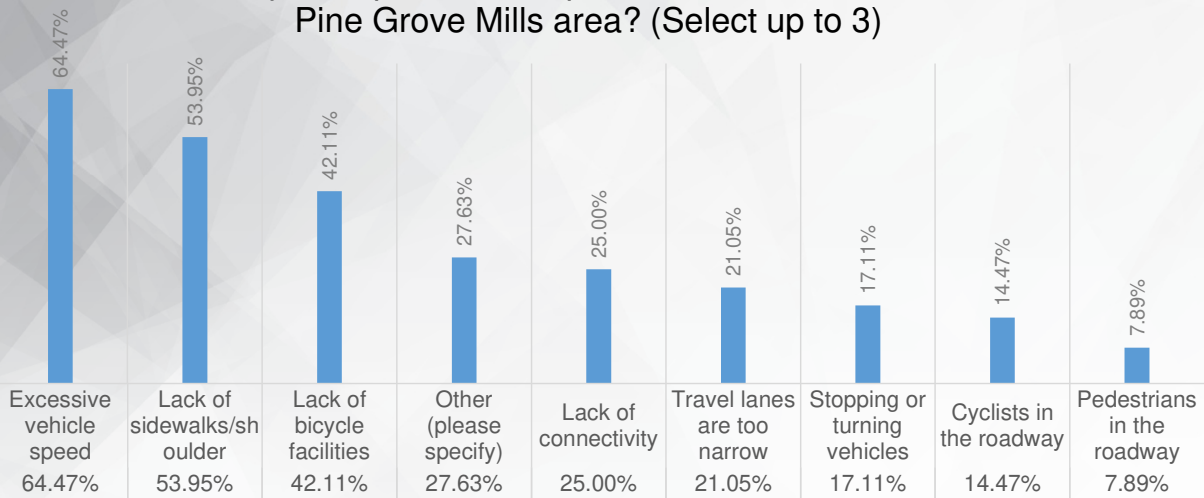
* Note that users could select multiple choices

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Transportation-Related Concerns

What are your top three transportation-related concerns in the Pine Grove Mills area? (Select up to 3)



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Transportation Related Concerns (continued)

Other Responses

- **Safety**
 - **Speed limits not enforced**
- Lack of parking
- Limited bus options (2)
- Lack of painted pedestrian crosswalks anywhere (except at school)
 - **Lack of crosswalks at intersection with Water Street**
- Lack of sensible traffic/pedestrian direction (preferably via stoplight).
- Lack of streetlamp overarching E. Pine Grove Road (btwn. Pine Grove Hall and Post Office)
- Post Office access for mature citizens
- Can't get around town without being on main road
- Potholes
- Vehicles coming down Pine Grove Mountain

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Transportation Related Concerns (continued)

Other Responses

- **Intersection of 45/26**
 - **Riding a bike along 45/26 back to State College is doable, but dangerous.**
 - **Dangerous intersection in the middle of town**
 - **Blind, uphill curve heading west on 45 by Pine Grove Hall. Dangerous for vehicle drivers, pedestrians and cyclists.**
 - **Lack of Visibility at the Nixon and 45/26 intersection**
- **Lack of bicycle facilities**
 - **Lack of safe bike lanes, especially over the mountain (2)**
 - **Need for dedicated bike lane along Nixon Road**
 - **I would cycle in the area, but it seems too dangerous at present time**
- **Bicycles being unsafe by not following proper practices**

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Transportation-Related Strategies from the Small Area Plan

In 2019, CRPA and Ferguson Township completed the Pine Grove Mills Small Area Plan. Please prioritize the transportation-related strategies from the Small Area Plan, as listed below.

Results based on weighted average (highest to lowest)

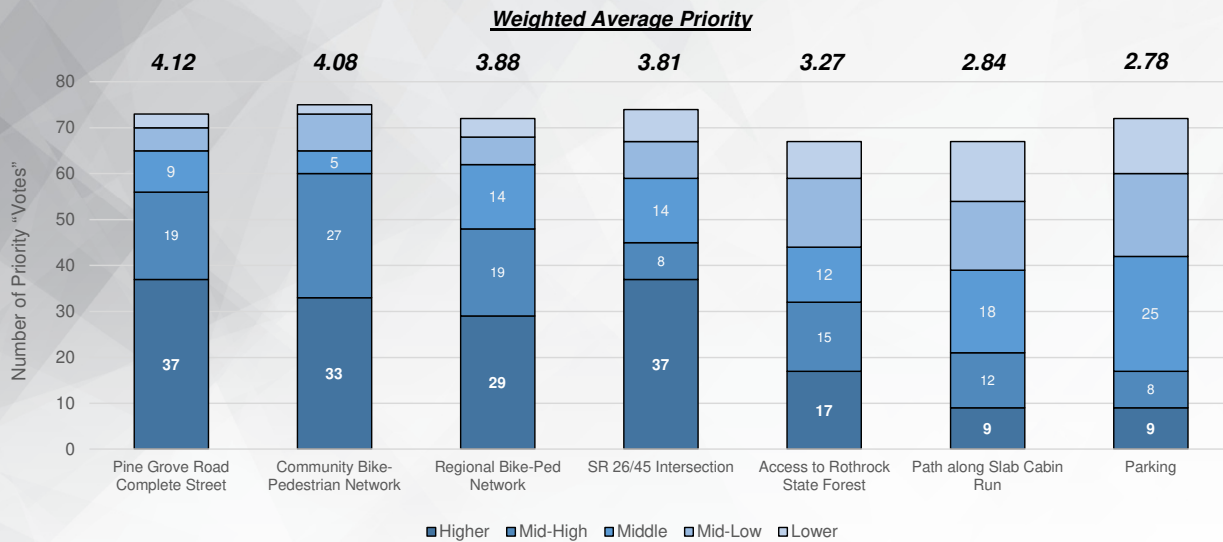
1. Transition State Route 45 through Pine Grove Mills to a “complete street” with space for all users: drivers, pedestrians, bicyclists, and public transportation riders. (4.12)
2. Link Pine Grove Mills neighborhoods and community destinations by constructing safe bike paths, bikeways, and walkways. (4.08)
3. Create comprehensive and safe pedestrian and bike connectivity between regional points of recreation (Rothrock, Village, parks, State College). (3.88)
4. Improve the intersection of State Routes 26 and 45 with a fully functioning traffic signal and crosswalks. (3.81)
5. Create/identify/sign access points for established trails in Rothrock State Forest. (3.27)
6. Create an ADA-accessible streamside walking path and viewing point along Slab Cabin Run on East Chestnut Street. (2.84)
7. Assess the need for additional on- and off-street parking in the Village area. (2.78)

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Transportation-Related Strategies from the Small Area Plan



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What other transportation/mobility improvements would you suggest for the Pine Grove Mills area?

- SR 45/SR 26 intersection
 - Pedestrian safety
 - Crosswalks
 - Streetlight/illumination
 - Feasibility of Signal (3)
 - Roundabout
 - Allow left turns from S. Nixon Road to SR 45/Pine Grove Road (2)



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What other transportation/mobility improvements would you suggest for the Pine Grove Mills area? (continued)

- Traffic calming along SR 26 and SR 45
 - Speed bump/hump (3)
 - Permanent speed clock
 - Speed enforcement (6)
 - Better signage (2)
 - Speed mitigation measures at Water Street and Ferguson Township Elementary
 - Extend speed limit past elementary school
 - Bypass downtown PGM
 - Traffic circles
- Traffic calming on Water Street



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What other transportation/mobility improvements would you suggest for the Pine Grove Mills area? (continued)

Pedestrian Facilities

- Sidewalks on Deepwood Drive
- Walking trails from downtown to Rothrock
- Crosswalk by Post Office
- Adding additional established crosswalks at intersections through the Village district
- Accessibility



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What other transportation/mobility improvements would you suggest for the Pine Grove Mills area? (continued)

Bicycle Facilities

- Protected separated bike paths on SR 45/26 to connect Water St. to Whitehall
- Connect bike paths to State College bike paths (5)
- Complete bike path off Banyan Drive to town
- Bike lane between SR 45 and Nixon Road utilizing alley near elementary school/cemetery to connect to a bike lane along Nixon Rd. to bypass curves/hill/traffic near SR 45/Nixon Road
- Wider shoulder on Rt. 26 over mountain for cycling, especially on north side
- More mountain biking trails (2)
- Signage to ensure motorists share the road and provide safe distance to cyclists
- Bike racks for businesses (CentreBike has been recycling PSU racks for this purpose)

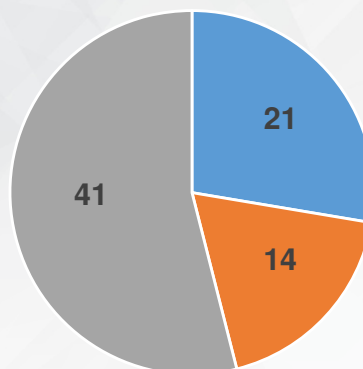
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What other transportation/mobility improvements would you suggest for the Pine Grove Mills area? (continued)

- Guidelines for e-bikes, e-scooters
- Transit
 - Return of CATA service with more frequent routes (2)
 - CATAGO service in Pine Grove Mills and western Ferguson Township
 - Possibility of shuttles, Zip Car, etc.
- Parking
 - Mark eligible parking spaces along E. & W. Pine Grove and Nixon Roads
 - Parking lot downtown
 - Hiking/biking trail parking

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Location of Respondents

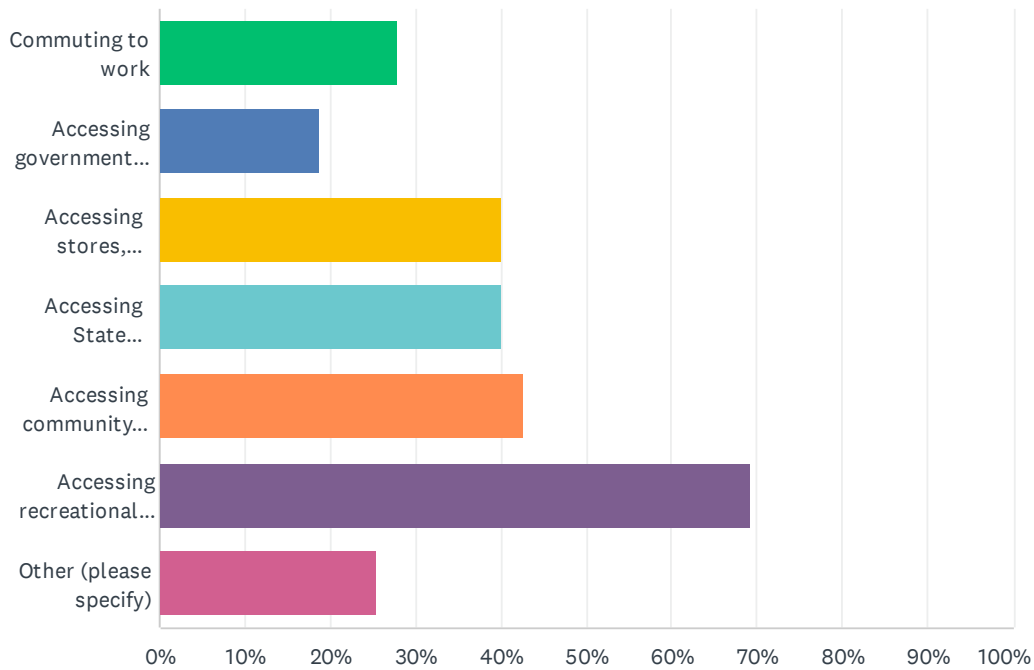


■ In Study Area ■ Outside Study Area ■ Unknown

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Q1 I travel in the Pine Grove Mills area for: (Select all that apply)

Answered: 75 Skipped: 1



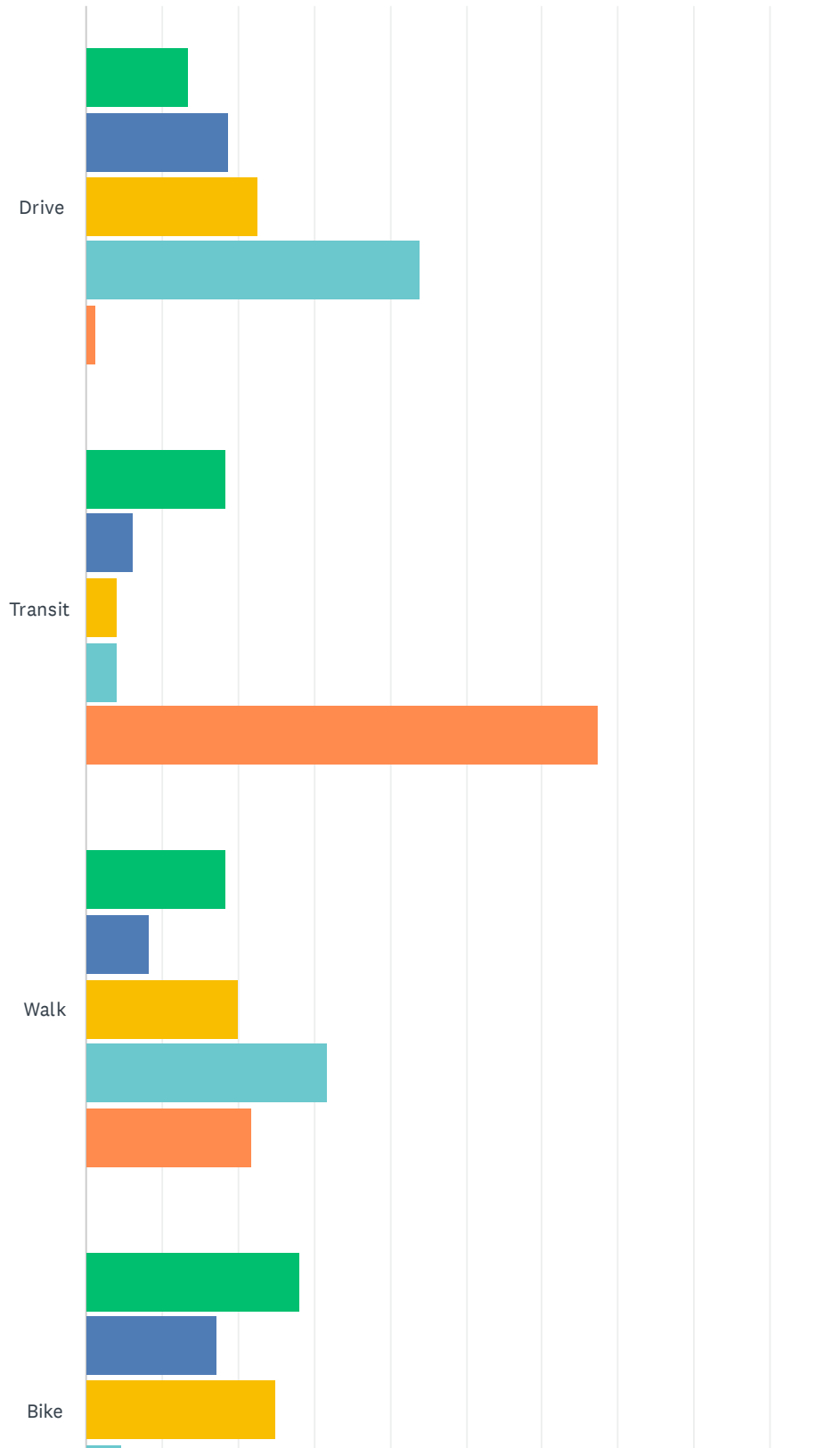
ANSWER CHOICES	RESPONSES
Commuting to work	28.00% 21
Accessing government services	18.67% 14
Accessing stores, services, goods, healthcare	40.00% 30
Accessing State College/Penn State	40.00% 30
Accessing community resources (school, social activities, church, etc.)	42.67% 32
Accessing recreational opportunities	69.33% 52
Other (please specify)	25.33% 19
Total Respondents: 75	

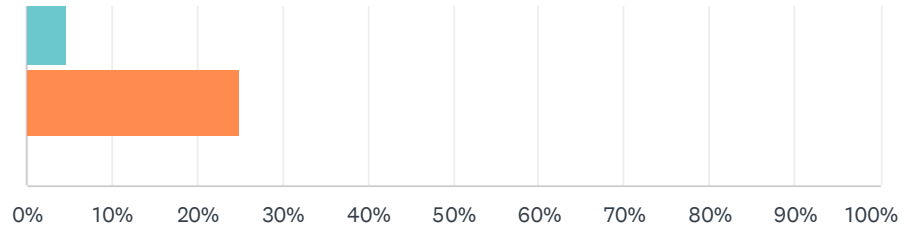
#	OTHER (PLEASE SPECIFY)	DATE
1	Visiting friends	10/28/2021 6:07 PM
2	I live here	10/27/2021 8:41 PM
3	I live in Pine Grove Mills.	10/27/2021 3:26 PM
4	I live here.	10/26/2021 7:18 PM
5	I live in PGM	10/26/2021 9:16 AM
6	Farmers market, nakex egg, post office	10/26/2021 3:06 AM
7	Website and video say survey ends 24 Oct. Survey page says 21 October.	10/25/2021 11:20 PM

8	Accessing my home	10/25/2021 8:25 PM
9	I live there - so I travel in PGM for anything	10/25/2021 6:55 PM
10	I live in the village, so I travel in PGM for ALL of these purposes.	10/25/2021 3:30 PM
11	Pine Grove Mills farmer's market	10/20/2021 7:54 AM
12	Biking for health and enjoyment	10/19/2021 11:50 AM
13	Farmers market and alternate route to Blair County	10/19/2021 11:00 AM
14	Bike Riding for Recreation	10/19/2021 9:11 AM
15	blood drives, visiting family	10/19/2021 8:56 AM
16	Recreational walking	10/17/2021 7:48 AM
17	I live here	10/16/2021 4:08 PM
18	Visitng Friends	10/16/2021 10:59 AM
19	Stitch your Art out store	10/15/2021 8:51 AM

Q2 Using what modes and how frequently do you travel in the Pine Grove Mills area?

Answered: 76 Skipped: 0



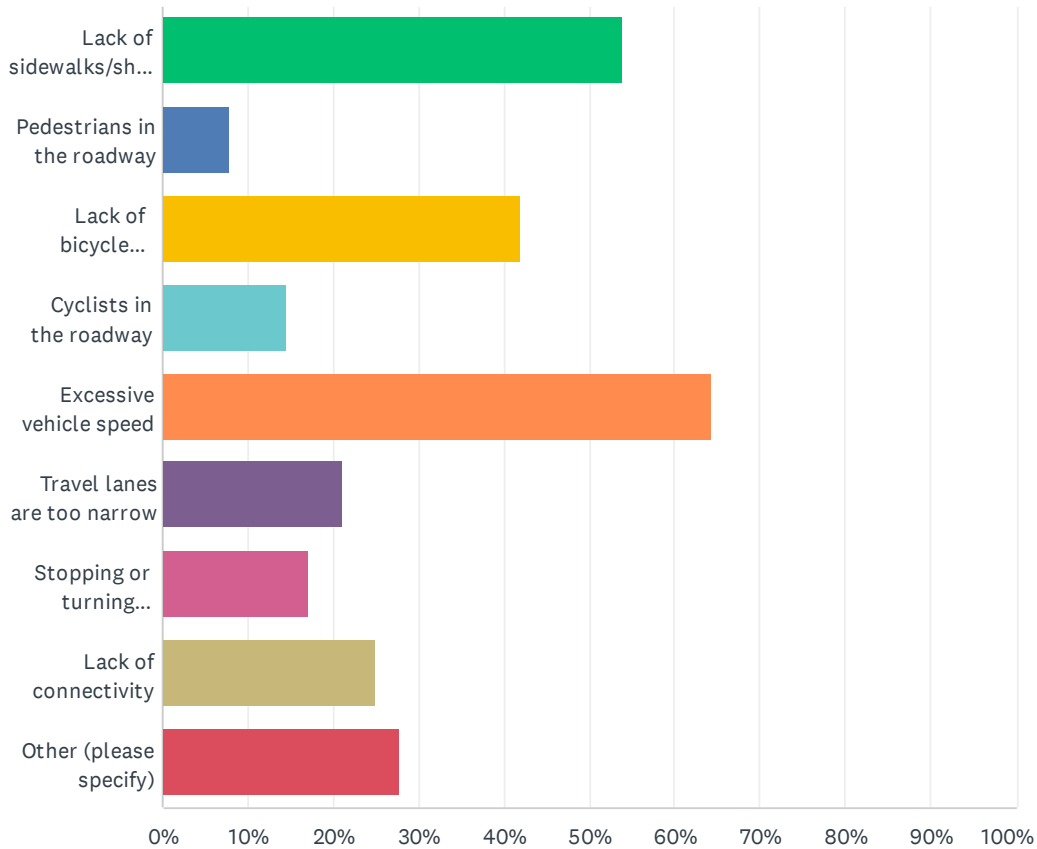


■ Less than Monthly
 ■ Monthly
 ■ Weekly
 ■ Dailly
 ■ N/A

	LESS THAN MONTHLY	MONTHLY	WEEKLY	DAILY	N/A	TOTAL	WEIGHTED AVERAGE
Drive	13.33% 10	18.67% 14	22.67% 17	44.00% 33	1.33% 1	75	2.99
Transit	18.37% 9	6.12% 3	4.08% 2	4.08% 2	67.35% 33	49	1.81
Walk	18.33% 11	8.33% 5	20.00% 12	31.67% 19	21.67% 13	60	2.83
Bike	28.13% 18	17.19% 11	25.00% 16	4.69% 3	25.00% 16	64	2.08

Q3 What are your top three transportation-related concerns in the Pine Grove Mills area? (Select up to 3)

Answered: 76 Skipped: 0



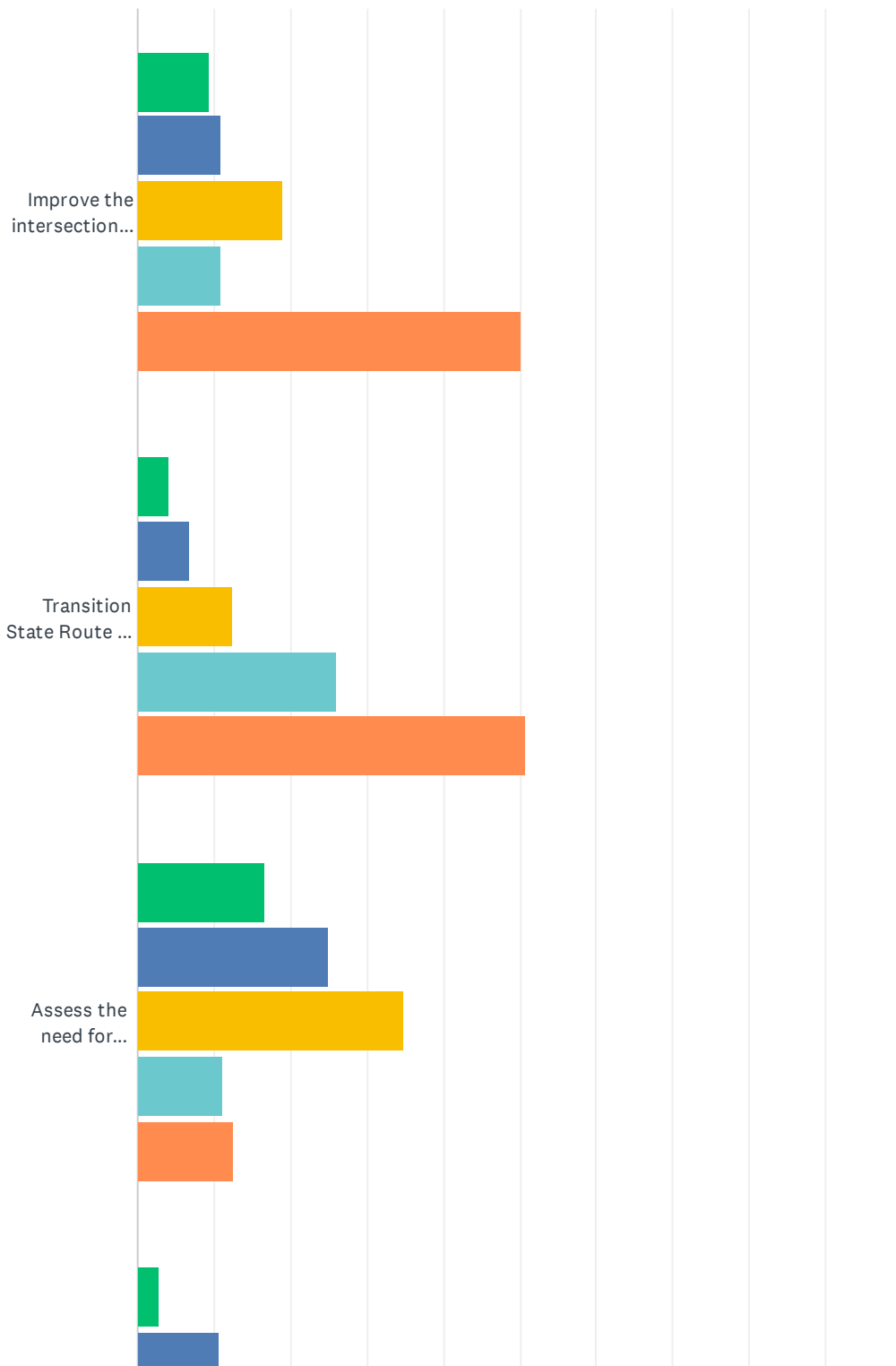
ANSWER CHOICES	RESPONSES	
Lack of sidewalks/shoulder	53.95%	41
Pedestrians in the roadway	7.89%	6
Lack of bicycle facilities	42.11%	32
Cyclists in the roadway	14.47%	11
Excessive vehicle speed	64.47%	49
Travel lanes are too narrow	21.05%	16
Stopping or turning vehicles	17.11%	13
Lack of connectivity	25.00%	19
Other (please specify)	27.63%	21
Total Respondents: 76		

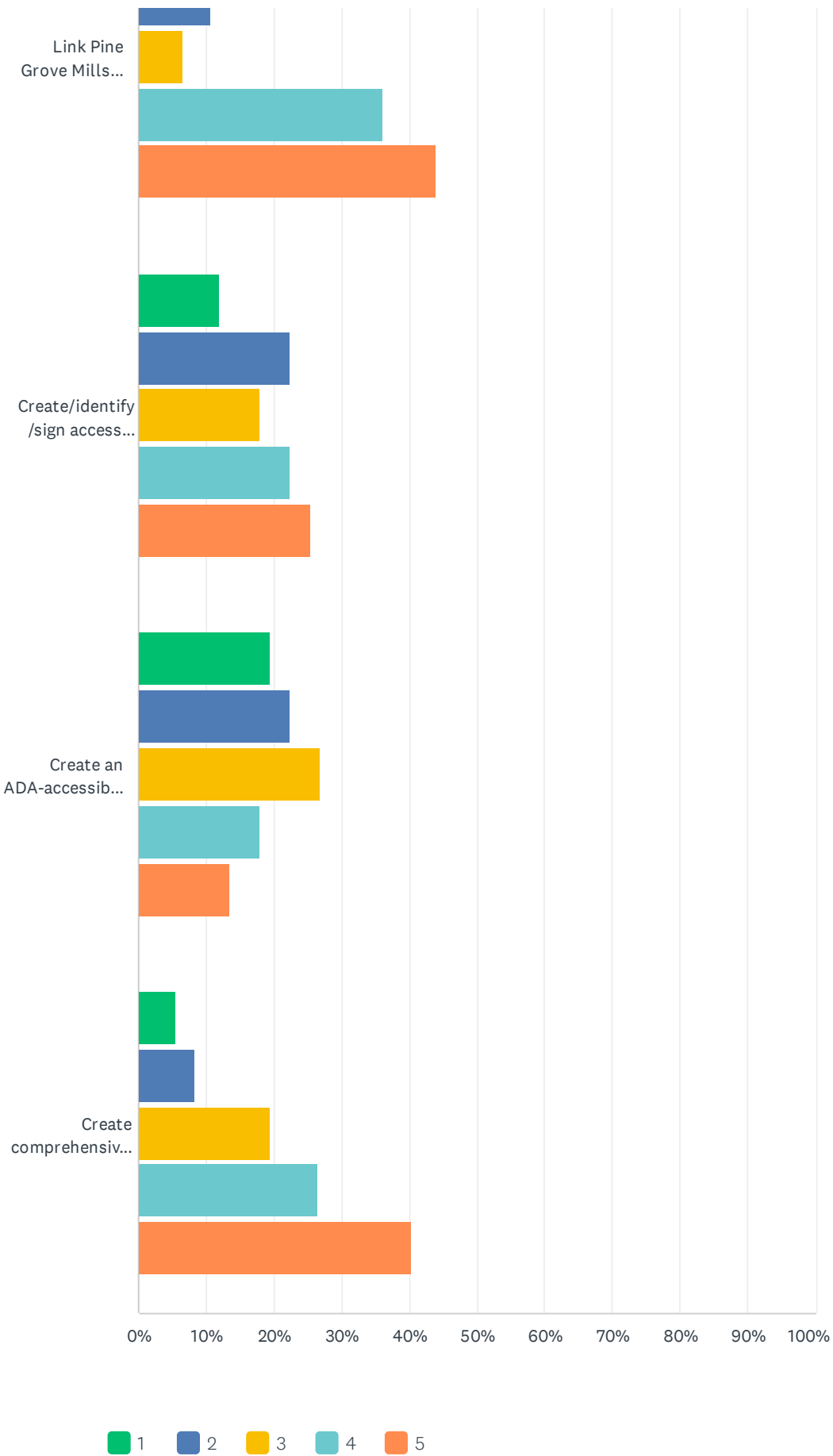
#	OTHER (PLEASE SPECIFY)	DATE
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1	The intersection of 26 and 45 seems excessively dangerous for pedestrians and drivers alike, especially because vehicles tend to speed and visibility is poor.	10/27/2021 3:26 PM
2	Lack of sensible traffic/pedestrian direction (preferably via stoplight). Lack of streetlamp overarching E. Pine Grove Road--specifically between Pine Grove Hall and the Post Office.	10/25/2021 11:20 PM
3	Lack of visibility at the Nixon and 45/26 intersection	10/25/2021 6:55 PM
4	Speed limits NOT enforced. Lack of parking.	10/25/2021 3:30 PM
5	Lack of cross walks at intersection with water st; small children needing to walk to school, post office, etc.	10/25/2021 9:46 AM
6	Lack of a bike lane	10/23/2021 4:55 PM
7	Post Office access for mature citizens	10/23/2021 10:17 AM
8	Bicycles being unsafe by not following proper practices	10/23/2021 9:35 AM
9	Inadequate transit service	10/20/2021 10:10 PM
10	Vehicles coming down Pine Grove Mountain	10/20/2021 7:54 AM
11	I would cycle in the area, but it seems too dangerous at the present time.	10/20/2021 7:21 AM
12	Potholes	10/20/2021 12:05 AM
13	You should contact people that say cyclists in the roadway and educate them about their responsibility to know the vehicle code	10/19/2021 2:25 PM
14	The intersection of Rt. 45 and Nixon Rd and Rt. 26 is a disaster. Blind, uphill curve heading west on 45 by Pine Grove Hall. Dangerous for vehicle drivers and cyclists. There needs to be a dedicated bike lane along Nixon Rd.	10/19/2021 1:01 PM
15	Lack of safe bike lanes, especially over the mountain	10/19/2021 11:50 AM
16	The dangerous intersection in the middle of town	10/19/2021 9:20 AM
17	Riding a bike along 45/26 back to State College is doable, but dangerous. No one would ever want a child or grandparent riding that route as it stands today, and even few able bodied adults feel safe on it. This link must be improved.	10/19/2021 9:18 AM
18	Can't get around town without being on main road (26)	10/17/2021 9:32 PM
19	Lack of painted pedestrian crosswalks anywhere, except at school	10/16/2021 4:08 PM
20	Limited bus options	10/16/2021 10:59 AM
21	Safety - potential for tragic accident if issues aren't addressed.	10/16/2021 12:08 AM

Q4 In 2019, Centre Regional Planning Agency and Ferguson Township completed the Pine Grove Mills Small Area Plan. Please prioritize the transportation-related strategies from the Small Area Plan, as listed below, (5 being highest priority and 1 being lowest priority)

Answered: 76 Skipped: 0





	1	2	3	4	5	TOTAL	WEIGHTED AVERAGE
Improve the intersection of State Routes 26 and 45 with a fully functioning traffic signal and crosswalks.	9.46% 7	10.81% 8	18.92% 14	10.81% 8	50.00% 37	74	3.81
Transition State Route 45 through Pine Grove Mills to a "complete street" with space for all users: drivers, pedestrians, bicyclists, and public transportation riders.	4.11% 3	6.85% 5	12.33% 9	26.03% 19	50.68% 37	73	4.12
Assess the need for additional on- and off-street parking in the Village area.	16.67% 12	25.00% 18	34.72% 25	11.11% 8	12.50% 9	72	2.78
Link Pine Grove Mills neighborhoods and community destinations by constructing safe bike paths, bikeways, and walkways.	2.67% 2	10.67% 8	6.67% 5	36.00% 27	44.00% 33	75	4.08
Create/identify/sign access points for established trails in Rothrock State Forest.	11.94% 8	22.39% 15	17.91% 12	22.39% 15	25.37% 17	67	3.27
Create an ADA-accessible streamside walking path and viewing point along Slab Cabin Run on East Chestnut Street.	19.40% 13	22.39% 15	26.87% 18	17.91% 12	13.43% 9	67	2.84
Create comprehensive and safe pedestrian and bike connectivity between regional points of recreation (Rothrock, Village, parks, State College).	5.56% 4	8.33% 6	19.44% 14	26.39% 19	40.28% 29	72	3.88

Q5 What other transportation/mobility improvements would you suggest for the Pine Grove Mills area?

Answered: 37 Skipped: 39

#	RESPONSES	DATE
1	None	11/8/2021 1:14 PM
2	Painted crosswalks at 26 and 45 with push buttons for pedestrians to stop traffic.	10/28/2021 5:07 PM
3	Make the lanes slightly narrower to slow car traffic. Add bicycle lanes on either side. Make it safer for pedestrians to cross near the 45/26 intersection in the center of the village. Mark eligible parking spaces	10/28/2021 4:31 PM
4	We ride the bike paths in State College frequently, but have to drive to a location to start because we don't feel its safe to bike on Nixon Road, a bike path to link up with the State College Bike paths would be very nice.	10/27/2021 8:41 PM
5	Anything that slows down traffic along 26 and 45 (especially on Water Street) would be very much appreciated.	10/27/2021 3:26 PM
6	A safer way to bike into State College. While technically a bike is a vehicle, vehicles doe not act that way. Streets into SC are too dangerous to ride. Would be nice to be able to bike safely to MNMS, And SC High as well. ESPECIALY, as electric bikes are improving.	10/27/2021 9:47 AM
7	Return of CATA bus service with a schedule that is more than a morning and late afternoon bus run.	10/26/2021 7:18 PM
8	None that haven't already been noted although PennDot has already said we will not get the traffic light and pedestrian crossing at the intersection of Rts. 45 and 26. Very disappointing as that is the top priority in the opinion of myself and many other PGM residents.	10/26/2021 9:16 AM
9	Highest priority number one: reduce dangerous speeds on 26 (hill coming in and out of town) such as changing speed limit, installing speed bump or permanent speed clock that flashes blue and red (like Lemont has) —living on W Chestnut street we have witnessed speeds averaging 50 mph coming in and leaving town at our street intersection. None of these other interventions will feel safe on 26 unless traffic is first calmed.	10/26/2021 3:06 AM
10	Designated (lined) parking spaces along E. & W. Pine Grove and Nixon Roads. And ABSOLUTELY, POSITIVELY a crosswalk on the bend between Pine Grove Hall and the Post Office... with an overarching, long-arm streetlamp that illuminates the center of the road to help address the "blind-curve" aspect that has been pointed out. If that curve were better illuminated, you'd kill two birds with one stone by increasing visibility for pedestrians crossing at the safest point while also drawing drivers' attention to the fact that the road curves prior to the intersection. Also, while I know Ferguson has stated that they do not use flashing lights, this is not true. Bluecourse @Martin Street recently installed a flex-arrow for traffic turning left onto Martin Street. These arrow lights that change functionality depending on time of day are an absolutely BRILLIANT technique for increasing throughput efficiency while maintaining safety. Such lights should be considered (as per Susan's [?] comment in the Z00m meeting).	10/25/2021 11:20 PM
11	Pennsylvania	10/25/2021 8:02 PM
12	Parklet off of Meckley drive	10/25/2021 7:18 PM
13	It would be great if the bike path off Banyan Drive to town was completed. I'm assuming it would connect to the path that goes through Orchard Park and the high school. This would remove bikes from 45/26, and also some bikes from the Nixon to Whitehall stretch, and allow for a bike/pedestrian walkway through what could be a nice area of farm land vs. busy roads with fast moving cars.	10/25/2021 6:55 PM
14	Enforce the 25 mph speed limit. If the police cannot do this (limited resources, etc.) then add better signage, like with flashing lights, street calming, video, etc. to slow people down.	10/25/2021 3:30 PM

15	Permanent mechanisms to slow traffic - speed humps, etc and also to divert large trucks from coming though the village.	10/25/2021 11:51 AM
16	Sidewalks on Deepwood Drive. So many pedestrians use it, beyond only the residents of the street. Speed mitigation measures between intersection at Water Street and ferg twp elementary. People really pick up speed after the intersection perhaps because they feel they are almost 'out of town'	10/24/2021 10:31 PM
17	More Mountain Biking Trails	10/23/2021 11:03 PM
18	Consider a round about at the intersection of 45/26/Nixon road	10/23/2021 4:55 PM
19	bike racks for businesses, centrebike has been recycling PSU racks for this purpose.	10/22/2021 1:54 PM
20	Consider enhanced public transportaiton, including serving Pine GRove Mills and western Ferguson Township with CATAGO service.	10/20/2021 10:10 PM
21	Safe roads and sidewalks on all streets. Make smooth.	10/20/2021 12:05 AM
22	Reconfigure S Nixon Rd and SR 45/Pine Grove Rd to allow for left turn from S Nixon Rd	10/19/2021 3:42 PM
23	Does not need to have a crosswalk at the intersection of Rt26 & Rt45. There's nothing to walk to.	10/19/2021 1:26 PM
24	A bike lane between Rt 45 and Nixon Rd that takes advantage of the alleys next to the elementary school and the cemetery and connects to a bike lane along Nixon Rd. that bypasses the curves/hill/traffic near the 45/Nixon Rd intersection. There needs to be a dedicated bike lane from the intersection of 45 and 26 on the State College side of town to the western side of town.	10/19/2021 1:01 PM
25	slow the cars and trucks	10/19/2021 11:59 AM
26	Signage to ensure motorists know to share the Road and provide safe distance to cyclists.	10/19/2021 11:50 AM
27	There should be a protected separated bike path along 45/26 that connects Water St to Whitehall. Build this now before the land along 45/26 gets more developed and creating it becomes more difficult/expensive. This will create a critical biking link between Pine Grove Mills and State College and allow safe bike rides from Pine Grove Mills all the way to Penn State and vice versa.	10/19/2021 9:18 AM
28	Walking trails from downtown to Rothrock	10/19/2021 9:02 AM
29	I noticed there is what looks like a right turning lane being put in at the red light on College and Whitehall. This is a major mistake. I travel Whitehall Rd daily and I've had people who are turning right on a red light almost hit me as I'm coming thru the green light. By giving them their on designated lane, they will not stop at all. There will be accidents at this light.	10/19/2021 8:56 AM
30	bike paths	10/19/2021 8:53 AM
31	a wider shoulder on rt 26 over the mountain would be great for cycling, especially on the north side.	10/18/2021 10:54 AM
32	Extend speed limit past the elementary school. Traffic entering Pine Grove Mills on 45 is often still decelerating and the presence of pedestrian traffic (primarily children) is concerning considering the speed.	10/17/2021 7:20 PM
33	A signal needs to be placed where 45 comes into the curve on 26 from Shingletown. This is a VERY dangerous intersection and needs to be addressed.	10/17/2021 7:48 AM
34	Township to improve and maintain selected so-called "alleys" to support their actual use by municipal, utility and private vehicles and bicyclists and pedestrians (e.g. dog walkers).	10/16/2021 4:08 PM
35	Continue to enforce speed limit through Pine Grove Mills...particularly when school students are going to and from school. Adding additional established crosswalks at intersections through the village district.	10/16/2021 10:59 AM
36	A crosswalk by the post office. Better nighttime lighting around the curve between the post office, Pine Grove Hall and the bridge.	10/16/2021 12:08 AM
37	Traffic calming - can some routes bypass downtown PGM? Or can we use traffic circles in some areas? I'm also concerned about the intersection where 45/26 merge. Turning left from	10/15/2021 8:51 AM

45W onto 26S is hard at rush hour and the merge from 26N to 45E can be dangerous. Calming that might help with westbound traffic into PGM

Q6 Is there any other information you would like us to know about transportation and mobility in Pine Grove Mills?

Answered: 25 Skipped: 51

#	RESPONSES	DATE
1	No	11/8/2021 1:14 PM
2	Speeding cars along Rt. 45 needs to be addresses. More police presence, stop signs, flashing speed signs with the speed drivers are going.	10/28/2021 5:07 PM
3	Traffic calming measures should be made up Water Street as it goes around a bend near the water tower.	10/28/2021 4:31 PM
4	Buses might be nice, but that is a no one rides them to justify them coming out, but they are so infrequent to make them reliable to use. Hum...No chance there could be like a on demand short hop shuttle? Or maybe even zip cars? Working from home now, I drive so infrequently. I keep a car to have because I have no other options. But seems a bit of a waste.	10/27/2021 9:47 AM
5	That I am very disappointed that the most important of the transportation suggestions offered by the PGMSAP seem to be impossible.	10/26/2021 9:16 AM
6	Our neighborhood has lost multiple pets due car strike on 26, I've personally been first responder to a car flipped upsidedown from a 24 year old taking the last curve into town too fast. In the past 2 months there have been several weekend instances of sports car and truck racing usually later between 9-11pm on 26 going up the mountain - but it starts at the gas station intersection. We need more monitoring and enforcement of driving behavior and speed before we can think about just building infrastructure like a sidewalk on an already dangerous road.	10/26/2021 3:06 AM
7	The fact that all traffic is channeled via 26/45 does not draw attention to the fact that PGM is a small, vibrant community. Until a few weeks back, I had no idea that there were several blocks of homes off of the primary roads. Also, PGM needs to collect signatures from the community to override PennDOT's requirements for traffic a signal. That intersectino is dangerous on multiple levels and needs to be addressed. There is no reason why someone traveling eastbound on Nixon should not be able to turn left onto E. Pine Grove Road other than non-progressive minds stymying necessary progress. We are a community of reasonable, intelligent people being told by people who have no stake in our community how to handle important safety issues.	10/25/2021 11:20 PM
8	If you want people to venture downtown, there needs to be a parking lot. Even with on street parking, there are too few spots and the road width is not ideal.	10/25/2021 6:55 PM
9	The issues should be addressed without changing the unique nature and historic aspects of the village. For example, you cannot widen some of the streets to add sidewalks without ruining people's homes/yards, or force owner to change alleys they own to expand traffic. In addition, don't change zoning to allow businesses that may not work within the current confines of the village. We don't want MORE traffic going through already quiet, safe streets where they do exist.	10/25/2021 3:30 PM
10	There is a major problem with speeding in the village. This is only monitored during school drop off and pick up. Something needs to be done to deter speeding. Also, there is currently no bus service in the area. Return of this service needs to be prioritized.	10/25/2021 11:51 AM
11	Our town is the only village neighboring state college that has no pike path access connecting it safely to state college via walking or biking. There is no or limited parking for hiking or guests on any of the streets.	10/25/2021 9:26 AM
12	Great lack of connectivity and accessible passable sidewalks. Some areas great others not.	10/24/2021 10:31 PM
13	narrowing roadways has been shown to slow traffic speeds, allows more room for bike lanes as a bonus.	10/22/2021 1:54 PM

14	Consideration for the anticipated changing climate should be part of the planning - the extreme rain events and increase run off is likely to impact the roadways in PGM.	10/20/2021 4:11 PM
15	E-bikes and E-scooters are becoming much more common. What rules are you ready to implement concerning those vehicles in designated bike paths and pedestrian areas? They are a good, reasonable means of transportation, and should be encouraged. However, come up with reasonable plans 'before' you have problems.	10/19/2021 10:11 PM
16	This area is scary to bike through, though I've done it. Creating grade separated biking through this region would also improve walkability, handicap access and more (not just sidewalks or painted roadways).	10/19/2021 5:16 PM
17	Safety needs to be the top priority for whatever plan is developed for the Pine Grove Mills area.	10/19/2021 1:01 PM
18	Pine Grove Mills is an epicenter of amazing biking opportunities and it would benefit the town greatly to invest in making the area fully safe and accessible for cyclists around town, on the roads and over the mountain. Thank you!!	10/19/2021 11:50 AM
19	i enjoy the rides through your area, despite not being from that township	10/19/2021 11:03 AM
20	I'd spend a lot more money in Pine Grove Mills if it had a safe bike connection to State College. The Naked Egg is only 4 miles from my house, but I go there infrequently because of the danger of biking there created by a lack of bike infrastructure along the way. Stitch your Art Out, the Pine Grove Mills Farmers Market, and Pine Grove Hall are just a bit further and all sound interesting, but I won't patronize them till I can safely bike to them.	10/19/2021 9:18 AM
21	the trails in the kepler rd area are excellent. it is also nice to connect from them to musser gap via bicycle in the powerline	10/18/2021 10:54 AM
22	It would be so wonderful to connect Pine Grove Mills to the overall State College bike path system. We are often biking on Whitehall, Nixon, and Old Gatesburg with drivers who are exceeding the speed limit and hostile to bike traffic. Also, turning from Nixon onto 45 is dangerous - traffic consistently exceeds the posted speed limit, and the corner at Pine Hall/Post Office is has no visibility.	10/17/2021 7:20 PM
23	Walking in winter is impossible some days after the state plows 26/45. People are ot required to shovel for 48 hours and so many of us end up walking on an icy street with cars and trucks. Very dangerous situation. THIS NEEDS TO BE ADDRESSED!	10/17/2021 7:48 AM
24	Warrants and regulations applicable to all improvements I have studied are contradictory and mutually defeating. Bold leadership by Township officials must be taken to produce results rather than using the regs as excuses for inaction as in the past.	10/16/2021 4:08 PM
25	I know this is controversial, but MORE side streets like Sunday Drive could help, especially when calmed. Park Ave & Atherton in State College is a jam partly because it's the only way access point to campus/different neighborhoods on that side of town.	10/15/2021 8:51 AM

Q7 Contact Information (Optional)

Answered: 35 Skipped: 41

ANSWER CHOICES	RESPONSES	
Name	94.29%	33
Company	0.00%	0
Address	91.43%	32
Address 2	0.00%	0
City/Town	97.14%	34
State/Province	97.14%	34
ZIP/Postal Code	100.00%	35
Country	0.00%	0
Email Address	94.29%	33
Phone Number	0.00%	0

#	NAME	DATE
1	Martha Hummel	11/8/2021 1:14 PM
2	John Quinn	10/27/2021 8:41 PM
3	Mathias Hanses	10/27/2021 3:26 PM
4	Darren J. Hron	10/27/2021 9:47 AM
5	Sherry Symons	10/26/2021 9:16 AM
6	Sarah Rocker	10/26/2021 3:06 AM
7	Sc'Eric	10/25/2021 11:20 PM
8	David Geveke	10/25/2021 8:02 PM
9	Connie Puckett	10/25/2021 7:18 PM
10	Kerry Newman	10/25/2021 3:30 PM
11	Erin Hanses	10/25/2021 9:46 AM
12	Emma pantano	10/25/2021 9:26 AM
13	Amanda Penn	10/24/2021 10:31 PM
14	Dr. Mark Davison	10/22/2021 1:54 PM
15	Hugh Mose	10/20/2021 10:10 PM
16	J Brown	10/20/2021 6:25 PM
17	Frank Dougherty	10/20/2021 7:54 AM
18	Lisa Baumgartner	10/20/2021 7:21 AM
19	Eric Durante	10/19/2021 10:20 PM
20	James Serene	10/19/2021 10:11 PM

21	Lara Chris Fowler	10/19/2021 5:16 PM
22	Paul J Fetterman	10/19/2021 1:26 PM
23	Scott Mato	10/19/2021 1:01 PM
24	chip mefford	10/19/2021 11:59 AM
25	Matthew Herndon	10/19/2021 9:18 AM
26	Nick Phelps	10/18/2021 10:54 AM
27	Meegan Tomlins	10/17/2021 7:20 PM
28	Jack Phillips	10/17/2021 7:19 PM
29	Ron Lenox	10/17/2021 7:48 AM
30	Melvin Westerman	10/16/2021 4:08 PM
31	Jen Anderson	10/16/2021 10:59 AM
32	Tammy macalarney	10/16/2021 4:32 AM
33	Elizabeth J Pyatt	10/15/2021 8:51 AM

#	COMPANY	DATE
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There are no responses.

#	ADDRESS	DATE
1	154 Ridge Rd	11/8/2021 1:14 PM
2	121 Chester Drive PO Box 215	10/27/2021 8:41 PM
3	118 S. Water Street	10/27/2021 3:26 PM
4	104 Chester Ct, P.O.Box 218	10/27/2021 9:47 AM
5	115 St Elmos Ln, P.O. Box 460	10/26/2021 9:16 AM
6	135 W Chestnut ST	10/26/2021 3:06 AM
7	183 Deepwood Dr.	10/25/2021 8:02 PM
8	223 Sycamore Drive	10/25/2021 7:18 PM
9	124 South Kirk Street	10/25/2021 3:30 PM
10	118 S Water St	10/25/2021 9:46 AM
11	207 deepwood dr	10/25/2021 9:26 AM
12	144 Deepwood Drive (PO Box 217)	10/24/2021 10:31 PM
13	212 meeks lane	10/22/2021 1:54 PM
14	621 E. McCormick Ave.	10/20/2021 10:10 PM
15	180 Chester Drive, PO Box 18	10/20/2021 6:25 PM
16	129 E Doris Ave	10/20/2021 7:54 AM
17	129 Ridge Ave	10/20/2021 7:21 AM
18	241 Goss Hollow Lane	10/19/2021 10:20 PM
19	150 Brandywine Dr.	10/19/2021 10:11 PM
20	329 Ridge Ave	10/19/2021 5:16 PM
21	po box 439, 292 deepwood drive	10/19/2021 1:26 PM
22	1246 Smithfield St.	10/19/2021 1:01 PM

23	2024 shingletown road	10/19/2021 11:59 AM
24	113 W Lytle Ave	10/19/2021 9:18 AM
25	244 Oak Ln	10/18/2021 10:54 AM
26	PO Box 117	10/17/2021 7:20 PM
27	170 Chester drive	10/17/2021 7:19 PM
28	101 Bradford Court	10/17/2021 7:48 AM
29	PO Box 277	10/16/2021 4:08 PM
30	136 West Pine Grove Mills	10/16/2021 10:59 AM
31	139 sycamore drive	10/16/2021 4:32 AM
32	154 Sycamore Dr	10/15/2021 8:51 AM

#	ADDRESS 2	DATE
	There are no responses.	

#	CITY/TOWN	DATE
1	Pa Furnace	11/8/2021 1:14 PM
2	PINE GROVE MILLS	10/27/2021 8:41 PM
3	Pine Grove Mills	10/27/2021 3:26 PM
4	Pine Grove Mills	10/27/2021 9:47 AM
5	Pine Grove Mills	10/26/2021 9:16 AM
6	Pine Grove Mills	10/26/2021 3:06 AM
7	State College	10/25/2021 11:20 PM
8	Pine Grove Mills	10/25/2021 8:02 PM
9	State College	10/25/2021 7:18 PM
10	Pine Grove Mills	10/25/2021 3:30 PM
11	Pine Grove Mills	10/25/2021 9:46 AM
12	Pine grove mills	10/25/2021 9:26 AM
13	Pine Grove Mills	10/24/2021 10:31 PM
14	port matilda	10/22/2021 1:54 PM
15	State College	10/20/2021 10:10 PM
16	Pine Grove Mills	10/20/2021 6:25 PM
17	State College	10/20/2021 7:54 AM
18	State College	10/20/2021 7:21 AM
19	Port Matilda	10/19/2021 10:20 PM
20	State College	10/19/2021 10:11 PM
21	State College	10/19/2021 5:16 PM
22	Pine Grove Mills	10/19/2021 3:42 PM
23	pine grove mills	10/19/2021 1:26 PM
24	State College	10/19/2021 1:01 PM
25	state college	10/19/2021 11:59 AM

26	State College	10/19/2021 9:18 AM
27	State College	10/18/2021 10:54 AM
28	Pine Grove Mills	10/17/2021 7:20 PM
29	Pine grove mills	10/17/2021 7:19 PM
30	State College	10/17/2021 7:48 AM
31	Pine Grove Mills	10/16/2021 4:08 PM
32	Pine Grove Mills	10/16/2021 10:59 AM
33	State college	10/16/2021 4:32 AM
34	State College	10/15/2021 8:51 AM
#	STATE/PROVINCE	DATE
1	PA	11/8/2021 1:14 PM
2	PA	10/27/2021 8:41 PM
3	PA	10/27/2021 3:26 PM
4	PA	10/27/2021 9:47 AM
5	PA	10/26/2021 9:16 AM
6	PA	10/26/2021 3:06 AM
7	PA	10/25/2021 11:20 PM
8	PA	10/25/2021 8:02 PM
9	PA	10/25/2021 7:18 PM
10	PA	10/25/2021 3:30 PM
11	PA	10/25/2021 9:46 AM
12	PA	10/25/2021 9:26 AM
13	PA	10/24/2021 10:31 PM
14	PA	10/22/2021 1:54 PM
15	PA	10/20/2021 10:10 PM
16	PA	10/20/2021 6:25 PM
17	PA	10/20/2021 7:54 AM
18	PA	10/20/2021 7:21 AM
19	PA	10/19/2021 10:20 PM
20	PA	10/19/2021 10:11 PM
21	PA	10/19/2021 5:16 PM
22	PA	10/19/2021 3:42 PM
23	PA	10/19/2021 1:26 PM
24	PA	10/19/2021 1:01 PM
25	PA	10/19/2021 11:59 AM
26	PA	10/19/2021 9:18 AM
27	PA	10/18/2021 10:54 AM
28	PA	10/17/2021 7:20 PM

29	PA	10/17/2021 7:19 PM
30	PA	10/17/2021 7:48 AM
31	PA	10/16/2021 4:08 PM
32	PA	10/16/2021 10:59 AM
33	PA	10/16/2021 4:32 AM
34	PA	10/15/2021 8:51 AM
#	ZIP/POSTAL CODE	DATE
1	16865-9786	11/8/2021 1:14 PM
2	16868	10/27/2021 8:41 PM
3	16868	10/27/2021 3:26 PM
4	16868-0218	10/27/2021 9:47 AM
5	16868-0460	10/26/2021 9:16 AM
6	16868	10/26/2021 3:06 AM
7	16801-4147	10/25/2021 11:20 PM
8	16868	10/25/2021 8:02 PM
9	16801	10/25/2021 7:18 PM
10	16868	10/25/2021 3:30 PM
11	16868	10/25/2021 9:46 AM
12	16868	10/25/2021 9:26 AM
13	16868	10/24/2021 10:31 PM
14	16870	10/22/2021 1:54 PM
15	16801	10/20/2021 10:10 PM
16	16868	10/20/2021 6:25 PM
17	16801	10/20/2021 7:54 AM
18	16803	10/20/2021 7:21 AM
19	16870	10/19/2021 10:20 PM
20	16801	10/19/2021 10:11 PM
21	16803	10/19/2021 5:16 PM
22	16868	10/19/2021 3:42 PM
23	16868	10/19/2021 1:26 PM
24	16801	10/19/2021 1:01 PM
25	16801	10/19/2021 11:59 AM
26	16803	10/19/2021 11:50 AM
27	16801	10/19/2021 9:18 AM
28	16801	10/18/2021 10:54 AM
29	16868	10/17/2021 7:20 PM
30	16868	10/17/2021 7:19 PM
31	16801	10/17/2021 7:48 AM

32	16868	10/16/2021 4:08 PM
33	16868	10/16/2021 10:59 AM
34	16801	10/16/2021 4:32 AM
35	16801	10/15/2021 8:51 AM
#	COUNTRY	DATE
There are no responses.		
#	EMAIL ADDRESS	DATE
1	marszalhum@comcast.net	11/8/2021 1:14 PM
2	johnaquinn17@gmail.com	10/27/2021 8:41 PM
3	mhanses@gmail.com	10/27/2021 3:26 PM
4	darren@dhron.net	10/27/2021 9:47 AM
5	sheryjls@hotmail.com	10/26/2021 9:16 AM
6	sjrocker@gmail.com	10/26/2021 3:06 AM
7	scQue@ymail.com	10/25/2021 11:20 PM
8	dgeveke@icloud.com	10/25/2021 8:02 PM
9	cjpuckett@comcast.net	10/25/2021 7:18 PM
10	knewman321@gmail.com	10/25/2021 3:30 PM
11	epmcken@gmail.com	10/25/2021 9:46 AM
12	emmapantano@gmail.com	10/25/2021 9:26 AM
13	amptree@gmail.com	10/24/2021 10:31 PM
14	jensdad_1999@yahoo.com	10/22/2021 1:54 PM
15	hughamose@comcast.net	10/20/2021 10:10 PM
16	f9a@psu.edu	10/20/2021 6:25 PM
17	fmdoc@comcast.net	10/20/2021 7:54 AM
18	lme129@yahoo.com	10/20/2021 7:21 AM
19	ericdurante@gmail.com	10/19/2021 10:20 PM
20	james.serene1@gmail.com	10/19/2021 10:11 PM
21	lara.fowler@gmail.com	10/19/2021 5:16 PM
22	tfetterman07@comcast.net	10/19/2021 1:26 PM
23	scottomato@gmail.com	10/19/2021 1:01 PM
24	cpm@well.com	10/19/2021 11:59 AM
25	matt.r.herndon@gmail.com	10/19/2021 9:18 AM
26	lefthandpath19@gmail.com	10/18/2021 10:54 AM
27	meegan.tomlins@gmail.com	10/17/2021 7:20 PM
28	jphillips@minitab.com	10/17/2021 7:19 PM
29	rblen1309@aol.com	10/17/2021 7:48 AM
30	wez@psu.edu	10/16/2021 4:08 PM
31	jab56@psu.edu	10/16/2021 10:59 AM

32	tmacalarney@gmail.com	10/16/2021 4:32 AM
33	elizabeth.j.pyatt@gmail.com	10/15/2021 8:51 AM
#	PHONE NUMBER	DATE
There are no responses.		

APPENDIX B

Public Meeting #2

Online Presentation

Public Survey Form


Full Survey Results

Email Comments

Pine Grove Mills Resident Comment Detail

Pine Grove Mills Mobility Study

Public Meeting #2
Participate Virtually April 18 – May 2, 2022



1

Presenter Introductions

- **Ron Seybert**
Ferguson Township
- **Robert Watts**
McCormick Taylor

2

2

Pine Grove Mills
Mobility Study
Working Group

- **Ferguson Township**
 - Staff
 - Planning Commission
 - Pine Grove Mills Small Area Plan Advisory Committee
- **Centre Regional Planning Agency (CRPA)**
- **PennDOT District 2-0**
- **Centre Area Transportation Authority (CATA)**
- **McCormick Taylor**

3

3

Pine Grove Mills
Mobility Study Origins

4

Small Area Plan (SAP)

- Community-led planning approach
- Facilitated by CRPA staff
- Developed a series of “themes”
- “Improve safety and provide for multiple modes of transportation” was a key theme
- Mobility map, goals, and objectives in the SAP represent the starting point for what should be refined in the Mobility Study as determined by the residents



5

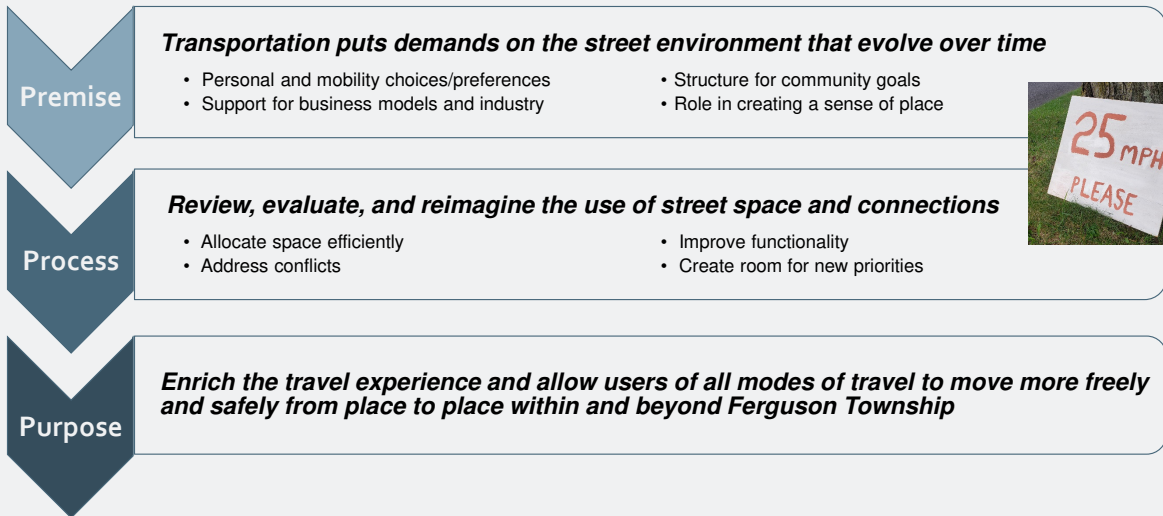
5

The Mobility Study



6

Transportation Mobility Study



7

Stakeholder and Community Input

- First Public Meeting
 - October 2021
- Working Group Meetings
- **Final Public Meeting**
 - **April 2022**
- Review by Working Group
- Review/Approval by Board of Supervisors
 - June 2022

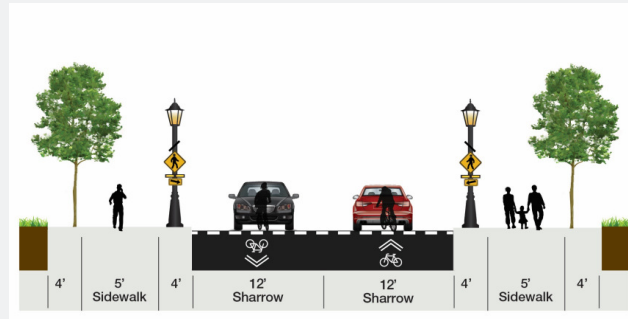


8

8

Solutions & Concept Illustrations

- Illustrate how the network could be changed
- Recognize various roadway interests, constraints, and limitations
- Traditional and innovative ideas
- Value is important for prioritizing projects
- Policy changes



9

9

How to View and Comment on Recommendations

10

GML0

Project Website - tinyurl.com/PGMMobility

The screenshot shows the Township of Ferguson Pennsylvania website. The header includes the township logo and name. A navigation menu on the left lists various services such as '2021-C4 Harold Drive Improvements', 'Applications, Forms, & Permits', and 'Pine Grove Mills Mobility Study'. The main content area features a breadcrumb trail 'Home » Departments » Public Works' and a title 'Pine Grove Mills Mobility Study' with the tagline 'DO YOU RIDE, DRIVE, WALK, HIKE OR BIKE?'. Below this is an announcement for 'Pine Grove Mills Mobility Study Open House #2 (April 18, 2022, 4:30pm-6:30pm)'. The text explains that the study is a transportation study conducted in coordination with PennDOT to generate concepts for improving transportation mobility in the Pine Grove Mills area. It mentions that the study has advanced ideas originally identified in the Pine Grove Mills Small Area Plan and has developed additional recommendations based on input from the Mobility Study's first public meeting in October 2021. The study is anticipated to be completed in June 2022. A section below states that the upcoming Open House will provide the public with an opportunity to review and comment on the transportation concepts and recommendations, and that Township staff and other members of the study Working Group will be on hand to receive input, answer questions, and discuss the study's outcomes. A search bar and home icon are visible in the top right corner.

11

Project Website - tinyurl.com/PGMMobility

The screenshot shows a virtual public meeting launch page for the Pine Grove Mills Mobility Study. The page features a map of the study area with several points of interest labeled A through F. Point A is 'Pine Grove Road & Water Street/Wagon Road Intersection', B is 'East Pine Grove Road Gateway', C is 'Pedestrian & Bicycle Network Improvements', D is 'Pine Grove Road Western Gateway & Speed Limits', E is 'Parking Studies, Analysis & Recommendations', and F is 'Rothrock State Forest Trails & Access'. A legend on the right side of the map identifies symbols for 'Study Area Boundary', 'State Route', 'Township Road', 'Alley/Private', 'No Info Available', and 'State Forest Road'. Below the legend is a scale bar showing 0, 0.25, and 0.5 miles, and a north arrow. A text box at the bottom center reads 'Welcome to the Virtual Public Meeting Launch Page. Click on the lettered boxes to view plan mapping and details about that topic.' The Township of Ferguson Pennsylvania logo is in the bottom right corner.

12

Slide 11

GMLO Placeholder - ideally this would show mock up of page with map and links to boards/survey

Goddard, Michelle L., 2022-04-06T14:59:58.234

Project Website - tinyurl.com/PGMMobility

CONCEPT #1 – STOP CONTROL OPTION
PINE GROVE ROAD & WATER STREET/NIXON ROAD INTERSECTION

PINE GROVE MILLS MOBILITY STUDY

Pine Grove Road Cross-Section with Enhanced Pedestrian Crossing

Description

- Add two enhanced pedestrian crossings of Pine Grove Road with rapid flashing beacons, high-visibility pavement markings, and overhead lighting.
- Add high-visibility crosswalks with overhead lighting across Water Street, Nixon Road, St. Elmo's Lane, and Post Office Drive/way.
- Narrow the travel lanes on Pine Grove Road and use the extra space for sidewalk, buffers, and community space.
- Turn Water Street into the intersection and use the extra space for sidewalk, buffers, and parking.

Benefits

- Gain motorist attention and promote compliance with "Yield to Pedestrian" rules by providing pedestrian crosswalks at enhanced and high-visibility crossings.
- Emphasize a human scale, low speed environment within the heart of Pine Grove Mills through street design, signage, and pavement markings.
- Water Street alignment is better suited for truck turning and puts pedestrians more directly in front of drivers.
- Stop sign control is well understood by drivers and in context with the small-town environment.
- Introduces minimal new delay on Pine Grove Road.

Challenges

- Vehicles on Pine Grove Road do not stop or yield at intersections, and speeds may remain higher than desired.
- Turn restrictions would still be required on Nixon Road.
- Long pedestrian crossing distance across Water Street.
- Design complications related to Pine Grove Country Store access and bridge structure over Sabo Cabin Run.

13

Project Website - tinyurl.com/PGMMobility

A. Reimagined Pine Grove Road & Water Street/Nixon Road Intersection

1. What do you think is the most important/needed update to the intersection of Pine Grove Road and Water Street/Nixon Road?

- Improved Pedestrian Crossings
- Additional Parking
- Different Intersection Configuration
- Other (please specify)

14

14

Public Feedback

Ways to Participate – tinyurl.com/PGMMobility



Review concepts and recommendations



Take the survey – April 18th – May 2nd



15

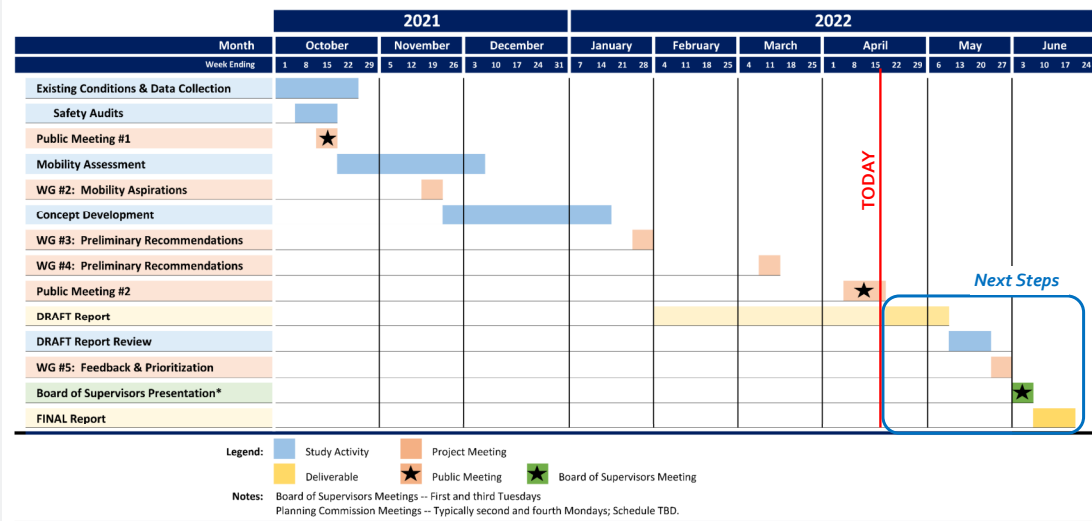
15

Next Steps



16

Project Schedule & Next Steps



17

Thank You

Mobility Study Contacts:

Robert Watts
rjwatts@mccormicktaylor.com

Ron Seybert
rseybert@twp.ferguson.pa.us



18



Information

Name (optional) _____

Address (optional) _____

Would you like to receive updates from Ferguson Township? Yes No

If so, please provide e-mail address (not to be shared with any third parties):

Are you a resident of Pine Grove Mills? (Check one) Yes No

What is your age? (Check one)

Under 18 18-25 26-40 41-55 56-64 65+

Do you drive, ride, bike or hike in Pine Grove Mills? (Check all that apply)

Drive Ride Bike Hike

Please comment below on the potential improvements that you viewed today. The letters below coordinate with the concepts boards.



Pine Grove Road & Water Street/Nixon Road Intersection

1. What do you think is the most important/needed update to the intersection of Pine Grove Road and Water Street/Nixon Road? (Check one)

Improved Pedestrian Crossings Additional Parking
 Different Intersection Configuration Other: _____

2. With the understanding that a traffic signal is not warranted for this intersection, which option do you prefer for the Pine Grove Road & Water Street/Nixon Road Intersection? (Check one)

Stop Control Option Small Roundabout Large Roundabout

3. With all three intersection options, there may be an opportunity to repurpose the roadway space in front of the Post Office. What mobility improvements would you like to see included in this space?

(Check all that apply)

Bike Parking Gazebo Bus Pull-Out
 Bus Stop Shelter On-Street Parking Other: _____

4. Please provide any comments on the Pine Grove Road & Water Street/Nixon Road Intersection concepts and information provided.



Please comment below on the potential improvements that you viewed today. The letters below coordinate with the concepts boards.

B

East Pine Grove Road Gateway - Pine Grove Road & Banyan Drive/Meckley Drive

1. Which option do you prefer for the Pine Grove Road and Banyan/Meckley Intersection? *(Check one)*

Full Size Modern Roundabout
with Green Median

Stop Control with Enhanced
Pedestrian Crossing Option

2. Please provide any comments on the Pine Grove Road & Banyan/Meckley Intersection concepts and information provided.

C

Pedestrian & Bicycle Network Improvements

1. The Pedestrian & Bicycle Network Opportunities Plan provides adequate connections for the Pine Grove Mills community. *(Check one)*

Strongly disagree Disagree Neither agree or disagree Agree Strongly agree

2. Do you have any recommendations for additional pedestrian and bike connections?

3. What connection would you use most frequently?

4. Do you have any comments on the Pine Grove Road Enhanced Pedestrian Crossing at Rosemont Drive?

5. Do you have any comments on the Nixon Road Enhanced Pedestrian Crossing at Shared Use Path?



Please comment below on the potential improvements that you viewed today. The letters below coordinate with the concepts boards.

6. Do you have any comments on the Pine Grove Road Enhanced Pedestrian Crossing at Deepwood Drive (east)?

7. Considering the issues and benefits identified, what do you feel is the best solution to improve bike and pedestrian access on Pine Grove Road from Ross Street to Ferguson Township Elementary School?

(Check one)

- On-Road, Shoulder Bike Lanes Shared Use Path (North Side)
- Shared Use Path (South Side) Shared Use Path (Alternating Side)

8. Which concept do you prefer to make Pine Grove Road from the Ferguson Township Elementary School to Rosemont Drive, a complete street? *(Check one)*

- Bike Lanes Shared Sidewalk Sharrows

9. Please provide any comments on the Pedestrian & Bicycle Network Improvements concepts and information provided.



Pine Grove Road Western Gateway & Speed Limit Changes

1. What would you like to see, if possible, as part of the Gateway treatment on Pine Grove Road?

(Check all that apply)

- Welcome to Pine Grove Mills Signage Speed Feedback Signs (i.e. Your Speed is....) Landscaped Median
- Pavement Markings Flashing Beacons Landscaped Roadside
- Other: _____

2. Please provide any comments on the speed reduction treatments proposed.



Please comment below on the potential improvements that you viewed today. The letters below coordinate with the concepts boards.

E Parking Improvements & Policy

1. Where do you feel additional parking is needed in Pine Grove Mills? *(Check all that apply)*

- Near the Pine Grove Road/Nixon Road/Water Street intersection
- Pine Grove Road east of Nixon Road/Water Street
- Pine Grove Road west of Nixon Road/Water Street
- Water Street
- Nixon Road
- Other: _____

2. Please provide any comments on the parking improvements and policy changes proposed.

F Rothrock State Forest Trails Access

1. Please provide any comments on the recommendations to improve access and connectivity between Pine Grove Mills and Rothrock State Forest Trails.

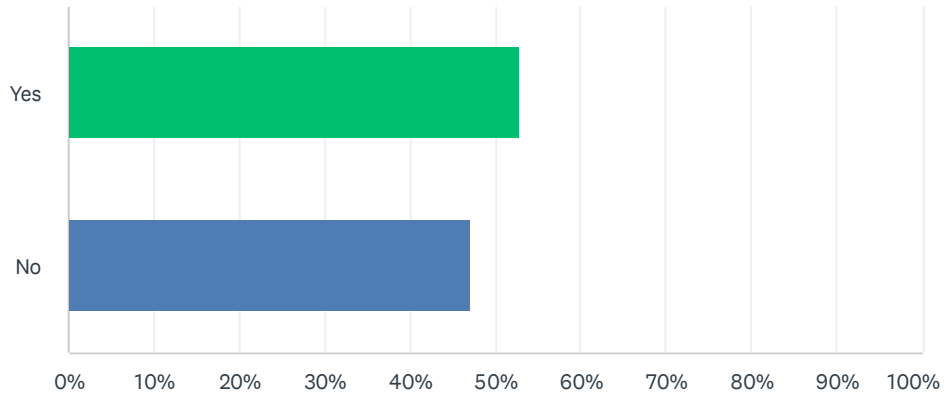
G Traffic & Safety

1. Where are you most concerned about traffic and/or safety in Pine Grove Mills? Why?

Please share any other comments you have on the recommendations shared today, the overall study, or the meeting itself.

Q1 Are you a resident of Pine Grove Mills?

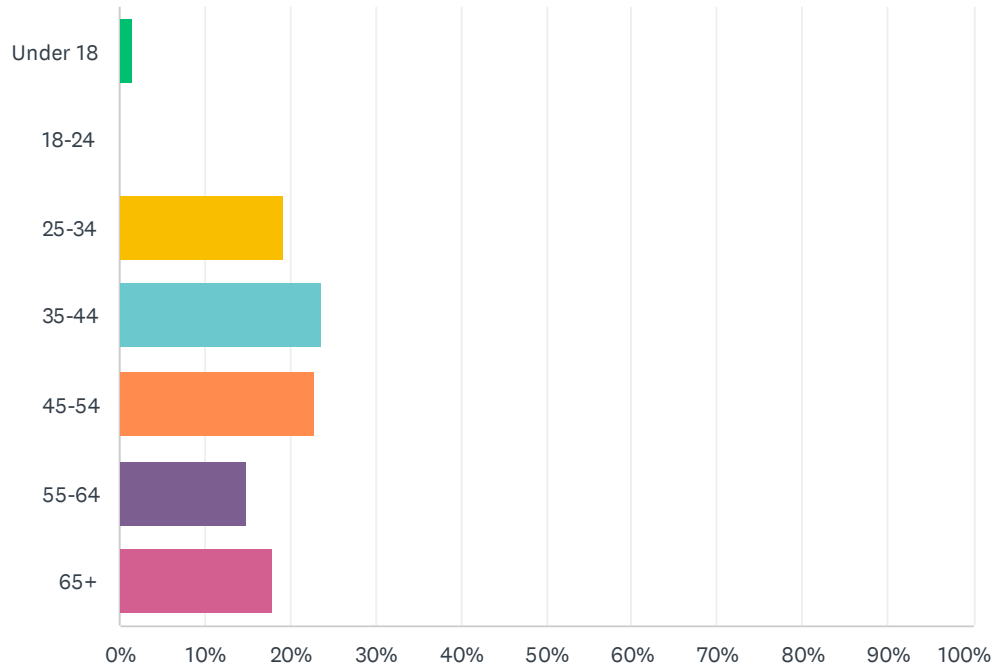
Answered: 140 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	52.86%	74
No	47.14%	66
TOTAL		140

Q2 What is your age?

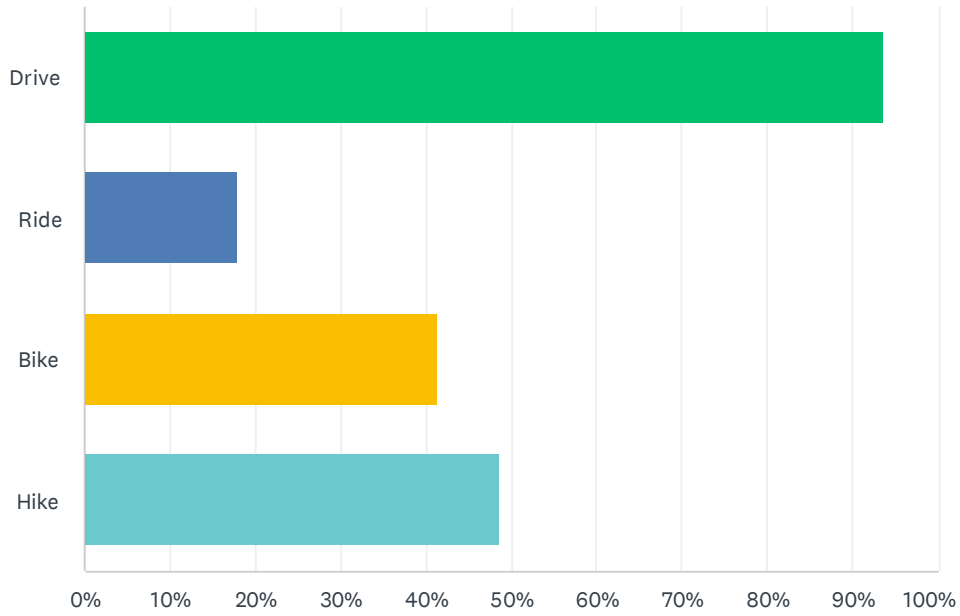
Answered: 140 Skipped: 0



ANSWER CHOICES	RESPONSES	
Under 18	1.43%	2
18-24	0.00%	0
25-34	19.29%	27
35-44	23.57%	33
45-54	22.86%	32
55-64	15.00%	21
65+	17.86%	25
TOTAL		140

Q3 Do you drive, ride, bike or hike in Pine Grove Mills?

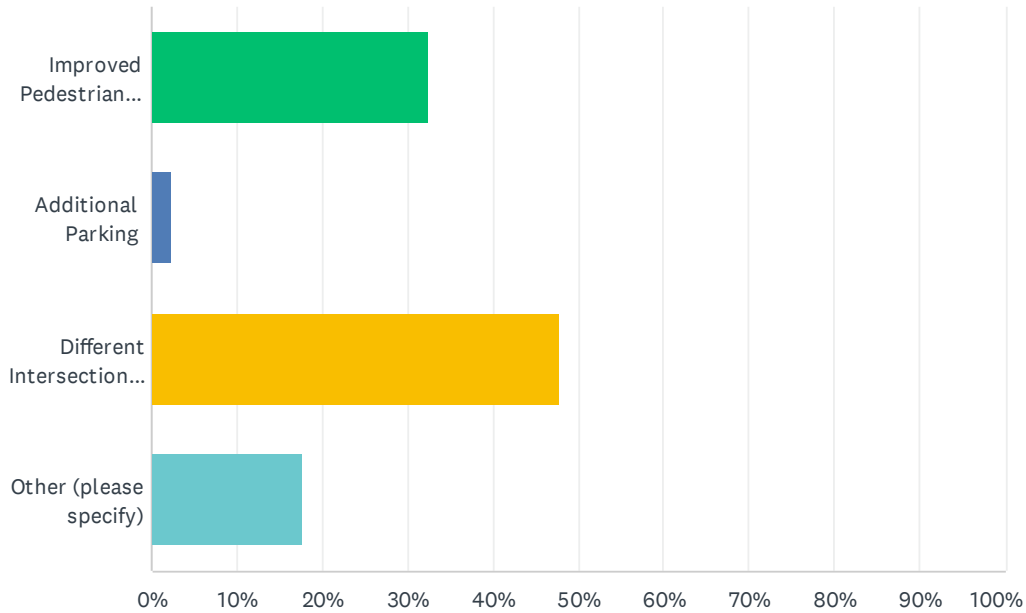
Answered: 140 Skipped: 0



ANSWER CHOICES	RESPONSES	
Drive	93.57%	131
Ride	17.86%	25
Bike	41.43%	58
Hike	48.57%	68
Total Respondents: 140		

Q4 What do you think is the most important/needed update to the intersection of Pine Grove Road and Water Street/Nixon Road?

Answered: 130 Skipped: 10



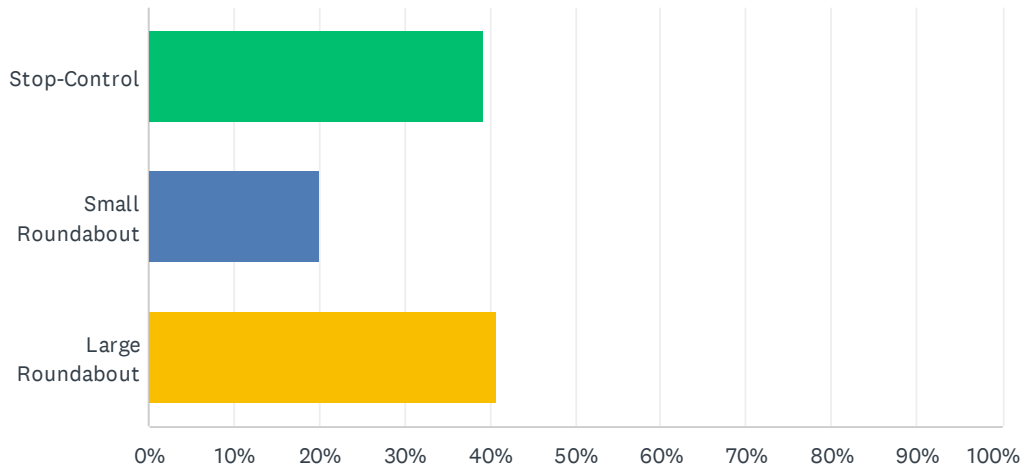
ANSWER CHOICES	RESPONSES
Improved Pedestrian Crossings	32.31% 42
Additional Parking	2.31% 3
Different Intersection Configuration	47.69% 62
Other (please specify)	17.69% 23
TOTAL	130

#	OTHER (PLEASE SPECIFY)	DATE
1	Stop taking farm land for stupid ideas	4/30/2022 5:06 AM
2	More visibility	4/29/2022 8:21 AM
3	Stop control	4/29/2022 2:44 AM
4	A traffic light	4/28/2022 9:37 PM
5	It is fine	4/28/2022 8:54 PM
6	need a stop light at intersection	4/28/2022 8:45 PM
7	Nothing. This is wasteful spending	4/28/2022 7:39 PM
8	Leave it alone, people need to be careful and pay attention, both drivers and walkers	4/28/2022 7:07 PM
9	Option 1. Tractor trailers come down the mt	4/28/2022 6:54 PM
10	Better line of sight for drivers, especially pulling out from Nixon Rd.	4/28/2022 6:24 PM

11	1	4/24/2022 9:45 PM
12	Leave it alone it works fine	4/24/2022 2:51 PM
13	Improved safety that still allows local business to thrive (including FARMING!)	4/23/2022 11:37 AM
14	Leave it how it is	4/23/2022 10:28 AM
15	Stop taking more of the farmer's land	4/23/2022 10:21 AM
16	Traffic light	4/22/2022 1:01 PM
17	different intersection configuration with improved pedestrian crossings. Also a stoplight which PennDot will not allow.	4/22/2022 7:36 AM
18	Not a round about that's crazy	4/21/2022 7:01 PM
19	I think our Ferguson township police need to be more active in speed tracking in this area. There is no need for frivolous spending for services the community doesn't want. We don't want our town commercialized by people who sit in an office that was a gross misuse of tax dollars. I certainly hope that our storm water fee will be lessened by the thought of doing this nonsense	4/20/2022 10:31 PM
20	Left turn from Nixon on to Water Street, I always have to pull a U turn at this intersection making it more confusing	4/20/2022 5:13 PM
21	Although not an option, a traffic light is the only way to ensure the safety of motorists, pedestrians, and bicyclists. The three options you've listed don't mitigate the issues and might even make them worse especially for cyclists.	4/19/2022 7:17 PM
22	None	4/19/2022 6:25 PM
23	Needs to accommodate bikes and pedestrians safely, and allow for all turning movements from Nixon Rd. to Route 26.	4/19/2022 9:52 AM

Q5 With the understanding that a traffic signal is not warranted for this intersection, which option do you prefer for the Pine Grove Road & Water Street/Nixon Road Intersection?

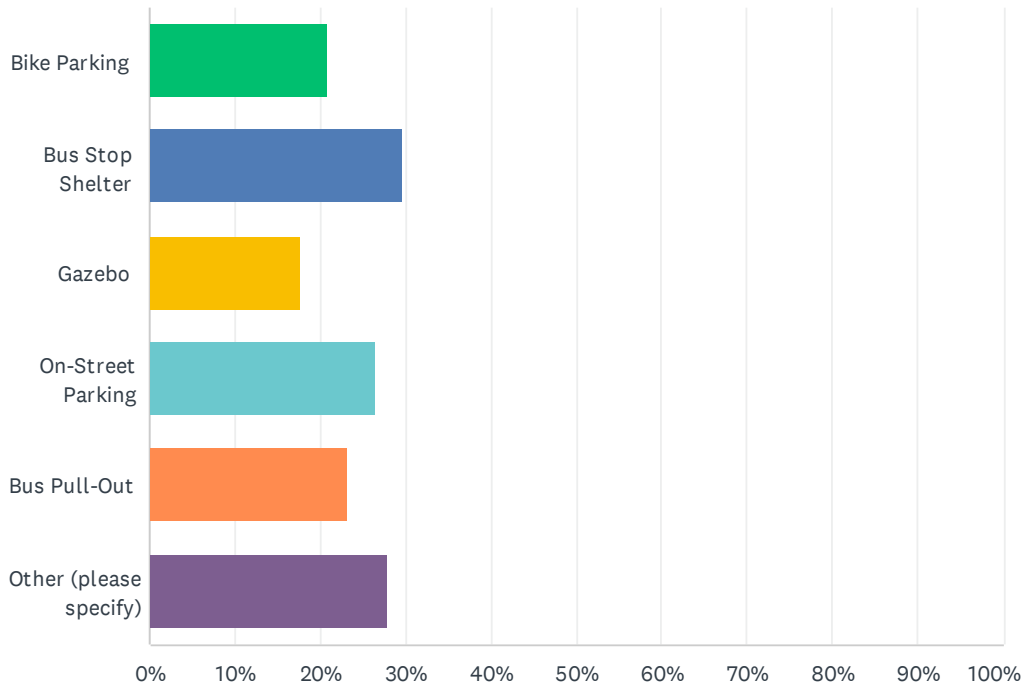
Answered: 135 Skipped: 5



ANSWER CHOICES	RESPONSES	
Stop-Control	39.26%	53
Small Roundabout	20.00%	27
Large Roundabout	40.74%	55
TOTAL		135

Q6 With all three intersection options, there may be an opportunity to repurpose the roadway space in front of the Post Office (green area). What mobility improvements would you like to see included in this space? Select all that apply.

Answered: 125 Skipped: 15



ANSWER CHOICES	RESPONSES
Bike Parking	20.80% 26
Bus Stop Shelter	29.60% 37
Gazebo	17.60% 22
On-Street Parking	26.40% 33
Bus Pull-Out	23.20% 29
Other (please specify)	28.00% 35
Total Respondents: 125	

#	OTHER (PLEASE SPECIFY)	DATE
1	Landscaped/hardscaped with covered benches and bike rack.	5/1/2022 9:11 PM
2	Street greenery	5/1/2022 7:03 PM
3	Do not add on-street parking. You will effectively just be giving Pine Grove Hall more parking space so it wouldn't really be improving the area, just paying public money to help out a private business.	5/1/2022 2:00 PM

4	Wild flower garden	5/1/2022 10:05 AM
5	Green space/rain garden	4/30/2022 2:46 PM
6	Keep it green	4/30/2022 2:29 PM
7	Just keep wasting are money that's all your good for	4/30/2022 5:06 AM
8	Quit wasting monies here	4/29/2022 5:13 PM
9	Nothing	4/29/2022 5:02 PM
10	Leave it alone	4/29/2022 8:53 AM
11	Nothing it's already a Dangerous spot	4/28/2022 8:14 PM
12	Nothing. You implemented a storm water fee but then want create more impervious surface area. If our storm water system is such an issue we need an additional fee then we should be more worried about creating green space and reducing commercialization and impervious surfaces.	4/28/2022 7:39 PM
13	All options seem to be hazardous for traffic and pedestrians	4/28/2022 7:29 PM
14	You hinder people pulling out of post office just extend the flowers with a seating area and move side walk over	4/28/2022 6:54 PM
15	Nothing LOL	4/28/2022 6:44 PM
16	native perennial landscaping with a bench	4/27/2022 10:46 AM
17	None	4/24/2022 9:45 PM
18	Who wants to listen to all the traffic who's maintaining the grass leave it the same	4/24/2022 2:51 PM
19	None. Just bc there's green space DOES NOT MEAN IT NEEDS TO BE 'UTILIZED'. That is a dangerous little section. Just let it provide environmental benefits like storm water management, nitrogen sequestration. Plants a tree there or something!	4/23/2022 11:37 AM
20	Stop taking Farmer's land	4/23/2022 10:21 AM
21	This is all awful	4/22/2022 1:01 PM
22	Nothing unless you want a mess like the naked egg parking along the highway and crossing	4/21/2022 7:01 PM
23	no opinion on this question. Probably not a good idea to have a gazebo so close to the road of a busy intersection	4/21/2022 12:17 PM
24	None. Unless this would be a school bus stop, CATA buses don't offer service on this road. A gazebo would not hold up to snow plows in the winter. On-street parking seems hazardous with this being on the turn. Why would people need to park their bikes here? To then walk to the post office that has a parking lot or to the Pine Hall which is open after 5PM three days per week?	4/21/2022 12:12 PM
25	Nothing that will interfere with visibility	4/21/2022 10:41 AM
26	No bus service right now. What's the point	4/20/2022 10:55 PM
27	Nothing again this is a gross misuse of tax dollars and understanding of the needs of the people actually living in the area. Why would you put parking there to increase a blind spot pulling out of the post office. Sounds safe to me. And a gazebo? For what? How will this update alter the storm water runoff? Sounds like if the township has money for this they should not be charging me a storm water fee	4/20/2022 10:31 PM
28	Rainwater collection planted area	4/20/2022 9:19 PM
29	Turning lane going to the intersection from the east as you approach pine grove mountain. Similar to how they split traffic for ag progress days. Would give better mountain access and better post office access.	4/20/2022 6:22 PM
30	No opinion, PGM has enough parking it doesn't really need to be used for that but I only drive in PGM so no further opinion	4/20/2022 5:13 PM
31	Leave it green	4/20/2022 11:28 AM

32	Greenspace. Fill it with Native plants. Preferably pollinators. We don't need more impermeable surfaces.	4/19/2022 7:17 PM
33	rain garden	4/19/2022 4:09 PM
34	Does there need to be anything added? Wouldn't that add to storm water run off (sarcasm intended) instead of the green space doing the job it needs to.	4/19/2022 3:50 PM
35	Mix of on-street parking and bike parking would help with the limited parking at the restaurant across the street.	4/19/2022 3:12 PM

Q7 Please provide any comments on the Pine Grove Road & Water Street/Nixon Road Intersection concepts and information provided.

Answered: 48 Skipped: 92

#	RESPONSES	DATE
1	Good candidate for a roundabout	5/3/2022 2:30 PM
2	I'm concerned about traffic coming down water street and making a right onto Pine Grove Road. That stop sign is already ignored. Improving the alignment of that traffic flow without slowing it down will only make pedestrian crossing more dangerous.	5/2/2022 12:30 PM
3	None of these options address the concerns over trucks coming down the mountain at speed and with brake failure (twice in the last 15 years). Full stops at all points of the intersection may reduce in-intersection collisions, but the aesthetic and movement of a roundabout is appealing.	5/2/2022 11:46 AM
4	Can flashing crosswalk lights be dimmed at night? Concerned about light pollution for nearby residents.	5/1/2022 9:11 PM
5	We like the idea of a place to sit at this space. We like the idea of something that slows down traffic to allow safer pedestrian crossing.	5/1/2022 6:30 PM
6	Pedestrian safety is the key consideration for me and my family. Enhanced crosswalks and slower vehicle traffic can contribute to the safety of the pedestrians navigating this intersection.	5/1/2022 3:54 PM
7	Please consider adding a bike lane for bike safety	5/1/2022 2:03 PM
8	The large roundabout concept is great. If you can't get the right of way access, the small roundabout is a good second choice. I don't think the stop sign control will do much more than what is already there. Sidewalks to help with the water street crossing are NECESSARY.	5/1/2022 2:00 PM
9	Is CATA necessary in this area? Empty buses don't save the earth. Find a balance.	4/30/2022 2:46 PM
10	Roundabout is not a good option for large equipment.	4/30/2022 2:29 PM
11	We enter this intersection routinely from Nixon road and it always feels dangerous because of the speed with which cars are driving on Pine Grove Rd. It's important that even with a roundabout that signage is placed on Pine Grove Rd approaching the intersection so cars and trucks slow down.	4/30/2022 11:34 AM
12	I would rank improving pedestrian safety as the highest priority, including safe road crossings and sidewalks that are wide enough to walk on safely.	4/29/2022 11:40 AM
13	Stop changing things	4/29/2022 8:53 AM
14	Put a red light in	4/29/2022 8:21 AM
15	I think the round about is not the way to go because big trucks and farm equipment have trouble getting around them.	4/28/2022 8:45 PM
16	Stop wasteful spending. Roundabouts are completely unnecessary and adding a bus stop, additional parking, etc is pointless when just last year a storm water maintenance fee was enacted. We can't be worried about it one year and continue contributing to the problem the next.	4/28/2022 7:39 PM
17	I don't feel traffic is that bad at this intersection, only during ag progress days. Seems to be a waste of money to do more than the stop control option	4/28/2022 7:29 PM
18	None of this is needed. Ferguson abuses their power	4/28/2022 6:44 PM
19	Need good option to keep drivers from turning left at Nixon/Pine grove road intersection and option three does that plus slows drivers on Pine Grove Road down. We have a terrible	4/28/2022 3:06 PM

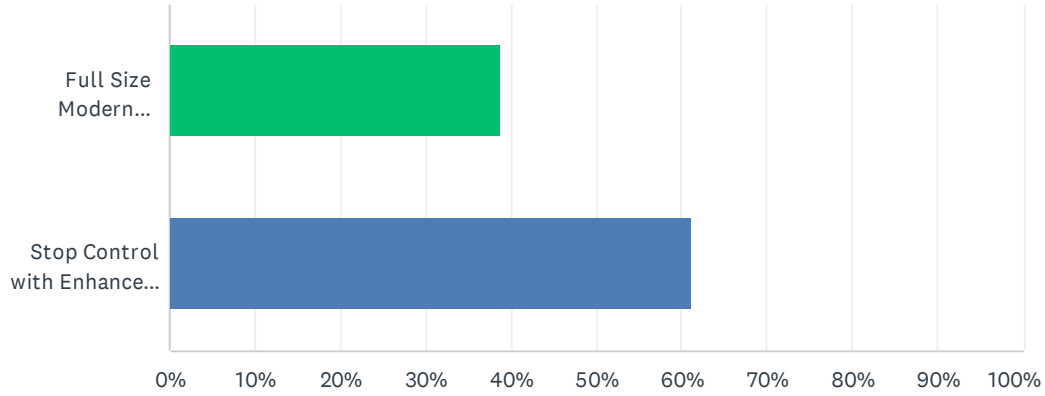
	speeding problem at that intersection.	
20	make sure to put warning signs on the way down PGMountain. is there any way to still have a gas station/mini store in PGMills?	4/28/2022 7:07 AM
21	While the big roundabout is the most expensive option, it would really beautify Pine Grove Mills, give a town focal point, slow traffic and create a safer walking environment for pedestrians	4/27/2022 2:05 PM
22	It is quite difficult to cross as a pedestrian.	4/25/2022 6:07 PM
23	Will always be a problem. Eventually we will go strait to Musser gap then. Blue course.connecting 26 to 45	4/24/2022 9:45 PM
24	Make it safe, but please remember the folks who use the roads the most frequently - local families and businesses. We just want to have access and be safe...	4/23/2022 11:37 AM
25	how do you plan on dealing with all the farm vehicles that use these roads...especially with roundabouts? Seriously?	4/23/2022 11:04 AM
26	I think it should left how it is. If you put in a roundabout it will make it nearly impossible for farmers to get equipment through there as well as big commercial trucks	4/23/2022 10:28 AM
27	Stop taking Farmer's land	4/23/2022 10:21 AM
28	Put a light higher up water street so ad to stop people speeding up and down the mountain.	4/22/2022 1:01 PM
29	N/A	4/21/2022 7:57 PM
30	It would be fabulous if this intersection could be made more friendly for strollers and wheelchairs. It is especially dangerous in the winter.	4/21/2022 6:22 PM
31	Personally, I think that the intersection needs a light.	4/21/2022 4:37 PM
32	Aside from a designated crosswalk for pedestrians, roundabouts do not seem like a safe solution, especially when factoring in large trucks coming down the mountain trying to go west on 45 and farm equipment in general. I especially don't think a small roundabout will work with an 18-wheeler or a tractor pulling a piece of equipment as this will likely require driving over the center of the roundabout.	4/21/2022 12:12 PM
33	Too many individuals are making left hand turns out of Nixon Rd. Better signage needed	4/21/2022 10:41 AM
34	Traffic coming down the mountain must stop to promote safety. If round-about are used too many motorists will want to continue movement and be less cautious of foot traffic.	4/21/2022 6:46 AM
35	The roundabout options will cause unnecessary confusion and are extremely inconvenient. Additionally the large roundabout will force another small business that has been in Pine Grove Mills for decades to close its doors.	4/20/2022 11:36 PM
36	How much money is being spent on this? It is Pine Grove Mills, not State College.	4/20/2022 10:55 PM
37	I believe this board of supervisors needs to revisit the people they are serving and understand we pay their way and need to be more informed. This township does a terrible job at informing the township constituents of meetings and nonsense plans such as this one. For no other reason than to keep us in the dark to pass their agenda clearly. There is nothing wrong with that intersection. Again if the Ferguson township police would do their job to slow people down there would be no issues.	4/20/2022 10:31 PM
38	Nixon should have NO access to pine grove road. Turning in either direction is unsafe with the given how much Pine Hall is sticking out into the road as far as it does.	4/20/2022 6:22 PM
39	I like the large circle option because it creates more sidewalk space - i'm also noticing that the gas station would have to be demolished but perhaps that could be a small Park-let with benches and a view of the creek.	4/20/2022 5:40 PM
40	I think a round about is a bad idea here. Trucks coming down the mountain need to stop.	4/20/2022 11:28 AM
41	Farther north on Nixon rd is a multi use path that doesn't connect much or allow neighborhood or pedestrian traffic access to Pine Grove Rd. Connecting this in a safe manner to the area would really boost business in the area.	4/20/2022 10:36 AM
42	I'm thinking like a cyclist. The intersection is dangerous for cyclists and pedestrians. I'm	4/19/2022 7:17 PM

concerned that either a small or large roundabout will make things perhaps even more difficult for cyclists. With a roundabout, a cyclist entering the intersection from Nixon will have to jump into vehicular traffic as they are negotiating the circle. Similarly, a cyclists approaching the intersection from the south on 45 will have to follow the flow of vehicular traffic which will be especially dangerous if the cyclist wants to turn onto Nixon Rd. It is less of an issue for cyclists entering the intersection from the north on 45 or the south on 26.

43	Turning left from 45 onto Nixon Road on a bicycle, which I do often, is fraught with dangers, improving this intersection would go a long way towards making it safer.	4/19/2022 5:48 PM
44	Right turns onto Pine Grove Road from Nixon (when heading south) are difficult given the poor sight lines. I'm in favor of most anything that would help with this.	4/19/2022 4:37 PM
45	What might also help is placing a stop for the Eastbound traffic on 45, and speed bumps before the intersection in both the East- and West-bound directions. The speed limit is 25 and that's rarely observed in that corridor.	4/19/2022 3:12 PM
46	Option safest for pedestrians should be chosen.	4/19/2022 2:05 PM
47	Thanks, it needs change.	4/19/2022 1:31 PM
48	Intersection needs to accommodate turning movements by trucks. Can street trees be included in the improvements?	4/19/2022 9:52 AM

Q8 Which option do you prefer for the Pine Grove Road and Banyan/Meckley Intersection?

Answered: 126 Skipped: 14



ANSWER CHOICES	RESPONSES	
Full Size Modern Roundabout with Green Median	38.89%	49
Stop Control with Enhanced Pedestrian Crossing Option	61.11%	77
TOTAL		126

Q9 Please provide any comments on the Pine Grove Road & Banyan/Meckley Intersection concepts and information provided.

Answered: 35 Skipped: 105

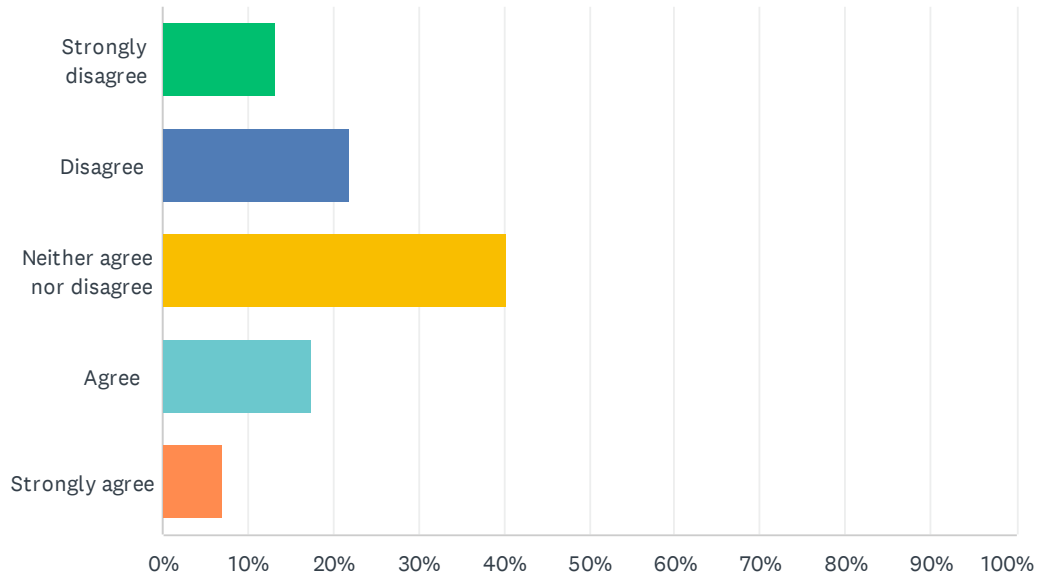
#	RESPONSES	DATE
1	No round about that doesn't improve walkability when vehicles will be flying up to a blind round about. Flashing lights with crossing and stop signs would be nice just like atherton and west foster care n state college.	5/2/2022 8:43 AM
2	We have crossed this intersection a few times and it's very difficult to cross on foot. We think that the roundabout would make it safest.	5/1/2022 6:37 PM
3	Anything that can help slow traffic entering/exiting Pine Grove Mills and enhance pedestrian safety is appreciated. The roundabout appears to do all of this.	5/1/2022 3:56 PM
4	Please consider a bike lane for access	5/1/2022 2:05 PM
5	Anything that makes people slow down on pine grove rd is good	5/1/2022 2:01 PM
6	This is a wast of time and money you guys would not even know how to use it anyways.	4/30/2022 5:07 AM
7	Neither	4/29/2022 6:22 PM
8	I don't think anything is needed there.	4/29/2022 1:02 PM
9	Traffic picks up speed at this intersection going up the hill into Pine Grove Mills. Anything to slow the cars down and to allow pedestrians to cross safely will be an improvement.	4/29/2022 11:43 AM
10	Round abouts make roads more hard to navigate!!	4/28/2022 8:48 PM
11	Why these intersections are even being looked at is beyond me. How many people actually cross that intersection vs drive through it. Common sense is not common anymore but no matter how much you idiot proof something there is always gonna be something someone finds wrong with it. Stop wasting township money on frivolous endeavors.	4/28/2022 7:41 PM
12	Round about would be good way to slow traffic coming into town	4/28/2022 7:30 PM
13	None of this. Ferguson abuses their power	4/28/2022 6:44 PM
14	Once again the full size roundabout makes it clear to drivers that they need to slow down to enter Pine Grove Mills. Option 2 still leaves a dangerous crossing with cars using the road as a high speed runway.	4/28/2022 3:08 PM
15	Lower speed limit	4/28/2022 1:53 PM
16	Looks like it would slow traffic!!	4/27/2022 2:05 PM
17	Round about a limit the size of vehicles that can use the roads. These roads are the veins of our economy. Please don't put a stopper on our livelihoods	4/23/2022 11:38 AM
18	this is a major road. I don't see how roundabouts can be good for trucks, farm equipment and such	4/23/2022 11:05 AM
19	Again, roundabouts will make it very difficult for farmers to move equipment through there	4/23/2022 10:29 AM
20	Stop taking Farmer's land	4/23/2022 10:22 AM
21	Round abouts are a hazard	4/22/2022 1:02 PM
22	N/A	4/21/2022 7:58 PM
23	I exit from Banyon drive to Pine Grove Road almost daily. I don't think stop signs will help. Even though I hate them, I think a roundabout will slow down traffic and make people more aware the potential hazards. I also think that the speed limit needs to be reduced, especially for the traffic heading east on Pine Grove road. From Meckley and Banyan Drive it can be hard	4/21/2022 4:41 PM

to see people heading out of Pine Grove Mills b/c of the hill prior to the intersection. Extending the 25 mph speed limit until after Thistlewood drive would help a lot.

24	seems something in the middle - one stop sign (on just one part of the road) does not seem sufficient and a roundabout (though hopefully it would slow traffic) could cause accidents as people do tend to drive at a decent speed on rt 45 and may not slow in time to navigate the roundabout safely. Not sure if a 4 way stop sign would work? I pull out of meckley rd daily and it is very difficult to see cars coming from the west (cars heading eastward) with much notice. Improving the view in that direction may help with safety of both pedestrians and cars pulling out onto rt 45	4/21/2022 12:23 PM
25	This would be a disaster if this roundabout existed along with one near Pine Grove Road & Water Street/Nixon Road Intersection	4/21/2022 12:13 PM
26	Again, motorist need to stop to promote pedestrian safety. Yielding/not yielding with possible distracting driving is an issue and personal safety should not be dismissed.	4/21/2022 6:48 AM
27	Why in the world are we putting in roundabouts? These are more dangerous to navigate and clearly the people in this township have trouble enough that we had to put in yellow blinking turn lights to tell people they can turn on green if the other lane is clear. What do these roundabouts do to our storm water drains? Again if the township has the money for this nonsense why are they charging a storm water fee.	4/20/2022 10:34 PM
28	Not a concern for anyone who doesn't live there.	4/20/2022 6:23 PM
29	I don't think a circle makes sense here... crosswalks should be sufficient but they should have lights that show when a pedestrian is crossing - technically it's 35 here but since it's just the beginning of the 35 zone people are going much faster typically	4/20/2022 5:43 PM
30	I don't know where this intersection is to be honest	4/20/2022 5:14 PM
31	Roundabouts are the most efficient low maintenance use of traffic control while also presenting safety improvements. They are economical in terms of maintenance and upkeep as well. Because vehicles are not necessarily forced to stop and often needlessly idle, they are more fuel efficient too. Restarting from a full stop is a very fuel inefficient event.	4/20/2022 10:44 AM
32	Having driven roundabouts in Europe where they are used everywhere and in America where they are seldom used, Americans simply don't understand how to use roundabouts. I've seldom seen a driver in America using turn signals to indicate where they plan to exit the roundabout. Will you provide protected bike lanes in the roundabout? If not, you are placing cyclists at grave risk negotiating a roundabout with traffic.	4/19/2022 7:21 PM
33	This would be a great entrance opportunity for PGM. It will be helpful to slow traffic down.	4/19/2022 3:18 PM
34	Here a roundabout would definitely help slow traffic down. The ped crossings are great, but PA drivers in general don't honor them.	4/19/2022 3:12 PM
35	Is a full roundabout allowed in this location given the high speed limit?	4/19/2022 10:03 AM

Q10 The Pedestrian & Bicycle Network Opportunities Plan provides adequate connections for the Pine Grove Mills community.

Answered: 114 Skipped: 26



ANSWER CHOICES	RESPONSES	
Strongly disagree	13.16%	15
Disagree	21.93%	25
Neither agree nor disagree	40.35%	46
Agree	17.54%	20
Strongly agree	7.02%	8
TOTAL		114

Q11 Do you have any recommendations for additional pedestrian and bike connections?

Answered: 51 Skipped: 89

#	RESPONSES	DATE
1	I support creating looped circulation opportunities through the study area. Need to carefully consider endpoints for federal opportunities	5/3/2022 2:31 PM
2	Connections within PGM is not the problem. Getting from PGM to other adjoins communities safely is the issue.	5/1/2022 9:27 PM
3	It would be great to have more sidewalks! Would a sidewalk be possible along Rosemont Drive that would facilitate walking to the park (i.e., along Rosemont and then Sunday Drive). It would be amazing to be able to bike with small children along Pine Grove Road (from Rosemont to Ferguson Township Elementary). With the sharrow idea, I still would not be comfortable doing that. But I recognize that a shared use path may not be ideal with narrowing the road.	5/1/2022 7:09 PM
4	We should work on improving bike access on Nixon Rd connecting to West White Hall. Many recreational bikers (including bike commuters) connect to W Whitehall Rd. W Whitehall is a popular bike path for road bikers. The shoulder on Nixon Rd is just too small for bikers to safely share the road with cars.	5/1/2022 2:19 PM
5	The sharrow concept does not actually make cars more aware of or more considerate of cyclists, and might actually be harmful in giving cyclists a false sense of security. Most PA drivers are not aware that cyclists are permitted by law to take up the entire lane, and sometimes react with road rage/dangerous driving. Therefore, dedicated bike lanes and/or shared use paths should be strongly prioritized, even at the expense of parking.	5/1/2022 2:16 PM
6	Fewer shared road. I am too afraid to bike the narrow roads shared with cars. A divider between cars and bikes would help.	5/1/2022 10:10 AM
7	It is important to regain access along Sports lane to the shared use path to have adequate connection.	4/30/2022 11:14 PM
8	Not needed	4/30/2022 2:34 PM
9	Please consider buying Sports Road so this can be used as a pedestrian pathway. The owner on Chester Court has aggressively stopped pedestrians from using this walkway from the pedestrian path to Reed Alley/Pine Grove Rd. This would be a better use of funds then putting up an overhead sign at the crossing on Nixon Rd. This limited access has majorly impacted pedestrian paths within Pine Grove Mills. You should do something about that. The existing pedestrian path from Nixon Road to the elementary school is in horrible shape. It hasn't been graded in 15 years or more (we have lived in PGM since 2003). There are holes made by water erosion that could twist your ankle so you have to be careful walking it. It is largely overgrown by grass. We walk this path almost daily with our dogs and are dismayed that the township hasn't bothered to regrade and add new gravel to this highly used pedestrian walkway. If you are going to do all of these other improvement, perhaps you can do some badly needed maintenance on this pedestrian pathway.	4/30/2022 11:50 AM
10	If you want to ride bike go up in the mountain and stay off the roads	4/30/2022 5:08 AM
11	We need a connection to get to the bike baths in the state college area. We need to be able to get from PGM to Cato Park	4/29/2022 1:08 PM
12	Make bikers register and license there bikes 8.00 per bike and proof of insurancone	4/29/2022 8:59 AM
13	Do not believe this is necessary	4/28/2022 9:45 PM
14	none	4/28/2022 8:52 PM
15	How many bike paths are in the centre region? And yet most people still continue to ride on the roads. I would be fine with bike paths if they were used for that purpose but historically they	4/28/2022 7:49 PM

	don't get used and are just a "nice idea" to think you are being progressive.	
16	No	4/28/2022 7:41 PM
17	They don't follow rules anyways they get a 6ft bike path and still ride in the middle of the road	4/28/2022 6:58 PM
18	Nothing needs fixed. You're taking farm land	4/28/2022 6:46 PM
19	Make actual bike lanes where possible and widen the roads to have them.	4/28/2022 1:56 PM
20	Rte 45 has signs that it is a Bicycle Route...please extend the sharrow (perhaps by actually having a decent shoulder and lane widths to accommodate bicycles - especially up to Rock Springs farm complex (at least to Tadpole and maybe even beyond)...and going towards St College, with cars parked on the sides of the roads, sharing without a bicycle path is madness (doors opening onto bicycles)	4/28/2022 7:18 AM
21	Bike lanes are okay but it would be nice to have a shared use path connecting Sports Lane to Nixon.	4/25/2022 6:27 PM
22	It would be useful to have a safer way to transfer from 46 to Nixon to Whitehall.	4/25/2022 6:22 PM
23	Who feeds the world FARMERS and your stealing important farm ground	4/24/2022 2:56 PM
24	Stop putting bike paths out in the rural areas because they bikers don't use them anyway. Make them ride in town where they should	4/23/2022 10:32 AM
25	Stop taking Farmer's land	4/23/2022 10:26 AM
26	More Bike path options or lanes.	4/21/2022 8:09 PM
27	On an old map, there was a proposed bike/pedestrian trail that went from Banyan Drive up towards Whitehall. Developing that trail would be great b/c it would get bikes off of Nixon and 45, and allow people to connect with the bike trails in Cato heading toward State College.	4/21/2022 4:50 PM
28	Not sure what the pedestrian and bicycle network plan is-- but unless it includes some pathway or safe sidewalk/ pedestrian area for PGM residents to walk from PGM to- say the Sheetz on Whitehall- where people can access more bus routes, etc-- then it is not sufficient. If you do not have use of a vehicle, there is no safe way to travel whatsoever. I have a teenager who does not drive - she has no means to access town safely if she has no ride by bus or car to leave PGM. She has walked on the shoulder of Rt 45 while cars drive by at 45mph not much more than a foot away from her. Would be the same concerns if she was riding a bike. It makes PGM a less desirable place to live for people who don't have access to a vehicle or cannot drive.	4/21/2022 12:41 PM
29	Route 45 is a busy road with fast traffic as you drive towards Ramblewood/Rock Springs. This does not seem like the safest place to promote biking.	4/21/2022 12:21 PM
30	The sidewalks for walking through Pine Grove Mills are atrocious. They are narrow, often blocked by trash cans and snow in the winter. I cannot think of a more poorly designed and maintained sidewalk system in the State College area! I often have to get off of the sidewalk and walk in the road, particularly in the winter. This is very dangerous.	4/21/2022 10:20 AM
31	No	4/21/2022 7:39 AM
32	We have too many bike paths in this township now that they don't use. I think you should have Ferguson township police make the bicyclist use the paths the tax payers pay for before adding anything new. They are a hazard on roads around here as it is because again Ferguson township police do not handle the speed issue that this township has.	4/20/2022 10:44 PM
33	It would be amazing to have a sidewalk or protected path installed on route 45 into the village center in one direction, and a path or sidewalk to Fairbrook Park. It would also be great to have a sidewalk or path created along Plainfield to connect with the bike lanes on Whitehall. Many residents walk along Plainfield, which is dangerous due to visibility issues.	4/20/2022 8:14 PM
34	I'm not as familiar with this plan - I don't know what a Sharrow is, in the future please describe	4/20/2022 5:51 PM
35	I wish there was a way to safely connect with the other bike paths that start in Cato park. Our family does not feel that there is adequate signage and slow enough speeds to come in and out of PGM on bikes on a daily basis. We would love for our children to be able to connect to other parts of the community via bike paths but that is not possible yet. We hope that improved signage and signals and bike lanes can come sooner than later.	4/20/2022 5:28 PM

36	Absolutely. Nixon Road/ Old Gatesburg Road needs a bike path ASAP. It is used daily for both biking and walking and very dangerous for both activities.	4/20/2022 5:19 PM
37	The connection along Route 26 is missing. A shared use path should be constructed from the Ferguson Township Municipal Building to the newly proposed intersection.	4/20/2022 4:55 PM
38	The imbedded map is small and pixelated but does not appear to show connections to Kepler road and West Chestnut ST access to Rothrock SF, please include this! Share the road is not a safe solution for pedestrians and should be avoided if at all possible. PA road shoulders are narrow and narrower during winter months while the debris left from winter can continue to narrow corridors well past winter.	4/20/2022 11:08 AM
39	Include bike lanes to allow for connection to Musser Gap Trail etc.	4/20/2022 9:02 AM
40	Nixon should have bike lanes connecting the bike lanes on Science Park with the bike lanes on Whitehall rd.	4/19/2022 7:28 PM
41	I don't, but as a cyclist I don't think that sharrows do much at all to enhance safety.	4/19/2022 4:43 PM
42	I would prefer to see PGM have a dedicated bike lane instead of just sharrows, but it is a start. I know it would remove one side of the parking from the road and parking is already complicated in PGM.	4/19/2022 4:30 PM
43	seems like sidewalks should be on Route 26 up the mountain until most of the residences end.	4/19/2022 4:16 PM
44	As a biker, I am less concerned about the number of connections than the safety of connections. Sharrows and shared use roads are scary. Dedicated bike paths are so much safer.	4/19/2022 4:09 PM
45	No recommendations. But if adding paths for bicycles and pedestrians who pays the storm water run off fees for those?	4/19/2022 4:01 PM
46	Anything off of 45 and 26 would be helpful.	4/19/2022 3:19 PM
47	Ensuring safety of a left turn when moving from west to east and turning off Pine Grove Road onto Nixon	4/19/2022 2:04 PM
48	26 is not safe to bike with kids. Need more options to get from bristol Ave area.	4/19/2022 1:46 PM
49	Many access the MTB trails and gravel roads up RT 26 on the right, from W. Chestnut and Kepler Rds. Please consider a bike path to both roads.	4/19/2022 1:44 PM
50	Should address pedestrian and bicycle connections to Rothrock State Forest.	4/19/2022 10:21 AM
51	Sidewalk should extend from the Lutheran Church on W Pine Grove Rd out to Plainfield Rd.	4/18/2022 8:22 PM

Q12 What connection would you use most frequently?

Answered: 47 Skipped: 93

#	RESPONSES	DATE
1	Shared road as use would be for commuting.	5/2/2022 11:51 AM
2	We walk a lot from Rosemont Drive to the park, so we walk up Rosemont, and turn right on Sunday. Would a sidewalk be possible here? We also cross Pine Grove Road at Rosemont a lot, and we walk along Pine Grove Road to Ferguson Township Elementary. We also cross Nixon Road at the crosswalk a lot.	5/1/2022 7:09 PM
3	Nixon intersection	5/1/2022 2:19 PM
4	The proposed shared use path along sheldon drive, if it could be made to connect to Whitehall, would be INCREDIBLY useful. One of the main reasons that we do not bike to work (from Sunday Drive to PSU Campus) is because of the near-nonexistent shoulder and poor visibility over the crest on Nixon Rd).	5/1/2022 2:16 PM
5	Shared use	4/30/2022 11:14 PM
6	Western end of Route 45	4/29/2022 12:15 PM
7	One that is there	4/29/2022 8:59 AM
8	Not sure	4/28/2022 11:14 PM
9	Nothing	4/28/2022 9:45 PM
10	none	4/28/2022 8:52 PM
11	None	4/28/2022 7:49 PM
12	None	4/28/2022 7:41 PM
13	None	4/28/2022 6:58 PM
14	The road that's already there. Nothing needs changed	4/28/2022 6:46 PM
15	I mainly use the crosswalk at the top of the hill near the Sunday Barns on Nixon Road.	4/28/2022 3:14 PM
16	Sharrow	4/28/2022 1:56 PM
17	bicycle ones	4/28/2022 7:18 AM
18	The improved sidewalks in town	4/27/2022 2:08 PM
19	Anything that would make it easier to get into Nixon. I would also like more walking paths.	4/25/2022 6:27 PM
20	I would like to be able to bike down Sports and connect over at Nixon on the other side of the cemetery.	4/25/2022 6:22 PM
21	Everything is fine as it is	4/23/2022 10:26 AM
22	None	4/22/2022 1:03 PM
23	Shared Use	4/21/2022 8:09 PM
24	The connection that runs parallel to 26	4/21/2022 6:28 PM
25	Route 45 East/ West from PGM towards Whitehall/ rt 26 area (If there was a pathway that cut through green area as opposed to the road to get to the same spot/ area near whitehall (where people could then access Blue Coarse drive pathways, or cut through more directly by way of Nixon Rd to corner of Whitehall / College Ave.)- that would be fine. Just needs to be safe way to travel with an actual pedestrian walkway/ path of some sort a reasonable, 'pathway sized' distance away from cars.)	4/21/2022 12:41 PM

26	None	4/21/2022 12:21 PM
27	None	4/21/2022 7:39 AM
28	None	4/21/2022 6:29 AM
29	None biking is not meant for this town especially they way that this township board is running the area.	4/20/2022 10:44 PM
30	Route 45 in both directions. It's too dangerous to walk or bike on the street currently. I would love to be able to walk or bike to the post office, hair salon, Pine Grove Hall, and other local businesses. Or alternatively walk to Fairbrook rather than drive.	4/20/2022 8:14 PM
31	Any	4/20/2022 6:29 PM
32	Pedestrian	4/20/2022 6:28 PM
33	Nixon to Whitehall is the safest way to connect.	4/20/2022 5:28 PM
34	Old Gatesburg/Nixon	4/20/2022 5:19 PM
35	The Shared Use Paths around town for running.	4/20/2022 4:55 PM
36	Nixon Road access to Kepler road and West Chestnut ST to Rothrock SF entries.	4/20/2022 11:08 AM
37	Hard to say. Depends on the day.	4/19/2022 7:28 PM
38	I most frequently ride my bike on Nixon from Pine Grove and Pine Grove Rd. to the southwest from Kirk Street.	4/19/2022 4:43 PM
39	With these improvements I would try it out on 45-26 as I bike into town usually on Whitehall and avoid 45 for the high speed but also because of PGM crowded roadway.	4/19/2022 4:30 PM
40	sidewalk	4/19/2022 4:16 PM
41	Nixon - Route 45 toward Boalsburg.	4/19/2022 4:09 PM
42	Don't walk or ride. Wouldn't use.	4/19/2022 4:01 PM
43	Nixon to 45W, 45E continuing onto 45E-26N.	4/19/2022 3:19 PM
44	Biking	4/19/2022 2:04 PM
45	Need safer options	4/19/2022 1:46 PM
46	RT 26 W/E and N/S	4/19/2022 1:44 PM
47	Rts 26 and 45, and Nixon Rd as well as Nixon Rd bike path	4/19/2022 1:38 PM

Q13 Do you have any comments on the Pine Grove Road Enhanced Pedestrian Crossing at Rosemont Drive?

Answered: 41 Skipped: 99

#	RESPONSES	DATE
1	Make sure it's a sign that pedestrian could trigger (like at the high school) so that it's not flashing all the time.	5/2/2022 11:51 AM
2	Can rapid flashing pedestrian crossing light be dimmed at night? Concerned about light pollution for nearby residents.	5/1/2022 9:27 PM
3	Will need to enforce to get drivers used to stopping.	5/1/2022 7:40 PM
4	We want this very much! We live right off Rosemont Drive, and we walk across this road frequently with children and it is not ideal currently.	5/1/2022 7:09 PM
5	This is great	5/1/2022 2:19 PM
6	No	4/30/2022 2:34 PM
7	Flashing lights	4/28/2022 11:14 PM
8	I believe our tax dollars could be spent in much more appropriate ways.	4/28/2022 9:45 PM
9	Not going to bring up the traffic hazard of the Naked Egg? Cars parked along the road and everywhere in between?	4/28/2022 7:49 PM
10	This seems necessary	4/28/2022 7:41 PM
11	Nothing needs changed. You abuse your power	4/28/2022 6:46 PM
12	This is a good idea. I cross from Rosemont to other side of PGR regularly when I walk and this will help.	4/28/2022 3:14 PM
13	No	4/28/2022 1:56 PM
14	there is never enough parking for the Naked Egg - having the crossing on the side of the road that extra parking happens on is a good thing - can you also extend the width of the road in that area to help out? Is that orange roof a people shelter (like a bus stop?)	4/28/2022 7:18 AM
15	This would allow locals safer access to the Naked Egg	4/27/2022 2:08 PM
16	Not needed	4/24/2022 2:56 PM
17	seems logical	4/23/2022 11:12 AM
18	Stop taking Farmer's land	4/23/2022 10:26 AM
19	N/A	4/21/2022 8:09 PM
20	It is a good idea - I walk there often. I don't think, however, that it is urgent. Crossing there is usually pretty easy.	4/21/2022 4:50 PM
21	None	4/21/2022 12:21 PM
22	Drivers are not obeying speed limit so any ped crossing would be dangerous	4/21/2022 10:46 AM
23	No	4/21/2022 7:39 AM
24	This would be a great improvement.	4/21/2022 6:53 AM
25	None	4/21/2022 6:29 AM
26	I'm all for painting crosswalks but I don't see a need for anything more than that.	4/20/2022 10:44 PM
27	Would these flashing beacons be constant, or activated by pedestrian before crossing?	4/20/2022 9:13 PM

28	No	4/20/2022 8:14 PM
29	Just need better parking and access for the Naked Egg	4/20/2022 7:01 PM
30	Add a blinking light button for when pedestrians cross. Cars can still be going very fast at least 45 in this zone,	4/20/2022 5:51 PM
31	Great idea.	4/20/2022 5:28 PM
32	We might need those flashing crosswalk signs so we know when pedestrians are crossing and have enough time to stop and not get rear ended	4/20/2022 5:19 PM
33	Many places have "State Law, must stop for pedestrians in cross walk" signs, often in the middle of the road at the crosswalk. These seems to be quite effective. Keeping the actual crosswalk paint maintained is also very important. The paint at the Rte 45 greenway crossing is nearly gone and so vehicles have more of a reason to ignore or invoke plausible deniability in not honoring that crossing.	4/20/2022 11:08 AM
34	This is definitely needed. It is a good start, but I think there should be 2 since many folks park along the road for the Naked Egg and they will probably not use the cross walk. The second one should be between the Naked Egg and the first house next to it.	4/19/2022 4:30 PM
35	does that work best with left had turns from teh side street?	4/19/2022 4:16 PM
36	I think it is an improvement.	4/19/2022 4:09 PM
37	No. It's fine.	4/19/2022 4:01 PM
38	Yikes. 45 mph westbound traffic hitting a crosswalk before a slowdown to 25 mph? Yeah, right. See earlier comment about PA drivers and ped crosswalks.	4/19/2022 3:19 PM
39	This graphic should include where parking/no parking is designated during peak times at the Naked Egg. Pedestrian areas can be obstructed, especially during peak times on the weekend.	4/19/2022 3:19 PM
40	Is this really required?	4/19/2022 2:04 PM
41	RRFB should be pedestrian activated, not continuous flashing.	4/19/2022 10:21 AM

Q14 Do you have any comments on the Nixon Road Enhanced Pedestrian Crossing at Shared Use Path?

Answered: 37 Skipped: 103

#	RESPONSES	DATE
1	Not a fan of the overhead flashing beacon - would a side of the road flashing beacon be sufficient as is being proposed for the Deepwood crossings? And could it be one that a pedestrian could trigger so that it's not flashing all the time?	5/2/2022 11:51 AM
2	Can rapid flashing pedestrian crossing light be dimmed at night? Concerned about light pollution for nearby residents.	5/1/2022 9:27 PM
3	I like the idea of flashing beacon to let drivers know that someone is there.	5/1/2022 7:40 PM
4	This is fine but would be our lowest priority. The current crossing seems okay.	5/1/2022 7:09 PM
5	This would be welcomed to enhance pedestrian safety as vehicles traveling from Pine Grove Road are usually traveling faster than the posted 25mph speed limit.	5/1/2022 4:03 PM
6	Yes please!! Cars come over that hill very fast.	5/1/2022 2:16 PM
7	No	4/30/2022 2:34 PM
8	This is very close to our house. People just drive too fast on this part of Nixon Rd. I'm not sure that this is really going to help, so not sure whether the money is well spent on this.	4/30/2022 11:50 AM
9	Signage	4/28/2022 11:14 PM
10	You can put up as many signs and paint lines across a road (wasting more money) but there is always going to be an idiot that renders all this useless	4/28/2022 7:49 PM
11	This also seems necessary	4/28/2022 7:41 PM
12	Again, you take farmland for bikers who don't even ride the bike lane. I.e Whitehall	4/28/2022 6:46 PM
13	Good idea - the crossing I use most often.	4/28/2022 3:14 PM
14	No	4/28/2022 1:56 PM
15	This is such a dangerous hill, I never feel safe crossing here. A path along nixon road to white hall road would better	4/27/2022 2:08 PM
16	Not needed	4/24/2022 2:56 PM
17	Stop taking Farmer's land	4/23/2022 10:26 AM
18	No	4/21/2022 8:09 PM
19	I use that often - one does have to be careful of cars heading N. on Nixon b/c the hill can make them hard to see. I would prioritize signage here over the Rosemont/45 area, especially since a number of kids cross here to go to the elementary school.	4/21/2022 4:50 PM
20	None	4/21/2022 12:21 PM
21	No	4/21/2022 7:39 AM
22	Again a great improvement.	4/21/2022 6:53 AM
23	None	4/21/2022 6:29 AM
24	Again I'm all for painted crosswalks. I don't believe it is the tax payers responsibility to put electronic signals up on these roads.	4/20/2022 10:44 PM
25	That looks great.	4/20/2022 8:14 PM
26	It is hard to see over the bump in the road	4/20/2022 7:01 PM

27	Helpful as people fly over this hill.	4/20/2022 5:28 PM
28	Same as 13	4/20/2022 5:19 PM
29	Overhead flashing signs are an amazing enhancement idea and could be used on Science Park Road where the bike path crosses near Circleville rd to great effect. Many places have "State Law, must stop for pedestrians in cross walk" signs, often in the middle of the road at the crosswalk. These seems to be quite effective. Keeping the actual crosswalk paint maintained is also very important. The paint at the Rte 45 greenway crossing is nearly gone and so vehicles have more of a reason to ignore or invoke plausible deniability in not honoring that crossing.	4/20/2022 11:08 AM
30	Better safety for folks in the neighborhood, and for kids and families going to and from school.	4/19/2022 7:28 PM
31	no, I like to see the overhead flashing device	4/19/2022 4:30 PM
32	only if drivers can see it will it be useful	4/19/2022 4:16 PM
33	This is also an improvement.	4/19/2022 4:09 PM
34	No.	4/19/2022 4:01 PM
35	Lobby PA legislature to make it "STOP for Peds in crosswalks" and not "Yield." "Yield" is apparently not clear enough, and is rarely, if ever, enforced.	4/19/2022 3:19 PM
36	No	4/19/2022 2:04 PM
37	RRFB should be pedestrian activated, not continuous flashing. Overhead mast arms are good. Should be second highest priority because of connections to access school.	4/19/2022 10:21 AM

Q15 Do you have any comments on the Pine Grove Road Enhanced Pedestrian Crossing at Deepwood Drive (east)?

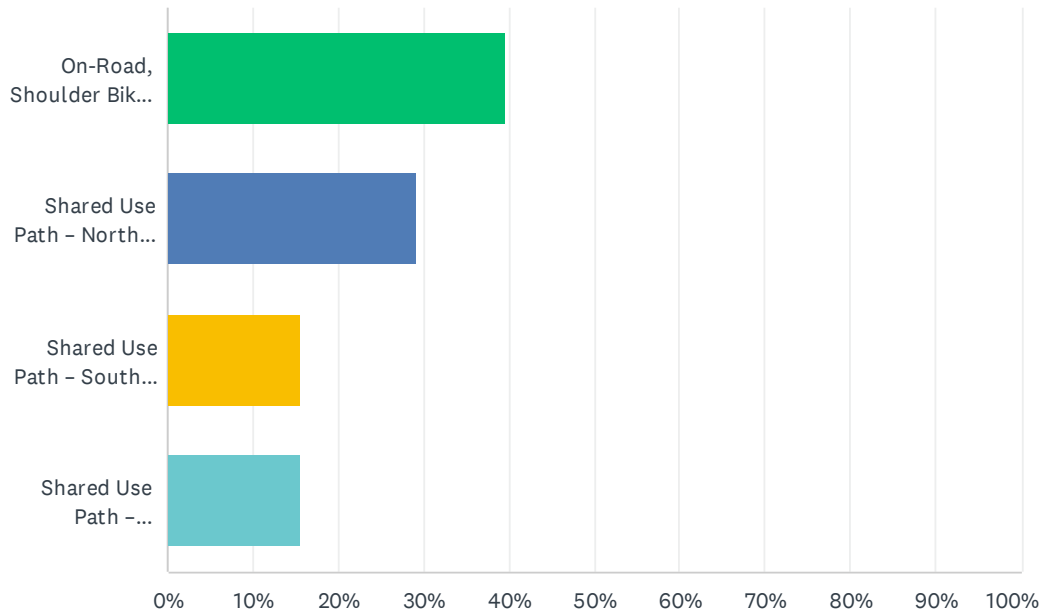
Answered: 37 Skipped: 103

#	RESPONSES	DATE
1	Make sure it's one that a pedestrian could trigger so that it's not flashing all the time.	5/2/2022 11:51 AM
2	Can rapid flashing pedestrian crossing light be dimmed at night? Concerned about light pollution for nearby residents.	5/1/2022 9:27 PM
3	We agree with anything that makes this intersection safer for children to cross, especially during school drop-off and pick-up times.	5/1/2022 7:09 PM
4	No	4/30/2022 2:34 PM
5	Mo	4/28/2022 11:14 PM
6	"Enhanced pedestrian crossing" in other words spending our tax money to paint some more lines on the road on what is common sense.	4/28/2022 7:49 PM
7	Good idea	4/28/2022 7:41 PM
8	You abuse your power	4/28/2022 6:46 PM
9	This change is a good idea.	4/28/2022 3:14 PM
10	No	4/28/2022 1:56 PM
11	Anything to keep the kids safe	4/27/2022 2:08 PM
12	Not a good idea	4/24/2022 2:56 PM
13	Seems like you are infringing on people's property. There has to be better ways to do this than taking their land.	4/23/2022 11:12 AM
14	Stop taking Farmer's land	4/23/2022 10:26 AM
15	No	4/21/2022 8:09 PM
16	Good idea, especially because of the school.	4/21/2022 4:50 PM
17	This makes sense.	4/21/2022 12:21 PM
18	No	4/21/2022 7:39 AM
19	This is a much needed enhancement.	4/21/2022 6:53 AM
20	None	4/21/2022 6:29 AM
21	I don't believe tax Payer dollars should be used for this. If the township can do this they don't need my storm water fee money.	4/20/2022 10:44 PM
22	No	4/20/2022 8:14 PM
23	This would make kids crossing for school MUCH more safe	4/20/2022 6:29 PM
24	Children should not cross twice. Please consider moving the crosswalk to allow only crossing traffic once.	4/20/2022 5:42 PM
25	Long time needed. Thank you.	4/20/2022 5:28 PM
26	No	4/20/2022 5:19 PM
27	Keeping the actual crosswalk paint maintained is also very important, otherwise good improvement.	4/20/2022 11:08 AM

28	Have continuous speed sensing signs to help maintain 25MPH / school zone speeds	4/20/2022 9:02 AM
29	Better safety for folks in the neighborhood, and for kids and families going to and from school.	4/19/2022 7:28 PM
30	no, but that doesn't seem that different from what is there. I don't understand why the cross walk went to the other side of Deepwood.	4/19/2022 4:30 PM
31	Is this wher the crossing guard stands?	4/19/2022 4:16 PM
32	No comment, as this area does not concern me.	4/19/2022 4:09 PM
33	No.	4/19/2022 4:01 PM
34	Understanding that there may be added cost, can flashing yellow lights be added to the two "200 Feet Ahead" signs during school opening and dismissal and during off hour school events?	4/19/2022 3:19 PM
35	No	4/19/2022 2:04 PM
36	RRFB should be pedestrian activated, not continuous flashing. Should be highest priority project given direct connection to school.	4/19/2022 10:21 AM
37	This enhancement makes a lot of sense.	4/18/2022 8:22 PM

Q16 Considering the issues and benefits identified, what do you feel is the best solution to improve bike and pedestrian access on Pine Grove Road from Ross Street to Ferguson Township Elementary School?

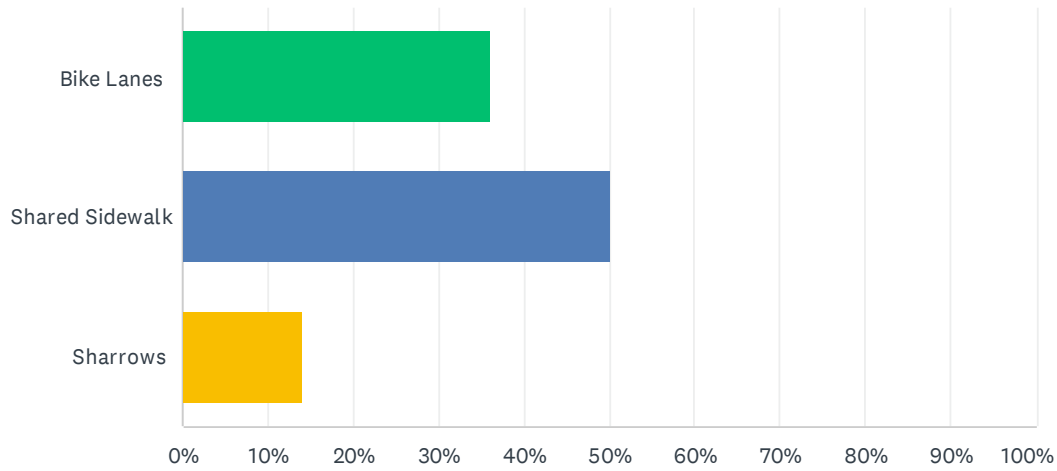
Answered: 96 Skipped: 44



ANSWER CHOICES	RESPONSES	
On-Road, Shoulder Bike Lanes	39.58%	38
Shared Use Path – North Side	29.17%	28
Shared Use Path – South Side	15.63%	15
Shared Use Path – Alternating Side	15.63%	15
TOTAL		96

Q17 Which concept do you prefer to make Pine Grove Road from the Ferguson Township Elementary School to Rosemont Drive, a complete street?

Answered: 100 Skipped: 40



ANSWER CHOICES	RESPONSES	
Bike Lanes	36.00%	36
Shared Sidewalk	50.00%	50
Sharrows	14.00%	14
TOTAL		100

Q18 Please provide any comments on the Pedestrian & Bicycle Network Improvements concepts and information provided.

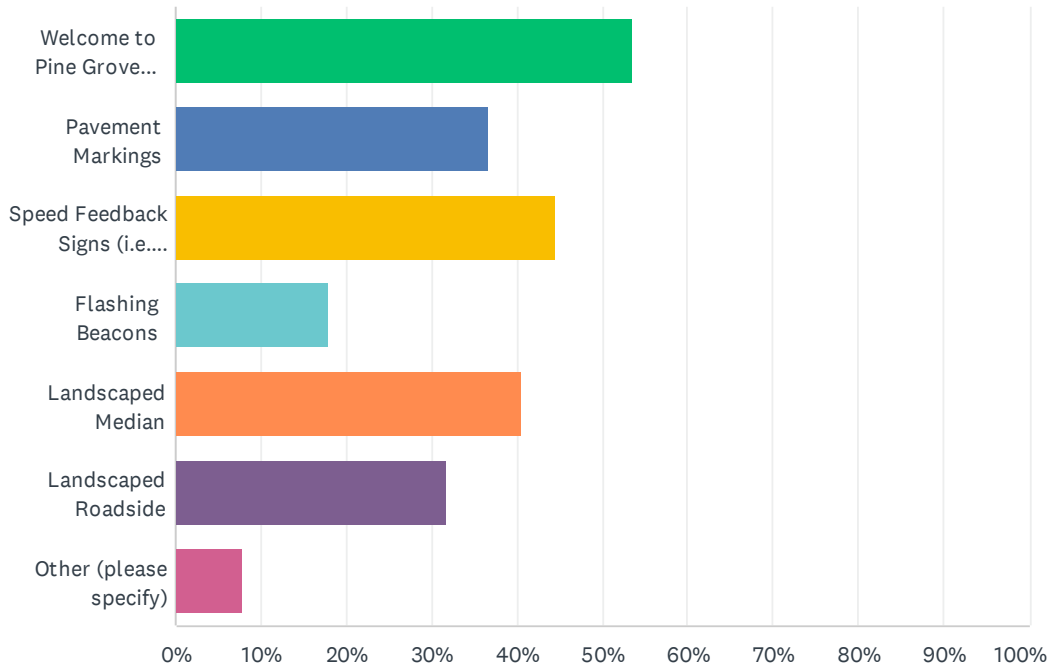
Answered: 25 Skipped: 115

#	RESPONSES	DATE
1	It is very scary to walk along the left-hand side of Pine Grove Road with small children. It feels like cars are so close to you. I frequently worry that a distracted driver could swerve and seriously injure me or my children. We try to walk as far as we can away from the road, single file, but that is difficult when you want to hold the hand of a small child so that they don't go too close to the road.	5/1/2022 7:09 PM
2	If Pine Grove Mills has any hope at all of developing into a walkable village (similar to the renaissance that Lemont has undergone over the past ~10 years), we MUST preserve and enhance pedestrian access. Even if pedestrians are not a common sight now, this is a chicken-and-egg problem. Businesses do not move in without foot traffic, but pedestrians don't walk where there is nothing to see or visit. With so much spillover from the State College housing market, I think we will see a lot of families and young people moving into PGM in the coming years. Now is the time to be making every effort towards walkability, and towards attracting more businesses like Pine Grove Hall, the Naked Egg, and small retail shops.	5/1/2022 2:16 PM
3	None at all	4/30/2022 5:08 AM
4	These changes impact too much private property and farmland. Your survey implies everyone believes there are currently problems and never gives the option of neither or none	4/28/2022 9:45 PM
5	Bicycle never use the bike paths anyways why would they start now	4/28/2022 8:17 PM
6	Making lanes wider. Taking up ag land and green space to make more impervious surface. Are we really worried about storm water run off or not? I can't tell. If you are going to continue to commercialize area and approve more impervious surfaces the storm water fee should be revoked. You can't be worried about it one year and then not the next.	4/28/2022 7:49 PM
7	Parked cars seem to be hazardous along the streets, especially with bikes	4/28/2022 7:41 PM
8	They do what they want anyways not going to help but def don't take ag land	4/28/2022 6:58 PM
9	Stop abusing your power	4/28/2022 6:46 PM
10	Dedicated bike paths are the only real safe alternative.	4/28/2022 3:14 PM
11	Make the bicycle people pay for licenses and insurance	4/24/2022 2:56 PM
12	None! Stop taking farm land away from farmers to make bike paths. There are plenty of bike paths in town	4/23/2022 10:32 AM
13	Stop taking Farmer's land	4/23/2022 10:26 AM
14	N/A	4/21/2022 8:09 PM
15	I have never heard of anyone biking to "the elementary school" from Ross Street. What parent would let their child ride a bike on route 45? Do not encourage more bikes on route 45 unless you slow the speed limit. Pine Grove Mills will never be a destination town to ride a bike to.	4/21/2022 7:10 PM
16	There is no way any bikers on Nixon Rd &/or Pine Grove Rd can get a 4' clearance by a driver. Impossible when the road is curvy & hilly to clear that much space & not have a head on collision with opposite oncoming unseen traffic	4/21/2022 10:46 AM
17	None	4/21/2022 6:29 AM
18	I am strongly against sacrificing more land, especially farmland along route 45 near Plainfield Drive, to accommodate bicyclists and pedestrians which do not frequent this stretch of roadway. I am strongly against the idea of adding a shared path to either side of the road.	4/20/2022 11:41 PM

19	If the township is considering this they need to refund my storm water fee and cancel it completely. These "improvements" are nonsense and complete oversight and negligent spending of hard earned constituent dollars.	4/20/2022 10:44 PM
20	Any other the above solutions would greatly improve the quality of life for my family, so that we can be more active and connect more easily to community assets.	4/20/2022 8:14 PM
21	Given that plans for #16 directly involve our property line and drainage according to this map, I'd like to know a whole lot more about impacts and expectations. Why are we talking about further developing vanishing rural land in PGM?	4/20/2022 8:16 AM
22	My first choice for Q17 is bike lanes, but the next would be for sharrows. IF you are doing road improvements think long term recognizing that 33' curb to curb will allow for future bike lane if parking can be figured out or less people have cars.	4/19/2022 4:30 PM
23	Won't the any of these options effect storm water run off for the township? If this was such an important issue that we needed an added fee it should be considered in everything we do in the township.	4/19/2022 4:01 PM
24	Bike lanes would be really useful for me, as someone who passes through Pine Grove Mills but is not a PGM resident. If I were a resident, I would select a shared-use path as I think this is much better for children	4/19/2022 1:38 PM
25	Should be pedestrian and bike connection to Cecil Irvin Park.	4/19/2022 10:21 AM

Q19 What would you like to see, if possible, as part of the Gateway treatment on Pine Grove Road?

Answered: 101 Skipped: 39



ANSWER CHOICES	RESPONSES
Welcome to Pine Grove Mills Signage	53.47% 54
Pavement Markings	36.63% 37
Speed Feedback Signs (i.e. Your Speed is...)	44.55% 45
Flashing Beacons	17.82% 18
Landscaped Median	40.59% 41
Landscaped Roadside	31.68% 32
Other (please specify)	7.92% 8
Total Respondents: 101	

#	OTHER (PLEASE SPECIFY)	DATE
1	This is a town of people that don't care about farm land	4/30/2022 5:09 AM
2	Speed enforcement! Cars routinely go 50 mph here!	4/29/2022 1:09 PM
3	Nothing. Stop wasting money on frivolous things.	4/28/2022 7:51 PM
4	Stop taking Farmer's land	4/23/2022 10:26 AM
5	Certainly not any more trees planted in town along the sidewalk. A nice sign and clean up the mess across from the naked egg would	4/21/2022 7:14 PM

6	None - spend my tax dollars more wisely	4/20/2022 10:46 PM
7	Landscaping is lovely and the flashing signs and your speed is signs are very effective	4/20/2022 5:55 PM
8	Nothing. Don't waste money.	4/19/2022 4:03 PM

Q20 Please provide any comments on the speed reduction treatments proposed.

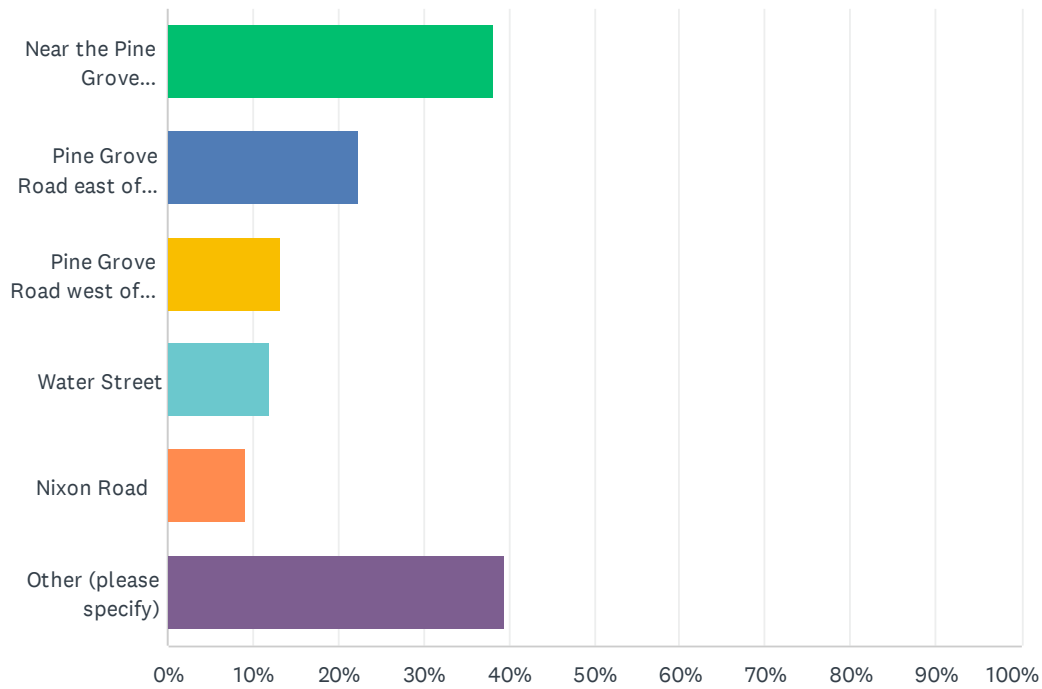
Answered: 38 Skipped: 102

#	RESPONSES	DATE
1	Dropping speed limit is great however if you are not going to enforce it properly what's the point. I see and hear multiple speeders and reckless drivers on 26 in front for the naked egg everyday and have yet to see one person pulled over or stopped. I think the reduced speed limit is great because of the congestion created in front of the naked egg	5/2/2022 8:53 AM
2	Agree with all the reduced speed limit proposals.	5/1/2022 9:28 PM
3	Like the idea of a transition to a slower/faster mph.	5/1/2022 7:11 PM
4	Having a 35mph transition area on East Pine Grove Road is appreciated.	5/1/2022 4:05 PM
5	Visual cues that tell cars they are entering a town ("welcome to" signs, speed feedback signs) are not enough. Drivers already don't care. I wish I could be more optimistic... but no one will slow down unless they are forced to. The only way to get cars to slow down will be to add physical slowdown mechanisms like medians, lane narrowing, etc. We should do everything that is legally in our power to accomplish this, even if it means adding (the horror!) a minute or two of travel time for people passing through. This also goes for other speed reduction strategies proposed throughout the mobility study. Delay of traffic on pine grove road should NOT be seen as a "challenge" -- it is a "benefit"!	5/1/2022 2:19 PM
6	cars tend to speed up in the west bound direction on the way out of town (before they get to the elementary they are way beyond 25mph). Consider an option that will also address this (not only speed coming into PGM from west)	4/30/2022 11:16 PM
7	All sound good except the Nixon Rd plan. The main issue with that part of Nixon Rd is the EXTENSIVE number of bicyclists and pedestrians. Changing the speed limit isn't going to slow down the people who are already ignoring the speed limit on the existing 25mph section of Nixon Rd. This is a band-aid on cancer solution. Better to add bike lanes that pedestrians can also use.	4/30/2022 12:32 PM
8	I think you're barking up the wrong tree. Why can't this quaint small town remain a quaint small town? There are more important things to do. Such as repeal the 'rain tax'. There's no true reason to pay the government for something that God give us and especially the western part of the township where the water runs to Spruce Creek not into the local town system	4/29/2022 8:29 AM
9	There hasn't been issues in these areas yet there is a need to change just for the sake of changing things and wasting money? The wasting spending and overthinking of this township amaze me	4/28/2022 7:51 PM
10	All seem necessary	4/28/2022 7:43 PM
11	LOL speed limit is like 25 mph already	4/28/2022 6:47 PM
12	The round about on the eastern gateway and the medians on the western gateway provide concrete notice that drivers are entering the town. I think this is the only option to enforce lower speed limits and sufficient warnings for drivers.	4/28/2022 3:16 PM
13	I support lowering the speed limit through curve on SR26.	4/28/2022 1:59 PM
14	This is a behavioristic approach that won't necessarily work. People who are going to speed are going to speed. Especially people who aren't from the area and you have a lot of people passing through these zones who just won't care. Build a road that goes AROUND PGM if you don't want people behaving badly in PGM.	4/23/2022 11:15 AM
15	I don't think the speeds need reduced. They are low enough. 25 miles per hour is too low	4/23/2022 10:33 AM
16	Stop taking Farmer's land	4/23/2022 10:26 AM

17	Looks like a good plan	4/22/2022 7:41 AM
18	N/A	4/21/2022 8:14 PM
19	I would change the aspirational speed in the eastern gateway to 25 mph, the the 35 mph that is being proposed. I think that this would reduce accidents at Banyan and Meckely more so than a roundabout.	4/21/2022 4:52 PM
20	This makes sense. Try changing the traffic speed first before installing roundabouts. Again, be mindful of landscape medians and roadsides with large equipment.	4/21/2022 12:25 PM
21	Need more police visibility especially during high traffic events	4/21/2022 10:47 AM
22	Looks good!	4/21/2022 10:20 AM
23	This looks good and acceptable to promote safety needs.	4/21/2022 6:55 AM
24	Don't lower speeds	4/21/2022 6:30 AM
25	Have Ferguson township police do their job and enforce current speed limits. Lowering them will do nothing if the current aren't enforced.	4/20/2022 10:46 PM
26	Dumb	4/20/2022 7:13 PM
27	Living on this end of Pine Grove Road with 5 kids, I worry about them using bikes and crossing the street because few vehicles have slowed down to even close to 25 mph by the time they get to the school.	4/20/2022 6:02 PM
28	Wonderful plan for speed reduction. As a resident, Ive been a first responder on the scene of a completely flipped car on Water Street - driver went over the guard rail and into the woods - it was about 11 pm at night and dark, he took the turns too quickly coming down the mountain. Extending the 25 mile an hour up the mountain to the big curve would be a huge safety benefit for cars as well as pedestrians.	4/20/2022 5:55 PM
29	All sound reasonable.	4/20/2022 5:28 PM
30	I'm OK with the speed limits as they are now.	4/19/2022 4:44 PM
31	none	4/19/2022 4:32 PM
32	I favor the speed reduction treatments.	4/19/2022 4:10 PM
33	How many wrecks happen related to speed in those areas? Not many, if any that I can recall. I don't think speed reduction is going to help something that isn't an issue.	4/19/2022 4:03 PM
34	Appears to adjust speeds where necessary	4/19/2022 3:24 PM
35	West Pine Grove Road intermediate should be 35, not 40, but otherwise, I think all of the above reductions are warranted and needed.	4/19/2022 3:22 PM
36	speed reduction is welcome, although I think many will be speeding anyway. I am not an expert on how to get people to volunarily go slower (due to road design, or signage?) but I think this should be a goal.	4/19/2022 1:39 PM
37	Consider street trees and landscape treatments at the western end of the Eastern Gateway for traffic calming.	4/19/2022 10:27 AM
38	Sign with speed limit to help reduce speed as vehicles enter the town. People do not slow down until they pass the school.	4/18/2022 8:24 PM

Q21 Where do you feel additional parking is needed in Pine Grove Mills?

Answered: 76 Skipped: 64



ANSWER CHOICES	RESPONSES
Near the Pine Grove Road/Nixon Road/Water Street intersection	38.16% 29
Pine Grove Road east of Nixon Road/Water Street	22.37% 17
Pine Grove Road west of Nixon Road/Water Street	13.16% 10
Water Street	11.84% 9
Nixon Road	9.21% 7
Other (please specify)	39.47% 30
Total Respondents: 76	

#	OTHER (PLEASE SPECIFY)	DATE
1	Next to Post Office	5/3/2022 2:29 PM
2	In front or near naked egg cafe	5/2/2022 8:55 AM
3	None	5/1/2022 9:29 PM
4	No new parking needed	5/1/2022 2:22 PM
5	Near the Naked Egg	5/1/2022 10:11 AM
6	No additional taxpayer funded parking necessary	4/30/2022 2:51 PM
7	Not needed	4/30/2022 2:37 PM
8	Don't need any	4/30/2022 5:09 AM

9	Near the Naked Egg	4/29/2022 8:30 AM
10	No where! Parking?! More impervious surface in this township thus creating more storm water run off. You have got to be kidding me. Are we worried about run off or not anymore. Take the fee away if we aren't. I'm getting financial whiplash from what is deemed more important on a year to year basis with this township.	4/28/2022 7:55 PM
11	Are we not concerned for the storm water effects with parking lots?	4/28/2022 7:45 PM
12	Don't allow businesses that don't have enough parking. It is a residential neighborhood, let's keep it that way.	4/28/2022 7:18 PM
13	existing parking on the street needs to be striped or improved deliniation	4/28/2022 4:37 PM
14	Since I do not park on the street, I have no opinions of this.	4/28/2022 3:17 PM
15	Stop taking Farmer's land	4/23/2022 10:26 AM
16	None, people need to park behind their property not on the road	4/22/2022 1:05 PM
17	Something needs done with the parking across from the naked egg. What a mess!!	4/21/2022 7:16 PM
18	Near the Naked Egg specifically. There's an empty lot across from it that could allow for larger, safer parking.	4/21/2022 12:26 PM
19	Put in s parking deck since you want to update our sleepy little town.	4/20/2022 10:58 PM
20	No where. There is no need for additional parking.	4/20/2022 10:47 PM
21	I don't have reason to park in any of these areas	4/20/2022 9:17 PM
22	Naked Egg	4/20/2022 7:01 PM
23	I'm not totally certain where the best parking would be perhaps some on street parking formally in front of the naked egg, perhaps some additional parking on the street near Pinegrove hall. If the new circle includes leveling the existing gas station I would rather that area be a pedestrian spot such as a gazebo or benches to look at the creek rather than additional parking right at a very busy intersection	4/20/2022 5:59 PM
24	To access Rothrock forest for hiking/biking	4/20/2022 9:05 AM
25	No more parking lots please	4/20/2022 8:16 AM
26	Is the real issue parking for Pine Grove Hall or is the parking needed for people who own property at the places you listed? If it is for property owners, then do what you need to do to help them out. If the extra parking is needed for a private business, let them pay for it!	4/19/2022 7:33 PM
27	Need to encourage parking and walking to a destination. Not parking in the center of PGM. Make it a place for people not cars.	4/19/2022 4:36 PM
28	not sure additional parking is needed	4/19/2022 4:17 PM
29	Additional parking creates more storm water run off. If the residents are paying this fee don't add more to the problem	4/19/2022 4:04 PM
30	Post Office and Pine Grove Hall	4/19/2022 3:24 PM

Q22 Please provide any comments on the parking improvements and policy changes proposed.

Answered: 19 Skipped: 121

#	RESPONSES	DATE
1	Our family would not really need extra parking in these areas but I understand other people may have needs we don't have.	5/1/2022 7:11 PM
2	The parking map used does not accurately represent where parking is currently permitted. I hope all residents living on Pine Grove Road will be consulted with potential changes and that previous restrictions based on line of sight issues remain in effect. Besides this, residents should be informed about who they should contact if they do experience line of sight issues, as their safety and the safety of those on Pine Grove Road is paramount.	5/1/2022 4:20 PM
3	Given that the highest regionally-averaged utilization rate was 50%, we definitely do not need more parking right now. However, thinking to the future, if we want to encourage businesses to move into downtown PGM, we will eventually need more parking. If we succeed in acquiring the Pine Grove Country Store property and right of way for the new Water street intersection, maybe some of that area could be turned into a municipal parking lot (effectively just enlarging the post office lot).	5/1/2022 2:22 PM
4	If you are going to commercialize and create more parking areas and more impervious surfaces remove the storm water fee. All we heard was how our storm water system needed this fee for the future. Yet you all keep approving more impervious surfaces and frivolous spending creating more strain on this so called "fragile, aging system". If you want to continue to create more areas of run off remove the fee.	4/28/2022 7:55 PM
5	Where is the money coming from to do all of this?	4/28/2022 7:45 PM
6	Stop taking farmland and using your power	4/28/2022 6:47 PM
7	I hope you are considering unintended consequences.	4/23/2022 11:16 AM
8	Stop taking Farmer's land	4/23/2022 10:26 AM
9	Move the post office to the vacant bank. Easier entry and exit. More parking	4/22/2022 1:05 PM
10	N/A	4/21/2022 8:14 PM
11	Parking we all ready have is causing visibility issues & safety issues for peds & bkers	4/21/2022 10:48 AM
12	Stop catering to PSU people and be concerned about the farm community that you are destronying as a result of these "improvements"	4/20/2022 10:47 PM
13	All of these plans and proposals are very thoughtful thank you for the hard work that has gone into them. In addition to the parking and pedestrian concerns, I think it would not be a heavy lift to consider having a little parklet where the existing gas station is. It would need to have probably some concrete barriers that could have flower boxes so as to protect from traffic but it would be a very nice gathering spot for people who walk or bicycle to get mail	4/20/2022 5:59 PM
14	I think there's enough parking in PGM right now for the size it is right now actually, never have trouble finding parking there.	4/20/2022 5:20 PM
15	Make parking and forest access available on Deepwood Cr. and W. Chestnut St.	4/20/2022 9:05 AM
16	Kudos to everyone involved for taking steps to make PGM safer.	4/19/2022 7:33 PM
17	Parking outside of central PGM and walking will be easier for folks when the sidewalks are safe and people and bikes are given priority. Parking is needed for residents, but for visitors it should be park out and walk in. It is tricky, but if parking is identified in good spots this could be a good location to visit to get to Rothrock, restaurants and more will come.	4/19/2022 4:36 PM
18	So worried about parking and bike lanes but all those contribute to storm water run off that we	4/19/2022 4:04 PM

the residents then have to pay for

19	Pine Grove Hall is driving the need for additional parking. This is a good thing.	4/19/2022 2:05 PM
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Q23 Please provide any comments on the recommendations to improve access and connectivity between Pine Grove Mills and Rothrock State Forest Trails.

Answered: 46 Skipped: 94

#	RESPONSES	DATE
1	Signage directing people to forest trail access would be an asset.	5/2/2022 12:38 PM
2	I think access is great but if you look you will already find existing trails at the proposed treetops drive trail access on rothrock property that already take you up into the forest. The access is great but trails already exist once on state forest land	5/2/2022 9:03 AM
3	Agree with all the proposed new access to Rothrock State Forest.	5/1/2022 9:29 PM
4	We would love and use the the Deepwood Drive access and the Treetops Drive access!	5/1/2022 7:14 PM
5	A good idea might be to add signage at the local/regional trailheads not only to say no parking, but to tell people that parking is available on Kepler road.	5/1/2022 2:22 PM
6	Not needed	4/30/2022 2:37 PM
7	All sounds good.	4/30/2022 12:33 PM
8	Who is using this? Is there a need?	4/29/2022 6:27 PM
9	Local access at the top of Sycamore Drive is an excellent idea and should be undertaken.	4/29/2022 10:17 AM
10	Creating parking m, more impervious surface. Our storm water must not be important to you all anymore since you took our money with more than 90% of public opposition and then create more areas of impervious surface. Unbelievable	4/28/2022 7:57 PM
11	Good ideas	4/28/2022 7:46 PM
12	Respect your farmers	4/28/2022 6:47 PM
13	Why can't limited number of cars park at the chestnut street turn around?	4/28/2022 6:33 PM
14	Trailhead signage and kiosks at access points in PGM	4/28/2022 4:39 PM
15	Adding these trail access points in treetops is a great idea. However if the access at treetops, sycamore and deepwood drive become popular - on street parking will become a problem. On weekends, hikers on the deepwood access can park in the school parking lot but the treetops area has nothing obvious.	4/28/2022 3:19 PM
16	Support up grading parking.	4/28/2022 2:00 PM
17	I am not as familiar with Kepler Road Parking Area but if you do expand it, will you also de-ice Kepler Road in the winter? and the parking area?	4/28/2022 7:21 AM
18	The kepler road parking area is hard to find. Access from Pine Grove Mills is not clear in Pine Grove Mills	4/27/2022 2:10 PM
19	I would love to see new trails developed but not necessarily more public parking.	4/25/2022 6:28 PM
20	I think the access is fine as is.	4/25/2022 6:25 PM
21	new trails work. More parking on top of the mountain will just cause more accidents if people aren't paying attention. If you expand it, it needs to be a drive through, with no ability to return to PGM unless you go down further to a place and safely turn around to come back.	4/23/2022 11:18 AM
22	Stop taking Farmer's land	4/23/2022 10:27 AM
23	N/A	4/21/2022 8:16 PM

24	I would love to having parking for the access off of either Deepwood and/or West Chestnut. It takes me 20/25 min to walk there and I would love to start there. A few spots could be added at either entrance point. One could add more parking on Water St. allowing a person to walk up on W. Chestnut to the access point. I would love to use this great resource more.	4/21/2022 4:57 PM
25	None	4/21/2022 12:28 PM
26	This is good if there is a need.	4/21/2022 6:56 AM
27	It is not the townships responsibility to connect to the state forest. Waste of tax payer dollars.	4/20/2022 10:48 PM
28	These proposals look good; signage would need to be greatly improved.	4/20/2022 9:23 PM
29	Any or all of those plans would be a great improvement and increase local access to trails.	4/20/2022 8:16 PM
30	Keep Deepwood Drive as No Parking. I live on this street and when people park along the street (yardsales, etc.) people park in yards.	4/20/2022 7:03 PM
31	There should be no parking still on deepwood and a parking lot put in as suggested at the end of cheasnut.	4/20/2022 6:35 PM
32	I think the neighborhood trails get a lot of use from residents who are biking walking hiking and riding horses - continuing to maintain that there is no street parking in the neighborhoods for out of town residence makes sense. The expansion of the Kepler parking lot has been wonderful and should continue to be fostered as the safest and largest accommodating trailhead for those who are coming from out of town to use the trails with cars. The signage from DC NR is wonderful, there is ample room up there too expand and it's also a safer place for cars to come and go. It's wonderful that we are not having the same issues that Shingletown is having I think that is a lesson we've learned, About not having out of town cars parking in narrow resident streets to access trailheads.	4/20/2022 6:03 PM
33	I think parking should be allowed for local access but not overnight parking.	4/20/2022 5:29 PM
34	While any user access improvements are awesome, access without parking is a recipe for angst. Additionally and very importantly, if you plan to open this access and add trails any time soon, you MUST start working with DCNR to integrate the proposed trails with their Musser's Gap trail plans NOW!! Finally, I would not support user type restricted trails in Rothrock like "hikers only".	4/20/2022 11:31 AM
35	Provide parking on Deepwood Cr. and W. Chestnut St. for forest access. Have bike lane connections to Musser Gap Trail via Rt 45	4/20/2022 9:09 AM
36	The more you connect PGM to Rothrock, the more you improve the quality of life in the area. Perhaps enough people will use those connections to attract small businesses.	4/19/2022 7:36 PM
37	It would be great to have additional parking for trail access.	4/19/2022 4:45 PM
38	Need to figure out parking, but there is some great opportunity here for PGM community. Keeper Road parking is too far away for connection to PGM. West Chestnut, Deepwood and Treetops are all good for locals but how do others visit? Does PGM want more car/foot traffic in their community? As an outsider I would welcome it and hope for a coffee shop, another lunch spot, etc.	4/19/2022 4:39 PM
39	seems like parking could be an issue not only vistirs of the trail but guests to the homes	4/19/2022 4:18 PM
40	I favor more public access parking.	4/19/2022 4:11 PM
41	Better directional signage within the Village for these trail amenities in addition to wildlife, history, etc.	4/19/2022 3:28 PM
42	Will the trails be updated to reflect the additional use? And from the public access / parking area, the trails are not that great. Further to the west the trail system is much better. Would it be possible to include a public access/parking in a shared manner with Penn State in the Rock Springs area? Trails are great in that area.	4/19/2022 2:07 PM
43	I suggest bike paths to both locations, W. Chestnut and Kepler Rd.'s.	4/19/2022 1:46 PM
44	I often park on Kepler and then ride my mountain bike on the trails. But I also will pass through some of these trials when riding from home, so I like the neighborhood connections that are bike/walk only. The more MTB trails the better, as this is a great area and provides alternatives to Musser and Shingletown that can be busy / heavily trafficked. A connection to cross 26	4/19/2022 1:45 PM

near Kepler, with as little time spent riding on 26 as possible, to take the gravel powerline path toward Musser (and vice versa) would be fantastic. New trails south of the powerline cut, as well as trails that connected to Chestnut as seen on the map, would be really great. I would ride from 26 through Sycamore or Treetops to these trails and then on to the powerline etc.

45	More direct access from all parts of the village for bikes and pedestrians.	4/19/2022 10:30 AM
46	Parking on W Chestnut would be helpful. I'm not sure if room is available, but parking on Deepwood would be beneficial. Currently people park in the school parking lot.	4/18/2022 8:27 PM

Q24 Where are you most concerned about traffic and/or safety in Pine Grove Mills? Why?

Answered: 79 Skipped: 61

#	RESPONSES	DATE
1	Water Street / Pine Grove Rd intersection. There were two major large truck accidents not included in the 5 year study because they occurred about 8 and 18 years ago. One of those was fatal. Both caused injury and destruction of property (buildings completely demolished in the end in both cases). That should NOT be ignored even though it was outside the study time period. Reorienting traffic so it faces east better might be an option. I'm not entirely sure. One of those trucks tried to bail to the west.	5/2/2022 12:41 PM
2	Pedestrians crossing 45 to head to and from the school or recreation areas in Rothrock. There is a lot of traffic that travels route 45. Speed of traffic coming into PGM from the south.	5/2/2022 11:53 AM
3	Water street intersection with pine grove rd and in front of the naked egg	5/2/2022 9:03 AM
4	Car speed entering PGM from all directions and within town. Fixing main intersection (Water St, 26, Nixon) with large roundabout to slow traffic but improve traffic flow and safety.	5/1/2022 9:31 PM
5	Kids should be able to walk and bike. Cars need to go slower. Cars fly on 26 over mountain as well.	5/1/2022 7:54 PM
6	With kids, I'm most concerned about walking on foot, particularly along Pine Grove Road, which we do a lot. It feels unsafe at times. The scariest parts are walking on the left side of Pine Grove Road with kids (you are so close to the roadway, cars go very fast), crossing at Water street, and crossing at Rosemont Drive. If those things could be improved for pedestrian safety, we would be thrilled!	5/1/2022 7:16 PM
7	I am most concerned about the traffic and safety at the intersection of Water Street, Pine Grove Road and Nixon Road. The vehicles travel quickly into and out of that intersection and the pedestrian crosswalks are inadequate and unsafe.	5/1/2022 4:22 PM
8	Nixon Rd intersection between Sunday Dr and Chester Dr for young students walking to school. Grade of Nixon Rd makes it difficult to see incoming cars northbound	5/1/2022 2:26 PM
9	1st priority -- Nixon/Water Street/Pine Grove Road crossing-- heavy traffic, poor visibility from the way the road curves, awkward crossing layout for pedestrians 2nd priority-- general speed control on Pine Grove Road.	5/1/2022 2:23 PM
10	All intersections due to traffic and pedestrian crossings. Pedestrian crossing by the Naked Egg.	5/1/2022 10:12 AM
11	around the Water Street/Nixon Road area because pedestrian access is inadequate. Driving in and out of the post office parking is challenging and often crowded. The blind corner across from post office. Making left turns is difficult onto water street or onto nixon from the other direction. etc.	4/30/2022 11:18 PM
12	Cidery parking and access	4/30/2022 2:53 PM
13	No concerns	4/30/2022 2:38 PM
14	1. The intersection of Nixon/Pine Grove Rd/Water St. Cars drive so fast on Pine Grove Rd, especially driving East to West, it makes it so unsafe. 2. Bicyclists on Nixon Rd and Rt 45 going out of town. There are so many, sometimes large groups of 20 or more riding together. I know we are supposed to share the road with them, but they really need bike paths to keep them safe when you are driving on hilly roads like Nixon Rd.	4/30/2022 12:38 PM
15	The speed on Rt 45 west of Plainfield is too high. There are multiple school bus stops where riders need to cross Rt 45 and cars are greatly exceeding the 50 speed limit.	4/30/2022 9:36 AM
16	Be safer to get all of you people are there	4/30/2022 5:10 AM

17	Traffic circles are a joke, pretty signs are a waste of taxpayer money and overbearing regulations are the reason for division of our community.	4/29/2022 5:21 PM
18	Between the post office and the naked egg cafe. So many speeders!	4/29/2022 1:12 PM
19	At the main intersection of Nixon, water and Rt 45. Safety. Also, can we add decorative paint to crosswalks and/or n side of slab cabin concrete bridge? Studies show this slows traffic. Plus adds charm to village.	4/29/2022 11:55 AM
20	I am not	4/29/2022 9:01 AM
21	It's fine the way it is except there needs to be a functioning light at the foot of the mountain	4/29/2022 8:31 AM
22	Coming off pine grove mountain	4/28/2022 9:47 PM
23	intersection coming off mountain and pulling out of nixon on to rt 45	4/28/2022 9:00 PM
24	I'm most concerned about wasteful spending on frivolous things and creating more storm water run off. If you are going to charge me a fee for storm water run off stop creating more. YOU are the problem	4/28/2022 7:59 PM
25	Any where it is 25 mph and not being enforced enough. Also cars pulling out from Nixon and stopping to turn up the mountain when cars on pine grove road are coming around the tavern	4/28/2022 7:48 PM
26	I am concerned about the parking restrictions not being enforced. Where there are no parking signs it should be enforced.	4/28/2022 7:21 PM
27	No where. Pine Grove is fine. You're using money for pointless things. Stop abusing your power	4/28/2022 6:48 PM
28	Safety is impacted by traffic, but as a hiker, interested in safety.	4/28/2022 6:34 PM
29	Nixon, Pine Grove Road and Water street connection. I cross this everyday as I walk to the Post Office and have nearly been hit at least one time. I opted for the large round about option here but know that many will mourn the loss of the gas station at that corner.	4/28/2022 3:21 PM
30	Cars drive too fast through Pine Grove mill up to and through SR26 curve.	4/28/2022 2:01 PM
31	the intersections at the PO, so difficult to get in and out and turned around in the parking lot, can't we loop around the building instead of having to back up into incoming traffic? the lack of parking and then handicap access ramps at businesses the speed and tight (narrow) roads that make bicyclists hard to see and avoid	4/28/2022 7:22 AM
32	intersection of SR26/45/Nixon. runaway trucks down the mountain, pedestrian safety	4/27/2022 10:51 AM
33	More shared use paths would be great.	4/25/2022 6:28 PM
34	The intersection by the post office is horrible.	4/25/2022 6:25 PM
35	Pine Grove road, Nixon, and water street. A dangerous intersection, and needs some kind of change.	4/23/2022 12:25 PM
36	Runaways trucks coming off the mountain, and the blind spot at the bottom. As well as pedestrian crossi. In the area	4/23/2022 11:42 AM
37	Listening to the opinion of a few to make impactful decisions that affect everyone. You know not everybody is engaged in this. Remember the that PGM is surrounded by farms and you need to engage with the farmers.	4/23/2022 11:19 AM
38	Stop taking Farmer's land	4/23/2022 10:27 AM
39	Water street, lack of speed enforcement. People race every weekend. I witnessed a bus being passed in a no pass zone in the residential area	4/22/2022 1:07 PM
40	Pine Grove Road, Water Street, and Nixon Road intersection due to: 1) lack of visibility pulling out from Nixon Road, 2) speed of vehicles and large trucks coming down the mountain	4/22/2022 7:44 AM
41	Nixon/Water Street and Pine Grove Road intersection due to the occasional congestion	4/21/2022 8:17 PM
42	Parking across from the naked egg.	4/21/2022 7:16 PM
43	The sidewalks and pedestrian crossing situation near the post office are very unsafe.	4/21/2022 6:31 PM

Sidewalks are hard to travel especially with a stroller and there are not good sight lines to be able to cross safely.

44	Originally, I was the most concerned about the intersection b/w Water St., 45 and Nixon. Lots of businesses and kids due to FTE. However, looking at the traffic study, I think that where 45 intersects with Banyan, Meckley, and even Thistlewood road is a problem. I would think lowering the speed limit on that stretch of road would be my first choice at trying to mitigate the accidents - it is cheap and much better than building a roundabout.	4/21/2022 5:00 PM
45	After growing up right along route 45, some of this seems difficult to justify, especially to promote biking or tourism. Aside from the Naked Egg, where the road definitely could be widened to make parking safer, there's really nothing in Pine Grove worth walking or biking to like there is in Boalsburg or downtown State College. There's no commerce/shopping aside from a gas station and it doesn't seem like there ever will be. This section of the road is used by numerous farmers and countless large trucks more frequently than bikers. While a bike lane and roundabouts certainly do have merit on certain roads, I do not support them on this section. People drive fast towards Ramblewood/Rock Springs and in town Pine Grove is tight. People have crashed in our front yard, a newspaper boy lost his life on a bike many years ago, and my family lost a friend who wrecked about 10 years ago. I don't think the answer is to promote biking, but I do think a logical solution is to slow down the speed limit with the gateway rather than installing roundabouts or designated bike lanes. This could truly benefit everyone, from anyone who feels absolute need to bike it, to the residents in general who live along this section of road and might need to cross it.	4/21/2022 1:01 PM
46	the area between PGM and Whitehall Rd- no safe pedestrian or bicycle passage combined with a high volume of traffic moving very swiftly. For reasons mentioned in previous responses	4/21/2022 12:45 PM
47	Pine Grove Rd speed needs to be better enforced. Living on Rosemont Dr we have many cars going much too fast since road is no longer a dead end.	4/21/2022 10:50 AM
48	Poor sidewalks, traffic right up against sidewalks, people not cleaning off sidewalks and forcing walkers onto the road to walk, particularly in the winter when snow plows cover the sidewalks with plowed snow. This is the BIGGEST problem in Pine Grove Mills for people who walk through the village. Everything else is subsidiary to this single issue.	4/21/2022 10:24 AM
49	It's getting fixed now	4/21/2022 7:40 AM
50	The intersection of Nixon Rd, Water Street and Rt 45.	4/21/2022 6:57 AM
51	Nothing really	4/21/2022 6:31 AM
52	The intersection of Rt 45 and Pine Grove Road. Also the intersection of Water Street and Pine Grove Road. Both of these intersections are very dangerous. Pulling out of the gas station is very dangerous. The cars parking on the street takes up so much space. If large farm equipment has to go through there it is very hard to navigate through that area. Drivers are not considerate to the drivers if the farm equipment.	4/21/2022 5:14 AM
53	The naked egg restaurant because college students and out of Towners are disrespectful and think they are above the rules of the area.	4/20/2022 10:49 PM
54	Nixon and Pine Grove Road. It's just an odd duck to begin with. People driving south on Nixon still insist on turning left, either towards town or just to the Post Office, regardless of the signage and obvious risk. Coming down Water Street you practically need to have your nose out on Pine Grove Road to see what's coming from the west. Parabolic mirrors are probably not a consideration.	4/20/2022 9:28 PM
55	People walking along Plainfield and Route 45 without a sidewalk or path.	4/20/2022 8:17 PM
56	Pine Grove Road, 26 and Nixon Road intersection. A lot of people don't follow the speed limit and it is hard to turn safely as visibility is limited.	4/20/2022 7:03 PM
57	On the Pine Grove Rd./ Water St./ and Nixon Rd. Intersection.	4/20/2022 6:51 PM
58	The intersection safety and traffic congestion around the naked egg	4/20/2022 6:38 PM
59	The speed limit not being respected currently... more blinking lights, speed signs that show how fast you were going, A circle in the center of town, and reduction and expansion of lower speed zones i.e. making part of the hill 25, Are all wonderful combination solutions that will help to make our village a safer place	4/20/2022 6:04 PM

60	West Pine Grove Road for speed and safety as well as the main intersection and pedestrian safety.	4/20/2022 6:03 PM
61	Bike traffic and near the school for our children and pedestrians.	4/20/2022 5:30 PM
62	Water Street/Nixon because it's murky between drivers coming in off the mountain vs speeding in Nixon vs slower traffic on WS. And Oldd Gatesburg Road/Nixon absolutely must get a bike path.	4/20/2022 5:22 PM
63	The Route 26 and Route 45 Intersection near the post office. Worse case scenario...an out of control truck (large) and a school bus. This intersection should be of highest priority.	4/20/2022 4:56 PM
64	The intersection of Rte 26 and Rte45....poor sight lines /visibility and speed.	4/20/2022 11:32 AM
65	Rt 45/Rt 26 intersection at gas station. The intersection configuration is challenging with the four roads not aligned, plus significant traffic goes over the mountain which is a steep grade coming into Pine Grove Mills	4/20/2022 9:13 AM
66	Left turns onto Water Street from down the mountain are dangerous. Too much traffic in too narrow a space	4/20/2022 8:21 AM
67	The intersection of 26 and 45. Because it is dangerous.	4/19/2022 7:36 PM
68	At the intersection of 45 and Nixon / PGM.	4/19/2022 5:51 PM
69	The visibility when heading south on Nixon and turning on to Pine Grove Rd. Thanks for asking!	4/19/2022 4:46 PM
70	Water St and 26 seems like a dangerous intersection for cars and does not allow for safe walking.	4/19/2022 4:40 PM
71	intersection of 26 in Pine Grove Mills	4/19/2022 4:19 PM
72	The main downtown intersection. Visibility is poor approaching it from Nixon Road.	4/19/2022 4:12 PM
73	This survey covered the most concerning areas of PGM.	4/19/2022 3:29 PM
74	The Nixon-45-26 intersection is where the bulk of my conflicts occur.	4/19/2022 3:23 PM
75	Left hand turns onto Nixon road.	4/19/2022 2:07 PM
76	Speed of traffic along 26, road deterioration and lack of bicycle paths.	4/19/2022 1:47 PM
77	I am most concernd about riding my bike up route 26 due to the tiny shoulders and fast moving traffic. A way to avoid most of this climb, such as via MTB trails or using the powerline, would be great.	4/19/2022 1:46 PM
78	Nixon Road crossing near Sunday Drive. Intersection of Nixon Rd. with Route 26. Pedestrian access to the post office.	4/19/2022 10:31 AM
79	Pedestrian crossing at Water St. and Pine Grove Rd is challenging and dangerous. Walking from the western side of town to the Post Office requires great care. Speed reduction on W Pine Grove Rd is very important. People entering town do not slow down until they pass the school. People leaving down speed up as they get to the school. Therefore, speed is a challenge in both directions.	4/18/2022 8:30 PM

Goddard, Michelle L.

From: Modricker,David <dmodricker@twp.ferguson.pa.us>
Sent: Tuesday, May 24, 2022 7:57 AM
To: Watts, Robert; Seybert,Ron
Cc: Bassett, Kristina
Subject: FW: Gateway

FYI. Forwarding an email from a resident.

-----Original Message-----

From: Mel Westerman <melwesterman@yahoo.com>
Sent: Friday, May 20, 2022 10:40 AM
To: Modricker,David <dmodricker@twp.ferguson.pa.us>
Subject: Gateway

Both lack consideration of a bikeway coming from the north and turning westward on Meckley to connect into center of village. I presented this plan to original SAP. /Mel

Goddard, Michelle L.

From: Modricker,David <dmodricker@twp.ferguson.pa.us>
Sent: Tuesday, May 24, 2022 2:03 PM
To: Watts, Robert; Seybert,Ron
Subject: FW: PGM Mobility Study

Mel email 2

-----Original Message-----

From: Mel Westerman <melwesterman@yahoo.com>
Sent: Friday, May 20, 2022 10:35 AM
To: Modricker,David <dmodricker@twp.ferguson.pa.us>
Subject: PGM Mobility Study

Dave,

First, I apologize for my tardiness. I completely understand if I'm too late.

Re: Intersection-

Although I am a fan of roundabouts (lived in England) I think the offset of Nixon from Water makes it very difficult. I do like the trimming of the gas station frontage and, especially, shifting of WPGR northward in any case to allow some slowing and better visibility. The left turn immediately after a right off of Water is a minor problem. I do it many times each month. People are courteous. I think a roundabout would complicate this maneuver.

Re: P.O. repurposing. GOOD idea! It will facilitate crossing. The bus stop is to be eliminated according to unofficial info I have from a CATA contact when they go to a new service plan in August. The gazebo would be the best choice IMHO because it would add to the village atmosphere and be a resting place for Mr. Wasson who sits on the steps across Water St. The gazebo across from my house on WPGR is used pretty often. I hope State code can be bent enough to allow a crosswalk at the dangerous point. I'm always challenged at tata point on my walks to the P.O.

I want to get this to you ASAP, so I'll send it before I attempt to open the survey.

Yours.

Mel Westerman



Information

Name (optional) _____

Address (optional) _____

Would you like to receive updates from Ferguson Township? Yes No

If so, please provide e-mail address (not to be shared with any third parties):

Are you a resident of Pine Grove Mills? (Check one) Yes No 74 Yes

What is your age? (Check one)

Under 18 18-25 26-40 41-55 56-64 65+

Do you drive, ride, bike or hike in Pine Grove Mills? (Check all that apply)

Drive Ride Bike Hike

Please comment below on the potential improvements that you viewed today. The letters below coordinate with the concepts boards.

A Pine Grove Road & Water Street/Nixon Road Intersection

1. What do you think is the most important/needed update to the intersection of Pine Grove Road and Water Street/Nixon Road? (Check one)

Improved Pedestrian Crossings 28 Additional Parking 2
 Different Intersection Configuration Other: _____
 28

2. With the understanding that a traffic signal is not warranted for this intersection, which option do you prefer for the Pine Grove Road & Water Street/Nixon Road Intersection? (Check one)

Stop Control Option 26 Small Roundabout 17 Large Roundabout 27

3. With all three intersection options, there may be an opportunity to repurpose the roadway space in front of the Post Office. What mobility improvements would you like to see included in this space? (Check all that apply)

Bike Parking 16 Gazebo 14 Bus Pull-Out 10
 Bus Stop Shelter 22 On-Street Parking 17 Other: _____

4. Please provide any comments on the Pine Grove Road & Water Street/Nixon Road Intersection concepts and information provided.



Please comment below on the potential improvements that you viewed today. The letters below coordinate with the concepts boards.

B

East Pine Grove Road Gateway - Pine Grove Road & Banyan Drive/Meckley Drive

1. Which option do you prefer for the Pine Grove Road and Banyan/Meckley Intersection? *(Check one)*

- Full Size Modern Roundabout with Green Median 24
- Stop Control with Enhanced Pedestrian Crossing Option 42

2. Please provide any comments on the Pine Grove Road & Banyan/Meckley Intersection concepts and information provided.

C

Pedestrian & Bicycle Network Improvements

1. The Pedestrian & Bicycle Network Opportunities Plan provides adequate connections for the Pine Grove Mills community. *(Check one)*

- Strongly disagree 9
- Disagree 15
- Neither agree or disagree 25
- Agree 8
- Strongly agree 4

2. Do you have any recommendations for additional pedestrian and bike connections?

3. What connection would you use most frequently?

4. Do you have any comments on the Pine Grove Road Enhanced Pedestrian Crossing at Rosemont Drive?

5. Do you have any comments on the Nixon Road Enhanced Pedestrian Crossing at Shared Use Path?



Please comment below on the potential improvements that you viewed today. The letters below coordinate with the concepts boards.

6. Do you have any comments on the Pine Grove Road Enhanced Pedestrian Crossing at Deepwood Drive (east)?

7. Considering the issues and benefits identified, what do you feel is the best solution to improve bike and pedestrian access on Pine Grove Road from Ross Street to Ferguson Township Elementary School?

(Check one)

- On-Road, Shoulder Bike Lanes 21 Shared Use Path (North Side) 14
- Shared Use Path (South Side) 8 Shared Use Path (Alternating Side) 8

8. Which concept do you prefer to make Pine Grove Road from the Ferguson Township Elementary School to Rosemont Drive, a complete street? *(Check one)*

- Bike Lanes 19 Shared Sidewalk 25 Sharrows 7

9. Please provide any comments on the Pedestrian & Bicycle Network Improvements concepts and information provided.



Pine Grove Road Western Gateway & Speed Limit Changes

1. What would you like to see, if possible, as part of the Gateway treatment on Pine Grove Road?

(Check all that apply)

- Welcome to Pine Grove Mills Signage 34 Speed Feedback Signs (i.e. Your Speed is....) 30 Landscaped Median 21
- Pavement Markings 20 Flashing Beacons 11 Landscaped Roadside 13
- Other: _____

2. Please provide any comments on the speed reduction treatments proposed.



Please comment below on the potential improvements that you viewed today. The letters below coordinate with the concepts boards.

E

Parking Improvements & Policy

1. Where do you feel additional parking is needed in Pine Grove Mills? *(Check all that apply)*

- Near the Pine Grove Road/Nixon Road/Water Street intersection 18
- Water Street 5
- Pine Grove Road east of Nixon Road/Water Street 10
- Nixon Road 1
- Pine Grove Road west of Nixon Road/Water Street 7
- Other: _____

2. Please provide any comments on the parking improvements and policy changes proposed.

F

Rothrock State Forest Trails Access

1. Please provide any comments on the recommendations to improve access and connectivity between Pine Grove Mills and Rothrock State Forest Trails.

G

Traffic & Safety

1. Where are you most concerned about traffic and/or safety in Pine Grove Mills? Why?

Please share any other comments you have on the recommendations shared today, the overall study, or the meeting itself.

APPENDIX C

Pine Grove Road & Water Street/Nixon Road Traffic Signal Warrant Study



FERGUSON

SIGNAL WARRANT STUDY

for

**Pine Grove Road (SR 0026/0045)
& Water Street (SR 0026) / Nixon Road (T-334)**

*Ferguson Township
Centre County, Pennsylvania*

Submitted:

November 30, 2021



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List of Appendices

- Appendix A – Automatic Traffic Recorder Data – Raw Data
- Appendix B – Intersection Turning Movement Count Data – Raw Data
- Appendix C – Development of Traffic Volume Data for Traffic Signal Warrant Analysis
- Appendix D – Traffic Signal Warrant Analysis (PennDOT Workbook)

Project Background

This report presents results of a traffic signal warrant study for the intersection of Pine Grove Road (SR 0026/0045 & Water Street (SR 0026) / Nixon Road (T-334) in the village of Pine Grove Mills, Ferguson Township, Centre County Pennsylvania. The purpose of the study is to determine if a traffic signal is warranted. Recent planning studies—in particular, the Pine Grove Mills Small Area Plan—identified the intersection as problematic for pedestrian crossings, because of the long crossing distances, lack of pedestrian refuges, intersection sight distance, and turning traffic volumes.

Existing Site Conditions

Figure 1 shows an aerial view of the Pine Grove Road & Water Street / Nixon Road intersection. The subject intersection is the central cross-roads intersection in the village of Pine Grove Mills. The area around the intersection is characterized by commercial and residential buildings located close to the street—typical of a small town built in the early 19th Century. The intersection is formed by two state-owned roads (Pine Grove Road, Water Street) and one Township owned road (Nixon Road). Pine Grove Road (SR 0026/0045) and Water Street (SR 0026) are classified arterials in both the federal and Ferguson Township networks. Nixon Road (T-334) is classified as a collector street in the Township network but is not federally classified.

Figure 1: Aerial Image of the Pine Grove Road & Water Street/Nixon Road Intersection

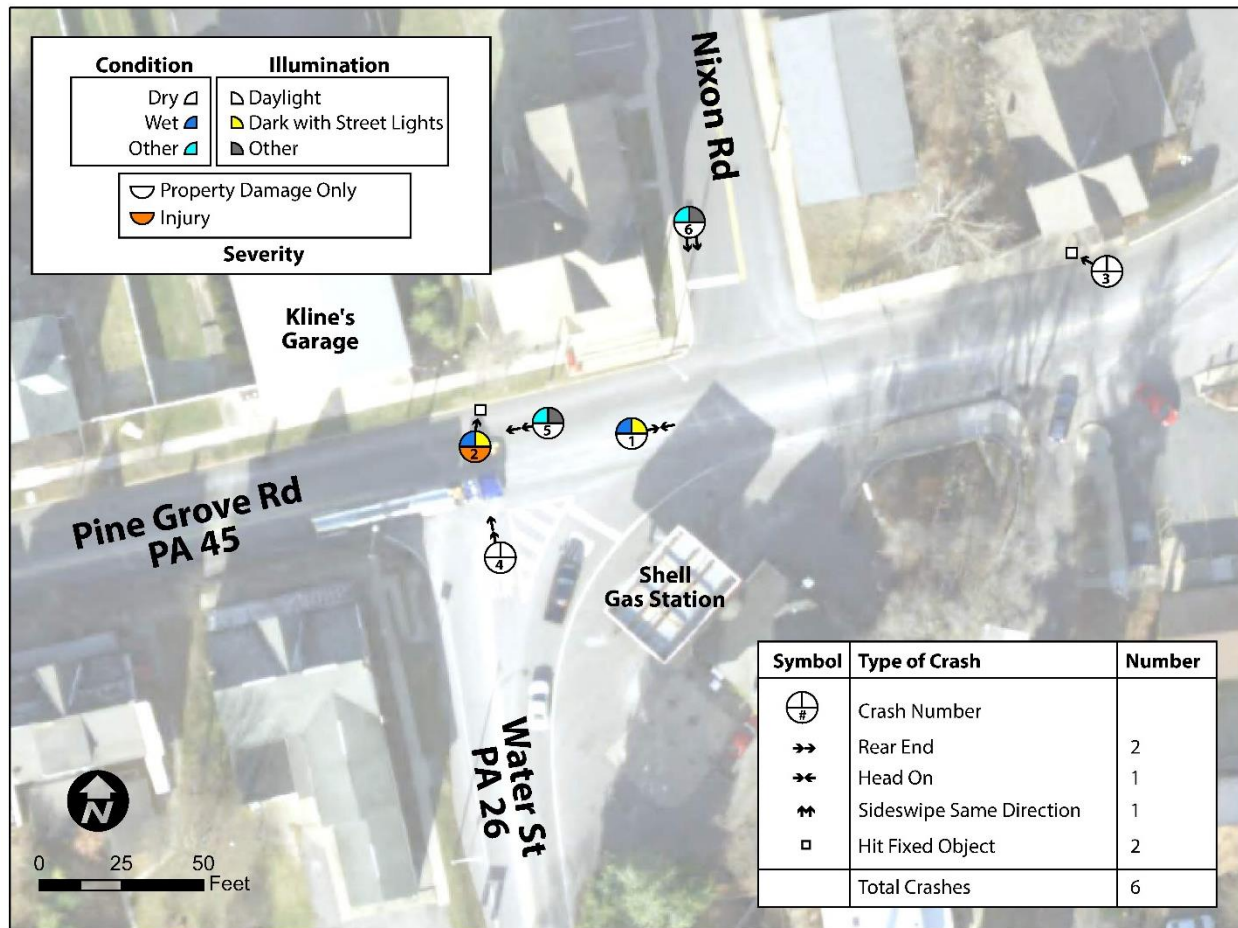


Water Street and Nixon Road operate with stop control, with “free-flow” movement on Pine Grove Road. Water Street is configured with a channelized right turn and striped “pork chop” island. All other approaches have single lanes. Left turns are restricted from Nixon Road because of a sight distance restriction created by the roadway curvature and a building located close to the street. The posted speed limit is 25 miles per hour on all intersecting approaches.

Crash History Evaluation

Crash history at the intersection for the 5-year period of January 1, 2016 to December 31, 2020 were assembled from Ferguson Township Police records into a GIS format. **Figure 2** provides a collision diagram of the six (6) crashes in the vicinity of the intersection. The crash location, collision type, and various environmental factors are given by the points and arrow diagrams, depicting the collision directions of the vehicles involved. There were two (2) rear end, one (1) head-on, one (1) sideswipe same direction, and two (2) hit fixed object collisions.

**Figure 2. Collision Diagram for the Pine Grove Road & Water Street/Nixon Road Intersection
 January 1, 2016 to December 31, 2020**



Traffic Data Collection

Traffic counts were completed by Tri-State Data Collection during August 2021, when both Penn State University and State College Area School District were in full session.

Automatic traffic recorders (ATRs) were placed at four (4) locations—one on each approach to the intersection. Complete, continuous 24-hour traffic count data were collected for Tuesday, August 24, 2021, and Wednesday, August 25, 2021. Traffic volume, classification, and speed were collected for all approaches. For Tuesday, August 24, 2021, the average daily traffic (ADT) volume on Pine Grove Road

was 8,494 vehicles per day east of Water Street and 2,306 vehicles per day west of Water Street. The ADT on Water Street was 4,573 vehicles per day, and the ADT on Nixon Road was 1,000 vehicles per day. The raw ATR data is provided in **Appendix A**.

Intersection turning movement volumes were counted during a continuous, 13-hour period (5:30 AM to 6:30 PM) at the intersection on Tuesday, August 24, 2021, encompassing the morning and afternoon commuter traffic peaks. These counts also documented pedestrian crossings, bicycle activity, and the number of heavy vehicles by movement through the intersection. The raw turning movement count data is provided in **Appendix B**.

Figure 3 summarizes the ATR and intersection count volumes by mode (vehicles, bikes, pedestrians), along with heavy truck volumes and speed data along each of the intersecting roadways, in the vicinity of Pine Grove Mills.

Traffic Volume Development and COVID-Adjustments

The raw ATR and turning movement traffic count data were developed into a format necessary for input to the traffic signal warrant analysis. Documentation of the following is provided in **Appendix C**:

1. Create Base Volume Summary – The raw ATR and intersection turning movement volumes were combined and summarized for each intersection approach by 15-minute interval for a continuous 24-hour period. ATR data was used for the 12:00 AM to 5:30 AM and 6:30 PM to 12:00 am periods. Turning movement data was used for the 5:30 AM to 6:30 PM period.
2. Reduce Right Turn Volume with Minimal Conflict – The MUTCD guidance indicates that minor street right turns should not be included in the warranting volume if the vehicles enter the major street with “minimal conflict”. The right-turn movements from Water Street were observed using the video count files supplied by Tri-State Data Collection. Right turns that stopped and then proceeded without additional delay were tallied as having “minimal conflict” with the major street traffic (**Table 1**). The minimal-conflict right-turn vehicles were removed from the minor street volume each 15-minute interval according to the percentage of the right turns that entered with minimal conflict.

Table 1. Evaluation of Southbound Water Street Right Turns that enter with “Minimal Conflict”

Southbound Water Street (SR 0026)	Minimal Conflict Right-Turns	Other Right-Turns
AM Peak Hour (7:15 AM to 8:15 AM)	11 (32%)	23 (68%)
PM Peak Hour (4:30 PM to 5:30 PM)	26 (59%)	18 (41%)

3. Adjust Traffic Volume to account for COVID Impacts – To develop traffic volume adjustments that account for traffic impacts of the COVID pandemic, the 2021 traffic counts were compared to other counts taken prior to the pandemic, as follows:

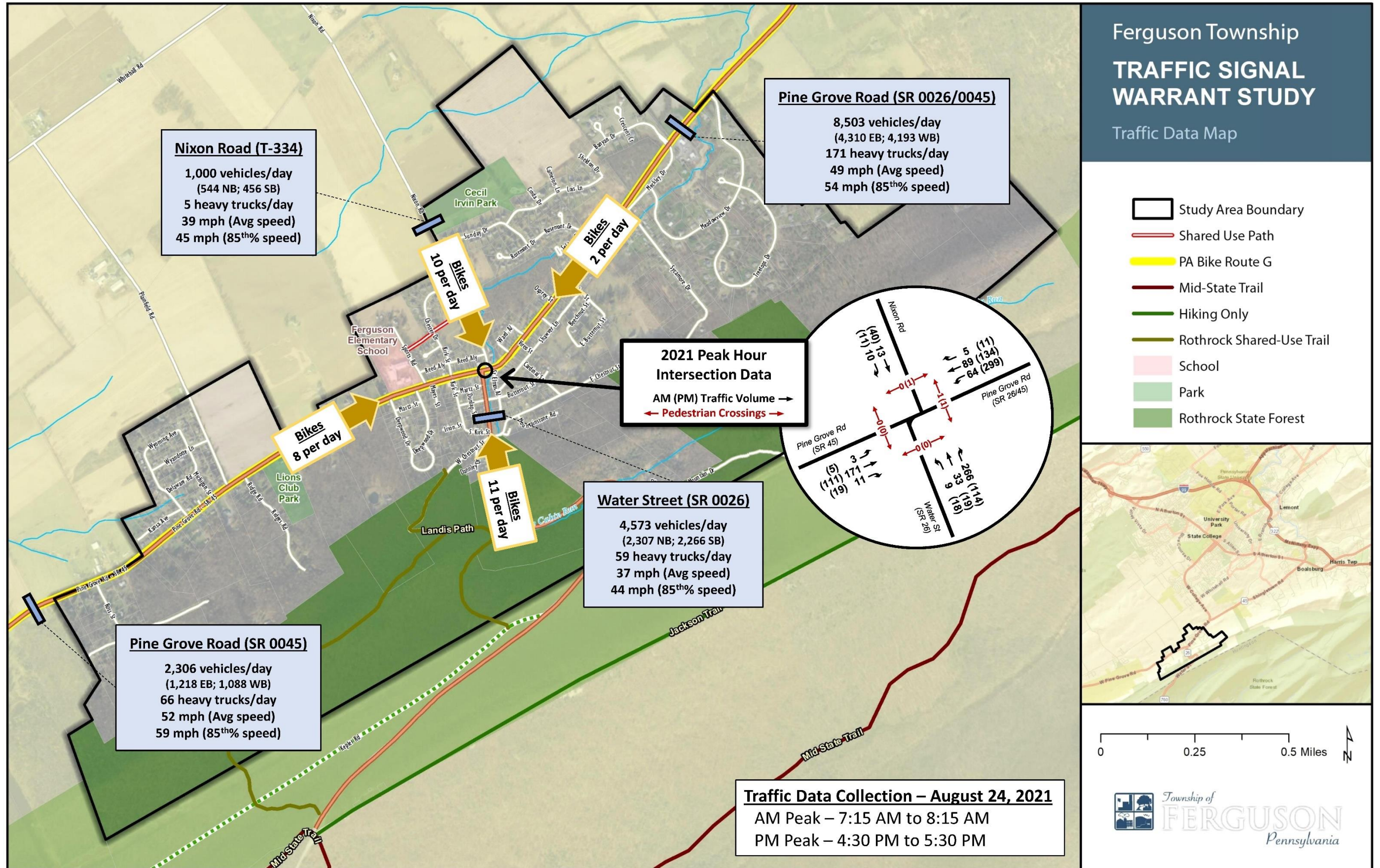
Pine Grove Road, east of Water Street/Nixon Road (August 30, 2018)

TUE, 8/24/2021		THU, 8/30/2018		2021 vs. 2018	
				Difference	% Difference
12:00 AM	24	12:00 AM	37	-13	-54.2%
1:00 AM	28	01:00 AM	22	6	21.4%
2:00 AM	9	02:00 AM	12	-3	-33.3%
3:00 AM	24	03:00 AM	30	-6	-25.0%
4:00 AM	53	04:00 AM	52	1	1.9%
5:00 AM	178	05:00 AM	196	-18	-10.1%
6:00 AM	409	06:00 AM	478	-69	-16.9%
7:00 AM	692	07:00 AM	831	-139	-20.1%
8:00 AM	654	08:00 AM	643	11	1.7%
9:00 AM	481	09:00 AM	536	-55	-11.4%
10:00 AM	450	10:00 AM	485	-35	-7.8%
11:00 AM	430	11:00 AM	474	-44	-10.2%
12:00 PM	489	12:00 PM	500	-11	-2.2%
1:00 PM	497	01:00 PM	535	-38	-7.6%
2:00 PM	575	02:00 PM	564	11	1.9%
3:00 PM	708	03:00 PM	777	-69	-9.7%
4:00 PM	727	04:00 PM	869	-142	-19.5%
5:00 PM	687	05:00 PM	839	-152	-22.1%
6:00 PM	452	06:00 PM	540	-88	-19.5%
7:00 PM	336	07:00 PM	428	-92	-27.4%
8:00 PM	256	08:00 PM	271	-15	-5.9%
9:00 PM	165	09:00 PM	189	-24	-14.5%
10:00 PM	122	10:00 PM	126	-4	-3.3%
11:00 PM	57	11:00 PM	80	-23	-40.4%
Total	8,503	Total	9,514	-1,011	-11.9%

Water Street (SR 0026), north of Pine Grove Road (SR 0026/0045)

TUE, 8/24/2021		TUE, 10/3/2017		2021 vs. 2017	
				Difference	% Difference
12:00 AM	14	12:00 AM	9	5	35.7%
1:00 AM	18	01:00 AM	10	8	44.4%
2:00 AM	9	02:00 AM	9	0	0.0%
3:00 AM	17	03:00 AM	26	-9	-52.9%
4:00 AM	43	04:00 AM	80	-37	-86.0%
5:00 AM	122	05:00 AM	219	-97	-79.5%
6:00 AM	295	06:00 AM	440	-145	-49.2%
7:00 AM	388	07:00 AM	409	-21	-5.4%
8:00 AM	313	08:00 AM	269	44	14.1%
9:00 AM	210	09:00 AM	196	14	6.7%
10:00 AM	241	10:00 AM	215	26	10.8%
11:00 AM	196	11:00 AM	219	-23	-11.7%
12:00 PM	236	12:00 PM	227	9	3.8%
1:00 PM	248	01:00 PM	237	11	4.4%
2:00 PM	317	02:00 PM	363	-46	-14.5%
3:00 PM	371	03:00 PM	480	-109	-29.4%
4:00 PM	433	04:00 PM	500	-67	-15.5%
5:00 PM	399	05:00 PM	321	78	19.5%
6:00 PM	230	06:00 PM	206	24	10.4%
7:00 PM	152	07:00 PM	142	10	6.6%
8:00 PM	137	08:00 PM	91	46	33.6%
9:00 PM	84	09:00 PM	75	9	10.7%
10:00 PM	61	10:00 PM	42	19	31.1%
11:00 PM	39	11:00 PM	18	21	53.8%
Total	4,573	Total	4,803	-230	-5.0%

Figure 3. Traffic Data Collection Summary for the Pine Grove Road & Water Street/Nixon Road Intersection



The 2021 counts were adjusted for each hour of the day according to the Percent (%) Difference. That is, where the 2021 counts were lower than the pre-COVID counts, the 2021 volumes were increased by the Percent Difference; where the 2021 counts were higher than the pre-COVID counts, the 2021 volumes were reduced by the Percent Difference.

Signal Warrant Analysis

The applicable MUTCD traffic signal warrants were evaluated, according to the project scope. **Table 2** describes the warrants, indicates their applicability, and the warrant determination. Detailed documentation of the volume-based signal warrant evaluations (Four Hour, Eight Hour, and Peak Hour) is provided in **Appendix D**, using the PennDOT Signal Warrants spreadsheets.

Evaluation Criteria & Assumptions

The following assumptions and criteria were used in the signal warrant analysis:

- The “70% Factor” criteria were considered appropriate for use in the vehicular based warrants, based on Pine Grove Mills being considered a “Community less than 10,000 Population”.
- The major street (Pine Grove Road) has a single lane of moving traffic, and the minor street (Water Street) was evaluated as one moving lane of traffic. According to MUTCD guidance, Water Street approach is considered “one lane,” since the traffic volumes are NOT equally distributed between left and right turn movements.
- The two days of ATR traffic data were reviewed, and data from the date with the higher traffic volume (Tuesday, August 24, 2021) was used in the signal warrant analysis.

Signal Warrant Evaluation

Table 2 summarizes the results of the signal warrant analysis. Five (5) of the nine (9) MUTCD Traffic Signal Warrants were evaluated. The other four (4) were not applicable (N/A) to the intersection conditions.

None of the vehicular volume warrants were found to be met, even after implementing COVID adjustments. The following observations are based on a sensitivity analysis of the volumes to gauge how much more traffic would need to grow before the warrants could be satisfied:

- When COVID adjustments are added, only 2 unique hours meet the 8 Hour Warrant Criteria, and zero unique hours meet the 4 Hour Warrant Criteria. The Peak Hour Warrant is not met.
- The COVID-adjusted volumes would have to increase uniformly by another 50% before the Peak Hour Warrant would be met for one hour of the day.
- The COVID-adjusted volumes would have to increase by another 75% (uniformly) before the 4-Hour Warrant would be met and 90% (uniformly) before the 8 Hour Warrant would be met.
- The highest traffic volumes of the day occur in the afternoon from about 3 PM to 5 PM. With a uniform 25% increase in the COVID-adjusted volumes, the 4 Hour warrant is met continuously from 3-5 PM. However, this only counts as 2 unique hours toward the signal warrant criteria.
- Based on the MUTCD guidance and observations of traffic operations at the intersection, only 15 to 25 percent of Water Street right turns count toward the signal warrant.

Table 2. Traffic Signal Warrant Results

Warrant	Evaluated? Met?	Explanation of Evaluation
#1 – 8 Hour Vehicular Volume	Evaluated Not Met.	Evaluated using the 70% Factor volumes to meet either Condition A or Condition B, and for the 56% volumes to meet combination of Condition A and Condition B.
#2 – 4 Hour Vehicular Volume	Evaluated Not Met.	Evaluated using the 70% Factor chart (Figure 4C-2, MUTCD) for a one-lane/one-lane approach scenario.
#3 – Peak Hour	Evaluated Not Met.	Evaluated using the 70% Factor chart (Figure 4C-4, MUTCD) for a one-lane/one-lane approach scenario.
#4 – Pedestrian Volume	Evaluated Not Met.	Evaluated using the 70% Factor charts (Figures 4C-6 and 4C-8, MUTCD). No hour of the day had more than five (5) pedestrian crossings. During the AM and PM peak hours, only one (1) crossing was observed. Based on the current Pine Grove Road traffic volume, 150 crossings per hour for four or more separate hours of the day are needed to meet the Four Hour Pedestrian warrant, and 250 crossings per hour are needed to meet the Peak Hour Pedestrian warrant.
#5 – School Crossing	N/A	Location is near but not adjacent to a school. No school zone or school crossing is present. The crossing volume is below the 20 peds per hour minimum necessary to meet the warrant.
#6 – Coordinated Signal System	N/A	No other traffic signals within a mile of the intersection.
#7 – Crash Experience	Evaluated Not Met.	All three criteria are not met. A. Adequate trial of other measures not completed or documented. B. During the last 5 years, no 12-month period contained 5 or more correctable crashes. C. Volume criteria are not met.
#8 – Roadway Network	N/A	Not applicable, based on conditions.
#9 – Intersection Near a Grade Crossing	N/A	Not applicable, based on conditions.

Conclusion

A traffic signal is not warranted at the intersection of Pine Grove Road (SR 0026/0045) & Water Street (SR 0026) / Nixon Road (T-334), based on traffic, crash, and pedestrian crossing conditions that were observed in August 2021.

APPENDIX D

Pedestrian & Bicycle Roadway Safety Audits Detailed Prompt Lists

Pedestrian Road Safety Audit Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 01 Pine Grove Road, North Side, St. Paul's Church to Sports Road

A. Streets

Master Prompt	Question	Notes
A.1 Presence, Design, and Placement	Are sidewalks provided along the street?	Yes. Asphalt and concrete sidewalks present.
	If no sidewalk is present, is there a walkable shoulder (e.g. wide enough to accommodate cyclists/pedestrians) on the road or other pathway/trail nearby?	N/A
	Is the sidewalk width adequate for pedestrian volumes?	Yes. Light pedestrian volume. Width ~5 feet. ADA-compliant width.
	Is there adequate separation distance between vehicular traffic and pedestrians?	Yes. Grass buffer.
	Are sidewalk/street boundaries discernable to people with visual impairments?	Yes.
	Are ramps provided as an alternative to stairs?	Yes. Not all ramps are compliant with current ADA requirements.
A.2 Quality, Conditions, and Obstructions	Is the path clear from both temporary and permanent obstructions?	Yes.
	Is the walking surface too steep?	No.
	Is the walking surface adequate and well-maintained?	Yes, for the most part.
A.3 Continuity and Connectivity	Are sidewalks/walkable shoulders continuous on this side of the street?	Yes.
	Are measures needed to direct pedestrians to safe crossing points and pedestrian access ways?	Yes. Crossing point designated at Deepwood Drive, across from Ferguson Township Elementary School driveway.
A.4 Lighting	Is the sidewalk adequately lit?	Dedicated pathway lighting present along frontage of St. Paul's Lutheran Church and Ferguson Township Elementary School. Otherwise, streetlights mounted on utility poles ~250-300 feet apart (alternating sides of the street). Church looking to transfer lighting to Township.
	Does street lighting improve pedestrian visibility at night?	Yes.
A.5 Visibility	Is the visibility of pedestrians walking along the sidewalk/shoulder adequate?	No.
A.6 Driveways	Are the conditions at driveways intersecting sidewalks endangering pedestrians?	No known issues.
	Does the number of driveways make the route undesirable for pedestrian travel?	No. Three (3) driveway/street crossings. Two cross the school driveways and are marked crosswalks.
A.7 Traffic Characteristics	Are there any conflicts between bicycles and pedestrians on sidewalks?	None observed. Bicyclists mostly use roadway/shoulder.
A.8 Signs and Pavement Markings	Are pedestrian travel zones clearly delineated from other modes of traffic through the use of striping, colored and/or textured pavement, signing, and other methods?	Yes. Sidewalk is physically separated from the roadway. A Crosswalk Marking Policy is desired by the Township to guide crosswalk classification and consistent markings.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 01 Pine Grove Road, North Side, St. Paul's Church to Sports Road

B. Street Crossings

Master Prompt	Question	Notes
B.1 Presence, Design, and Placement	Are crossings of the major street marked?	Yes. One crossing at Deepwood Drive (east) is marked.
	Do wide curb radii lengthen pedestrian crossing distances and encourage high-speed right turns?	No.
	Do channelized right turn lanes minimize conflicts with pedestrians?	No right turn lanes present.
	Does a skewed intersection direct drivers' focus away from crossing pedestrians?	No skewed intersections present.
	Are pedestrian crossings located in areas where sight distance may be a problem?	No.
	Do raised medians provide a safe waiting area (refuge) for pedestrians?	No.
	Are marked crosswalks wide enough?	Yes.
	Are crosswalks sited along pedestrian desire lines?	Yes.
	Are corners and curb ramps appropriately planned and designed at each approach to the crossing?	Not all ramps are compliant with current ADA requirements.
B.2 Quality, Condition and Obstructions	Is the crossing pavement adequate and well maintained?	Yes.
B.3 Continuity and Connectivity	Does pedestrian network connectivity continue through crossings by means of adequate, waiting areas at corners, curb ramps and marked crosswalks?	The pedestrian network is well-connected. Crosswalks are marked. Not all ramps are compliant with current ADA requirements.
B.4 Lighting	Are pedestrian crossings adequately lit?	Yes.
B.5 Visibility	Can pedestrians see approaching vehicles at all legs of the intersection/crossing and vice versa?	Yes.
	Is the distance from the stop (or yield) line to a crosswalk sufficient for drivers to see pedestrians?	Yes, but stop bars are less than 4 feet from crosswalks.
B.6 Access Management	Are driveways placed close to crossings?	No.
B.7 Traffic Characteristics	Do turning vehicles pose a hazard to pedestrians?	Yes.
	Are there sufficient gaps in the traffic to allow pedestrians to cross the road?	Yes, during peak and off-peak times, except during school arrival/departure times.
	Do traffic operations (especially during peak periods) create a safety concern for pedestrians?	Yes. Crossing guard stops vehicles on Pine Grove Road at Deepwood Drive (east) marked crosswalk during school arrival/dismissal times.
B.8 Signs and Pavement Markings	Is paint on stop bars and crosswalks worn, or are signs worn, missing, or damaged?	No.
	Are crossing points for pedestrians properly signed and/or marked?	Crosswalks are properly marked but are not consistent. Township would prefer piano key pattern for the crossing at Deepwood Drive (east).
B.9 Signals	Are pedestrian signal heads provided and adequate?	N/A
	Are traffic and pedestrian signals timed so that wait times and crossing times are reasonable?	N/A
	Is there a problem because of an inconsistency in pedestrian actuation (or detection) types?	N/A
	Are all pedestrian signals and push buttons functioning correctly and safely?	N/A
	Are ADA accessible push buttons provided and properly located?	N/A

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 01 Pine Grove Road, North Side, St. Paul's Church to Sports Road

C. Transit Areas

Master Prompt	Question	Notes
C.1 Presence, Design, and Placement	Are safe pedestrian crossings convenient for transit and school bus users?	No. Only one marked crossing of Pine Grove Road is provided at Deepwood Drive (east).
	Are shelters appropriately designed and placed for pedestrian safety and convenience?	No shelters are present in this section.
C.2 Quality, Condition, and Obstructions	Is a sufficient landing area provided to accommodate waiting passengers, boarding/alighting passengers, and through/bypassing pedestrian traffic at peak times?	Yes, for the most part. Transit ridership from the area is low. Transit riders typically wait on the sidewalk or on paved driveways. A dedicated concrete waiting area is provided adjacent to Sports Road.
	Is the landing area paved and free of problems such as uneven surfaces, standing water, or steep slopes?	No. Access from sidewalk waiting area to street at Deepwood Drive (west) is steep.
	Is the sidewalk free of temporary/permanent obstructions that constrict its width or block access to the bus stop?	Yes.
C.3 Continuity and Connectivity	Is the nearest crossing opportunity free of potential hazards for pedestrians?	Yes.
	Are transit stops part of a continuous network of pedestrian facilities?	Yes.
C.4 Lighting	Are access ways to transit facilities well-lit to accommodate early-morning, late-afternoon, and evening?	See A.4 (street/sidewalk lighting).
C.5 Visibility	Are open sight lines maintained between approaching buses and passenger waiting and loading areas?	Yes.
C.7 Traffic Characteristics	Do pedestrians entering and leaving buses conflict with cars, bicycles, or other pedestrians?	No.
C.8 Signs and Pavement Markings	Are appropriate signs and pavement markings provided for school bus and transit stops?	School bus stops are not signed. Transit stops are signed with standard CATA signage.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 02 Pine Grove Road, North Side, Sports Road to Nixon Road

(This section does not address the intersection of Pine Grove Road/Water Street/Nixon Road)

A. Streets

Master Prompt	Question	Notes
A.1 Presence, Design, and Placement	Are sidewalks provided along the street?	Yes. Concrete sidewalk present.
	If no sidewalk is present, is there a walkable shoulder (e.g. wide enough to accommodate cyclists/pedestrians) on the road or other pathway/trail nearby?	N/A
	Is the sidewalk width adequate for pedestrian volumes?	Yes. Light pedestrian volume. Width varies 4-5 feet. ADA-compliant passing opportunities available (1).
	Is there adequate separation distance between vehicular traffic and pedestrians?	Yes. Grass/landscaped buffer.
	Are sidewalk/street boundaries discernable to people with visual impairments?	Yes.
	Are ramps provided as an alternative to stairs?	Yes (along sidewalk). Sidewalk sits below street, and access to street is by stairs. Stairs are private/not owned or maintained by Township or PennDOT.
A.2 Quality, Conditions, and Obstructions	Is the path clear from both temporary and permanent obstructions?	No. Occasional obstructions present (e.g., temporary ramp from house porch to sidewalk, see photos). Retaining walls/landscaping impinge on sidewalk at certain points.
	Is the walking surface too steep?	No.
	Is the walking surface adequate and well-maintained?	Yes, for the most part.
A.3 Continuity and Connectivity	Are sidewalks/walkable shoulders continuous on this side of the street?	Yes.
	Are measures needed to direct pedestrians to safe crossing points and pedestrian access ways?	Yes. No crossing points are designated along this section. Street parking is used heavily on Sundays, when there are more frequent crossings to/from churches.
A.4 Lighting	Is the sidewalk adequately lit?	No. Dedicated pathway lighting not provided in this section. Tree canopy obscures utility pole mounted street lighting (~250-300 feet apart, alternating sides of the street). Some light provided by front door lights on houses located close to the sidewalk.
	Does street lighting improve pedestrian visibility at night?	Somewhat.
A.5 Visibility	Is the visibility of pedestrians walking along the sidewalk/shoulder adequate?	No.
A.6 Driveways	Are the conditions at driveways intersecting sidewalks endangering pedestrians?	No known issues.
	Does the number of driveways make the route undesirable for pedestrian travel?	No. Two (2) driveway/street crossings.
A.7 Traffic Characteristics	Are there any conflicts between bicycles and pedestrians on sidewalks?	None observed. Bicyclists mostly use roadway/shoulder.
A.8 Signs and Pavement Markings	Are pedestrian travel zones clearly delineated from other modes of traffic through the use of striping, colored and/or textured pavement, signing, and other methods?	Yes. Sidewalk is physically separated from the roadway. Residences are provided with rear (alley) access. A Crosswalk Marking Policy is desired by the Township to guide crosswalk classification and consistent markings.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 02 Pine Grove Road, North Side, Sports Road to Nixon Road

(This section does not address the intersection of Pine Grove Road/Water Street/Nixon Road)

B. Street Crossings

Master Prompt	Question	Notes
B.1 Presence, Design, and Placement	Are crossings of the major street marked?	No crossings of Pine Grove Road are marked in this section.
	Do wide curb radii lengthen pedestrian crossing distances and encourage high-speed right turns?	No.
	Do channelized right turn lanes minimize conflicts with pedestrians?	No right turn lanes present.
	Does a skewed intersection direct drivers' focus away from crossing pedestrians?	No skewed intersections present.
	Are pedestrian crossings located in areas where sight distance may be a problem?	N/A
	Do raised medians provide a safe waiting area (refuge) for pedestrians?	N/A
	Are marked crosswalks wide enough?	N/A
	Are crosswalks sited along pedestrian desire lines?	N/A
	Are corners and curb ramps appropriately planned and designed at each approach to the crossing?	Not all ramps crossing driveways and side streets are compliant with current ADA requirements.
B.2 Quality, Condition and Obstructions	Is the crossing pavement adequate and well maintained?	Yes, for the most part. Kirk Street pavement has some spider cracking/rutting.
B.3 Continuity and Connectivity	Does pedestrian network connectivity continue through crossings by means of adequate, waiting areas at corners, curb ramps and marked crosswalks?	The pedestrian network is well-connected along/parallel to Pine Grove Road.
B.4 Lighting	Is the pedestrian crossing adequately lit?	N/A
B.5 Visibility	Can pedestrians see approaching vehicles at all legs of the intersection/crossing and vice versa?	N/A
	Is the distance from the stop (or yield) line to a crosswalk sufficient for drivers to see pedestrians?	N/A
B.6 Access Management	Are driveways placed close to crossings?	N/A
B.7 Traffic Characteristics	Do turning vehicles pose a hazard to pedestrians?	Yes.
	Are there sufficient gaps in the traffic to allow pedestrians to cross the road?	Yes, during peak and off-peak times, except during school arrival/departure times.
	Do traffic operations (especially during peak periods) create a safety concern for pedestrians?	Yes.
B.8 Signs and Pavement Markings	Is paint on stop bars and crosswalks worn, or are signs worn, missing, or damaged?	N/A
	Are crossing points for pedestrians properly signed and/or marked?	N/A
B.9 Signals	Are pedestrian signal heads provided and adequate?	N/A
	Are traffic and pedestrian signals timed so that wait times and crossing times are reasonable?	N/A
	Is there a problem because of an inconsistency in pedestrian actuation (or detection) types?	N/A
	Are all pedestrian signals and push buttons functioning correctly and safely?	N/A
	Are ADA accessible push buttons provided and properly located?	N/A

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 02 Pine Grove Road, North Side, Sports Road to Nixon Road

(This section does not address the intersection of Pine Grove Road/Water Street/Nixon Road)

C. Transit Areas

Master Prompt	Question	Notes
C.1 Presence, Design, and Placement	Are safe pedestrian crossings convenient for transit and school bus users?	No. No crossings of Pine Grove Road are marked in this section.
	Are shelters appropriately designed and placed for pedestrian safety and convenience?	No stops or shelters are present in this section.
C.2 Quality, Condition, and Obstructions	Is a sufficient landing area provided to accommodate waiting passengers, boarding/alighting passengers, and through/bypassing pedestrian traffic at peak times?	N/A
	Is the landing area paved and free of problems such as uneven surfaces, standing water, or steep slopes?	N/A
	Is the sidewalk free of temporary/permanent obstructions that constrict its width or block access to the bus stop?	N/A
C.3 Continuity and Connectivity	Is the nearest crossing opportunity free of potential hazards for pedestrians?	N/A
	Are transit stops part of a continuous network of pedestrian facilities?	N/A
C.4 Lighting	Are access ways to transit facilities well-lit to accommodate early-morning, late-afternoon, and evening?	N/A
C.5 Visibility	Are open sight lines maintained between approaching buses and passenger waiting and loading areas?	N/A
C.7 Traffic Characteristics	Do pedestrians entering and leaving buses conflict with cars, bicycles, or other pedestrians?	N/A
C.8 Signs and Pavement Markings	Are appropriate signs and pavement markings provided for school bus and transit stops?	School bus stops are not signed.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 03 Pine Grove Road, North Side, Nixon Road to Rosemont Drive

(This section does not address the intersection of Pine Grove Road/Water Street/Nixon Road)

A. Streets

Master Prompt	Question	Notes
A.1 Presence, Design, and Placement	Are sidewalks provided along the street?	Yes. Concrete sidewalks present.
	If no sidewalk is present, is there a walkable shoulder (e.g. wide enough to accommodate cyclists/pedestrians) on the road or other pathway/trail nearby?	N/A
	Is the sidewalk width adequate for pedestrian volumes?	Yes. Light pedestrian volume. Width varies 3-5 feet. ADA-compliant passing opportunities available (1).
	Is there adequate separation distance between vehicular traffic and pedestrians?	Sidewalk is adjacent to the curbline, except east of Kocher Lane, where a small grass buffer is provided (mostly 1-2 feet wide; 6-7 feet near Rosemont Drive). Much of the section has an on-street parking lane separating traffic from pedestrians.
	Are sidewalk/street boundaries discernable to people with visual impairments?	Yes.
	Are ramps provided as an alternative to stairs?	Yes. Not all ramps are compliant with current ADA requirements.
A.2 Quality, Conditions, and Obstructions	Is the path clear from both temporary and permanent obstructions?	No. Occasional obstructions present. Recycling bins block the sidewalk on pick up days. Landscaping/trees impinge on the walking path. Pruning is needed.
	Is the walking surface too steep?	Some driveway aprons and pedestrian ramps may be too steep (either along the pedestrian path or the cross-slope).
	Is the walking surface adequate and well-maintained?	Yes, for the most part. Asphalt sidewalk in front of Pine Grove Hall is uneven.
A.3 Continuity and Connectivity	Are sidewalks/walkable shoulders continuous on this side of the street?	Yes.
	Are measures needed to direct pedestrians to safe crossing points and pedestrian access ways?	Yes. No crossing points are designated along this section.
A.4 Lighting	Is the sidewalk adequately lit?	Yes. Dedicated pathway lighting is provided along the entire section.
	Does street lighting improve pedestrian visibility at night?	Yes.
A.5 Visibility	Is the visibility of pedestrians walking along the sidewalk/shoulder adequate?	Yes.
A.6 Driveways	Are the conditions at driveways intersecting sidewalks endangering pedestrians?	No known issues.
	Does the number of driveways make the route undesirable for pedestrian travel?	Somewhat. ~25 driveway cuts in this section.
A.7 Traffic Characteristics	Are there any conflicts between bicycles and pedestrians on sidewalks?	None observed. Bicyclists mostly use roadway/shoulder.
A.8 Signs and Pavement Markings	Are pedestrian travel zones clearly delineated from other modes of traffic through the use of striping, colored and/or textured pavement, signing, and other methods?	Yes. Sidewalk is physically separated from the roadway. A Crosswalk Marking Policy is desired by the Township to guide crosswalk classification and consistent markings.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 03 Pine Grove Road, North Side, Nixon Road to Rosemont Drive

(This section does not address the intersection of Pine Grove Road/Water Street/Nixon Road)

B. Street Crossings

Master Prompt	Question	Notes
B.1 Presence, Design, and Placement	Are crossings of the major street marked?	No crossings of Pine Grove Road are marked in this section.
	Do wide curb radii lengthen pedestrian crossing distances and encourage high-speed right turns?	No.
	Do channelized right turn lanes minimize conflicts with pedestrians?	No right turn lanes present.
	Does a skewed intersection direct drivers' focus away from crossing pedestrians?	No skewed intersections present.
	Are pedestrian crossings located in areas where sight distance may be a problem?	N/A
	Do raised medians provide a safe waiting area (refuge) for pedestrians?	N/A
	Are marked crosswalks wide enough?	N/A
	Are crosswalks sited along pedestrian desire lines?	N/A
	Are corners and curb ramps appropriately planned and designed at each approach to the crossing?	Not all ramps crossing driveways and side streets are compliant with current ADA requirements.
B.2 Quality, Condition and Obstructions	Is the crossing pavement adequate and well maintained?	N/A
B.3 Continuity and Connectivity	Does pedestrian network connectivity continue through crossings by means of adequate, waiting areas at corners, curb ramps and marked crosswalks?	N/A
B.4 Lighting	Is the pedestrian crossing adequately lit?	N/A
B.5 Visibility	Can pedestrians see approaching vehicles at all legs of the intersection/crossing and vice versa?	N/A
	Is the distance from the stop (or yield) line to a crosswalk sufficient for drivers to see pedestrians?	N/A
B.6 Access Management	Are driveways placed close to crossings?	N/A
B.7 Traffic Characteristics	Do turning vehicles pose a hazard to pedestrians?	No.
	Are there sufficient gaps in the traffic to allow pedestrians to cross the road?	Yes, except during peak hour times (AM and PM).
	Do traffic operations (especially during peak periods) create a safety concern for pedestrians?	Yes.
B.8 Signs and Pavement Markings	Is paint on stop bars and crosswalks worn, or are signs worn, missing, or damaged?	N/A
	Are crossing points for pedestrians properly signed and/or marked?	N/A
B.9 Signals	Are pedestrian signal heads provided and adequate?	N/A
	Are traffic and pedestrian signals timed so that wait times and crossing times are reasonable?	N/A
	Is there a problem because of an inconsistency in pedestrian actuation (or detection) types?	N/A
	Are all pedestrian signals and push buttons functioning correctly and safely?	N/A
	Are ADA accessible push buttons provided and properly located?	N/A

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 03 Pine Grove Road, North Side, Nixon Road to Rosemont Drive

(This section does not address the intersection of Pine Grove Road/Water Street/Nixon Road)

C. Transit Areas

Master Prompt	Question	Notes
C.1 Presence, Design, and Placement	Are safe pedestrian crossings convenient for transit and school bus users?	No. No crossings of Pine Grove Road are marked in this section.
	Are shelters appropriately designed and placed for pedestrian safety and convenience?	No shelters are present in this section.
C.2 Quality, Condition, and Obstructions	Is a sufficient landing area provided to accommodate waiting passengers, boarding/alighting passengers, and through/bypassing pedestrian traffic at peak times?	Yes, for the most part. Transit ridership from the area is low. Transit riders typically wait on the sidewalk or on paved driveways.
	Is the landing area paved and free of problems such as uneven surfaces, standing water, or steep slopes?	Yes.
	Is the sidewalk free of temporary/permanent obstructions that constrict its width or block access to the bus stop?	No. Occasional obstructions present. Recycling bins block the sidewalk on pick up days. Landscaping/trees impinge on the walking path. Pruning is needed.
C.3 Continuity and Connectivity	Is the nearest crossing opportunity free of potential hazards for pedestrians?	N/A
	Are transit stops part of a continuous network of pedestrian facilities?	Yes.
C.4 Lighting	Are access ways to transit facilities well-lit to accommodate early-morning, late-afternoon, and evening?	Yes.
C.5 Visibility	Are open sight lines maintained between approaching buses and passenger waiting and loading areas?	Yes.
C.7 Traffic Characteristics	Do pedestrians entering and leaving buses conflict with cars, bicycles, or other pedestrians?	Conflicts may occur with other pedestrians and bicycles on the sidewalk.
C.8 Signs and Pavement Markings	Are appropriate signs and pavement markings provided for school bus and transit stops?	School bus stops are not signed. Transit stops are signed with standard CATA signage.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 04 Pine Grove Road, Rosemont Drive to Meckley Drive, Both Sides

A. Streets

Master Prompt	Question	Notes
A.1 Presence, Design, and Placement	Are sidewalks provided along the street?	No, except for 150 feet of sidewalk on the north side of Pine Grove Road between Rosemont Drive and the Naked Egg parking lot.
	If no sidewalk is present, is there a walkable shoulder (e.g. wide enough to accommodate cyclists/pedestrians) on the road or other pathway/trail nearby?	Yes. Shoulder width 4-5 feet.
	Is the sidewalk width adequate for pedestrian volumes?	Yes. Light pedestrian volume. Width varies 3-5 feet. ADA-compliant passing opportunities available (1).
	Is there adequate separation distance between vehicular traffic and pedestrians?	Yes, where sidewalk exists (grass buffer).
	Are sidewalk/street boundaries discernable to people with visual impairments?	Yes.
	Are ramps provided as an alternative to stairs?	Yes.
A.2 Quality, Conditions, and Obstructions	Is the path clear from both temporary and permanent obstructions?	No. Occasional obstructions present. Recycling bins and trash cans may block the sidewalk on pick up days. Leaves and brush may be piled on sidewalk.
	Is the walking surface too steep?	No.
	Is the walking surface adequate and well-maintained?	Yes.
A.3 Continuity and Connectivity	Are sidewalks/walkable shoulders continuous and on both sides of the street?	Yes.
	Are measures needed to direct pedestrians to safe crossing points and pedestrian access ways?	Yes. No crossing points are designated along this section.
A.4 Lighting	Is the sidewalk adequately lit?	No. Neither dedicated pathway lightning nor street lighting is provided in this section.
	Does street lighting improve pedestrian visibility at night?	N/A
A.5 Visibility	Is the visibility of pedestrians walking along the sidewalk/shoulder adequate?	Sidewalk, yes. Shoulder, no.
A.6 Driveways	Are the conditions at driveways intersecting sidewalks endangering pedestrians?	Yes. Wide access area to the Naked Egg parking lot is problematic for pedestrians. Vehicles can pull directly into parking spaces across the shoulder from Pine Grove Road. Access control is needed.
	Does the number of driveways make the route undesirable for pedestrian travel?	Yes.
A.7 Traffic Characteristics	Are there any conflicts between bicycles and pedestrians on sidewalks?	None observed. Bicyclists (and some pedestrians) use the roadway/shoulder.
A.8 Signs and Pavement Markings	Are pedestrian travel zones clearly delineated from other modes of traffic through the use of striping, colored and/or textured pavement, signing, and other methods?	No, except for the sidewalk on the north side of Pine Grove Road (between Rosemont Drive and the Naked Egg parking lot), which is physically separated from the roadway.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 04 Pine Grove Road, Rosemont Drive to Meckley Drive, Both Sides

B. Street Crossings

Master Prompt	Question	Notes
B.1 Presence, Design, and Placement	Are crossings of the major street marked?	No crossings of Pine Grove Road are marked in this section.
	Do wide curb radii lengthen pedestrian crossing distances and encourage high-speed right turns?	Yes, at the west end of Meckley Drive.
	Do channelized right turn lanes minimize conflicts with pedestrians?	No right turn lanes present.
	Does a skewed intersection direct drivers' focus away from crossing pedestrians?	Yes, at the west end of Meckley Drive.
	Are pedestrian crossings located in areas where sight distance may be a problem?	N/A
	Do raised medians provide a safe waiting area (refuge) for pedestrians?	N/A
	Are marked crosswalks wide enough?	N/A
	Are crosswalks sited along pedestrian desire lines?	N/A
	Are corners and curb ramps appropriately planned and designed at each approach to the crossing?	N/A
B.2 Quality, Condition and Obstructions	Is the crossing pavement adequate and well maintained?	Not all ramps crossing driveways and side streets are compliant with current ADA requirements.
B.3 Continuity and Connectivity	Does pedestrian network connectivity continue through crossings by means of adequate, waiting areas at corners, curb ramps and marked crosswalks?	N/A
B.4 Lighting	Is the pedestrian crossing adequately lit?	N/A
B.5 Visibility	Can pedestrians see approaching vehicles at all legs of the intersection/crossing and vice versa?	Yes.
	Is the distance from the stop (or yield) line to a crosswalk sufficient for drivers to see pedestrians?	N/A
B.6 Access Management	Are driveways placed close to crossings?	N/A
B.7 Traffic Characteristics	Do turning vehicles pose a hazard to pedestrians?	Yes, particularly turns into the Naked Egg parking lot and Meckley Drive.
	Are there sufficient gaps in the traffic to allow pedestrians to cross the road?	Yes, except during peak hour times (AM and PM).
	Do traffic operations (especially during peak periods) create a safety concern for pedestrians?	Yes.
B.8 Signs and Pavement Markings	Is paint on stop bars and crosswalks worn, or are signs worn, missing, or damaged?	N/A
	Are crossing points for pedestrians properly signed and/or marked?	N/A
B.9 Signals	Are pedestrian signal heads provided and adequate?	N/A
	Are traffic and pedestrian signals timed so that wait times and crossing times are reasonable?	N/A
	Is there a problem because of an inconsistency in pedestrian actuation (or detection) types?	N/A
	Are all pedestrian signals and push buttons functioning correctly and safely?	N/A
	Are ADA accessible push buttons provided and properly located?	N/A

Pedestrian Road Safety Audits Guidelines and Prompt Lists

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Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 04 Pine Grove Road, Rosemont Drive to Meckley Drive, Both Sides

C. Transit Areas

Master Prompt	Question	Notes
C.1 Presence, Design, and Placement	Are safe pedestrian crossings convenient for transit and school bus users?	No. No crossings of Pine Grove Road are marked in this section.
	Are shelters appropriately designed and placed for pedestrian safety and convenience?	No shelters are present in this section.
C.2 Quality, Condition, and Obstructions	Is a sufficient landing area provided to accommodate waiting passengers, boarding/alighting passengers, and through/bypassing pedestrian traffic at peak times?	Yes, for the most part. Transit ridership from the area is low. Transit riders typically wait on the sidewalk or in the grass median between sidewalk and street.
	Is the landing area paved and free of problems such as uneven surfaces, standing water, or steep slopes?	No. Neither of the stops east of Rosemont Drive have dedicated, paved waiting areas. Sidewalk is adjacent to the stop on the south side of Pine Grove Road. No sidewalk is provided on the north side. Roadway shoulder is the nearest paved area.
	Is the sidewalk free of temporary/permanent obstructions that constrict its width or block access to the bus stop?	No. Occasional obstructions present. Residents may pile leaves and brush on the sidewalk for Township pickup.
C.3 Continuity and Connectivity	Is the nearest crossing opportunity free of potential hazards for pedestrians?	N/A
	Are transit stops part of a continuous network of pedestrian facilities?	No.
C.4 Lighting	Are access ways to transit facilities well-lit to accommodate early-morning, late-afternoon, and evening?	No.
C.5 Visibility	Are open sight lines maintained between approaching buses and passenger waiting and loading areas?	Yes.
C.7 Traffic Characteristics	Do pedestrians entering and leaving buses conflict with cars, bicycles, or other pedestrians?	Conflicts may occur with other pedestrians and bicycles on the sidewalk.
C.8 Signs and Pavement Markings	Are appropriate signs and pavement markings provided for school bus and transit stops?	School bus stops are not signed. Transit stops are signed with standard CATA signage.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

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Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 05 Meckley Drive, Both Sides

A. Streets

Master Prompt	Question	Notes
A.1 Presence, Design, and Placement	Are sidewalks provided along the street?	No, except for 225 feet of sidewalk on the north side of Meckley Drive near the intersection with Pine Grove Road opposite Banyan Drive.
	If no sidewalk is present, is there a walkable shoulder (e.g. wide enough to accommodate cyclists/pedestrians) on the road or other pathway/trail nearby?	No. Pedestrians walk on Meckley Drive. Vehicle volumes are minimal.
	Is the sidewalk width adequate for pedestrian volumes?	Yes. Light pedestrian volume. Width ~5 feet. ADA-compliant width.
	Is there adequate separation distance between vehicular traffic and pedestrians?	Yes, where sidewalk exists (grass buffer).
	Are sidewalk/street boundaries discernable to people with visual impairments?	Yes.
	Are ramps provided as an alternative to stairs?	Yes, at Pine Grove Road Ramp is not compliant with current ADA requirements. No ramp at the west end.
A.2 Quality, Conditions, and Obstructions	Is the path clear from both temporary and permanent obstructions?	No (sidewalk). Grass/plants have overgrown part of the sidewalk.
	Is the walking surface too steep?	No.
	Is the walking surface adequate and well-maintained?	Yes, except for where grass/plants have overgrown part of the sidewalk. Trimming needed to restore full width of sidewalk.
A.3 Continuity and Connectivity	Are sidewalks/walkable shoulders continuous and on both sides of the street?	No. Sidewalk along part of the street segment and only on one side of the street. Shoulder along Meckley Drive is not marked.
	Are measures needed to direct pedestrians to safe crossing points and pedestrian access ways?	No. No crossing points are designated along this section. No logical crossing points.
A.4 Lighting	Is the sidewalk adequately lit?	No. Dedicated pathway lightning not provided in this section. One utility-mounted street light provided at Sycamore Drive. Some light provided by privately-owned post lights near the street.
	Does street lighting improve pedestrian visibility at night?	Minimally.
A.5 Visibility	Is the visibility of pedestrians walking along the sidewalk/shoulder adequate?	No.
A.6 Driveways	Are the conditions at driveways intersecting sidewalks endangering pedestrians?	Somewhat. ~6 driveway cuts in this section. Sycamore Drive and Meadowview Drive are Township-owned streets.
	Does the number of driveways make the route undesirable for pedestrian travel?	No.
A.7 Traffic Characteristics	Are there any conflicts between bicycles and pedestrians on sidewalks?	None observed. Bicyclists mostly use roadway.
A.8 Signs and Pavement Markings	Are pedestrian travel zones clearly delineated from other modes of traffic through the use of striping, colored and/or textured pavement, signing, and other methods?	No, except for the sidewalk at the east end of Meckley Drive, which is physically separated from the roadway.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

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Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 05 Meckley Drive, Both Sides

B. Street Crossings

Master Prompt	Question	Notes
B.1 Presence, Design, and Placement	Are crossings of the major street marked?	No crossings of Meckley Drive are marked. A crossing of Pine Grove Road is "implied" at the east end of Meckley Drive (opposite Banyan Drive; two-way stop-controlled intersection). Sidewalk and ramps exist on both sides of Pine Grove Road but the crossing is not marked.
	Do wide curb radii lengthen pedestrian crossing distances and encourage high-speed right turns?	Yes, at the west end of Meckley Drive.
	Do channelized right turn lanes minimize conflicts with pedestrians?	No right turn lanes present.
	Does a skewed intersection direct drivers' focus away from crossing pedestrians?	Yes, at the west end of Meckley Drive.
	Are pedestrian crossings located in areas where sight distance may be a problem?	The unmarked crossing of Pine Grove Road at the east end of Meckley Drive has a sight distance concern looking to the west, which is related to the speed of vehicles and the vertical roadway geometry on SR 0026/0045.
	Do raised medians provide a safe waiting area (refuge) for pedestrians?	No.
	Are marked crosswalks wide enough?	N/A
	Are crosswalks sited along pedestrian desire lines?	N/A
	Are corners and curb ramps appropriately planned and designed at each approach to the crossing?	Not all ramps are compliant with current ADA requirements.
B.2 Quality, Condition and Obstructions	Is the crossing pavement adequate and well maintained?	Yes.
B.3 Continuity and Connectivity	Does pedestrian network connectivity continue through crossings by means of adequate, waiting areas at corners, curb ramps and marked crosswalks?	No.
B.4 Lighting	Is the pedestrian crossing adequately lit?	No. Neither pathway nor street lighting is provided.
B.5 Visibility	Can pedestrians see approaching vehicles at all legs of the intersection/crossing and vice versa?	Yes, but sight distance is a concern looking west from Meckley Drive/Banyan Drive.
	Is the distance from the stop (or yield) line to a crosswalk sufficient for drivers to see pedestrians?	N/A
B.6 Access Management	Are driveways placed close to crossings?	No.
B.7 Traffic Characteristics	Do turning vehicles pose a hazard to pedestrians?	Yes.
	Are there sufficient gaps in the traffic to allow pedestrians to cross the road?	Yes, except during peak hour times (AM and PM).
	Do traffic operations (especially during peak periods) create a safety concern for pedestrians?	Yes.
B.8 Signs and Pavement Markings	Is paint on stop bars and crosswalks worn, or are signs worn, missing, or damaged?	N/A
	Are crossing points for pedestrians properly signed and/or marked?	No crossings of Meckley Drive or Pine Grove Road are marked or signed. The crossing of Pine Grove Road is on an uncontrolled approach, and concerns about the safety of the crossing impact how it is marked/signed.
B.9 Signals	Are pedestrian signal heads provided and adequate?	N/A
	Are traffic and pedestrian signals timed so that wait times and crossing times are reasonable?	N/A
	Is there a problem because of an inconsistency in pedestrian actuation (or detection) types?	N/A
	Are all pedestrian signals and push buttons functioning correctly and safely?	N/A
	Are ADA accessible push buttons provided and properly located?	N/A

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 05 Meckley Drive, Both Sides

C. Transit Areas

Master Prompt	Question	Notes
C.1 Presence, Design, and Placement	Are safe pedestrian crossings convenient for transit and school bus users?	No. No crossings of Meckley Drive or Pine Grove Road are marked in this section.
	Are shelters appropriately designed and placed for pedestrian safety and convenience?	No shelters are present in this section.
C.2 Quality, Condition, and Obstructions	Is a sufficient landing area provided to accommodate waiting passengers, boarding/alighting passengers, and through/bypassing pedestrian traffic at peak times?	Yes, for the most part. Transit ridership from the area is low. Transit riders typically wait on the sidewalk or roadside.
	Is the landing area paved and free of problems such as uneven surfaces, standing water, or steep slopes?	Yes.
	Is the sidewalk free of temporary/permanent obstructions that constrict its width or block access to the bus stop?	Yes.
C.3 Continuity and Connectivity	Is the nearest crossing opportunity free of potential hazards for pedestrians?	No. The unmarked crossing of Pine Grove Road at the east end of Meckley Drive has a sight distance concern looking to the west, which is related to the speed of vehicles and the vertical roadway geometry on Pine Grove Road.
	Are transit stops part of a continuous network of pedestrian facilities?	No.
C.4 Lighting	Are access ways to transit facilities well-lit to accommodate early-morning, late-afternoon, and evening?	No.
C.5 Visibility	Are open sight lines maintained between approaching buses and passenger waiting and loading areas?	No. The waiting area (sidewalk) for eastbound buses is lower than the roadway approach and is somewhat obscured by the roadside berm.
C.7 Traffic Characteristics	Do pedestrians entering and leaving buses conflict with cars, bicycles, or other pedestrians?	Conflicts may occur with other pedestrians and bicycles on the sidewalk.
C.8 Signs and Pavement Markings	Are appropriate signs and pavement markings provided for school bus and transit stops?	School bus stops are not signed. Transit stops are signed with standard CATA signage.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 06 Pine Grove Road, South Side, Water Street to Rosemont Drive

(This section does not address the intersection of Pine Grove Road/Water Street/Nixon Road)

A. Streets

Master Prompt	Question	Notes
A.1 Presence, Design, and Placement	Are sidewalks provided along the street?	Yes. Concrete sidewalks present.
	If no sidewalk is present, is there a walkable shoulder (e.g. wide enough to accommodate cyclists/pedestrians) on the road or other pathway/trail nearby?	N/A
	Is the sidewalk width adequate for pedestrian volumes?	Yes. Light pedestrian volume. Width varies 3-5 feet. ADA-compliant passing opportunities available (1).
	Is there adequate separation distance between vehicular traffic and pedestrians?	Sidewalk is adjacent to the curbline, except east of Kocher Lane, where a small grass buffer is provided (mostly 1-2 feet wide). No parking is provided on the south side of Pine Grove Road, and the vehicle lane is immediately next to the sidewalk.
	Are sidewalk/street boundaries discernable to people with visual impairments?	Yes.
	Are ramps provided as an alternative to stairs?	Yes. Not all ramps are compliant with current ADA requirements.
A.2 Quality, Conditions, and Obstructions	Is the path clear from both temporary and permanent obstructions?	No. Occasional obstructions present. Recycling bins block the sidewalk on pick up days. Landscaping/trees impinge on the walking path. Pruning is needed. At certain points, landscaping and retaining walls appear to be installed over/into the sidewalk.
	Is the walking surface too steep?	Some driveway aprons and pedestrian ramps may be too steep (either along the pedestrian path or the cross-slope).
	Is the walking surface adequate and well-maintained?	Yes, for the most part. Stones, mulch, and other debris washes down onto the sidewalk from lots and unpaved driveways--particularly at Viero Street where an inlet is located within the sidewalk pathway. Some sidewalk slabs appear to have been cut or resurfaced by residents. Some slabs are missing because of utility cuts across the roadway.
A.3 Continuity and Connectivity	Are sidewalks/walkable shoulders continuous and on both sides of the street?	Yes.
	Are measures needed to direct pedestrians to safe crossing points and pedestrian access ways?	Yes. No crossing points are designated along this section.
A.4 Lighting	Is the sidewalk adequately lit?	Yes. Dedicated pathway lighting is provided along the entire section.
	Does street lighting improve pedestrian visibility at night?	Yes.
A.5 Visibility	Is the visibility of pedestrians walking along the sidewalk/shoulder adequate?	Yes.
A.6 Driveways	Are the conditions at driveways intersecting sidewalks endangering pedestrians?	No known issues.
	Does the number of driveways make the route undesirable for pedestrian travel?	Somewhat. ~21 driveway/side street cuts in this section.
A.7 Traffic Characteristics	Are there any conflicts between bicycles and pedestrians on sidewalks?	None observed. Bicyclists mostly use roadway/shoulder.
A.8 Signs and Pavement Markings	Are pedestrian travel zones clearly delineated from other modes of traffic through the use of striping, colored and/or textured pavement, signing, and other methods?	Yes. Sidewalk is physically separated from the roadway. A Crosswalk Marking Policy is desired by the Township to guide crosswalk classification and consistent markings.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 06 Pine Grove Road, South Side, Water Street to Rosemont Drive

(This section does not address the intersection of Pine Grove Road/Water Street/Nixon Road)

B. Street Crossings

Master Prompt	Question	Notes
B.1 Presence, Design, and Placement	Are crossings of the major street marked?	No crossings of Pine Grove Road are marked in this section.
	Do wide curb radii lengthen pedestrian crossing distances and encourage high-speed right turns?	No.
	Do channelized right turn lanes minimize conflicts with pedestrians?	No right turn lanes present.
	Does a skewed intersection direct drivers' focus away from crossing pedestrians?	No skewed intersections present.
	Are pedestrian crossings located in areas where sight distance may be a problem?	Yes. Some driveways and side streets are bounded by retaining walls and landscaping, and the sidewalk sits below most lots on the south side of Pine Grove Road. Pedestrians, especially shorter children, may not be seen by drivers approaching Pine Grove Road. Significant side street grades also create a need for longer sight distance.
	Do raised medians provide a safe waiting area (refuge) for pedestrians?	N/A
	Are marked crosswalks wide enough?	N/A
	Are crosswalks sited along pedestrian desire lines?	N/A
B.2 Quality, Condition and Obstructions	Are corners and curb ramps appropriately planned and designed at each approach to the crossing?	Not all ramps crossing driveways and side streets are compliant with current ADA requirements.
	Is the crossing pavement adequate and well maintained?	N/A
B.3 Continuity and Connectivity	Does pedestrian network connectivity continue through crossings by means of adequate, waiting areas at corners, curb ramps and marked crosswalks?	N/A
B.4 Lighting	Is the pedestrian crossing adequately lit?	N/A
B.5 Visibility	Can pedestrians see approaching vehicles at all legs of the intersection/crossing and vice versa?	N/A
	Is the distance from the stop (or yield) line to a crosswalk sufficient for drivers to see pedestrians?	N/A
B.6 Access Management	Are driveways placed close to crossings?	N/A
B.7 Traffic Characteristics	Do turning vehicles pose a hazard to pedestrians?	Yes.
	Are there sufficient gaps in the traffic to allow pedestrians to cross the road?	Yes, except during peak hour times (AM and PM).
	Do traffic operations (especially during peak periods) create a safety concern for pedestrians?	Yes.
B.8 Signs and Pavement Markings	Is paint on stop bars and crosswalks worn, or are signs worn, missing, or damaged?	N/A
	Are crossing points for pedestrians properly signed and/or marked?	N/A
B.9 Signals	Are pedestrian signal heads provided and adequate?	N/A
	Are traffic and pedestrian signals timed so that wait times and crossing times are reasonable?	N/A
	Is there a problem because of an inconsistency in pedestrian actuation (or detection) types?	N/A
	Are all pedestrian signals and push buttons functioning correctly and safely?	N/A
	Are ADA accessible push buttons provided and properly located?	N/A

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 06 Pine Grove Road, South Side, Water Street to Rosemont Drive

(This section does not address the intersection of Pine Grove Road/Water Street/Nixon Road)

C. Transit Areas

Master Prompt	Question	Notes
C.1 Presence, Design, and Placement	Are safe pedestrian crossings convenient for transit and school bus users?	No. No crossings of Pine Grove Road are marked in this section.
	Are shelters appropriately designed and placed for pedestrian safety and convenience?	No shelters are present in this section.
C.2 Quality, Condition, and Obstructions	Is a sufficient landing area provided to accommodate waiting passengers, boarding/alighting passengers, and through/bypassing pedestrian traffic at peak times?	Yes, for the most part. Transit ridership from the area is low. Transit riders typically wait on the sidewalk or on paved driveways.
	Is the landing area paved and free of problems such as uneven surfaces, standing water, or steep slopes?	Yes.
	Is the sidewalk free of temporary/permanent obstructions that constrict its width or block access to the bus stop?	No. Occasional obstructions present. Recycling bins block the sidewalk on pick up days. Landscaping/trees impinge on the walking path. Pruning is needed.
C.3 Continuity and Connectivity	Is the nearest crossing opportunity free of potential hazards for pedestrians?	N/A
	Are transit stops part of a continuous network of pedestrian facilities?	Yes.
C.4 Lighting	Are access ways to transit facilities well-lit to accommodate early-morning, late-afternoon, and evening?	Yes.
C.5 Visibility	Are open sight lines maintained between approaching buses and passenger waiting and loading areas?	Yes.
C.7 Traffic Characteristics	Do pedestrians entering and leaving buses conflict with cars, bicycles, or other pedestrians?	Conflicts may occur with other pedestrians and bicycles on the sidewalk.
C.8 Signs and Pavement Markings	Are appropriate signs and pavement markings provided for school bus and transit stops?	School bus stops are not signed. Transit stops are signed with standard CATA signage.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 07 Pine Grove Road, South Side, Deepwood Drive to Water Street

A. Streets

Master Prompt	Question	Notes
A.1 Presence, Design, and Placement	Are sidewalks provided along the street?	Yes. Concrete sidewalk present.
	If no sidewalk is present, is there a walkable shoulder (e.g. wide enough to accommodate cyclists/pedestrians) on the road or other pathway/trail nearby?	N/A
	Is the sidewalk width adequate for pedestrian volumes?	Yes. Light pedestrian volume. Width varies 4-5 feet. ADA-compliant passing opportunities available (1).
	Is there adequate separation distance between vehicular traffic and pedestrians?	Yes. Grass/landscaped buffer.
	Are sidewalk/street boundaries discernable to people with visual impairments?	Yes.
	Are ramps provided as an alternative to stairs?	Yes (along sidewalk). Sidewalk sits above the street, and access to street is by stairs. Stairs are private/not owned or maintained by Township or PennDOT.
A.2 Quality, Conditions, and Obstructions	Is the path clear from both temporary and permanent obstructions?	No. Occasional obstructions present (e.g., temporary ramp from house porch to sidewalk, see photos). Retaining walls/landscaping/house steps impinge on sidewalk at certain points.
	Is the walking surface too steep?	No.
	Is the walking surface adequate and well-maintained?	Yes, for the most part. Sidewalk closer to Water Street is older, with more spalling and cracking present. Adjacent trees appear to impact the sidewalk surface at certain points. Repairs, leveling, and other spot fixes are evident.
A.3 Continuity and Connectivity	Are sidewalks/walkable shoulders continuous and on both sides of the street?	Yes.
	Are measures needed to direct pedestrians to safe crossing points and pedestrian access ways?	Yes. No crossing points are designated along this section. Street parking is used heavily on Sundays, when there are more frequent crossings to/from churches.
A.4 Lighting	Is the sidewalk adequately lit?	No. Dedicated pathway lighting not provided in this section. Tree canopy obscures utility pole mounted street lighting (~250-300 feet apart, alternating sides of the street). Some light provided by front door lights on houses located close to the sidewalk.
	Does street lighting improve pedestrian visibility at night?	Somewhat.
A.5 Visibility	Is the visibility of pedestrians walking along the sidewalk/shoulder adequate?	No.
A.6 Driveways	Are the conditions at driveways intersecting sidewalks endangering pedestrians?	No known issues.
	Does the number of driveways make the route undesirable for pedestrian travel?	No. Three (3) driveway/street crossings.
A.7 Traffic Characteristics	Are there any conflicts between bicycles and pedestrians on sidewalks?	None observed. Bicyclists mostly use roadway/shoulder.
A.8 Signs and Pavement Markings	Are pedestrian travel zones clearly delineated from other modes of traffic through the use of striping, colored and/or textured pavement, signing, and other methods?	Yes. Sidewalk is physically separated from the roadway. Residences are provided with rear (alley) access. A Crosswalk Marking Policy is desired by the Township to guide crosswalk classification and consistent markings.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 07 Pine Grove Road, South Side, Deepwood Drive to Water Street

B. Street Crossings

Master Prompt	Question	Notes
B.1 Presence, Design, and Placement	Are crossings of the major street marked?	Yes. One crossing at Deepwood Drive (east) is marked.
	Do wide curb radii lengthen pedestrian crossing distances and encourage high-speed right turns?	No.
	Do channelized right turn lanes minimize conflicts with pedestrians?	No right turn lanes present.
	Does a skewed intersection direct drivers' focus away from crossing pedestrians?	No skewed intersections present.
	Are pedestrian crossings located in areas where sight distance may be a problem?	No.
	Do raised medians provide a safe waiting area (refuge) for pedestrians?	No.
	Are marked crosswalks wide enough?	Yes.
	Are crosswalks sited along pedestrian desire lines?	Yes.
	Are corners and curb ramps appropriately planned and designed at each approach to the crossing?	Not all ramps are compliant with current ADA requirements.
B.2 Quality, Condition and Obstructions	Is the crossing pavement adequate and well maintained?	Yes.
B.3 Continuity and Connectivity	Does pedestrian network connectivity continue through crossings by means of adequate, waiting areas at corners, curb ramps and marked crosswalks?	The pedestrian network is well-connected. Crosswalks are marked. Not all ramps are compliant with current ADA requirements.
B.4 Lighting	Is the pedestrian crossing adequately lit?	Yes.
B.5 Visibility	Can pedestrians see approaching vehicles at all legs of the intersection/crossing and vice versa?	Yes.
	Is the distance from the stop (or yield) line to a crosswalk sufficient for drivers to see pedestrians?	N/A
B.6 Access Management	Are driveways placed close to crossings?	No.
B.7 Traffic Characteristics	Do turning vehicles pose a hazard to pedestrians?	Yes.
	Are there sufficient gaps in the traffic to allow pedestrians to cross the road?	Yes, during peak and off-peak times, except during school arrival/departure times.
	Do traffic operations (especially during peak periods) create a safety concern for pedestrians?	Yes. Crossing guard stops vehicles on Pine Grove Road at Deepwood Drive (east) marked crosswalk during school arrival/dismissal times.
B.8 Signs and Pavement Markings	Is paint on stop bars and crosswalks worn, or are signs worn, missing, or damaged?	No.
	Are crossing points for pedestrians properly signed and/or marked?	Crosswalks are properly marked but are not consistent. Township would prefer piano key pattern for the crossing at Deepwood Drive (east).
B.9 Signals	Are pedestrian signal heads provided and adequate?	N/A
	Are traffic and pedestrian signals timed so that wait times and crossing times are reasonable?	N/A
	Is there a problem because of an inconsistency in pedestrian actuation (or detection) types?	N/A
	Are all pedestrian signals and push buttons functioning correctly and safely?	N/A
	Are ADA accessible push buttons provided and properly located?	N/A

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 07 Pine Grove Road, South Side, Deepwood Drive to Water Street

C. Transit Areas

Master Prompt	Question	Notes
C.1 Presence, Design, and Placement	Are safe pedestrian crossings convenient for transit and school bus users?	No. Only one marked crossing of Pine Grove Road is provided at Deepwood Drive (east).
	Are shelters appropriately designed and placed for pedestrian safety and convenience?	No shelters are present in this section.
C.2 Quality, Condition, and Obstructions	Is a sufficient landing area provided to accommodate waiting passengers, boarding/alighting passengers, and through/bypassing pedestrian traffic at peak times?	Yes, for the most part. Transit ridership from the area is low. Transit riders typically wait on the sidewalk or on paved driveways. Only one stop in this section at Mayes Street.
	Is the landing area paved and free of problems such as uneven surfaces, standing water, or steep slopes?	Yes.
	Is the sidewalk free of temporary/permanent obstructions that constrict its width or block access to the bus stop?	Yes.
C.3 Continuity and Connectivity	Is the nearest crossing opportunity free of potential hazards for pedestrians?	Yes.
	Are transit stops part of a continuous network of pedestrian facilities?	Yes.
C.4 Lighting	Are access ways to transit facilities well-lit to accommodate early-morning, late-afternoon, and evening?	See A.4 (street/sidewalk lighting).
C.5 Visibility	Are open sight lines maintained between approaching buses and passenger waiting and loading areas?	Yes.
C.7 Traffic Characteristics	Do pedestrians entering and leaving buses conflict with cars, bicycles, or other pedestrians?	No.
C.8 Signs and Pavement Markings	Are appropriate signs and pavement markings provided for school bus and transit stops?	School bus stops are not signed. Transit stops are signed with standard CATA signage.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 8 Water Street, Both Sides, Pine Grove Road to Chestnut Street

A. Streets

Master Prompt	Question	Notes
A.1 Presence, Design, and Placement	Are sidewalks provided along the street?	Yes (concrete and asphalt sidewalk) but only along the west side of Water Street, and sidewalk ends ~200 feet north of Chestnut Street. No sidewalk is present on the east side of Water Street.
	If no sidewalk is present, is there a walkable shoulder (e.g. wide enough to accommodate cyclists/pedestrians) on the road or other pathway/trail nearby?	A very narrow walkable shoulder is present south of Butternut Street. North of Butternut Street, the shoulder narrows and landscaping impinges on the shoulder area.
	Is the sidewalk width adequate for pedestrian volumes?	Yes. Light pedestrian volume. Width varies 3-4 feet. ADA-compliant passing opportunities available (1).
	Is there adequate separation distance between vehicular traffic and pedestrians?	Yes. Grass/landscaped buffer.
	Are sidewalk/street boundaries discernable to people with visual impairments?	Yes.
	Are ramps provided as an alternative to stairs?	Yes (along sidewalk). Sidewalk sits above the street, and access to street is by stairs. Stairs are private/not owned or maintained by Township or PennDOT.
A.2 Quality, Conditions, and Obstructions	Is the path clear from both temporary and permanent obstructions?	No. Occasional obstructions present. Retaining walls/landscaping/house steps impinge on sidewalk at certain points. Pathway crosses parking areas and may be obstructed by parked vehicles.
	Is the walking surface too steep?	Yes, at certain points. The roadway grade on Water Street is approximately ~4-6%. The walking surface is steeper where crossing driveways.
	Is the walking surface adequate and well-maintained?	The surface condition varies greatly, from good to poor. Concrete sidewalk is in good condition near Pine Grove Road, and gets worse going to the south. The surface does not look as if it has been consistently maintained.
A.3 Continuity and Connectivity	Are sidewalks/walkable shoulders continuous and on both sides of the street?	No. Sidewalk is provided only on the west side of Water Street. Sidewalk ends ~200 feet north of Chestnut Street.
	Are measures needed to direct pedestrians to safe crossing points and pedestrian access ways?	Yes. No crossing points are designated along this section. Street parking is used heavily on Sundays, when there are more frequent crossings to/from churches.
A.4 Lighting	Is the sidewalk adequately lit?	No. Dedicated pathway lighting not provided in this section. Tree canopy obscures utility pole mounted street lighting (~250-300 feet apart, along east side of Water Street). Some light provided by front door lights on houses located close to the sidewalk.
	Does street lighting improve pedestrian visibility at night?	Somewhat.
A.5 Visibility	Is the visibility of pedestrians walking along the sidewalk/shoulder adequate?	No.
A.6 Driveways	Are the conditions at driveways intersecting sidewalks endangering pedestrians?	No known issues.
	Does the number of driveways make the route undesirable for pedestrian travel?	No. Six (6) driveway/street crossings.
A.7 Traffic Characteristics	Are there any conflicts between bicycles and pedestrians on sidewalks?	None observed. Bicyclists use roadway/shoulder.
A.8 Signs and Pavement Markings	Are pedestrian travel zones clearly delineated from other modes of traffic through the use of striping, colored and/or textured pavement, signing, and other methods?	Yes. Existing sidewalk is physically separated from the roadway. Properties have direct access to Water Street. A Crosswalk Marking Policy is desired by the Township to guide crosswalk classification and consistent markings.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 8 *Water Street, Both Sides, Pine Grove Road to Chestnut Street*

B. Street Crossings

Master Prompt	Question	Notes
B.1 Presence, Design, and Placement	Are crossings of the major street marked?	No crossings of Water Street are marked in this section.
	Do wide curb radii lengthen pedestrian crossing distances and encourage high-speed right turns?	No.
	Do channelized right turn lanes minimize conflicts with pedestrians?	No right turn lanes present.
	Does a skewed intersection direct drivers' focus away from crossing pedestrians?	No.
	Are pedestrian crossings located in areas where sight distance may be a problem?	N/A
	Do raised medians provide a safe waiting area (refuge) for pedestrians?	N/A
	Are marked crosswalks wide enough?	N/A
	Are crosswalks sited along pedestrian desire lines?	N/A
	Are corners and curb ramps appropriately planned and designed at each approach to the crossing?	N/A
B.2 Quality, Condition and Obstructions	Is the crossing pavement adequate and well maintained?	Not all ramps crossing driveways and side streets are compliant with current ADA requirements.
B.3 Continuity and Connectivity	Does pedestrian network connectivity continue through crossings by means of adequate, waiting areas at corners, curb ramps and marked crosswalks?	N/A
B.4 Lighting	Is the pedestrian crossing adequately lit?	N/A
B.5 Visibility	Can pedestrians see approaching vehicles at all legs of the intersection/crossing and vice versa?	Yes.
	Is the distance from the stop (or yield) line to a crosswalk sufficient for drivers to see pedestrians?	N/A
B.6 Access Management	Are driveways placed close to crossings?	N/A
B.7 Traffic Characteristics	Do turning vehicles pose a hazard to pedestrians?	Yes.
	Are there sufficient gaps in the traffic to allow pedestrians to cross the road?	Yes.
	Do traffic operations (especially during peak periods) create a safety concern for pedestrians?	Yes.
B.8 Signs and Pavement Markings	Is paint on stop bars and crosswalks worn, or are signs worn, missing, or damaged?	N/A
	Are crossing points for pedestrians properly signed and/or marked?	N/A
B.9 Signals	Are pedestrian signal heads provided and adequate?	N/A
	Are traffic and pedestrian signals timed so that wait times and crossing times are reasonable?	N/A
	Is there a problem because of an inconsistency in pedestrian actuation (or detection) types?	N/A
	Are all pedestrian signals and push buttons functioning correctly and safely?	N/A
	Are ADA accessible push buttons provided and properly located?	N/A

Pedestrian Road Safety Audits Guidelines and Prompt Lists

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Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 8 Water Street, Both Sides, Pine Grove Road to Chestnut Street

C. Transit Areas

Master Prompt	Question	Notes
C.1 Presence, Design, and Placement	Are safe pedestrian crossings convenient for transit and school bus users?	No crossings of Water Street are marked in this section.
	Are shelters appropriately designed and placed for pedestrian safety and convenience?	No shelters or transit stops are present in this section.
C.2 Quality, Condition, and Obstructions	Is a sufficient landing area provided to accommodate waiting passengers, boarding/alighting passengers, and through/bypassing pedestrian traffic at peak times?	N/A
	Is the landing area paved and free of problems such as uneven surfaces, standing water, or steep slopes?	N/A
	Is the sidewalk free of temporary/permanent obstructions that constrict its width or block access to the bus stop?	N/A
C.3 Continuity and Connectivity	Is the nearest crossing opportunity free of potential hazards for pedestrians?	N/A
	Are transit stops part of a continuous network of pedestrian facilities?	N/A
C.4 Lighting	Are access ways to transit facilities well-lit to accommodate early-morning, late-afternoon, and evening?	N/A
C.5 Visibility	Are open sight lines maintained between approaching buses and passenger waiting and loading areas?	N/A
C.7 Traffic Characteristics	Do pedestrians entering and leaving buses conflict with cars, bicycles, or other pedestrians?	N/A
C.8 Signs and Pavement Markings	Are appropriate signs and pavement markings provided for school bus and transit stops?	School bus stops are not signed.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 9 Nixon Road, Both Sides, Pine Grove Road to Chester Drive

A. Streets

Master Prompt	Question	Notes
A.1 Presence, Design, and Placement	Are sidewalks provided along the street?	Yes, but only along the west side of Nixon Road. A short stretch of sidewalk is provided on the east side at the south end, near Pine Grove Road.
	If no sidewalk is present, is there a walkable shoulder (e.g. wide enough to accommodate cyclists/pedestrians) on the road or other pathway/trail nearby?	N/A. Roadway shoulders are very narrow (1-2 feet).
	Is the sidewalk width adequate for pedestrian volumes?	Yes. Light pedestrian volume. Sidewalk width varies 3-5 feet. ADA-compliant passing opportunities available (1). Sidewalk transitions to 8-10 foot wide shared use path near Chester Drive.
	Is there adequate separation distance between vehicular traffic and pedestrians?	No (along sidewalk). Sidewalk is immediately adjacent to the curb and vehicle lanes. Yes (along shared use path). Grass/landscaped buffer.
	Are sidewalk/street boundaries discernable to people with visual impairments?	Yes.
	Are ramps provided as an alternative to stairs?	Yes.
A.2 Quality, Conditions, and Obstructions	Is the path clear from both temporary and permanent obstructions?	Yes, for the most part. Landscaping impinges on sidewalk at certain points.
	Is the walking surface too steep?	Yes, at certain points. The roadway grade on Nixon Road is ~XX%. The walking surface is steeper where crossing driveways.
	Is the walking surface adequate and well-maintained?	Yes.
A.3 Continuity and Connectivity	Are sidewalks/walkable shoulders continuous and on both sides of the street?	Continuous on the west side only. A short stretch of sidewalk is provided on the east side at the south end, near Pine Grove Road.
	Are measures needed to direct pedestrians to safe crossing points and pedestrian access ways?	No. The shared use path directs users to a safe crossing point.
A.4 Lighting	Is the sidewalk adequately lit?	Dedicated pathway lighting is provided along the entire section, but spacing and alternating pattern may not provide adequate illumination at all points.
	Does street lighting improve pedestrian visibility at night?	Not likely, considering light fixture spacing.
A.5 Visibility	Is the visibility of pedestrians walking along the sidewalk/shoulder adequate?	Yes, for the most part.
A.6 Driveways	Are the conditions at driveways intersecting sidewalks endangering pedestrians?	No.
	Does the number of driveways make the route undesirable for pedestrian travel?	No. However, access to parking and driveways along the sidewalk near Pine Grove Road provide wide areas where pedestrians are exposed to vehicular movements.
A.7 Traffic Characteristics	Are there any conflicts between bicycles and pedestrians on sidewalks?	None observed. Bicyclists mostly use roadway/shoulder.
A.8 Signs and Pavement Markings	Are pedestrian travel zones clearly delineated from other modes of traffic through the use of striping, colored and/or textured pavement, signing, and other methods?	Yes.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 9 Nixon Road, Both Sides, Pine Grove Road to Chester Drive

B. Street Crossings

Master Prompt	Question	Notes
B.1 Presence, Design, and Placement	Are crossings of the major street marked?	No crossings of Nixon Road are marked in this section.
	Do wide curb radii lengthen pedestrian crossing distances and encourage high-speed right turns?	No.
	Do channelized right turn lanes minimize conflicts with pedestrians?	No right turn lanes present.
	Does a skewed intersection direct drivers' focus away from crossing pedestrians?	No skewed intersections present.
	Are pedestrian crossings located in areas where sight distance may be a problem?	N/A
	Do raised medians provide a safe waiting area (refuge) for pedestrians?	N/A
	Are marked crosswalks wide enough?	N/A
	Are crosswalks sited along pedestrian desire lines?	N/A
	Are corners and curb ramps appropriately planned and designed at each approach to the crossing?	N/A
B.2 Quality, Condition and Obstructions	Is the crossing pavement adequate and well maintained?	Not all ramps crossing driveways and side streets are compliant with current ADA requirements.
B.3 Continuity and Connectivity	Does pedestrian network connectivity continue through crossings by means of adequate, waiting areas at corners, curb ramps and marked crosswalks?	N/A
B.4 Lighting	Is the pedestrian crossing adequately lit?	N/A
B.5 Visibility	Can pedestrians see approaching vehicles at all legs of the intersection/crossing and vice versa?	Yes.
	Is the distance from the stop (or yield) line to a crosswalk sufficient for drivers to see pedestrians?	N/A
B.6 Access Management	Are driveways placed close to crossings?	N/A
B.7 Traffic Characteristics	Do turning vehicles pose a hazard to pedestrians?	Yes.
	Are there sufficient gaps in the traffic to allow pedestrians to cross the road?	Yes.
	Do traffic operations (especially during peak periods) create a safety concern for pedestrians?	Yes.
B.8 Signs and Pavement Markings	Is paint on stop bars and crosswalks worn, or are signs worn, missing, or damaged?	N/A
	Are crossing points for pedestrians properly signed and/or marked?	N/A
B.9 Signals	Are pedestrian signal heads provided and adequate?	N/A
	Are traffic and pedestrian signals timed so that wait times and crossing times are reasonable?	N/A
	Is there a problem because of an inconsistency in pedestrian actuation (or detection) types?	N/A
	Are all pedestrian signals and push buttons functioning correctly and safely?	N/A
	Are ADA accessible push buttons provided and properly located?	N/A

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 9 Nixon Road, Both Sides, Pine Grove Road to Chester Drive

C. Transit Areas

Master Prompt	Question	Notes
C.1 Presence, Design, and Placement	Are safe pedestrian crossings convenient for transit and school bus users?	No crossings of Nixon Road are marked in this section.
	Are shelters appropriately designed and placed for pedestrian safety and convenience?	No shelters or transit stops are present in this section.
C.2 Quality, Condition, and Obstructions	Is a sufficient landing area provided to accommodate waiting passengers, boarding/alighting passengers, and through/bypassing pedestrian traffic at peak times?	N/A
	Is the landing area paved and free of problems such as uneven surfaces, standing water, or steep slopes?	N/A
	Is the sidewalk free of temporary/permanent obstructions that constrict its width or block access to the bus stop?	N/A
C.3 Continuity and Connectivity	Is the nearest crossing opportunity free of potential hazards for pedestrians?	N/A
	Are transit stops part of a continuous network of pedestrian facilities?	N/A
C.4 Lighting	Are access ways to transit facilities well-lit to accommodate early-morning, late-afternoon, and evening?	N/A
C.5 Visibility	Are open sight lines maintained between approaching buses and passenger waiting and loading areas?	N/A
C.7 Traffic Characteristics	Do pedestrians entering and leaving buses conflict with cars, bicycles, or other pedestrians?	N/A
C.8 Signs and Pavement Markings	Are appropriate signs and pavement markings provided for school bus and transit stops?	School bus stops are not signed.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 10 Nixon Road, Both Sides, Chester Drive to Sunday Drive

A. Streets

Master Prompt	Question	Notes
A.1 Presence, Design, and Placement	Are sidewalks provided along the street?	Yes. A shared use path is provided along the west side of Nixon Road north from Chester Drive to a crossing of Nixon Road. The shared use path continues to the north along the east side of Nixon Road to its end at Sunday Drive.
	If no sidewalk is present, is there a walkable shoulder (e.g. wide enough to accommodate cyclists/pedestrians) on the road or other pathway/trail nearby?	N/A. Roadway shoulders are very narrow (1-2 feet).
	Is the sidewalk width adequate for pedestrian volumes?	Yes. Light pedestrian volume. Shared use path width is 8-10 feet.
	Is there adequate separation distance between vehicular traffic and pedestrians?	Yes, where shared use path exists (grass/landscaped buffer).
	Are sidewalk/street boundaries discernable to people with visual impairments?	Yes.
	Are ramps provided as an alternative to stairs?	Yes.
A.2 Quality, Conditions, and Obstructions	Is the path clear from both temporary and permanent obstructions?	Yes.
	Is the walking surface too steep?	Yes, at certain points. Steep shared use path grade between Chester Drive and the Nixon Road crossing.
	Is the walking surface adequate and well-maintained?	Yes.
A.3 Continuity and Connectivity	Are sidewalks/walkable shoulders continuous and on both sides of the street?	Continuous, but not on both sides for the entire section.
	Are measures needed to direct pedestrians to safe crossing points and pedestrian access ways?	Yes. No crossing points are designated along this section.
A.4 Lighting	Is the sidewalk adequately lit?	Dedicated pathway lighting is provided along the shared use path on the west side of Nixon Road, but there is no pathway lighting on the east side of Nixon Road, where the path crosses over near Sunday Drive.
	Does street lighting improve pedestrian visibility at night?	Not likely, considering light fixture spacing and the lack of pathway lighting between the crossing and Sunday Drive.
A.5 Visibility	Is the visibility of pedestrians walking along the sidewalk/shoulder adequate?	Yes, for the most part.
A.6 Driveways	Are the conditions at driveways intersecting sidewalks endangering pedestrians?	No. No driveway crossings of the shared use path.
	Does the number of driveways make the route undesirable for pedestrian travel?	No. No driveway crossings of the shared use path.
A.7 Traffic Characteristics	Are there any conflicts between bicycles and pedestrians on sidewalks?	None observed. The shared use path is designed for both pedestrian and bicycle use.
A.8 Signs and Pavement Markings	Are pedestrian travel zones clearly delineated from other modes of traffic through the use of striping, colored and/or textured pavement, signing, and other methods?	Yes. The shared use path is physically separated from the roadway.

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 10 Nixon Road, Both Sides, Chester Drive to Sunday Drive

B. Street Crossings

Master Prompt	Question	Notes
B.1 Presence, Design, and Placement	Are crossings of the major street marked?	Yes. One marked crossing is provided where the shared use path crosses Nixon Road.
	Do wide curb radii lengthen pedestrian crossing distances and encourage high-speed right turns?	No.
	Do channelized right turn lanes minimize conflicts with pedestrians?	No right turn lanes present.
	Does a skewed intersection direct drivers' focus away from crossing pedestrians?	No skewed intersections present.
	Are pedestrian crossings located in areas where sight distance may be a problem?	Yes. The crossing occurs at the top of a crest vertical curve, and vehicle drivers cannot see the crossing point until they are very close to it. Nighttime sight distance would be more problematic, because the vertical sag geometry reduces headlight distance.
	Do raised medians provide a safe waiting area (refuge) for pedestrians?	No.
	Are marked crosswalks wide enough?	Yes.
	Are crosswalks sited along pedestrian desire lines?	Yes.
B.2 Quality, Condition and Obstructions	Are corners and curb ramps appropriately planned and designed at each approach to the crossing?	Yes.
	Is the crossing pavement adequate and well maintained?	Yes.
B.3 Continuity and Connectivity	Does pedestrian network connectivity continue through crossings by means of adequate, waiting areas at corners, curb ramps and marked crosswalks?	Yes.
B.4 Lighting	Is the pedestrian crossing adequately lit?	Dedicated pathway lighting is provided on the west side of Nixon Road at the crossing. No lighting is provided on the east side fo the crossing.
B.5 Visibility	Can pedestrians see approaching vehicles at all legs of the intersection/crossing and vice versa?	Yes.
	Is the distance from the stop (or yield) line to a crosswalk sufficient for drivers to see pedestrians?	No.
B.6 Access Management	Are driveways placed close to crossings?	No.
B.7 Traffic Characteristics	Do turning vehicles pose a hazard to pedestrians?	Yes.
	Are there sufficient gaps in the traffic to allow pedestrians to cross the road?	Yes.
	Do traffic operations (especially during peak periods) create a safety concern for pedestrians?	No.
B.8 Signs and Pavement Markings	Is paint on stop bars and crosswalks worn, or are signs worn, missing, or damaged?	No.
	Are crossing points for pedestrians properly signed and/or marked?	Yes.
B.9 Signals	Are pedestrian signal heads provided and adequate?	N/A
	Are traffic and pedestrian signals timed so that wait times and crossing times are reasonable?	N/A
	Is there a problem because of an inconsistency in pedestrian actuation (or detection) types?	N/A
	Are all pedestrian signals and push buttons functioning correctly and safely?	N/A
	Are ADA accessible push buttons provided and properly located?	N/A

Pedestrian Road Safety Audits Guidelines and Prompt Lists

adapted for use in the Pine Grove Mills Mobility Study

Date/Time of Safety Audit:

October 13, 2021 -- 9:00 AM to 12:00 PM

Attendees:

Ron Seybert, Kristina Bassett, Paul Tomkiel, Robert Watts

Road Name(s):

Segment 10 Nixon Road, Both Sides, Chester Drive to Sunday Drive

C. Transit Areas

Master Prompt	Question	Notes
C.1 Presence, Design, and Placement	Are safe pedestrian crossings convenient for transit and school bus users?	Yes. One marked crossing is provided where the shared use path crosses Nixon Road.
	Are shelters appropriately designed and placed for pedestrian safety and convenience?	No shelters or transit stops are present in this section.
C.2 Quality, Condition, and Obstructions	Is a sufficient landing area provided to accommodate waiting passengers, boarding/alighting passengers, and through/bypassing pedestrian traffic at peak times?	N/A
	Is the landing area paved and free of problems such as uneven surfaces, standing water, or steep slopes?	N/A
	Is the sidewalk free of temporary/permanent obstructions that constrict its width or block access to the bus stop?	N/A
C.3 Continuity and Connectivity	Is the nearest crossing opportunity free of potential hazards for pedestrians?	N/A
	Are transit stops part of a continuous network of pedestrian facilities?	N/A
C.4 Lighting	Are access ways to transit facilities well-lit to accommodate early-morning, late-afternoon, and evening?	N/A
C.5 Visibility	Are open sight lines maintained between approaching buses and passenger waiting and loading areas?	N/A
C.7 Traffic Characteristics	Do pedestrians entering and leaving buses conflict with cars, bicycles, or other pedestrians?	N/A
C.8 Signs and Pavement Markings	Are appropriate signs and pavement markings provided for school bus and transit stops?	School bus stops are not signed.

APPENDIX E

Project Cost Estimates

Mobility Study Cost Estimates
Ferguson Township TASA Grant Cost Estimate

Pine Grove Mills Mobility Study

Project ID
1

Pine Grove Mills Mobility Study Pine Grove Road & Water Street/Nixon Road - Stop-Controlled Option

Description	Quantity	Unit of Measure	Unit Cost	Total Cost
CLASS 1 EXCAVATION	749	CY	\$ 19.00	\$ 14,231.00
CLASS 1B EXCAVATION	568	CY	\$ 72.00	\$ 40,896.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH		SY	\$ 21.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	2286	SY	\$ 19.00	\$ 43,434.00
SUPERPAVE ASPHALT MIXTURE DESIGN, FLEXIBLE BASE REPLACEMENT, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	169	SY	\$ 19.00	\$ 3,211.00
SUBBASE 6" DEPTH (NO. 2A)	2286	SY	\$ 12.00	\$ 27,432.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-G	3975	SY	\$ 18.00	\$ 71,550.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L		SY	\$ 11.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, SRL-G	19	TON	\$ 183.00	\$ 3,477.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, < 0.3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	2234	SY	\$ 14.00	\$ 31,276.00
MILLING OF ASPHALT PAVEMENT SURFACE, 1 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	1689	SY	\$ 6.00	\$ 10,134.00
PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH		SY	\$ 97.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 8" DEPTH		SY	\$ 138.00	\$ -
18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL	54	LF	\$ 113.00	\$ 6,102.00
TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	3	SET	\$ 1,510.00	\$ 4,530.00
TYPE M CONCRETE TOP UNIT AND ADA COMPLIANT GRATE	1	SET	\$ 1,500.00	\$ 1,500.00
STANDARD INLET BOX, HEIGHT < />= 10'	1	EACH	\$ 2,630.00	\$ 2,630.00
GRADE ADJUSTMENT OF EXISTING INLETS	1	SET	\$ 1,220.00	\$ 1,220.00
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	1402	LF	\$ 57.00	\$ 79,914.00
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT, INCLUDING REMOVAL OF EXISTING CURB		LF	\$ 61.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, TYPE A		LF	\$ 39.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB		LF	\$ 53.00	\$ -
CEMENT CONCRETE SIDEWALK	469	SY	\$ 136.00	\$ 63,784.00
DETECTABLE WARNING SURFACE, POLYMER COMPOSITE	180	SF	\$ 42.00	\$ 7,560.00
POST MOUNTED SIGNS, TYPE B	58.25	SF	\$ 53.00	\$ 3,087.25
POST MOUNTED SIGNS, TYPE F	10	SF	\$ 23.00	\$ 230.00
INTERNALLY ILLUMINATED SIGN		EACH	\$ 7,520.00	\$ -
FLASHING WARNING SIGNS		EACH	\$ 7,520.00	\$ -
RRFB Assembly with Ped Push Button (Single Sided)		EACH	\$ 6,460.00	\$ -
RRFB Assembly with Ped Push Button (Double Sided)	4	EACH	\$ 7,040.00	\$ 28,160.00
Permanent Speed Display Sign		EACH	\$ 8,080.00	\$ -
TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		EACH	\$ 21,480.00	\$ -
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	588	LF	\$ 12.00	\$ 7,056.00
24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 15.00	\$ -
12" WHITE HOT THERMOPLASTIC TRANSVERSE PAVEMENT MARKINGS		LF	\$ 21.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "STOP", 8' - 0"	1	EACH	\$ 301.00	\$ 301.00
WHITE HOT THERMOPLASTIC LEGEND, "X ING", 8' - 0"		EACH	\$ 271.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "PED", 8' - 0"		EACH	\$ 200.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "AHEAD", 8' - 0"		EACH	\$ 397.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "YIELD LINE", 24" X 36" TRIANGLE, (MIN 4 TRIANGLES PER LINE)	33	LF	\$ 36.00	\$ 1,188.00
4" WHITE WATERBORNE PAVEMENT MARKINGS	1431	LF	\$ 0.20	\$ 286.20
4" YELLOW WATERBORNE PAVEMENT MARKINGS	1687	LF	\$ 0.54	\$ 910.98
GAZEBO	1	EACH	\$ 2,500.00	\$ 2,500.00
BIKE RACK, 8 BIKES, SINGLE SIDED	3	EACH	\$ 600.00	\$ 1,800.00
BUS SHELTER WITH SIDES AND SEATING		EACH	\$ 8,000.00	\$ -
Notes:				
Temporary R/W impacts for this concept - no permanent R/W impacts				
Utility Pole in front of Post Office, currently in the roadway pavement, may need relocated				

SUBTOTAL	\$ 458,400
8% MOBILIZATION	\$ 36,672
25% CONTINGENCY	\$ 114,600
15% CONSTR. ENGR & INSPECTION	\$ 68,760
SUBTOTAL	\$ 678,433
23% SURVEY & DESIGN COSTS	\$ 156,040
UTILITIES	See Notes Above for anticipated impacts
RIGHT-OF-WAY ESTIMATE	See Notes Above for anticipated impacts
TOTAL (rounded)	\$ 834,500

Pine Grove Mills Mobility Study

Project ID
1

Pine Grove Mills Mobility Study Pine Grove Road & Water Street/Nixon Road - Roundabout Option

Description	Quantity	Unit of Measure	Unit Cost	Total Cost
CLASS 1 EXCAVATION	2140	CY	\$ 19.00	\$ 40,660.00
CLASS 1B EXCAVATION	768	CY	\$ 72.00	\$ 55,296.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH		SY	\$ 21.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	4571	SY	\$ 19.00	\$ 86,849.00
SUPERPAVE ASPHALT MIXTURE DESIGN, FLEXIBLE BASE REPLACEMENT, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH		SY	\$ 19.00	\$ -
SUBBASE 6" DEPTH (NO. 2A)	4862	SY	\$ 12.00	\$ 58,344.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-G	4571	SY	\$ 18.00	\$ 82,278.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L		SY	\$ 11.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, SRL-G		TON	\$ 183.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, < 0.3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	4535	SY	\$ 14.00	\$ 63,490.00
MILLING OF ASPHALT PAVEMENT SURFACE, 1 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR		SY	\$ 6.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	86	SY	\$ 97.00	\$ 8,342.00
PLAIN CEMENT CONCRETE PAVEMENT, 8" DEPTH	291	SY	\$ 138.00	\$ 40,158.00
18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		LF	\$ 113.00	\$ -
TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		SET	\$ 1,510.00	\$ -
TYPE M CONCRETE TOP UNIT AND ADA COMPLIANT GRATE		SET	\$ 1,500.00	\$ -
STANDARD INLET BOX, HEIGHT < />= 10'		EACH	\$ 2,630.00	\$ -
GRADE ADJUSTMENT OF EXISTING INLETS		SET	\$ 1,220.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	1387	LF	\$ 57.00	\$ 79,059.00
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT, INCLUDING REMOVAL OF EXISTING CURB		LF	\$ 61.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, TYPE A	515	LF	\$ 39.00	\$ 20,085.00
PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB	176	LF	\$ 53.00	\$ 9,328.00
CEMENT CONCRETE SIDEWALK	831	SY	\$ 136.00	\$ 113,016.00
DETECTABLE WARNING SURFACE, POLYMER COMPOSITE	156	SF	\$ 42.00	\$ 6,552.00
POST MOUNTED SIGNS, TYPE B	76.25	SF	\$ 53.00	\$ 4,041.25
POST MOUNTED SIGNS, TYPE F	31.75	SF	\$ 23.00	\$ 730.25
INTERNALLY ILLUMINATED SIGN		EACH	\$ 7,520.00	\$ -
FLASHING WARNING SIGNS		EACH	\$ 7,520.00	\$ -
RRFB Assembly with Ped Push Button (Single Sided)		EACH	\$ 6,460.00	\$ -
RRFB Assembly with Ped Push Button (Double Sided)	2	EACH	\$ 7,040.00	\$ 14,080.00
Permanent Speed Display Sign		EACH	\$ 8,080.00	\$ -
TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		EACH	\$ 21,480.00	\$ -
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	472	LF	\$ 12.00	\$ 5,664.00
24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 15.00	\$ -
12" WHITE HOT THERMOPLASTIC TRANSVERSE PAVEMENT MARKINGS		LF	\$ 21.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "STOP", 8' - 0"		EACH	\$ 301.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "X ING", 8' - 0"		EACH	\$ 271.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "PED", 8' - 0"		EACH	\$ 200.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "AHEAD", 8' - 0"		EACH	\$ 397.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "YIELD LINE", 24" X 36" TRIANGLE, (MIN 4 TRIANGLES PER LINE)	55	LF	\$ 36.00	\$ 1,980.00
4" WHITE WATERBORNE PAVEMENT MARKINGS	1804	LF	\$ 0.20	\$ 360.80
4" YELLOW WATERBORNE PAVEMENT MARKINGS	2438	LF	\$ 0.54	\$ 1,316.52
GAZEBO	1	EACH	\$ 2,500.00	\$ 2,500.00
BIKE RACK, 8 BIKES, SINGLE SIDED	5	EACH	\$ 600.00	\$ 3,000.00
BUS SHELTER WITH SIDES AND SEATING		EACH	\$ 8,000.00	\$ -

Notes:
 Major R/W impacts - includes total take of Gas Station property
 Would include major impacts to drainage and underground utilities
 May impact the existing culvert under Pine Grove Road

SUBTOTAL	\$ 697,130
8% MOBILIZATION	\$ 55,770
25% CONTINGENCY	\$ 174,282
15% CONSTR. ENGR & INSPECTION	\$ 104,569
SUBTOTAL	\$ 1,031,752
23% SURVEY & DESIGN COSTS	\$ 237,303
UTILITIES	See Notes Above for anticipated impacts
RIGHT-OF-WAY ESTIMATE	See Notes Above for anticipated impacts
TOTAL (rounded)	\$ 1,269,100

Pine Grove Mills Mobility Study

Project ID
2

Pine Grove Mills Mobility Study Pine Grove Road & Water Street/Nixon Road - Street Repurposing

Description	Quantity	Unit of Measure	Unit Cost	Total Cost
CLASS 1 EXCAVATION		CY	\$ 19.00	\$ -
CLASS 1B EXCAVATION	209	CY	\$ 72.00	\$ 15,048.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH		SY	\$ 21.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	113	SY	\$ 19.00	\$ 2,147.00
SUPERPAVE ASPHALT MIXTURE DESIGN, FLEXIBLE BASE REPLACEMENT, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	10	SY	\$ 19.00	\$ 190.00
SUBBASE 6" DEPTH (NO. 2A)	113	SY	\$ 12.00	\$ 1,356.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-G	210	SY	\$ 18.00	\$ 3,780.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L		SY	\$ 11.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, SRL-G	1	TON	\$ 183.00	\$ 183.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, < 0.3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	97	SY	\$ 14.00	\$ 1,358.00
MILLING OF ASPHALT PAVEMENT SURFACE, 1 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	97	SY	\$ 6.00	\$ 582.00
PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH		SY	\$ 97.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 8" DEPTH		SY	\$ 138.00	\$ -
18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		LF	\$ 113.00	\$ -
TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	2	SET	\$ 1,510.00	\$ 3,020.00
TYPE M CONCRETE TOP UNIT AND ADA COMPLIANT GRATE	1	SET	\$ 1,500.00	\$ 1,500.00
STANDARD INLET BOX, HEIGHT < / = 10'		EACH	\$ 2,630.00	\$ -
GRADE ADJUSTMENT OF EXISTING INLETS		SET	\$ 1,220.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	430	LF	\$ 57.00	\$ 24,510.00
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT, INCLUDING REMOVAL OF EXISTING CURB		LF	\$ 61.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, TYPE A		LF	\$ 39.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB		LF	\$ 53.00	\$ -
CEMENT CONCRETE SIDEWALK	246	SY	\$ 136.00	\$ 33,456.00
DETECTABLE WARNING SURFACE, POLYMER COMPOSITE	96	SF	\$ 42.00	\$ 4,032.00
POST MOUNTED SIGNS, TYPE B	30.50	SF	\$ 53.00	\$ 1,616.50
POST MOUNTED SIGNS, TYPE F	6	SF	\$ 23.00	\$ 138.00
INTERNALLY ILLUMINATED SIGN		EACH	\$ 7,520.00	\$ -
FLASHING WARNING SIGNS		EACH	\$ 7,520.00	\$ -
RRFB Assembly with Ped Push Button (Single Sided)	2	EACH	\$ 6,460.00	\$ 12,920.00
RRFB Assembly with Ped Push Button (Double Sided)	1	EACH	\$ 7,040.00	\$ 7,040.00
Permanent Speed Display Sign		EACH	\$ 8,080.00	\$ -
TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		EACH	\$ 21,480.00	\$ -
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	108	LF	\$ 12.00	\$ 1,296.00
24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 15.00	\$ -
12" WHITE HOT THERMOPLASTIC TRANSVERSE PAVEMENT MARKINGS		LF	\$ 21.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "STOP", 8' - 0"		EACH	\$ 301.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "X ING", 8' - 0"		EACH	\$ 271.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "PED", 8' - 0"		EACH	\$ 200.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "AHEAD", 8' - 0"		EACH	\$ 397.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "YIELD LINE", 24" X 36" TRIANGLE, (MIN 4 TRIANGLES PER LINE)	22	LF	\$ 36.00	\$ 792.00
4" WHITE WATERBORNE PAVEMENT MARKINGS	26	LF	\$ 0.20	\$ 5.20
4" YELLOW WATERBORNE PAVEMENT MARKINGS	212	LF	\$ 0.54	\$ 114.48
GAZEBO	1	EACH	\$ 2,500.00	\$ 2,500.00
BIKE RACK, 8 BIKES, SINGLE SIDED	1	EACH	\$ 600.00	\$ 600.00
BUS SHELTER WITH SIDES AND SEATING		EACH	\$ 8,000.00	\$ -
Notes:				
Temporary R/W impacts for this concept - no permanent R/W impacts				
Utility Pole in front of Post Office, currently in the roadway pavement, may need relocated				

SUBTOTAL	\$ 118,184
8% MOBILIZATION	\$ 9,455
25% CONTINGENCY	\$ 29,546
15% CONSTR. ENGR & INSPECTION	\$ 17,728
SUBTOTAL	\$ 174,913
23% SURVEY & DESIGN COSTS	\$ 40,230
UTILITIES	See Notes Above for anticipated impacts
RIGHT-OF-WAY ESTIMATE	See Notes Above for anticipated impacts
TOTAL (rounded)	\$ 215,200

Pine Grove Mills Mobility Study

Project ID
3

Pine Grove Mills Mobility Study Pine Grove Road & Banyan Drive/Meckley Drive Roundabout Gateway

Description	Quantity	Unit of Measure	Unit Cost	Total Cost
CLASS 1 EXCAVATION	2062	CY	\$ 19.00	\$ 39,178.00
CLASS 1B EXCAVATION	140	CY	\$ 72.00	\$ 10,080.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH		SY	\$ 21.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	4388	SY	\$ 19.00	\$ 83,372.00
SUPERPAVE ASPHALT MIXTURE DESIGN, FLEXIBLE BASE REPLACEMENT, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	226	SY	\$ 19.00	\$ 4,294.00
SUBBASE 6" DEPTH (NO. 2A)	4647	SY	\$ 12.00	\$ 55,764.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-G	6644	SY	\$ 18.00	\$ 119,592.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L		SY	\$ 11.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, SRL-G	25	TON	\$ 183.00	\$ 4,575.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, < 0.3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	4388	SY	\$ 14.00	\$ 61,432.00
MILLING OF ASPHALT PAVEMENT SURFACE, 1 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	2256	SY	\$ 6.00	\$ 13,536.00
PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	260	SY	\$ 97.00	\$ 25,220.00
PLAIN CEMENT CONCRETE PAVEMENT, 8" DEPTH	259	SY	\$ 138.00	\$ 35,742.00
18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		LF	\$ 113.00	\$ -
TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		SET	\$ 1,510.00	\$ -
TYPE M CONCRETE TOP UNIT AND ADA COMPLIANT GRATE		SET	\$ 1,500.00	\$ -
STANDARD INLET BOX, HEIGHT < />= 10'		EACH	\$ 2,630.00	\$ -
GRADE ADJUSTMENT OF EXISTING INLETS		SET	\$ 1,220.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	760	LF	\$ 57.00	\$ 43,320.00
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT, INCLUDING REMOVAL OF EXISTING CURB		LF	\$ 61.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, TYPE A	826	LF	\$ 39.00	\$ 32,214.00
PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB	176	LF	\$ 53.00	\$ 9,328.00
CEMENT CONCRETE SIDEWALK	203	SY	\$ 136.00	\$ 27,608.00
DETECTABLE WARNING SURFACE, POLYMER COMPOSITE	256	SF	\$ 42.00	\$ 10,752.00
POST MOUNTED SIGNS, TYPE B	81	SF	\$ 53.00	\$ 4,293.00
POST MOUNTED SIGNS, TYPE F	8	SF	\$ 23.00	\$ 184.00
INTERNALLY ILLUMINATED SIGN		EACH	\$ 7,520.00	\$ -
FLASHING WARNING SIGNS		EACH	\$ 7,520.00	\$ -
RRFB Assembly with Ped Push Button (Single Sided)		EACH	\$ 6,460.00	\$ -
RRFB Assembly with Ped Push Button (Double Sided)		EACH	\$ 7,040.00	\$ -
Permanent Speed Display Sign		EACH	\$ 8,080.00	\$ -
TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		EACH	\$ 21,480.00	\$ -
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	340	LF	\$ 12.00	\$ 4,080.00
24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 15.00	\$ -
12" WHITE HOT THERMOPLASTIC TRANSVERSE PAVEMENT MARKINGS		LF	\$ 21.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "STOP", 8' - 0"		EACH	\$ 301.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "X ING", 8' - 0"		EACH	\$ 271.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "PED", 8' - 0"		EACH	\$ 200.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "AHEAD", 8' - 0"		EACH	\$ 397.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "YIELD LINE", 24" X 36" TRIANGLE, (MIN 4 TRIANGLES PER LINE)	44	LF	\$ 36.00	\$ 1,584.00
4" WHITE WATERBORNE PAVEMENT MARKINGS	2925	LF	\$ 0.20	\$ 585.00
4" YELLOW WATERBORNE PAVEMENT MARKINGS	3700	LF	\$ 0.54	\$ 1,998.00
GAZEBO		EACH	\$ 2,500.00	\$ -
BIKE RACK, 8 BIKES, SINGLE SIDED		EACH	\$ 600.00	\$ -
BUS SHELTER WITH SIDES AND SEATING		EACH	\$ 8,000.00	\$ -
Notes:				
Possible permanent R/W impacts				
Significant drainage impacts - no visible utility impacts				

SUBTOTAL	\$ 588,731
8% MOBILIZATION	\$ 47,098
25% CONTINGENCY	\$ 147,183
15% CONSTR. ENGR & INSPECTION	\$ 88,310
SUBTOTAL	\$ 871,322
23% SURVEY & DESIGN COSTS	\$ 200,404
UTILITIES	See Notes Above
RIGHT-OF-WAY ESTIMATE	for anticipated impacts
TOTAL (rounded)	\$ 1,071,800

Pine Grove Mills Mobility Study

Project ID
4

Pine Grove Mills Mobility Study Rosemont Drive Enhanced Crossing

Description	Quantity	Unit of Measure	Unit Cost	Total Cost
CLASS 1 EXCAVATION		CY	\$ 19.00	\$ -
CLASS 1B EXCAVATION	18	CY	\$ 72.00	\$ 1,296.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH		SY	\$ 21.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	18	SY	\$ 19.00	\$ 342.00
SUPERPAVE ASPHALT MIXTURE DESIGN, FLEXIBLE BASE REPLACEMENT, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	65	SY	\$ 19.00	\$ 1,235.00
SUBBASE 6" DEPTH (NO. 2A)	18	SY	\$ 12.00	\$ 216.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-G	665	SY	\$ 18.00	\$ 11,970.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L		SY	\$ 11.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, SRL-G		TON	\$ 183.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, < 0.3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	18	SY	\$ 14.00	\$ 252.00
MILLING OF ASPHALT PAVEMENT SURFACE, 1 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	647	SY	\$ 6.00	\$ 3,882.00
PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH		SY	\$ 97.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 8" DEPTH		SY	\$ 138.00	\$ -
18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		LF	\$ 113.00	\$ -
TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		SET	\$ 1,510.00	\$ -
TYPE M CONCRETE TOP UNIT AND ADA COMPLIANT GRATE		SET	\$ 1,500.00	\$ -
STANDARD INLET BOX, HEIGHT < />= 10'		EACH	\$ 2,630.00	\$ -
GRADE ADJUSTMENT OF EXISTING INLETS	1	SET	\$ 1,220.00	\$ 1,220.00
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT	47	LF	\$ 57.00	\$ 2,679.00
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT, INCLUDING REMOVAL OF EXISTING CURB		LF	\$ 61.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, TYPE A		LF	\$ 39.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB		LF	\$ 53.00	\$ -
CEMENT CONCRETE SIDEWALK	22	SY	\$ 136.00	\$ 2,992.00
DETECTABLE WARNING SURFACE, POLYMER COMPOSITE	36	SF	\$ 42.00	\$ 1,512.00
POST MOUNTED SIGNS, TYPE B	36.75	SF	\$ 53.00	\$ 1,947.75
POST MOUNTED SIGNS, TYPE F	6	SF	\$ 23.00	\$ 138.00
INTERNALLY ILLUMINATED SIGN		EACH	\$ 7,520.00	\$ -
FLASHING WARNING SIGNS		EACH	\$ 7,520.00	\$ -
RRFB Assembly with Ped Push Button (Single Sided)		EACH	\$ 6,460.00	\$ -
RRFB Assembly with Ped Push Button (Double Sided)	2	EACH	\$ 7,040.00	\$ 14,080.00
Permanent Speed Display Sign		EACH	\$ 8,080.00	\$ -
TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		EACH	\$ 21,480.00	\$ -
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	123	LF	\$ 12.00	\$ 1,476.00
24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 15.00	\$ -
12" WHITE HOT THERMOPLASTIC TRANSVERSE PAVEMENT MARKINGS		LF	\$ 21.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "STOP", 8' - 0"		EACH	\$ 301.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "X ING", 8' - 0"		EACH	\$ 271.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "PED", 8' - 0"		EACH	\$ 200.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "AHEAD", 8' - 0"		EACH	\$ 397.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "YIELD LINE", 24" X 36" TRIANGLE, (MIN 4 TRIANGLES PER LINE)	22	LF	\$ 36.00	\$ 792.00
4" WHITE WATERBORNE PAVEMENT MARKINGS	232	LF	\$ 0.20	\$ 46.40
4" YELLOW WATERBORNE PAVEMENT MARKINGS	142	LF	\$ 0.54	\$ 76.68
GAZEBO		EACH	\$ 2,500.00	\$ -
BIKE RACK, 8 BIKES, SINGLE SIDED		EACH	\$ 600.00	\$ -
BUS SHELTER WITH SIDES AND SEATING		EACH	\$ 8,000.00	\$ -
Notes:				
Possible minimal permanent R/W impacts on northeast corner				
Minor drainage impacts - no visible utility impacts				

SUBTOTAL	\$ 46,153
8% MOBILIZATION	\$ 3,692
25% CONTINGENCY	\$ 11,538
15% CONSTR. ENGR & INSPECTION	\$ 6,923
SUBTOTAL	\$ 68,306
23% SURVEY & DESIGN COSTS	\$ 15,710
UTILITIES	See Notes Above
RIGHT-OF-WAY ESTIMATE	for anticipated impacts
TOTAL (rounded)	\$ 84,100

Pine Grove Mills Mobility Study

Project ID
5

Pine Grove Mills Mobility Study Nixon Shared-Use Path Enhanced Crossing

Description	Quantity	Unit of Measure	Unit Cost	Total Cost
CLASS 1 EXCAVATION		CY	\$ 19.00	\$ -
CLASS 1B EXCAVATION		CY	\$ 72.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH		SY	\$ 21.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH		SY	\$ 19.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, FLEXIBLE BASE REPLACEMENT, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	149	SY	\$ 19.00	\$ 2,831.00
SUBBASE 6" DEPTH (NO. 2A)		SY	\$ 12.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-G	1491	SY	\$ 18.00	\$ 26,838.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L		SY	\$ 11.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, SRL-G		TON	\$ 183.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, < 0.3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH		SY	\$ 14.00	\$ -
MILLING OF ASPHALT PAVEMENT SURFACE, 1 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	1491	SY	\$ 6.00	\$ 8,946.00
PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH		SY	\$ 97.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 8" DEPTH		SY	\$ 138.00	\$ -
18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		LF	\$ 113.00	\$ -
TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		SET	\$ 1,510.00	\$ -
TYPE M CONCRETE TOP UNIT AND ADA COMPLIANT GRATE		SET	\$ 1,500.00	\$ -
STANDARD INLET BOX, HEIGHT < / = 10'		EACH	\$ 2,630.00	\$ -
GRADE ADJUSTMENT OF EXISTING INLETS		SET	\$ 1,220.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT		LF	\$ 57.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT, INCLUDING REMOVAL OF EXISTING CURB		LF	\$ 61.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, TYPE A		LF	\$ 39.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB		LF	\$ 53.00	\$ -
CEMENT CONCRETE SIDEWALK		SY	\$ 136.00	\$ -
DETECTABLE WARNING SURFACE, POLYMER COMPOSITE		SF	\$ 42.00	\$ -
POST MOUNTED SIGNS, TYPE B	39.50	SF	\$ 53.00	\$ 2,093.50
POST MOUNTED SIGNS, TYPE F	6	SF	\$ 23.00	\$ 138.00
INTERNALLY ILLUMINATED SIGN		EACH	\$ 7,520.00	\$ -
FLASHING WARNING SIGNS		EACH	\$ 7,520.00	\$ -
RRFB Assembly with Ped Push Button (Single Sided)		EACH	\$ 6,460.00	\$ -
RRFB Assembly with Ped Push Button (Double Sided)	2	EACH	\$ 7,040.00	\$ 14,080.00
Permanent Speed Display Sign		EACH	\$ 8,080.00	\$ -
TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		EACH	\$ 21,480.00	\$ -
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	41	LF	\$ 12.00	\$ 492.00
24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 15.00	\$ -
12" WHITE HOT THERMOPLASTIC TRANSVERSE PAVEMENT MARKINGS		LF	\$ 21.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "STOP", 8' - 0"		EACH	\$ 301.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "X ING", 8' - 0"	2	EACH	\$ 271.00	\$ 542.00
WHITE HOT THERMOPLASTIC LEGEND, "PED", 8' - 0"	2	EACH	\$ 200.00	\$ 400.00
WHITE HOT THERMOPLASTIC LEGEND, "AHEAD", 8' - 0"	2	EACH	\$ 397.00	\$ 794.00
WHITE HOT THERMOPLASTIC LEGEND, "YIELD LINE", 24" X 36" TRIANGLE, (MIN 4 TRIANGLES PER LINE)	19	LF	\$ 36.00	\$ 684.00
4" WHITE WATERBORNE PAVEMENT MARKINGS	959	LF	\$ 0.20	\$ 191.80
4" YELLOW WATERBORNE PAVEMENT MARKINGS	926	LF	\$ 0.54	\$ 500.04
GAZEBO		EACH	\$ 2,500.00	\$ -
BIKE RACK, 8 BIKES, SINGLE SIDED		EACH	\$ 600.00	\$ -
BUS SHELTER WITH SIDES AND SEATING		EACH	\$ 8,000.00	\$ -
Notes:				
No R/W impacts anticipated				
Possible minor utility impacts to existing lighting				

SUBTOTAL	\$ 58,530
8% MOBILIZATION	\$ 4,682
25% CONTINGENCY	\$ 14,633
15% CONSTR. ENGR & INSPECTION	\$ 8,780
SUBTOTAL	\$ 86,625
23% SURVEY & DESIGN COSTS	\$ 19,924
UTILITIES	See Notes Above for anticipated impacts
RIGHT-OF-WAY ESTIMATE	See Notes Above for anticipated impacts
TOTAL (rounded)	\$ 106,600

Pine Grove Mills Mobility Study

Project ID
6

Pine Grove Mills Mobility Study Deepwood Drive (east) Enhanced Crossing

Description	Quantity	Unit of Measure	Unit Cost	Total Cost
CLASS 1 EXCAVATION	23	CY	\$ 19.00	\$ 437.00
CLASS 1B EXCAVATION	44	CY	\$ 72.00	\$ 3,168.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH		SY	\$ 21.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	97	SY	\$ 19.00	\$ 1,843.00
SUPERPAVE ASPHALT MIXTURE DESIGN, FLEXIBLE BASE REPLACEMENT, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	54	SY	\$ 19.00	\$ 1,026.00
SUBBASE 6" DEPTH (NO. 2A)	97	SY	\$ 12.00	\$ 1,164.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-G	637	SY	\$ 18.00	\$ 11,466.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L		SY	\$ 11.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, SRL-G	6	TON	\$ 183.00	\$ 1,098.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, < 0.3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	97	SY	\$ 14.00	\$ 1,358.00
MILLING OF ASPHALT PAVEMENT SURFACE, 1 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	540	SY	\$ 6.00	\$ 3,240.00
PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH		SY	\$ 97.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 8" DEPTH		SY	\$ 138.00	\$ -
18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		LF	\$ 113.00	\$ -
TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		SET	\$ 1,510.00	\$ -
TYPE M CONCRETE TOP UNIT AND ADA COMPLIANT GRATE		SET	\$ 1,500.00	\$ -
STANDARD INLET BOX, HEIGHT < />= 10'		EACH	\$ 2,630.00	\$ -
GRADE ADJUSTMENT OF EXISTING INLETS		SET	\$ 1,220.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT		LF	\$ 57.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT, INCLUDING REMOVAL OF EXISTING CURB	131	LF	\$ 61.00	\$ 7,991.00
PLAIN CONCRETE MOUNTABLE CURB, TYPE A		LF	\$ 39.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB		LF	\$ 53.00	\$ -
CEMENT CONCRETE SIDEWALK	41	SY	\$ 136.00	\$ 5,576.00
DETECTABLE WARNING SURFACE, POLYMER COMPOSITE	60	SF	\$ 42.00	\$ 2,520.00
POST MOUNTED SIGNS, TYPE B	30.50	SF	\$ 53.00	\$ 1,616.50
POST MOUNTED SIGNS, TYPE F	6	SF	\$ 23.00	\$ 138.00
INTERNALLY ILLUMINATED SIGN		EACH	\$ 7,520.00	\$ -
FLASHING WARNING SIGNS		EACH	\$ 7,520.00	\$ -
RRFB Assembly with Ped Push Button (Single Sided)		EACH	\$ 6,460.00	\$ -
RRFB Assembly with Ped Push Button (Double Sided)	2	EACH	\$ 7,040.00	\$ 14,080.00
Permanent Speed Display Sign		EACH	\$ 8,080.00	\$ -
TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		EACH	\$ 21,480.00	\$ -
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	140	LF	\$ 12.00	\$ 1,680.00
24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 15.00	\$ -
12" WHITE HOT THERMOPLASTIC TRANSVERSE PAVEMENT MARKINGS		LF	\$ 21.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "STOP", 8' - 0"		EACH	\$ 301.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "X ING", 8' - 0"		EACH	\$ 271.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "PED", 8' - 0"		EACH	\$ 200.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "AHEAD", 8' - 0"		EACH	\$ 397.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "YIELD LINE", 24" X 36" TRIANGLE, (MIN 4 TRIANGLES PER LINE)	22	LF	\$ 36.00	\$ 792.00
4" WHITE WATERBORNE PAVEMENT MARKINGS		LF	\$ 0.20	\$ -
4" YELLOW WATERBORNE PAVEMENT MARKINGS	240	LF	\$ 0.54	\$ 129.60
GAZEBO		EACH	\$ 2,500.00	\$ -
BIKE RACK, 8 BIKES, SINGLE SIDED		EACH	\$ 600.00	\$ -
BUS SHELTER WITH SIDES AND SEATING		EACH	\$ 8,000.00	\$ -
Notes:				
No R/W impacts anticipated				
Possible minor utility impacts to existing lighting and water (for fire hydrant)				

SUBTOTAL	\$ 59,323
8% MOBILIZATION	\$ 4,746
25% CONTINGENCY	\$ 14,831
15% CONSTR. ENGR & INSPECTION	\$ 8,898
SUBTOTAL	\$ 87,798
23% SURVEY & DESIGN COSTS	\$ 20,194
UTILITIES	See Notes Above for anticipated impacts
RIGHT-OF-WAY ESTIMATE	See Notes Above for anticipated impacts
TOTAL (rounded)	\$ 108,000

Pine Grove Mills Mobility Study

Project ID
10

Pine Grove Mills Mobility Study Western Pine Grove Road Gateway

Description	Quantity	Unit of Measure	Unit Cost	Total Cost
CLASS 1 EXCAVATION		CY	\$ 19.00	\$ -
CLASS 1B EXCAVATION	254	CY	\$ 72.00	\$ 18,288.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH		SY	\$ 21.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	591	SY	\$ 19.00	\$ 11,229.00
SUPERPAVE ASPHALT MIXTURE DESIGN, FLEXIBLE BASE REPLACEMENT, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	129	SY	\$ 19.00	\$ 2,451.00
SUBBASE 6" DEPTH (NO. 2A)	591	SY	\$ 12.00	\$ 7,092.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-G	1882	SY	\$ 18.00	\$ 33,876.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L		SY	\$ 11.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, SRL-G	15	TON	\$ 183.00	\$ 2,745.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, < 0.3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	591	SY	\$ 14.00	\$ 8,274.00
MILLING OF ASPHALT PAVEMENT SURFACE, 1 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	1291	SY	\$ 6.00	\$ 7,746.00
PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH	52	SY	\$ 97.00	\$ 5,044.00
PLAIN CEMENT CONCRETE PAVEMENT, 8" DEPTH		SY	\$ 138.00	\$ -
18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		LF	\$ 113.00	\$ -
TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		SET	\$ 1,510.00	\$ -
TYPE M CONCRETE TOP UNIT AND ADA COMPLIANT GRATE		SET	\$ 1,500.00	\$ -
STANDARD INLET BOX, HEIGHT < />= 10'		EACH	\$ 2,630.00	\$ -
GRADE ADJUSTMENT OF EXISTING INLETS		SET	\$ 1,220.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT		LF	\$ 57.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT, INCLUDING REMOVAL OF EXISTING CURB		LF	\$ 61.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, TYPE A	200	LF	\$ 39.00	\$ 7,800.00
PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB		LF	\$ 53.00	\$ -
CEMENT CONCRETE SIDEWALK		SY	\$ 136.00	\$ -
DETECTABLE WARNING SURFACE, POLYMER COMPOSITE		SF	\$ 42.00	\$ -
POST MOUNTED SIGNS, TYPE B	14	SF	\$ 53.00	\$ 742.00
POST MOUNTED SIGNS, TYPE F		SF	\$ 23.00	\$ -
INTERNALLY ILLUMINATED SIGN	1	EACH	\$ 7,520.00	\$ 7,520.00
FLASHING WARNING SIGNS		EACH	\$ 7,520.00	\$ -
RRFB Assembly with Ped Push Button (Single Sided)		EACH	\$ 6,460.00	\$ -
RRFB Assembly with Ped Push Button (Double Sided)		EACH	\$ 7,040.00	\$ -
Permanent Speed Display Sign	1	EACH	\$ 8,080.00	\$ 8,080.00
TRAFFIC SIGNAL SUPPORT, 30' MAST ARM	1	EACH	\$ 21,480.00	\$ 21,480.00
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 12.00	\$ -
24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS	157	LF	\$ 15.00	\$ 2,355.00
12" WHITE HOT THERMOPLASTIC TRANSVERSE PAVEMENT MARKINGS	36	LF	\$ 21.00	\$ 756.00
WHITE HOT THERMOPLASTIC LEGEND, "STOP", 8' - 0"		EACH	\$ 301.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "X ING", 8' - 0"		EACH	\$ 271.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "PED", 8' - 0"		EACH	\$ 200.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "AHEAD", 8' - 0"		EACH	\$ 397.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "YIELD LINE", 24" X 36" TRIANGLE, (MIN 4 TRIANGLES PER LINE)		LF	\$ 36.00	\$ -
4" WHITE WATERBORNE PAVEMENT MARKINGS	1050	LF	\$ 0.20	\$ 210.00
4" YELLOW WATERBORNE PAVEMENT MARKINGS	871	LF	\$ 0.54	\$ 470.34
GAZEBO		EACH	\$ 2,500.00	\$ -
BIKE RACK, 8 BIKES, SINGLE SIDED		EACH	\$ 600.00	\$ -
BUS SHELTER WITH SIDES AND SEATING		EACH	\$ 8,000.00	\$ -
Notes:				
R/W impacts anticipated on both north and south sides				
Possible utility impacts to existing utility poles on north side of roadway				

SUBTOTAL	\$ 146,158
8% MOBILIZATION	\$ 11,693
25% CONTINGENCY	\$ 36,540
15% CONSTR. ENGR & INSPECTION	\$ 21,924
SUBTOTAL	\$ 216,314
23% SURVEY & DESIGN COSTS	\$ 49,752
UTILITIES	See Notes Above for anticipated impacts
RIGHT-OF-WAY ESTIMATE	
TOTAL (rounded)	\$ 266,100

Pine Grove Mills Mobility Study

Project ID N/A

Pine Grove Mills Mobility Study Western Pine Grove Road Shared Use Path (Ross Street to Ferguson Township Elementary School)

Description	Quantity	Unit of Measure	Unit Cost	Total Cost
CLASS 1 EXCAVATION	986	CY	\$ 19.00	\$ 18,734.00
CLASS 1B EXCAVATION	18	CY	\$ 72.00	\$ 1,296.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH	2411	SY	\$ 21.00	\$ 50,631.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	125	SY	\$ 19.00	\$ 2,375.00
SUPERPAVE ASPHALT MIXTURE DESIGN, FLEXIBLE BASE REPLACEMENT, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH		SY	\$ 19.00	\$ -
SUBBASE 6" DEPTH (NO. 2A)	2536	SY	\$ 12.00	\$ 30,432.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-G	125	SY	\$ 18.00	\$ 2,250.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L	2411	SY	\$ 11.00	\$ 26,521.00
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, SRL-G		TON	\$ 183.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, < 0.3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	125	SY	\$ 14.00	\$ 1,750.00
MILLING OF ASPHALT PAVEMENT SURFACE, 1 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR		SY	\$ 6.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH		SY	\$ 97.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 8" DEPTH		SY	\$ 138.00	\$ -
18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		LF	\$ 113.00	\$ -
TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		SET	\$ 1,510.00	\$ -
TYPE M CONCRETE TOP UNIT AND ADA COMPLIANT GRATE		SET	\$ 1,500.00	\$ -
STANDARD INLET BOX, HEIGHT < />= 10'		EACH	\$ 2,630.00	\$ -
GRADE ADJUSTMENT OF EXISTING INLETS		SET	\$ 1,220.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT		LF	\$ 57.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT, INCLUDING REMOVAL OF EXISTING CURB	20	LF	\$ 61.00	\$ 1,220.00
PLAIN CONCRETE MOUNTABLE CURB, TYPE A		LF	\$ 39.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB		LF	\$ 53.00	\$ -
CEMENT CONCRETE SIDEWALK	47	SY	\$ 136.00	\$ 6,392.00
DETECTABLE WARNING SURFACE, POLYMER COMPOSITE	110	SF	\$ 42.00	\$ 4,620.00
POST MOUNTED SIGNS, TYPE B	30.50	SF	\$ 53.00	\$ 1,616.50
POST MOUNTED SIGNS, TYPE F	6	SF	\$ 23.00	\$ 138.00
INTERNALLY ILLUMINATED SIGN		EACH	\$ 7,520.00	\$ -
FLASHING WARNING SIGNS		EACH	\$ 7,520.00	\$ -
RRFB Assembly with Ped Push Button (Single Sided)		EACH	\$ 6,460.00	\$ -
RRFB Assembly with Ped Push Button (Double Sided)	2	EACH	\$ 7,040.00	\$ 14,080.00
Permanent Speed Display Sign		EACH	\$ 8,080.00	\$ -
TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		EACH	\$ 21,480.00	\$ -
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	150	LF	\$ 12.00	\$ 1,800.00
24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 15.00	\$ -
12" WHITE HOT THERMOPLASTIC TRANSVERSE PAVEMENT MARKINGS		LF	\$ 21.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "STOP", 8' - 0"		EACH	\$ 301.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "X ING", 8' - 0"		EACH	\$ 271.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "PED", 8' - 0"		EACH	\$ 200.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "AHEAD", 8' - 0"		EACH	\$ 397.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "YIELD LINE", 24" X 36" TRIANGLE, (MIN 4 TRIANGLES PER LINE)	22	LF	\$ 36.00	\$ 792.00
4" WHITE WATERBORNE PAVEMENT MARKINGS		LF	\$ 0.20	\$ -
4" YELLOW WATERBORNE PAVEMENT MARKINGS		LF	\$ 0.54	\$ -
GAZEBO		EACH	\$ 2,500.00	\$ -
BIKE RACK, 8 BIKES, SINGLE SIDED		EACH	\$ 600.00	\$ -
BUS SHELTER WITH SIDES AND SEATING		EACH	\$ 8,000.00	\$ -

Notes:
 Significant R/W impacts anticipated to properties on northern side of roadway
 Significant utility impacts to existing utility poles on north side of roadway
 Additional drainage impacts to drainage ditch on the northern side, east of Plainfield Road

SUBTOTAL	\$ 164,648
8% MOBILIZATION	\$ 13,172
25% CONTINGENCY	\$ 41,162
15% CONSTR. ENGR & INSPECTION	\$ 24,697
SUBTOTAL	\$ 243,678
23% SURVEY & DESIGN COSTS	\$ 56,046
UTILITIES	See Notes Above for anticipated impacts
RIGHT-OF-WAY ESTIMATE	See Notes Above for anticipated impacts
TOTAL (rounded)	\$ 299,800

Pine Grove Mills Mobility Study

Project ID 9

Pine Grove Mills Mobility Study Water Street Sidewalk - Pine Grove Road to Chestnut Street

Description	Quantity	Unit of Measure	Unit Cost	Total Cost
CLASS 1 EXCAVATION		CY	\$ 19.00	\$ -
CLASS 1B EXCAVATION	124	CY	\$ 72.00	\$ 8,928.00
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH		SY	\$ 21.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH		SY	\$ 19.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, FLEXIBLE BASE REPLACEMENT, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH		SY	\$ 19.00	\$ -
SUBBASE 6" DEPTH (NO. 2A)		SY	\$ 12.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-G		SY	\$ 18.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L		SY	\$ 11.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, SRL-G		TON	\$ 183.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, < 0.3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH		SY	\$ 14.00	\$ -
MILLING OF ASPHALT PAVEMENT SURFACE, 1 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR		SY	\$ 6.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH		SY	\$ 97.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 8" DEPTH		SY	\$ 138.00	\$ -
18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		LF	\$ 113.00	\$ -
TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		SET	\$ 1,510.00	\$ -
TYPE M CONCRETE TOP UNIT AND ADA COMPLIANT GRATE		SET	\$ 1,500.00	\$ -
STANDARD INLET BOX, HEIGHT < />= 10'		EACH	\$ 2,630.00	\$ -
GRADE ADJUSTMENT OF EXISTING INLETS		SET	\$ 1,220.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT		LF	\$ 57.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT, INCLUDING REMOVAL OF EXISTING CURB		LF	\$ 61.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, TYPE A		LF	\$ 39.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB		LF	\$ 53.00	\$ -
CEMENT CONCRETE SIDEWALK	447	SY	\$ 136.00	\$ 60,792.00
DETECTABLE WARNING SURFACE, POLYMER COMPOSITE	60	SF	\$ 42.00	\$ 2,520.00
POST MOUNTED SIGNS, TYPE B		SF	\$ 53.00	\$ -
POST MOUNTED SIGNS, TYPE F		SF	\$ 23.00	\$ -
INTERNALLY ILLUMINATED SIGN		EACH	\$ 7,520.00	\$ -
FLASHING WARNING SIGNS		EACH	\$ 7,520.00	\$ -
RRFB Assembly with Ped Push Button (Single Sided)		EACH	\$ 6,460.00	\$ -
RRFB Assembly with Ped Push Button (Double Sided)		EACH	\$ 7,040.00	\$ -
Permanent Speed Display Sign		EACH	\$ 8,080.00	\$ -
TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		EACH	\$ 21,480.00	\$ -
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	48	LF	\$ 12.00	\$ 576.00
24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 15.00	\$ -
12" WHITE HOT THERMOPLASTIC TRANSVERSE PAVEMENT MARKINGS		LF	\$ 21.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "STOP", 8' - 0"		EACH	\$ 301.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "X ING", 8' - 0"		EACH	\$ 271.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "PED", 8' - 0"		EACH	\$ 200.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "AHEAD", 8' - 0"		EACH	\$ 397.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "YIELD LINE", 24" X 36" TRIANGLE, (MIN 4 TRIANGLES PER LINE)		LF	\$ 36.00	\$ -
4" WHITE WATERBORNE PAVEMENT MARKINGS		LF	\$ 0.20	\$ -
4" YELLOW WATERBORNE PAVEMENT MARKINGS		LF	\$ 0.54	\$ -
GAZEBO		EACH	\$ 2,500.00	\$ -
BIKE RACK, 8 BIKES, SINGLE SIDED		EACH	\$ 600.00	\$ -
BUS SHELTER WITH SIDES AND SEATING		EACH	\$ 8,000.00	\$ -
Notes:				
Minimalistic implementation (no curb work, trees, etc.)				

SUBTOTAL	\$ 72,816
8% MOBILIZATION	\$ 5,825
25% CONTINGENCY	\$ 18,204
15% CONSTR. ENGR & INSPECTION	\$ 10,922
SUBTOTAL	\$ 107,768
23% SURVEY & DESIGN COSTS	\$ 24,787
UTILITIES	See Notes Above for anticipated impacts
RIGHT-OF-WAY ESTIMATE	See Notes Above for anticipated impacts
TOTAL (rounded)	\$ 132,600

Pine Grove Mills Mobility Study

Project ID 8

Pine Grove Mills Mobility Study Shared Lane Markings and Signage

Description	Quantity	Unit of Measure	Unit Cost	Total Cost
CLASS 1 EXCAVATION		CY	\$ 19.00	\$ -
CLASS 1B EXCAVATION		CY	\$ 72.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH		SY	\$ 21.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH		SY	\$ 19.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, FLEXIBLE BASE REPLACEMENT, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH		SY	\$ 19.00	\$ -
SUBBASE 6" DEPTH (NO. 2A)		SY	\$ 12.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-G		SY	\$ 18.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L		SY	\$ 11.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, SRL-G		TON	\$ 183.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, < 0.3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH		SY	\$ 14.00	\$ -
MILLING OF ASPHALT PAVEMENT SURFACE, 1 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR		SY	\$ 6.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH		SY	\$ 97.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 8" DEPTH		SY	\$ 138.00	\$ -
18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		LF	\$ 113.00	\$ -
TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		SET	\$ 1,510.00	\$ -
TYPE M CONCRETE TOP UNIT AND ADA COMPLIANT GRATE		SET	\$ 1,500.00	\$ -
STANDARD INLET BOX, HEIGHT < />= 10'		EACH	\$ 2,630.00	\$ -
GRADE ADJUSTMENT OF EXISTING INLETS		SET	\$ 1,220.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT		LF	\$ 57.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT, INCLUDING REMOVAL OF EXISTING CURB		LF	\$ 61.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, TYPE A		LF	\$ 39.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB		LF	\$ 53.00	\$ -
CEMENT CONCRETE SIDEWALK		SY	\$ 136.00	\$ -
DETECTABLE WARNING SURFACE, POLYMER COMPOSITE		SF	\$ 42.00	\$ -
POST MOUNTED SIGNS, TYPE B	162.50	SF	\$ 53.00	\$ 8,612.50
POST MOUNTED SIGNS, TYPE F		SF	\$ 23.00	\$ -
INTERNALLY ILLUMINATED SIGN		EACH	\$ 7,520.00	\$ -
FLASHING WARNING SIGNS		EACH	\$ 7,520.00	\$ -
RRFB Assembly with Ped Push Button (Single Sided)		EACH	\$ 6,460.00	\$ -
RRFB Assembly with Ped Push Button (Double Sided)		EACH	\$ 7,040.00	\$ -
Permanent Speed Display Sign		EACH	\$ 8,080.00	\$ -
TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		EACH	\$ 21,480.00	\$ -
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 12.00	\$ -
24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 15.00	\$ -
12" WHITE HOT THERMOPLASTIC TRANSVERSE PAVEMENT MARKINGS		LF	\$ 21.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "STOP", 8' - 0"		EACH	\$ 301.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "X ING", 8' - 0"		EACH	\$ 271.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "PED", 8' - 0"		EACH	\$ 200.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "AHEAD", 8' - 0"		EACH	\$ 397.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "YIELD LINE", 24" X 36" TRIANGLE, (MIN 4 TRIANGLES PER LINE)		LF	\$ 36.00	\$ -
4" WHITE WATERBORNE PAVEMENT MARKINGS		LF	\$ 0.20	\$ -
4" YELLOW WATERBORNE PAVEMENT MARKINGS		LF	\$ 0.54	\$ -
GAZEBO		EACH	\$ 2,500.00	\$ -
BIKE RACK, 8 BIKES, SINGLE SIDED		EACH	\$ 600.00	\$ -
BUS SHELTER WITH SIDES AND SEATING		EACH	\$ 8,000.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, SHARED LANE MARKING	100	EACH	\$ 340.00	\$ 34,000.00
Notes: Assumes thermoplastic sharrows placed every 100 feet Assumes signage (optional)				

SUBTOTAL	\$ 42,613
8% MOBILIZATION	\$ 3,409
25% CONTINGENCY	\$ 10,653
15% CONSTR. ENGR & INSPECTION	\$ 6,392
SUBTOTAL	\$ 63,067
23% SURVEY & DESIGN COSTS	\$ 14,505
UTILITIES	See Notes Above for anticipated impacts
RIGHT-OF-WAY ESTIMATE	
TOTAL (rounded)	\$ 77,600

Pine Grove Mills Mobility Study

Project ID
11

Pine Grove Mills Mobility Study Shared Lane Markings and Signage

Description	Quantity	Unit of Measure	Unit Cost	Total Cost
CLASS 1 EXCAVATION		CY	\$ 19.00	\$ -
CLASS 1B EXCAVATION		CY	\$ 72.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH		SY	\$ 21.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BASE COURSE, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH		SY	\$ 19.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, FLEXIBLE BASE REPLACEMENT, PG 64S-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4" DEPTH		SY	\$ 19.00	\$ -
SUBBASE 6" DEPTH (NO. 2A)		SY	\$ 12.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-G		SY	\$ 18.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L		SY	\$ 11.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64S-22, < 0.3 MILLION ESALS, 9.5 MM MIX, SRL-G		TON	\$ 183.00	\$ -
SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64S-22, < 0.3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH		SY	\$ 14.00	\$ -
MILLING OF ASPHALT PAVEMENT SURFACE, 1 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR		SY	\$ 6.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 4" DEPTH		SY	\$ 97.00	\$ -
PLAIN CEMENT CONCRETE PAVEMENT, 8" DEPTH		SY	\$ 138.00	\$ -
18" THERMOPLASTIC PIPE, GROUP I, 15'-1.5' FILL		LF	\$ 113.00	\$ -
TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		SET	\$ 1,510.00	\$ -
TYPE M CONCRETE TOP UNIT AND ADA COMPLIANT GRATE		SET	\$ 1,500.00	\$ -
STANDARD INLET BOX, HEIGHT < />= 10'		EACH	\$ 2,630.00	\$ -
GRADE ADJUSTMENT OF EXISTING INLETS		SET	\$ 1,220.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT		LF	\$ 57.00	\$ -
PLAIN CEMENT CONCRETE CURB, 8" HEIGHT, INCLUDING REMOVAL OF EXISTING CURB		LF	\$ 61.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, TYPE A		LF	\$ 39.00	\$ -
PLAIN CONCRETE MOUNTABLE CURB, ROUNDABOUT TRUCK APRON CURB		LF	\$ 53.00	\$ -
CEMENT CONCRETE SIDEWALK		SY	\$ 136.00	\$ -
DETECTABLE WARNING SURFACE, POLYMER COMPOSITE		SF	\$ 42.00	\$ -
POST MOUNTED SIGNS, TYPE B	80.00	SF	\$ 53.00	\$ 4,240.00
POST MOUNTED SIGNS, TYPE F		SF	\$ 23.00	\$ -
INTERNALLY ILLUMINATED SIGN		EACH	\$ 7,520.00	\$ -
FLASHING WARNING SIGNS		EACH	\$ 7,520.00	\$ -
RRFB Assembly with Ped Push Button (Single Sided)		EACH	\$ 6,460.00	\$ -
RRFB Assembly with Ped Push Button (Double Sided)		EACH	\$ 7,040.00	\$ -
Permanent Speed Display Sign		EACH	\$ 8,080.00	\$ -
TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		EACH	\$ 21,480.00	\$ -
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 12.00	\$ -
24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS		LF	\$ 15.00	\$ -
12" WHITE HOT THERMOPLASTIC TRANSVERSE PAVEMENT MARKINGS		LF	\$ 21.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "STOP", 8' - 0"		EACH	\$ 301.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "X ING", 8' - 0"		EACH	\$ 271.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "PED", 8' - 0"		EACH	\$ 200.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "AHEAD", 8' - 0"		EACH	\$ 397.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, "YIELD LINE", 24" X 36" TRIANGLE, (MIN 4 TRIANGLES PER LINE)		LF	\$ 36.00	\$ -
4" WHITE WATERBORNE PAVEMENT MARKINGS	1500	LF	\$ 0.20	\$ 300.00
4" YELLOW WATERBORNE PAVEMENT MARKINGS		LF	\$ 0.54	\$ -
GAZEBO		EACH	\$ 2,500.00	\$ -
BIKE RACK, 8 BIKES, SINGLE SIDED		EACH	\$ 600.00	\$ -
BUS SHELTER WITH SIDES AND SEATING		EACH	\$ 8,000.00	\$ -
WHITE HOT THERMOPLASTIC LEGEND, SHARED LANE MARKING		EACH	\$ 340.00	\$ -
Notes:				
Assumes marking of 90 spaces (inventory)				

SUBTOTAL	\$ 4,540
8% MOBILIZATION	\$ 363
25% CONTINGENCY	\$ 1,135
15% CONSTR. ENGR & INSPECTION	\$ 681
SUBTOTAL	\$ 6,719
23% SURVEY & DESIGN COSTS	\$ 1,545
UTILITIES	See Notes Above for anticipated impacts
RIGHT-OF-WAY ESTIMATE	
TOTAL (rounded)	\$ 8,300

TA Grant Application Budget Estimate for Pine Grove Mills (Ferguson Township) Bike and Pedestrian Improvements

Engineering

Description				Quantity	Unit	Unit Price	Extended Price
Survey, Preliminary, Final Engineering				1	LS	\$104,918	\$104,918
							\$104,918

Right of Way

Description				Quantity	Unit	Unit Price	Extended Price
Purchase Sidewalk Easements incl all impacts		0.00		0	AC	\$110,000	\$0
Donated Sidewalk Easements		0.00		0	AC	\$0	\$0
Purchase Temporary Construction Easements		12000		12000	SF	\$1	\$12,000
Donate Temporary Construction Easement		0.00		0	AC	\$0	\$0
Appraisal Waivers		12		12	EA	\$1,000	\$12,000
ROW acquisition services and document preparation		1		1	LS	\$6,000	\$6,000
Legal and Recording		12		12	EA	\$250	\$3,000
							\$33,000

Utility

Description				Quantity	Unit	Unit Price	Extended Price
Adjust curb stop				2	LS	\$1,000	\$2,000
Adjust service laterals				0	LS	\$1,500	\$0
							\$2,000

Construction

ECMS Item No.	Description	Water St (SR0026)	Pine Grove Rd (SR0045)	Nixon Road (T-334)	Qty	Unit	Unit Cost	Item Cost
0201-0001	Clearing and Grubbing				1	LS	\$12,000	\$12,000
0203-0001	Class 1 Excavation	88	204		292	CY	\$30	\$8,760
0203-0004	Class 1B excavation	82			82	CY	\$75	\$6,181
0204-0150	Class 4 excavation	124			124	CY	\$60	\$7,467
0313-0422	Superpave Asphalt Mixture Design, Base Course, PG 64S-22, 0.3<3Million EASLs, 25.0 MM Mix, 4" Depth	130	1833		1963	SY	\$35	\$68,717
0413-0246	Superpave Asphalt Mixture Design, Wearing Course, PG 64S-22, 0.3<3Million EASLs, 9.5 MM Mix, 1 1/2" Depth, SRL-G	130	3667		3797	SY	\$12	\$45,560
0491-0012	Milling of Asphalt Pavement Surface, 1 1/2" Depth, Milled Material Retained by Contractor		3667		3667	SY	\$25	\$91,667
0601-0353	18" Thermoplastic Pipe, Group III, 8'-2' Fill	200			200	LF	\$100	\$20,000
0605-2711	Type C Concrete Top Unit and Bicycle Safe Gate	1			1	EA	\$1,500	\$1,500
0605-2731	Type M Concrete Top Unit and Bicycle Safe Gate	1			1	EA	\$1,500	\$1,500
0605-2850	Standard Inlet Box, Height <= 10'	2			2	EA	\$3,500	\$7,000
0608-0001	Mobilization				1	LS	\$14,033	\$14,033
0630-0031	Plain Cement Concrete Curb, 6" Height	890			890	LF	\$55	\$48,950
0676-0001	Cement Concrete Sidewalk	356			356	SY	\$140	\$49,778
0676-0003	Sidewalks and Driveway Aprons Through Driveways	40			40	SY	\$150	\$6,000
0695-0004	Detectable Warning Surface, Polymer Composite	60			60	SF	\$40	\$2,400
0802-0001	Topsoil Furnished and Placed	54	51		105	CY	\$75	\$7,899
4804-0001	Seeding and Soil Supplements - Formula B, Including Mulch	40	147		186	LB	\$5	\$931

West College Avenue Streetscape - Corl to Buckout - TAP Grant Application Cost Estimate

0808-0100	Tree	20			20	EA	\$500	\$10,000
0810-0050	Selective Tree Removal				1	LS	\$10,000	\$10,000
0901-0001	Maintenance and Protection of Traffic During Construction				1	LS	\$46,778	\$46,778
0931-0003	Post Mounted Signs, Type B, Steel Square Post		72		72	SF	\$35	\$2,520
0954-0011	2" Conduit			50	50	LF	\$5	\$250
0954-0101	Signal Cable, 12 AWG, 3 Conductor			500	500	LF	\$5	\$2,500
0954-0302	Junction Box, JB-27			2	2	EA	\$1,000	\$2,000
0954-0500	Directional Boring			50	50	LF	\$110	\$5,500
0962-1000	4" White Waterborne Pavement Markings		8250		8250	LF	\$2	\$16,500
0962-1029	White Waterborne Pavement Legend, "Bicycle with Rider", 8'-0" x 4'-0"		48		48	EA	\$150	\$7,200
9000-0001	Rectangular Rapid Flashing Beacon				1	LS	\$25,000	\$25,000

SUBTOTAL CONSTRUCTION	\$528,589
INSPECTION at 15% per guidance doc	\$79,288
CONTINGENCY CONSTRUCTION at 10%	\$52,859
INFLATION for 2 years at 3% a year	\$31,715
PennDOT Administrative costs	\$7,000
TOTAL CONSTRUCTION	\$699,452

TOTAL PROJECT	\$839,370
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