Initiatives Towards a Walk and Bike Friendly Community



CDRPC Local Government Planning & Zoning Workshop October 4, 2012





Sustainable Bethlehem



Agenda



- Bethlehem Bicycle and Pedestrian Committee Background
- Bethlehem Bicycle & Pedestrian Vision, Mission, Goals
- Committee Activities
- Next Steps
- Questions/Comments





2005 Comprehensive Plan Mobility Goal

"Improve mobility—the ability of people, regardless of age and status, to engage in desired activities at moderate cost to themselves and society—throughout the town. This includes strategic investments in needed highway infrastructure, improved access to public transportation and development that is supportive of public transportation, and significant enhancements to the safety and attractiveness of non-motorized modes of travel."



- Maintain and **improve walkability** within the hamlets.
- Provide adequate bicycle facilities and establish signed system of routes throughout the Town
- Maintain and enhance pedestrian connections within neighborhoods, and between neighborhoods and hamlet centers.
- Consider opportunities to provide paved shoulders on all collector and arterial roads, where sidewalks are not provided.
- Establish Delaware Avenue as a pedestrian friendly, small-scale commercial corridor.



March 2009 – Committee Established as PaTHs 4 Bethlehem
 Pathways to Hamlets, Homes and Healthy Hearts

- •November 2010 Committee Formally Established through Town Board Resolution
 - •11 Member Committee
 - •Town Residents

•Planning, Engineering, Parks & Recreation, Highway, and Police Department representatives

•Bethlehem Central School District Liaison

•Monthly meetings – 4th Tuesday of the month at 6:30PM in Town Hall Room 101



<u>Vision</u>

Residents and visitors in Bethlehem live and work in a sustainable community that has a diversity of transportation options, and they routinely choose bicycling and walking for safe and efficient transportation and as a healthy option for recreation.

Mission

The Bethlehem Bicycle and Pedestrian Committee is a resource that effectively uses a 5E approach (Engineering, Education & Enforcement, and Engagement & Encouragement) to advise the Town, educate the community, and advocate for opportunities to improve mobility and connectivity for bicyclists and pedestrians.



<u>Goals</u>

Engineering

Bethlehem offers safe and efficient infrastructure to ensure accessibility, connectivity, and mobility for bicyclists and pedestrians.

Education & Enforcement

The Bethlehem community is aware of and actively exhibits safe bicycling, walking, and driving behavior. A share the road approach is respected among all travel modes and reinforced through enforcement of traffic laws.

Engagement & Encouragement

The Bethlehem community is utilizing its bicycle and pedestrian network to the full extent and is empowered to drive new programs in the Town.



Committee Activities

- Complete Streets Resolution August 2009
- Town Bike Expo Facilitate Bicycle Skills Stations
- Bicycle and Pedestrian Priority Network
- Evaluation Process for New Pathway Investment
- Bicycle and Pedestrian Safety Tip Palm Cards
- CDTA/CDTC Bike Rack Program 23 Bicycle Racks



RESOLUTION NO. 30

TOWN BOARD

TOWN OF BETHLEHEM

RESOLUTION

COMPLETE STREETS

WHEREAS, a goal of the Town of Bethlehem Comprehensive Plan is to improve mobility – the ability of people, regardless of age and status, to engage in desired activities throughout the Town; and

WHEREAS, the Town of Bethlehem Comprehensive Plan recommends maintaining and enhancing bicycle and pedestrian connections within neighborhoods, and between neighborhoods and hamlet centers;

WHEREAS, the Town of Bethlehem has established a pathways committee (PaTHs 4 Bethlehem) to explore bicycle and pedestrian facility connections and address issues; and

WHEREAS, bicycling and walking are important forms of transportation and recreation in our community; and

WHEREAS, bicycling and walking contribute to health, fitness, neighborhood vitality, social interaction, and economic development; and

WHEREAS, the full integration of all modes in the design of streets and highways will increase the capacity and efficiency of the road network, reduce traffic congestion by improving mobility options, limit greenhouse gas emissions, and improve the general quality of life; and

WHEREAS, educating the public about safety, health and mobility are part of being a quality community; and

WHEREAS, Complete Streets are defined as facilities that are designed and operated to enable safe and efficient access for all users. Persons with disabilities, pedestrians, bicyclists, motorists and transit riders are able to safely and efficiently move along and across a complete street.

NOW, THEREFORE, BE IT RESOLVED, the intent of the Town of Bethlehem Complete Streets Policy is to recognize bicyclists and pedestrians as equally important as motorists in the planning and design of all new street construction and street reconstruction undertaken by the Town.

BE IT FURTHER RESOLVED, it is also the intent of the Town of Bethlehem Complete Streets Policy to recognize that local Town streets with low vehicle volumes and slow travel speeds safely and efficiently accommodate bicyclists and pedestrians. However, principal Town roads that are characterized as having high vehicle volumes and high travel speeds, and are important for bicycle and pedestrian travel to access and connect to destinations in and adjacent to the Town, shall be considered for Complete Streets treatment.

Bethlehem Complete Streets Resolution

-Adopted August 2009

-Zoning Law 2012



Town Bike Expo – Bicycle Skills Stations

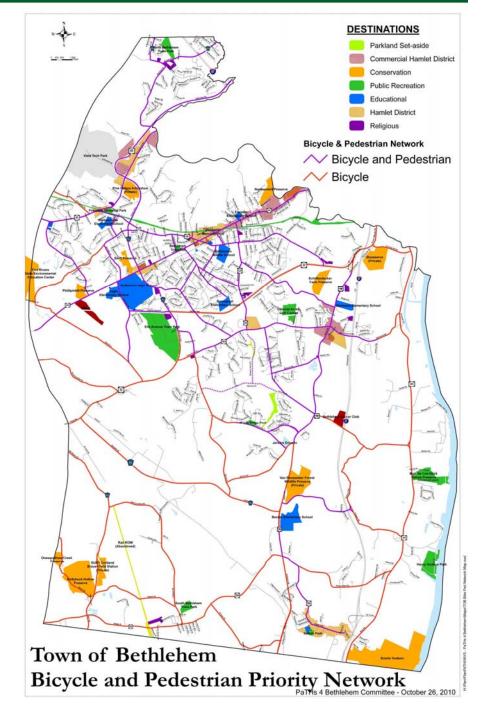




Bicycle and Pedestrian Priority Network

- ✓ <u>Used for:</u>
 - Grant Applications
 - Land Use Review –
 Site Plan
 - Evaluation Process

Bethlehem Bicycle and Pedestrian Committee





Evaluation Process for New Pathway Investment





Town of Bethlehem Evaluation Process for New Pathway Investment *Procedures /Users Guide*





Evaluation Process for New Pathway Investment

<u>STEP 1:</u>	LOCATED ON PEDESTRIAN AND BICYCLE NETWORK MAP			
SCREENING	RECOMMENDED BY TOWN PLAN OR STUDY			
STEP 2:	CALCULATE ESTIMATED PROJECT COST			
COST	\$\$\$\$			
STEP 3: BENEFITS	COMPLETE BENEFITS EVALUATION SAFETY •VOLUME •SPEED •CROSSINGS & INTERSECTIONS •ACCESS CONFLICTS •LACK OF EXISTING FACILITIES DESTINATIONS		SCORE B	ATE TOTAL ASED ON SCORING TRIX
<u>Step 5:</u> Leverage Opportunities	POTENTIAL FOR PEDESTRIAN/BICYCLE ACTIVITY •POPULATION DENSITY •POTENTIAL USERS GEOGRAPHIC DISTRIBUTION <u>IDENTIFY TOWN SHARE</u> FEDERAL/STATE GRANT PROGRAM DEVELOPER SHARE	Y	SCO BASED C SHAR REVISE	e cost Ore On town E and E total Ore



<u>STEP 3:</u> COMPLETE BENEFITS EVALUATION TABLE

Weight

Bic

Safi This cont for a bioy char num ped vehi inte lack acco well

> lf pr road class func

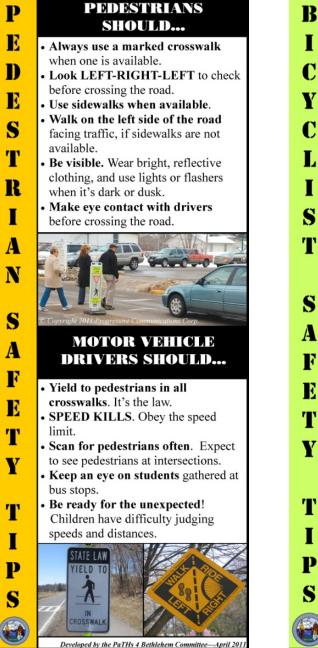
39%

- Safety
- Destinations
- Potential for Pedestrian/Bicycle Activity
- Geographic
 Distribution

	BENEFITS EVALUATION	TABLE			
PROJECT NAME: DRAFT					
			-		
Criteria (cle and Pedestrian Priority_ work Map or Town Plan/Study	Measure Review map to determine if proposed project is located on the bicycle and pedestrian network and/or if project is recommended in Town Plan/Study. If either is yes, proceed to additional evaluation criteria listed below.	Rating Yes No Project Is recommended in Town Plan/Study (BONUS 10 points)	Response	Points	
ety alement looks at saveral factors that ribute to roadway safety (potential cidents batwaen vehicles and alisty/padastrians). Four roadway sctaristics contribute to the potential bar and saverity of bicycle and strian accidents. They include aular volume, speed, crossings and reactions, and access conflict. The of existing pedestrian and bicycle mmodations contributes to safety, as yet boundaries incorporate multiple	Volume Roadway volume directly relates to the users exposure, and affects the quality of the roadway environment for pedestrian and bicyclists, especially when proper accommodations for these users are absent. Review Town of Bethlehem Roadway Functional Classification Map to determine the functional classification of the roadway proposed for a bicycle and pedestrian improvement project. (if evaluator perceives that roadway function does not reflect typical AADT, review AADT to apply points).	Arterial (principal and minor) - AADT>= 8000 (7 points) Urban Collector - AADT2000 - 7399 (5 points) Rural Collector - AADT500 - 1999 (3 points) Local Residential - AADT <= 1999 (0 point)			
yactobalan an Arantonal Waxa and functional Floations, utilize higher speed and Janai class floation to apply points.	Speed Speed is directly related to severity of the acddent. Review the posted speed of the roadway proposed for a bicycle and pedastrian improvement project. (if evaluator perceives that operating speed does not reflect posted speed, review operating speed to apply points). WEIGHT: 13%	Speed 50+mph (5 points) Speed 31 - 49 mph (3 points) Speed 31 - 40 mph (1 points) Speed 25 - 30 mph (0 point)	мрн		
	Crossings and Intersections The quantity and complexity of a readway crossing directly relates to exposure for potential accidents. Review the number, and complexity of the roadway crossing(s) in the project area. (Complex crossings may include major prindpal arterials, such as Delmar Bypass, Route BW, active astrond a relificad). Do not include intersections at the project boundaries. Commercial driveways that are accessed by traffic signals are treated as intersections.	Intersection crossed. (max 9 points + complex intersections)	INTERSECTIONS		
	Access Conflicts High volume, multiple driveways create a greater exposure and risk for accidents to the pedestrian and bicyclist. Review the access conflict loctions within the project area. If the project is located in a commercial Zoning District (General Commercial, Heavy Industrial, Rural Light Industrial, MCD) only account for commercial driveways. If the project is located in a residential Zoning District (Reas. A, B, C, Cora Readential, Rural, Residential Large Lot, Multifamily, PDD) only account for residential driveways. If the project is located in a mobed use Zoning District (Hannels, Commercial Hamlet, Rural Hamlet, Rural Riverfont) or traverses several Districts review the predominate land use in the project came rolad driveways that are accessed by troffic signals are treated as intersections.	Commercial Driveways Crossed 16+ Driveways (6 points) 11 - 15 Driveways (4 points) 6 - 10 Driveways (2 points) 1 - 5 Driveways (1 points) Residential Driveways (Crossed 50+ Driveways (6 points) 0 - 49 Driveways (6 points)	DRIVEWAYS		
	Lack of Existing Pedestrian and Bicycle Accommodations Properly designed pedestrian and bicycle	30 – 39 Driveways (2 points) 20 – 29 Driveways (1 points) 20 – 29 Driveways (1 points) 219 Driveways (0 points) No Padestrian/Bicycle Accommodations (12 points) Some Padestrian/Bicycle Accommodations bull to design standards (9 points) Same Padestrian/Bicycle Accommodations bull to design standards (9 points) Full Pad/Dice Accommodations bull to design standards (9 points)	DRIVEWAYS		



Bicycle and Pedestrian Safety Tip Palm Cards



Bethlehem Bicycle and Pedestrian Committee





CDTC/CDTA Bike Rack Program - 23 Bike Racks Awarded





NYSERDA Grant – 2011/2012

Bethlehem Energy Management, Greenhouse Gas Emissions Inventory, and Bicycle/Pedestrian Program Initiatives







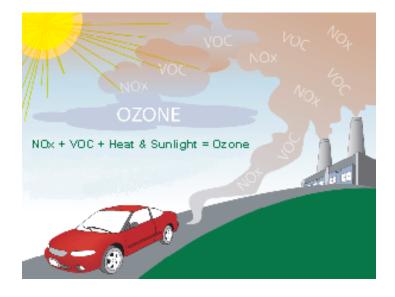
Benefits of a Bicycle/Ped Program

- Reduce GHG emissions and VMTs
 - Mitigate climate change
 - Reduce congestion



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- Reduce GHG emissions and VMTs
 - Mitigate climate change
 - Reduce congestion
- Improve Air Quality
 - Motor vehicle exhaust puts harmful chemicals in our air and contributes to ground-level ozone





Benefits of a Bicycle/Ped Program

- Reduce GHG emissions and VMTs
 - Mitigate climate change
 - Reduce congestion
- Improve Air Quality
 - Motor vehicle exhaust puts harmful chemicals in our air and contributes to ground-level ozone
- Public Health Benefits
 - Bicycle riding is a safe, low-impact method of exercise for all ages and abilities
 - It is a great cardiovascular exercise and can help fight the national obesity epidemic
 - Reduces emissions that exacerbate asthma and other respiratory diseases



NYSERDA Grant – Bicycle and Pedestrian Initiatives

- Sustainable Bethlehem Approach
- Bicycle Month Event Preparation Guide
- Annual Event Calendar
- League of American Bicyclists Traffic Skills 101 Course
- Walk and Bicycle Friendly Community Applications
- Bike Route Pilot Project
- Bicycle Prioritization Projects with Linear Foot Costs
- Bicycle and Pedestrian Infrastructure Maintenance Manual
- Community Workshop



Sustainable Bethlehem Approach



www.sustainablebethlehem.org



Bicycle Month Event Preparation Guide

2012

National Bike Month Event Implementation Guide



Prepared for the Town of Bethlehem by VHB Engineering, Surveying and Landscape Architecture, P.C. (VHB)



League of American Bicyclists Traffic Skills 101

Course











Walk and Bicycle Friendly Community Applications

Walk Friendly Communities

COMMUNITY REPORT CARD AND FEEDBACK:

Bethlehem, New York April 4, 2012

Introduction

Thank you for submitting an application to the Walk Friendly Communities program on behalf of Bethlehem, New Yorkl A Walk Friendly Community is a city or town that has shown a commitment to improving walkability and pedestrian safety through comprehensive programs, plans and policies.

Each application was evaluated by at least three reviewers to provide a fair assessment of your community and provide technical feedback on how to improve the walkability of your community.

After thorough consideration of your application, we are unable to designate Bethlehem, New York, as a Walk Friendly Community. However, there were several areas that we were particularly impressed with. including:

- The town's Complete Streets Resolution creates a strong foundation from which Bethlehem can address the safety of all users and leverage more funding for pedestrian infrastructure and improvements.
- Bethlehem does a great job pairing education and enforcement through law enforcement training, progressive ticketing and dispersal of safety tip palm cards
- PaTHs 4 Bethlehem plays an important role not only in drawing public input, but also in working with various departments on pedestrian issues.
- The installation of 4 roundabouts with pedestrian islands is a great way to calm traffic and increase safety for pedestrians.

Bethlehem has exhibited a desire to become a community that supports active transportation. The application to the Walk Friendly Communities program is an endorsement of that desire and it is our hope that the feedback and information we provide can help Bethlehem improve in this regard.

We have noted several areas in which your community can improve its policies, programs, and standards. Please continue to build upon this foundation to work to become a Walk Friendly Community. This report card provides detailed feedback on how your community can take its programs and initiatives to the next level; take the time to review the feedback and contact us with any questions.

Page 1 of 10

www.walkfriendly.org

info@walkfriendly.org





Bicycle Friendly Community



Bicycle Friendly Community Evaluation



- Establish a Bicycle Coordinator Position
- Increase the number of arterial and collector roads with wide shoulders and bike lanes
- Formally establish May as Bike Month and host/sponsor or encourage bicycle-themed events
- Develop a Comprehensive Bike Plan for the Town
- Additional Engineering, Education, Encouragement, Enforcement, Evaluation/Planning recommendations (short and long term)



Walk Friendly Community Evaluation

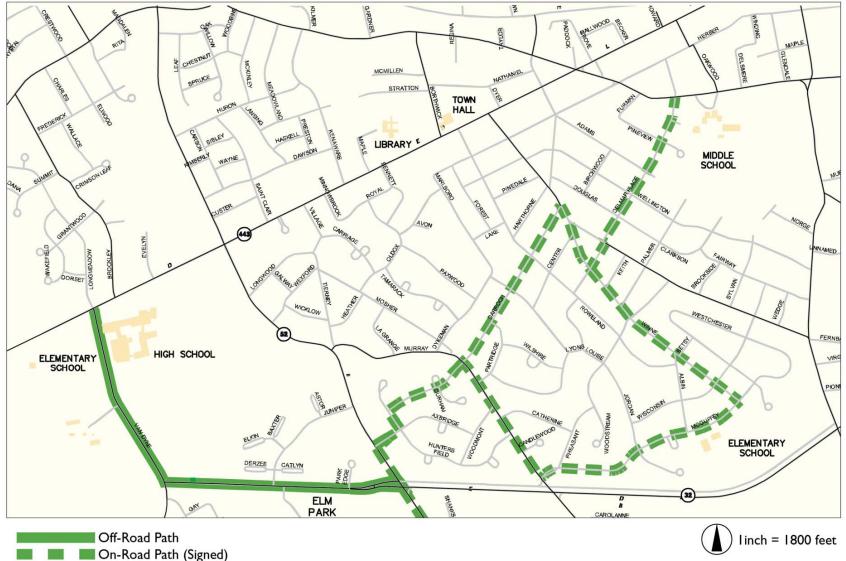


- Establish a Pedestrian Coordinator Position
- Increase the miles and ADA compliance of sidewalks
- Establish a Safe Routes to School program
- Develop a Comprehensive Pedestrian Plan for the Town
- Additional Engineering, Education, Encouragement, Enforcement, Evaluation/Planning recommendations



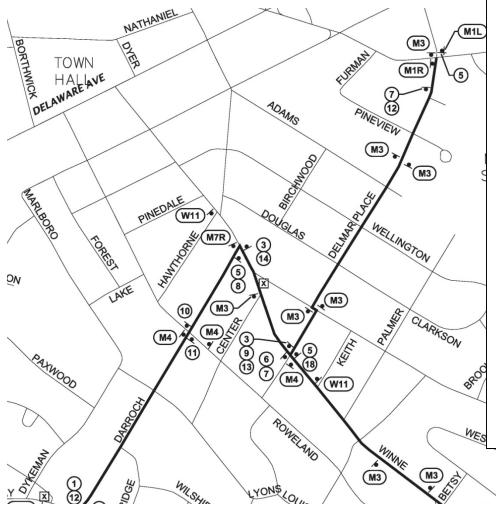
Bike Route Pilot Project

DELMAR BICYCLE ROUTE





Bike Route Pilot Project



SIGN #	LEGEND	DIMENSIONS	QUANTITY	AREA PER SIGN (SF)	TOTAL (SF)
1	H. SCHOOL	6" x 24"	2	1.00	2
2	H. SCHOOL 🜩	6" x 24"	5	1.00	5
3	H. SCHOOL	6" x 24"	4	1.00	4
4	M. SCHOOL	6" x 24"	2	1.00	2
5	M. SCHOOL -	6" x 24"	6	1.00	6
6	M. SCHOOL	6" x 24"	5	1.00	5
7	HAMAGRAEL	6" x 24"	4	1.00	4
8	HAMAGRAEL ->	6" x 24"	3	1.00	3
9	HAMAGRAEL	6" x 24"	2	1.00	2
10	LIBRARY 🜩	6" x 24"	2	1.00	2
11	LIBRARY	6" x 24"	3	1.00	3
12	ELM PARK	6" x 24"	4	1.00	4
13	ELM PARK 🔿	6" x 24"	5	1.00	5
14	ELM PARK	6" x 24"	4	1.00	4
15	MAPLE RIDGE	6" x 24"	2	1.00	2
16	MAPLE RIDGE	6" x 24"	1	1.00	1
17	MAPLE RIDGE 🜩	6" x 24"	1	1.00	1
18	LIBRARY	6" x 24"	1	1.00	1
otal D11-	I Bike Route Sign Assemblie	s: 26			
1-1 M	I Sign Schedule	•			
T. S .					
SIGN #	LEGEND	DIMENSIONS	QUANTITY	AREA PER SIGN (SF)	TOTAL (SF)
M1R	M6-1R	12" x 9"	4	0.75	3

SIGN #	LEGEND	DIMENSIONS	QUANTITY	AREA PER SIGN (SF)	TOTAL (SF)
M1R	M6-1R	12" x 9"	4	0.75	3
M1L	M6-1L	12" x 9"	4	0.75	3
M2R	M6-2R	12" x 9"	0	0.75	0
M3	M6-3	12" x 9"	10	0.75	7.5
M4	M6-4	12" x 9"	6	0.75	4.5
M4-6(END)	M4-6(END)	12" x 6"	0	0.50	0
M6R	M6-6R	12" x 9"	1	0.75	0.75
M6L	M6-6L	12" x 9"	1	0.75	0.75
M7R	M6-7R	12" x 9"	1	0.75	0.75
18/4.4	W11-1	24" x 24"	6	4.00	4.5
W11	W16-1P	18" x 24"	6	3	4.5
Total D11-1	I Bike Route Sign Assemblie	s: 27		· · · · ·	

M6 Arrow Plaque/ Warning Sign Schedule



Bike Route Pilot Project









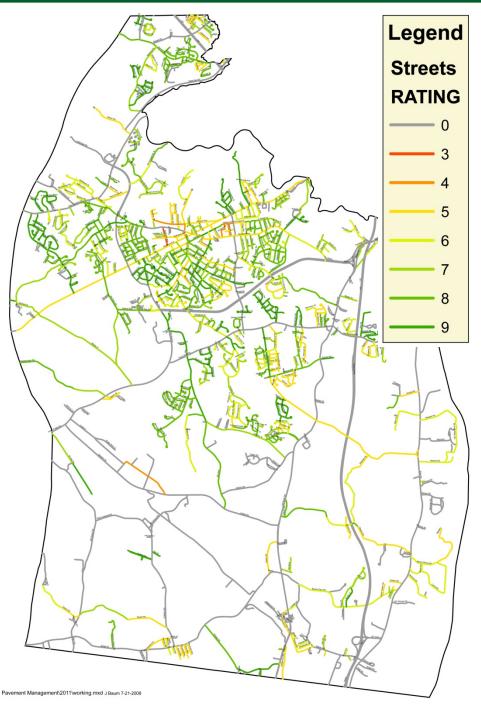
Bicycle and Pedestrian Infrastructure

Maintenance Manual

Surface rating	Visible distress	Examples
9 Excellent	Pavement is new. Does not require maintenance	
8 Excellent	Less than ¹ / ₈ " vertical edge; little or no depressed or raised areas, for cement concrete cracked squares (no more than 2 pieces),no spalling of concrete surface or raveling of bituminous surface, no horizontal separation, or debris/vegetation	
7 Good	Same as 6, but in slightly better condition. Needs routine maintenance – spot patch repairs/crack filling.	
6 Good	Vertical edge between 1%" and 14"; 0-1" raised/depressed; no more 3 cracked squares of cement concrete; less than 25% spalled concrete surface or bituminous surface, less than an inch of horizontal separation; less than 25% covered by debris/vegetation	
5 Fair	Same as 4, but in slightly better condition. Needs preservative fractural sealcoat/joint grinding.	
4 Fair	Vertical edge between ¼" and ½" 1-2" raised/depressed; no more than 4 cracked squares of cement concrete; 25-50% spalled concrete surface or raveled bituminous surface; less 1-1 1/2" of horizontal separation; 25-50% covered by debris/vegetation	
3 Poor	Same as 2, but in slightly better condition. Needs milling and/or structural overlay/patching or replacement of sections full width	
2 Poor	Significant aging. Vertical edge between ½" and ¾"; 2-3" raised/depressed; no more than 5 cracked squares of cement concrete; 50-75% spalled concrete surface or bituminous surface; less 1 1/2-2" of horizontal separation; 50-75% covered by debris/vegetation	
1 Failed	Vertical edge between ¾" and 1"; greater than 3" raised/depressed; more than 5 cracked squares of cement concrete; more than 75% spalled concrete surface or bituminous surface; more than 2" of horizontal separation; more than 75% covered by debris/vegetation	



Bicycle and Pedestrian Infrastructure Maintenance Manual





Community Workshop

- March 12, 2012
- 50 Participants
- Bicycle/Pedestrian
 Characteristics Survey
 - Key Pad Polling



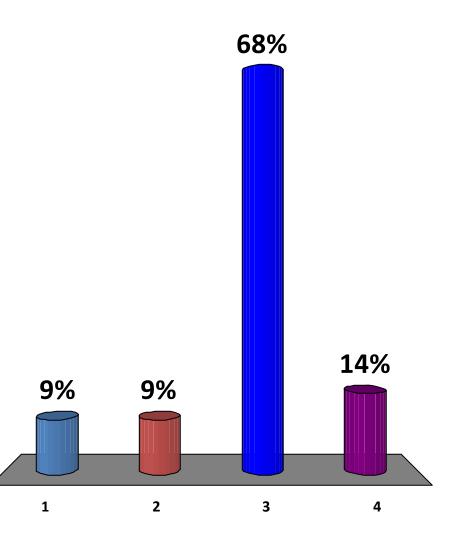






How do you identify yourself with regards to biking?

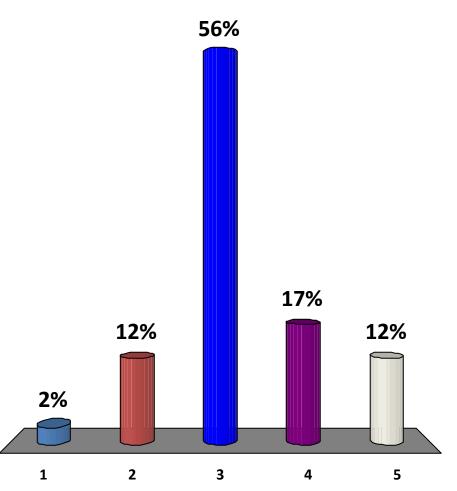
- 1. Commuter
- 2. Daily trips (errands)
- 3. Recreational
- 4. Do not ride a bicycle





What do you consider the greatest barrier to riding a bicycle in Bethlehem?

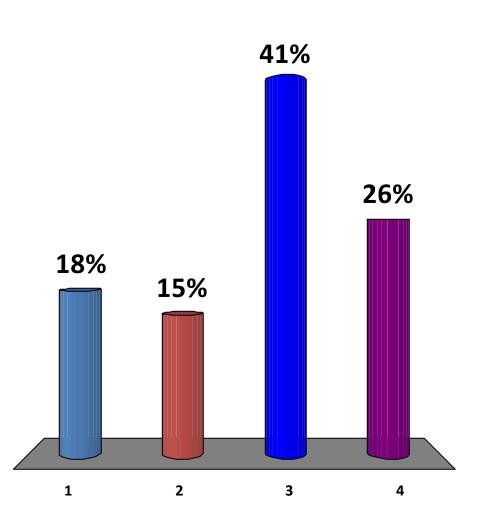
- 1. Lack of marked routes
- 2. Condition of infrastructure
- 3. Safety concerns/being on road with cars
- Lack of bicycle route
 network linking to key
 destinations
- 5. Weather





What do you think is the cause of the most motor vehicle-bicycle accidents in Bethlehem.

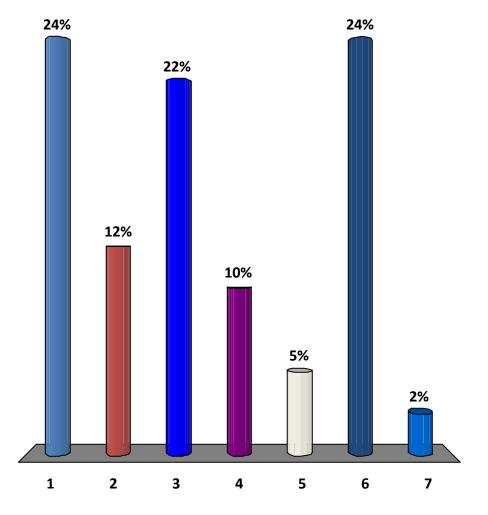
- 1. Drivers speeding
- 2. Drivers inattentiveness
- Bicyclists riding
 against traffic
- 4. Bicyclists listening to music/not paying attention





What do you consider the greatest barrier to walking more in Bethlehem?

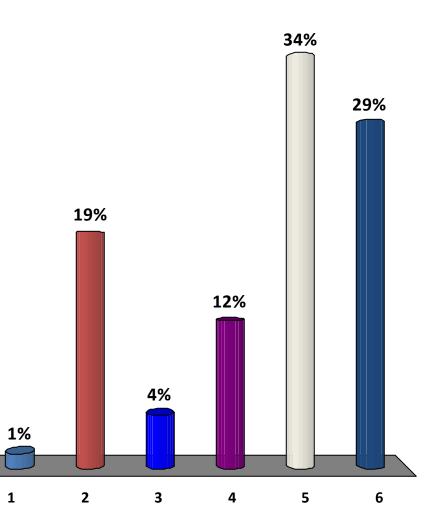
- 1. Lack of sidewalks
- 2. Condition of sidewalks
- Lack of network of sidewalks to get to key destinations
- 4. Lack of safe crossings
- Lack of respect for pedestrians
- 6. Distance
- 7. Weather





Please rank the top three projects you think Bethlehem should focus on this year.

- 1. Bike Expo
- 2. Town wide bicycle/walking education campaign
- Taking action to become a certified bicycle friendly community
- 4. Engaging community partners
- 5. Prioritizing roadway & sidewalk maintenance
- 6. Creating a budget line item for a bicycle/pedestrian infrastructure





WALK TO SCHOOL DAY – October 3, 2012

Slingerlands Elementary School

Hamagrael Elementary School

































NEXT STEPS

- NYSDOT Safe Routes to School Grant Application
- Capital Improvement Plan (5 Year)
- Establish Future Committee Action Items to Address Goals (Education, Enforcement, Engineering, Encouragement, Engagement)

• Based on:

- Recommendations from Walk and Bike Friendly Community Application Evaluations
- March 2012 Key Pad Polling Results

QUESTIONS/COMMENTS