



WALKABILITY AUDIT REPORT

ELIZABETHTOWN BOROUGH

Reducing chronic disease among
Lancaster County residents

Brought to you by:



TABLE OF CONTENTS

FACT SHEETS - 1

BACKGROUND - 6

ROUTE - 10

CONDITIONS - 12

RESULTS - 40

CONCLUSIONS - 46

RECOMMENDATIONS - 49

RESOURCES - 56

WALK AUDIT FACT SHEETS

WALKABILITY FACT SHEET

HEALTH

Men and women age 50–71 who took a brisk walk nearly every day had a
27% reduced death rate compared to non-exercisers
[*Arch Internal Medicine*, 2007].

Retired men who walked less than 1 mile/day had nearly
twice the mortality rates
of those who walked more than 2 miles/day
[*Harvard University, Brigham & Women's Hospital*, ongoing]

On average, sedentary people who became active later in life
improved their life expectancy
by about 1.6 years
[*Harvard Alumni Study*, 2000].

Risks of death from
breast and uterine cancer were reduced
19% in those who walked 1 – 3 hours/week and by 54% for walking 3 – 5 hours/week
[*Harvard University Women's Health Study*, 2012].



WALKABILITY FACT SHEET

ECONOMICS

A 10-point increase in Walk Score

increases commercial property values by 5%-8% [*University of Arizona and Indiana University, 2010*].

In pedestrian friendly neighborhoods,
home values commanded a premium
of up to \$20,000 over home in non-walkable communities
[*Urban Land Institute, 1999*].

Homes in walkable urban neighborhoods have

experienced less than half the average decline
in price from the housing peak in the mid-2000's [Brookings Institution, 2011].

On a five-step "ladder" of walkability, each step up the ladder resulted in an additional

\$9/sf to office space rentals

\$7/sf to retail space rentals

\$300/month for apartment rentals

\$82/sf to home values

[*Brookings Institution, 2012*].



WALKABILITY FACT SHEET

QUALITY OF LIFE

College students showed **increased performance**
on recognition memory tasks after exercise [*NYU current research*].

People living in walkable neighborhoods
watch less TV
participate in community projects
volunteer more
and trust their neighbors more
[*University of New Hampshire, 2010*].

Aerobic exercise gives children the capacity to learn and
increases their memory, attention,
and decision-making
[*Neuroscience, 2011*].



WALKABILITY FACT SHEET

ENVIRONMENT

Drivers experience **higher levels of air pollution inside their vehicle** than outside. [*Rank, Folke and Jespersen, 2001*].

Motor vehicles are responsible for more than two-thirds of the **carbon monoxide** in the atmosphere, a third of the **nitrogen oxides** and a quarter of the **hydrocarbons** [*Surface Transportation Policy Project*].

Parents who drive their kids to school contribute to 20-30% of morning traffic congestion in urban areas.

[www.americawalks.org]

Fewer cars would generate LESS traffic, LESS air and noise pollution, and LESS fuel consumption

[www.walksandiego.org].



WALK AUDIT BACKGROUND

WALK AUDIT BACKGROUND

WHAT ARE WALKABILITY AUDITS AND WHY ARE THEY IMPORTANT?

Walkability is important for a community and everyone benefits from walking. Walkable communities are safer for pedestrians and school children walking or biking to school. Walking improves fitness, contributes towards cleaner air, reduces risks of certain health problems, and promotes a greater appreciation for a community. On average, home values are increased in walkable communities. And, with the proper design, communities will see an increase in commerce for local businesses. However, people are unable to walk if an area is unsafe or difficult to utilize.

Walkability audits enable individuals in a community to analyze how walkable their communities are. They are a key planning tool that provides communities with the technical assistance necessary to access walking and biking conditions while creating a plan for improving them.

Successful walk audits require the commitment of municipal leaders and staff to assess the walkability of areas within their communities and make efforts to improve walkability and safety for residents and visitors. The most important part of an audit is having the participation of local residents—people who know the area, who live or work there, and know what it's like to walk around the neighborhood. Community members are encouraged to come along and share their comments and observations. However, it is also important to involve participants who can influence the built environment. This includes: planners, public works staff, engineers, architects, public health and safety staff, school officials, and elected and appointed officials.

The Walkability Checklist is a tool used to provide both a snapshot of current conditions and assess the participant's ability walk to destinations within their neighborhood. The Walkability Checklist provides a way to easily record safety problems along walking and bicycling routes to school. They can also be used to share information with school and community leaders and media. The Checklist enables the individual to determine problems within a community that would benefit from specific improvements.

WALK AUDIT BACKGROUND

Location

Elizabethtown Borough, located in the western portion of Lancaster County, is composed primarily of areas of relatively dense residential areas with pockets of industrial uses and large institutional uses such as Elizabethtown College and the Elizabethtown Area School District . The walk audit was performed within a wide variety of uses including residential, institutional, open space, industrial and mixed use.

The walk audit route provides access to various pedestrian destinations such as the Borough center square, the school, the college, Masonic Village, Mars Chocolate, the Gears Community Center the Amtrak train station and several Borough parks.

Desired outcomes

Investigate the existing conditions for walkability along the chosen routes. Identify features that contribute to pedestrian use as well as those that need improvement. A goal of the walk audit is also to provide guidance for future planning, development and construction activity that may occur within the walk audit area to provide recommendations for the best use of limited funding resources.

Participants

The walk audit occurred on March 28, 2014. In attendance were representatives from Elizabethtown Borough Township, Lighten Up Lancaster County, LiveWell Lancaster County, Elizabethtown College, the Lancaster County Planning Commission and local engineering firm, C.S. Davidson, as well as interested Borough residents.

Method

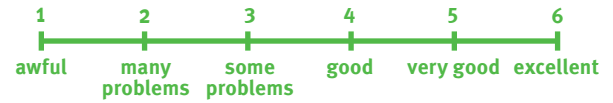
Participants walked the route and evaluated the walkability using the Walkability Checklist provided by the Federal Highway Administration, the National Center for Safe Routes to School and others.

Take a walk and use this checklist to rate your neighborhood's walkability.

How walkable is your community?

Location of walk

Rating Scale:



1. Did you have room to walk?

- ☐ Yes ☐ Some problems:
- ☐ Sidewalks or paths started and stopped
 - ☐ Sidewalks were broken or cracked
 - ☐ Sidewalks were blocked with poles, signs, shrubbery, dumpsters, etc.
 - ☐ No sidewalks, paths, or shoulders
 - ☐ Too much traffic
 - ☐ Something else _____

Rating: (circle one)

1 2 3 4 5 6

Locations of problems:

4. Was it easy to follow safety rules? Could you and your child...

- ☐ Yes ☐ No Cross at crosswalks or where you could see and be seen by drivers?
- ☐ Yes ☐ No Stop and look left, right and then left again before crossing streets?
- ☐ Yes ☐ No Walk on sidewalks or shoulders facing traffic where there were no sidewalks?
- ☐ Yes ☐ No Cross with the light?

Rating: (circle one)

1 2 3 4 5 6

Locations of problems:

2. Was it easy to cross streets?

- ☐ Yes ☐ Some problems:
- ☐ Road was too wide
 - ☐ Traffic signals made us wait too long or did not give us enough time to cross
 - ☐ Needed striped crosswalks or traffic signals
 - ☐ Parked cars blocked our view of traffic
 - ☐ Trees or plants blocked our view of traffic
 - ☐ Needed curb ramps or ramps needed repair
 - ☐ Something else _____

Rating: (circle one)

1 2 3 4 5 6

Locations of problems:

5. Was your walk pleasant?

- ☐ Yes ☐ Some problems:
- ☐ Needed more grass, flowers, or trees
 - ☐ Scary dogs
 - ☐ Scary people
 - ☐ Not well lighted
 - ☐ Dirty, lots of litter or trash
 - ☐ Dirty air due to automobile exhaust
 - ☐ Something else _____

Rating: (circle one)

1 2 3 4 5 6

Locations of problems:

3. Did drivers behave well?

- ☐ Yes ☐ Some problems: Drivers ...
- ☐ Backed out of driveways without looking
 - ☐ Did not yield to people crossing the street
 - ☐ Turned into people crossing the street
 - ☐ Drove too fast
 - ☐ Sped up to make it through traffic lights or drove through traffic lights?
 - ☐ Something else _____

Rating: (circle one)

1 2 3 4 5 6

Locations of problems:

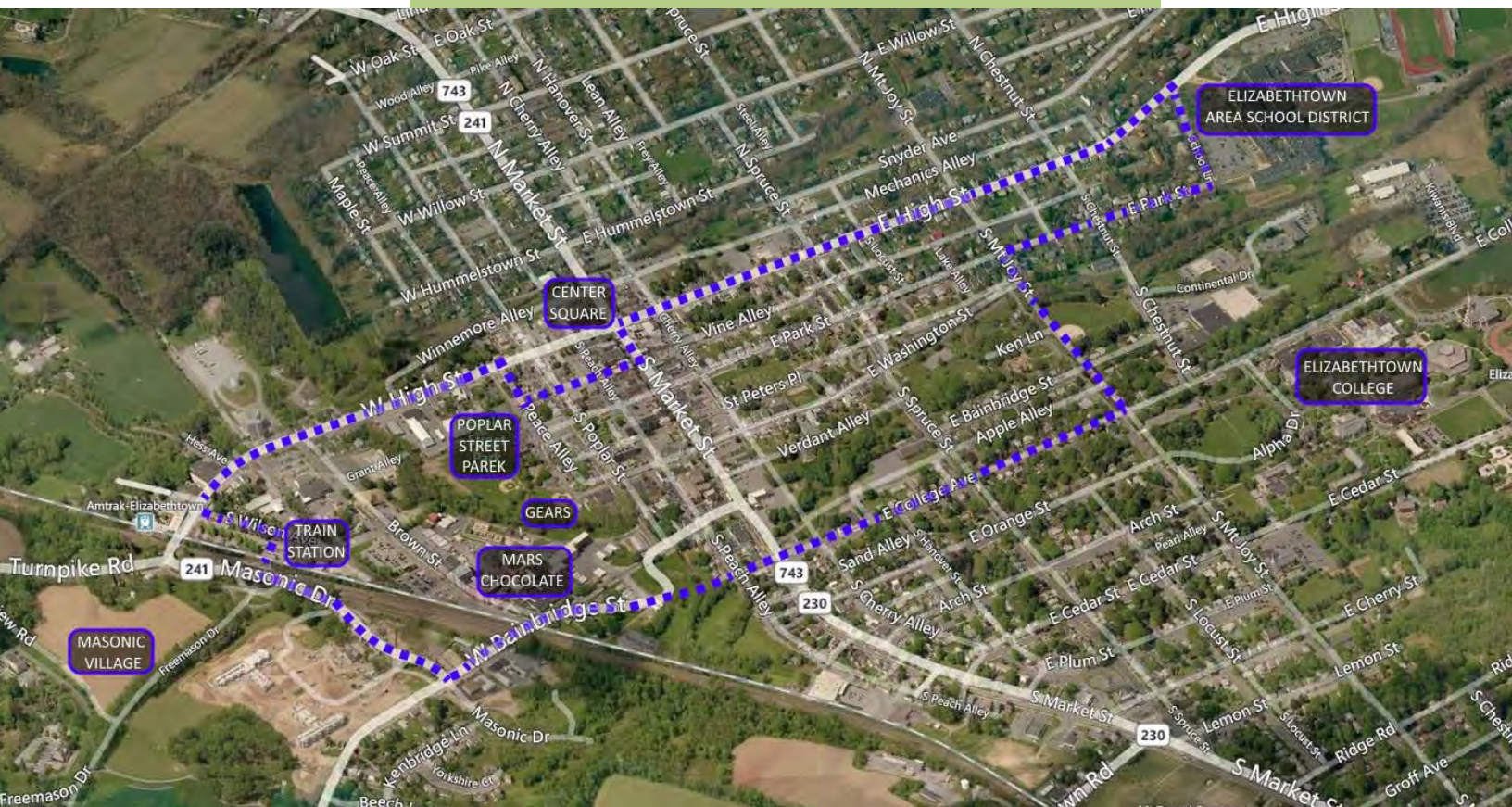
How does your neighborhood stack up? Add up your ratings and decide.

1. _____	26-30	Celebrate! You have a great neighborhood for walking.
2. _____	21-25	Celebrate a little. Your neighborhood is pretty good.
3. _____	16-20	Okay, but it needs work.
4. _____	11-15	It needs lots of work. You deserve better than that.
5. _____	5-10	It's a disaster for walking!
Total: _____		

Now that you've identified the problems,
go to the next page to find out how to fix them.

WALK AUDIT ROUTE

WALK AUDIT ROUTE



The walk audit route was chosen due to the many pedestrian destinations currently located along and near these roadways. Known pedestrian usage confirms that walking is a desirable and useful mode of transportation to these establishments. Starting at the Borough parking lot near Cherry Alley, the walk audit progressed to the Borough center square. The participants travelled east along High Street to the high school and then to the college via School Lane, Park Street and Mount Joy Street. The walk audit route then proceeded west along College Avenue and Bainbridge Street and north along Masonic Drive. A pedestrian tunnel led the group to the Amtrak train station. From there the route travelled east along High Street and along Peach and Rose Alleys before ending at the center square.

WALK AUDIT CONDITIONS

HIGH STREET CONDITIONS



Wide sidewalks at Center Square with attractive brick accents.

HIGH STREET CONDITIONS



The building facades within the downtown district are close enough to the street to provide an interesting walking environment yet still far enough away from the street to offer plenty of room for pedestrians.

HIGH STREET CONDITIONS



Crosswalks and ADA ramps are provided at most intersections.

HIGH STREET CONDITIONS



The sidewalk width narrows the further the walk audit route gets from the downtown; however the width is still appropriate for the volume of pedestrian traffic that would be expected in this area.

HIGH STREET 5 CONDITIONS



Landscaping protruding into the sidewalk reduces the available walking space at this location.

HIGH STREET CONDITIONS



A pedestrian crosswalk and signage is provided across High Street at the Elizabethtown High School.

HIGH STREET CONDITIONS



Pedestrian signage is missing at the crosswalk (looking northeast).

SCHOOL LANE CONDITIONS



Concrete sidewalk is provided with a grass street between the sidewalk and the curb. This strip provides separation from traffic that allows pedestrians to feel safe and comfortable.

SCHOOL LANE CONDITIONS



Curb ramps are provided at intersections, however they do not meet current ADA standards (eg. no truncated warning dome mat).

PARK STREET CONDITIONS



A portion of the sidewalk has settled, providing a vertical separation at a joint.

PARK STREET CONDITIONS



Cracked and broken sidewalk is present in some areas.

COLLEGE AVE CONDITIONS



Vegetation encroaches onto the sidewalk, narrowing the travel width slightly.

COLLEGE AVE CONDITIONS



Narrow sidewalk width – possibly due to landscaping
or a tree that has since been removed.

COLLEGE AVE CONDITIONS



Outdated ADA ramp at the intersection of College Avenue and Spruce Street. Curb ramps that do not meet the frequently updated ADA standards are typical conditions in many municipalities. The presence of silt buildup and moisture indicate that water ponds at the ramp.

COLLEGE AVE CONDITIONS



Concrete sidewalks are generally in good condition. The presence of the grass strip and trees make this a comfortable walking route for pedestrians.

COLLEGE AVE CONDITIONS



Pedestrian crosswalks, ADA ramps, pedestrian signals and push buttons are provided at the Market Street intersection. Note the water ponding at the ADA ramp. This is not unusual to find at even newly designed and constructed ramps.

BAINBRIDGE ST CONDITIONS



Interpretive historical displays at Millstone Plaza at the intersection with Market Street create a noteworthy stop along the walk audit route. Community resources like this are important features for encouraging walkability as they are best viewed at a pedestrian level and provide points of interest to be appreciated.

BAINBRIDGE ST CONDITIONS



Updated ADA accessible curb ramps, sidewalks and safety features are provided along most of this section of roadway.

BAINBRIDGE ST CONDITIONS



Water is present on the sidewalk inside the Amtrak tunnel. This could cause icy conditions during the winter months.

BAINBRIDGE ST CONDITIONS



The parking lot of a local business forces pedestrians to cross a long expanse of asphalt unprotected. Fortunately, the volume of traffic entering and exiting the parking lot appeared to be low.

MASONIC DR CONDITIONS



Curb extensions at a mid-block crossing protect pedestrians waiting to cross and shorten the length of travel needed to cross the travel lanes.

HIGH STREET CONDITIONS



Broken asphalt and uneven bricks are present for a short section near the approach to the railroad tracks.

HIGH STREET CONDITIONS



Concrete sidewalks are present for most of High Street and are largely in satisfactory condition.

HIGH STREET CONDITIONS



Pedestrian crosswalks and signage are prevalent throughout the Borough.

ROSE ALLEY CONDITIONS



Decorative brick pavers provide an attractive walking surface.

ROSE ALLEY CONDITIONS



Luminescent pavers inlaid between the standard brick pavers provide pedestrian lighting during nighttime hours.

ROSE ALLEY CONDITIONS

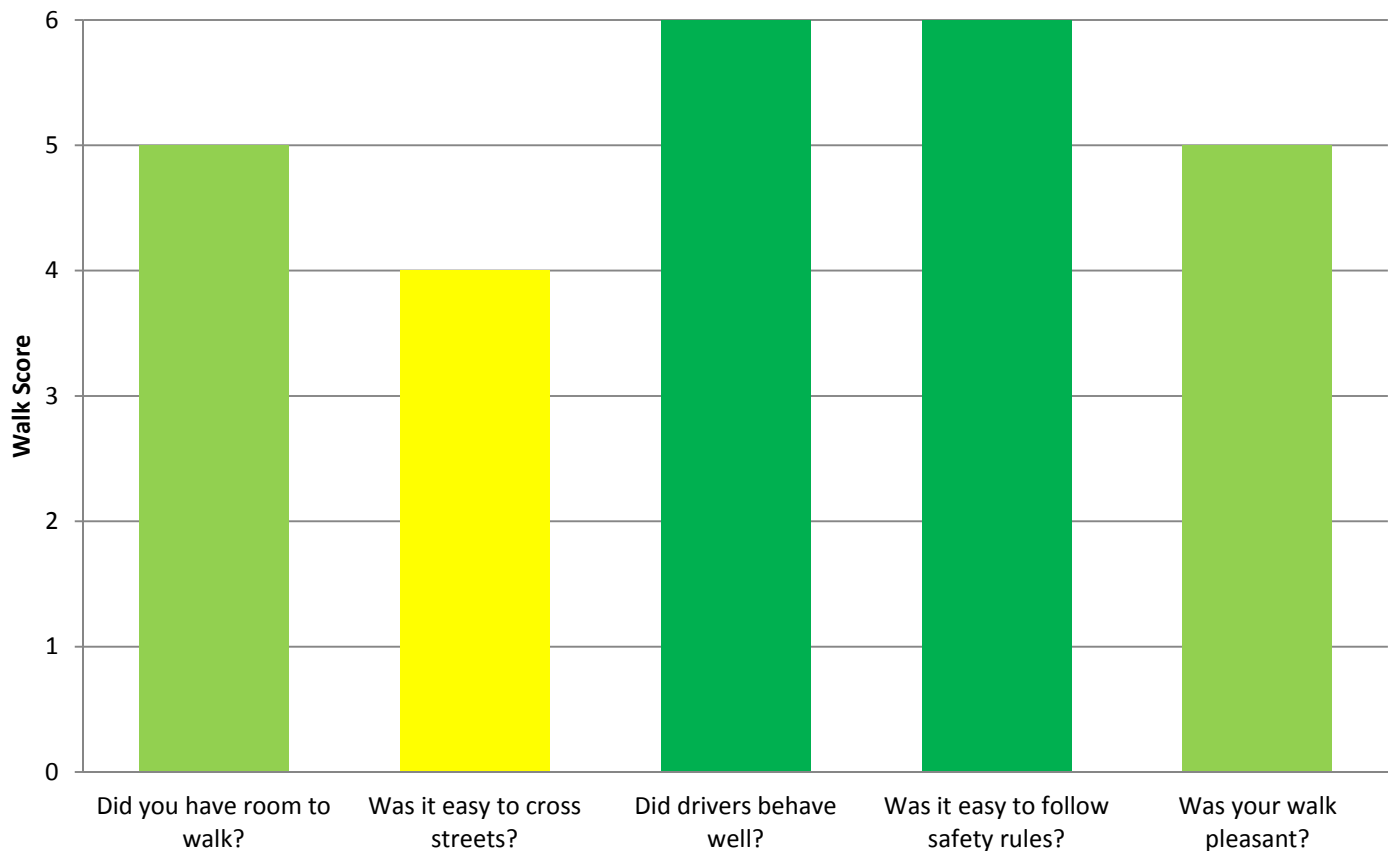


Often considered an amenity, benches can be a necessity for the elderly and pedestrians with young children who need to stop and rest.

WALK AUDIT RESULTS

RESULTS

High Street Walkability Audit Results



Participant Comments

Did you have room to walk? There were some problems. Some of the sidewalks were broken or cracked. The historical features prevent the ability to walk and it was relatively dangerous. For example, the walkways narrowed at the square and they weren't even.

Was it easy to cross streets? It was pretty good. School dismissal time would change things.

Did drivers behave well? Yes.

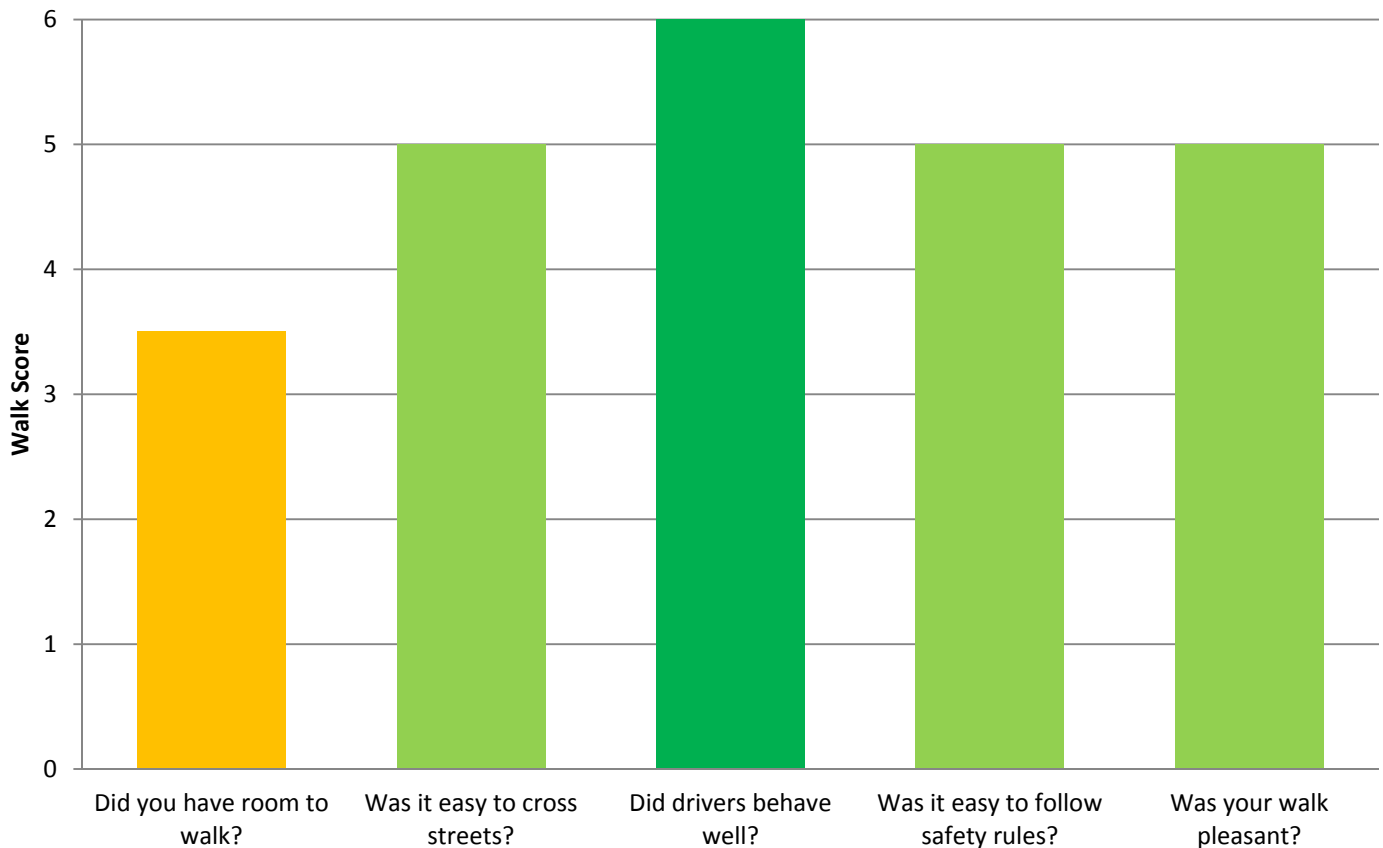
Was it easy to follow safety rules? Yes

Was your walk pleasant? Yes, but drawing attention to the historical markers using signs would make it better.

Total score: 26 = Celebrate! You have a great neighborhood for walking.

RESULTS

School Lane/Park Street Walkability Audit Results



Participant Comments

Did you have room to walk? There were some problems. The sidewalks were broken or cracked and there were narrow sides. Some poles in the sidewalks raised them.

Was it easy to cross streets? Yes.

Did drivers behave well? Yes.

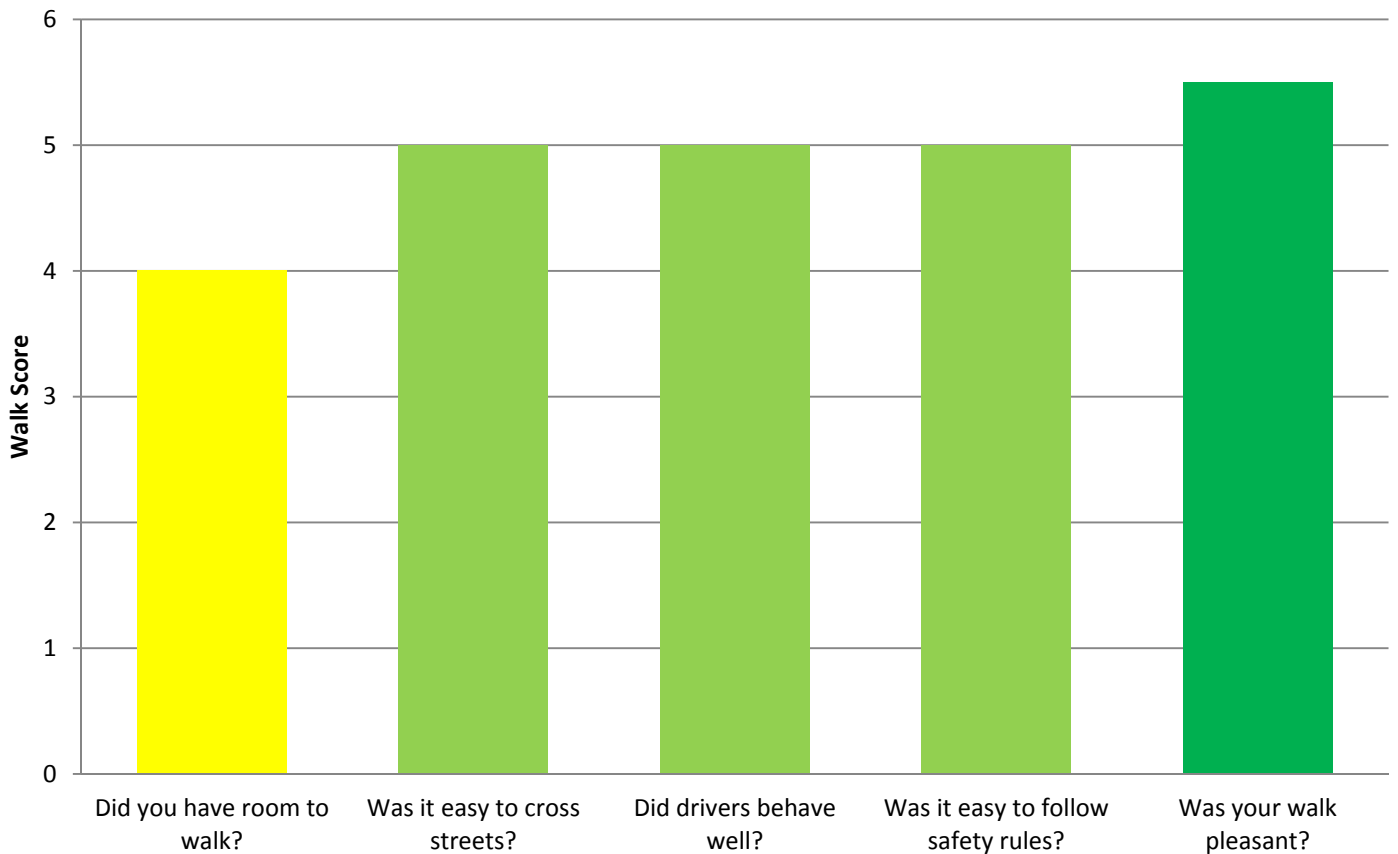
Was it easy to follow safety rules? Yes, but we did not cross with a light.

Was your walk pleasant? Yes, but it was not well lit at night. Because there are some indentations apparent, it would be very likely to trip when walking.

Total score: 24.5 = Celebrate a little. Your neighborhood is pretty good.

RESULTS

College Avenue Walkability Audit Results



Participant Comments

Did you have room to walk? There were some problems. The sidewalks were broken or cracked and there were narrow. Some of the sidewalks were blocked with shrubbery and had a steep drop off.

Was it easy to cross streets? Yes.

Did drivers behave well? Yes. They stopped in the middle of crosswalks.

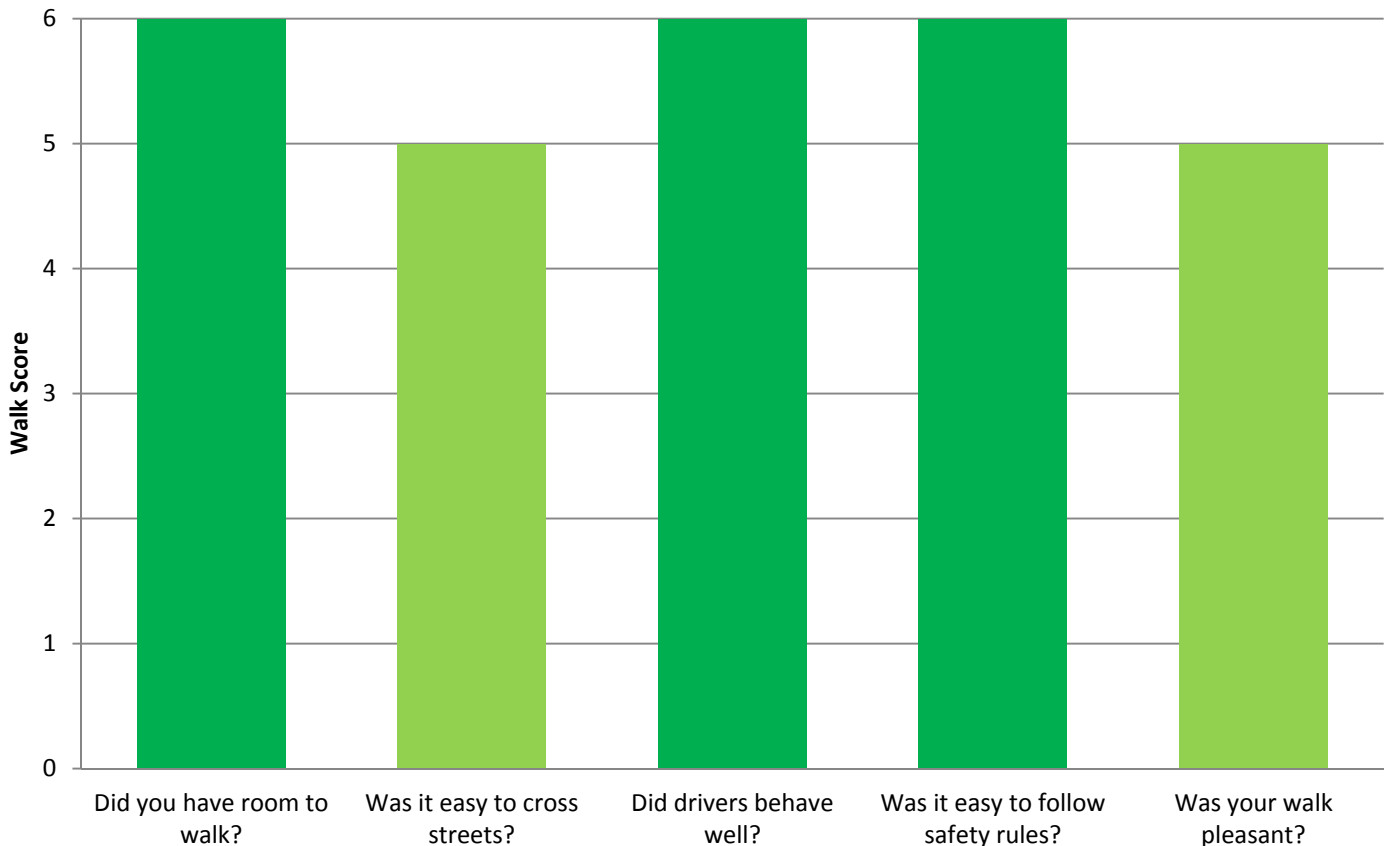
Was it easy to follow safety rules? Yes.

Was your walk pleasant? Yes.

Total score: 24.5 = Celebrate a little. Your neighborhood is pretty good.

RESULTS

Bainbridge Street/Masonic Drive Walkability Audit Results



Participant Comments

Did you have room to walk? Yes.

Was it easy to cross streets? There were some problems. We were unable to cross to sidewalk on one side of Bainbridge. Crosswalk needed striping at 241 and Bainbridge.

Did drivers behave well? Yes. It might have been different if smaller group of just one individual though.

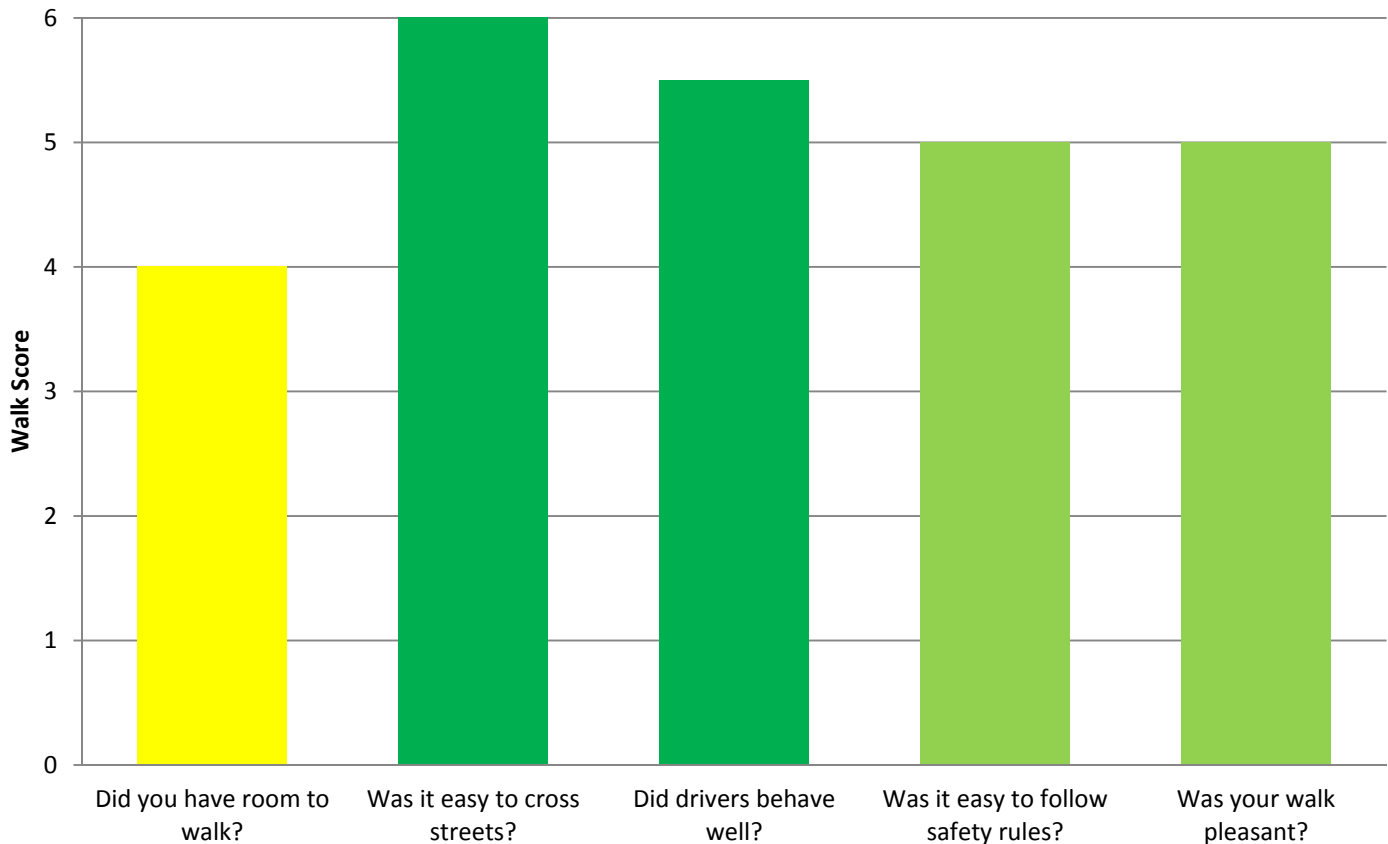
Was it easy to follow safety rules? Yes, but we did not cross with a light.

Was your walk pleasant? Yes.

Total score: 28 = Celebrate! You have a great neighborhood for walking.

RESULTS

Wilson Avenue/High Street/Rose Alley Walkability Audit Results



Participant Comments

Did you have room to walk? There were some problems. The sidewalks were broken or cracked and there were narrow. Some of the sidewalks were blocked with shrubbery and had a steep drop off, and some started and stopped. Specifically, they were uneven and narrow, and most were covered with asphalt near an industrial area (train track). Also, there were steep ramps and did not appear to meet good standards.

Was it easy to cross streets? Yes.

Did drivers behave well? Yes. There was busy traffic too.

Was it easy to follow safety rules? Yes.

Was your walk pleasant? Yes.

Total score: 25.5 = Celebrate a little. Your neighborhood is pretty good.

WALK AUDIT CONCLUSIONS

WALK AUDIT CONCLUSIONS

High Street

1. This roadway scored in the top of the score range with a walkability rating of 26 out of a possible 30. This means that participants rated the road as contributing to a great neighborhood for walking.
2. Walk audit participants noted that some sidewalks were cracked or broken and landscaping narrowed the sidewalk width in some locations. Overall though, High Street is excellent for pedestrians.

School Lane/Park Street

1. This segment of our walk audit route scored near the top of the scoring system with a rating of 24.5 out of a possible 30. Participants felt that this neighborhood is generally pretty good for pedestrian activity.
2. Concrete sidewalks were provided along this entire section of the walk audit route with a grass separation strip often being provided as well.
3. Some vertical separations between the sidewalk sections was noted as well as cracked and broken sidewalk. Some ADA curb ramps did not meet current standards due to the age of construction.

College Avenue

1. This segment of our walk audit route also scored high with a rating of 24.5 out of a possible 30. Participants felt that this neighborhood is generally pretty good for pedestrian activity.
2. Vegetation and landscaping narrowed the sidewalk width in areas and cracked sidewalks were noted. Crosswalks are typically provided at each intersection with full signalization provided at Market Street.

WALK AUDIT CONCLUSIONS

Bainbridge Street/Masonic Drive

1. This segment of our walk audit route scored the highest of the five segments with an extremely high rating of 28 out of a possible 30.
2. The newly constructed Millstone Plaza as well as the recent street and sidewalk improvements west of Market Street make this section of the Borough highly walkable. The walk audit route was provided safe and interesting travel for participants.
3. Curb ramps met current ADA standards, pedestrian crosswalks and signage were provided and curb extensions at Masonic Drive made crossing the streets a comfortable experience for pedestrians.

Wilson Ave/High Street/Rose Alley

1. This roadway scored in the top of the score range with a walkability rating of 25.5 out of a possible 30. Participants felt that this neighborhood is generally pretty good for pedestrian activity.
2. Concrete sidewalks were provided for pedestrians along this segment of the walk audit route, except for one short section near the railroad where the asphalt/brick walkway was uneven and deteriorated.
3. The Rose Alley improvements contributed to an extremely walkable neighborhood by providing attractive walking surfaces, lighting and benches for rest stops.

WALK AUDIT RECOMMENDATIONS

WALK AUDIT RECOMMENDATIONS

REMOVE OBSTACLES



Any vegetation, including shrubbery and trees, that narrow the sidewalk with can be removed to provide more room for pedestrians.

WALK AUDIT RECOMMENDATIONS

PEDESTRIAN SIGNAGE



Consider adding a pedestrian crosswalk sign at the mid-block crossing at the High School on High Street.

WALK AUDIT RECOMMENDATIONS

UPGRADE ADA CURB RAMPS



Upgrades could be made to curb ramps to meet current ADA standards. Since ramps are required to be upgraded if the roadway is improved, a plan for upgrading curb ramps could be incorporated into a roadway maintenance and/or capital improvement plan.

WALK AUDIT RECOMMENDATIONS

DETERIORATED SIDEWALK



Monitor cracked and broken sidewalks for signs of further deterioration. Initiate repairs if a trip hazard develops due to a vertical separation.

WALK AUDIT RECOMMENDATIONS

WATERPROOF AMTRAK TUNNEL



Consideration could be given to a long-term solution to water infiltration through the Amtrak bridge over Bainbridge Street. Ongoing moisture on the sidewalk could lead to accelerated deterioration of the new sidewalk and/or icy conditions during winter.

WALK AUDIT RECOMMENDATIONS

HIGH STREET SIDEWALK



Sidewalk improvement at the railroad crossing on High Street would increase the walkability of this section. Access to the street could be maintained with the existing depressed curb and a driveway or a grass strip could be provided as shown above. The Borough is currently constructing a dedicated walking path that will run parallel to this section of the walk audit route, providing an alternate route for pedestrians.

WALK AUDIT RESOURCES

RESOURCES

EDUCATIONAL

National Center for Safe Routes to School – www.saferoutesinfo.org

Pedestrian and Bicycle Information Center - www.pedbikeinfo.org

FHWA Office of Safety Bicycle and Pedestrian Safety - safety.fhwa.dot.gov/ped_bike

US Access Board – www.access-board.gov

FUNDING

Pennsylvania's Transportation Alternatives Program Grants

TAP Coordinator: Chris Metka, PennDOT 717-787-8065, cmetka@pa.gov

Department of Conservation and Natural Resources (DCNR) Grants

<http://www.dcnr.state.pa.us/brc/grants/index.aspx>

LOCAL RESOURCES

Active Transportation Working Group – Beth Schwartz, bakoser@lghealth.org

Citizen's Bicycle and Pedestrian Advisory Committee (BPAC)

<http://pa-lancastercountyplanning.civicplus.com/151/Bicycle-Pedestrian-Planning>

LiveWell Lancaster County – livewell.org

