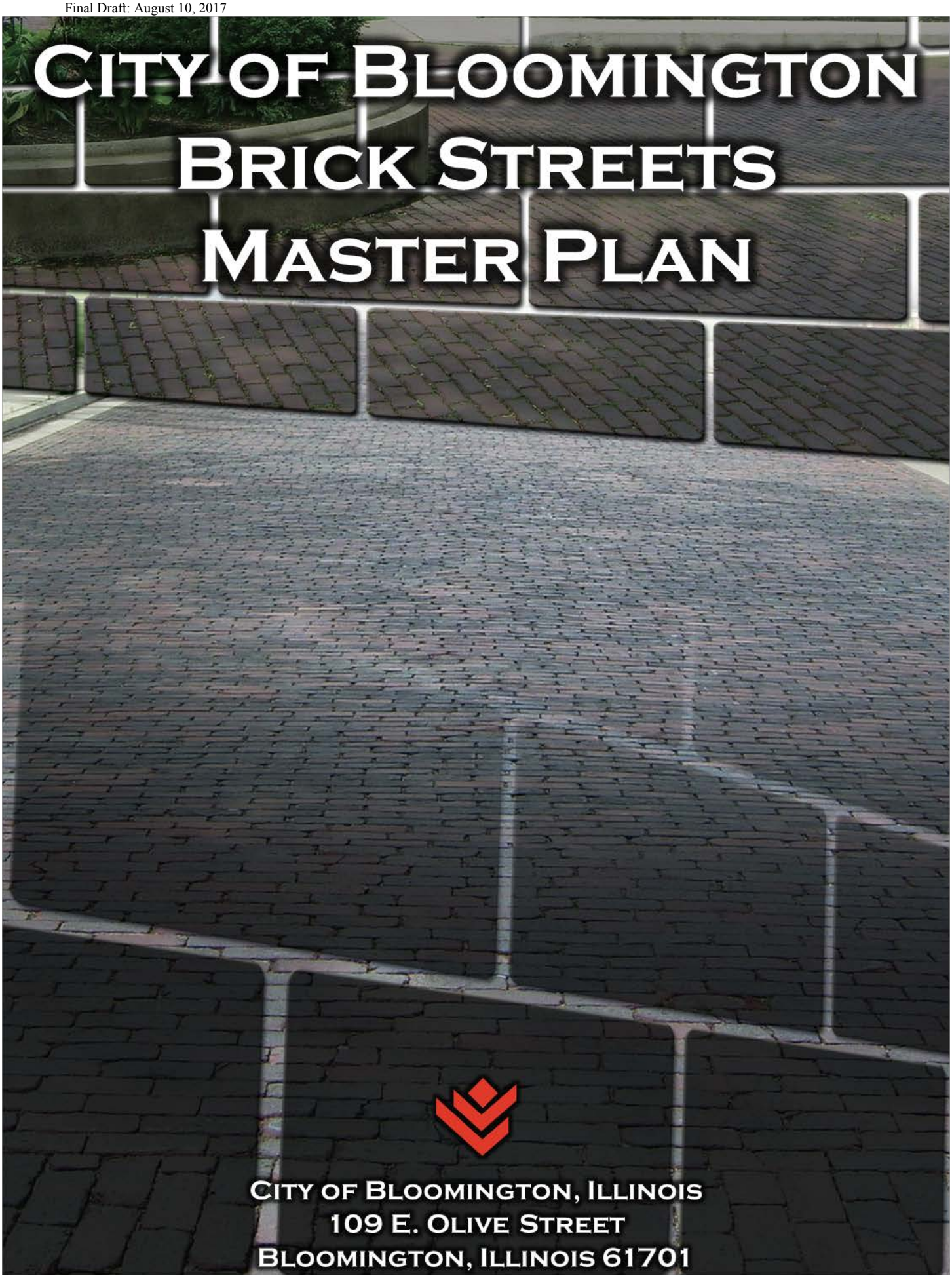


City of Bloomington Brick Streets Master Plan

City of Bloomington, Illinois
109 E. Olive Street
Bloomington, Illinois 61701

(DRAFT) RESOLUTION NO. 2017 –

A RESOLUTION APPROVING THE CITY OF BLOOMINGTON BRICK STREETS MASTER PLAN

WHEREAS, the City of Bloomington has 3.5 miles of public brick streets within the city and the City wishes to preserve its historic brick streets; and

WHEREAS, a systematic approach is needed by the City to provide proper stewardship, including a budgeted plan of action, for preserving its brick streets; and

WHEREAS, the City also needs to look at future planning for brick streets beyond the 3.5 miles of public brick streets that exist in the community; and

WHEREAS, the Public Works Department worked with the Historic Preservation Commission to create the City of Bloomington Brick Streets Master Plan; and

WHEREAS, the Brick Streets Master Plan was approved by the Historic Preservation Commission on Month XX, 2017 and the Planning Commission on Month XX, 2017; and

WHEREAS, the City Council finds it to be in the best interests of the City to adopt the City of Bloomington Brick Streets Master Plan.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BLOOMINGTON, ILLINOIS:

That the City of Bloomington Brick Streets Master Plan is hereby approved.

PASSED this XX day of Month 2017.

APPROVED this XX day of Month 2017

CITY OF BLOOMINGTON **ATTEST**

_____ _____

Tari Renner, Mayor Cherry L. Lawson, C.M.C., City Clerk

APPROVED AS TO FORM

_____

Jeffrey R. Jurgens, Corporation Counsel

ACKNOWLEDGEMENTS

Bloomington City Council

Tari Renner – Mayor
Jamie Mathy – Ward 1 Alderman
David Sage – Ward 2 Alderman
Mboka Mwilambwe – Ward 3 Alderman
Amelia Buragas – Ward 4 Alderman
Joni Painter – Ward 5 Alderman
Karen Schmidt – Ward 6 Alderman
Scott Black – Ward 7 Alderman
Diana Hauman – Ward 8 Alderman
Kim Bray – Ward 9 Alderman

Bloomington Historic Preservation Commission

Sherry Graehling – Chair
Lea Cline – Vice Chair
Ann Bailen – Member
John Elterich – Member
Levi Sturgeon – Member
Gabriel Goldsmith – Member
Katie Simpson – City Staff
Tom Dabareiner – City Staff

Bloomington Planning Commission

Justin Boyd – Chair
Ryan Scritchlow – Vice Chair
John Protzman – Member
Kevin Suess – Member
James Pearson – Member
Megan Headean – Member
Alan Balmer – Member
Eric Penn – Member
David Stanczak – Member
Nicole Chlebek – Member
Katie Simpson – City Staff
Tom Dabareiner – City Staff

Bloomington City Staff

David A. Hales – City Manager
Steve Rasmussen – Assistant City Manager
Jim Karch – Director of Public Works
Tom Dabareiner – Director of Community Development
Katie Simpson – City Planner
Kevin Kothe – City Engineer
Ryan Otto – Assistant City Engineer
Luke Thoele – Civil Engineer II
Steve Arney – Engineering Technician
Troy Olson – Engineering Technician
Crystal Williams – Engineering Technician
Michael Hill – Public Works Admin.
Candace Towery – Public Works Admin.

Special Thanks To

City of Rock Island, Illinois
City of Decatur, Illinois
Doug Grovesteen – Civil Engineer, Clark Deitz, Inc.
Mark Lee – Senior Engineer, Klingner & Associates, P.C.
John Gavin – Co-Owner, Gavin Historical Bricks

PROPOSED ADOPTION TIMELINE

April 2017

- City Council Directs Public Works to Move Forward with Brick Streets Master Plan

May 2017

- Public Works presents initial thoughts on Brick Streets Master Plan at Historic Preservation Commission

July 2017

- Historic Preservation Commission suggests final changes to Brick Streets Master Plan

Aug. 2017

- Submit to Historic Preservation Commission for approval

Sept. 2017

- Submit to Planning Commission for approval

Oct. 2017

- **Submit to City Council for approval**

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

The overall goal of the City of Bloomington Brick Streets Master Plan is to preserve all remaining brick streets within the City. To achieve this goal, City staff assigned a category and priority level for brick streets, based on metrics set by Public Works and the Historic Preservation Commission. In order to fund patching and reconstruction of these streets, this master plan suggests a ten-year spending plan to preserve brick pavement before it deteriorates to a level that would require reconstruction.

In addition to creating a spending plan for brick streets in Bloomington, this master plan outlines design recommendations, new regulations for underground infrastructure work, and suggestions for compliance with the Americans with Disabilities Act and the City's Complete Streets Ordinance.

This master plan also includes information for future consideration, including methods to reclaim previous brick streets that have been overlaid with concrete or asphalt in areas such as historic districts or shopping areas, additional metrics to use for categorizing and prioritizing brick streets in the future, and other, helpful information.

Figure 1: White Pl. at University St.

2. INTRODUCTION

City staff initially developed a strategic plan in 2009 to address the City's brick street needs. However, the City Council did not have a chance to approve that plan. Furthermore, the City's stance on how to deal with brick streets has significantly changed since that time. The previous policy has been to preserve brick streets that are in good condition and meet certain other requirements on a case-by-case basis. However, this master plan establishes a policy wherein the City will preserve all 3.5 miles of brick streets in the community.

Figure 2: Highest-rated brick street in Bloomington (PASER 10) (Davis Ave., Jefferson St. to Washington St.)

City staff has done significant research in order to come up with this master plan, which is a comprehensive plan and implementation strategy to deal with all of the City's brick streets. Multiple cities in Illinois have developed policies to patch and reconstruct historic brick streets. Cities in Illinois that proactively patch and reconstruct streets include Peoria, Champaign-Urbana, Galesburg, Rock Island, and Decatur. Some of these communities have selected specific streets to preserve, while others have elected to preserve all remaining streets. In addition, some have set priorities for their best streets, with the intention of overlaying low priority streets with concrete or asphalt.

3. PURPOSE

City staff created the Brick Streets Master Plan to convey the best practices for preserving Bloomington's brick streets. Approving this plan does not authorize funding. However, the City should follow the enclosed ten-year spending plan closely in order to achieve the goals of this plan and the goals of the City of Bloomington. Currently, the City has about 3.5 miles, or 1.1 percent of all streets. 320 miles of streets are paved with concrete, asphalt, or oil and chip. Brick streets have been a diminishing asset in the community. They provide a look and feel to a neighborhood that can generate a sense of nostalgia and help maintain a part of the City's rich history. In addition, although brick streets are costly to reconstruct and patch properly when compared to concrete and asphalt, brick streets have the potential to last for generations.

This master plan has been a collaborative effort between the Public Works Department, Community Development Department, Administration Department, City Council, Historic Preservation Commission, Planning Commission, the public, other municipalities, and contractors to find a long-term, sustainable plan to reconstruct or patch the City's 3.5 miles of brick streets and keep them in serviceable condition, free of non-brick patches.

4. COMPREHENSIVE PLAN TIE-IN

The comprehensive plan, adopted in August 2015, is the core statement of development policy and principle of the City of Bloomington. Comprehensive plans can be 18 to 36 month long processes that include a discussion of existing conditions, community outreach and a land use plan that identifies goals and objectives with respect to housing, infrastructure, education, recreation, transportation and other topics that influence land use. Comprehensive plans are advisory in nature, and are given implementation through adoption of zoning and other ordinances, codes and municipal regulatory tools conforming to the plan. 7,000 citizens participated in the formation of this plan, which won the Daniel Burnham award and is a National Silver Level plan recognized by the American Planning Association.

4.1. Comprehensive Plan 2035 Vision Tie-In

The Unified Community Vision set forth by the comprehensive plan supports preserving brick streets in the community. Brick streets enhance quality of life in Bloomington by providing a distinct look and feel to neighborhoods. Further, brick streets help to surround residents with the City's rich history.

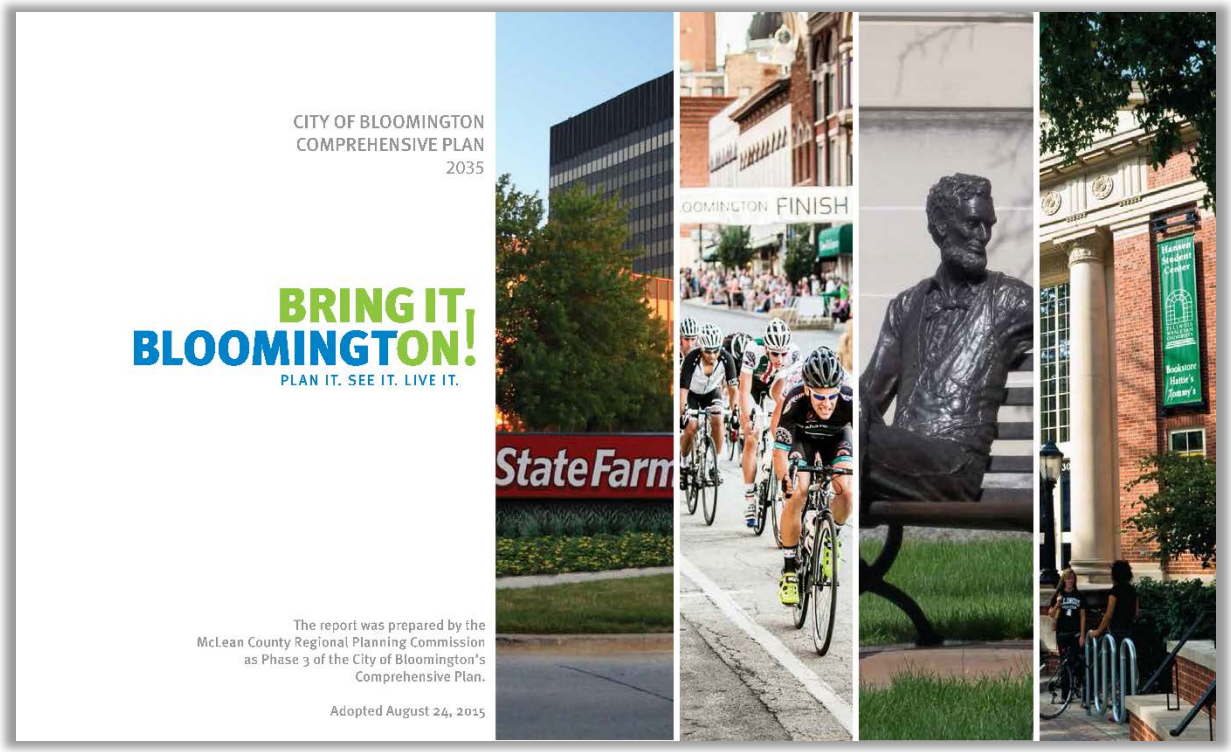


Figure 3: "Comprehensive Plan 2035" cover

4.2. Comprehensive Plan 2035 Goals and Objectives Tie-In

The comprehensive plan provides a context for decisions about growth and development in the City. It reflects the City's policy intent with respect to many issues that confront Bloomington, including built, fiscal, social, environment and economic conditions. The plan sets forth a series of goals to be achieved over the next twenty years, defines objectives to be reached in support of the goals, and recommends actions by the City, and its regional partners, to reach the objectives. The plan also addresses implementation, by establishing benchmarks and measures of performance to gauge to what degree the goals and objectives are attained, and whether the progress achieved is producing the intended results.

N-1 Ensure the compact development of the City through denser, mixed-use developments and reinvestment in the established older neighborhoods

- N-1.1 Enhance the livability of all Bloomington neighborhoods
- N-1.2 Prioritize, with urgency, the revitalization of the neighborhoods in the regeneration area
- N-1.3 Redevelop the neighborhoods in the Preservation area while carefully protecting their historic nature and character

N-2 Improve community identity and appearance by celebrating the unique nature and character of the City's individual neighborhoods

- N-2.2 Celebrate the uniqueness of Bloomington's neighborhoods

H-2 Ensure reinvestment in the established older neighborhoods and compact development of the City

- H-2.2 Preserve historic homes and structures in the designated Preservation Area

ACH-4 Identify, conserve and preserve the City's heritage resources as a basis for retaining and enhancing strong community character and a sense of place

- ACH-4.1 Fully integrate considerations of historic and cultural resources as a major aspect of the City's planning, permitting and development activities

UEW-1 Provide quality public infrastructure within the City to protect public health, safety

- UEW-1.1 Maintain the existing City operated infrastructure in good condition by prioritizing maintenance over building new and implementing fees to cover costs
- UEW-1.3 Work cooperatively with other public and private utility service providers operating in the City to address mutual concerns and needs

5. STRATEGIC PLAN TIE-IN

The City's Strategic Plan emphasizes quality infrastructure and puts forward a vision for the future. Concerning brick streets, Vision 2025 supports a beautiful city with respect for the heritage of the community and neighborhoods. Creating a plan to preserve current brick streets, and potentially revive former brick streets, fits into this goal.

Vision 2025 also calls for a family-friendly city with a hometown feeling that is attractive for all family generations, including retirees and young families as well as single professionals. Brick streets help create a hometown feeling and make the city attractive for all family generations by having a unique look and feel that reflects the City's history.

In addition, Vision 2025 sets forth policies that create convenient connectivity throughout the city, with well-maintained city streets. With the creation of this plan, Public Works, with proper funding, will be able to patch or reconstruct deteriorating brick streets and maintain brick streets that are serviceable and free of non-brick patches. Furthermore, the City's brick streets will no longer be in disrepair, making it easier for vehicles to utilize them.

Finally, Vision 2025 seeks to create pride in Bloomington by maintaining the unique character and identity of Bloomington. Brick streets, and the City's brick street policy under this master plan, will help the City stand out among other Illinois communities and communities across the United States.

5.1. Mission Statement Tie-in

The Mission Statement for the City states that the City should be financially responsible while providing "quality, basic municipal services at the best value." By using a prioritizing philosophy for brick street patching, reconstruction, and maintenance, City staff can properly plan and deliver services in the most cost-effective and pragmatic manner. City staff has collaborated with other cities and brick street contractors to ensure these priorities match the mission of the City.

The Brick Streets Master Plan further serves the City's goal to keep residents informed. It provides understandable and accessible material and calls for partnership with citizens in compatibility with the City mission statement.

Figure 4: City of Bloomington Mission Statement

5.2. 2015 Strategic Plan Goals Tie-in

Strategic Plan Goals set the tone for City government functions in Bloomington and are goals aligned with Vision 2025. They are guiding principles that enter into every City action. Every staff memo asking for City Council action must link to at least one goal. The Brick Streets Master Plan directly fit into the following goals and objectives, helping Bloomington become a "Jewel of Midwest Cities."

1. Financially Sound City Providing Quality Basic Services

a. Budget with adequate resources to support defined services and level of services
c. Engaged residents that are well-informed and involved in an open governance process
d. City services delivered in the most cost-effective, efficient manner

2. Upgrade City Infrastructure and Facilities

a. Better quality roads and sidewalks

4. Strong Neighborhoods

c. Preservation of property/home valuations
d. Improved neighborhood infrastructure
e. Strong partnership with residents and neighborhood associations

5. Great Place – Livable, Sustainable City

b. City decisions consistent with plans and policies
e. More attractive city: commercial areas and neighborhoods

Figure 5: "Strategic Plan" cover

6. HISTORY OF BRICK STREETS PLANNING IN BLOOMINGTON

6.1. Draft Brick Streets Strategic Plan (2009)

The Public Works Engineering Division completed a strategic plan for brick streets in September 2009. The Historic Preservation Commission recommended that the City Council adopt the Brick Streets Strategic Plan, but City staff did not request approval of the plan from the City Council.

Portions of the draft 2009 Brick Street Strategic Plan are included in this Brick Streets Master Plan in order to describe the previous plans and the policies suggested by it.

Prior to completing the plan, the Public Works Department held four public meetings to gather input from citizens, including two public meetings held during the Historic Preservation Commission meetings on August 20, 2009 and September 17, 2009. The 2009 Brick Streets Strategic Plan categorized and prioritized each of the brick streets within the City and designated whether brick pavement on a street should be preserved, patched, or overlaid.

Figure 6: "Brick Streets Strategic Plan" (2009) Cover

In addition, the plan created a procedure for brick street reconstruction and discussed potential cost-sharing procedures between the adjacent property owners and the City. Category 1 (restore) contained 10 streets, Category 2 (repair) contained 21 streets, and Category 3 (reconstruct) contained eight streets. These categories do not align with the current master plan, as their meanings have been redefined, which is why the category numbers are no longer used.

Pages 8 through 11 contain information from the draft Brick Streets Strategic Plan, unaltered apart from formatting. These policies and procedures are no longer in effect.

Brick Street Restoration Policy under the Draft Strategic Plan

Restoration for category 1 and category 2 streets is clear: If the surface is disturbed, it is to be re-laid with brick meeting the standards laid out in this policy. Any restoration work completed on categories 1 or 2 streets shall be paid for using city funds.

Restoration for category 3 streets is different from categories 1 and 2 in that when the street needs to be restored either partially or completely, the city has the right to place whatever material best suits the needs of the city to maintain public safety. Category 3 streets also differ in that residents will have the ability to choose whether they would like to continue to have a brick street and share some of the cost to restore it to a category 1 brick street.

Being a category 3 street does not automatically place the street in the resurfacing pool. Placement in the resurfacing pool is either determined by the Public Works Department or by a petition of at least 80% of the property owners along the category 3 brick street. The Public Works Department will only place the category 3 brick street in the resurfacing pool if the street is in such condition that it has become a safety hazard and is beyond minor repairs.

At the time adjoining residents or the city determine that a residential brick street is in need of total reconstruction, the residents will be informed by mail of the placement of the street in the pool of citywide streets for evaluation in the street resurfacing program. At the time of this notification, residents will have one year to implement one of the following options:

File a petition to have the street remain brick. If the Public Works Department receives a petition from 80% of the adjacent property owners that they wish to keep the street brick, then the Public Works Department will allow the street to remain brick assuming that there are not any major safety issues that exist which cannot be easily addressed. Filing this petition does not guarantee that the brick street will remain a brick street.

Coordinate with the City Council to determine if there should be a special service area implemented. Filing of this petition does not guarantee a specific council response. The City Council's response is dependent upon finances and the general direction of the council. This special service area procedure allows for a cost-sharing of the street reconstruction between the city and the adjacent property owners. It will allow adjacent property owners to have a special assessment be placed on their property tax bill so that the street can be upgraded from a resurface project to a brick street restoration project. The adjacent property owners will be responsible for the difference between the estimated resurfacing cost and the actual cost to reconstruct the street using bricks. Once completed, the street would become a category 1 brick street. In order to begin this process, a petition must be filed with the City of Bloomington Public Works Department.

After the year deadline has passed, the City can move forward with the resurfacing or reconstructing of the street as funding priorities and objective resurfacing criteria allow.

Prioritization Assumptions under the Draft Strategic Plan

In forming the plan methodology and recommendations, the following assumptions were made regarding the preservation of Bloomington's brick streets in the 2009 draft Brick Streets Strategic Plan.

- Assumption 1
  - Streets with few patches are stronger candidates for preservation.
- Assumption 2
  - Streets with poor structural condition are poor candidates for preservation.
- Assumption 3
  - Many utilities beneath a street make it a poor preservation candidate.
- Assumption 4
  - Streets where the curb and gutter is in a poor condition will not be independently prioritized separate from the brick street.
- Assumption 5
  - Streets with a larger percentage of patches but of good riding quality shall be placed in a category 2.
- Assumption 6
  - It is not a feasible option to mill streets currently overlaid with asphalt and make them brick streets again.
- Assumption 7
  - Intersections will be dealt with independently from the remainder of the street because of drainage and possible connection issues to the rest of the street.

Overall Prioritization Categories under the Draft Strategic Plan

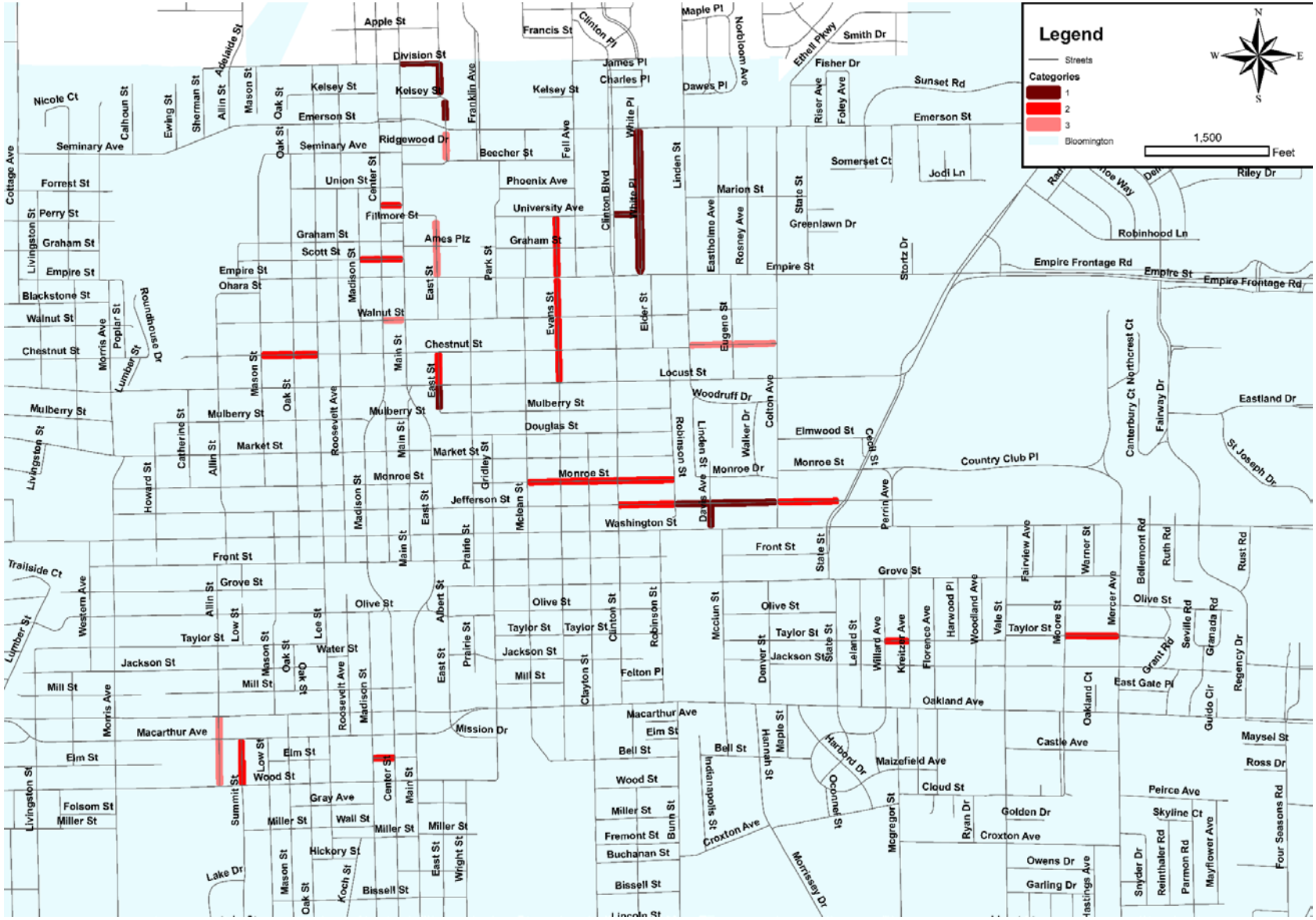
- Category 1 (Restore): These brick streets sections should be repaired, restored and reconstructed to their original appearance. These bricks should be replaced and the disturbed areas restored to their former appearance. Additional efforts should be made to actually restore these brick streets when funds are available.
- Category 2 (Repair): These streets are important enough to merit preservation, but not so important as to merit restoration. If any existing brick areas are disturbed, they shall be restored to their original appearance using the standard in this policy. All existing pavement patches on category two brick streets will not be restored unless disturbed areas are adjacent to existing pavement patches.
- Category 3 (Reconstruct): Resurfacing and patching with materials other than brick are allowed on these streets. These brick streets do not meet the standards required for repair or restoration. The Public Works Department can patch, resurface or reconstruct as budget and conditions dictate.

Brick Street Data and Prioritization (Draft 2009 Brick Streets Strategic Plan)

Brick Street Section	Category	Structural Problems	Crown Condition	Drainage Problems	Base Condition	Ride-ability	PASER	Area of Patch (Sq. Ft.)	Percent of Street Patched (%)	Neighborhood / Historical District
Allin St., Macarthur Ave. to Wood St.	3	SOME	FAIR	FEW	AVERAGE / POOR	AVERAGE/ POOR	3	633.1	4.1	
Allin St., Oakland Ave. to Macarthur Ave.	3	MANY	FAIR	FEW	AVERAGE	AVERAGE	4	112.7	1.6	
Chestnut St., Eugene St. to Colton Ave.	3	MANY	FLAT	FEW	AVERAGE / POOR	POOR	2	587.7	5.4	
Chestnut St., Linden St. to Eugene St.	3	MANY	FAIR / FLAT	FEW	POOR	AVERAGE/ POOR	2	555.6	4.8	
Chestnut St., Mason St. to Oak St.	2	MANY	FLAT	MANY	AVERAGE / POOR	AVERAGE/ POOR	2	376.8	2.9	Northwest Union Neighborhood
Chestnut St., Oak St. to Lee St.	2	SOME	FAIR	FEW	AVERAGE	AVERAGE	5	558.4	6.3	Northwest Union Neighborhood
Davis Ave., Jefferson St. to Washington St.	1	FEW	GOOD	NONE	GOOD	GOOD	10	0	0	Davis-Jefferson Historical District
Division St., Main St. to East St.	1	FEW	GOOD	FEW	GOOD	GOOD	8	43.3	1.1	
East St., Chestnut St. to Locust St.	2	SOME	FAIR	FEW	AVERAGE	AVERAGE	4	375.9	3.7	
East St., Division St. to Kelsey St.	1	FEW	GOOD	NONE	GOOD / AVERAGE	AVERAGE	7	324.3	3.1	
East St., Emerson St. to Beecher St.	3	SOME	FAIR	FEW	AVERAGE	AVERAGE	4	612.6	7.1	
East St., Graham St. to Empire St.	3	MANY	FAIR	FEW	AVERAGE / POOR	POOR	2	1175	12.5	
East St., Kelsey St. to Emerson St.	1	FEW	GOOD	NONE	GOOD / AVERAGE	AVERAGE	7	85.2	1.4	
East St., Locust St. to Mulberry St.	1	FEW	GOOD	NONE	GOOD / AVERAGE	GOOD	7	506.8	6.9	Downtown Bloomington
East St., University Ave. to Graham St.	3	SOME	FAIR	FEW	AVERAGE	AVERAGE	5	541.8	6.9	
Elm St., Madison St. to Center St.	2	SOME	FAIR	FEW	AVERAGE	AVERAGE	5	0	0	South Hill Neighborhood
Evans St., Chestnut St. to Locust St.	2	MANY	FAIR	FEW	AVERAGE / POOR	POOR	3	188.8	2.2	Greenlee, Robert, House - NHD
Evans St., Empire St. to Walnut St.	2	MANY	FAIR	MANY	POOR	POOR	3	277.4	2.6	
Evans St., Graham St. to Empire St.	2	SOME	FAIR	FEW	AVERAGE	AVERAGE	5	111.8	1.5	
Evans St., University Ave. to Graham St.	2	SOME	FAIR	FEW	AVERAGE / POOR	POOR	3	261.3	3	
Evans St., Walnut St. to Chestnut St.	2	SOME	GOOD	FEW	GOOD / AVERAGE	AVERAGE	6	179.9	2.1	
Jefferson St., Clinton St. to Robinson St.	2	SOME	FAIR	FEW	AVERAGE	AVERAGE	5	474.3	2.5	Near East Side Neighborhood
Jefferson St., Colton Ave. to Towanda Ave.	2	SOME	GOOD	FEW	AVERAGE	AVERAGE/ POOR	5	1449	7.3	Davis-Jefferson Historical District
Jefferson St., Davis Ave. to Colton Ave.	1	SOME	FAIR	FEW	AVERAGE	AVERAGE	5	359	1.6	Davis-Jefferson Historical District
Jefferson St, Robinson St. to Davis Ave.	1		GOOD	NONE	GOOD / AVERAGE	GOOD	6	11.9	0.1	Davis-Jefferson Historical District
Monroe St., Clayton St. to Clinton St.	2	MANY	GOOD	FEW	AVERAGE / POOR	POOR	3	611.9	8	Near East Side Neighborhood
Monroe St., Clinton St. to Robinson St.	2	SOME	FAIR	MANY	AVERAGE	AVERAGE	4	653.2	4	Near East Side Neighborhood
Monroe St., Evans St. to Clayton St.	2	MANY	FAIR	MANY	AVERAGE / POOR	POOR	2	200.5	2.6	Near East Side Neighborhood
Monroe St., McLean St. to Evans St.	2	MANY	FAIR	MANY	POOR	POOR	2	433.9	4.8	Near East Side Neighborhood
Scott St., Center St. to Main St.	2	FEW	FAIR	NONE	AVERAGE	AVERAGE	7	0	0	Northwest Union Neighborhood
Scott St., Madison St. to Center St.	2	SOME	FAIR	FEW	AVERAGE	AVERAGE	6	0	0	Northwest Union Neighborhood
Summit St., Macarthur Ave. to Wood St.	2	SOME	FAIR	FEW	GOOD / AVERAGE	AVERAGE	6	223.8	1.8	
Taylor St., Moore St. to Mercer Ave.	2	MANY	FLAT	EXCESSIVE	POOR	POOR	1	26.3	0.2	Founders Grove
Taylor St., Willard Ave. to Kreitzer Ave.	2	SOME	FAIR	FEW	AVERAGE / POOR	AVERAGE	4	170.8	2.7	Founders Grove
Thompson Ave., Center St. to Main St.	2	SOME	FAIR	FEW	AVERAGE	AVERAGE	6	0	0	Northwest Union Neighborhood
University Ave., Clinton Blvd. to White Pl.	1	FEW	FLAT	NONE	GOOD / AVERAGE	GOOD	7	0	0	White Place – NHD
Walnut St., Center St. to Main St.	3	MANY	FAIR	MANY	POOR	POOR	2	59.7	1.2	Northwest Union Neighborhood
White Pl., Emerson St. to University Ave.	1	FEW	FAIR	FEW	AVERAGE	AVERAGE	7	0	0	White Place – NHD
White Pl., University Ave. to Empire St.	1	FEW	GOOD	FEW	AVERAGE	AVERAGE	7	0	0	White Place – NHD

Table 1: 2009 Brick Street Data and Prioritization

Brick Street Prioritization Map (Draft 2009 Brick Streets Strategic Plan)



Map 1: 2009 Brick Street Prioritization Map

6.2. Brick Streets Projects between 2009 and 2017

Since 2009, Public Works authorized workers to overlay portion of two blocks of brick streets in the City with concrete. Moving forward, the City's policy will be to preserve the remaining brick. However, the concrete on these two blocks will remain in place, as it is relatively new and would be cost prohibitive to relay with brick.

Elm Street

Workers overlaid about one third of Elm St., from Center St. to Madison St., with concrete.

Figure 7: Brick portion of Elm St., from Center St. to Madison St.

Figure 8: Concrete portion of Elm St., from Center St. to Madison St.

Chestnut Street

In spring 2016, workers overlaid about half of Chestnut St., from Oak St. to Mason St., with concrete, based on a request from property owners along the street.

Figure 9: Brick portion of Chestnut St., from Oak St. to Mason St.

Figure 10: Concrete portion of Chestnut St., from Oak St. to Mason St.

Monroe Street

In August 2016, residents living on Monroe Street, from Clinton Street to Robinson Street, signed a petition to have their brick street overlaid with asphalt in order to repair it. Public Works again planned to move forward with overlaying a brick street. In December 2016, Staff sent a letter to those affected by the resurfacing to inform them that, if the City Council approved the Fiscal Year 2018 budget, Public Works would authorize workers to overlay the street with asphalt. However, in early April 2017, Ward 4 Alderman Amelia Buragas informed Staff that, after talking with residents, a brick street was preferred over resurfacing with asphalt. On April 24, 2017, the City Council instructed staff to move forward with design, planning, and bidding for patching or reconstructing the brick on this portion of Monroe St. in Fiscal Year 2019.

Figure 11: Condition of Monroe St., from Clinton St. to Robinson St. in Spring 2017

Moving Forward with the Brick Streets Master Plan

In addition to looking at patching or reconstructing Monroe St., from Clinton St. to Robinson St., the City Council instructed City staff to work with the Historic Preservation Commission on this Brick Streets Master Plan. The Historic Preservation Commission was tasked with coming up with an implementation strategy and recommendation to further direct staff on the development of a Brick Streets Master Plan, utilizing information from the draft 2009 Brick Streets Strategic Plan. The goal stated in the motion was to ensure that there is a comprehensive plan for dealing with brick streets in Bloomington rather than using a piecemeal approach.

7. BRICK STREET DESIGN RECOMMENDATIONS

7.1. Types of Brick Pavement

City staff has considered or used four types of brick or brick-like pavement to match or replicate historical brick streets in the City:

1. Red or purple vitrified clay brick (recommended)
2. Red concrete blocks (recommended)
3. Red stamped concrete (not recommended)
4. Red patio pavers (not recommended)

Several other types of bricks, blocks, and other pavements are historical, such as cobblestone and yellow bricks, but they are not part of Bloomington's history.

Unfortunately, a definitive way to measure durability of each type of pavement does not exist. The City must consider other factors when determining which material to use for brick streets in the future.

Red or Purple Vitrified Clay Brick (Recommended)

The City used this type of brick for all of its brick streets over the years. All current brick streets are paved with red or purple vitrified clay brick street pavers (Fig. 12), with the exception of University St., Clinton Blvd. to White Pl., which uses red patio pavers (not recommended). While this type of pavement is the most historical, it would have the highest short-term expense to reconstruct or patch. This type of brick is not widely available and could have a significant cost for materials. In addition, because this type of brick is not uniform in thickness, workers would have to lay each brick by hand, which increases the cost of labor. Long-term costs or cost-per-year estimates are unknown.

Figure 12: Vitrified clay bricks

Red Concrete Blocks (Recommended)

Concrete Brick Street Pavers (Fig. 13)[1] are not historical brick. However, they are a high-quality analog to clay brick streets that have a similar look and feel of brick streets without the expense of installing historic brick. One of the advantages of concrete brick street pavers is that workers are able to use machines to lay the bricks without having to lay them by hand. Concrete brick street pavers are uniform in shape and size, which allows the process to go quicker and at a lower cost. In addition to those factors, concrete brick street pavers are more widely available and less expensive than vitrified clay bricks.

Figure 13: Concrete bricks

[1] Concrete Paver Systems n.d.

Red Stamped Concrete (Not Recommended)

This type of pavement (Fig. 14) utilizes brick-colored concrete that workers place on a street. The workers then stamp the concrete in order to give the appearance of brick. However, the appearance is not authentic, and it would not add to the historical nature of current brick streets. Therefore, this type of pavement is not recommended at this time.

Figure 14: Brick-stamped concrete

Red Patio Pavers (Not Recommended)

Manufacturers design patio pavers for patios or walking paths and not for streets. The City should never use these for brick streets. Only one street in the community, University Ave., Clinton Blvd. to White Pl., has this type of brick. As seen in Fig. 15, these pavers wear out and can create hazards on a street. The City will reconstruct this street with one of the two recommended pavement types.

Figure 15: Patio paver bricks after years of use

7.2. Patching Standards and Details

This standard pertains to all brick streets, which the City will repair using recommended bricks. Prior to removal of any of the brick street surface, a representative of the Public Works Department will mark the limits for the brick street replacement. During removal of the existing brick street surface, due care shall be exercised to prevent damage to adjacent bricks.

Temporary Patching

Workers will use a gravel patch (Fig. 17) in instances where workers remove bricks for underground infrastructure work, until a patching contract can address the repair. A gravel patch temporarily fixes a problem area without using permanent patch materials such as concrete or asphalt, at a much lower cost than brick patching. Temporary gravel patches will last about a year, but additional maintenance can stretch the life of the patch until maintenance contracts can address the issue appropriately. Gravel patches should be closely monitored to ensure maintenance isn't needed sooner than expected.

Figure 16: Temporary gravel patch

7.3. Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) was signed into federal law on July 26, 1990. The City's Sidewalk Master Plan describes how the City is moving towards 100 percent compliance with the ADA concerning crosswalks and curbs. However, that is outside of the scope of this document.

Sidewalk and Curb Requirements and Recommendations

The City's sidewalk system falls under Title II of ADA, which prohibits state and local governments from discriminating against persons with disabilities or from excluding participation in or denying benefits of programs, services or activities to persons with disabilities. Passage of the Americans with Disabilities Act triggered significant changes to the design and construction of pedestrian facilities. Further, workers installed pedestrian curb ramps at most intersections in Bloomington. However, the City's sidewalk system is not yet fully accessible and barriers remain. The ADA has numerous requirements on how workers should construct the City's sidewalks and curb ramps should be constructed in an effort to eliminate barriers for people with disabilities.

While the ADA does not prohibit brick streets, these curb requirements are such that they prohibit building historic curb heights when patching or reconstructing brick streets. It is important to note that workers may have to replace historic and/or sandstone curbs with modern curb measurements and materials in order to comply with the ADA.

Crosswalk Requirements and Recommendations[2]

As noted by the City of Columbia, Missouri, it is also important that all crosswalks over brick streets, curb ramps, and adjacent sidewalks are ADA accessible. While cities have used modern bricks in recent times to distinguish downtown crosswalks while providing ADA accessibility, crosswalks over brick streets do not have to be brick. The City of Columbia recommends that workers use asphalt or concrete for crosswalks on brick streets.

According to Columbia, Missouri, the Americans with Disabilities Act of 1990 does not require any street material (asphalt, brick or concrete) to meet the same ADA standards as sidewalks, ramps and crosswalks; however, with proper restoration techniques, brick streets can follow sidewalk, ramp and crosswalk design standards for slopes, cross slopes, and surface impediments such as vertical surface discontinuities. The City of Columbia recommends these important design factors: repaired brick streets need to be uniformly placed over a level concrete base to prevent vertical obstructions and tight, sand swept joints are needed to create a smooth surface to limit traveling vibrations.

Additional information on the use of wheelchairs on brick streets can be found in the Complete Streets section.

[2] City of Columbia, Missouri 2015

ADA Transition Plan
ADA also required municipalities with more than 50 employees to implement a plan for enactment. The Sidewalk Master Plan served as an official update to the right-of-way portion of the City's ADA plan. This Brick Streets Master Plan does not seek to specifically address or alter the ADA plan.

ADA Coordinator
The ADA Coordinator must be the single contact person to handle issues and investigate complaints for ADA compliance. The official responsible for implementation of the City of Bloomington's ADA Transition Plan in Public Rights-of-Way is:

Kevin Kothe, P.E.
City Engineer
115 East Washington Street
P.O. Box 3157
Bloomington, IL 61702-3157
Telephone: (309) 434-2225
Email: kkothe@cityblm.org

Complaint Process
The City has a formal complaint process, as required under Title II of ADA. Under the procedure, Public Works evaluates all requests and complaints, documents them and documents responses. Persons with disabilities who require curb ramps -- and any other concerned persons -- are encouraged to contact the Public Works office directly at (309) 434-2225 to ensure that the specific needs of each individual are accurately understood and recorded. Written and e-mailed requests/complaints also are welcomed. The issue and specific locations are then entered into a log and the matter gets referred to the appropriate Engineering administrator for inspection and possible action. The Department of Public Works then coordinates any work and keeps a record of all formal responses to the complainant or requester.

Complaints may be received through a variety of communication methods:
Phone: Department of Public Works (309) 434-2225
Email: kkothe@cityblm.org
Mail: Department of Public Works
115 East Washington Street
P.O. Box 3157
Bloomington, IL 61702-3157

Additional Information
For more information about sidewalk and curb requirements as part of Bloomington's commitment to complying with the Americans with Disabilities Act, see pages 14 through 19 in "A Master Plan for Sidewalks."

7.4. Complete Streets

A "Complete Streets" ordinance took effect on September 1, 2016. Chapter 38, Article XII, Sections 180-185.1 describe the City's commitment to Complete Streets. It is important to consider this ordinance when developing additional plans for brick streets. The ordinance currently refers to all streets in the community, including all brick streets. A brick street is not a Complete Street according to the City's current ordinance.

Advantages and Disadvantages of Brick for Complete Streets Planning

Table 2: Advantages and Disadvantages of Brick for Complete Streets Planning[3]

ADVANTAGES	DISADVANTAGES
Longer lifespan than asphalt.	Cannot withstand heavy traffic
Can be used as a traffic calming element in low-speed environments	Individual bricks become loose and uneven over time and need to be replaced
Provides a nice design element in neighborhoods and historic areas	Tree roots can uplift bricks, which create an obstacle for pedestrians and wheelchair users
	Brick streets and sidewalks are less comfortable for bicyclists and wheelchair users

Keeping this information in mind, and conforming to all current plans adopted by the City, this plan recommends an additional exemption for historic streets as follows:

Section 181.2: Exemption.

The implementation of Complete Streets practices may not be required if the City of Bloomington determines that one or more of the following conditions exists: 1) the project occurs on a roadway where specified users are prohibited by law; 2) the project involves ordinary maintenance activities such as cleaning, sealing, spot repairs, patching, and surface treatments; 3) the cost of accommodations for a particular mode is excessively disproportionate to the need for accommodation and potential benefit of accommodation; ~~and/or~~ 4) there is clear and quantifiable evidence of a lack of need or lack of increased safety benefits; and/or 5) the street surface is considered a historic street surface. The City of Bloomington may consult local, regional, state, and federal plans and leaders, as appropriate, in assessing exemptions. Exemptions to the Complete Streets policy must be documented in writing, submitted to the Director of Public Works and approved by the City Manager. In the event that consensus cannot be reached between the City Manager and the Director of Public Works, the City Council may make the final determination for an exemption.

[3] Mid-Ohio Regional Planning Commission 2012

8.POLICIES AND ORDINANCES

8.1. Utility Cuts

Utility cuts, which result when pavement is disturbed in order to work on underground infrastructure, are the most common surface disturbance in local streets. Typically, the party that disturbs the pavement must repair or replace disturbed pavement with the same pavement material. However, restoration of brick pavement costs significantly more than patching utility cuts on concrete or asphalt pavement. This is due to the fact that brick replacement, which is labor intensive with relatively fixed per unit costs, cannot compete with the advantage of mechanization and efficiencies of scale allowed through asphalt or concrete patching for streets that are not brick.

In the case of brick street utility cuts, the City will require those that disturb brick pavement to install a temporary gravel patch. In addition, the party will be required to recover brick from disturbed brick streets and on disturbed brick streets overlaid with asphalt or concrete, taking the brick to the City's yard at the southeast corner of East Street and Jackson Street. This requirement will replace the requirement that the party that disturbed the brick must reconstruct the disturbed pavement with brick. Public Works suggests codifying this policy so that it will be enforceable with fines and additional repercussions.

The City will continually work with each utility company, private contractor, and City department, in order to plan around underground infrastructure work. This is to ensure that brick patches are installed as soon as possible and that temporary gravel patches are used minimally. In some cases, this would enable brick to remain at the job site so that it doesn't have to be hauled back and forth from the City's yard. Though streets with utilities running beneath them are less than optimal candidates for preservation, there are no brick streets in the city that are free of utilities. Nearly all of the brick streets have at least one water main and one sewer line running beneath them.

8.2. Using Volunteers for Brick Recovery or Bricklaying

To help reduce the overall cost of repairing or maintaining brick streets, this plan recommends using volunteers for tasks that do not require expertise. Examples include cleaning salvaged brick, stacking salvaged brick, assisting with relaying bricks, and brushing in grout.[4] These tasks typically require a large amount of labor, which is the majority of the cost in repairing or maintaining brick streets. Factors such as the cost of training volunteers, the cost to provide personal protective equipment, and the risk of injury should be considered when using volunteers for this work. Further analysis will need to be done prior to allowing this practice.

[4] West Central Neighborhood Association n.d.

8.3. Vegetation Policy

One of the disadvantages of brick streets is that vegetation can spring up between bricks. Vegetation growth between bricks generally occurs on infrequently used streets (Fig. 18).

Due to environmental concerns, the City will not use plant-killing chemicals on these streets in order to eliminate vegetation. This method creates a risk of damage to the street or a risk of chemical infiltration into water or sewer infrastructure.

Figure 17: Vegetation between bricks

While it is possible for street sweepers to make vegetation slightly shorter, street sweepers are ineffective at removing vegetation between bricks.

Figure 18: Effects of driving on vegetation between bricks

As seen in Fig. 19, vehicles driving over vegetation kills it off over time. This means that vegetation would not be as prevalent in driving lanes, but it could grow along the side of a street.

Streets that drivers use more frequently have a lower chance of vegetation growth, but it can still occur. The City will not actively take steps to get rid of vegetation growth between bricks.

8.4. Truck Route Ordinance

One ordinance to consider with brick streets is to establish truck route restrictions on all brick streets in the City. This would help protect brick streets and make them easier to maintain long-term. Some brick streets, such as White Place, already have this restriction.

Figure 19: Truck route restriction sign on White Pl.

8.5. Recovering Brick from Brick Streets Overlaid with Asphalt

At one time, the City of Bloomington had more than forty-five miles of brick streets. Many of those streets were overlaid with asphalt without removing the brick. The Engineering Division found some research on heating asphalt to melt asphalt off of brick, but the process required special equipment.

However, on April 24, 2017 the Engineering Division spoke with John Gavin, co-owner of Gavin Historical Bricks in Iowa City, Iowa. Mr. Gavin's company is a supplier of Purington-brand historic bricks, and it has several million bricks in stock. According to Mr. Gavin, restoration of asphalt-on-brick to brick is a simple process, but it is expensive and labor intensive. It requires a skilled heavy equipment operator and laborers. He was able to provide basic instructions on this process, and the Engineering Division proceeded to test that process at a sewer dig on Grove Street.

It should be noted that the photos show a single strip of road, but a similar process would be used for the entire width of a road section. The final process does not match the photos in that, when performing this process on the entire width of a road section, the backhoe bucket and teeth would have to face away from the backhoe to allow the backhoe to sit on the sand and concrete underneath the brick rather than on the brick that is to be removed. Otherwise, another piece of equipment may be used. Once this process is performed on the entire width of a road section, the photos should be updated.

Grove Street was in good condition underneath the asphalt during this test, which could be atypical. Issues with underground infrastructure may make this process difficult, inefficient, or cost-prohibitive. Each street slated to undergo this process will need to be evaluated to ensure brick recovery is possible. Also, if the bricks were milled, or scraped during an asphalt overlay, they may be able to be reused if turned over.

This section only shows the process for recovering the brick from brick streets overlaid with asphalt, but it does not outline the process for reusing the brick on the same street. For more information on restoring former brick streets to brick streets, please see *Future Considerations: Restoring Former Brick Streets* in this document.

1. *This process requires a backhoe with teeth in good condition or other, similar equipment.*

2. *Lightly scrape over the asphalt surface. The asphalt will peel away without damaging the bricks, if done correctly. There should be little residual.*

3. *Clean residual asphalt from the bricks. Power washing is a common method.*

4. *The street probably has issues. (There was a reason for the asphalt overlay). Most likely, all of the bricks will have to be removed.*

5. *Once the bricks are removed, place them in a pile on the nearby road so that they can be palletized. Alternatively, haul them away to another location to be palletized later.*

6. *Carefully stack undamaged bricks on a pallet on location or at another location, depending on the method used. Count on having to discard 30 percent of the bricks because of various types of damage.*

Figure 20: Brick Recovery Process

8.6. Storing Excess Bricks

The Public Works Department Streets and Sewers Division actively salvages bricks just for repair purposes. This includes salvaging brick from places such as alley approaches, which are not part of brick streets. In an effort to have spare bricks for repair work done by city crews, the City of Bloomington will require that utility companies and private contractors who work on streets provide the city with any bricks from any streets with bricks on or under the existing surface and deliver them to our City yards located at the southeast corner of East Street and Jackson Street. Future city contracts will be modified so that this process is included. More details on this process can be found under Utility Cuts.

Excess bricks are currently stored at an outdoor location with limited access. According to the West Central Neighborhood Association, bricks should be stacked on pallets with no more than five layers (or 350 bricks), with each layer facing a different direction than the last.[5] In addition, pallets should be wrapped in shrink wrap to prevent bricks from falling during transport.[8]

Figure 21: Bloomington's current storage area for brick

[5] West Central Neighborhood Association n.d.

9. PUBLIC INPUT AND COMMUNITY INVOLVEMENT

The City Council first discussed the Brick Streets Master Plan in April 2017, when council members instructed the Public Works Department to work with the Historic Preservation Commission to create the plan. Public Works received direction from the Historic Preservation Commission at the May 2017 Meeting.

Following the initial meeting with the Historic Preservation Commission, Public Works sent a letter to property owners, residents, and businesses along each of the brick streets in Bloomington. The letter, sent in June 2017, gave information about upcoming public meetings that would discuss the plan. It also included contact information for any questions or concerns. Public Works received several comments via phone and e-mail that were all in favor of preserving brick streets within the community.

The Historic Preservation Commission Meeting in June 2017 was canceled, but, in July 2017, Public Works presented a draft plan and asked for recommendations from the Historic Preservation Commission on topics such as street prioritization and ordinances. Public Works also heard feedback from the public during this meeting.

Public Works met with members of the Historic Preservation Commission in early August 2017 to obtain further feedback on the final prioritization and recommendations before a final copy of the plan was presented.

More details on the meetings leading up to the final approval of the plan by the City Council will be added to this section as they occur.

10. BRICK STREET ANALYSIS AND PRIORITIZATION

Public Works staff created a methodology to study brick streets in Bloomington and establish priorities for their preservation, based on the 2009 strategic plan and additional considerations. In 2009, the Public Works Department gathered input from various stakeholders, including the City Council, neighborhood groups and the public. In addition, other communities completed a survey on how they deal with their brick street infrastructure. In 2017, City staff updated the information gathered in 2009 and collaborated with the Community Development Department and the Historic Preservation Commission to examine best practices for analysis and prioritization. The following is a summary of the brick streets categorization process:

- City staff identified existing exposed brick streets. Over the years, workers overlaid at least two full blocks of brick streets with asphalt. In addition, workers overlaid portions of two other blocks of brick streets. A list of streets is available later in this section.
- In 2017, City staff analyzed the condition of the street and given a Brick PASER (Pavement Surface Evaluation and Rating) system rating based on two official PASER scales and one PASER scale developed for sidewalks in the City. Additional information about the PASER system rating methodology can be found later in this section.
- In 2009, City staff utilized satellite imagery within the City's Geographic Information System (GIS) to estimate the numbers of concrete or asphalt patches for each brick street section. City staff then used the GIS to calculate the percentage of the patch based on the total area of each block. Due to time constraints, City staff was unable to update this data. However, City staff only used the patch area as the least important sorting metric for a single category.
- City staff then determined if each block is within a historic district or has the potential to be located in a historic district in the near future. More information on that is available later in this section.
- City staff will enter all of this information into the City of Bloomington's GIS database.

10.1. Overall Prioritization Categories

City staff prioritized all current blocks of brick streets, apart from those that are serviceable and free of non-brick patches, for either reconstruction or patching. In addition, city staff prioritized serviceable brick streets in the event that multiple serviceable brick streets need temporary patches replaced. but funding is limited. The patching and reconstruction categories will each have their own budget, with about 20 percent of the total brick street budget allocated for patching over utility cuts, temporary gravel patches, or asphalt and concrete patches and about 80 percent of the total brick street budget allocated for reconstruction. Serviceable brick streets with necessary temporary patch replacements will take priority and funding before all other streets in the Patch category.

All streets in either the reconstruct or patch categories will undergo further engineering prior to a final determination of reconstruction versus patching. Based on information gathered during that process, Public Works will decide which option would be more cost-effective for each block.

Reconstruct

If the Engineering Division determines that a prioritized brick street in this category needs to be reconstructed, then the street will be reconstructed so that it reaches a PASER system rating of at least four, and so that it is free of non-brick patches. Typically, a street in this category is unable to be patched to bring it up to a serviceable level, and, therefore, must undergo brick street

reconstruction. The worst streets will be the highest priorities in this category. These brick street sections are a core part of the Brick Street Master Plan and will be a large portion of the overall budget for brick streets.

In order to prioritize streets in this category, brick streets are separated by PASER system rating, from least to greatest. Then, within each PASER system rating table, prioritized streets within historic districts are listed first and then streets within potential historic districts. As a final sorting metric, streets are arranged by total approximate area from greatest to least. The total approximate area is an easy way to determine cost, because a larger total approximate area would cost more to reconstruct than a smaller total approximate area. Other factors help to determine cost, but approximate area is a good quaternary sorting metric for prioritization.

Patch

Within the patching category, temporary patches or utility cuts resulting from underground infrastructure work will be the first to receive funding. Once temporary patches have been replaced, Public Works will begin working on the highest priority streets in the patching category until each street is free of non-brick patches. These brick street sections are near serviceable condition, and would only require brick patching in order to bring them up to serviceable condition. The best streets will be the highest priorities in this category. This strategy will be implemented so that, when the worst Reconstruct category streets are using more funding, the best Patch category streets will require less funding. Then, once the best Reconstruct category streets are using less funding, the worst Patch category streets could use more funding if necessary.

This category is prioritized in a similar manner to the Reconstruct Category, except that brick streets that have been split up by PASER system rating are ranked from highest to lowest rating. Then, streets in historic districts are prioritized higher than streets in potential historic districts, which are prioritized higher than streets in neither type of district. Finally, total area of patch is used as a cost metric, since only patches would be replaced rather than the entire street. Brick streets in this category are sorted by smallest area of patch to largest area of patch.

Serviceable (No Patch)

These brick street sections have a PASER System rating of 4 or above and are free of non-brick patches. These streets do not require reconstruction or patching. Streets in this category will be given a prioritization for cases in which more than one street in this category needs a temporary patch replaced. In cases where underground infrastructure work creates a need for brick patching, serviceable (no patch) brick streets will receive funding prior to streets in the Patch category to ensure that serviceable streets remain serviceable. These brick street sections should be monitored to ensure they continue to meet the requirements of a serviceable brick street. Streets in this category may be placed in another category if they no longer meet the requirements for this category.

Streets in this category are sorted in the same manner as streets in the Patch category, but street area and patch area are not taken into consideration, as those metrics are unnecessary with the current list. However, a new prioritization metric will need to be developed as more streets are added to this category.

10.2. Brick Pavement Surface Evaluation and Rating (Brick PASER)

To remain consistent with the rating systems used for other infrastructure in the City, Public Works has created a 10-point rating system for brick streets, combining the four-point rating system from the PASER manual for brick and block[6] and the 10-point rating system from the PASER manual for asphalt streets,[7] and the PASER system developed by Public Works for the City of Bloomington Sidewalk Master Plan. The Brick PASER system developed by Public Works should not be confused with the four-point rating system used in the PASER manual for brick and block.

The PASER system of rating the condition of various pavement surfaces was developed by the Transportation Information Center at the University of Wisconsin, Madison, in the 1980's. This center is partnered with the Federal Highway Administration. PASER is currently used by the City to analyze asphalt streets, concrete streets, and concrete sidewalks, but a new system had to be developed so that all three rating systems would align, preventing confusion.

Figure 22: Covers for "A Master Plan for Sidewalks," "Pavement Surface Evaluation and Rating PASER Manual: Asphalt Roads," and "Pavement Surface Evaluation and Rating PASER Manual: Brick & Block."

[6] Wisconsin Transportation Information Center 2015
[7] Wisconsin Transportation Information Center 2013

Ten-Point Brick Street Rating System (Based on PASER)

Surface Rating	General Condition & Defects	Functionality & Aesthetics	
10 New	None	Brand new or newly reconstructed. Zero non-brick patches.	
9 Excellent	No rutting.	Like new condition. Zero non-brick patches.	
8 Very Good	Less than 25% of bricks cracking or spalling. No rutting.	Minor defects caused by weathering. Still looks acceptable. Very good ride. Very few defects. Zero non-brick patches.	
7 Good (+)	Over 25% of bricks have minor weathering. 25% to 50% shows minimal cracking along the street. Unevenness, but no rutting.	Weathering and minor defects are becoming visible. Still functional. Good ride. Zero non-brick patches.	
6 Good (-)	Moderate aging beginning to be visible. Minimal cracking is visible in over 50% of the street. Very minor rutting may be visible.	Minor defects. Functionality and aesthetics are slightly lowered. Still acceptable. Good ride. Zero non-brick patches.	
5 Fair (+)	Less than 25% of the brick street has moderate cracking. Over 50% of the street has moderate spalling. Sunken or settled areas. Broken bricks or blocks. Open joints. Minor rutting.	Ride may be uneven and rough. Might be a hindrance to some vehicles, but functionality acceptable to most. Areas of poor drainage. Zero non-brick patches.	
4 Fair (-)	One or more types of defects present extending over 5% to 10% of the surface area of the street. Less than 50% of the street has severe spalling. Less than 50% of the brick street has moderate cracking. Sunken or settled areas. Broken bricks or blocks. Open joints. Rutting causing minor ride issues and drainage issues.	Ride may be uneven and rough. Still usable by most. Lacking aesthetic appeal. Areas of poor drainage. Zero non-brick patches.	
3 Poor	One or more types of defects present extending over 10% to 20% of the surface area of the street. Severe spalling and moderate cracking is evident in 50% of the brick street. Sunken or settled areas. Broken bricks or blocks. Open joints. More severe rutting.	Ride uneven and rough. Functionality is almost gone. Negative aesthetics. Areas of poor drainage. Non-brick patches 5% to 10% of surface area. Street needs to be reconstructed.	
2 Very Poor	Defects cover 20% to 30% of the surface area. Up to 50% of the brick street has severe cracking. Extreme rutting.	Very rough ride. Not functional. Street needs to be reconstructed. Poor drainage. Non-brick patches 10% to 20% of surface area.	
1 Failed	Defects cover more than 30% of the surface area. Complete loss of brick. Over 50% of the brick street has severe cracking. Extreme rutting.	Brick street is impassable. Street needs to be reconstructed. Poor drainage. Non-brick patches 20% to 30% of surface area.	

Table 3: Ten-point brick street rating system (based on PASER)

10.3. Historic District Location

Brick streets were also prioritized based on whether they were located within one of the City's historic districts. These districts include Downtown Bloomington, Franklin Square, East Grove, Davis-Jefferson, North Roosevelt Avenue, and White Place. A map of these districts is available on p. 37.

Downtown Bloomington Historic District
Roughly a 12 block area bounded by East, Center, Front and Locust Streets, this district was listed on the National Register of Historic Places in February 1985. Within the Downtown Bloomington Historic District are two properties individually listed on the National Register, The McLean County Courthouse Square (February 1973) and the restored Miller-Davis Law Buildings at l0l-103 N. Main and 102-104 E. Front (April 1979).

Franklin Square Historic District
This district consists of the 300 to 400 Blocks of East Chestnut and East Walnut Streets and the 900 block of North Prairie and North McLean Streets. Franklin Park and the bordering houses were added to the National Register of Historic Places in January 1976. The same area was designated a local S-4 Historic and Cultural District zone by the Bloomington City Council in 1979. This district includes private residences.

East Grove Street Historic District
This district includes 400-700 East Grove Street and is bounded on the west by Gridley Street and on the east by Clinton Street. Nomination to the National Register for Historic Places was approved in 1987. The District includes two properties already listed on the National Register - the Reuben M. Benjamin House at 510 East Grove Street (1978), and the George Cox House at 701 East Grove Street (1985.) Private residences dominate this district.

Davis-Jefferson Historic District
This district includes portions of 900-1100 East Jefferson Street and 202 and 204 Davis Street and was designated a local S-4 Historic and Cultural zone by the Bloomington City Council in November, 1984. There is one National Register property in this district at 1005 East Jefferson-The David Davis III and IV House. Private residences dominate this district.

North Roosevelt Avenue Historic District
This district includes an area bounded by Union Street, West Empire Street, North Lee Street, and North Madison Street. North Roosevelt Avenue is the central street. This is a neighborhood that was built up in the 1870's, a largely working class neighborhood, with Irish and Hungarian immigrants, with historic connections to the Chicago and Alton Railroad shops. There were herringbone brick sidewalks and carriage houses of which some remnants are still to be seen today.

White Place Historic District
This district includes White Place, Clinton Boulevard, the east side of Fell A venue between Empire and Emerson Streets and the west side of Fell A venue between University and Phoenix. Nomination to the National Register of Historic Places was approved in 1988. Private residences dominate the district.

10.4. Potential Historic District Location

Based on the City's 2004 Historic Preservation Plan, several neighborhoods have the potential to become historic districts in the future. While brick streets are not located within all of these areas, four of them contain brick streets. This consideration is used to ensure that the prioritization will be up-to-date if these districts become historic districts within the City. These areas include Illinois Wesleyan University, Miller Park, and South Hill. A map of these districts is available on p. 40.

Illinois Wesleyan University

Located.in the north central area of Bloomington, the campus represents some of the promise and belief of the early leaders in their community. It has carried a reputation of excellence as a liberal arts institution since its beginnings in 1850. Several of the campus structures are of notable design.

Miller Park

The grounds of the park have been the charge of the City since 1887. It has gradually acquired the unique features (the zoo, bridges, monuments, and the large artificial lake), which have contributed to its wide popularity and attractiveness. The park pavilion is one of the most beautiful buildings in Bloomington.

South Hill

One of the oldest neighborhood areas, it was generally the location of the middle-class German families who came during the 1850's to 1870's. They were active in the commercial and artisan trades of the early community and supported a fully developed subculture of social organizations and newspapers well into the 20th century.

10.5. Brick Street Data and Prioritization

Reconstruct Category

Prioritized by City Council (PASER 4)				
Brick Street Section	**Priority**	**Approx. Area (Sq. Ft.)**	**Neighborhood**	**Historic District or Potential Historic District?**
Monroe St., Clinton St. to Robinson St.	**1**	**16,330**	**Near East Side Neighborhood**	**No**
PASER 3				
Brick Street Section	**Priority**	**Approx. Area (Sq. Ft.)**	**Neighborhood**	**Historic District or Potential Historic District?**
Taylor St., Moore St. to Mercer Ave.	2	13,150	Founders Grove	No
PASER 4				
Brick Street Section	**Priority**	**Approx. Area (Sq. Ft.)**	**Neighborhood**	**Historic District or Potential Historic District?**
University Ave., Clinton Blvd. to White Pl. (Patio Brick)	3	9,505	White Place Historic District	Historic District
Chestnut St., Linden St. to Eugene St.	4	11,575	N/A	N/A
Chestnut St., Eugene St. to Colton Ave.	5	10,883	Northwest	No
Monroe St., Clayton St. to Clinton St.	6	7,649	Near East Side Neighborhood	No
PASER 5				
Brick Street Section	**Priority**	**Approx. Area (Sq. Ft.)**	**Neighborhood**	**Historic District or Potential Historic District?**
Evans St., Chestnut St. to Locust St.	7	8,582	Franklin Square	Potential Historic District
PASER 5 (Reconstruct or Patch)				
Brick Street Section	**Priority**	**Approx. Area (Sq. Ft.)**	**Neighborhood**	**Historic District or Potential Historic District?**
Monroe St., McLean St. to Evans St.	8	9,040	Near East Side Neighborhood	No
PASER 6 (Reconstruct or Patch)				
Brick Street Section	**Priority**	**Approx. Area (Sq. Ft.)**	**Neighborhood**	**Historic District or Potential Historic District?**
Summit St., Macarthur Ave. to Wood St.	9	12,433	Miller Park	Potential Historic District
Monroe St., Evans St. to Clayton St.	10	7,712	Near East Side Neighborhood	No

Table 4: Brick Street Data and Prioritization, Reconstruct Category

Patch Category

PASER 8					
Brick Street Section	**Priority**	**Area of Non-Brick Patch (Sq. Ft.)**	**Percent of Non-Brick Patch**	**Neighborhood**	**Historic District or Potential Historic District?**
Chestnut St., Mason St. to Oak St. (Brick Portion)	1			Northwest Union Neighborhood	No
PASER 7					
Brick Street Section	**Priority**	**Area of Non-Brick Patch (Sq. Ft.)**	**Percent of Non-Brick Patch**	**Neighborhood**	**Historic District or Potential Historic District?**
East St., Locust St. to Mulberry St.	2	506.8	6.9	Downtown Bloomington?	Potential Historic District
PASER 6					
Brick Street Section	**Priority**	**Area of Non-Brick Patch (Sq. Ft.)**	**Percent of Non-Brick Patch**	**Neighborhood**	**Historic District or Potential Historic District?**
Jefferson St., Robinson St. to Davis Ave.	3	11.9	0.1	Davis Jefferson Historic District	Historic District
Jefferson St., Colton Ave. to Towanda Ave.	4	1449	7.3	Davis Jefferson Historic District	Historic District
Elm St., Madison St. to Center St. (Brick Portion)	5			South Hill Neighborhood	Potential Historic District
Allin St., Oakland Ave. to Macarthur Ave.	6	112.7	1.6	Miller Park (Frederick Garling house)	Potential Historic District
East St., Division St. to Kelsey St.	7	324.3	3.1	Illinois Wesleyan University	Potential Historic District
Allin St., Macarthur Ave. to Wood St.	8	633.1	4.1	Miller Park	Potential Historic District
Division St., Main St. to East St.	9	43.3	1.1	N/A	N/A
Evans St., Walnut St. to Chestnut St.	10	179.9	2.1	N/A	N/A
Evans St., University Ave. to Graham St.	11	261.3	3	N/A	N/A
East St., Chestnut St. to Locust St.	12	375.9	3.7	N/A	N/A
PASER 5					
Brick Street Section	**Priority**	**Area of Non-Brick Patch (Sq. Ft.)**	**Percent of Non-Brick Patch**	**Neighborhood**	**Historic District or Potential Historic District?**
Jefferson St., Davis Ave. to Colton Ave.	13	359	1.6	Davis Jefferson Historic District	Historic District
East St., Kelsey St. to Emerson St.	14	85.2	1.4	Illinois Wesleyan University	Potential Historic District
Walnut St., Center St. to Main St.	15	59.7	1.2	Northwest Union Neighborhood	No
Evans St., Graham St. to Empire St.	16	111.8	1.5	N/A	N/A
Evans St., Empire St. to Walnut St.	17	277.4	2.6	N/A	N/A
Jefferson St., Clinton St. to Robinson St.	18	474.3	2.5	Near East Side Neighborhood	No
Chestnut St., Oak St. to Lee St.	19	558.4	6.30	Northwest Union Neighborhood	No
PASER 4					
Brick Street Section	**Priority**	**Area of Non-Brick Patch (Sq. Ft.)**	**Percent of Non-Brick Patch**	**Neighborhood**	**Historic District or Potential Historic District?**
East St., Emerson St. to Beecher St.	20	612.6	7.10	Illinois Wesleyan University	Potential Historic District

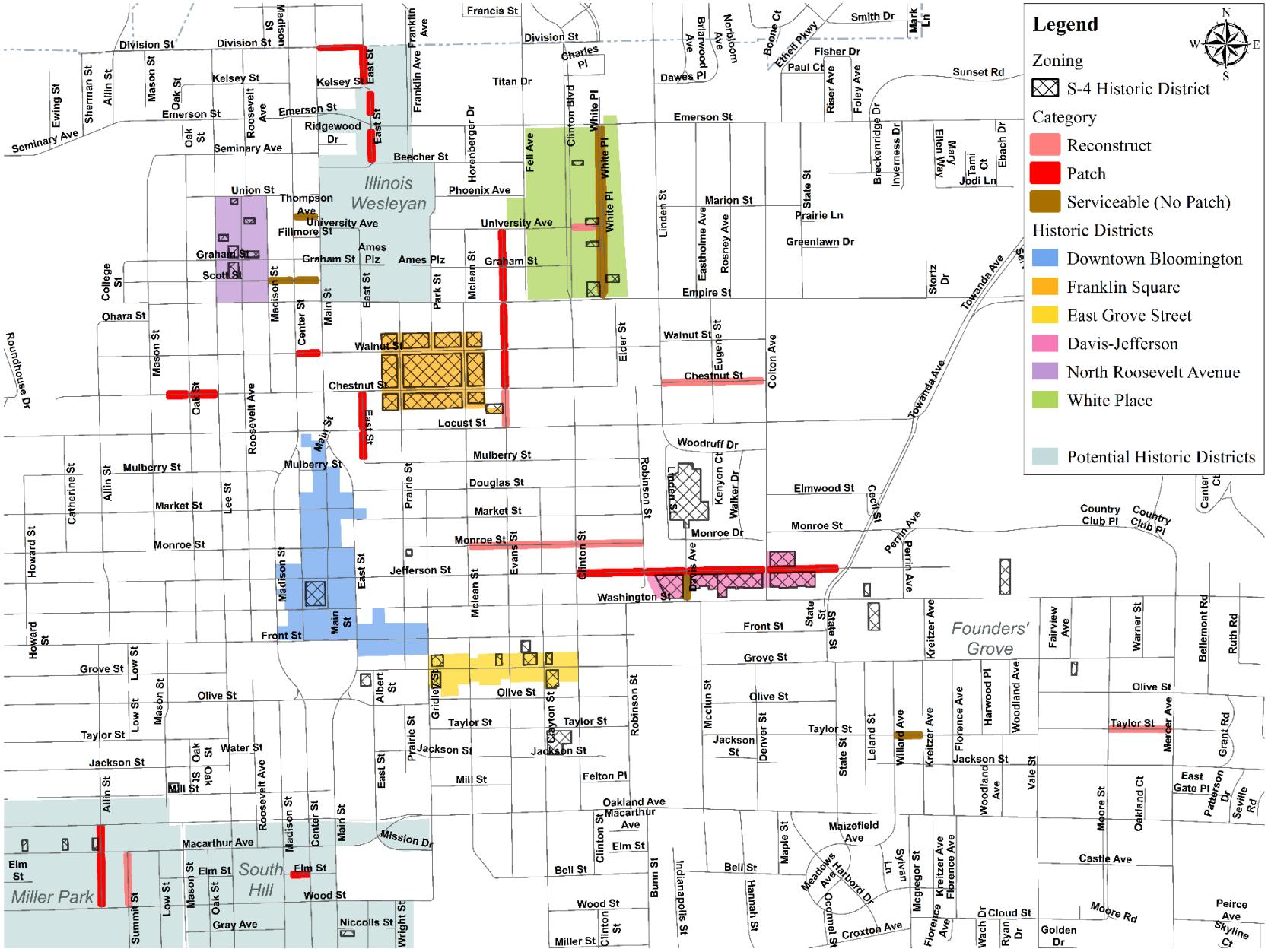
Table 5: Brick Street Data and Prioritization, Patch Category

Serviceable (No Patch) Category

PASER 10					
Brick Street Section	**Priority**	**Area of Non-Brick Patch (Sq. Ft.)**	**Percent of Non-Brick Patch**	**Neighborhood**	**Historic District or Potential Historic District?**
Davis Ave., Jefferson St. to Washington St.	1			Davis Jefferson Historic District	Historic District
PASER 8					
Brick Street Section	**Priority**	**Area of Non-Brick Patch (Sq. Ft.)**	**Percent of Non-Brick Patch**	**Neighborhood**	**Historic District or Potential Historic District?**
Scott St., Center St. to Main St.	2			Northwest Union Neighborhood	No
PASER 7					
Brick Street Section	**Priority**	**Area of Non-Brick Patch (Sq. Ft.)**	**Percent of Non-Brick Patch**	**Neighborhood**	**Historic District or Potential Historic District?**
White Pl., Emerson St. to University Ave.	3			White Place Historic District	Historic District
White Pl., University Ave. to Empire St.	4			White Place Historic District	Historic District
Scott St., Madison St. to Center St.	5			Northwest Union Neighborhood	No
PASER 6					
Brick Street Section	**Priority**	**Area of Non-Brick Patch (Sq. Ft.)**	**Percent of Non-Brick Patch**	**Neighborhood**	**Historic District or Potential Historic District?**
Thompson Ave., Center St. to Main St.	6			Northwest Union Neighborhood	No
PASER 5					
Brick Street Section	**Priority**	**Area of Non-Brick Patch (Sq. Ft.)**	**Percent of Non-Brick Patch**	**Neighborhood**	**Historic District or Potential Historic District?**
Taylor St., Willard Ave. to Kreitzer Ave.	7			Founders Grove	No

Table 6: Brick Street Data and Prioritization, Serviceable (No Patch) Category

10.6. Map of Brick Streets by Category



Map 2: 2017 map of brick streets by category

11. BRICK STREET COST ESTIMATES

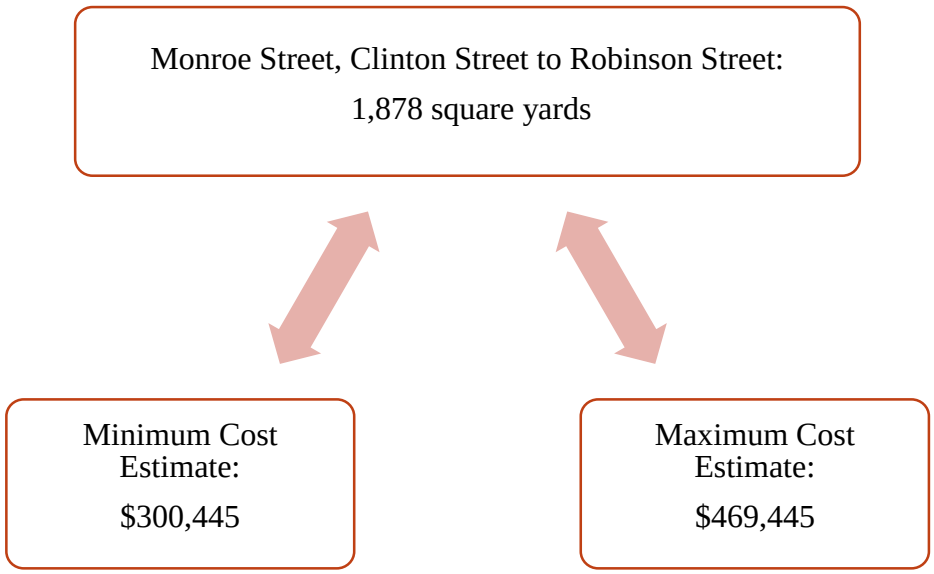
11.1. Cost Estimate Methodology

In 2017, the Public Works Department estimated that brick streets could cost anywhere from $160 to $250 per square yard. This number will be updated once more reconstruction projects have been completed.

As a baseline, Public Works applied this estimate to the first brick street reconstruction project, which is Monroe Street, from Clinton Street to Robinson Street. This section of street is about 1,878 square yards. Using the above cost per square yard estimate, the total for this block would be $300,445 and $469,445. However, this block is atypical in length, which means that the cost for other streets could potentially be lower. Also, the highest estimate may not be the best way to establish a baseline.

For the purposes of this plan, and until more accurate numbers are obtained, Public Works suggests a $400,000 per year expenditure for brick street reconstruction. This is a little more than halfway between the two estimates. These numbers also helped Public Works determine that $100,000 per year for patching would be sufficient.

Figure 23: Initial Reconstruction Estimates for 2017 Monroe Street Project



11.2. Comparison to Other Pavement Types

Due to the nature of pavement, it is difficult to determine the overall cost-effectiveness of a particular type of pavement. Factors such as drainage, location, weather, usage, environmental factors, underground infrastructure condition, and unforeseen circumstances make it difficult to state which pavement would last the longest or how much a particular type of pavement would cost per year. Vitrified clay brick pavement or concrete brick pavement may have a higher initial cost, but it is possible for these materials to last longer. Materials such as concrete and asphalt have a lower initial cost, but they may not last as long as the brick pavements. The choice to use brick pavement is more about aesthetics than cost-effectiveness, which overrules any cost differences between brick pavement and non-brick pavement.

11.3. Ten-Year Spending Plan

The Brick Streets Master Plan proposes a realistic approach to fund prioritized brick streets within 10 years while also making minor patches and repairs to streets that are not prioritized. The plan requires an increased funding priority from the City Council and it needs consistent funding. In recent years, the City has not dedicated funding to brick streets, which means that the Ten-Year Spending Plan will require a significant amount of funding.

The accompanying chart shows estimated amounts of spending under the Brick Streets Master Plan. In 2017 calendar year dollars, the improvement plan would spend $500 thousand per fiscal year on brick streets. However, to account for inflation and additional factors, the improvement plan shows a total of $5.7 million in brick street repair and maintenance spread over ten years. This assumes a 3 percent increase in the cost of labor, materials, and inflation through fiscal year 2029. This accounts for one major reconstruction project per year and contracts for brick patching.

Table 7: Ten-Year Spending Plan Summary*

	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6	Yr. 7	Yr. 8	Yr. 9	Yr. 10
Priority Reconstruction	$400,000	$412,000	$424,000	$437,000	$450,000	$464,000	$478,000	$492,000	$507,000	$522,000
Utility and Priority Patches	$100,000	$103,000	$106,000	$109,000	$113,000	$116,000	$119,000	$123,000	$127,000	$130,000
Total:	**$500,000**	**$515,000**	**$530,000**	**$546,000**	**$563,000**	**$580,000**	**$597,000**	**$615,000**	**$633,000**	**$652,000**
Grand Total:	**$5,732,000**									

*Figures may not add, as they are rounded to the nearest $1,000.

Ten-Year Spending Plan Objectives

Objective I: Consistently Fund Ten-Year Improvement Plan

In order to comply with the master plan, it is essential that brick streets receive consistent funding. The goal is to provide funding each year until all brick streets are considered serviceable and have zero non-brick patches. Then, a new funding plan could be established to maintain these streets and look at future considerations outlined in this plan.

Objective II: Remove and Prevent Non-Brick Patches

Once all non-brick patches are removed from streets as a part of this plan, the City must continue prohibiting non-brick patches in the future. Temporary gravel patches will be allowed until such time as the City can repair a temporary gravel patch with brick. However, materials such as concrete and asphalt should not be allowed to patch brick streets.

Objective III: Preserve All Current Brick Streets

All 3.5 miles of current brick streets must be preserved, according to directives provided by the City Council and the Historic Preservation Commission. Previous policies have allowed non-brick patches or overlaying brick with asphalt or concrete. However, to comply with the goals outlined in this plan, brick streets should no longer be allowed to be overlaid or reconstructed with anything other than approved brick.

Objective IV: Find the Most Cost-Effective Solution for Each Street

As the City goes through each prioritized street, a street may need to be reconstructed while in the patch category or patched while in the reconstruct category. Public Works will further analyze each street to determine the most cost-effective solution to upgrade the street to serviceable condition free of non-brick patches. Priorities are subject to change based on further analysis.

Ten-Year Spending Plan Funding Levels for Brick Streets by Block and Year

	Priority Reconstruction Amount ($)	Priority Reconstruction Blocks	Priority Patch Amount ($)	Priority Patch Blocks
Year 1	$400,000	Monroe St., Clinton St. to Robinson St.	$100,000	Chestnut St., Mason St. to Oak St. (Brick Portion) East St., Locust St. to Mulberry St.
Year 2	$412,000	Taylor St., Moore St. to Mercer Ave.	$103,000	Jefferson St., Robinson St. to Davis Ave. Jefferson St., Colton Ave. to Towanda Ave.
Year 3	$424,000	University Ave., Clinton Blvd. to White Pl.	$106,000	Elm St., Madison St. to Center St. (Brick Portion) Allin St., Oakland Ave. to Macarthur Ave.
Year 4	$437,000	Chestnut St., Linden St. to Eugene St.	$109,000	East St., Division St. to Kelsey St. Allin St., Macarthur Ave. to Wood St.
Year 5	$450,000	Chestnut St., Eugene St. to Colton Ave.	$113,000	Division St., Main St. to East St. Evans St., Walnut St. to Chestnut St.
Year 6	$464,000	Monroe St., Clayton St. to Clinton St.	$116,000	Evans St., University Ave. to Graham St. East St., Chestnut St. to Locust St.
Year 7	$478,000	Evans St., Chestnut St. to Locust St.	$119,000	Jefferson St., Davis Ave. to Colton Ave. East St., Kelsey St. to Emerson St.
Year 8	$492,000	Monroe St., McLean St. to Evans St.	$123,000	Walnut St., Center St. to Main St. Evans St., Graham St. to Empire St.
Year 9	$507,000	Summit St., Macarthur Ave. to Wood St.	$127,000	Evans St., Empire St. to Walnut St. Jefferson St., Clinton St. to Robinson St.
Year 10	$522,000	Monroe St., Evans St. to Clayton St.	$130,000	Chestnut St., Oak St. to Lee St. East St., Emerson St. to Beecher St.

Table 8: Funding levels for brick streets by block and year

Consequences of Underfunding

The consequences of underfunding the Brick Streets Master Plan include delays in brick street patching and reconstruction, continued deterioration of brick streets, increased risk of safety issues arising from the deterioration of brick streets, and a delay in the prioritization of additional brick street projects. While this document is considered advisory, it should be followed closely to avoid these issues. However, should unforeseen circumstances arise that cause underfunding, patching brick streets would take priority over reconstructing brick streets.

If More Funds Become Available

With the large expense of brick streets, it's not expected that more funds will become available. However, brick street repairs planned for future years may be accomplished if more funds become available or if project costs are lower than expected. Funding should focus on upgrading all 3.5 miles of streets to an acceptable rating first. Once that is accomplished, the City should look to the Future Considerations outlined in this Brick Streets Master Plan to continue examining brick streets.

Following Up

The City should take steps to ensure its existing brick streets remain in good shape. The best methods to do so are to continue to inspect all brick streets periodically to ensure brick streets have not been patched with unauthorized materials and to ensure that the PASER system rating remains above four, update policies and procedures as soon as they change, and review the entire plan every five years.

12. FUTURE CONSIDERATIONS

12.1. Additional Analysis and Prioritization Metrics

Historical Infrastructure and Historical Street Furniture

The presence of any of the following pieces of historic infrastructure and historic street furniture could be considered as a factor to consider when prioritizing brick streets.

Sandstone Curbs

Curbs made of sandstone are located along many of the streets in the City. However, many of them are in disrepair or are located along non-brick streets. Sandstone curbs along brick streets that are considered to be in good condition or easily repaired to good condition would be a valuable asset to a historical brick street

Figure 24: Sandstone curb

Carriage Walks and Carriage Steps

Carriage walks are the pathways in the public right of way connecting curbs to sidewalks. Carriage walks were constructed during a time when homes did not typically have a garage or fully utilize off-street parking.

Figure 25: Carriage walk

Light Posts

Historical light posts are another feature along some of the brick streets in the City that could be a consideration. The City uses light posts with a historical look in some areas, but truly historical lamp posts enhance an area that has brick streets.

Figure 26: Light post

Gateways and Pillars

Some brick street areas have various gateways and pillars that are another piece of historical infrastructure.

Figure 27: Gateway

Alley Driveway Access

Roads that have alley driveway access, like White Place or parts of Monroe Street, may be prioritized over roads that do not. These roads would be easier to maintain long-term, as those who live along the street would not use it as frequently as those who must access their driveway from the street.

Figure 28: Alley driveway access

Regeneration Area or Preservation Area Location

In addition to Historic District location, brick streets could also be evaluated based on location within the Regeneration Area or Preservation Area, determined by the City's Comprehensive Plan.

Regeneration Area

As identified in the existing conditions analysis and fortified by the community outreach, Bloomington's West Side (or the Regeneration Area) is different in many ways from rest of the community. There is a higher concentration of crime, a concentration of lower income households and a food desert. The assessed values in this neighborhood are declining which makes private reinvestment challenging. The concentration of these and many other social issues not only negatively impact the lives of people living there today but will continue to do so in the future if left untouched. The family and the neighborhood context both have a significant impact on the academic achievement of children. Education has been identified as a major factor that helps break the cycle of poverty. The poor performance of children in the schools serving the Regeneration Area can be attributed to the neighborhood context in that area. This complex multi-directional relationship is explained at a greater length in Chapter 5 in the Comprehensive Plan. The plan calls for a comprehensive and collaborative approach to revitalizing this area.

Figure 29: Multi-family apartment in Regeneration Area

Preservation Area

The Preservation Area has the highest concentration of historical homes, landmarks and other assets, including the White Place, Franklin Square, and East Grove Street National Historic Districts, and the Davis-Jefferson local historic district. It also includes many sites scattered throughout the area. A walk down one of the tree-lined streets in these neighborhoods is a panorama of varied architecture, from lavish Queen Anne to humble Spanish Revival, with carefully manicured lawns and landscapes interspersed with homes awaiting their chance for restoration. While this area is experiencing some private investment, there are concentrated blocks that need attention. The competing interests between historic preservation and the market pressures for conversion or demolition need to be addressed as well. The City's last historic preservation plan was not updated comprehensively for more than two decades. It is critical for the historic preservation plan to be kept up to date. It not only identifies the historic assets but also identified strategies and resources necessary to protect those assets.

Map 3: Historic Districts and the Preservation Area (Yellow Dotted Line)

Equalized Assessed Value

The property tax value of a home, or Equalized Assessed Value (EAV), is another factor considered when prioritizing brick streets. Current EAV values on a block can help determine the prioritization based on the current EAV, before repairs begin, or the expected EAV once repairs have been completed. As EAV is a determining factor in how much property tax revenue the City receives, it's important to see how the investment in a brick street could be returned in the form of property tax revenue. The City does not directly use funds from property taxes for streets. However, the property tax revenue gained has the potential to make more funds available for streets.

Owner-Occupancy[8]

Owner-occupancy, which measures how many homes are occupied by owners rather than a third party, can be important to the long-term preservation of brick streets. According to prior research, owner-occupants are more likely to care about the aesthetics of living along a brick street. They will also be the people responsible for cost-sharing in the reconstruction of a brick street.

Architectural Integrity[8]

The ambience of a brick street often relates to the architectural integrity, or architectural purity, of the buildings that make up the neighborhood around the street. Much of the purpose of preserving a brick street is lost if there is nothing the street can relate to in its immediate surrounding. The City currently has a way to measure the architectural integrity of a block. However, should this metric be used, a significant amount of information would need to be gathered in order to rate each street's architectural integrity.

Infrastructure Condition

In the future, this plan will be updated with information on the conditions of water, sanitary sewer and storm water infrastructure underneath each brick street as well as sidewalks along each brick street. These conditions will help Public Works determine when brick streets may be disturbed by utility cuts so that brick streets can be prioritized accordingly.

[8] City of Rock Island, Illinois, 2005

12.2. Restoring Former Brick Streets

As this process uses some of the same steps as the *Recovering Brick from Brick Streets Overlaid with Asphalt* process, outlined earlier in this document, some of the same information will be provided to make it easier to follow the steps without having to refer back to the previous section.

At one time, the City of Bloomington had more than forty-five miles of brick streets. Many of those streets were overlaid with asphalt without removing the brick. The Engineering Division found some research on heating asphalt to melt it off of brick, but the process required special equipment.

However, on April 24, 2017 the Engineering Division spoke with John Gavin, co-owner of Gavin Historical Bricks in Iowa City, Iowa. Mr. Gavin's company is a supplier of Purington-brand historic bricks, and it has several million bricks in stock. According to Mr. Gavin, restoration of asphalt-on-brick to brick is a simple process, but it is expensive and labor intensive. It requires a skilled heavy equipment operator and laborers. He was able to provide basic instructions on this process, and the Engineering Division proceeded to test that process at a sewer dig on Grove Street.

The photos show a single strip of road, but a similar process would be used for the entire width of a road section. The final process doesn't match the photos in that, when performing this process on the entire width of a road section, the backhoe bucket and teeth would have to face away from the backhoe to allow the backhoe to sit on the sand and concrete underneath the brick rather than on the brick that is to be removed. Once this process is performed on the entire width of a road section, the photos should be updated.

Grove Street was in good condition underneath the asphalt during this test, which could be atypical. Issues with underground infrastructure may make this process difficult, inefficient, or cost-prohibitive. Each street slated to undergo this process will need to be evaluated to ensure brick recovery is possible. Also, if the bricks were milled, or scraped during an asphalt overlay, they may be able to be reused if turned over.

1. *This process requires a backhoe with teeth in good condition or other, similar equipment.*

2. *Lightly scrape over the asphalt surface. The asphalt will peel away without damaging the bricks, if done correctly. There should be little residual.*

3. *Clean residual asphalt from the bricks. Power washing is a common method.*

4. *The street probably has issues. (There was a reason for the asphalt overlay). Most likely, all of the bricks will have to be removed.*

5. *Once the bricks are removed, place them in a pile on the nearby road so that they can be palletized.*

6. *Carefully stack undamaged bricks on a pallet. Count on having to discard 30 percent of the bricks because of various types of damage.*

7. *Create a new base. Generally, this is a layer of concrete first, then some type of select granular backfill (sand).*

8. *Re-lay the bricks by hand. It really helps if additional bricks are on hand, since about 30% of the stock has been elimintated.*

Figure 30: Brick Street Restoration Process

12.3. Establishing Brick Street Districts

Another idea to consider is designating areas that will have all brick streets. This could be especially important for historic districts in the community, including downtown. Entire blocks or entire districts could be reestablished as brick streets to add further historical aesthetics. Each historic district in Bloomington is described in the Brick Street Analysis and Prioritization section. This will be helpful when exploring this idea further.

One thing to consider with this idea is that some of these districts currently have or will have bicycle infrastructure as part of the City's Bicycle Master Plan. As mentioned in the Complete Streets section, brick streets are not ideal for bicycles or wheelchair traffic and are not considered Complete Streets under the current ordinance. Any street that is included in the Bicycle Master Plan and also part of one of these districts would not be a candidate to be a part of a brick street district, unless an amendment is made to the Bicycle Master Plan.

12.4. Examining Historical Curbs

In the future, Public Works will inventory all curbs along brick streets in order to determine if the curbs are made from historical materials (i.e. sandstone or granite) or modern materials (i.e. concrete). The inventory will also include information such as measurements, condition, and other data that the Department deems necessary.

In addition, Public Works will examine methods to preserve historical materials. Examples of preservation methods include finding ways to reuse the historical materials on the same street project, reuse the historical materials on a different street project, or repurpose the historical materials for use by residents. Public Works will use the first brick street reconstruction project on Monroe St., from Clinton St. to Robinson St., as a pilot project to test curb preservation methods for sandstone curbs located along the block. Using that pilot project, Public Works will propose regulation and best practices for curb preservation.

13. CONCLUSION

The City of Bloomington Brick Streets Master Plan affirms the City of Bloomington's commitment to preserving its remaining 3.5 miles of brick streets by creating a comprehensive plan to address the needs of each street block within ten years.

In addition, this plan makes it clear that any bricks that are recovered from current or former brick streets should be saved so that current brick streets can be maintained and so that, looking into the future, more brick streets may be added. Historical vitrified clay brick is a valuable asset to the City, and it should be protected as such.

This plan also encourages adequate funding for each street, as designated by the ten-year spending plan. Many of the City's brick streets are in dire need of repair, and inadequate funding would further threaten the City's brick streets.

Regular updates to this plan are essential to ensuring that brick streets are preserved in the most cost-effective and efficient manner. As suggested earlier in this document, the City of Bloomington Brick Streets Master Plan should be updated as policies change or at least every five years.

Once all current brick streets in the City have been upgraded to an acceptable PASER system rating, the City should create a maintenance spending plan to ensure all current brick streets remain in an acceptable condition. Once that is accomplished, the City should seek additional input from the Historic Preservation Commission and the public with regards to moving forward with items discussed in the Future Considerations portion of this document.

Figure 31: Close-up of brick pavement on Davis Ave., Jefferson St. to Washington St.

14. REFERENCES

City of Columbia, Missouri. 2015. *Brick Streets- Response to Council Questions/FAQs.* Columbia, Missouri, September 9. Accessed June 1, 2017.

City of Rock Island, Illinois. 2005. *Brick Streets Plan.* Rock Island, Illinois, March 28.

Concrete Paver Systems. n.d. *Pavers for Highways, Roads, and Streets.* http://concretepaversystems.com/commercial/streets/.

David Davis Mansion Website. n.d. *David Davis Mansion.* https://www.daviddavismansion.org/.

Mid-Ohio Regional Planning Commission. 2012. "Complete Streets Toolkit: A Guide for Central Ohio Communities."

West Central Neighborhood Association. n.d. *Durable Goods: Restoring Historic Brick Streets.* Fort Wayne, IN: West Central Neighborhood Association.

Wisconsin Transportation Information Center. 2013. "Pavement Surface Evaluation and Rating PASER Manual: Asphalt Roads." Madison, WI.

Wisconsin Transportation Information Center. 2015. "Pavement Surface Evaluation and Rating PASER Manual: Brick & Block." Madison, WI.

15. APPENDICES

15.1. Index of Maps

15.2. Index of Tables

15.3. Index of Figures

15.5. Resources for Brick Street History

A good introduction to traditional brick-making is found in Harley J. McKee, "Introduction to Early American Masonry," 1973, and a more complete account is given in Heinrich Ries and Henry Leighton, "History of Clay-Working in the United States," 1910.

Sidney Poitier's "The Last Brickmaker in America," which was first broadcast in 2001; is highly recommended and is currently available from several video outlets.

Brick Making machines are covered in Carroll Pursell, "Parallelograms of Perfect Order", Smithsonian Journal of History (3) (1968), 19-27.

Two illustrated articles by William D. Walters, Jr. deal with local brick and tile manufacturing: "Abandoned Nineteenth Century Brick and Tile Works in Central Illinois," Industrial Archaeology Review 4:1 (Winter 1979-80) 70-80 and "Nineteenth Century Midwestern Brick," Pioneer America, 14:3 (1982) 125-134; copies of both are available at the McLean County History Center.

The full text of many turn of the century Paving manuals are now online; a few of the many that mention Bloomington are Edward Gurley Love, "Pavements and Roads," 1890, which includes an analysis of Heafer's bricks on pages 173 and 174; H. A. Wheeler, Vitrified Paving Brick, 1910; and George Wilson Tilson, A Textbook on Brick Paving, 1917.

Brick street Restoration is discussed in William D. Walters, Jr. and Royce Baier "Brick Streets in Illinois," Illinois Preservation Series 12 (1991).

Local research into brick pavement includes an article written by Bill Kemp, Archivist and Historian at the McLean County Museum of History. The article "First brick street in U.S. myth endures in Bloomington" appeared in the Pantagraph on September 30, 2012 and is available online. The article discusses the history of brick pavement in the City and disproves a long-believed myth that Bloomington built the first brick street in the United States.

Further local research should continue with the City Engineer's Reports and the paving ordinances contained in the many published volumes of the Bloomington City Council Minutes.

15.6. Strategic Plan Vision, Mission, and Core Beliefs

Vision 2025

Bloomington 2025 is a beautiful, family friendly city with a downtown - the heart of the community and great neighborhoods. The City has a diverse local economy and convenient connectivity. Residents enjoy quality education for a lifetime and choices for entertainment and recreation. Everyone takes pride in Bloomington. Jewel of Midwest Cities.

Mission

The Mission of the City of Bloomington is to be financially responsible providing quality, basic municipal services at the best value. The city engages residents and partners with others for community benefit.

Core Beliefs

Enjoy **S**erving Others
Produce Results
Act with **I**ntegrity
Take **R**esponsibility
Be **I**nnovative
Practice **T**eamwork
Show the **SPIRIT!!**

15.7. Strategic Plan Goals

Goal	**1.**	**Financially Sound City Providing Quality Basic Services**
Objective	a.	Budget with adequate resources to support defined services and level of services
	b.	Reserves consistent with city policies
	c.	Engaged residents that are well informed and involved in an open governance process
	d.	City services delivered in the most cost-effective, efficient manner
	e.	Partnering with others for the most cost-effective service delivery
Goal	**2.**	**Upgrade City Infrastructure and Facilities**
Objective	a.	Better quality roads and sidewalks
	b.	Quality water for the long term
	c.	Functional, well maintained sewer collection system
	d.	Well-designed, well maintained City facilities emphasizing productivity and customer service
	e.	Investing in the City's future through a realistic, funded capital improvement program
Goal	**3.**	**Grow the Local Economy**
Objective	a.	Retention and growth of current local businesses
	b.	Attraction of new targeted businesses that are the "right" fit for Bloomington
	c.	Revitalization of older commercial homes
	d.	Expanded retail businesses
	e.	Strong working relationship among the City, businesses, economic development organizations
Goal	**4.**	**Strong Neighborhoods**
Objective	a.	Residents feeling safe in their homes and neighborhoods
	b.	Upgraded quality of older housing stock
	c.	Preservation of property/home valuations
	d.	Improved neighborhood infrastructure
	e.	Strong partnership with residents and neighborhood associations
	f.	Residents increasingly sharing/taking responsibility for their homes and neighborhoods
Goal	**5.**	**Great Place – Livable, Sustainable City**
Objective	a.	Well-planned City with necessary services and infrastructure
	b.	City decisions consistent with plans and policies
	c.	Incorporation of "Green Sustainable" concepts into City's development and plans
	d.	Appropriate leisure and recreational opportunities responding to the needs of residents
	e.	More attractive city: commercial areas and neighborhoods
Goal	**6.**	**Prosperous Downtown Bloomington**
Objective	a.	More beautiful, clean Downtown area
	b.	Downtown Vision and Plan used to guide development, redevelopment and investments
	c.	Downtown becoming a community and regional destination
	d.	Healthy adjacent neighborhoods linked to Downtown
	e.	Preservation of historic buildings

15.8. Comprehensive Plan 2035 Vision, Goals, and Objectives

Vision

Bloomington, in 2035, unites the vibrant urban core to its diverse neighborhoods. Supported by our quality of life and enduring economic stability, it is the destination community for people and businesses that seek a culture of innovation and entrepreneurship. Residents thrive, surrounded by rich history, arts and culture, lifelong learning opportunities, a healthy environment and an active lifestyle.

Goals and Objectives

Neighborhoods

N-1 Ensure the compact development of the City through denser, mixed-use developments and reinvestment in the established older neighborhoods

N-2 Improve community identity and appearance by celebrating the unique nature and character of the City's individual neighborhoods

N-3 Improve communication between the City, the citizens and the neighborhood organizations to foster teamwork and community spirit

Housing

H-1 Ensure the availability of safe, attractive and high quality housing stock to meet the needs of all current and future residents of Bloomington

H-2 Ensure reinvestment in the established older neighborhoods and compact development of the City

Education

EDU-1 Increased coordination between the City and the school districts to maintain high quality educational opportunities equitably for all students within the City

EDU-2 Provide life-long skills and learning opportunities for all by investing in excellent schools, colleges and continuous education

Economic Development

ED-1 Ensure a broad range of employment opportunities for all residents

ED-2 Foster a culture of entrepreneurship

ED-3 Build and maintain a skilled and employable workforce to meet the needs of the current businesses

ED-4 Enhance the image of Bloomington as a business friendly community

ED-5 Enhance tourism based-economic development

Downtown

D-1 Continue to build a healthy Downtown that offers a range of employment, retail, housing, cultural and entertainment opportunities for all

D-2 Market and promote the unique brand and image of Downtown Bloomington

D-3 Protect Downtown's historic character and encourage appropriate new development

D-4 A clean and safe Downtown

D-5 Continue to develop a multi-modal transportation network in Downtown

D-6 Reinforce the connections between Downtown and adjacent neighborhoods

Arts, Culture, and History

ACH-1 Create a unique identity for the Bloomington area arts and culture scene
ACH-2 Increase the visibility of the Bloomington arts and cultural scene

Health

HL-1 Create a park and green space system that provides for a variety of active and passive recreational and wellness activities for current and future residents
HL-2 Ensure maximum usage of the City's parks and recreational facilities and associated resources
HL-3 Ensure a healthy environment and accessibility of parks and open spaces
HL-4 Continue to develop quality parks and recreational programming for all
HL-5 Provide access to healthy foods and promote food security to build community

Natural Environment

NE-1 Protect and conserve the community's vital natural resources
NE-2 Create a park and green space system that protects the environment and provides for a variety of active and passive recreational activities for current and future residents of Bloomington
NE-3 Reduce environmental pollutants
NE-4 Increase cooperation and coordination among governments, nonprofits and businesses across the region to address shared environmental issues
NE-5 Provide more efficient and sustainable municipal solid waste management

Social Health/Community Wellbeing

CWB-1 End chronic homelessness and reduce the severity of situational homelessness
CWB-2 End chronic homelessness and reduce the severity of situational homelessness
CWB-3 Develop a coordinated and efficient system of services that addresses comprehensive needs of children, families and communities

Public Safety

PS-1 Reduce crime and the fear of crime
PS-2 Plan and provide for fire and emergency facilities adequate to protect health, life, safety, livelihood and property for current and future citizenry and businesses in the City
PS-3 A comprehensive emergency preparedness plan
PS-4 Intergovernmental Cooperation

Utilities

UEW-1 Provide quality public infrastructure within the City to protect public health, safety and the environment
UEW-2 Promote and facilitate energy conservation and alternate energy generation and resources
UEW-3 Education and increase public awareness regarding utility, energy and water issues

Transportation

TAQ-1 A safe and efficient network of streets, bicycle-pedestrian facilities and other infrastructure to serve users in any surface transportation mode

TAQ-2 Transit development provides an alternative of choice for the general population and support for the transit-dependent

TAQ-3 Air transportation serves the needs of local and regional residents and businesses to connect regionally, nationally and internationally

TAQ-4 Rail transportation serves passenger needs for local and regional residents and businesses to connect regionally, nationally and internationally

TAQ-5 Safe and efficient movement of freight by motor vehicle, rail and air, in the community and serving local, state, national and international markets

TAQ-6 Reduce air pollutants and other impacts produced by transportation

Community Facilities

CF-1 Continue to provide quality public facilities and services

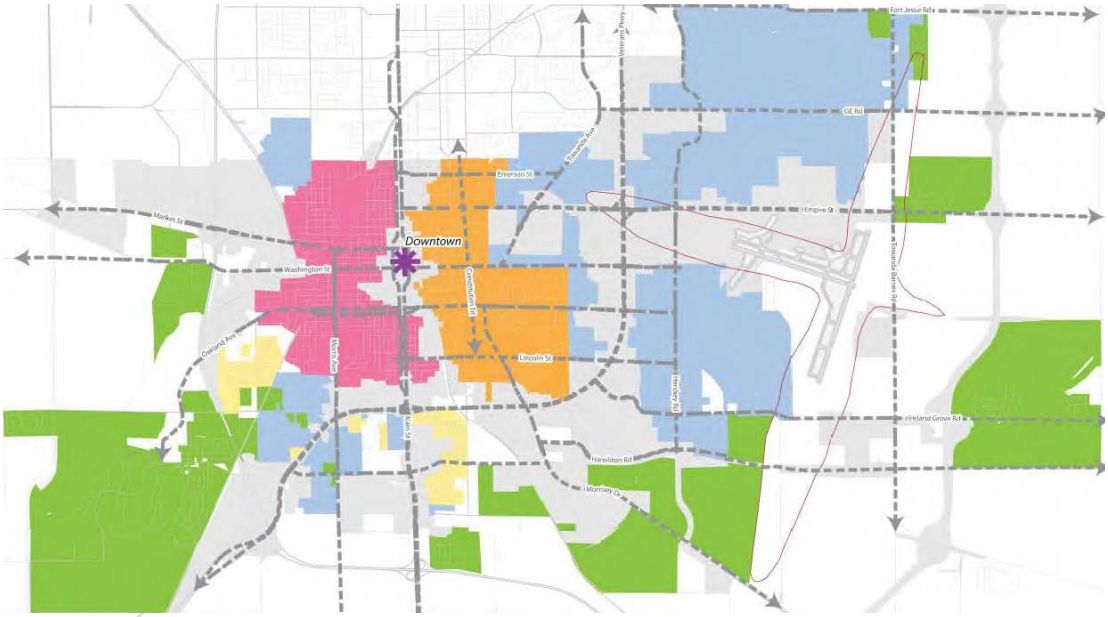
CF-2 Provide public services in a fiscally, socially and environmentally responsible manner

CF-3 Pursue solutions for unmet and emerging community needs

The City of Bloomington is located in the heart of Central Illinois, approximately 125 miles southwest of Chicago, 155 miles northeast of St. Louis, and 64 miles northeast of Springfield, the State Capital. Bloomington is the County Seat of McLean County, the largest county in Illinois (approximately 762,240 acres). Bloomington (pop. 76,610) is a twin City with the Town of Normal (pop. 52,497). Interstates 39, 55 and 74 converge on Bloomington-Normal, as well as US Route 51 and State Route 9.

The twin cities are also serviced by two major railroad lines and Amtrak, as well as air transportation at the Central Illinois Regional Airport, one of the fastest growing airports in the country, which services commuter, corporate, and private aircraft.

Bloomington is located in one of the most productive agricultural areas in the nation, but the economy is diverse and well-balanced. In addition to the major manufacturers and industries, there are two universities, two hospitals, a convention center, one indoor mall, one outdoor mall, and many banks and Savings & Loan Associations located in Bloomington-Normal. The City of Bloomington is one of the fastest growing metropolitan areas in Illinois with an estimated 20.25% increase in population between 1986 and 1995. New construction continues to enhance residential, industrial and commercial growth.



City of Bloomington, Illinois
109 E. Olive Street
Bloomington, Illinois 61701
Phone: (309) 434-2210
E-mail: info@cityblm.org
Website: www.cityblm.org