

Brookfield, Missouri

DOWNTOWN
REVITALIZATION &
ECONOMIC
ASSISTANCE FOR
MISSOURI



BUILDING AND
STREETScape
DESIGN GUIDELINES
NOVEMBER 2013



ACKNOWLEDGMENTS



DOWNTOWN
REVITALIZATION &
ECONOMIC
ASSISTANCE FOR
MISSOURI

DOWNTOWN REVITALIZATION AND ECONOMIC ASSISTANCE FOR
MISSOURI (DREAM) PROGRAM SPONSORS:



PLANNING CONSULTANT:

BUILDING AND
STREETSCAPE
DESIGN GUIDELINES



This Page Intentionally Left Blank

TABLE OF CONTENTS

1.0 INTRODUCTION	1		
1.1 Historic Overview	1		
1.2 Intent of Guidelines	2		
1.3 Existing Context	3		
1.4 Downtown Brookfield Map	4		
2.0 BUILDING DESIGN GUIDELINES	5		
2.1 Rehabilitation and Maintenance Guidelines for Historic and Non-Historic Buildings	5		
2.1.1 Differences Between Rehabilitation, Restoration & Renovation	5		
2.1.2 The Benefits of Rehabilitation	6		
2.1.3 Building Zones	7		
2.1.4 Façade Elements	8		
2.1.5 Rhythm	8		
2.1.6 Alterations	9		
2.1.7 Masonry	10		
2.1.8 Windows	12		
2.1.9 Architectural Details	14		
2.1.10 Entrances	14		
2.1.11 Awnings	15		
2.1.12 Storefronts	16		
2.1.12.1 Entrance	16		
2.1.12.2 Windows	16		
2.1.12.3 Spandrel Panels	16		
2.1.12.4 Transoms	17		
2.1.13 Signage	18		
2.1.13.1 General Design Issues	18		
2.1.13.2 Style and Location of Signs	19		
Projecting Signs	19		
Wall Signs	20		
Window Signs	20		
Awning and Canopy Signs	20		
Sidewalk Signage	21		
Signs to Avoid	22		
2.1.13.3 Number and Area of Signs	22		
2.1.14 Lighting	23		
2.1.15 Rear Elevation	24		
2.1.15.1 Entry Door	24		
2.1.15.2 Upper Rear Façade	24		
2.1.15.3 Fences	24		
2.1.15.4 Trash Dumpsters, Ancillary Structures, and Utilities	25		
2.1.16 Building Color Guidelines	26		
3.0 NEW CONSTRUCTION GUIDELINES	27		
3.1 New Construction Overview	27		
3.2 Design Guidelines for Residential Buildings	28		
3.2.1 Building Orientation	28		
3.2.2 Building Materials	28		
3.2.3 Building Design Elements	28		
3.3 Design Guidelines for Commercial Buildings	29		
3.3.1 Building Orientation	29		
3.3.2 Building Form and Scale	29		
3.3.3 Building Materials	29		
3.3.4 Franchise Architecture	29		
3.4 Sustainable Design	30		
3.4.1 Introduction	30		
3.4.2 Fundamentals	31		
3.4.3 Elements	32		
4.0 STREETScape DESIGN GUIDELINES	33		
4.1 Design Guidelines for Public Streets	33		
4.1.1 Design Coordination	33		
4.1.2 Infrastructure	33		
4.1.3 ADA Accessibility	34		
4.1.4 Pedestrian Access and Sidewalks	34		
4.1.5 Sidewalk Zones	35		
4.1.6 Fountains and Public Art	38		
4.1.7 Signs and Banners	39		
4.1.8 Parking and Service Areas	40		
4.1.9 Lighting	41		

TABLE OF CONTENTS

4.1.10 Site Furnishings	42
4.1.11 Outdoor Café Seating	44
4.1.12 Landscaping	45
4.1.13 Street Trees	46
4.1.14 Bicycles	50
4.2 Wayfinding	51
4.2.1 Wayfinding Principles	51
4.2.2 Wayfinding Components	53
5.0 DOWNTOWN BROOKFIELD ROADWAY AND STREETSCAPE PLANS	55
5.1 Main Street Improvements Concept	55
5.2 Streetscape Design Concept	56
5.1.1 Potential Roadway and Streetscape Design	57
5.1.2 Potential Twin Parks Design	59
5.1.3 Main Street Underpass Concept	61
5.1.4 South Main Gateway Concept	62
5.1.5 Wayfinding Signage—Gateway	64
Wayfinding Signage—Trailblazer	65
6.0 DOWNTOWN BROOKFIELD BUILDING ELEVATIONS	67
6.1 Building Elevation Illustrations	67
6.1.1 Main Street—East Facades	69
7.0 IMPLEMENTATION	71
7.1 Introduction	71
7.1.1 Overlay District	71
7.1.2 Supplemental Design Standards	72
Example of Typical Design Standards	73
7.1.3 Project Approval Process	75
7.1.4 Historic Preservation Commission Standards	76
7.1.5 Service	77
7.1.6 Next Steps	77

APPENDICES	79
Appendix A:	
Secretary of the Interior Standards for Rehabilitation	81
Appendix B: Glossary	83
Appendix C: Bartlett & West Technical Memorandum	85
Appendix D: Potential Twin Parks Design Update	91
Appendix E: Potential Twin Parks Tree Plan	92

1.0: INTRODUCTION

1.1 Historic Overview

“The area around the present City of Brookfield was once known as Locust Creek country, named for the wide stream which runs through Linn County, tributary to the Grand River. Farming began in the area in 1831; during the next 25 years, several communities developed. No town was actually platted until 1859, when Major Josiah Hunt, the land commissioner for the Hannibal and St. Joseph Railroad, had the present town of Brookfield platted as a shipping point on the line. John Wood Brooks, a civil engineer from Boston, surveyed the purposed town, and it was named Brookfield in his honor. Many Irish came to the area to work on the railroad’s construction. Finding Brookfield a pleasant settlement, the men and their families remained when railroad construction was completed. Within a short time, the ample labor supply and the town’s central location induced the railroad to locate its division headquarters, shops and roundhouse in the town.” (Excerpted from www.brookfieldcity.com.)

Downtown was integral to the town’s growth, serving as the commercial and civic hub for Brookfield. Similar to many towns, Downtown served the local community as the place to go for trade, religious services, education, and socializing. Downtown grew and developed many prominent buildings that showcased the prosperity and quality of life in Brookfield. In the 1950’s, American lifestyles changed with the rise of highway construction and the affordable automobile. Neighborhoods and commercial areas began moving away from the traditional downtown business district. Downtowns, while still the center of much community life, started to experience a loss of commercial viability. Consumers expected easy access and parking for their cars. New and modern design was preferred over traditional and old. As a result, by the mid 1970’s many American downtowns suffered from a lack of investment. Downtown Brookfield was no exception.

Today, Brookfield represents the mid-point in Missouri along Highway 36 (soon to be Interstate 72). Highway 36 is an east-west connection from Chicago to Kansas City and is in the process of transitioning to interstate status. While Downtown Brookfield experienced numerous changes throughout its history, many positive attributes still exist. Downtown reflects a long history with picturesque buildings, storefronts, and homes. Although the district requires infrastructure improvements and some of the buildings suffer from deferred maintenance or have experienced inappropriate façade renovations, the overall area maintains its historic charm. Downtown Brookfield retains many positive qualities and a unique built environment.



Brookfield was platted in 1859 and quickly grew into a railroad hub.



The original Brookfield depot as it looked around 1903.



Main Street in Downtown Brookfield has hosted many parades over the years.

1.2 Intent of Guidelines

While these guidelines are written for Downtown Brookfield, the design recommendations are sound advice that might be applicable elsewhere in the community. These guidelines are written primarily for commercial areas, however they also briefly address issues regarding residential buildings and sites. The main intent of the guidelines is to help preserve the architectural character and improve the visual appearance of Downtown Brookfield.

In America, downtowns traditionally have had a sense of place. Businesses, courthouses, city halls, shops and houses of worship were almost always located in the downtown. Downtown was the business and civic center of the community. The architectural style, size and materials of the buildings in downtown often reflected the success and wealth of the community. In Brookfield, Missouri, this civic pride was evident among the many Victorian and other historic facades along Main Street and surrounding the Twin Parks area. While many of the original uses have been replaced and some of the commercial viability faded, the buildings and memories of Downtown Brookfield remain.

Downtown Brookfield has many buildings which have design merit and character. Collectively these buildings and other structures, some of which lack architectural significance, contribute to the overall character of Downtown. Design guidelines provide recommendations to help preserve existing buildings and spaces which still have historic integrity. This report also suggests methods of improvements for buildings which have lost their character due to inappropriate alterations or neglect. Restoration of buildings to the original design is not the goal of the guidelines, unless the building is on the National Register of Historic Places. The guidelines focus on improving the public façade and appearance of structures, streets and public spaces to help create a unique identity for Downtown. There are three types of structures which form the collective whole of Downtown: those that contribute to that identity, those that detract, and those that do neither. The objective is to maximize contributing elements and minimize those which detract thus creating a stronger, more attractive Downtown Brookfield.

The improved identity and appearance of Downtown Brookfield will provide an incentive for more investment and interest. To successfully support revitalization, it is vital that property owners, city staff, and other community organizations make a long-term commitment to Downtown Brookfield. The guidelines are a resource for local leaders who agree to the commitment of improving the collective visual appearance and activity of Downtown. The improved appearance and identity will then reflect the investment, vitality and new civic pride of Downtown Brookfield.

1.3 Existing Context

Downtown Brookfield has a traditional grid pattern street layout, including historic Main Street filled with stores, civic institutions and offices. Main Street runs north-south with the highest concentration of older buildings in varying condition. The buildings and surrounding streets comprise a dense, well-defined central business district. Although there are a number of cross streets and access points, the primary access route into Downtown Brookfield is directly along Main Street connected by interchange to Highway 36 south of Downtown. Business Route 36 runs along Main Street before turning west at Helm Street, just south of the railroad. The railroad runs east-west and bisects Downtown. In the 1950's, a railroad bridge/underpass was constructed to allow for uninhibited traffic flow along Main Street. This underpass was a major achievement at the time and continues to serve as a positive focal point for Downtown. At the same time, it also illustrates some lack of connectivity between the north and south portions of Downtown Brookfield.

The Downtown massing of buildings is most concentrated along Main Street resulting in nearly complete building block formats. The adjacent streets of Woods, Brook, Boston, & Helm (east-west) and Lynn & Livingston (north-south) provide a mix of commercial, institutional, and residential uses, along with several parcels that are vacant or used as surface parking lots. Some of the buildings retain their architecturally significant elements, however many structures suffer from deferred maintenance or were subjected to unfortunate alterations. Many buildings were altered negatively by the addition of elements which are inappropriate in scale, material, and finish. Also some façades were compromised by the boarding of upper-floor windows, excessive signage, and out of scale awnings.

While many buildings were altered negatively, Downtown Brookfield also has examples of good maintenance and rehabilitation efforts. Many of these structures represent a good cross-section of style and age within monumental buildings in Downtown. There are also a few buildings with good façade design elements such as fabric awnings, appropriately-scaled signage and the correct replacement windows. Other rehabilitation efforts are also ongoing on several buildings in and around Downtown.

The existing streetscape in Downtown Brookfield has some positive attributes, however there is great opportunity to upgrade and coordinate all the elements, including period style lights, planters, waste receptacles, and street trees. Many of the sidewalks and alleyways are also in need of maintenance, or replacement. All of these elements, combined with a largely intact building stock, provide a tremendous opportunity to enhance the architectural character and civic identity of Brookfield.



View of the Main Street Underpass (above).
Some of the buildings that contribute to the architectural character of Downtown (below).



1.4 Downtown Brookfield Map (DREAM Boundaries marked in red)



2.0 BUILDING DESIGN GUIDELINES

2.1 Rehabilitation and Maintenance Guidelines for Historic and Non-Historic Buildings

Original elements on historic buildings provide a historic value that cannot be replaced. Any original element or material that still exists, particularly on the facade, should be retained if possible. Prism glass in transom windows or a decorative wooden door with beveled glass are examples of original materials that should be retained.

Efforts should be made to accurately duplicate original features during the replacement of missing architectural elements. When an entire architectural element is missing, the replacement should match the original in design, color, texture, and other visual qualities. Where reconstruction of a missing architectural element is impossible due to a lack of historical evidence, the new design should complement the subject building, as well as surrounding buildings, in size, scale and material. Architectural design elements should reflect the building's style, but replication of similar features on comparable buildings may be acceptable.

2.1.1 Differences Between Rehabilitation, Restoration & Renovation

The Secretary of Interior's Standards for Rehabilitation define *rehabilitation* as:

"the act or process of returning a property to a state of utility through repair or alteration which makes possible an efficient contemporary use while preserving those portions or features of the property which are significant to its historical, architectural and cultural values."

Rehabilitation should be distinguished from *restoration*, which is:

"the act or process of accurately recovering the forms and details of a property and its setting as it appeared at a particular period of time by means of removal of later work or by the replacement of missing earlier work."

As opposed to rehabilitation and restoration, *renovation* seeks to modernize a building. Little attention is paid to retaining historically significant architectural features of a building. Renovation, by its very nature, destroys the historic integrity of a building. Once a building is renovated it may no longer be eligible for rehabilitation tax credits or listing on national or local historic registers.



Example of rehabilitation in Downtown Brookfield.



Example of restoration in Downtown Brookfield.

2.1.2 The Benefits of Rehabilitation

Proper building rehabilitation provides significant benefits to property owners, tenants, and contributes to the collective well-being of Downtown Brookfield. Building rehabilitation may include façade improvements, updating mechanical, electrical and plumbing systems, and new interior finishes. These improvements represent a significant investment and results in a positive economic impact for the community. For a building owner, rehabilitation not only increases the property value but typically lowers ongoing maintenance and operating costs, translating to an additional return on investment. More than just an economic impact, the rehabilitation of each individual building adds to the overall improvement of Downtown.

A building façade provides the first impression to the public, which is the most lasting impression. This reinforces the importance of the proper façade rehabilitation. An attractive façade and positive first impression is critical not only to the business inside, but also to the overall impression of Downtown. Well done rehabilitation of each building will create a higher standard in regards to the public façades in Downtown. A high standard for the design and rehabilitation of public façades will eventually produce a collective visual quality for Downtown Brookfield.



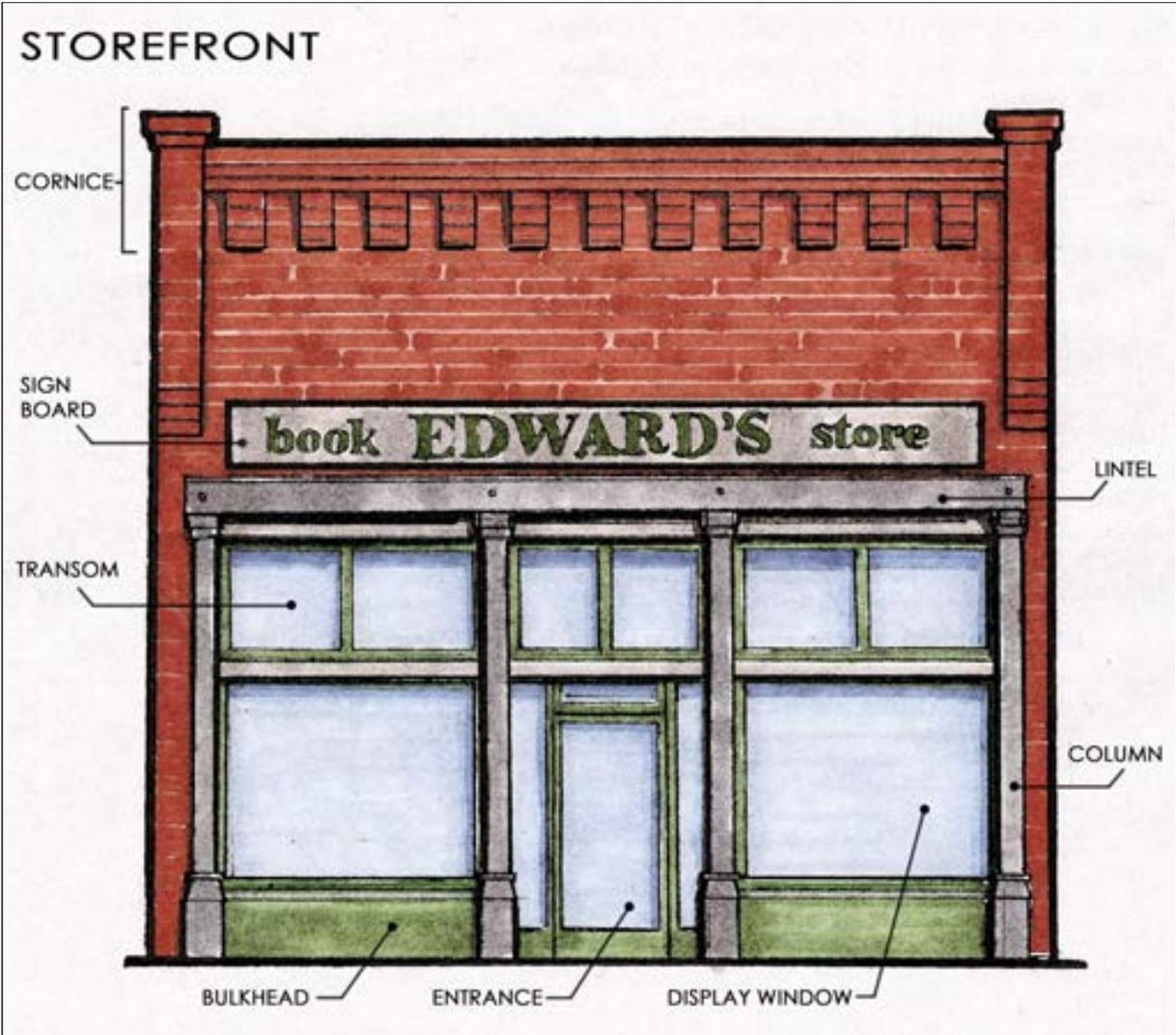
Rehabilitation of a building façade.
(Macon, Missouri)



Well designed & coordinated storefront.
(St. Charles, Missouri)

2.1.3 Building Zones

Improvements to individual buildings will be discussed in the context of three distinct 'zones'; the Storefront, the Upper Façade, and the Rear Elevation. The elements of the Storefront/Façade zones are depicted in this diagram.



2.1.4 Façade Elements

The various elements of a façade must be balanced. Appropriate massing, building and floor heights, proportions, roof lines, materials, and setbacks are critical considerations in new construction. Any future development should be encouraged to implement a design that contributes to the fabric of Downtown. Any future design that will detract from the fabric should be denied.

Other aspects like architectural details, colors, and cornices are more important to the restoration of historic buildings, but can be used effectively in new construction as well. Developing balance between all elements allows a building to be individual in its character, but at the same time complementary to the overall fabric and feel of Downtown.

2.1.5 Rhythm

The defined rhythm of Downtown Brookfield should be maintained along the street frontage by adhering to uniform lot widths, building widths, and window spacing.

- New infill buildings and structures should maintain the rhythm through proper repetition of details and orientation to the street.
- Vertical elements, entrances, lighting, and other street furnishings can also develop the rhythm of a specific block.



Example of a modern façade amongst the historic buildings and interrupted rhythm along Main Street in Downtown Brookfield.

2.1.6 Alterations

Encourage removal of inappropriate alterations or additions that disrupt the fabric of the Storefront Zone. It is possible that non-historic and new construction can complement the building fabric that has developed, therefore some alterations may not need to be removed. Decks, ADA structures, and other 'detachable' alterations can be utilized, but should be as unobtrusive as possible and located on the rear or sides of the building.

As a rule, all alterations to the Upper Façade zone should be removed. Alterations in this zone can significantly change the appearance of the face of the building. This includes all signs and lighting as these should be restricted to the Storefront Zone. Avoid removing or altering any historic material or significant architectural features. Care should be taken during the removal process due to the possibility of damaging original elements hidden behind the alterations. When disassembly of a historic element is necessary, use methods that minimize damage to the original materials.



Original design.



Minor alterations.



Storefront is lost.



Significant alterations.



2.1.7 Masonry

Masonry is typically the preferred façade material for downtowns. Most existing construction will utilize some masonry. In most instances metal and wood siding are not appropriate choices for the downtown building fabric. These types of siding provide: harsh lines, stark contrast, and no relief or depth to the buildings. If wood was the historic material, it may be restored.

- Maintain the original color and texture of masonry walls. Stucco or paint should not be removed from historically painted or stucco masonry walls. Likewise, paint or stucco should not be applied to historical masonry walls. Unpainted masonry should remain natural, not painted or sealed.
- Clean masonry and mortar only when necessary to limit deterioration or to remove heavy soiling. Sandblasting, caustic solutions, and high-pressure water blasting should not be used. These methods erode the surface, accelerate deterioration and will permanently damage the brick.
- Masonry restoration, particularly on historic structures, should be done with great care.
- If the masonry has been painted or stained, a minimally intrusive removal process should be used.
- Damaged masonry should be repaired or replaced with similar color, texture, and style masonry products. Re-point masonry walls when there is evidence of disintegrating mortar, cracks in mortar joints, loose bricks, or moisture retention in the walls. The new mortar should duplicate the old mortar in composition, bonding strength, profile, color, and texture. Do not use cement mortar in brick construction; cement is far too hard and will cause spalling and cracking of the softer bricks.
- Re-pointing should be done with an appropriate mortar material with a consistent color across the entire façade and all elevations.
- Masonry replacement and/or repair should only be done with appropriate materials.
- Portland cement as a patch for masonry is unacceptable.



Masonry wall in Downtown Brookfield that is poorly maintained.



Maintenance of masonry wall.

- If a historic façade has been covered with metal or wood siding it should be removed. Exposing the underlying brick masonry will help re-establish the character of the building and contribute to the visual continuity of the block. Metal cladding or siding also hides interesting details that can enhance building identity. If, after removing the covering material, portions of the original must be replaced, use a material that is similar in color and texture.



Brickwork and cornice which has been inappropriately painted.



Metal and vinyl siding hides original brick masonry façades and windows.

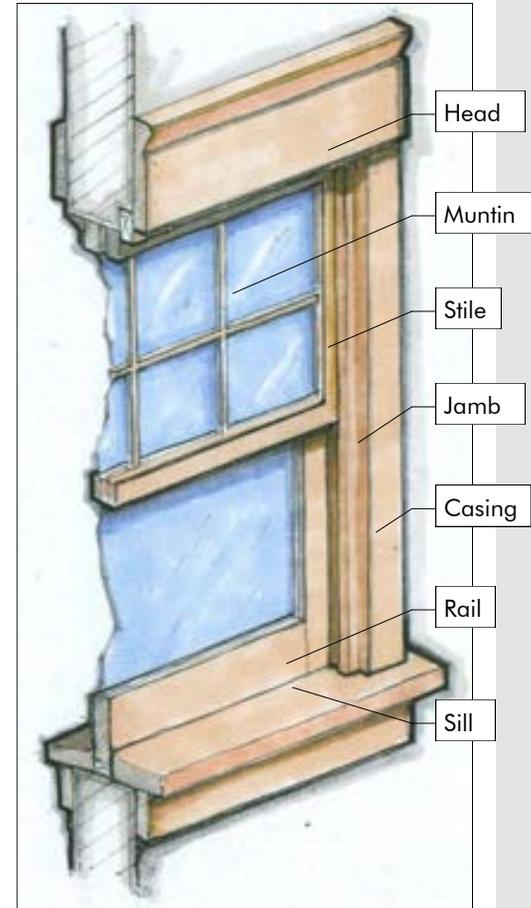


Covered windows, wood shingle awning, and mismatching brickwork, which is inappropriate.

2.1.8 Windows

Windows are a major feature of the building exterior and vary with each building style. Windows have a proportional relationship to the structure as a whole, and they also have a decorative function. The shape and glazing pattern of windows on a building may be one of the principle characteristics in identifying its historic period and style. Thus, if original windows are removed and replaced with incompatible modern windows, the basic character of the building will be altered substantially.

- The number, size and locations of existing window openings should be retained. Do not “block-in” windows to reduce the size of the window opening or to fit stock window sizes. New window openings should not be added on elevations that are subject to view from a public street.
- Retain and repair window frames, sash, decorative glass, panes, sills, heads, hoodmolds, moldings, and exterior shutters and blinds whenever possible. If replacement of any window part is necessary due to deterioration, the replacement should duplicate the material and design of the older window. Replacement sash of wooden windows, for example, should be made of wood. If duplication of the original window or window part is not technically or economically feasible, a simplified version of the original may be acceptable as long as it has the same size and proportion.
- Modern window types that are inappropriate include large picture windows, casements and bow windows, unless they are original to the building.
- Do not install shutters on windows that did not originally have shutters. Replacement shutters or blinds should be sized to cover the entire window when closed. In other words, the shutter should measure the full height of the window and half its width. Fasten shutters to the window frame and not to the siding.
- Inappropriate modern window features such as plastic and metal awnings or fake, non-operable, synthetic shutters and blinds distract from the historic appearance of a building and should not be used.



Brookfield, Missouri

- Storm windows should have wooden frames, or if metal, should be anodized or painted to blend with the trim. Interior, rather than exterior, storm windows are recommended.
- Typical upper windows are vertically oriented and uniformly spaced across the building front. This rhythm of upper story windows is an important unifying feature of Downtown.
- Masonry infill, wood panels, or mismatched windows should be removed and replaced with appropriate materials.
- If the original window still exists, it should be restored to serviceable condition when possible.
- Replace only missing portions of original elements where feasible. Sometimes trim elements and other materials must be removed for repair. Always devise methods of replacing the disassembled materials in their original configuration.
- Installation of interior storm windows should be considered.
- If the existing window is beyond repair an appropriate replacement window of the same size and profile should be installed.
- If the ceiling is lower than the window head, pull the ceiling back from the window to keep the original height at the window. Any windows covered by masonry infill, wood panels, or mismatched windows should be removed.
- Use design elements that reflect the building's style. A simplified interpretation of similar features on comparable buildings may be considered.
- Window shades or curtains in colors that coordinate with accent trim should be encouraged.



Shutters are appropriate on upper level windows. They should be proportioned so that if closed, they would completely cover the window. (Washington, Missouri)



Building which preserves significant window features. (Hannibal, Missouri)

2.1.9 Architectural Details

- Replacement of missing cornices or architectural elements should use accurate duplications of original features. In some cases, an entire detail must be reconstructed. In the event that replacement is necessary, the new material should match the original in design, color, texture, and other visual qualities. Photographic evidence is a good source for research.
- If the cornice is missing, a similar cornice of like size and scale should be installed.
- If no evidence exists as to form and detail, the reconstructed cornice should be as simple and non-intrusive as possible.
- If the cornice is intact it should be repaired and maintained as required.
- Where architectural details have been removed, refer to historic photos for details to use as patterns for new designs.
- Where exact reconstruction of details is not feasible, consider developing a simplified interpretation of the original, in which its major forms and lines are retained.

2.1.10 Entrances

- Recessed entries help invite customers into the store.
- Maintain recessed entries where they exist. These areas provide protection from the weather, and the repeated rhythm of these shaded areas along the street helps to identify business entrances.
- Avoid entrances that are flush with the sidewalk.
- If the original recessed entry has been removed, consider establishing a new one. Use doors with large panes of glass where feasible, these will improve the visibility of the business to outside viewers.
- Consider using an accent color on the door.
- Center signs over door.



Building rehabilitation that preserved the ornamental cornice at the top of the building. (Neosho, Missouri)



Recessed entrance with detailed bulkheads creates an inviting experience for the customer. (Washington, Missouri)

2.1.11 Awnings

Awnings used in the storefront zone provide shade for merchandise, shelter for pedestrians, and bring a colorful accent to the building front that can be changed frequently and without great expense. The following suggestions enhance appropriate use of awnings and improve Downtown aesthetics:

- Mount the top edge to align with the top of the transom, or to align with the framing that separates the transom from the main display window. This will help strengthen the visual continuity of store fronts.
- Roll-up awnings were a common site on historic storefronts and can be used following a similar approach to the original application. If a roll-up awning is not operable, the awning should follow the shape of an operable awning.
- Like the storefront, awnings should be confined to the extent of the original storefront opening.
- Awning colors should coordinate with the color scheme for the entire building.
- Awning signage or lettering should not be allowed where another flush-faced sign exists.
- Awnings will wear and should be acknowledged as an operating cost of doing business which can be changed every few years for a fresh look.



Examples of awnings in Downtown Brookfield.

2.1.12 Storefronts

2.1.12.1 Entrance:

- The entrance door should be recessed to emphasize the entry, provide a bit of shelter and remove the open door from the path of pedestrians on the sidewalk. These areas also create a rhythm of shaded areas along the street to help to identify business entrances.
- If the original recessed entry has been removed, consider establishing a new one.
- The recessed entrance door should also be ADA compliant.
- The door should provide a view into the building as well as a sense of openness. Solid doors should be avoided.
- Consider using an accent color on the door.

2.1.12.2 Windows:

- Preserve any of the large panes of glass that make-up the original store front, if they still exist. These transparent surfaces allow pedestrians to see goods and activities inside.
- Any new or replacement storefront should be built of similar materials compatible with the original façade design and craftsmanship.
- Wood framing similar to the original is preferred, but metal framing with the appropriate historic profile is acceptable.
- Clear insulated glass with 'Low-E' coating is a good choice for replacement storefronts.
- Tinted or reflective glass and interior reflective films should not be used on the storefront.

2.1.12.3 Spandrel Panels:

- Maintaining the original spandrel panel, if it exists, is preferable, but if the panel is missing, reconstruction using old photographs as a guide is acceptable.
- Coordinate the color scheme of the spandrel panel with other façade elements.
- If original design information is not available, another option is to design a simplified panel using appropriate materials such as painted wood or metal.



Well designed & coordinated storefronts in Downtown Brookfield.

2.1.12.4 Transoms:

- These bands of glass are found on many buildings and often align at the same height in a block. Maintaining this line will help to reinforce a sense of visual continuity for the street.
- When transoms are covered and original moldings and window frame proportions are concealed, the impact of the store front is weakened. If the interior ceiling is now lower than this glass line, move the dropped ceiling back from the window to maintain its historical dimensions.
- Some transoms have hinged panels to allow natural ventilation. Restore these to working order where feasible. Used in combination with ceiling fans these operable transoms can be very effective in improving comfort levels when full air-conditioning is not necessary.



Buildings which preserve the transom.
(Cripple Creek, Colorado)

2.1.13 Signage

For a successful business environment each shop must have its own identity while at the same time maintaining the continuity of the district. Appropriate signage identifies the business without detracting from the architecture of the building and the fabric of Downtown. Sign types and their locations should be kept simple and consistent for ease of public awareness. Signage should be restricted to the storefront or rear entrances of a building. The following guidelines will help enhance this aspect of Downtown Brookfield:

2.1.13.1 General Design Issues:

- The sign should be a part of the building design. Do not hide building features. Find an element or space that will naturally accommodate the sign.
- The size of the sign should be of an appropriate scale for the building and street. Large signs should not be needed as the signage in a downtown area is more oriented to the pedestrian than the motorist.
- Flush-mounted signs positioned to fit within architectural features is preferred. This type of signage will help reinforce horizontal lines along the street.
- Locate flush signs so they do not extend beyond the outer edges of the building front.
- The material and color of the sign should complement the building materials and color scheme.
- The message of the sign should be simple and easy to understand. The name of the business and type of business should be sufficient. A logo or symbol of the type of business could substitute for a "type of business" message.
- Rooftop, blade, pole, abandoned, neon, electronic message boards, and billboard signage should not be allowed or severely restricted.
- Place signs near the business entrance, to guide a customer's eyes to the door.
- Where several businesses share a building, coordinate the signs by aligning several smaller signs or grouping them onto a single panel as a directory to make them easier to locate. Use similar forms or backgrounds for the signs to tie them together visually and make them easier to read.
- Mount signs so they will not obscure any architectural details.
- Sign materials should be compatible with the façade materials.



Examples of current building signage in Downtown Brookfield.

- Good craftsmanship will pay off through longer use of a sign, and will convey a stronger image to the public. Select high quality materials. Signs are exposed to extreme weather conditions, and a deteriorating sign presents a poor image to customers.
- Encourage the use of “custom” designs that portray a business as being unique. Mass-produced signs, especially rectangular plastic panels with internal lighting, fail to make a lasting impression.
- Illuminate signs in such a way as to enhance the overall composition of the façade.
- External lighting cast from period style, non-intrusive fixtures is preferable to internal sign lighting.

2.1.13.2 Style and Location of Signs:

Projecting Signs: Projecting wall signs that give the name or the logo of the business or product sold, such as a watch for a jeweler or a drug company logo. These signs should have the following characteristics:

- Material: Unframed painted wood or metal panels hung from painted wall brackets. Wood signs with carved or sandblasted designs that are painted are also appropriate.
- Color: Sign colors should complement the paint scheme and masonry color of the building.
- Lighting: Non-illuminated or externally illuminated with spotlights.
- Location: Bottom of sign should be 8’-0” above the sidewalk and below the building parapet or the second floor windows.
- Locate projecting signs along the first floor level of the façade. If the ceiling is lower than the window head, pull the ceiling back from the window to keep the original height at the window.
- Use symbols in projecting signs; these are more easily identified and remembered and will add interest to the building.



Some of the existing projecting signs in Downtown Brookfield.

Wall Signs: Painted signs on the brick wall above the windows or on the side of the building. The old faded signs on the sides of the buildings are commonly called “ghost signs” and should be preserved wherever possible. Wall signs should have the following characteristics:

- Material: Painted on brick wall or on wood or metal panels. The signs painted on brick were usually white lettering on black backgrounds unless they advertised a product, such as Coca-Cola or Wrigley’s, which were multi-colored.
- Lighting: Natural light or externally illuminated with spotlights.
- Location: Many of these signs were in recessed brick panels above the storefront windows. There are many examples of these in the historic photos and they still exist beneath paint and metal or wood panels. Wall signs should not be located above the building parapet.

Window Signs: Painted or foiled lettering on the display window glass. These often advertised a doctor, dentist or attorney. Window signs should have the following characteristics:

- Material: Painted lettering, or gold or silver foil lettering. Lettering colors should complement the paint scheme of the building.
- Lighting: Natural lighting or the inside lights of the building.
- Location: On the glass of the entry door or the display window at eye level. These signs were fairly simple and did not attempt to dominate the window. The merchandise inside is what you are trying to sell. Window signs are also appropriate in second floor windows to identify second floor businesses.

Awning and Canopy Signs: Awning or canopy signs should have the following characteristics:

- Material: Lettering silk-screened on awning fabric or painted on wood or metal sign panels.
- Location: Six to eight inch high lettering on the front valence of a fabric awning or a hung sign panel. These panels should be a maximum of twelve inches high.



Examples of existing wall, window, and canopy signage in Downtown Brookfield.

- Mount the top edge to align with the top of the transom, or to align with the framing that separates the transom from the main display window. This will help strengthen the visual continuity of store fronts.
- Roll-up awnings were a common sight on historic storefronts and can be used following a similar approach to the original application. If a roll-up awning is not operable, the awning should at least follow the shape of an operable awning.
- As with the storefront, awnings should be confined to the extent of the original storefront opening.
- Awnings should be trapezoidal in profile with closed ends, not rounded or curved, and a consistent color.
- Awning colors should coordinate with the color scheme for the entire building.
- Awning signage or lettering should be limited to the hanging vertical flap of the awning and be complementary in color to the building.
- Awning signage or lettering should not be allowed where another flush faced sign exists.
- Awning signage or lettering should not be allowed where another flush faced sign exists.
- Awnings will wear and should be acknowledged as an operating cost of doing business. They can be changed every few years for a fresh look.
- Aluminum and/or steel awnings and structures are not original building elements and typically detract from the overall appeal of the Downtown façade. These awnings should be removed and points of attachment repaired on the building façade.

Sidewalk signage: Symbolic signage, such as barber poles, were often set on the sidewalk. Sidewalk placards were also used to advertise merchandise.

Sidewalk signage should have the following characteristics:

- Material: Painted wood or metal.
- Lighting: Natural illumination. Do not internally illuminate.
- Location: At the edge of the sidewalk or at the building face. Most signs of this type should be portable so that they can be taken inside at night or during special activities such as parades.



Free-standing entrance sign.
(St. Charles, Missouri)



Signboards on sidewalk.
(Hannibal, Missouri)

- Signboards under the awning intended to assist pedestrians should be a limited, uniform size and complement the awning and building.

Signs to Avoid:

- Flashing or animated signs, or signs with moving parts or the effect of movement
- Internally illuminated signs or awnings.
- Signs that make sounds or music

2.1.13.3 Number and Area of Signs:

Principal Business Signs: Signs that identify the name and nature of the principal business should be limited to two per building storefront. These signs could be any combination of the sign types discussed above.

Auxiliary Signs: In addition, each business could have a sign stating hours of business and an “open” sign. These should be limited to two square feet each.

Side Street Directories: Side walls of corner buildings could be used for directions to side street locations such as parking, churches and businesses. These signs should be of uniform size and design, and be mounted below a directional arrow. A suggested sign panel size would be 12 inches high by 48 inches long with 6 inch high lettering.

Sign Area: The aggregate area of all principal signs should not exceed 100 square feet, except buildings with front wall area of 1000 square feet or more, where the aggregate sign area should not exceed approximately 10% of the front wall area.

Lettering Size: The size of lettering or any sign type should not exceed 12 inches high, except for the first letter of each word, which should not exceed 18 inches high.

Lettering Style: Because the historic signs spanned a long time period, a variety of lettering styles existed together. Lettering style for new signs could be either simple block letters or more elaborate lettering styles. Each business should express their individuality in their sign design.



Stop sign on ornamental post.
(St. Charles, Missouri)

2.1.14 Lighting

Buildings should be interesting to pedestrians and motorists at night, as well as by day. A well-lit storefront or rear façade creates a positive impression about Downtown. The following lighting conditions can be implemented to enhance the attractiveness and safety of the Downtown:

- Use lighting as a design element to draw attention to the entire building, not just the sign.
- Any lighting at the storefront should be used to accent the entrance, signage, or architectural elements as well as provide light for safety and security.
- Light fixtures should be the lowest wattage possible and of a concealed, simple, and non-intrusive design or a style that is appropriate to the period of the building.
- Sign lighting should be balanced in color and intensity with light in display windows.
- Warm-colored light is preferred for all exterior lighting, since this is more pleasing to the eye, and will more easily draw attention to window displays.
- Neon lights and cool fluorescent lights should not be used.
- Lighting on rear façades should provide illumination at the entry door as well as along the pedestrian path from the parking area. This lighting should be similar to the lighting in the front of the building.



Example of inappropriate style of lighting.
(Columbia, Illinois)



Use lighting to highlight building, signage & entrances.
(St. Charles, Missouri)

2.1.15 Rear Elevation

The rear elevation typically faces an alley or parking lot and provides access for deliveries and maintenance. In some cases customer parking is provided behind a building and entry to the business through the rear is desirable. Attention to the appearance of the rear elevation can be extremely important to the quality of the customers' shopping experience. Consider how image can be improved here, while accommodating service functions.

2.1.15.1 Entry Door:

- The rear door will no longer be just for service but should project a sense of openness and welcome.
- Customers might also feel a loyalty or sense of 'special access' by using this door and the business can build on this loyalty by catering to that customer and improving that experience.
- A new door and hardware with a large area of glass may be considered.
- A small canopy or awning can provide some form of shelter.

2.1.15.2 Upper Rear Façade:

- The upper rear façade elements should be treated similar to the front. Too often this is a façade that is neglected and allowed to deteriorate.
- Windows should be restored or replaced.
- Gutters and downspouts should be in good repair and painted.
- Use materials and colors that coordinate with the main façade so customers will learn to recognize both entrances are related to the same business.
- Use a smaller version of the front sign to identify the rear entrance.
- New exit stairs and balconies can enhance the marketability of second story space, especially when these lead out onto parking lots located on the back side of the building. Encourage installing new stairs that comply with current building codes.

2.1.15.3 Fences:

- Fences should be designed to harmonize with the surrounding structures in both scale and color.
- Some materials which may be appropriate include masonry, wood, ornamental metal and wrought-iron.



Well maintained rear entrance & upper rear façade.
(St. Charles, Missouri)

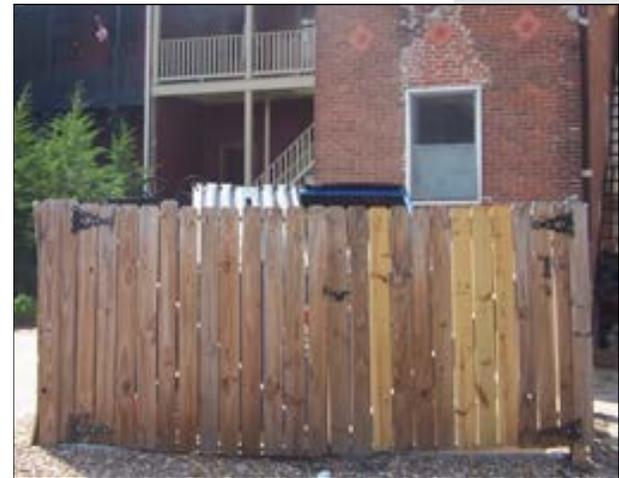


Rear Entrance with good variety of landscape.
(St. Charles, Missouri)

2.1.15.4 Trash Dumpsters, Ancillary Structures, and Utilities:

Sensible, yet firm enforcement of the city’s building and nuisance codes will be required and should be a priority throughout the Downtown.

- Waste receptacles should be placed in an enclosure or behind a screen.
- Use landscaping to help screen waste receptacles and dumpsters.
- Enclosures and screens should harmonize with the surrounding buildings in scale and color.
- Landscaping can also be used to screen air-conditioning condensers and utility transformers.
- Use solid wood or masonry partitions, lattice screens, or hedges to screen trash areas.
- Any ancillary structures should match the surrounding buildings style and scale. These structures must be maintained well.
- Keep electrical service boxes and conduits in good repair and painted.
- Encourage using a color scheme on these screens that matches that of the rest of the building.



Screened waste receptacles and dumpsters.



Regulations for property owners and refuse haulers should be enforced.

2.1.16 Building Color Guidelines

Color can enhance the details and patterns of façades. The most effective and economical schemes often start with the natural colors of the building materials themselves as a base, such as the red of many brick buildings. The following techniques should be encouraged:

- Use only one base color for the majority of the background wall surface, but use a different color for accents. Do not paint a building entirely one color.
- Base colors should be muted earth tones or pastels.
- Look for “built-in” features of the façade that can be highlighted with an accent color.
- Window frames, sills, moldings, and cornices are potential elements to highlight with a contrasting color.
- Use bright colors only in small amounts. Place them at the first floor level to direct the customer’s eyes to the business.
- Consider accent colors for signs, awnings, and entrance doors.

The use of various color schemes for buildings should receive an approval process. Such steps could be developed through the existing building code and permit approval procedure. Existing codes may need to be supplemented with design standards for Downtown Brookfield, which is discussed further in Section 7.0.



Example of a good use of color which accents the building entrance. (Washington, Missouri)



Block that follows same basic design principles. (St. Charles, Missouri)

3.0 NEW CONSTRUCTION GUIDELINES

3.1 New Construction Overview

The design of any new structure within areas of historic construction is of great importance because it must be compatible with existing structures and must harmonize with the visual characteristics of the neighborhood.

The following guidelines for new construction cover additions to existing buildings as well as entirely new infill buildings within the historic districts. These guidelines are not intended to dictate particular architectural styles or features. They are intended to identify a range of design options to encourage new development that is harmonious with the character of the districts. The important elements to consider in new construction are scale, design quality, and relationship to neighboring buildings, rather than the degree to which new construction imitates an historic style or period.

It is best to avoid recreating historical styles or themes in order to avoid a “theme park” type of atmosphere. While new buildings can be inspired by past design, creating a false past should be avoided. Recommendations include:

- New construction should be of design considerate of traditional storefront elements described in these guidelines or on nearby historic buildings that contribute to the fabric of Downtown.
- Use a simple design, complementary to the Downtown, with three basic elements; a unified paint and color scheme, an awning, and non-intrusive signage.
- Emphasize horizontal features that can align with other buildings.

New construction should be compatible with the rhythm of neighboring buildings along the street. Rhythm is defined by the relationship of buildings to open space along the street, the relationship of solids to voids on building façade, and the relationship of entrance and porch projections to the street. The directional emphasis- whether vertical or horizontal in character- of new construction should relate to that of neighboring buildings.



The defined rhythm of Downtown Brookfield should be maintained along a street frontage by adhering to uniform lot widths, building widths, and window spacing.

- New infill buildings and structures should maintain the rhythm through proper repetition of details and orientation to the street.
- Vertical elements, entrances, lighting and other street furnishings can also develop the rhythm of a specific block.

New construction should be evaluated in terms of the following: siting, massing, rhythm and directional emphasis, materials, and building elements.

3.2 Design Guidelines for Residential Buildings

3.2.1 Building Orientation

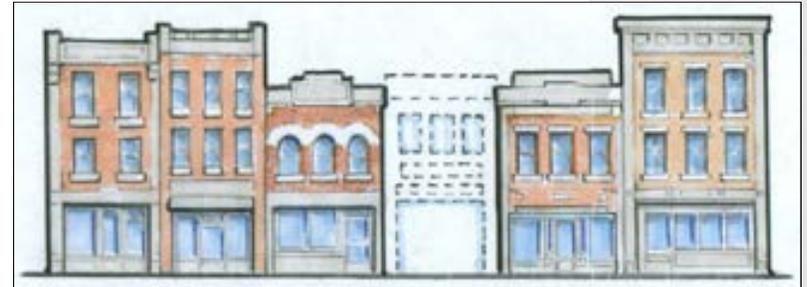
The setback and orientation of new buildings in historic districts should align with neighboring historic buildings. Within the service area, principal elevations of buildings characteristically face the street with a strong sense of entry. New buildings with main façades and entrances oriented to the side yard, or new buildings having a courtyard arrangement are not appropriate.

3.2.2 Building Materials

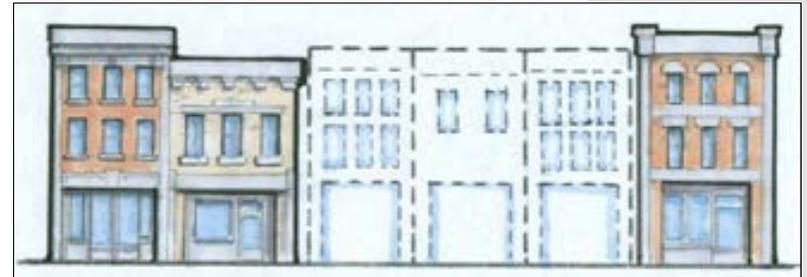
The exterior materials used in new construction should be compatible with historically appropriate materials of neighboring buildings or the district as a whole.

3.2.3 Building Design Elements

The various individual elements of a building—the roof, windows, doors, porches and trim—should be carefully integrated into the overall design of new construction. These elements also should complement those on neighboring buildings. The shape and pitch of the roof should be considered. Window and door proportion, size, design, and pattern of spacing between the openings should be compatible with historic treatments of windows and doors in the district. Although the front porch is uncommon in modern construction, the inclusion of porches may be important in new construction within the Village Square of Downtown Brookfield.



New buildings are same in scale and are aligned with sidewalks.



New buildings follow the rhythm of existing buildings.

3.3 Design Guidelines for Commercial Buildings

3.3.1 Building Orientation

The setback and orientation of new buildings in historic districts should align with neighboring historic buildings. Within the service area, principal elevations of buildings characteristically face the street with a strong sense of entry. New buildings with main façades and entrances oriented to the side yard, or new buildings having a courtyard arrangement are not appropriate.

3.3.2 Building Form and Scale

New construction should conform to the massing proportion, volume, scale, and height of neighboring buildings. The bulk and area requirements in the zoning ordinance regulate the specific height and area coverage of buildings allowed in the historic districts.

3.3.3 Building Materials

The exterior materials used in new construction should be compatible with historically appropriate materials of neighboring buildings or the district as a whole.

3.3.4 Franchise Architecture

Large franchises and national chains typically have a 'downtown style' in addition to their trademarked brand. The City of Brookfield should insist that companies use a downtown design standard and adapt their brand to create a building front which compliments Downtown.



A franchise façade that enhances the surrounding street fabric.

3.4 SUSTAINABLE DESIGN

3.4.1 Introduction

The construction of sites and buildings have a significant impact on the natural environment. The operations of a site and a building, can also affect the air, land and soil of the downtown. Sustainable Design measures seek to lessen the impact on the natural and built environment. Such design efforts also aim to increase the efficiency at which buildings operate, in regard to energy use and operating costs. The design process is comprehensive, beginning with site selection and orientation; through specification of sustainable materials to energy efficient operating systems.

Downtown Brookfield is a built environment of many historic buildings, modern buildings, public streets, parking lots, a few vacant lots and open space. Sustainable Design measures can be applied to both existing buildings and new buildings. The U. S. Green Building Council (USGBC) has become the leading organization in developing standards for sustainable design and operations of buildings. The U. S. Green Building Council's certification system is known as Leadership in Energy and Environmental Design (LEED). The majority of LEED designated buildings are new construction projects, however the USGBC has also developed standards for the upgrade of existing buildings.

Sustainable design is a broad and encompassing initiative which strives to create a built environment which is good for both man and nature. The following recommendations only introduce the basic fundamentals of sustainable design regarding downtown buildings and environments. For additional information beyond these guidelines, numerous resources exists, such as the following:

- U. S. Green Building Council (USGBC) www.usgbc.org
- Whole Building Design Guide www.wbdg.org
- American Society for Testing and Materials International (ASTM)
ASTM E2432— Standard Guide for General Principles of Sustainability
Relative to Buildings www.astmStandards.e2432.htm



Permeable pavers for parking area allow stormwater to percolate back into the soil and groundwater.



Interior flooring fabricated from bamboo, a rapidly renewable resource.

3.4.2 Fundamentals

Sustainable design measures are constantly changing, however there are six fundamental principles which constitute sustainability:

- 1) **Optimal Site Potential:** Consider site selection, building orientation and existing natural features of a site including topography, drainage, landscape and natural habitats. The rehabilitation and reuse of existing buildings should always be evaluated as an alternative to new building construction.
- 2) **Efficient Use of Water:** The design and use of water systems in a building maximize efficiency and recycle water for on-site use when feasible. Site design should seek to reduce stormwater run off from the site. Use best management practices (BMP) to limit stormwater run off, clean storm water and trap pollutants in the water before discharging into the sewer system.
- 3) **Environmental Materials and Resources:** Utilize building materials with a high percentage of recycled content or contain rapidly renewable materials such as cork flooring, bamboo cabinetry, wool carpeting, etc. Specify or use materials or items which are manufactured within proximity to the project site. Ideally, this proximity is no more than 500 miles.
- 4) **Optimal Energy Use:** The operation of a site and building identify methods for increased energy efficiency or use renewable resources such as solar or geo-thermal energy.
- 5) **Interior Environmental Quality:** Identify methods for creating a healthy environment, and increasing the comfort of building users. Proper ventilation, use of natural light, and moisture control are a few methods to ensure a quality interior space.
- 6) **Optimal Operations and Maintenance Methods:** Utilize building systems, furnishings and finishes which will have minimal operations and maintenance needs. Such systems will require less energy, less water and can be maintained with natural cleaners which are not toxic to the environment or occupants.



“Green Roofs” reduce stormwater runoff, reduce heat gain and provide aesthetics for building users.



Solar panels provide an additional energy source for building power needs.

3.4.3 Elements

Sustainable design elements are extensive. The following list seeks to introduce only a few recommendations which are applicable to Downtown Brookfield:

- 1) **Parking and Service Areas:** Minimize stormwater runoff by using pervious pavement materials such as pervious paver systems or pervious concrete. Such systems will allow stormwater to percolate into the soil and not into the public stormwater sewer system.
- 2) **Building Materials:** Utilize materials which are composed of recycled materials or manufactured from rapidly renewable materials, which are made from plants that are typically harvested within a 10 year cycle. Examples include: bamboo flooring, linoleum flooring (made of wheat flour and linseed oil) cotton batt insulation and wheatboard cabinetry. Recycled bricks from demolished buildings should also be used for new building construction or restoration projects.
- 3) **Alternative Transportation:** Promote by providing secure bicycle storage and changing/shower facilities for employees.
- 4) **Solar Energy Alternatives:** Install solar panels to supplement the power system for commercial and residential buildings. Utilize prefabricated solar water heaters to provide the majority of the hot water needs for buildings.
- 5) **Stewardship:** New wood products, including construction lumber, should be certified by the Forest Stewardship Council, which promotes responsible forest management.
- 6) **Lighting:** Develop a lighting plan for public spaces which minimizes excessive lighting, which affects night sky viewing and the migratory patterns of birds. Flags which require lighting should be lit from the top shining down on the flags instead of being lit from the ground, projecting light into the sky.
- 7) **Operations:** Use timers on public fountains and lights in non-essential areas to shut off lights after 1:00 a.m., in order to reduce energy consumption.
- 8) **Landscaping:** Plant native landscape materials which can survive on natural rainfall once established.
- 9) **Street Furnishings:** Specify site furnishings such as benches, waste receptacles, bollards, and planters which are made from recycled plastic materials.
- 10) **Water Conservation:** Capture rain water runoff from roofs in rain barrels for irrigation use or direct to rain gardens on site. Inside buildings, consider waterless urinals or low flow water closets to limit potable water use.



Permeable pavement system installation.



Rain garden with native landscape plants.



Solar water heater.

4.0 STREETScape DESIGN GUIDELINES

4.1 Design Guidelines for Public Streets

The term 'streetscape' typically refers to exterior public spaces located between the building façades on one side of the street and the building façades on the other side of the street. An organized streetscape combines many design elements to create an inviting and attractive public street.

4.1.1 Design Coordination

A comprehensive design approach to Downtown will result in a more successful project. Downtown Brookfield can display a sense of order and rhythm through the repetition of design elements on buildings and street furnishings. A sense of arrival should exist upon entering Downtown.

- Downtown should have well maintained streets and walks.
- Particular care should be devoted to the main entries and corridors into Downtown, as these will be the visitors' first impressions of the area.
- Good, clear signage provides an invitation to enter, navigate Downtown and visit attractions.
- Establishing uniformity in streetscape furnishings provides a visual cohesiveness to the Downtown district.

4.1.2 Infrastructure

- Curbs should be in good repair and a consistent material along the street. There should be no gaps or areas of uneven elevation along the curb line.
- Sidewalks at all street intersections should have accessible curb ramps.
- Poorly working storm drains can create an undesirable situation at street intersections when runoff water collects in large pools. This condition makes pedestrian access virtually impossible and must be corrected.
- Overhead utilities may pose a visual distraction from the overall unity of Downtown. Although costly, relocation of overhead utilities should be considered, especially with each new development/redevelopment project.
- New or replacement curbs should be vertical curbs.



Existing streetscape elements and placement along Main Street within Downtown.



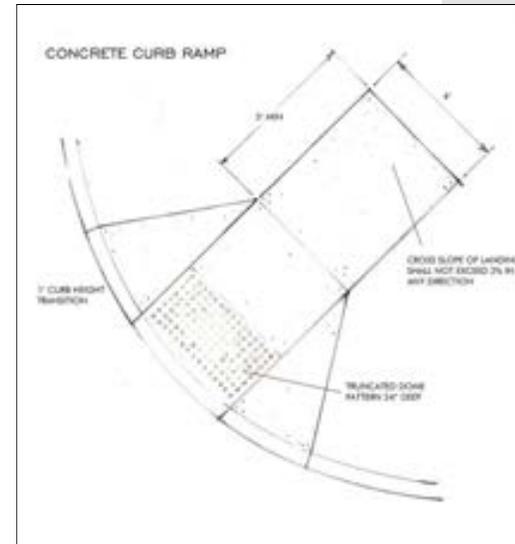
Curb and sidewalk in disrepair in Downtown Brookfield.

4.1.3 ADA Accessibility

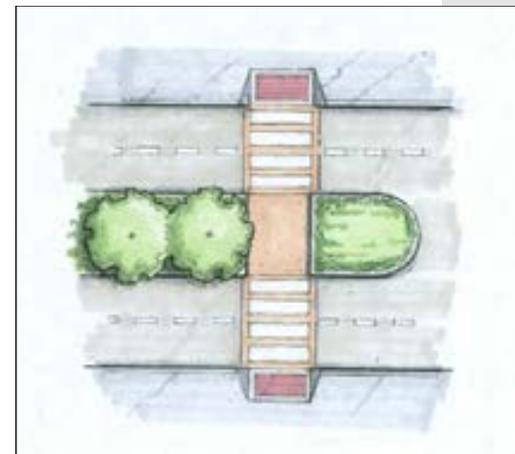
Accessibility on public sidewalks is required by law, per the Americans with Disabilities Act (ADA). Without the required curb ramps, sidewalk travel in urban areas is dangerous, difficult, and in some cases impossible for people who use wheelchairs, scooters, and other mobility aids. Curb ramps allow people with mobility impairments to have access to the sidewalks and buildings.

4.1.4 Pedestrian Access and Sidewalks

- A clean, clear and well-lit pathway for pedestrians should be provided from any remote parking area to Downtown. This pathway will also need to comply with Federal ADA Accessibility Guidelines.
- Sidewalks should run continuously through an entire block to create a clearly defined pedestrian pathway and minimizing conflicts between people and vehicles.
- All roadway crosswalks should be clearly marked with signage and striping.



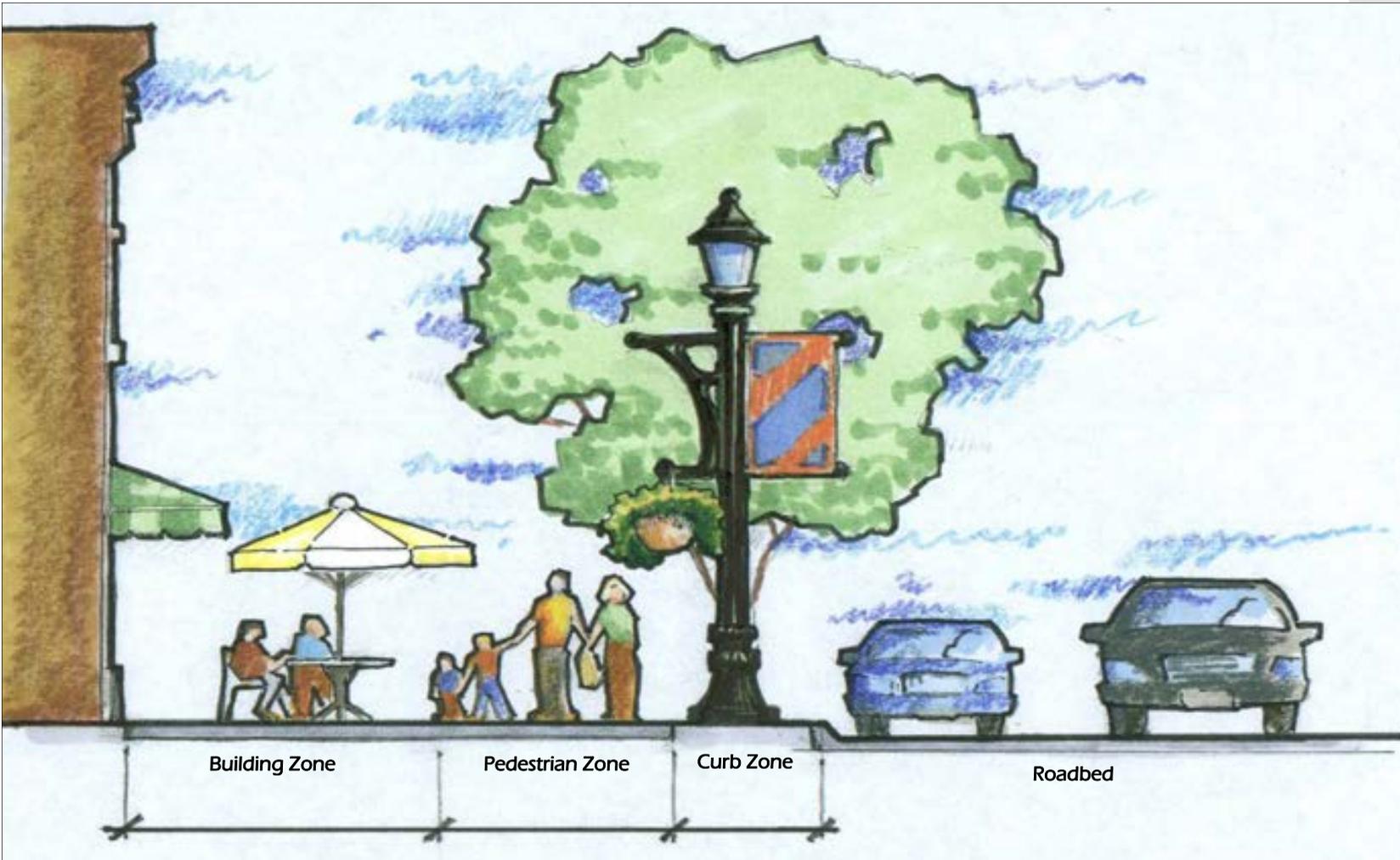
Detail design drawing of an accessible ramp.



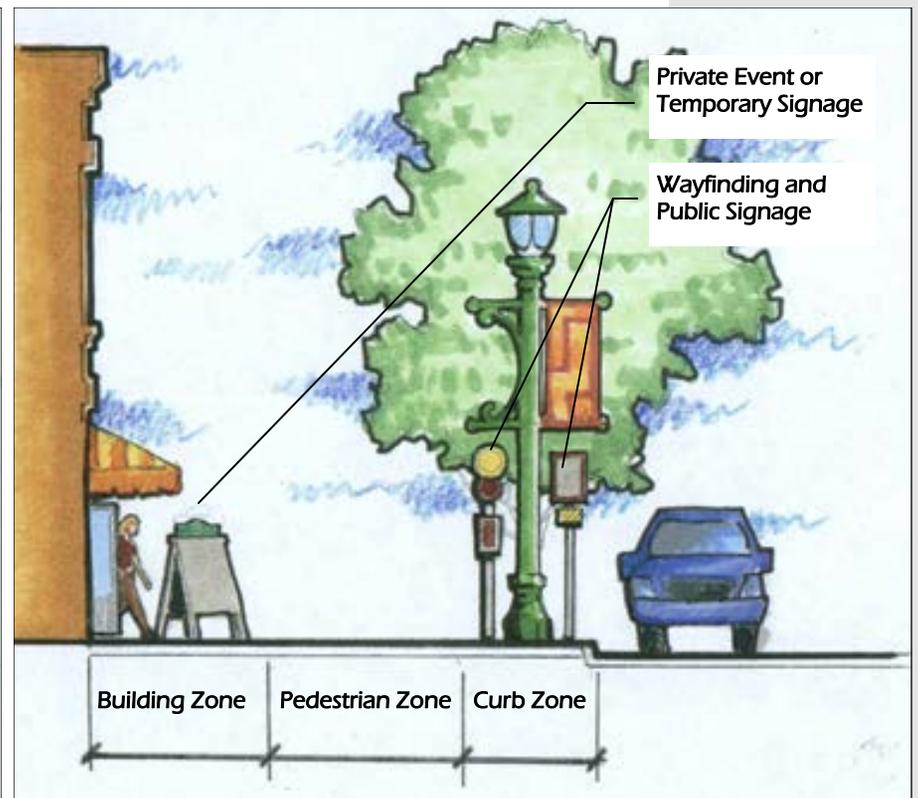
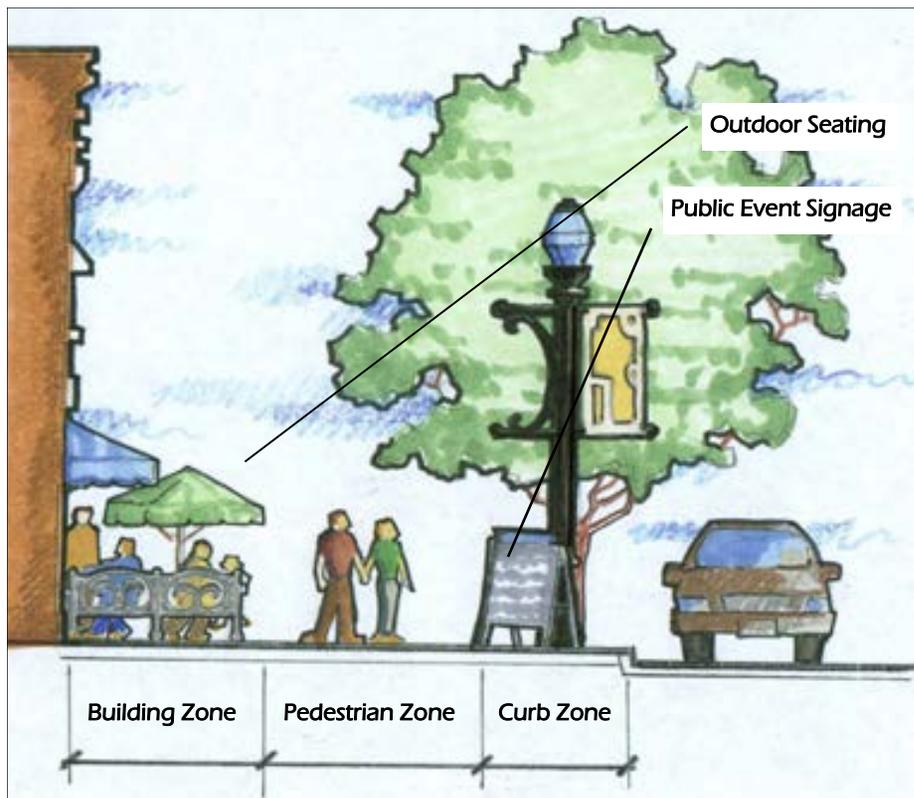
Example of proper crosswalk alignment and designation.

4.1.5 Sidewalk Zones

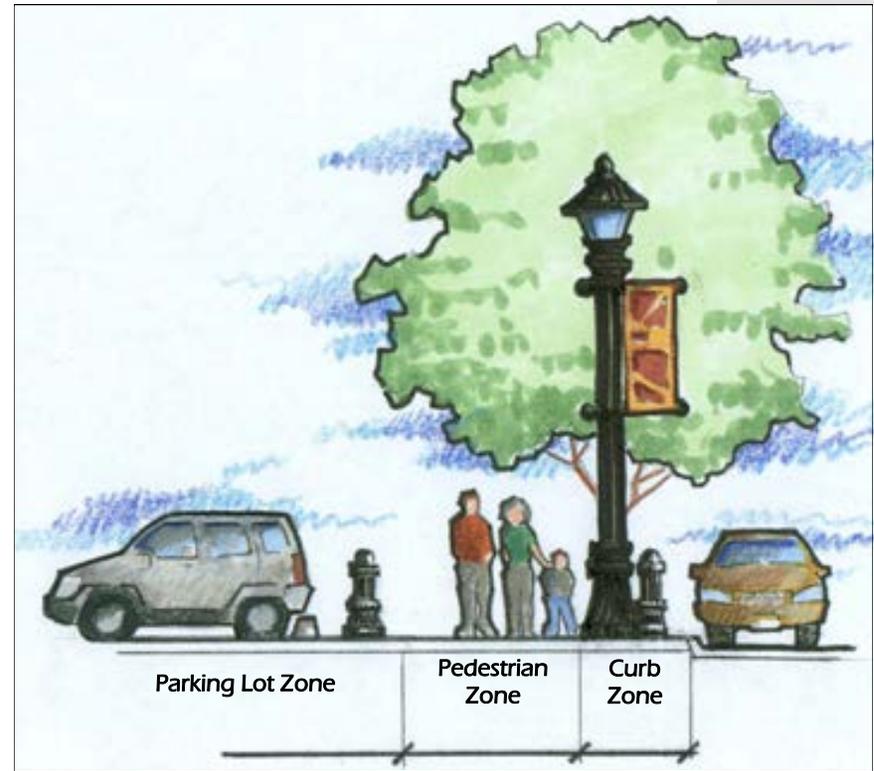
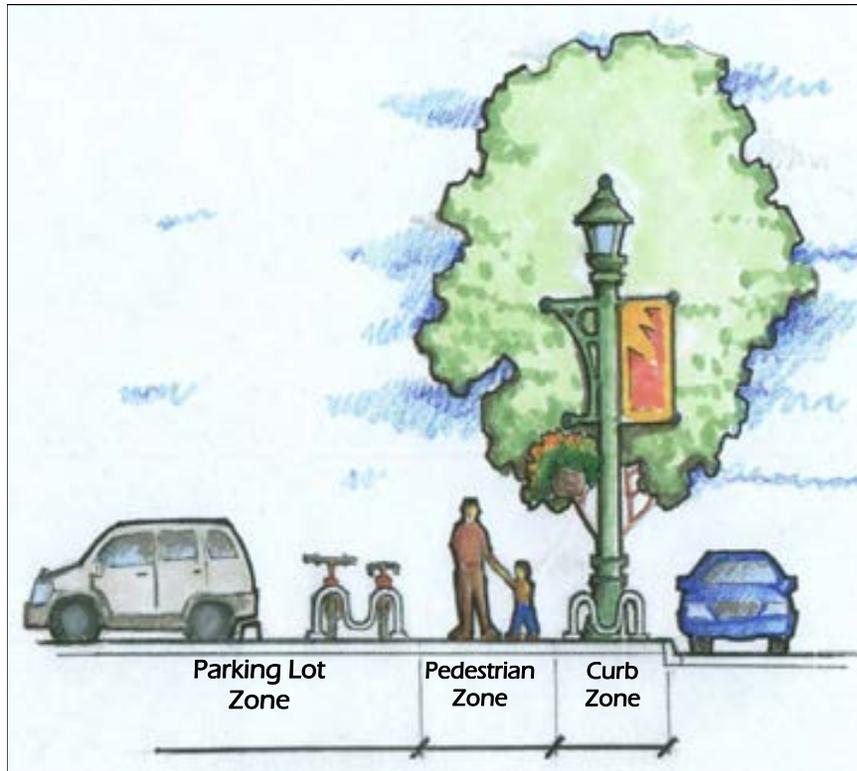
Appropriate zones in front of a building shall be maintained. The Building Zone, Pedestrian Zone, and Curb Zone all have unique characteristics that should be regulated to ensure that private elements do not adversely impact public improvements.



- Aside from ADA accessible pavement improvements, Streetscape Amenities should remain clear of the Pedestrian Zone and allow for free movement of pedestrians. These elements will enhance the pedestrian experience, but must not obstruct them.
- Businesses should be informed on the importance of maintaining Sidewalk Zones. Each business should care for the zones within their building's street frontage.



- Items such as bicycle racks, bollards, and benches can add to the streetscape.
- Businesses should consider providing and maintaining such elements within their Building or Parking Lot Zones to enhance service to their patrons.



4.1.6 Fountains and Public Art

The introduction of fountains and public art can enhance Downtown Brookfield and the pedestrian experience. These features will be most effective as simple interactive elements which Downtown visitors can enjoy. Fountains can be simple bubblers that provide a refreshing respite in the summer months and are lower maintenance than fountains in a pool. Some general guidelines to help the City of Brookfield design these features include:

- Fountain water should be left in its natural state (no coloring).
- Pedestrians should be allowed to touch and splash in the water of a fountain, where codes allow.
- Fountains can be combined with signage and landscaping to create a gateway for Downtown.
- Fountains should receive regular maintenance by properly trained staff.
- Repairs to fountains should be performed by a qualified professional.
- Public art and sculpture should be of high quality, produced by a trained professional.
- Graffiti and vandalism of public art should be repaired as soon as possible.
- Temporary and seasonal art exhibits should be encouraged to showcase Downtown Brookfield as a center for art.
- Public art should, if possible, reflect local stories or history.
- Public art can also serve as memorial to local persons or to commemorate historical events.



Examples of public fountains.



Examples of public art.

4.1.7 Signs and Banners

Signage should be used to identify, define and promote Downtown and its activities. Individual building and business signage is discussed in Section 2.1.13. Wayfinding techniques and components to assist in navigation through the area will be addressed in Section 4.2. Some basic guidelines for effective usage of signage are as follows:

- Street name signs should be chosen and installed that are distinctively different from the street name signs located in the rest of the community. This will reinforce a feeling of ‘place’ in Downtown Brookfield.
- The style of the street name and street address signs should complement if not match completely.
- In an effort to reduce visual clutter, regulation and direction signage should be combined where possible.
- Banners and other temporary signs should be allowed, but restricted as to size, prevalence, and length of display.
- Hung from the light poles, seasonal banners or decorations approved by the City can create seasonally festive streets.
- Banners can add a sense of civic identity while providing information about upcoming events or festivals.
- Banners should be well designed and are most effective with a simple design, repeated throughout Downtown, and with minimal lettering. Sponsor panels should only be allowed within a uniform design panel.
- The banner brackets used for these banners should be maintained by the City.
- Banners should be changed on a regular schedule and replaced as needed. Banners which have been faded or worn due to long term use, should be replaced.
- Balloons, pennants, and other distracting sign novelties should be strictly regulated in Downtown.
- Murals must have an artistic component and must meet approval by the City. Murals should be professionally installed. Any mural not approved should be considered in violation of the sign code.



Existing banner signage in Downtown Brookfield.

4.1.8 Parking and Service Areas

Parking to support business and retail tenants must be provided. Street parking will accommodate some, but not all of the required parking. Additionally, public owned parking lots can be used for streetscape element installations. The City of Brookfield and the Mainstreet Brookfield Downtown Association should cooperate to develop key public parking lots to welcome visitors.

- Parking lots on previously vacant property in and around Downtown is a good solution for additional parking spaces.
- Provide planting buffers at the edges of parking lots or use decorative paving to define the site border.
- Include landscape islands throughout the lot to improve the aesthetics and minimize the storm water run-off.
- Side or rear locations off the main street are preferred for parking lots.
- A clear and well lit pathway for pedestrians from any parking area should be provided.
- The street, alley and sidewalk pavement should be in good condition with no tripping hazards for pedestrians.
- Crosswalks should be clearly marked and free of obstacles to provide a clear view for traffic.
- Care must also be taken that lots are policed in the evening as they will tend to become a security concern for some patrons.



Public parking lot that provides a buffered edge with landscaping. (Fulton, Missouri)



Regulation signage combined on ornamental post. (Washington, Missouri)

4.1.9 Lighting

Streetscape lighting should enhance the pedestrian and nighttime image of Downtown while also providing an attractive installation during the day. Lighting guidelines are listed as follows:

- The sidewalks should be provided with light to clearly define the walking surface.
- Storefront lighting can add to the pedestrian walkway illumination.
- Streetscape lights should be on 12'-14' height poles and project light down onto the sidewalk, not into second floor windows.
- Lighting should be uniform in style, type, height, and brightness throughout the area.
- The same type of illumination (metal halide, high pressure sodium, incandescent, etc.) should be used throughout Downtown.
- Light poles with brackets for banners and electrical outlets can effectively display temporary or seasonal decorations.
- An overall lighting design strategy should be developed to ensure appropriate lighting levels.
- The lighting plan should address parking areas, rear building entrances, and alleys.



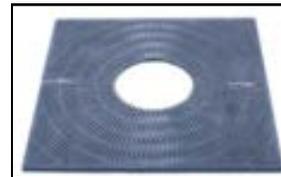
Existing light posts in Downtown Brookfield are a mix of scale and style.

4.1.10 Site Furnishings

The furnishings included along a street or in a pedestrian plaza, parking lot, or park should be considered as part of the overall streetscape in terms of design. Elements should complement and introduce users to the theme of Downtown. Clusters of furnishings will provide gathering spaces for pedestrians and encourage visitors to park their vehicles and explore Downtown.

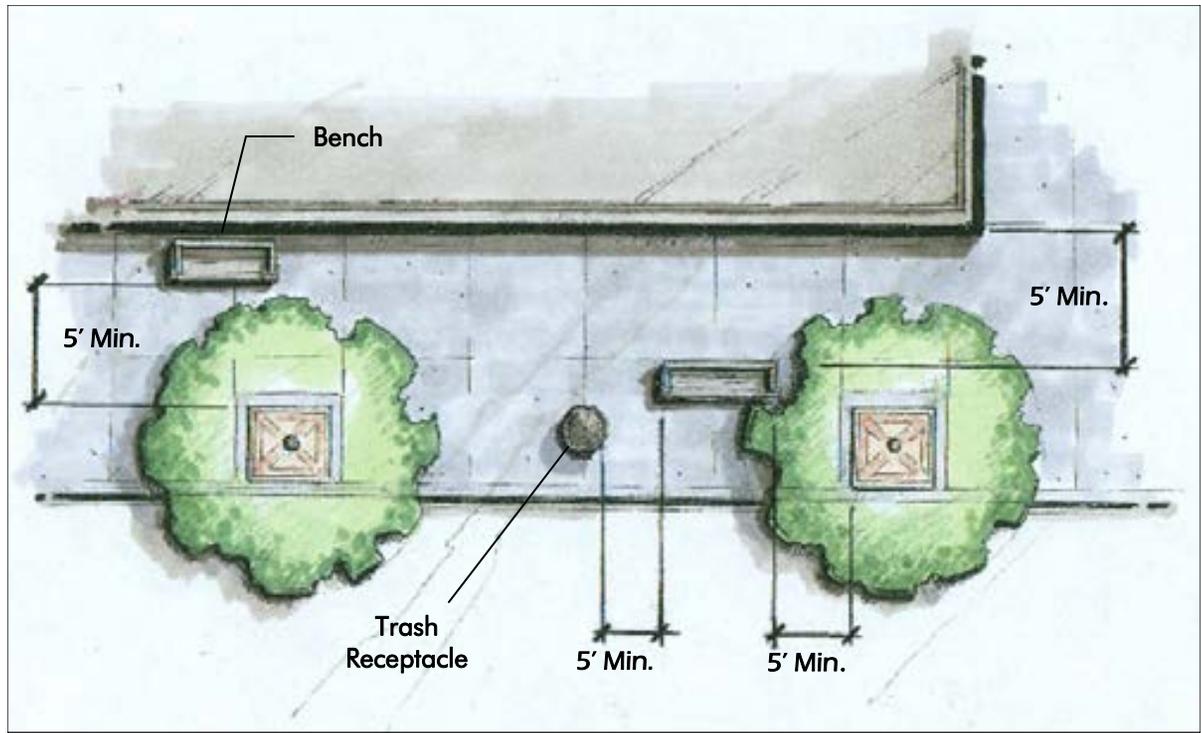
General guidelines for furnishings include:

- Benches within the streetscape encourage social interaction which contributes to a successful Downtown. To help achieve this in most cases, street side benches in Downtown should face the street or public space rather than the building façade.
- Planters and window boxes provide seasonal color and can be a volunteer opportunity if maintained by a local club or organization.
- Public art and sculpture add to the identity of Downtown.
- Trash receptacles help to keep Downtown clean.
- Grouped together, such furnishings will enhance Downtown and provide a gathering place for pedestrians.
- Furnishings should be coordinated with light and sign poles to present a unified look to the streetscape.
- Street furnishing will invite people to walk around and linger in Downtown.



Potential site furnishing examples coordinated for Downtown Brookfield.

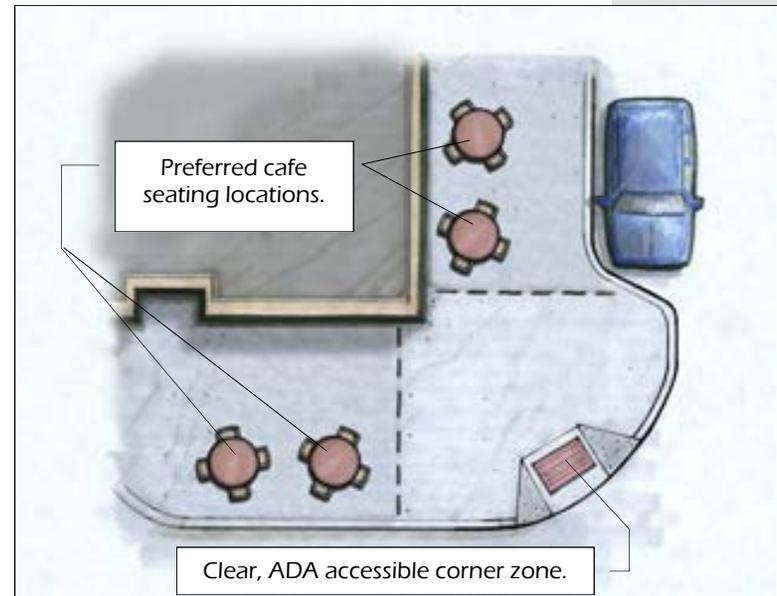
- The minimum distances shown represent suggestions for spacing of site furnishings. Actual distances may vary due to site conditions.



4.1.11 Outdoor Café Seating

Outdoor Café or sidewalk seating is a good option for restaurant/business patrons and can contribute to the life of a street. Seating areas for restaurants should be encouraged, but monitored by the City. The following are suggestions for proper arrangement:

- Areas should be located in the sidewalk area fronting the restaurant.
- Allow a clear and unencumbered path along the sidewalk for pedestrian traffic or be located close enough to the building. In either case the sidewalk must maintain ADA compliance. The restaurant owner is responsible for keeping the sidewalk and this pathway clear at all times.
- Areas adjacent to the building should not block entrances or exits to the building.
- Provide a clearly defined area connected with the restaurant.
- Fencing, if allowed, can be helpful to delineate public and private space and provide security as desired.
- Utilize appropriate umbrellas or other patron covering in a uniform color, matching the building colors, and with only the restaurant name. Any other wording or message should not be allowed.
- Temporary outdoor seating material must be kept in top condition to provide an attractive image for the restaurant and all of downtown. Such furnishings should be durable, weatherproof, and sturdy enough to prevent movement by winds.
- Plastic furnishings should not be used.
- Furnishings should be stored in a secure location.
- At least one sturdy trash receptacle should be provided.



Proper location of café seating is important for safety, access, and service.



Outdoor café seating.
(St. Louis, Missouri)



Outdoor café seating.
(University City, Missouri)

4.1.12 Landscaping

- Landscaping zones can also be identified along side streets to complement, but not obstruct building façades.
- Landscaping in front of a business is recommended. Plants in movable containers should be considered where no available landscape planting area is available. Containers should never be placed in the pedestrian pathway, but rather, immediately adjacent to buildings or curbs.
- Trees work best when planted in groups or islands where they can thrive in larger volumes of soil.
- Trees and shrubs should be of a hardy variety, common to the region.
- Shrubs should be massed in groupings of five to seven plants with no more than two different species within a planting bed.
- Locate plantings in traditional areas of the site. Plantings along fences, walks, foundations, and at porch edges are good locations.
- Landscaping should be installed adjacent to alleys, driveways and other areas in between buildings.
- Garden clubs or volunteers should be encouraged to help maintain landscaping of perennials and annuals on public property.



Good example of landscaping along an alley.
(Sikeston, Missouri)



Containers with seasonal landscaping at a store entrance. (Washington, Missouri)

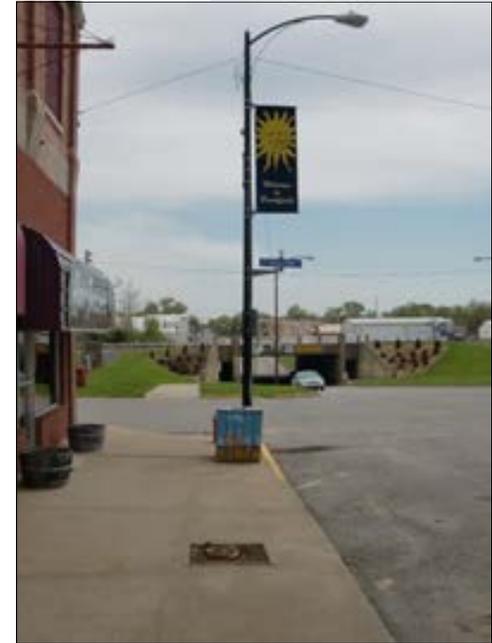
4.1.13 Street Trees

Many downtown communities have attempted tree planting programs in an effort to compliment the existing streetscape and further beautify their urban districts. Often times, many of these trees fail prematurely or are simply removed due to concerns with dropping fruit, attracting birds, and hiding business signage or addresses. The City of Brookfield is no exception to these problems often leaving the Downtown streetscape devoid of greenery or landscaping. The city should consider developing a standardized list of suitable street trees in an attempt to minimize these concerns. There are a number of issues to consider when formulating a list, including:

- Using species best adapted to the local climate, soils, etc.
- Avoid plant species that are susceptible to insects or disease
- Ensuring adequate soil volume and rooting space
- The use of a 'tree pit' with decorative metal tree grate covering
- Ensuring regular maintenance and watering schedule (as needed)
- Allow a minimum of seven feet of vertical clearance before any lateral branching begins
- Trees should be chosen for their root growth structure. Specify varieties with downward growing taproots, not lateral growth that will damage surrounding pavement

Although certain tree species can attract birds more than others, it is important to note that whenever trees are provided, so too is a habitat for birds. Even though the concern cannot be completely avoided, steps can be taken to lessen the potential impacts. A suitable tree list should recommend species that are resistant to insects, non-fruiting, and have smaller leaf coverage. Also, the Missouri Department of Conservation has wildlife damage and urban wildlife biologists on staff to help the city determine ways of managing these types of problems.

With regard to trees covering building signage, this is usually more of an issue when trees have grown out to be fuller and/or taller. However, good planning practice shows that business districts with mature trees attract more customers, keep them on-site longer, and that those customers are willing to pay more for the store's product. Signs serve to identify a business and attract customers, but they are usually not capable of the other benefits. While street trees can be located, based on existing conditions, to minimize blocking of store windows, door ways and signs, this is not always possible. A combination of alternate plantings (small, medium & large), responsible tree pruning and moving signage to accommodate the trees is much better than limiting the trees in favor of signs. It is also recommended that the suitable tree list contain species with mature heights and spreads more amenable to these concerns.



The stump where a street tree once existed on Main Street in Downtown Brookfield.

It is important that the list is not too limiting, ensuring many different suitable types to foster creativity and sustainability. Also, people often make the mistake of thinking named trees on a list will work in any conditions within the geographic area, regardless of site conditions (soil type, moisture, light availability, etc). This misconception can result in many failed planting projects.

With these factors in mind, the following is a list of suitable street trees for Downtown Brookfield to consider:

Native to north-central Missouri (these should be the first choice)

*Cultivars of many of the following trees exist that may prove more suitable for street tree planting.

SMALL TREES

Amelanchier arborea (service berry)

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/h290/amelanchier-arborea.aspx

Cercis canadensis (redbud)

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/h550/cercis-canadensis.aspx

Crataegus viridis (green hawthorn)

*look for spineless and disease-resistant varieties such as “Winter King”

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/b964/crataegus-viridis.aspx

Ostrya virginiana (hop hornbeam)

<http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/l330/ostrya-virginiana.aspx>

Viburnum prunifolium (black haw)

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/g240/viburnum-prunifolium.aspx



Redbud



Hornbeam

LARGE TREES (plan for wider tree lawns, public spaces, parks, etc.)

Acer nigrum (black maple)

*maples tend to be over-planted in urban areas; perform an inventory before adding these to the urban forest

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a844/acer-saccharum-subsp.-nigrum.aspx

Acer saccharum (sugar maple)

*maples tend to be over-planted in urban areas; perform an inventory before adding these to the urban forest

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/h240/acer-saccharum.aspx

Betula nigra (river birch)

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/x800/betula-nigra.aspx

Celtis laevigata (sugarberry)

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a857/celtis-laevigata.aspx

Ulmus americana (American elm)

*choose Dutch Elm Disease resistant varieties such as 'Jefferson' and 'Valley Forge'

<http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a922/ulmus-americana.aspx>

Other suitable Missouri Natives (to add variety, but not to be planted in as large of numbers)

SMALL TREES

Carpinus caroliniana (musclewood)

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/h540/carpinus-caroliniana.aspx



Black Maple



River Birch

Chionanthus virginicus (fringe tree)

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/c120/chionanthus-virginicus.aspx

LARGE TREES

Liriodendron tulipifera (tulip tree)

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a878/liriodendron-tulipifera.aspx

Nyssa sylvatica (black gum)

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a670/nyssa-sylvatica.aspx

Quercus phellos (willow oak)

*has small acorns, so shouldn't cause too big of a problem as a street tree

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a191/quercus-phellos.aspx

Taxodium distichum (baldcypress)

www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/m510/taxodium-distichum-var.-distichum.aspx



Black Gum



Willow Oak

It is highly recommended that Brookfield conduct a street and park tree inventory. The inventory will highlight the numbers of trees and species that currently exist and assist the city to choose the appropriate number of each species to avoid overplanting any one family, genus, or species. The inventory will also help to identify problem trees and therefore ensure properly targeted maintenance, planting, and removal activities. The Missouri Department of Conservation has a grant program that can assist the inventory and subsequent activities.

For more information, refer to the Missouri Department of Conservation for further advice on tree selection and proper planting and maintenance techniques. Other resources:

"Missouri Urban Trees" http://mdc.mo.gov/sites/default/files/resources/2010/06/8045_5179.pdf.

4.1.14 Bicycles

A downtown area should not only be pedestrian friendly, but bicycle friendly as well. The scale of Downtown makes bicycle travel an enjoyable means of transportation in Brookfield. Downtown plans should implement bicycle facilities which can be used by local citizens and tourists. The City should identify opportunities for future bicycle facilities in Downtown and throughout the community. Such facilities may include the following:

- Bicycle racks with the uniform design of materials, color and style as other site furnishings.
- Directional and regulatory street signage which identifies local streets as bike routes and share the road routes.
- Wayfinding signage to direct cyclists to various destinations within Downtown.
- Public restrooms and drinking fountains available for cyclists.
- Dedicated bicycle lanes on streets, where feasible and possible.

The City of Brookfield should promote the use of cycling to and through the town. Developing a bicycle network program to identify local streets as the defined bike routes through town would provide a safe and well organized plan for cyclists and automobile drivers to understand. Implementing bicycle facilities will provide an alternative means of transportation and another recreational experience for visitors and locals.



Bicycle rack
(Webster Groves, Missouri)



Example of bicycle signage
(St. Louis, Missouri)

4.2 WAYFINDING

4.2.1 Wayfinding Principles

Wayfinding is an indispensable tool for directing travelers to destinations while at the same time creating a positive first impression. The term wayfinding was originally coined by Kevin Lynch in his seminal 1960 book *The Image of the City*. Lynch presented the concept that people use a cognitive map to move through their environment to their destination. Wayfinding develops a system to assist travelers in interpreting the map.

Wayfinding systems have been used for many years in institutions such as colleges and corporate headquarters. As it is commonly recognized today wayfinding helps travelers *find* their way to the destination, in this case Downtown.

In relation to community planning and specifically to Downtown Brookfield, the goal of the wayfinding system is to make the journey to Downtown as transparent and seamless as possible. Furthermore, by taking a comprehensive approach in developing the wayfinding system it can reinforce the community's unique identity and sense of place. This can be accomplished through four main aspects that can be controlled and enhanced through appropriate design and building codes:

Architecture:

- Visual clues of buildings and other features of a street aid people in knowing their location and the direction of their destination without the use of signage.
- Notable architecture serves as landmarks and orientation points. These points are often destinations as well as starting points and other wayfinding techniques should utilize this aspect. The Brookfield County Courthouse, the Library, and the Clapp Building are good examples of landmark architecture in Downtown Brookfield.
- Buildings have visual aids, such as pediments or lights, that draw our eyes to where we expect an entrance or a shop window to be located.



Wayfinding signage.
(Webster Groves, Missouri)

Sight Lines:

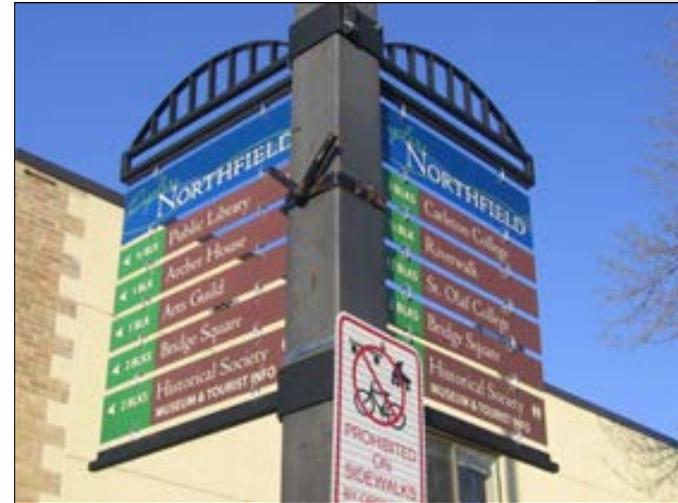
- The motorist will feel most comfortable in maintaining visual contact with his or her destination and will want to make as few direction changes as possible.
- Clean and clear lines of sight at key intersections should be maintained.
- Avoid allowing buildings to encroach or block these lines.
- Repetitive landscaping and site furnishings can enhance and draw the eye down these streets, but care must be taken that these items do not obstruct important navigational landmarks.

Lighting:

- Lighting can be used to define routes and pathways.
- Warmly lit storefronts and entrances draw the eye and provide the customer with the information needed to locate the business.
- A repetitive line of lighting can be a very effective navigation tool.
- Poor lighting causes missed information and leaves an unsafe impression.

Signage:

- Uniform signage at important decision points is a critical element of downtown wayfinding.
- Excessive signage will lessen the effectiveness of individual signs. Fewer, easy to read, appropriately placed signs are preferred.



Example of a sign grouping to maximize effectiveness.
(Northfield, MN)

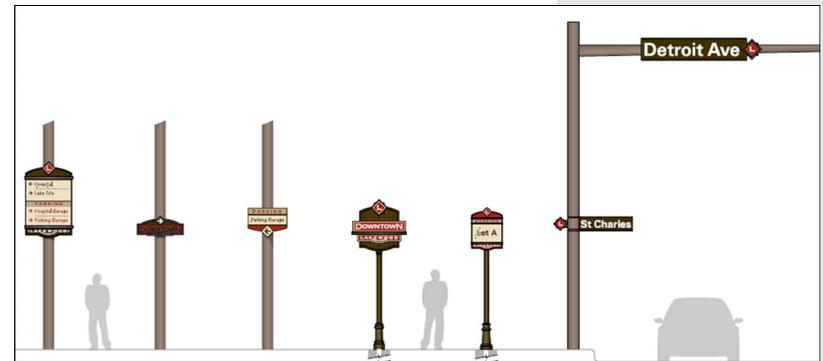
4.2.2 Wayfinding Components

Wayfinding systems are made up of components that create an arrival sequence to the Downtown. The system consists of common themed signs, of various types that direct travelers to attractions.

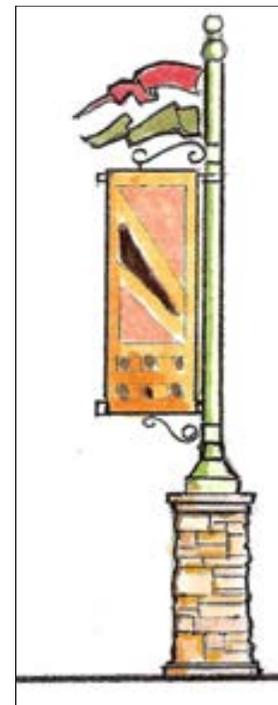
A successful wayfinding system is made up of many components that can be utilized in a variety of configurations. Some communities may require only a few of the components or can gradually add components into a complete system. Determining how many of the components a wayfinding system needs, depends upon the size, number and type of street.

Arterial and local collector streets are typically the location of gateway, historic, historic district, and trailblazing signs. These streets comprise the transportation corridors which focus the traveler into the downtown. They are discussed in detail as follows:

- Historic District Corridor— The central component and primary focus of the streetscape improvements and wayfinding system. This corridor includes the final approach, as well as the main arteries of the historic district. Signage types for this corridor typically include Historical District Gateway and Proximity signs.
- Residential/Commercial Entry Corridor— The areas immediately surrounding Downtown, a secondary focus for streetscape improvements and primary focus for residential improvement programs. Usually contain a small to moderate amount of commercial businesses, converted residential, and residential. Signage types for this corridor typically include Trailblazing and Proximity signs.
- Commercial Entry Corridor— Typically the beginning of the wayfinding system for travelers. The corridor consists of commercial and institutional uses and should focus on simple design treatments that reflect the scale and traffic. Signage types for this corridor typically include Primary Gateway and Trailblazing signs.



Example wayfinding signage system.
(Lakewood, Ohio)



Example of a historic district gateway sign.

As stated previously, a successful wayfinding system is made up of many components, including but not limited to these categories of signage:

- Primary Gateway Sign— Serves as the “Welcome” to a visitor, creating the first impression of the community. The sign should be significant, serving as a landmark.
- Trailblazer Sign— Utilitarian purpose combined with unique branding and design elements. Attractions to consider as destinations on Trailblazer Signs include; Downtown, Historic Districts, museums, event areas, government offices, parking, colleges/universities, and visitor centers. Signs should be located at or near a key transportation node.
- Historic District Gateway Sign— Creates a boundary for the Historic District, should be used within the Historic District Corridor. These signs should reflect the size, scale and character of the architecture within the district.
- Proximity Signs— In close proximity of the attractions these signs direct visitors to the destination.

All signs and banners included in the wayfinding system should have a simple and uniform design. Above all, the signs need to be brief and easy to read with large type face, appropriate coloring, and adequate character spacing. The wayfinding system signs should be unique and stand out in their surroundings. Sign guidelines should be developed using the Manual of Uniform Traffic Control Devices, published by the Federal Highway Administration (FHWA).



Example of a trailblazer sign.
(Wake Forest, NC)

5.0 DOWNTOWN BROOKFIELD ROADWAY AND STREETSCAPE PLANS

5.1 Main Street Improvements Concept

Main Street offers an extremely wide avenue through the heart of Downtown Brookfield. The street offers two lanes each way with diagonal parking on both sides north of the railroad, and parallel parking with a center turning lane south of the railroad. This extra width presents a hindrance to pedestrians and walking oriented activities. Pedestrians want to feel safe when walking along or crossing streets. Even at designated crossings with stoplights and stop signs, the wide expanse of Main Street deters walking. Therefore a “roadway diet” is recommended for Main Street within the DREAM Boundary Area. Plans were prepared and are illustrated on the following pages. The roadway improvements consist of eliminating one lane each way, the installation of a landscaped median in the center with turning lanes at key intersections, and mid-block crosswalks to improve pedestrian activity. Streetscape improvements, as discussed in Section 5.2, are also an integral part of the plan. A review of the proposed concept was completed by the engineering firm of Bartlett & West. Their Technical Memorandum is included in **Appendix C**, but a summary of their finding is as follows:

- Traffic counts and accident data were obtained from state and local officials
- Existing and proposed conditions were modeled to determine the effect of the proposed project
- Findings show that the reduction in through lanes increases delay slightly; however, the increase is not great and the overall level of service for all intersections did not change so that all approaches would operate at acceptable conditions
- The proposed lane reduction and new median would provide more safety for pedestrians crossing the street and will separate northbound and southbound traffic
- The proposed cross section will create larger lanes and more distance between the through movements and the parked cars
- It is not recommended to flatten the angle of parking which would decrease visibility and speed of parking
- For southbound movement at John Street a right-turn only lane should be considered
- It is suggested to construct a median and maintain the two lane section between Boston and Helm Streets, and the existing right-turn only lane at Helm and Main should remain and the storage bay for northbound and westbound approaches should be made larger to account for higher percentage of trucks making this movement
- It is recommended that the east lane south of Robard be a dedicated right-turn only lane, and the center lane be striped as a dedicated left turn lane to allow for a smooth transition from four lanes to two lanes
- Finally, the sidewalks should be pushed out further into the bump-outs at each cross street intersection, which will move the stop bar location further out as well and allow traffic to have better site distance before proceeding

5.2 Streetscape Design Concept

An effective streetscape plan is one which establishes an identity through consistent use of the visual and functional elements. Some blocks in the Downtown area have the basics of an established rhythm. This can be used as a starting point toward the creation of a complete streetscape which is both functional and aesthetically pleasing. Creating a complete streetscape for Downtown Brookfield starts with recognizing the existing framework and design elements, and then using these to establish a consistent rhythm throughout the designated area of the city. Some streets have wide sidewalks, planters in place, and some site furnishings. However, some of these elements have gaps in their layout or are in need of repair. In addition the inconsistency with regard to historic light poles and street trees is apparent. Lighting and street trees (with tree guards and grates) should be placed in a coordinated fashion, along with new site furnishings, throughout the design area. Benches should be positioned to help encourage public interaction. Trash bins and planters with a design more consistent with the new light poles are necessary toward a cohesive streetscape plan. Enhanced crosswalks, median and curbside planting areas are additional elements which will help to establish the identity of Downtown.

The following illustrations shows existing and potential elements of what a roadway diet and established streetscape could resemble for Downtown Brookfield. Additionally, improvements to the Twin Parks, Main Street Underpass, and a proposed South Gateway space are shown. The design concepts presented are only suggestions to encourage and assist the city and other interested parties with revitalization efforts.

5.1.1 Potential Roadway and Streetscape Design

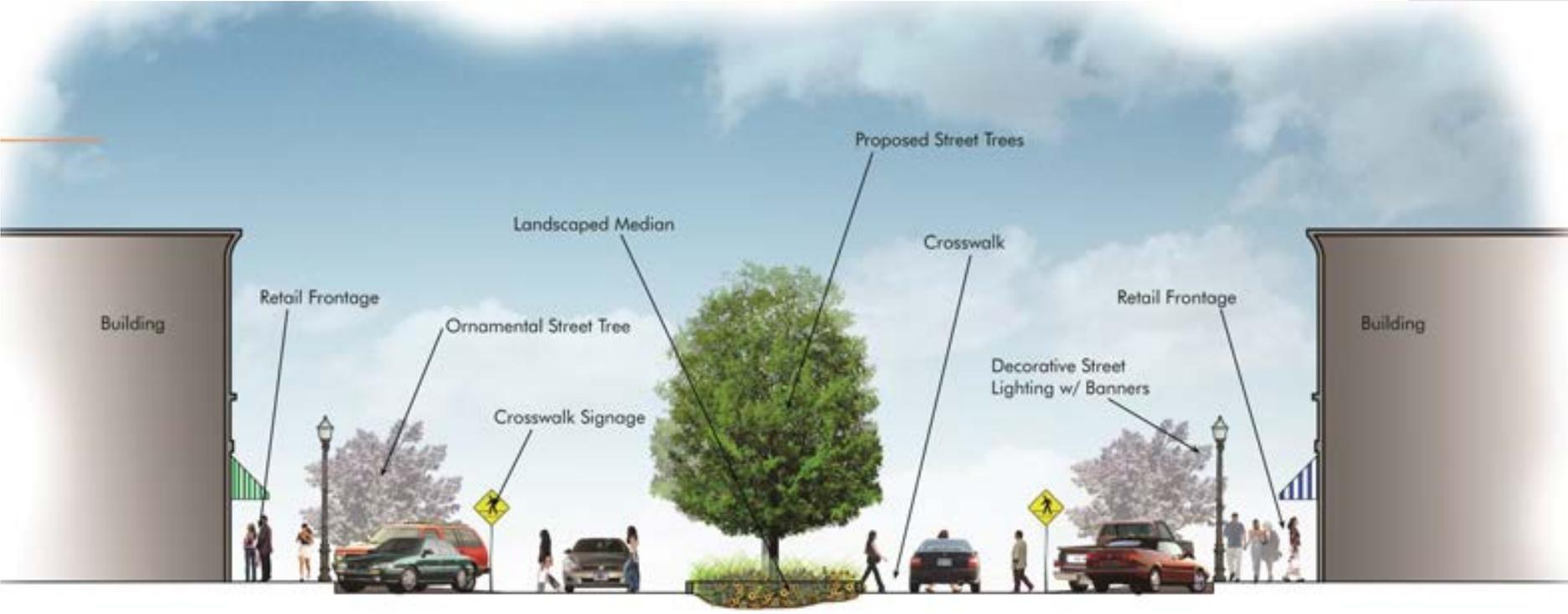
POTENTIAL IMPROVEMENTS:

Two blocks shown. First block between Park and John Streets is an attempt to conjoin the Twin Parks through pavement treatment, crosswalks, median and landscaping enhancements. The second block is typical of roadway and streetscape improvements to Main Street between John Street to the north and Robard Street to the south.



Plan View

Potential Roadway and Streetscape Design (continued)

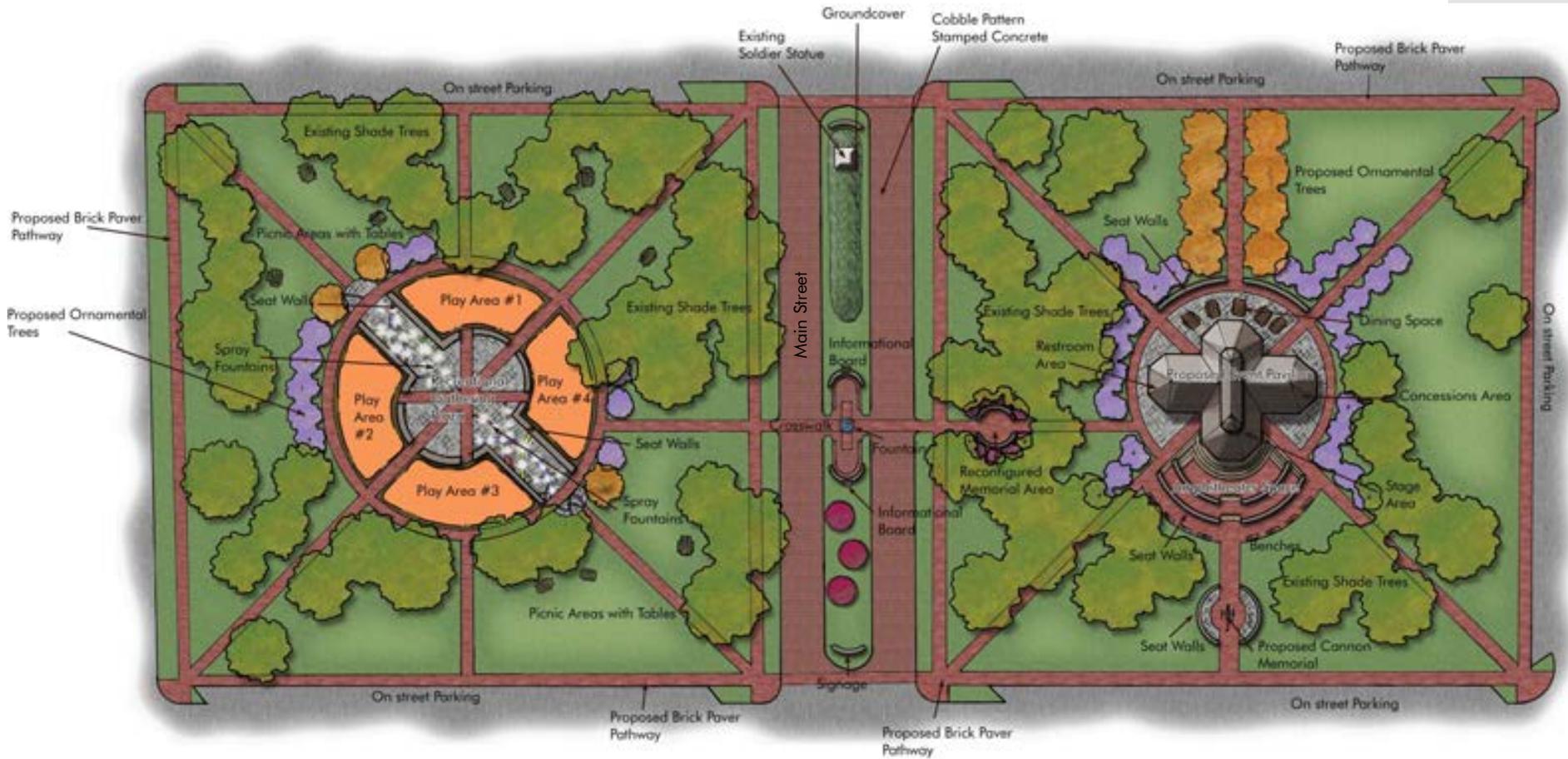


Cross Section View of Main Street

5.1.2 Potential Twin Parks Design

POTENTIAL IMPROVEMENTS:

Twin Parks West provides recreation and playground oriented space, while Twin Parks East offers entertainment and event oriented space for Downtown and the community. All pathways should be constructed with brick pavers, plaza area with stone pavers or stamped concrete, and Main Street with a stamped cobble stone pattern.

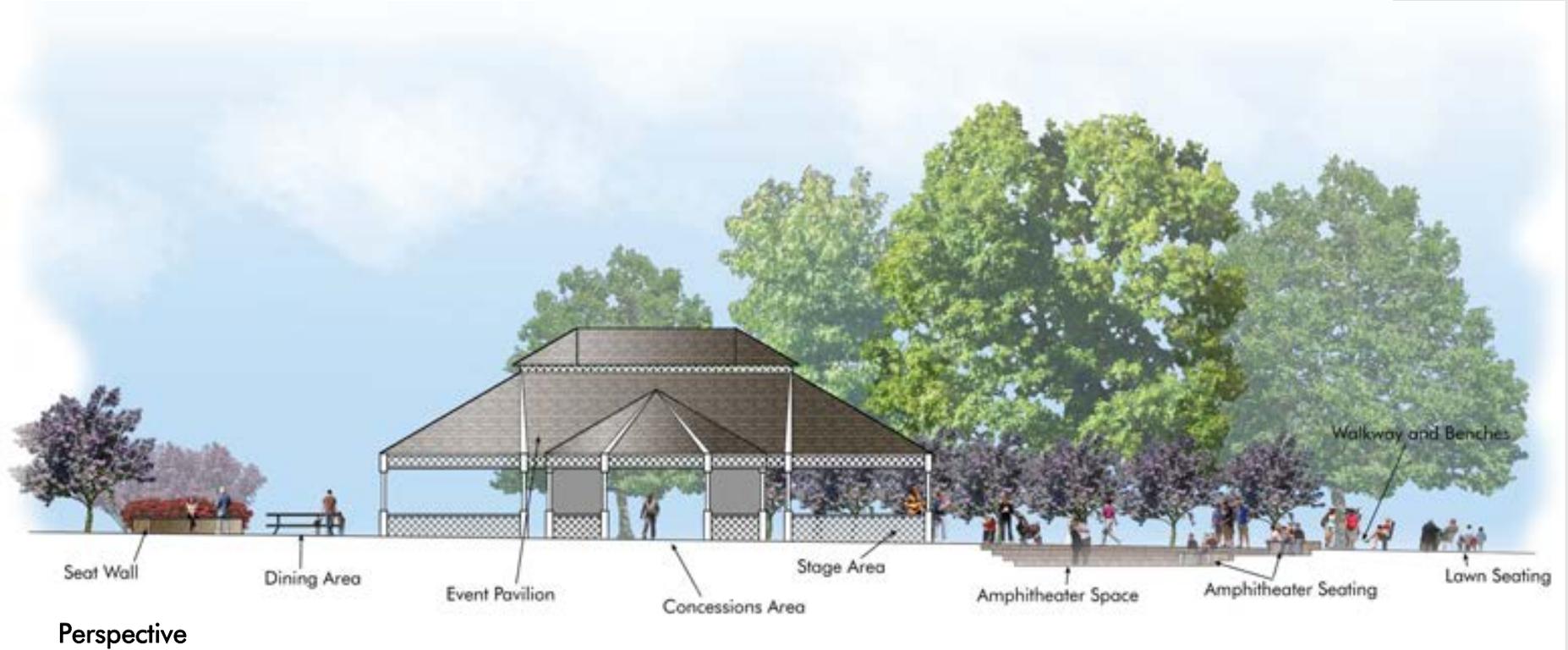


Site Plan

Potential Twin Parks Design (continued)

POTENTIAL IMPROVEMENTS:

Perspective rendering looking at a potential event pavilion structure, including a plaza/outdoor dining area and amphitheater space with seating. The pavilion could also provide restrooms and a concession area.



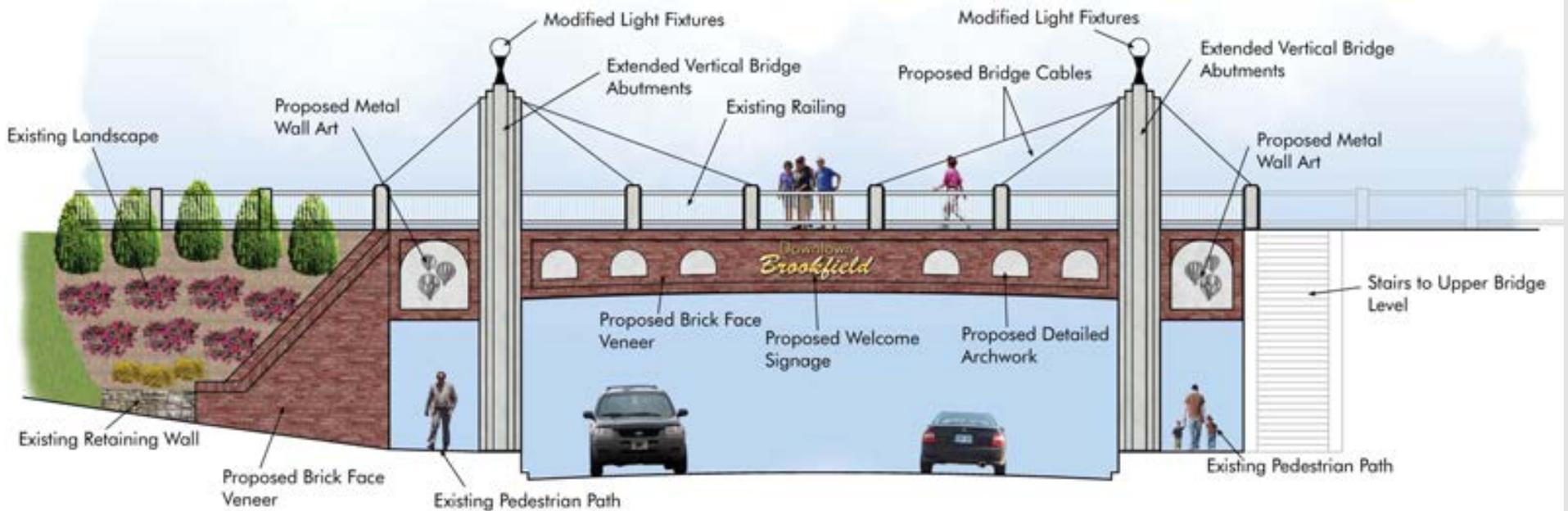
Perspective

Brookfield resident-volunteers, with the leadership of Brookfield Area Growth Partnership, are working to make the planned improvements to the Twin Parks a reality. An update of the Potential Twin Parks Design may be found in Appendix D. In cooperation with the Forestry Division of the Missouri Department of Conservation, a Twin Parks Tree Plan has been developed as well. The Tree Plan may be found in Appendix E.

5.1.3 Main Street Underpass Concept

POTENTIAL IMPROVEMENTS:

Enhancements to the Main Street Underpass including adding a brick veneer facing, extended vertical bridge abutments, ornamental metal artwork, and welcome signage.



5.1.4 South Main Gateway Concept

POTENTIAL IMPROVEMENTS:

- The South Main Gateway creates an entrance to Downtown Brookfield utilizing a grand entry fountain with signage and a South Gateway Park space
- The South Gateway Park space will provide educational opportunities to visitors and residents on the heritage of the Brookfield Community
- The Main Plaza space will have a railroad theme including rails set into the plaza pavers, a reflective underpass wall, combined with plenty of seating
- The potential main brick pathway is designed to reflect Main Street and create a visual connection between the north and south ends of Downtown
- This park space will connect to existing sidewalks in order to provide the community easy access
- The potential ornamental landscaping and shade trees will be used to increase the aesthetic appeal of the Downtown entrance and to provide color and shade

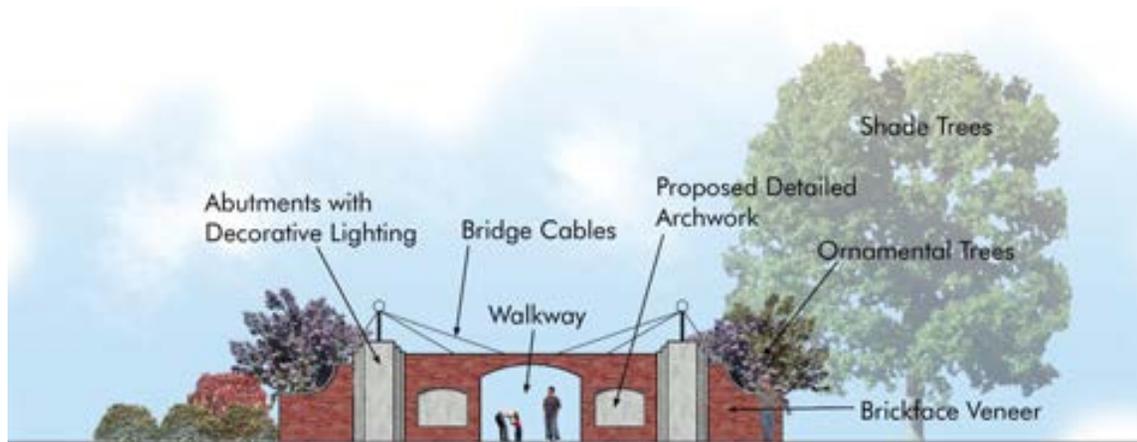
Site Plan



South Main Gateway Concept (continued)

POTENTIAL IMPROVEMENTS:

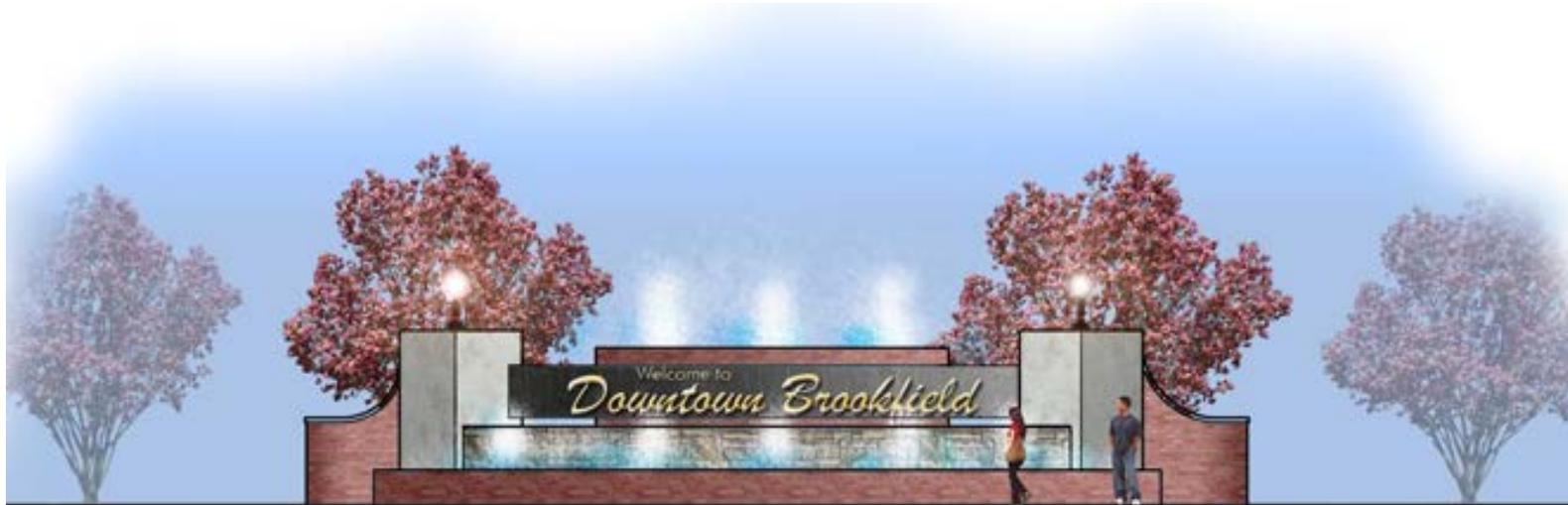
Elevation views of South Main Gateway area showing the potential plaza space, reflection wall, seat walls, memorial statue, and ornamental landscaping.



5.1.5 Wayfinding Signage - Gateway

POTENTIAL IMPROVEMENTS:

Elevation view of the potential grand entry fountain and welcome signage located in South Main Gateway area.



Wayfinding Signage - Trailblazer

POTENTIAL IMPROVEMENTS:

Example of potential wayfinding signage in the form of a trailblazer sign with inclusion of possible branding elements.



This Page Intentionally Left Blank

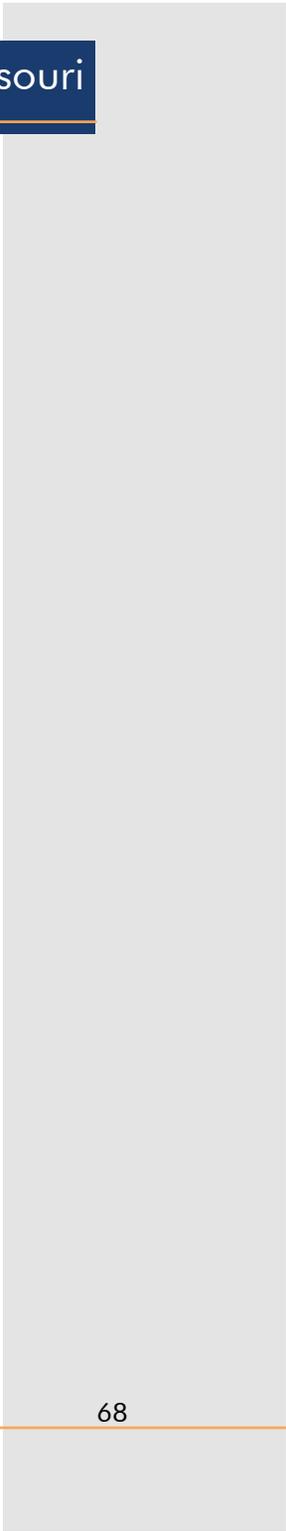
6.0 DOWNTOWN BROOKFIELD BUILDING ELEVATIONS

6.1 Building Elevations Illustrations:

Within the DREAM process public input was obtained through interviews and public meetings, as well as previously conducted focus groups and surveys regarding Downtown Brookfield. The overall consensus was to build on Brookfield's history and maintain the historic character. Whenever possible historic photos were used to emulate this style on the illustrations included in this section. The subject buildings chosen by the community for design examples are located along the east side of Main Street between Helm and Clayton Streets. These buildings enjoy mixed occupancy, including a number which are service businesses, and many suffer from deferred maintenance and inappropriate alterations. More retail shops and façade improvements are needed for these buildings. The structures are representative of Downtown with obvious historic character that should be preserved before it is lost, and being located south of the railroad these elevations are some of the first downtown buildings to be seen by new visitors arriving via Highway 36. As such these buildings were chosen for architectural study.

Concept illustrations for these structures are depicted on the following pages. The images depict the existing conditions first and then the potential rehabilitation with a list of the recommended improvements. The design concepts presented are only suggestions to encourage and assist property owners, the city, and other interested parties with revitalization efforts.

This Page Intentionally Left Blank



6.1.1 Main Street—East Façades (Helm to Clayton)

POTENTIAL IMPROVEMENTS: Restoration and/or rehabilitation of existing façades

Existing Elevations



Potential Elevations



Main Street—East Façades (Helm to Clayton)

Potential Elevations



Potential Improvements

- Remove frame, metal & shingled canopies.
- Remove paint from masonry façade using correct removal methods.
- Restore/insert masonry veneer where possible.
- Restore/insert cornice where applicable.
- Restore/insert second floor windows with new windows of appropriate scale.
- Restore/insert storefront windows and entry where public access is available.
- Utilize canvas/fabric awnings whenever possible.
- Use compatible paint colors.
- Rehabilitation intent is to showcase individual facades while maintaining the function of one business in multiple buildings.
- Match brick/façade color between first and second floor when possible.
- Utilize ornamental sign lighting.
- Install lights and business signage of appropriate scale and design.
- Consider installation of other appropriate decorative metal ornamentation for upper façades.
- Streetscape of lights, trees, planters & site furnishings.

7.0 IMPLEMENTATION

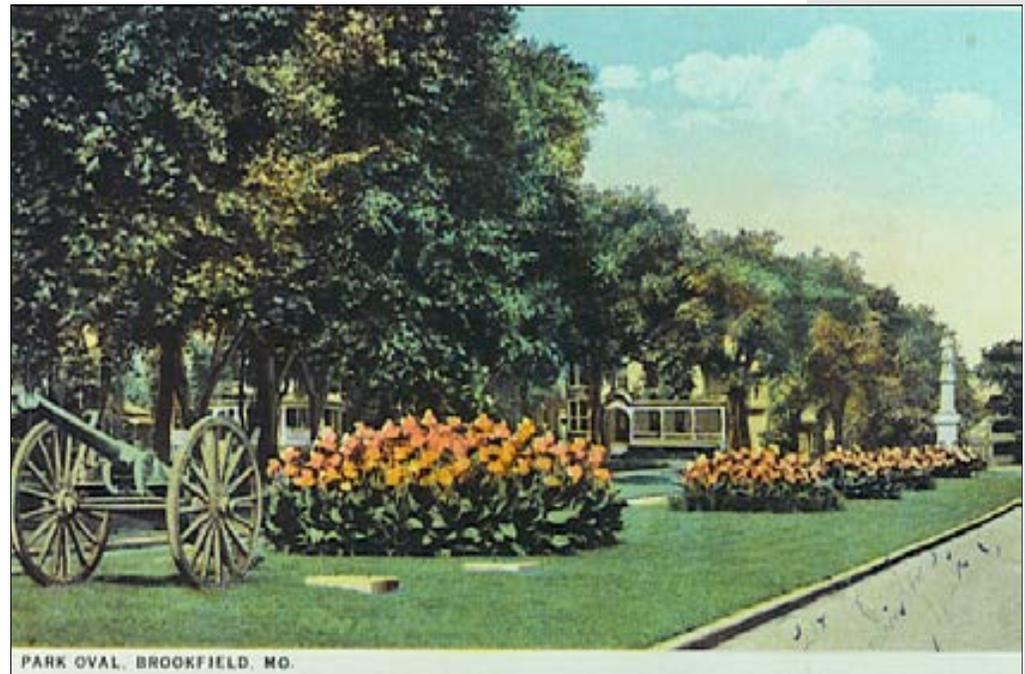
7.1 Introduction

The general purpose and intent of the building design guidelines is to promote the rehabilitation and preservation of historic buildings and the development of appropriate new construction within Downtown Brookfield. The existing architectural character of Downtown must be preserved and enhanced for the future stability of the City of Brookfield. The historic buildings, density and open space helps to define Downtown, and gives identity to the City of Brookfield and to the region.

The Building Design Guidelines were developed as a resource for property owners to utilize in the rehabilitation of existing structures and the development of new buildings. The long term goal of these guidelines is to develop a higher standard of quality for rehabilitation and new construction for Downtown. Implementation of the guidelines and developing an appreciation for preservation and quality design will help to sustain the character of the area. Important implementation measures include the following:

7.1.1 OVERLAY DISTRICT

- **Consider establishment of the Downtown Overlay District:** The Downtown Overlay District will be the defined area for the supplemental design standards. The Overlay District should be the same boundaries of any Downtown Community Improvement District. The intent of the overlay district is to ensure the correct preservation and rehabilitation of existing structures, and that new infill construction adheres to the higher standards.



7.1.2 SUPPLEMENTAL DESIGN STANDARDS

- **Strengthen the existing design standards:** A long-term goal would be to eventually strengthen the existing supplemental design standards and apply to all buildings within the Downtown District. The design standards are the next step, after design guidelines, to elevate the level of design and rehabilitation in Downtown Brookfield. Supplemental design standards should be evenly applied across the district after the design guidelines have been implemented by Downtown property owners. The existing building and zoning codes should be supplemented with the design standards for the overlay district. The supplemental design standards should be specific enough to describe what is acceptable, or not acceptable, regarding design, materials, means and methods of the construction of exterior architectural features. An example of the text and graphics for strengthening the design standards is as follows. The standards should establish a concise and easy to understand direction for property owners and contractors involved in the rehabilitation and construction of new buildings in the overlay district. These design standards will supplement the building code of the City of Brookfield. The supplemental design standards should not be interpreted as superseding, nor an abandonment of, the existing building code requirements.



Historic storefronts adhering to district-wide design standards. (St. Charles, Missouri)

EXAMPLE OF TYPICAL DESIGN STANDARDS

On the following page are text and graphics as an example of a set of design standards which supplement existing building codes. The design standards are written to give specifics in regard to design, dimensions, materials and methods. The following text is listed as an example for windows.

V. Windows

V.I Windows at Public Façades.

- A. Windows in Public Façades shall be one of the following (Refer to Figure A):
 - 1. The existing window repaired and retained.
 - 2. A replacement window which duplicates the original and meets the following requirements;
 - a. Replacement windows or sashes shall be made of wood or finished aluminum.
 - b. The profiles of muntins, sashes, frames and moldings shall match the original elements in dimension and configuration.
 - c. The number of window lites, their arrangement and proportion shall match the original or be based on a Model Example.
 - d. The method of opening shall be the same as the original with the following exception; double-hung windows may be changed to single-hung.
- B. Reconstructed windows and sashes in a Public Façade shall be based on the following;
 - 1. An adjacent existing window in the same façade which is original; or
 - 2. If all windows on a façade are being replaced than they shall be based on a Model Example or the window detailed in Figure B.
- C. Glass Types at a Public Façade
 - 1. Glass in historic windows on a Public Façade shall be one of the following:
 - a. Clear glass or other original glazing;
 - b. Glass based on a Model Example; or
 - c. Insulated glass with its exterior face set 3/8" back from the exterior face of the sash.

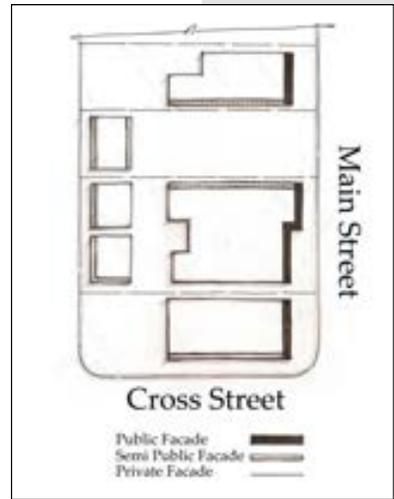


Figure A

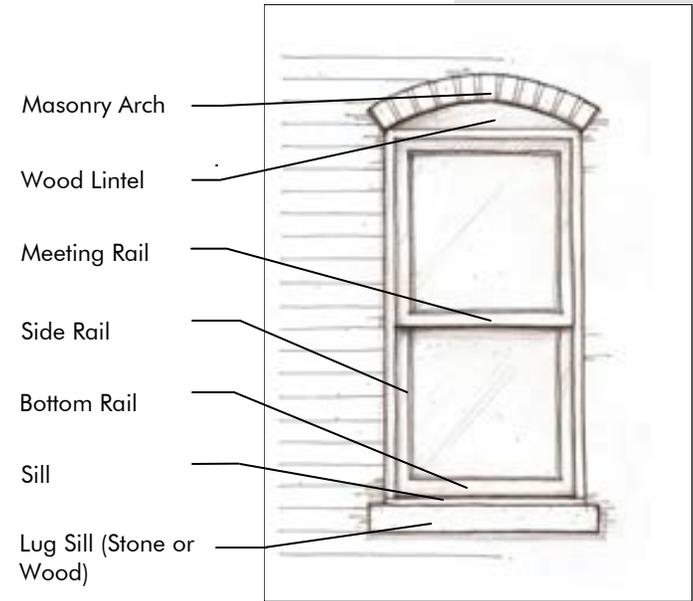


Figure B

2. The following glass types are prohibited in Public Façades:
 - a. Tinted glass;
 - b. Reflective glass;
 - c. Glass block; and
 - d. Plastic (Plexiglas) except Lexan or an equivalent.

- D. Abandoned Windows in a Public Façade Windows which are to be abandoned on the interior shall be in filled by closing them with wooden shutters set 1/2" back from the face of the wall with the window opening left intact including the frame, sash, sub-sill and lintel.

- E. Storm Windows and Screens at a Public Façade *Comment: Storm windows and screens may be installed at the interior or at the exterior. Interior installation is preferred because of the increased visibility of the exterior of the window and its details.*
 1. Materials
 - a. Exterior storm windows and screens shall be made of wood, aluminum or plastic. Wood shall be painted; aluminum shall be factory or field painted. Clear anodized aluminum is prohibited.
 - b. Interior storm windows and screens are not regulated by these Standards.
 2. Storm windows and screens shall also meet the following requirements:
 - a. The dimensions of the area of glass or screen shall be the same as the area of glass in the window being protected.
 - b. The meeting rail of the storm or screen window shall be In line with the meeting rail of the window being protected. Additional meeting rails are prohibited.

- F. New Window Openings Are Prohibited in a Public Façade, except as required by City Health and Safety Codes,
 1. No new window openings shall be created in a Public Façade.
 2. No existing window opening in a Public Façade shall be altered in length or width.

7.1.3 PROJECT APPROVAL PROCESS

The goal of the Downtown Overlay zoning district is to develop a higher standard regarding zoning, design, preservation and maintenance. The method to assist in achieving the higher standards for the overlay district is a simple and well defined project approval process. The process should be easy to understand for developers, property owners and the city staff overseeing building and zoning codes. The following text describes a project approval process for the future. This process should only be implemented once the market and the property owners of Downtown justify the system. A graphic illustrating the potential process is illustrated, at right, and described in detail below.

STEP 1: City Staff: Property owners should meet with the City Staff for the review of the project plans. The project plans should include drawings of a site plan, elevations and details regarding building materials, colors, accessibility, and dimensions. The plans should also list the proposed use of the site and building and whether such use complies with existing zoning codes. The property owner and city staff will determine if the proposed site and building are listed on the National Historic Register or local historic district. Upon classifying whether the building is historic or not will determine the next steps in the project approval process. If the property is determined to be historic, the project plan should next be reviewed by the Historic Preservation Commission (HPC). (Refer to page 76 for discussion of this new commission.) If the property is determined not to be historic, the project plan review proceeds to the Planning and Zoning Commission (P&Z).

STEP 2: Planning and Zoning Commission: City Staff submits the project report and a recommendation to the Planning and Zoning Commission. The Planning and Zoning Commission should meet monthly to review project proposals. The Commission should create a seat for an individual with an established background in architectural design for the purpose of establishing consistent, implementable design standards.

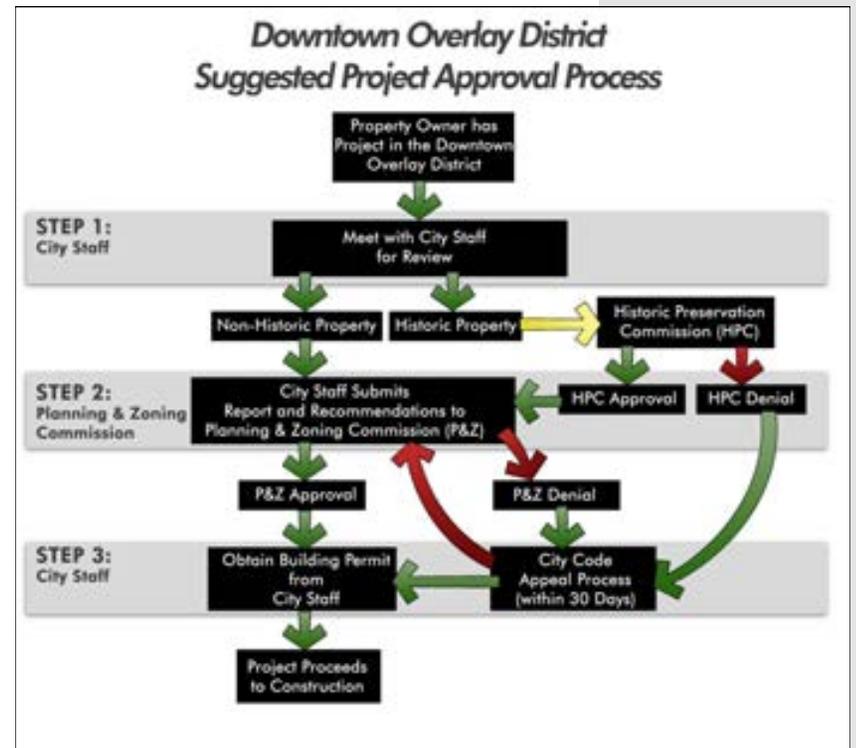


Illustration of the potential project approval process for the Downtown Overlay District category.

The Planning and Zoning Commission (P&Z) would review the report as prepared by City Staff, which could include site plans, building elevations, cross sections and illustrations. City Staff should present their findings and recommendations to the Planning and Zoning Commission. The property owners should be given the opportunity to present and answer questions regarding their project. Adjacent property owners, business/neighborhood associations and the general public should also be allowed to speak on proposed projects at the board meetings. The Planning and Zoning Commission will approve or deny the proposal based on staff recommendations and their professional acumen.

If necessary, denials from the Planning and Zoning Commission could be appealed through the City Code Appeal process. The Appeals Board or authority should review the denied resolution, from the P&Z Commission, within thirty days, so as to not hinder the progress of the project and property owner.

STEP 3: Building Permit: Project resolutions approved by the Planning and Zoning Commission would then return back to the City Staff for a building permit. Inspections during construction, for compliance to the approved plans, would allow for a final occupancy permit. The occupancy permit would only be issued once final construction is complete.

7.1.4 HISTORIC PRESERVATION COMMISSION STANDARDS

The City of Brookfield currently has several historic properties with potential to be recognized on the National Register of Historic Places. While the Register suggests standards to ensure the correct preservation and rehabilitation of existing structures, there is no requirement that building owners meet these standards. However, establishment of a "Brookfield Preservation Property" as designated by the Brookfield City Council, upon recommendation of a Historic Preservation Commission (HPC), must adhere to a simple set of design standards prior to any alteration, construction, or demolition.

- **Creation of a Historic Preservation Commission:** The Historic Preservation Commission would be established to have jurisdiction over the entire city. It will work collaboratively with individuals and community groups to identify, preserve, and protect the city's heritage and to educate the public on the value of historic preservation. The commission should also seek to create an inventory of historic properties, promote historical tourism, and generate pride in Brookfield's heritage. The HPC should be comprised of 3 to 5 members, each serving 3 to 5 year terms. The Commissioners should have a strong background in engineering, architecture, construction, design, or historic preservation. The intent of the board is to preserve the architectural and community identity of the City of Brookfield. The Commission should hold regularly scheduled, public meetings, and the city should adopt the statutes of the commission. The Commission's responsibilities should be strengthened to allow any member to submit an application for designations of a "Brookfield Preservation Property" and make recommendations to the Planning and Zoning Commission and City Council.

7.1.5 SERVICE

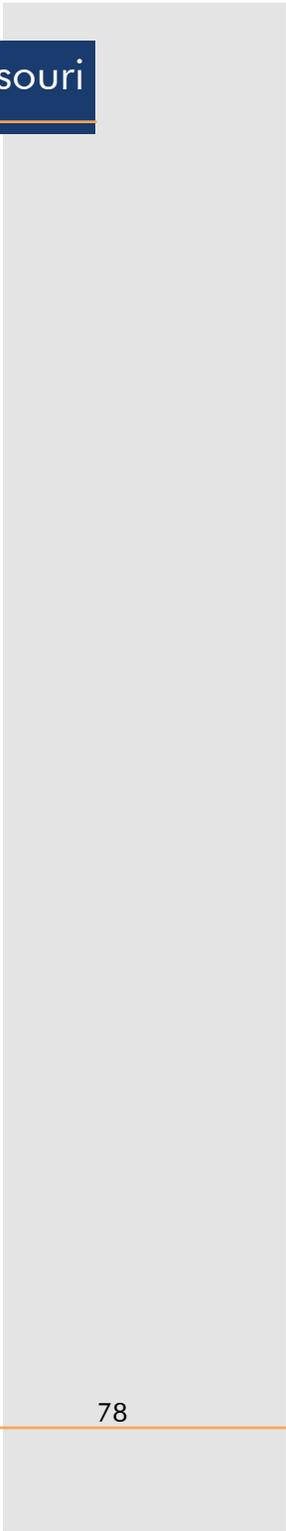
Municipal officials and employees, as well as members of community organizations, should view the citizens that they serve as valued customers. They provide a service to the residents and citizens of the community, and thus should approach their daily tasks with the professionalism that the proud members of the community deserve.

7.1.6 NEXT STEPS

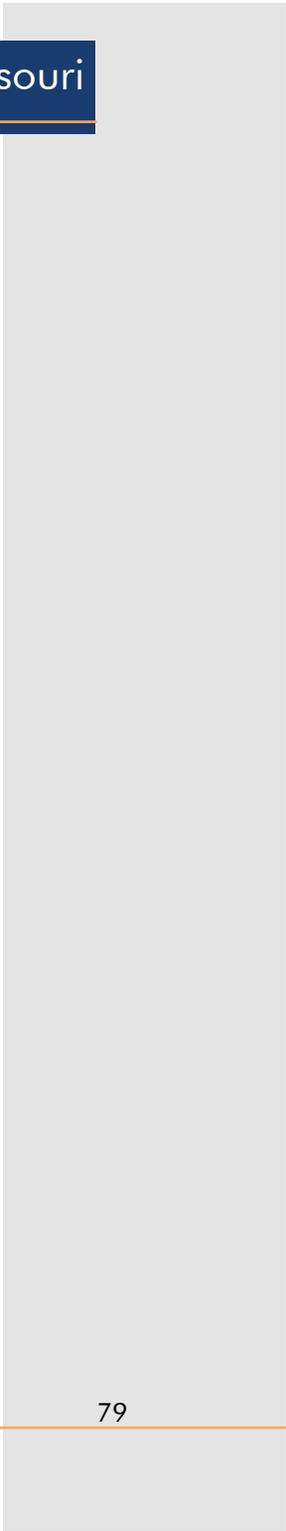
Implementing building design guidelines requires public support and buy-in. Suggestions for next steps include:

- The Downtown Brookfield Connection (DBC), with assistance from the BAGP and Chamber, should open a dialogue between the City and Downtown property owners about building issues.
- The DBC, with assistance from the BAGP and Chamber, should work with the City and local contractors to develop a program to address common issues, such as infrastructure improvements.
- Other activities such as rehabilitation training, recognition, and a streamlined permitting process will be well received by Downtown property owners. The DBC should continue to work with city staff to address building maintenance issues by educating property owners.
- Continue to enhance Downtown's public spaces and streetscape. Ideas such as public spaces, gateway features, wayfinding signage, and higher design standards can reflect the city's investment in Downtown. However, this investment must continually be demonstrated by proper maintenance of improvements.

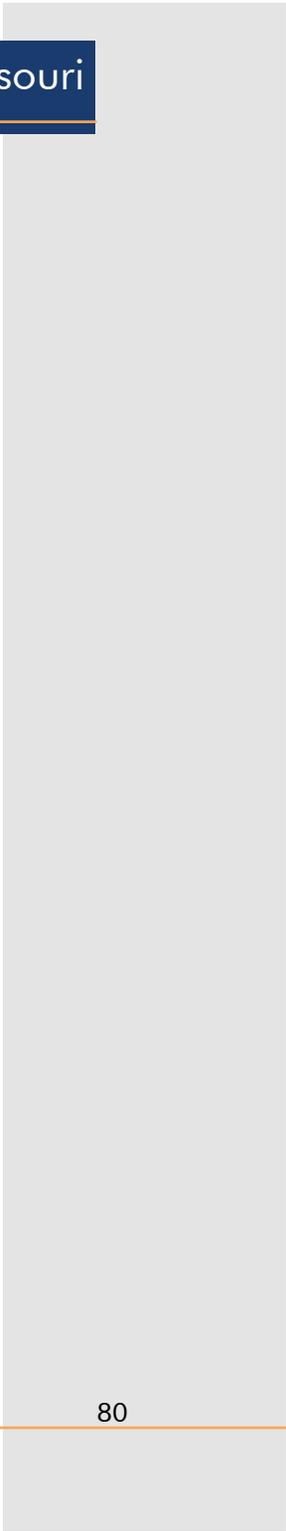
This Page Intentionally Left Blank



APPENDICES



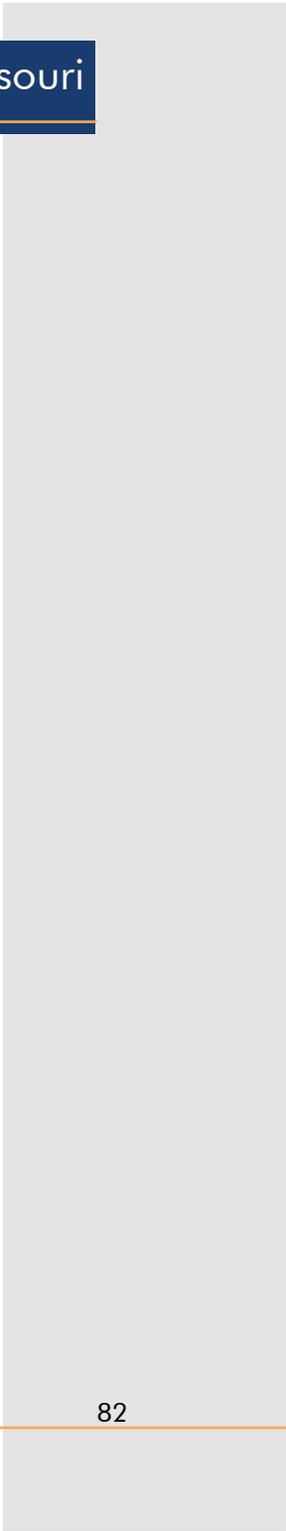
This Page Intentionally Left Blank



APPENDIX A: SECRETARY OF THE INTERIOR STANDARDS FOR REHABILITATION
(36 CFR Part 67)

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

This Page Intentionally Left Blank



APPENDIX B: GLOSSARY

WEATHERBOARDS: Long, thin horizontal boards with a square cross section that are overlapped and applied as the exterior surfacing material on homes and buildings.

BASE: The lowest part of a column, below the shaft; the supporting, or lowest, part of a building.

BALUSTRADE: A railing or low wall consisting of a handrail on balusters (vertical posts) and a base rail.

CAP: The top member of a column or pilaster.

CLAPBOARDS: Long, thin horizontal boards with a triangular cross section that are overlapped and applied as the exterior surfacing material on homes and buildings.

CLERESTORY: An upper portion of a wall which has windows for the purpose of admitting light into a large room.

CONTEXT: The surrounding environment (streets, buildings, landscape, etc.) in which a building or site exists.

COPING: A covering (or capping) course on the top of a wall or parapet.

CORBEL: An architectural member (of stone, wood or metal) which projects from the side of a wall to serve as a support for another element, such as: a cornice, the spring of an arch, a balustrade.

CORNICE: A projecting ornamental molding which caps the top of a building.

DORMER: A window set vertically in a small gable projecting from a sloping roof; the roofed projection in which this window is set.

ELEVATION: A scaled, non-perspective drawing of a building façade.

FAÇADE: An exterior face of a building, usually the front.

FASCIA: A horizontal band of vertical face trim.

FREESTANDING SIGN: A sign which is detached from the building, and is mounted to columns, posts, or any upright member that is supported from the ground or other object; or a detached sign which is erected on the ground.

GABLE: The triangular wall section, formed by ends of a sloping roof.

HOOD MOLDING: A projecting molding on the face of a wall, over an opening (doorway or window), to deflect the rain.

INDIRECT LIGHTING: Light from a concealed source, which reflects onto the sign face.

INTERNAL ILLUMINATION: The means of lighting from a concealed or contained source within the sign, which becomes visible through a translucent surface.

KICK PLATE: A solid panel beneath a storefront display window.

LANDMARK: A prominent building or feature officially designated as having special status and protection.

LATTICE: An openwork screen or grill made of interlocking or overlapping strips.

LINTEL: A horizontal structural member (such as a stone or beam) which spans an opening.

LUMINAIRE: A complete lighting unit or the housing for a light bulb or lamp.

MOLDING: A decorative, or shaped strip of wood, metal, brick, etc., usually mounted horizontally, and used to ornament or finish the surface of a structure.

MOTIF: A significant, repeated element of design in a composition.

MONUMENT SIGN: A free-standing sign, generally low to the ground with a continuous connection to the ground (as opposed to being supported on a pole).

PARAPET: The top section of a wall which projects above the roof line.

PRESERVE: To protect and keep in an unaltered condition. Preservation usually includes the overall form of the building, its structural system and finishes, decorative details, and even landscaping. Preservation may also include keeping alterations and additions that have become important.

RECONSTRUCT: To reproduce, in detail, a structure as it existed at some time in the past, either through the original construction methods, or other methods which produce the same visual result. Accurate reconstruction requires knowledge and evidence of the original design.

REHABILITATION: The act or process of returning a property to a state of utility through repair or alteration which makes possible an efficient contemporary use while preserving those portions or features of the property which are significant to its historical, architectural and cultural values.

REMODEL: To remake; to make over. In remodeling, the appearance is changed by removing original detail and altering spaces. New materials and forms are installed. Applying a modern front to an older building is an example of remodeling. Often, these changes are not reversible.

RENOVATION: The act or process of modernizing a building without making an effort to retain historically significant architectural features. Renovation permanently destroys the historic integrity of a building.

RESTORATION: The act or process of accurately recovering the forms and details of a property and its setting as it appeared at a particular period of time by means of removal of later work and/or by the replacement of missing earlier work.

SHAFT: The main portion of a column, between the base and capital.

SILL: The bottom horizontal member of a window or door frame.

STABILIZE: To make resistant to change in condition. A building is usually stabilized to retard deterioration until it can be repaired. A weather-resistant closure and a safe structural system are minimum stabilization efforts.

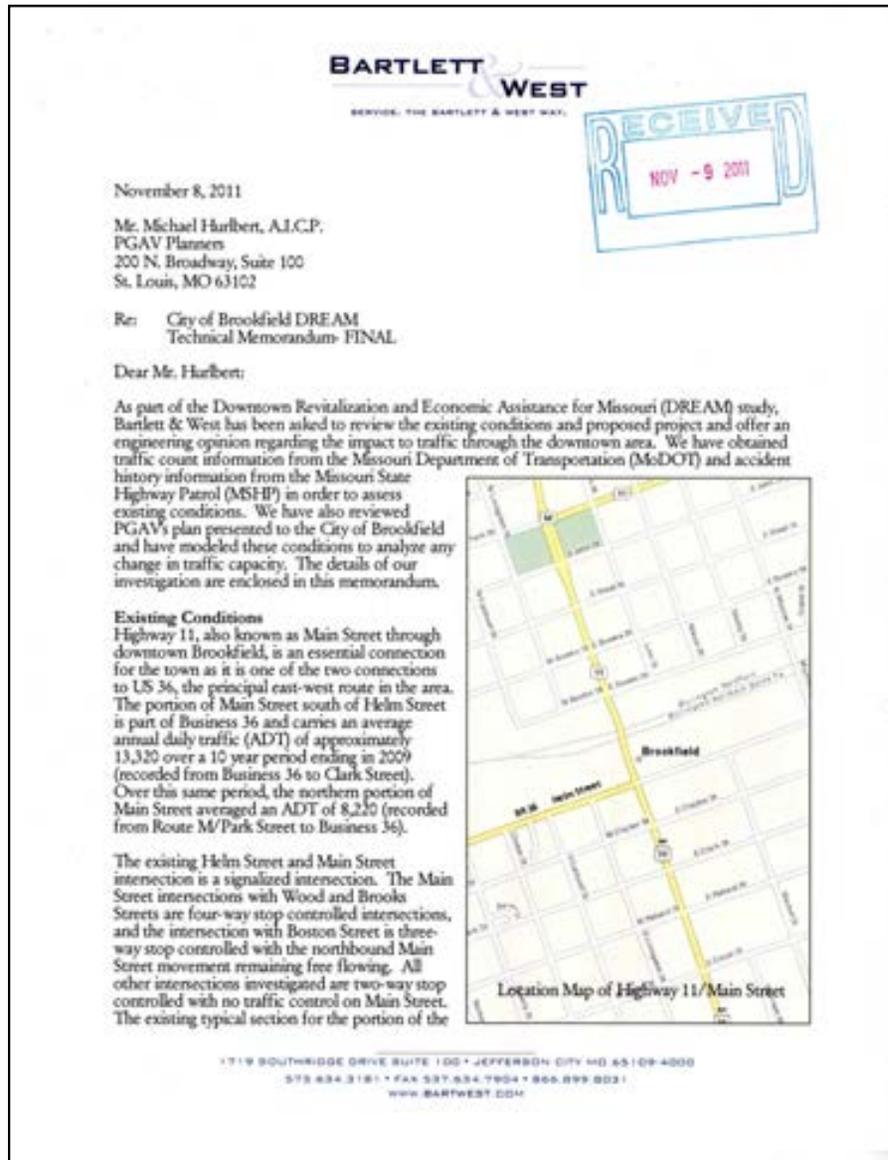
STRING COURSE: A thin projecting horizontal strip of masonry on the façade of a building.

TERRA COTTA: A decoratively molded ceramic material, often glazed, used for architectural motifs or ornamentation on a building.

TRANSOM: A horizontal cross bar in a window, over a door or between a door and the window above it. This also refers to the window (often hinged) above a door.

VOUSOIR: One of the wedge like stones of which an arch is composed.

APPENDIX C: BARTLETT & WEST TECHNICAL MEMORANDUM

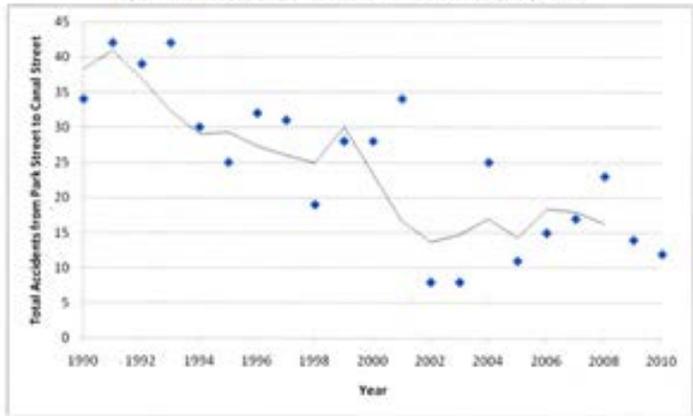


APPENDIX C: BARTLETT & WEST TECHNICAL MEMORANDUM (continued)

roadway north of Boston Street includes four lanes of traffic and angled parking on both sides of the roadway. South of Helm Street, four lane traffic remains, but a center turn lane replaces the angled parking.

Accident history was obtained dating back to 1990 for each intersection from Canal Street to Park Street. This data shows a recent trend of fewer accidents that begins in approximately 2001. The traffic history does not show any significant variation in traffic during this time, so it seemed likely that something changed in the physical corridor around this time. David Hane, Brookfield City Manager, said that the angle of parking was steepened around that year. The steeper angle allowed for a slightly wider lane, but mainly for a better visibility of on-coming traffic when backing out. He felt that this change has dropped the accident frequency in the area, and they have recently steepened the parking angle even more. Approximately 39% of the accident records obtained from MSHSP involve a parked car. Therefore, any improvement to the parked vehicle visibility would improve the overall safety in the area.

Figure 1: Accident History Obtained from Missouri State Highway Patrol



Proposed Conditions

We have reviewed the proposed changes to Main Street. These improvements generally consist of installing a median from John Street (north extent) to Robard Street (south extent). Through this area, Main Street would be reduced from the existing 4 lane section to a two lane section. The proposed median is 16' wide and each lane would be 12' wide with a 2' buffer distance provided to both the angled parking and the median. At the intersections the median will taper to provide a 12' wide, 87' long storage bay for the left turn movements to allow for storage of three vehicles. The only additional deviation through this area is the existing dedicated right turn lane in the northwest quadrant of Main Street and Helm Street that will remain. Angled parking is also proposed south of Helm Street. It was also assumed that there would be no change in traffic control types at any intersection except for Main Street and Boston Street, which was assumed to change from a three-way stop to a standard two-way stop for the side streets.

APPENDIX C: BARTLETT & WEST TECHNICAL MEMORANDUM (continued)

The existing and proposed conditions were modeled in Synchro, a traffic analysis program, to determine the affect of the proposed project. Peak hour traffic volume was obtained from a MoDOT traffic count conducted on February 21, 2008 for Main Street and Helm Street. For the remaining side streets, it was assumed that left turns and right turns were 15% of the traffic each (55 vehicles per hour). It was also assumed that the side street turning movements replenished the traffic at the same rates in order to keep the traffic volume on Main Street consistent. This same 55 vehicles per hour volume was used as the through movements for the side streets. These results are preliminary at this time and should be investigated in more depth before improvements are made, which would include a traffic count to update the numbers used in the modeling.

The results of the model are shown in Table 1 and Table 2. Table 1 displays the traffic delay in seconds that is experienced at the intersections for both existing and proposed conditions. This is the average time that is added to a vehicles trip because of the presence of the intersection. Table 2 shows the level of service (LOS) for each intersection. This is a qualitative rating that is given based on the amount of delay that is being caused. A LOS of A or B indicates that the roadway can handle the traffic well and traffic is moving at least at a reasonably free-flowing state. A LOS of C indicates a stable flow. LOS D and E are indicative of larger delays, and E is typically considered maximum capacity.

Table 1: Delay(s) Experienced at Main Street Intersections by Approach

Main St. Inter.	Existing Conditions					Proposed Conditions				
	East	West	North	South	Overall	East	West	North	South	Overall
John	33.7	33.7	1	1	11.4	39.9	39.9	1.2	1.2	13.2
Wood	11.9	11.9	11.4	11.4	11.6	12.5	12.5	15.7	15.7	14.7
Brooks	11.9	11.9	11.4	11.4	11.6	12.5	12.5	15.7	15.7	14.7
Boston	33.7	33.7	1	1	11.4	39.9	39.9	1.2	1.2	13.2
Helm	6.6	13.1	5.7	6	7.4	8.9	15.8	6.4	10.3	10
Clayton	17.7	17.6	8.4	8.1	6	19.1	19.9	8.4	8.1	6.5
Clark	17.7	17.6	8.4	8.1	6	19.3	20.1	8.3	8.1	6.6
Robard	17.7	17.7	8.4	8.1	6	19.2	19.7	8.3	8.1	6.5

Table 2: Level of Service for Main Street Intersections by Approach (bold denotes decrease in LOS)

Main St. Inter.	Existing Conditions					Proposed Conditions				
	East	West	North	South	Overall	East	West	North	South	Overall
John	E	E	A	A	B	E	E	A	A	B
Wood	B	B	B	B	B	B	B	C	C	B
Brooks	B	B	B	B	B	B	B	C	C	B
Boston	E	E	A	A	B	E	E	A	A	B
Helm	A	B	A	A	A	A	B	A	B	A
Clayton	C	C	A	A	A	C	C	A	A	A
Clark	C	C	A	A	A	C	C	A	A	A
Robard	C	C	A	A	A	C	C	A	A	A

As expected the reduction in through lanes does increase delay slightly. However, the increase in delay is not great, and as shown in Table 2, the overall level of service for the intersections does not change and all intersections operate at a level of service of A or B in existing and proposed

APPENDIX C: BARTLETT & WEST TECHNICAL MEMORANDUM (continued)

conditions. Table 2 does show the level of service rating along Main Street decreases at a few of the intersections, but the minimum level of service for proposed conditions is C with a delay of 15.7 seconds, which is just outside of the 15 second maximum criterion for a LOS B. Therefore, it appears that all approaches would operate at acceptable conditions for proposed conditions.

It is also anticipated that the proposed median would include mid-block crosswalks to better accommodate pedestrians. In existing conditions the pedestrians must cross four lanes of traffic with no protection from a median to allow for a location to stop. These mid-block crossings are also expected to be large enough to accommodate emergency vehicles.

Summary/Recommendations

After some investigation, it appears that the general concept of the proposed project in Downtown Brookfield will handle the existing traffic. It should be noted that these are preliminary results and a more extensive traffic study should be completed in the future with traffic counts and future traffic projection before constructing the project. However, we feel that the assumptions made at this time are conservative, and Main Street will be able to handle the traffic with these changes. The proposed changes have added safety benefits as well. The new median would provide more safety for pedestrians crossing the street and will separate northbound and southbound traffic. The proposed cross section will create larger lanes and more distance between the through movements and the parked cars. However, the restriction to one lane may cause additional delay related to on-street parking. Therefore, it is not recommended to flatten the angle of parking, which would decrease the visibility and speed of parking.

A meeting was conducted on September 7, 2011 with City representatives, MoDOT, PGAV and Bartlett & West in attendance. These proposed conditions and their traffic impacts were discussed. While some concerns such as snow removal and delivery stops were discussed, there was a general concurrence from all parties that this was a viable project and would be supported by all pending further investigation. Minutes from this meeting are attached to this memorandum.

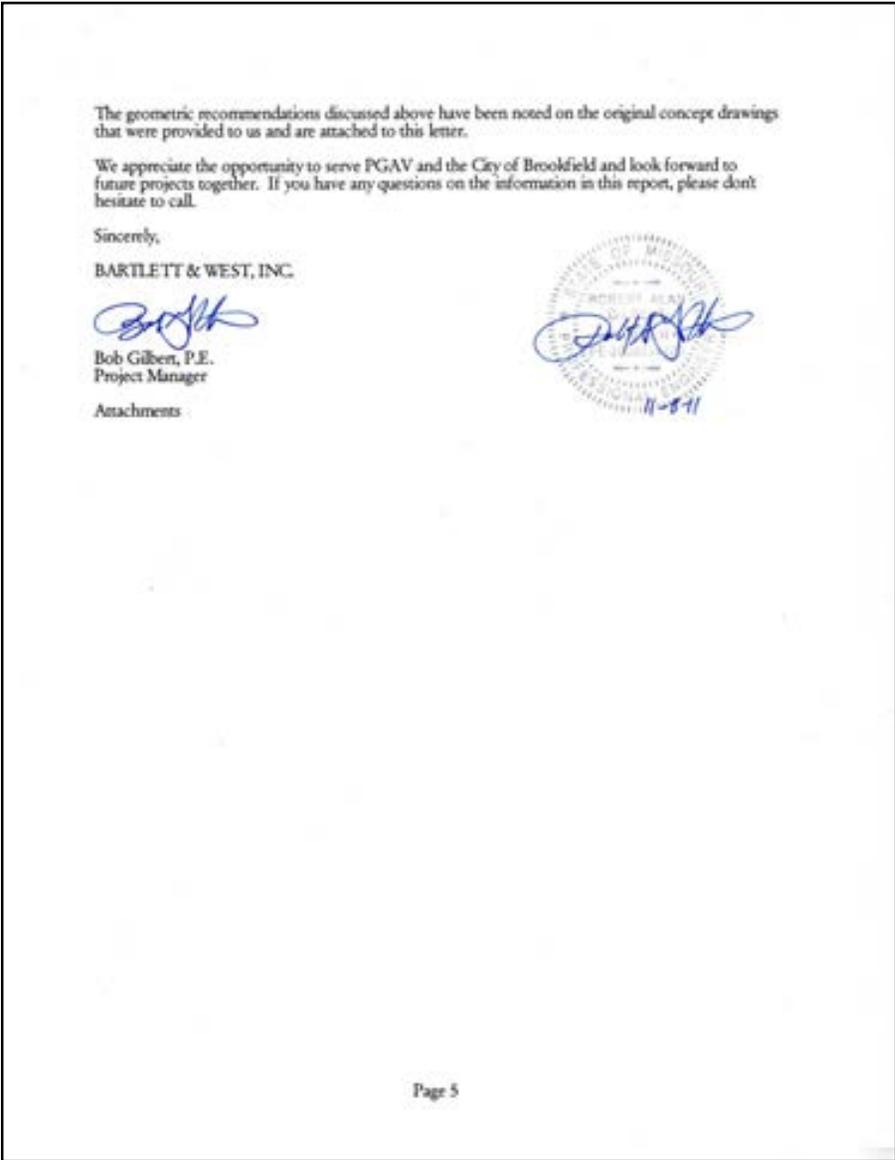
There are some geometric issues that should be considered with the proposed plan. For the southbound movements at John Street a right-turn-only lane should be considered. As currently shown, the through lane doesn't line up well with the receiving lane. Therefore, the west lane could be turned into a right turn lane, and the second lane could be the through lane. A dedicated left turn lane would be beneficial and could be created by tapering the island and adding a storage length as is done for the other medians.

It is suggested to construct a median and maintain the two lane section between Boston and Helm Street. This would help create a consistent corridor and eliminate unnecessary merging locations. It is also recommended that the existing right-turn-only lane remain in the northwest quadrant of the Helm Street and Main Street intersection as was assumed during the traffic modeling. For the northbound and westbound approaches, the storage bay should be made larger to account for a higher percentage of trucks making this movement.

It is also recommended that the east lane south of Robard be a dedicated right-turn-only lane. The remaining through lane would then match well with the single receiving lane in the new typical section with a median. The center turn lane could then be striped as a dedicated left turn lane. This would allow for a smooth transition from a four lane to two lane section.

Finally, it should be considered that the sidewalks be pushed into the bump-outs at each cross street intersection. The side street traffic is unlikely to stop at the stop bars if the stop bars are placed too far from Main Street. By pushing the sidewalks closer to Main Street at the intersections, the stop bar location can be moved as well. This will also allow traffic to have better sight distance while sitting at the stop bar.

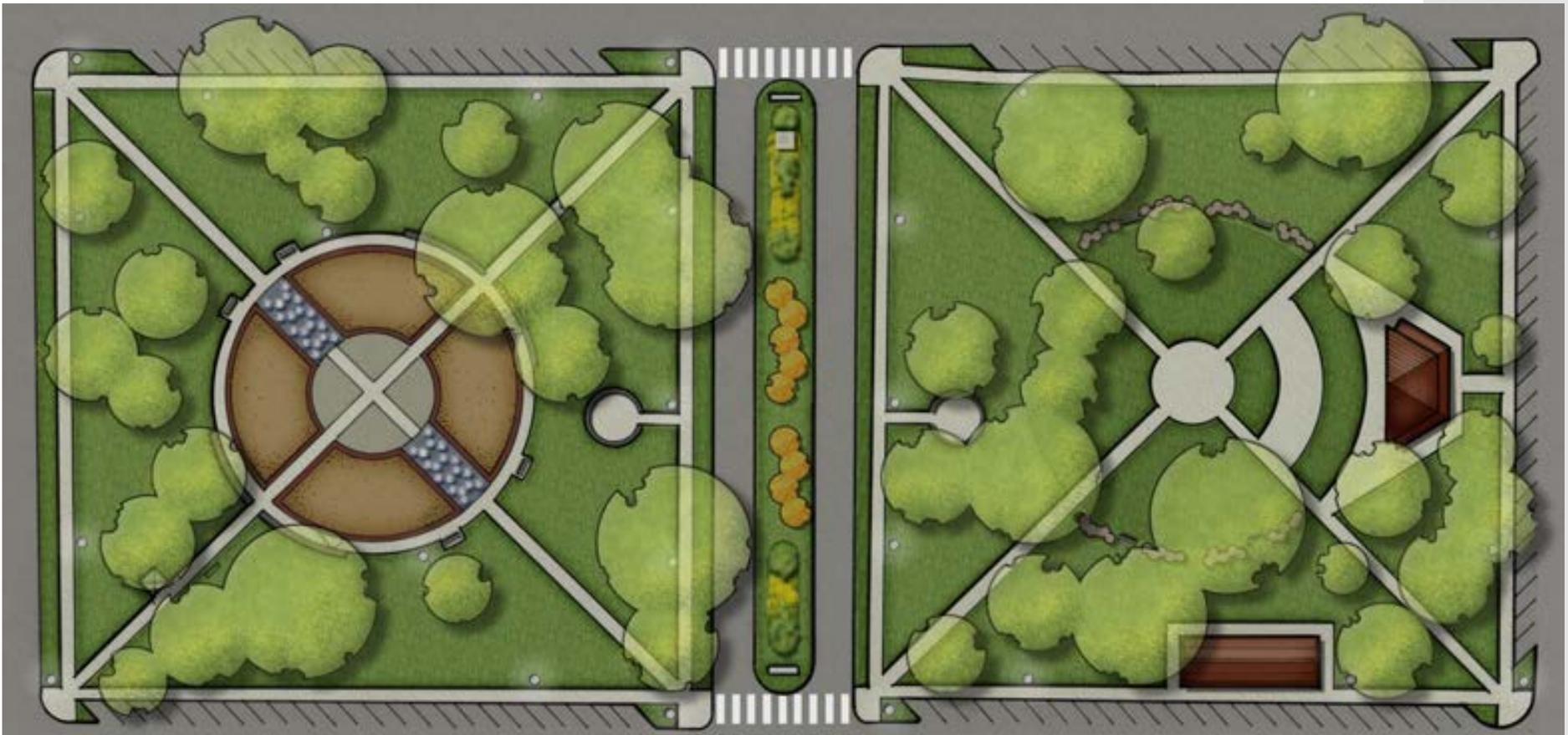
APPENDIX C: BARTLETT & WEST TECHNICAL MEMORANDUM (continued)



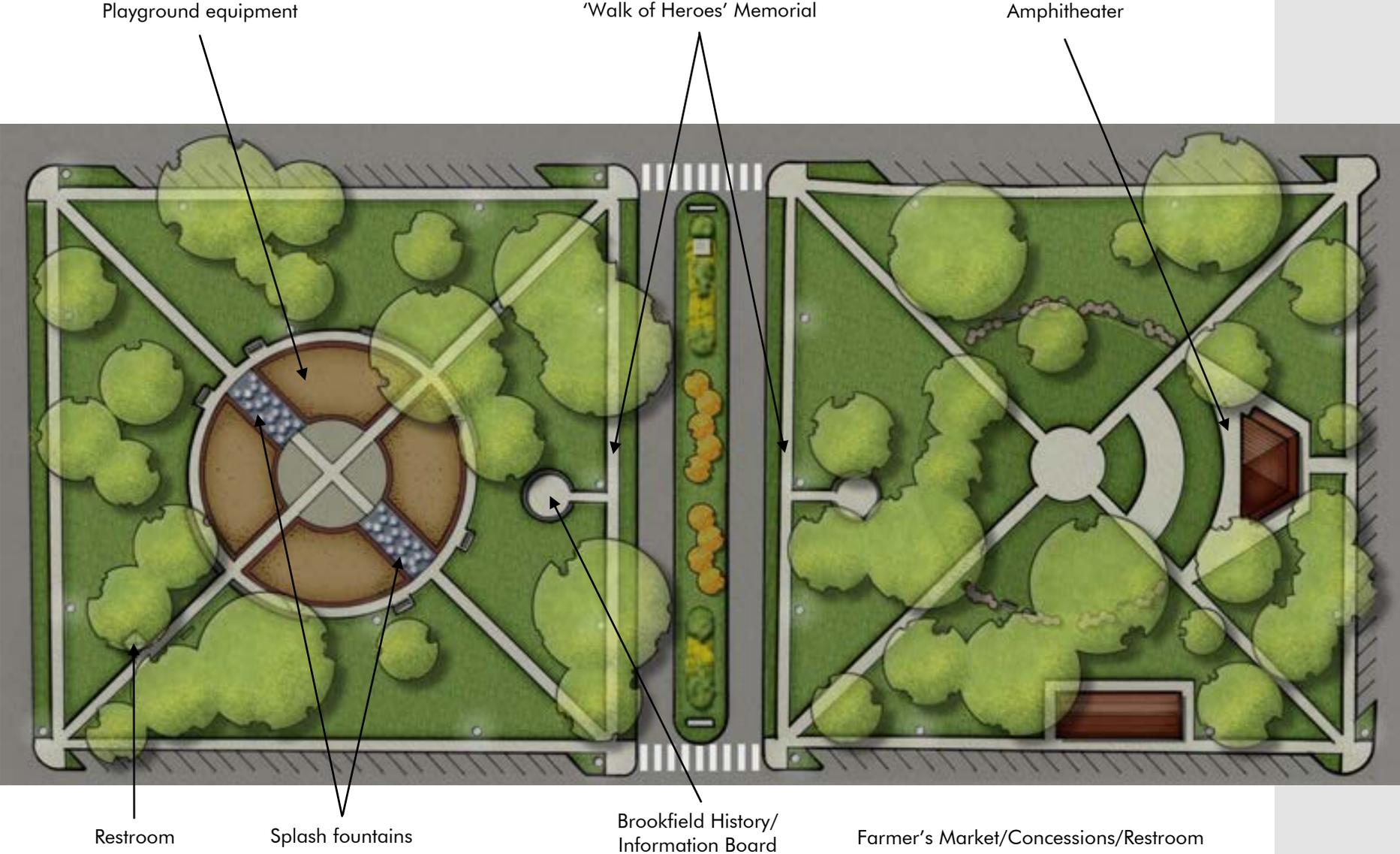
APPENDIX D: Potential Twin Parks Design Update

Key Feature Changes in Twin Parks Design Update:

- Playground—play equipment will follow a nature-inspired design theme and be organized in age-appropriate sections
- Information Board—the Brookfield History and information board will be moved from the ‘oval’ to an area immediately adjacent in Twin Parks West
- Restroom—a unisex restroom has been added to the southwest area of Twin Parks West
- ‘Walk of Heroes’ - an effort to honor military men and women that will reline the sidewalks running parallel to the oval with commemorative bricks



APPENDIX D: Potential Twin Parks Design Update (continued)



APPENDIX E: Potential Twin Parks Tree Plan

