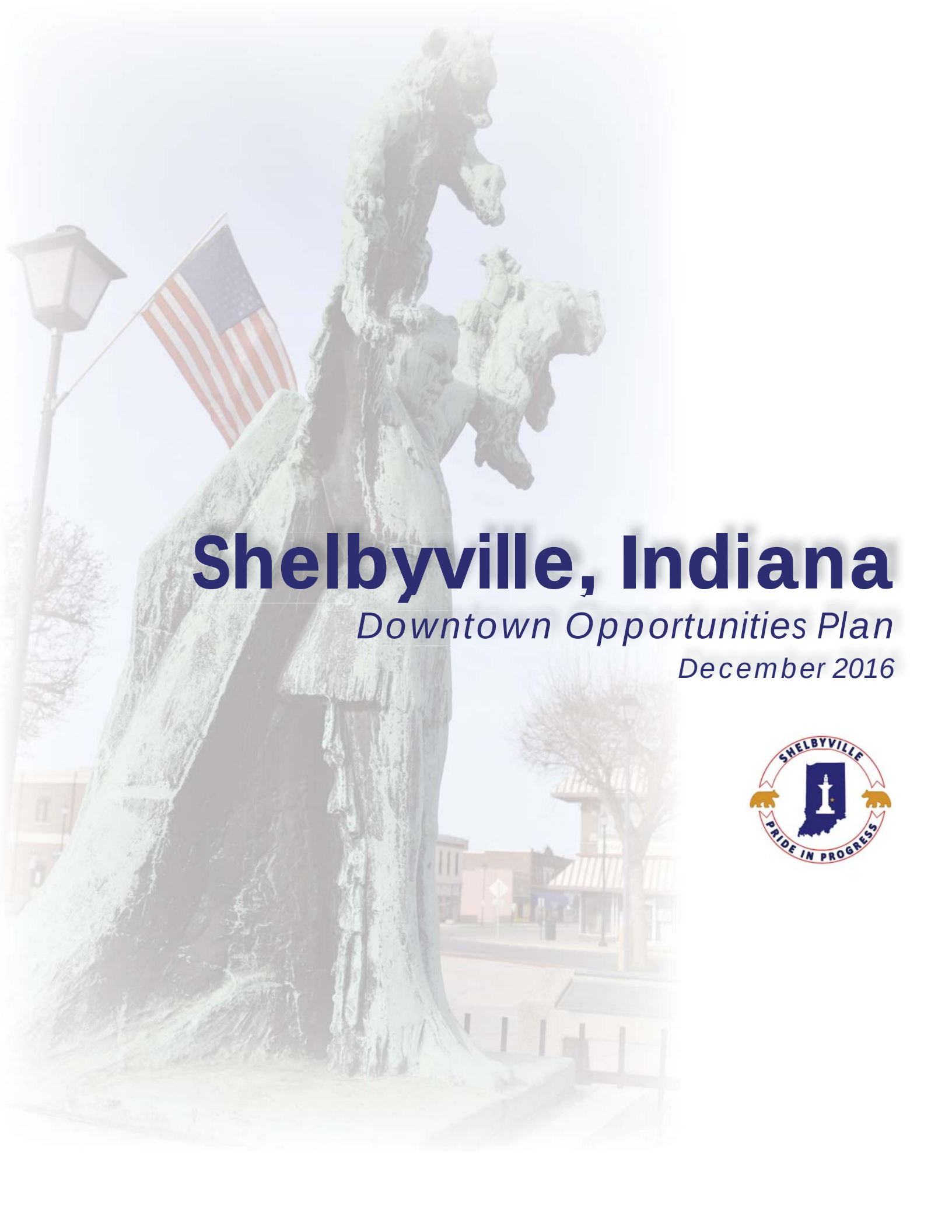

Shelbyville, Indiana

Downtown Opportunities Plan

December 2016

Shelbyville, Indiana

Downtown Opportunities Plan

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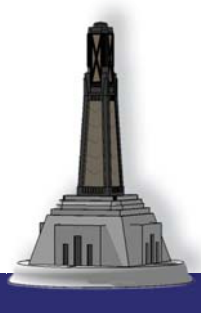

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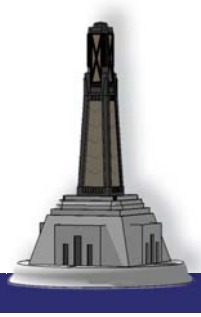

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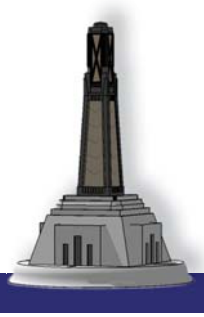


Section A

Overview and Executive Summary

Overview & Executive Summary

Project Background

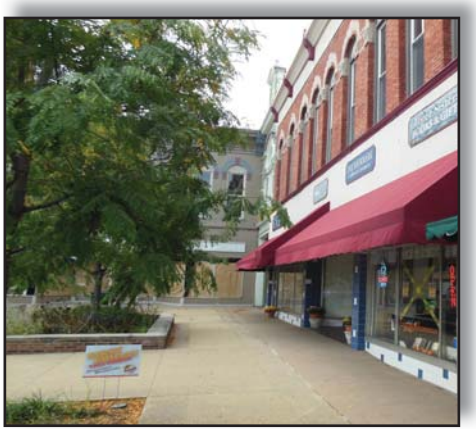
In order to thrive as a community, the City of Shelbyville must compete with other cities and towns on multiple levels. As such, Shelbyville routinely competes for jobs, residents, attractions, business investment, private development, institutions, foundations, etc. The decision to locate one's family, business or institution in a given community is largely based upon the assets, attractions, offerings, and amenities that a community provides. Therefore, the City of Shelbyville is embarking on this study to advance the City's competitive advantages while at the same time improving the quality of life available to all residents.

18 On The Square

Opportunity Planning

Civic Square

Quality of Life is a top consideration for new residents and new business ventures. Shelbyville's Civic Square provides a unique open space opportunity surrounded by historic buildings. Civic Square's potential to expand the City's Quality of Life Amenities and become the heart and soul of the community is undeniable. Civic space uses: Urban Trail access to downtown, band shell concerts, movies on the Pavilion, festivals, farmers markets, Mainstreet Shelbyville Wine Walks and Taste of Shelby County. Daily activities: synchronized water jets in West Civic Square; food, flowers and ice cream vendors in Civic Square Pavilion, an overlook deck from which to dine and observe Civic Square Events, the Public Green upon which to toss a blanket or a Frisbee and four outdoor dining venues.


Existing Civic Square Streetscape

Art from a Statewide Artist Engagement Program, will embellish walls, seats and other Civic Square appurtenances with sculptures, limestone bas reliefs and artworks based upon celebrating our local history, current technology and future hopes of the community. The new Shelby Arts Alliance Director will manage artists' proposals for artworks, commissioning art for Civic Square.

Civic Square Pavilion will serve many functions: Santa on the Square; movies on the Pavilion; VIP seating on the overlook; public addresses by visiting dignitaries; community events, etc. will all be staged in, on and around the Pavilion. On a daily basis, Pavilion vendors will offer restaurant dining inside and out, as well as flowers, ice cream, specialty candies, greeting cards, gifts and tourist attraction information. The Pavilion's monumental scale offers several opportunities for bas relief depictions of local history and culture through our arts commissioning program.

Civic Square design has functionality: WiFi will blanket the Square plus Harrison and Washington Streets, street lights will have electrical service panels for event vendors; public safety will be improved by eliminating hazardous vehicle/pedestrian conflicts and Civic Square events will no longer re-route traffic, further increasing spontaneous attendance.

Overview & Executive Summary

Architectural Catalyst Projects

Shelbyville's architectural assets are many: a historic downtown core, a historic river corridor, cultural icons such as the Strand Theatre, the Shelby County Courthouse, Methodist Building, Knights of Pythias Lodge and several historic churches to name just a few. Preserving those assets in perpetuity, appropriately managing adaptive reuse of historic structures and guiding the design of infill development are key elements to maintaining the architectural heritage for which this City is known. This study has established design guidelines in keeping with the Secretary of Interior Preservation Standards for the adaptive re-use of three downtown catalyst projects breathing life into eight historic buildings. It is the City's intent to utilize these pilot catalyst projects to establish appropriate local governance of historic building adaptive re-use.

Methodist Building Facade

An economically successful revival of Downtown Shelbyville is anchored in populating its historic structures with new businesses and residents seeking a downtown experience. This Downtown Opportunities Planning Effort includes establishment of economic incentives, grants and loans to precipitate the private investments that will sustain our City's historic fabric for generations. Three Catalyst Projects have been identified and each combines adjacent buildings to garner projects of a size that reduces overall cost per square foot while also setting downtown's renaissance into motion.

Three buildings on the Square's SW quadrant are under development for market rate housing with a roof top deck for enjoying sunbathing, music and movies on Civic Square. The Methodist Building Owner is considering this Downtown Opportunities Plan for adaptive re-use, while local investors are contemplating the purchase of two public square buildings for a restaurant and market rate housing. Additionally a downtown business owner, currently invested in two restaurants, is developing his plan to re-use the former Opera House as an events venue. Successful and appealing urban housing is necessary in order to sustain an active and vibrant downtown filled with merchants who benefit from meeting the needs of local residents. This Downtown Opportunities Planning Effort is already prompting redevelopment activity to meet the established residential housing needs.

Pasghetti's Italian Restaurant

Harrison Urban Trail & Living Streetscapes

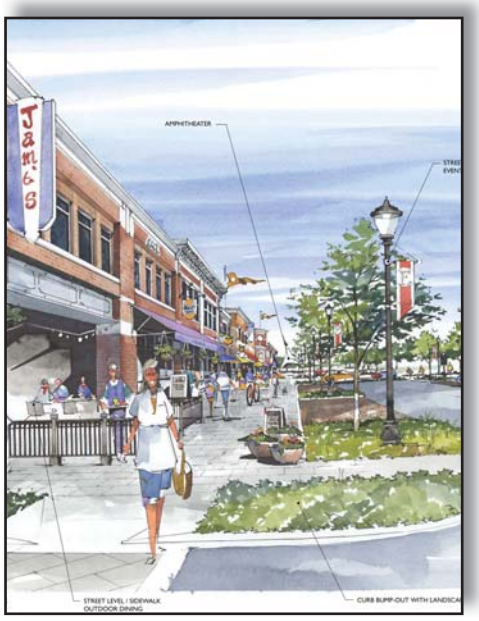
The Blue River Trails (BRT) master plan calls for an East/West greenway connecting 5 City parks. The Harrison Urban Trail & Living Streetscapes will connect downtown to BRT and City parks via a North/South pedestrian/ cyclist corridor with Trail Stations Celebrating Shelbyville's Local History and Culture. These Living Streetscapes are designed to infiltrate rain water runoff, eliminating the need for irrigation while sustainably treating storm water and reducing flooding impacts. These facilities offer ample opportunities to inform the public about sustainable practices being employed by the City.

Urban Trail Concept Rendering

The City is also planning 2016 phase one implementation of the newly completed and ISDH supported Bicycle & Pedestrian Master Plan to improve alternative transportation access to downtown and the wonderful parks system. Healthy Shelby County (HSC) was established in 2012 to improve public health following a sobering assessment of public health issues. In the short time since then, HSC efforts, in collaboration with other community organizations, has prompted a noticeable improvement in public health. HSC has been actively involved in hosting an ISDH Active Living Workshop, trails planning and facilities implementation in coordination with Parks & Recreation. These new accessible alternative transportation routes into downtown will serve the entire community and further cement their brand to "Get Healthy Here!"

Downtown Living Streetscapes & Gateway Design Guidelines

A key to successful communities is a thriving downtown commercial core. This study is focused on several strategies to accomplish this goal. Streetscape improvements are one of those strategies to enhance the visitor, worker and shopper experience with way-finding signage, improved street lighting and street appurtenances, sidewalks with accented paving and landscaping.



Streetscape Concept Rendering

For decades now, cities across the state have made investments in traffic lights and widened streets and highways to move traffic faster. This has been at the expense of the downtown pedestrian experience, resulting in narrower sidewalks and fewer, if any, street trees for shade. This trend has not been good for local merchants. This Downtown Opportunities Plan has identified opportunities to reverse this trend - Downtown Living Streetscapes are designed to capture storm water runoff within landscaped tree beds providing a lush, seasonally changing physical separation between pedestrians and automobiles, eliminating the need for irrigation while also reducing flooding impacts. These facilities also have a noticeable impact on the heat island effect, making downtown more comfortable and appealing during the summer months. Lastly, studies have shown that thriving landscapes in downtown corridors increase foot traffic, add longevity to pavement systems, improve retail activity and raise lease rates and assessed valuations.

Gateways serve a primary function for communities – they mark one's arrival. When done appropriately, they serve as harbingers of the community's architectural integrity. This study has identified gateways into Downtown Shelbyville at four key locations within the City.

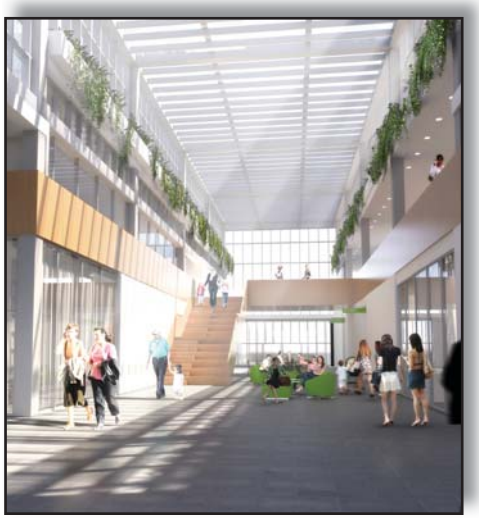
Overview & Executive Summary

Multi-Generational Community Center

The 2010/2012 Transformational Stellar Experiences prompted three local organizations to understand their mutual needs for shared programming space and a downtown location. The Center's proposed site is a 3 minute walk to Civic Square and brings new life and energy to the former Major Hospital property. The Shelby County Players, Shelby County Arts Alliance and Shelby Senior Services are partnering to build this Multi-Generational Center that will house the Shelby County Players' performance hall, the Shelby County Arts Alliance's art studios and Shelby Senior Services' offices and meeting rooms.

MGC Exterior Rendering - Ratio Architects

Shelbyville's Multi-Generational Center will be The Place for all ages to celebrate community events, enjoy the arts and access services in the City. The project will serve as a Gateway into downtown, transitioning Historic Residential Neighborhoods into the Commercial Core. The Center is divided into two sections serving complementary yet distinct functions. To the west are the senior services facilities with these amenities: a game room, library, visual arts classrooms, spaces for yoga and dance, and a dining/community room. The building's east side houses a community theater, with support spaces such as dressing rooms, a prop room, rehearsal spaces and a set workshop.



MGC Interior Rendering - Ratio Architects

Linking these two sections is the soaring Charles Major Grand Hall, honoring one of Shelbyville's notable residents, whose home once stood here and, most recently, provided the grounds for Major Hospital. The Grand Hall provides space for receptions, banquets and gallery shows, while drawing visitors from the entrance plaza into an atmosphere tailored to socializing and lively community exchanges. The Center's materials convey an atmosphere of warmth, familiarity and energy. Large amounts of south-facing exterior glazing bathe interior spaces in natural light, while terra cotta sunscreens and paneling lower heat gain during the day and provide a warm-colored complement to the abundant limestone.

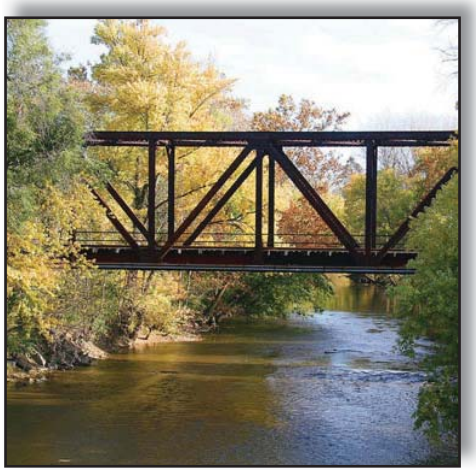
Brownstone Townhomes & Public Parking

Across the street and adding to the District Gateway are the market rate garden townhomes proposed in a walk-up brownstone style. Programmed at 2,000 SF/unit, this residential offering will meet market needs identified in the Community Readiness Index Study. Senior housing will be on the ground level with market rate apartments above. Immediately across the street, the Multi-Generational Center will serve all tenants through entertainment, programs and services. Additionally, Public Parking is planned behind the Brownstone Townhomes and along Jackson Street. These improvements will exhibit Shelbyville's Living Streetscapes design program, providing shade and storm water management services. When combined with the Multi-Generational Center across the street, these two projects will create a new Gateway into downtown.

Proposed Brownstone Townhomes

Riverfront District

The Indiana Legislature created provisions for establishing Riverfront Districts within cities and towns to promote economic development along and nearby local rivers and streams. This legislation provides liquor licenses within designated areas of locally prescribed boundaries at more affordable prices than can be acquired in the open market. The City of Shelbyville established a Riverfront district in June 2016 to promote private development along the Blue River and within nearby properties located within the district - including a number of eligible properties on Civic Square. The benefits of such a district can already be seen in the development of the Riverfront Taproom located at the Harrison Street Bridge over the Big Blue River in the former Keifer Furniture building.



Blue River Riparian Corridor

Neighborhood Stabilization District

The Neighborhood Stabilization District provides needed funds for retaining historic building stock in the immediate downtown area. This effort will also be complimented by Partnerships with Indiana Landmarks, where residents learn to care for historic properties through Do It Yourself Workshops. Previously completed programs in several Indiana communities have been coordinated with IHCDA grant funds and have proven that the desired outcomes are attainable: increased assessed values and increased home ownership. Indiana Landmarks knowledge and relationship with IHCDA allows this partnership to provide guidance on which homes and features would be appropriate for state funds versus those homes which should be locally funded or completed by DIY workshop groups.

Completed OOR Housing Project

Vision & Goals

In an effort to enhance the City of Shelbyville's appeal to residents, visitors, business and industry, City leaders have embarked on this Downtown Redevelopment Study to accomplish the following goals:

- To expand public gathering places, amenities and attractions within Downtown Shelbyville
- To promote pedestrian connectivity and alternative transportation options
- To promote private investment and appropriate development activities
- To preserve and protect the City's architectural heritage and historic fabric
- To strengthen the "Shelbyville Quality of Place Brand"

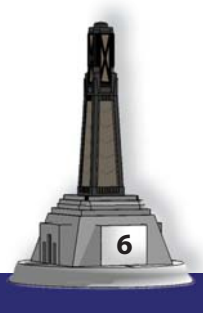
Shelbyville has a rich and varied history, great historic building stock and one of our state's most pristine riparian corridors in the Big Blue River. Efforts by communities to educate and inform their local citizens about the City's historical roots will serve the community well. This rich tapestry of history and events, when understood and appreciated, builds local interest and pride in one's own community while also adding to the Shelbyville tourism experience.

In the early 1900's Shelbyville was known around the country for its numerous wood crafting companies making furniture, tables, desks, cabinets, chairs and wardrobes from the seemingly endless supply of locally harvested Indiana hardwoods. At one point the City boasted 30 companies in this industry. The success of this large wood crafting economy played a major role in spawning the significant collection of prominent historic buildings and magnificent residences. The City is fortunate that many of these historic structures remain, contributing significantly to today's historic downtown and residential neighborhoods.

The City of Shelbyville's local building stock, both in the older residential areas and also in the commercial core, gives Shelbyville much of its charm and appeal. Local architectural icons include the Strand Theatre, the Shelby County Courthouse, Methodist Building, Opera House and Knights of Pythias Buildings. These buildings are architectural icons within Shelbyville's historic commercial core. A primary goal of this study is to revitalize this historic Downtown Core by developing architectural, streetscape and gateway design guidelines and standards for improved development within the commercial core of Shelbyville.

Steering committee guidance and public input sessions have identified the following downtown opportunities:

- An improved Civic Square focused on public event space, outdoor dining, an urban trail and an iconic civic structure
- Establishment of catalyst project design guidelines and standards for architecturally appropriate new construction infill development and adaptive reuse of historic structures
- Streetscape improvements enhancing the downtown shopping and entertainment experience
- Plans for gateways appropriately marking entrances into downtown
- Wayfinding Signage improvements
- A recently established Riverfront Redevelopment District along the Blue River Corridor extending into the downtown



Planning Process: Downtown Opportunities Plan Development Initiatives

Project Launch & Public Engagement
July 2015 to October 2015

Schematic Design & Structured Parking Feasibility Study
November 2015 to April 2016

Design Development
March 2016 to May 2016

Stellar Communities Initiative
March 2016 to August 2016

Big Blue River Riparian Corridor

18 On The Square

Julius Joseph Fountain

Planning Process

Project Launch & Public Engagement
July 2015 to October 2015

July 8th, 2015
Steering Committee Kick-Off Meeting #1

August 1st to 25th, 2015
Public Attitude Survey

August 14th, 2015
Mainstreet Shelbyville Update Meeting

August 15th, 2015
Downtown Shelby Days Festival Booth

September 23rd, 2015
Historic Downtown Walking Tour

October 8th, 2015
Steering Committee Meeting #2

Schematic Design, Catalyst Projects & Structured Parking Feasibility Study

November 2015 to April 2016

November 2nd, 2015

Redevelopment Commission Update Meeting

November 19th, 2015

Civic Square Schematic Plan Options 'A' & 'B' Released

February 15th to 19th, 2016

Catalyst Building Redevelopment Potential Surveys

February 22nd to 24th, 2016

Structured Parking Due Diligence - Geotech Soil Borings

March & April, 2016

Structured Parking Options Analysis & Review

Planning Process

Design Development
March 2016 to May 2016

March 9th, 2016
Civil Conversation Public Meeting

March 31st, 2016
Riverfront District Plan Commission Approval

April 1st to 18th 2016
Civic Square Design Development

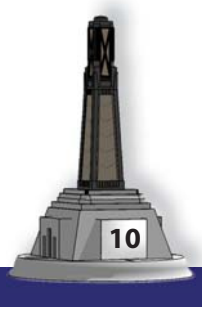
April 26th, 2016
Berne, Indiana - Muensterberg Plaza and Clock Tower Tour

May 11th, 2016
Steering Committee Meeting #3

May 16th, 2016
City Council Plan Development Update

May 17th, 2016
County Council Plan Development Update

June 3rd, 2016
Taste of Shelby County Festival Booth



Stellar Communities - Strategic Investment Plan
March 2016 to August 2016

March 11th, 2016
Letter of Interest Submittal

April 5th, 2016
Finalist Status Notification

April 21st, 2016
Finalist Workshop

June 3rd, 2016
Stellar Finalist Celebration

July 1st, 2016
Strategic Investment Plan Submittal

July 2016
Finalist Site Visit

August 2016
Designee Announcement

Community Engagement

Steering Committee Meeting #1 07/08/15

The first steering committee meeting was held on July 8th, 2015 at the Shelby County Annex Building. In summary, the Design Team was formally introduced, a schedule for the project study and upcoming events was reviewed. Existing conditions were discussed in detail and potential architectural and streetscape catalyst projects were presented.

Public Attitude Survey 08/01/15

From August 1st to the 25th, a public attitude survey was launched to seek community perspective on Shelbyville's existing infrastructure and public infrastructure investments desired. The survey received 780 respondents; over half of whom have lived in Shelbyville for ten years or more. Other respondents included 38 downtown business and / or property owners and 117 downtown employees.

Bicycle access and traffic flow conditions were the two major concerns with existing infrastructure. Natural elements such as landscaping and street trees joined festival space, public art and public parking as the most desired public enhancements.

Mainstreet Shelbyville Update Meeting 08/14/15

The Design Team held an update meeting regarding the planning study on August 14th, 2015. A review of the Bicycle & Pedestrian Master Plan was followed by initial downtown concept plans, streetscape sections and representative images for Civic Square.

Downtown Shelby Days Festival 08/15/15

The design team sought public input over five concept plans during Downtown Shelby Days on August 15th, 2015. The team of landscape architects and engineers engaged with downtown business owners, the Shelbyville community and visitors taking feedback and answering any questions that arose. Each person received two stickers to vote for their preferred concept designs. A total of 271 votes were received.

Historic Downtown Walking Tour 09/23/15

On September 23rd, 2015, City officials, members of the public and the design team took part in a historic walking tour led by local historian Kris Schwickrath. The walking tour covered Civic Square, North Harrison Street and the Porter Community Center. This tour was conducted to inform study recommendations focussed upon preserving historic resources, as well as local culture and history.

Downtown Shelby Days

Downtown Shelby Days

Downtown Shelby Days

Community Engagement

Steering Committee Meeting #2 10/08/15

The second steering committee meeting was held on October 8th, 2015 at the Shelby County Annex Building. The public attitude survey results were discussed along with an in-depth look at potential catalyst projects. The five concept plans for Civic Square were reviewed in detail highlighting the scheme that received the most public votes. Existing parking numbers were presented as well as a proposed parking structure under the Square.

Benefits associated with the development of a riverfront district and downtown gateways were also presented and discussed.

Downtown Shelby Days

Redevelopment Commission Meeting 11/02/15

On November 2nd, 2015, Shelbyville's Redevelopment Commission was updated on the Downtown Opportunities Plan project progress. A summary of the October 8th Steering Committee Meeting was presented and feedback from commission members was taken into consideration.

Downtown Shelby Days

Civil Conversation Public Meeting 03/09/16

A Civil Conversation Public Meeting was hosted by 3 Sisters Coffee Shop on March 9th, 2016 with over 60 merchants and property owners in attendance. During this meeting, the public was updated on information regarding the Strategic Investment Plan process. Design for the Downtown Opportunities Plan was also presented highlighting Civic Square, surrounding streetscapes, public parking, architectural catalyst projects and active living transportation corridors.

Steering Committee Meeting #3 05/11/16

The Steering Committee met on May 11th to review work to date, including the additional efforts underway regarding the Strategic Investment Plan. The committee reviewed various projects and related preliminary construction budgets within the Downtown Opportunities Plan that form the basis of the Strategic Investment Plan. In addition, designs for Civic Square Pavilion and Tower were presented. The need for an iconic civic structure to anchor the expansive Civic Square and become a hub of activity in downtown was discussed in detail.

Downtown Shelby Days

Community Engagement

City Council / County Council Meetings 05/16 and 05/17/16

The Downtown Opportunities Team met with City Council on May 16th and County Council on May 17th to update them and the public on project progress. Results of the Public Attitude Survey and public input from Downtown Shelby Days were reviewed. Current plans for Civic Square were presented along with parking alternatives to meet current and future parking demands. Three goals for Civic Square were proposed: Ensure Economic Sustainability for Civic Square Merchants; Celebrate and Preserve Architectural Heritage surrounding the Square; Establish Civic Square's Place-Making Prominence in the State of Indiana. Details of various projects within the Strategic Investment Plan were reviewed along with preliminary budgets for each project.

Race for the Cure

Taste of Shelby County 06/03/16

The City planned a community engagement event in conjunction with "Taste of Shelby County", the city's largest downtown food and beverage event sponsored by the Shelby County Tourism & Visitor's Bureau. Over 1,500 local residents were in attendance. The Committee arranged for the fabrication of custom "arrow" signs with accompanying graphic renderings of Civic Square features to be placed around the Public Square in the very locations where proposed improvements will be built. The Methodist building street level lobby was opened to the public. Residents studied in detail the architectural renderings and plans for downtown Shelbyville. Designers and developers were on hand to answer questions and offer explanations of project details.

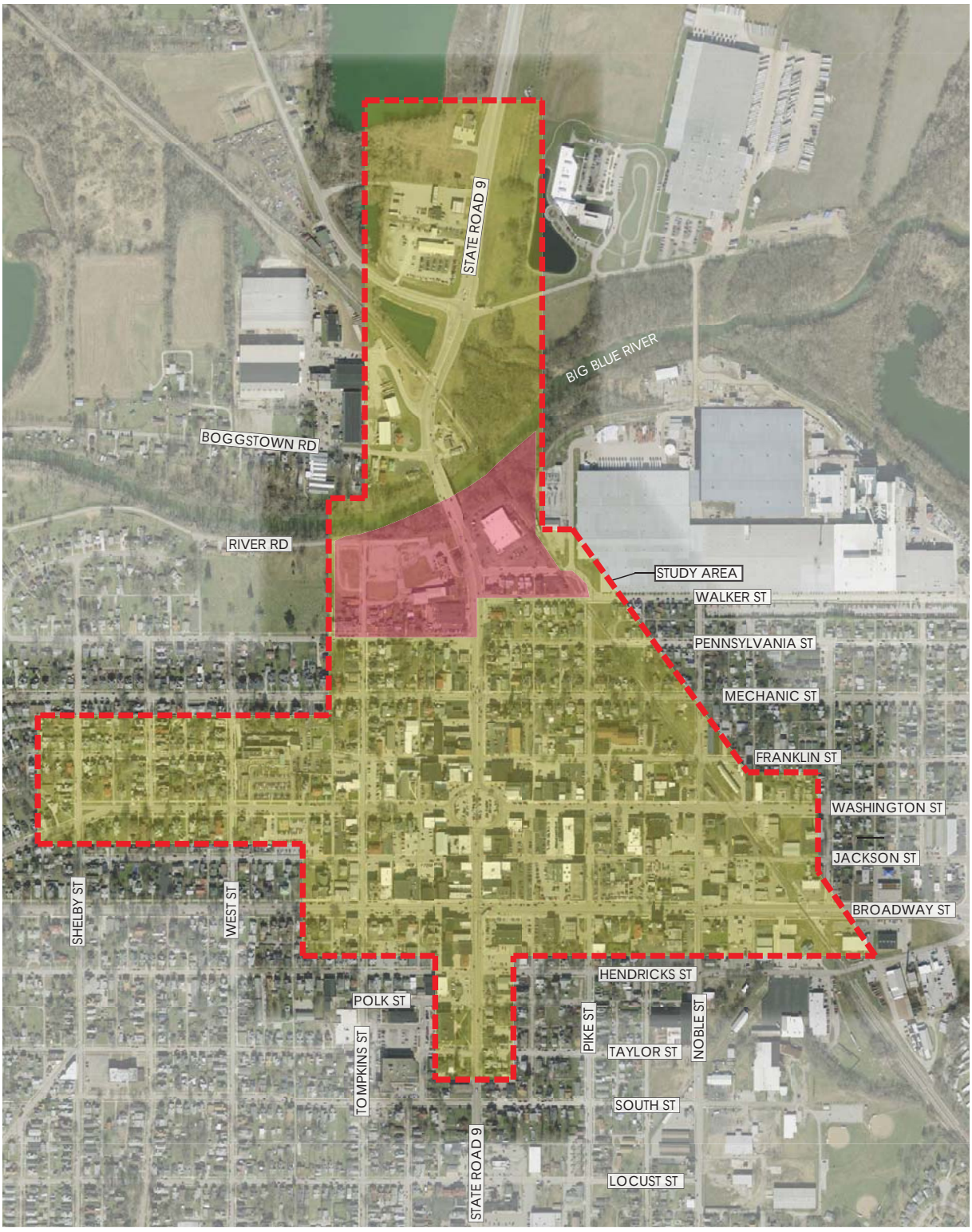
Saturday Morning Farmer's Market

Taste of Shelby County

Section B

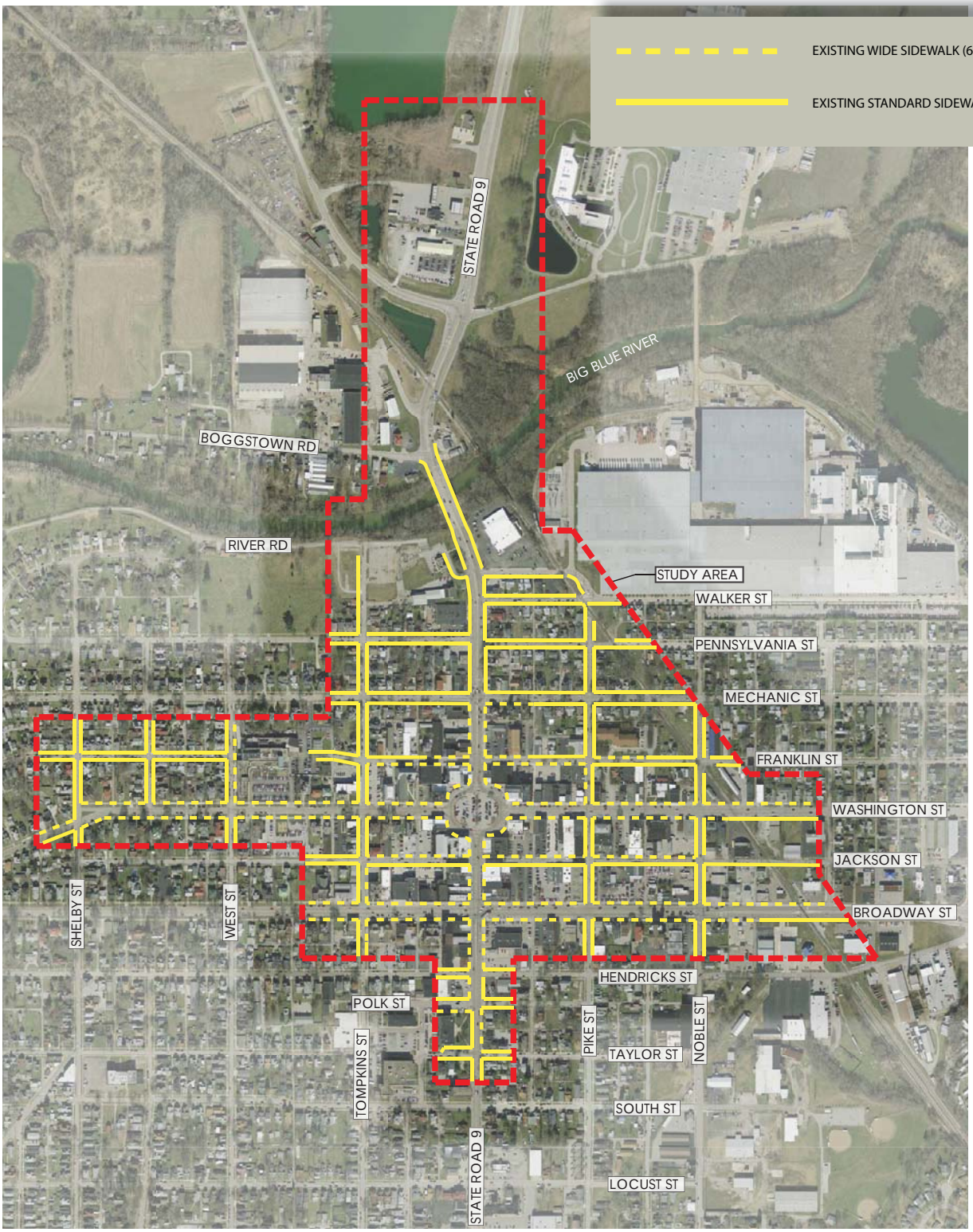
Existing Conditions & Analysis

Study Area



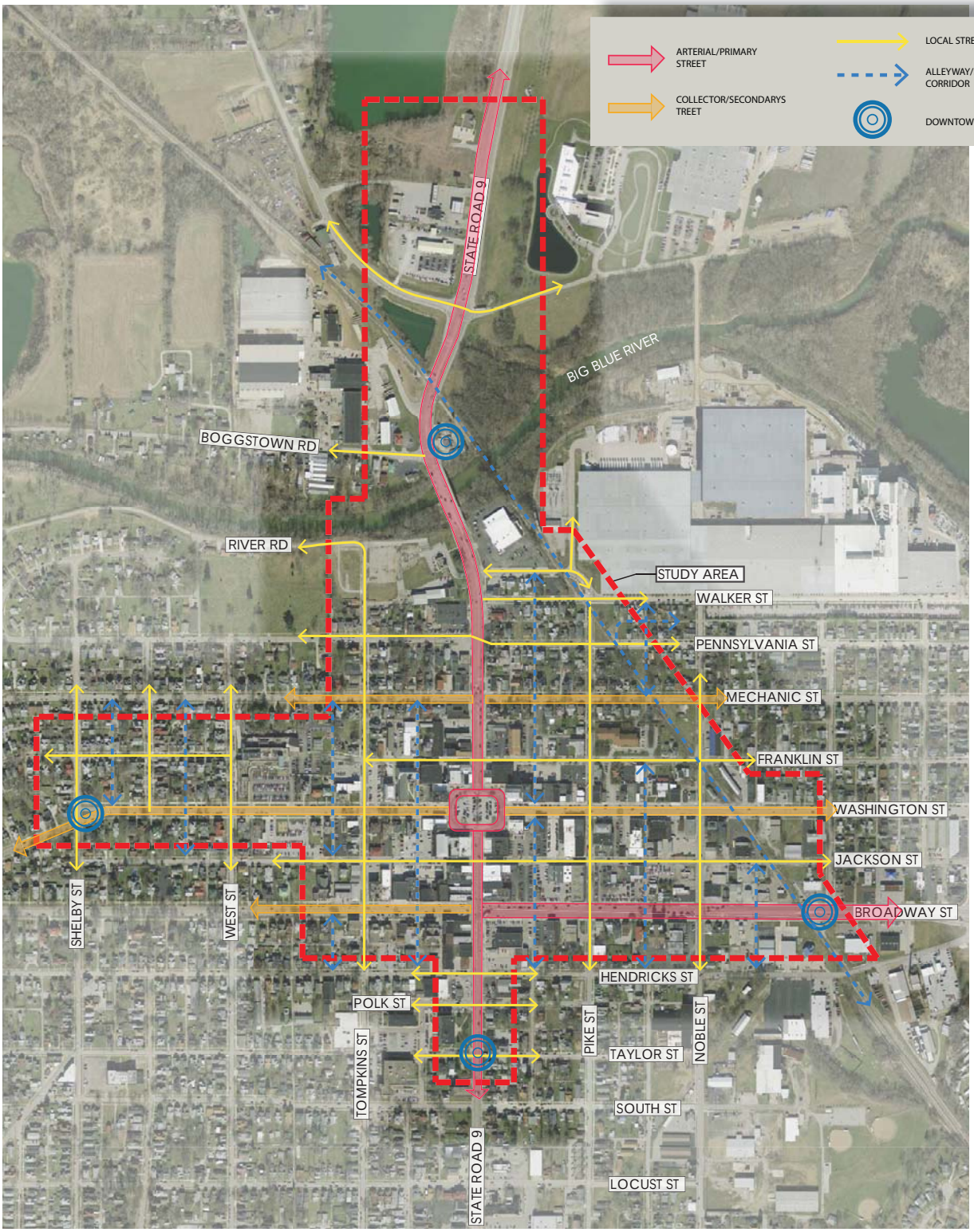
The study area includes primary entry points into downtown as well as attraction points, key business, retail and housing districts and catalyst project sites. The study area is primarily along the Harrison Street corridor from Taylor Street north to Boggstown Road. Shelby Street serves as the west boundary while the railroad corridor serves as the east boundary.

Pedestrian Network



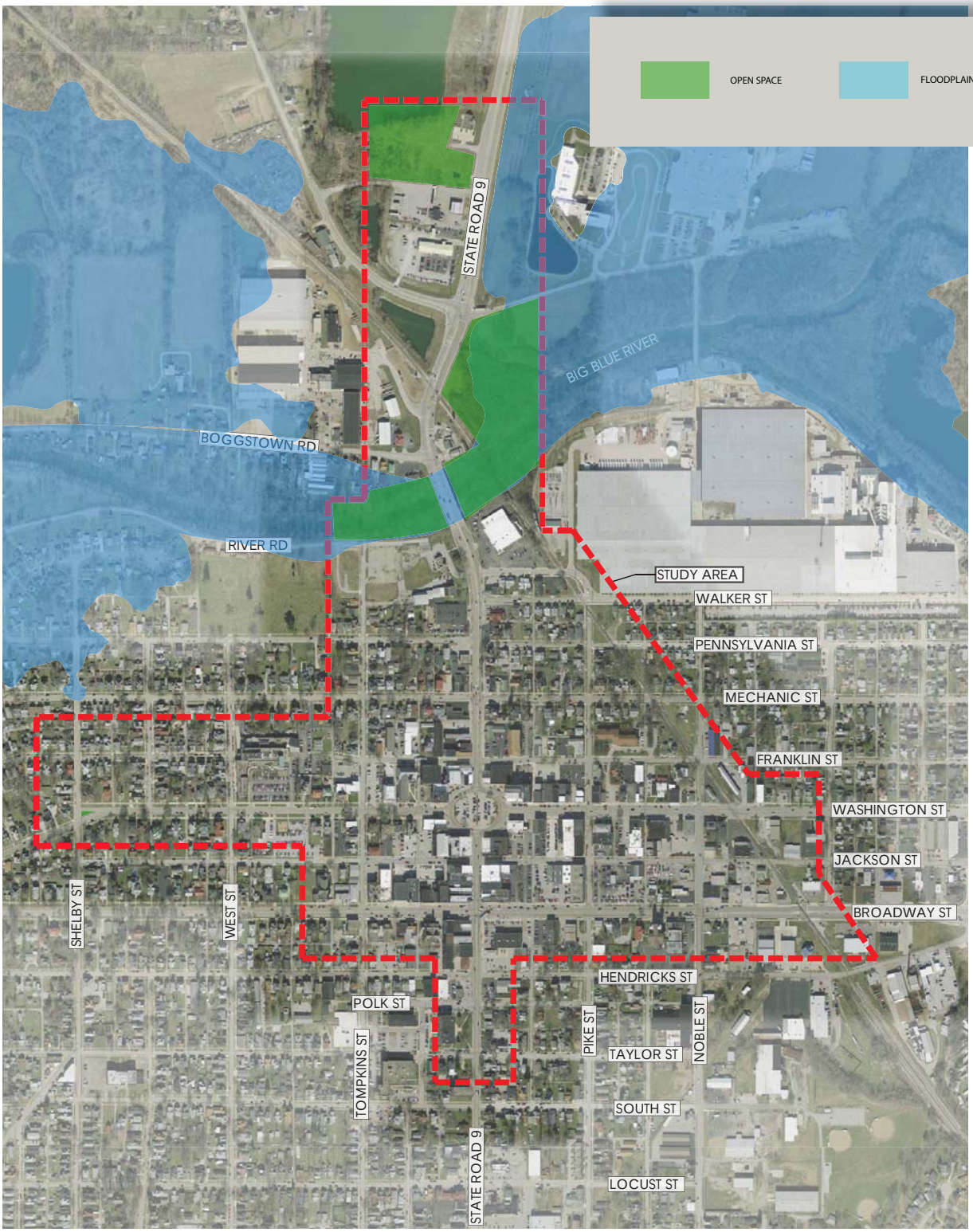
Existing sidewalks are found on nearly every street within the study area. Wider sidewalks (greater than 6') can be found on Broadway, Washington and Harrison Streets as well as around Civic Square. Police and Emergency Medical Service records clearly demonstrate an established need for improved pedestrian and cyclist safety in Downtown Shelbyville. These public safety needs are being addressed within streetscape design recommendations.

Vehicular Network & Downtown Gateways



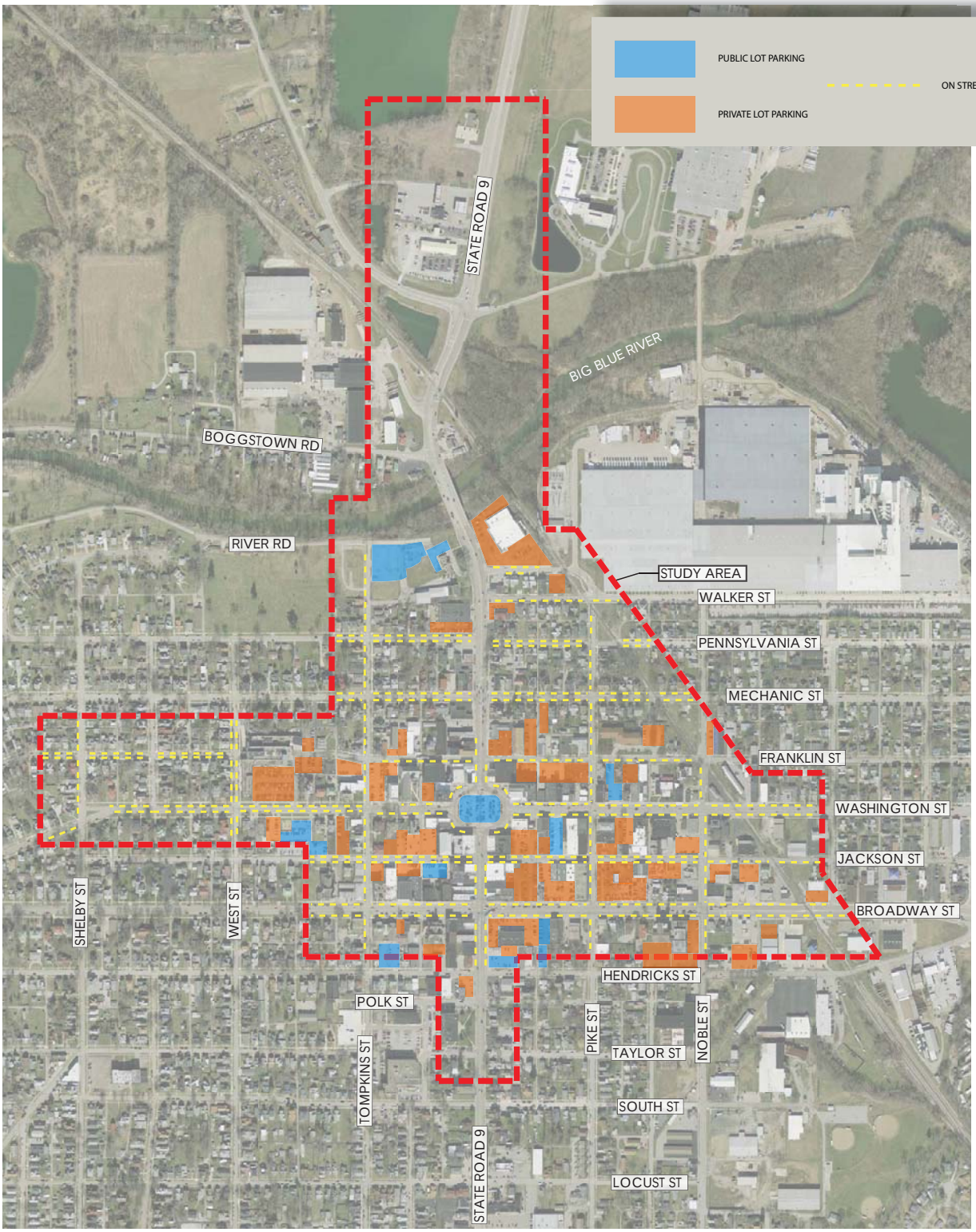
Primary arterial streets through the downtown study area are Harrison and East Broadway Streets. These corridors host State Route 9 running north / south and State Route 44 running east / west, funneling the majority of traffic through Civic Square. Mechanic, Washington and West Broadway are considered secondary or collector streets. This study recommends relinquishment of State Route 9 between I-74 and Broadway Street with a simultaneous re-routing of truck traffic to State Route 44 / I-74 corridors.

Floodzone & Open Space



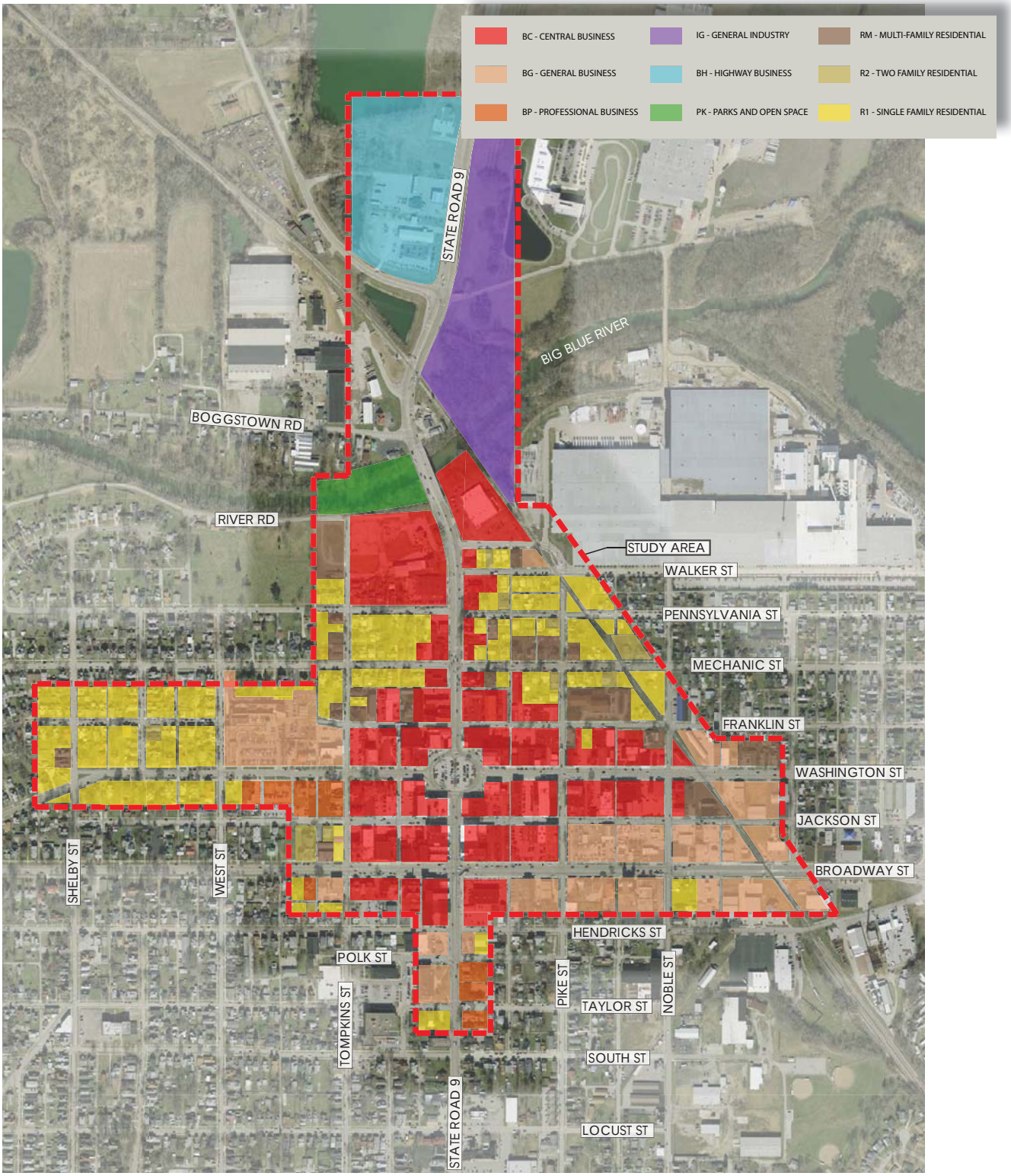
The Big and Little Blue Rivers wind their way through Shelbyville, jointly arriving five blocks north of Civic Square where a new trail head is being planned. These two pristine waterways and riparian corridors are an outstanding natural resource for the community and host the Blue River Memorial, Sunset and Kennedy Parks along with Shelby County Fairgrounds, Porter Visitors Center and Forest Hill Cemetery. The City has set aside park lands for the recreational needs of local residents. Fortunately, neither the floodplain nor floodway negatively impact real estate in downtown Shelbyville.

Surface Parking



Initial parking analysis has shown substantial surface parking exists in downtown Shelbyville. However many of the parking lots are privately owned and mostly underutilized. Shared parking arrangements among private lot owners have the potential to significantly increase parking availability. As downtown Shelbyville regains its economic strength through public and private investments, additional parking will be needed to support that growth. Locations for structured parking and potential parking capacities are included in this report.

Zoning



The majority of the study area is zoned for Central Business surrounded by General Business and Single Family Residential. A goal is to expand upon Open Space access and Housing Development by integrating them with the Central Business zoned areas. The Blue River Corridor, with connections to five parks along the planned Blue River Trails, offer expansive access to public open space near downtown. The proposed Urban Trail along Harrison Street will provide direct, safe and convenient access between downtown, nearby neighborhoods and the Blue River Trails.

Existing Infrastructure

General engineering issues and observations were taken into account throughout the duration of this planning study. Main issues and observations are as follows:

Road pavements appear to be in fair to poor condition throughout the study area and it appears that reduced curb face exposure has taken place due to road resurfacing. Some streets with the study area are one-way only such as Jackson Street and Franklin Street. Ideally, these one-way streets should be converted to two-way to improve traffic flow patterns. On-street parking is present on most streets within study area.

Sidewalks are generally found on both sides of the road and vary in width. Sidewalks are generally in fair condition, but there are many areas that have broken panels or panels that have separated with grass growing between them.

Existing lighting is generally sparse, with cobra heads present on existing power poles throughout the study area. Decorative pedestrian scale fixtures can be found on surrounding streets close to State Route 9 and Civic Square.

Existing Sidewalk Condition

East Washington Street Crossing to Square

Street Signals

There are 5 signalized intersections present throughout the study area:

- State Route 9 and Michigan Road
- State Route 9 and Boggstown Road
- State Route 9 and Mechanic Street
- State Route 9 and Broadway / State Route 44
- State Route 44 and Noble Street

Curb ramps are present at most crosswalk locations, but many lack detectable warning surfaces leading onto the roadway. Marked crosswalks are not present at all pedestrian crosswalk locations. Pedestrian indications and push buttons are also not present at many crosswalk locations.

Drainage Issue on South Harrison Street

Surface Storm Water

Shelbyville's existing Stormwater Master Plan report does not indicate any areas of flooding concern. However, sparsely spaced curb inlets were observed and are likely to cause water to travel long distances and creating drainage issues. Water flowing long distances can contribute to the degradation of roadways over time, due primarily to Indiana's freeze / thaw cycles.

Market Analysis

Demographics

Shelbyville's demographics are significantly different than the demographics of the County. The City has more renters than the County, as well as income and educational attainment levels are lower than found outside the City.

Note: Recent collaborations between the City, County and School corporation have established new education programs and workforce development that are targeted toward raising local educational attainment levels.

Table 4 Demographic Comparisons and Benchmarks for Shelbyville, Shelby County and U.S.

Demographic	Shelbyville	Shelby County	Index Shelbyville/ Shelby	U.S.	Index Shelby/ U.S.
Population 2000	18,410	43,445	--	--	
Population 2015	19,300	44,582	--	--	
Households 2015	7,740	17,488	--	--	
Avg. HH Size	2.43	2.51	97	2.51	1.00
% Renters	39%	26%	1.50	33%	.79
Median Age	37.1	41.2	.90	37.9	1.09
Median HH Income	$39,568	$51,097	.77	$53,217	.96
Avg. HH Income	$49,815	$61,122	.82	$74,699	.82
Per Capita Income	$20,027	$25,239	.79	$28,597	.88
Household Income >$100,000	9.5%	17.4%	.55	23.1%	.75
College Degree +	13%	15%	.87	30%	.50

Source: Census, ESRI (2015) and REPG

Demographic Comparisons & Benchmarks

Vehicular Traffic

Traffic flow is an important influence on retail shopping providing retailer's stores visibility and accessibility to their customers. The major traffic arterial serving Shelbyville is Interstate 74, which provides regional access. The traffic counts on I-74 west of Route 9 are 32,858 (2013) with 23% of the traffic being commercial vehicles. I-74 traffic east of Route 44 is 26,353 with 30% of
the traffic being commercial. State Route 9 south of I-74 (South of Rampart St.) is 17,650 (2011) with 8% commercial traffic and State Route 44 south of I-74 (North of Progress Dr.) is 12,251 (2011) and west of Dagley Court it is 14,588 (2011).

The downtown area on State Route 9 between Pennsylvania and Broadway has an average daily count of 13,237 (2011) with 8% commercial traffic. On South Harrison Street between Broadway and Colescott, the count is 15,142 with 8% commercial traffic. On Broadway between Harrison Street and Noble Street the count is 13,777 (2011) also with 8% commercial traffic. Minor downtown streets like Noble between Washington and Franklin have just 1,742 vehicles daily, Mechanic Street between State R oute 9 and Tompkins has a 3,199 (2013) count.

The vehicular traffic is good for business in the downtown area, however, the total average traffic counts are below 20,000 a count that many retailers use in assessing retail viability for those that depend upon vehicular traffic to support their business.

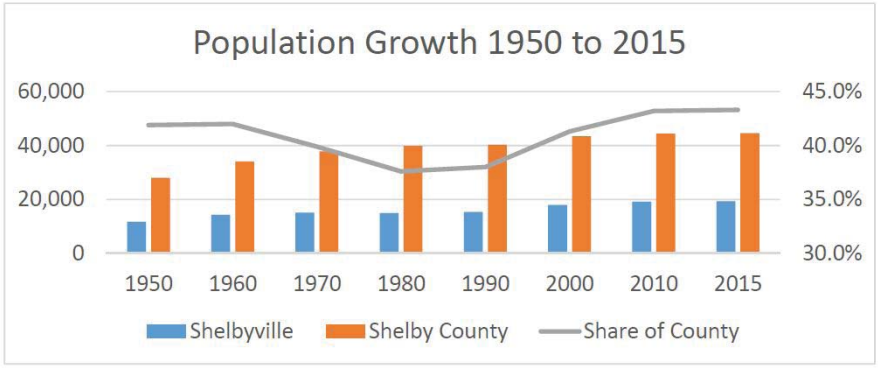
Civic Square Businesses

Population Growth, Shopping & Trade

Shelbyville is a small City of 19,300 people (est. 2015) that serves as the county seat for Shelby County, one of the eleven counties that make up the Indianapolis Metropolitan Area. Including Shelbyville, four other cities in the Indianapolis Metropolitan Area have county seats in cities between 10,000 and 50,000 people. Shelbyville's population ranks fifth among the eleven metropolitan county seat cities. However, its population growth rate ranks 8th. The growth rate of Shelbyville, of 4.8% from 2000 to 2015 is below the average of 9% for the county.

Being the county seat, Shelbyville is the *de facto* primary trade area for the county.

Most of the retail shopping in Shelby County is on State Route 44 / Broadway Street near the I-74 interchange where traffic counts maximize a retailers the drawing power. A secondary location is the I-74 State Route 9 area, but that intersection is less of a shopping destination as it is more a service center for interstate travelers. The heart of Downtown Shelbyville is immediately proximate to the intersection of these two routes that come off the interstate and meet downtown about two miles south of the Interstate.



Population Growth 1950 - 2015

As the proposed investments in Civic Square and Downtown Shelbyville move from plans to reality, it would be prudent for the City to anticipate and plan accordingly for private development pressure on the undeveloped State Route 9 corridor leading into Downtown Shelbyville.

Market Analysis

Shelbyville has an estimated 8,711 housing units with 7,740 occupied units providing an 11% vacancy rate of about 971 units. The estimated occupied rental units is at 3,232 and owner occupied units are at 4,408. This provides a tenure mix of 45% rental and 55% owner occupied.

The median home value for Shelbyville is $98,500 while the average home value for Shelbyville is $114,223.

There are few examples of upper level downtown housing products outside of Indianapolis. However, this does not mean that demand does not exist. The suburban communities with strong downtowns like Zionsville, Carmel, and Fishers have demonstrated success with viable downtown market rate housing providing added benefits to downtown merchants.

The challenge is to identify how much demand exists for current Shelbyville residents and Indianapolis City residents to move to a satellite City to pioneer an Indianapolis urban lifestyle at an affordable price in Shelbyville.

Table 3 2015 Households by Income and Age of Householder

	Home Ownership*	<25	25-34	35-44	45-54	55-64	65-74	75+	Total
HH Income Base		431	1,201	1,364	1,463	1,452	970	859	7,740
<$15,000	<$45,000	125	155	148	205	271	181	170	1,255
$15,000-$24,999	$45,000-$75,000	84	149	169	155	187	185	288	1,217
$25,000-$34,999	$75,000-$105,000	58	136	138	140	133	139	173	917
$35,000-$49,999	$105,000-150,000	72	183	229	253	215	176	110	1,238
$50,000-$74,999	$150,000-225,000	66	307	320	332	325	174	54	1,578
$75,000-$99,999	$225,000-300,000	13	166	176	194	154	58	38	799
$100,000-$149,999	$300,000-450,000	12	92	158	150	137	40	18	607
$150,000-$199,999	$450,000-600,000	1	9	11	23	13	8	2	67
$200,000+	$600,000+	0	4	15	11	17	9	6	62
Median HH Income		$25,839	$47,584	$49,820	$48,285	$43,253	$33,154	$23,431	$39,658
Median House @3x		$78,000	$143,000	$150,000	$145,000	$130,000	$100,000	$70,000	$119,000
Average HH Income		$33,583	$52,724	$57,796	$56,273	$52,710	$43,151	$32,912	$49,815
Average House @3x		$100,000	$158,000	$173,000	$169,000	$158,000	$129,000	$100,000	$149,000

2015 Households by Income & Age of Householder - Home Ownership

Table 4 2015 Households by Income and Age of Householder

	Monthly Rent 30% Income	<25	25-34	35-44	45-54	55-64	65-74	75+	Total
HH Income Base		431	1,201	1,364	1,463	1,452	970	859	7,740
<$15,000	<$375	125	155	148	205	271	181	170	1,255
$15,000-$24,999	$375-$625	84	149	169	155	187	185	288	1,217
$25,000-$34,999	$625-$875	58	136	138	140	133	139	173	917
$35,000-$49,999	$875-$1,250	72	183	229	253	215	176	110	1,238
$50,000-$74,999	$1,250-$1,875	66	307	320	332	325	174	54	1,578
$75,000-$99,999	$1,875-$2,500	13	166	176	194	154	58	38	799
$100,000-$149,999	$2,500-$3,750	12	92	158	150	137	40	18	607
$150,000-$199,999	$3,750-$5,000	1	9	11	23	13	8	2	67
$200,000+	$5,000+	0	4	15	11	17	9	6	62
Median HH Income		$25,839 $645	$47,584 $1,190	$49,820 $1,245	$48,285 $1,207	$43,253 $1,080	$33,154 $829	$23,431 $586	$39,658 $991
Average HH Income		$33,583 $840	$52,724 $1,320	$57,796 $1,450	$56,273 $1,406	$52,710 $1,318	$43,151 $1,079	$32,912 $823	$49,815 $1,245

2015 Households by Income & Age of Householder - Renting

Section C

Civic Square

Downtown Shelby Days

Existing Infrastructure

On August 15th, 2015, the design team presented five design schemes for Civic Square to the public during Downtown Shelby Days. The festival is "A celebration of Shelby County with a mission to incorporate who we are and what we are as a County".

The design team interacted with downtown business owners, members of the Shelbyville community and visitors, taking note of public opinions, ideas and concerns. Each person was able to place two votes for their personal favorite design schemes. A total of 271 votes were recorded.

The most common feedback related to:

- Maintaining easy and convenient Post Office access
- Where will the Julius Joseph Fountain (1921) and Balsar Statue (1929) go?
- Please enforce the truck route
- Maintaining large and wide farm equipment access through the Square (N/S route) due to SR 9 bridge
- Maintaining accommodations for business deliveries on the Square
- Straight north/south Harrison Street traffic could be dangerous
- Green space in the Square would be good for the Farmer's Market and Mainstreet Events
- Scheme E was generally recognized as the most reasonable as long as effective alternatives to proposed Washington Street flow is addressed

Downtown Shelby Days

Shelbyville Post Office

Balsar Statue

Downtown Shelby Days

Concept Scheme A - 51 Votes

Scheme A allows traffic to move uninterrupted along Harrison Street. A planted median divides north and south traffic within Civic Square. Washington Street terminates with vehicle turnarounds on both east and west sides of the square instead of intersecting with Harrison Street. This was a popular choice among those voting, in spite of Washington Street's lack of access to Harrison Street.

Concept Scheme B - 5 Votes

Scheme B is very similar to Scheme A with Harrison Street moving through Civic Square and Washington Street terminating on both the east and west sides. The major difference is the elimination of vesicular drop-off zones at Civic Square. While this scheme allows for more green space within Civic Square, public parking dead-ends on East and West Washington Streets could prove problematic.

Concept Scheme C - 122 Votes

Scheme C is similar to Scheme B with vehicle drop-off zones on both East and West Washington Streets. This scheme offered the most dramatic design concept with a tunnel for Harrison Street that would run under Civic Square allowing for the largest possible Civic Plaza for community events unencumbered with highway traffic. This scheme was voted most popular by the public, however, concerns regarding implementation included additional costs to construct the underground highway to INDOT standards, shoring foundations of historic buildings, security and maintenance.

Concept Scheme D - 5 Votes

Scheme D also utilizes turnarounds for both East and West Washington Streets. Harrison Street acts as a central boulevard with a planted median that flows on a gradual arc within the square. This feature provides an aesthetic look to Civic Square and would also aid in reducing traffic speeds.

Downtown Shelby Days

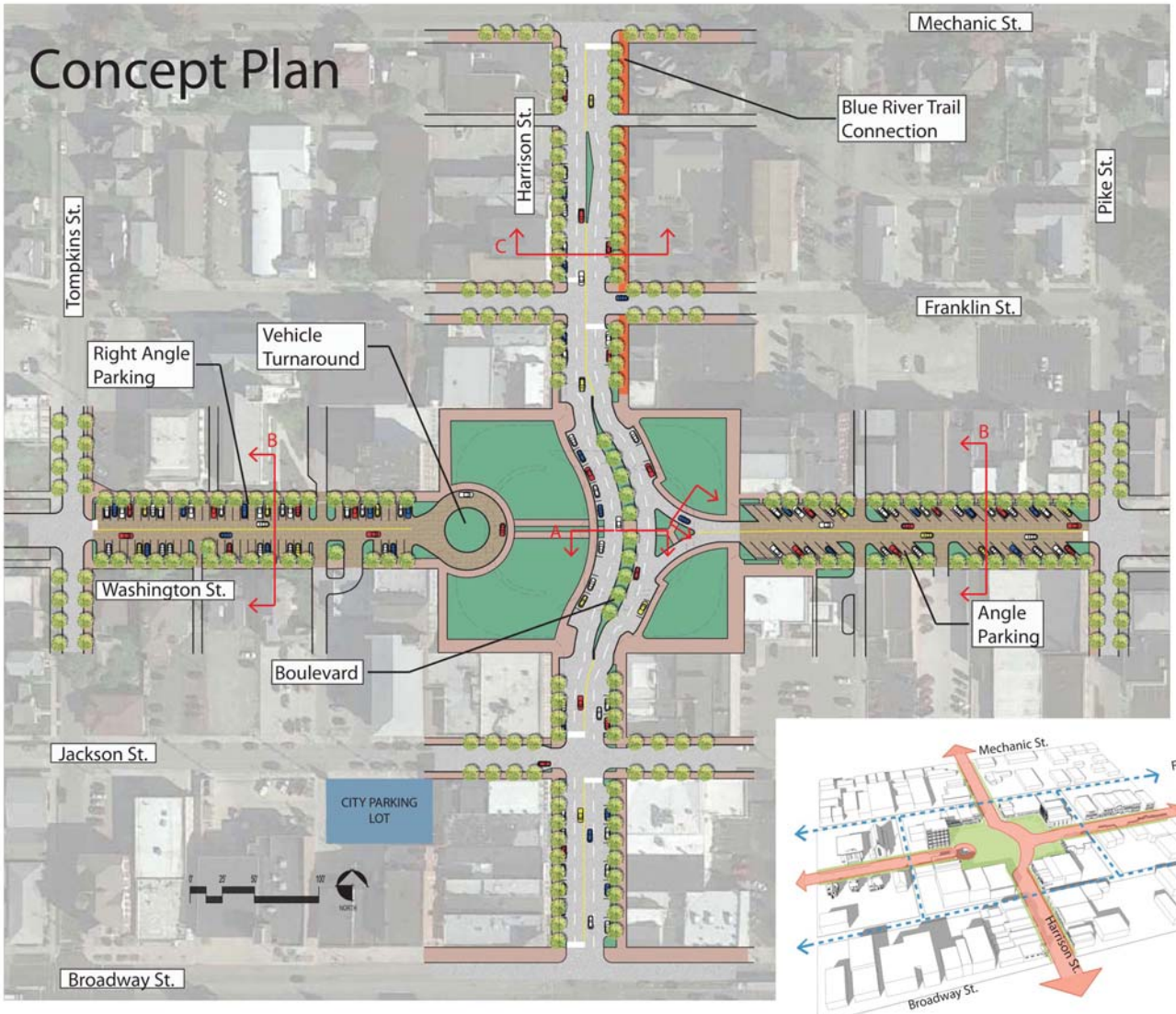
Concept Scheme E - 88 Votes

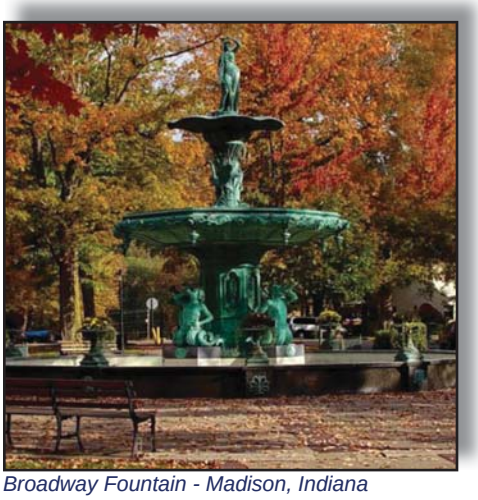
Jameson Square Fountain - Portland, Oregon

Scheme E received the second most votes during Downtown Shelby Days and was recognized as the most logical plan to move forward through the design process. West Washington Street would feature a vehicle turnaround that could be utilized as a drop-off zone and an events plaza for farmer's markets or concerts during downtown events. Harrison Street would flow on an arcing pattern like Scheme D but would flow towards East Washington Street. This direction would allow for vehicular connections between Harrison and East Washington Streets.

Both East and West Washington Streets would feature efficiently arranged on-street parking and would help offset the majority of the parking removed from Civic Square. Harrison Street would also add parallel parking spaces.

In this design scheme, Civic Square would feature three distinct open space opportunities. A large area on the west side would be designed to support active downtown events, farmer's markets and festivals while the two more intimate areas on the east side provide passive space for outdoor dining, children's play area, shaded seating areas and quiet space.





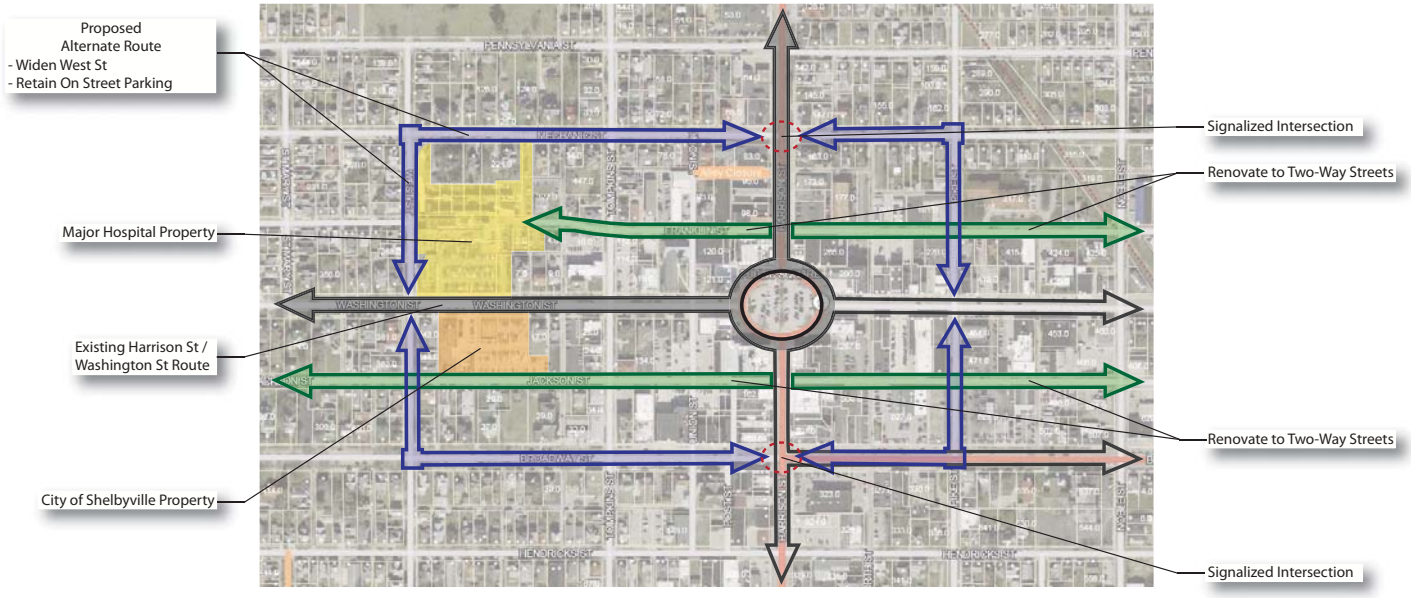
Broadway Fountain - Madison, Indiana

The design team developed Scheme E further per the direction of City officials, Downtown Opportunities Plan Steering Committee, and public feedback. Existing parking on Civic Square is nearly equaled by this design scheme with additional public parking lots such as the City Hall lot, lots on Jackson and West Washington Streets and parking structure possibilities not yet factored in to meet the anticipated growing demand.

The design team then studied alternative transportation options to re-route through traffic around Civic Square. Traffic design considerations took into account all types of events, festivals and everyday use including the relocation of the Balsar Statue and Julius Joseph Fountain.

Parking: 192 Existing
191 Proposed

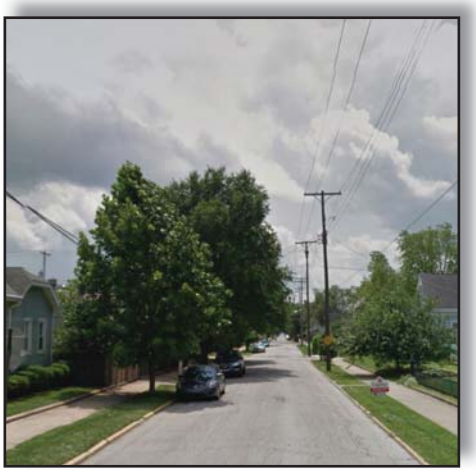
Alternative Traffic Routes



A primary goal for Civic Square redesign is to improve public safety, particularly as it relates to pedestrians. To ensure a safer pedestrian civic space while closing the connection between West Washington Street and Harrison Street - will require alternative routes for through traffic to access State Routes 9 and 44, not only on a day to day basis, but also particularly when Civic Square is closed to traffic during community events.

Existing one-way streets such as Franklin and Jackson Streets should be converted to two-way traffic. In order to provide convenient traffic flow from State Route 9 to Washington Street, a signed route is recommended utilizing Mechanic Street, West Street and Broadway Street west of Civic Square.

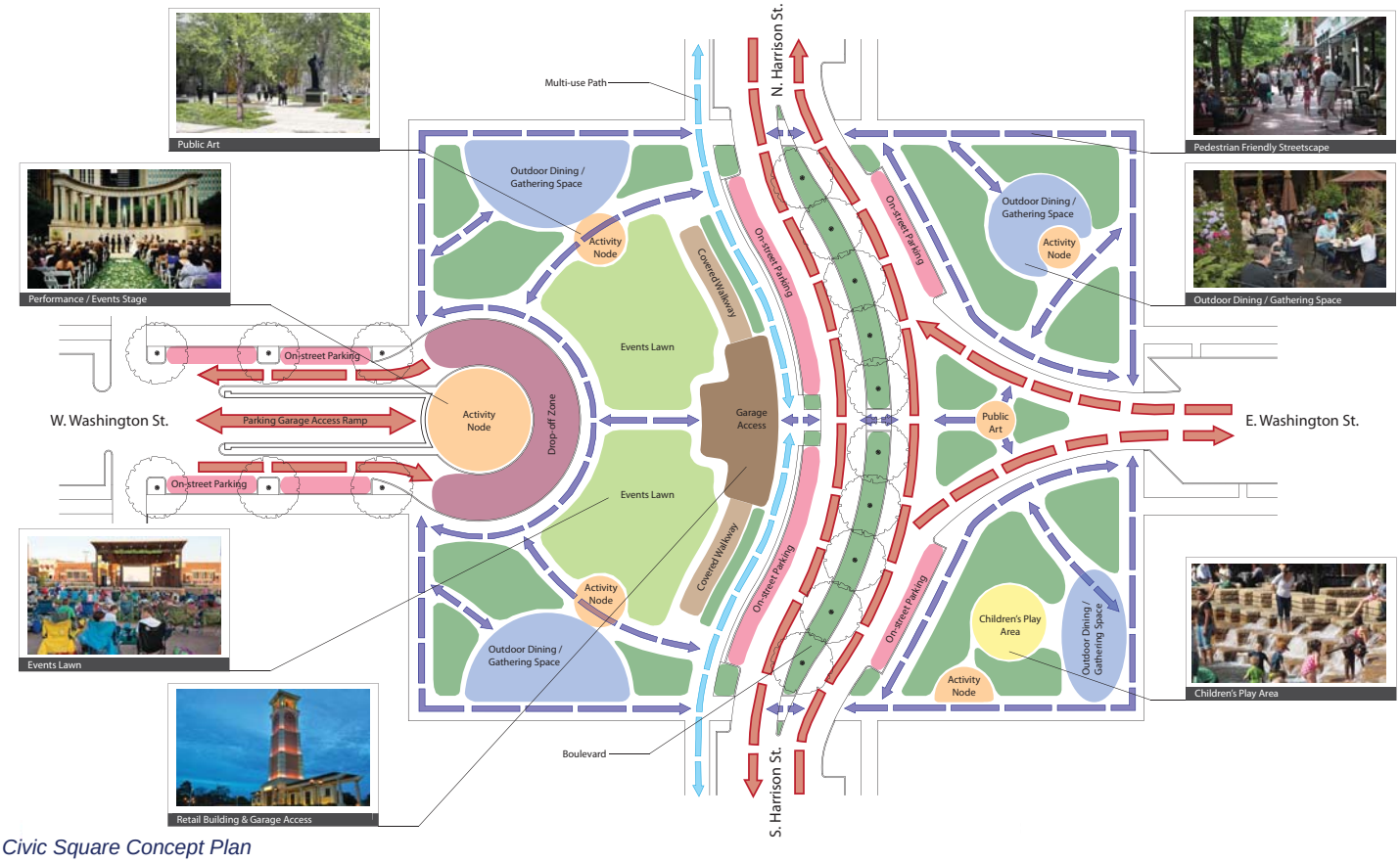
In order to reduce the amount of through traffic truck within Civic Square, this study recommends that the City utilize a signed, enforced truck route along State Route 44 to the I-74 interchange.



West Street

Pike Street

Schematic Design



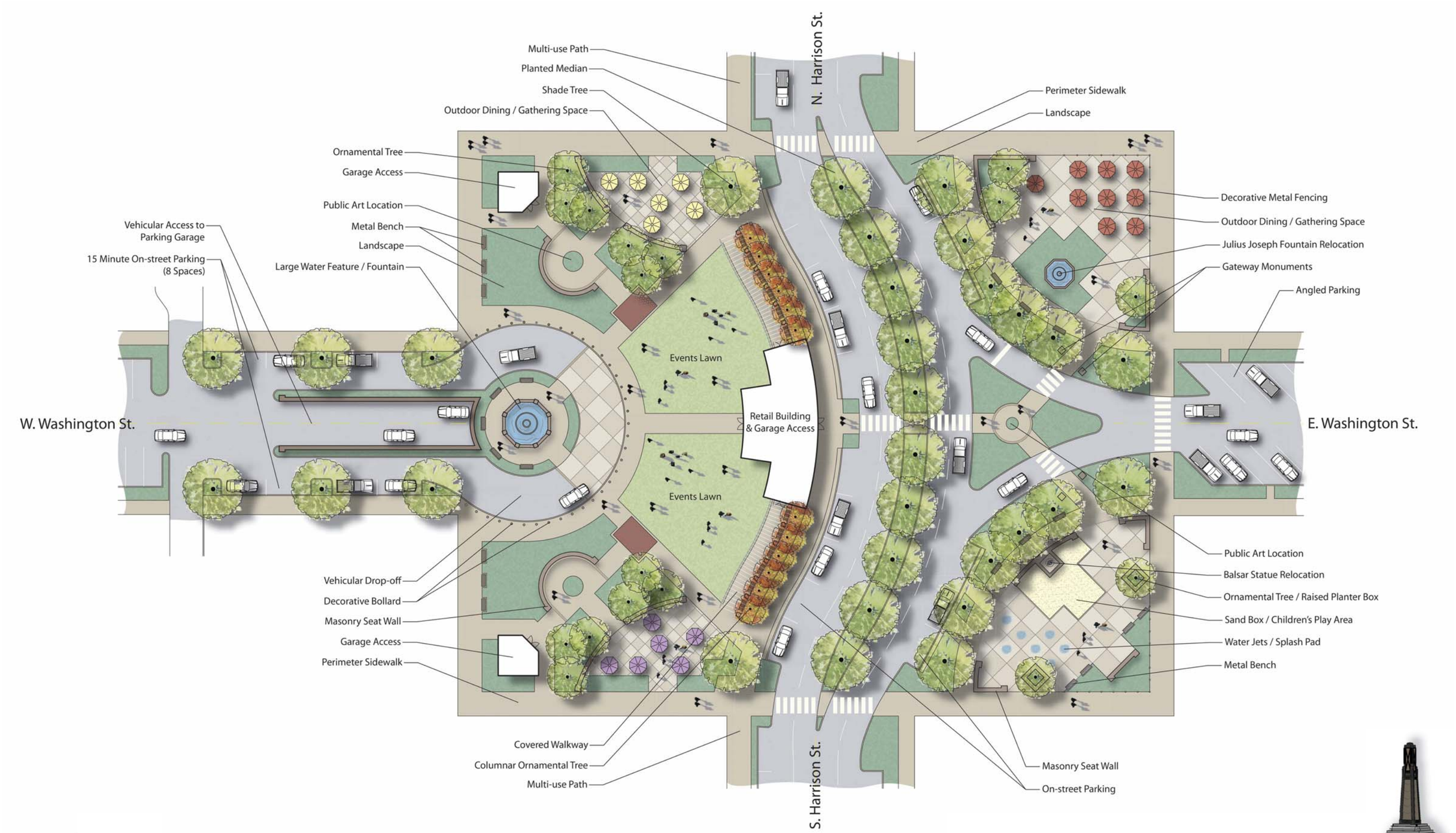
Civic Square Concept Plan

Following the concept layout chosen during Downtown Shelby Days, different Civic Square spacial types and feature locations were discussed. Potential uses for Civic Square space include:

- Vehicular routes and access
- Boulevard
- On-street parking
- Potential parking structure access locations
- Drop-off zones
- Pedestrian circulation
- Activity nodes
- Public art
- Events lawn
- Outdoor dining & gathering spaces
- Children's play area
- Iconic structure
- Additional retail space

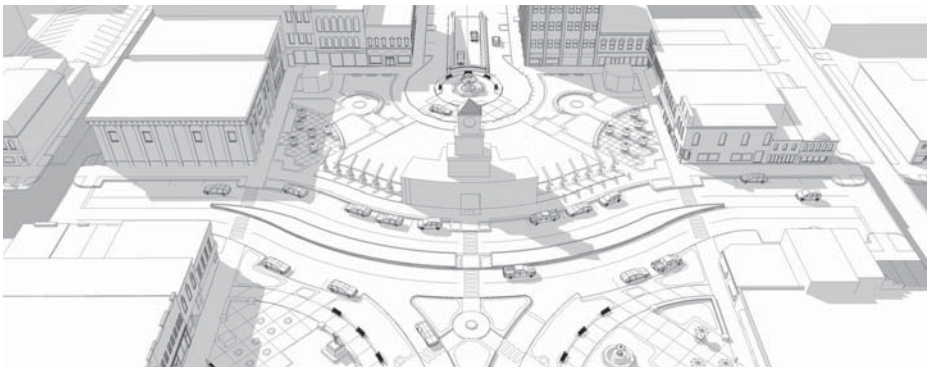
Iconic Structure Example

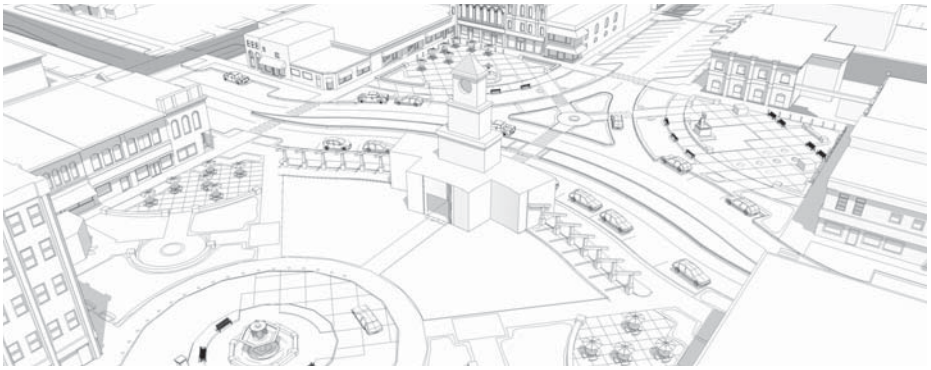
The study of these design ideas and spatial relationships are critical to further the design development potential of Civic Square.



Civic Square Schematic Design 'A'

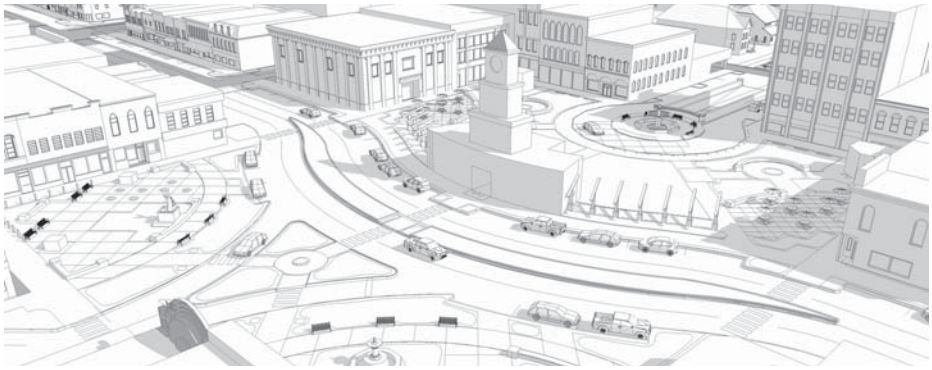
Sketch-Up Model 'A' - View from East Washington Street

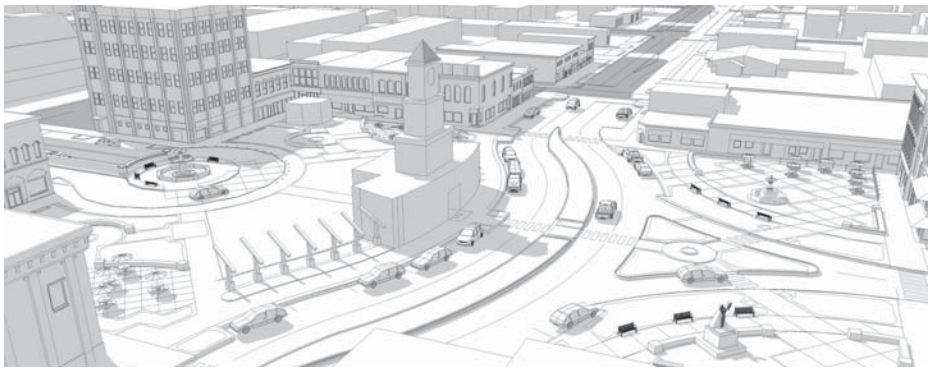




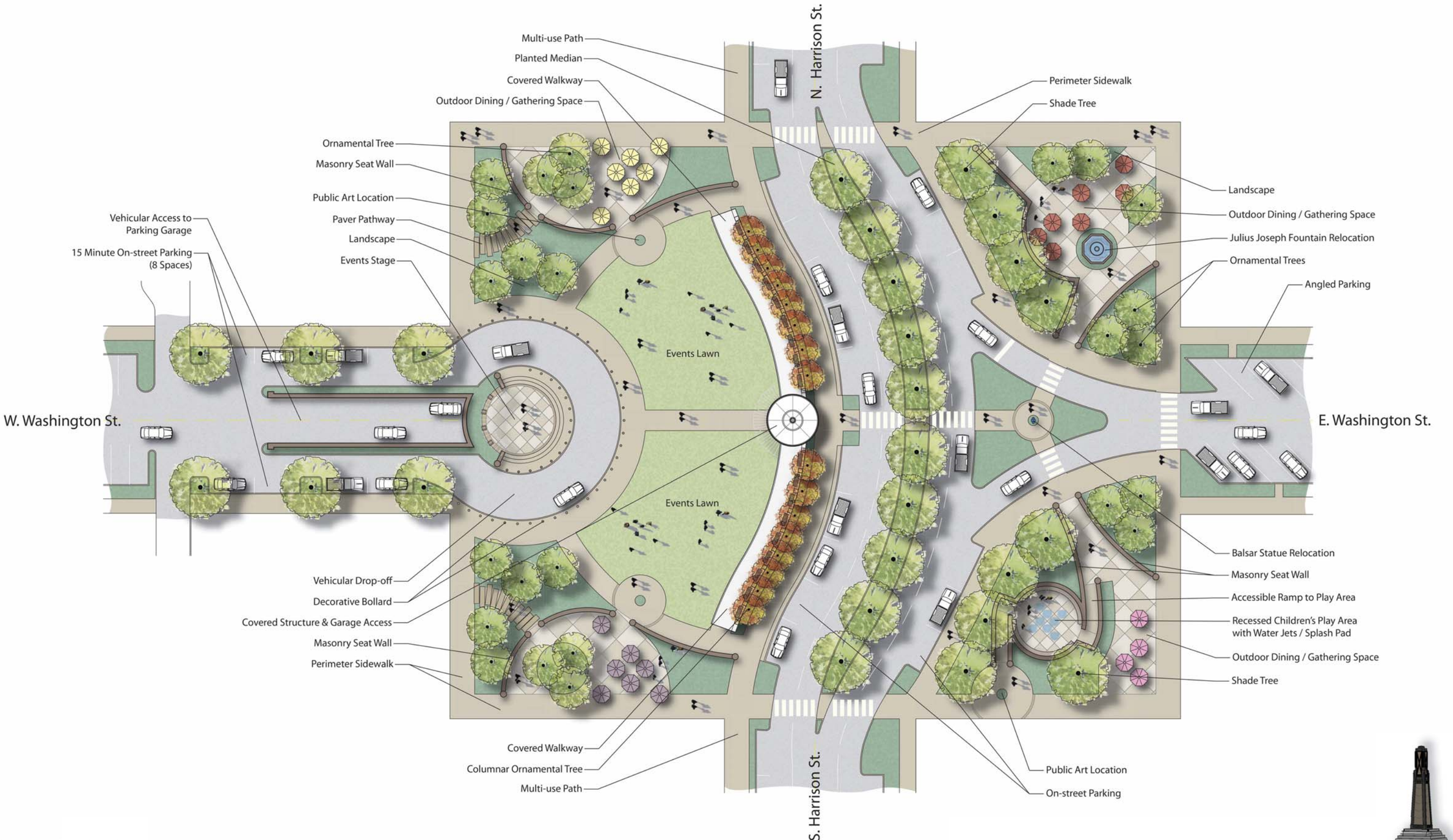
Sketch-Up Model 'A' - View from Southwest Corner

Sketch-Up Model 'A' - View from Northeast Corner



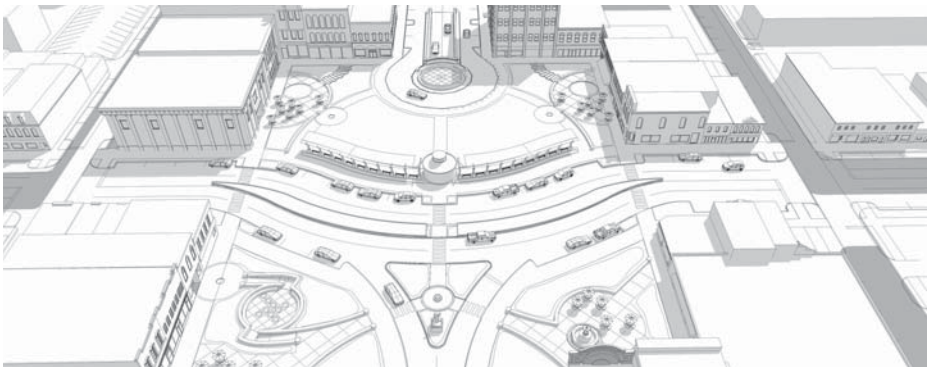


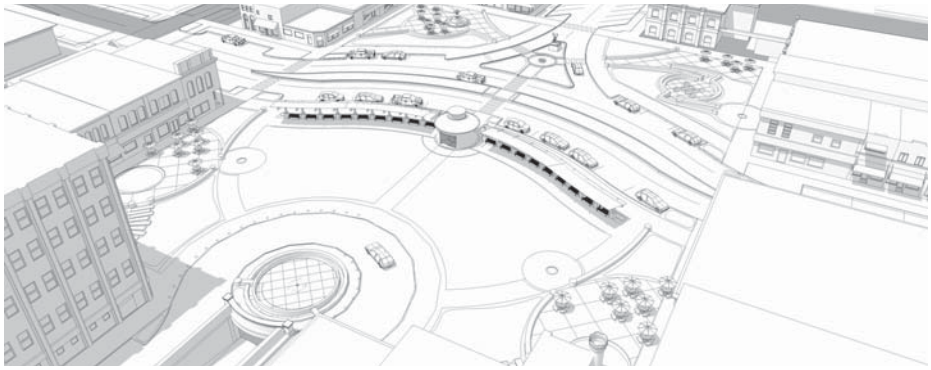
Sketch-Up Model 'A' - View from Southeast Corner



Civic Square Schematic Design 'B'

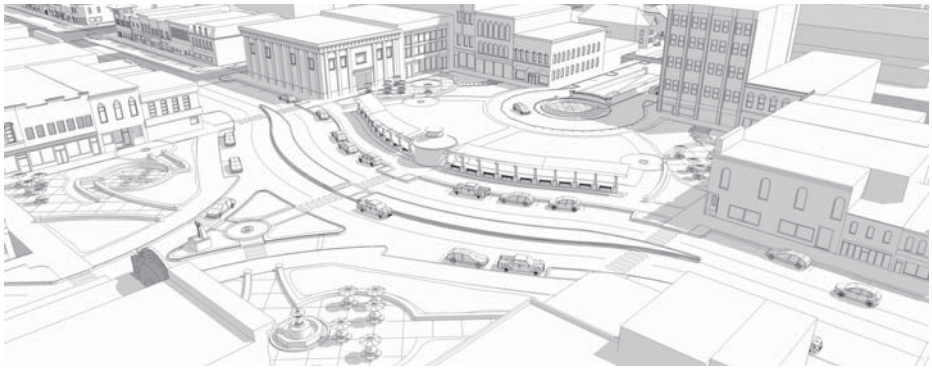
Sketch-Up Model 'B' - View from East Washington Street

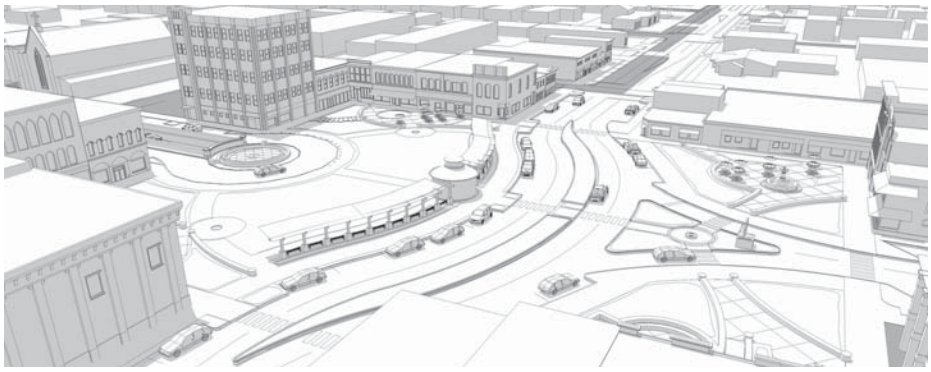




Sketch-Up Model 'B' - View from Southwest Corner

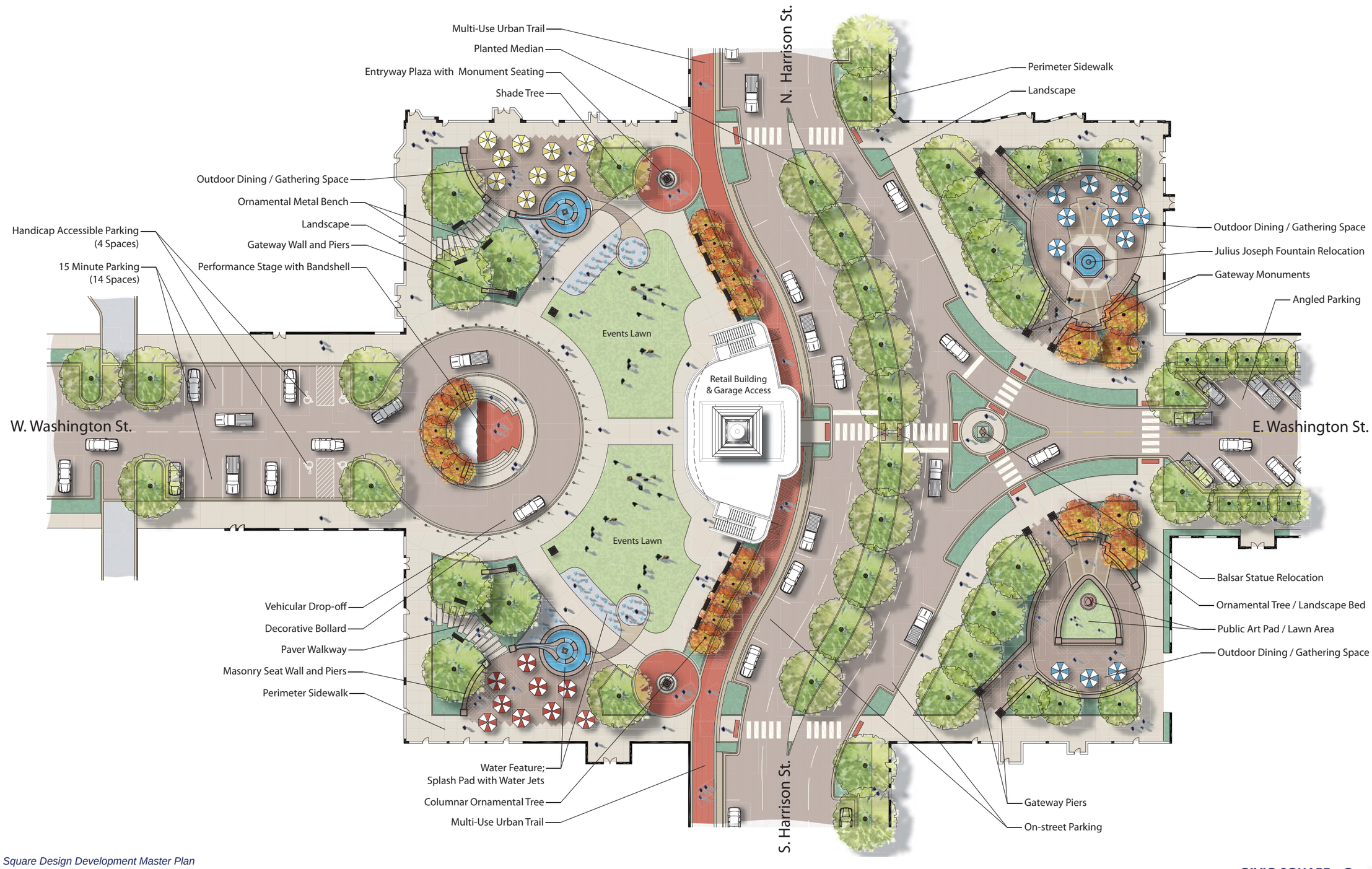
Sketch-Up Model 'B' - View from Northeast Corner



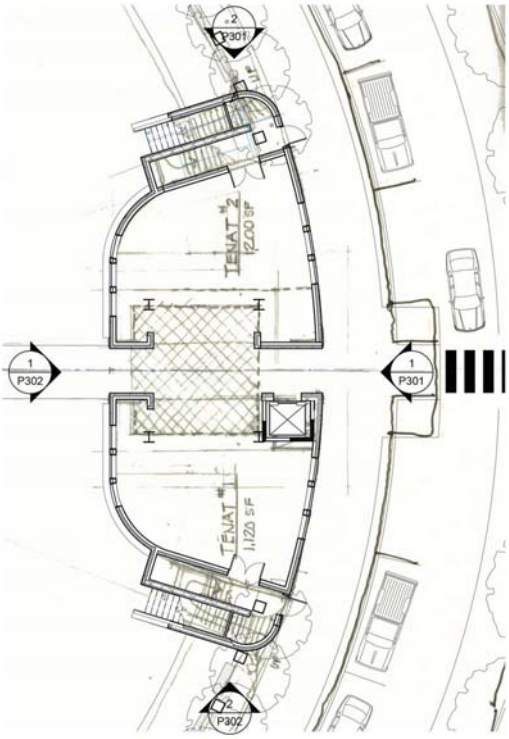


Sketch-Up Model 'B' - View from Southeast Corner

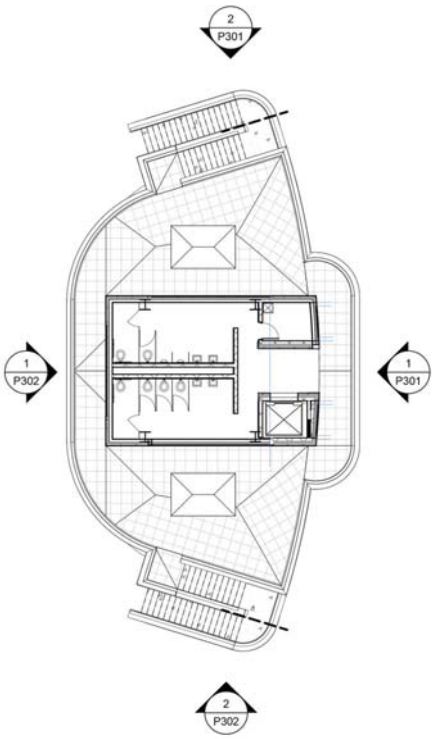
Design Development Master Plan



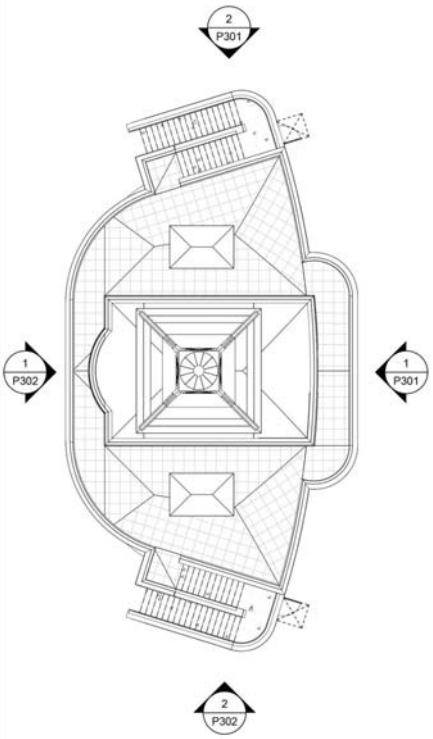
Civic Square Pavilion



1st Floor Plan



2nd Floor Plan



3rd Floor Plan

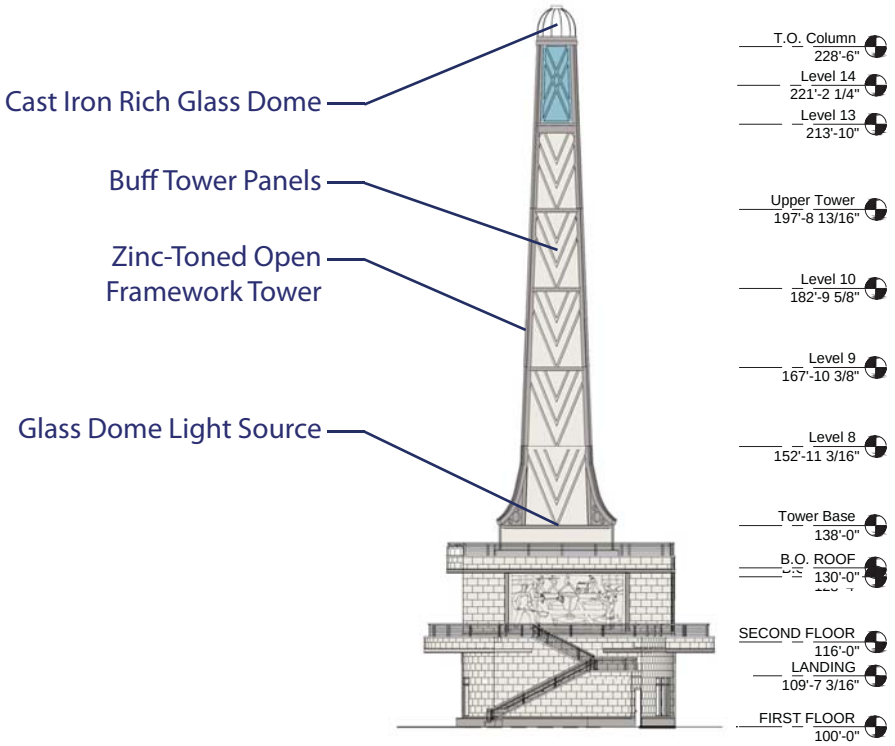
A monumental pavilion is proposed for Civic Square. This pavilion will create an identity marker for the City of Shelbyville and an attraction to the downtown commercial district. The height of the pavilion spire should be tall enough to be easily seen in all directions from the City limits especially along I-74. The modern architectural style is proposed to exude a Civic presence and complement the Art Deco style that is seen in other structures on Civic Square.

The first floor will have two open spaces that can be rented to small businesses, such as a restaurant, café, candy, coffee, ice cream, florist or gift shop, which will animate Civic Square and provide a central meeting place. The base on the west side of the first floor is designed to double as a seat wall. The second floor is to have a large open deck and public restrooms. These can be accessed by monumental stairs at either end of the structure or by the elevator. In the event that below grade parking were to be built under Civic Square, the basement of the pavilion would be connected to the proposed sub-level parking structure utilizing a central elevator / stairwell shaft.

The base of the structure is to have a dark tone granite with large format smooth limestone blocks above. A decorative limestone band near the top of the wall can be used as a "donor panel" - recognizing local businesses and individuals providing support for the capitol campaign. The top of the walls are to have a sloped limestone cap. The railings at the stairs and second floor are to be stainless steel with horizontal cables. Panels on the walls of the second floor walls will allow limestone reliefs to be designed. The tower portion of the pavilion is planned to be a steel structure in a dark bronze color with "limestone" panels inside to emulate the design of the existing post lights on the Court House steps. The top of the tower is to have translucent glass panels and dome so it can be lit from below and be a beacon for Civic Square center.

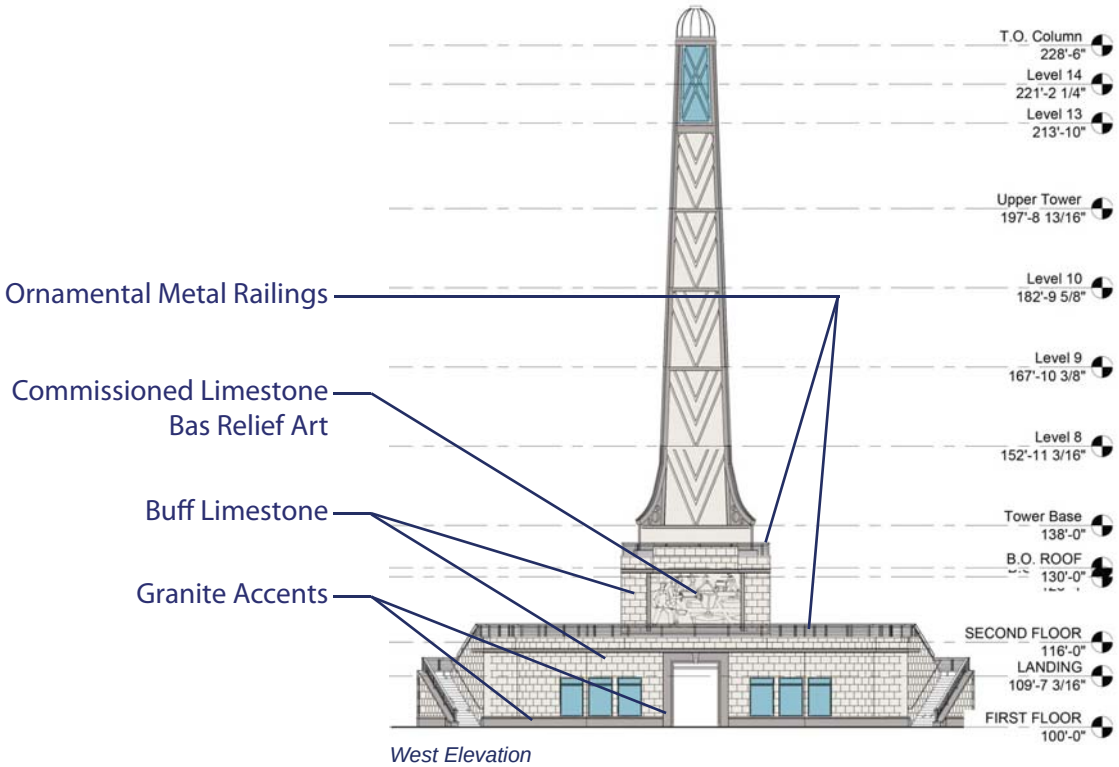
Civic Square Pavilion

Tower Materials



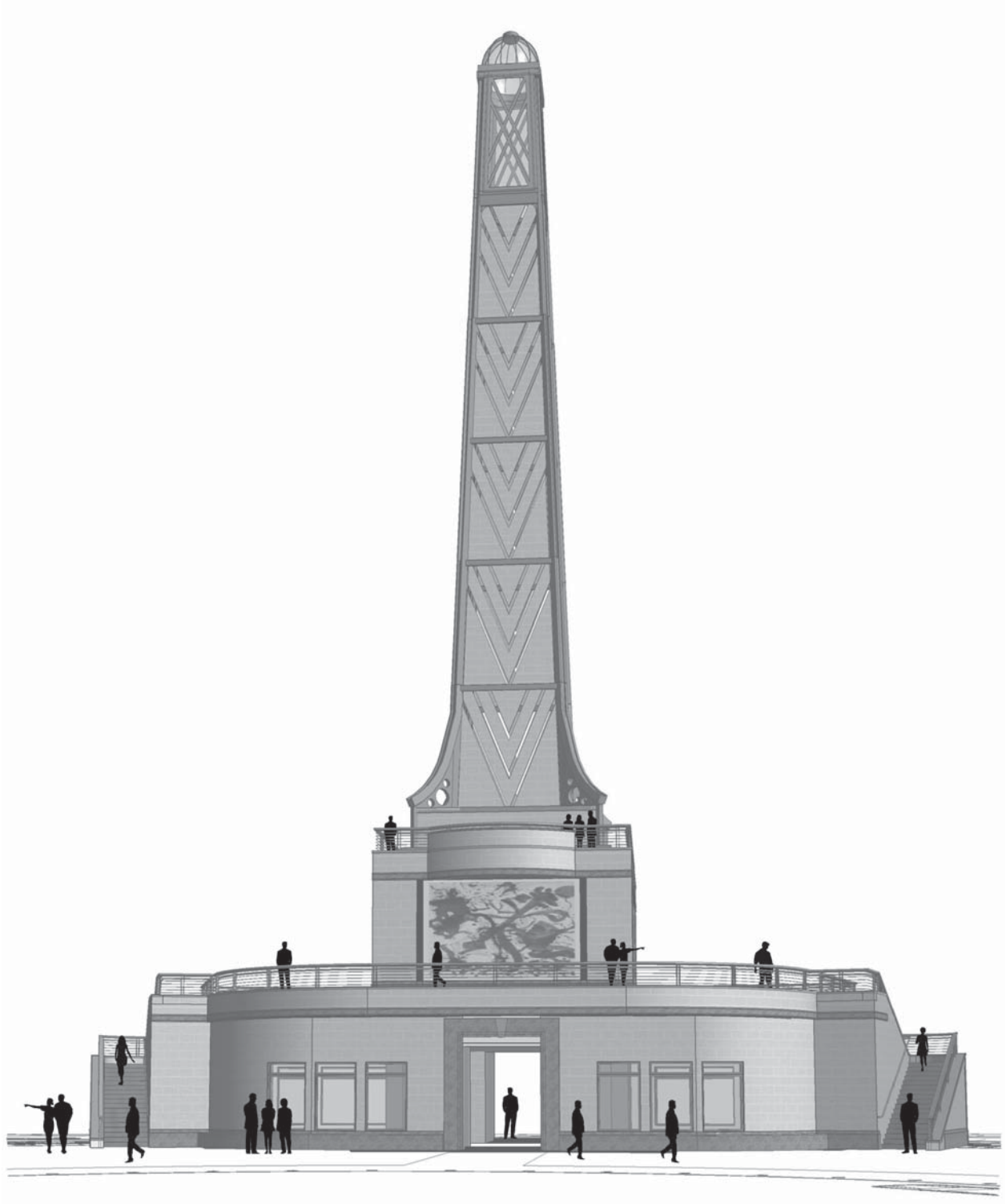
South Elevation

Building Materials



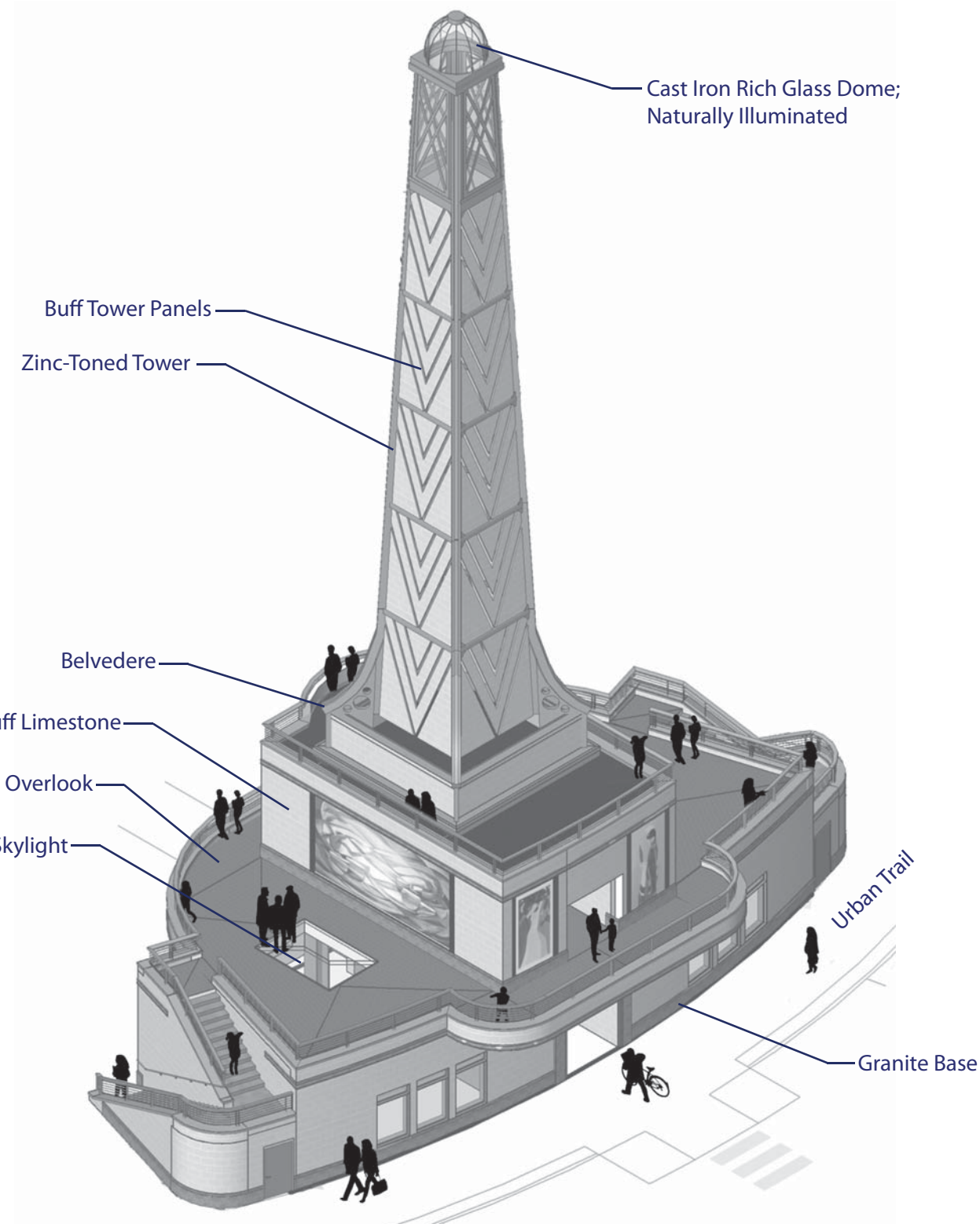
West Elevation

Civic Square Pavilion



Perspective Looking East

Civic Square Pavilion



Bird's-eye Perspective Looking Northwest

Civic Square Rendering

The Public Green Rendering

Urban Trail at The Public Green Rendering

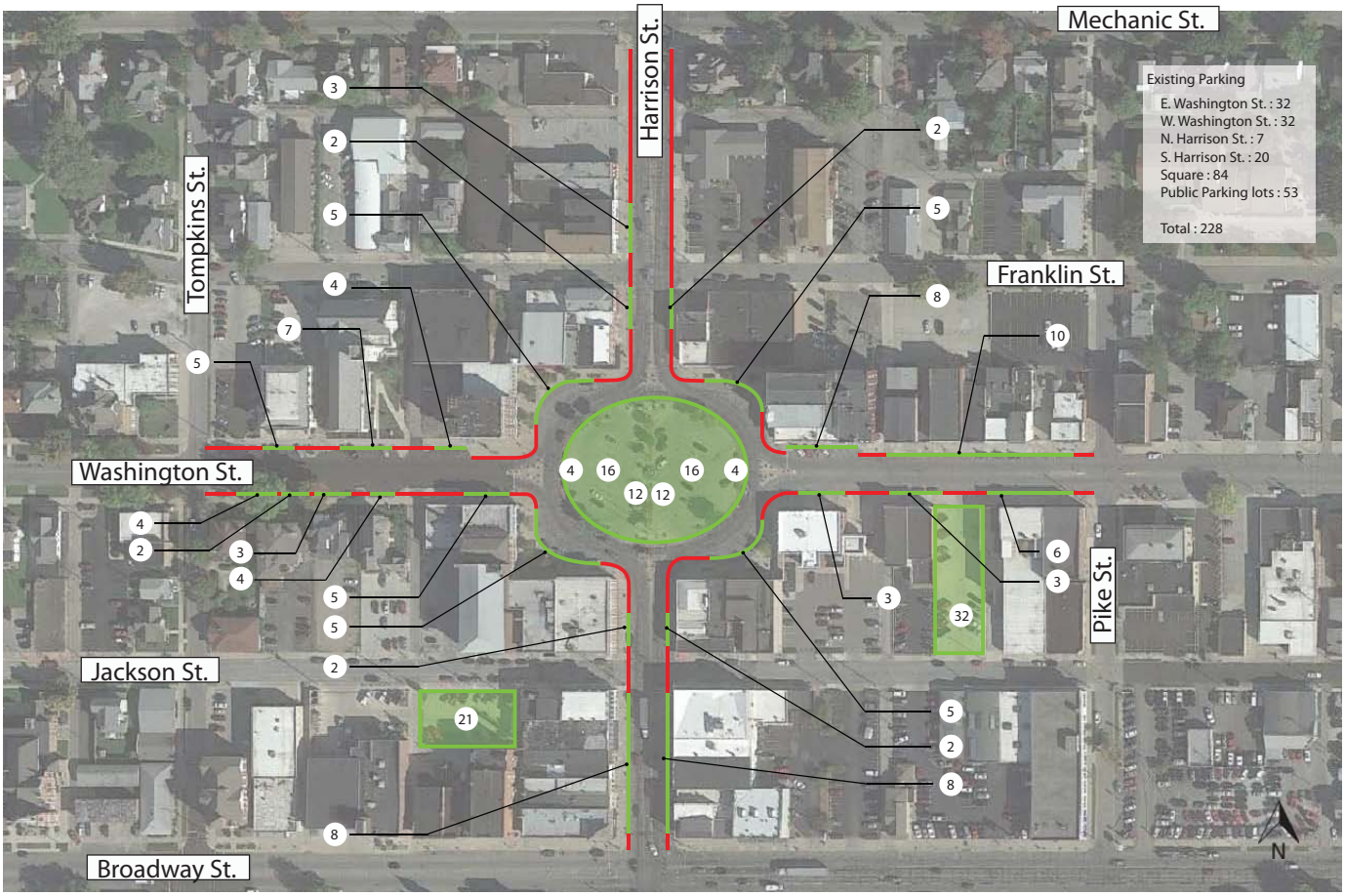
Urban Trail at Shelby County Courthouse Rendering

Section D

Parking Study

SHELBYVILLE
PRIDE IN PROGRESS

Downtown / Civic Square Parking



Convenient automobile parking is critical to supporting a successful downtown commercial core and creating opportunities for viable downtown businesses. Shoppers desire easy access to local retail offerings. The community attitude survey showed the majority of shoppers are willing to walk a few blocks from their parked car to a store. Not surprisingly, business owners also desire convenient access for their customers.

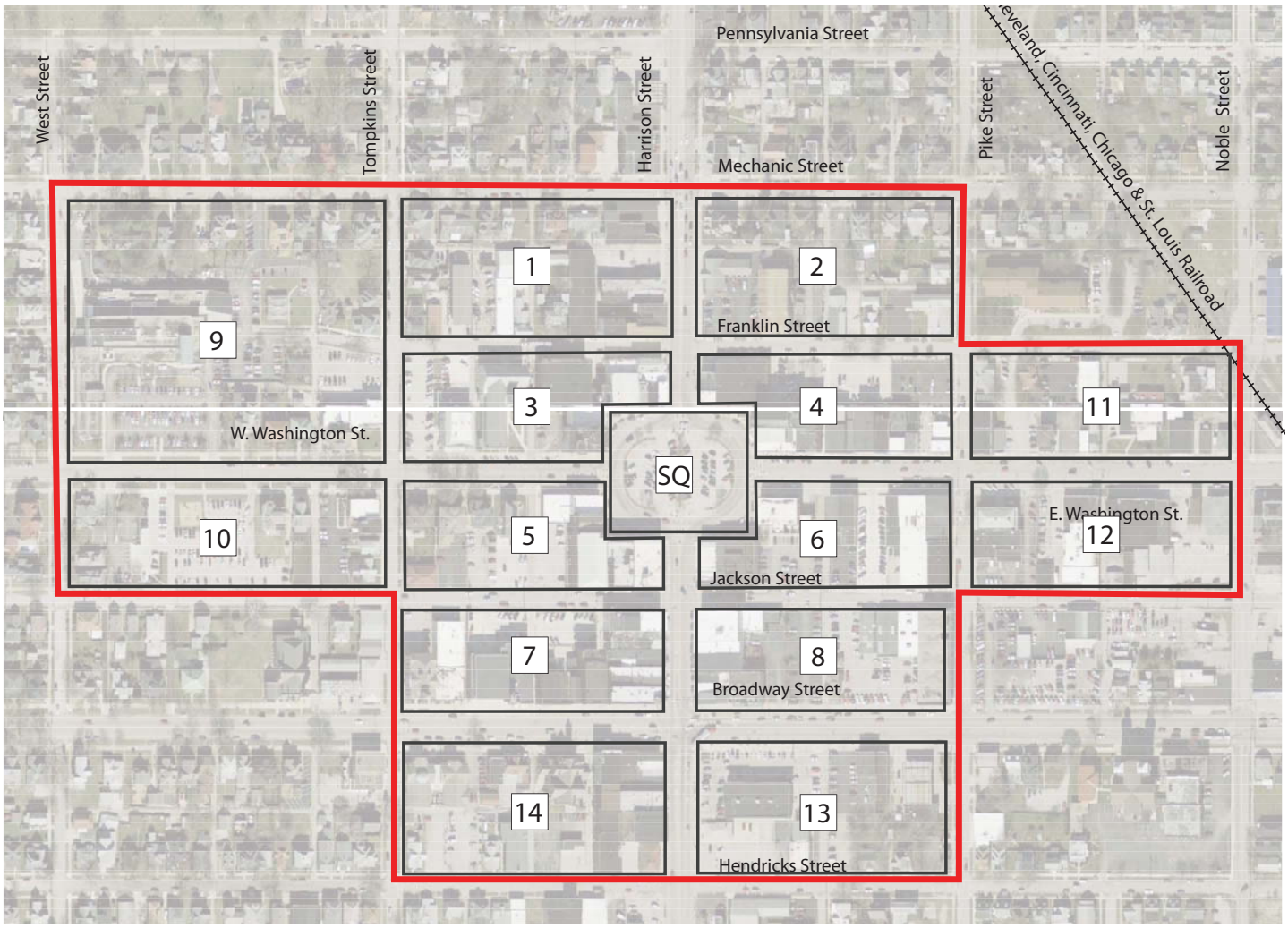
The graphic above displays the current number of public parking spaces within Civic Square and along streets within two blocks. While many concerns over the amount of available parking were voiced throughout the public engagement process, the community attitude survey revealed that most saw current parking availability as adequate.

The above graphic illustrates 228 existing public parking spaces that are convenient to Civic Square. A goal of this study is to maintain these 228 spaces while converting Civic Square from a parking lot to a public plaza, while also acknowledging that parking needs will grow. Shelbyville's anticipated growth in retail and housing means more shoppers and tenants with expanded parking needs. This study outlines measures that can meet those needs.

Supply / Demand Study

Shelbyville Parking System

For the purpose of this study, parking assets in downtown Shelbyville will be referred to as the "Parking System". While not organized under a single management system, the cumulative parking resources in downtown, both privately and publicly owned, provide the parking for employees, visitors and residents of downtown. The area for the parking study is focused on the blocks around the intersection of Washington and Harrison Streets. The boundaries and blocks are shown below:



The Parking System consists of off-street parking lots and on-street parking spaces. A majority of the off-street parking lots are owned and maintained by private land owners, including churches, private businesses and other organizations. The City maintains eleven public parking lots in the study area and all on-street parking. The Parking System operates without end user parking fees. Although there is a cost to build and maintain the parking spaces, there is no user fee for those who park downtown.

The regulation of the parking system consists of private property owners monitoring their parking lots, and the City providing enforcement of No Parking Zones, ADA spaces and other ordinance restrictions. Currently, the City provides very light enforcement of the 2-hour time limits for on-street parking.

Parking Supply and Demand

Parking Supply

This study has identified approximately 1,553 parking spaces in the focus area. There are 485 on-street parking spaces. Some are striped and marked as individual spaces and some are without delineation. There are 1,068 off-street parking spaces, 384 are operated by the City with 684 privately owned. In total, the City has control of 869 parking spaces in the study area or approximately 56% of capacity.

The most notable City owned lots are the 32 spaces on Block 6, the 64 spaces in the center of the Public Square and the 141 spaces on Block 10.

Parking Demand

Carl Walker, Inc. conducted in person parking occupancy counts on August 2nd and 3rd, 2016 during morning and afternoon peak accumulation times. The parking accumulation counts were similar on both days, with a slightly higher afternoon peak on August 3. The findings and projections for the remainder of the report are based on the August 3 vehicle parking counts.

Taken as a whole, parking demand in the study area is approximately 50% of the parking supply. There is an area of higher parking demand concentrated around Major Hospital on Blocks 9 and 10.

E Washington St Public Parking Lot - Block 6

Notable Parking Findings

- The Public Square Parking was utilized at less than 50% of capacity at all count times. The Square has lower parking utilization than Blocks 3, 4, 5 and 6 that surround the Square.
- Blocks 9 and 10 are well utilized, but the demand appears to be mostly generated by Major Hospital. When the hospital relocates, the west side of downtown will have reduced parking demand.
- Off-street parking was 54% occupied, while on-street parking was 45% occupied.
- There are numerous private parking areas with low utilization, such as the Eagles parking on Block 2 and the parking lots behind the Washington St. store fronts on Blocks 4 and 5.
- When considering only publicly available, municipal parking areas, the parking demand increases above 50% on Block 4, 5 and 8 and to 75% on Block 7. Overall, the public parking areas have an average occupancy of 51% and peak occupancy of 54%.

Supply / Demand Study

8/3/16

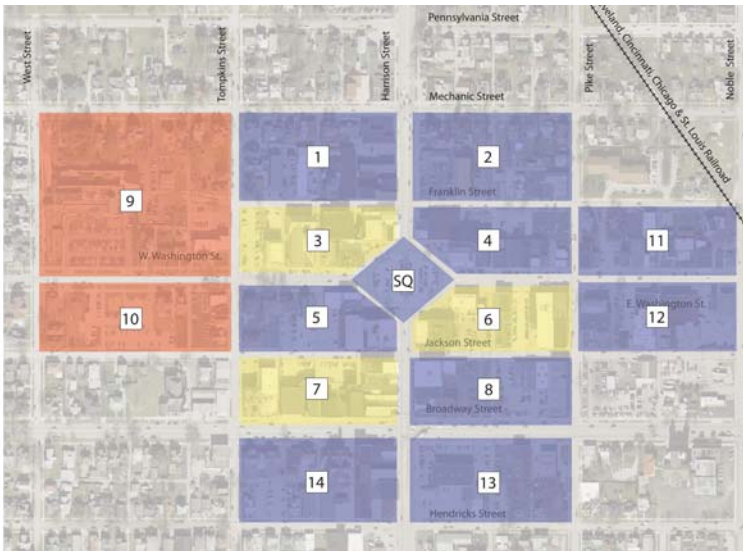
Current Total Off-Street and On-Street Parking

Block - Lot	Capacity	Morning	Afternoon	Average Occupancy	Peak Occupancy
Square	64	13	24	29%	38%
Block 1	19	1	1	5%	5%
Block 2	114	29	18	21%	25%
Block 3	95	54	46	53%	57%
Block 4	130	56	64	46%	49%
Block 5	113	51	42	41%	45%
Block 6	113	61	68	57%	60%
Block 7	65	39	45	65%	69%
Block 8	75	32	31	42%	43%
Block 9	253	188	193	75%	76%
Block 10	192	158	148	80%	82%
Block 11	69	20	21	30%	30%
Block 12	69	19	25	32%	36%
Block 13	92	12	27	21%	29%
Block 14	90	38	44	46%	49%
TOTALS	**1,553**	**771**	**797**	50%	51%

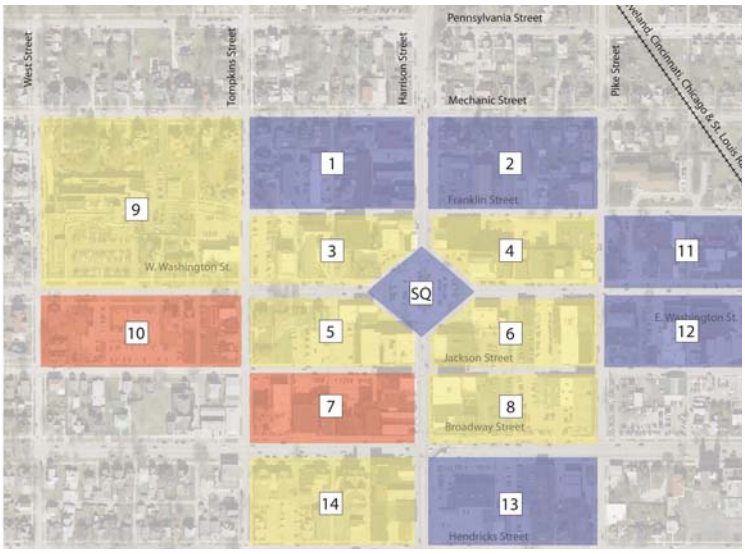
8/3/16

Total Current Municipal Public Parking Demand

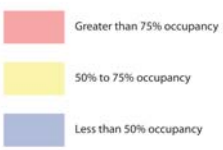
Block - Lot	Capacity	Morning	Afternoon	Average Occupancy	Peak Occupancy
Square	64	13	24	29%	38%
Block 1	19	1	1	5%	5%
Block 2	35	12	5	24%	34%
Block 3	35	19	15	49%	54%
Block 4	43	21	26	55%	60%
Block 5	36	21	16	51%	58%
Block 6	65	35	46	62%	71%
Block 7	51	31	38	68%	75%
Block 8	35	14	22	51%	63%
Block 9	58	20	32	45%	55%
Block 10	174	154	143	85%	89%
Block 11	69	20	21	30%	30%
Block 12	32	11	14	39%	44%
Block 13	92	12	21	18%	23%
Block 14	61	29	43	59%	70%
TOTALS	**869**	**413**	**467**	51%	54%



Current Parking Demand Map - All

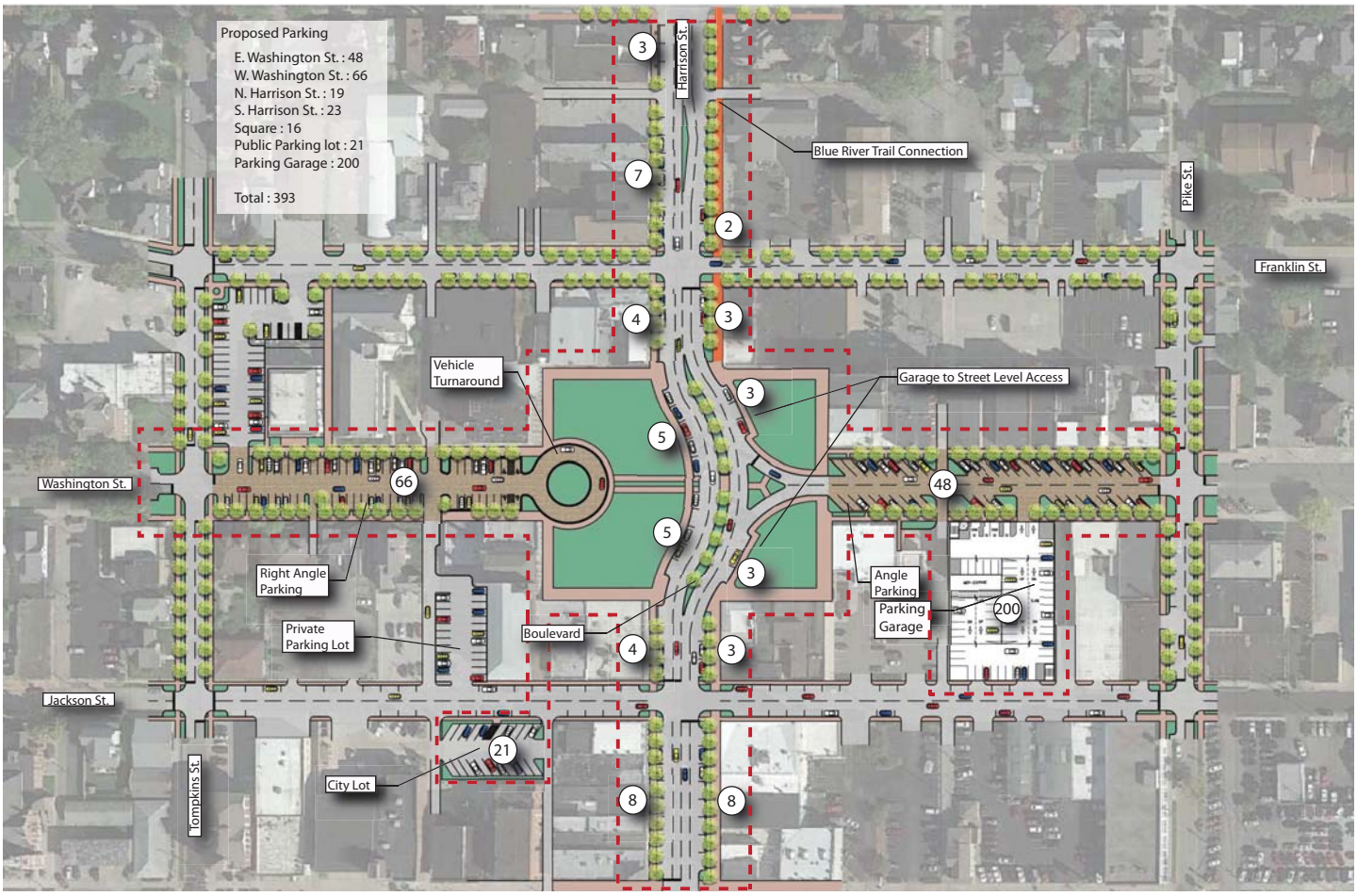


Current Parking Demand Map - Public only



Supply / Demand Study

Future Parking Projections



Shelbyville will experience a significant change in parking needs with the relocation of Major Hospital. This will alter the dynamics on the west side of downtown, not only for parking and transportation, but overall downtown activity. The City has identified several new projects and development opportunities as outlined within this Downtown Opportunity Plan and Shelbyville's Strategic Investment Plan. In developing future parking demand estimates, this study has considered the following changes and have incorporated them into the demand model:

- Relocation of Major Hospital
- Renovation of the Civic Square
- Living Streetscape improvements on East and West Washington St.
- Creation of the Multi-Generational Center on Major Hospital Site
- Development of Brownstone Townhomes on the south side of West Washington St.
- Redevelopment of unused space in the Methodist Building, Bradley Hall, Sears Building, Knights of Pythias, BMV and Pasghetti's buildings
- Creation of 200 space parking structure on East Washington St.

The following summary presents the detailed parking impact from each of these development opportunities:

Parking Supply

Civic Square

Current Parking Supply (On and Off Street)	84
Parking Supply after Modifications	16
Net Change in Parking Supply	- 68

Washington Street Modifications

East Washington

Current Parking Spaces	30
Future Parking Spaces	46
Net Change in Parking Supply	+ 16

West Washington

Current Parking Spaces	29
Future Parking Spaces	65
Net Change in Parking Supply	+ 36

East Washington Garage

Current Spaces	48
Future Spaces	200
Net Change in Parking Supply	+152

*Multi Generational Center **

Current Parking Supply (Hospital)	163
Parking Supply after Modifications	135
Net Change in Parking Supply	- 28

Brownstone Townhomes

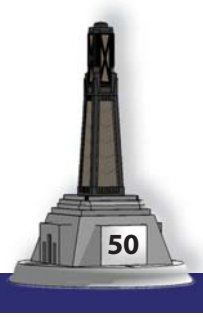
Current Parking Supply (Hospital)	141
Parking Supply after Modifications	105
Net Change in Parking Supply	- 36

Net Gain / Loss of Parking from Heritage Projects

Loss of 16 spaces west side of Methodist Building	- 16

Net Changes in Parking Supply **+ 56**

** At the time of this report's publication, the Multi-Generational Center had an uncertain future due to many factors, including the unknown property and facilities ownership structure and the coordination of multiple entities proposed to be operating there. This report illustrates proposed parking counts based upon a fully realized site plan and building program per the City of Shelbyville's 2016 Strategic Investment Plan. Further study of this site, its utilization and parking needs will be warranted when contingencies have been eliminated and the building program has been adequately established.*



Supply / Demand Study

Parking Demand

Development Projects

North Harrison Senior Housing

Building currently under construction.
All parking needs will be contained on site.
No increase in demand.

Multi Generational Center

Change in Parking Demand	
Hospital	- 163
Theater - Peak Demand	85
Multi-Generational Center	31
Net change in Parking Demand	- 47

Housing

Brownstone Townhomes

Change in Parking Demand	
Hospital	- 141
Apartments	
20 Units at 1.75 space per unit	35
Net change in Parking Demand	- 106

Architectural Heritage Projects

Estimated Parking Demand

Methodists Building	
Housing	17
Hotel	30
Bradley Hall / Sears Building	
Housing	19
Commercial	7
Restaurant	49
Knights of Pythias/BMV/Pasghettis	
Housing	40
Commercial	6
Restaurant	60

Increased Parking Demand from Heritage Projects and Brownstone Townhomes	
Housing and Hotel (75% of Peak Demand)	105
Commercial and Restaurant (25% Captive Market Reduction)	92
Estimated Parking Demand from Housing and Heritage Projects	+ 197
Net Gain in Estimated Parking Demand	**+ 44**

In total there is a net gain of 56 additional public parking spaces, and a net gain in parking demand of 44 additional spaces. This leaves the City with remodeled and vibrant new developments, while still retaining an ample supply of parking to meet demand. This is largely possible because the hospital is being replaced with lower density parking demand and development activity can take advantage of the newly opened space.

The projected parking demand generated by the new commercial and restaurant development was estimated using information from publications by the Urban Land Institute and National Parking Association. The residential parking demand was calculated at one parking space for each one-bedroom residence and 1.75 parking spaces for each two-bedroom residence. Parking demand for housing and the hotel will peak in the evening and overnight. The estimated daytime parking demand for these land uses is approximately 75% of peak evening parking demand. The new developments will create parking demand for 197 spaces during peak daytime hours.

Public Square Parking Lot

Much of this new demand can be accommodated in the parking lot on Block 10 after Major Hospital relocates. The remainder will be spread out across Blocks 3, 4, 5, 6 and 7. The proposed parking garage on Block 6 will likely not fill up from the increased demand and removal of parking from the Civic Square. However, it will provide vital parking spaces as parking demand pushes east. Without the parking garage, Blocks 3, 4, 5, 6, 7, 8, 9, and 10 will all exceed 80% occupancy at peak parking demand, with the potential for a number of Blocks to exceed 90%.

Almost all of the newly created parking spaces will be publicly available municipal parking. It is assumed that residential redevelopment projects will rely on public parking, as there is not an option to include parking spaces within the redeveloped historic buildings. This will result in higher parking utilization west of Harrison St. Blocks 3, 4, 5, 7, 9 and 10. These blocks are projected to have peak occupancy over 75% .

Shared Parking Opportunities

Many communities utilize shared parking methodology to determine and provide the appropriate amount of parking necessary in areas that have higher levels of development and building space density. Shared parking is the concept that cooperative land uses with different usage peak times can both meet their parking demand in the same parking facilities. Daytime office buildings have peak parking demands at approximately 10 am to 2 pm on weekdays, while entertainment venues, theaters, restaurants and residential land uses will likely have evening and weekend peak parking demands. Rather than create total parking supply as the peak of the office building daytime demand PLUS the peak of the entertainment evening demand, a shared parking scenario allows far less total parking spaces, but still accommodates the peak parking demand of both land uses because they peak at different times.

Supply / Demand Study

Shared Parking Opportunities *(cont'd)*

In Shelbyville, there are several daytime use parking lots (public and private) that have low parking utilization in the evening or overnight. These lots could serve as residential overnight parking through a shared use agreement between the parking lot owner and the residents. This would allow the development or redevelopment without the need for additional parking.

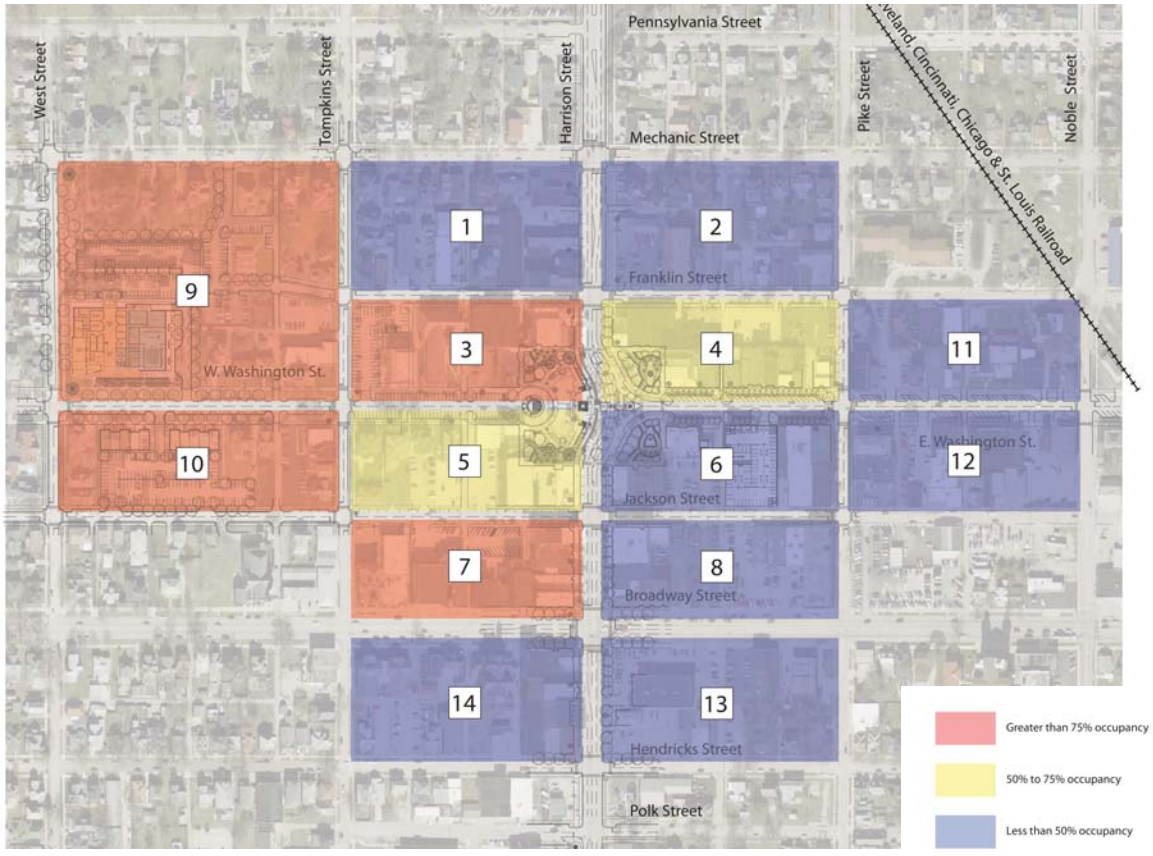
The public on-street and off-street parking spaces also provide an opportunity for residential shared use parking. A residential permit program would allow downtown residents to park on designated City streets and lots overnight and beyond the two-hour time limit. The permits could be issued for free or at a small annual administrative cost. Police would enforce overnights to make sure the vehicles parked on streets and in City lots were permitted. This also provides additional monitoring of nuisance and abandoned vehicles.

Future Parking Supply and Demand Projections
Total Off-Street and On-Street

Block - Lot	Capacity	Morning	Afternoon	Average Occupancy	Peak Occupancy
Block 1	19	1	1	5%	5%
Block 2	112	29	18	21%	26%
Block 3	92	71	61	72%	77%
Block 4	137	68	76	53%	55%
Block 5	124	75	66	57%	60%
Block 6	269	97	115	39%	43%
Block 7	65	43	49	71%	75%
Block 8	75	32	31	42%	43%
Block 9	224	173	190	81%	85%
Block 10	156	126	123	80%	81%
Block 11	69	20	21	30%	30%
Block 12	69	19	25	32%	36%
Block 13	92	12	21	18%	23%
Block 14	90	38	44	46%	49%
TOTALS	**1,593**	**804**	**841**	52%	53%

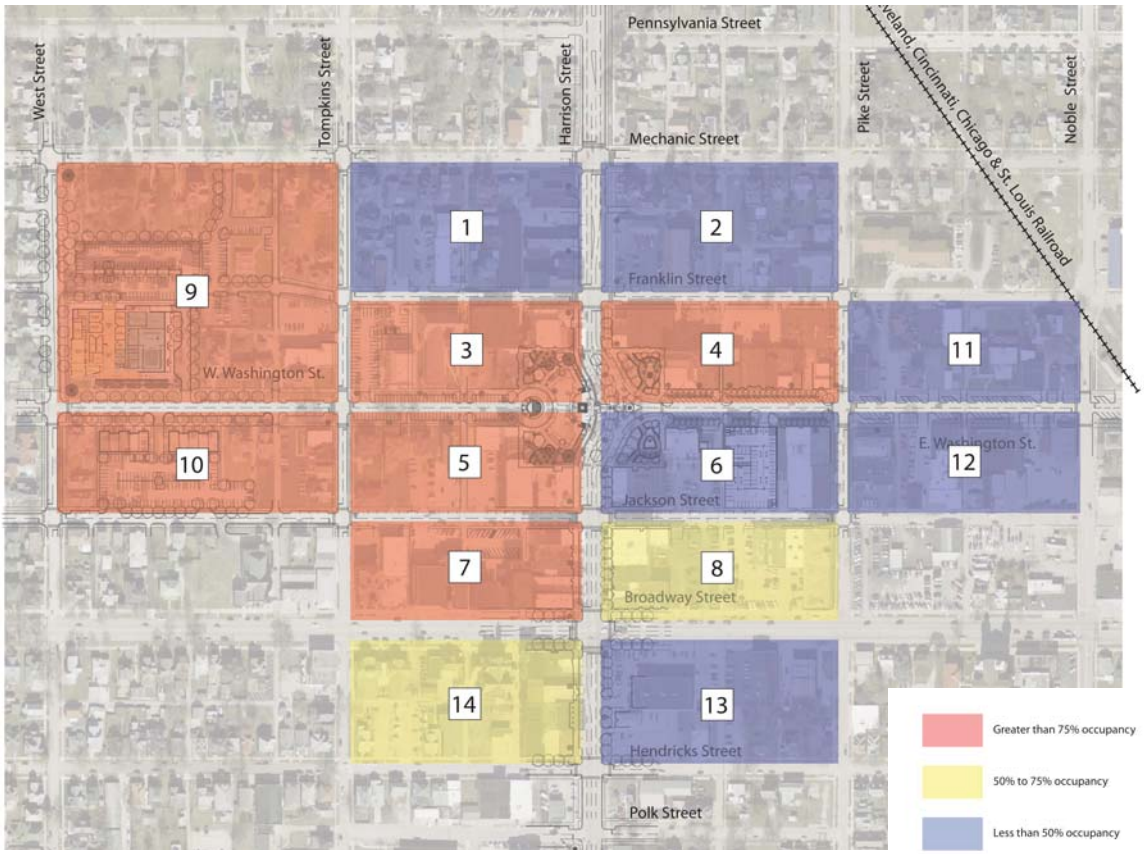
Future Parking Projections

The charts and maps on pages 53 and 54 show projections of parking supply and demand accounting for renovated streescapes and development opportunities:



Future Projected Parking Demand Map - All

Future Municipal Public Parking Demand Projections Block - Lot	Capacity	Morning	Afternoon	Average Occupancy	Peak Occupancy
Block 1	19	1	1	5%	5%
Block 2	33	12	5	26%	36%
Block 3	48	40	36	79%	83%
Block 4	50	33	38	71%	76%
Block 5	53	45	40	80%	85%
Block 6	238	79	101	38%	42%
Block 7	51	35	42	75%	82%
Block 8	35	14	22	51%	63%
Block 9	193	160	173	86%	90%
Block 10	138	122	118	87%	88%
Block 11	69	20	21	30%	30%
Block 12	32	11	14	39%	44%
Block 13	92	12	21	18%	23%
Block 14	61	29	43	59%	70%
TOTALS	**1,112**	**613**	**675**	58%	61%



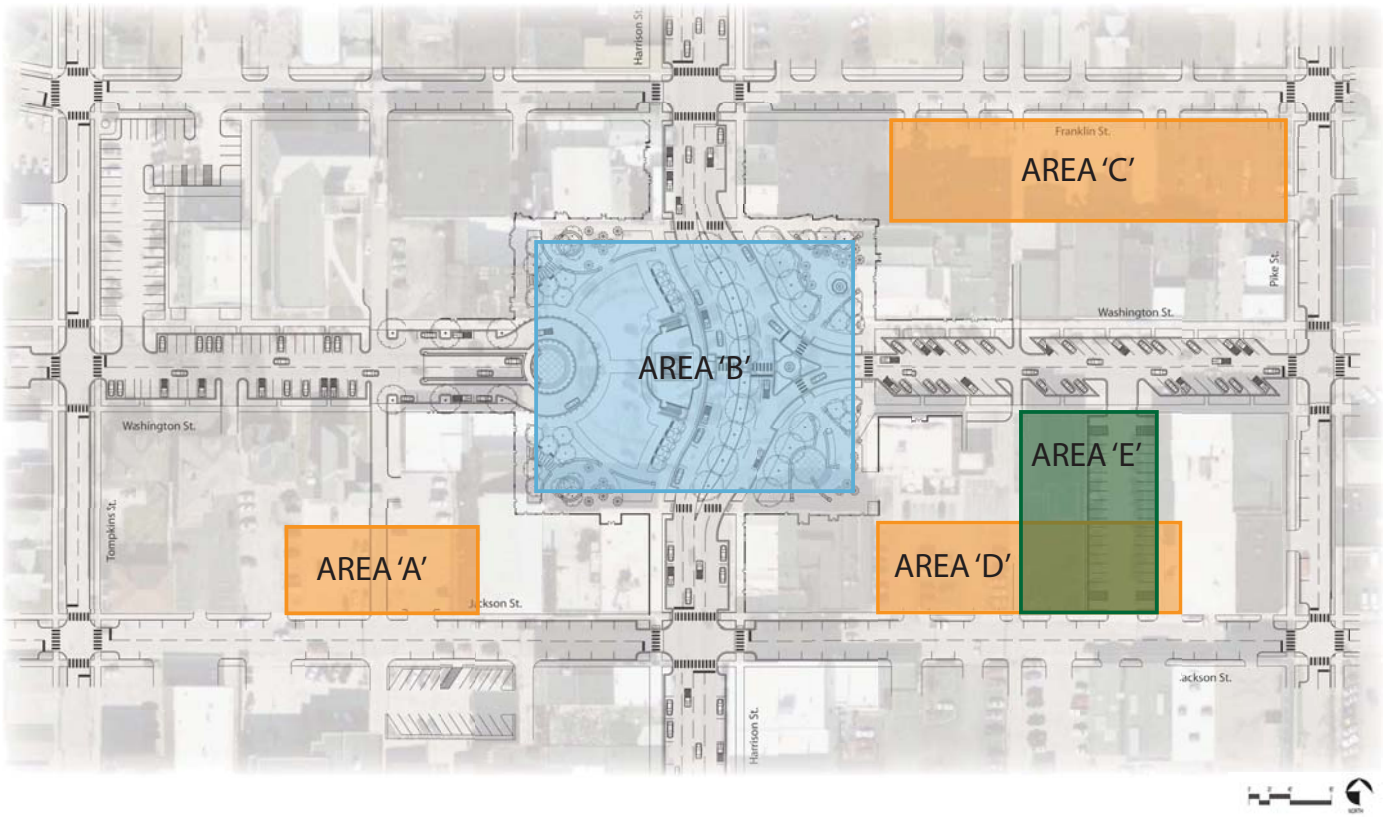
Future Projected Parking Demand Map - Public only

Primary Findings and Observations

This parking study is focused on measuring the existing parking supply and demand and then projecting future parking demand based on specifically identified projects. In the course of studying parking demand, there were other issues that became apparent, even if some were not specific to the scope of work identified for the study. A summary of the findings and observations follow:

- There currently is ample parking in downtown Shelbyville to meet the needs of the City. Peak parking occupancy is 51% of all parking and 54% of City controlled public parking, including on-street and off-street city owned parking lots.
- Based upon development scenarios provided, projected parking demand will increase even after Major Hospital moves out of downtown.
- The "Parking System" is not actively managed by any controlling City department or group. This is working well and is acceptable at this time due to the availability of open parking within close proximity to most destinations. Currently public parking spaces are approximately 54% occupied at peak demand times.
- It would be prudent for the City to conduct semi-annual parking supply and demand counts to monitor the effects of development on the Parking System and help determine when changes or additions to the parking supply are necessary.
- The hotel and residential redevelopment will become a complimentary land use in downtown. Peak parking demand for the new residential units and hotel will be overnight. The daytime parking demand for these land uses is conservatively estimated at 75% of peak evening demand.
- The residential development on the west side of the Civic Square will be in renovated historic buildings, therefore little to no parking can be located on site. The municipal lot on Block 10 is a potential location for residential parking. This would be in addition to special "loading and unloading" zones near the entrance to these residential developments. Additionally, an overnight on-street residential permit program for downtown residents would allow more parking options for those living downtown.
- A new 200 space parking garage is proposed and included in the parking supply and demand projections. A garage is more expensive to build than a parking lot, and is a long term commitment to parking as a land use. Planning, design and construction of this parking garage should wait until development momentum necessitates the need for more parking.
- As development increases and momentum builds, it will be important to manage the parking system. This includes planning for new parking needs, maintaining existing parking facilities, modifying zoning regulations as necessary, and providing high levels of customer service. MainStreet Shelbyville, Inc. may be a possible partner in providing customer service programs, hosting a parking website and promoting parking needs in the downtown.
- The City has minimum parking requirements for downtown development in the BC (Business Central) zoning district. The City should determine whether to continue this practice, or explore options that do not require parking requirements in the BC district. Parking requirements can unintentionally encourage the demolition of structures to create parking lots. This would be in conflict of the City's goals of infill development.
- Efforts should be made to engage private land owners in the Parking System. It can be difficult to negotiate the sharing of private property for public parking unless there is a financial benefit such as paid parking. Regardless, downtown property owners should be encouraged to be integral parts of the downtown community.
- Events at the Strand Theater on south Harrison St. can generate an influx of parking demand. This demand is routinely in the evening and can be accommodated by on-street parking on nearby streets and public parking lots. As new development opportunities come to fruition, some of the parking demand may be shifted to the new parking garage on Block 6. A two block walk for a special event is generally considered to be a reasonable expectation.

Parking Structure Study



Potential Parking Structure Area Alternatives

Upon achieving the expansion of commercial / retail activities in the downtown core, additional parking may be required. The concept and schematic designs retain nearly the same number of parking spaces as currently exist in downtown. As downtown redevelopment activities grow, additional parking near Civic Square will become necessary. The Parking Consultants developed nine different parking structure design alternatives for City consideration; five alternatives to a sub-surface structure to be located under Civic Square and four above-ground structures located within walking distance of Civic Square.

It should be noted that:

1. This report does not recommend the construction of structured parking at this time, given current parking availability versus demand.

2. At some point in the future, as downtown redevelopment gains steam, structured parking will become warranted.

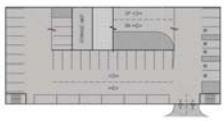
3. Carl Walker, Inc. Parking Consultants produced this parking assessment and analysis without any explicit or implicit representations to be the sole provider of design and engineering services for the construction of structured parking in the City of Shelbyville, Indiana, whenever that need may be warranted in the future. The City retains full authority in determining consulting service providers for such services both now and in the future.

Parking Structure Study Areas 'A', 'C' & 'D'

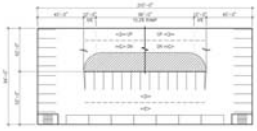
The Parking Consultants were asked to briefly consider opportunities for above ground parking at sites A, C and D. Based on rough dimensions, the sites provide enough space for structured parking, but are not large enough for efficient parking. Due to the site limitations, the structures have to be laid out with single loaded parking bays on one side or extremely inefficient 60 degree parking on both bays. This leads to parking efficiencies exceeding 420 square feet per space. Inefficiencies that large will significantly increase the overall cost per space of parking.

In order to develop an efficient parking structure with an average of 325 square feet per parking space, certain dimensions are necessary. A site that is at least 122 feet by 220 feet can provide a suitable footprint. This assumes other design elements such as stair / elevator towers in the corners, no street level or other occupied space, and easy vehicle entry / exit with the road system. There are also economies of scale between, for example, a 300 space structure and a 600 space structure with regard to spreading out mobilization and overhead costs across fewer parking spaces. A parking structure's architectural presence within a downtown is also an important consideration, as the structure façade and detailing can range from basic concrete panels to field placed brick and more. For an efficient, 300 space parking structure with architectural detailing to compliment the surrounding neighborhood, costs can range from $22,000 to $24,000 per space.

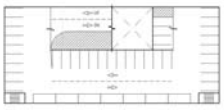
AREA 'A' DESIGN — *TOTAL SPACES - 117*



LEVEL 1 - 38 SPACES

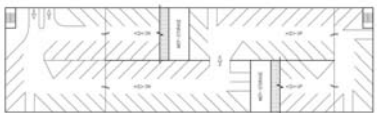


LEVEL 2 - 38 SPACES

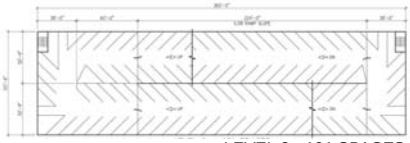


LEVEL 3 - 41 SPACES

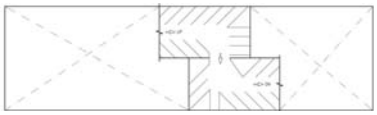
AREA 'C' DESIGN — *TOTAL SPACES - 200*



LEVEL 1 - 77 SPACES

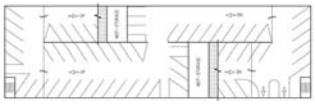


LEVEL 2 - 101 SPACES

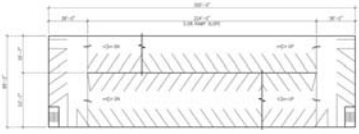


LEVEL 3 - 22 SPACES

AREA 'D' DESIGN — *TOTAL SPACES - 145*



LEVEL 1 - 55 SPACES



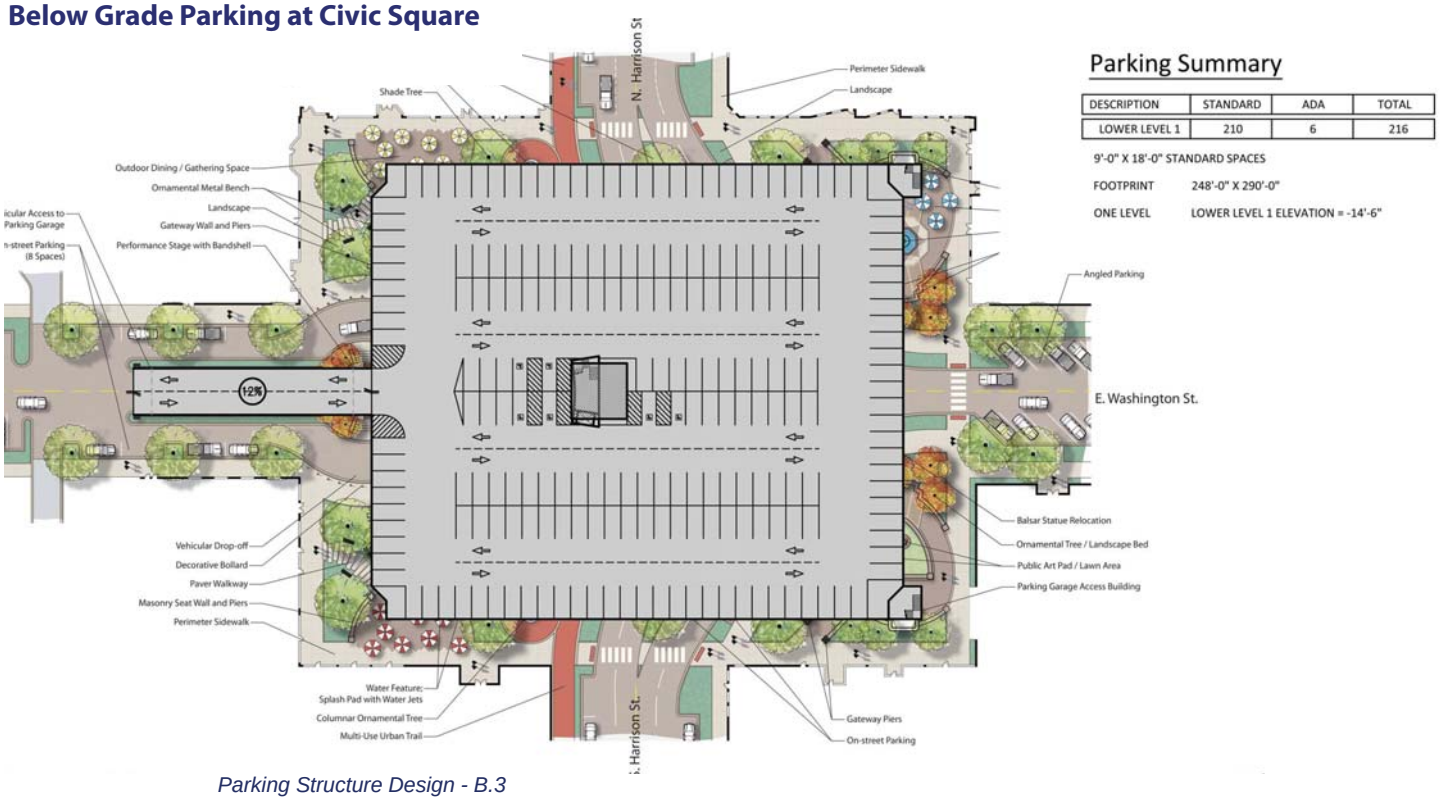
LEVEL 2 - 72 SPACES

LEVEL 3 - 18 SPACES

Parking Structure Designs 'A', 'C' & 'D'

Parking Structure Study Area ‘B’

Below Grade Parking at Civic Square



Parking Summary

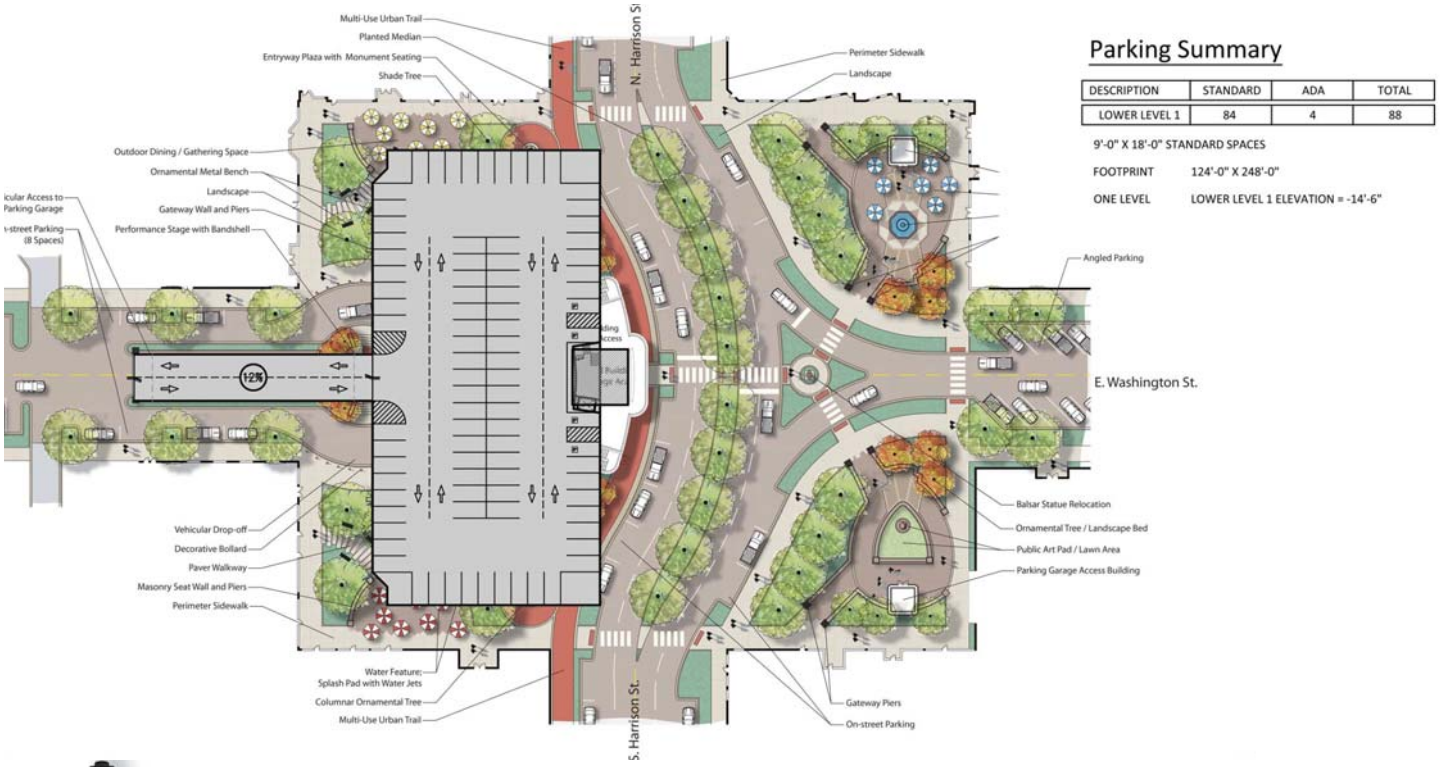
DESCRIPTION	STANDARD	ADA	TOTAL
LOWER LEVEL 1	210	6	216

9'-0" X 18'-0" STANDARD SPACES

FOOTPRINT 248'-0" X 290'-0"

ONE LEVEL LOWER LEVEL 1 ELEVATION = -14'-6"

Parking Structure Design - B.3



Parking Summary

DESCRIPTION	STANDARD	ADA	TOTAL
LOWER LEVEL 1	84	4	88

9'-0" X 18'-0" STANDARD SPACES

FOOTPRINT 124'-0" X 248'-0"

ONE LEVEL LOWER LEVEL 1 ELEVATION = -14'-6"

Parking Structure Design - B.1

Parking Structure Study Area 'B'

The Design Team and City established benchmarks for the potential underground Civic Square parking structure, including:

- Maximize the number of spaces; 200 or more would be preferred
- Pedestrian access from the structure to Civic Square Pavilion
- Washington Street vehicle entry / exit lanes
- Plaza level design elements with landscape on structural slab
- Underground connections with buildings on the northwest and southwest corners of the site.

Concept B.3 provides 216 parking spaces serving public parking and leased space parking needs for surrounding developments. Concept B.1 has 88 parking spaces and would serve as a more cost effective option.

Potential Civic Square Parking Structure Entrance Section

Geotech Report Summary

Subsurface conditions of Civic Square were explored during the period of February 22 through 24, 2016. The exploratory activities were performed using hollow stem augers to advance the boreholes. Representative samples of the soil conditions using Standard Penetration Test (SPT) procedures were obtained at regular intervals. In addition, coring of rock was performed at two of the boring locations. After obtaining groundwater observations, each borehole was backfilled with auger cuttings and bentonite chips, and the surface was patched with concrete.

Geotech Rig

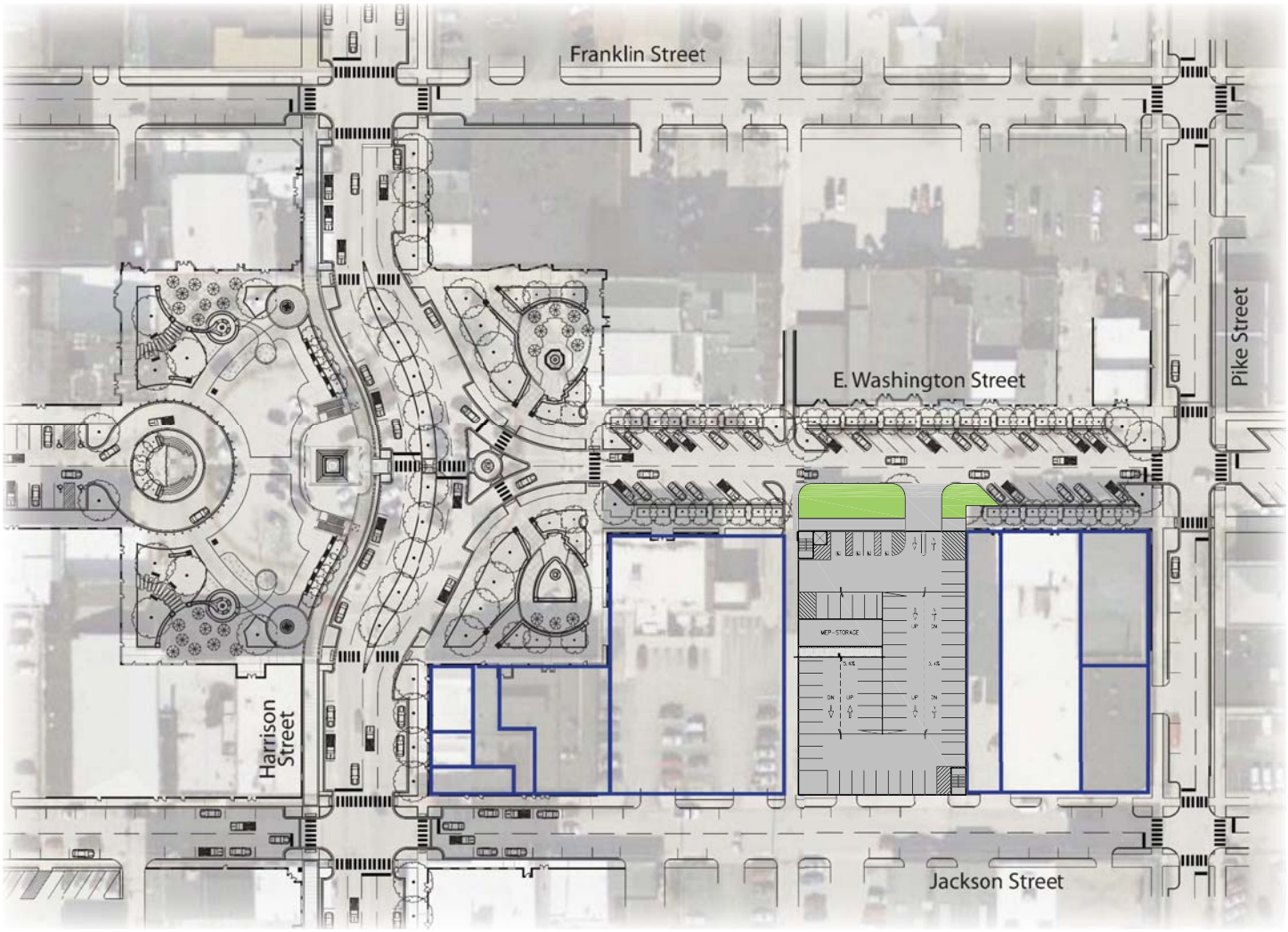
Following the field activities, the soil samples were visually classified by a engineering technician and later reviewed by a geotechnical engineer. Representative samples were selected for testing consisting of moisture content, hand penetrometer readings, unconfined compressive strength, and grain size analysis.

The subsurface conditions at the boring locations were relatively similar and consisted of sandy clay to a typical depth of about 6 feet underlain by sand and gravel of various gradations that extended to depths of about 21 to 23 feet below the existing surface.

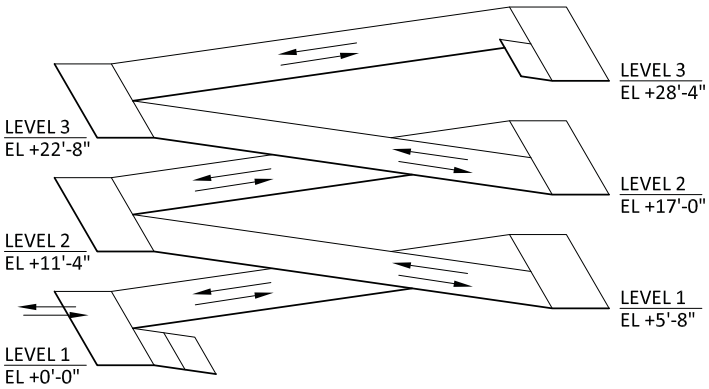
Ground water may become an issue with a multi-level structure as water was detected near a depth of 18 feet below the surface. Therefore, a two-level below-grade parking structure will require 24/7 ground water pumping to maintain the facility.

Below Grade Parking Structure Section

Parking Structure Study Area 'E'



Potential East Washington Street Parking Structure Layout



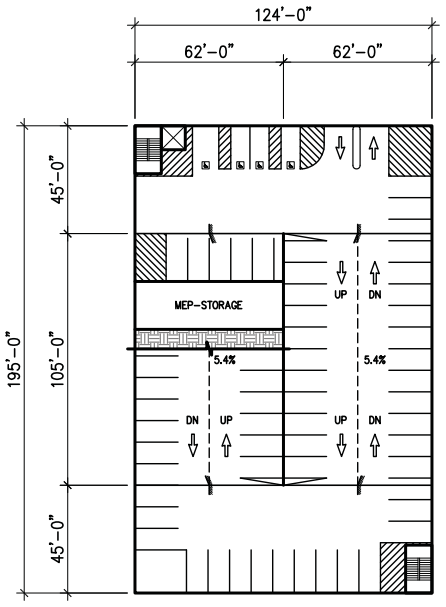
Potential East Washington Street Parking Structure Isometric View

DESCRIPTION	STANDARD	ADA	TOTAL	AREA (SF)
LEVEL 3	66	---	66	21,900
LEVEL 2	69	4	73	24,180
LEVEL 1	57	4	61	23,680
TOTAL	192	8	200	69,760

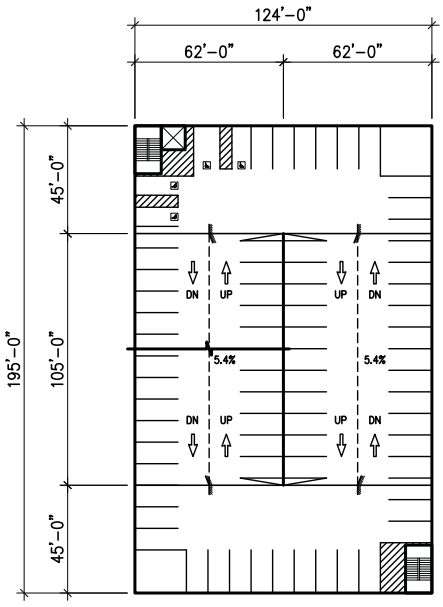
9'-0" X 18'-0" STANDARD SPACES
EFFICIENCY = 348.8 SF/SPACE

Potential East Washington Street Parking Structure Summary

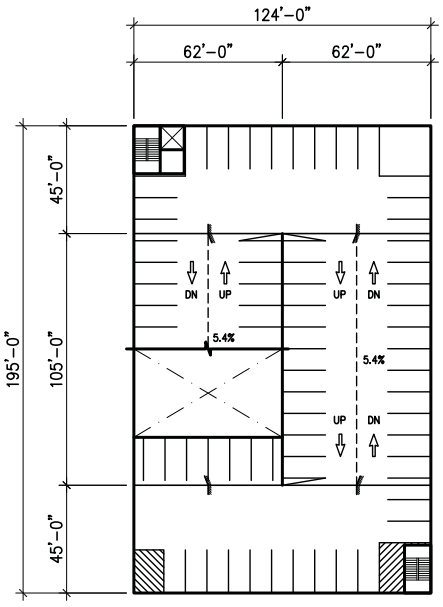
Parking Structure Study Area 'E'



1st Level Plan



2nd Level Plan



3rd Level Plan

A parking structure on East Washington Street would provide convenient access for drivers and pedestrians. While adding a net gain of parking in the downtown area following completion of downtown revitalization. Some of the key features of a parking structure on this site include:

- Vehicle entry and exit off of Washington Street
- Pedestrian access primarily on Washington Street, but also on Jackson Street
- Simple vehicle circulation system that is easy to understand and use
- Parking capacity of 200, a net gain of 152 for the area *(City lot currently has 32 and bank lot has 16, total of 48)*
- Street level ADA spaces
- One block from the Civic Square

Function and Patron Use

The parking structure has three parking levels with a single thread helix ramping system. This type of ramping system is easy to use, as each driver passes all available spaces if they were to go all the way to the top of the structure. There are no difficult-to-find spaces. The 90 degree parking spaces with two-way traffic is also easy for patrons to understand.

Parking Efficiency – 349 Sq. ft. per space

Parking efficiency is measured by dividing the number of square feet of construction by the number of parking spaces created (sq. ft. / spaces). Efficiency is measured as a method to compare parking structure options as well as to determine if the cost of the structure is reasonable, given that construction costs are often measured as cost per sq. ft.

Parking Structure Example - Rock Hill, South Carolina

Parking Structure Study Area 'E'

Parking Structure Example - Valparaiso University

Parking Structure Example - Traverse City, Michigan

Cost Estimate

The parking structure cost estimate is based on the cost per square foot of construction. The square foot costs are gathered from RS Means Cost Estimations, Engineering News Record (ENR) cost estimating data and Carl Walker, Inc.'s experience with parking structure design and construction.
The Preliminary Construction Cost Estimate is for a cast-in-place concrete structural system. A pre-cast concrete structure may have slightly lower construction costs, but would have increased maintenance expenses over time. The estimate allows for reasonable architectural façade treatment, similar to what is displayed in the example photographs.

Soft costs are comprised of multiple services associated with construction. Design team architectural and engineering fees are 7.5% of construction costs. Additionally, 6% of construction costs typically include: permits, legal fees, city inspections, materials testing and special inspections, utility connections and owners costs. It is also prudent to include a 6.5% contingency for budgeting purposes at this preliminary stage of development.

Parking Structure Cost Estimate – $5,500,000.00

Carl Walker, Inc Preliminary Estimate								
3 Levels Above Grade - Stand Alone	*Unit*	*Quantity*	*Cost - Low*	*Cost -High*	*Cost- Low*	*Cost - High*	*Estimate*	*Estimate (SF)*
Base Cost Per sf- Floor Area	SF	69,760	$55.00	$63.00	$3,836,800	$4,394,880	$4,100,000	$58.77
Parking Premiums								
Parking Premium: Cast-in-Place Construction	SF	45,580	$3.00	$5.00	$136,740	$227,900	$225,000	$4.94
Parking Premium: Ceiling Stain	SF	55,000	$1.00	$1.25	$55,000	$68,750	$65,000	$1.18
Parking Premium: Site Utilities	LS	1	$0	$0	$50,000	$50,000	$50,000	$0.72
Parking Structure Total					$4,080,000	$4,740,000	$4,440,000	$63.65
Escalation to Mid-2017		3.00%			$122,000	$142,000	$133,000	$1.91
Construction Cost Mid-2017					$4,202,000	$4,882,000	$4,573,000	$65.55
Cost per Space					$21,000	$24,400	$22,900	
Architectural/Engineering Fees		7.50%			$315,000	$366,000	$343,000	
Permits, Testing, Utility Connections, etc.		6.00%			$252,000	$293,000	$274,000	
Owner's Contingency		6.50%			$273,000	$317,000	$297,000	
Project Budget					**$5,042,000**	**$5,858,000**	**$5,487,000**	**$78.66**
Cost per Space					**$25,200**	**$29,300**	**$27,400**	

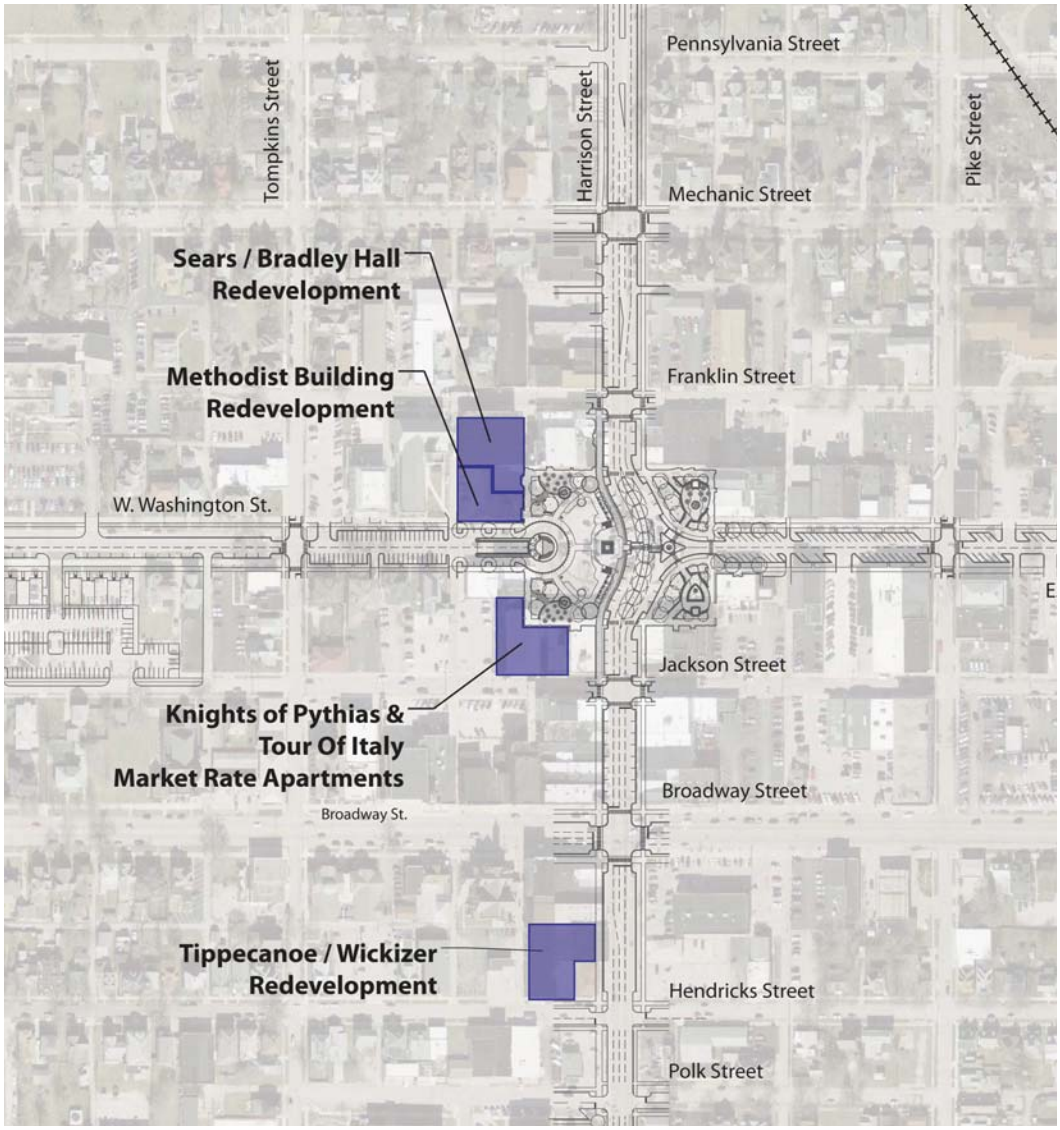
Exclusions
1. Utility Relocation beyond $50,000
2. Land, Legal, and Financing Costs
3. Underslab drainage system; Storm Water Detention
4. Deep Foundations
5. Open Structure: No mechanical ventilation or sprinklers

Preliminary Cost Estimate for Area 'E' Parking Structure - prepared August 5th, 2016

Section E

Architectural Catalyst Projects

Architectural Catalyst Projects Location Map



8 historic buildings were chosen as Architectural Catalyst Projects within the study area; Sears Building, Bradley Hall, Methodist Building, Knights of Pythias, Pasghetti's Italian Restaurant (Formerly Tour of Italy), BMV, Tippecanoe Print Building and the Wickizer Building. The goals for these mainly vacant buildings is to return them to their original architectural state and provide opportunities for new development to move in. Recommended improvements are proposed for both exterior facades and interior floors. Some buildings are already attracting developers and new tenant spaces include commercial / retail, office, storage, Rathskellar, restaurants, market rate and affordable housing and a boutique hotel.

Building surveys were completed in February of 2016. From there, Historic Preservation Architects have developed conceptual ideas, building improvements and floor plan layouts for all 8 Architectural Catalyst Projects. The majority of the projects can qualify for the Federal Historic Preservation Tax Incentives program which encourages private sector investment in the rehabilitation and re-use of historic buildings when improvements adhere to Secretary of Interior Preservation standards.

Methodist Building

The existing Methodist Building is currently vacant. The first floor is open, with a few structural columns and is open to a mezzanine that is a unique feature. There are large, open storefronts on the main façade that wraps the southeast corner. This floor is well suited for commercial, retail, or restaurant / café use. The upper floor spaces are more divided by columns. These floors would be better suited for spaces such as business, residential, or hotel use. There is a desire to develop a boutique hotel to provide a unique experience with hotel rooms or market rate apartments in the downtown area; either option would help foster an active 24-hour social environment. An additional proposal would be to move government offices into the building. This option would help consolidate the government offices, but would create an additional activity and fill a daytime social void on Civic Square.

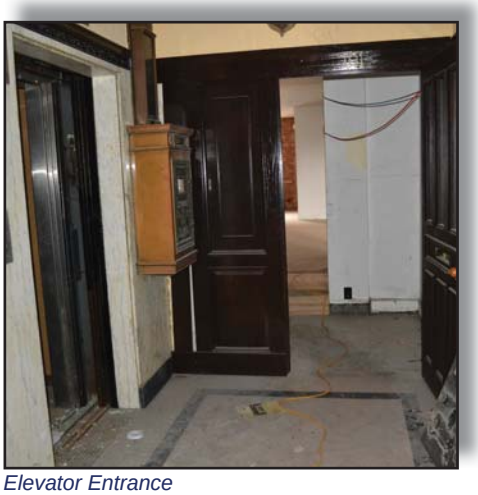
East Facade

Overall the building appears to be in good condition and many of the historic character defining features remain intact. The majority of the exterior features have been retained, as well as the main circulation spaces in the upper floors. These factors make the building a good candidate for rehabilitation and reuse, as well as obtaining Historic Tax Credits. Proposed exterior and interior modifications will require approval by the State Historic Preservation Officer if Historic Tax Credits are sought.

Stairwell

Key features on the interior are the cast iron columns on the first floor, the historic storefront, mezzanine, as well as the circulation corridors on the upper floors. Depending on the reuse of the upper floors, modifications to the circulation corridors may be required.

Exterior Renovations should focus on retaining and repairing the existing historic fabric. Few changes have been made to the historic exterior character. Minor stone repairs are required at some of the base elements. The mortar joints of the stone and brick are in good condition and should be inspected after the masonry is cleaned to determine the extent of minor repairs. There are metal embeds that should be removed from the façade, and the brick and mortar patched. Upon up close inspection, there may be some minor areas of tuckpointing required. The south canopy should be retained and repaired. The southwest entry door panel has been removed. The steel frame door should be replicated. Some glazing in the windows is broken and should be replaced with glazing that is historically accurate. If greater thermal and sound insulation is desired, interior storm windows can be installed. Overall the wood frames and sashes of the windows appear to be in good condition. In most cases, these just need to be scraped, cleaned, sealed, and painted. The bottom of some sash members or sills may need to be repaired with a wood consolidation compound or replaced with a durable wood.



Elevator Entrance

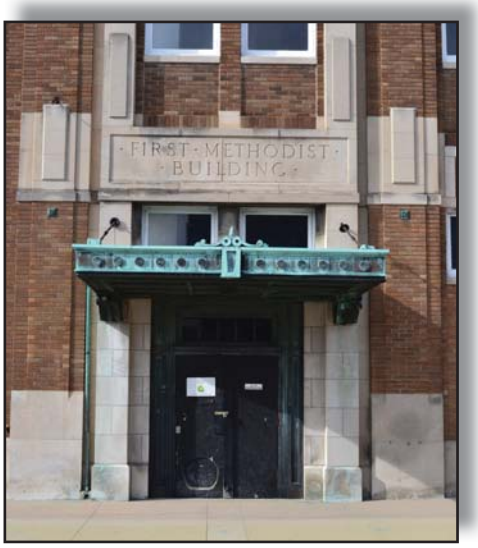
Methodist Building

The Basement can be divided and developed as required for storage with access to the existing stairs and elevator at the west side of the building. A basement connection to Bradley Hall and Sears Building to the north would be proposed to allow interior access to these buildings.

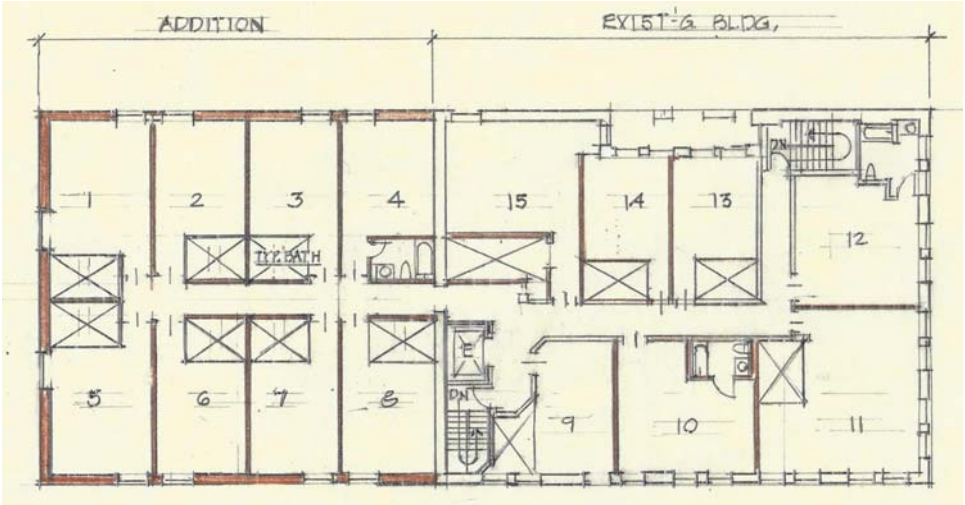
The First floor and Mezzanine have been modified, but the primary historic character of the spaces has been retained. These areas can be redeveloped as tenant spaces for commercial, business, or retail. The existing historic wood ceiling near and within the southeast entrance should be retained and repaired. The entry vestibule should also be retained and the finishes restored or new historically appropriate materials used that are consistent with the Period of Significance. The cast iron columns need to be retained. The mezzanine and associated railings should be retained and the leading edge kept open, not walled off.

The Second through Fifth Floors can be developed as either Market rate one and two bedroom apartments or as a Boutique Hotel. The historic corridors of the upper floors are relatively intact and should be retained as well as the ceiling treatments. Existing doors, windows, transoms, and trim should be retained and repaired. New hardware should be as compatible as possible to the historic character. Doors that are not required for entry into residential units should be retained and fixed in place. To provide additional sound separation, a second, insulated, metal stud wall should be constructed on the inside of the units at the corridor wall. The space behind the corridor walls can be divided as required for the planned use. The typical proposed plan will need to be modified for the Second Floor due to the difference in configuration of the corridor. New walls would be metal stud with gypsum board and painted finishes in all units. Floor finishes would be carpet in the dwelling units and corridors. Kitchen, toilet, and bath areas would be ceramic tile floors as well as designated walls and inside the tub / shower. Windows, doors, other openings, and floor base would feature painted wood trim. Some spaces would feature exposed brick masonry with a clear sealed finish.

South Facade

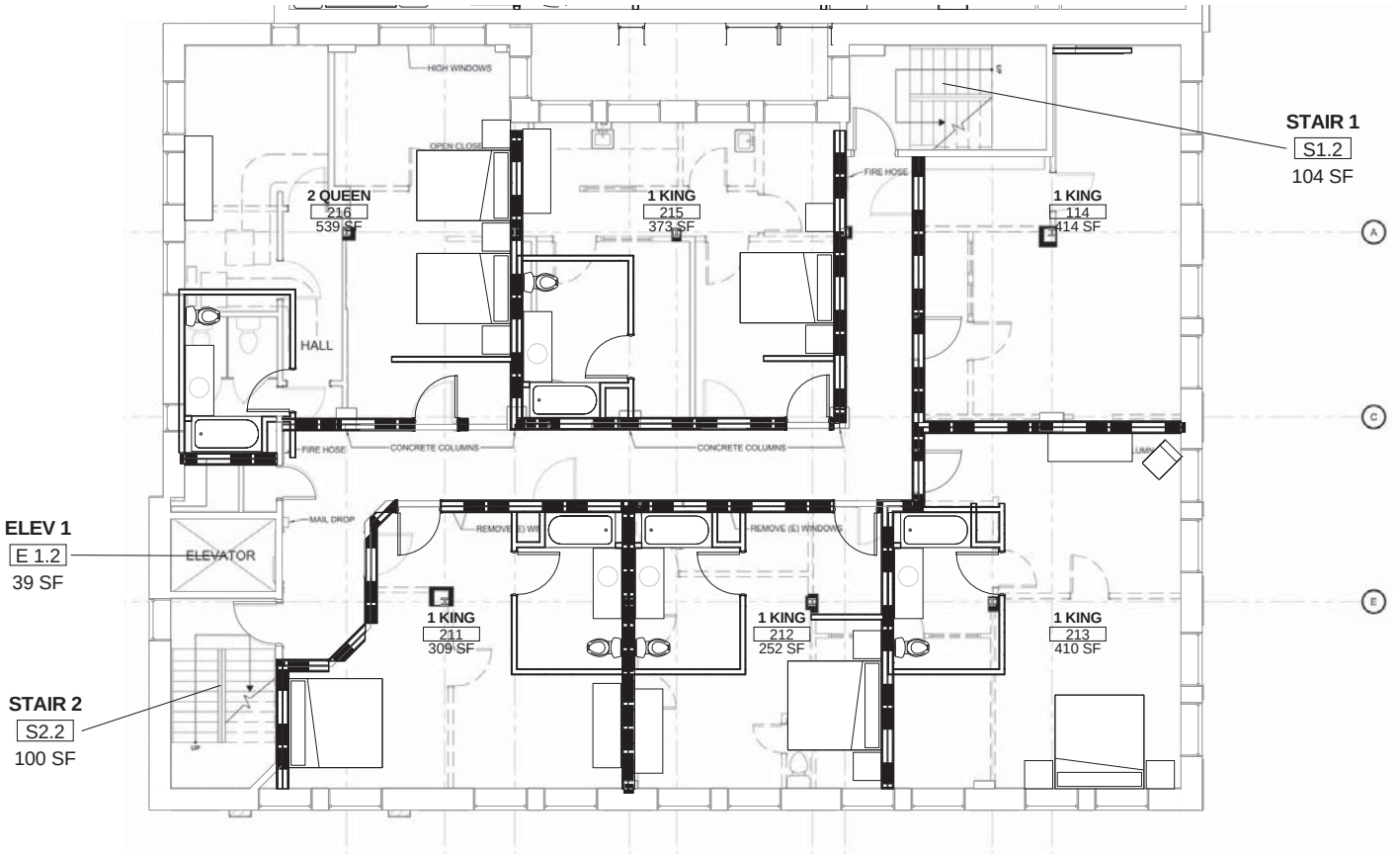


South Entrance



Alternative Methodist Building Hotel Development Scheme including expansion into West Parking Lot resulting in 60 total units on floors 2 through 5

Methodist Building



2nd Floor Plan

Methodist Building - Hotel

No. Units	Type of Space	Square Feet
1	Basement	4145 SF
1	Commercial / Retail	4145 SF
1	Mezzanine	2000 SF
20	One King Bedroom	252 SF - 414 SF
4	Two Queen Bedroom	539 SF

Methodist Building - Market Rate Housing

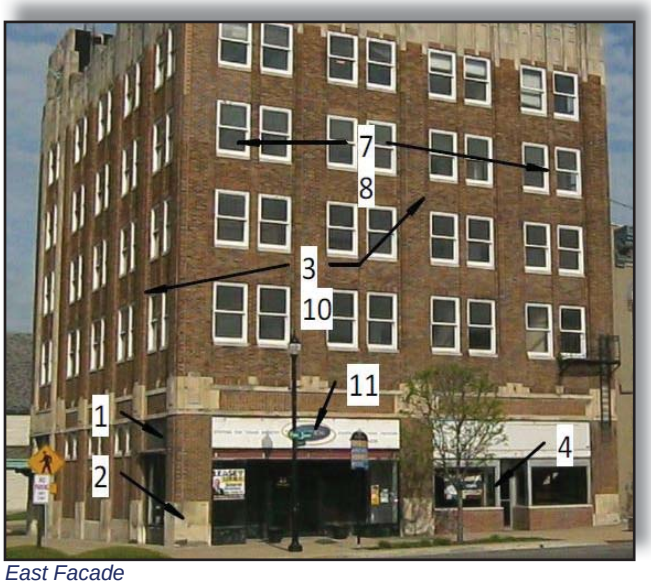
No. Units	Type of Space	Square Feet
1	Basement	4145 SF
1	Commercial / Retail	4145 SF
1	Mezzanine	2000 SF
4	One Bedroom	715 SF
4	One or Two Bedroom	1017 SF
4	Two Bedroom	1121 SF

Cost Opinion*: $2,900,000 - $3,165,000

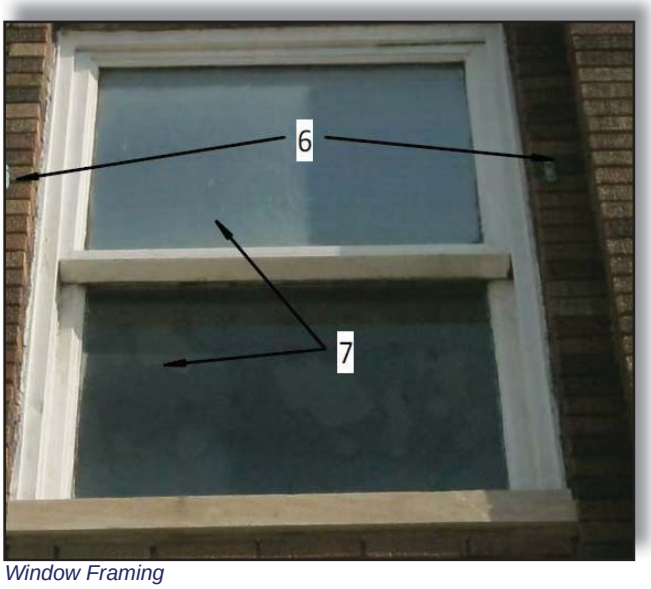
**Does not include alternative development scheme shown on page 66*

1. Replace missing and broken glass with matching glazing
2. Repair limestone base
3. Remove metal embeds
4. Replicate historic storefront
5. Retain, repair, and paint historic wood ceiling
6. Retain awning clips
7. Repair wood windows and retain historic glazing pattern
8. Retain and repair canopy
9. Retain door frame' Provide new doors
10. Tuckpoint as required
11. Scrape, clean, repair, and paint fascia

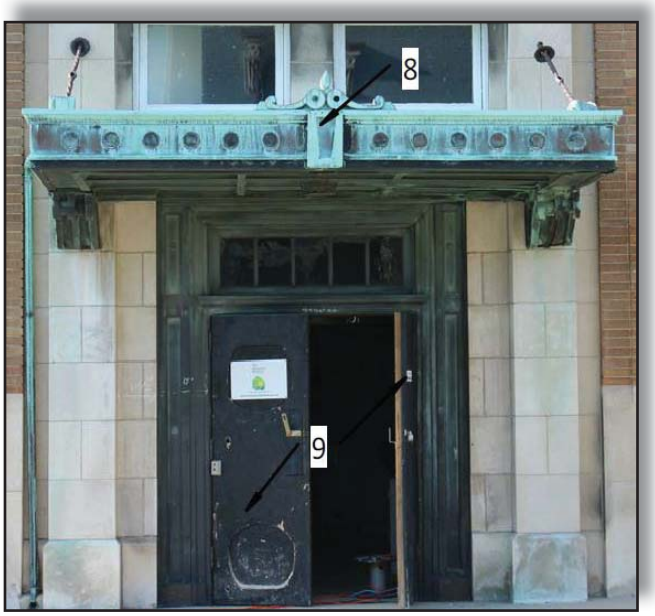
Methodist Building



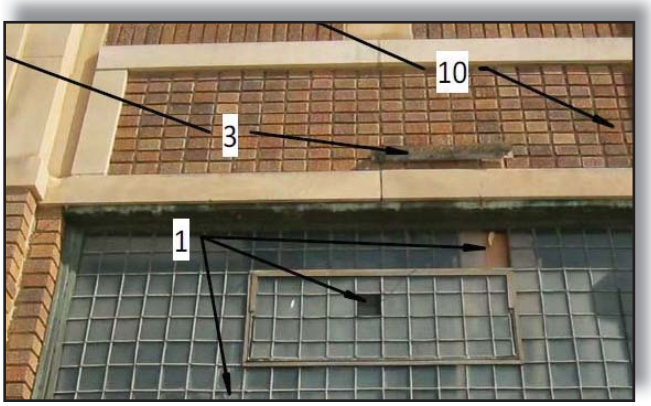
East Facade



Window Framing



South Entrance



South Facade

East Storefront

Historic Wood Ceiling

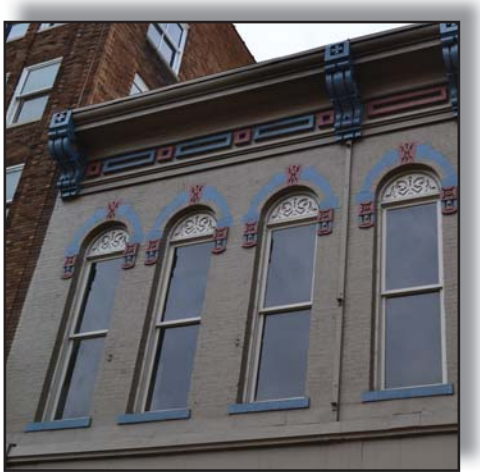
Bradley Hall Building

The existing Bradley Hall is currently vacant. The first floor has a full width storefront accessing a large open space that is well suited for commercial, retail, or restaurant / café use. The upper floor is open can be used for business or residential use with access through the adjacent Sears Building as there is no direct access to the second floor from within the building. There is also no direct access to the basement within the building; access is gained through the basement of the Sears Building. The City has been made aware of development interest in this building to develop it as a restaurant on the first floor and basement with market rate residential on the second floor.

East Facade

Overall the building appears to be in excellent condition. The majority of the exterior features have been retained or can be easily reinstated. These factors make the building a good candidate for rehabilitation and reuse, as well as obtaining Historic Tax Credits.

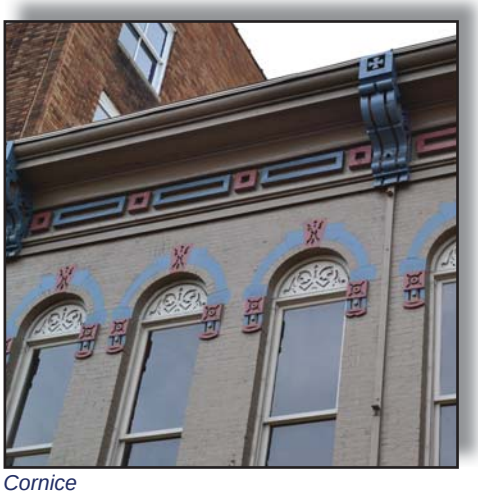
The original cast iron storefront was replaced around the 1920's or 30's, based upon the existing storefront windows, and cast iron cladding has been removed and covered with cement board panels. These panels should be removed and the storefront restored to be more sympathetic to the historic character of the building. The lower fascia that was retained should be repaired to eliminate the gaps at the underside to prevent birds and other pests from nesting within the metal profile. The bricked in window openings on the west (rear) façade should be reopened and new windows installed.



Upper Floor Windows

Key features on the interior are the cast iron columns on the first floor. There is no access to the second floor from within Bradley Hall; access is to the north through the Sears Building.

The Basement can be divided and developed as required for storage. A circulation corridor along the west end will provide a connection to the adjacent Methodist Building and Sears Building. This will allow access to the existing stairs and elevators in the adjacent structures. There is potential for a Rathskellar in the basement to support the proposed restaurant on the first floor. Code and accessibility guidelines will need to be studied to determine what modifications may be required to meet access requirements if this floor is made public.



Cornice

Bradley Hall Building

The First floor has been modified, but the primary historic character of the space has been retained. This space can be redeveloped as a tenant space for commercial, business, retail, or restaurant / cafe. The existing historic materials and finishes should also be retained and the finishes restored or new historically appropriate materials used that are consistent with the Period of Significance. The cast iron columns need to be retained, as well as any historic floor and ceiling treatments.

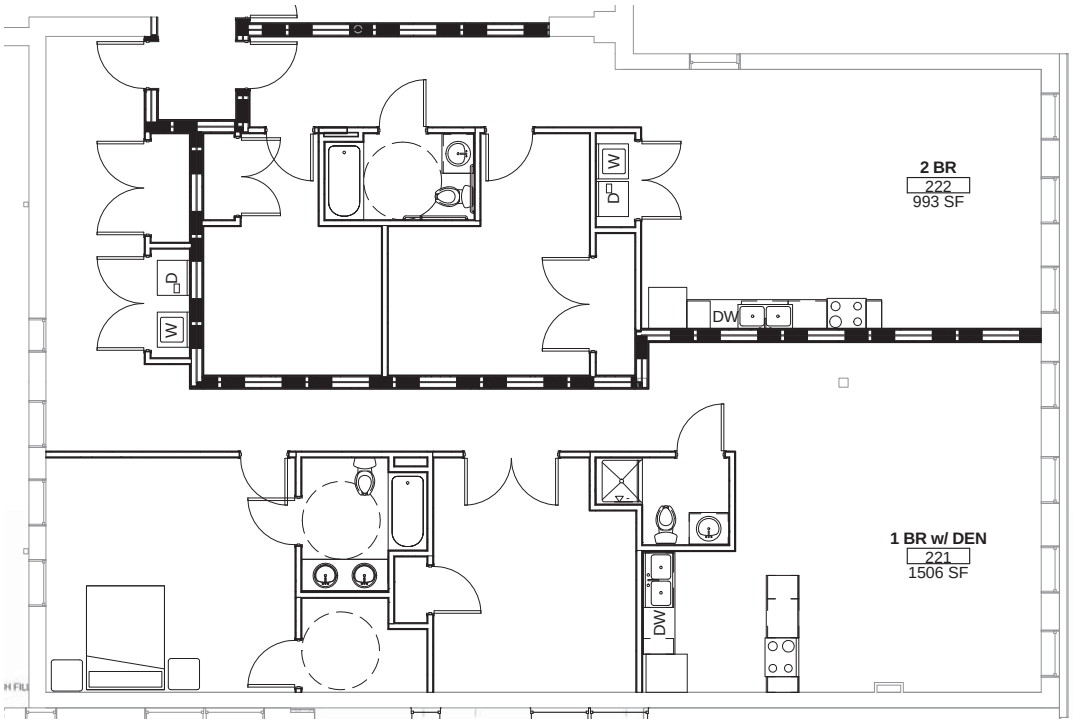
The Second Floor can be developed as two market rate one bedroom with a den or two bedroom apartment or condominium units. The historic finishes should be retained where possible. New doors, windows, transoms, and trim should be designed to be consistent with the Period of Significance. New hardware should be as compatible as possible to the historic character. New walls would be metal stud with gypsum board and painted finishes in all units. A double, insulated stud wall will separate units from each other and public corridors. Floor finishes would be carpet in the dwelling units and corridors. Kitchen, toilet, and bath areas would have ceramic tile floors as well as designated walls and inside the tub / shower. Windows, doors, other openings, and floor base would feature painted wood trim. Some spaces may feature exposed brick masonry with a clear sealed finish. Ceilings would typically be painted gypsum board.

In general the building is in good structural condition. No significant structural modification or stabilization appears to be required. Some reinforcement of floor structure may be needed if the second floor is partitioned for residential use to support concentrated loads of the new floor plan. Window sills and lintels throughout must be checked, restored and properly flashed. A new basement corridor and deck would need to be constructed across the west side to connect the Sears Building and Bradley Hall to the Methodist Building basement and proposed parking structure. If direct access to the basement and second floor from within Bradley Hall is desired, the existing structure will need to be modified to accommodate these penetrations.

West Facade

Alleyway Signage

Bradley Hall Building



2nd Floor Plan

Bradley Hall - Market Rate Housing

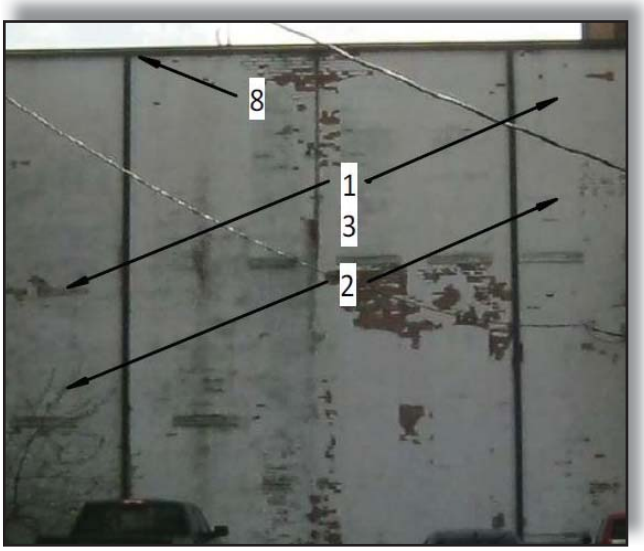
No. Units	Type of Space	Square Feet
1	Basement / Rathskeller	2810 SF
1	Commercial / Retail	2810 SF
1	One Bedroom with Den	1506 SF
1	Two Bedroom	993 SF

Cost Opinion: $1,010,000 - $1,100,000

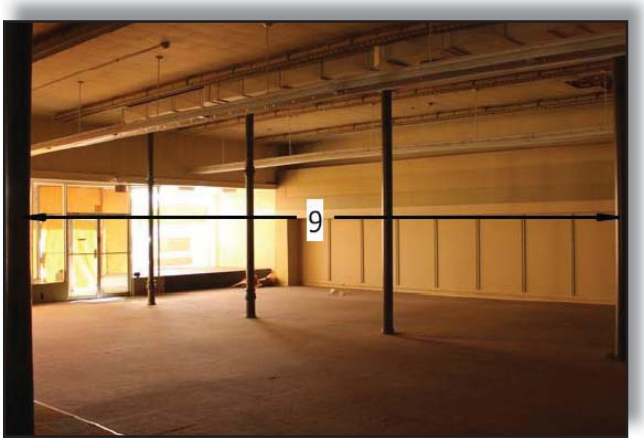
1. Remove coating
2. Remove infill and install window
3. Tuckpoint 10% and clean 100% masonry
4. Repair wood trim and windows
5. Remove metal embeds. Retain blade sign support
6. Repair and seal metal cornice
7. Renovate non-historic storefront
8. Replace gutter and leaders
9. Retain cast iron columns

Bradley Hall Building

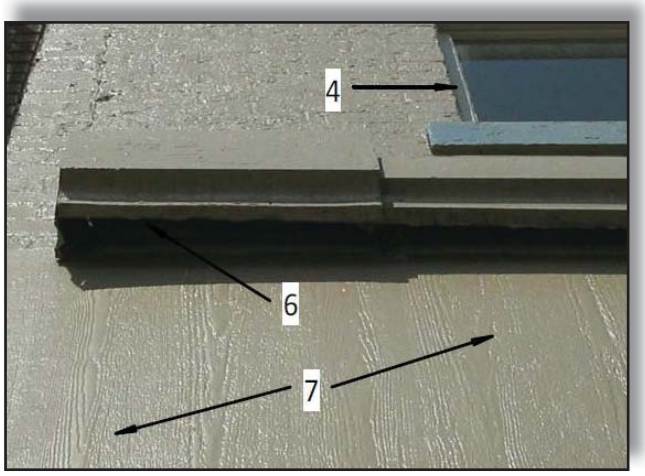
East Facade



West Facade



Interior



Window Trim and Cornice

Storefront Covering

Sears Building

The existing Sears Building is currently vacant. The first floor is fairly open and is well suited for commercial, retail, restaurant / café, or residential use. Since the southeast corner for the building is tucked against other structures there are no windows. This corner would work well as a space that the adjacent first floor business in Bradley Hall could expand into. It could also create a unique interior connection between the proposed first floor residential and the business tenant. The upper floor is open and can be used for office, business, or residential use. Development inquiries have shown interest in this building to develop a restaurant on a portion of the first floor and basement and market rate residential in the remainder of the first floor and on the entire second floor.
Overall the building appears to be in excellent condition. The majority of the exterior features have been retained. These factors make the building a good candidate for rehabilitation and reuse, as well as obtaining Historic Tax Credits.

North Facade

One of the key features on the exterior is the original cast iron and wood storefront. This is intact but is in need of repair and possibly replication of elements that are too severely deteriorated. The original wood double hung windows have been covered and their condition is unknown.

Key features on the interior are the cast iron columns on the first floor. Access to the basement and second floor is by either a stair along the south wall or a freight elevator.

Storefront

Exterior Renovations should focus on retaining and repairing the existing historic fabric. Few changes have been made to the historic exterior character. The original wood storefront and metal cornice are in excellent condition. The cast iron storefront columns are in poor condition. The historic cast iron columns are severely deteriorated and may not be able to be repaired. If the columns cannot be repaired, these can be replicated in fiberglass. The historic limestone stairs at the storefront have either been removed or are encapsulated under the new wood stairs. New granite stairs should be provided as well as a railing that is in keeping with the historic character of the building. The original concreted loading dock stairs should be removed, as well as the wood stairs, and be replaced with new concrete stairs. Bollards should be placed at each end to protect the stairs from vehicles. Minor stone repairs are required in areas of the limestone foundation. There are metal embeds in the brick that should be removed from the façade, and the brick and mortar patched. The brick on the east and south elevation has been exposed where a building was demolished. This is a softer brick because it did not need to resist the effects of weather. Since the softer brick has been exposed at these locations there are areas that require replacement. The parapet is capped with terra cotta saddle back tiles. These should be removed and flashing applied under the caps before they are reinstalled.

West Facade

On the west elevation, the steel lintel over the garage door should be replaced. The wood lintel on the south wall should be removed and the area bricked in. The metal box gutter and leaders should be replaced, connected to an underground drain line and the bottom four feet of the leader protected from vehicle impact. All windows that have been blocked in should be reopened and new clad wood double hung windows installed. The condition of the wood double hung windows is unknown since the windows have been covered over by plywood. It is anticipated that the wood frames and sashes that remain are in good condition and can be repaired.

West Alley Doors

The Basement can be divided and developed as for storage along the north half and an extension of the proposed Rathskellar in Bradley Hall in the remainder of the basement. A new, enclosed egress stair is proposed to connect the basement to the lobby and second floor. A basement connection to Bradley Hall and the Methodist Building to the south is proposed to allow interior access to these buildings.

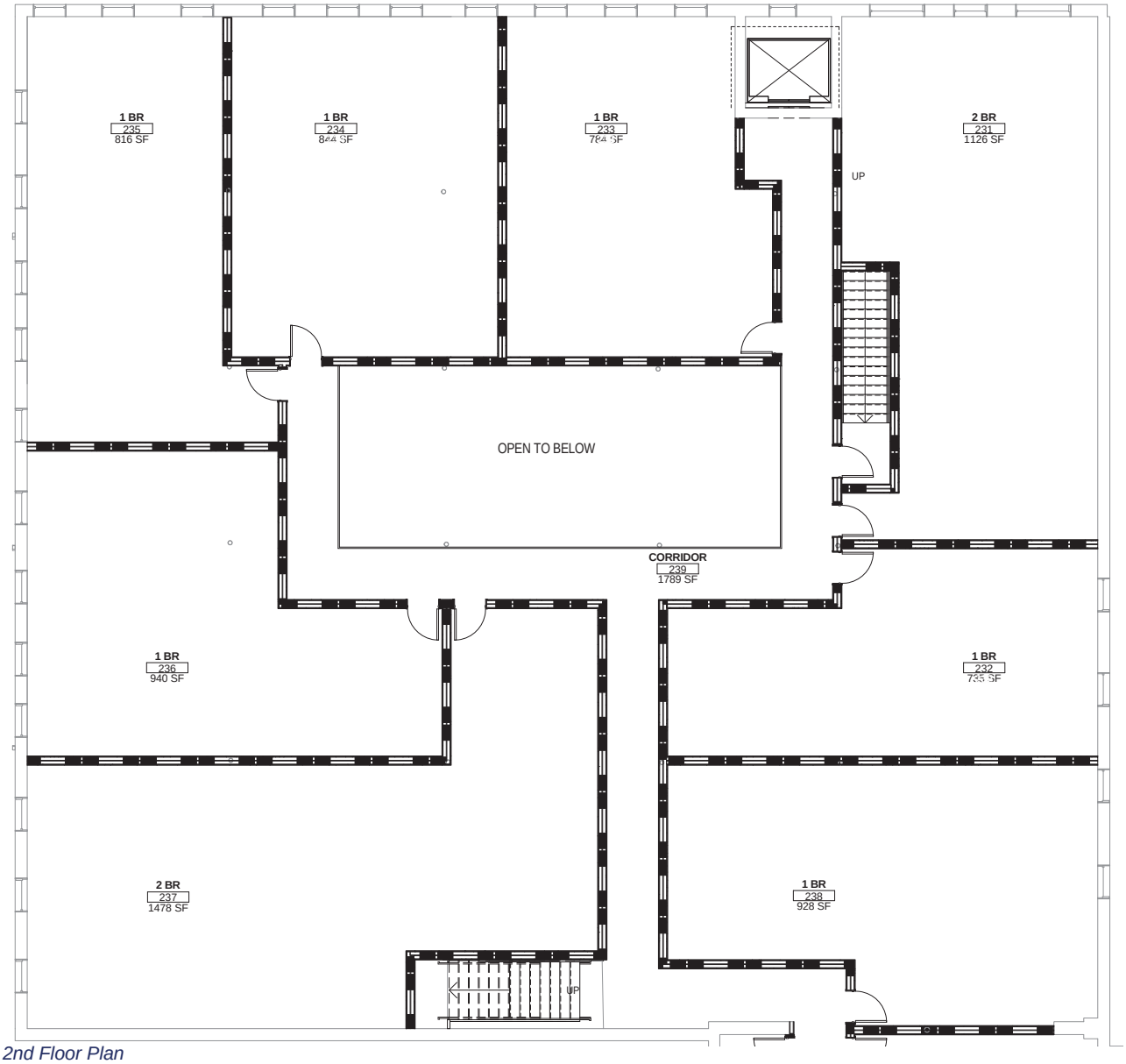
Covered Windows

The First floor has been modified, but the primary historic character of the space has been retained. These spaces can be redeveloped as tenant spaces for commercial, business, or retail and multifamily residential. The existing historic materials and finishes should also be retained and the finishes restored or new historically appropriate materials used that are consistent with the Period of Significance. The cast iron columns need to be retained. The existing stair to the second floor is proposed to be removed and reconstructed to provide access from a new tenant access at the west alley to the second floor. It is recommended to extend the proposed restaurant for Bradley Hall into the southeast corner of the Sears Building as there is no opportunity to provide windows into the space. The remainder of the first floor is proposed to be divided for five, market rate one and two bedroom apartments.

The Second Floor can be developed as eight market rate one and two bedroom apartments. The historic finishes should be retained where possible. New doors, windows, transoms, and trim should be designed to be consistent with the Period of Significance. New hardware should be as compatible as possible to the historic character. New walls would be metal stud with painted gypsum board and painted finishes in all units.

A new roof to basement penetration is proposed to allow natural light into all occupied spaces. This will provide a unique feature in the structure. The penetration between the first floor and basement will be a transparent cover to allow the activities in the Rathskellar to be viewed and the spaces above better insulated from the sound.

Sears Building



2nd Floor Plan

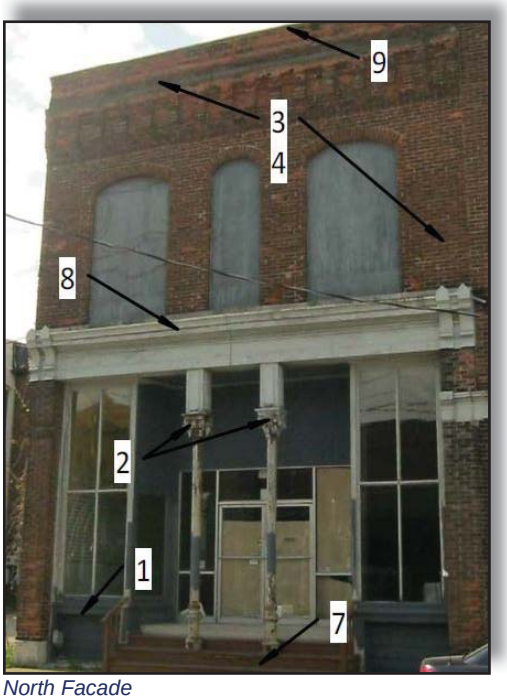
Sears Building - Market Rate Housing

No. Units	Type of Space	Square Feet
1	Rathskeller	5260 SF
2	Restaurant	4987 SF
9	One Bedroom	735 SF - 940 SF
4	Two Bedroom	1126 SF - 1478 SF

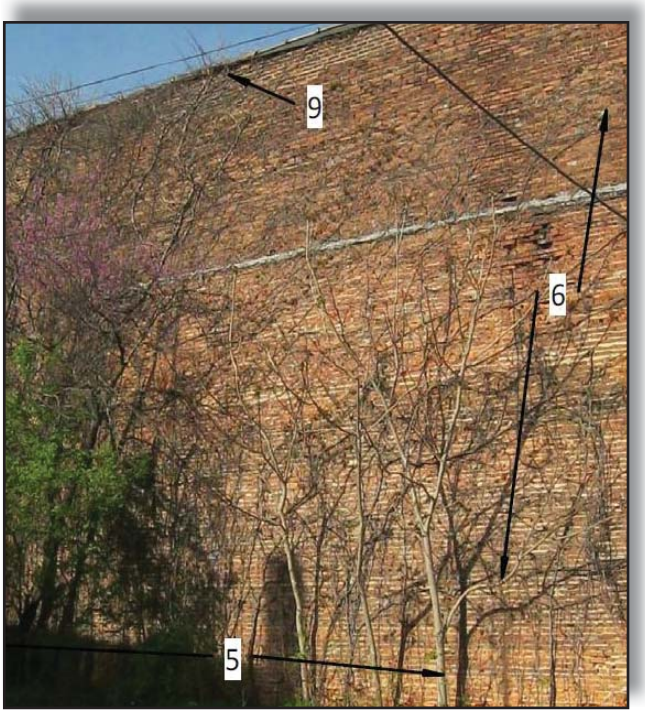
Cost Opinion: $3,970,000 - $4,290,000

1. Repair wood storefront elements
2. Repair or replicate cast iron columns
3. Remove metal embeds
4. Tuckpoint 100% and clean masonry
5. Replace bottom 3' of brick along entire wall and remove vegetation
6. Replace north 10' of brick along entire height
7. Replace stairs
8. Spot repair, scrape, clean, and paint metal cornice
9. Remove parapet cap, flash, and replace
10. Investigate relocation of electrical service
11. Replace lintel
12. Replace garage door
13. Remove window in-fill / paneling and repair wood windows, Install new as required
14. Replace gutter and leaders and protect bottom 4'

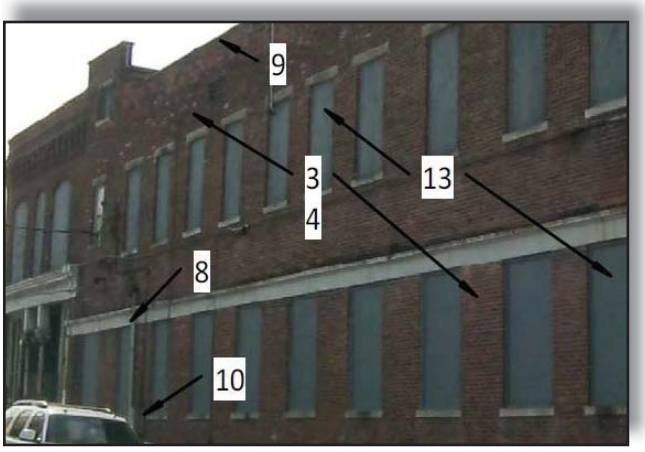
Sears Building



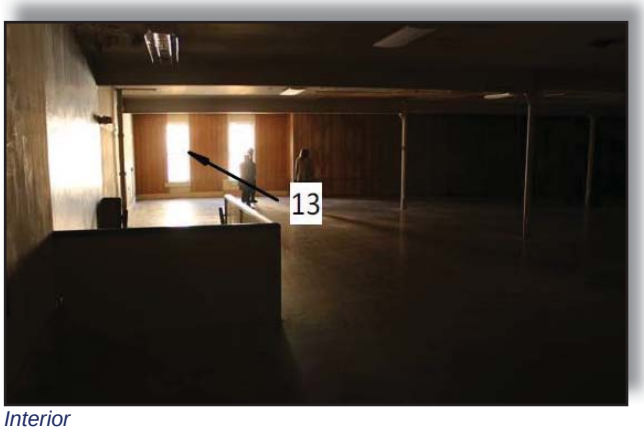
North Facade



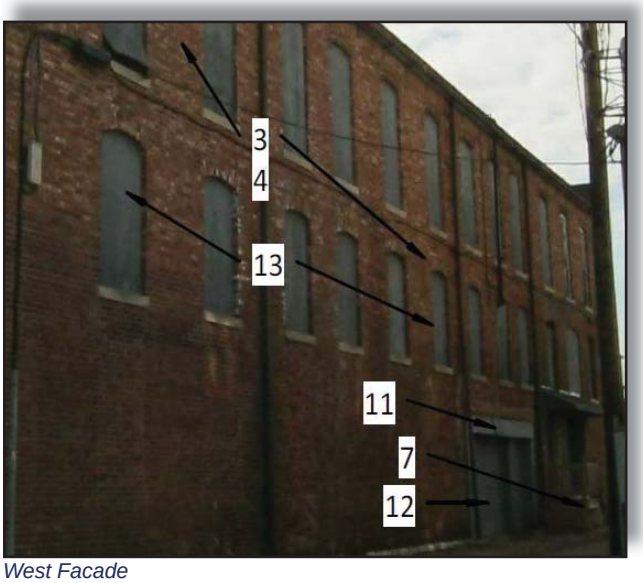
East Facade



North Facade & Windows



Interior



West Facade

Exterior Iron Column

Knights of Pythias

The existing Knights of Pythias is mostly vacant. A retail / donation shop leases the northeast storefront and the adjacent BMV has some lease space in the rear for a conference room and storage. The first floor is well suited for commercial, retail, business, or residential use. The upper floors are accessed through a separate entry and can be used for business or residential use. A developer has purchased this building to develop apartments, with some units overlooking Civic Square.

Overall the building appears to be in excellent condition and many of the historic character defining features remain intact. The majority of the exterior features have been retained, as well as the main circulation spaces in the upper floors. These factors make the building a good candidate for rehabilitation and reuse, as well as obtaining Historic Tax Credits.

Key features on the interior are the historic storefront, the circulation corridors on the upper floors, and the main wood stairway. Depending on the reuse of the upper floors, modifications to the circulation corridors may be required. Extensive modifications of these corridors may make attaining Historic Tax Credits challenging. The proposed exterior and interior modifications will require approval by the State Historic Preservation Officer if Historic Tax Credits are sought.

Exterior Renovations should focus on retaining and repairing the existing historic fabric. Few changes have been made to the historic exterior character. The entire structure should have the masonry cleaned and the facades inspected for minor repairs that are required. The upper portion of the east party wall will require tuckpointing, as well as the top of the tower parapet. This will be intricate work on the main portion of the façade as the mortar joints are much smaller than a standard joint. The existing wood entry door to the stairs should be repaired and the tile apron at the entry retained. The west elevation should be tuckpointed with areas of toothpatching, especially along the bottom four feet of the entire wall. The gutter leaders should be replaced and terminated to an underground drainage system. The original loading dock bays at the south elevation have been infilled. These can be opened back up and windows installed. The transom over the man door should be replaced with a transom that is more in keeping with the historic character of the structure. The visible existing wood windows appear to be in good condition. In most cases, these just need to be scraped, cleaned, sealed, and painted. Upon close inspection, the bottom of some sash members or sills may need to be repaired with a wood consolidation compound or replaced with a durable wood. Where new windows are required, double or single hung wood clad windows can be used. The profiles and proportions of the windows should match the original windows.

East Facade

Store Front

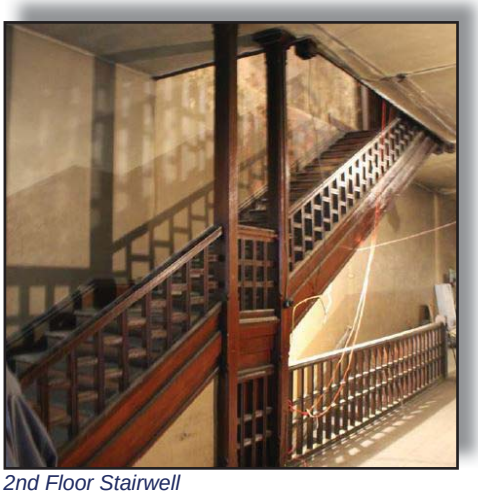

South & West Facades

The condition of the Basement is unknown. This is to be storage for the building tenants. Additional corridors and connections to the adjacent BMV and restaurant basements may be explored.

The First floor has been modified with new partitions, doors and trim. These areas can be redeveloped as tenant spaces for commercial, business, retail, or residential. Any remaining historic fabric should be retained and repaired. The entry vestibule and lobby should be retained and the finishes restored or new historically appropriate materials used that are consistent with the Period of Significance. The historic decorative wood stairway should be retained, repaired, and the finish retouched as required.

The Second and Third Floors can be developed as either market rate or affordable one and two bedroom apartments. The historic corridors of the upper floors are relatively intact and should be retained as well as the ceiling treatments. Existing doors, windows, transoms, and trim should be retained and repaired or removed and reused where possible. New hardware should be compatible with the historic character. The space behind the corridor walls can be divided as required for the planned use. New walls would be metal stud with gypsum board and painted finishes in all units with a double stud insulated wall separating each unit. Floor finishes would be carpet in the dwelling units and corridors. Kitchen, toilet, and bath areas would be ceramic tile floors as well as designated walls and inside the tub / shower. Windows, doors, other openings, and floor base would feature painted wood trim. Some spaces would feature exposed brick masonry with a clear sealed finish. Ceilings would typically be painted gypsum board.

In general the building is in good structural condition, with a few noted exceptions as stated. No significant structural stabilization repairs are required. The upper roof parapet should be checked for soundness of flashings, particularly under the parapet caps. A floor loading and lateral load resistance analysis should be included in the rehabilitation work. A new enclosed egress stairway will require structural modification to the existing floor system at the second and third floors. A new elevator core is planned and will need structural modification for this penetration through the floors. A structural study is recommended for the proposed addition of lofts to the third floor spaces to determine if this addition is feasible. Window sills and lintels throughout must be checked, restored and properly flashed. Lintels at all openings should also be checked for corrosion and replaced where required.

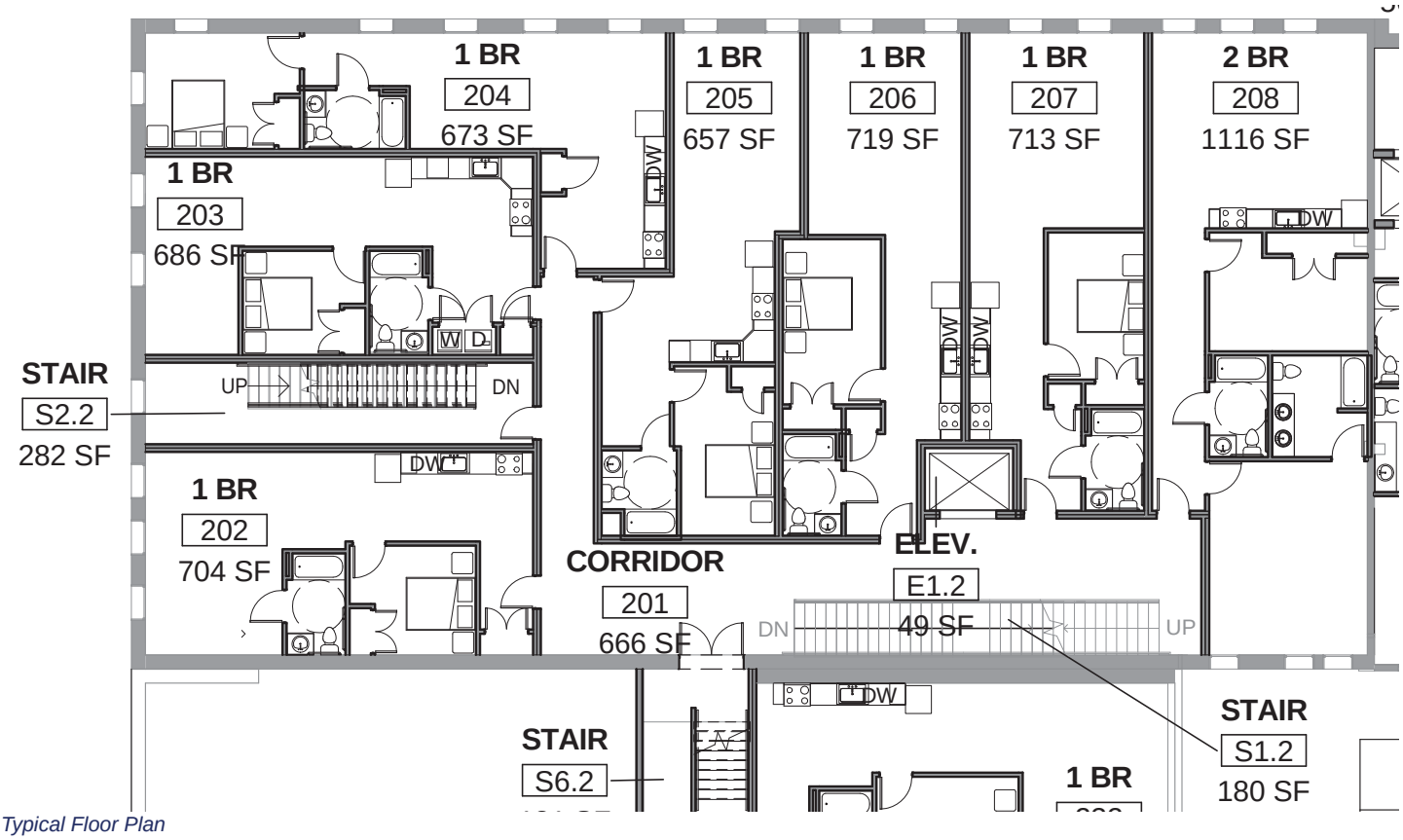


2nd Floor Stairwell

Hall with Original Lights

Hall with Dining Service

Knights of Pythias



Typical Floor Plan

Knights of Pythias - Affordable Rate Housing

No. Units	Type of Space	Square Feet
1	Basement	7230 SF
19	One Bedroom	648 SF - 913 SF
2	Two Bedroom	1116 SF - 1270 SF

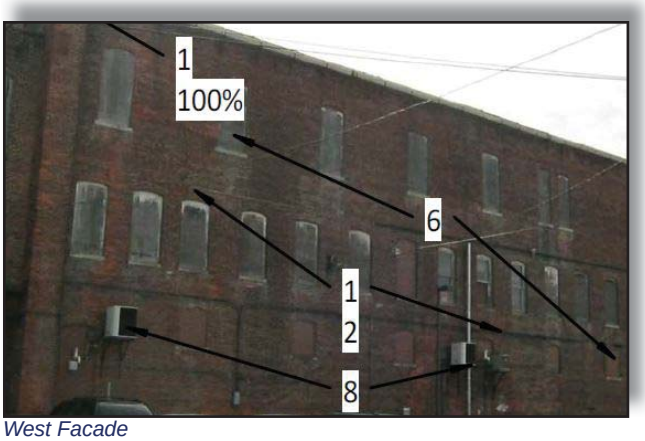
Cost Opinion: $4,380,000 - $4,710,000

1. Tuckpoint masonry 10%, or as noted, and clean
2. Spot toothpatch as needed
3. Repair and refinish wood door
4. Replace storefront
5. Repair and clean tile apron
6. Remove infill and repair windows' Replace as needed
7. Replace and add leaders
8. Relocate compressors
9. Remove loading dock infill and install new windows
10. Remove infill and replace transom
11. Retain and repair mezzanine
12. Retain, repair, and refinish corridors, doors, and trim
13. Retain, repair, and refinish stairs

Knights of Pythias

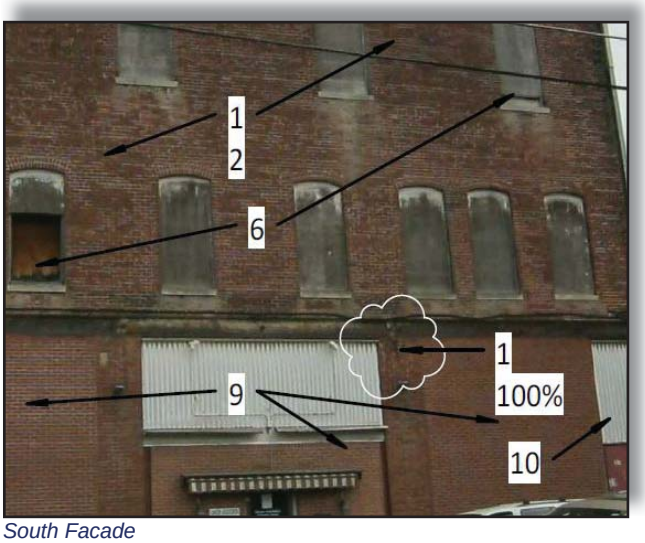
East Facade & Cornice

Storefront



West Facade

Interior



South Facade

BMV

The existing BMV is currently vacant on the upper floors. The first floor and basement is to be retained for use by the BMV. The upper floors are accessed from a separate entry can be used for business or residential use. A portion of the first floor would need to be redesigned to accommodate a proposed elevator. A developer has shown interest in this building to develop four market rate apartment units; two which look out onto the square.

Overall the building appears to be in excellent condition. The majority of the exterior features have been retained above the storefront window level and the storefront could be reconstructed based upon historic photographs. These factors make the building a good candidate for rehabilitation and reuse, as well as obtaining Historic Tax Credits.

The original storefront has been removed and modified. There is a side entrance that accesses a stairway to the upper floors. The existing brick façade and wood double hung windows are in good condition and should be retained and repaired. Some modifications and repairs will be required at the west elevation to reestablish the blocked in or modified windows and spot tuckpoint and toothpatch the masonry. There is a brick retaining wall along the west property line that appears to belong to the adjacent bank. This wall is deteriorated in several locations and requires immediate repair before it collapses.

Key features on the interior are the wood trim and the decorative ashlar patterned plaster on the walls.

Exterior Renovations should focus on retaining and repairing the existing historic fabric and reconstruction where possible. Few changes have been made to the historic exterior character. The masonry should be cleaned and inspected for minor repairs that are required. The mortar joints of the brick are overall in good condition. The area of brick that is adjacent to the southwest chimney needs to be tuckpointed and toothpatched. There are metal embeds that should be removed from the façade, and the brick and mortar patched. The metal storefront cornice should be repaired, scraped, cleaned and painted. There are several repairs required on the west elevation. The rear entry canopy is deteriorated should be replaced. The rear entry door and frame is rusted and should be replaced. The third floor window sills are deteriorated and should be replaced. Several windows on this elevation have been removed and infilled. These windows should be opened and new windows installed. Overall the existing wood frames and sashes of the windows appear to be in good condition. The bottom of some sash members or sills may need to be repaired with a wood consolidation compound or replaced with a durable wood. Where new windows are required, double or single hung wood clad windows can be used.

East Facade

Storefront

The Basement can be divided and developed as required for storage for business and residential tenant use and storage.

The First floor has been modified, little to none of the historic character remains. This area can remain as the BMV or be redeveloped as a commercial or retail space.

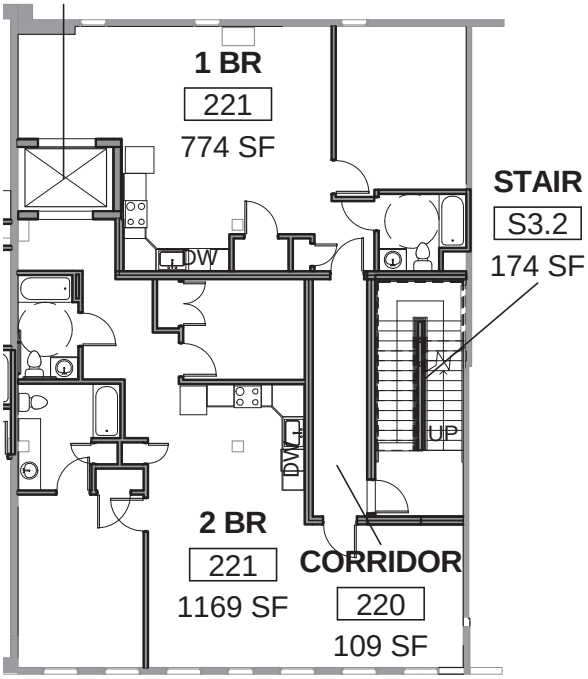
The Second and Third Floors can be developed as four market rate one or two bedroom apartments. The historic character is relatively intact and should be retained to the greatest extent possible. The existing stairs should be retained or new stairs with a similar character constructed. Doors and trim should be wood and match the existing profiles, species, and grain. New hardware should be as compatible with the historic character. New walls would be metal stud with gypsum board and painted finishes in all units with a double stud insulated wall separating each unit. Floor finishes would be carpet in the dwelling units and corridors. Kitchen, toilet, and bath areas will have ceramic tile floors as well as designated walls and inside the tub / shower. Windows, doors, other openings, and floor base would feature painted wood trim. Some spaces would feature exposed brick masonry with a clear sealed finish. Ceilings would typically be painted gypsum board. The floor elevation difference between the Knights of Pythias and BMV is too great and is not conducive to having a direct connection between these structures at the upper floors.

In general the building is in good structural condition, with a few noted exceptions as stated. No significant structural stabilization repairs are required. However, a spot check of the exterior masonry should be undertaken to confirm the soundness. The upper roof parapet should be checked for soundness of flashings, particularly under the parapet caps. If a new enclosed egress stairway is provided, this will require structural modification to the existing floor system at the second and third floors. A new elevator core is planned and will need structural modification for this penetration through the floors. Window sills and lintels throughout must be checked, restored and properly flashed. Lintels at all openings should also be checked for corrosion and replaced where required.

West Facade

3rd Floor Interior

BMV



Typical Floor Plan

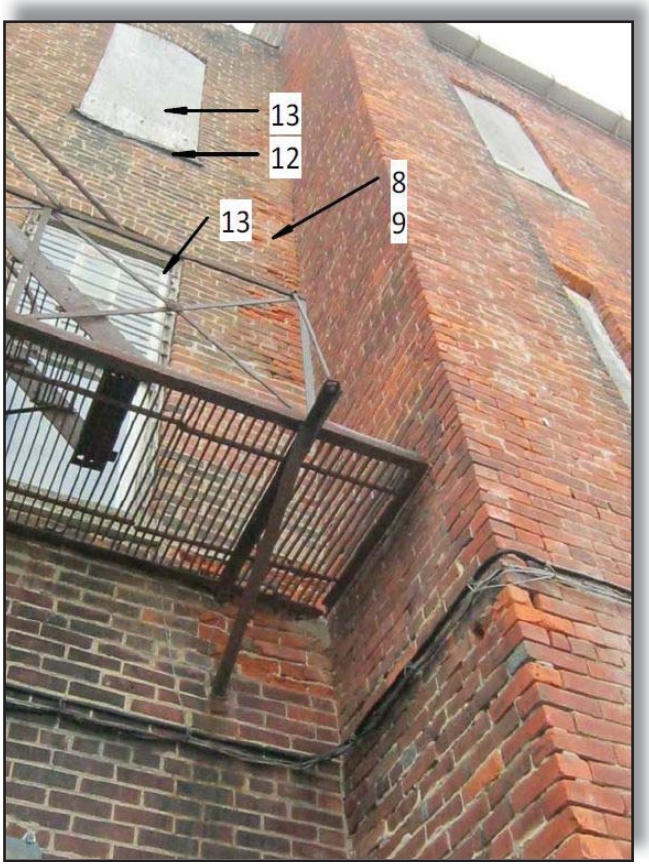
BMV - Market Rate Housing

No. Units	Type of Space	Square Feet
1	Basement	2490 SF
1	Commercial / Retail	2490 SF
2	One Bedroom	671 SF - 774 SF
2	Two Bedroom	1169 SF

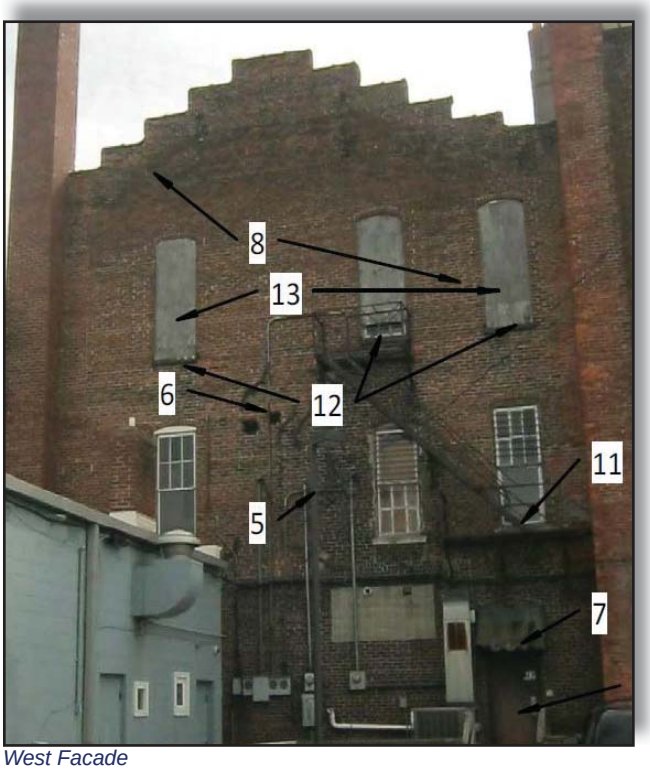
Cost Opinion: $1,345,000 - $1,445,000

1. Replace storefront to replicate historic storefront
2. Repair storefront cornice
3. Scrape, clean, and paint cornice
4. Repair and clean tile apron
5. Patch opening
6. Remove abandoned utilities
7. Replace canopy
8. Tuckpoint 10% and clean masonry
9. Toothpatch masonry
10. Replace door and frame
11. Remove fire escape
12. Replace window sills
13. Scrape, clean, repair, and paint windows
14. Retain and repair decorative plaster

East Facade



West Facade



West Facade

Storefront

Interior

Pasghetti's Italian Restaurant

Pasghetti's Italian Restaurant and an insurance agency occupy the first floor and vacant apartments are on the upper floors of this structure. The upper floors are accessed through a separate entry can be used for business or residential use. A developer has purchased this building to develop ten apartments, with six units that look out onto the square.

Overall the building appears to be in excellent condition. The original two story structures on the site were either demolished and a new three story structure constructed or a third floor was added. The limestone and metal façade has had few modifications over the years. This modification is a contributing addition over time and has remained fairly intact. These factors make the building a good candidate for rehabilitation and reuse, as well as obtaining Historic Tax Credits.

The historic limestone façade and metal decorative elements are key features on the exterior. These should be retained and repaired as required. The patina on the metal should be maintained and deteriorated areas patched and repaired. The storefront has been modified and is mainly in keeping with the historic character of the building.

The key features on the interior are the apartment entry lobby, corridor walls, finishes, and wood doors, frames, and trim on the upper floors.

Exterior Renovations should focus on retaining and repairing the existing historic fabric. The limestone and decorative metal façade has become a contributing change over time. The facades should be cleaned and inspected for required repairs. The mortar joints of the stone and brick are in good condition. The large sign board on the parapet should be removed and the limestone repaired. The metal embeds should be removed from the façade, and the masonry and mortar patched. There may be some minor areas of tuckpointing and masonry repair required. An expansion joint closure is recommended for the joint at the corner of the Knights of Pythias to help seal this joint. The roof should be inspected, based upon visible staining on the façade, it appears that there may be a leak either in the membrane or at the parapet. The existing rear egress stair should be removed. On the south elevation, new openings on the second floor, that match those at the third, should be provided. This may require that the electrical service be relocated. If greater thermal and sound insulation is desired, interior storm windows can be installed. Overall the wood frames and sashes of the windows appear to be in good condition. In most cases, these just need to be scraped, cleaned, sealed, and painted. The bottom of some sash members or sills may need to be repaired with a wood consolidation compound or replaced with a durable wood.

North Facade

Storefront & Outdoor Dining

Pasghetti's Italian Restaurant

The Basement can be divided and developed as required for storage for business and tenant storage.

The First floor has been modified for a restaurant and insurance company. These businesses are to remain.

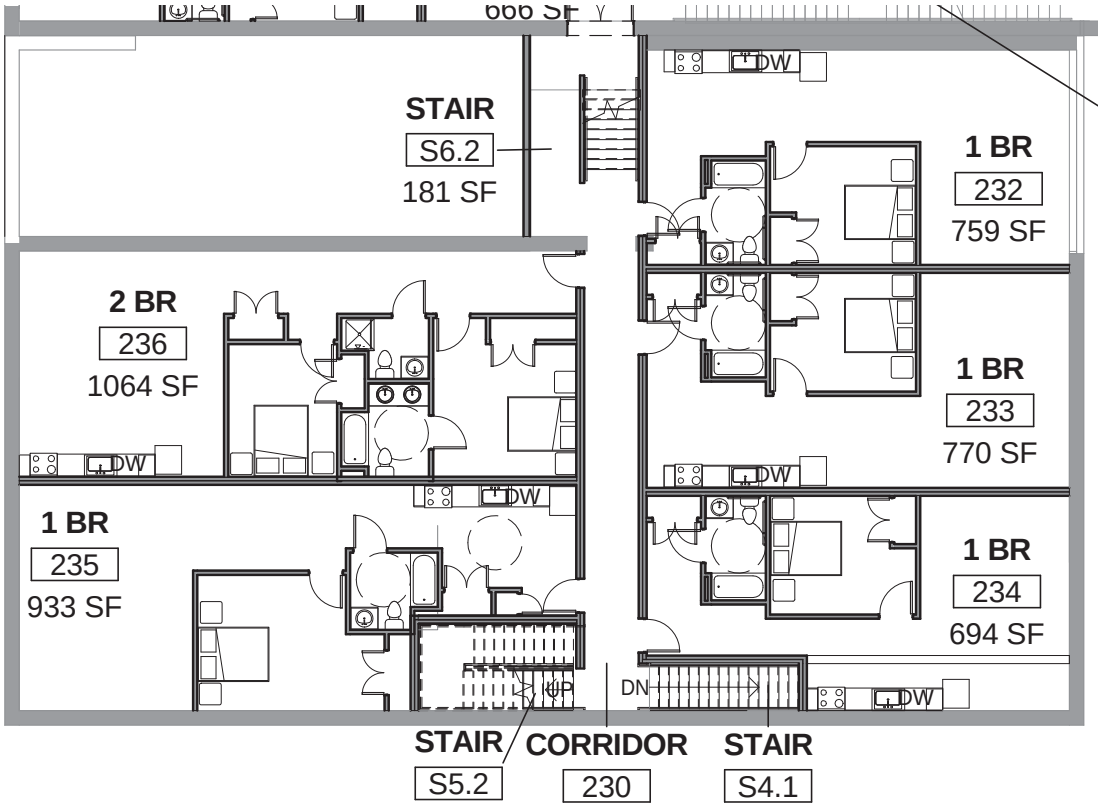
The Second and Third Floors can be developed as six affordable or market rate one bedroom apartments. The historic character is relatively intact and should be retained to the greatest extent possible. The existing entry stairs should be retained. Existing corridors and openings should be retained. Where doors are not required, these should be retained and an insulated stud wall infill used to provide sound insulation. Doors and trim should be wood and match the existing profiles, species, and grain. New hardware should be as compatible as possible to the historic character. New walls would be metal stud with gypsum board and painted finishes in all units with a double stud insulated wall separating each unit. Floor finishes would be carpet in the dwelling units and corridors. Kitchen, toilet, and bath areas will have ceramic tile floors as well as designated walls and inside the tub / shower. Windows, doors, other openings, and floor base would feature painted wood trim. Some spaces would feature exposed brick masonry with a clear sealed finish. Ceilings would typically be painted gypsum board.

In general the building is in good structural condition, with a few noted exceptions as stated. No significant structural stabilization repairs are required. The upper roof parapet should be checked for soundness of flashings, particularly under the parapet caps. Window sills and lintels throughout must be checked, restored and properly flashed.

South Facade

South Facade

Pasghetti's Italian Restaurant



Typical Floor Plan

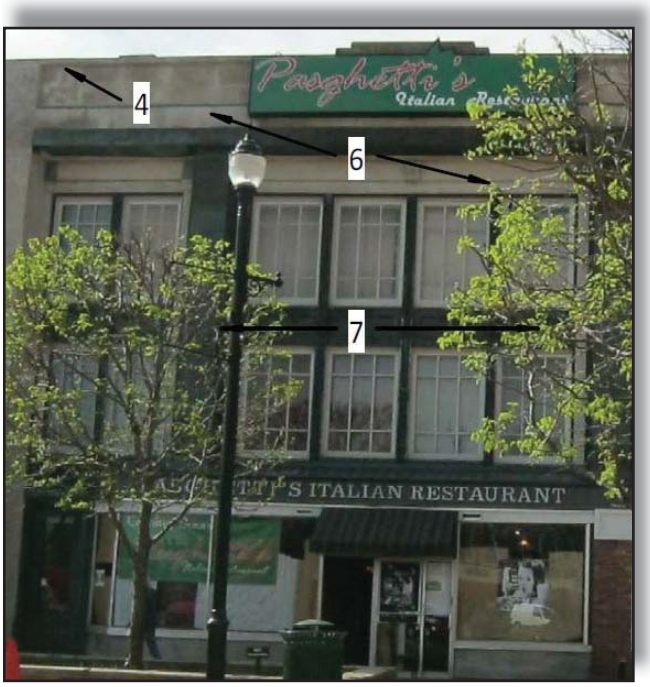
Pasghetti's Italian Restaurant

No. Units	Type of Space	Square Feet
1	Basement	6310 SF
1	Restaurant	6310 SF
8	One Bedroom	759 SF - 933 SF
2	Two Bedroom	1064 SF

Cost Opinion: $3,110,000 - $3,340,000

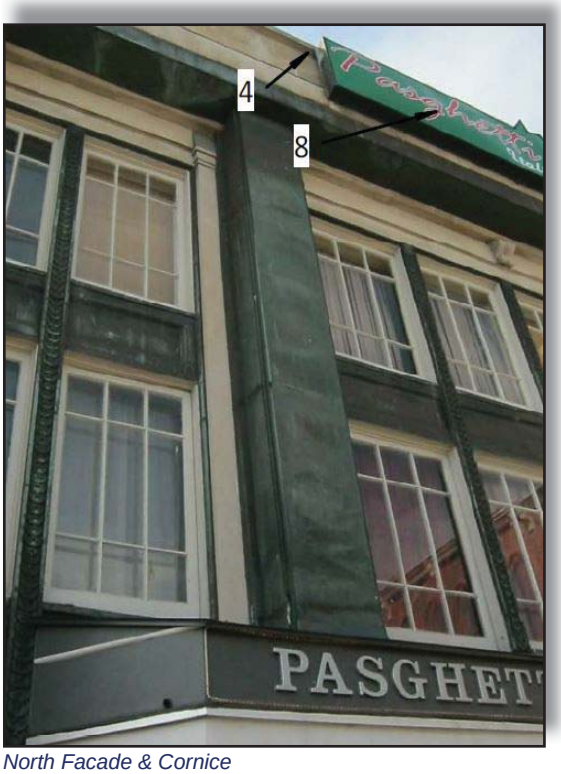
1. Retain existing lobby, stair, and elevator
2. Add expansion joint
3. Relocate electrical service
4. Remove parapet cap, flash, and reinstall
5. Repair leak at parapet
6. Spot tuckpoint and clean masonry
7. Spot clean decorative metal, patina to be retained
8. Remove sign and metal embeds
9. New, enlarged windows
10. Remove egress stair

Pasghetti's Italian Restaurant

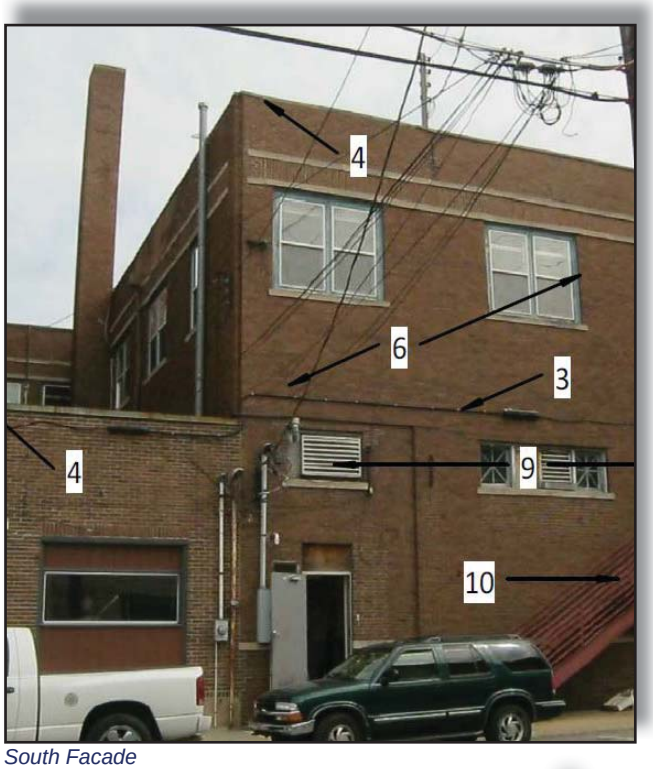


North Facade

Entryway



North Facade & Cornice



South Facade

Tippecanoe Press Building

The existing Tippecanoe Building is currently vacant except for the first floor that is being used to store theater pipe organs for a future museum. There is a full height glass storefront across the entire front and a separate entry for the upper floors. The first floor is well suited for commercial or retail use. The second floor was once connected to the balcony level of the adjacent Strand Theatre. The upper floors can be used as conference / ballroom and support spaces for the adjacent Strand Theater to expand the programming and provide an additional source of revenue.

East Facade

Overall the building appears to be in excellent condition and is a good candidate for rehabilitation and reuse. The majority of the historic character defining features has been retained on the upper floors. The exterior has been clad in exposed aggregate concrete panels and the storefront has been removed and modified.

There is the possibility that the applied façade may be a contributing addition over time. This would need to be further reviewed with the State Historic Preservation Office. A second option would be to remove the applied panels and restore the brick façade and reconstruct the storefront. There is a separate entry for the upper floors. The original wood double hung windows are still in place at the third floor and may be behind the wall at the second floor. Key features on the interior are structural partition walls on the first floor. Much of the historic materials is intact at the upper floors and should be retained. At the third floor, there are windows that overlook the main hall on the second floor. At one point the second floor could be accessed from the balcony of the adjacent Strand Theatre. This building would most likely not be a candidate for Historic Tax Credits due to the changes at the exterior unless one undertook original facade restoration.

South Facade

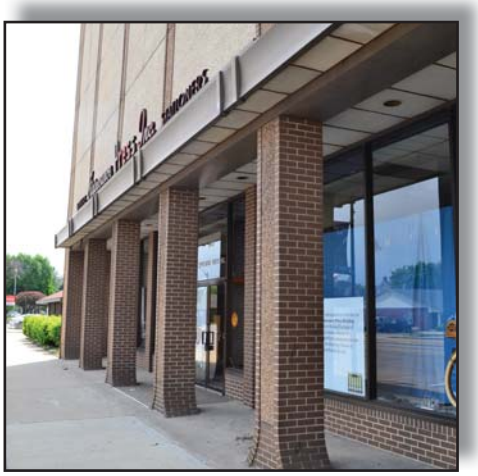
Exterior renovations should focus on retaining and repairing the existing fabric. The storefront cornice should be scraped, cleaned, and painted. The panels and their anchors inspected. The entrance to the upper floor should be retained.

Tippecanoe Press Building

The Basement can be divided and developed as required for storage. The First floor has been modified and little of the historic character of the spaces has been retained. These areas can be redeveloped as tenant spaces for commercial, business, or retail.

The Second and Third Floors can be developed as either light office or supporting conference and banquet space for the adjacent Strand Theatre. The historic fabric of the upper floors is relatively intact and should be retained. Existing doors should be retained and repaired. New hardware should be as compatible as possible to the historic character. New walls would be metal stud with gypsum board and painted finishes with accents of wood paneling to match. Floor finishes would be existing hardwood or carpet. Kitchen, toilet, and bath areas should have ceramic tile floors as well as designated walls. Windows, doors, other openings, and floor base would feature stained wood trim. Some spaces would feature exposed brick masonry with a clear sealed finish. Ceilings would typically be painted gypsum board.

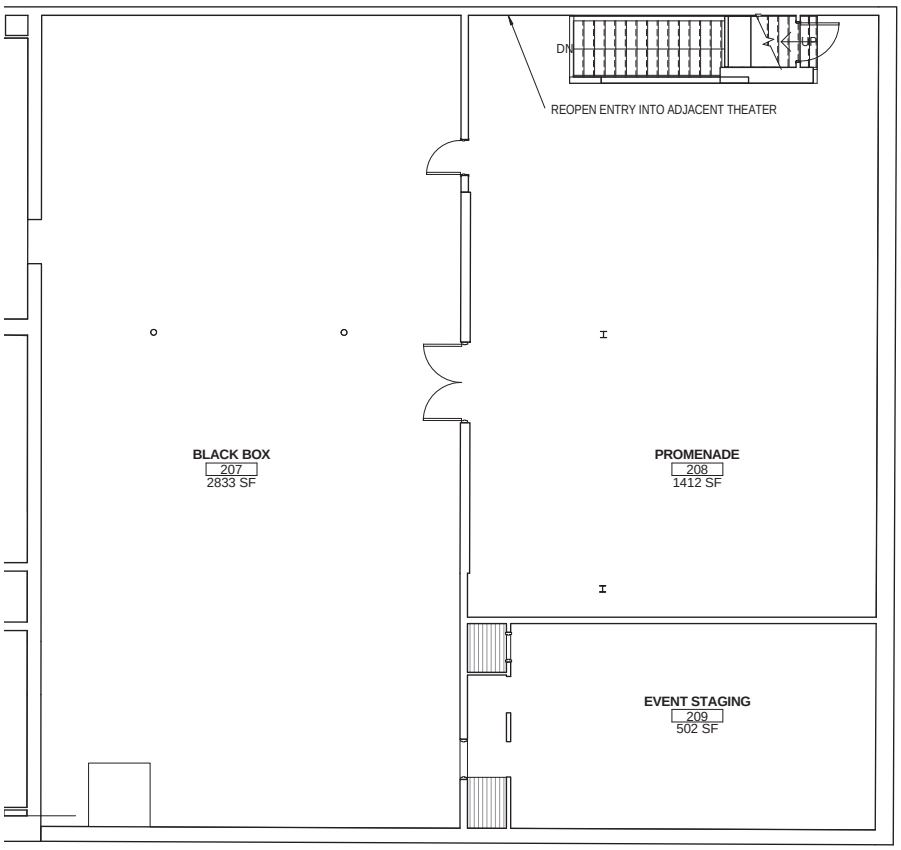
In general the building is in good structural condition, with a few noted exceptions as stated. No significant structural stabilization repairs are required. However, a spot check of the exterior panel anchorage to the original masonry facade should be undertaken to confirm the soundness of connections and the condition of the anchors. The upper roof parapet should be checked for soundness of flashings, particularly under the parapet caps. A floor loading and lateral load resistance analysis should be included in the rehabilitation work. The structural feasibility of adding an in-fill floor above the second floor hall would need to be investigated.



Storefront

Interior

Tippecanoe Press Building



2nd Floor Plan

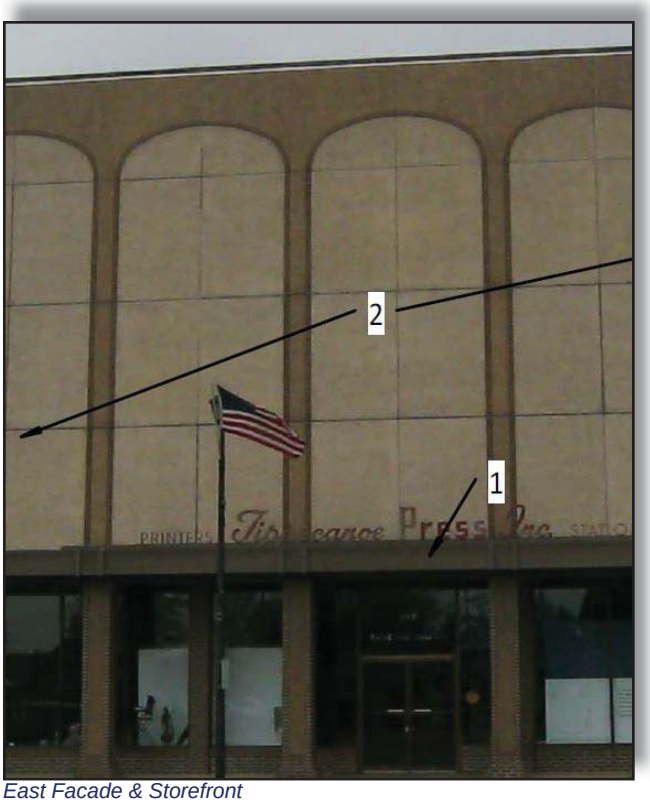
Tippecanoe Press Building

No. Units	Type of Space	Square Feet
1	Basement	4615 SF
1	Commercial / Retail	4671 SF
1	Black Box	2833 SF with 502 SF Event Staging
1	Ballroom	2102 SF with 228 SF Event Staging
1	Meeting Room	1129 SF

1. Scrape, clean, and paint storefront cornice
2. Inspect and repair panel anchors
3. Scrape, clean, and tuckpoint
4. Add floor structure

Cost Opinion: $1,938,000 - $4,383,000

Tippecanoe Press Building



East Facade & Storefront

Interior

South Facade

Interior

Wickizer Building

The existing Wickizer Building is currently vacant. The first floor is well suited for a split between offices or a fusion business center and residential. The upper floor can be adapted for used as business or residential. Due to the location of the building off the main street, a retail or commercial use would not be recommended.

Overall the building appears to be in excellent condition. The majority of the historic features has been retained or can be easily reinstated. These factors make the building a good candidate for rehabilitation and reuse, as well as obtaining Historic Tax Credits. There has been a more recent addition to the east façade, and this may be considered a contributing addition over time. The original storefront was modified when the east addition was constructed. The original window openings have been retained but are blocked in. Several of the openings on the west elevation have been infilled. The east addition is ashlar limestone with aluminum windows and is old enough to be considered a contributing addition over time. This will need to be reviewed further by the State Historic Preservation Officer to determine eligibility.

Key features on the interior are the tall open spaces and the exposed wood roof trusses on the second floor. Overall this building is a good candidate for Historic Tax Credits.

Exterior Renovations should focus on retaining and repairing the existing historic fabric. Overall, few changes have been made to the historic exterior character. An addition was constructed at the southeast corner in the 1960's or 70's and may be considered a contributing addition over time. The masonry should be cleaned and inspected to required minor repairs. The mortar joints of the stone and brick are in good condition. There may be some minor areas of tuckpointing required. The west elevation should be fully tuckpointed. The painted east elevation should be scraped and cleaned. There are metal embeds that should be removed from the façade, and the brick and mortar patched. The exposed aggregate panels at the main storefront should be removed. The gutter and leaders should be replaced and terminated to an underground drainage system. The bottom four feet of the leaders should be protected from vehicle impact. Overall the aluminum and wood frames and sashes of the windows appear to be in good condition. In most cases, the wood windows just need to be scraped, cleaned, sealed, and painted. The bottom of some sash members or sills may need to be repaired with a wood consolidation compound or replaced with a durable wood. Infilled openings should be opened and new windows provided. If the loft area is able to be used, new windows should be provided. The door and frame to the mechanical platform need to be replaced. The wood fascia and soffit should be scraped, cleaned, and painted.

West & South Facades

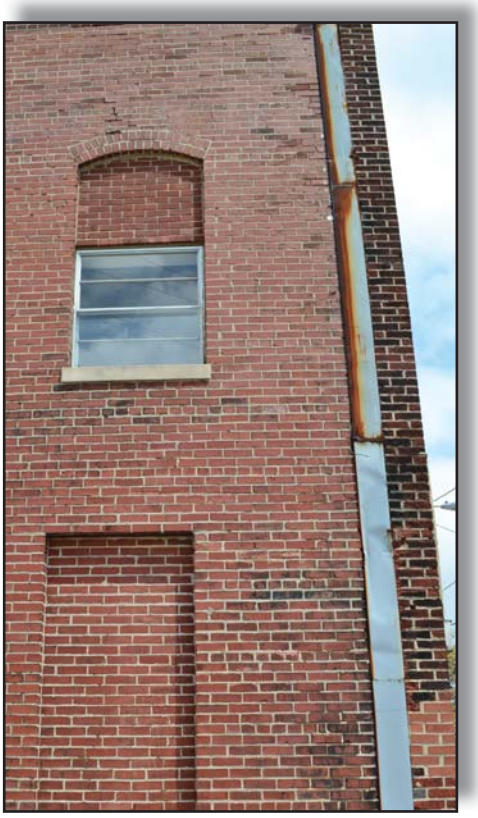
Storefront

East Facade

The First floor has been modified to meet the changing needs of the industrial use, but the primary historic character of the space has been retained. These areas can be redeveloped as tenant spaces for offices, shared business space, in conjunction with residential.

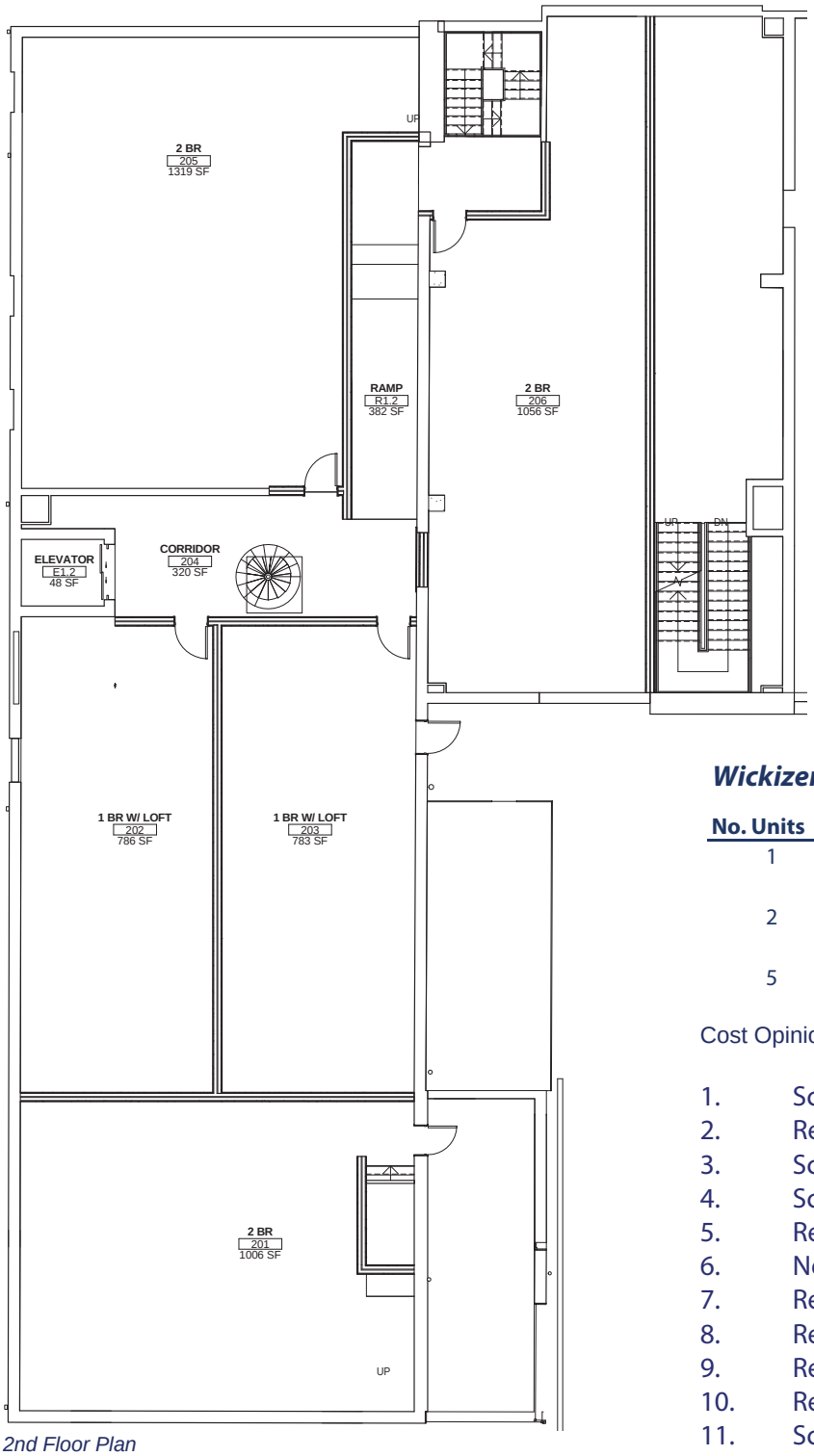
The Second floor and loft area can be developed as either market rate one and two bedroom apartments or townhouse units. New hardware should be as compatible as possible to the historic character. New walls would be metal stud with gypsum board and painted finishes in all units with a double stud insulated wall separating each unit. Floor finishes would be carpet in the dwelling units and corridors. Kitchen, toilet, and bath areas will have ceramic tile floors as well as designated walls and inside the tub / shower. Windows, doors, other openings, and floor base would feature painted wood trim. Exterior walls in the spaces would feature exposed brick masonry with a clear sealed finish. Ceilings would typically be painted gypsum board or be exposed structure.

In general the building is in good structural condition, with a few noted exceptions as stated. No significant structural stabilization repairs are required. A spot check of the exterior mechanical frame should be undertaken to confirm the soundness if it is to be retained. The upper roof parapet should be checked for soundness of flashings, particularly under the parapet caps. Window sills and lintels throughout must be checked, restored and properly flashed.



Bricked Windows

Wickizer Building



2nd Floor Plan

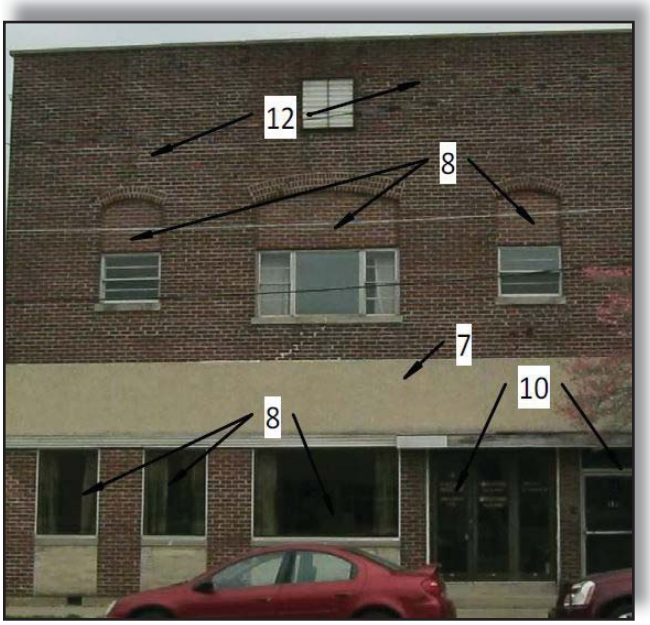
Wickizer Building

No. Units	Type of Space	Square Feet
1	Business / Commercial	3153 SF
2	One Bedroom with Loft	783 SF - 786 SF with 583 SF - 670 SF Loft Space
5	Two Bedroom	1001 SF - 1319 SF

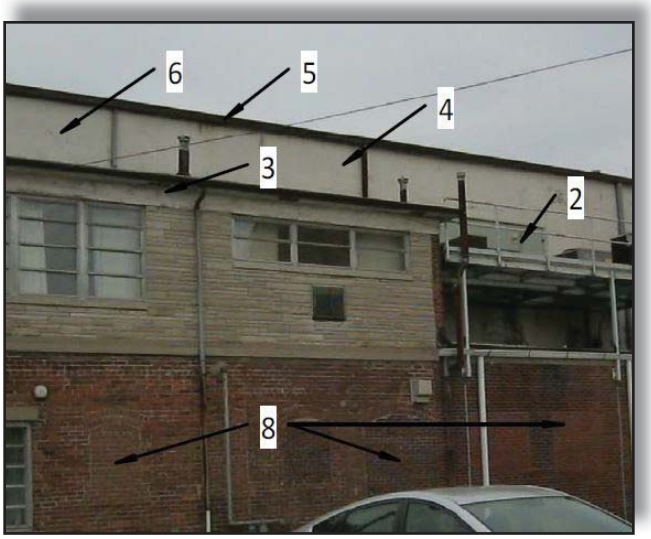
Cost Opinion: $1,921,000 - $2,064,000

1. Scrape, clean, repair, and paint windows
2. Relocate mechanical and remove platform
3. Scrape, clean, repair, and paint fascia and soffit
4. Scrape, clean, and tuckpoint masonry
5. Replace box gutter and leader
6. New window openings at loft
7. Remove panel
8. Remove infill and install new windows
9. Remove parapet cap, flash, and reinstall
10. Remove and replace entry
11. Scrape, clean, repair, and paint wood trim
12. Tuckpoint 5%
13. Toothpatch 5%
14. Repair elevator doors
15. New storefront entry
16. Retain and repair door
17. Replace lintel

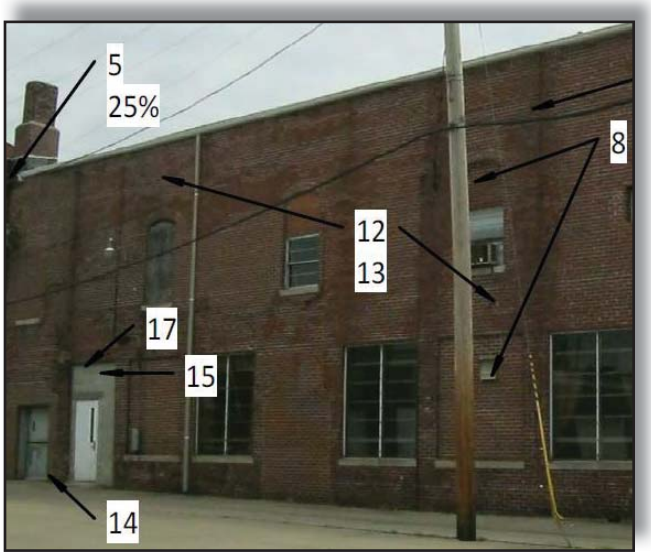
Wickizer Building



East Facade

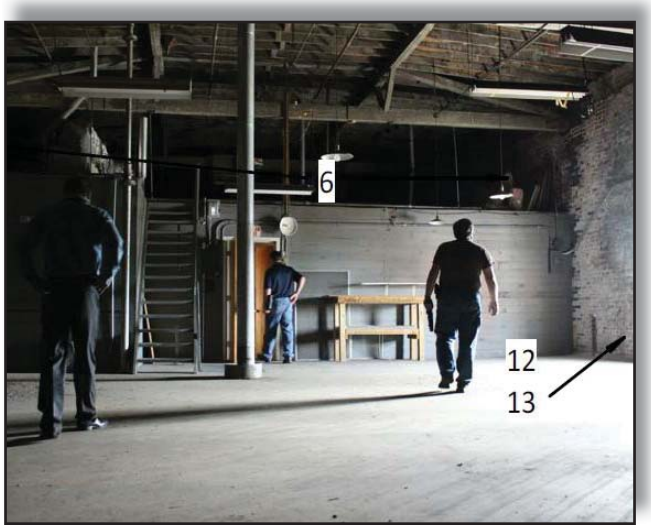


South Entrance



East Storefront

Interior



Interior

Section F

Design Guidelines

Branding the System

An important Downtown Opportunities Plan goal is to create a downtown that, in the end, becomes regionally identifiable and uniquely associated with Shelbyville. Design standards for streetscape components will play a significant role in achieving this goal.

Streetscape design standards will include the following elements:

- o Gateways Features
- o Historic Markers
- o Light Fixtures
- o Site Furnishings including:
  - Seating
  - Litter Receptacles
  - Bike Racks
  - Lighted Bollards
- o Wayfinding
- o Street Trees
- o Landscape
- o Trailhead Appurtenances
- o Application of Complete Streets Metrics
- o Bicycle & Pedestrian Corridors
- o Crosswalk Designs and Pedestrian Refuges
- o Pedestrian Accommodations at Key Intersections

When these various components are predetermined for the value of their function and aesthetics, phased implementation is simplified and successfully delivers consistent public improvements. Even more important, the design standards combine to establish and "mark" the City's downtown in a fashion that makes the public places unique and attractive for visitors and residents, thereby building the "Shelbyville Brand". This branding also serves to promote public safety, as the various components of a thoughtfully executed streetscape promote traffic calming and the desired traffic speed reductions being sought.

As the rebranding effort for downtown Shelbyville evolves, streetscape design guidelines, proposed design elements and gateway and monument features will take form and embellish the Downtown Shelbyville experience.

Branding Example- South Haven, Michigan

Cultural Trail - Indianapolis


Monument Feature Example - City of Franklin

Streetscape Design Guidelines & Standards

The intent of the following Streetscape Design Guidelines and Standards is to establish a uniform set of design parameters and site features for development occurring within specified corridors and districts throughout the City of Shelbyville.

General Conditions

Accessibility

All development within the defined downtown district and greenway corridors shall be accessible to all people, including those with disabilities. New design features and site improvements shall comply with the requirements of the Americans with Disabilities Act for Accessibility Guidelines (ADAAG).

Historic Character

Historic character adds community value. The Streetscape Design Guidelines and Standards aim to highlight and embellish the characteristics, features, and symbols of historic Shelbyville. Period-style site furnishings and materials will compliment downtown's historic context.

Environmental Issues

These Design Guidelines and Standards address sustainable design and management where possible. The following design principles are intended to promote a healthy and sustainable framework for the City of Shelbyville.

Alternative Transportation
A key feature of the project is the expansion and improvement of pedestrian and bicycle corridors throughout the City. These corridors will provide residents and visitors with alternative transportation options such as walking, running, and bicycling. Use of alternative transportation routes encourages reduction of automobile use and carbon emissions, improved air quality, and a more active lifestyle for community residents.

Stormwater Management
Stormwater distribution and water quality are a community responsibility that can be improved with site design features. Vegetated bio-swales capture and slow water while removing particulate matter. Pervious pavement also allows stormwater infiltration and reduces stormwater runoff. These techniques can be employed where feasible in order to enhance stormwater best management practices (BMPs) within the City while also reducing flood impacts.

Native Vegetation
Native plant material typically requires less maintenance once established, thus requiring less energy and costs associated with maintenance. New plantings shall utilize native plant materials to meet design requirements where feasible. (See Landscape and Plantings for a detailed list of recommended plants)

Choice of Materials
High quality, durable materials shall be specified in order to reduce long-term maintenance costs. Preference shall be made for recycled content materials and locally produced and / or regionally quarried materials where feasible.

Energy Conservation
Design standards shall seek to implement energy efficiency, such as:

- Low energy site lighting (LED, compact fluorescent, sensor controls for night lighting, etc.)
- Use of native groundcover instead of lawn to reduce high maintenance costs
- Planting trees strategically to reduce urban heat island effect and cooling costs

Utilities

All new major utility lines and building connections shall be sub-surface, wherever feasible. There should be further study to determine feasibility to bury existing electric and communication utilities throughout the downtown redevelopment district. If feasible, this work should be done in conjunction with improvements outlined in these guidelines.

Vehicular Circulation

Guidelines

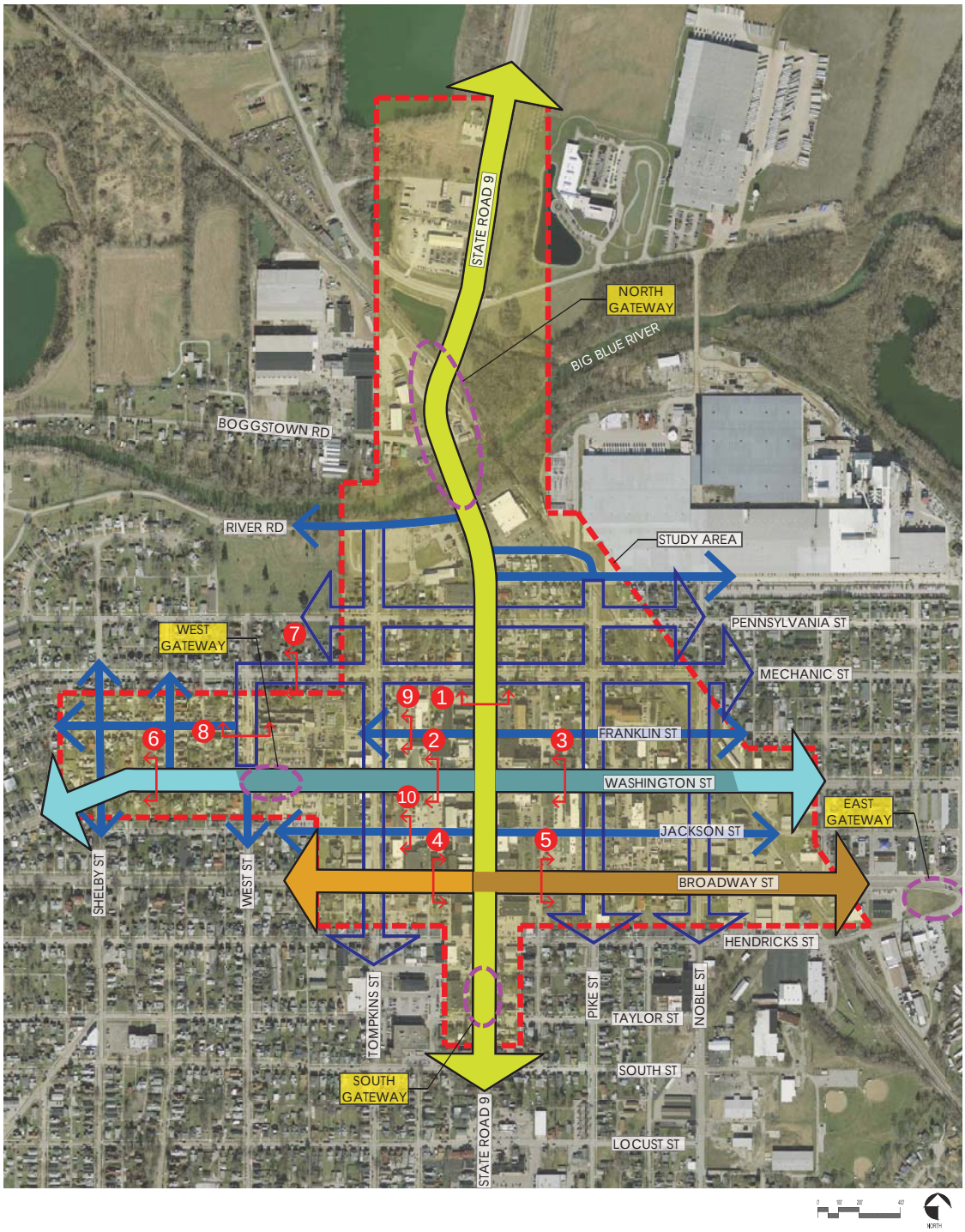
- INDOT design guidelines and standards shall be followed for lane widths, design speeds, horizontal and vertical alignment, cross slopes, side slopes, lateral clear zones, curbs, roadway pavement, pavement markings, drainage, traffic signals, lighting and utilities

- Safe pedestrian routes and crossings shall be provided

- Median barriers, guardrails, lighting, and wayfinding signage design shall incorporate materials in keeping with the overall "gateway" character.

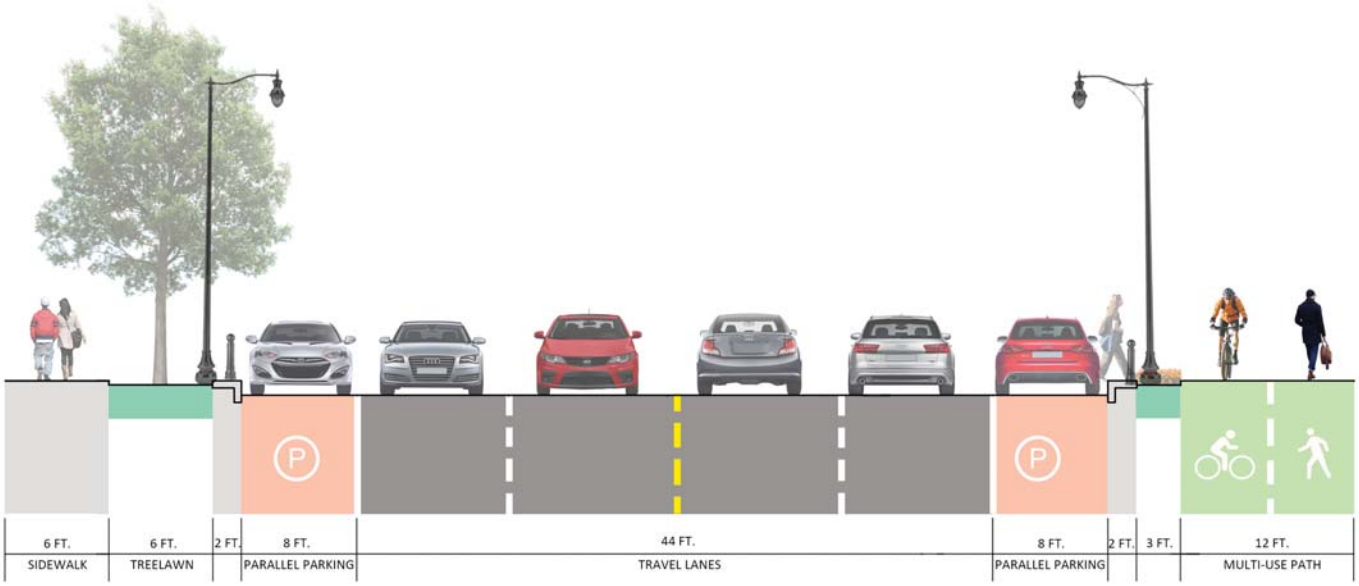
- Enhanced traffic signals shall be incorporated into the greenway and gateway corridor development. New traffic signal styles shall conform to the style of proposed light fixtures (See Site Lighting) and sign standards (See Wayfinding Signage)

Streetscape Classifications



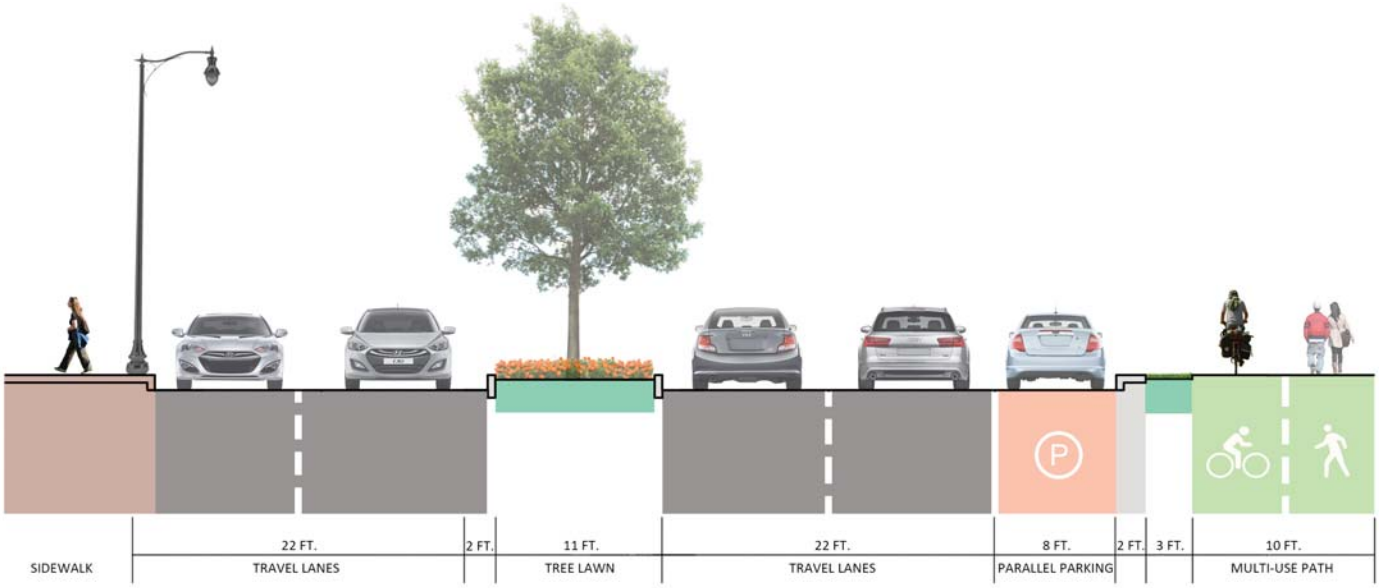
Harrison Street is the primary corridor running north / south through Downtown Shelbyville. Washington and Broadway Streets are the primary corridors flowing east / west. The remainder of the streets within the study area can be classified as either local or collector streets and feature a combination of one-way and two-way traffic patterns. It is suggested that all one-way streets be converted to two-way to allow for improved traffic flow within downtown.

Streetscape Sections



Harrison Street Section

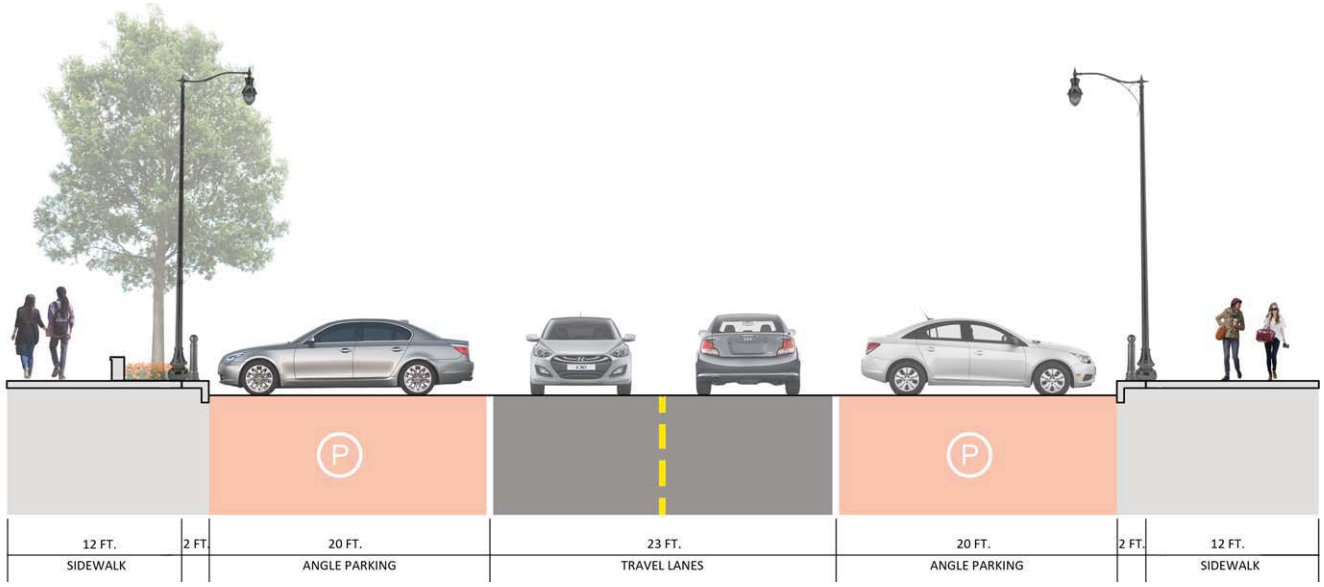
Harrison Street north and south of Civic Square will feature two lanes of traffic in each direction, a center turn lane when necessary and parallel parking on each side of the street. Road widths will be narrowed for traffic calming measures and to gain pedestrian space suitable for a landscape buffer, sidewalk and proposed urban trail.



Harrison Street Section with Median

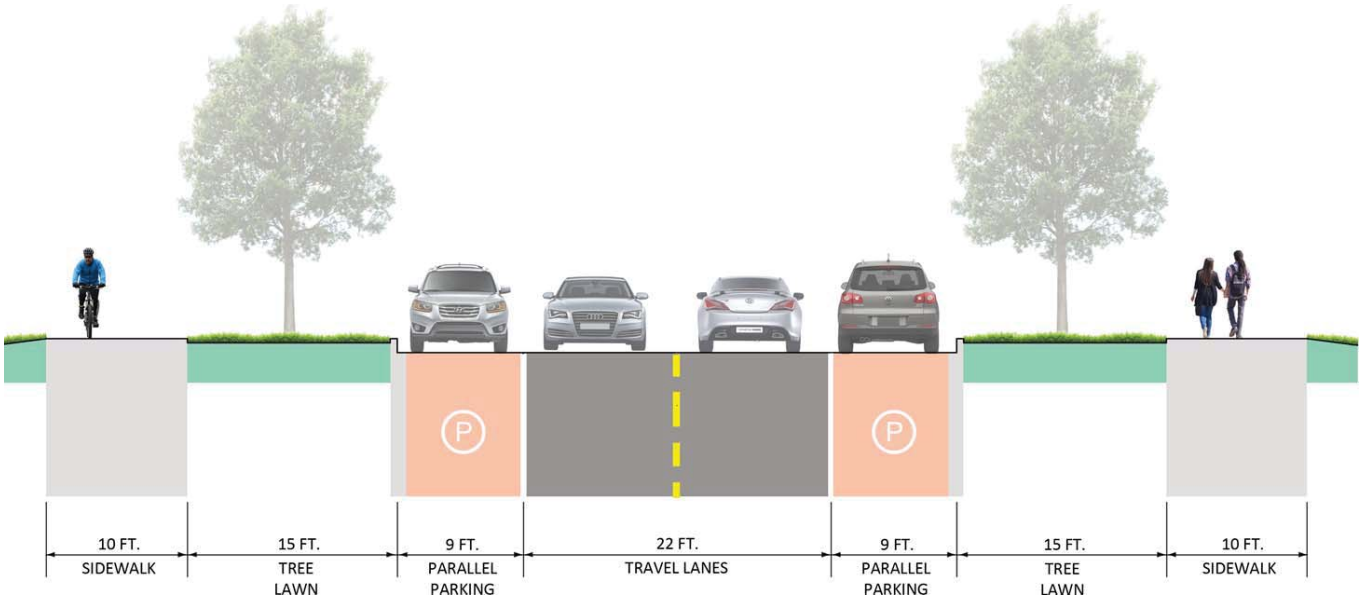
Harrison Street within Civic Square will feature two lanes of traffic in each direction, a planted median in the middle and parallel parking on each side of the street according to the proposed plan.

Streetscape Sections

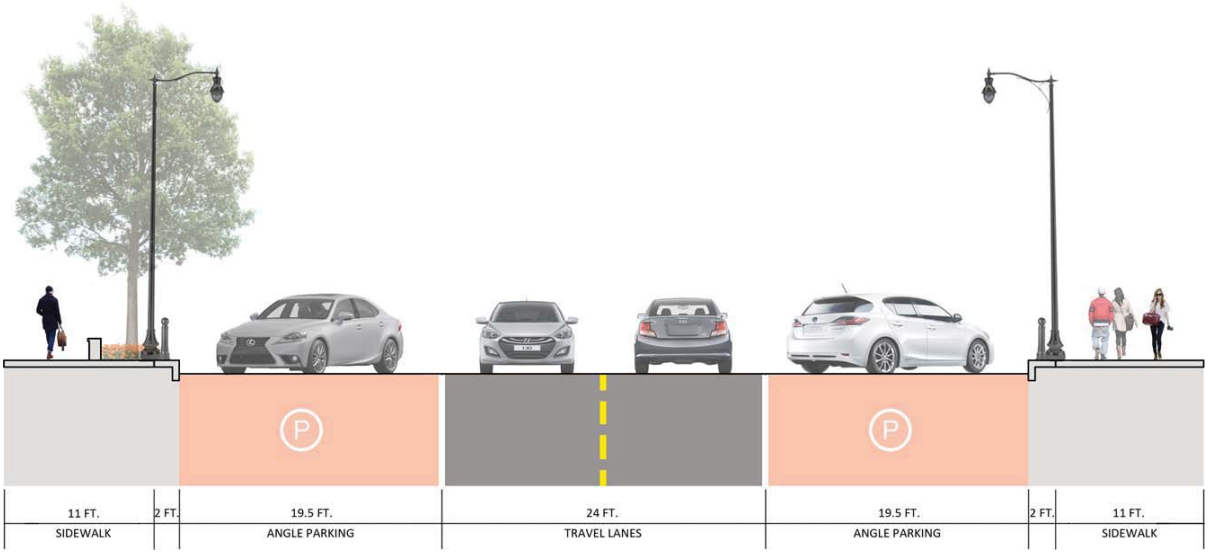


West Washington Street Section

West Washington Street from Civic Square to Tompkins Street will feature one lane of traffic in each direction with 90° parking on both sides of the street. Traffic moving east towards Civic Square will flow into a vehicle drop-off at the bandshell.

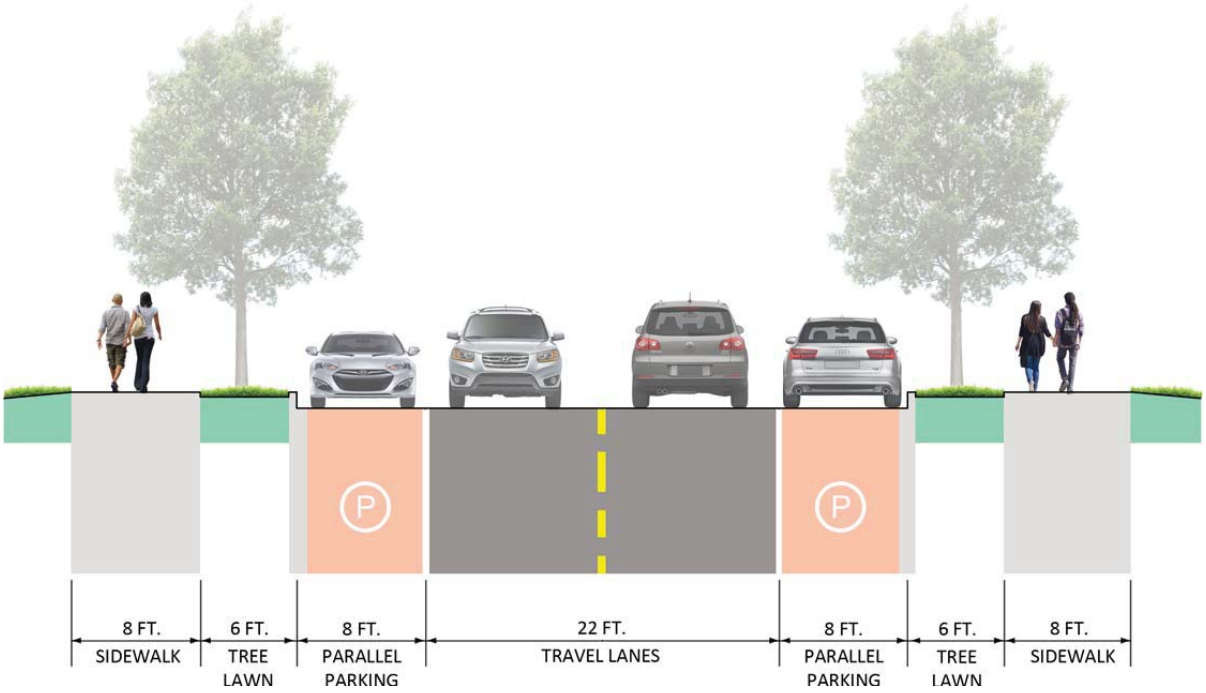


West Washington Street Section with Parallel Parking



East Washington Street Section

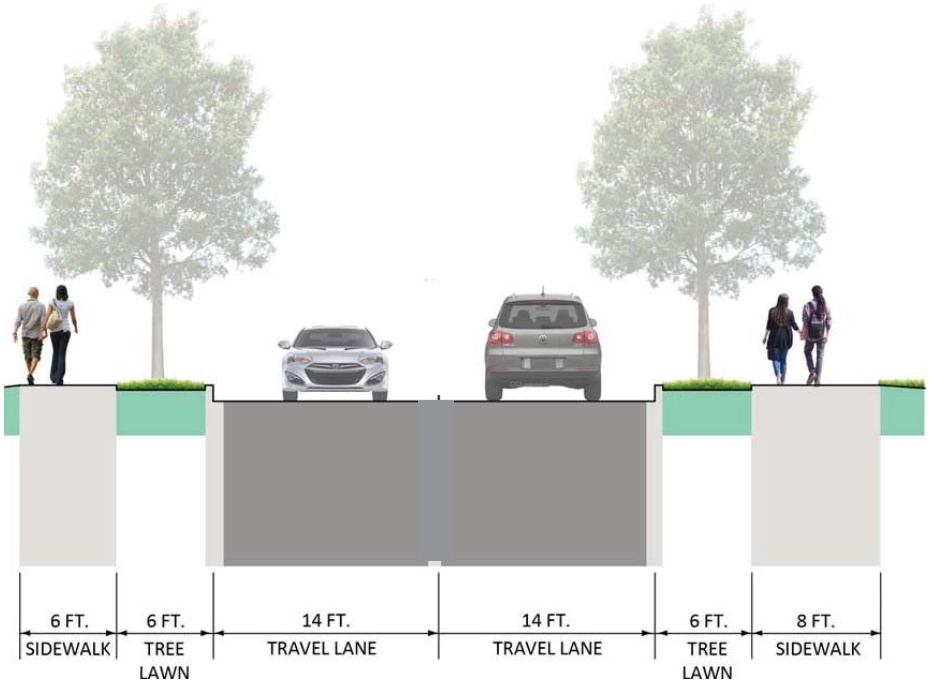
East Washington Street from Civic Square to Pike Street will feature one lane of traffic in each direction with angled parking on both sides of the street.



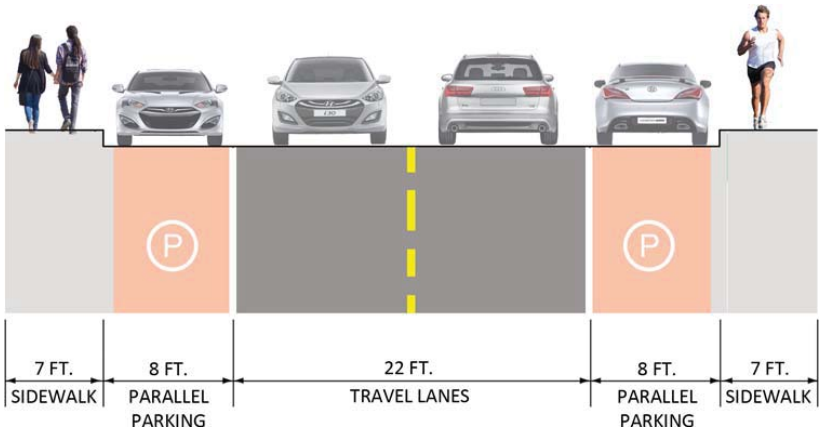
Mechanic Street Section

Mechanic Street is the east / west leg of the proposed alternative traffic route for vehicles looking to avoid Civic Square and access State Route 44 west and State Route 9 north of downtown. Road widths may be increased to allow for wider lanes and parallel parking that can better accommodate increased traffic flow.

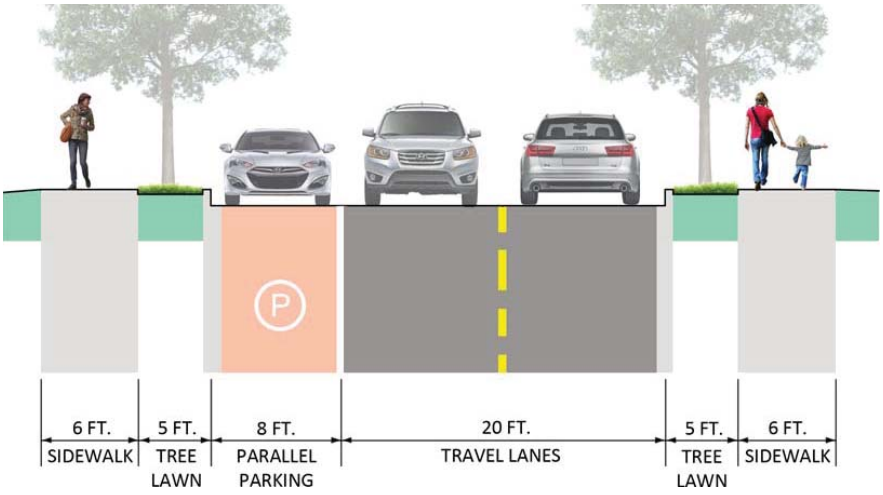
Streetscape Sections



West Street Section

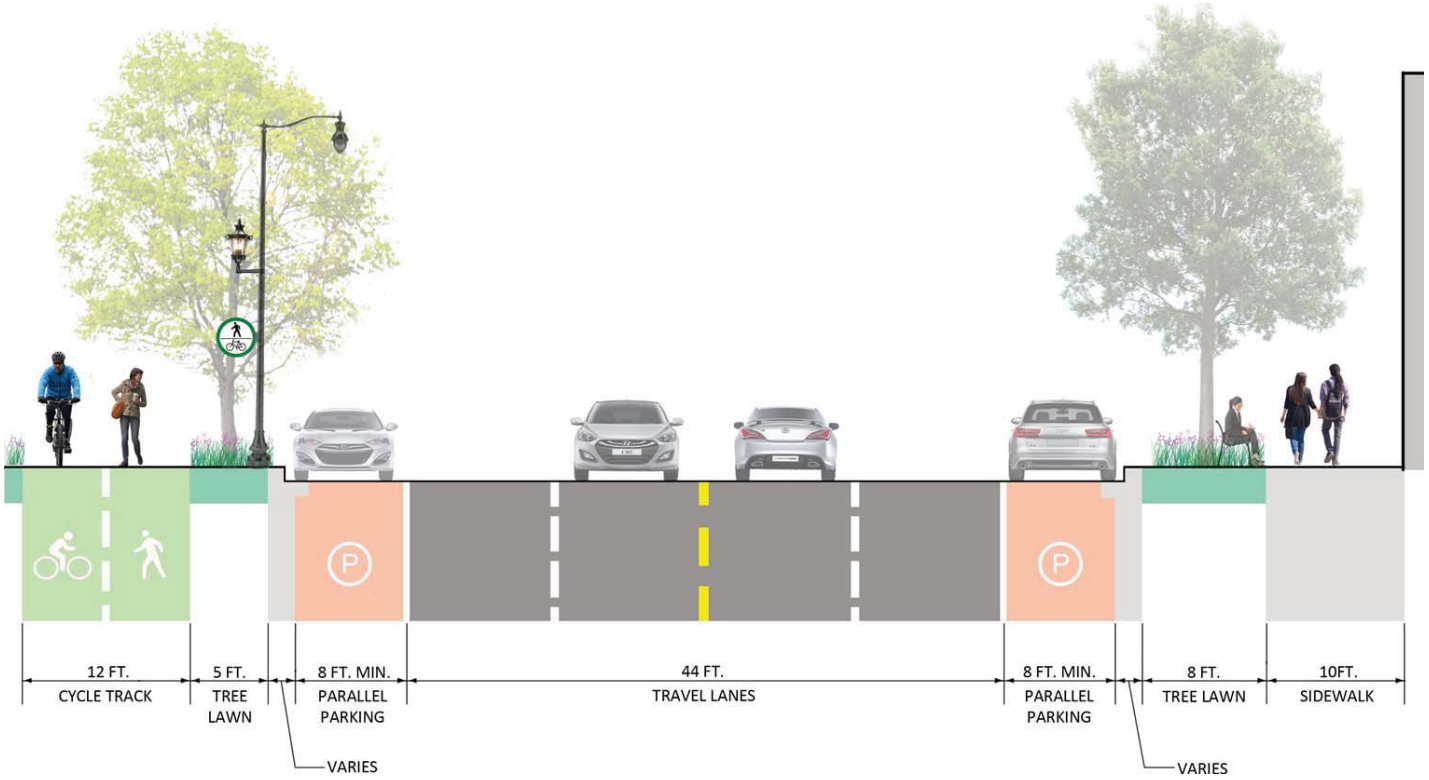


Jackson Street Section

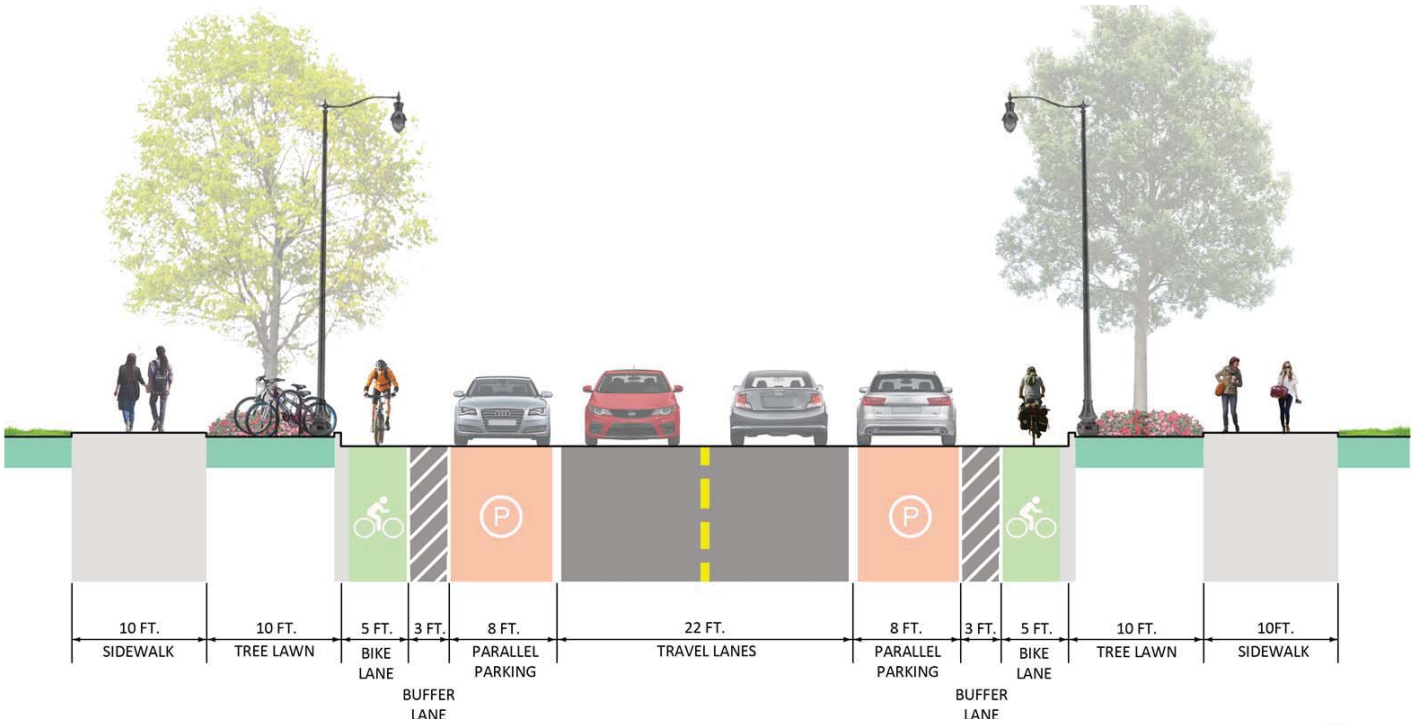


Franklin Street Section

Streetscape Sections



East Broadway Street Section



West Broadway Street Section

Pedestrian and Bicycle Corridors

Shelbyville's 2015 Bicycle & Pedestrian Master Plan has identified viable greenway corridors throughout major thoroughfares of the City, organized by location and trail/path type. These corridors are the avenues by which residents and visitors will experience the City. A network of paths connected to nodes of community activity promotes accessibility and active recreation. By making the corridors visibly well marked, aesthetically attractive, safe and comfortable, trail system navigation will be easier for users. Further study is needed to determine detailed design specifications at precise locations throughout these planned pedestrian corridors.

Existing Shelbyville Pedestrian Corridor

Guidelines

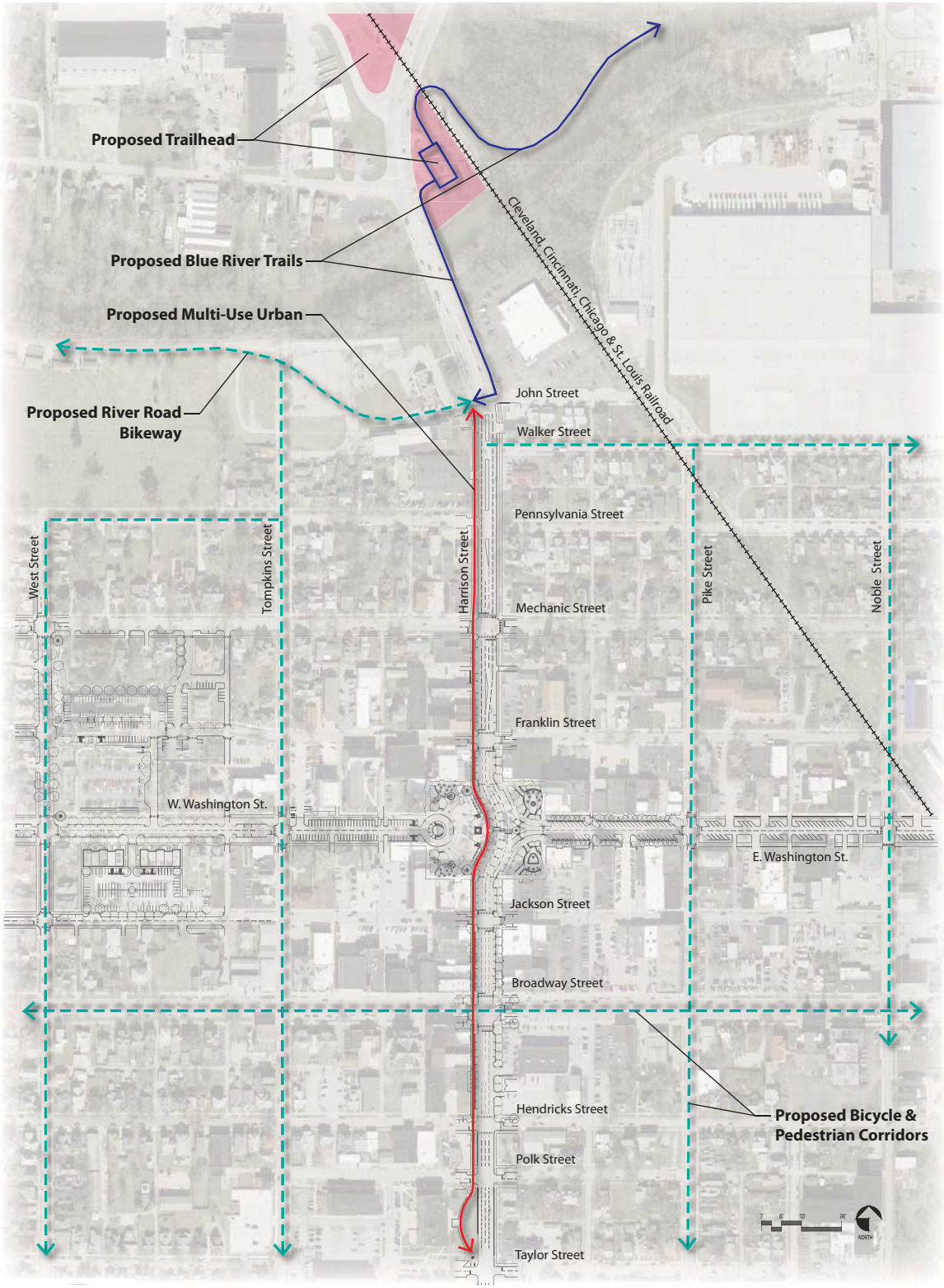
- Monument features shall be integrated into trail designs at appropriate locations
- Landscape treatments shall reflect different trail types
- Streetscape appurtenances shall be consistent throughout the pedestrian corridors, regardless of trail type
- Emergency call boxes shall be strategically placed to provide safety and security measures for trail users
- Light fixtures shall be incorporated throughout the trail system in compliance with INDOT standards (where applicable)
- Wayfinding signage shall guide both pedestrian and auto-oriented users in terms of trail accessibility, locations of community landmarks, and safety

2015 Mayor's Bike Ride

Alternative Transportation Standards

- Alternative Transportation standards within the Downtown shall aspire to achieve Complete Street Standards for the benefit of all local citizens and comply with Bicycle & Pedestrian Master Plan adopted in 2015.

Pedestrian and Bicycle Corridors



Bicycle & Pedestrian Corridors within Study Area as defined in the 2015 Bicycle & Pedestrian Master Plan

Trailheads

Trailheads are a necessary component of a bicycle and pedestrian system and should be strategically located throughout the Bicycle and Pedestrian system and throughout the community. Trailheads offer access to trail amenities and corridors for all users.

Automobile parking at trailheads should be designed and constructed using existing ordinances and standards with 5 or more vehicle parking spaces (including accessible parking spaces). Quantity is dependent on several factors including popularity of facility or surrounding population density.

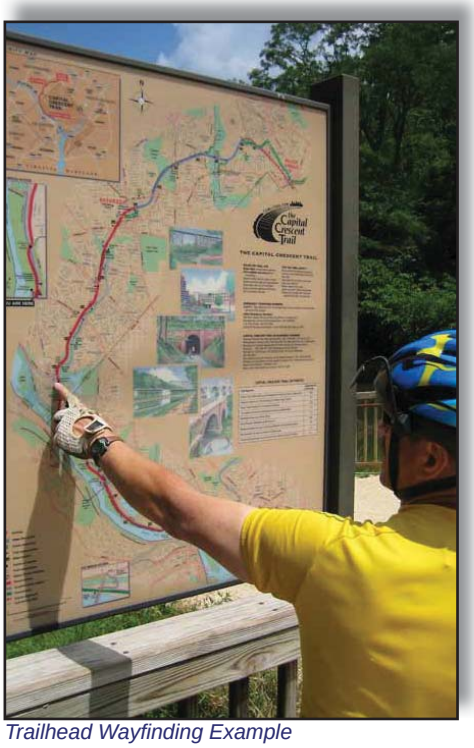
Bike parking should be located at all trailheads allowing users a secure location to lock their bicycle, but also increasing the opportunities for multi-modal transportation options for system users.

Amenities such as pet waste bag dispensers and trash receptacles help to keep the trailhead clean and sanitary while meeting system users needs. Ideally recycling receptacles would be offered as well and coordinated with a county-wide pick-up program.

Wayfinding and Bicycle/Pedestrian system mapping should be prominently displayed at the trailhead to orient users to their location and where one may travel throughout the system. The City may also post a web based version of the Bicycle and Pedestrian Master Plan and provide links to the map within trail head signs.

Benches, water dispensers and shade – either tree canopy or a structure – should also be considered to offer users a place of respite.

Amenities and constructed elements at trailheads should be considered part of the trails brand and should coordinate with existing standards to provide a uniform aesthetic throughout the system.



Trailhead Wayfinding Example


Existing Trailhead Example

Planned Trailhead

A planned trailhead is currently under development on a plot of land just north of the Blue River and adjacent to the railroad tracks and Harrison Street. It is being designed as the north gateway into downtown, connecting the planned Blue River Trails to the planned Urban Trail feeding into downtown and Civic Square.

Intersection Design Guidelines & Standards

The Manual on Uniform Traffic Control Devices (MUTCD) gives general guidance regarding when and where to mark pedestrian crossing locations.

The following guidelines are intended to serve engineers and planners who are responsible for planning and designing pedestrian facilities within the study area. These guidelines are not to be used as warrants, as circumstances may vary depending on location and no set of guidelines can cover every condition or guarantee improved safety. These guidelines are intended to improve the consistency of the application of pedestrian crossing treatments.

Designers, engineers, and planners all share a responsibility to find ways for vehicles, pedestrians, and bicyclists to coexist safely and conveniently. Accommodating pedestrians with disabilities is required in the planning, design, and construction of pedestrian facilities.

The purpose of this section is to provide guidance for determining consistent engineering solutions to pedestrian safety concerns, particularly with regard to crosswalks. This section should be used to provide guidance for new and future construction projects and for retrofitting existing crosswalk locations.

Crosswalk Enhancement Example

Crosswalk Enhancement Example

Background

Marking crosswalks serves two purposes: (1) it shows pedestrians the best place to cross; and (2) it warns drivers that pedestrians may be present.

The following are advantages of marking crosswalks.

- Helping pedestrians find their way across complex intersections
- Designating the shortest path
- Directing pedestrians to the location of best visibility and sight distance
- Providing automobile drivers visual warnings of pedestrian crossing zones

Ladder Pattern Example

General Guidance

As with the installation of any traffic control devices, engineering judgment is essential. All crosswalk pavement markings and signs shall be selected, designed, and installed in conformance with the MUTCD.

Crosswalk markings should not be used at all intersections. If used extensively, motorists would become desensitized to their presence. Crosswalk markings should generally be used only at locations where pedestrian activity is significant. Significant pedestrian activity is defined as meeting one or more of the following:

- At least 15 pedestrians crossing the street during each of the two highest one hour traffic periods in a day
- On a school route
- On a route to and within 1,000 feet of a park, community center, or transit facility

Stripes Pattern Example

The design of intersections should always be completed with pedestrian crossings in mind.

Intersection Design Guidelines & Standards

Guidelines for Marking Crosswalks

The table below provides guidance for the selection of the recommended traffic control devices for most circumstances as determined by the street characteristics, posted speed limits, and traffic volumes.

CRITERIA FOR PEDESTRIAN CROSSING TREATMENTS

Roadway Configuration	Roadway ADT and Posted Speed															
	Less than 5,000 vpd				5,000 to 9,999				10,000 to 19,999				Over 20,000			
	< 30mph	35 mph	40 mph	> 45 mph	< 30mph	35 mph	40 mph	> 45 mph	< 30mph	35 mph	40 mph	> 45 mph	< 30mph	35 mph	40 mph	> 45 mph
2 Lanes - Residential	1	2	2	N	1	2	4	N	2	2	4	N	2	2	4	N
2 Lanes - Commercial	1	2	2	N	1	2	4	N	2	2	4	N	2	2	4	N
2 Lanes - Industrial	1	2	2	N	1	2	4	N	2	2	4	N	2	2	4	N
2 Lanes with Median	1	3	3	N	1	3	4	N	2	3	4	N	2	3	4	N
2 Lanes with Signal	NA	NA	NA	NA	1	2	3	3	2	2	3	3	2	2	3	4
4 Lanes	2	2	2	N	2	2	4	N	2	2	4	N	2	2	4	N
4 Lanes with Median	2	3	3	N	2	3	4	N	2	3	4	N	2	3	4	N
4 Lanes with Signal	NA	NA	NA	NA	2	2	3	3	2	2	3	3	2	2	3	4
School Routes	1	2	2	4	1	2	4	5	2	4	5	N	2	4	N	N

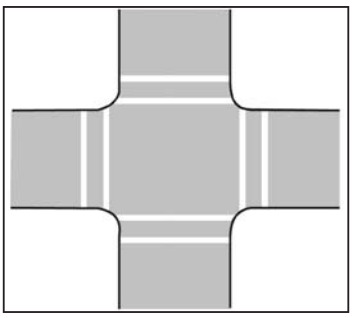
NA = not applicable
N = Pedestrian treatments not recommended without engineering study.

Source: Boulder, San Jose, Virginia DOT

Types of Pedestrian Crosswalks

Level 1

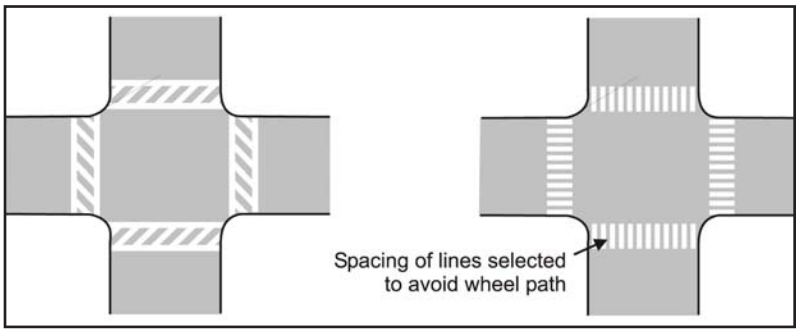
Level 1 crosswalks should be marked with parallel lines. The lines shall be white and shall be reflective. The lines may be painted at low vehicular traffic locations and should be thermoplastic or preformed plastic at high volume locations. At stop or signal controlled intersections, stop bars shall be installed in advance if the crosswalk lines in conformance with the MUTCD.



Level 1 Crosswalk Graphic

Level 2

Level 2 crosswalks should be marked with high visibility pavement markings and advance warning signs. High visibility markings should include hatching (ladder or zebra designs) and advance "Ped Xing" or "School Xing" markings.

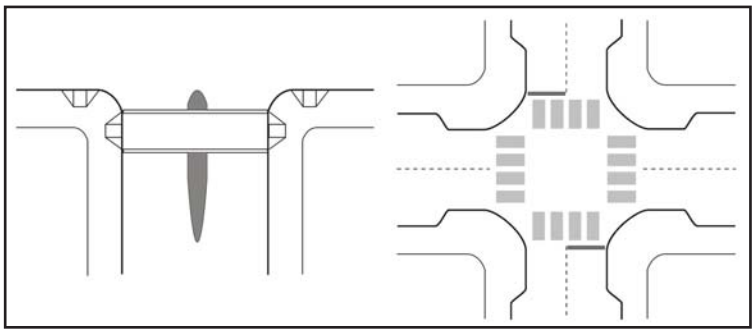


Level 2 Crosswalk Graphic

Level 2 Crosswalk Signage

Level 3

Level 3 crosswalks should have pedestrian refuge islands and/or curb extensions (bump-outs) in addition to the Level 2 markings and signs.



Level 3 Crosswalk Graphic

Level 4

Level 4 crosswalks should be marked with overhead warning signs, flashing beacons (including HAWK or RRFB), or in-pavement lighting in addition to the Level 2 and 3 traffic control pavement markings and signs.

Overhead Pedestrian Crossing Signal Example

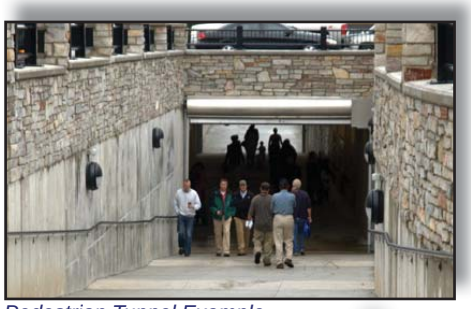
Level 5

Level 5 crossings should be considered for pedestrian signals or grade separation. Pedestrian signals shall be installed only when determined to be warranted and designed and installed in conformance with the MUTCD. Pedestrian signal locations shall include Level 2 and 3 traffic control devices and may include Level 4 devices.

Pedestrian Bridge Example

Mid-Block Pedestrian Crossings

Mid-block pedestrian crossings should be avoided, especially when designing new facilities. They are generally acceptable only in low speed, low traffic areas, such as downtown. When installed, they should have the appropriate level of protection as determined by accepted standards.



Pedestrian Tunnel Example

Landscape and Plantings

Guidelines

- o Include a variety of plants that support biodiversity and wildlife habitat

- o Utilize aesthetic values of plants – texture, form, scale, visual and seasonal qualities shall all play a role in plant selection

- o Utilize plant functionality – use appropriate plant species that capture and filter runoff, provide shade and microclimate, contribute to building energy efficiency, buffer and provide scale for pedestrian spaces as well buffer areas between public and private property

- o Match plant species with local micro-climate and soil conditions – use plants native to USDA hardiness zone 5, which typically have the best suitability to regional climate characteristics

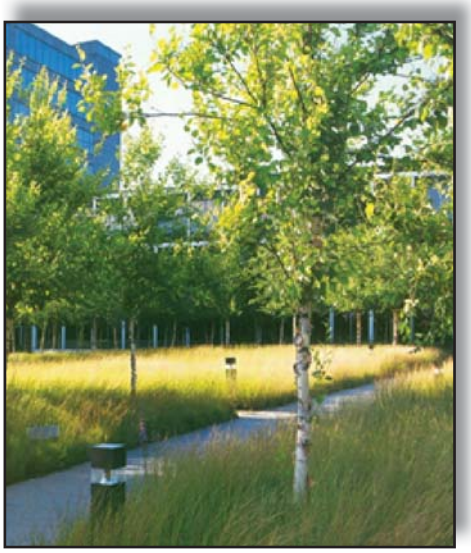
- o Recognize plant maintenance characteristics during plant selection – do not select plants that are invasive, prone to pests or disease, or have messy fruit or seeds

- o Limit the use of turf grass lawn to minimize the maintenance and energy costs of mowing

- o Amend soils prior to planting – use a mixture of topsoil and compost integrated into the existing local soils for proper cultivation

Landscape Beds

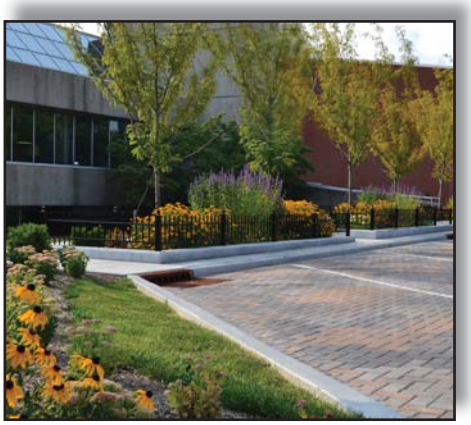
A landscape bed with a raised decorative masonry curb and decorative aluminum fencing will be utilized where appropriate from gateway features toward the City center, and will include street trees and perennial landscaping. Existing landscape beds shall be generally maintained and widened where feasible to allow landscape plantings.



Naturalistic Planting Example

Guidelines

- Strive to achieve minimum width 5'-9" from curb face to curb face for landscape bed
- Curb height 6" minimum
- Planting material shall include a low groundcover and shade trees spaced at approximately 20'-0" on center (Landscape and Plantings)
- Site lighting should be thoughtfully integrated into landscape beds where appropriate (Site Lighting)
- Where minimum 5'-9" minimum width for planting cannot be achieved, upgrade sidewalk with benches, litter receptacle, bike racks or planters



Street Planter Example - City of Franklin

Perimeter Corridor Planting Principles

Location

The perimeter corridor shall be defined as all landscape areas along the greenway trails, on both sides of the street within the public right-of-way.

Naturalistic Plantings

Plantings shall be characterized by informal groupings of plants, utilizing a wide range of species to encourage biodiversity. Plants shall form ecological plant communities, and can consist of a mix of hardy natives and non-native species, although native species are preferred. Plant arrangement shall focus on creating irregular yet gracious outlines to form edges, which support wildlife and provide visual interest.

Bioswale Planting Example - Town of Speedway

Bioswale Plantings

Bioswales shall be located along greenway trail corridors, and shall incorporate runoff into vegetated channels located in the public right-of-way that collect and filter water from storm events. Bioswale plantings shall integrate a mix of native species that can tolerate periods submerged in water as well as drought. Perforated underdrains and overflow systems shall be incorporated into the bioswale design where necessary to prevent standing water for periods exceeding 48 hours.

Landscape and Plantings

Urban Corridor Planting Principles

Location
The urban corridor shall be defined as all landscape areas along the urban trail and urban streetscape, on both sides of the street within the public right-of-way.

Street Trees
Street trees enhance visual streetscape characteristics and help to mitigate urban heat island effects by contributing to the City's urban tree canopy. Include urban tolerant shade tree species along street corridors at the required spacing, depending on land use. Street trees shall be located within the public right-of-way and be maintained by the City of Shelbyville.

- Typical spacing shall not be greater than one (1) shade tree per forty (40) linear feet
- Plant trees in prepared tree pits with minimum 3' – 0" width and 12' – 0" length, larger where possible
- Use continuous planting strips where feasible
- Areas beneath urban corridor trees shall require a vegetated groundcover


Street Trees Example


Street Trees and Ornamental Plantings Example

Ornamental Plantings
Ornamental planting design shall be formal in style, and shall incorporate more geometric shapes and forms into the landscape patterns. Plant groupings will be highly structured and maintain hard line edges. Simple, rhythmic patterns shall create balanced order within the urban corridor areas, and provide visual interest and ecological functionality.

Rain Garden Plantings
Rain gardens shall be located along urban trail and urban streetscape corridors, and shall incorporate runoff into vegetated basins located in the public right-of-way that collect and filter water from storm events. Rain garden plantings shall integrate a mix of native species that can tolerate periods submerged in water as well as drought. Perforated underdrains and overflow systems shall be incorporated into the rain garden design where necessary to prevent long-term standing water and flooding.


Raingarden Example

Site Furnishings

The following site furnishings shall be required as unifying elements to create visual consistency within the City's Downtown District and Greenway Corridors. The quality and craftsmanship of the manufacture and installation of these components is important to the overall visual aesthetics throughout the City. Site furnishings shall be located mainly along major use areas such as greenway paths, urban trails, and upgraded streetscape areas.

Guidelines

- Site furnishings should maintain consistency throughout the defined district and corridor zones.
- Minimize the number of different materials and color choices to unify components.
- Elements shall be grouped where possible to avoid visual clutter.
- Priority shall be given to quality furnishings including those fabricated with recycled materials.

**Approxiate material costs are shown below in 2016 prices and do not include tax or installation. Freight and shipping vary per item and have been included within the cost shown.*

Benches

Type:	Melville Bench - Backed
Material:	Aluminum with Ipe Exterior Wood Seat Panels
Color:	Powder Coated Stormcloud or Black
Dimensions:	76" L x 19" W x 30" H
Manufacturer:	Landscape Forms
Representative:	Landscape Forms; (800) 521-2546
Cost:	$ 2,050 each

Trash / Recycling Receptacles

Type:	Poe Litter Receptacle - Side Opening Recycling
Material:	Heavy-Duty Cast and Extruded Aluminum
Color:	Powder Coated Stormcloud or Black
Dimensions:	29" W x 44" H x 34 Gallon
Manufacturer:	Landscape Forms
Representative:	Landscape Forms; (800) 521-2546
Cost:	$ 1,750 each

Site Furnishings

Bicycle Racks

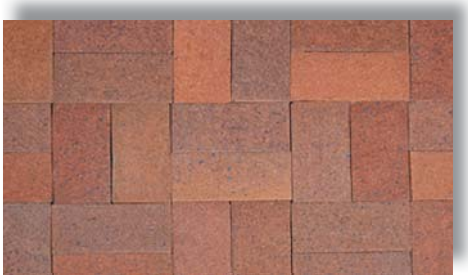
Type:	35 Loop Bike Rack - Embedded
Material:	Shape-Fitting Cast Aluminum Frame
Color:	Powder Coated Stormcloud or Black
Dimensions:	14″ D x 36″ L x 31″ H
Manufacturer:	Landscape Forms
Representative:	Landscape Forms; (800) 521-2546
Cost:	$ 350 per loop

Lighted Bollards

Type:	Hawthorn Path Light
Lamp:	LED 12 watt, type 5
Material:	Cast Aluminum; surface mount
Color:	Powder Coated Stormcloud or Black
Dimensions:	8″ Base W x 11″ Top W x 37″ H
Manufacturer:	Landscape Forms
Representative:	Landscape Forms; (800) 521-2546
Cost:	$ 1,250 each

Site Pavers

Application:	Civic Square / Streetscape
Type:	Brown Ironspot Pavers: #470-479 Dark
Material:	Clay
Dimensions:	3-5/8 x 7-5/8 x 2-1/4 d or 3-5/8 x 11-5/8 x 2-1/4d
Manufacturer:	Belden Brick Company
Representative:	Indiana Brick Corp; (317) 896-1600
Cost:	$ 5.76 per square foot for 4x8 $ 6.36 per square foot for 4x12



Application:	Civic Square / Streetscape
Material:	Concrete with through color mix
Type:	Verona™ Series (#336; nonstock item requires lead time)
Dimensions:	18″w × 18″l × 3-1⁄8″h *(for pedestrian use only)*
Manufacturer:	Pavestone
Representative:	CDC Sales Pavestone-Cincinnati; (513) 259-6275
Cost:	$ 4.01 per square foot

Site Pavers ***(continued)***

Application:	Harrison Street Urban Trail
Type:	Boardwalk Pavers with up to a 5 color blend
Material:	Architectural Clay
Dimensions:	2-1/4 × 9 x 2-1/4 or 2-1/4 × 9 x 3 *(W x L x H)*
Manufacturer:	Whitacre - Greer
Representative:	Edgewood Building Supply; (317) 902-1480
Cost:	$ 6.20 per square feet for 2-1/4 h $ 7.20 per square feet for 3-0 h

Application:	Civic Square / Harrison Street Urban Trail
Type:	Hanover® Asphalt Block with smooth finish
Material:	Asphalt
Dimensions:	8" hexagonal x 2-1/2 h
Manufacturer:	Hanover Architectural Products
Representative:	The Boots Group; (317) 431-7746
Cost:	$ 5.58 per square foot

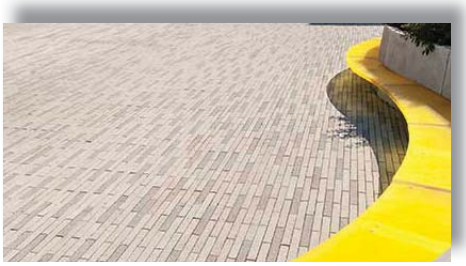
Application:	Civic Square / Harrison Street Urban Trail
Type:	Hanover® Asphalt Block with smooth finish
Material:	Asphalt
Dimensions:	6 x 12 x 2-1/2 h
Manufacturer:	Hanover Architectural Products
Representative:	The Boots Group; (317) 431-7746
Cost:	$ 5.58 per square foot

Application:	Civic Square / Streetscape
Type:	Olde Hanover® Prest® Brick with Tudor finish
Material:	Brick
Dimensions:	3 x 9 x 2-1/2 or 3 x 9 x 3-1/8
Manufacturer:	Hanover Architectural Products
Representative:	The Boots Group; (317) 431-7746
Cost:	$ 3.99 per square foot non-vehicular $ 5.24 per square foot vehicular use

Site Pavers

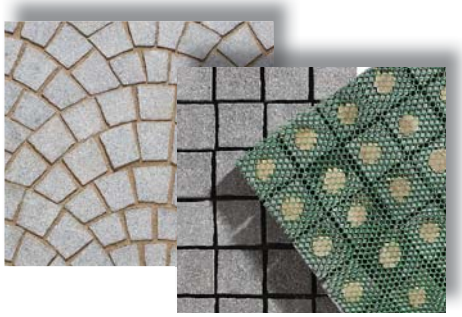
Site Pavers ***(continued)***

Application:	Harrison Street Urban Trail
Material:	Concrete paver with flamed finish
Type:	PlankStone®
Dimensions:	2-7/8" x 23-1/2 x 4" (W x L x H)
Manufacturer:	Hanover Architectural Products
Representative:	The Boots Group; (317) 431-7746
Cost:	$ 6.33 per square foot



Application:	Civic Square
Type:	Multisided Prest® Brick with flamed finish
Material:	Brick
Dimensions:	8" Hexagon
Manufacturer:	Hanover Architectural Products
Representative:	The Boots Group; (317) 431-7746
Cost:	$ 3.13 per square foot

Application:	Civic Square
Type:	Hanover® Pre-Assembled Granite Cobbles
Material:	Granite Cobbles with flamed finish
Dimensions:	Several Interlocking Shapes and Patterns
Manufacturer:	Hanover Architectural Products
Representative:	The Boots Group; (317) 431-7746
Cost:	$ 26.93 to 36.93 per square foot pending selected color and pattern



NOTE: A variety of paver styles, shapes and materials have been selected as preferred standards to be installed within the Civic Square, Harrison Street Urban Trail and Living Streetscape projects contained within this study. The pavers should be arranged within the design composition to obtain the best outcome based upon aesthetics, durability and intended application of the product during the detailed design phases of these projects.

Site Lighting

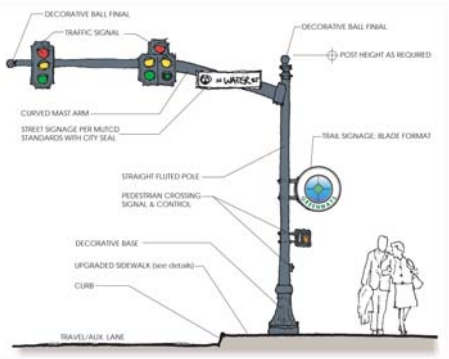
The lighting options for the greenway corridors and gateway feature areas will directly impact visual accessibility within the night environment, providing safety and security measures. The lighting shall be dark sky compliant, directing light downward where it is needed. Throughout the day, the lighting fixtures will also present aesthetic qualities that maintain visual consistency throughout the corridors and downtown. Lighting fixtures shall have historic visual character with current energy efficient LED technology for long-term maintenance and energy cost savings. The LED lighting shall maintain standard 4500K color temperature, effectively producing a white light similar to metal halide lighting options. The fixtures shall be located in the greenway corridors, gateway feature areas and in parking lots, park open spaces, streetscapes, Civic Square and adjacent property developments. Banner arms shall be incorporated to promote community events.

Pedestrian Scale Lighting Fixtures

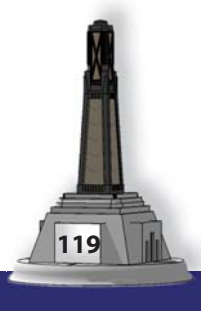
Type:	Fixture: A850SRLED Old Town Series Base and Pole: 5700 Plainfield Series Arms: SBAR - Double Banner Arms PA478 - Decorative Planter Arm with Ring
Material:	Cast Aluminum
Color:	Powder Coated Black
Dimensions:	16'-0" Fluted Pole with 40.5" Fixture
Manufacturer:	Sternberg Lighting
Representative:	ESL Spectrum; (317) 951-2300
Cost:	$ 3,000 each; includes shipping add $150 each for banner arms add $150 each for GFI outlet

Traffic Signal Arms

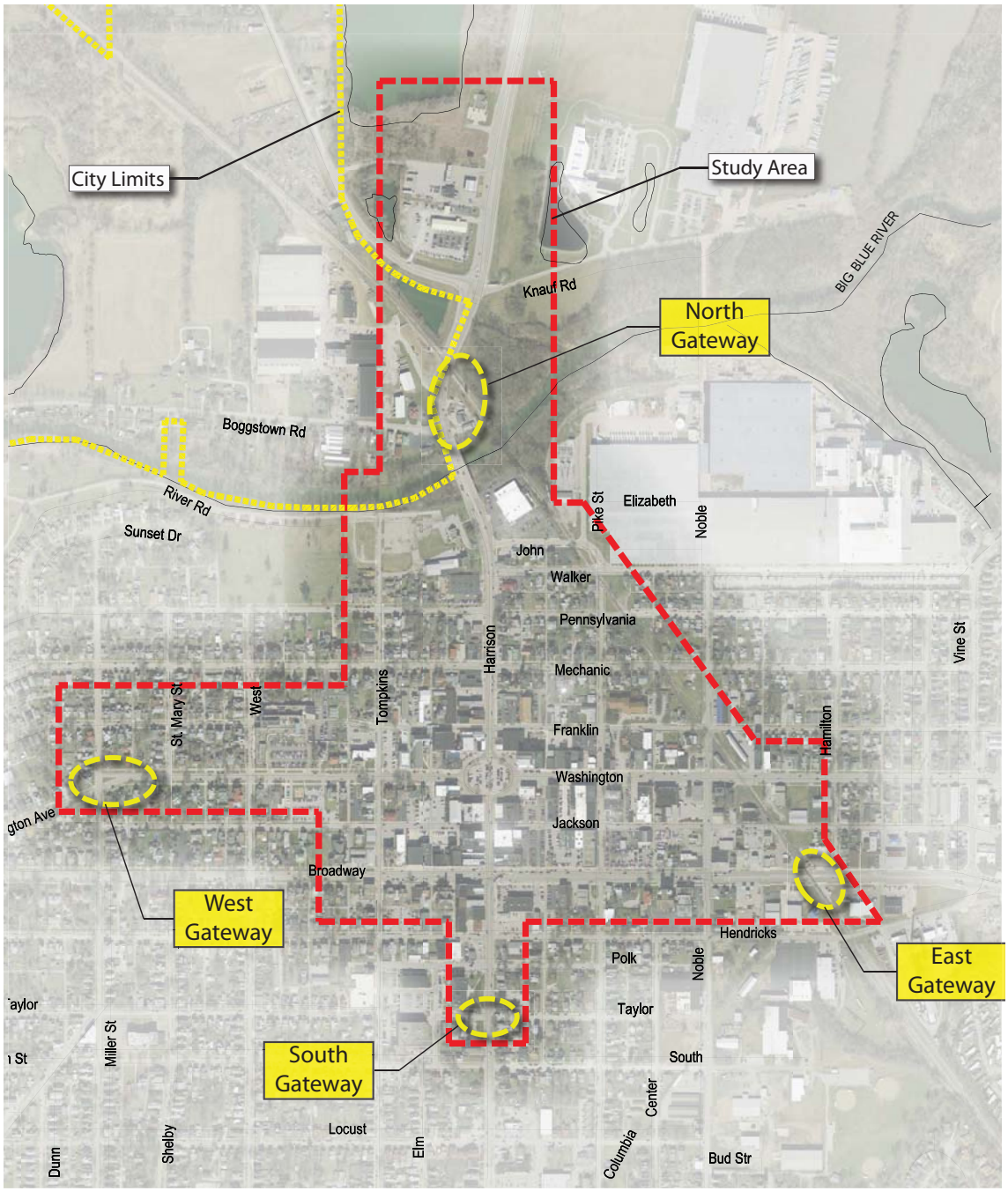
Type:	Arm: CA – Curved Arm
Base:	5700 Plainfield Series
	Pole: RSF – Round Straight Fluted
	Cap: RBCC3 Ball Finial Post Cap
Material:	Cast aluminum
Color:	Powder coated black
Dimensions:	Varies; Design to AASHTO 2009 at 100 MPH
Manufacturer:	Sternberg Lighting
Representative:	ESL Spectrum; (317) 951-2300
Cost:	$ 35,000 to $ 90,000 per intersection pending size, arm length span and required bracket quantity



The above signal pole and arm selections represent the preferred standard and have been successfully installed in Indiana communities. However, additional regulatory coordination and discussions may be necessary to determine current acceptance. Design criteria for price quote is AASHTO 2009 at 100 MPH.



Gateways



Proposed Gateways Map

The intent of these gateway features is proposed to be a design interpretation of a local architectural icon, serving to mark one's arrival into downtown Shelbyville from the North, South, East and West.

The gateway concept designs shown in this report are representational. As the rebranding effort for Downtown Shelbyville evolves, updates to the gateway designs will follow.

Gateways

North Gateway

A planned trailhead is in place for a vacant plot of land just north of the Blue River adjacent to the railroad tracks and Harrison Street that will also serve as the north gateway into downtown. This gateway will span both sides of Harrison Street and is currently under design for construction.

North Gateway Location

South Gateway

The south gateway will span an entire block from Polk Street to Taylor Street along the Shelby County Courthouse frontage. This location serves as the southern end of the Multi-Use Urban Trail. The trail will follow the existing walkway layout winding its way from Harrison Street up to the front doors of the courthouse and back. A concept rendering for this gateway can be viewed within on page 123.


South Gateway Location

West Gateway

The west gateway is proposed for the corner of West and Washington Streets. Major Hospital currently sits on this parcel but will soon be replaced with the Multi-Generational Center. Wide right-of-way widths along Washington Street make this site an ideal gateway location for the downtown.


West Gateway Location

East Gateway

A design for the east gateway was recently done by Mathies Landscaping, Inc. and is proposed to be located at the corner of Hendricks and Broadway Streets. This vacant piece of land provides enough room to create a small public park complete with plaza seating, monuments, public art, landscaping and signage.

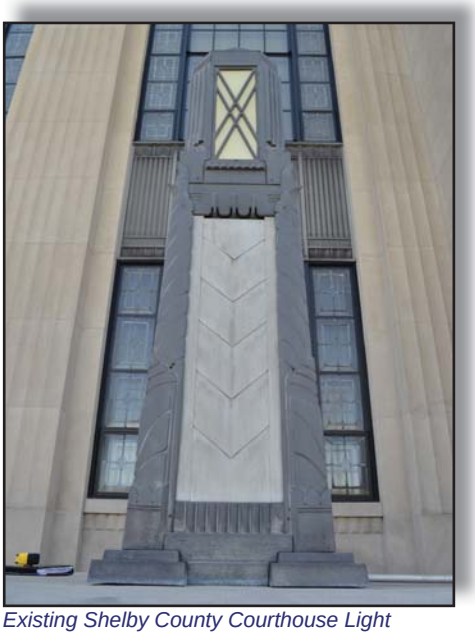

East Gateway Location

Gateway Monuments

Gateway monuments and monument seats have been designed with light fixtures inspired by existing lights framing the Shelby County Courthouse entrance. These art deco designed lights have also provided design inspiration for Civic Square Tower as well.

The gateway monument measures 6'-6" in height and features a decorative limestone base. The top of the monument is similar to that of the courthouse light but does not include the top glass panels. This gateway monument is designed to be used at entrance points for all important pedestrian corridors; specifically in and around Civic Square.

The monument seat measures 12'-6" in height and features a round, decorative limestone seat and base. The top of the monument is designed to be a taller version of the courthouse light. The seat monument is designed to be used at important pedestrian nodes throughout the downtown study area including within Civic Square and as part of the south and east gateway features.



Existing Shelby County Courthouse Light

Detail of Shelby County Courthouse Light

Gateway Monuments and Monument Seats

South Gateway Perspective

Shelby County Courthouse Enhancements / South Gateway Perspective

The south gateway will span an entire block from Polk Street to Taylor Street along the Shelby County Courthouse frontage. This location serves as the southern end of the Multi-Use Urban Trail. The trail will follow the existing walkway layout winding its way from Harrison Street up to the front doors of the courthouse and back.

Monument seats will be located at both the north and south ends of the block surrounded by native landscape plantings. Accent paving will also be utilized along the Multi-Use Urban Trail to imply the importance of this gateway and County Seat.

Signage

Street and wayfinding signage will be incorporated within the greenway and gateway corridors to provide ease of navigation for residents and visitors of the City, increase awareness of cultural and recreational opportunities, and allow users to easily locate and access points of interest within the community. Wayfinding style will feature colors, styles, and forms consistent with other streetscape elements located within the major corridors, further reinforcing the "Shelbyville Quality of Life Brand".

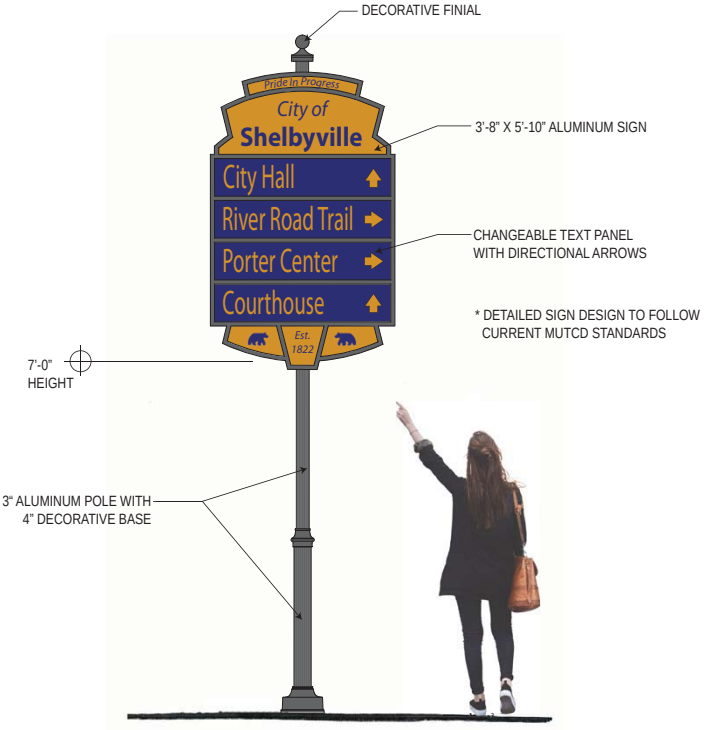
Street Signage Example

Guidelines:

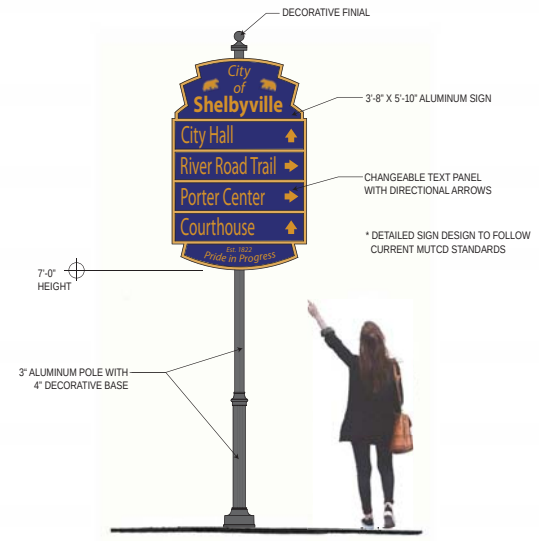
- All metal shall be cast aluminum with black powder coated finish
- Sign, pole, base and finial components supplied by 'The Streetscape Company, LLC' or sign fabricator with equivalent quality and craftsmanship standards
- All street, regulatory, warning, guide and ADA signs shall be located and mounted as per required ordinances and codes
- Smaller regulatory, guide and ADA signs shall be mounted on a 2" diameter round smooth post with ball finial

Public Parking Signage Example

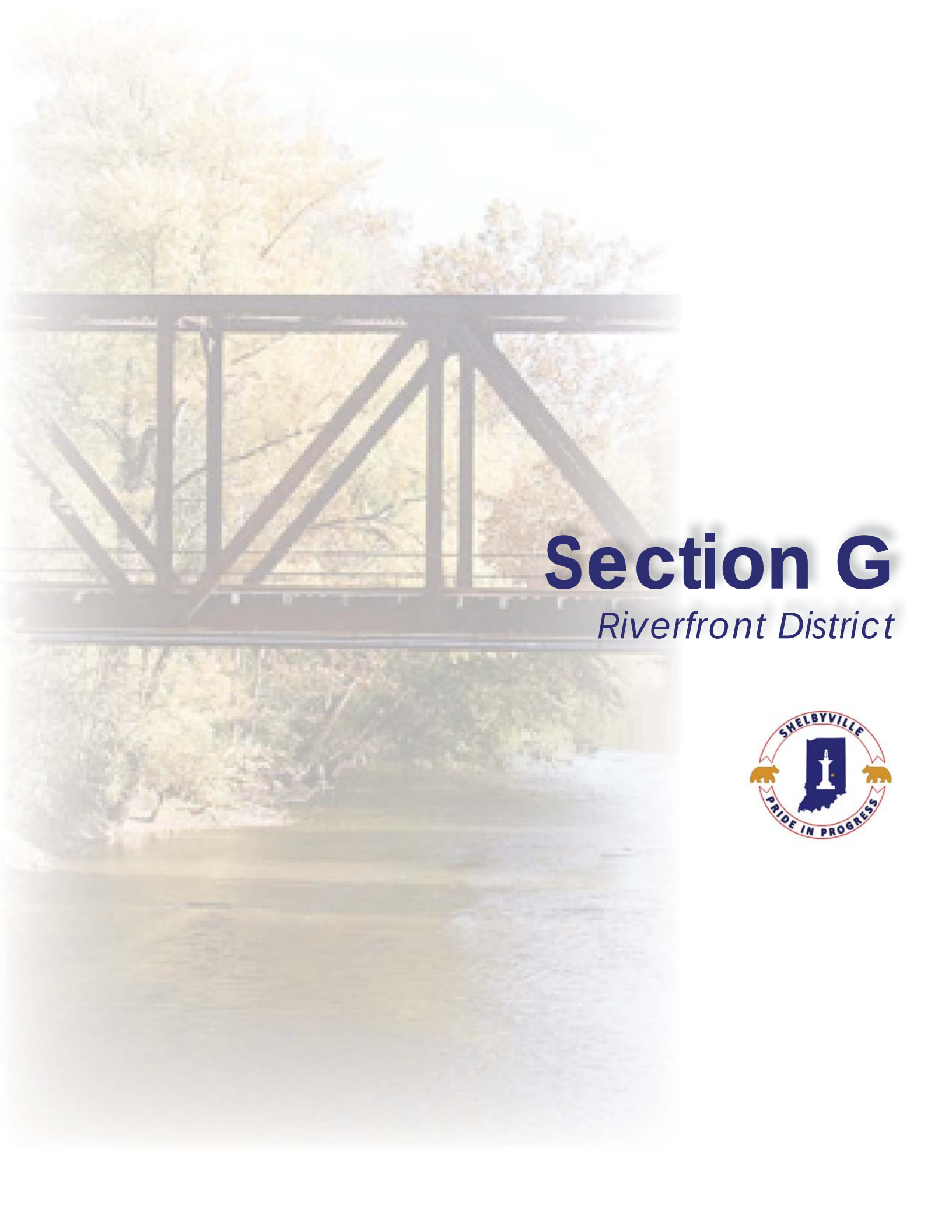
Clearly marked routes promote the highest use of these public facilities that serve local residents, visitors and tourists navigating their way around the City. Properly designed and unique wayfinding will be more functionally effective for all users. The design standards for signage will address text color, background color, sign size, post materials, directional graphics and user graphics. Guided by current MUTCD standards, uniform text and graphics are effective means to increase the efficacy of the wayfinding system.



Wayfinding Signage Concept Design 'A'



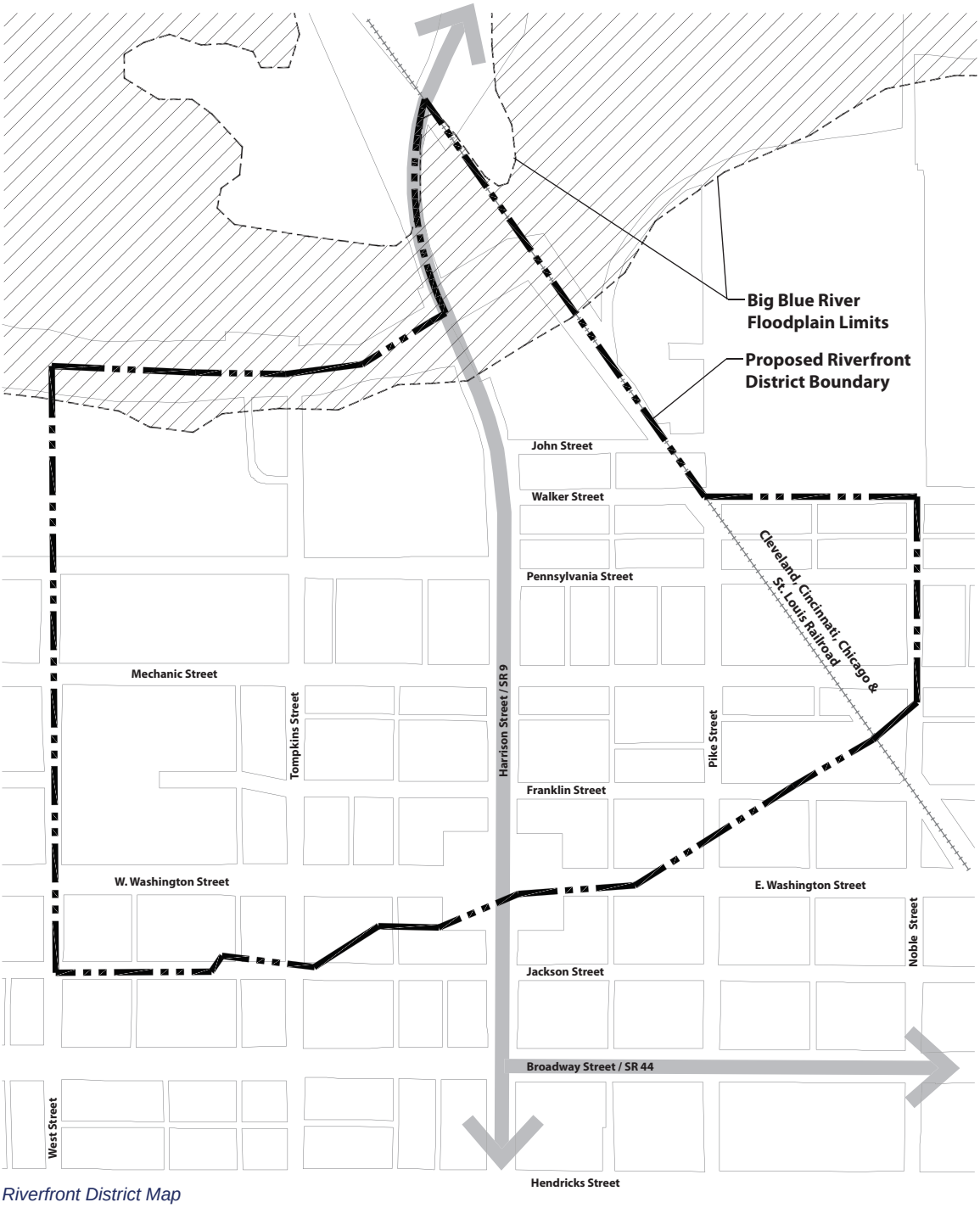
Wayfinding Signage Concept Design 'B'



Section G

Riverfront District

Riverfront District Map



Riverfront District Map

Riverfront District

There is ample opportunity for additional restaurants, cafes, and specialty retail, particularly along Washington Street and northwest of Civic Square. Downtown must appeal to skilled workers in order to fill vacant spaces. One way to make downtown more appealing is by encouraging additional retail, restaurants and night life. Traditionally, Indiana communities are limited on the number of alcoholic beverage licenses available, with state legislated quotas determined by the population of the most recent U.S. Census. Those licenses also are bought and sold on the open market, which can drastically increase their cost.

Indiana Code Section 7.1-3-20 et. Seq. ("Act") permits the Indiana Alcohol and Tobacco Commission to issue liquor licenses in a Riverfront Development District established pursuant to Indiana law. The district designation provides the opportunity to allow an unlimited number of three-way and two-way liquor licenses sold at the state designated purchase rate as opposed to the private market rate, providing new opportunities to increase the number of restaurants and nightlife that can be located in the district. The granting of additional three-way liquor licenses in the district will enable the creation of new food and beverage businesses which will create economic opportunities in the area, expand the tax base through additional development and lengthen the useful life of the downtown district into the evening hours. Establishment of the district enhances Shelbyville's regional appeal by encouraging the location and operation of a diverse mix of restaurants and entertainment venues in the riverfront district. It will also remove a significant barrier to downtown redevelopment and provide an experience that encourages repeat visits by residents and visitors.

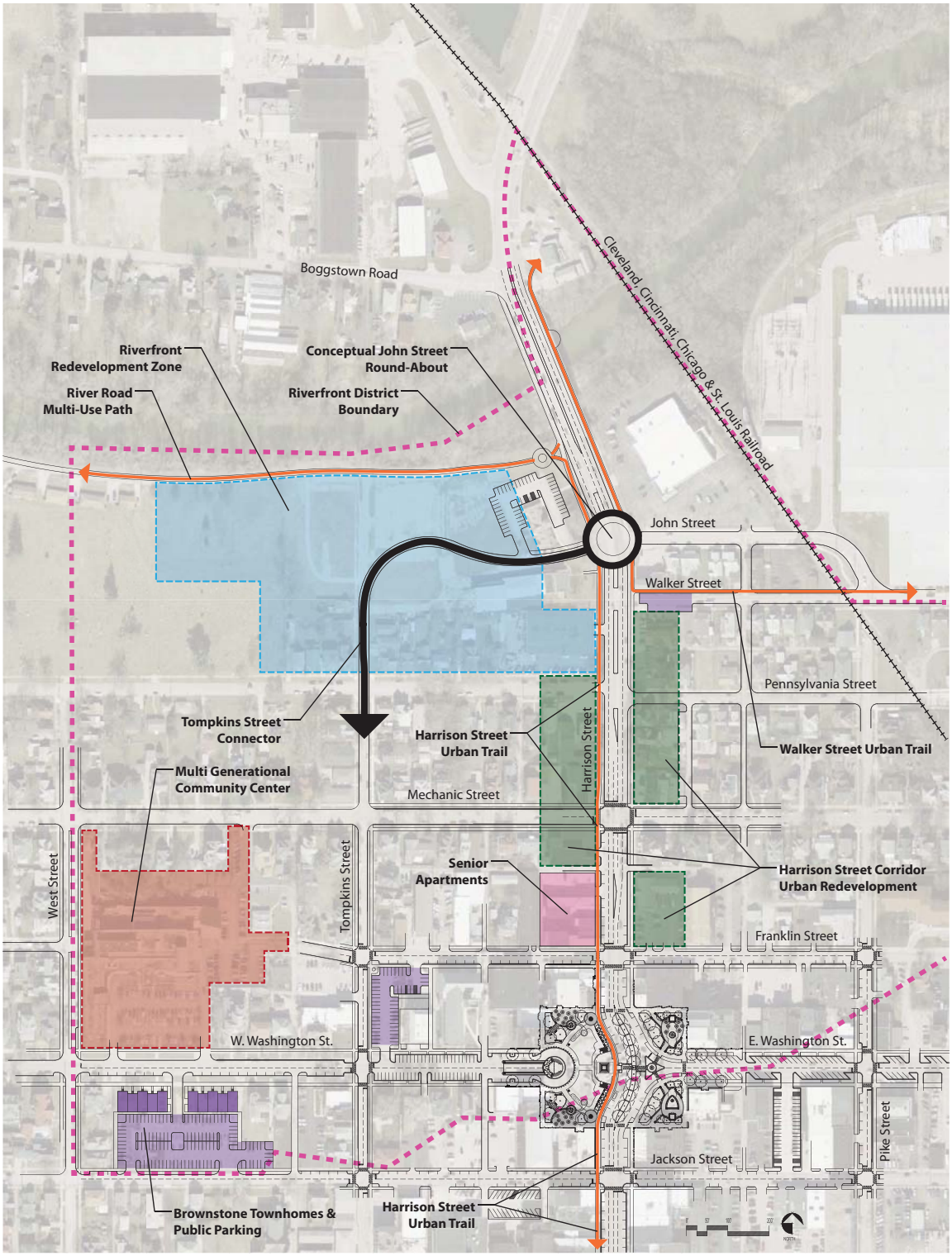
The City of Shelbyville formally adopted the local Riverfront District in June of 2016.

Riverfront District Example


Riverfront District Example


Riverfront District Example

Conceptual Riverfront Redevelopment Zone



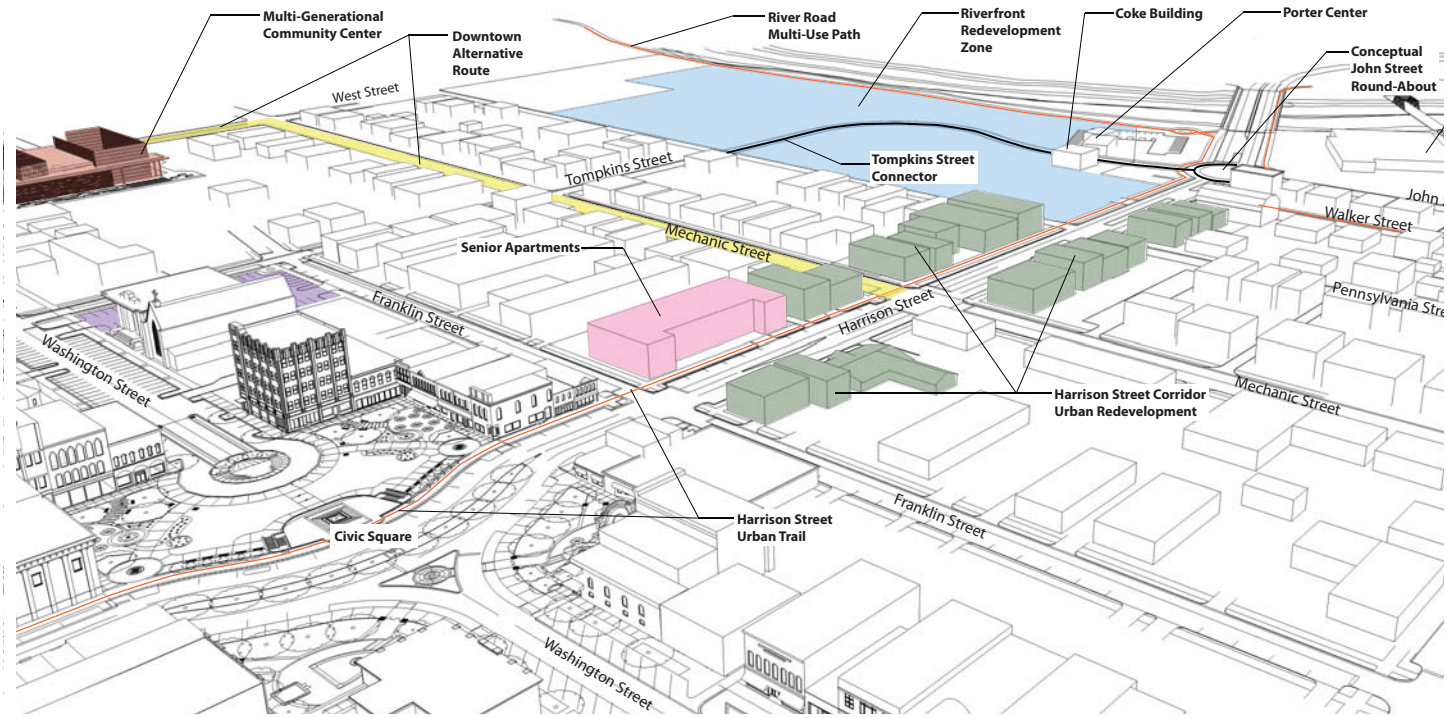
Conceptual Riverfront Redevelopment Zone Plan

Conceptual Riverfront Redevelopment Zone

There is no limit to the number of liquor licenses which may be issued within the District. The idea behind the District is to further cement downtown as a destination for dining, culture, and entertainment by encouraging rather than limiting these types of establishments. Establishing the district costs the City no money but provides an additional economic development tool to further downtown revitalization.

The City may establish conditions and restrictions over and above those imposed by state law to encourage certain types of establishments to locate within the District. The City may require that the granting of the license benefit the purposes of the district, and not be detrimental to the property values and business interest of others in the district. Additionally, the City may consider several other factors designed to improve the quality of downtown in granting the license, including the applicant's plans to improve the facility, the consistency of such plans with the nature and architecture of the riverfront area, the restaurant's ability to draw people to Shelbyville, the number and nature of the jobs added to or retained in the Shelbyville employment base, the financial and ownership strength, and the history of the operation and reputation in the Shelbyville community and elsewhere.

The district boundaries are established by statute and may not exceed 1500 feet or three City blocks from the river, or if the property is located in a flood plain, from the area located nearest to the river capable of being developed. Restrictions applicable to traditional liquor licenses also apply to liquor licenses issued in the district.



Riverfront Redevelopment Zone Plan Rendering

Shelbyville Alcohol Licenses

The City of Shelbyville can issue one one-way, i.e. beer, one two-way i.e. beer and wine, and one three-way, i.e. beer, wine and liquor license for every 1,500 people or fraction thereof. When the quota is met one must buy a liquor license from a license holder.

With a population of 19,153 (2010) [population must be verified by the US Census] Shelbyville is entitled to 12.7 licenses. There are a total of 20 licenses listed below, of which 7 are listed as "transfers," indicating the remaining 13 constitute the full number of licenses allowed.

In order for a restaurant to qualify for a liquor license, the minimum seating capacity is 25 patrons.

The following places have three-way licenses; Identified as 210 Beer, wine, liquor and 201-1 include destinations carry-out services:

1.	Agustins Mexican Grill	322 Duran Drive	210
2.	The Brickhouse 57	East Locust Street	210
3.	Crosstown Bar & Grill	1147 East State Road 44	210
4.	Club 57	1289 North Michigan Road	transfer 210
5.	Cagney's Pizza King	33 East Broadway Street	210
6.	McKay Manor	1473 East McKay Road	210
7.	Half Pints	2806 Range Road (in escrow)	transfer 210
8.	Willie Farkles	639 South Noble Street (transfer)	210
9.	Kendall's Tavern	1304 S Miller Street (transfer)	210
10.	Occasions Banquet	415 East Hendricks Street	210-1
11.	Buffalo Wild Wings	1621 East Michigan Avenue	210
12.	Big Jim's Tavern	102 East Wash Street.	210
13.	The Fiddlers Three	1415 East Michigan Road (transfer)	201-1
14.	Applebee's	101 Lee Road	210-1
15.	Cholula Mexican	1642 East State Road 44 (transfer)	201-1
16.	Texas Corral	2103 Intelliplex Drive	210-1
17.	Blue River Bowl	1601 Miller Street	210-1
18.	The Hamilton	132 West Washington Street (transfer)	210-1
19.	18 On the Square	18 Public Square	210-1
20.	Cob's Place	990 Miller Avenue	210

The above establishments are current as of October 2015.

Hotels are excluded from the quota.

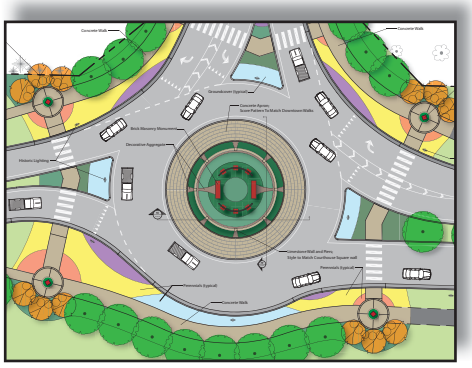
Riverfront Redevelopment Zone

Conceptual John Street Round-About

This plan proposes consideration of a gateway round-about located on Harrison Street at the John Street / Porter Center intersection. While the City plans to limit truck (freight) traffic thru the downtown, the proposed size of the round-about will accommodate local truck traffic needs.

As the City anticipates increased traffic at this location due to the new Riverfront Taproom, this round-about design accomplishes several needs:

- Gateway entrance into downtown
- New drive between Porter Center and Coke building provides redevelopment parcel behind Porter Center at Riverfront
- Slows traffic on Harrison Street as traffic enters downtown
- Accommodates Riverfront Taproom restaurant traffic
- Improved traffic control and public safety
- More pedestrian friendly Harrison Street crossings



Gateway Roundabout Example - Franklin, Indiana

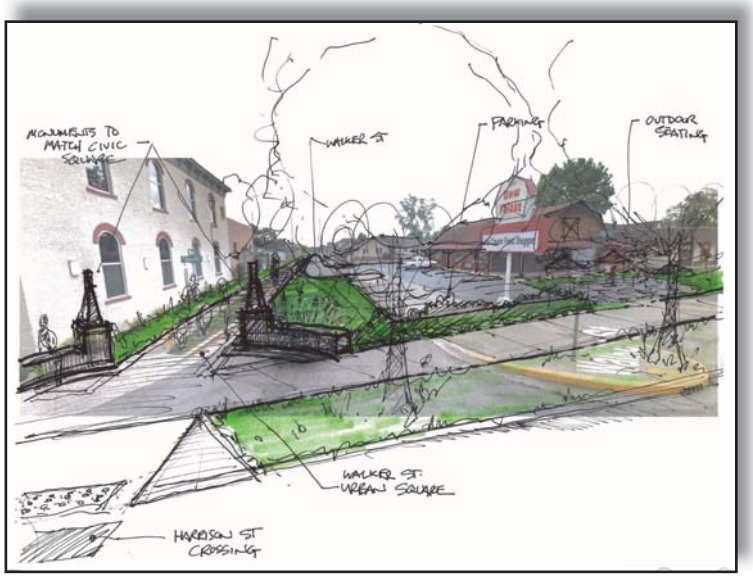
Riverfront Redevelopment Zone

This is a conceptual plan. Further study is required to understand Right-of-Way needs and feasibility. However, both the existing historic buildings and the space constraints add an opportunity to create a village type redevelopment within this area that would complement the downtown. Once Civic Square, the Multi-Generational Center and the Blue River Trail are constructed, this area will be primed for mixed-use redevelopment supporting housing, office activities and commercial retail.

Riverfront Redevelopment Zone Example - Franklin, Indiana

Walker Street Urban Trail

This concept closes Walker Street at Harrison Street to accommodate the round-about, create room for the urban trail and add more – as well as safer – parking for nearby businesses. The closure provides Walker Street at Harrison Street more room to accommodate the trail and amenities – it also directs vehicular traffic to the John Street Round-About. The trail could then move east to Vine Street and then over the Morris Street Bridge eventually connecting to the Blue River Trails through Kennedy Park or the Fairgrounds.



Walker Street Urban Trail Sketch

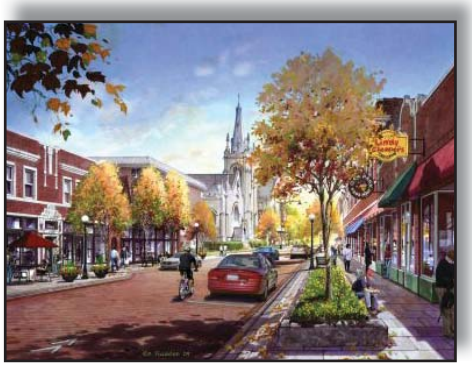
Harrison Street Urban Redevelopment

The plan proposes to strengthen the urban fabric of the downtown by adding multi-story mixed use developments along this corridor. Developments could be similar in style and mass to the North Harrison Senior Apartments redevelopment project or they could consist of dense but smaller infill structures. This Redevelopment Concept is not a mandate but rather a zoning overlay consideration. At 22,000+ cars a day *(2014 INDOT Traffic Count Data System)* in this stretch on North Harrison Street, the proposed retail storefronts in these new developments will offer immediate and convenient resident access to the Urban Trail, Civic Square and the Blue River Trails. Surface parking should be further studied to potentially offer shared lots behind the proposed structures to compliment d on-street parking capacity.

Village Redevelopment Example - Dublin, Ohio

Mechanic Street / West Street Improvements

This route serves the western downtown neighborhoods access needs due to Civic Square improvements. In addition to the east and west travel lanes, there is enough room for the parallel parking to remain on both sides of Mechanic Street. The West Street corridor is proposed to be reconstructed offering parallel parking on the west side of the street and increased travel lane widths. Both corridors are proposed to receive decorative street lights and street tree enhancements. The Multi-Generational Center will have dedicated curb cuts on West Street and Mechanic Street. A portion of the hospital site along West Street will become a linear park with a meandering trail connecting neighborhood residents to the Multi-Generational Center.



Village Redevelopment Example - Oak Park Village, Illinois

Section H

Economic Development Incentives & Conceptual Cost Estimates

Economic Improvement Districts (EIDS)

Economic Improvement Districts (EIDs) are public-private partnerships in which local property and business owners elect to make a collective contribution to the maintenance, development and promotion of their property and public spaces. EIDs provide a unique and straightforward economic and community development tool for municipalities, developers and property owners because they allow targeted control, financing and development of projects without creating an additional financing burden on county and municipal taxing units. EIDs are an important tool in accomplishing the work of revitalizing commercial corridors in downtowns and neighborhoods, and are managed by the property owners in the district and the investments support their businesses. The services provided by EIDs are supplemental to those already provided by the municipality. EIDs also allow taxing units to leverage the cost of public improvements and services that would otherwise be limited by the circuit breaker credit.

EIDs are created by property owners who want to self-fund and control the development of projects serving and surrounding their property, e.g., replacement of sidewalks, revitalizing neighborhoods, maintaining and programming civic spaces, promoting and marketing of businesses, building public infrastructure, cleaning streets and providing security. Property owners establish an EID by petitioning their taxing unit's legislative body for approval of an EID.

Economic improvement projects include:

1. Planning or managing development or improvement activities.
2. Designing, landscaping, beautifying, constructing, or maintaining public areas, public improvements, or public ways (including designing, constructing, or maintaining lighting, infrastructure, utility facilities, improvements, and equipment, water facilities, fountains, sewage facilities, improvements, and equipment, streets, or sidewalks for a public area or public way).
3. Promoting commercial activity or public events.
4. Supporting business recruitment and development.
5. Providing security for public areas.
6. Acquiring, constructing, or maintaining parking facilities.
7. Constructing, rehabilitating, or repairing residential property, including improvements related to the habitability of the residential property.

Economic Improvement Districts (EIDS)

EID projects are included within the definition of "economic development facilities" that fall under the economic development jurisdiction of a county or municipal Economic Development Commission. This allows an Economic Development Commission to provide economic development incentives and issue tax-exempt bonds for projects located within an EID. EID assessments paid by property owners within an EID are explicitly included within the definition of Indiana property tax for the purpose of being deducted against the EID property owner's federal income tax. However, while an EID assessment is considered a property tax, it is not to be calculated as part of the circuit breaker credit that limits the amount of property tax levy a tax unit can generate.

In order to receive approval of an EID, the petition to establish the district must be been signed by (1) a majority of the owners of real property within the proposed district; and (2) the owners of real property constituting at least sixty-six and two-thirds percent (66 2/3%) of the assessed valuation in the proposed district. EID Boards have the same powers and bond issuance authority of an Economic Development Commission, which provided authority to an EID Board to secure tax-exempt bond financing for EID projects.

Tax Increment Finance District Expansion and Consolidation

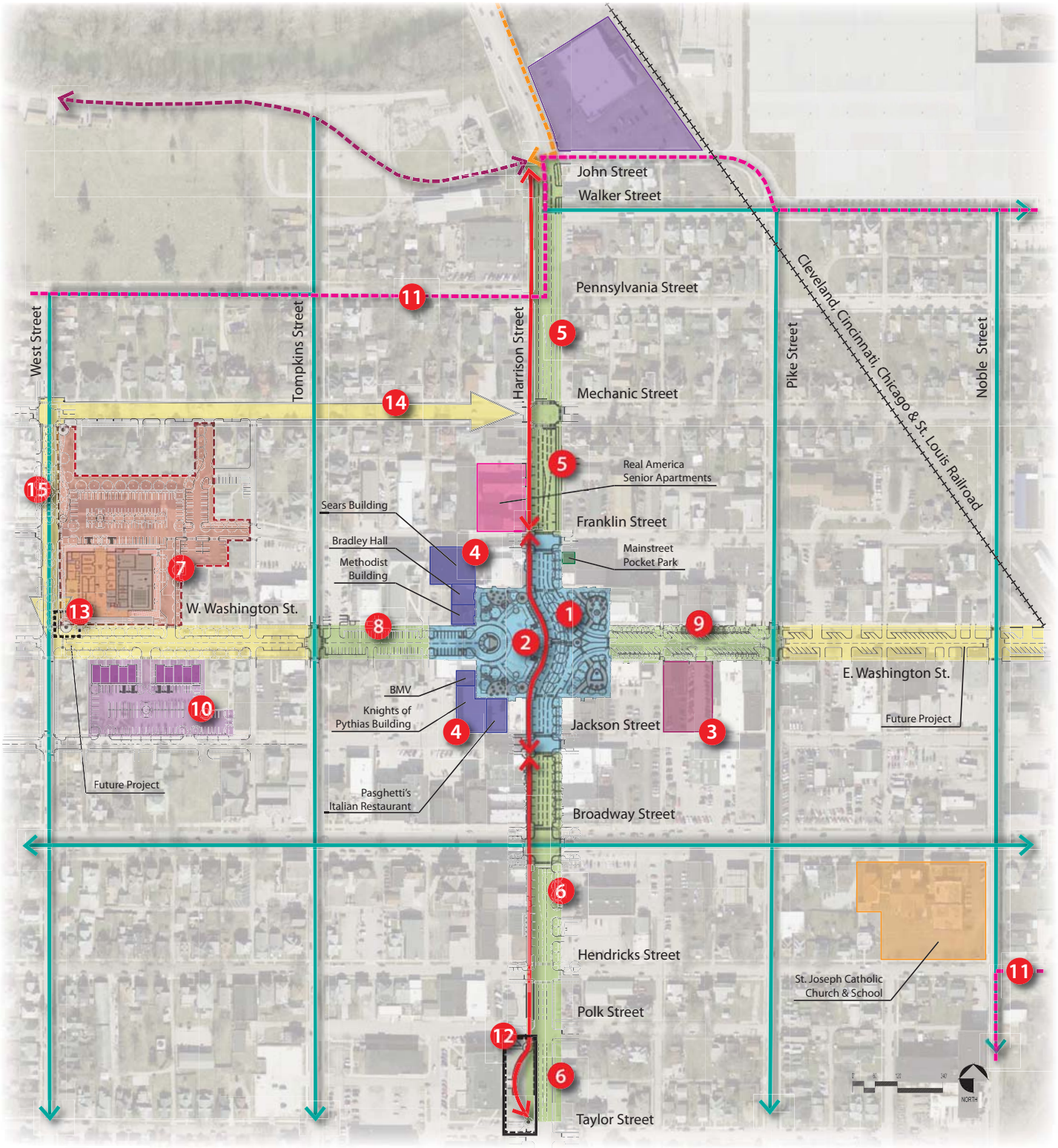
Tax Increment Finance (TIF) districts provide a means for cities to fund public improvements much faster than would otherwise be possible. In order to establish a district, the City must find, among other things, that neither the regulatory processes at its disposal, nor the ordinary operation of private enterprise will correct the problems in those areas to be included in the TIF. Once the City has created a district, it may capture taxes on real property for new development in the district and use it to fund projects consistent with the plan for the district. All the property tax revenues on development that flow after the base assessment date (March 1st, prior to action on the Resolution by the Redevelopment Commission establishing the TIF District) may be used for this purpose for the term of the TIF District.

In the last decade or so, the General Assembly has addressed Redevelopment Commissions, in particular, and the power of TIF districts, in general. Last year, for example, the General Assembly set expiration dates on these districts depending upon when they were last established or amended, but allowed the districts created prior to 1995 (legacy districts) to be extended to the last date of bonds issued by July 1, 2015. Recent changes in State law have made it more difficult to finance key infrastructure projects and large, community-wide projects which are located outside of solvent TIF districts. It is our recommendation that the City take steps to:

1. Extend the lives of the existing TIF Districts to the maximum extent allowed by law.
2. Create the Downtown Economic Development Area.
3. Evaluate the need for the designation of additional Economic Development Areas in areas which are strategic and prime for redevelopment.
4. Create new Economic Development Areas connecting the Downtown Economic Development Area with the Track TIF District, the Kroger TIF District, the Walmart TIF District and any new economic development areas;
5. Bring these districts together into the Shelbyville Consolidated Economic Development Area.

By consolidating the TIF districts, the City can create a larger, more flexible allocation area for redevelopment and infrastructure investment. Additionally, this consolidation maximizes the City's bonding capability to accomplish larger priority investments, which have community-wide impact, as suggested in the plan. In addition, consolidation positions the City to best take advantage of its bonding capacity by issuing one bond, rather than five smaller bonds, for improvements.

Conceptual Cost Estimates



Conceptual Cost Estimates Map

Conceptual Cost Estimates

1

Civic Square & Urban Trail
$6,050,000.00

2

Civic Square Pavilion & Tower
$7,500,000.00

3

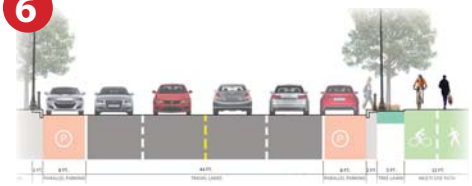
East Washington Street
Parking Structure
$5,500,000.00

4

Architectural Heritage
Catalyst Projects
$19,400,000.00

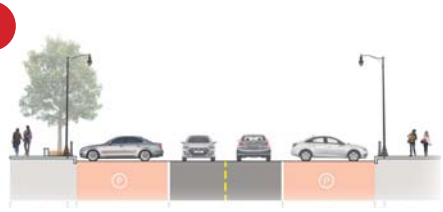
5

North Harrison Urban Trail & Living
Streetscape (John to Franklin)
$1,881,000.00

6

South Harrison Urban Trail & Living
Streetscape (Jackson to Taylor)
$1,919,000.00

7

Multi-Generational
Community Center
$18,400,000

8

West Washington Living Streetscape
(Tompkins to Civic Square)
$641,000.00

9


East Washington Living Streetscape
(Civic Square to Pike)
$1,559,000.00

10

Brownstone Townhomes &
Public Parking
$4,300,000.00

11

Neighborhood Stabilization District
$250,000.00

12

South Gateway
$101,775.00

13

West Gateway
$67,850.00

14

West Mechanic Street
(West to Harrison)
$470,500.00

15

West Street
(Mechanic to Washington)
$725,000.00

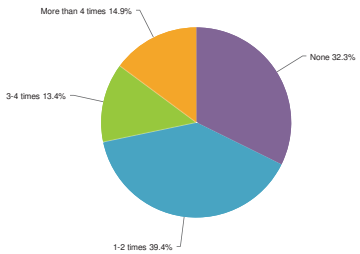
The above costs are based upon schematic level design and should be used for preliminary budgeting and planning purposes. They include construction, design and engineering costs but do not account for construction inspection services , unforeseen items or inflation.

Section I

Appendix

New Summary Report - 25 August 2015

1. How often in the past 30-days have you visited Downtown Shelbyville to shop or eat?

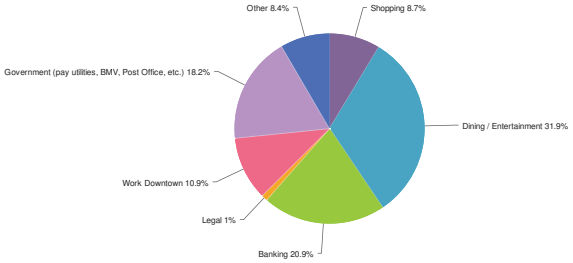


None	32.3%		250
1-2 times	39.4%		305
3-4 times	13.4%		104
More than 4 times	14.9%		115
	Total		774

Statistics

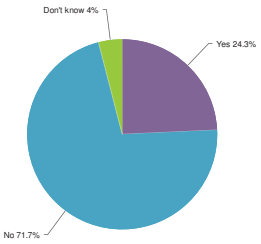
Sum	617.0
Average	1.5
StdDev	0.9
Max	3.0

2. Which of the following brings you most often to Downtown Shelbyville?



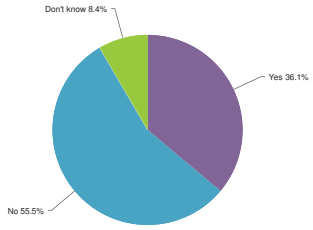
Shopping	8.7%		67
Dining / Entertainment	31.9%		247
Banking	20.9%		162
Legal	1.0%		8
Work Downtown	10.9%		84
Government (pay utilities, BMV, Post Office, etc.)	18.2%		141
Other	8.4%		65
	Total		774

3. Do you consider Mickey's T Mart at South Harrison Street and Colescott Street to be part of Downtown Shelbyville?



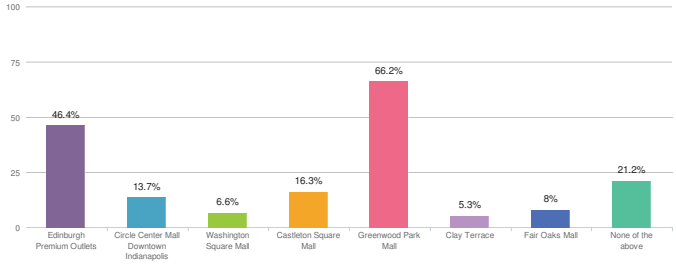
Yes	24.3%		188
No	71.7%		555
Don't know	4.0%		31
	Total		774

4. Do you consider the Big Blue River at North Harrison Street to be part of Downtown Shelbyville?



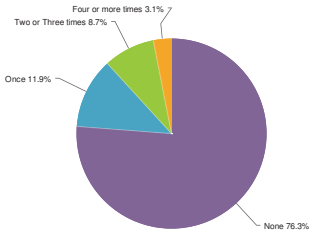
Yes	36.1%		280
No	55.5%		430
Don't know	8.4%		65
	Total		775

5. Please check the following places that you have visited in past 90-days.



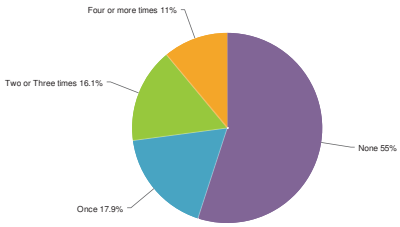
Edinburgh Premium Outlets	46.4%		358
Circle Center Mall Downtown Indianapolis	13.7%		106
Washington Square Mall	6.6%		51
Castleton Square Mall	16.3%		126
Greenwood Park Mall	66.2%		511
Clay Terrace	5.3%		41
Fair Oaks Mall	8.0%		62
None of the above	21.2%		164
	Total		772

6. How many times this year have you visited the Shelbyville Farmer's Market on Wednesday evening?



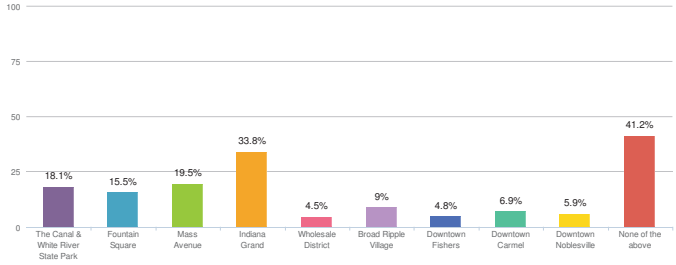
None	76.3%		588
Once	11.9%		92
Two or Three times	8.7%		67
Four or more times	3.1%		24
	Total		771

7. How many times this year have you visited the Shelbyville Farmer's Market on Saturday morning?



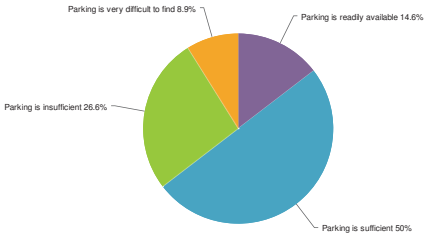
None	55.0%		424
Once	17.9%		138
Two or Three times	16.1%		124
Four or more times	11.0%		85
	Total		771

8. Please check the following entertainment places that you have visited in the past 90-days:



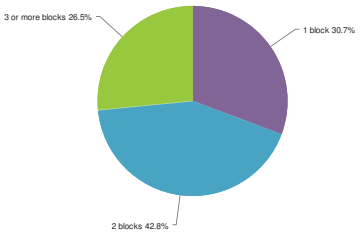
The Canal & White River State Park	18.1%		138
Fountain Square	15.5%		118
Mass Avenue	19.5%		149
Indiana Grand	33.8%		258
Wholesale District	4.5%		34
Broad Ripple Village	9.0%		69
Downtown Fishers	4.8%		37
Downtown Carmel	6.9%		53
Downtown Noblesville	5.9%		45
None of the above	41.2%		315
	Total		764

9. How would you describe the amount of available parking in Downtown Shelbyville?



Parking is readily available	14.6%		112
Parking is sufficient	50.0%		384
Parking is insufficient	26.6%		204
Parking is very difficult to find	8.9%		68
		Total	768

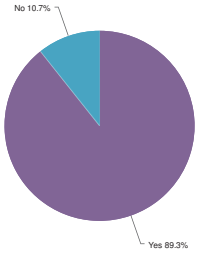
10. How many blocks are you willing to walk from your parked car or your home when shopping or dining in Downtown Shelbyville?



1 block	30.7%		235
2 blocks	42.8%		327
3 or more blocks	26.5%		203
		Total	765

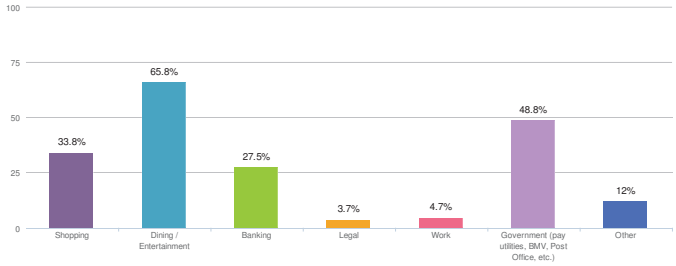
Statistics	
Sum	1,498.0
Average	2.0
StdDev	0.8
Max	3.0

11. When parking in Downtown, do you ever park in the Public Square?



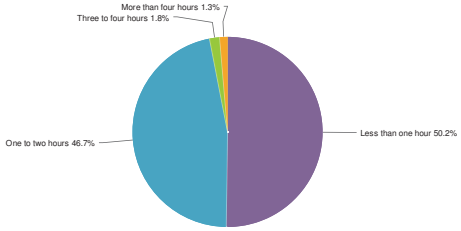
Yes	89.3%		687
No	10.7%		82
		Total	769

12. For what reasons do you park in the Public Square? (Check all that apply)



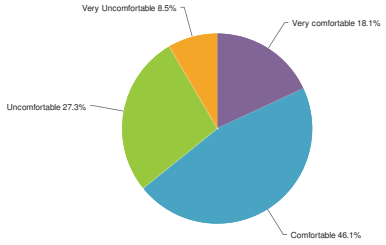
Shopping	33.8%		231
Dining / Entertainment	65.8%		450
Banking	27.5%		188
Legal	3.7%		25
Work	4.7%		32
Government (pay utilities, BMV, Post Office, etc.)	48.8%		334
Other	12.0%		82
		Total	684

13. When parking in the Public Square, how long is your average visit?



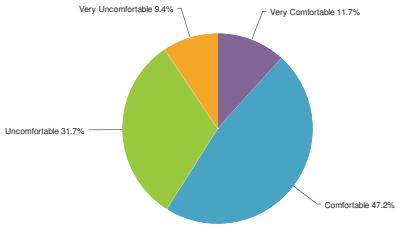
Less than one hour	50.2%		344
One to two hours	46.7%		320
Three to four hours	1.8%		12
More than four hours	1.3%		9
		Total	685

14. Select your level of comfort when crossing the street in the Public Square as a pedestrian or bicyclist:



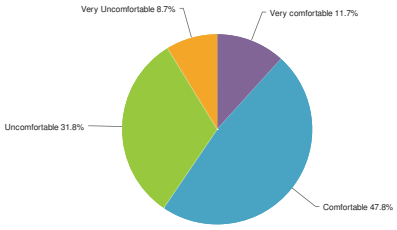
Very comfortable	18.1%		139
Comfortable	46.1%		354
Uncomfortable	27.3%		210
Very Uncomfortable	8.5%		65
		Total	768

15. Select your level of comfort when crossing Harrison St in Downtown Shelbyville as a pedestrian or bicyclist:



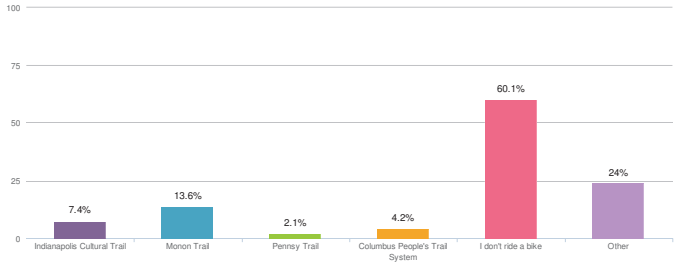
Very Comfortable	11.7%		89
Comfortable	47.2%		358
Uncomfortable	31.7%		240
Very Uncomfortable	9.4%		71
		Total	758

16. Select your level of comfort when crossing Broadway St in Downtown Shelbyville as a pedestrian or bicyclist:



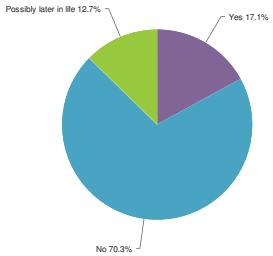
Very comfortable	11.7%		89
Comfortable	47.8%		362
Uncomfortable	31.8%		241
Very Uncomfortable	8.7%		66
		Total	758

17. Have you ridden a bike on any of the following:



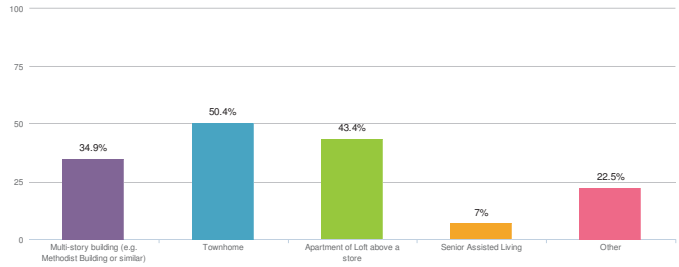
Indianapolis Cultural Trail	7.4%		53
Monon Trail	13.6%		98
Pennsy Trail	2.1%		15
Columbus People's Trail System	4.2%		30
I don't ride a bike	60.1%		433
Other	24.0%		173
		Total	720

18. Could you see yourself living in Downtown Shelbyville?



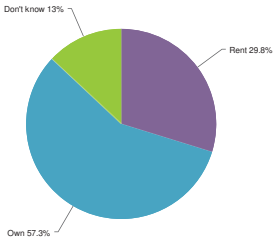
Yes	17.1%		132
No	70.3%		544
Possibly later in life	12.7%		98
	Total		774

19. If answered yes to the above question, what types of downtown housing would attract you? Check all that apply:



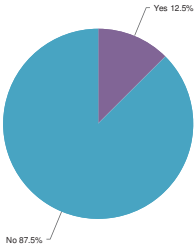
Multi-story building (e.g. Methodist Building or similar)	34.9%		45
Townhome	50.4%		65
Apartment of Loft above a store	43.4%		56
Senior Assisted Living	7.0%		9
Other	22.5%		29
	Total		129

20. If you answered the question above, would you prefer to:



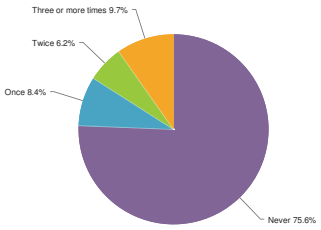
Rent	29.8%		39
Own	57.3%		75
Don't know	13.0%		17
	Total		131

21. Do you work from home?



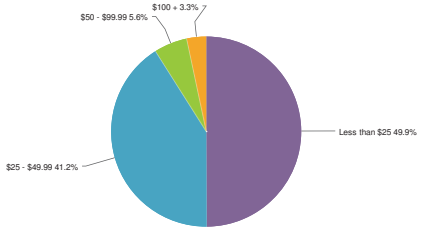
Yes	12.5%		96
No	87.5%		671
	Total		767

22. How frequently in the past 30-days have you used your personal computer to work in a public place like a coffee shop or library?



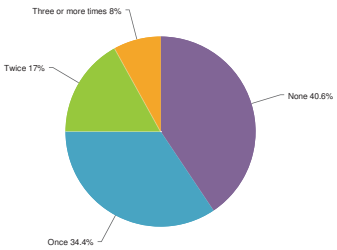
Never	75.6%		582
Once	8.4%		65
Twice	6.2%		48
Three or more times	9.7%		75
	Total		770

23. When shopping in Downtown Shelbyville, how much is your average purchase?



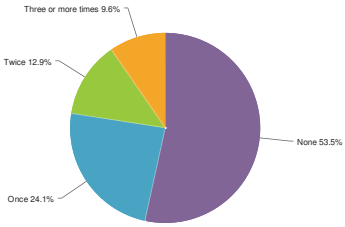
Less than $25	49.9%		381
$25 - $49.99	41.2%		314
$50 - $99.99	5.6%		43
$100 +	3.3%		25
	Total		763

24. In an average month, how often do you eat dinner at a restaurant in Downtown Shelbyville?



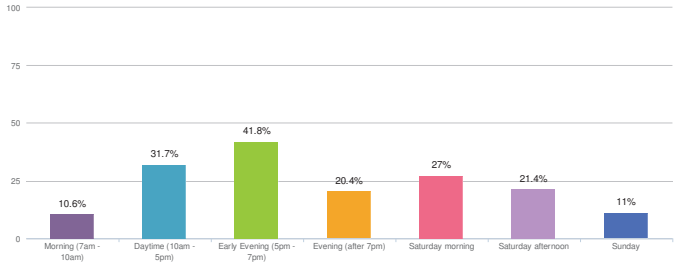
None	40.6%		314
Once	34.4%		266
Twice	17.0%		131
Three or more times	8.0%		62
	Total		773

25. In an average month, how often do you eat lunch at a restaurant in Downtown Shelbyville?



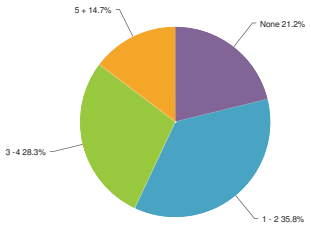
None	53.5%		411
Once	24.1%		185
Twice	12.9%		99
Three or more times	9.6%		74
	Total		769

26. When is it most convenient for you to shop (choose 2)?



Morning (7am - 10am)	10.6%		81
Daytime (10am - 5pm)	31.7%		243
Early Evening (5pm - 7pm)	41.8%		320
Evening (after 7pm)	20.4%		156
Saturday morning	27.0%		207
Saturday afternoon	21.4%		164
Sunday	11.0%		84
	Total		766

27. How many times have you attended a festival or parade in the Public Square or Downtown Shelbyville in the last 3 years?

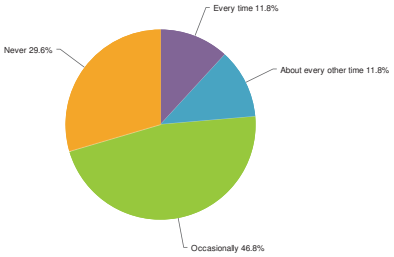


None	21.2%		163
1 - 2	35.8%		276
3 -4	28.3%		218
5 +	14.7%		113
	Total		770

Statistics

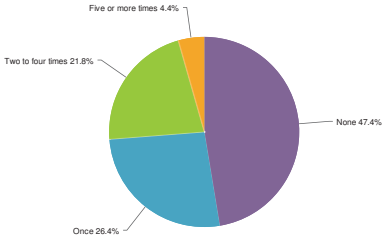
Sum	1,495.0
Average	2.5
StdDev	1.5
Max	5.0

28. Do you patronize local businesses before or after a festival or parade in Downtown Shelbyville?



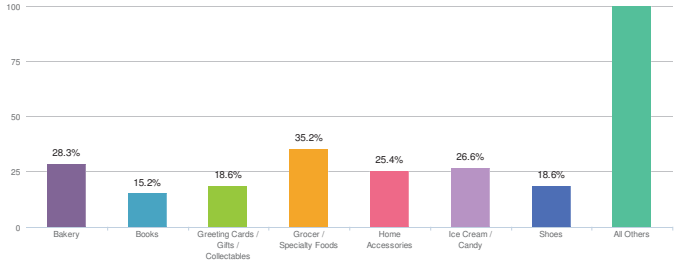
Every time	11.8%		90
About every other time	11.8%		90
Occasionally	46.8%		356
Never	29.6%		225
	Total		761

29. How many times in the past 12-months have you attended an event at the Strand Theatre?



None	47.4%		363
Once	26.4%		202
Two to four times	21.8%		167
Five or more times	4.4%		34
	Total		766

30. Choose the 3 store types most likely to increase the amount that you spend downtown:



Bakery	28.3%		215
Books	15.2%		115
Greeting Cards / Gifts / Collectables	18.6%		141
Grocer / Specialty Foods	35.2%		267
Home Accessories	25.4%		193
Ice Cream / Candy	26.6%		202
Shoes	18.6%		141
Sporting Goods	12.1%		92
Women's Apparel	32.3%		245
Men's Apparel	12.9%		98
Children's Apparel	11.3%		86
Microbrewery	35.6%		270
Other	11.5%		87
	Total		759

31. Would you come downtown for the following businesses or business types?

	Yes	No	Responses
TJ Maxx	540 71.4%	216 28.6%	756
Old Navy	558 73.2%	204 26.8%	762
Gap	428 56.8%	325 43.2%	753

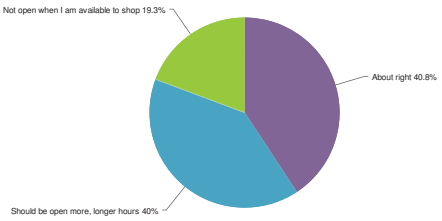
32. Would you come downtown for the following businesses or business types?

	Yes	No	Responses
Microbrewery	497 65.7%	259 34.3%	756
Winery	504 66.8%	251 33.2%	755

33. Would you come downtown for the following businesses or business types?

	Yes	No	Responses
Barnes & Noble	502 68.0%	236 32.0%	738
Hallmark Store	440 60.1%	292 39.9%	732
Trader Joe's	586 79.3%	153 20.7%	739
Panera Bread	594 79.4%	154 20.6%	748

34. What best describes your attitude toward the current hours of operations for existing retail businesses:



About right	40.8%		311
Should be open more, longer hours	40.0%		305
Not open when I am available to shop	19.3%		147
		Total	763

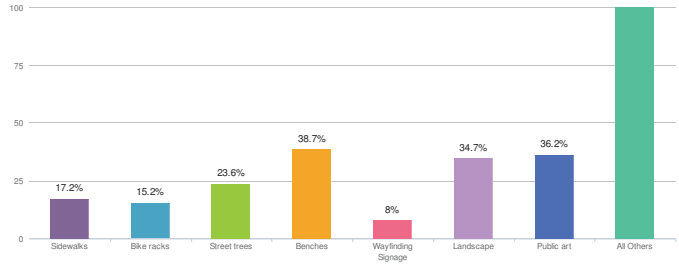
35. Please rate overall satisfaction with the following Public Facilities in Downtown Shelbyville:

	Excellent	Good	Fair	Poor	Responses
Bicycle Access	36 5.0%	256 35.4%	277 38.3%	155 21.4%	724
Cleanliness of Streets / Sidewalks	105 13.8%	481 63.3%	141 18.6%	33 4.3%	760
General Safety	87 11.4%	429 56.4%	199 26.1%	46 6.0%	761
General Attractiveness	70 9.2%	356 46.7%	242 31.8%	94 12.3%	762
Pedestrian Access	78 10.3%	417 55.1%	193 25.5%	69 9.1%	757
Pedestrian Safety	49 6.4%	364 47.8%	239 31.4%	109 14.3%	761
Parking Convenience	58 7.6%	367 48.4%	246 32.4%	88 11.6%	759
Street Lighting	95 12.5%	473 62.2%	154 20.2%	39 5.1%	761
Traffic Flow & Conditions	33 4.4%	268 35.4%	311 41.0%	146 19.3%	758
Wayfinding Signage	47 6.2%	395 52.4%	243 32.2%	69 9.2%	754

36. Please rate overall satisfaction with the following Local Businesses in Downtown Shelbyville:

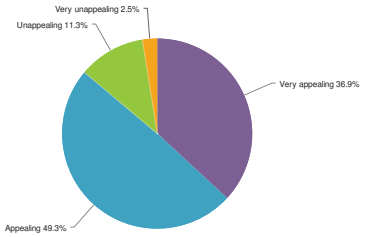
	Excellent	Good	Fair	Poor	Responses
Building Appearance	37 4.9%	338 44.6%	304 40.1%	79 10.4%	758
Employee Friendliness	124 16.4%	458 60.6%	149 19.7%	25 3.3%	756
Employee knowledge of products	120 16.0%	480 64.2%	133 17.8%	15 2.0%	748
Interior Appearance of Business	61 8.1%	443 58.7%	219 29.0%	32 4.2%	755
Merchandise Display	64 8.5%	421 56.1%	236 31.5%	29 3.9%	750
Quality of Goods available	66 8.8%	372 49.7%	253 33.8%	58 7.7%	749
Hours of operation	16 2.1%	324 42.9%	312 41.3%	104 13.8%	756

37. What public enhancements would you like to see most in Downtown Shelbyville? (Choose 3)



Sidewalks	17.2%		129
Bike racks	15.2%		114
Street trees	23.6%		177
Benches	38.7%		290
Wayfinding Signage	8.0%		60
Landscape	34.7%		260
Public art	36.2%		271
Trash receptacles	10.6%		79
Public announcement system	5.1%		38
More public parking	29.5%		221
Metered parking	0.8%		6
Free WiFi	34.7%		260
Downtown festival space	23.6%		177
		Total	749

38. Indicate your desire for outdoor dining adjacent to the restaurant or on the public sidewalk:



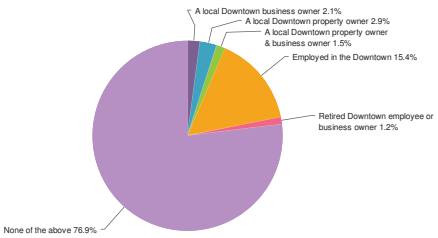
Very appealing	36.9%		280
Appealing	49.3%		374
Unappealing	11.3%		86
Very unappealing	2.5%		19
		Total	759

39. What types of social / cultural activities would you like to see added to Downtown?

Count	Response
1	....
1	5K's
1	??
1	A fall festival like Hope or Greenfield. Not the junk Shelbyville has. Kid friendly days.
1	A gym, churches, and steak n shake
1	A microbrewery, record store, and expanded coffee shop for Three Sisters with an outdoor cafe!
1	Activities for young, growing families.
1	An annual festival
1	Another restaurant. Brewery.
1	Antique festival
2	Any
1	Any... Also it would help if advertisement was better.. That goes for everything in Shelbyville

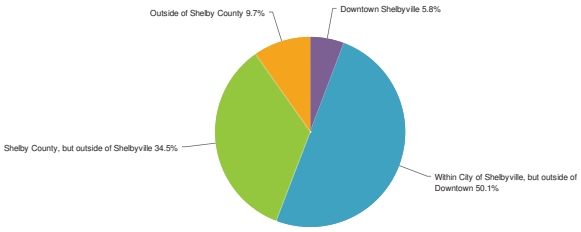
Total	0

41. Are you:



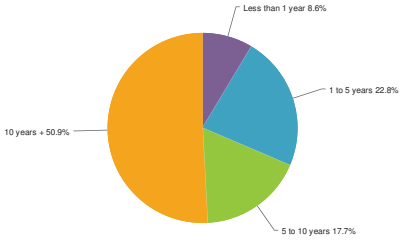
A local Downtown business owner	2.1%		16
A local Downtown property owner	2.9%		22
A local Downtown property owner & business owner	1.5%		11
Employed in the Downtown	15.4%		117
Retired Downtown employee or business owner	1.2%		9
None of the above	76.9%		584
		Total	759

42. Do you live in:



Downtown Shelbyville	5.8%		44
Within City of Shelbyville, but outside of Downtown	50.1%		382
Shelby County, but outside of Shelbyville	34.5%		263
Outside of Shelby County	9.7%		74
		Total	763

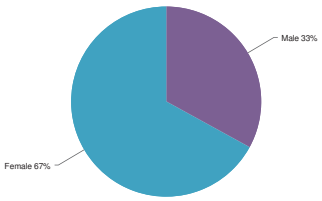
43. How long have you lived at your current location?



Less than 1 year	8.6%		66
1 to 5 years	22.8%		175
5 to 10 years	17.7%		136
10 years +	50.9%		390
		Total	767

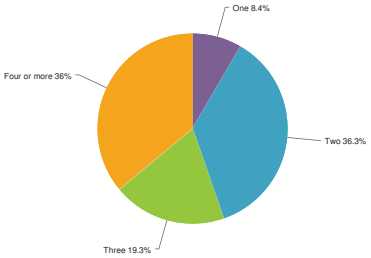
Statistics	
Sum	4,755.0
Average	6.8
StdDev	3.8
Max	10.0

44. What is your gender?



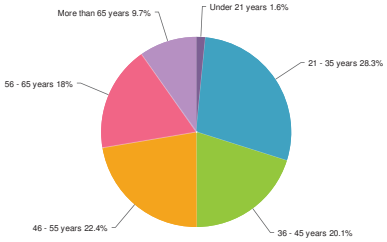
Male	33.0%		251
Female	67.0%		510
	Total		761

45. How many people live in your household?



One	8.4%		64
Two	36.3%		276
Three	19.3%		147
Four or more	36.0%		274
	Total		761

46. What is your age group?



Under 21 years	1.6%		12
21 - 35 years	28.3%		216
36 - 45 years	20.1%		153
46 - 55 years	22.4%		171
56 - 65 years	18.0%		137
More than 65 years	9.7%		74
	Total		763

Statistics

Sum	25,582.0
Average	37.8
StdDev	13.2
Max	56.0

March 24, 2016

EARTH EXPLORATION INC

7770 West New York Street
Indianapolis, IN 46214-2988
317-273-1690 (FAX) 317-273-2250

2204 Yankee Street
Niles, MI 49120
269-262-4320 or 574-233-6820
(FAX) 269-262-4479

Mr. Brandon M. Schreeg, PLA
Remenschneider Associates, Inc.
Stutz Building
212 West 10th Street, Suite B435
Indianapolis, IN 46202

Re: Geotechnical Feasibility Evaluation
Underground Parking Structure
Shelbyville, Indiana
EEI Project No. 1-16-034

Dear Brandon:

We are pleased to submit our report for the above-referenced project. This letter presents the results of our subsurface exploratory and laboratory testing programs and provides geotechnical discussion for the conceptual planning of an underground parking structure. We understand that the intent of our services at this time was to provide preliminary design and construction recommendations for the purpose of the design team to prepare a feasibility study. Supplemental geotechnical engineering efforts and detailed recommendations would then be performed later pending the outcome of the feasibility study.

The work for this project was authorized by Remenschneider Associates, Inc. (RAI) via acceptance of Earth Exploration, Inc. (EEI) Proposal No. P1-15-831.1. Only an electronic copy of this letter is being provided. Hard copies can be provided upon request. Unless you notify us otherwise, we will retain the soil samples from the exploratory program for about 30 days and then discard them.

The opinions and recommendations submitted in this report are based, in part, on our interpretation of the subsurface information revealed by the test borings performed at locations indicated on an attached plan. Understandably, this report does not reflect variations in conditions between or beyond these locations. Therefore, variations in these conditions can be expected, and fluctuation of the groundwater levels will occur with time. Other important limitations of this report are included as an attachment.

Project Concepts

From our understanding, the city of Shelbyville is planning to make improvements to their downtown area and is in the conceptual stages of planning. As part of those improvements, a single- or two-level underground parking structure is being planned below an area currently occupied by the existing public square made up by the intersection of Washington Street and Harrison Street (SR 9). Based on information provided by RAI and Carl Walker, Inc., the lower level of the structure is anticipated to be at least 15 ft below grade and located about 20 ft from existing masonry buildings. In addition, column loads are anticipated to be in the range of 525 to 1,675 kips, and tolerable settlement is 1½ in. total and ¾ in. differential. No other details are known.

Field Exploration and Laboratory Testing

Subsurface conditions were explored by performing five borings (designated B-1 through B-5) at the locations approximately identified on the attached Exploratory Location Plan (Drawing No. 1-16-034.A1). The location of the borings was selected by RAI. The exploratory locations were identified in the field by EEI personnel referencing features shown on an aerial photograph. The exploratory locations should be considered accurate only to the degree implied by the methods used.

Exploratory field activities were performed by EEI during the period of February 22 through 24, 2016. The exploratory activities were performed using hollow stem augers to advance the boreholes. Representative samples of the soil conditions using Standard Penetration Test (SPT) procedures were obtained at regular intervals. In addition, coring of rock was performed at two of the boring locations. After obtaining groundwater observations, each borehole was backfilled with auger cuttings and bentonite chips, and the surface was patched with concrete. At an offset location to Boring B-3, a piezometer was installed to a depth of about 23 ft for in-situ permeability testing and for future groundwater observations to be made by the city. The surface at the piezometer was completed with a flush-mount cover. A detail of the piezometer construction (Drawing No. 1-16-034.A2) along with additional details of the drilling and sampling procedures is attached.

Following the field activities, the soil samples were visually classified by an EEI engineering technician and later reviewed by an EEI geotechnical engineer. For your information, soil descriptions on the boring logs are in general accordance with the Unified Soil Classification System, and further details of this classification system are attached. Representative samples were selected for testing consisting of moisture content, hand penetrometer readings, unconfined compressive strength, and grain size analysis. The results of these tests are provided on the attached boring logs and/or laboratory reports. The boring logs represent our interpretation of the individual samples and field logs and results of the laboratory tests. The stratification lines on the boring logs represent the approximate boundary between soil and rock types; although, the transition may actually be gradual.

Subsurface Conditions

The subsurface conditions at the boring locations were relatively similar and consisted of sandy clay (CL) to a typical depth of about 6 ft underlain by sand and gravel of various gradations (SP, SW-SM, SW, GP, GW, GW-GM) that extended to depths of about 21 to 23 ft below the existing surface. The sand and gravel was, in turn, underlain by lean and sandy clay that extended to dolomitic limestone present near depths of 38 to 39 ft. The limestone was observed to the maximum depth explored (i.e., 49 ft). Refer to the boring logs for more detailed information.

The relative density of the sand and gravel was generally medium dense based on the SPT N-values. The consistency of the underlying lean and sandy clay was very stiff to hard based on estimations of undrained shear strength from the hand penetrometer readings and unconfined compression tests. The moisture content of the underlying clay was in the range of 8 to 19 percent. Based on the results of the Atterberg limit determinations relative to the estimated undrained shear

and moisture content, the underlying clay is highly overconsolidated likely due to the effects of glaciation.

Groundwater level observations made during the field activities are noted at the bottom of the boring logs. From those observations, groundwater was present near a depth of 18 ft below the surface. In addition, a water level reading was taken from the piezometer on March 1st, and groundwater was present at a depth of 17.2 ft below the surface at that time. It should be recognized that groundwater levels will fluctuate due to changes in precipitation, infiltration, surface run-off, pumping of any nearby wells, water levels in the nearby drainage features, and other hydrogeological factors.

Discussion and Conceptual Recommendations

Structure Foundations & Below-Grade Walls

Excavations to the proposed depth for the below-grade structure are anticipated to expose primarily sand and gravel. Based on field observations, the relative density of the soil was medium dense, and it is our opinion that these conditions are conducive for support of spread foundations. Typically, the foundation subgrade areas are prepared by densification of the soil, and we anticipate an allowable bearing pressure on the order of 8 ksf may be suitable for the anticipated loading conditions. For a foundation size of approximately 10 ft by 10 ft, total settlement is not anticipated to exceed 1 in. As plans progress and individual foundation locations, depths, and loads become available, a more detailed analysis of the estimated total and differential settlement at each foundation location will be necessary. For your information, the prediction of settlement is not only a function of the contact pressure but also the size of the loaded area (i.e., the size of the footing).

For your consideration of seismic loads, it is our opinion that the subsurface profile is representative of a Site Class D in accordance with ASCE 7. If the design of the structure is such that significant savings could be realized via a Site Class C, then we could evaluate the site conditions via shear wave velocity testing (MASW) as part of the future supplemental effort.

The design of the below grade walls is anticipated to require incorporation of not only the backfill (earth) pressure but also hydrostatic conditions and surcharges from nearby buildings and other surface elements both during construction and permanently. For our discussion herein, we anticipate wall construction to include cast-in-place concrete. With regard to the earth pressure, these below grade walls are typically backfilled with relatively clean granular soil, and the sand and gravel to be removed from the excavation is anticipated to be suitable for re-use as backfill. Not including any hydrostatic or surcharge conditions and anticipating at-rest earth pressure to be applicable, a service-level equivalent fluid pressure of 60 psf/ft of wall height is suitable for the structural design of the below-grade walls. Where active earth pressure is appropriate, such as possible against cantilevered walls, an equivalent fluid pressure of 45 psf/ft of wall height may be considered. It is important to recognize, however, that movement of the wall is required to mobilize the active earth pressure. Similarly, a more thorough evaluation of earth pressures will be required as plans progress. This is particularly true if top-down construction methods are utilized as part of the permanent below grade walls as discussed later.

Other Design and Construction Considerations

As we have discussed, the excavations made for the project will require: 1) cut slopes adequate to prevent cave-ins/subsidence; or 2) supported excavations for safe construction operation. The contractor will be required to make all excavations in conformance with Occupational Safety and Health Administration (OSHA) requirements. The contractor is solely responsible for constructing and maintaining stable excavations. We also recommend that you identify any third-party risks as they relate to these activities.

Because of the granular soil conditions, we recommend that you evaluate the size and location of the below-grade structure as it relates to the anticipated geometry of the excavation relative to the existing buildings. Assuming no utility conflicts are present and that it will be necessary to maintain pedestrian access to the adjacent buildings, we anticipate that the offset from the existing buildings to the below grade wall of the structure will be about 30 to 35 ft for a 17-ft deep excavation in order to avoid the use of an excavation support system. If an excavation support system is unavoidable, we recommend that you evaluate an excavation geometry such that the maximum retained height of the excavation support system is less than 10 ft. We anticipate that a drilled-in-place cantilevered pile and lagging system could be used provided it is of a sufficient distance (e.g., no closer than 15 ft) from buildings and utilities. For your information, excavation support in excess of 10 ft in height would require tiebacks or internal bracing which are costly, and in congested areas, practically prohibitive. As mentioned earlier, it may be possible to incorporate an excavation support system into the permanent design of the structure, but this would require careful detailing and understanding of the loads, construction sequencing, and foundation geometry.

With regard to the groundwater, we recommend that you develop your concept using the shallowest lower level floor elevation that is possible. For a single below-grade level, we understand excavations may still approach 15 ft to establish the floor level, and foundation excavations are anticipated to extend another 2 to 3 ft deeper. In that case, groundwater will be exposed during construction, and higher groundwater levels could be present at the time of construction and throughout the service life of the structure. To better understand the risk of groundwater fluctuations, we recommend that the piezometer be utilized to make periodic observations (such as monthly) for at least one year. For planning purposes, it will be necessary to lower the groundwater level at least 2 ft below the anticipated base of the deepest excavation prior to beginning excavation activities in order to provide adequate subgrade conditions during construction. Due to the high permeability of the sand and gravel, dewatering measures will likely require the use of tightly-spaced well points around the perimeter of the excavation. The effectiveness of the foundation subgrade preparation is directly dependent on the adequacy of the contractor's dewatering efforts.

Due to the permeability of the sand and gravel (determined to be on the order of 0.1 cm/s based on the in-situ testing), it is our opinion that an attempt to provide permanent dewatering would require costly systems to operate and maintain and be of long-term risk in event of interrupted power and mechanical failures. You could consider design of the below-grade walls and floor as a sealed system anticipating the weight of the structure to be sufficient to resist buoyancy and assuming the floor slab to be designed to resist the upward (negative) moment. Even in this case, moisture problems would likely develop over time.

Concluding Remarks

We trust that this information is sufficient for your current level of effort. As you know, the intent of our services at this time was to provide preliminary design and construction recommendations for the purpose of the design team to prepare a feasibility study. Supplemental geotechnical engineering efforts and detailed recommendations would then be performed later pending the outcome of the feasibility study. As part of this feasibility-level scope, we can participate in one additional meeting in Indianapolis with the design team. As the plans progress, however, we anticipate being retained to work with the design team to further develop the scope.

We appreciate the opportunity to provide our services to you on this project. Please contact our office if you have any questions or when you need further assistance with the project.

Sincerely,

EARTH EXPLORATION, INC.

Michael S. Wigger, P.E.
Principal Engineer

KLZ

Attachments –

Important Information about Your Geotechnical Report
Exploratory Location Plan (Drawing No. 1-16-034.A1)
Field Methods for Exploring and Sampling Soils and Rock
Piezometer Construction Detail (Drawing No. 1-16-034.A2)
Log of Test Boring - General Notes
Log of Test Boring (5)
Grain Size Distribution Curve (5)
Unconfined Compression Test (5)

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a constructor — a construction contractor — or even another civil engineer. Because each geotechnical- engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. No one except you should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you* — should apply this report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical-engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

Geotechnical engineers consider many unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk-management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical-engineering report that was:

- not prepared for you;
- not prepared for your project;
- not prepared for the specific site explored; or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical-engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical-engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical-engineering report whose adequacy may have been affected by*: the passage of time; man-made events, such as construction on or adjacent to the site; or natural events, such as floods, droughts, earthquakes, or groundwater fluctuations. *Contact the geotechnical engineer before applying this report to determine if it is still reliable.* A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ — sometimes significantly — from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide geotechnical-construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmation-dependent recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design-team members' misinterpretation of geotechnical-engineering reports has resulted in costly

problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical-engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical-engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time* to perform additional study. Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and constructors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

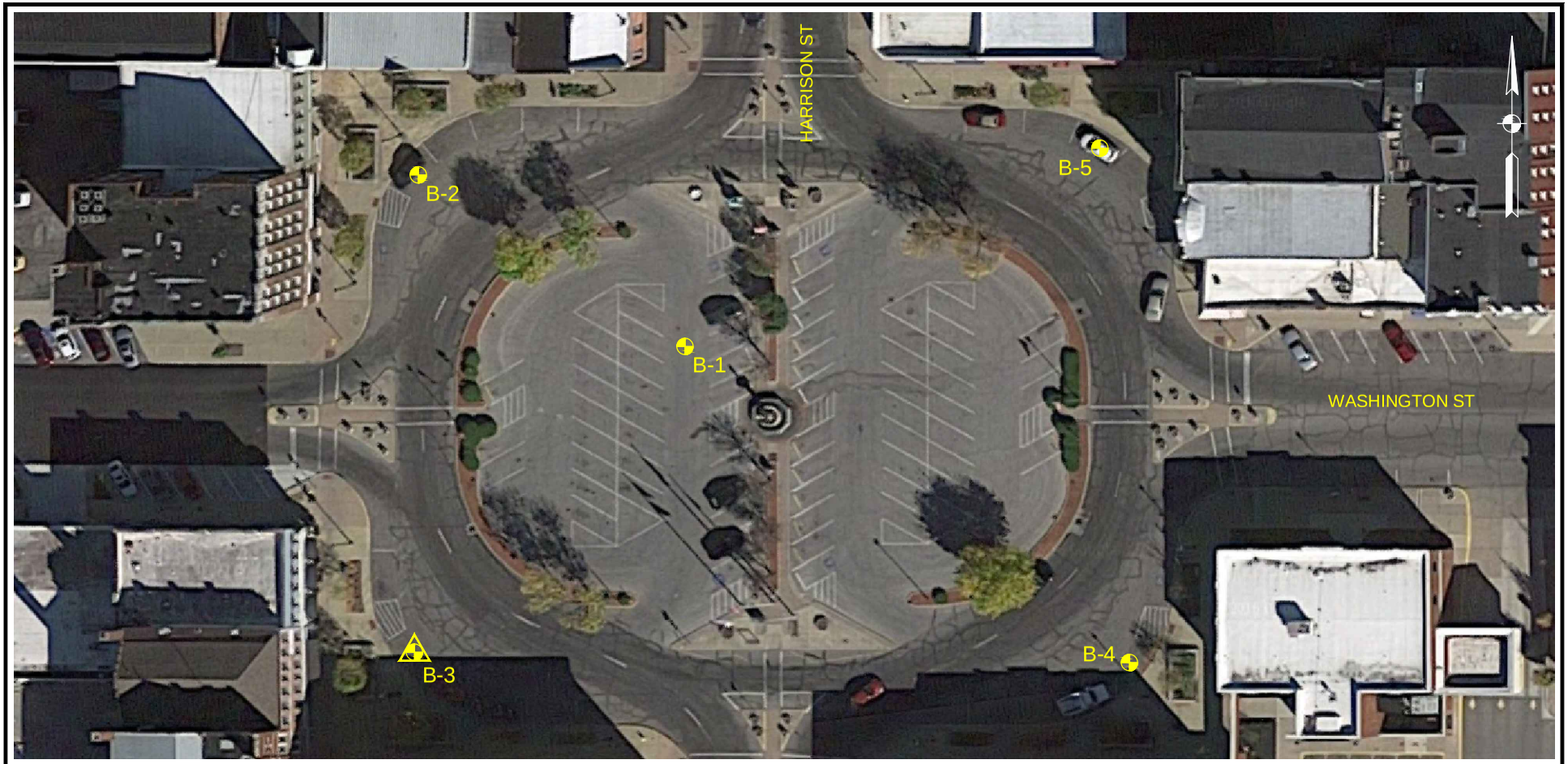
Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold-prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold- prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical- engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

Rely, on Your GBC-Member Geotechnical Engineer for Additional Assistance

Membership in the Geotechnical Business Council of the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you GBC-Member geotechnical engineer for more information.

GEOTECHNICAL BUSINESS COUNCIL
of the Geoprofessional Business Association

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@geoprofessional.org www.geoprofessional.org



VICINITY MAP
N.T.S.

NOTES

1. Base map developed from an aerial image from maps.google.com.
2. Vicinity map generated using commercially-available software by DeLorme (Street Atlas USA ver. 8.0).
3. Borings were located in the field by Earth Exploration, Inc.
4. Exploratory locations are approximate.

LEGEND

B-1	Test Boring Location and Designation
B-3	Test Boring & Piezometer Location and Designation

EXPLORATORY LOCATION PLAN

PROJECT:	Underground Parking Structure
LOCATION:	Shelbyville, Indiana
CLIENT:	Remenschneider Associates, Inc.
EEI PROJECT NO.:	1-16-034
SCALE:	1" = 60'

PROJECT ENG:	MSW
APPROVED BY:	MSW
DRAWN BY:	JBF
DATE AND TIME:	3/8/16

EARTH EXPLORATION
7770 West New York Street
Indianapolis, IN 46214-2988
317-273-1690
(FAX) 317-273-2250

DRAWING NO.:

1-16-034.A1

FIELD METHODS FOR EXPLORING AND SAMPLING SOILS AND ROCK

A. Boring Procedures Between Samples

The boring is extended downward, between samples, by a hollow stem auger, continuous flight auger, driven and washed-out casing, or rotary boring with drilling mud or water.

B. Standard Penetration Test and Split-Barrel Sampling of Soils

(ASTM* Designation: D 1586)

This method consists of driving a 2-in. outside diameter split-barrel sampler using a 140-lb weight falling freely through a distance of 30 in. The sampler is first seated 6 in. into the material to be sampled and then driven 12 in. The number of blows required to drive the sampler the final 12 in. is recorded on the Log of Test Boring and known as the Standard Penetration Resistance or N-value. Recovered samples are first classified as to texture by the field personnel. Later in the laboratory, the field classification is reviewed by a geotechnical engineer who observes each sample.

C. Thin-walled Tube Sampling of Soils

(ASTM* Designation: D 1587)

This method consists of hydraulically pushing a 2-in. or 3-in. outside diameter thin wall tube into the soil, usually cohesive types. Relatively undisturbed samples are recovered.

D. Soil Investigation and Sampling by Auger Borings

(ASTM* Designation: D 1452)

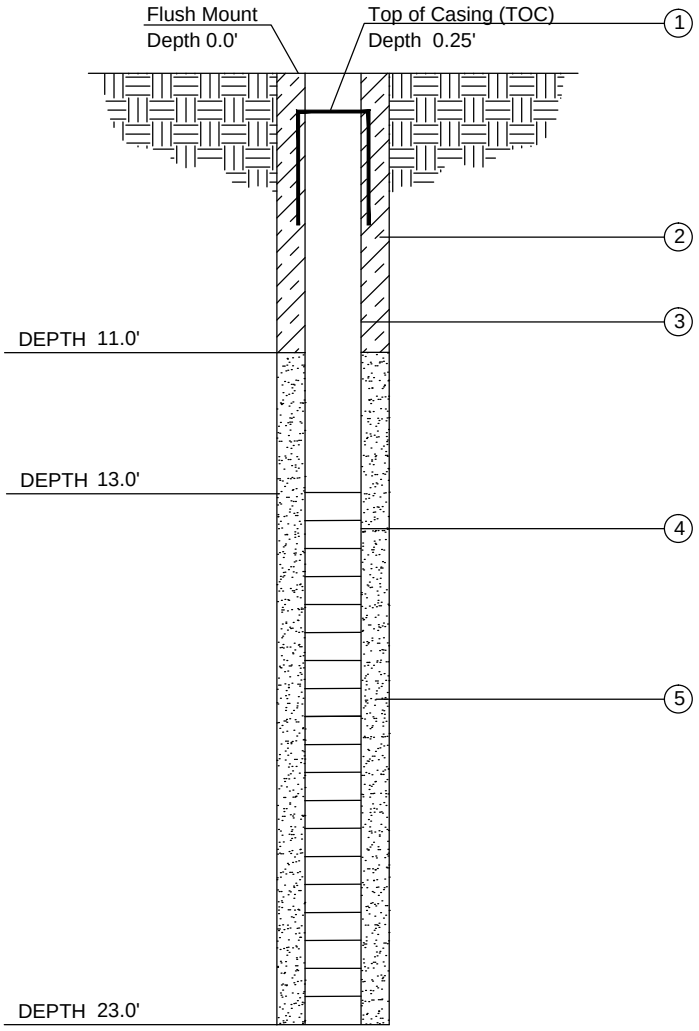
This method consists of augering a hole and removing representative soil samples from the auger flight or bucket at 5-ft intervals or with each change in the substrata. Relatively disturbed samples are obtained and its use is therefore limited to situations where it is satisfactory to determine approximate subsurface profile.

E. Diamond Core Drilling for Site Investigation

(ASTM* Designation: D 2113)

This method consists of advancing a hole in rock or other hard strata by rotating downward a single tube or double tube core barrel equipped with a cutting bit. Diamond, tungsten carbide, or other cutting agents may be used for the bit. Wash water is used to remove the cuttings. Normally, a 3-in. outside diameter by 2-in. inside diameter coring bit is used unless otherwise noted. The rock or hard material recovered within the core barrel is examined in the field and laboratory. Cores are stored in partitioned boxes and the length of recovered material is expressed as a percentage of the actual distance penetrated.

* American Society for Testing and Materials, Philadelphia, PA



BORING/PIEZOMETER NO. B-3

DATE 2/23/16 DRILL RIG CME 55

1. PROTECTIVE CASING [X] YES [ ] NO

LOCK [ ] YES [X] NO

2. TYPE OF SURFACE SEAL (IF INSTALLED)

Bentonite

3. SOLID PIPE DIAMETER 2"

SOLID PIPE LENGTH 12.76'

JOINT TYPE Threaded

4. SCREEN TYPE Slotted

SCREEN LENGTH 10'

SLOT-SIZE 0.010 LENGTH

SCREEN DIAMETER 2"

5. TYPE OF BACKFILL AROUND SCREEN

Sand

6. TYPE OF BACKFILL N/A

7. TYPE OF BACKFILL N/A

8. DRILLING METHOD HSA

9. ADDITIVES USED IF ANY None

WATER LEVEL 17.2'

DATE 3/1/16

PIEZOMETER CONSTRUCTION DETAIL

PROJECT: Underground Parking Structure
LOCATION: Shelbyville, Indiana
CLIENT: Remenschneider Associates, Inc.
EEI PROJECT NO.: 1-16-034
SCALE: Not to Scale

PROJECT ENG: MSW
APPROVED BY: MSW
DRAWN BY: JBF
DATE AND TIME: 3/16/16

EARTH EXPLORATION, INC.
7770 West New York Street
Indianapolis, IN 46214-2988
317-273-1690
(FAX) 317-273-2250

DRAWING NO.:
1-16-034.A2

UNIFIED SOIL CLASSIFICATION SYSTEM / GENERAL NOTES

FINE-GRAINED SOILS

CONSISTENCY	UNCONFINED STRENGTH (tsf)
Very Soft	<0.25
Soft	0.25 - 0.5
Medium	0.5 - 1.0
Stiff	1.0 - 2.0
Very Stiff	2.0 - 4.0
Hard	>4.0

COARSE-GRAINED SOILS

RELATIVE DENSITY	N-VALUE* (Blows/ft)
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	50+

RELATIVE PROPORTIONS

TERM	DEFINING RANGE BY % OF WEIGHT
Trace	0 - 5
Little	5 - 12
Some	12 - 35
And	35 - 50

ORGANIC CONTENT BY COMBUSTION METHOD

SOIL DESCRIPTION	LOI
Trace Organic Matter	0 - 5%
Little Organic Matter	5 - 12%
Organic Silt/Clay	12 - 35%
Sedimentary Peat	35 - 50%
Fibrous and Woody Peat	50%±

UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

MAJOR DIVISIONS			SYMBOLS & DESCRIPTIONS	
COARSE-GRAINED SOILS More than 50% of material coarser than No. 200 sieve	GRAVEL AND GRAVELLY SOILS More than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS Little or no fines	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
			GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES Appreciable amount of fines	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SAND AND SANDY SOILS More than 50% of coarse fraction passing No. 4 sieve	CLEAN SANDS Little or no fines	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES Appreciable amount of fines	SM	SILTY SANDS, SAND-SILT MIXTURES
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE-GRAINED SOILS More than 50% of material finer than No. 200 sieve	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SAND OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILT
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENT

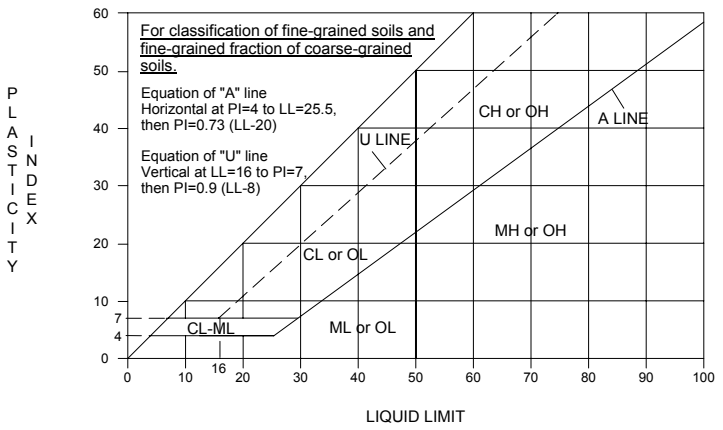
NOTE: DUAL SYMBOLS USED FOR BORDERLINE CLASSIFICATIONS

GRAIN SIZE TERMINOLOGY

SOIL FRACTION		PARTICLE SIZE	US STANDARD SIEVE SIZE
Boulders		Larger than 12-in.	Larger than 12-in.
Cobbles		3 to 12-in.	3 to 12-in.
Gravel	Coarse	3/4 to 3-in.	3/4 to 3-in.
	Fine	4.75 mm to 3/4-in.	#4 to 3/4-in.
Sand	Coarse	2.00 to 4.75 mm	#10 to #4
	Med	0.425 to 2.00 mm	#40 to #10
	Fine	0.075 to 0.425 mm	#200 to #40
Silt		0.005 to 0.075 mm	Smaller than #200
Clay		Smaller than 0.005 mm	Smaller than #200

Plasticity characteristics differentiate between silt and clay.

PLASTICITY CHART



EXPLORATORY SAMPLING ABBREVIATIONS

AS	- Auger Sample	PID	- Photo-Ionization Detector
BF	- Backfilled Upon Completion	PMT	- Borehole Pressuremeter Test
BS	- Bag Sample	PT	- 3-in. O.D. Piston Sample
C	- Casing: Size 2½-in., NW; 4-in., HW	PTS	- Peat Sample
COA	- Clean-Out Auger	RB	- Rock Bit
CS	- Continuous Sampler	RC	- Rock Core
CW	- Clear Water	REC	- Recovery
DC	- Driven Casing	RQD	- Rock Quality Designation
DM	- Drilling Mud	RS	- Rock Sounding
FA	- Flight Auger	S	- Soil Sounding
FT	- Fish Tail	SS	- 2-in. O.D. Split-Spoon Sample
HA	- Hand Auger	ST	- Thin-Walled Tube Sample
HSA	- Hollow Stem Auger	VS	- Vane Shear Test
NW	- No Water Encountered	WPT	- Water Pressure Test

LABORATORY TEST ABBREVIATIONS

qp	- Hand Penetrometer Reading, tsf
qu	- Unconfined Compressive Strength, tsf
W	- Moisture Content, %
LL	- Liquid Limit, %
PL	- Plastic Limit, %
PI	- Plasticity Index, %
SL	- Shrinkage Limit, %
LOI	- Loss on Ignition, %
γ_d	- Dry Unit Weight, pcf
pH	- Hydrogen-Ion Concentration
P_{200}	- Percent Passing a No. 200 Sieve

*The penetration resistance, N, is the summation of the number of blows required to effect two successive 6" penetrations of the 2" O.D. split-spoon sampler. The sampler is driven with a 140 lb weight falling 30" and is seated to a depth of 6" before commencing the standard penetration test.

LOG OF TEST BORING

Project: **Underground Parking Structure**
Location: **Shelbyville, Indiana**
Client: **Remenschneider Associates, Inc.**

7770 West New York Street - Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. **B-1**
Elevation
Datum **---**
EEI Proj. No. **1-16-034**
Sheet **1** of **2**

Project No.	---	Station	---	Weather	Cloudy	Driller	D.C.
Struct. No.	---	Offset	---	Temp.	25° F	Inspector	---

SAMPLE No.	Type	Rec %	N Value	Depth ft	DESCRIPTION/CLASSIFICATION and REMARKS	q_p tsf	q_u tsf	γ_d pcf	W %	LL %	PL %	PI %
					ASPHALTIC CONCRETE							
SS-1		90	7		**GRANULAR SUBBASE**, (sand and gravel)	1½			23.7			
SS-2		100	10		**CL**, **SANDY CLAY**, trace gravel, stiff, brown	1¾			18.2			
				5								
SS-3		90	8									
SS-4		90	11									
				10								
SS-5		100	9		**SW-SM**, **SAND**, and gravel, loose to medium dense, moist to wet, brown							
SS-6		100	13									
				15								
SS-7		100	11									
				▽	**GW-GM**, **GRAVEL**, some sand, medium dense, brown, moist to wet below 18 ft							
SS-8		70	14									
				20								
SS-9		100	48			3½			10.0	22	14	8
SS-10		100	42		**CL**, **LEAN CLAY**, some sand, little gravel, very stiff to hard, brown	3½			9.6			
				25								
SS-11		100	71			>4½	11.69	132.9	8.7			
SS-12		100	81			>4½			15.6	40	15	25
				30	**CL**, **LEAN CLAY**, some sand, trace gravel, hard, dark gray							

Continued Next Page

WATER LEVEL OBSERVATIONS

Depth ft	▽ While Drilling	▼ Upon Completion	▼ After Drilling
To Water	18	NW	BF
To Cave-in		15	

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

GENERAL NOTES

Start **2/24/16** End **2/24/16** Rig **CME 55**
Drilling Method **3¼" I.D. HSA** **ATV**
Remarks **Backfilled with auger cuttings, bentonite chips and concrete patch at surface.**

LOG OF TEST BORING

Project **Underground Parking Structure**
Location **Shelbyville, Indiana**
Client **Remenschneider Associates, Inc.**

7770 West New York Street - Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. **B-1**
Elevation
Datum **---**
EEI Proj. No. **1-16-034**
Sheet **2** of **2**

Project No.	---	Station	---	Weather	**Cloudy**	Driller	**D.C.**
Struct. No.	---	Offset	---	Temp.	**25° F**	Inspector	---

SAMPLE					DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES						
No.	Type	Rec %	N Value	Depth ft		q_p tsf	q_u tsf	γ_d pcf	W %	LL %	PL %	PI %
SS-13		100	67	35	**CL**, **LEAN CLAY**, some sand, trace gravel, hard, dark gray	>4½			14.4			
					End of Boring at 38.7 ft Auger refusal on bedrock at 38.7 ft							

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

LOG OF TEST BORING

Project: **Underground Parking Structure**
Location: **Shelbyville, Indiana**
Client: **Remenschneider Associates, Inc.**
7770 West New York Street - Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. **B-2**
Elevation
Datum **---**
EEI Proj. No. **1-16-034**
Sheet **1** of **2**

Project No.	---	Station	---	Weather	Cloudy	Driller	D.C.
Struct. No.	---	Offset	---	Temp.	30° F	Inspector	---

SAMPLE No.	Type	Rec %	N Value	Depth ft	DESCRIPTION/CLASSIFICATION and REMARKS	q_p tsf	q_u tsf	γ_d pcf	W %	LL %	PL %	PI %
					ASPHALTIC CONCRETE							
					PORTLAND CEMENT CONCRETE							
SS-1		90	6		**GRANULAR SUBBASE**, (crushed stone)	1½			19.9			
SS-2		100	7	5	**CL**, **SANDY CLAY**, little gravel, stiff, brown	1			22.7			
SS-3		90	20									
SS-4		100	14									
				10								
SS-5		100	17		**SW**, **SAND**, some gravel, medium dense, moist							
SS-6		70	39									
				15								
SS-7		90	17									
SS-8		100	14									
				20	**GW**, **GRAVEL**, and sand, medium dense, moist to wet below 18 ft							
SS-9		100	11									
SS-10		100	27			>4½	6.27	118.8	15.2			
				25								
SS-11		100	31		**CL**, **SANDY CLAY**, trace, little gravel, hard to very stiff, brown to gray below 38 ft	>4½			12.9			
SS-12		100	26			3½	2.41	118.8	15.0			
				30								

Continued Next Page

WATER LEVEL OBSERVATIONS

Depth ft	▽ While Drilling	▼ Upon Completion	⧩ After Drilling
To Water	23	17½	BF
To Cave-in		19½	

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

GENERAL NOTES

Start **2/22/16** End **2/22/16** Rig **CME 55**
Drilling Method **3¼" I.D. HSA** **ATV**
Remarks **Backfilled with auger cuttings, bentonite chips and concrete patch at surface.**

LOG OF TEST BORING

Project: **Underground Parking Structure**
Location: **Shelbyville, Indiana**
Client: **Remenschneider Associates, Inc.**

7770 West New York Street - Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. **B-2**
Elevation
Datum **---**
EEI Proj. No. **1-16-034**
Sheet **2** of **2**

Project No.	---	Station	---	Weather	**Cloudy**	Driller	**D.C.**
Struct. No.	---	Offset	---	Temp.	**30° F**	Inspector	---

SAMPLE No.	Type	Rec %	N Value	Depth ft	DESCRIPTION/CLASSIFICATION and REMARKS	q_p tsf	q_u tsf	γ_d pcf	W %	LL %	PL %	PI %
SS-13		100	22	35	**CL**, **SANDY CLAY**, trace, little gravel, hard to very stiff, brown to gray below 38 ft	2½			14.7			
SS-14		85	50/0.3			3½			12.3			
RC-1		76	RQD=0%	40	**DOLOMITIC LIMESTONE**, moderately hard to very hard, brown, low to very low bedding plane angles, highly weathered to 41 ft, vuggy							
RC-2		98	RQD=92%	45								
					End of Boring at 49.5 ft							

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

LOG OF TEST BORING

EARTH EXPLORATION, Inc.

7770 West New York Street - Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Project: **Underground Parking Structure**
Location: **Shelbyville, Indiana**
Client: **Remenschneider Associates, Inc.**

Boring No. **B-3**
Elevation
Datum **---**
EEI Proj. No. **1-16-034**
Sheet **1** of **2**

Project No.	---	Station	---	Weather	**Cloudy**	Driller	**D.C.**
Struct. No.	---	Offset	---	Temp.	**40° F**	Inspector	---

SAMPLE No.	Type	Rec %	N Value	Depth ft	DESCRIPTION/CLASSIFICATION and REMARKS	q_p tsf	q_u tsf	γ_d pcf	W %	LL %	PL %	PI %
					ASPHALTIC CONCRETE							
					PORTLAND CEMENT CONCRETE							
SS-1	X	90	8		**GRANULAR SUBBASE**, (crushed stone)	1¼			16.3			
SS-2	X	100	11		**CL**, **SANDY CLAY**, little gravel, stiff, brown	1			14.0			
				5								
SS-3	X	100	14									
SS-4	X	100	21									
				10								
SS-5	X	100	15		**SP**, **FINE TO MEDIUM SAND**, and gravel, medium dense, moist							
SS-6	X	100	23									
				15								
SS-7	X	100	20									
				▽ ▼	**GP**, **GRAVEL**, and sand, medium dense, moist to wet below 18½ ft							
SS-8	X	100	20									
				20								
SS-9	X	100	47		**CL**, **LEAN CLAY**, some sand, little gravel, hard, gray	4½			8.3			
SS-10	X	100	48			4½			12.3			
				25								
SS-11	X	100	42		**CL**, **SANDY CLAY**, little to some gravel, hard to very stiff, gray	3			12.2	25	13	12
SS-12	X	100	50			4½			14.0			
				30								

Continued Next Page

WATER LEVEL OBSERVATIONS

Depth ft	▽ While Drilling	▼ Upon Completion	⧩ After Drilling
To Water	**18½**	**18½**	**BF**
To Cave-in		**31**	

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

GENERAL NOTES

Start **2/22/16** End **2/22/16** Rig **CME 55**
Drilling Method **3¼" I.D. HSA** **ATV**
Remarks **Backfilled with auger cuttings, bentonite chips and concrete patch at surface.**
***Piezometer installed at offset location.**

LOG OF TEST BORING

Project: **Underground Parking Structure**
Location: **Shelbyville, Indiana**
Client: **Remenschneider Associates, Inc.**

7770 West New York Street - Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. **B-3**
Elevation
Datum **---**
EEI Proj. No. **1-16-034**
Sheet **2** of **2**

Project No.	---	Station	---	Weather	**Cloudy**	Driller	**D.C.**
Struct. No.	---	Offset	---	Temp.	**40° F**	Inspector	---

SAMPLE					DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES						
No.	Type	Rec %	N Value	Depth ft		q_p tsf	q_u tsf	γ_d pcf	W %	LL %	PL %	PI %
SS-13		90	84			>4½			12.4			
				35	**CL**, **SANDY CLAY**, little to some gravel, hard to very stiff, gray							
SS-14		100	50/0			1½			15.7			
RC-1		22	RQD=15%	40	**DOLOMITIC LIMESTONE**, moderately hard to very hard, brown, low bedding plan angles, vuggy, highly weathered to 41 ft							
RC-2		73	RQD=7%	45								
					End of Boring at 49 ft							

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

LOG OF TEST BORING

Project: **Underground Parking Structure**
Location: **Shelbyville, Indiana**
Client: **Remenschneider Associates, Inc.**

7770 West New York Street - Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. **B-4**
Elevation
Datum **---**
EEI Proj. No. **1-16-034**
Sheet **1** of **2**

Project No.	---	Station	---	Weather	**Sunny**	Driller	**D.C.**
Struct. No.	---	Offset	---	Temp.	**40° F**	Inspector	---

SAMPLE No.	Type	Rec %	N Value	Depth ft	DESCRIPTION/CLASSIFICATION and REMARKS	q_p tsf	q_u tsf	γ_d pcf	W %	LL %	PL %	PI %
					ASPHALTIC CONCRETE							
					PORTLAND CEMENT CONCRETE							
SS-1	X	90	6		**GRANULAR SUBBASE**, (sand and gravel)	½			25.8			
SS-2	X	100	7		**CL**, **SANDY CLAY**, trace gravel, medium stiff to stiff, brown (fill)	1			22.1			
				5								
SS-3	X	100	5			---			---			
SS-4	X	90	14									
				10								
SS-5	X	90	19									
SS-6	X	90	21		**SW-SM**, **SAND**, and gravel, loose to medium dense, moist to wet below 19 ft, brown to gray near 21 ft							
				15								
SS-7	X	90	26									
SS-8	X	90	16	▽								
				20								
SS-9	X	100	16	▼								
SS-10	X	100	25			3			17.1			
				25								
SS-11	X	100	51		**CL**, **LEAN CLAY**, some sand, little gravel, very stiff to hard, gray	4½			9.1	21	13	8
SS-12	X	100	44			>4½			16.6			
				30								

Continued Next Page

WATER LEVEL OBSERVATIONS

Depth ft	▽ While Drilling	▼ Upon Completion	⧩ After Drilling
To Water	**19**	**22**	**BF**
To Cave-in		**25**	

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

GENERAL NOTES

Start **2/22/16** End **2/22/16** Rig **CME 55**
Drilling Method **3¼" I.D. HSA** **ATV**
Remarks **Backfilled with auger cuttings, bentonite chips and concrete patch at surface.**

LOG OF TEST BORING

Project **Underground Parking Structure**
Location **Shelbyville, Indiana**
Client **Remenschneider Associates, Inc.**

7770 West New York Street - Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. **B-4**
Elevation
Datum **---**
EEI Proj. No. **1-16-034**
Sheet **2** of **2**

Project No.	---	Station	---	Weather	**Sunny**	Driller	**D.C.**
Struct. No.	---	Offset	---	Temp.	**40° F**	Inspector	---

SAMPLE					DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES						
No.	Type	Rec %	N Value	Depth ft		q_p tsf	q_u tsf	γ_d pcf	W %	LL %	PL %	PI %
SS-13		100	40	35	**CL**, **LEAN CLAY**, some sand, trace gravel, hard, brown and gray	>4½	6.38	116.8	16.3			
SS-14		70	50/0.2			>4½			18.5			
					End of Boring at 38.9 ft Auger refusal on bedrock at 38.9 ft							

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

LOG OF TEST BORING

Project: **Underground Parking Structure**
Location: **Shelbyville, Indiana**
Client: **Remenschneider Associates, Inc.**

7770 West New York Street - Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. **B-5**
Elevation
Datum **---**
EEI Proj. No. **1-16-034**
Sheet **1** of **2**

Project No.	---	Station	---	Weather	**Sunny**	Driller	**D.C.**
Struct. No.	---	Offset	---	Temp.	**35° F**	Inspector	---

SAMPLE No.	Type	Rec %	N Value	Depth ft	DESCRIPTION/CLASSIFICATION and REMARKS	q_p tsf	q_u tsf	γ_d pcf	W %	LL %	PL %	PI %
					ASPHALTIC CONCRETE							
					PORTLAND CEMENT CONCRETE							
SS-1	X	90	7		**GRANULAR SUBBASE**, (crushed stone)	1½			19.3			
					CL, **SANDY CLAY**, trace gravel, stiff, brown (fill)							
SS-2	X	90	9									
				5								
SS-3	X	90	20									
SS-4	X	90	17									
				10								
SS-5	X	90	13		**SP**, **FINE TO MEDIUM SAND**, some gravel, loose to dense, moist to wet below 18½ ft, brown							
SS-6	X	100	10									
				15								
SS-7	X	100	28									
				▽ ▼								
SS-8	X	100	23									
				20								
SS-9	X	100	34									
SS-10	X	100	51		**CL**, **LEAN CLAY**, some sand, little gravel, hard, gray	>4½			10.8			
				25								
SS-11	X	100	52			>4½	9.88	134.9	9.5			
SS-12	X	100	62			2½			17.6			
				30	**CL**, **LEAN CLAY**, some sand, little gravel, very stiff to hard, gray							

Continued Next Page

WATER LEVEL OBSERVATIONS

Depth ft	▽ While Drilling	▼ Upon Completion	⧩ After Drilling
To Water	**18½**	**18½**	**BF**
To Cave-in		**23**	

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

GENERAL NOTES

Start **2/23/16** End **2/23/16** Rig **CME 55**
Drilling Method **3¼" I.D. HSA** **ATV**
Remarks **Backfilled with auger cuttings, bentonite chips and concrete patch at surface.**

LOG OF TEST BORING

Project **Underground Parking Structure**
Location **Shelbyville, Indiana**
Client **Remenschneider Associates, Inc.**

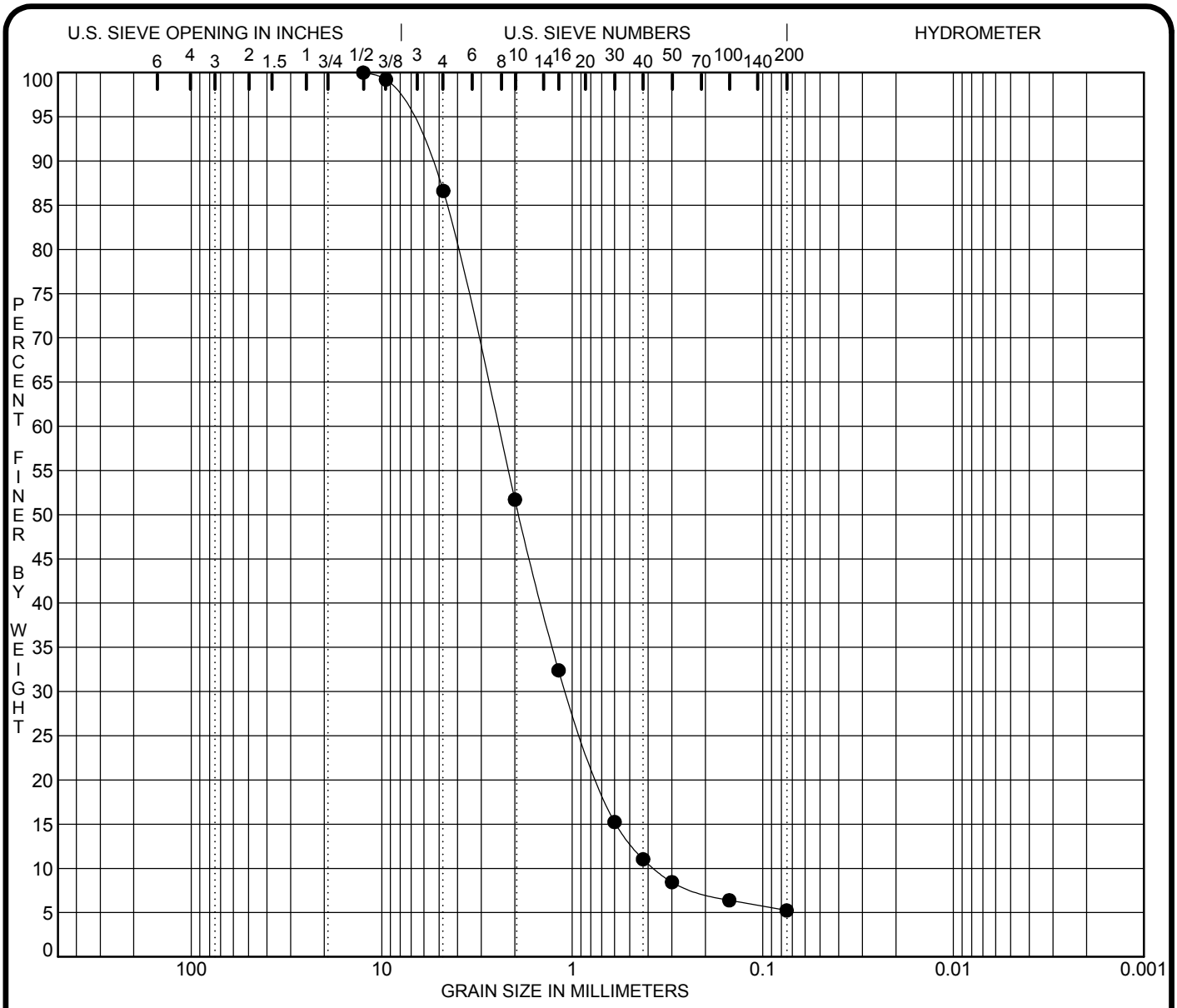
7770 West New York Street - Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. **B-5**
Elevation
Datum **---**
EEI Proj. No. **1-16-034**
Sheet **2** of **2**

Project No.	---	Station	---	Weather	**Sunny**	Driller	**D.C.**
Struct. No.	---	Offset	---	Temp.	**35° F**	Inspector	---

SAMPLE					DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES						
No.	Type	Rec %	N Value	Depth ft		q_p tsf	q_u tsf	γ_d pcf	W %	LL %	PL %	PI %
SS-13		100	70	35	**CL**, **LEAN CLAY**, some sand, little gravel, very stiff to hard, gray	>4½			17.7			
					End of Boring at 38.2 ft Auger refusal on bedrock at 38.2 ft							

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.



BOULDERS	GRAVEL	SAND		SILT	CLAY
		coarse	fine		

	Sample Identification		Station / Offset / Line	Depth, ft.	Elevation, USCGS
●	B-1	SS-5	---	11.0 - 12.5	-

Lab No.	Classification	pH	%Gravel	%Sand	%Silt	%Clay	MC%	LL	PL	PI
	SW-SM, SAND, and gravel		48.3	46.5	5.2			NP	NP	NP

Remarks:

EARTH EXPLORATION, Inc.

Project No. --- **Project** Underground Parking Structure

Structure No. --- **Location** Shelbyville, Indiana

EEI Proj. No. 1-16-034 **Client** Remenschneider Associates, Inc.

GRAIN SIZE DISTRIBUTION CURVE

Earth Exploration, Inc.
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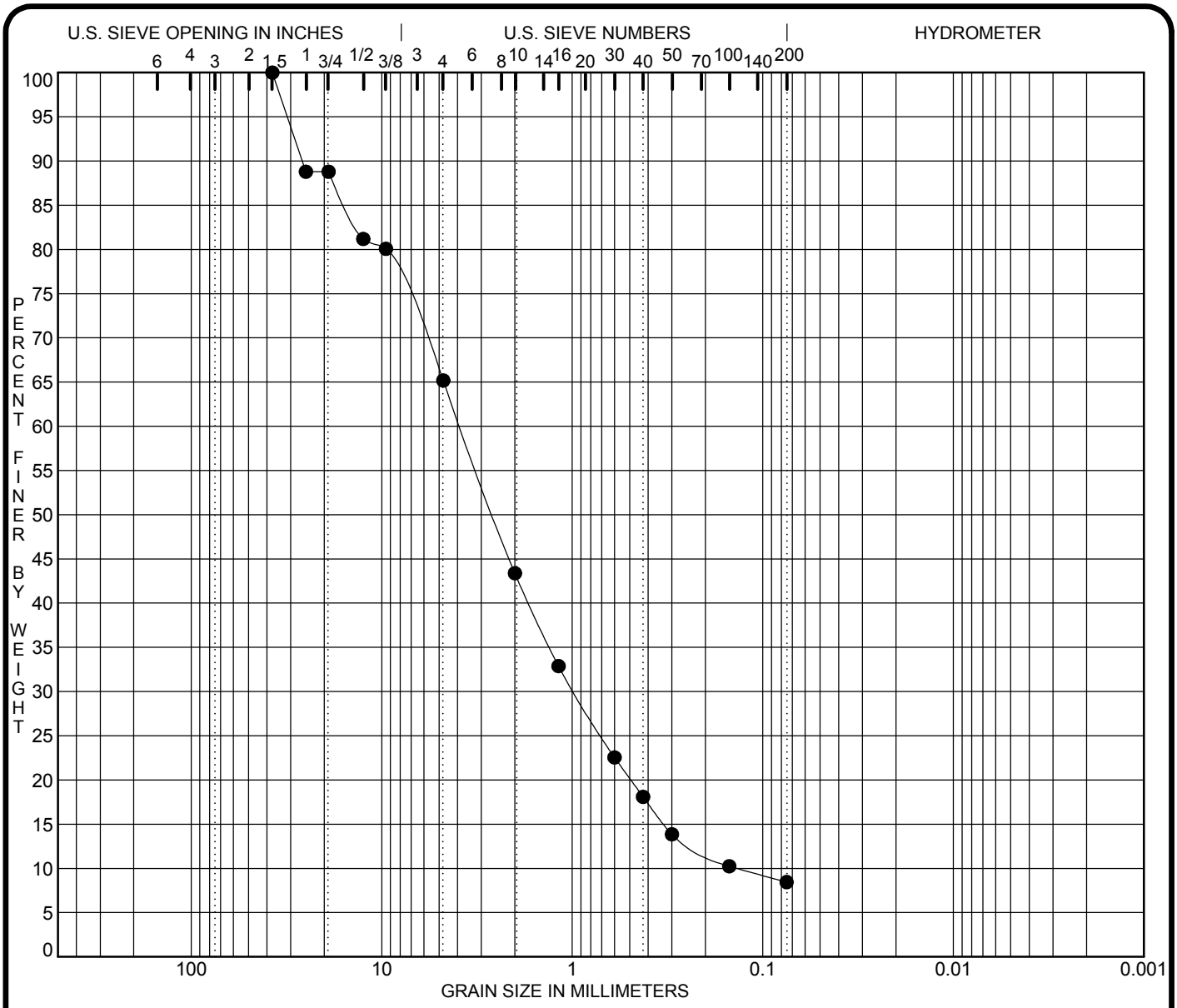
317-273-1690 / 317-273-2250 (Fax)



BOULDERS	GRAVEL	SAND		SILT	CLAY
		coarse	fine		

	Sample Identification		Station / Offset / Line	Depth, ft.	Elevation, USCGS
●	B-1	SS-7	---	16.0 - 17.5	-

Lab No.	Classification	pH	%Gravel	%Sand	%Silt	%Clay	MC%	LL	PL	PI
	GW-GM, GRAVEL, some sand		56.6	34.9	8.4			NP	NP	NP

Remarks:

EARTH EXPLORATION, Inc.

Project No. --- **Project** Underground Parking Structure

Structure No. --- **Location** Shelbyville, Indiana

EEI Proj. No. 1-16-034 **Client** Remenschneider Associates, Inc.

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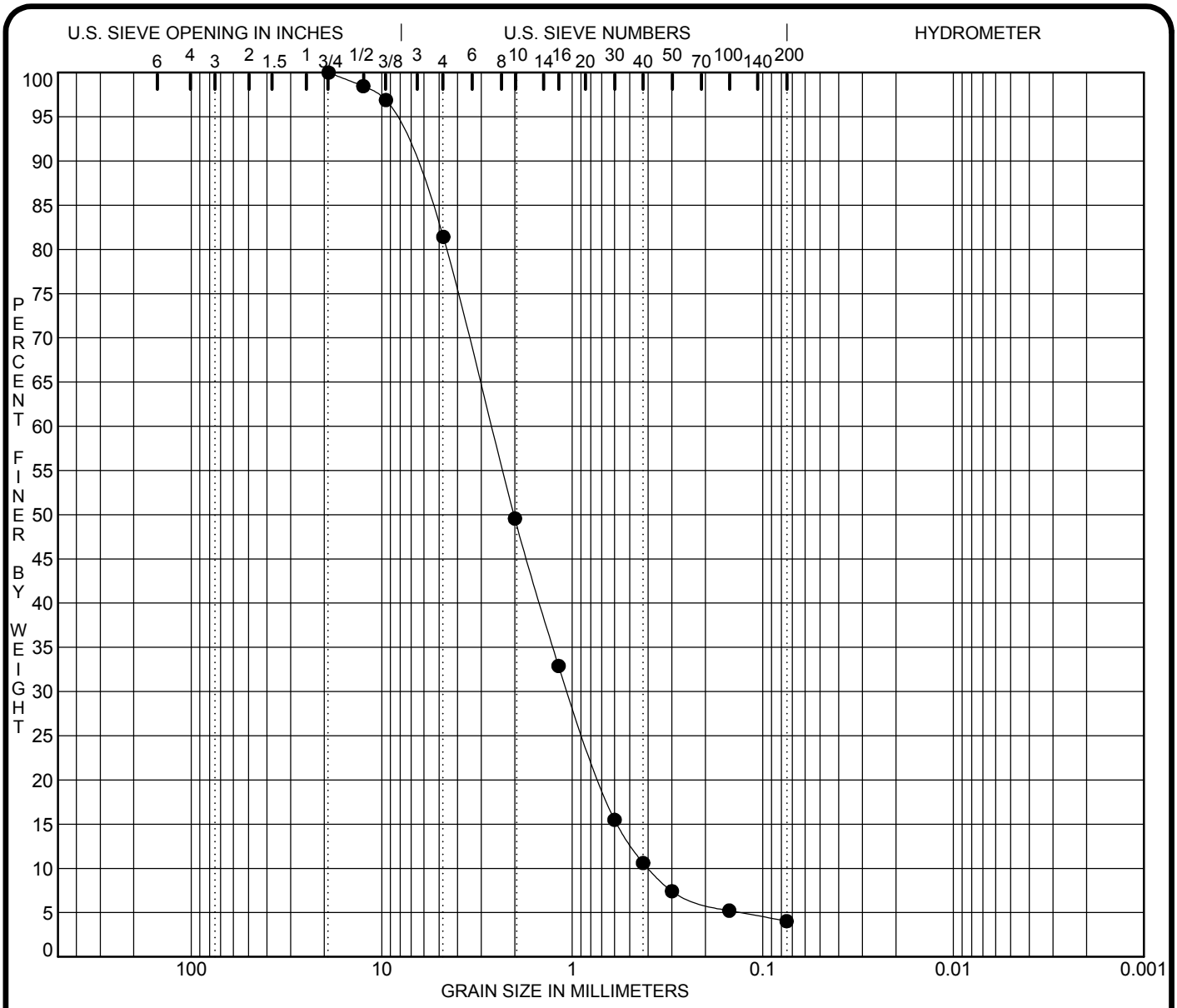

BOULDERS	GRAVEL	SAND		SILT	CLAY
		coarse	fine		

Sample Identification		Station / Offset / Line	Depth, ft.	Elevation, USCGS
● B-2	SS-7	---	16.0 - 17.5	-

Lab No.	Classification	pH	%Gravel	%Sand	%Silt	%Clay	MC%	LL	PL	PI
	GW, GRAVEL,and sand		50.4	45.5	4.0			NP	NP	NP

Remarks:

EARTH EXPLORATION, Inc.

Project No. --- **Project** Underground Parking Structure

Structure No. --- **Location** Shelbyville, Indiana

EEI Proj. No. 1-16-034 **Client** Remenschneider Associates, Inc.

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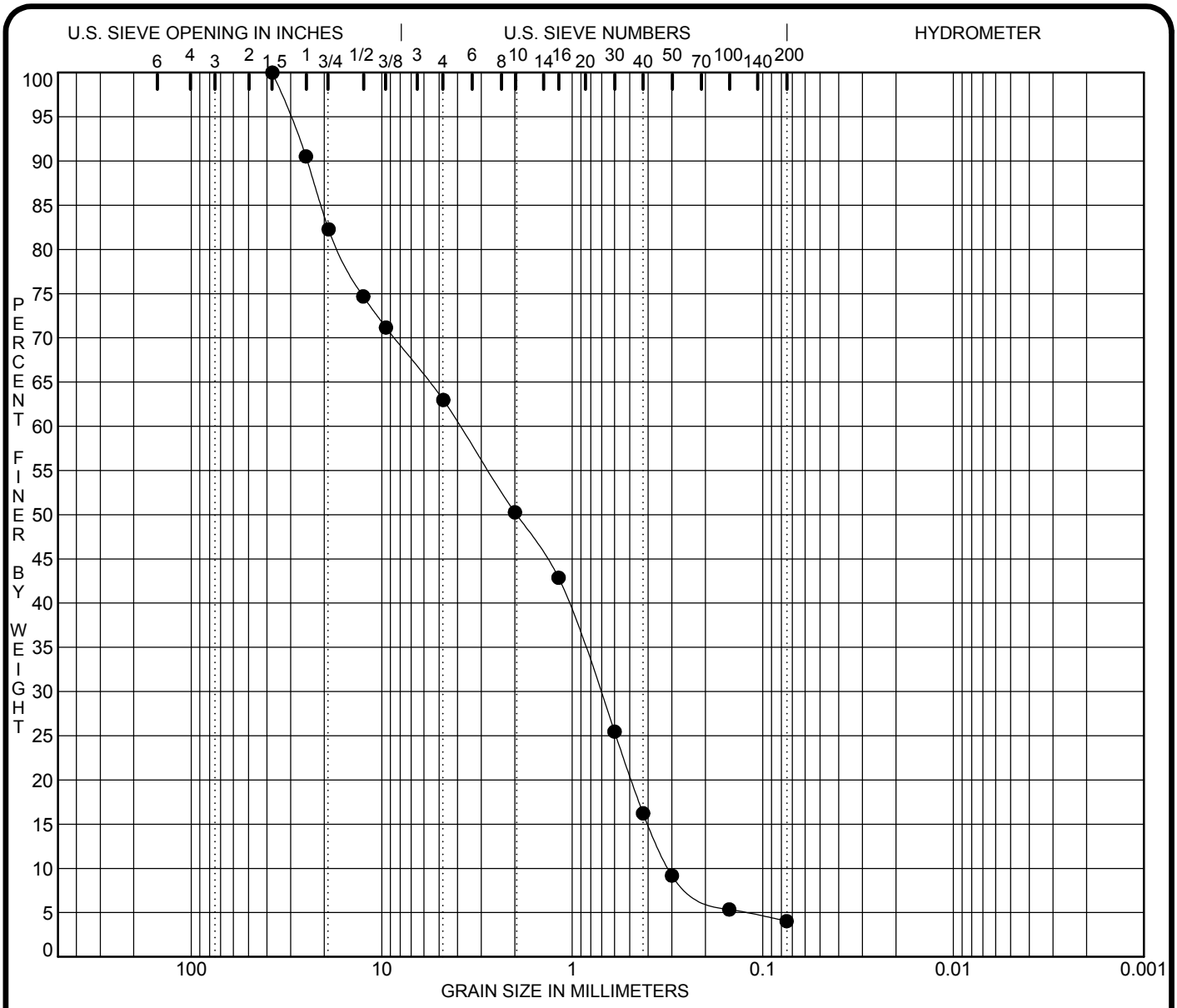

BOULDERS	GRAVEL	SAND		SILT	CLAY
		coarse	fine		

	Sample Identification		Station / Offset / Line	Depth, ft.	Elevation, USCGS
●	B-3	SS-8	---	18.5 - 20.0	-

Lab No.	Classification	pH	%Gravel	%Sand	%Silt	%Clay	MC%	LL	PL	PI
	GP, GRAVEL, and sand		49.7	46.2	4.0			NP	NP	NP

Remarks:

EARTH EXPLORATION, Inc.

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Structure No. --- **Location** Shelbyville, Indiana

EEI Proj. No. 1-16-034 **Client** Remenschneider Associates, Inc.

GRAIN SIZE DISTRIBUTION CURVE

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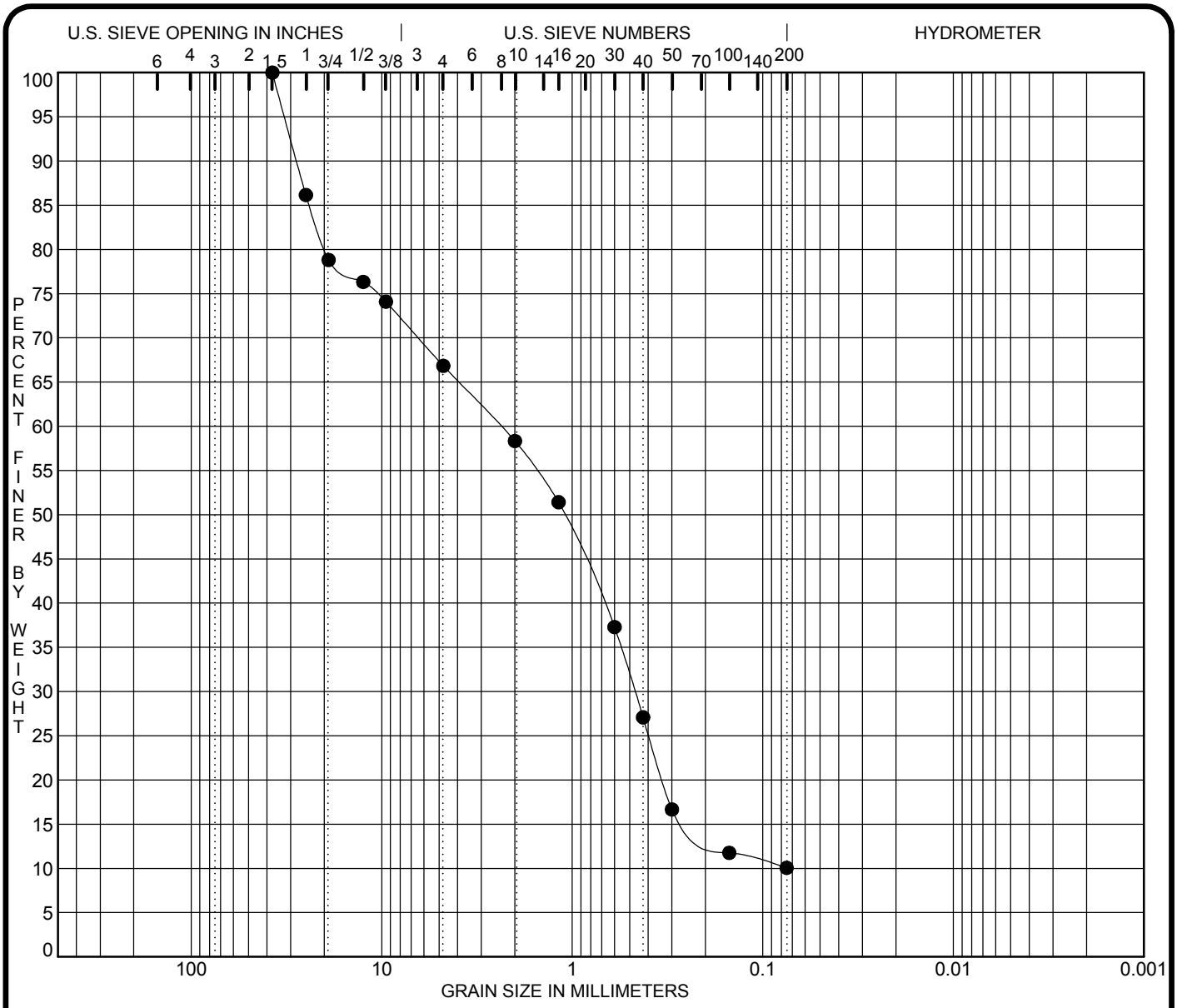

BOULDERS	GRAVEL	SAND		SILT	CLAY
		coarse	fine		

	Sample Identification		Station / Offset / Line	Depth, ft.	Elevation, USCGS
●	B-4	SS-5	---	11.0 - 12.5	-

Lab No.	Classification	pH	%Gravel	%Sand	%Silt	%Clay	MC%	LL	PL	PI
	SW-SM, SAND, and gravel		41.7	48.3	10.1			NP	NP	NP

Remarks:

EARTH EXPLORATION, Inc.

Project No. --- **Project** Underground Parking Structure

Structure No. --- **Location** Shelbyville, Indiana

EEI Proj. No. 1-16-034 **Client** Remenschneider Associates, Inc.

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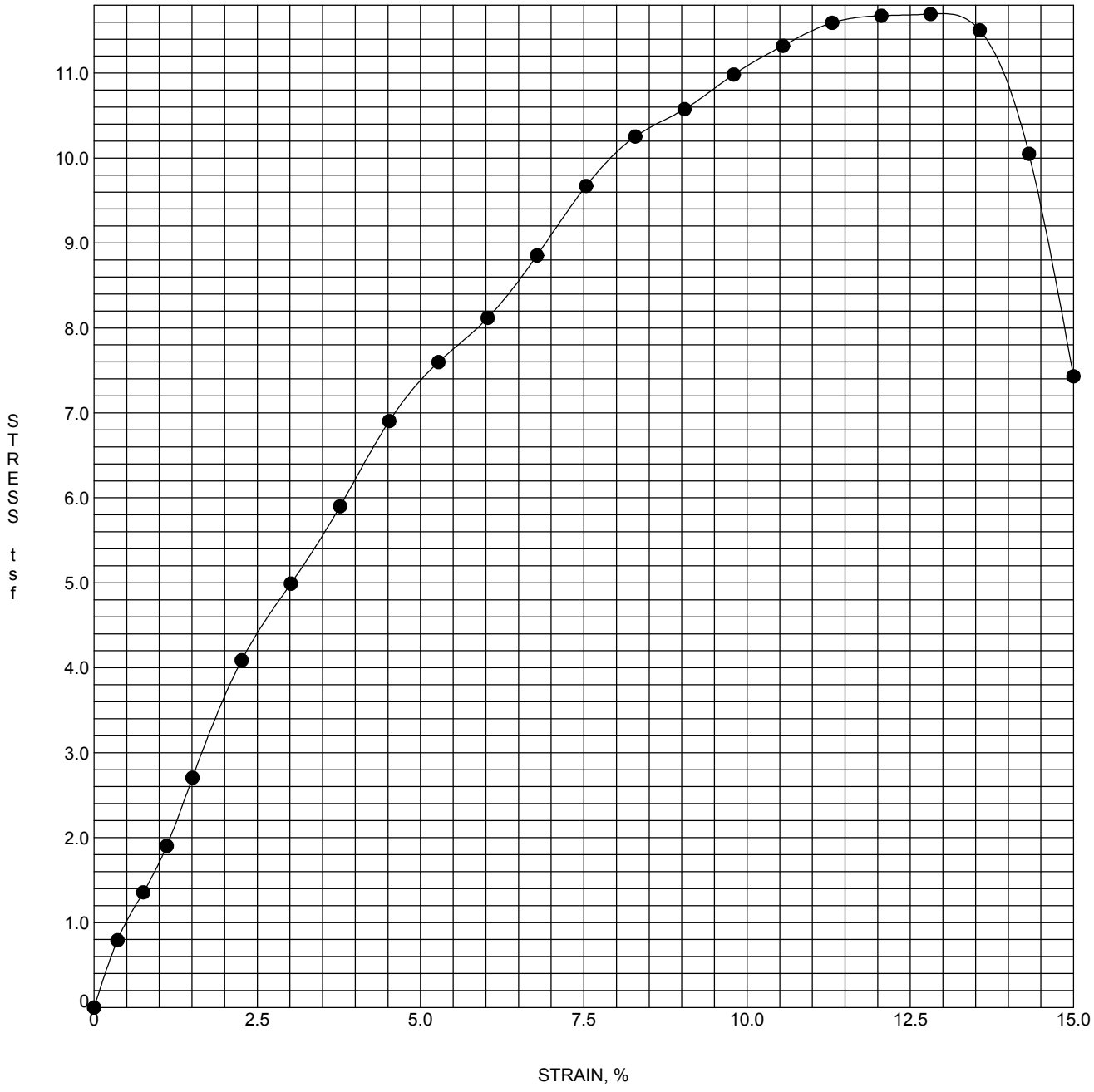


	Sample Identification	Station / Offset / Line	Depth, ft	Classification
●	B-1 SS-11	---	26.0 - 27.5	CL, LEAN CLAY

Lab No.	Sample Ht., mm	Sample Diam., mm	Initial M.C., %	Initial Wet Den, pcf	Initial Dry Den, pcf	Sat., %	Unc. Comp. Strength, tsf	Failure Strain, %	Rate of Strain to Failure, %
	70.8	36.5	8.7	144.5	132.9	85.2	11.69	12.8	1.5

EARTH EXPLORATION, Inc.

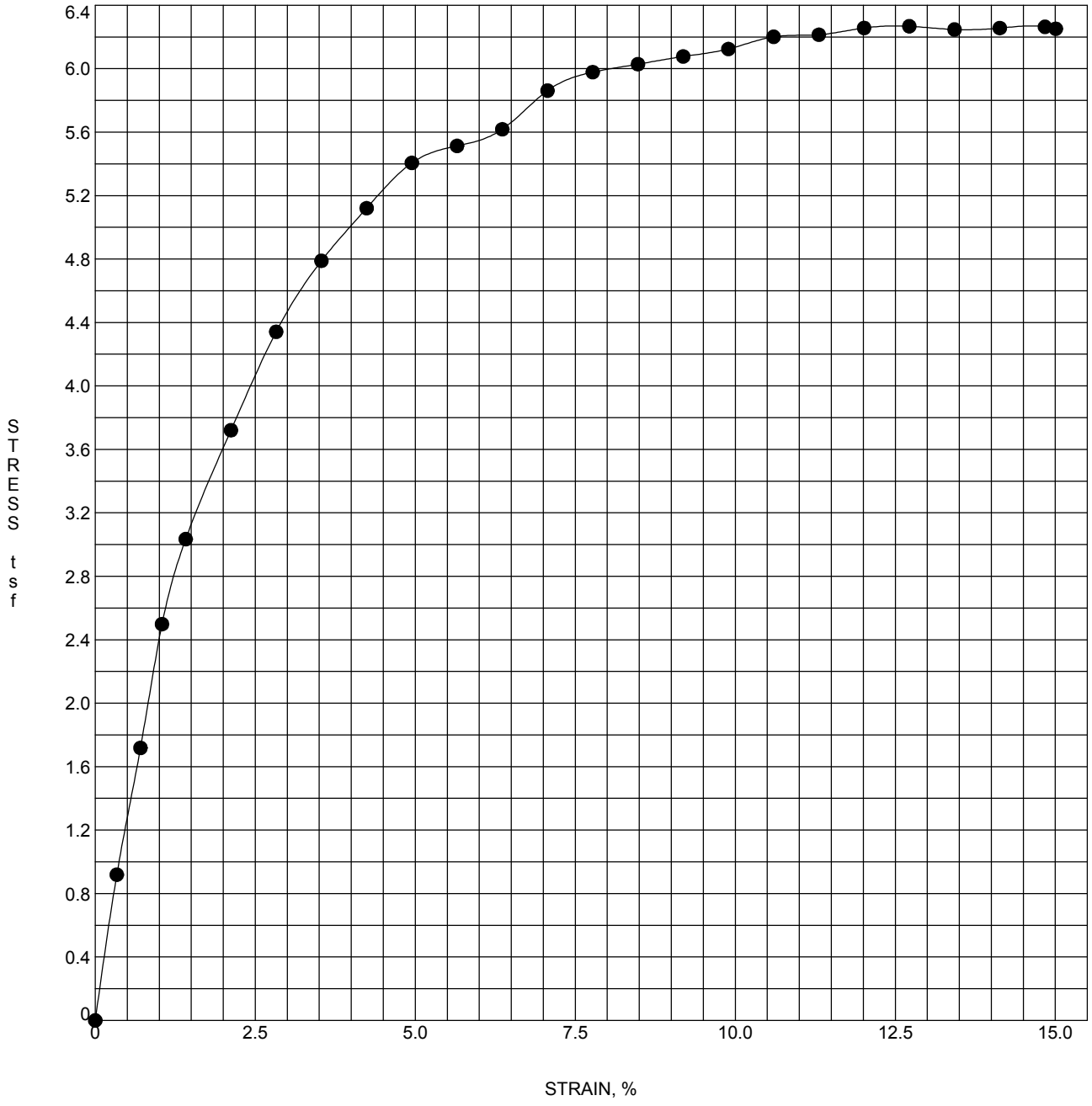
Project No. --- **Project** Underground Parking Structure

Structure No. --- **Location** Shelbyville, Indiana

EEI Proj. No. 1-16-034 **Client** Remenschneider Associates, Inc.

UNCONFINED COMPRESSION TEST

Earth Exploration, Inc.
7770 West New York Street, Indianapolis, IN 46214
317-273-1690 / 317-273-2250 (Fax)



	Sample Identification	Station / Offset / Line	Depth, ft	Classification
●	B-2 SS-10	---	23.5 - 25.0	CL, SANDY CLAY

Lab No.	Sample Ht., mm	Sample Diam., mm	Initial M.C., %	Initial Wet Den, pcf	Initial Dry Den, pcf	Sat., %	Unc. Comp. Strength, tsf	Failure Strain, %	Rate of Strain to Failure, %
	75.5	36.2	15.2	136.9	118.8	96.5	6.27	12.7	1.4

EARTH EXPLORATION, Inc.

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EEI Proj. No. 1-16-034 **Client** Remenschneider Associates, Inc.

UNCONFINED COMPRESSION TEST

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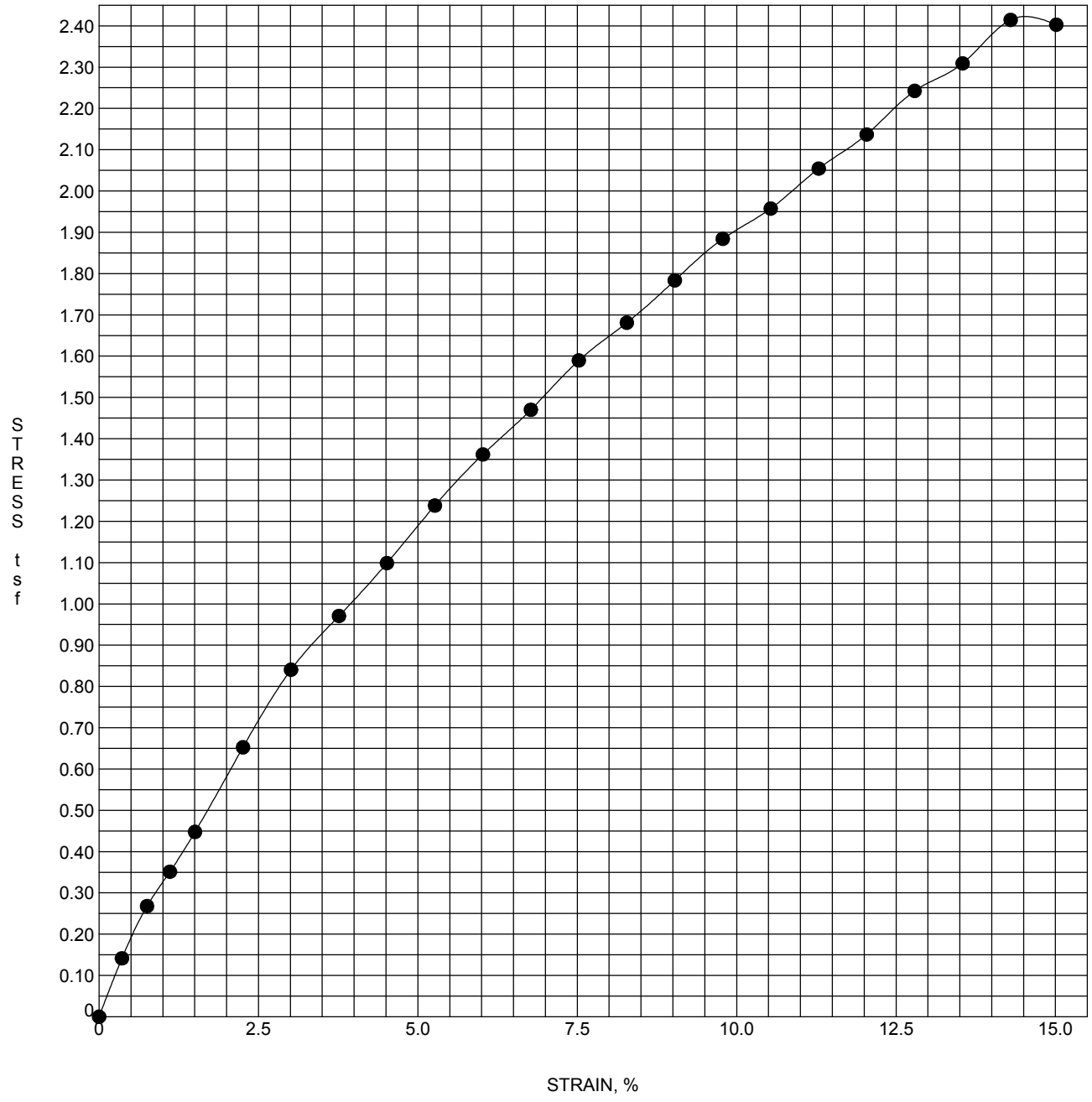

	Sample Identification	Station / Offset / Line	Depth, ft	Classification
●	B-2 SS-12	---	28.5 - 30.0	CL, SANDY CLAY

Lab No.	Sample Ht., mm	Sample Diam., mm	Initial M.C., %	Initial Wet Den, pcf	Initial Dry Den, pcf	Sat., %	Unc. Comp. Strength, tsf	Failure Strain, %	Rate of Strain to Failure, %
	70.9	36.2	15.0	136.5	118.8	94.7	2.41	14.3	1.5

EARTH EXPLORATION, Inc.

Project No. --- **Project** Underground Parking Structure

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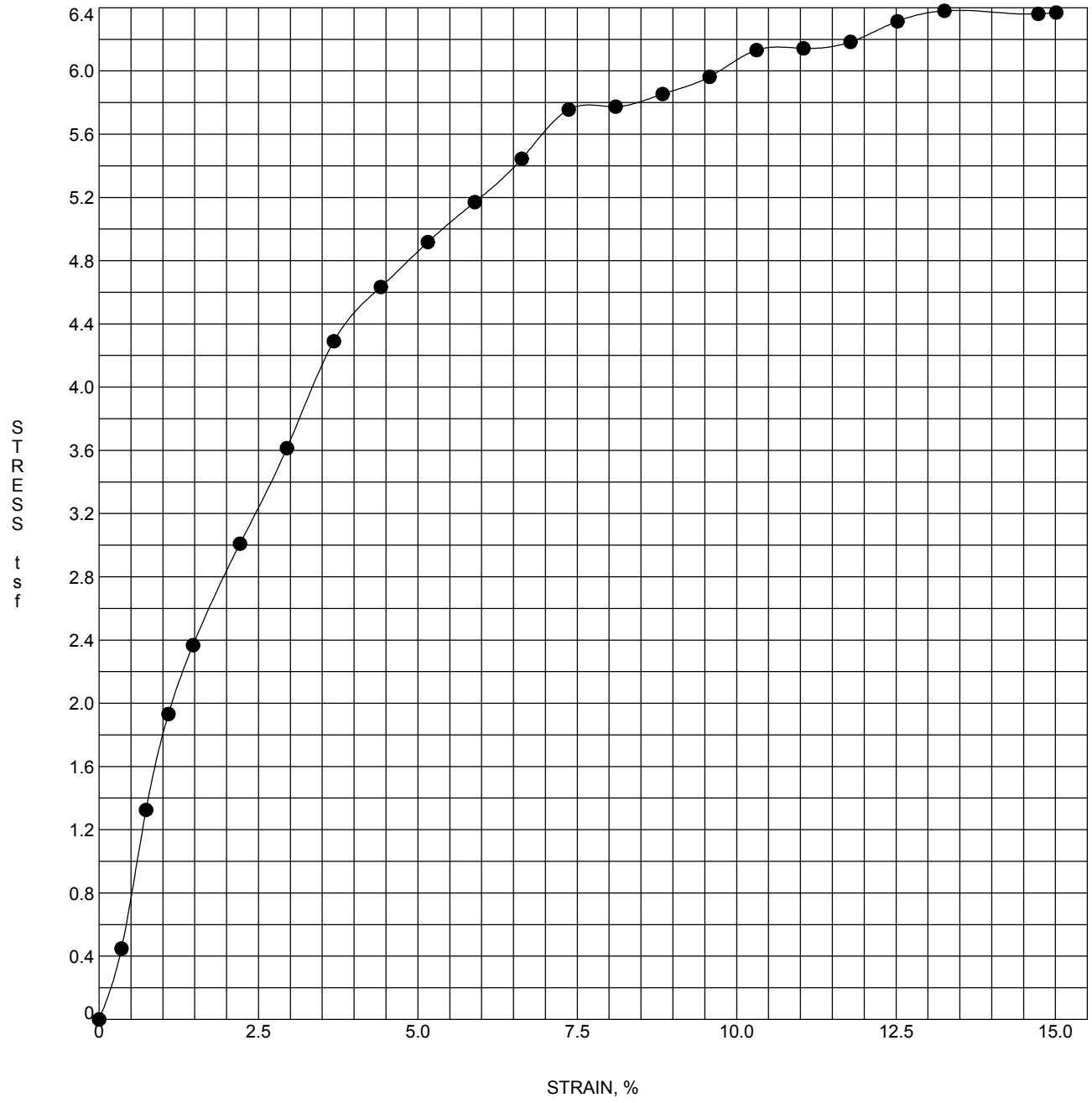

	Sample Identification	Station / Offset / Line	Depth, ft	Classification
●	B-4 SS-13	---	33.5 - 35.0	CL, LEAN CLAY

Lab No.	Sample Ht., mm	Sample Diam., mm	Initial M.C., %	Initial Wet Den, pcf	Initial Dry Den, pcf	Sat., %	Unc. Comp. Strength, tsf	Failure Strain, %	Rate of Strain to Failure, %
	72.4	36.4	16.3	135.8	116.8	97.7	6.38	13.3	1.5

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Structure No. --- **Location** Shelbyville, Indiana

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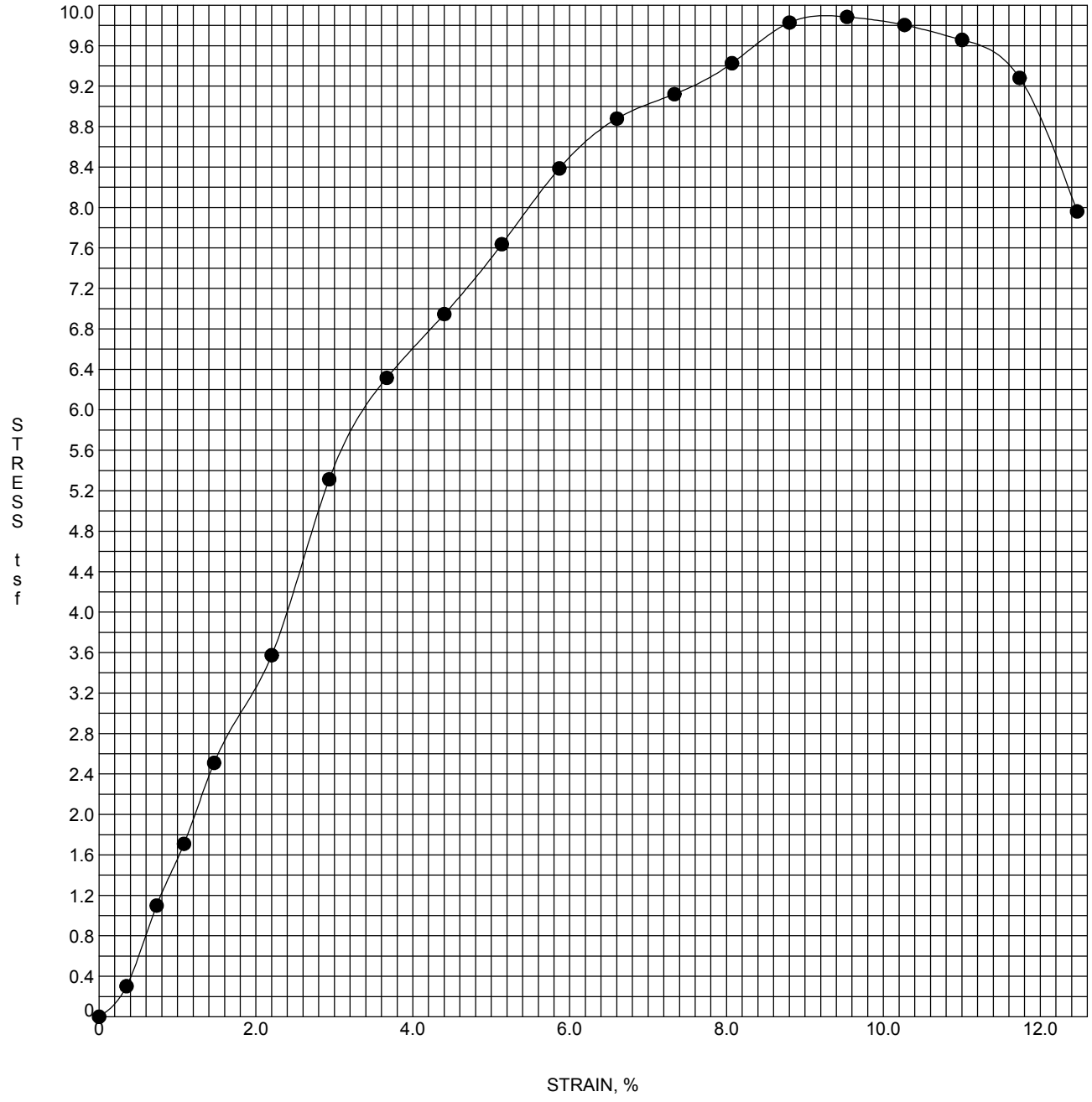

	Sample Identification	Station / Offset / Line	Depth, ft	Classification
●	B-5 SS-11	---	26.0 - 27.5	CL, LEAN CLAY

Lab No.	Sample Ht., mm	Sample Diam., mm	Initial M.C., %	Initial Wet Den, pcf	Initial Dry Den, pcf	Sat., %	Unc. Comp. Strength, tsf	Failure Strain, %	Rate of Strain to Failure, %
	72.7	35.0	9.5	147.7	134.9	99.5	9.88	9.5	1.5

EARTH EXPLORATION, Inc.

Project No. --- **Project** Underground Parking Structure

Structure No. --- **Location** Shelbyville, Indiana

EEI Proj. No. 1-16-034 **Client** Remenschneider Associates, Inc.

UNCONFINED COMPRESSION TEST

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Preferred Parking Option

There are many benefits to constructing a parking structure under a remodeled traffic circle with a modified road system and new green space. The City established certain benchmarks for the structure, including:

- Maximize the number of spaces; 200+ would be preferred.
- Pedestrian access from the structure to a destination point near the middle of the square at grade level.
- Vehicle Entry / Exit lanes off of Washington Street on the west side of the site.
- Design elements with grass and trees on the supported slab at street level.
- Potential underground connections with buildings on the northwest and southwest corners of the site.

Other items the planning team considered when developing conceptual layouts of the facility:

- The thickness of the overburden impacts the depth of the structure, and directly the cost due to soil excavation.
    - The depth required for various plantings and full size trees.
- Sub-surface soil conditions, specifically how the ground water level would affect structure depth.
- Parking layout and vehicle traffic flow.
- Location of vertical pedestrian connections.
- Snow and ice protection on the vehicle ramp.
- Location of parking structure walls to minimize interference with existing building foundations.
- Potential foundation and retaining wall issues.

There will be other considerations and more detail necessary if the project progresses, but these are a few items at the conceptual stage.

It was determined that a two-level underground structure was not feasible due to the groundwater level, and the cost of shoring, excavation and support necessary. With this determination made, we considered how many spaces can be accommodated in a single below grade level with minimal interference with surrounding buildings. Based on a desire to maximize parking, while considering cost implications, B.3 was determined to be the best option to study more in depth.

Option B.3

The preferred option provides a one level parking deck, with a straight ramp down on the west side off Washington St. The floor would be relatively level and easy to use for patrons, including a vertical connector (stairs and elevators) just off the center of the parking level. The 90 degree parking with two-way traffic is also easy for patrons to understand.

Number of Spaces - 216

Vehicle Flow – Two-way traffic with 90 degree parking.

Efficiency – 332 Sq. ft. per space

Parking efficiency is measured by dividing the number of square feet of construction by the number of parking spaces created (sq. ft. / spaces). Efficiency is measured as a method to compare parking structure options as well as to determine if the cost of the structure is reasonable, given that construction costs are often measured as cost per sq. ft. Parking efficiency for this project is measured as the square footage of the subgrade of the parking structure (the parking level only). The actual construction would create two levels; one subgrade parking level and one grade level with only a few on-street parking spaces. We did not calculate parking efficiency based on the square footage of both levels, as this would have greatly distorted the efficiency number.

Depth Considerations

- 2'0" Soil, Plantings and other grade level elements
- 4'6" Structural Slab
- 8'4" Parking Level Clearance
- 2'0" From top of Slab on Grade to the top of Footings
- 3'0" Footings

Total Depth – 19'10"

There is a small cost savings of $100,000 to $150,000 if the structure has a lower clearance (7'0" to 7'6") than the 8'4" represented.

Cost Estimate

Similarly to the parking efficiency analysis, the cost per space estimates are considering that one level of the structure is parking and the second (Plaza) level is mostly green, pedestrian or roadway. The preliminary construction cost estimate notes this by identifying the cost per space if the Plaza level were also parking (shown as Equivalent Plaza Parking).

Soft costs are comprised of multiple services associated with construction. Design team architectural and engineering fees are typically 6% of construction costs. Another 7% of construction costs usually listed as soft costs include: permits, typical legal fees, city inspections, materials testing and special inspections, utility connections and owners costs. Additionally included would be 12% for potential design and construction contingencies.

Preliminary cost estimate is attached.

Vehicle Entrance / Exit Ramp

The vehicle ramp provides access to the parking structure heading eastbound on Washington Street. There is an above grade turn around if a driver progresses down the street, but does not want to park in the structure. The ramp is approximately 135 feet long and slopes at a 12% grade with 6% transition ramps at the top and bottom. The 12% grade is not suitable for walking and pedestrians should be restricted from using the ramp.

The vehicle ramp will be open to the elements and will be a concern during winter months. At the proposed grade, a vehicle may not be able to stop at the bottom of an icy ramp, and may not be able to exit at the top of the ramp to pull back onto street level.

The open ramp solutions are to enclose the ramp in an attempt to keep weather out, or provide a slab snow melting system to eliminate ice and snow. An enclosure will keep much of the snow and ice out, but cannot stop anything brought in on the tires of vehicle and would lead to an icy ramp on the certain days. The snow melt system provides a higher level of service and reduces risk of ice on the ramp. The conceptual cost estimate includes the on-site cost of a snow melt system.

Implications of Geotechnical Report

Subsurface Soil Conditions (Preliminary Geotechnical Recommendations)

- Preliminary subsurface exploration and geotechnical evaluation have been performed by Earth Exploration, Inc. Dated March 24, 2016.
- Site findings include the following information:
    - The subsurface conditions at the boring locations consists of sandy clay to a typical depth of 6 feet top 6 feet underlain by sand and gravel of various gradations that extended to depths of about 21 to 23 feet below the existing surface.
    - The sand and gravel was, in turn, underlain by lean and sandy clay that extended to dolomitic limestone present near depths of 38 to 39 feet below the existing grade.
    - Groundwater level observations made during the field activities indicate that groundwater was present near a depth of 18 feet below the surface. In addition, a water level reading was taken from the piezometer on March 1st, and groundwater was present at a depth of 17.2 feet below the surface at that time. The groundwater levels will fluctuate due to changes in precipitation, infiltration, surface run-off, pumping of any nearby wells, water levels in the nearby drainage features, and other hydrogeological factors.
- Spread footings and mat foundations are anticipated to support the proposed column loads.
- The preliminary geotechnical evaluation report indicates a net allowable bearing capacity of 8,000 psf.
- Total settlement is not anticipated to exceed 1 inch.
- Floor slab-on-grade will be isolated from the foundations.
- For a single below-grade level, we anticipate the slab-on-grade to be at an elevation of 15 feet below existing grade. The bottom of foundations will extend another 4 to 5 feet below the top of slab-on-grade elevation. In that case, groundwater will be exposed during construction, and higher groundwater levels could be present at the time of construction and throughout the service life of the structure. Temporary dewatering will be expected during construction.
- Due to its high cost, it is recommended that permanent dewatering be avoided.
- It is recommended that the piezometer be monitored monthly for at least one year.
- Subsurface profile is representative of a Site Class D. Shear wave velocity testing could be done to try and improve to Site Class C. This could result in significant savings. This will be studied further during the design phase of the project.
- Below-grade walls will be provided with perimeter drain lines along the base of the wall to prevent hydrostatic pressures on the walls.
- At-rest lateral pressure on walls is 60 psf/ft.
- Active lateral pressure on walls is 45 psf/ft.
- Temporary earth retention system will be required in order to construct below-grade walls.
    - The earth retention system will be designed by a registered Professional Engineer hired by the earth retention contractor.

- Temporary bracing will be required to minimize and control lateral movement. Bracing will most likely include wales with tiebacks or internal bracing.
- Temporary tiebacks would extend into adjacent properties; authorization from adjacent property Owners will be required.
- Temporary tiebacks could consist of grouted post-tensioned tendons, multi-strands or helical anchors.
- In order to protect adjacent properties, horizontal movement of the earth retention system will be limited to less than ½".
- Soldier pile and wood-lagging appears to be a viable earth retention system. Soldier piles will have to be pre-drilled and the toe length backfilled with concrete.

Below Grade Pedestrian Connections to Adjacent Buildings

The underground parking may provide the opportunity for direct pedestrian connections from parking to existing buildings on the perimeter of the site. There are several factors that will affect the opportunity for these connections including; foundation conditions of existing building, basement elevations of existing building, utility connections, security needs, etc. For this study we assume that the tunnels could be constructed by opening the ground and using a reasonable amount of shoring for the tunnel, not shoring the existing buildings. The potential costs range from $5,000 to $10,000 per lineal foot of corridor / tunnel. This does not include architectural treatment or other enhancements to the walkway, simply the structure.

Special Considerations of Below Grade Parking

Below grade parking is a common option for many parking projects, whether the parking is located below a building, roadway, athletic field or open greenspace. Underground parking provides the flexibility to bring parking spaces near desired locations, while maintaining or enhancing the grade level and above. There are certain considerations for below grade parking that have an impact on customer service and cost. Some of the implications include:

- Fire Protection
- Ventilation
- Structural Depth to Support Grade Level Use – Greenspace and Roadway
- Pedestrian Access / Emergency Egress
- Groundwater
- Retaining Walls / Foundation Placements
- Waterproofing Top Level

While these are important concerns, they can be addressed through proper design with a design team familiar with underground parking issues.

Above Ground Parking Options

Carl Walker was asked to briefly consider opportunities for above ground parking at sites A, C and D. Based on rough dimensions, the sites provide enough space for structured parking, but are not large enough for efficient parking. Due to the site limitations, the structures have to be laid out with single loaded parking bays on one side or extremely inefficient 60 degree parking on both bays. This leads to parking efficiencies exceeding 420 square feet per space. Inefficiencies that large will significantly increase the overall cost per space of parking.

In order to develop an efficient parking structure with an average of 325 square feet per parking space, certain dimensions are necessary. A site that is at least 122 feet by 220 feet can provide a suitable footprint. This assumes other design elements such as stair / elevator towers in the corners, no street level or other occupied space, and easy vehicle entry / exit with the road system. There are also economies of scale, with a 300 space structure slightly more expensive, per space, than a 600 space structure due to spreading out mobilization and overhead costs across fewer parking spaces. Architecture is also an important consideration, as the structure façade and detailing can range from basic concrete panels to field placed brick and more. For an efficient, 300 space parking structure with architectural detailing to compliment the surrounding neighborhood, costs could range from $22,000 to $24,000 per space.

Economic Improvement Districts (EIDS)

Economic Improvement Districts (EIDs) are public-private partnerships in which local property and business owners elect to make a collective contribution to the maintenance, development and promotion of their property and public spaces. EIDs provide a unique and straightforward economic and community development tool for municipalities, developers and property owners because they allow targeted control, financing and development of projects without creating an additional financing burden on county and municipal taxing units. EIDs are an important tool in accomplishing the work of revitalizing commercial corridors in downtowns and neighborhoods, and are managed by the property owners in the district and the investments support their businesses. The services provided by EIDs are supplemental to those already provided by the municipality. EIDs also allow taxing units to leverage the cost of public improvements and services that would otherwise be limited by the circuit breaker credit.

EIDs are created by property owners who want to self-fund and control the development of projects serving and surrounding their property, e.g., replacement of sidewalks, revitalizing neighborhoods, promoting and marketing of businesses, building public infrastructure, cleaning streets and providing security. Property owners establish an EID by petitioning their taxing unit's legislative body for approval of an EID.

Economic improvement projects include:

(1) Planning or managing development or improvement activities.
(2) Designing, landscaping, beautifying, constructing, or maintaining public areas, public improvements, or public ways (including designing, constructing, or maintaining lighting, infrastructure, utility facilities, improvements, and equipment, water facilities, improvements, and equipment, sewage facilities, improvements, and equipment, streets, or sidewalks for a public area or public way).
(3) Promoting commercial activity or public events.
(4) Supporting business recruitment and development.
(5) Providing security for public areas.
(6) Acquiring, constructing, or maintaining parking facilities.
(7) Constructing, rehabilitating, or repairing residential property, including improvements related to the habitability of the residential property.

EID projects are included within the definition of "economic development facilities" that fall under the economic development jurisdiction of a county or municipal Economic Development Commission. This allows an Economic Development Commission to provide economic development incentives and issue tax-exempt bonds for projects located within an EID. EID assessments paid by property owners within an EID are explicitly included within the definition of Indiana property tax for the purpose of being deducted against the EID property owner's federal income tax. However, while an EID assessment is considered a property tax, it is not to be calculated as part of the circuit breaker credit that limits the amount of property tax levy a tax unit can generate.

In order to receive approval of an EID, the petition to establish the district must be been signed by (1) a majority of the owners of real property within the proposed district; and (2) the owners of real property

constituting at least sixty-six and two-thirds percent (66 2/3%) of the assessed valuation in the proposed district. EID Boards have the same powers and bond issuance authority of an Economic Development Commission, which provided authority to an EID Board to secure tax-exempt bond financing for EID projects.

Tax Increment Finance District Expansion and Consolidation

Tax Increment Finance (TIF) districts provide a means for cities to fund public improvements much faster than would otherwise be possible. In order to establish a district, the City must find, among other things, that neither the regulatory processes at its disposal, nor the ordinary operation of private enterprise will correct the problems in those areas to be included in the TIF. Once the City has created a district, it may capture taxes on real property for new development in the district and use it to fund projects consistent with the plan for the district. All the property tax revenues on development that flow after the base assessment date (March 1st, prior to action on the Resolution by the Redevelopment Commission establishing the TIF District) may be used for this purpose for the term of the TIF District.

In the last decade or so, the General Assembly has addressed Redevelopment Commissions, in particular, and the power of TIF districts, in general. Last year, for example, the General Assembly set expiration dates on these districts depending upon when they were last established or amended, but allowed the districts created prior to 1995 (legacy districts) to be extended to the last date of bonds issued by July 1, 2015. Recent changes in State law have made it more difficult to finance key infrastructure projects and large, community-wide projects which are located outside of solvent TIF districts. It is our recommendation that the city take steps to:

(1) Extend the lives of the existing TIF Districts to the maximum extent allowed by law.
(2) Create the Downtown Economic Development Area.
(3) Evaluate the need for the designation of additional Economic Development Areas in areas which are strategic and prime for redevelopment.
(4) Create new Economic Development Areas connecting the Downtown Economic Development Area with the Track TIF District, the Kroger TIF District, the Wal-mart TIF District and any new economic development areas;
(5) Bring these districts together into the Shelbyville Consolidated Economic Development Area.

By consolidating the TIF districts, the City can create a larger, more flexible allocation area for redevelopment and infrastructure investment. Additionally, this consolidation maximizes the City's bonding capability to accomplish larger priority investments, which have community-wide impact, as suggested in the plan. In addition, consolidation positions the City to best take advantage of its bonding capacity by issuing one bond, rather than five smaller bonds, for improvements.

Riverfront Development District

There is ample opportunity for additional restaurants, cafes, and specialty retail, particularly Washington Street and northwest of the downtown square. Downtown must appeal to skilled workers in order to fill office vacancies. One way to make it more appealing is through additional retail, restaurants and night life. Traditionally, Indiana communities are limited on the number of alcoholic beverage licenses and state legislated quotas are determined by the population of the most recent U.S. Census. Those licenses also are bought and sold on the open market, which can drastically increase their cost.

Indiana Code Section 7.1-3-20 et. Seq. ("Act") permits the Indiana Alcohol and Tobacco Commission to issue liquor licenses in a Riverfront Development District established pursuant to Indiana law. The district designation provides the opportunity to allow an unlimited number of three-way and two-way liquor licenses sold at the state designated purchase rate as opposed to the private market rate, providing new opportunities to increase the number of restaurants and nightlife that can be located in the district. The granting of additional three-way liquor licenses in the district will enable the creation of new food and beverage businesses which will create economic opportunities in the area, expand the tax base through additional development and lengthen the useful life of the downtown district into the evening hours. Establishment of the district will enhance Shelbyville's regional appeal by encouraging the location and operation of a diverse mix of restaurants and entertainment venues in the riverfront district, will remove a significant barrier to Downtown development, provide an experience that encourages repeat visits by residents and visitors, and assist in reinforcing the existing physical fabric of Downtown to create a sense of community.

There is no limit to the number of licenses which may be issued within the District. The idea behind the District is to further cement downtown as a destination for dining, culture, and entertainment by encouraging rather than limiting these types of establishments. Establishing the district costs the city no money but provides an additional economic development tool to further the revitalization of downtown.

The City may establish conditions and restrictions over and above those imposed by state law to encourage certain types of establishments to locate within the District. The city may require that the granting of the license benefit the purposes of the district, and not be detrimental to the property values and business interest of others in the district. Additionally, the city may consider several other factors designed to improve the quality of downtown in granting the license, including the applicant's plans to improve the facility, the consistency of such plans with the nature and architecture of the riverfront area, the restaurant's ability to draw people to Shelbyville, the number and nature of the jobs added to or retained in the Shelbyville employment base, the financial and ownership strength, and the history of the operation and reputation in the Shelbyville community and elsewhere.

The district boundaries are established by statute and may not exceed 1500 feet or three city blocks from the river, or if the property is located in a flood plain, from the area located nearest to the river cap able of being developed. Restrictions applicable to traditional liquor licenses also apply to liquor licenses issued in the district.

Shelbyville is a small city of 19,300 (est. 2015) people that serves as the county seat for Shelby County, which is one of the eleven counties that make up the Indianapolis Metropolitan Area. Including Shelbyville, four other cities in the Indianapolis Metropolitan Area have county seats in cities between 10,000 and 50,000 people as shown in Table 1. Surprisingly, Nashville, with a population of less than 1,000 residents probably has one of the strongest retailing centers, which was built on tourist trade as an artesian community. Shelbyville, population ranks fifth among the eleven metropolitan county seat cities. However, its population growth rate ranks 8th.

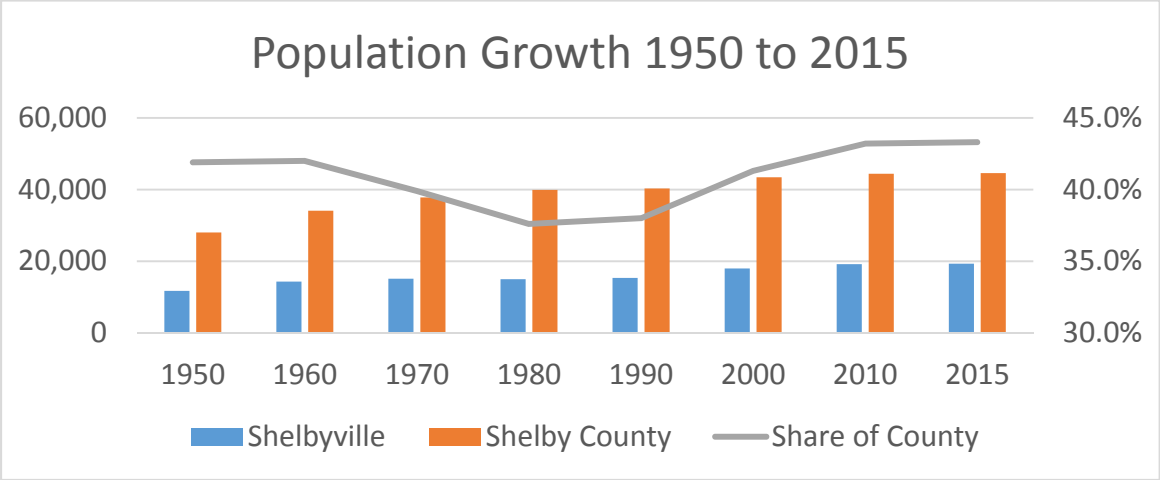
Table 1. Indianapolis Metro Area County Seat Communities

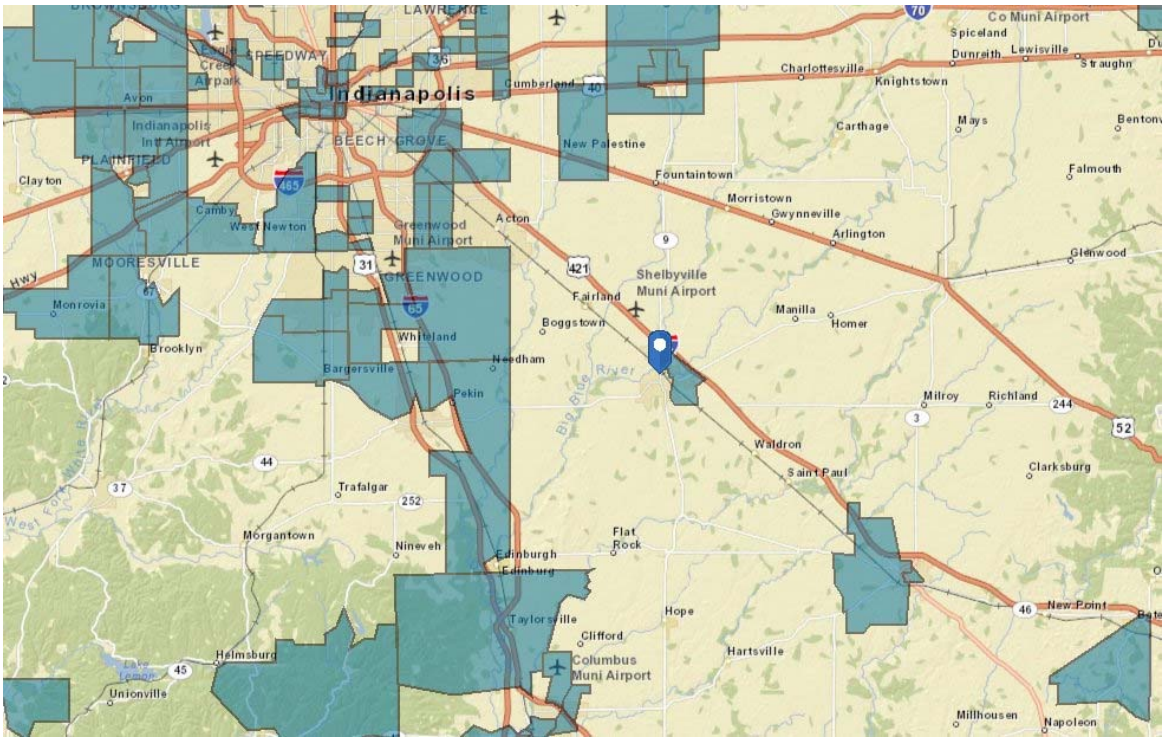
Indianapolis Metro County Seats	County	County Seat City Population 2015	2000-2015 Growth
Anderson	Madison	54,887	(-8.2%)
Danville	Hendricks	9,397	36.5%
Franklin	Johnson	24,230	15.8%
Greencastle	Putnam	10,596	8.0%
Greenfield	Hancock	22,106	41.2%
Indianapolis	Marion	836,540	6.7%
Lebanon	Boone	16,339	8.9%
Martinsville	Morgan	11,570	(-5.6%)
Nashville	Brown	837	10.7%
Noblesville	Hamilton	58,066	79.5%
Shelbyville	Shelby	19,300	4.8%
Total	11 County Seat Cities:	1,063,868	9.0%
Indianapolis Metropolitan Area:	Total 11 County Population:	1,967,168	18.6%

Source: ESRI and REPG

The City of Indianapolis represents about 42% of the Indianapolis Metropolitan Area of eleven counties, which incidentally, is about the same ratio of population that Shelbyville is of Shelby County. This means that much of the metropolitan area remains rural in character. The growth rate of Shelbyville, of 4.8% from 2000 to 2015 is below the average of 9%. Two cities, Anderson and Martinsville lost population and Noblesville saw a population explosion gaining almost 80%. Shelbyville had the lowest positive rate of growth among the nine county seats that had growth.

Shelby County's population has also remained relatively static since the 1970s. Interstate 74, which connects Indianapolis with Cincinnati, has not seen much growth as the population in Map 1 shows. Much of the metropolitan area of Indianapolis and grown both north and south of Indianapolis along the I-65 corridor and to the west and north in places like Carmel.





Map 1. Census tracks where population grew by 10% or more from 2010 to 2015

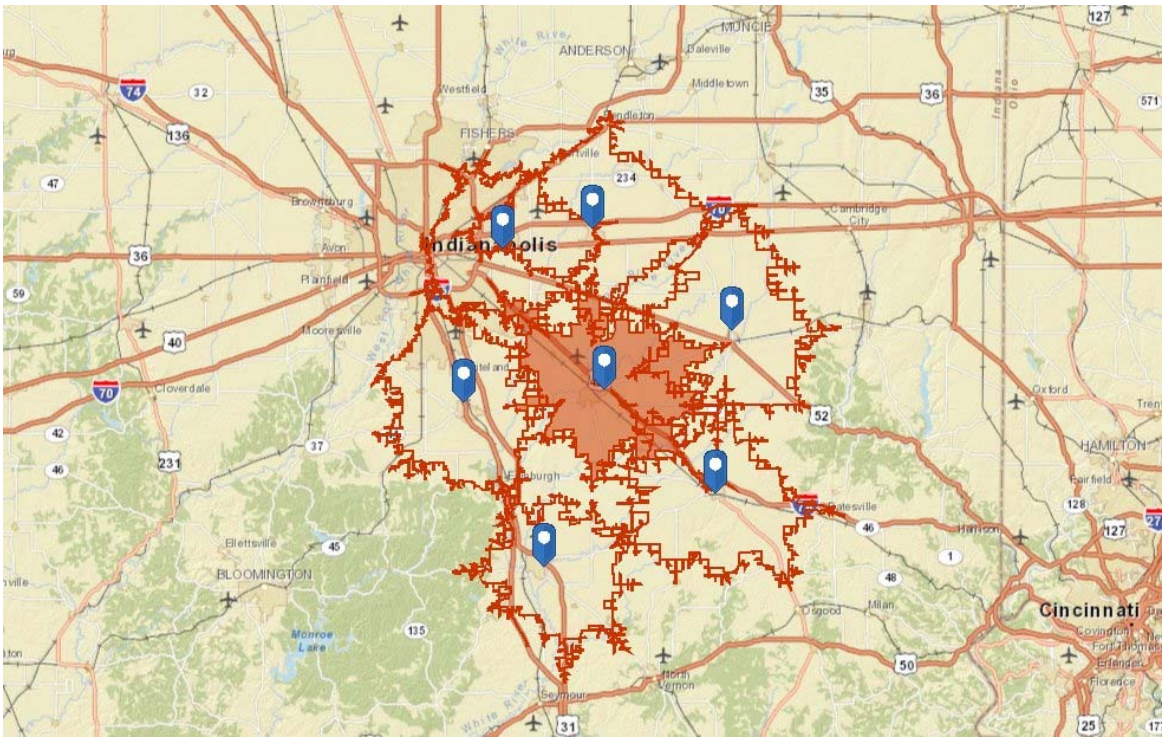
Shelbyville is about a 30 minute drive time to downtown Indianapolis and an hour and a quarter to Cincinnati, which has a slightly larger population than Indianapolis with 2.1 million residents in its metro area.

Shopping Areas

Most of the retail shopping in Shelby County is on Route 44 Broadway at I-74, which is a location the maximizes a retailers the drawing power. A secondary location is the I-74 State Route 9 area, but that intersection is less of a shopping destination as it is more a service center for interstate travelers. The heart of downtown Shelbyville is immediately proximate to the intersection of these two routes that come off the interstate and meet downtown about two miles south of the Interstate.

Trade Areas

Shelbyville is the county seat for Shelby County and besides the county offices; other local and national governmental services are in the downtown area. This makes the county the *de facto* primary trade area for Shelbyville. However, from a shopping perspective, Walmart because of its size and drawing power also defines the primary trade area. Map 2, illustrates how Walmart now covers this region using a 20-minute drive time contour around each of their nearby stores.



Map 2. Shaded contour is Shelbyville Walmart location with 20-minute drive time contour. Other Contours show 20-minute drive times of adjacent Walmarts.

Table 2 Twenty-minute Drive Time Contour Demographics from Walmart Stores that Surround the Shelbyville location

Walmart	Population	Households	Median HH Income	Per Capita Income
Shelbyville	40,797	16,008	$49,548	$24,139
Rushville	18,787	7,470	$47,351	$22,758
Greenfield	132,024	49,931	$49,261	$23,352
Indy: Washington St	425,121	168,008	$39,466	$21,739
Franklin	158,644	60,968	$55,332	$27,092
Greensburg	24,231	9,505	$50,604	$23,670
Columbus	71,834	28,132	$52,132	$27,213

Source: ERSI (2015) and REPG

The actual trade areas may vary, but using this technique is a useful way to approximate Shelbyville's primary trade area for shopping. The small gap in the southeast does not have a significant population base and for those residents outside Shelby County, we have assumed would likely flow to Columbus, which is a larger market. Shelby County population while not coterminous with the 20-minute drive time contour has a higher population. The Rushville Walmart is a freestanding store without any adjacent retail. The Greensburg Walmart is in a shopping center on I-74 similar to Shelbyville.

Vehicular Traffic

Traffic is an important influence on retail shopping because it provides retailer's stores visibility and accessibility to their customers. The major traffic arterial serving Shelbyville is Interstate 74, which provides regional access. The traffic counts on I-74 west of Route 9 are 32,858 (2013) with 23% of the traffic being commercial vehicles. I-74 traffic east of Route 44 is 26,353 with 30% of the traffic being commercial.

State Route 9 south of I-74 (South of Rampart St.) is 17,650 (2011) with 8% commercial traffic and State Route 44 south of I-74 (North of Progress Dr.) is 12,251 (2011) and west of Dagley Court it is 14,588 (2011).

In the downtown area of Shelbyville, on SR 9 between Pennsylvania and Broadway has an average daily count of 13,237 (2011) with 8% commercial traffic. South Harrison Street between Broadway and Colescott, the count is 15,142 with 8% commercial traffic. On Broadway between Harrison Street and Noble Street the count is 13,777 (2011) also with 8% commercial traffic.

Minor downtown streets like Noble between Washington and Franklin have just 1,742 vehicles daily, Mechanic Street between SR 9 and Tompkins has a 3,199 (2013) count.

The vehicular traffic is good in the downtown area, however, the total average traffic counts are below 20,000 a count that many retailers use in assessing retail viability for those that depend upon vehicular traffic to support their business.

Demographics

Retailers are interested in being close to their customers and need to know about the demographic characteristics of their service population. The primary trade area, which may represent about 80% of its customers, is Shelby County. The demographics in the immediate area around Fountain Square are shown in Table 3. The quarter-mile ring a convenient walking distance and the half-mile ring is usually the limit that people will walk to shop, but obviously not an absolute.

Table 3 Demographics around Fountain Square and Shelbyville

	¼-mile from Fountain Square	½-mile from Fountain Square	Shelbyville
2000 Population	1,482	4,321	18,410
2000 Household	482	1,742	7,455
2015 Population	820	3,647	19,300
2015 Households	376	1,430	7,740
Avg. Household Size	2.15	2.47	2.43
% Renters	53%	48%	39%
Median Age36.3	36.3	34.3	37.1
Median Household Income	$20,712	$31,047	$39,658
Average Household Income	$31,275	$37,842	$49,815
% Household Income >100,000	3.5%	4.1%	9.5%
College Degree+	8%	6%	13%
Dominate Tapestry Segment	Hardscrabble Road		
Dominate Tapestry Segment		Traditional Living	

Source: ESRI Tapestry 2015

The Tapestry Segments in Table 3 are explained later in this report.

Table 4 Demographic Comparisons and Benchmarks for Shelbyville, Shelby County and U.S.

Demographic	Shelbyville	Shelby County	Index Shelbyville/ Shelby	U.S.	Index Shelby/ U.S.
Population 2000	18,410	43,445	--	--	
Population 2015	19,300	44,582	--	--	
Households 2015	7,740	17,488	--	--	
Avg. HH Size	2.43	2.51	97	2.51	1.00
% Renters	39%	26%	1.50	33%	.79
Median Age	37.1	41.2	.90	37.9	1.09
Median HH Income	$39,568	$51,097	.77	$53,217	.96
Avg. HH Income	$49,815	$61,122	.82	$74,699	.82
Per Capita Income	$20,027	$25,239	.79	$28,597	.88
Household Income >$100,000	9.5%	17.4%	.55	23.1%	.75
College Degree +	13%	15%	.87	30%	.50

Source: Census, ESRI (2015) and REPG

Shelbyville's demographics are significantly different that the demographics from the overall County, including Shelbyville. It is not surprising that the city has more renters than the county, but its income and educational attainment levels are substantially lower than found outside the city. When compared to the United States, Shelby County as a rural county not many renters and has an older population. Its median household income is in line with the country, but Shelby County does not have as many wealthy households, which is affected by the very low percentage of households with college degrees or higher.

Psychographic Segmentation

Psychographic segmentation is method that takes demographic information and groups the data into 65 significantly distinct demographic clusters, which are then reduced into 14 lifestyle or a lifemode patterns. Each of the 65 clusters has a name, which is designed to reflect in two or three words the overall character of each cluster. While each individual has their own personality traits, there are surprising similarities that we share and this analysis tries to identify those similarities as they pertain to commercial activities. These are useful to understand what the residents who live within a trade area are likely have interest and their potential to purchase certain brands, shop at particular stores, or participate in certain activities. Trade area residents usually have many different lifestyles within them and our interest is not in identifying each lifestyle, but in focusing at the lifestyles are dominant within the trade area that represent most of the residents. Table 5 shows the lifemodes that are within the primary trade area of Shelby County as well as Shelbyville. Table 4 shows just the dominate lifemodes for the quarter-mile and half-mile rings from Fountain Square

Table 4 Tapestry LifeModes for
Primary Trade Area (Shelby County and city of Shelbyville

LifeMode	Shelby County	Shelbyville
Salt of Earth	31.8%	7.1%
Green Acres	21.4%	2.5%
Heartland Communities	15.7%	28.6%
Traditional Living	12.4%	27.8%
Hardscrabble Road	5.0%	11.4%
Front Porches	4.7%	7.8%
Midlife Constant	3.7%	6.3%
Rustbelt Tradition	2.9%	6.5%
Prairie Living	2.3%	--

Source: ESRI Tapestry 2015

Using the ESRI Tapestry Lifemode psychographic segmentation system (2015), it is apparent that the lifemodes within Shelbyville differ from the Shelby County residents. About 70% of all households within Shelby County fall under three groups, which are collectively called "Cozy and Comfortable". The differences between these three groups is economic status with the Green Acres being the highest and is associated with have college degrees or higher, the other two groups consist of households that are headed by high school graduates. All three are generally conservative, They prefer to eat at home, shop at discount stores, especially Walmart and spend money on buying tools and equipment for their home, vehicles, gardens, and lawns..

The Shelbyville residents are more diversified in lifemode classifications and overlap with the County in the Heartland Community lifemode. These residents associated with a more rural lifestyle than the other groups that make up Shelbyville residents, which are mostly fall in semi-rural life styles associated with "Satellite" cities. The Traditional Living and Hardscrabble Road segments have high school diplomas, many are retired, or single householders. The younger segments of these lifemodes are interested in going dancing, clubbing as well as visiting museums and overlap with the Heartland Communities lifemode, which he residents of Shelby County, which includes the city fall Shelbyville are in the group called Traditional Living, Heartland Communities, and Hardscrabble Road., which reflects small satellite cities. This group consists of young and old and a group that likes to go dancing and clubbing as well as visiting museums and going to concerts. They prefer eating at fast food restaurants.

The dominant Tapestry mode within a quarter-mile of Fountain Square is the Hardscrabble Road segment and within a half-mile, the Traditional Living segment dominates dominates.

Retail Market Potential

We subscribe to GfK, a company that undertakes market research into consumer buying habits through surveys. They produce a product that measures the relative likelihood of the adults of households in specified trade area to exhibit certain consumer behavior or purchasing patterns compared to the U.S. in creating a Market Potential Index. In index of 100 is the average for the U.S. and an index of 115 or higher generally indicates that significantly higher spending than normal. The retail and food potentials are shown in Table 5.

Table 5 Propensity to buy particular items or shop at particular national stores

Product/Consumer Behavior	% of Adults/HHs of Geography with Highest Row Index Potential	Shelby County Market Potential Index
Purchased cigarettes at Convenience store		141
Purchased gas at a Convenience Store		127
Spent $100+ at Convenience store in last 30-days		126
Played video game		127
Restaurants:	Index	Percent HH in County
Family Restaurants past 6 mos.		
Bob Evan's	151	5.6%
Buffalo Wild Wings	116	8.9%
Ci Ci Pizza	118	5.2%
Cracker Barrel	123	11.9%
Golden Corral	126	10.8%
Old Country Buffet	124	2.6%
Texas Roadhouse	137	10.1%
Fast Food:		
A&W	143	4.7%
Arby's	138	23.2%
Captain D's	118	4.0%
Dairy Queen	129	17.9%
Hardee's	135	8.1%
Little Caesar's Pizza	123	13.5%
Long John Silvers	153	8.6%
Pizza Hut	116	23.2%
Papa Murphy	118	4.8%
Sonic Drive in	120	12.4%
Steak n Shake	120	5.8%
Taco Bell	115	36.4%
White Castle	126	4.2%

Source: GfK

* The stores and behavioral patterns, % participating and index is for areas that are similar demographics and psychographics with Shelby County. It does not mean these restaurants where patronized by Shelby County residents. Restaurants listed indicate that these brands or similar concepts may have be of interest to Shelby County residents based on national studies showing propensity to shop or partake in these activities that are similar to Shelby County residents. However, interest does not mean that there is sufficient consumer demand to support these stores.

Retail Marketplace Profile

The marketplace profile shown in table 6 looks at the potential retail demand by store type the shows the current number of establishments Shelby County.

Table 6. Shelby County Retail Sales Potential by Industry and Number of Current Stores

Industry Sectors	Estimated Sales Potential	Stores in Shelby County
Automobile Dealers	$80,455,752	13
Other Motor Vehicle Dealers	$5,738,102	7
Auto Parts, Accessories & Tire Stores	$5,856,699	9
Furniture Stores	$5,156,903	5
Home Furnishings Stores	$3,395,123	7
Electronics & Appliance Stores	$13,571,941	7
Bldg. Material & Supplies Dealers	$12,591,808	17
Lawn & Garden Equip & Supply Stores	$3,343,156	10
Grocery Stores	$58,429,328	22
Specialty Food Stores	$1,209,521	7
Beer, Wine & Liquor Stores	$4,926,693	3
Health & Personal Care Stores	$42,561,538	17
Clothing Stores	$16,686,749	11
Shoe Stores	$3,903,608	0
Jewelry, Luggage & Leather Goods Stores	$3,512,067	5
Sporting Goods/Hobby/Musical Instr. Stores	$9,459,780	20
Book, Periodical & Music Stores	$2,497,693	3
Department Stores Excluding Leased Depts.	$25,443,628	3
Other General Merchandise Stores	$64,078,096	9
Miscellaneous Store Retailers	$13,848,986	53
Florists	$431,496	6
Office Supplies, Stationery & Gift Stores	$4,079,346	14
Used Merchandise Stores	$1,393,049	12
Other Miscellaneous Store Retailers	$7,945,095	21
Full-Service Restaurants	$15,693,317	19
Limited-Service Eating Places	$25,384,017	27
Drinking Places - Alcoholic Beverages	$3,938,369	8

Source: ESRI and Dun & Bradstreet 2015

Memorandum

Date: August 6, 2015

To: Remenschneider Team

Fr: Larry Lund, Real Estate Planning Group

Re: Shelbyville Housing

Our assignment is to provide an overview the housing market in Shelbyville and not an assessment for any particular development or analysis for any specific types of property. These further analyses would take a much more involved study.

Shelbyville has an estimated 8,711 housing units with 7,740 occupied units providing an 11% vacancy rate of about 971 units. They estimate occupied rental units at 3,232 and owner-occupied units are 4,408. This provides a tenure mix of 45% rental and 55% owner occupied.

ESRI (demographic data service) estimates in 2015 that about 290 households moved into a owner occupied unit in 2010 or later and during this same period 1,385 households moved into a rental units. The total represents 1,605 units over four years a rate of 21% of the total occupied housing market. This rate is similar to other cities in Indiana. Note that unit move-ins can include those already living in Shelbyville as well as new residents.

Realtor.com, which reports information from the local multiple listing service, shows 195 homes for sale with 21 homes or 11% listed in the past six months. In the past six months, only three homes sold. The average listing price is $121,412 and the average price per square foot is $58 indicating an average house size for listed properties of 2,093 square feet. The average listing price is about 40% less than the average-listing price per square foot for the State of Indiana, which is $98 per square foot.

Craigslist is a better source for rental information than Realtors.com. Craigslist has 69 properties listed for rent, which may be exaggerated because some listings appear multiple times and rented units are not removed promptly, regardless, only 7 one-bedrooms units are for rent, 62 2-bedrooms, 2-3 bedrooms, and 2-4bedroom units are listed. Rents are from $475 for a 1-bedroom with 550 sq. ft. ($.86 per square foot monthly) to a high of $1,325 for a 3-bedroom 2,328 square foot apartment ($.57 per square foot monthly).

Migration Patterns

From the Great Recession to 2012, Shelby lost population from other states and other counties, but benefited from an influx of international residents. However, much of the migration is likely owing to students going off to study at Purdue and to Chicago. The second table shows just the flows of civilian employment in significant counties within Indiana. Here we see significant in-migration from Marion, Rush and Johnson counties and losing workers to Hancock, Tippecanoe, Monroe and Madison counties.

Table 1 Flow of People To and From Shelby County, Indiana 2009-2012

Direction	Outbound From Shelby County	Inbound To Shelby County	Net Migration Shelby County
Another States	622	609	-13
Another Indiana Counties	2,270	1,980	-290
Different Country	0	117	117
Total	2,892	2,706	-186

Source; U.S. Census Mapper 7/14/2015

Table 2 Flow of Employed Civilians by County Outbound from Shelby County and Inbound to Shelby County, Indiana 2009-2012

Top Indiana Counties	Outbound from Shelby County	Inbound To Shelby County	Net Migration Shelby County
Hancock	235	95	-177
Marion	210	323	113
Johnson	144	173	29
Bartholomew	60	51	-9
Tippecanoe	55	35	-20
Rush	46	128	82
Monroe	17	6	-11
Madison	7	na	-7
Total	774	811	37

Source: U.S. Census Mapper 7/14/2015

Housing Affordability by Age and Household Income

The next two tables show household incomes by age cohort for the city. The first table shows the number of households based on home ownership and the second based on renting. The metric used for home ownership is 3x's the gross household income as an indicator of what home price is affordable. The metric for renting is based on 30% of the household income.

The largest pool for home ownership is those households between 55-65 who earn between n $50,000 and $75,000 that can afford a $150,000 to $225,000 home. On the rental side, these age cohorts can theoretically afford rents between $1,200 and $1,875 per month.

These tables also provide basic information for targeting other specific audiences.

Table 3 2015 Households by Income and Age of Householder									
	Home Ownership*	<25	25-34	35-44	45-54	55-64	65-74	75+	Total
HH Income Base		431	1,201	1,364	1,463	1,452	970	859	7,740
<$15,000	<$45,000	125	155	148	205	271	181	170	1,255
$15,000-$24,999	$45,000-$75,000	84	149	169	155	187	185	288	1,217
$25,000-$34,999	$75,000-$105,000	58	136	138	140	133	139	173	917
$35,000-$49,999	$105,000-150,000	72	183	229	253	215	176	110	1,238
$50,000-$74,999	$150,000-225,000	66	307	320	332	325	174	54	1,578
$75,000-$99,999	$225,000-300,000	13	166	176	194	154	58	38	799
$100,000-$149,999	$300,000-450,000	12	92	158	150	137	40	18	607
$150,000-$199,999	$450,000-600,000	1	9	11	23	13	8	2	67
$200,000+	$600,000+	0	4	15	11	17	9	6	62
Median HH Income		$25,839	$47,584	$49,820	$48,285	$43,253	$33,154	$23,431	$39,658
Median House @3x		$78,000	$143,000	$150,000	$145,000	$130,000	$100,000	$70,000	$119,000
Average HH Income		$33,583	$52,724	$57,796	$56,273	$52,710	$43,151	$32,912	$49,815
Average House @3x		$100,000	$158,000	$173,000	$169,000	$158,000	$129,000	$100,000	$149,000

Table 4 2015 Households by Income and Age of Householder									
	Monthly Rent 30% Income	<25	25-34	35-44	45-54	55-64	65-74	75+	Total
HH Income Base		431	1,201	1,364	1,463	1,452	970	859	7,740
<$15,000	<$375	125	155	148	205	271	181	170	1,255
$15,000-$24,999	$375-$625	84	149	169	155	187	185	288	1,217
$25,000-$34,999	$625-$875	58	136	138	140	133	139	173	917
$35,000-$49,999	$875-$1,250	72	183	229	253	215	176	110	1,238
$50,000-$74,999	$1,250-$1,875	66	307	320	332	325	174	54	1,578
$75,000-$99,999	$1,875-$2,500	13	166	176	194	154	58	38	799
$100,000-$149,999	$2,500-$3,750	12	92	158	150	137	40	18	607
$150,000-$199,999	$3,750-$5,000	1	9	11	23	13	8	2	67
$200,000+	$5,000+	0	4	15	11	17	9	6	62
Median HH Income		$25,839 $645	$47,584 $1,190	$49,820 $1,245	$48,285 $1,207	$43,253 $1,080	$33,154 $829	$23,431 $586	$39,658 $991
Average HH Income		$33,583 $840	$52,724 $1,320	$57,796 $1,450	$56,273 $1,406	$52,710 $1,318	$43,151 $1,079	$32,912 $823	$49,815 $1,245

Using an online multiple listing services there are about 18,478 properties on the market in the Indianapolis Metropolitan area, which 1,220 are condominiums and narrowing the search downtown condominiums that we built or will open between 2013 and 2016 there are only 60. Many of these are single-family homes in condominium legal structures to provide common lawn service. Ultimately, one is left with what a market size that is best described as “decimal dust”.

Examples of Downtown Housing

Looking at Indianapolis, the listing for Park Meridian, show units that are three bedroom to four bedrooms with three to four baths ranging I size from 1,717 square feet to 2,285 square feet with asking prices that range from $121 to $127 per square foot.

Meridian Arch at 802 Meridian that has a one bedroom with 910 square feet for sale at $247 per square foot.

The Athletic Club at 350 N Meridian Street has six units on the market that mostly consist of 2-bedrooms/2-baths ranging from 1,365 square feet to 2,214 square feet with listing prices from $206 per square foot for a 1,702 square foot unit to $300 per square foot for a 1,365 square foot 2-bedroom/2-bath unit.

Lockerbie Glove Company at 548 Lockerbie Circle and 430 North Park Avenue five 2-bedroom 2-bath units from 1,285 square feet to 2,414 square feet with listing prices from $176 per square foot for a 2,414 square foot two bedroom-2 bath unit to $230 per square foot for a 2 bedroom, 2 bath unit with 1,285 square feet.

The bottom line is there are few examples of downtown housing products outside of Indianapolis. The suburban communities with strong downtowns like Zionsville, Carmel, and Fishers have some upscale downtown housing. Bloomington has some, but they appear to be associated with University housing. Other communities like Franklin, Lafayette, Crawfordsville, and Columbus also have isolated examples, so it is impossible to make recommendations on absorption for a small satellite city like Shelbyville. This does not mean that demand does not exist; it just means that we cannot quantify any demand for market rate housing. What we have seen in places like Franklin and Crawfordsville are places where individuals have built units for their own use.

The challenge is to identify how much demand exists for current Shelbyville residents and Indianapolis city residents to move to a satellite city to pioneer an Indianapolis urban lifestyle at an affordable price in Shelbyville. It is also a question of whether urban lifestyles in satellite cities that are now semi-rural is an oxymoron.

Appendix:

1. **Table 5 City of Shelbyville**
2. **OWNER-OCCUPIED HOUSING UNITS BY VALUE**

	Units	Percent
Total	4,165	100.0%
Less than $10,000	176	4.2%
$10,000 to $14,999	53	1.3%
$15,000 to $19,999	22	0.5%
$20,000 to $24,999	67	1.6%
$25,000 to $29,999	68	1.6%
$30,000 to $34,999	60	1.4%
$35,000 to $39,999	18	0.4%
$40,000 to $49,999	115	2.8%
$50,000 to $59,999	153	3.7%
$60,000 to $69,999	217	5.2%
$70,000 to $79,999	394	9.5%
$80,000 to $89,999	463	11.1%
$90,000 to $99,999	324	7.8%
$100,000 to $124,999	736	17.7%
$125,000 to $149,999	396	9.5%
$150,000 to $174,999	322	7.7%
$175,000 to $199,999	135	3.2%
$200,000 to $249,999	168	4.0%
$250,000 to $299,999	136	3.3%
$300,000 to $399,999	99	2.4%
$400,000 to $499,999	17	0.4%
$500,000 to $749,999	0	0.0%
$750,000 to $999,999	11	0.3%
$1,000,000 or more	15	0.4%
Median Home Value	$98,500	
Average Home Value	$114,223	

Source: American Community Survey 2009-2013

Table 6 OWNER-OCCUPIED HOUSING UNITS BY MORTGAGE STATUS	Units	Percentage
Total	4,165	100.0%
Housing units with a mortgage/contract to purchase/similar debt	2,941	70.6%
Second mortgage only	166	4.0%
Home equity loan only	271	6.5%
Both second mortgage and home equity loan	0	0.0%
No second mortgage and no home equity loan	2,504	60.1%
Housing units without a mortgage	1,224	29.4%

Source: American Community Survey 2009-2013

Table 7 HOUSING UNITS BY UNITS IN STRUCTURE	Units	Percentage
Total	8,638	100.0%
1, detached	5,499	63.7%
1, attached	458	5.3%
2	388	4.5%
3 or 4	327	3.8%
5 to 9	704	8.2%
10 to 19	513	5.9%
20 to 49	190	2.2%
50 or more	172	2.0%
Mobile home	387	4.5%
Boat, RV, van, etc.	0	0.0%

Source: American Community Survey 2009-2013

Table 8 HOUSING UNITS BY YEAR STRUCTURE BUILT	Units	Percent
Total	8,638	100.0%
Built 2010 or later	0	0.0%
Built 2000 to 2009	1,061	12.3%
Built 1990 to 1999	1,194	13.8%
Built 1980 to 1989	964	11.2%
Built 1970 to 1979	1,021	11.8%
Built 1960 to 1969	655	7.6%
Built 1950 to 1959	856	9.9%
Built 1940 to 1949	507	5.9%
Built 1939 or earlier	2,380	27.6%
Median Year Structure Built	1969	

Source: American Community Survey 2009-2013

Table 9 OCCUPIED HOUSING UNITS BY YEAR HOUSEHOLDER MOVED INTO UNIT	Units	Percent
Total	7,716	100.0%
Owner occupied		
Moved in 2010 or later	290	3.8%
Moved in 2000 to 2009	2,001	25.9%
Moved in 1990 to 1999	830	10.8%
Moved in 1980 to 1989	323	4.2%
Moved in 1970 to 1979	329	4.3%
Moved in 1969 or earlier	392	5.1%
Renter occupied		
Moved in 2010 or later	1,395	18.1%
Moved in 2000 to 2009	2,001	25.9%
Moved in 1990 to 1999	109	1.4%
Moved in 1980 to 1989	46	0.6%
Moved in 1970 to 1979	0	0.0%
Moved in 1969 or earlier	0	0.0%

Source: American Community Survey 2009-2013

Table 10 Census 2010 Occupied Housing Units by Age of Householder and Home Ownership			
		Owner Occupied Units	
	Occupied Units	Number	% of Occupied
Total	7,682	4,308	56.1%
15-24	511	118	23.1%
25-34	1,191	504	42.3%
35-44	1,418	723	51.0%
45-54	1,587	952	60.0%
55-64	1,274	841	66.0%
65-74	816	575	70.5%
75-84	618	430	69.6%
85+	267	165	61.8%

Source: ESRI 2015

Table 11 Census 2010 Occupied Housing Units by Size and Home Ownership

		Owner Occupied Units	
	Occupied Units	Number	% of Occupied
Total	7,682	4,308	56.1%
1-Person	2,359	1,077	45.7%
2-Person	2,411	1,610	66.8%
3-Person	1,255	681	54.3%
4-Person	946	576	60.9%
5-Person	445	230	51.7%
6-Person	177	86	48.6%
7+ Person	89	48	53.9%

Memorandum

Date: July 9, 2015

From: Larry Lund

To: Remenschneider Team

Re: Co-Working Spaces in Indiana

I have located eighteen co-working spaces in Indiana as follows:

Cowork Btown , **406 S Walnut St, Bloomington** with 6,000 square foot

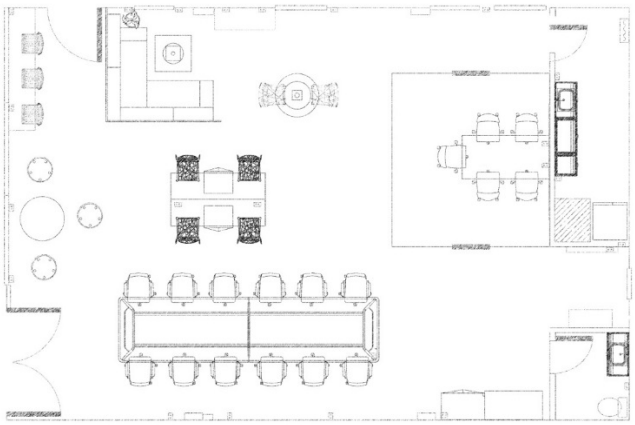
The Outpost in Whitley County 114 N Chauncey St, Columbia City, Whitley County.
746 square foot facility available 23/7. Operated by the County's EDC

Co-Work Evv at Innovation Pointe, 318 Main Street, Evansville Not open yet, but on 4th floor of Centrum Building with estimated 12,000 square feet

Launch Fishers 7 Launch Fishers Way, Fishers, moving to 2175 Visionary Way. The city plans to buy the building, formerly used by Deca Financial Services LLC, for $3.1 million and lease it to Launch Fishers. Building improvements are estimated to cost $400,000 including $125,000 for working capital. . As part of the expansion, the city will partner with Ball State University to create the Center for Excellence in Entrepreneurship. Ball State will lease 3,010 square feet in the new building and companies working from Launch will have access to university research, faculty and students. They are in a 51,571 square foot building starting with 16,000 square feet in the basement of Hamilton East Public Library. They currently have 518 members. There are 24 official Certified Tech Parks throughout the state, including four in Indianapolis. The program allows cities to capture certain state and local tax revenue and use the funds to attract technology companies.

Cowork FTW Fort Wayne, 3217 Stellhorn Rd, Ft Wayne, 8,000 square foot.

Current Blend, **307 E. 4th St., Huntingburg.** Received a grant of $12,500 from County of Dubois to build out space. The space is 1,100 square feet. (see below)



Speak Easy aka Developer Town 5255 Winthrop Ave, Broad Ripple, Indianapolis opened in 2013 on Monon Trail in Broad Ripple with 22,000 square feet.

Hinge Bureau 719 Virginia Ave Indianapolis. On fountain Square and on Cultural Trail. They occupy 7,000 square feet

Velocity, 400 Missouri Ave, Jeffersonville 7,000 square foot facility also has a mobile maker

The Innovation Connector, 1208 W. White River Blvd., Muncie a 15,000 square foot building. This facility is associate with Ball State.

Match Box 17 S Sixth St, Lafayette, 10,000 square feet with 4,000 leased to library. Affiliated with Purdue and Ivy Tech.

The Anvil, 320 **North Street, West Lafayette**. Located in the basement with 10,000 square feet

Purdue Foundry 1201 W. State St West Lafayette (Discovery Park) a 31,000 square foot co-working environment opened in 2013 by Purdue University for faculty, staff and students

Richmond Innovation Center 814 E Main St, Richmond former Ritz Theater, then Osco and then community center now an innovation center of 9,600 square feet. Renovation cost $1.4 million. Reportedly, 60% occupied.

The Branch 105 E. Jefferson Blvd, South Bend. This is located on the 5th floor of The Jefferson Center in downtown. The space is 2,465 square foot and they had two tenants.

River Race Cowork, **South Bend**. Not sure if this has started, it is promoted as a cow-working space along with Rabbit Moon Bakery and Maha Luna. MaHa Luna is bakery co-op that might rent time to other food makers to use their facility.

Launch Terre Haute 683 Wabash Avenue 2nd floor**, Terry Haute.** Not sure if this has started yet.

Z Works, **Zionsville. 85 E Cedar St. Zionsville**, in former historic firehouse and town hall. Opened June 15, 2105 Space is 3,200 square feet.

While temporary office space has been around for decades, the rebranding of co-working and innovation centers is new with most of the facilities in Indiana opening in 2013 or later. At this time, it is hard to identify the metrics that might indicate a successful place. We have experimented looking at levels of people who have college degrees and higher, the number of people who work at home who might want the facilities and comradery of working in an open environment and we looked at people who buy Apple products, making the assumption that they might be more entrepreneurial.

Indiana's Co-working Environments and Metrics within 15-minute Drive-time of Location

Name	Location	2015 Population	% College Grads+ >25yrs.	Est. Work at Home	% that work at home	% Own Apple Products	Apple Index
Cowork Btown	Bloomington	115,701	48%	2,199	4.2%	18%	122
The Outpost	Columbia City	24,244	18%	389	3.4%	8%	61
Co-Work EVV	Evansville	161,440	20%	1,731	2.3%	10%	72
Launch Fishers	Fisher	227,661	55%	6,141	5.5%	21%	143
Cowork FTW	Ft. Wayne	221,634	24%	3,285	3.4%	10%	72
Current Blend	Huntingburg	23,032	17%	459	4.0%	9%	61
Speak Easy	Indianapolis Broad Ripple	246,642	36%	4,268	3.7%	14%	97
Hinge Bureau	Indianapolis Virginia Ave	421,031	19%	4,224	2.4%	10%	67
Velocity	Jefferson	343,188*	28%	4,619	3.0%	12%	85
Innovation Connector	Muncie	94,668	24%	1,005	2.6%	11%	79
Match Box	Lafayette Sixth St	157,858	37%	2,257	3.2%	15%	106
The Anvil	West Lafayette	149,576	38%	2,174	3.3%	15%	105
Purdue Foundry	West Lafayette	146,925	38%	2,187	3.4%	15%	105
Innovation Center	Richmond	51,421	17%	399	1.9%	9%	60
The Branch	South Bend Jefferson Bl.	185,176	25%	2,353	2.9%	11%	76
River Race Cowork	South Bend	191,939	25%	2,339	2.8%	11%	77
Lunch Terre Haute	Terre Haute	87,411	21%	716	2.0%	11%	75
Zworks	Zionsville	106,134	56%	2,507	5.1%	21%	143
Crawfordsville	Crawfordsville	27,673	18%	487	4.0%	8%	57
Shelbyville	Shelbyville	28,652	14%	248	1.9%	8%	58

Source: ESRI and REPG *

Velocity in Jefferson, In 15-minute drive time includes much of Louisville, KY