

An Opportunity for
Urban Renaissance



CITY OF COLUMBUS, WI

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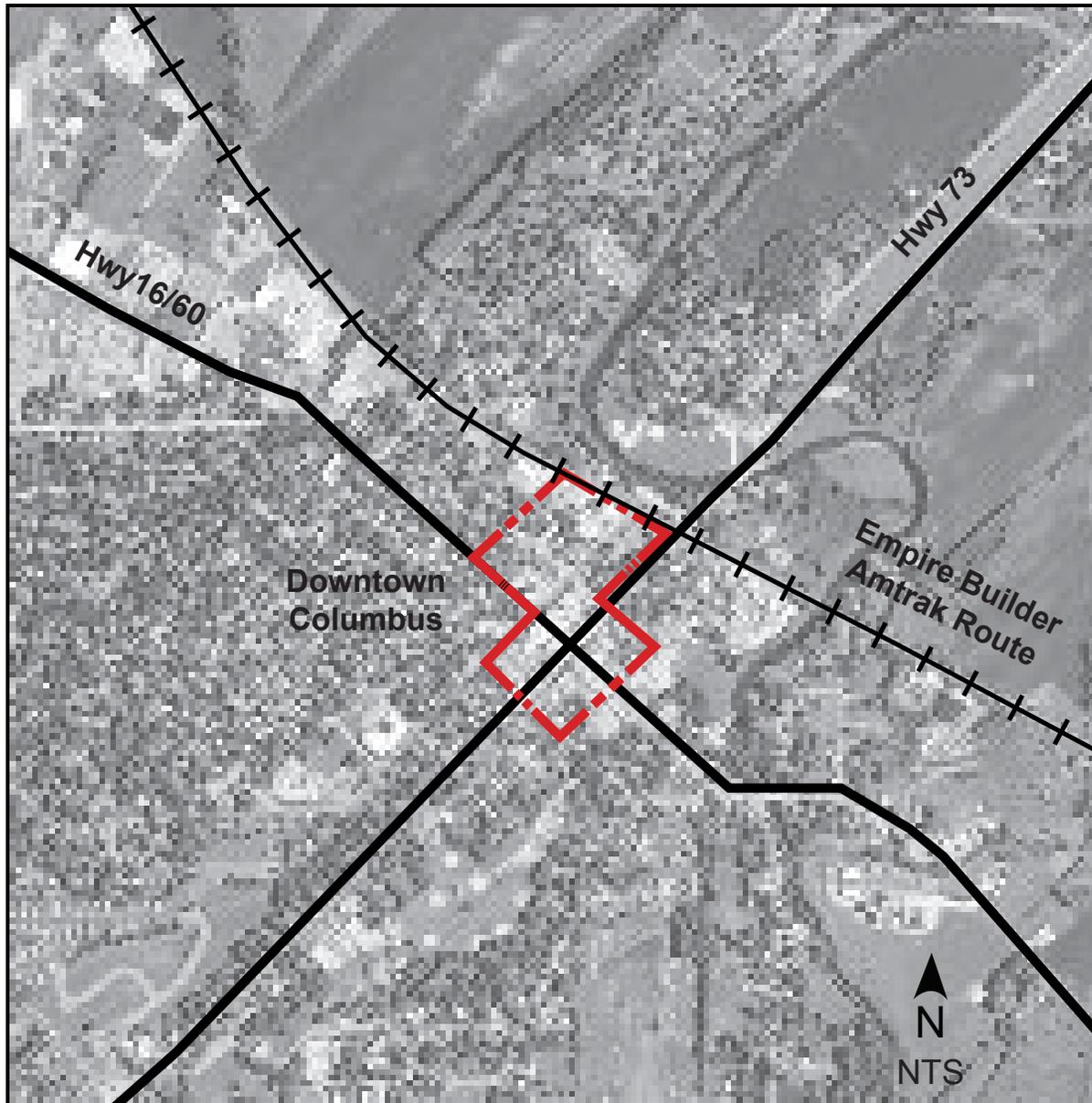
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Introduction



To fulfill the requirements of the Senior Capstone Program in the Department of Landscape Architecture at the University of Wisconsin-Madison, I will investigate how ideas of energy sustainability and multimodal transportation may inform the design of downtown Columbus. This investigation will be given context and focus by the concerns and goals (listed on page 9) of the Columbus Community Development Authority and Steve Sobiek, Director of Economic Development and Energy Sustainability. The downtown area and Amtrak station in Columbus will be the main site for the focus of this study.

Columbus' multiple transportation routes converge in the downtown area



Mission Statement

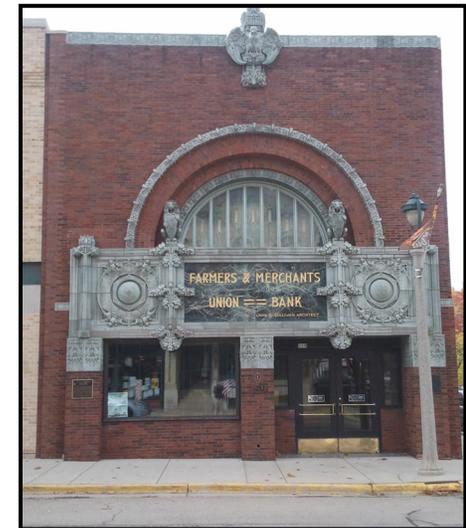
The mission of this Columbus Capstone Project is to evaluate the potential of urban renewal in Columbus' downtown and to present an innovative, practical, and feasible economic and energy sustainability plan from which the City, the private sector, and the public can accept a strategy for a successful re-birth of the downtown area.



Columbus City Hall



Christopher Columbus
Statue in Downtown

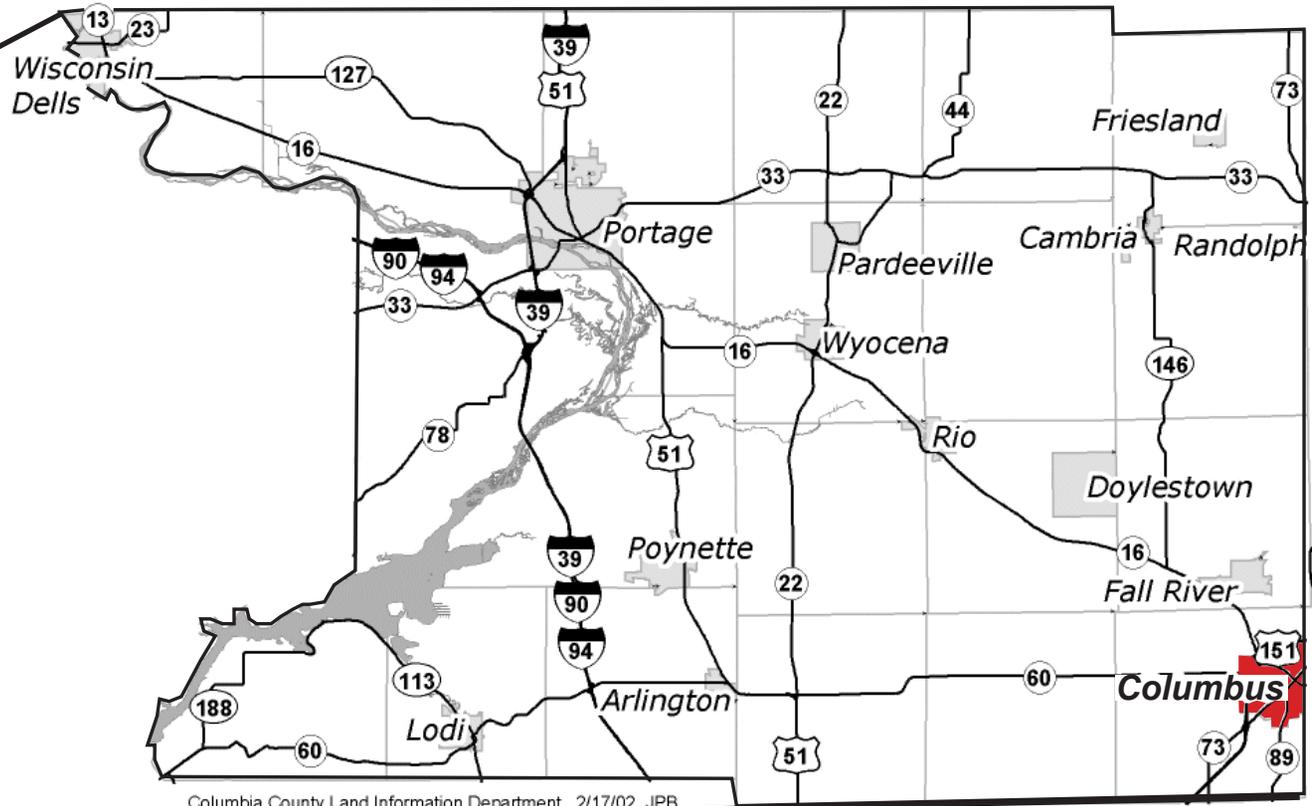


Farmers and Merchants
Bank

Location

- 28 miles Northeast of Madison
- 46 miles Southwest of Fond du Lac
- 74 miles Northwest of Milwaukee
- Situated in the lower Eastern corner of Columbia County





Columbia County

Columbia County, 2012

Columbus Community Development Authority (CDA)



Pictured On Left:

Henry Elling
Alderperson Paula Schumann
Mayor Kelly Crombie
Nathan Roberts (Chair)
Wendy Watrud
Jerry Dzierlinga

Not pictured is Ryan Peickert

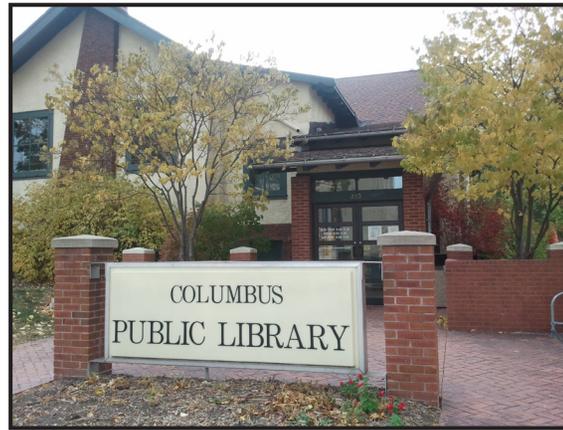
Contact: Steve Sobiek,
Director of Economic
Development and Energy
Sustainability

CDA's Downtown Goals

- Rejuvenate the downtown area.
- Unite the downtown district with the nearby Amtrak and Lamers bus stop.
- Incorporate multiple facets of renewable energy practices.
- Create ideas for a gathering space on Dickason Boulevard with the possibility of holding festivals and other events.



Columbus Recreation
Department



Columbus Public
Library



Napoli Italian
Restaurant

Initial Client Goals

After meeting with my clients and hearing about the types of projects the city has already undertaken and would like to see in the future, we worked together to establish a set of goals for this Capstone Project.

The first goal is to rejuvenate the downtown area to attract more users, while still incorporating energy sustainability practices, such as LED lighting and solar panels. To do this, the streetscape will need to be made into a welcoming area for all users, and mixed use properties will need to be implemented to keep visitors into the nighttime hours instead of just for a few hours in a day. In order to achieve a welcoming pedestrian atmosphere, I will be incorporating practices from the Complete Streets Initiative, which involves widening the pedestrian atmosphere and creating an environment that is welcoming to all users, including pedestrians and those in vehicles or traveling by bicycle.



Streetscape of Hwy 16/60 in need of updating



Shops that would be ideal for wind or solar retrofits



Street conditions near the Amtrak Station

In addition to enhancing the pedestrian realm, there is also the potential for refurbishment of older buildings to include new technology such as See-Through Solar Film, or even the implementation of wind sculptures to harvest energy. Many of the buildings currently in the downtown area are suitable for retrofit operations involving solar and wind technology, and all proposed new buildings could be designed with the proper renewable energy infrastructure right away in the design stages. With all of the new renewable energy technology going into the Columbus downtown redevelopment design, I believe there will be a great opportunity to educate the public about these practices through the use of signage and other descriptive plaques and information kiosks.

The second goal is to better unite the main downtown district with the Amtrak station, where the Lamers bus line has recently included a stop on their trip from Madison to Green Bay. Currently, the downtown district is separated from the station by numerous homes that are in a state of disrepair, with some even being abandoned.



Historic Amtrak Station

The final goal of the CDA, to include numerous types of renewable energy practices in the downtown area, is intended to expand on the city's goal to become as energy-independent as possible. Through the use of solar, wind, geothermal, and biogas energies, Columbus can become a renewable energy model for cities throughout the nation and world.

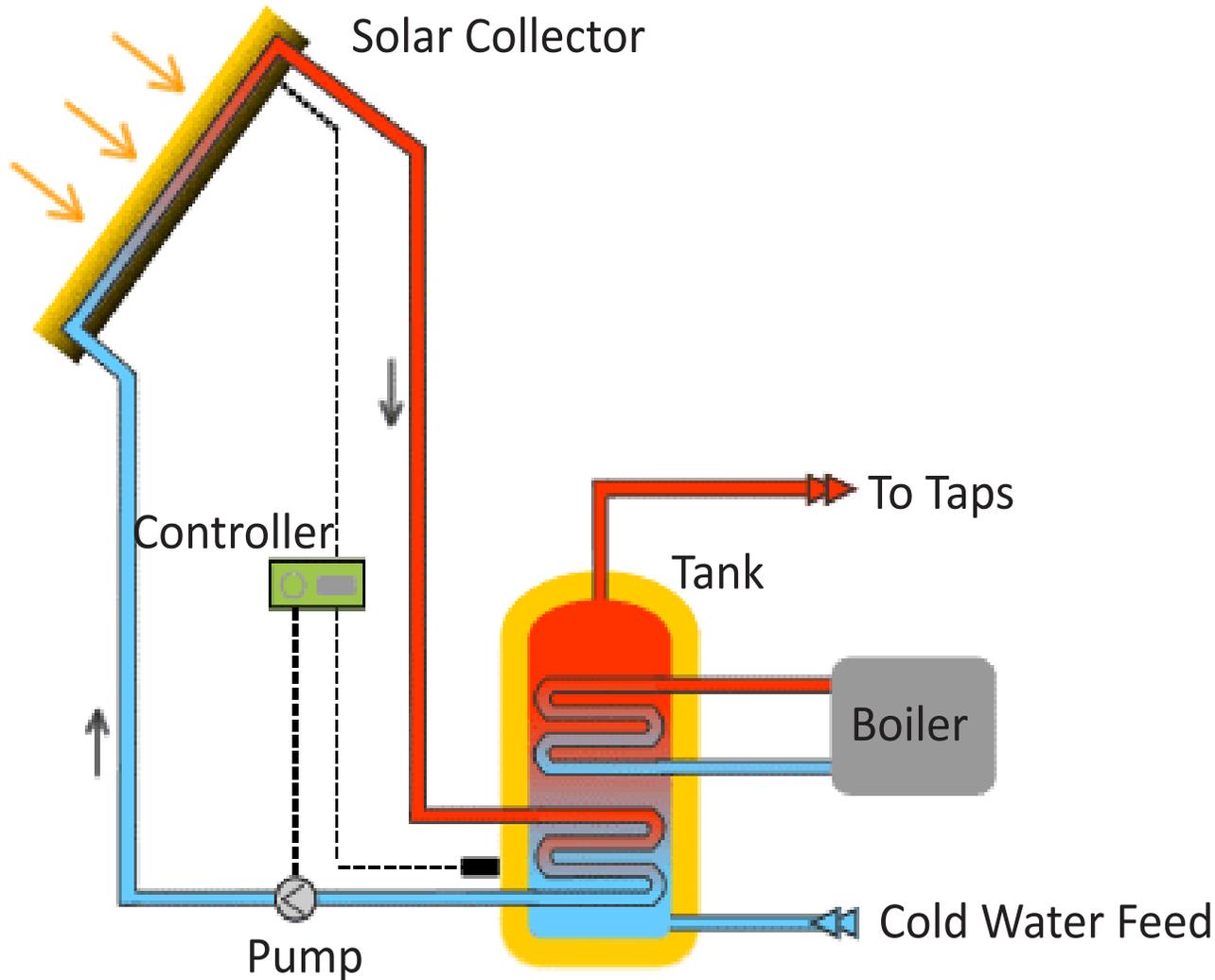
Going right along with the goal of uniting the downtown district with the Amtrak station, goal three is to create a welcoming pedestrian area on Dickason Boulevard with the possibility of holding festivals. The two of these goals together will help invite users to the downtown area and make them feel welcome and willing to explore the rest of the downtown.



Current Dickason Boulevard Streetscape

Solar Energy

Solar Thermal Energy



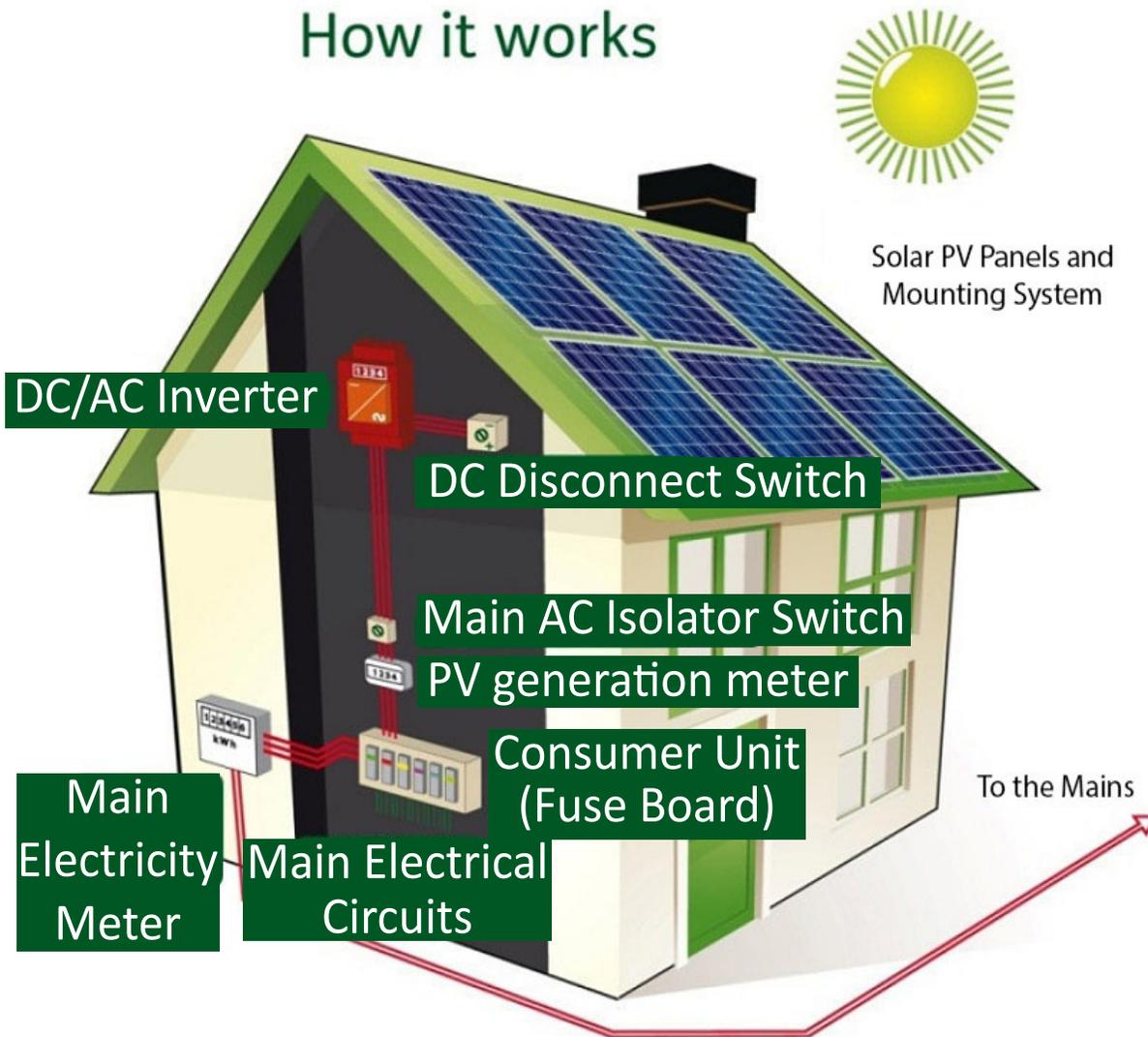
Solar Thermal Energy Diagram
Solar Energy Facts Blog, 2012

Energy sustainability is the idea of fulfilling today's energy needs without compromising the planet for future generations. To fulfill our country, and more specifically, Columbus's, energy needs, it is time that we look toward innovative technologies in renewable resources. Highest on the list for suitability in Columbus are solar and wind energy, though geothermal energy and biogas production could play a small portion in the innovative energy practices that the city is looking to take on.

In addition to the proposal for sustainable energy practices in Columbus, it is imperative that the city also look to promote sustainable construction and best management practices (BMPs). Strategies in stormwater management, sustainable building products, and proper placement of vegetation are just a few examples of ways to reduce the city's dependence on non-renewable resources and continue in their quest to become energy independent.

Solar Photovoltaic Energy

How it works



Solar Photovoltaic Panel Diagram
Solar Energy Facts Blog, 2012

As mentioned in Urban Energy Transition from Fossil Fuels to Renewable Power, there are many ways that Columbus (and the rest of the nation) can work toward sustainable energy practices. As society progresses toward the end of the age of nonrenewable resources, the writer (Droege) delves into the associated issues with finding renewable energy sources that can be applied to an urban setting. Through innovative engineering, architecture, design, and landscape architecture, it becomes obvious that the world around us needs to evolve to accept the challenges brought about by these changes in our world. Through a look at the history of renewable power and an investigation of new initiatives, Droege assesses many current issues in urban energy consumption and developing construction practices. (Droege, 2008) Though not a large urban center, the downtown area of Columbus could benefit from the ideas and practices mentioned in Droege's book. Building smartly and efficiently and keeping renewable energy practices in mind when doing so will be key to Columbus's future expansion.



Dedication of solar panels installed at the Columbus High School

In Solar Energy Engineering Processes and Systems, Kalogirou provides examples and ideas on technologies to obtain maximum power capabilities from solar cells, while still keeping products as cost efficient as possible. The book includes chapters on solar collectors and the solar technology itself, methods of determining performance and efficiency of these collectors, photovoltaic technology, and even solar water heating and heating and cooling systems for the home. This dynamic book offers a look into many of the aspects that comprise solar technology, while still making it understandable to those with just very basic knowledge of the subject. (Kalogirou, 2009) Since there are numerous types of solar systems and differing technology associated with each, it will be imperative that Columbus research all of their solar system options and how each will fit in best with the character of the downtown.

Similar to the Urban Energy Transition, Sustainable Design: Ecology, Architecture, and Planning provides a look into sustainable design from a more widespread viewpoint. Through his book, Williams uses multiple levels of planning and design to detail aspects of sustainable design. From regional to site design and from landscape architecture to architecture and urban planning, the author promotes designing within our limits and thinking about the future in all of the projects we are involved with. This book shows that all aspects of design need to work together to be innovative and create a precedent for the future builders, designers, engineers, and landscape architects. (Williams, 2007) As Columbus looks to redevelop and improve this project site, these types of practices will be necessary for creating a unique character and culture for the downtown environment.



Example of panels in use at CHS

Barcelona, Spain



Mausoleum Solar Panels near Barcelona, Spain



The largest urban solar structure in Europe helped house the 2008 Primavera Sound Festival in Barcelona

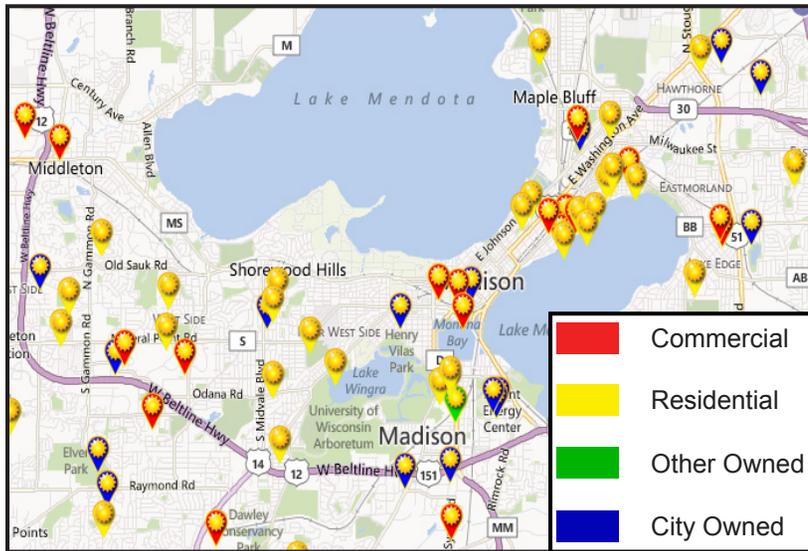
As the first city in the world to initiate a Solar City Ordinance, Barcelona is at the forefront of the solar energy push that is occurring throughout the world. This ordinance requires that all new buildings have solar panel arrays to support at least 60% of the building's sanitary water heating needs. Though solar energy has been slower to be made common in many countries, Barcelona had many strong advocates of the advantages in solar energy. These innovative thinkers knew that the best solution for the future is to look to renewable energy for our consumption needs instead of relying on fossil fuels to sustain us.

Between 1999 when the Ordinance was adopted and 2011, the city increased its solar thermal collector area to over 87,600 m², while the size of photovoltaic (PV) panels increased to over 5,000m². Since

the Ordinance was passed, over 75 other cities and municipalities throughout Spain have adopted similar legislation, making it the number two nation in the world for solar energy production. (Droege, 2008)

In order for Columbus to approach its goal of energy independence, the city administration (and the Columbus Development Authority in particular) need to think long-term and plan for a future of renewable resources. Though Barcelona is many times larger than Columbus, the city's drive to promote renewable energy is a precedent that should be studied by all. This type of policy-making is just the type of model that citizens in Columbus need to be made aware of and draw upon for their own solar energy proposals.

Madison, Wisconsin



Map of solar installations currently in Madison



PV panels being installed on the West Wing of the state Capitol

While it is great to find precedents on a global scale of massive proportions like Barcelona, places much closer to Columbus are also taking on the challenge of implementing solar energy. MadiSUN, Madison's very own solar energy program, has been a key proponent in changing legislation and policies regarding permitting and zoning for solar arrays. Named one of 25 Solar America Cities in 2007, MadiSUN has been educating both residents and local businesses on the benefits and incentives behind installing solar panels right here in southern Wisconsin. The city has already installed multiple solar installations throughout the city, including (but not limited to) the Demetral Landfill, the East Police Parking Lot, and several fire stations around town. (City of Madison, 2012. U.S. DoE, 2012)

In addition to helping spur state legislation for solar energy, Madison has also been a strong supporter of the idea of community purchase of solar panels. This policy allows citizens to group together and purchase the arrays in bulk, creating a strong incentive for solar power at a lower cost per panel for interested parties. (MadiSUN.org, 2012) Since the city of Madison is in such close proximity to Columbus (only 28 miles to the Southwest), Columbus needs to take advantage of the nearby resource for help in creating their own solar initiatives. The idea of starting off the solar energy program by installing panels on public buildings is a practice that Columbus could easily follow in the downtown area with its City Hall, Community Center, and Amtrak Station. The push for energy independence starts with one project at a time, and who better to set an example than the city policy-makers themselves?

Portland, Oregon



Electric Vehicle Charging Station Canopy



Charging Station Canopy for bikes and electronics

Located in the Northwestern corner of Oregon, Portland is home to numerous projects that many Landscape Architects look to for inspiration. They are at the forefront of projects that include stormwater management systems, public transportation, green infill, and solar energy systems (just to name a few topics). Despite the rainy winters, Portland is home to hundreds of solar energy systems, whether that be solar electric or solar heating systems. It is estimated that up to 10% of Portland's energy use could be satisfied by solar energy by 2025, which is a great example for Columbus to look to in its quest for more sustainable energy applications.

It is important for the city officials and citizens of Columbus to understand all of the benefits of solar energy and see the types of improvements they can make in a city, especially when combined with other BMPs. With all of the different infrastructure improvements and renewable energy practices that Portland has implemented in the past few years, it is a great place for those in Columbus to look to for inspiration. Specifically, Leadership in Energy and Environmental Design, or LEED, certified building practices and solar systems will be beneficial topics in Columbus that could be implemented in both new building construction and redevelopment projects.

Project Goals



-Utilize the Complete Streets Initiative to bring more pedestrian and bikeable space to downtown.



-Create a gathering area on Dickason Boulevard with the possibility of hosting public events.



-Continue the city's history of sustainable energy by incorporating both solar and wind energy-harvesting techniques.



-Incorporate open areas for community use adjacent to Dickason Boulevard.



-Rejuvenate the Amtrak Station, making it more welcoming to rail travelers.



-Create a walkable connection between Hwy 16/60 and the Amtrak Station via both Dickason Boulevard and Hwy 73.



-Propose mixed-use redevelopment for aging portions of the site that are in need of rejuvenation.



-Utilize vegetation to soften the downtown hardscape.



-Locate and recommend areas for potential sustainable energy practices.

Project Goals

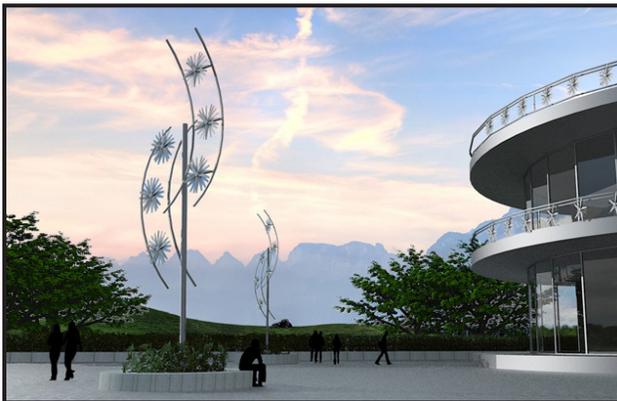
 After gathering data from research, site visits, and interactions with my clients, I developed a program of design elements for my site. One of the first elements that I would like to incorporate in downtown Columbus is renewable energy. Through innovative solar technology, such as See-Through Solar film (seen on right) and high-efficiency photovoltaic cells, the city can continue their track record of being local leaders in solar energy use.



See-Through Solar Film by Konarka



Wind power is another renewable resource that can be taken advantage of in many parts of the downtown area. By hiring local artists to create pieces with movable parts (like those shown to the left) to capture wind, the city can reignite and highlight a most-likely unknown source of community pride. Both of these energy sources can be tied to the power grid within the city and help the city move even further towards its goal of energy independence. LED lights are already in place throughout town, so this precedent will definitely need to be continued.



Example of a wind array by JLM Energy

Next on the list of program elements is rejuvenating the downtown. To do this, I propose implementing the Complete Streets Initiative (similar to the section view below) in the downtown area (and even outside of my site boundaries) to make the area a more pedestrian- and biker-friendly area. This will bring a different user-group to the site because it is currently a somewhat dangerous area to bike through due to lack of bike lanes. In addition, the sidewalks should be widened, with the possibility of outdoor seating in the summertime at local establishments, such as the Hydro Street Brewery and Napoli's Italian Restaurant. Street trees are nearly completely absent from the more public areas of the project site, so bringing in trees to provide shade and a welcoming atmosphere is a must!



Section View of a downtown Complete Street



The Amtrak station is the next program element that needs consideration. Built in 1906, the Columbus station has strong historic ties to the town, but is in need of a facelift to attract more visitors. Currently, the average daily number of passengers boarding or disembarking at the station is 49. With the addition of a second daily stop, there is hope that those numbers will rise. If the station is adequately renovated and made more welcoming to guests (like the picture above), there is a chance that passengers may decide to disembark the train and continue on the later train of the day, or even stay overnight. I propose that the city spends some time and effort to renovate the building, first by washing it to get the years of dust and train soot off the walls, and then by updating the doors, windows, and lighting fixtures. The outdoor portion of the platform is also in need of some tender loving care- there is great opportunity for new benches, tables, and potted plants that would be much more welcoming than looking at the tired old building you can currently see.



Sturtevant
Amtrak Station



Mixed-Use developments in
downtown St. Charles, IL



Mixed-use buildings in locations that need redevelopment are also necessary in creating a vibrant downtown, like in the areas of St. Charles, IL, seen to the left. At the sites of the current Caldwell Lumber building and the block directly to the south of it, I see prime locations for mixed-use buildings. These would have a combination of restaurants and stores on the bottom floor, and one to two stories of offices and residences above. With the push toward opening the town toward the Amtrak station and making it a welcoming stop for visitors, it is necessary to create energetic and diverse nearby locations such as these where guests can enter the downtown to see what else it has to offer.



 In addition to all of the program elements already mentioned, I also believe that there is a need for a public gathering space close to City Hall and the rest of downtown. Currently, the area in front of City Hall is a sizeable parking lot, and with some strategic design work, I believe that this space could become a haven for festivals and events that the city will host in the future. With proper design, this space could still be utilized for parking on a daily basis but have the opportunity for being closed down to traffic for any scheduled event.

**Notice that each project goal has an associated icon that I feel is a picture reminiscent of the aims for that goal. Throughout my document, you will see icons at the tops of the pages; this means that the goals associated with that icon are being fulfilled with the work on that page.”

Ethics



Downtown Columbus on Highway 73

Within the realm of Landscape Architecture, there are many rules and regulations to follow, with the ideas of Health, Safety, and Welfare being the number one priority for the profession. To promote these three factors for the public good, it is necessary to design spaces that should not cause harm to anyone that uses them.

For the city of Columbus, WI, this would include designing spaces that follow the city's current practice of energy sustainability and offering open, friendly places that citizens feel welcome to use throughout the year. LED lighting and solar technology are just a couple of steps along the route that the city has established towards becoming the "Greenest" city in the state. Incorporation of both of these strategies, along with water harvesting techniques and permeable paver solutions can all enhance the beauty and functionality of the downtown cityscape so that it will quickly begin to be a profitable and used space that visitors and residents alike will frequent.

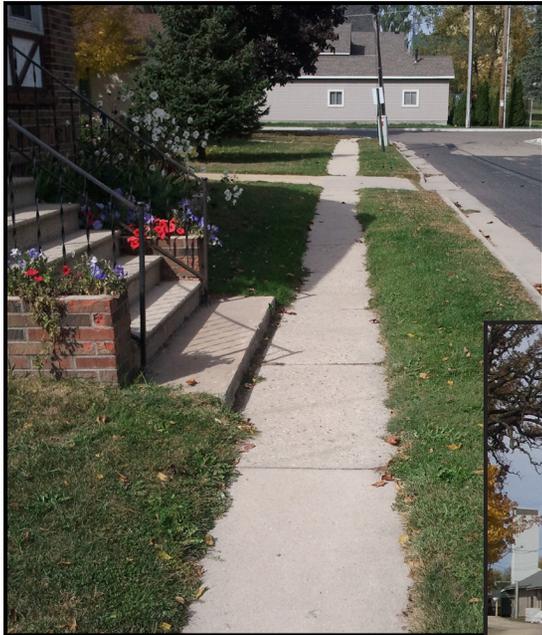
Criterion

- Has this project increased the aesthetic qualities within the downtown Columbus area?
- Have "Green" infrastructure practices been utilized, including LED lighting, solar technology, and water harvesting techniques?
- Has the multi-modal transportation hub been adequately transformed into a welcoming atmosphere that would entice travelers to stop and visit the downtown area?
- Have the downtown blocks leading South, down Dickason Boulevard and Highway 73, been integrated into the transportation hub re-design to create a cohesive flow?
- Has the downtown area been transformed to incorporate the idea of Complete Streets, with safe transportation routes for all users, regardless of age or ability?
- Does the downtown area look revitalized and welcoming to those passing by, including both visitors and current residents?
- Has the risk of pedestrian and vehicular traffic conflicts been minimized?

During the fall semester, we each came up with our own set of evaluation criteria for our project. These could include both goals and checkpoints that we wanted to make sure that we didn't lose track of throughout our semester of design work in the spring. As the spring semester was moving along, it was imperative to continually make sure that our designs were following our criteria, and I know that I referenced these numerous times throughout the design stages. These criterion were a great way to make sure that I was staying focused on my goals and that I would be able to say at the end of this project that I successfully met my criterion, which I feel comfortable in doing.



Existing Downtown Conditions



Narrow sidewalks



Amtrak entrance
from Hwy 73



Downtown storefronts



View down Dickason Blvd to the Amtrak Station



Looking toward downtown on Hwy 73



Background Info

Incorporated in May of 1864, but settled since 1839, Columbus has a rich history in Southern Wisconsin. Over time, the city has grown from a village of just several homes to almost 5,000 citizens, with a land area of four square miles.

The downtown area has numerous buildings with historic architecture, giving the streets character and an “old-time” feel that inspired Hollywood producers to film portions of the 2009 film “Public Enemies” in the Columbus downtown. This feel and architectural quality are imperative to preserve and enhance, and through my project, I aim to continue this style throughout the new developments I am proposing in the downtown.

Throughout its years, Columbus has been home to numerous companies, including Kurth Beer (which used to rival the Milwaukee powerhouse, Miller), the American Packaging company, and Caldwell Lumber, both of which are still integral parts of the city. Caldwell has been a leading

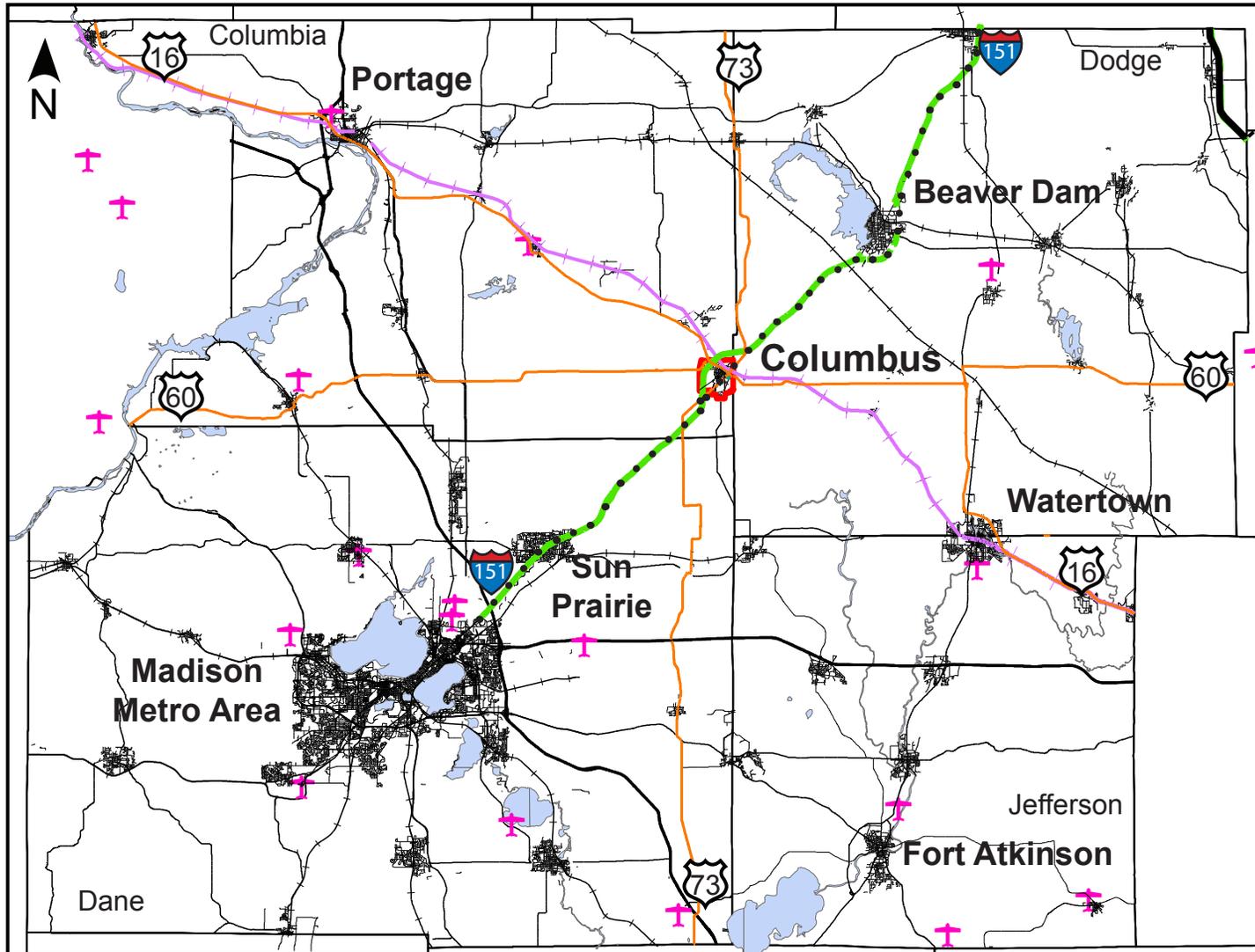
business in the downtown area since 1919, but its owners have been starting to think about selling, which leaves its location as prime real estate for development adjacent to the Amtrak Station. The Empire Builder Amtrak line was originally a freight line for the Great Northern Railway, but was converted to passenger rail in June of 1929, and has had one daily stop in Columbus ever since. With the addition of a second daily stop scheduled to begin soon, the Amtrak station and surrounding area provide a great opportunity for redevelopment, which will hopefully get many more users to get off the train and see all of the attractions that Columbus’ downtown has to offer.

The downtown area of Columbus is at the heart of the city, where state highways 73 and 16/60 cross. While these roads bring a lot of traffic to the area, the lack of attractions, such as parks, movie theaters, and nightlife, prevents travelers from stopping and seeing what the town has to offer. Currently, the Hydro Street Brewing

Company and Eatery and the Antique Mall are the two biggest attractions to the downtown area. With an overall footprint of 50 acres, the project area will be redesigned to include multi-use buildings, a transportation hub adequate to host traffic from both the Amtrak- which runs from Chicago to the Twin Cities- and Lamers Bus line (from Madison to Green Bay), and cutting-edge energy technology that can benefit the entire town, not just the businesses and municipalities housed there.

While the city has a storied past, the downtown area is in need of revitalization in order to aid the city in its quest for growth. Welcoming outdoor spaces, pedestrian and bike circulation, and rejuvenated storefronts are all key elements to once again making the downtown area of Columbus a hustling, bustling, thriving center for community living.

Regional Inventory

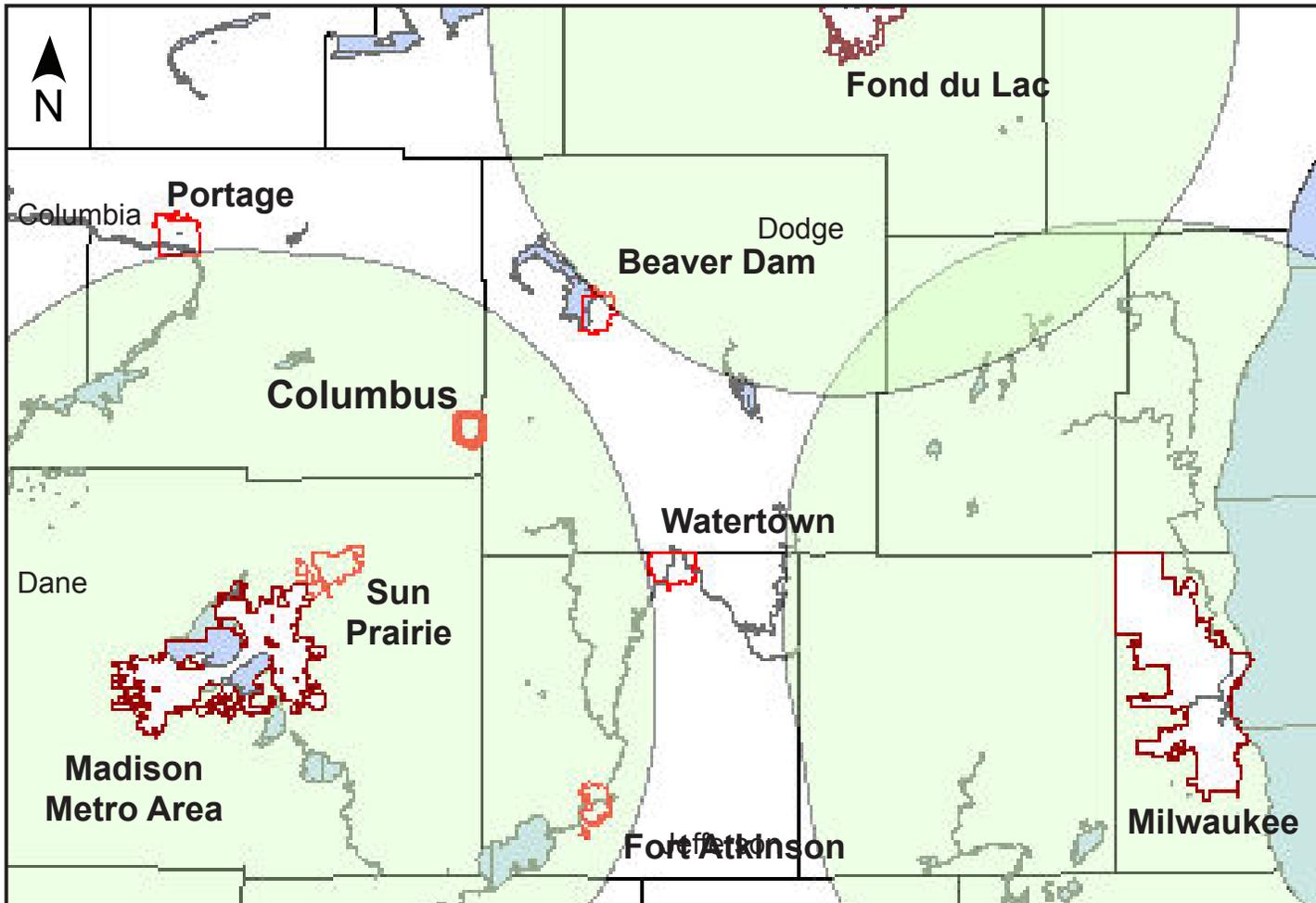


While not a large town in terms of population, Columbus has the benefit of being located in an area that makes it possible for numerous transportation corridors to cross. The city is home to not just one, but FOUR highways connecting it to nearby towns, the Empire Builder Amtrak line, and a Lamers bus route that connects the cities of Madison and Green Bay, with a number of other stops along the way. There are also more than ten airports and airfields within an hour's drive, making it accessible to a large number of user groups.

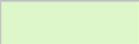
- Highway 151
 - Highways 16, 60, 73
 - Amtrak
 - Airport/Airfield
 - Columbus Boundary
 - Lamers Bus Route
- 1" = 10 mi



Proximity to Largest Nearby Cities

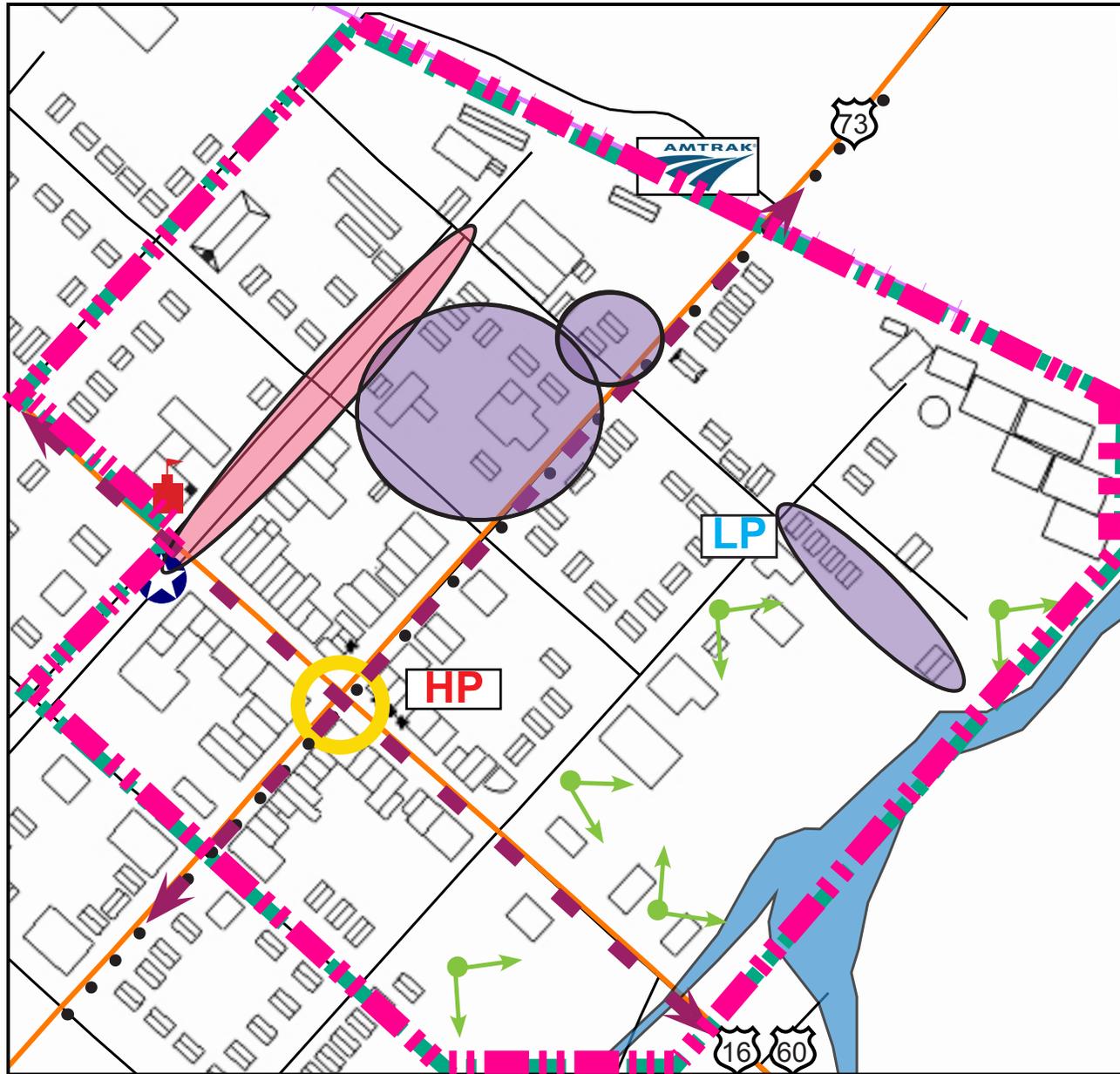


In addition to having a large number of transportation routes that move through town, Columbus also has the advantage of being centrally located between the three largest cities in Southeast Wisconsin (those being Fond du Lac, Madison, and Milwaukee). Being within a 50 mile commute to all of these cities will make it all that more attractive to visitors for both short visits and long-term stays.

-  25 Mile Buffer
-  City Boundary

1" = 15 mi

Site Inventory



-  Wind from Traffic
-  Columbus Statue
-  High Point
-  Low Point
-  Dickason Blvd Gathering Space
-  Major Traffic Node
-  Low Quality Residential Area
-  Lamers Bus Route
-  Amtrak
-  Hwy 16, 60, or 73
-  Project Boundary
-  Amtrak Station & Lamers Bus Stop
-  City Hall
-  Good Views

Analysis

Inspirations



Amtrak station windows



'Crane Tile' bricks at Amtrak Station

Opportunities

- +Site is fairly flat
- +Many buildings are empty or for sale and are available for renovation**
- +Multiple transportation corridors converge downtown**
- +Building height is 3 stories
- +The area near the Crawfish river is fairly open and would be prime real-estate for a waterfront park

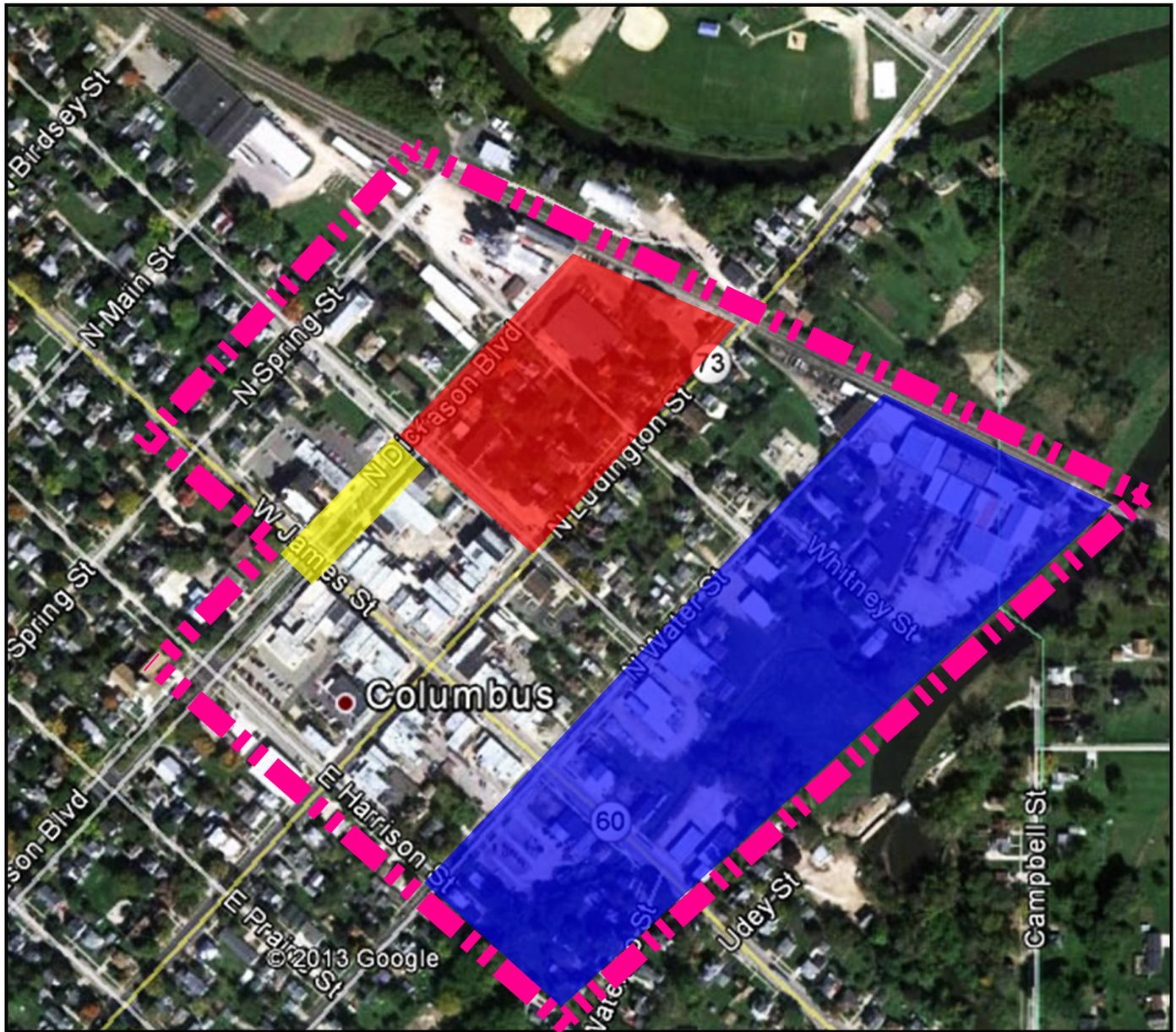
Constraints

- Sidewalks are very narrow
- Buildings are aging poorly
- Aging community population**
- No visual unity between downtown streets
- Poor walkability and bikeability**
- Several homes are still occupied and would require time for the city to acquire
- Lots of traffic going through the downtown, making it unsafe for both pedestrians bicyclists

When first entering the downtown area of Columbus, you see the charming storefronts and wonder to yourself why there are no people are wandering about (or at least I did). After speaking with my client and walking around the project area to take pictures, it is easy enough to figure out why the downtown is empty. Too many storefronts are vacant, the sidewalks are harsh and uninviting, and the overall look and feel of the area is semi run-down and tired.

Visiting the site and walking around the downtown by myself made me feel a bit out of place and like I didn't quite belong there. Despite those feelings, I in no way think that the downtown is beyond help. In fact, it made me even more confident in the fact that there were large amounts of potential to enhance both the streetscape and the downtown atmosphere itself. After going through my notes and pictures, I completed numerous analyses in GIS and using the Soil Data Mart website to determine the areas that I felt were best-suited for redevelopment, which can be seen on the following page.

Proposed Redevelopment Locations



- ① Amtrak Station Area
- ② Dickason Blvd Open Space
- ③ Waterfront Zone



Site Conditions



①



Amtrak Station



Caldwell Lumber

②



Dickason Blvd Parking Area

Amtrak Station Area

- Old Buildings
- Potential for Mixed-Use redevelopment adjacent to Amtrak
- Amtrak Station needs rejuvenation
- Large parking lot nearby offers potential for expansion
- Numerous old homes for sale
- Open space is in disrepair
- Prime location for new businesses to thrive off visitors using the Amtrak

Dickason Blvd Open Space

- Too much asphalt
- Lack of vegetation
- Streetscape has no distinguishing features
- Nowhere nearby for patrons of local businesses (and City Hall) to visit on breaks or in between stops

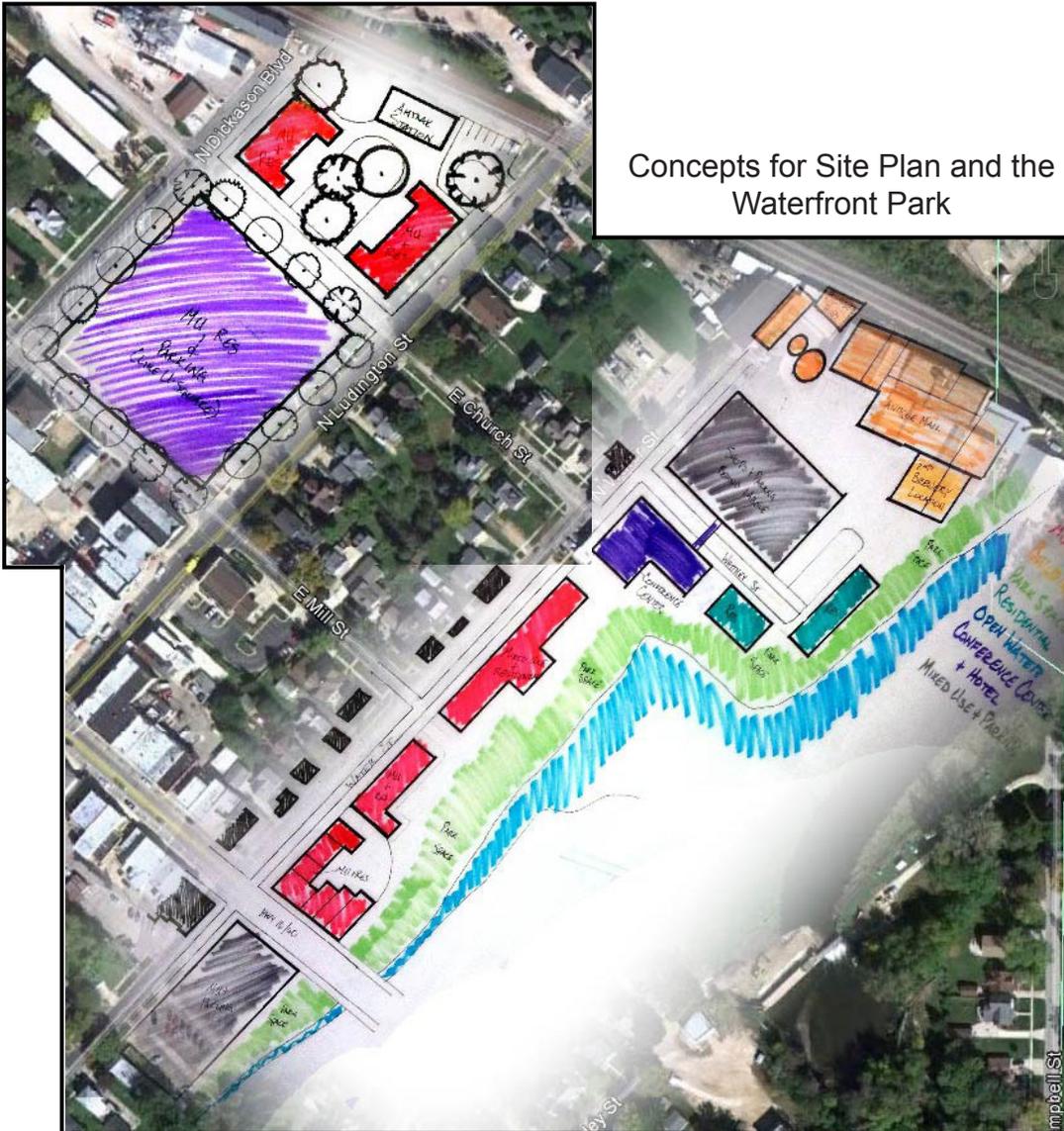
③

Waterfront Zone

- Very few buildings on waterfront
- Flat areas have good potential for trails and picnic areas
- Water Street is already wide enough to accommodate street enhancements
- Corner of Whitney and Water Streets are within 5 minute walk of the Amtrak Station
- EMS should be located closer to the fire and police stations



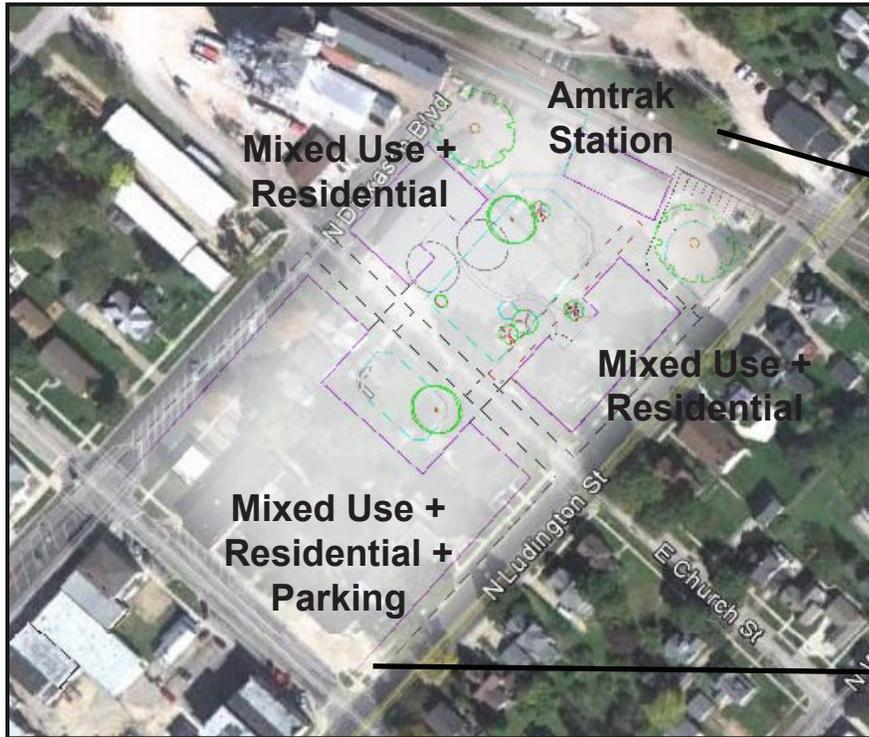
Emergency Medical Services building



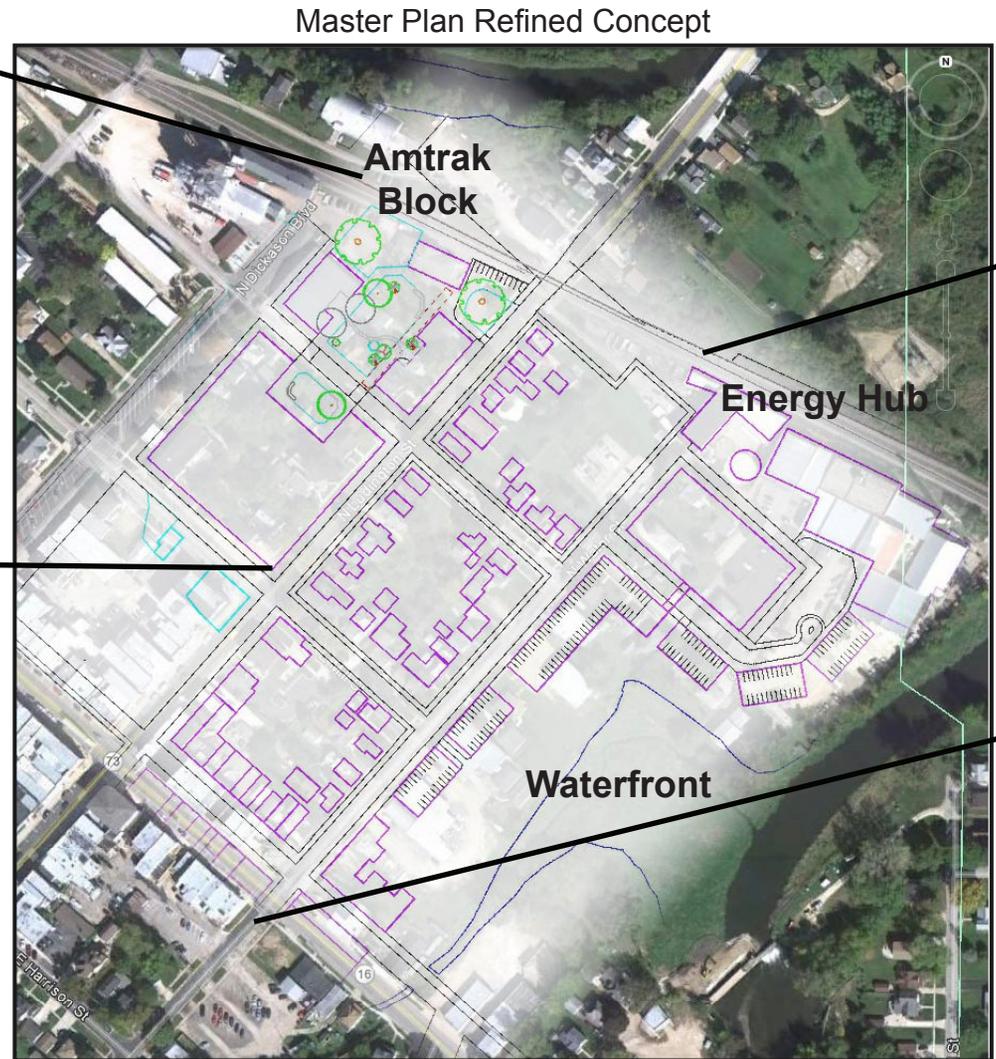
Concepts for Site Plan and the Waterfront Park

When doing any type of design work, it is imperative that you welcome various ideas and put them all on paper so that you can go back to them for inspiration in the future. During my initial design process, I did just that, and I very quickly accumulated sheets and sheets of design ideas. To the left you can see several of my very first design concepts for my whole project. It wasn't until I went through many more sheets of trace paper that I started to finally narrow down the final design for the downtown area.

Refined Process Images



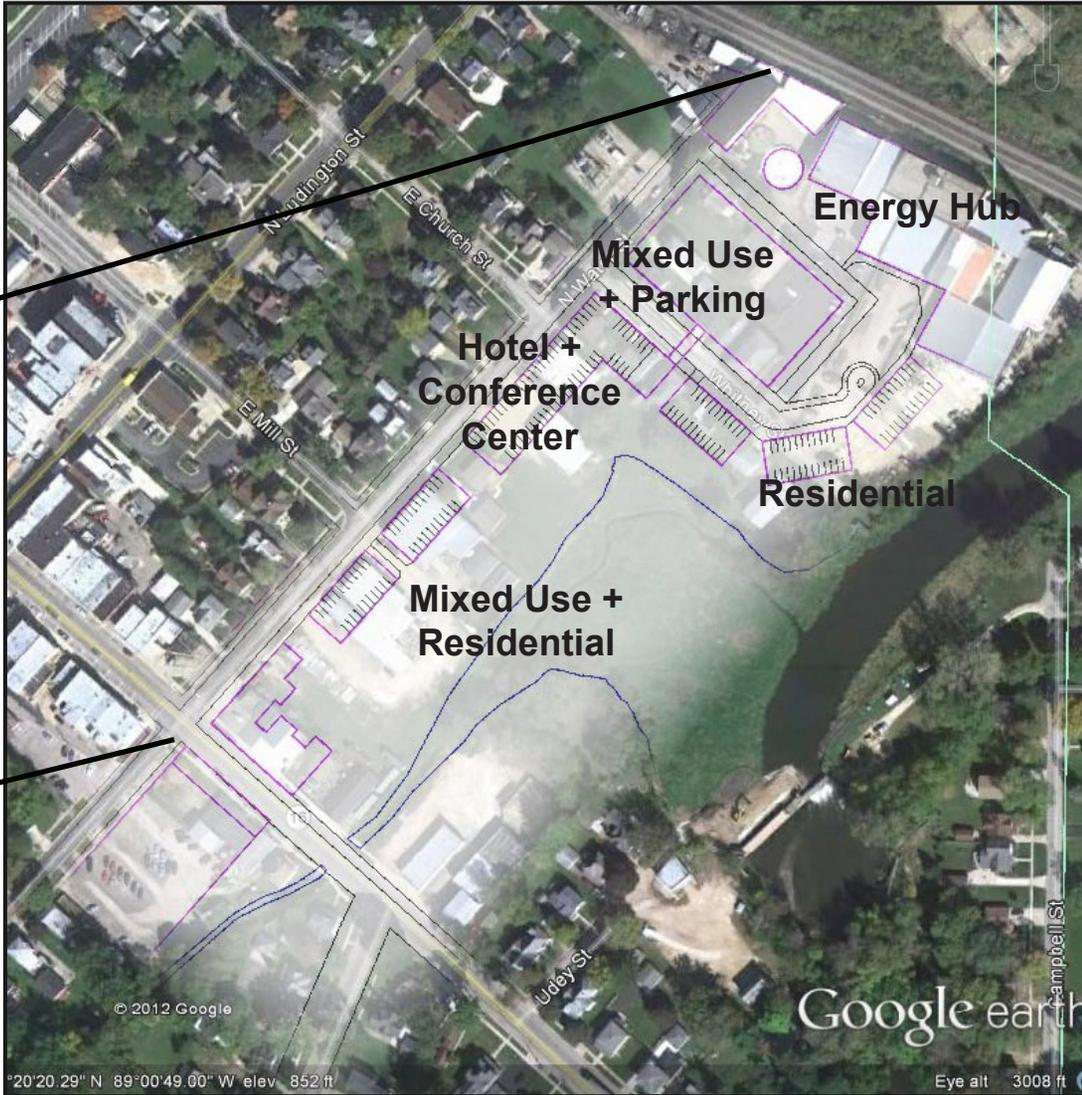
Refined Concept for Site Plan



Master Plan Refined Concept



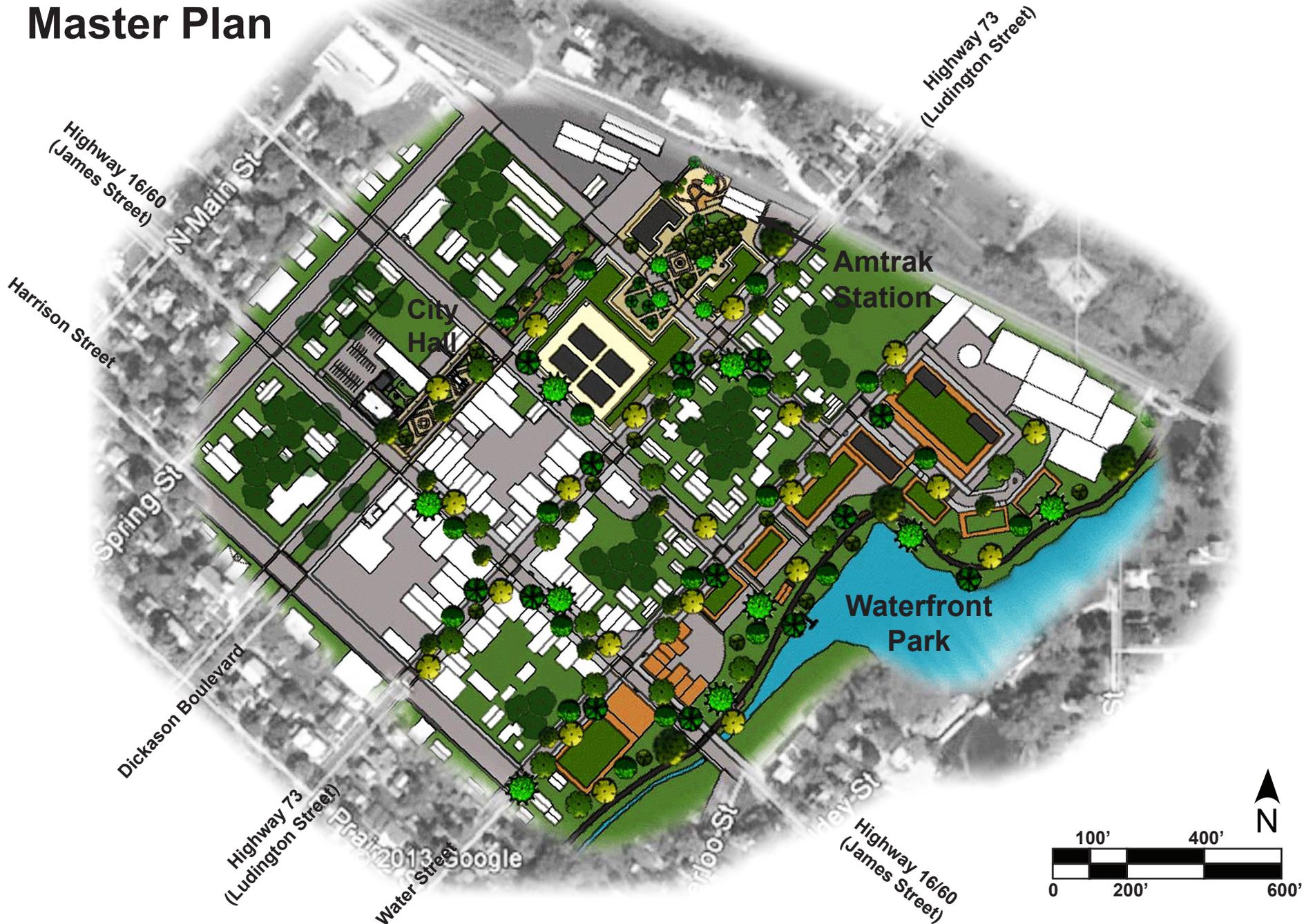
N
NTS



Refined Concept for the Waterfront Park

From my first initial concept plans I moved on to inputting my ideas into AutoCAD and utilizing several other software programs to bring my visions to life. Here you can see the shape of my sites taking place in preparation for the final Master Plan.

Master Plan



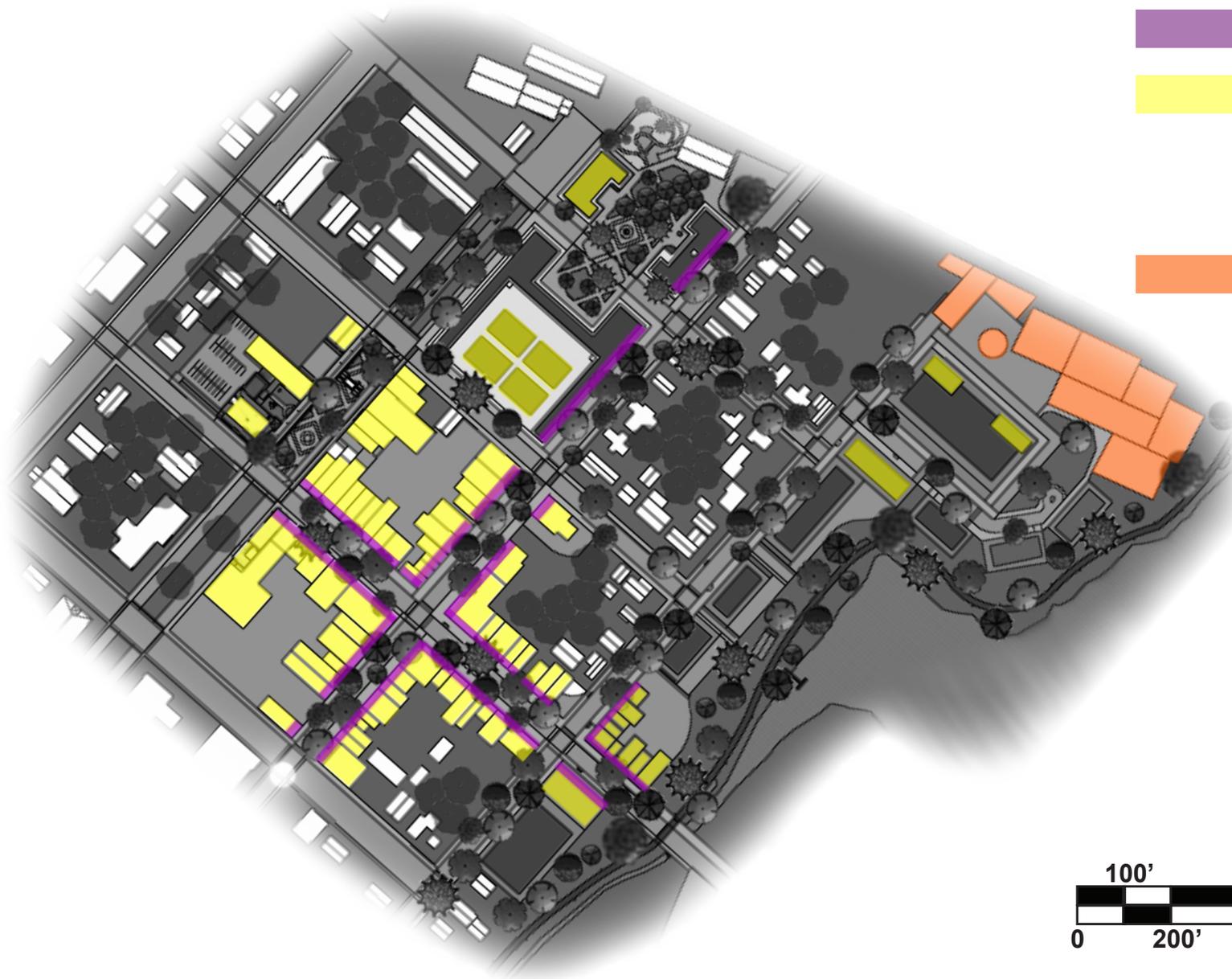


For the overall Master Plan for the downtown area of Columbus, my focus was to address each of my project goals to improve the overall aesthetics, energy efficiency, and layout of the downtown area.

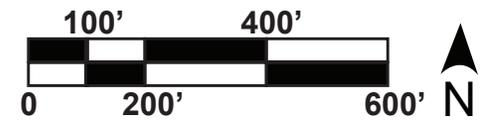
In working with the CDA it was made evident to me that there wasn't any one area that was in need of redevelopment, but numerous locations throughout the downtown. From this, I grouped the different areas into three specific groups in order to tackle the issues at hand. The three areas that I worked on were the area on Dickason Boulevard near City Hall, the blocks adjacent to the Amtrak Station, and the entire area East of Water Street between the Amtrak lines to the North and Harrison Street to the South.

In the following pages, I will break down each area into more depth and highlight the beauty and potential that can be reintroduced to the downtown area.

Proposed Renewable Energy Layout



-  **Wind Energy**
-  **Solar Energy**
(Both solar thermal and solar photovoltaic arrays)
-  **Biofuel Energy**



After working with my research topic, analyzing wind and sun patterns, and speaking with numerous sources in the solar, wind, and biofuel energy fields, I came up with several locations throughout the downtown for three different types of renewable energy that Columbus could implement along with the rest of the downtown Master Plan.

Since the downtown area currently doesn't have any street trees that are taller than the buildings, there are many opportunities to retrofit existing buildings to hold solar panel arrays of both types. Precedents set in Madison of putting solar panel arrays on the roofs of historic buildings should help to establish rapport for implementing solar options throughout the downtown, and even on historical buildings. Buildings that I am proposing to construct should theoretically be easier to implement because there is no need to worry about the structure and integrity of the building being compromised. Solar panels would be beneficial on almost

any roof in the downtown area, and would remain unseen due to the height of the buildings they would be on.

When people think of wind energy, they automatically picture giant wind turbines out in the middle of a field. While these images are normally what you would see with regard to wind energy, I propose to use mini turbines produced by JLM Energy that could be more of a decorative feature than an eyesore, as seen in the picture below. Installed in the downtown area, these could provide a unique, distinguishing feature to Highways 73 and 16/60. These two streets receive the most traffic in the downtown area, and the opportunity to harvest

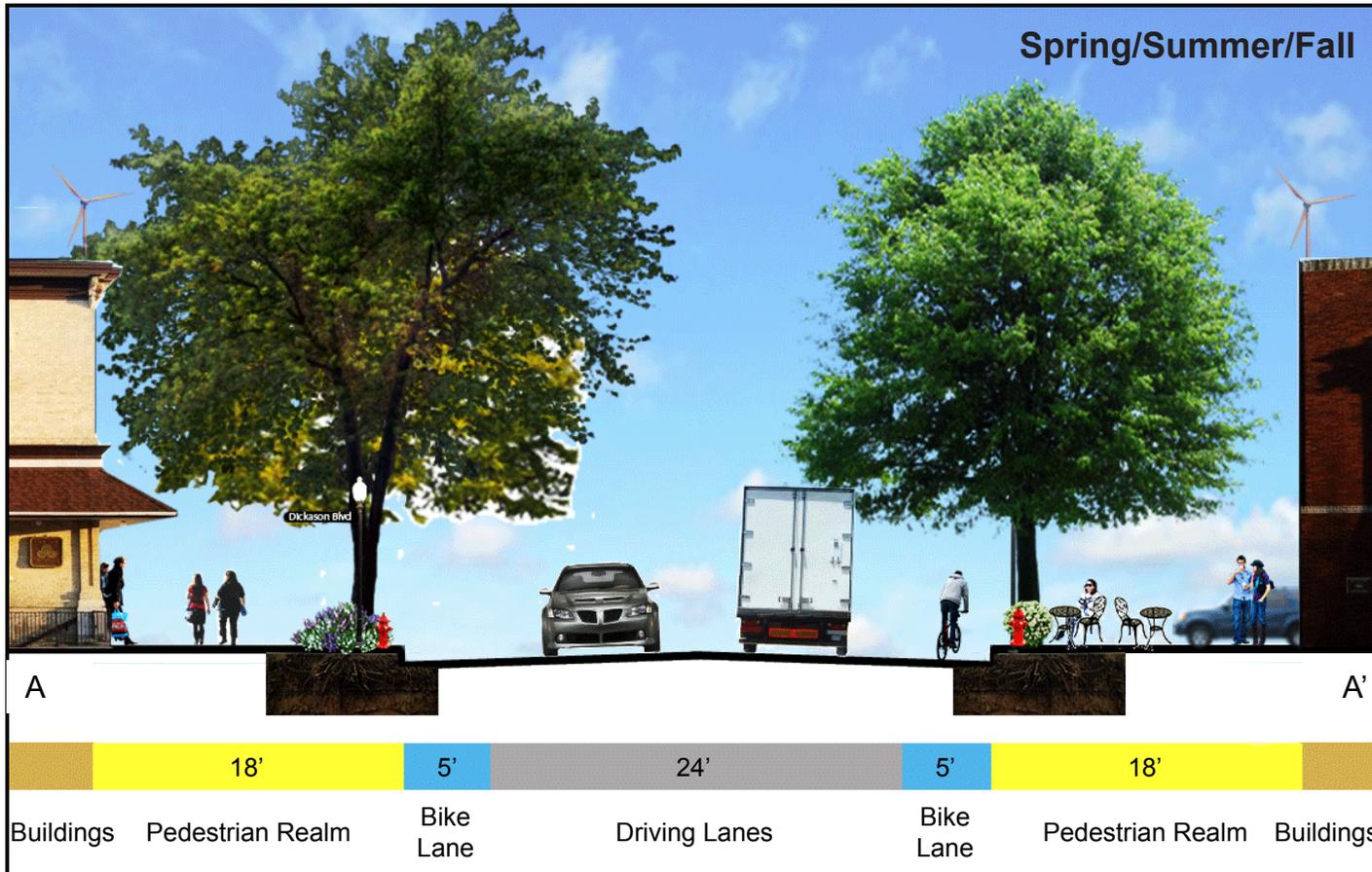


Zephyr wind turbine array

the energy from the movement of vehicles already traveling through the area would significantly increase the amount of renewable energy inputted to the city's energy network.

In addition to wind and solar energy, I propose to retrofit the existing water management infrastructure at the northeastern portion of my site to make it a biodigester. The Hydro Street Brewery has mentioned that they might be interested in expanding their operations to a second location near the Antique Mall (which would stay where it currently is). I spoke with a specialist in Brookfield, Wisconsin, about the possibility of utilizing the byproduct of the brewing process, and he seemed very positive in his explanation that yes, it is indeed possible to do. In this case, there would be more than one beneficiary: the brewery would have a way to dispose of its byproduct, and the city would add to their renewable energy totals to move even closer to their goal of being as energy independent as possible.

Option 1- Completely remove downtown parking



Enhancement Option 1 Changes:

- Widening the area to be used by pedestrians
- Addition of street trees and other plantings
- Bike lanes in both directions
- Enhancing wayfinding through signage

Benefits:

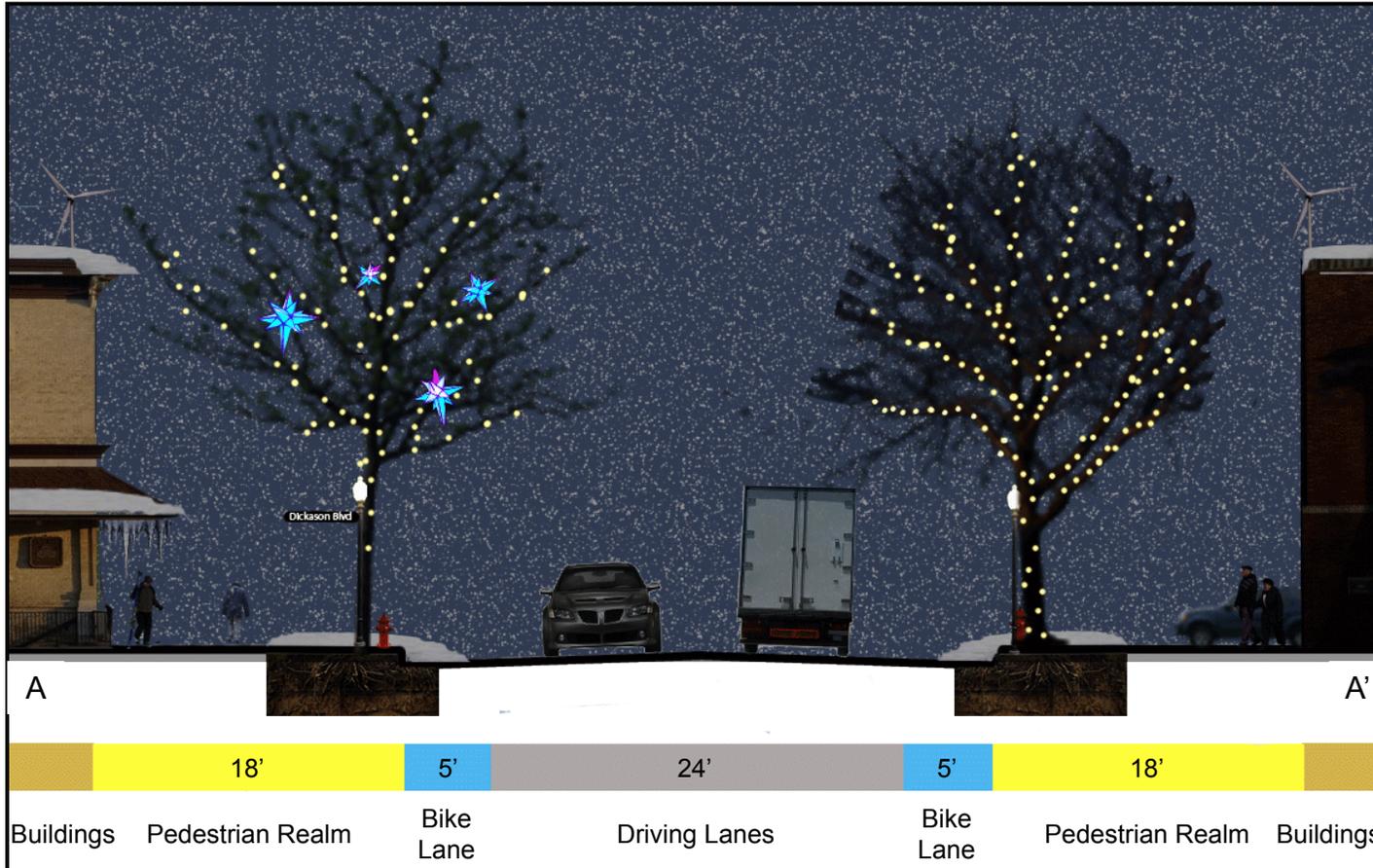
- Makes the downtown area more walkable
- Addition of bike lanes allows for alternate methods of transportation
- Bikeability and walkability improve overall community health
- Bike lanes can double as bus or shuttle location stops
- Solar LED streetlamps reduce energy footprint of Columbus

Almost 100% of the time, people are healthier when they get daily exercise. For that reason, I propose the idea of making the downtown area of Columbus completely walkable

by cutting out all of the parking and relocating it to the Empire Plaza Parking Ramp, which will be pointed out further in my Site Plan to on pages 44-45. The images seen (Continued)



Winter



Enhancement Option 1 Additional Benefits:

- Makes the downtown area safer to walk in poor weather (pedestrians are farther away from traffic lanes)
- Wider roadways mean snow won't be piled up in driving lanes
- Bike lanes can still be cleared for bus or shuttle stops
- Solar LED streetlamps reduce energy footprint of Columbus even more in winter months

above show cross-sectional views of what Highways 73 and 16/60 would look like once improved. This option significantly increases the pedestrian

realm and adds bike lanes in each direction, which follows my project goal of implementing the Complete Streets Initiative. Please also note

the location and size of the wind turbines, which are placed based on the proposed renewable energy layout on pages 38-39.

Option 2- Remove only one parking lane per street



Enhancement Option 2 Changes:

- One lane of parking
- Widening the area to be used by pedestrians, though not as much as Option 1
- Also includes addition of street trees and other plants
- Bikelanes are still incorporated in both directions
- Signage would still be improved

Benefits:

- Same as those already mentioned for Option 1
- Parking lane allows for disabled spaces throughout downtown and several short-term spots as well

While I love the idea of making a community completely walkable and free of parking, I acknowledge that in this day and age, it is not completely feasible. For that reason, Option 2 includes one lane of parking on each street, in locations to be determined

by the CDA. This added lane of parking would call for a slightly smaller pedestrian realm on both sides of the road, but would still allow for bike lanes in both directions. Driving lanes in both options would remain the size they currently are. This option is best

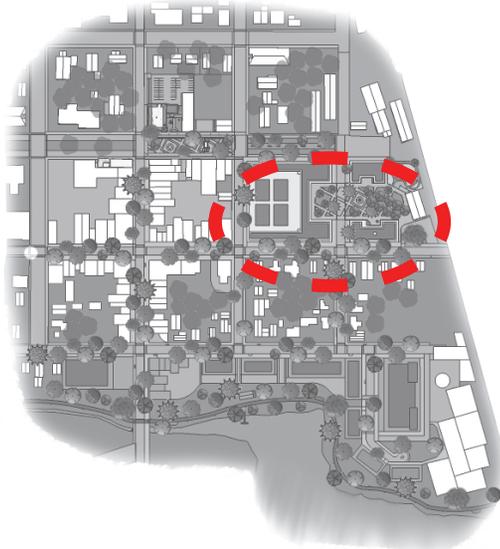
for accomodating short-term and disabled parking spaces throughout downtown. The additional parking removed from downtown would be placed in the Empire Plaza Parking Ramp.



Hwy 73 looking downtown (note parking lane on far side)

Empire Plaza





Empire Plaza is located on the Northern portion of my Master Plan, and is adjacent to Hwy 73. The Empire Builder Amtrak line is the only one that runs through Columbus, and it has been an integral part of the city for over 75 years. To pay tribute to this history, and to hopefully attract more funding and visitors from the Amtrak, I named my Plaza after this line.

As you can see in the image to the left, there is a strong grid pattern framed by the walkways on the site, which

is reminiscent of the windows of the Amtrak station, which I mentioned as one of my inspirations on page 29. The other thing that inspired me was the pattern of the Crane Tile bricks, which is portrayed through the large gathering area with a fountain at the center of the site, just off of Church Street. Both of these unique characteristics are meant to tie back to the Amtrak station once again, in homage to all the line has meant to the city since it began running through town in 1929.

In addition to the structured area of the main plaza, I have also included an area for natural discovery, where I envision both children and adults wandering through the grasses and exploring their surroundings. On top of being a fun area to get off the beaten path, this area could also be used for educational purposes. With proper signage, it would be quite simple to transform the area into a learning center for plants and wildlife that can be found within the area.

Adjacent to the plaza itself, I propose installing three buildings for both mixed use and residential applications. As mentioned in my street enhancement pages from earlier, the building on the left of the picture would include three levels of parking, which could house roughly 300 vehicles. This would help offset the parking that I am proposing to remove from the downtown streets and also provide parking spaces for all the the residents living in the apartments adjacent to the plaza.

The mixture of building types and sizes would house a variety of retail and restaurants not currently located in the downtown. In the large building to the south of Church Street, for example, it would be possible to include a grocery store, and could even hold a new location for the Columbus public library and several rooms to create a boutique movie theater. The downtown area is in desperate need of a new, exciting atmosphere, and I believe that this type of unique mixed-use development could help provide just that.

Empire Plaza -Perspectives



Church Street Entrance to Empire Plaza's northern portion



Gathering area near Amtrak station with adjacent restaurant

While plan views are great to show spatial distribution, it is much easier to envision a space when it is seen as a picture. Seen on this spread are several images of what I envision for the plaza space in the downtown area.

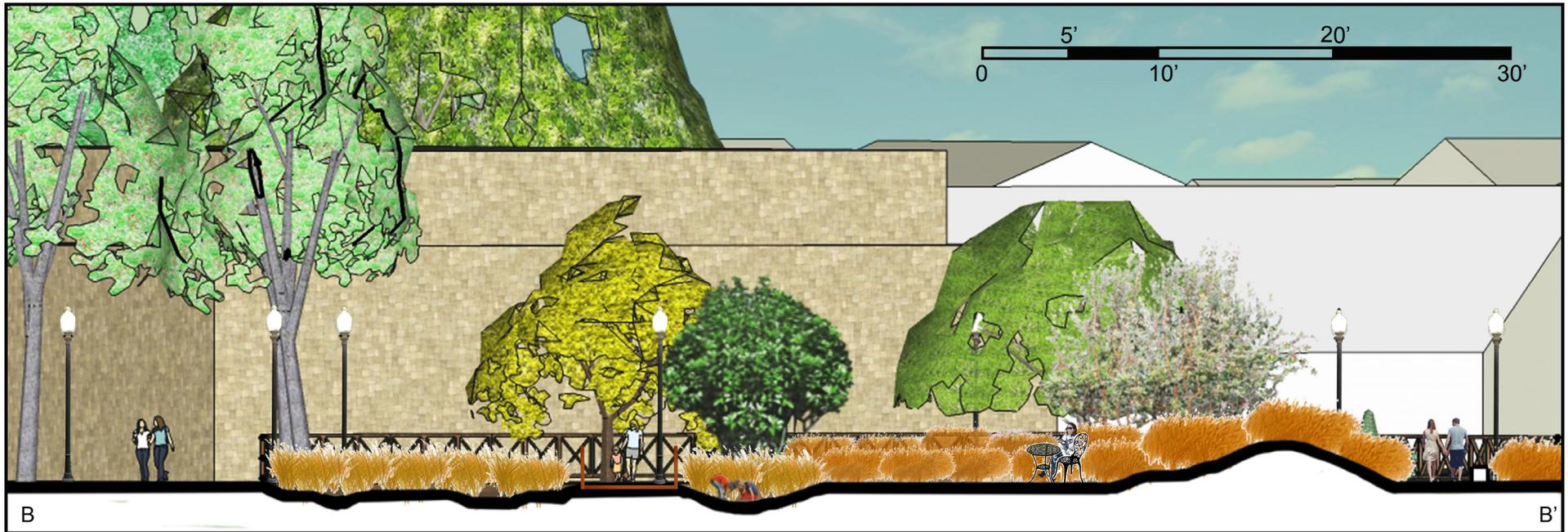
Here you can see that the colors of the pavers are reminiscent of the Cream City brick that is used in a large number of buildings in the downtown. The red accents once again tie to the Crane Tile brick that was mentioned earlier and also tie together with the colors found in the brickwork of the City Hall facade. This space is meant to welcome a wide variety of users and mesh well with the architecture and visual quality already seen throughout the downtown area.

On the facing page is a slightly better view of the types of roof systems I would recommend for the plaza- those being solar panel arrays in some areas and intensive green roof on others so that residents of these buildings have private green space for themselves.



Aerial View of Empire Plaza

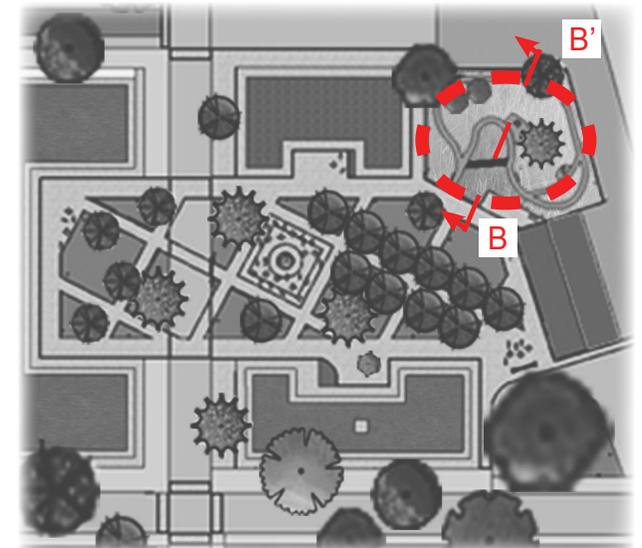
Empire Plaza -Natural Discovery Area



Section View of Natural Discovery Area

As mentioned earlier, the Natural Discovery area is meant to be an area free from the structure and hustle-and-bustle of the main portion of the plaza. Here, users can get away from reality for a bit and become closer to nature, even if just for a five minute walk around the area. I want users of all ages to feel free to wander through the grasses and observe things “off the beaten path.”

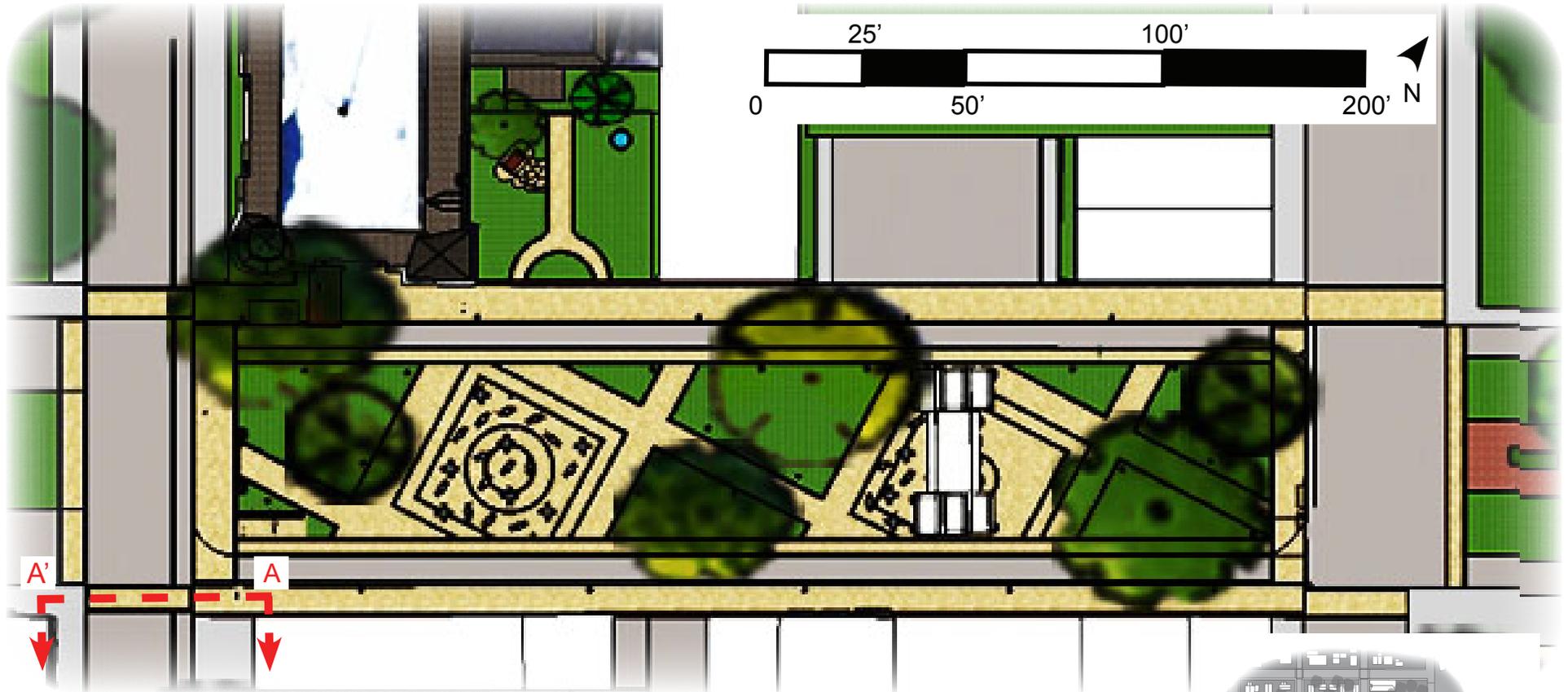
In the renderings above and on the facing page, you can see that the tall grasses are meant to provide seclusion and a bit of mystery for those willing to explore them. An educational component is a quick and simple addition to the area by installing signage to inform users about the plant (and possibly some bug and animal) species on site.





View of the Natural Discovery Area from Empire Plaza

Dickason Boulevard Site Concept



While not my site-specific plan for this project, I felt that it was imperative to create a concept for Dickason Boulevard. Being one of the goals specifically given to me by the CDA, it was clear to me that some type of plan needed to be created.

My site concept for Dickason Boulevard is a continuation of the patterns and shapes already described at Empire Plaza, which is meant to unify these two key areas of the downtown. The two locations are only a block apart, and are connected by a greenway, which starts on right side of the plan above.





Aerial view of the Dickason Boulevard re-design

Dickason Boulevard Open Space

Purposes:

- Provide open space in the heart of downtown
- Create additional seating for nearby restaurants and shops

Current Uses of Adjacent Buildings:

- City Hall
- Community Center
- Colonial Carriage Works
- Hydro Street Brewery
- Farmers and Merchants Bank, etc.

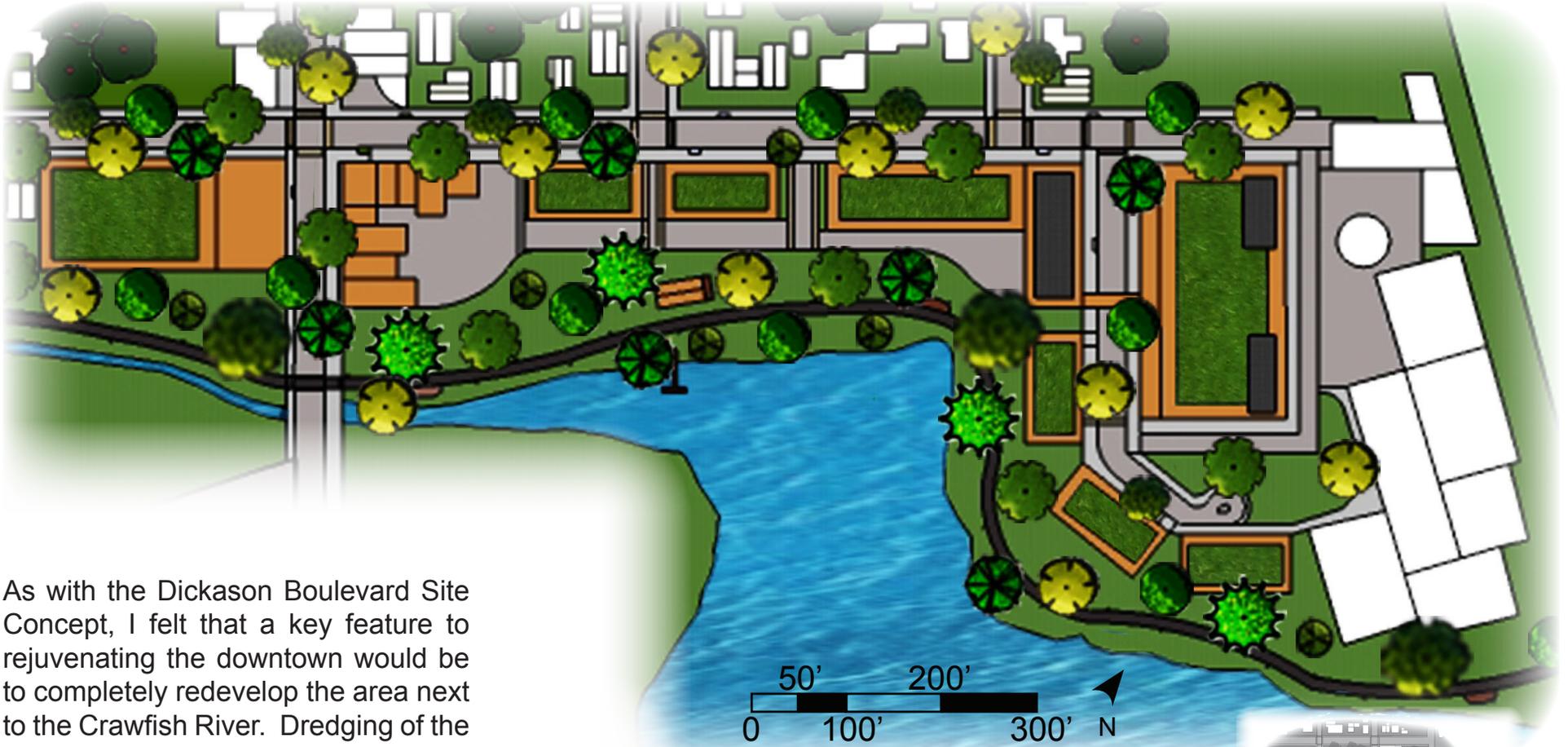
Connections To:

- Hwy 16/60
- Empire Plaza
- Columbus bus route
- Complete Streets bike routes

Possible Uses:

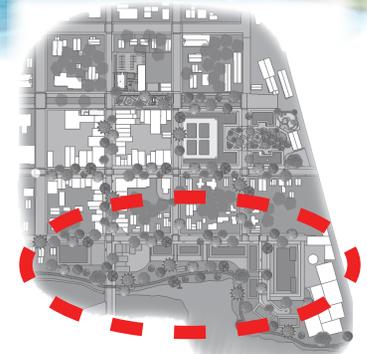
- Concerts
- Festivals
- Farmer's Market
- Weddings
- Other Celebrations

Waterfront Park Site Concept



As with the Dickason Boulevard Site Concept, I felt that a key feature to rejuvenating the downtown would be to completely redevelop the area next to the Crawfish River. Dredging of the current low area and implementation of the mixed use and residential buildings would require a significant amount of fundraising, but I feel that the benefits of having a waterfront area for both residents and visitors will enhance the area immensely.

A multi-use trail would connect the park to other parks nearby, and exercise hubs with outdoor fitness equipment will be another way to increase the health of its users.





Aerial view of the Waterfront Park re-design

In addition to a trail, I propose building a pavilion that can be used for rental of game and activity equipment, and could be rented out for events when the need arises. A small beach would also enhance the park and provide a location from which to launch small watercraft, such as canoes or kayaks.

Adjacent to the park is significant room to build mixed-use buildings, apartment complexes, and even a hotel and conference center. Though

it would be fairly small (similar to the size of the Monona Terrace in Madison), the Amtrak line has been known to host a yearly conference in a town that has a station. This would provide opportunities for additional funding and at least one guaranteed client for the facility.

Park by Crawfish River

Purposes:

- Utilize natural area that is currently very underused
- Bring more green space to downtown
- Give residents in new apartments easy access to recreational space

Potential Building Uses:

- Mixed use + Residential
- Conference Center + Hotel
- Residential
- Brewery's second location
- Parking

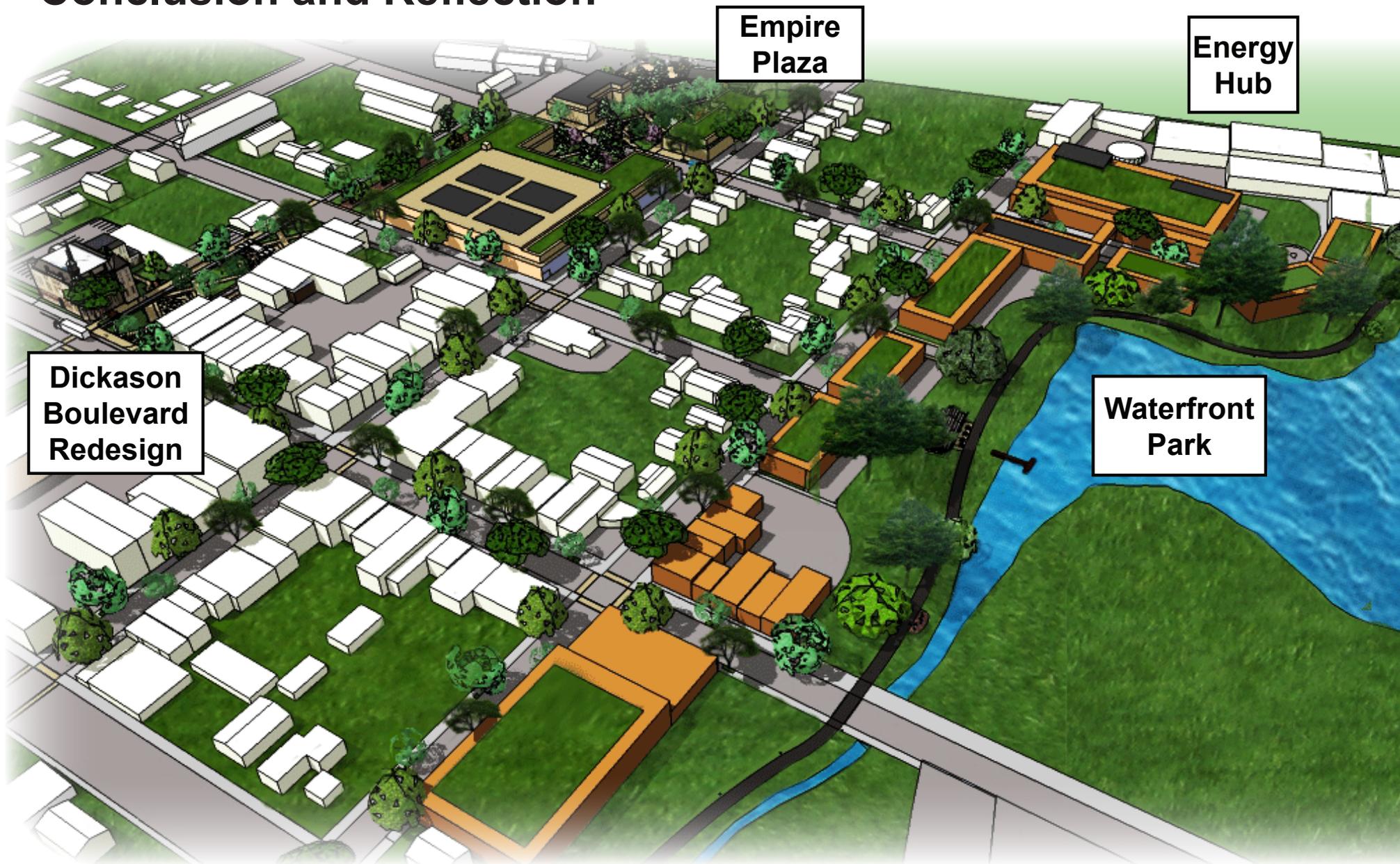
Connections To:

- Fireman's, Meister, and Rotary Parks
- Complete Streets bike routes

Possible Uses:

- Conference center breaks,
- Bicycling, exercise hubs, swimming, canoeing/kayaking/paddleboating, recreational fishing, etc.

Conclusion and Reflection





Conclusion

Columbus is a great little town in the heart of Wisconsin, so it is only fitting that the central portion of the city be as vibrant and welcoming as it had been in the past. Through numerous street enhancements, current building rejuvenation, and the construction of new mixed-use developments and open space, I believe that the city can be returned to the former grandeur that helped attract the producers of “Public Enemies.”

The city and CDA need to realize that this is a plan that will take tens of years to implement, but has the potential to significantly improve the quality of life for residents and draw visitors from many different user groups. If Columbus is to be a thriving, bustling city for many years to come, success will come from strengthening the pulse of the city, which should be downtown (not in ever-expanding areas around the city). Walkable, vibrant downtown areas may seem like a foreign concept in a town the size of Columbus, but with time and continued population growth, citizens will welcome this area and be proud to call Columbus their home.

Reflection

Working on this project throughout the last nine months has helped me grow both as an individual and as a Landscape Architect. The challenges I faced with regard to design development and technical plans were tough at times, but in the end have made me realize just how well-prepared I am for the workforce after graduation.

As the year progressed, I was continually changing and expanding the scope of my project, especially in the design of my site plan at Empire Plaza. In addition to changing the design of the plaza, I had to re-calculate all of my grading and stormwater calculations, which was frustrating at the time, but was a great reminder of the fact that projects can change and it is up to me to rise to the occasion and create an even better design than what I previously had.

As I attended the presentations of my classmates’ projects this week, it amazed me to realize the progress that I had made throughout the year and my career- from having no clue where to start, to creating graphics that I could never have imagined three years ago. This project isn’t just a tribute to myself, but to my education as well, which makes me proud to be a Badger, and even prouder to say that I am now a Landscape Architect.

Press Release

CDA Hears Plan for Downtown Renewal

February 23, 2013 8:00 am

By PAUL SCHARF Editor

The community development authority heard a report on Monday night from Stacey Brochtrup, a senior majoring in Landscape Architecture at the University of Wisconsin-Madison, who spoke about her senior capstone project on the redevelopment of the Columbus downtown.

The title of her thesis is, “An Opportunity for Urban Renaissance.” It deals with numerous topics including renewable energy, the historic downtown atmosphere and transportation.

Brochtrup, who is originally from Reedsville, has been working on this project since September under the guidance of former city administrator Boyd Kraemer and director of economic development and energy sustainability Steve Sobiek.

She said the basic idea of her plan is to formulate “the idea of trying to bring life to the downtown. It’s slowly becoming dormant, and something needs to be done to liven it up, and maybe one visionary investment will change things.”

“I have always been attracted to urban settings,” she said. “I’m trying to incorporate as many aspects of pieces that could potentially be implemented in Columbus. I know it’s not going to happen tomorrow or next year, but it could hopefully happen in the future. I’m looking more at a 50-year plan.”

The focus of the plan involves transforming the area around the Amtrak train depot. That area would have mixed-use development, including retail stores and restaurants with second-story apartments.

The plan also suggests a waterfront hotel and conference center.

“Columbus has a lot of potential, and if this can (provide) some small ideas for changes for the future, I think I have done my job,” Brochtrup stated. “I really love this project.”

She presented an extensive multi-media presentation detailing her plan, including proposals for a parking garage and the re-design of the downtown. The presentation may be accessed through her website: <http://staceybrochtrup.wix.com/home>.

Brochtrup’s goal is to find a job in landscape architecture with a focus in urban development. The city will receive a copy of her capstone document at the end of the semester.

“We look at the next economic frontier, which is downtown,” said Sobiek. “You have got to start with a plan.”

“This plan will create possibilities for future redevelopment that could be incorporated into a future tax incremental finance district,” he stated. Sobiek said that developer incentives could be among the future possibilities for the downtown.



Letter of Receipt



*Office of Economic Development and Energy Sustainability
City of Columbus*

April 30, 2013

To whom it may concern:

As Economic Development Director for Columbus, I worked with Stacey Brochtrup in 2012 and 2013 as she developed a UW Department of Landscape Architecture Capstone Project for Columbus.

I applaud her vision, leadership and hard work that I have seen exhibited in a number of ways.

Stacey's knowledge of land use, as well as redevelopment tools and assets, allowed her to expeditiously work in lockstep with the City in developing the downtown Columbus Capstone project.

Her dedicated, hard working, organized and professional nature made Stacey a joy to work with.

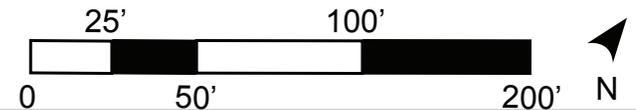
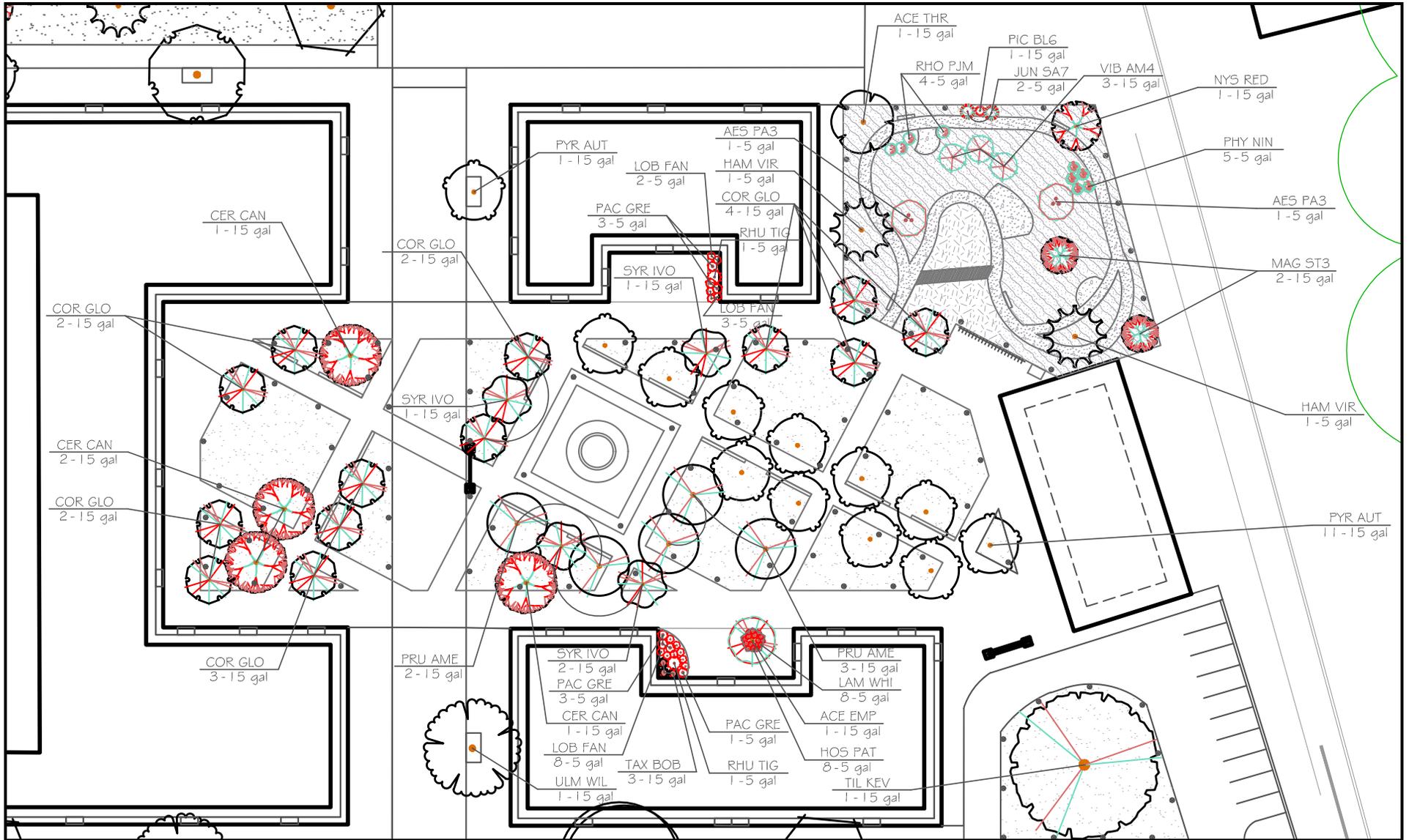
In summary, Stacey brought a focused passion, commitment and professionalism to the Columbus Capstone project. This resulted in a valuable downtown redevelopment plan that will greatly benefit Columbus!

Sincerely,

A handwritten signature in black ink, appearing to read 'Steven Sobiek', written in a cursive style.

Steven Sobiek
Director, Economic Development and Energy Sustainability

Empire Plaza



SITE PLANTING PLAN

PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT.	QTY
	ACE EMP	<i>Acer palmatum</i> 'Emperor' / Emperor / Japanese Maple	15 gal	1
	ACE THR	<i>Acer triflorum</i> / Three Flowered Maple	15 gal	1
	CER CAN	<i>Cercis canadensis</i> / Eastern Redbud	15 gal	4
	COR GLO	<i>Cornus mas</i> 'Golden Glory' / Golden Glory Cornelian Cherry	15 gal	15
	HAM VIR	<i>Hamamelis virginiana</i> / Common Witch Hazel	5 gal	2
	MAG STB	<i>Magnolia stellata</i> / Star Magnolia	15 gal	2
	NYS RED	<i>Nyssa sylvatica</i> 'Red Rage' TM / Red Rage Black Gum	15 gal	1
	PIG BL6	<i>Picea pungens</i> 'Blue Totem' / Blue Totem Colorado Spruce	15 gal	1
	PRU AME	<i>Prunus americana</i> / American Plum	15 gal	5
	PYR AUT	<i>Pyrus calleryana</i> 'Autumn Blaze' / Autumn Blaze Pear	15 gal	12
	SYR IVO	<i>Syringa reticulata</i> 'Ivory Silk' / Ivory Silk Japanese Tree Lilac	15 gal	4
	TIL KEV	<i>Tilia tomentosa</i> Kevin Johnson / Kevin Johnson Silver Linden	15 gal	1
	ULM MIL	<i>Ulmus</i> x 'Morton Glossy' TM / Elm	15 gal	1
SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	SIZE	QTY
	AES PAS	<i>Aesculus parviflora</i> / Bottlebrush Buckeye	5 gal	2
	HOS PAT	<i>Hosta undulata</i> 'Patriot' / Variegated Hosta	5 gal	8
	JUN SA7	<i>Juniperus</i> x pfitzeriana 'Saybrook Gold' / Saybrook Gold Juniper	5 gal	2
	LAM WHI	<i>Lamium maculatum</i> 'White Nancy' / White Nancy Dead Nettle	5 gal	8
	LOB FAN	<i>Lobelia</i> x 'Fan Blue' / Fan Blue Cardinal Flower	5 gal	15
	PAC GRE	<i>Pachysandra terminalis</i> 'Green Carpet' / Japanese Spurge	5 gal	7
	PHY NIN	<i>Physocarpus opulifolius</i> 'Summer Wine' / Summer Wine Ninebark	5 gal	5
	RHO PJM	<i>Rhododendron azalea</i> 'PJM' / Azalea	5 gal	4
	RHU TI6	<i>Rhus typhina</i> 'Tiger Eyes' / Tiger Eyes Sumac	5 gal	2
	VIB AM4	<i>Viburnum opulus americanum</i> / American Cranberrybush	15 gal	3
GROUND COVERS	CODE	BOTANICAL NAME / COMMON NAME	CONT.	QTY
	GCM 1	Ground Cover Mixture / Type 1	seed	20,522 sf
	GCM 2	Ground Cover Mixture / Type 2	seed	7,186 sf
	GCM 3	Ground Cover Mixture / Type 3	seed	1,411 sf

Plant Selection

When choosing plants for my design, I wanted to focus on seasonal color and form of my tree selection, as you can see on the following pages. To highlight the grid structure of the plaza, I created an alley of Autumn Blaze Callery Pears to draw the user into the space from the Amtrak Station and the Lamers bus stop, also in the same vicinity. All tree branches would be kept trimmed to 9 feet so that there is a strong canopy cover, and yet nothing to impede one's view across the plaza. In addition, tall grass mixtures would be used in the Natural Discovery Area to help provide the sense of mystery that I mentioned earlier.

Tree Species



Acer palmatum 'Emperor 1'
Emperor 1 Japanese Maple
Mature Height: 15-25'
Mature Spread: 15-25'



Acer triflorum
Three-Flower Maple
Mature Height: 20-25'
Mature Spread: 15-25'



Cercis canadensis
Eastern Redbud
Mature Height: 20-30'
Mature Spread: 20-30'



Cornus mas 'Golden Glory'
Golden Glory Corneliancherry Dogwood
Mature Height: 20-25'
Mature Spread: 15-20'



Hamamelis virginiana
Common Witchhazel
Mature Height: 15-20'
Mature Spread: 20-25'



Magnolia stellata
Star Magnolia
Mature Height: 10-18'
Mature Spread: 10-15'



Nyssa Sylvatica 'Red Rage'™
'Haymanred' Black Gum
Mature Height: 40-50'
Mature Spread: 30-50'



Picea pungens 'Blue Totem'
Blue Totem Colorado Spruce
Mature Height: 6-8'
Mature Spread: 2-3'



Prunus Americana
American Plum
Mature Height: 15-20'
Mature Spread: 15-20'



Pyrus calleryana 'Autumn Blaze'
Autumn Blaze callery pear
Mature Height: 25-35'
Mature Spread: 20-30'



Syringa reticulata 'Ivory Silk'
Ivory Silk Japanese Tree Lilac
Mature Height: 20-25'
Mature Spread: 15-20'



Tilia Tomentosa 'Kevin Johnson'
Kevin Johnson Silver Linden
Mature Height: 50-70'
Mature Spread: 40-60'

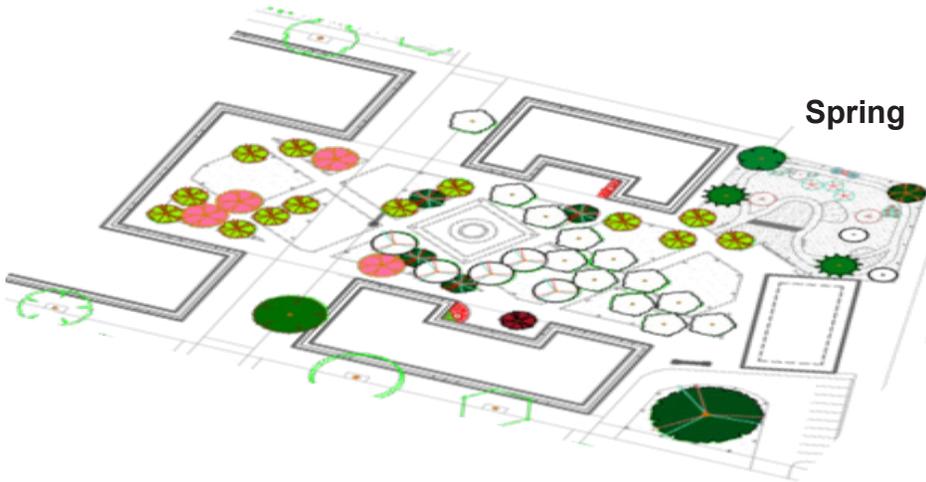


Ulmus x 'Morton Glossy'™
Morton Glossy Elm
Mature Height: 50-60'
Mature Spread: 30-40'

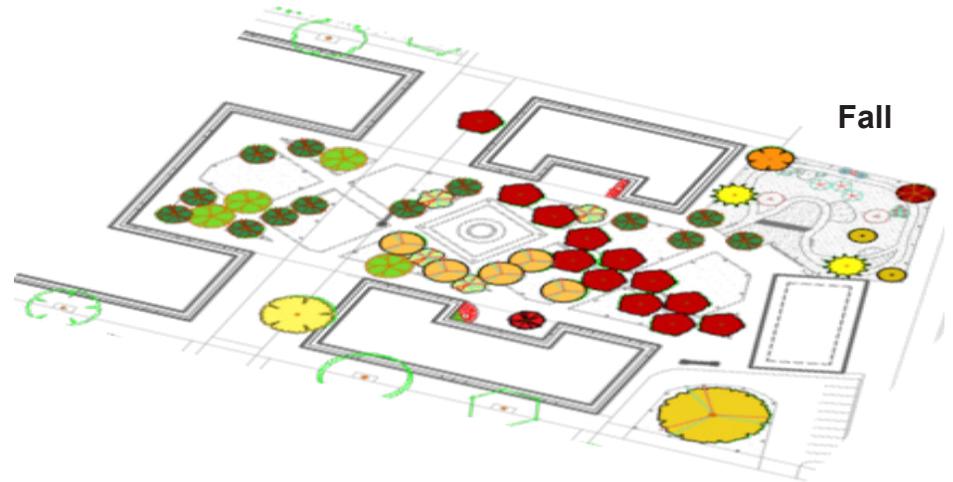
Seasonal Colors



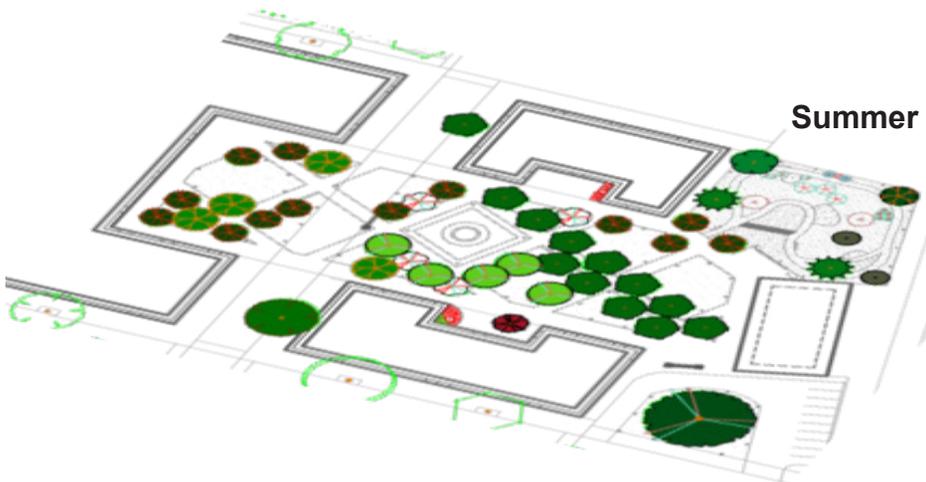
Spring



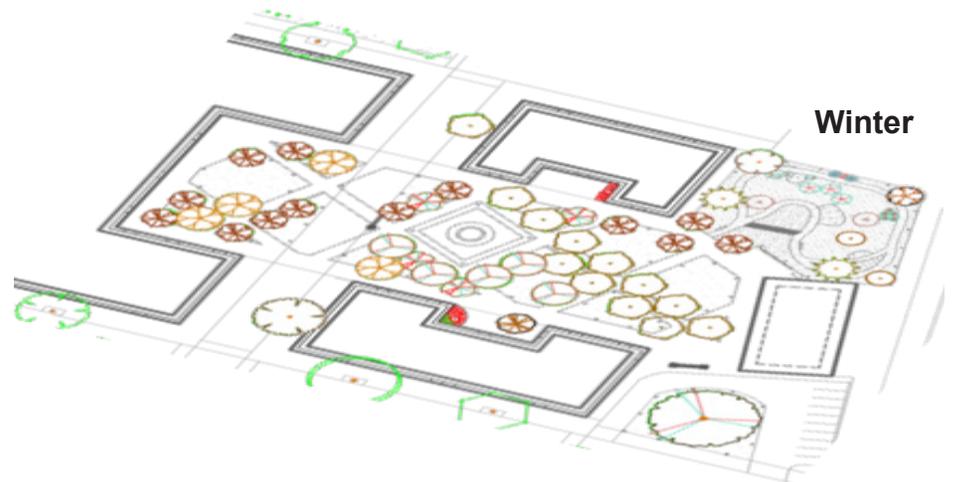
Fall



Summer



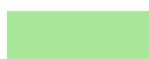
Winter





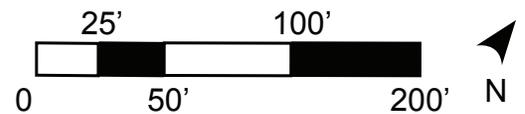
Areas of Cut:

33,165.15 yd³



Areas of Fill:

487.84 yd³



GRADING PLAN

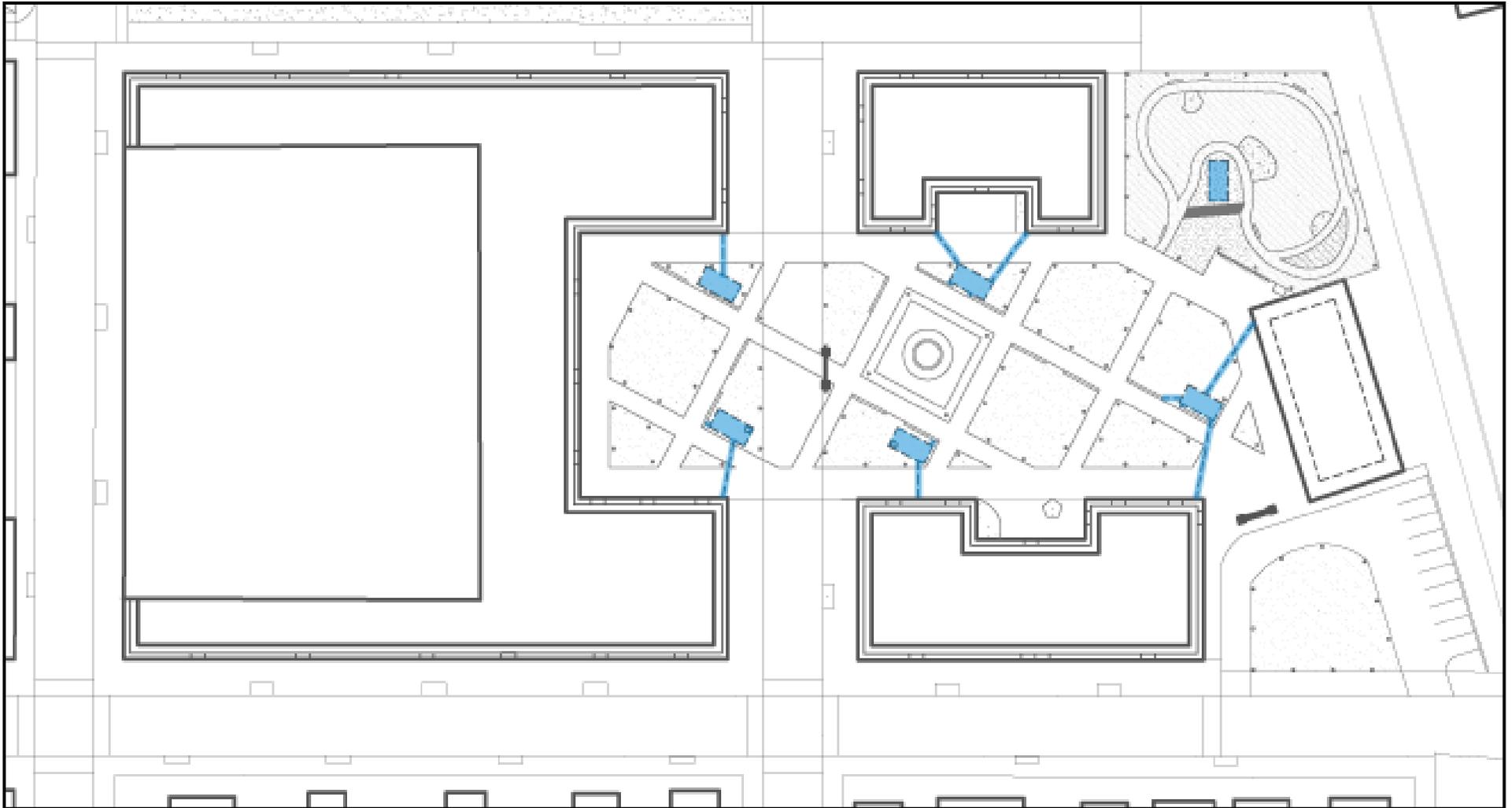
Cut -ft2				Fill -ft2			
	Depth				Depth		
B1	79362	9	714258	B1			
B2	9099	8	72792	B2			
B3	12899	8	103192	B3			
H1				H1	1309	0.50	655
					825	1.00	825
					341	1.20	409
							1889
H2				H2	885	0.75	664
					360	1.00	360
					219	0.75	164
							1188
H3				H3	467	1.00	467
					223	1.00	223
					24	0.25	6
							696
H4				H4	2765	1.00	2765
					1663	1.00	1663
					760	0.75	570
							4998
D1	4980	0.7	3486	D1			
D2	1154	1.5	1731	D2			
D3				D3	235	0.80	188
				D4	2306	1.00	2306
				D5	1885	1.00	1885
				D6	88	0.25	22
Total Cut	895459 ft2			Total Fill	13172 ft2		

Cut- Fill
882287 ft3

33165 yd3

488 yd3

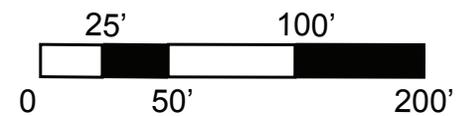
32677 yd3 to export



**Subsurface
Water Storage**

**Storage per unit: 59.25 yd³
6 units on-site**

**Total On-Site Water
Storage Capacity:
71,801 gallons**



Stormwater Calculations

Total Watershed Area: 318612.04 ft²
 7.314325987 acres

Pre-Q Calculations

Sub-Watershed	Coefficient	Intensity	Ft ²	Area (acres)	Q	Volume in ft ³
Concrete	0.95	7.06	110374	2.53	16.99 cfs	231446531.6 ft ³
Buildings	0.98	7.06	73658	1.69	11.70 cfs	(G15*60*60*60*24)
Open Land	0.75	7.06	88202	2.02	10.72 cfs	
Gravel (Compact)	0.7	7.06	46107	1.06	5.23 cfs	
				7.31		
				TOTAL	44.65 cfs	

Post-Q Calculations

Sub-Watershed	Coefficient	Intensity	Ft ²	Area (acres)	Q	Volume in ft ³
Concrete	0.95	7.06	116467	2.67	17.93 cfs	229608144.00 ft ³
Buildings	0.98	7.06	116586	2.68	18.52 cfs	
Open Land	0.75	7.06	38647	0.89	4.70 cfs	(G28*60*60*60*24)
Permeable Pavers	0.28	7.06	31384	0.72	1.42 cfs	
Gravel (Compact)	0.7	7.06	15154	0.35	1.72 cfs	
				7.31		
				TOTAL	44.29 cfs	

Post Q - Pre Q -0.35 cfs

Total Volume Difference -1838387.59 ft³
 (Post-Pre)

Water Storage Capacity	# of Units	Size	Volume	Storage (yd ³)
	6	20x10x8	1,600	59.30

Total Storage On-Site 355.8 yd³

Construction Detail A -LED Solar Streetlamp

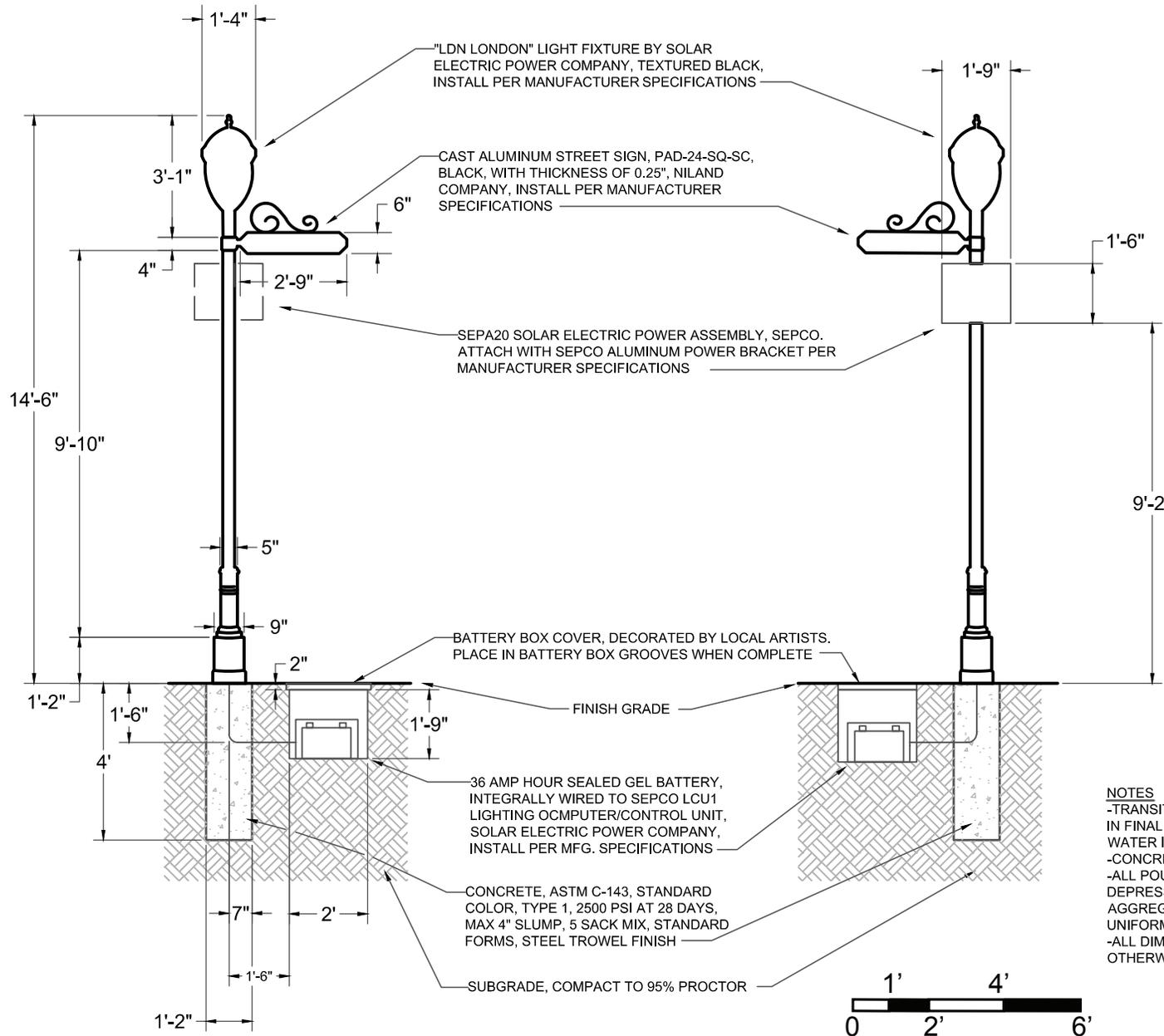


Purposes:

- Provide lighting for downtown streetscapes
- Increases safety
- Improves wayfinding

Benefits:

- Decreases electricity costs
- Makes visitors to the downtown area more comfortable with their surroundings

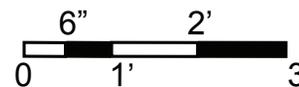
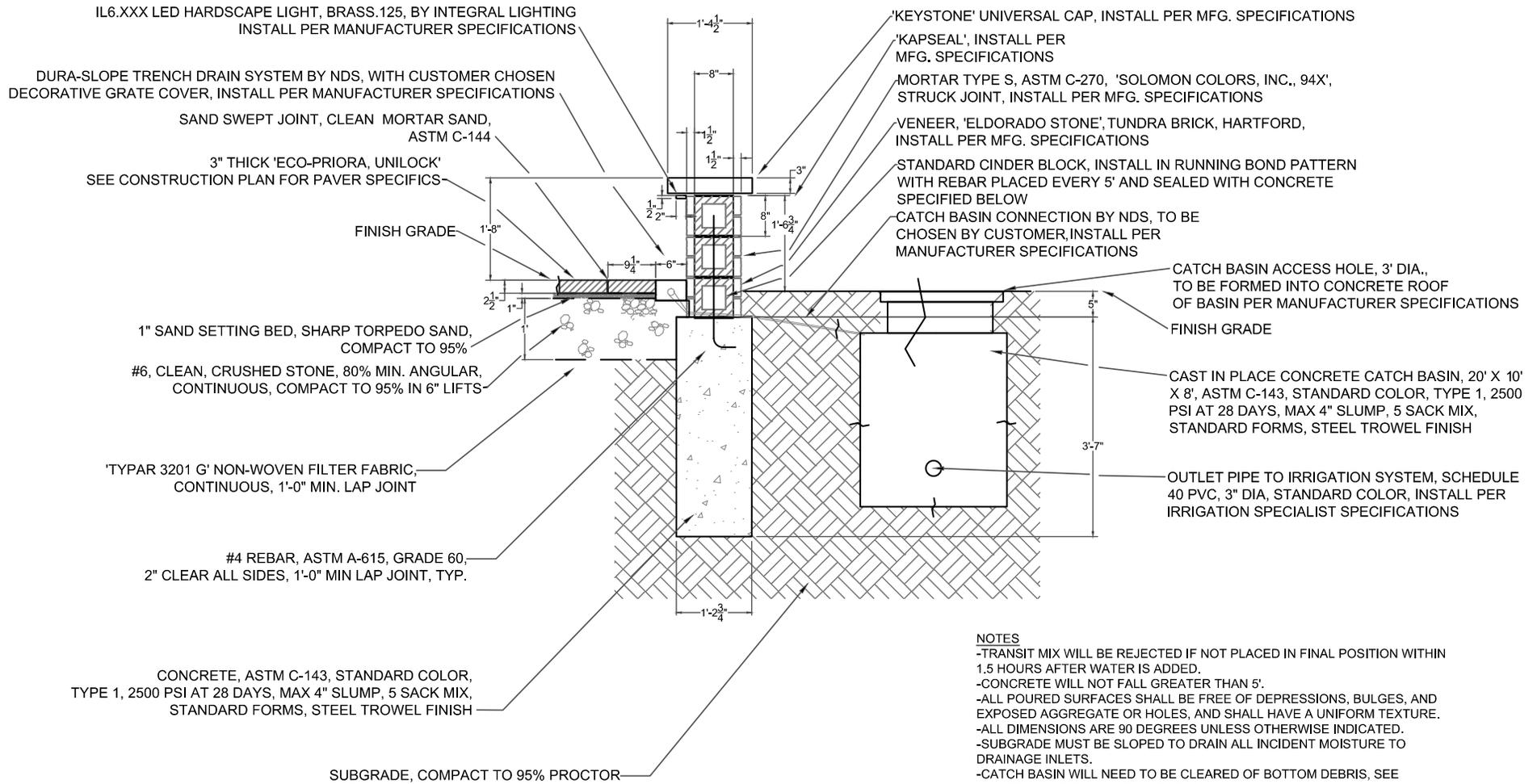


NOTES

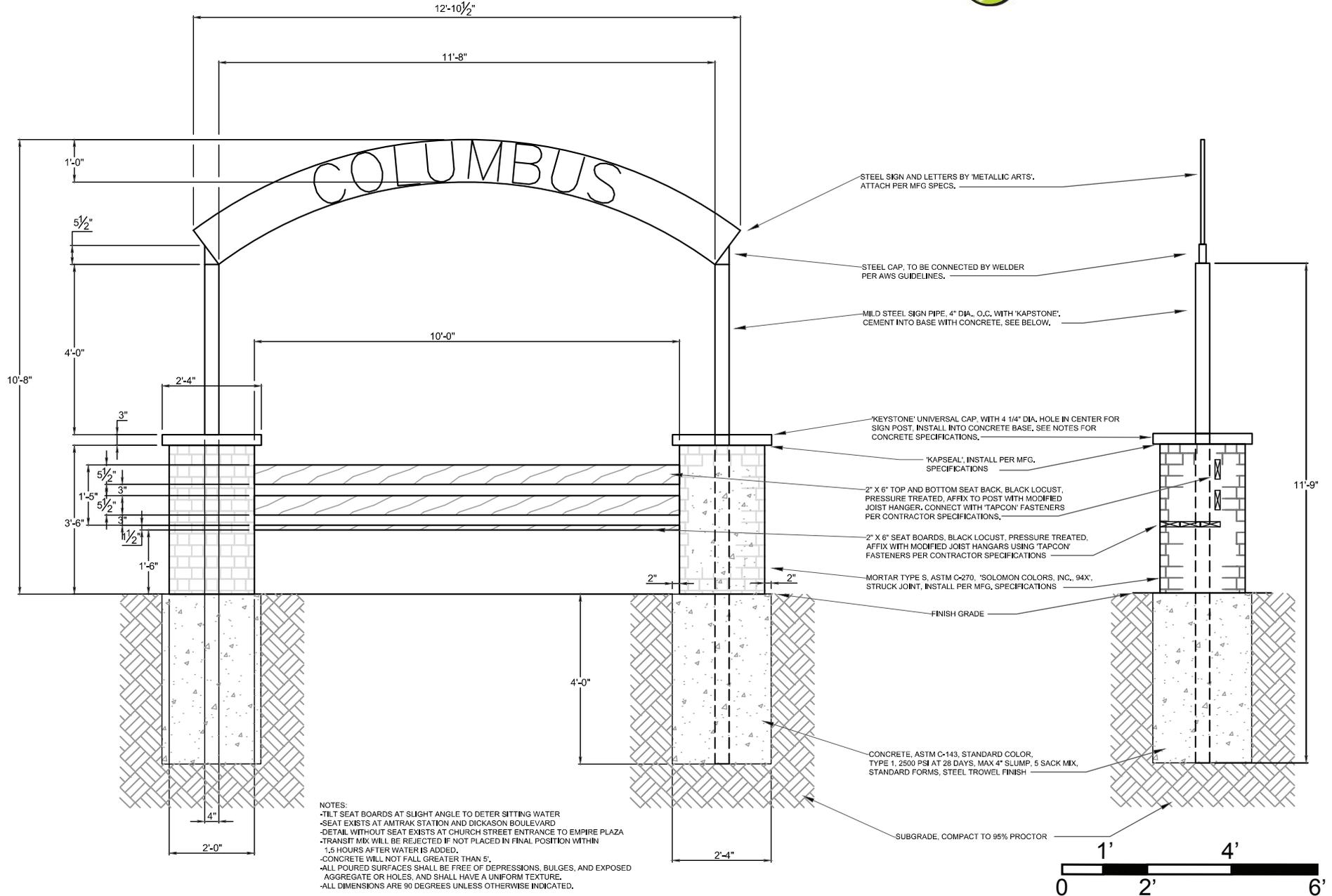
- TRANSIT MIX WILL BE REJECTED IF NOT PLACED IN FINAL POSITION WITHIN 1.5 HOURS AFTER WATER IS ADDED.
- CONCRETE WILL NOT FALL GREATER THAN 5'.
- ALL POURED SURFACES SHALL BE FREE OF DEPRESSIONS, BULGES, AND EXPOSED AGGREGATE OR HOLES, AND SHALL HAVE A UNIFORM TEXTURE.
- ALL DIMENSIONS ARE 90 DEGREES UNLESS OTHERWISE INDICATED.



Construction Detail B -LED Seat Wall



Construction Detail C - Columbus Welcome Arch





Entrance to Empire Plaza on Church Street



Bus stop at Amtrak Station gathering area

Purposes:

- Welcome visitors to public gathering spaces at Dickason Boulevard and Empire Plaza
- Provide seating for those waiting to utilize city or inter-city buses

Construction Phasing Plan



- Phase 1**
Area: Hwy 16/60 from Spring Street to Waterloo Street
Time Frame: Immediately (input during Hwy 16/60 redevelopment)

- Phase 2**
Areas: Downtown Streets, Dickason Boulevard, and Energy Hub
Time Frame: 1-10 years (could overlap time frame with phases 1 & 3)

- Phase 3**
Area: Crawfish River Park
Time Frame: 15-20 years

- Phase 4**
Areas: Empire Plaza, Hotel/Conference Center, and Energy Hub block
Time Frame: 25-30 years

Project Log

	Weekly Hours	Cumulative Totals
Week 1	2	2
Week 2	5	7
Week 3	6	13
Week 4	9.75	22.75
Week 5	11.5	34.25
Week 6	9	43.25
Week 7	10	53.25
Week 8	13	66.25
Week 9	13	79.25
Week 10	11.5	90.75
Week 11	26.25	117
Week 12	25.75	142.75
Week 13	34	176.75
Week 14	14	190.75
Week 15	3	193.75
Total Fall Hours:	193.75	

	Weekly Hours	Cumulative Totals
Week 1	4	4
Week 2	18.5	22.5
Week 3	23	45.5
Week 4	22	67.5
Week 5	27.5	95
Week 6	24	119
Week 7	32.5	151.5
Week 8	34	185.5
Week 9	8.75	194.25
Week 10	17	211.25
Week 11	45.25	256.5
Week 12	39	295.5
Week 13	19.75	315.25
Week 14	33	348.25
Week 15	14	362.25
Week 16	18.25	380.5
Total Fall Hours:	380.5	

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