E JOHN STREET/ OUTER LOOP AREA SMALL AREA PLAN

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9-21-16 DL 10-10-16
9-29-16 DL 12-05-16
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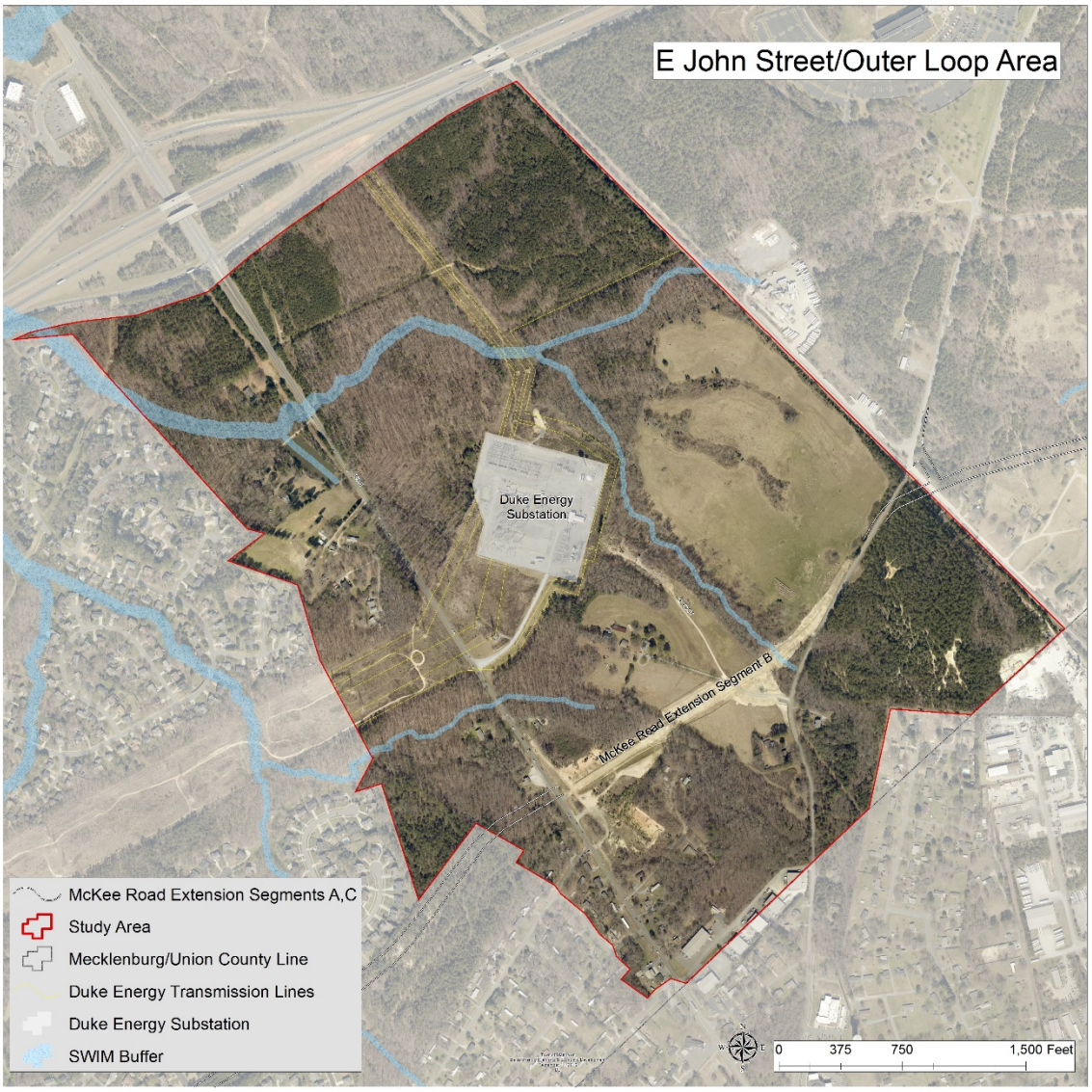
KI 10-6-16

The land area around E John Street, south of I-485 and extending up to the CSX rail line, is one of the last large mostly-vacant sectors within the Town of Matthews. In the near future, this property is expected to become prime for development as E John Street/Old Monroe Rd is improved and widened. Planning the future conceptual build-out of this area therefore must be strategic and intentional. This study builds on the recommendations and strategies for this sector set forth in Chapter 4 of the Land Use Plan. This plan will create a vision for appropriate density of development for the study area and will provide recommendations for implementing the vision. This plan also identifies unique opportunities for development here due to the proximity to established neighborhoods, Central Piedmont Community College, the Mecklenburg County Sportsplex, and the future Entertainment District.



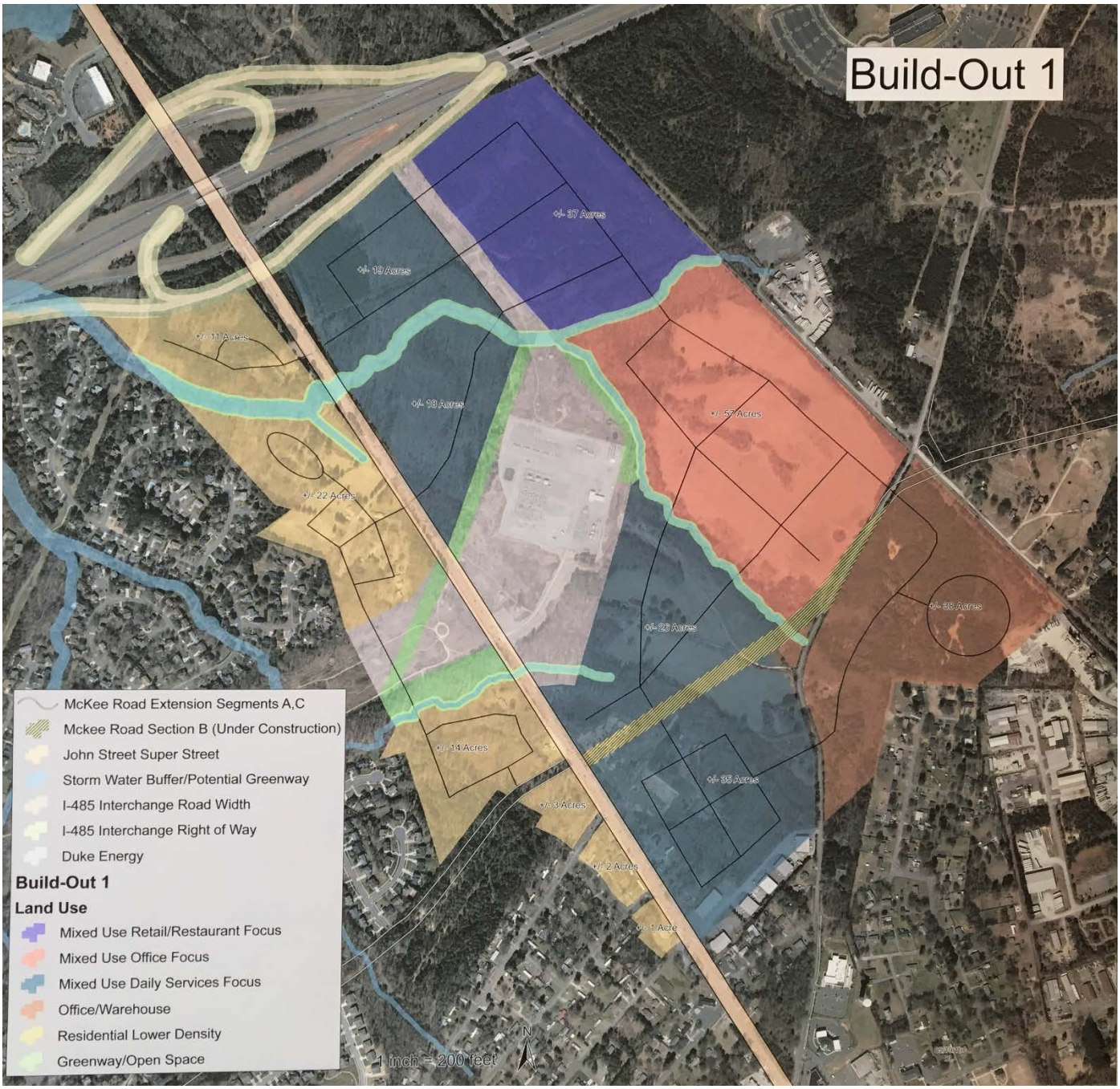
BACKGROUND

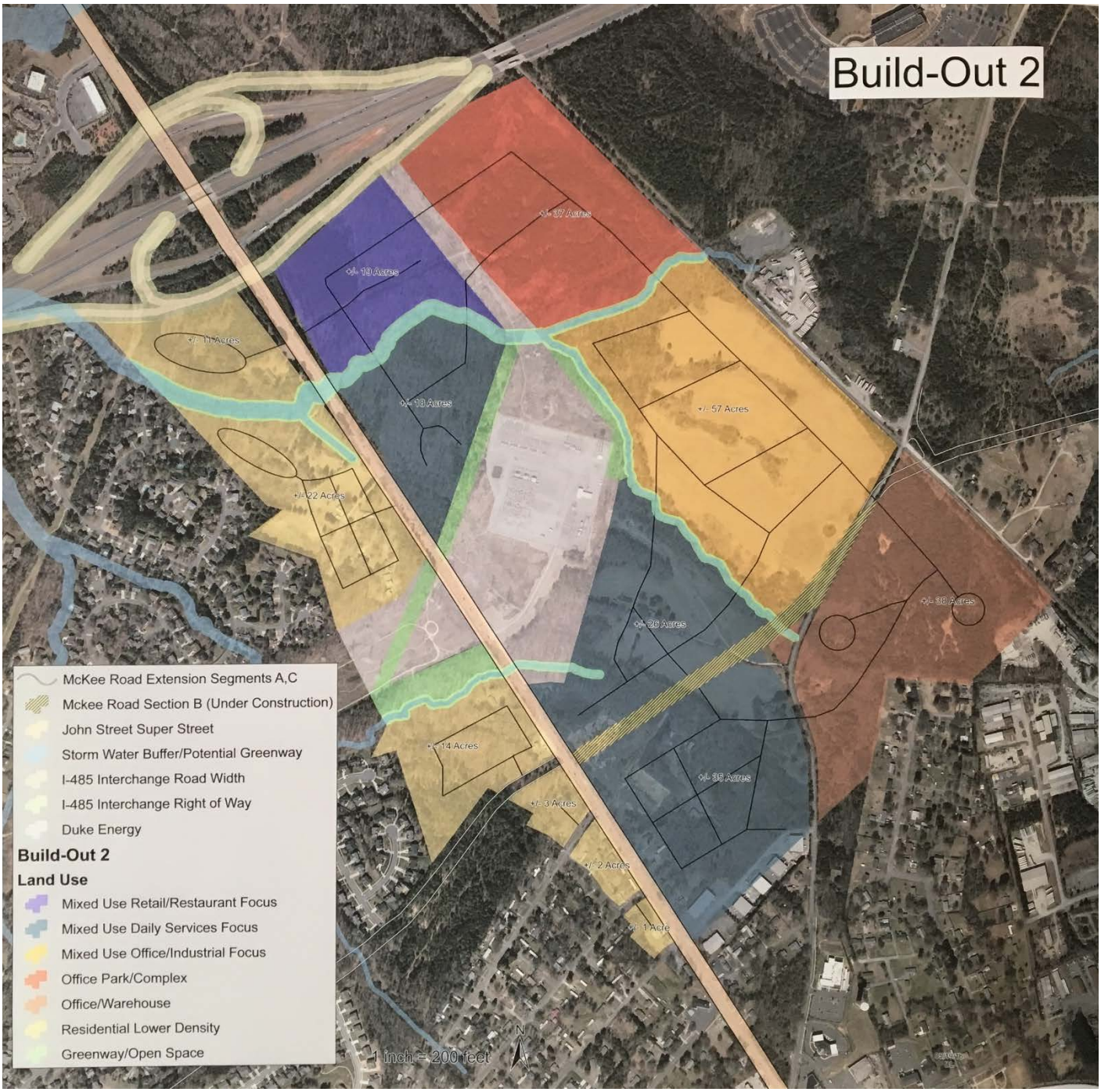
The E John Street/Outer Loop Small Area Plan was determined by the Matthews Town Board of Commissioners in 2015 to be the top priority section of our jurisdiction to have an in-depth study prepared in advance of the expected E John St/Old Monroe Rd widening project. NCDOT intends to widen E John Street from Downtown Matthews to the Mecklenburg-Union County line where the street name changes to Old Monroe Rd as the widening continues to Wesley Chapel-Stouts Road in Indian Trail between the years 2022 and 2024. The Town recognized the need for a more detailed vision of this corridor and its adjacent land area with the impending road project and sought out input from the public and community stakeholders to establish this vision.

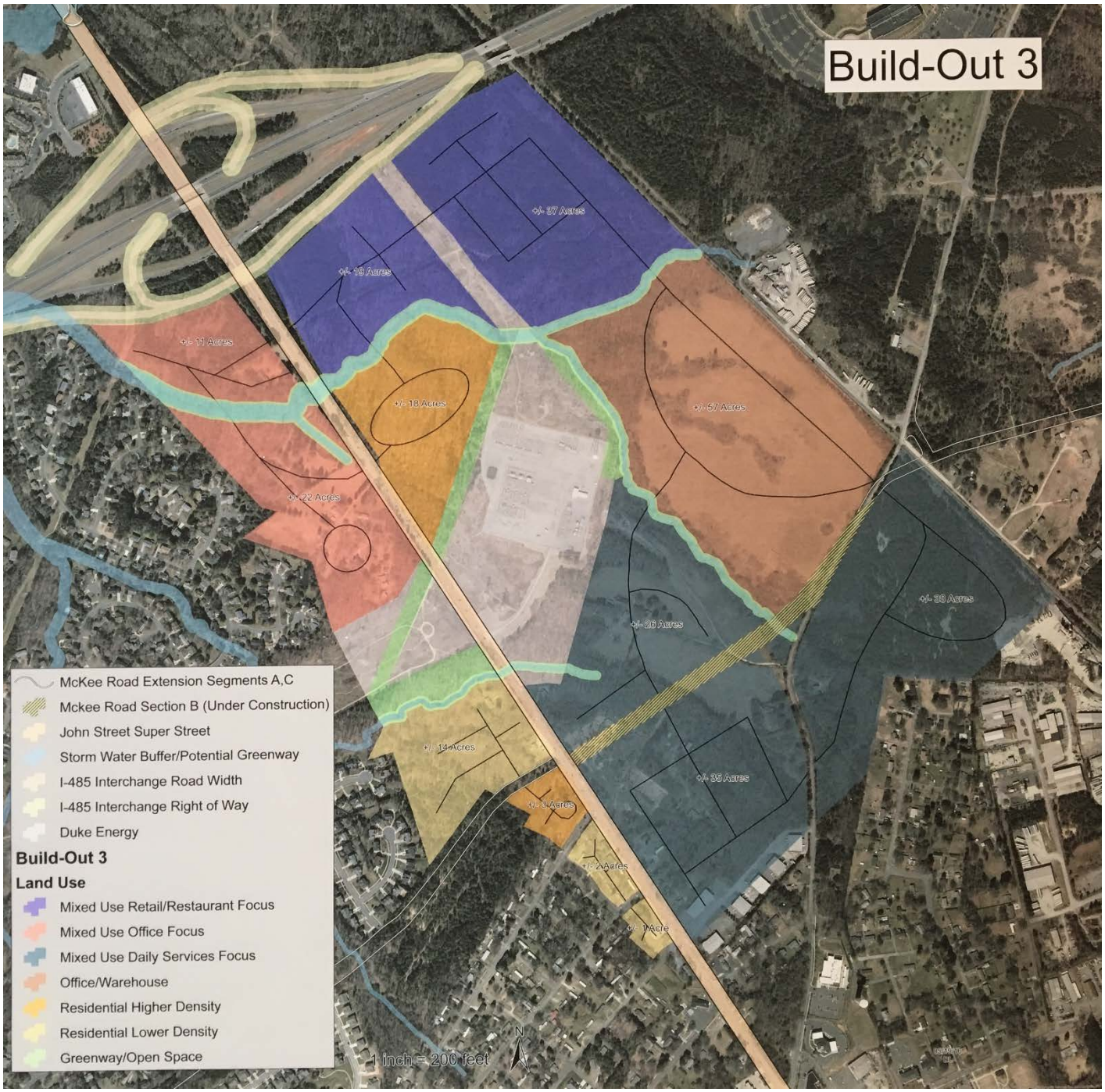
Town Staff reached out to students at Winthrop University to conduct some initial research and background inventory collection. On December 1, 2015, a public input session was held at Town Hall with support from Winthrop students, where community members provided their feedback. The vision for the area began unfolding as citizens viewed options of different forms of residential, commercial, and industrial development, as well as various modes of transportation, and possible build-outs of the area. Participants and area residents were also asked to complete an online survey during the month of December which gauged individual preferences on potential styles and densities of development in the area. Below pictured are community members giving analyzing material provided by staff at the December public input session.

Following out of the December 1st session, a community stakeholders committee was formed. The stakeholders met on January 28, 2016 to review the comments and concerns expressed during the public input session and the survey, and discussed the styles of development different groups of people – millennials, baby boomers, families with children – may want here in the future. The stakeholders group met again on March 3 to create a list of guiding principles that set the direction for the planning process and provided a framework for this plan preparation and recommendations. When the stakeholders met on May 5, they reviewed three “build-out scenarios”, each one showing how a different mix of uses could generally fill up the entire study area.

The following maps are of the three proposed build-outs that were presented to the stakeholders group.




Build-Out 2
+/- 37 Acres
+/- 19 Acres
+/- 11 Acres
+/- 18 Acres
+/- 57 Acres
+/- 22 Acres
+/- 38 Acres
+/- 26 Acres
+/- 14 Acres
+/- 36 Acres
+/- 3 Acres
+/- 2 Acres
+/- 1 Acre
McKee Road Extension Segments A,C
Mckee Road Section B (Under Construction)
John Street Super Street
Storm Water Buffer/Potential Greenway
I-485 Interchange Road Width
I-485 Interchange Right of Way
Duke Energy
Build-Out 2
Land Use
Mixed Use Retail/Restaurant Focus
Mixed Use Daily Services Focus
Mixed Use Office/Industrial Focus
Office Park/Complex
Office/Warehouse
Residential Lower Density
Greenway/Open Space
1 inch = 200 feet
N


Build-Out 3
+/- 57 Acres
+/- 19 Acres
+/- 11 Acres
+/- 18 Acres
+/- 57 Acres
+/- 22 Acres
+/- 38 Acres
+/- 26 Acres
+/- 14 Acres
+/- 35 Acres
+/- 3 Acres
+/- 2 Acres
+/- 1 Acre
McKee Road Extension Segments A,C
Mckee Road Section B (Under Construction)
John Street Super Street
Storm Water Buffer/Potential Greenway
I-485 Interchange Road Width
I-485 Interchange Right of Way
Duke Energy
Build-Out 3
Land Use
Mixed Use Retail/Restaurant Focus
Mixed Use Office Focus
Mixed Use Daily Services Focus
Office/Warehouse
Residential Higher Density
Residential Lower Density
Greenway/Open Space
1 inch = 200 feet
N

A second public input session was held on May 19 to solicit comments from all interested participants about the three build-out scenarios. Each scenario was at a separate station, with statistics showing how the land values could rise as a result. Visitors were asked to answer specific questions at each station. This included giving opinions on how and where public open space should be provided, and who they would expect to live and work in the study area. The general consensus was to build a robust greenway and walking pathway network throughout the entire study area, with small parks connected to this network. The citizens also supported finding ways to connect existing adjacent neighborhoods, including Brightmoor and Matthews Plantation, so those residents could also take advantage of the new development to work, shop, dine, exercise, and enjoy active or passive outdoor spaces. Below pictured is a community member placing a to-scale sample park on one of the proposed build-outs. The activity allowed staff to gain insight on where parks would best fit within the study area.

The stakeholders group met on September 22 to review the rough draft of the full study and to discuss the revised consensus build-out scenario, which used the input from the stakeholders and public.

The E John/Outer Loop Small Area Plan has taken the comments and concerns expressed by all participants over the past twelve months to define a long-range vision for how this study area should develop. It is expected that small sections or individual parcels will develop at various times, incrementally building out the overall boundaries. By providing this plan as a “road map”, all current and future property owners will see how their piece of the area fits within the larger design, and how each parcel will be dependent on other parcels around them to adhere to the general concept for build-out.

Below are the guiding principles, as defined by the stakeholders committee in May 2016, which describe the primary intentions of the E John Street/Outer Loop Small Area Plan.

General Principles

- Create a cohesive vision for all land parcels throughout the study area boundaries.
- Recognize the properties adjacent to E John Street backing up to existing single family neighborhoods need to take extra care to adequately protect and buffer those existing developed sites.
- Involve affected stakeholders and citizens.
- Recognize new development within this study area will require significant expansion and improvement of public utilities and the public street network.
- Continue to build upon the recommendations of the Land Use Plan and other adopted plans and policies.
- Ensure any new development proposals are consistent with adopted policies and zoning actions.
- Incorporate walkability and transit-supportive design.

Specific Principles

- Identify a mix of land uses within the study area that are consistent with the vision.
- Emphasize pedestrian-friendly design and urban scale form of development as the vision calls for them.
- Create land development strategies that promote the use of alternate travel modes including pedestrians, bicycles and public transportation via development design standards and public infrastructure.
- Recognize the impact new driveway access points may cause as new development occurs on a parcel-by-parcel basis, so that long-term viability of the street network remains safe and allows traffic to flow at an appropriate pace.
- Consider unique uses and development layouts to create desirable new destinations and points of interest within the study area.
- Provide strategies that will promote sustainable development and not reduce the integrity of existing surrounding development.
- Protect and preserve large, healthy tree specimen during the initial site design process, both individually located and groves of trees where they can serve as buffers and screens between uses or against vehicular use areas.

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ECONOMIC STATISTICS

The E John Street Study area encompasses over 335 acres of underdeveloped land. It is bordered by Brightmoor and Matthews Plantation subdivisions to the southwest and the CSX railroad line to the northeast. This area is predominately zoned R-12 single-family residential. This low-density, limited-use zoning classification has remained here in large part because the lack of adequate transportation network and public utilities has made it difficult to develop this sector in more intense ways. Long-time residents in this area have been able to enjoy the rural character while still being in close proximity to shops, services, restaurants, and employment opportunities.

The average land value per acre of land in this area is approximately $56,000 when factoring in building, land, and feature (other on-site improvements) value. The median home value in this area is $59,000 and median value for land is $251,800. There are four properties in this area whose value surpasses $1,000,000: two properties owned by Duke Energy Company to transport and process electricity and zoned as R-12, one property owned by Lester and Mary Yandle LLC designated as a woodland area and zoned as R-12, and one property owned by Mulvaney Group Ltd and zoned as R-12 Single Family Residential.

In terms of zoning, most of the study area is zoned as R-12 with only a handful of properties being zoned as R-20 or I-1 (C-D). Total property value per acre varies significantly due to structures on the property and many other factors.

Below is a table evaluating properties within the study area and their real property assessed values for tax purposes. These properties are not uniform in size, shape, land use, or development. Based on the information in the table, there are many lower priced properties within the study area. However, there are several properties that are valued at $500,000+. Many of the properties valued greater than $500,000 are large tracts of land or are being used by Duke Energy and are unlikely to be altered with any development plan.

Land Value	Number of Properties
$0-$100,000	45
$100,001-$200,000	12
$200,001-$300,000	8
$300,001-$400,000	1
$400,001-$500,000	1
$500,000+	8
Total	75

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The table below summarizes the tax values of buildings on those properties within the study area that have some permanent structures on them. Less than half of the properties have structures on them. Buildings seem to be fairly uniform in value with only a handful being valued less than $40,000 or more than $120,000.

Building Value	Number of Properties
N/A-No Building	46
$0-$40,000	7
$40,001-$80,000	11
$80,001-$120,000	9
$120,000+	2
Total	75

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LAND USE

The Town of Matthews has seen a robust amount of development in recent years and has crossed the population threshold of 30,000 citizens. With growth on the rise, the Town has acted progressively in drafting plans to ensure that quality land uses are designated in areas that are soon to be ripe for development. The land area adjacent to E John Street is over 335 acres of largely undeveloped or underdeveloped property. Lack of utility connection in this area has hindered development. At the center of the study area is the Duke Energy substation, with its transmission lines extending in two directions. While these utility improvements guarantee easy access to electrical power source, they also tend to restrict the types of uses that desire to locate immediately adjacent to them. In a similar way, the CSX freight railroad may hinder certain types of land use from locating nearby.

Due to the amount of acreage covered in this small area plan, it is beneficial to consider a diverse mix of land uses here. The Town has now embraced the concept of a more urban character of mixed use development at a higher density than previous commercial development that occurred in the latter half of the 20th century, but only in select locations. This study area is an ideal opportunity to encourage newer arrangements and concentrations of nonresidential uses, along with residential styles other than traditional single-family detached subdivisions with cul-de-sac internal streets.

Since different portions of the study area may allow a good fit with certain nonresidential uses more than others, the study area has been broken into multiple geographic "blocks", which will focus on certain types of uses. The consensus build-out scenario in this plan illustrates these "blocks" by anticipated land use categories. These "focus" mixed use categories do not automatically exclude other uses, but rather show the intent to have a significant portion of development in their respective blocks be that type of nonresidential use. The mix of uses by focus type, and examples of land uses that would reflect the focus intent, include:

Office focus

Examples of uses that encourage an **Office** focus are: professional service offices and studios, such as for architects, accountants, engineers, real estate agents, doctors, dentists, investment agencies, lawyers, and similar, located within individual small office cottages, stand-alone office buildings, to office parks comprised of several large multi-tenant buildings (an office park or complex which may include supportive non-office uses for the employees there).

Retail/Restaurant focus

Examples of uses that encourage a **Retail/Restaurant** focus are: grocery stores; clothing and shoe stores; department stores; similar places selling merchandise generally incorporating more than 12,000 sq ft of sale floor area; cafeterias; sit-down restaurants; lounges; sports bars; fine dining; all food establishments generally incorporating more than 5,000 sq ft of floor area.

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Daily Services focus

Examples of uses that encourage a **Daily Services** focus are: cafes; coffee shops; lunch counters/sandwich shops; fast food providers; ice cream shops; pizza carry-out storefronts; convenience stores; dry cleaners; child day care centers; pet boarding facilities; barber shops; hair or nail salons; spas; live-work units; and similar establishments providing daily or regularly-used items or services to those who live or work nearby; such daily service providers generally being smaller business establishments with between 1 and 5 employees on the largest shift, and often covering no more than 4,000 sq ft in floor area.

Production/Distribution focus

Examples of uses that encourage a **Production/Distribution** focus are: assembly of finished products prior to sale; flex use spaces; equipment/home goods repair activities; light manufacturing that does not emit any unpleasant noise, fumes, or light; storage and distribution of manufactured products, supplies and equipment.

Residential focus

Examples of uses that encourage a **Residential** focus are: cottage clusters of small houses; live-work units; townhomes or rowhouses; multi-family apartment buildings; residential uses on upper stories over nonresidential uses.

Greenway/Landscape buffer

Types of open space styles within this category are: greenway trails alongside creeks; multi use paths for pedestrians and bicyclists located beside streets or between other properties; pocket parks or plazas that may have gardens, benches, public art, and other hardscaping features; and small parks with open lawns or playgrounds.

In addition to the above types of land uses, there are a number of other land use categories that would be appropriate to locate within the study area. Civic uses, such as libraries, community centers, assembly halls, and police or fire substations, and institutional uses such as churches and schools may fit within several of the proposed mixed use focus areas.

Where a “block” on the build-out scenario shows a certain focus, it means that those types of uses should comprise at least thirty percent of the total building floor area once the entire section is developed. That allows a significant amount of other uses to also fit within that block.

The designated focus land use should be the first type of new development to be built within that block. This is because the initial development that occurs within each block of the study area will likely define the development pattern and subsequent development around it, and will influence further development to have a similar or complementary flavor. Therefore, by designating specific focus land use categories, the build-out scenario clearly identifies the vision for the subareas. No specific zoning categories are designated to be established within each “block”. Instead, the land use focus identification assumes any appropriate zoning category may be applied within each subarea. For example, office

uses may be allowed in the O Office district, the B-1, and B-3Business categories, and the MUD Mixed Use District.

The land use designations shown in the consensus build-out scenario on page 184 encourages different types of land use intensities to transition smoothly over the study area. Greenways can naturally divide separate focus use areas. Where a primarily nonresidential focus area will be placed near established low density residential uses, a landscape buffer area is indicated. Less intensive focus uses such as residential and office are therefore placed along the south side of E John Street. Frontage along the north side of E John Street is to be reserved for more intensive restaurant, retail, and daily service usage.

The future four-legged intersection of McKee Road and E John Street will function as a central point of the newly-developing area, and will have the most access to residents within and adjacent to the study area, as well as being an easy access location for visitors to the area. The four quadrants immediately adjacent to this intersection of two major thoroughfares are shown to be a Daily Use focus area.

The land use areas bordering the CSX rail line are designated for the greatest variety of uses. Along I-485 and the railroad, land is designated as an office focus location. Office use is preferred here because this use is generally tolerant of the constant hum of highway traffic and passing trains. The largest tract of land located centrally along the railroad track was designated to allow the largest mix of focus types due to its location in the study area. It is sandwiched between office, residential, and production uses, so its designation is a hybrid of the three. Along the railroad at the Mecklenburg/Union County line production and distribution services are designated. This property borders industrial uses in Union county along with the CSX rail line which makes it optimal for production and warehouse facilities. This area also has potential to utilize the rail line to transport goods to and from the property.

On the following page is the preferred build-out for the study area. Not only does the map land use focus areas for development, it illustrates a conceptual road network. The interior road network is an important design element that is included in response to the E John superstreet project. With limited access areas off of John Street and the unlikely scenario of permitted crossover intersections, there is a need for a skeletal perimeter road network that allows people to navigate from one focus area to another. The following build-out shows a network that has limited access points off of John Street, but multiple curb cuts off of the future Mckee Road extensions. The conceptual road network also reflects stipulations for the newly designed interchange at John Street and I-485. The new on and off ramp designs limit the amount of access points approaching the ramps from John Street and the conceptual street network reflects that. Notice in the build-out on the following page the limited access points, the perimeter skeletal network that allows traffic to flow across focus areas, and the intentional access points off of the future Mckee Road extensions.

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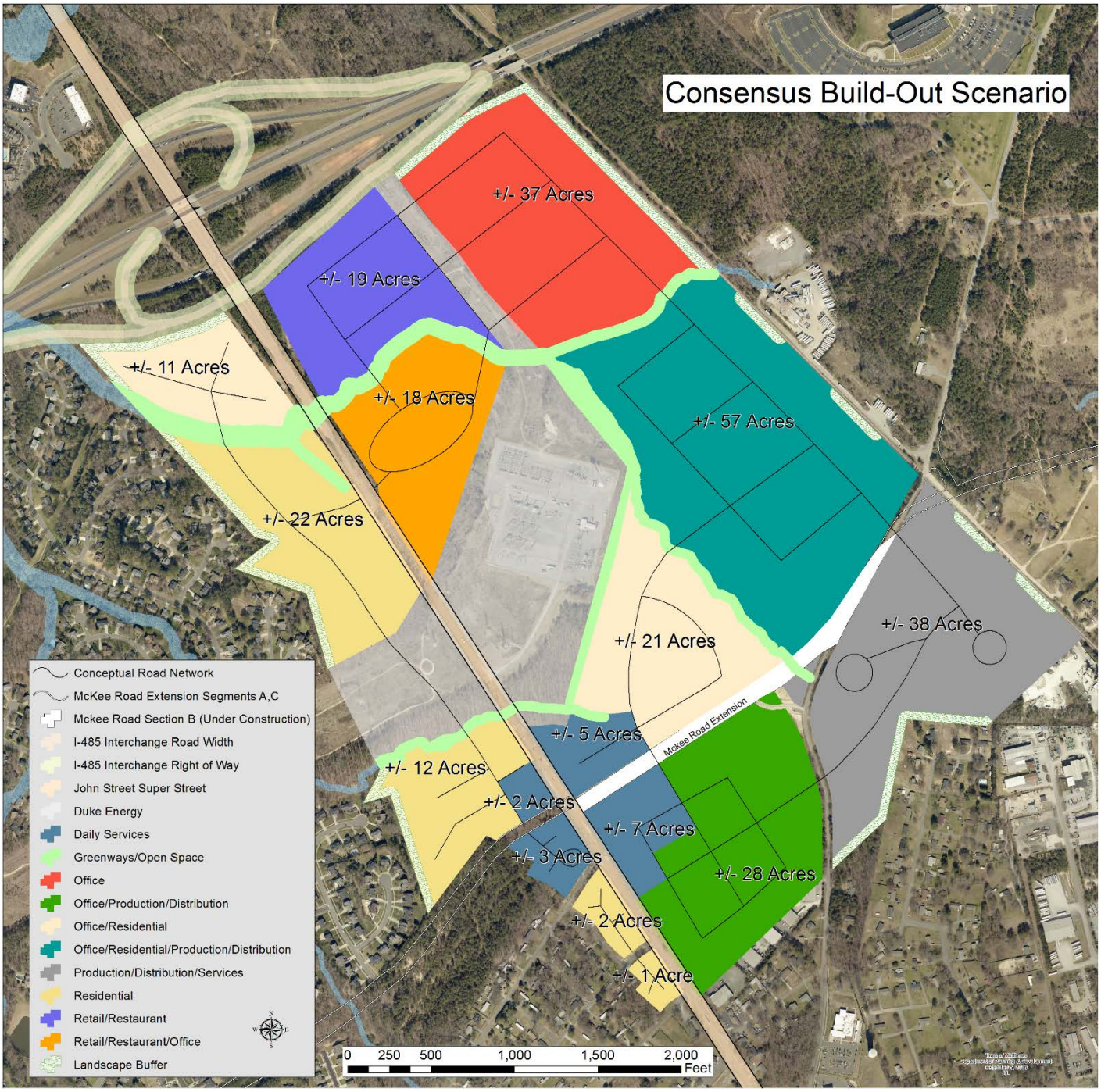
Consensus Build-Out Scenario
+/- 37 Acres
+/- 19 Acres
+/- 11 Acres
+/- 18 Acres
+/- 57 Acres
+/- 22 Acres
+/- 21 Acres
+/- 38 Acres
+/- 5 Acres
Mckee Road Extension
+/- 12 Acres
+/- 2 Acres
+/- 7 Acres
+/- 3 Acres
+/- 28 Acres
+/- 2 Acres
+/- 1 Acre
Conceptual Road Network
McKee Road Extension Segments A,C
Mckee Road Section B (Under Construction)
I-485 Interchange Road Width
I-485 Interchange Right of Way
John Street Super Street
Duke Energy
Daily Services
Greenways/Open Space
Office
Office/Production/Distribution
Office/Residential
Office/Residential/Production/Distribution
Production/Distribution/Services
Residential
Retail/Restaurant
Retail/Restaurant/Office
Landscape Buffer
0 250 500 1,000 1,500 2,000
Feet

E JOHN STREET SMALL AREA PLAN LAND USE ACTION ITEMS:

1. *Proposed new development should correspond to the designated focus land use categories within the applicable block on the consensus build-out scenario.*
2. *Initial development within each block of the conceptual build-out scenario shall conform to the assigned focus land use category(ies), since it will set the tone for further adjacent development.*
3. *In each land use focus designation, the "focus" type of land use should comprise at least 30% of the overall build-out at each phase of completion.*
4. *Residential units should be incorporated into buildings in upper floors, such as two stories of office use and one or two stories of residential, when the mix of uses are compatible.*
5. *New internal street networks and pedestrian pathways should be designed for the larger segment of the study area as individual sites are proposed for development. This is necessary to assure that cross connectivity can be achieved, and is especially important given the limited new curb cut accesses from E John Street.*
6. *Greenways and other open space locations should be established for the overall study area before any development begins, and any parcel considered for development should then include their segment of the greenway and open space network. This is critical to guarantee the connectivity of the open space system.*
7. *Landscape buffers identified in the consensus build-out scenario that will be against established single-family neighborhoods, I-485, along the future right-of-way for E John Street, and the CSX rail line should be identified and protected from damage before any development begins. These locations should be protected during all development phases, and guarantees put into effect to preserve them perpetually.*
8. *A variety of residential styles should be used throughout the study area, to provide good options for new households to find the style they desire.*

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It was determined early on in the planning process that creating a unique destination in the study area was a priority. A destination can be defined as a place where people will make a special trip to visit, or a place that is known for a particular purpose. Due to the proximity to two major roadways, E John Street and I-485, with a third one anticipated to be built in the coming decade, Mc Kee Road, this study area is a prime location for unique development. Destinations are achieved by bringing in development that is one of a kind and registers as an asset and a defining place within the greater Matthews community.

Destinations:

Multiple suggestions about potential unique destination uses were provided during stakeholder meetings and public input sessions. These destinations are highly encouraged if an opportunity arises for their development to take place within the study area. Desired destinations include but are not limited to: medical/scientific research park; business incubator or entrepreneur startup facility; arts village; vineyard and/or winery; mixed-use retail facility; botanical garden; or nature preserve. Raffaldini Winery, pictured below, is a destination located in the piedmont of North Carolina. A similar destination may be appropriate within the study area.

Placemaking:

Place-making is an important part of the urban environment as well and is a priority for development that occurs in the study area. The importance of placemaking is fundamental because it creates a memorable identity and atmosphere in the community that people value. Placemaking must include a number of critical elements to be successful, such as public art, quality architectural building design, public open space, and landscaping.

Public Art

Public art should be considered in the early stages of planning any development. Not every site may be appropriate to showcase a piece of art, but it certainly needs to be integrated into the overall design of a development. Art should be comprised of durable materials that can withstand extreme weather conditions. People especially like public art pieces they can touch or interact with. Children (and many adults too) like to climb, and art pieces can provide that outlet. Public art may be a low wall with places for people to sit between flower boxes, pavement that incorporates designs and colors, wind-blown structures, or common items recreated in oversized ways. ~~This photo shows an example of a prominent piece of public art located in Uptown Charlotte known as the Firebird.~~ The photo below is an example of public art in Downtown Matthews at Stumptown Park.

Architectural Building Design

The Town of Matthews has often stressed the community's desire for new buildings to emphasize a consistent look and feel, and have quality design elements. This traditionally has been accomplished by incorporating brick or stone into building facades, and emulating architectural styles commonly found in the region and in historic small farming communities. Creating new buildings that are in harmony with the character of Matthews does not have to limit architectural design to older or traditional building styles. Materials and architectural elements similar to those found throughout Matthews may be organized in contemporary ways. Inviting doors and windows along building facades where people will walk or drive by enhance passers-by perceptions of their quality. Buildings should not have blank walls in excess of 10 feet wide facing any public access or public view location. Below pictured are examples of craftsman style homes that give character to the community they are in.

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Public Open Space

Land that is not built upon is equally as important in placemaking as the developed portions. Open space should be scattered throughout development and well integrated into the design. Open spaces should be utilized between buildings for parklets, interesting gathering spaces, or otherwise be preserved for natural habitat. Below is an example of a cottage cluster development which includes common open space in the design along with craftsman style architectured homes.

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E JOHN STREET SMALL AREA PLAN DESTINATIONS AND PLACEMAKING ACTION ITEMS:

1) *As development begins throughout the study area, continue to pursue opportunities to incorporate uses that will create unique destinations here. Desired destinations include but are not limited to: medical/scientific research park; business incubator or entrepreneur startup facility; arts village; vineyard and/or winery; mixed-use retail facility; botanical garden; or nature preserve.*
2) *Multiple and coordinated elements within the study area should be used to develop and enhance a sense of "place", including public art, quality architectural building design, public open space, and landscaping.*
3) *The architectural elements of each building should incorporate qualities typically found within Matthews for consistency, but can also combine elements in a fresh new way to give individual buildings a contemporary twist.*
4) *Buildings should not have blank walls in excess of 10 feet wide facing any public access or public view location.*

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The East John Street/Outer Loop area serves as one of the key gateway corridors into the Town and should be developed in a pattern that creates a quality first impression. The future design character of the built environment along both existing thoroughfares and proposed new streets is critical as most of the area is undeveloped today, creating a blank slate for much of the area. While a complementary overall architectural character is desired for the area, individual buildings, especially at intersections, should be multi-story to create a strong presence.

East John Street Design Concept

East John Street should be developed in a pattern similar to Matthews Township Parkway with an emphasis on tree preservation and enhancement along the road frontage. On mid-block parcels and those without a shared drive or side street immediately adjacent, buildings should generally be located behind the tree save area with parking to the side and rear. Deviation from this layout may be appropriate at intersections or driveways into developments, instead placing buildings close to their direct vehicular and pedestrian travelways. This will allow development along these internal routes to create a “main street” style corridor into the interior of the study area, utilizing anchor buildings up against the internal streets. Parking can then be allowed on E John Street corner lots adjacent to the tree buffer.

Focus Use Areas Away from E John Street

The mixed use focus areas adjacent to I-485 and the CSX railroad may not desire to incorporate as much architectural detail on buildings which are not easily seen by passers-by. These buildings should still exhibit good quality design elements and should still incorporate exterior materials that are consistent with the Matthews community character.

Loading and service areas, warehouse docks, service bays, and similar activity areas necessary for certain uses should be located so as not to be visible from any public street or internal drive used as vehicular or pedestrian access to and between properties. A tree buffer should be created along the edge of I-485 right-of-way where it can, over time, create a visual and noise buffer. Landscaping should also be included in the site plan layout for properties adjacent to the CSX railroad where possible, recognizing the railroad exerts right-of-way control some distance from the tracks. In such cases, large maturing trees may be particularly important within parking lots to create visual relief for workers within the nearby buildings**.**

Architecture and Design

Image preference surveys were conducted to assess community interest in differing styles and forms of both residential and nonresidential building types. For nonresidential development, mixed use styles of development that incorporated sidewalk dining and quality public spaces rated very highly. Standard suburban style development with parking in the front setback did not score very well. Building heights of no more than three to four stories are preferred. Brick or masonry buildings were preferred to other building materials in many cases.

Residential development characteristics that fared best in the survey were those without street side facing garages and those of more traditional development style. No preference was clear in terms of what housing type was most preferred but images with the appearance of higher quality design scored very well.

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McKee Road Focal Point

The intersection of East John Street and McKee Road presents an opportunity to create a central design theme for the four corners. The goal of this approach is to create a cohesive, master planned intersection that is both attractive and inviting. Design elements at the intersection may include a central architectural theme, enhanced sidewalks with brick inlay, sculptures, public art, monumentation and landscaping that defines the area.

E JOHN STREET SMALL AREA PLAN URBAN DESIGN ACTION ITEMS

1) *Properties along E John Street should maintain or create a tree buffer along the road frontage, and parking or vehicular use areas should not be located between new buildings and the tree buffer here. Exceptions may be made for corner lots.*
2) *New buildings on parcels not fronting on E John Street should be brought close to the interior public or private streets, with parking to the side or rear.*
3) *Buildings at focal points such as intersections and driveway entrances should be multi-story.*
4) *Parking should be located to the side and rear of buildings to the greatest extent possible.*
5) *Sculpture, public art or other monumentation should be developed at the E John Street/McKee Road intersection on all four corners.*
6) *All buildings should have an operable front door with connection to a public street*
7) *Utilities should be moved underground as development occurs*
8) *Drive thru canopies and gas station canopies should be located behind the principal structure*
9) *Mechanical equipment either at ground level or on building rooftops should be screened from view*

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There are a relatively small number of public streets within the study area, and they are maintained by the state rather than by the Town of Matthews. They include:

- E John Street – bisects the area from I-485 to the Mecklenburg/Union County line
- McKee Road – a new segment, referred to as McKee Rd Segment B, was built and opened during the time this study was being conducted
- Campus Ridge Road – this roadway angles through the study area, coming from Stallings at the Mecklenburg-Union County line and exiting at the CSX railroad headed toward CPCC Levine campus
- Morningwood Drive – within Eastwood Forest, a small residential neighborhood straddling the County line, now being used as a primary cut-through street from Pleasant Plains Road to E John Street
- Forestmont Drive – within Eastwood Forest, intersecting E John Street
- Friendship Drive – within Eastwood Forest, intersecting E John St at the County line

Although I-485 is not included in the study area, planned reconstruction of the interchange at E John Street will intrude into the study area limits on both sides of E John Street. The ramp locations will be spread further from the freeway in order to create new partial loop ramps so all traffic turning from E John onto I-485 will be able to turn right only, and no left turning traffic will back up on E John while waiting for sufficient space to turn across oncoming traffic to enter the ramps.

One property has a private driveway that connects between E John Street and Campus Ridge Road, which customers may use. It is not a public access road, and should not be used as such by the general public.

At this time, there is a short piece of no-longer-needed right-of-way that was part of the former curve in Campus Ridge Road before the new segment of McKee Rd was built. NCDOT may in the future decide to abandon this portion, and turn it over to adjacent property owners. This is not an automatic action, and no timing has been announced for this.

East John Street is the dominant thoroughfare within the study area. Average daily traffic on East John Street within the study area was 27,000 in 2013. It is part of U-4714, an NCDOT road widening project scheduled for additional right-of-way acquisition in 2020 and start of construction in 2022. The expected design is two through lanes in both directions separated by a center planted median. A 5' sidewalk will be located for the full length on the northeast side, while a 10' multi use path will be constructed on the southwest.

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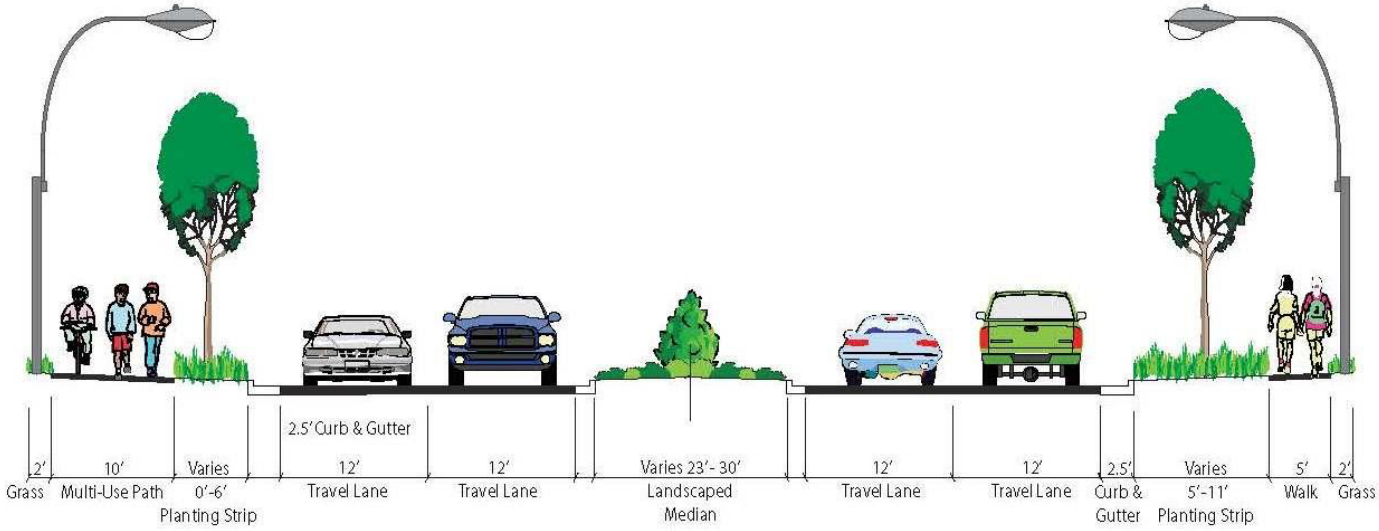
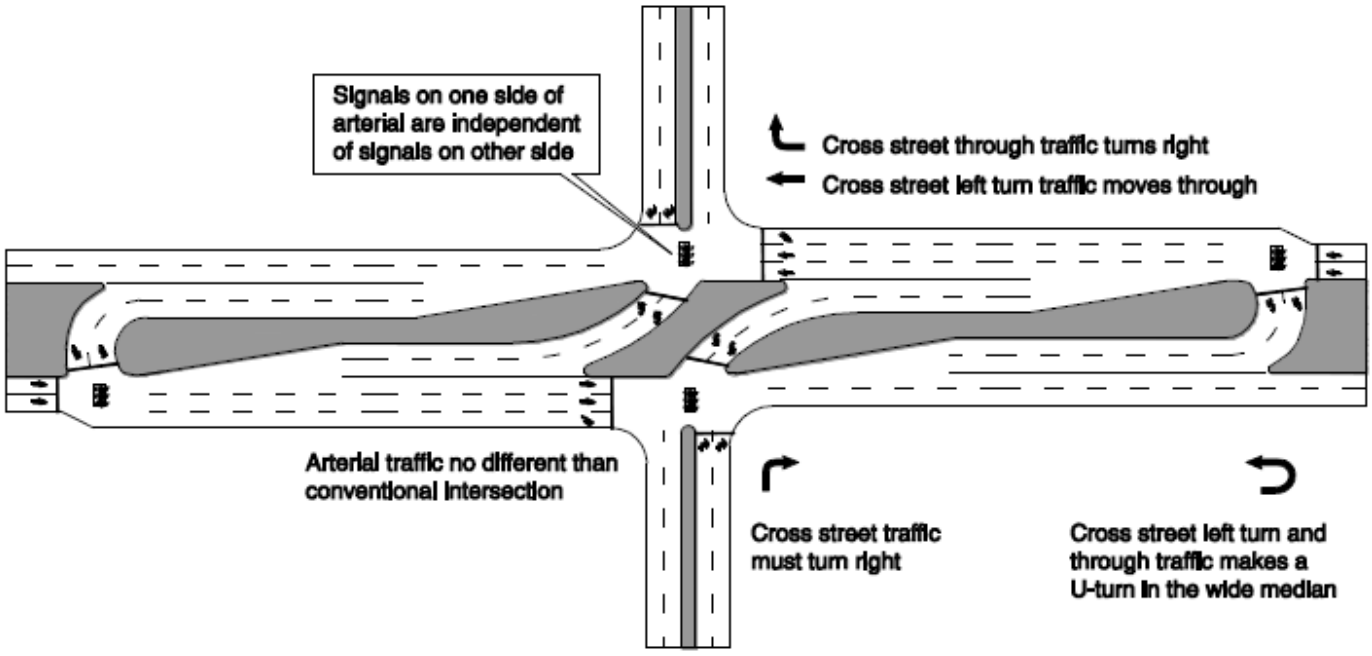
Preliminary Alternative 1: Four-Lane Median Divided



Source: Atkins Global, NCDOT

NCDOT is proposing this be ~~This is being~~ designed as a "superstreet", which precludes most left-turning movements at intersections, and replaces them with U-turn pavements across the grass median beyond the cross streets to reduce the number of vehicle stopping points for through traffic. The Town is continuing to explore alternatives, and to discuss options with NCDOT. The current NCDOT plans would mean ~~This means~~ that any new streets or driveways created to connect to E John St will primarily have only right-in/right-out traffic movements. Some locations may become eligible, on a case-by-case basis, to have a left-turn lane created across the center median into the new side street or driveway, and these U-turn movements may become signalized if there is sufficient turning traffic activity.

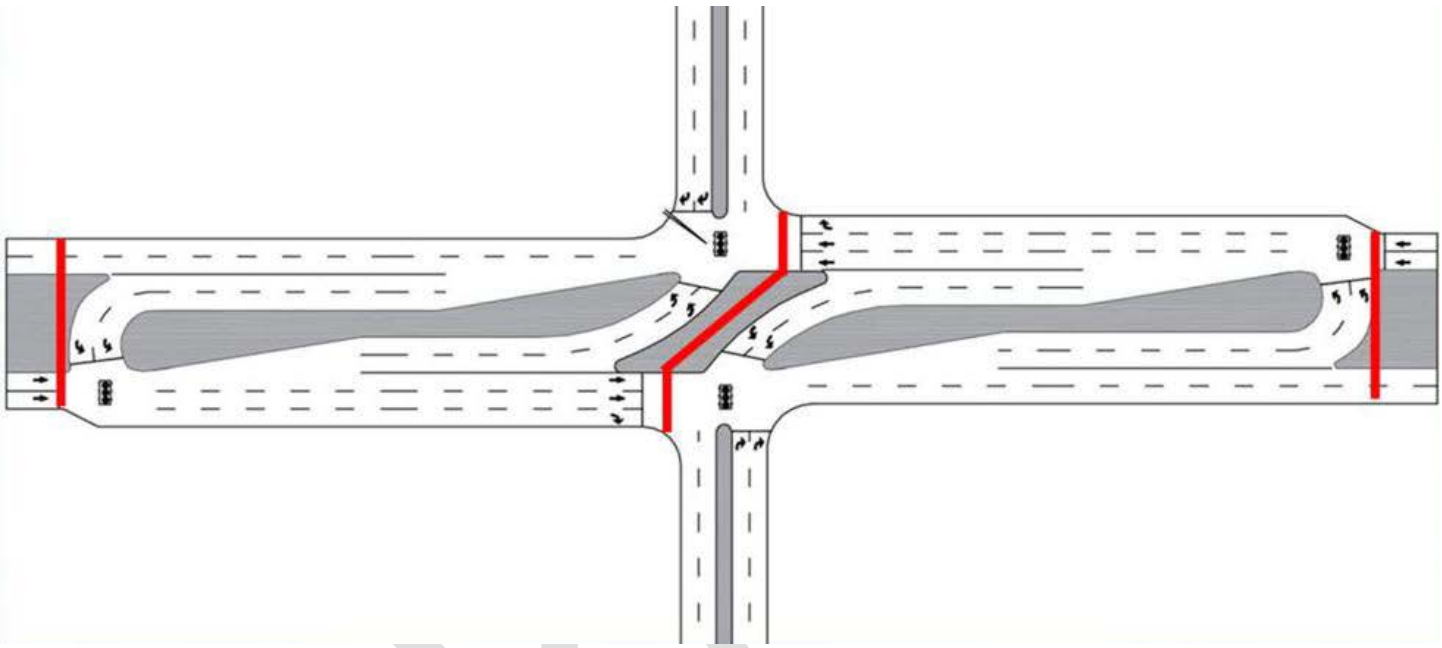
This illustration shows the typical traffic flow on a superstreet.



Source: Atkins Global, NCDOT

The superstreet concept reduces or eliminates most traffic signals, and therefore if this street widening project is constructed as NCDOT envisions, it will allow motorized traffic on E John Street to flow without expecting to stop. Pedestrians and bicyclists will therefore need safe opportunities to cross E John Street. Designated crossing locations have not at this time been determined, since there is little development in place today on either side. Pedestrian cross walks may be located near vehicular left-turn/U-turn breaks in the center median, which would allow those not in a motorized vehicle to only cross traffic coming from one direction at a time. Pedestrians and bicyclists would have a center median protected refuge area where they can wait for traffic to clear before continuing on the second half of their street crossing travel pathway. Pedestrian signals may also be added at one or more crossing locations. Pedestrian and bicycle crossing options are part of a consultant study underway at the time of this writing.

This illustration shows how a pedestrian/bicycle crossing location can be incorporated into a super street design.



Source: Atkins Global, NCDOT

It is anticipated that McKee Rd Segment A may be built within the next decade, if it receives sufficient points from local and state transportation sectors. Like Segment B just completed, it will initially be constructed with a single through travel lane in each direction, although it can be expanded to multiple lanes in future years. Once built, it will create a four-legged intersection of two major thoroughfares. The superstreet design for E John St does not include improvements for straight-through and left-turning movements for this fourth leg at this time, since funding has not yet been secured. NCDOT staff have agreed to develop a Memorandum of Understanding with the Town that would guarantee a careful study of greater traffic movement at this intersection when it becomes a four-sided intersection. Preliminary design work has been done to assure future revisions at this new traffic generation point, but it is not known at this time exactly how or where further right-of-way or pavement will be needed to accommodate full directional movement for the new intersection.

Longer-term future planning indicates McKee Road Segment C will deviate from the existing Campus Ridge Road pavement to cross over the CSX railroad slightly to the southeast, and then continue beyond the study area as it heads

toward US74 and into Union County. It is anticipated but not confirmed at this time that the new crossing will be required to be raised to separate car, bus, and truck traffic from trains.

This illustration shows Segments A, B, and C for McKee Road.

If East John Street is widened ~~into a superstreet~~ before McKee Road Segment A (Pleasant Plains Road to E John Street) is built, it will disrupt existing travel patterns for many drivers in the area that now use Morningwood Drive between Pleasant Plains Road and E John Street. Since most vehicles use this as a cut-through to I-485 or toward Charlotte, they must attempt to find a slot where they can turn left onto E John Street today. When a center median ~~the superstreet design~~ is built, there will no longer be the opportunity for left turns here. Traffic continuing to use this through street would turn right to travel toward Union County to make a U-turn at the next available median break, likely near Forestmont Drive. Alternatively, those vehicles could utilize Potter Road to the southeast, or they could stay on Pleasant Plains Road toward

downtown Matthews. Once McKee Road Segment A is built and open for use, it should take the bulk of current cut-through traffic off of Morningwood Drive.

As new development takes place on both sides of E John Street, there will be increased demand to provide safe pedestrian and bicycle access along this spine roadway. In addition to the sidewalk and multi use path that will parallel and run beside traffic on E John St, there is a need and expectation that internal multi use paths should be constructed to allow easy non-vehicular movement through all new development sites. Ideally, new individual buildings will be constructed within overall "mini-master" concepts of build-out such that sidewalk and multi use path connections will be well-coordinated.

Vehicles will also need new travel lanes to access new development sites. When three build out scenarios were shown to stakeholders and the public during this study process (see pages 174-176), each one showed a somewhat different general street network layout. The intent was to illustrate there are many possibilities in designing internal street access. New street connections or driveways to E John Street should be limited since only right-in/right-out movements will be possible.

Driveway and street connections to E John Street therefore should be carefully planned to best coordinate their locations for new development sites that will make use of them. For those development sites closest to the future McKee Road/E John Street intersection, primary street connections should be directed to McKee Road, as it will not be as restrictive on turning movements. For the portion of E John Street closest to I-485, NCDOT will maintain a certain distance where new connections are prohibited. This is necessary because there will be traffic signals at the ramps on and off I-485, which may result in some stacking of traffic when the signal is red, and will create more weaving movements on E John Street for traffic entering or exiting the ramps. NCDOT does not allow extra turning, slowing, or accelerating traffic at such points for safety purposes.

Discussions should begin with Duke Energy to determine that company's preferences on any vehicular and non-vehicular connections across their property edges at the substation, and across their easements for transmission towers on the southwest side of E John Street. Creating these internal pathways will reduce the need for street connections out to E John between the clusters of new development on each side of the spine road. The initial build-out scenarios showed examples of how and where new green spaces and trails could be accommodated to allow good connectivity within and adjacent to Duke Energy parcels, and within the overall study area.

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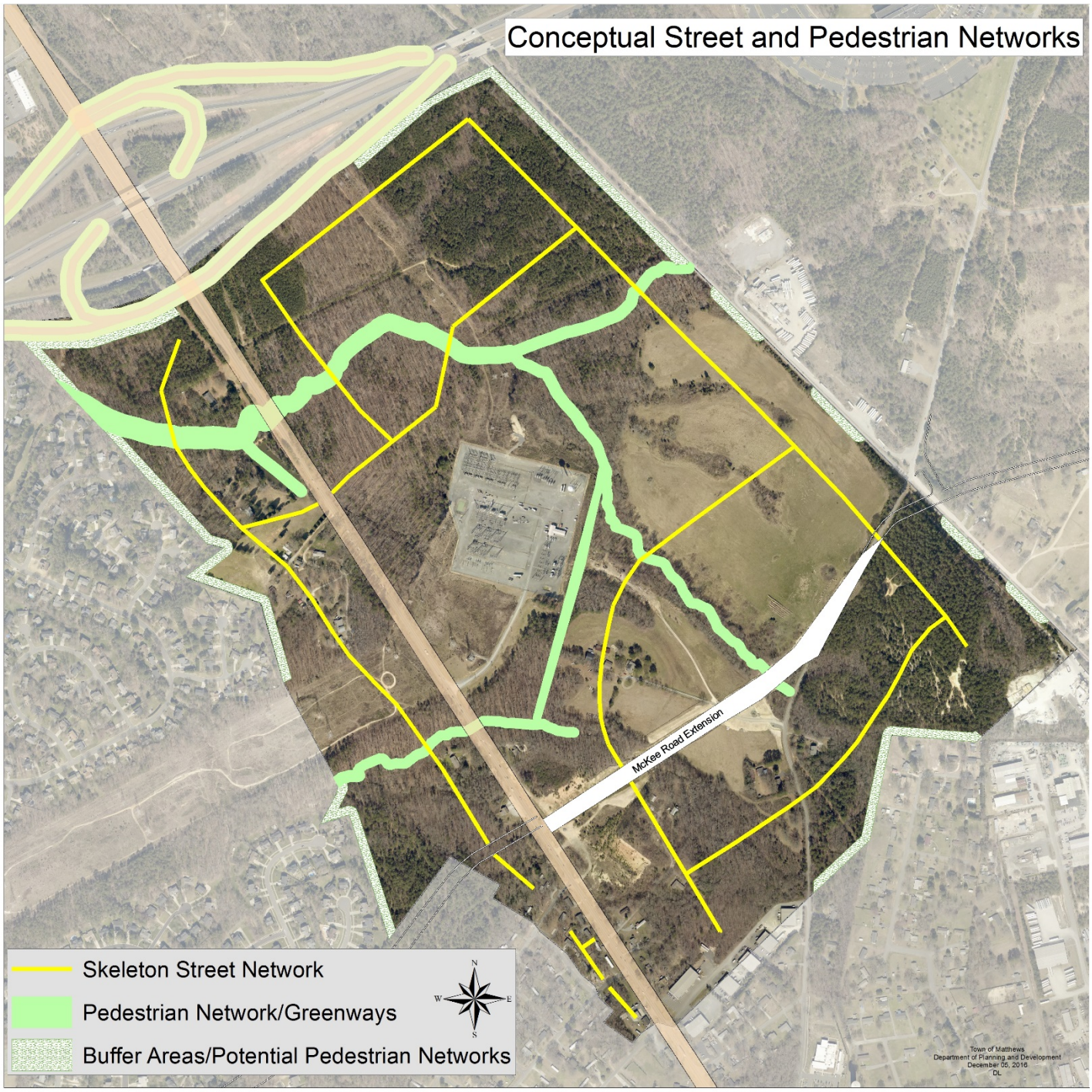
Below is a map visualizing the conceptual pedestrian and ~~skeletal~~ skeleton street networks that are discussed in this section. Concept to show all portions of study area will become accessible in the future. (updated map below 12-23-16)



E JOHN STREET SMALL AREA PLAN TRANSPORTATION ACTION ITEMS

1) *Any development proposed within the study should determine where vehicular access points can appropriately be created that can be shared with surrounding further development.*
2) *Because driveways and new street intersections into E John Street will be constrained by the E John Street/Old Monroe Road widening project to be constructed in a few years, any desired connections to E John Street must be reviewed by NCDOT and the Town of Matthews to verify proper placement for area development as a whole.*
3) *New internal street networks will be necessary to open up interior tracts to development. A skeleton street network shall be designed and must be followed as individual parcels are ready for development. This skeleton street network includes:*
    a. *new streets parallel to E John Street on both sides;*
    b. *a new street parallel to the CSX railroad tracks, from I-485 to McKee Rd;*
    c. *a new street parallel to I-485 connecting the interior blocks along the CSX rail line to E John St between I-485 and the Duke Energy substation; and*
    d. *new street connections parallel to McKee Rd between McKee and the County line to provide internal connectivity between parcels against the rail line and E John St.*
4) *Development at the future four-approach intersection of McKee Road and E John Street should not occur until McKee Road Segment A is under construction, so that new ingress and egress points onto McKee will be operable when new development (businesses and/or residential) is open..*
5) *Locations for safe and direct pedestrian and bicycle crossing of E John Street should be identified as early as possible, once new construction along the road is underway. Pedestrian signals should be considered at each marked crosswalk area.*
6) *A skeleton greenway and multi-use path network for the full study area should be determined prior to individual property development. This network should include:*
    a. *A minimum 5' sidewalk on one side and a 10' multi use path on the other side of E John Street, as intended to be constructed at the time of the widening project;*
    b. *A greenway along the creeks in the study area as illustrated in the build-out scenario;*
    c. *Connecting trails along edges of the Duke Energy properties to complete connections within the network, as illustrated in the build-out scenario;*
    d. *Multi use pathways or similar paved trails generally corresponding with the new internal street skeleton network.*
    e. *A pedestrian connection – bridge if necessary – for residents within the established neighborhoods southwest of the study area to access the mixed use development via the internal trail system.*

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UTILITIES

Charlotte Water (formerly Charlotte-Mecklenburg Utility Department) is the primary provider of public potable water and sanitary sewer. The larger residential lots currently have private well and septic systems. The smaller properties are serviced by public sewer and either private wells or Union County Public Water. A large portion of the northeast side of E John Street is not yet developed and therefore there is no public water or sewer system in place.

Charlotte Water provides sewer to the Eastwood Forest Subdivision via an 8" main. The sewer line increases in size to 12" as it moves north (downstream in Brightmoor subdivision) towards I-485 where it discharges into a 16" main that crosses under the interstate.

Charlotte Water has a program for the extension of both water and sewer mains, which are available to new developments. There is a sewer main servicing Central Piedmont Community College (CPCC) Levine Campus outside the study area. It was not designed to accommodate significant additional development, and it likely cannot cross under the CSX railroad rail line at the northeast border of the study area.

Duke Energy has a substation in the center of the study area, and large transmission towers that move power out into the surrounding community. The study area is served by overhead lines consisting of electric, cable and phone. Above ground poles run along both sides of E John Street. Any new development and redevelopment should bury these overhead wires in order to allow for street trees and a more scenic view.

Any new development within the area would be required to meet storm water detention regulations. There are many options available to developers to incorporate the storm water features as an amenity within their overall development sites.

E JOHN STREET SMALL AREA PLAN UTILITIES ACTION ITEMS:

1) *Utilities should be buried for all new development and redevelopment.*
2) *Any sidewalk or street construction activity should be reviewed to include taking existing overhead lines underground.*
3) *Developers need to coordinate their site plan layouts to install sufficient infrastructure in order to service potential growth for their facility as well as future developments.*

The study area includes large tracts of land that are in their natural undisturbed state. This creates opportunities for coordinated placement of open space. The open space could be small spaces suitable for neighborhood flower or vegetable gardens, or large enough to include picnic groves. The consensus build-out scenario illustrates where green corridors should be placed, and park amenities should be stitched to these pedestrian travel corridors.

New development is encouraged to incorporate pocket parks within their plans or to dedicate land to public use. Pocket parks can be used as community gathering spaces to hold pop-up markets, outdoor movies and other passive activities.

The study area is part of the Four Mile Creek Watershed. Tributaries of the creek extend under I-485 along the southwest side of the area and traversing E John Street. The area along the streams are indicated in the build-out scenario as suitable for greenway trails throughout the study area. The map below shows the Surface Water Improvement and Management (S.W.I.M) buffers, which are protected land for creeks, watersheds, and storm water runoff that potential greenways could follow. One particular tributary flows into a pond on a parcel of land that fronts along E John Street. This could serve as a community park and/or entrance to the greenway system. A pedestrian bridge along this tributary (on the ~~southeast~~ southwest side of E John St) should be installed allowing residents in the neighboring subdivisions walkable access to daily services.

Any new development and redevelopment along the southwest side of E John Street should include a natural buffer adjacent to the Brightmoor subdivision. Additionally, a buffer along I-485 should be left intact for any residential development that will be contiguous to the interstate in order to reduce noise impact to the residents. These buffers will provide additional opportunities to extend greenways and access from residential neighborhoods. Greenways help protect environmentally sensitive areas such as stream buffers, trees and wetlands.

The street network in the study area should incorporate sidewalks and/or multi-use paths on both sides of the streets whenever possible. Providing pedestrian connectivity to neighborhood amenities and daily services will allow residents to be less dependent on vehicular use.

Connecting greenway paths to sidewalk or multi-use path along McKee Road will permit students a safe route to CPCC campus in the future.

NCDOT will be widening E John Street through the study area in several years. The proposed widening plan includes a sidewalk on one side and multi-use path on the other side of the street. These sidewalks and multi-use paths should be connected to other greenways and open spaces within the study area.

E JOHN STREET SMALL AREA PLAN NATURAL RESOURCES AND OPEN SPACE ACTION ITEMS:

1) *Establish natural buffers along Brightmoor and Matthews Plantation subdivisions.*
2) *Maintain natural buffer adjacent to Hwy I-485 and residential neighborhoods adjacent to the study area.*
3) *Create greenways along existing stream buffers.*
4) *Provide a pedestrian bridge over stream tributaries to connect neighborhoods to daily services and other amenities.*
5) *Developers need install pocket parks and natural areas within their developments.*
6) *Explore private – public partnerships to ensure natural resources in the area are used to enhance new development.*

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STRATEGIES

The E John Street/ Outer Loop Area Small Area Plan is a document to guide development and provide a vision for a largely undeveloped corridor. In order for the vision of this plan to become a reality, there are necessary strategies that should be employed. Strategies for achieving the overall desired development can be obtained from the Action Items laid out in previous sections of this plan. The Action Items should be implemented in tandem with other strategies such as building partnerships and evaluating and designing regulations. Below listed are explanations of strategies to be implemented.

Focus on Action Items

Action Items are laid out at the end of appropriate sections of the small area plan. The items laid out are specific approaches that can be taken to achieve the desired build-out of the study area. They should be prioritized by the Town Board and by Staff. The action items focus on key tasks that are essential for creating a cohesive and well-designed segment of the Matthews community. Action Items include provisions for land use, urban design standards, place-making, transportation, utilities, and open space.

Building Partnerships and Communication

Partnerships should be maintained within Town departments, and made between the Town and private developers/land owners. These partnerships should be made early on in the development design process and may be defined by the Town Board. For example, if a new greenway within the study area is being proposed by a developer, all property owners affected along with Town Staff and Mecklenburg County should meet and be in constant communication. Public-private partnerships may be made in initial meetings ensures the timeliness and success of the greenway project and may result in a better end product. Effective communication in these partnerships is essential. With the creation of the partnerships, the Town should identify the parties involved, their reason for involvement, and what their role is in completing the action item. When necessary the partnership agreements may be formalized, detailing the magnitude of the project, each partner's responsibility, deadlines, and completion dates.

Evaluate and Design Regulations

The study area is by-in-large undeveloped therefore; it acts as a blank slate. It may be appropriate to develop a new overlay district or new zoning provisions to apply to the property in this area depending on what unique development is proposed. Along with new potential districts, the Town Board should periodically review the land use regulations to verify that these regulations provide enough direction to effectively guide development in the study area.

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Unique Destination Concepts That May Be Located Within the Study Area

The section in this study on creating one or more unique destinations within the area listed several ideas:

- medical/scientific research park
- business incubator or entrepreneur startup facility
- arts village
- vineyard and/or winery
- mixed-use retail facility
- botanical garden or nature preserve

A research park or a business incubator would fit particularly well into any of the blocks that include an Office focus. A medical or scientific research concentration close to Central Piedmont Community College Levine campus would provide mutual benefit for the college's student body and faculty as employees and initiators of research projects and for the facility to have easy access to cutting-edge technology and specialized training for employees.

Similarly, a business incubator or entrepreneur startup facility would likely be well situated near the CPCC campus where students and faculty would easily be able to flesh out their business plans and increase their expectations for a strong opening and initial operations.

An arts village could include a concentration of individual artists living in close proximity, creating their pieces, and displaying/selling finished works in a coordinated fashion. Gatlinburg Tennessee and downtown Eureka Springs Arkansas have developed strong identities as artist concentrations which generate significant tourist attention all year long. These cities can provide an understanding of the scale of artist residency and activity that will be effective in branding the immediate vicinity as an arts village.

A vineyard or winery often creates a sense of respite from an urban area, even when located close to larger metro areas. This type of use could be designed to include a boutique hotel to encourage overnight guests, and could incorporate some cottage cluster housing for those wanting to be involved in some aspect of the agrarian business. An on-site winery operation could include tours of the facility and a tasking room, and might offer wine and related products for sale. Similar unique destinations could be a cottage cluster housing area within an active farming operation such as growing herbs or vegetables, or raising goats. The farm products could be sold directly from the location or on-line, or

could be processed on-site to make other products for sale – dried herbal sachets, goats' milk soaps, etc. A vineyard or farm could be a tour and teaching facility as well. This concept might be acceptable for a segment of the study area that may currently be open field, whether adjacent to existing single-family neighborhoods or land that has been farmed in the past.

A mixed use retail facility does not have to appear as a traditional suburban-style strip center. Instead it could have a couple "anchor" retailers surrounded by a group of small retail outlets in a concentrated area, surrounded beyond the retail by complementary office and residential uses. Phillips Place in Charlotte is an example of a newly created retail hub intended to blend with the immediate surrounding activities.

A botanical garden or nature preserve would require more space than the scattered pocket parks envisioned by this small area plan, but would not significantly reduce the buildable opportunities in the area as a whole. A property within the study area that may be currently wooded can be creatively improved to allow public access for the purpose of enjoying natural beauty. Formal garden areas can be designed to showcase flowering and fruiting plants, for example, between groves of existing trees. A decorative greenhouse or gazebo could be included to give places for visitors to stop and enjoy the scenery or to learn about specific plant life.

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