

PARIS AVENUE THOROUGHFARE MASTER PLAN BASIS OF DESIGN REPORT

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1.0 PARIS AVENUE INTRODUCTION

Summary:

Four Waters Engineering, Inc. (4Waters) is assisting the Town of Port Royal (Town) in developing a preliminary master plan for Paris Avenue to transform the road into a gateway portal. The general area for this assignment is along Paris Avenue, from Ribaut Road to 7th Street, a distance of approximately 3,900 feet (0.75 mile), as provided in **Appendix A**. Improvements are restricted to within the public right-of-way (ROW), with minimal work being proposed on private property. Work on private property should be minor grading and driveway repairs or replacement.

The majority of this assignment pertains to surface features (sidewalks, curbs, landscaping, etc.), with some effort being made for underground work (sewers, water, conduit, etc.). Regarding utilities, Dominion Energy was contacted and involved with a February 23, 2023 site walk to discuss relocation of above ground electricity to underground conduits.

Several meetings were undertaken for this project including the following: design charrette, design review meeting, and public open house. These meetings were to further the design and incorporate the public and Town interest to ensure stakeholders' interests were acknowledged for this engagement.

The design team conducted a workshop meeting with the Town on February 23, 2023, which discussed the important characteristics of the roadway improvements. It was established at this meeting that the design will include improvements for pedestrians, businesses, parking, and vehicular traffic. The town ranked the following criteria in importance with number one being the most important, so the consultants would know orders of importance.

1. Pedestrian Traffic
2. Businesses
3. Parking
4. Vehicular Traffic

During the Town's design review meeting it was decided that parking spaces could not be reduced from the current count. This resulted in reconfiguring the proposed parking spaces, along with accommodating motorcycle and golf cart spaces into the final count.

To assist with maintaining a 25 mph speed limit, the Town desired to reduce the width of a travel lane along Paris Avenue to ten feet (10'). In February 2024, the Town approved setting Paris Avenue's speed limit at 22 mph, to demonstrate support for military veterans.

If this project moves forward, Beaufort-Jasper Water & Sewer Authority (BJWSA) should be consulted regarding their water and sanitary sewer within the Paris Avenue right of way. If they decide to participate by improving their underground systems, this design should be incorporated into a master set of drawings. Additionally, any potential underground utility work should be completed prior to roadway surface work.

4Waters has prepared an estimate of probable construction costs based on the 30% Design. The total Engineer's Opinion of Probable Construction Costs for the Paris Avenue Thoroughfare Improvements project is \$12,900,000, with a 25% contingency of \$3,225,000 for a total anticipated expenditure of \$16,125,000.

Due to the costs associated with developing Paris Avenue into a gateway portal, funding will be required. The Lowcountry Council of Governments (COG) has been contacted regarding funding opportunities for this project. Because the project does not promote economic development, or include new utility services involved with Paris Avenue, funding programs will have to be identified that do not include those requirements.

30% Design Process:

The design team undertook a review meeting with the Town on July 20, 2023. This meeting included a presentation of the Paris Avenue layout. Feedback from this meeting was incorporated into the final design with critical items updated in the 15% design for the public meeting held on August 9, 2023. After these stakeholder meetings, 4Waters proceeded into the final 30% design master plan design documents which included conceptual design drawings, engineer’s opinion of probable construction costs, and this design of basis report which can be used for future detailed design and planning.

Design Criteria:

Due to the Town’s concern of speeding motorists along Paris Avenue, they wanted to slow traffic speed down organically. The design of Paris Avenue’s cross-sectional areas were based on The Port Royal Code Thoroughfare Standards, adopted in 2014. This manual accounts for lower speed limits, on street parking, and sidewalks, as provide below in **Table 1**. The design team followed this design criteria while generating roadway cross sections for the Town’s review.

Table 1: Table 2.3.90.A Thoroughfare Formulas

Allowed Movement Types	Speed	Lane Assembly A		Public Frontage Assembly D			
		Travel Lanes B	Parking ¹ C	Planter E	Path F	Assembly D	Edge G
T3 T3							
Yield: Rear Lane	10 mph	12'		4' min.		4' min.	R, C, or RB
Yield ¹	<20 mph	12'	7'	5' min.	5' min.	10' min.	R or C
Slow: 20	20 mph	9'	7'	5' min.	5' min.	10' min.	R or C
Slow: 25	25 mph	10'	7'	5' min.	5' min.	10' min.	R or C
Low: 30	30 mph	10'	8'	5' min.	5' min.	10' min.	R or C

In discussions with the Town, it was determined to reduce the drive aisles to a minimum width of ten feet (10’) which is supported by the Town’s thoroughfare standards. It is anticipated this will help reduce the speed of vehicular traffic to 25 mph or less (the posted speed limit is 25 mph) without additional traffic calming devices such as speed humps. Recently, the Town adopted a 22 mph speed limit along Paris Avenue.

As stated within National Association of City Transportation Officials (NACTO) website, “Lane widths of 10 feet are appropriate in urban areas and have a positive impact on a street’s safety without impacting traffic operations.” <https://nacto.org/publication/urban-street-design-guide/street-design-elements/lane-width/>

The decision was made to reduce the travel lane width to ten feet (10’), which studies have indicated “there is no measurable decrease in urban street capacity when through lane widths are narrowed from 12 feet to 10 feet,” as provided within NACTO’s website.

Traffic calming measures for Paris Avenue include the following:

- Slow (220 mph) posted speed limit.
- Narrow (10’ wide) travel lanes.
- Raised table (i.e. speed hump).
- Dedicated crosswalks
- Selective pinch points (i.e. extruding curbs)

A survey and utility locates were completed by ATLAS Surveying, Inc. (ATLAS) and field-verified by 4Waters. This information is shown on the “Existing Conditions” drawings (sheets EX-1:EX-9) within the 30% design set. The Paris Avenue right-of-way (ROW) is generally 75 feet with some privately owned structures encroaching into the ROW.

A geotechnical investigation was undertaken by GHD in 2023, with the draft report being located in **Appendix B**. Based on the pavement cores, the existing pavement sections along Paris Avenue were highly variable, likely the result of previous work over time. Initial drilling cores indicate the following pavement composition, as shown in **Table 2**.

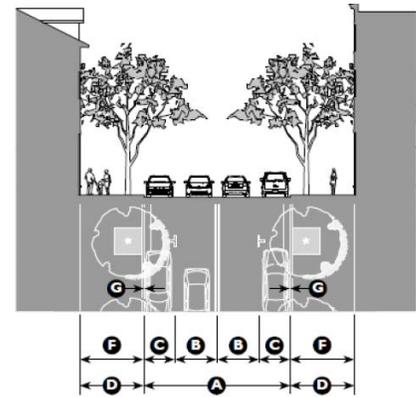


Table 2: Roadway Composition

Log Boring	Roadway Surface	Base Course
B-1	5" asphalt	2.75" sand asphalt
B-2	1.75" asphalt	5.75" sand asphalt
B-3	1.75" asphalt	7.25" limestone aggregate
B-4	1.75" asphalt	4.75" sand asphalt
B-5	2.25" asphalt	4.5" limestone aggregate
B-6	3" asphalt	2.5" sand asphalt
B-7	1.5" asphalt	3.5" sand asphalt
B-8	4.75" asphalt	5.25" limestone aggregate

The topography of the project ranges in elevations from approximately 25 feet at Ribaut Road to 8 feet at 7th Street. The roadway is superelevated for a portion of the project, with the remaining portion crowned, with some valley gutters. The Town reported drainage issues at various locations along Paris Avenue, with engineering observations noticing an excess of drainage structures at Port Royal Elementary School.

The existing water and sewer infrastructure along Paris Avenue is owned by Beaufort Jasper Water and Sewer Authority (BJWSA). The survey identified visible utility infrastructure, but did not confirm the condition of these existing structures. BJWSA should confirm their existing utilities, including location, pipe sizes, and condition. It is anticipated these utilities are approaching the end of their life cycle and should be investigated and potentially replaced. This work is outside of this project, but should be undertaken before proceeding into the next phase (100% detailed design).

Limitations:

In discussions with the Town, the following items were brought to their attention that have the potential to be future issues:

- There is parallel, perpendicular, and angled parking along Paris Avenue. A known issue with the angled parking is vehicles encroaching into the travel lanes.
- Pedestrian walkways from Ribaut Road to 11th Street are mainly 4 feet wide; from 11th Street to 8th Street the sidewalks are mainly 10 feet wide; and from 8th Street to 7th Street the sidewalks go back to 4 feet wide.
- The Town Hall building encroaches on the ROW which causes Paris Avenue roadway alignment to shift to the west at 8th Street.

- There has been flooding of Port Royal Elementary School's main entrance and lobby area, with multiple catch basins and trench drains installed to reduce this effect.

A sixty-two (62) sheet set of drawings, dated May 2024 consisting of landscape architectural, planning, surveying, and civil engineering drawings is associated with this Basis of Design report. These drawings are preliminary in nature and have been generated to provide a footprint for future Paris Avenue improvements, which will consist of detailed design efforts. Additionally, proposed utility improvements (water and sanitary) will need to be determined and coordinated with BJWSA.

2.0 ROADWAY MODIFICATIONS

The design consultants' understanding is that Port Royal wishes to transform Paris Avenue into a gateway portal. This involves redesigning the roadway to meet the Town's priority list, as previously presented. This report can be used as the Town's guide to help develop Paris Avenue into the streetscape project they desire.

By treating this project as a streetscape, in lieu of a simple roadway improvement project, the Town intends to maximize their investment. Transforming Paris Avenue into a more visually appealing transportation corridor should bring additional benefits beyond the traffic aspects.

Improvements may provide retail businesses within the area with more pedestrian circulation, community shoppers, and tourist traffic. Additionally, parking will be updated to current standards, allowing a better flow of visitors to the downtown. Americans with Disabilities Act (ADA) has been addressed in the conceptual design with increased handicapped parking, ramps and wider sidewalks.

The Town has set itself a goal of developing Paris Avenue into a streetscape project, but realizes it will be a multiphase project spanning several years. It is the intent of using this Basis of Design report to assist the Town as they proceed with implementing their plan for Paris Avenue.

Ribaut Road Intersection:

In discussions with the Town, it was agreed that reconfiguring the intersection of Ribaut Road and Paris Avenue would be one of the first stages of any improvement. This intersection is owned by the South Carolina Department of Transportation (DOT) and will need their approval for any modifications.

The design team, in conjunction with the Town has modified this intersection to reduce the width of Paris Avenue from 132 ft. to 84 ft. This results in the loss of the concrete median island, and a better alignment with Paris Avenue North. With a shorter width, any archway the Town may want to install becomes more feasible.

The land reclaimed by this revised width may be used by Dominion for some of their infrastructure. This extra land can also accommodate a large gateway sign or other large artistic structure to be located near the Ribaut Road and Paris Avenue intersection.

Driveways:

Private driveways were located in the survey and shown on the drawings. It is anticipated to rebuild all driveways within the ROW with either asphalt or concrete, depending on existing composition. To reduce complaints pertaining to driveway closures, access, or replacements, discussions with homeowners about these driveways should be considered.

Temporary construction easements may be required for driveway work that exceeds the roadway allowance. These will need to be confirmed and acquired in later design phases but should be expected by the Town.

Some properties which have multiple driveways that will be required to be disconnected. The following is a list of the parcels that would have an extra driveway removed.

- 1628 Paris Avenue (Corner Perk Port Royal)

In addition, the alleyway servicing 1719 Ribaut Road (Maureen McDonnel, owner) would be disconnected from Paris Avenue.

Roadway Cross Sections:

To assist in traffic calming along Paris Avenue, “pinchpoints” as provided within NACTO’s design standards have been used along the road’s length. These pinchpoints consist of curbed islands that extend from the back of curb and assist in maintaining the ten foot (10’) lane width. Due to angled parking spaces, roadway widths adjacent to these areas have been increased to twelve feet (12’)

Existing landscaped medians composed of concrete curbing is proposed to be demolished to transform Paris Avenue into a continuous two-lane road. Removal of these medians, which contain vegetation (trees and shrubs) will assist with better line-of-sight issues, particularly of pedestrians crossing the road. Additionally, removal of these existing medians will assist in turning movements for angled parking.

Appendix C provides three (3) Paris Avenue general cross sections, which pertain to the majority of the street. These cross sections were developed in conjunction with the Town’s intent of slowing vehicular traffic down, along with providing ample sidewalks, while maintaining the number of parking spaces.

Onstreet Parking:

A parking space survey was conducted to confirm the existing number and type (angled, parallel, or perpendicular) of spaces within the Paris Avenue ROW. **Table 3** below summarizes the total existing parking.

Table 3: Existing Paris Avenue Parking Space Summary

PARKING TYPE	TOTAL	ADA	NON ADA	MEETS STANDARDS	DOES NOT MEET STANDARDS
Angled Parking	181	4	177	0	181
Parallel Parking	106	10	96	87	19
Total Parking	287	14	273	87	200

It was determined that 200 existing spaces do not meet Town standards, the primary deficiency is shorter than acceptable lengths. This results in parked vehicles extending into the driving portion of the street. The proposed conceptual design corrects this deficiency, which results in fewer overall parking spaces as provided in **Table 4**; however, the overall number of parking spaces meeting the Town standard increases within the vicinity of Paris Avenue.

Table 4: Future Paris Avenue Parking Space Summary

PARKING TYPE	TOTAL	ADA	NON ADA	MEETS STANDARDS	DOES NOT MEET STANDARDS
New Angled Parking	45	2	43	45	0
New Parallel/Perpendicular Parking	192	11	180	192	0
New Food Truck Parking	1	0	1	1	0
New Golf Cart Parking	18	0	18	18	0
New Proximity Parking	56	0	56	56	0
Total Parking	312	13	298	312	0

As noted, there are fewer angled parking spaces, but more parallel parking spaces. This was the result of increasing the sidewalk widths on both sides of the street, combined with a grading buffer to accommodate the new road elevation and tying the proposed grade to existing grade. There is an overall reduction in automobile parking spaces from existing to proposed by fifty (50) along Paris Avenue. Additional parking spots within Paris Avenue's vicinity has been designed which accounts for fifty-six (56) new parking spaces. Therefore, the overall parking spaces from existing to proposed meeting the Town standard is increased by twenty-five (25), including golf carts and a food truck.

Additional parking within the vicinity of Paris Avenue will be provided at the following locations which help to supplement parking losses along Paris Avenue.

- 12th Street at Port Royal Elementary School
- 12th Street at Alano Club
- London Avenue

These parking spaces have recently been designed by Four Waters Engineering, with **Appendix D** containing the drawings. It is anticipated the Town will have these improvements construction, which should help alleviate parking scarcity.

Sidewalks:

In order to meet the Town's pedestrian objective, it was determined to increase sidewalk widths on both sides of the road to eight feet (8') minimum, and twelve feet (12') typically. This will allow greater movement of residents and business patrons, along with allowing shared usage of the sidewalk for businesses. Sidewalks adjacent to ADA parallel parking spots will differ from the typical sidewalks proposed for this project. The anticipated streetscape cross sectional profile is provided in **Appendix E**.

Multiple locations within Paris Avenue's ROW have building structures that extend into the Paris Avenue ROW. Many of these structures are overhangs that are supported by columns embedded into/onto the sidewalk. The proposed design considers these structures permanent, to remain, and improvements be made around them. This approach should be verified by the Town, and if confirmed, permanent easements for these structures should be considered. Construction activities within the public ROW near personal property (trees, signs, fences, etc.) have the potential to damage these items. A proposed grading buffer should help reduce the number of personal property complaints during construction.

In enhancing the pedestrian experience along Paris Avenue, the use of tabby-finished concrete sidewalks and brick pavers at crosswalks and traffic tables has been carefully considered. Tabby-finished concrete sidewalks offer a distinctive texture and appearance that aligns with the historic charm of Port Royal while providing a durable and low-maintenance surface for pedestrians to traverse. At crosswalks and traffic tables, brick pavers are utilized to delineate pedestrian pathways and enhance visibility, ensuring safe and efficient navigation for both pedestrians and motorists. The combination of tabby-finished concrete sidewalks and brick pavers not only adds visual interest but also reinforces the character and identity of Paris Avenue, creating a welcoming and pedestrian-friendly streetscape for residents and visitors alike.

3.0 MUNICIPAL UTILITIES

Water:

This assignment did not fully investigate the municipal waterline(s) capacity along Paris Avenue, as they are owned by Beaufort-Jasper Water & Sewer Authority (BJWSA). The survey located surface features (valves, hydrants), and estimated the underground pipes' locations. Due to lack of available Geographic Information System (GIS) data, these located infrastructures were not confirmed by BJWSA.

It is anticipated that some existing utilities will require relocation. Conflicts of existing utilities will be identified at further design phases. Waters will coordinate with BJWSA on known water infrastructure to confirm utility locates and identify potential conflicts.

If it is determined that water upgrades are warranted, BJWSA will be heavily involved with design and construction of their watermain system. If Paris Avenue is planned to be improved, it is vital that all underground utility work be completed beforehand. This will prevent utility cuts into newly laid asphalt and repeated closing of segments of the road.

The design of potable water, including fire hydrants will be undertaken during later design phases. These will be coordinated between the Town and BJWSA to ensure they are in the optimal location.

Sanitary Sewer:

This effort did not fully investigate the municipal sanitary sewer capacity along Paris Avenue, as they are owned by Beaufort-Jasper Water & Sewer Authority (BJWSA). The survey located surface features (manholes), and estimated the underground pipes' locations. Due to lack of available Geographic Information System (GIS) data, these located infrastructures were not confirmed by BJWSA.

Recently, a conceptual sanitary sewer "master plan" was generated for Ribaut Road, to determine which properties that front the road lack access to municipal sanitary sewer. It was determined that a few properties at the intersection of Paris Avenue and Ribaut Road may be without municipal sanitary sewer.

In review of existing conditions, Paris Avenue seems to lack a dedicated sanitary sewer within its right of way. Installing a sanitary sewer along the street should be a priority before moving onto surface work. The Town should meet with BJWSA to determine a course of action for supplying municipal sanitary sewer service. If sanitary sewer service is provided along Paris Avenue, a pump station may be required due to elevation pipe differences or distance from connection points.

If it is determined that water upgrades are warranted, BJWSA will be heavily involved with design and construction of their watermain system. If Paris Avenue is planned to be improved, it is vital that all underground utility work be completed beforehand. This will prevent utility cuts into newly laid asphalt and repeated closing of segments of the road.

Storm Sewer:

Currently, an improved stormwater system is proposed to be constructed as part of the Paris Avenue improvements. The stormwater system is designed to convey a 25-year storm event, without surcharging. The infrastructure includes the location of catch basins at critical drainage locations.

Additionally, the storm pipes are sized to convey the anticipated storm event, and range in size from 15" to 36" in diameter. The drainage design also calls for the upsizing of existing storm sewer pipes where necessary as it nears the outfall point. This will allow for the existing system to better serve the surrounding communities by conveying stormwater to its ultimate outfall location and reduce flooding along Paris Avenue.

The proposed stormwater system improvements utilize the existing corridor where available. This choice reduces the potential for conflicts with other utilities as well as maintains connectivity of private systems which discharge to the Paris Avenue stormwater conveyance system.

4.0 DRAINAGE

Flooding:

The Town has documented flooding issues in front of the Port Royal Elementary School and at the intersection of West Paris Avenue and Paris Avenue. The flooding in front of Port Royal Elementary occurs around the crosswalk that students use when walking to and from school, creating a public safety issue, and takes a prolonged period to recover. The flooding at the intersection of West Paris Avenue and Paris Avenue is centered around a handicapped parking space, again creating public safety and accessibility issues. It is believed that this flooding is caused by an undersized stormwater conveyance system that is unable to provide the necessary capacity for quick recovery.

According to the most recent FEMA Flood Maps, the majority of the Town is Zone X being outside of the 500-year floodplain and starting east and south of the Port Royal Elementary School is Zone X inside of the 500-year floodplain. Whether in or out of the 500-year floodplain, Zone X is considered to be a low-risk zone, so any documented flooding is unlikely to be caused by any particular storm event but more so due to inadequate existing stormwater infrastructure. The stormwater improvements associated with the Paris Avenue redesign are anticipated to reduce flooding and improve recovery times for any staging in the roadway that does occur.

Outlets and Tributary Areas:

This project consists of separating four (4) tributary areas based on their ultimate outlet location and maintaining existing drainage patterns where possible. The four locations from north to south include the following:

- Cypress Wetlands near the Amphitheater.
- Port Royal Elementary School, closed conveyance to the Cypress Wetlands.
- The Pond located west of Madrid Avenue, known as the Madrid Pond.
- Battery Creek.

In the period between the 15% design and the submittal of this 30% Basis of Design Report, it was decided that the outfalls should be reduced from five (5) to four (4). This resulted in the removal of the outfall to the ditch between Helena Square and Tamara Lane that ultimately outfalls to the Cypress Wetlands and rerouting that portion of the system to outfall to the Cypress Wetlands on the south side of the Amphitheater. This will result in the two outfalls discharging to the Cypress Wetlands near the Amphitheater. As a part of this project, portions of the existing stormwater infrastructure along Paris Avenue will need to be improved in order to adequately convey stormwater to the outfall locations.

Methodology:

Existing and proposed tributary areas were determined based on topography, which provided (im)pervious areas. Determining the surface runoff coefficient, combined with the tributary area, allowed calculations for the various storm events (2 yr., 10 yr., 25 yr., etc.). This provided an anticipated stormwater runoff value based on time of concentration for the storm events.

Storm sewer structures were located to provide maximum surface coverage, which should reduce drainage issues within the project area. Knowing the anticipated storm runoff volumes, pipes were able to be sized based on this knowledge. **Appendix F** provides the storm system calculations for servicing Paris Avenue with an updated system.

A spreadsheet program was used to calculate flow through the pipe network, based on diameter and slope. Manning's Equation is used within the spreadsheet program to calculate flow based the following formula: $Q = A * 1.486/n * R^{2/3} * S^{1/2}$

Where Q = Discharge (cu. ft./sec.)

A = Cross-sectional Area of Flow (sq. ft.)
 n = Coefficient of Roughness
 R = Hydraulic Radius (ft.)
 S = Slope of Pipe (ft./ft.)

The sizes, inverts, lengths, and Manning’s “n” values for all pipes were entered into the program. In addition to pipe information, all runoff coefficients and tributary areas were used to develop a comprehensive stormwater model. Criteria provided in **Table 5** was used as a minimum bases for confirming pipe conveyance.

Table 5: Stormwater Management Criteria

STORMWATER MANAGEMENT REQUIREMENT	SOUTHERN LOWCOUNTRY STORMWATER REQUIREMENTS	DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL STORMWATER REQUIREMENTS
Hydraulic Conveyance Gradient Calculations	Hydraulic capacity and flow velocity for drainage conveyances, including ditches swales, pipes, inlets, and gutters. Plan profiles for all open conveyances and pipelines, with and hydraulic gradients for the 2-, 10-, 25-, 50-, 100-year, 24-hour storms.	Each conveyance measure must be stabilized and capable of handling the 10-year, 24-hour storm event with non-erosive flow conditions.
Pipe Flows	2 feet per second minimum, 10 feet per second maximum	If the velocity exceeds 5 feet per second, then permanent velocity dissipation measures, devices, and/or erosion prevention BMPs must be installed to provide non-erosive flow conditions.

Sediment Control

Sediment Control best management practices (BMPs) are designed to remove some of the sediment accumulated within stormwater runoff, to the best extent practicable. These BMPs help prevent sediment impacts to adjacent properties and water bodies from stormwater discharges originating from construction sites. Typically, these BMPs are placed near each of the site’s outfalls and are installed prior to site work preparation. However, these BMPs can also be located throughout the construction site and, in these circumstances, are installed after surface (asphalt, grass, concrete, etc.) removal has occurred.

Examples of Sediment Control BMPs include: sediment traps, sediment basins, silt fence, rock check dams, rock sediment dikes, sediment tubes, and inlet protection. Consult SC DHEC’s BMP Handbook for more information on Sediment Control BMPs.

5.0 LANDSCAPE AMENITIES

The proposed streetscape project for the Town of Port Royal's Paris Avenue, embodies the collaborative efforts and insights gleaned from extensive stakeholder meetings. By incorporating feedback from these sessions, our design aims to create a streetscape that not only enhances functionality but also reflects the desires and aspirations of the community.

Appendix G provides the various amenities that were presented at the Open House forum, which were selected by residents as their top choices. Key elements such as street trees, plant material, site furnishings, and signage have been meticulously selected and positioned to align with the feedback received.

This inclusive approach ensures that the Paris Avenue streetscape not only captures the unique identity of Port Royal but also resonates with the needs and preferences of its residents. Through thoughtful integration of stakeholder input, our vision is to craft a vibrant and inviting environment that fosters a sense of pride and ownership among all those who call Port Royal home.

Street Trees:

For the street tree selection, a meticulous approach was taken to ensure that the chosen species not only enhance the visual appeal of the streetscape but also thrive in the local environment. Between Ribaut Road and 8th Street, Live Oaks (*Quercus virginiana*) were selected as the overstory trees, offering stately canopies and a timeless aesthetic that harmonizes with the historic character of Port Royal.

Complementing the Live Oaks, American Fringe Trees (*Chionanthus virginicus*) were chosen as understory trees in areas where existing canopy trees extend into the street right-of-way. Their delicate white flowers in spring and vibrant foliage in fall provide a graceful understory layer, adding depth and texture to the streetscape.

South of 8th Street, the iconic Palmetto Trees (*Sabal palmetto*) were selected for their resilience and distinctive silhouette, serving as emblematic landmarks that evoke a sense of place and identity unique to the region. By carefully considering the ecological suitability and visual impact of each species, the street tree selection not only enhances the aesthetic appeal but also contributes to the overall sustainability and charm of the Paris Avenue Streetscape.

Shrubs and Ground Covers:

In planning the shrub and groundcover selections for the Paris Avenue Streetscape project, careful consideration was given to accommodate the varying sun exposure and soil conditions along the avenue. It's suggested that all plant materials selected be known for their resilience in challenging street environments and drought tolerance, ensuring sustainable growth and minimal resource demand.

Suggestions for both flowering and non-flowering shrubs were made to provide a diverse and visually appealing landscape throughout the year. Evergreen groundcovers such as Asiatic jasmine and native ferns were proposed to offer robust coverage with minimal maintenance requirements.

Additionally, a selection of native flowering species was recommended to introduce vibrant color and attract local pollinators, contributing to the ecological diversity of the streetscape. By incorporating these suggested plant varieties tailored to the unique conditions of Paris Avenue, the streetscape can enhance the area's aesthetic appeal while fostering a resilient and dynamic urban environment.

Site Furnishings:

In response to public feedback, the site furnishings for the Paris Avenue Streetscape project, have been thoughtfully chosen to balance functionality and aesthetics while aligning with the area's unique character.

Based on residents' preference, we propose integrating the Maglin Site Furnishings Series 1200 benches, known for their timeless design and durability. This series not only offers a variety of backed and backless options but also complements Port Royal's port/industrial aesthetic and historic nature.

Consistency in design language and quality is maintained by selecting the remaining site furnishings, including trash receptacles, recycle bins, bike racks, bollards, and planters, from the same Maglin family. By utilizing the Maglin Series, we aim to provide durable, stylish, and cohesive site furnishings that seamlessly integrate into the streetscape, enhancing the overall user experience and preserving the distinct character of Paris Avenue.

Signage:

In the development of Paris Avenue's directional signage, careful consideration has been given to provide clear guidance for both pedestrians and drivers while enhancing the streetscape's visual appeal. A variety of signs have been incorporated, including street signs, traffic signs, pedestrian directional signs, signs for local businesses, and informational signs, to ensure comprehensive navigation and communication.

As determined through meetings with stakeholders, the signage adopts a distinctive design reminiscent of the Spanish Moss Trail signage, embodying a nautical-inspired look characterized by a harmonious color palette and clean, elegant design elements. This cohesive visual identity not only fosters consistency throughout the streetscape but also reinforces the area's connection to its maritime heritage. By integrating directional signage that reflects the unique character of Port Royal, Paris Avenue becomes more than just a thoroughfare—it becomes a memorable and navigable destination that celebrates the community's identity and history.

In addition to the directional signage, Paris Avenue will feature banner signs affixed to streetlight posts. These banners serve as a dynamic platform for communicating upcoming holidays, events, and community celebrations. With the flexibility to change banners as needed, the streetlight posts become adaptable fixtures that reflect the spirit of various occasions throughout the year, enhancing the vibrancy and sense of community along Paris Avenue. This thoughtful integration of dynamic signage not only serves practical purposes but also contributes to the overall ambiance and liveliness of the streetscape, inviting individuals to engage with the evolving tapestry of events and festivities in Port Royal.

Art:

The August 2023 open house allowed residents to provide feedback on the presented artwork, including painted utility structures, sculptures, and exhibits. The provided artistic work was well received by residents, with none of them being particularly disliked. Voting for the art was generally even across the various options, so residents have a variety of tastes in regard to art, which is reflected in the final options.

The artwork as presented may be enhanced with the introduction of local artists supplying their works. This would allow local artists the opportunity to showcase their ability, along with having the option to donate their work to the Town, which could provide cost savings in regard to acquiring art.

6.0 POWER AND LIGHTING

4Waters met Dominion Energy South Carolina (Dominion) onsite on Thursday, February 23 2023, to discuss the potential project, along with exchanging information about their infrastructure. The contact personnel within Dominion include the staff, listed in **Table 6**. 4Waters has been in communication with these individuals, who have provided information that led into the conceptual electrical layout drawings.

Table 6: Dominion Personnel List

Individual	Role	Email Address
John Ferreri	Lighting Coordinator	john.ferreri@dominionenergy.com
Stephen Ridenhour	Street Lighting	stephen.a.ridenhour@dominionenergy.com
Evan Wheeler	Power Distribution	evan.wheeler@dominionenergy.com
David Sharpe	Power Distribution	david.sharpe@dominionenergy.com

Phasing electrical upgrades were discussed, with the consensus being that this would lead to an overall larger cost, but would be more financially feasible in the short term. Three phase power (3 Phase) would be included along the length of Paris Avenue, within the project area. Unfortunately, this would require Dominion to loop this new electrical system into their existing one. Dominion provided maps of their system, which show where 3 Phase is available, as provided in **Appendix H**

The first component of Paris Avenue electrical upgrades would entail installing underground 3 Phase along Paris Avenue to Paris Avenue West. At that intersection, it would become temporary above ground power and run along Paris Avenue West until it ties back into Dominion’s existing system. This would and tie into the newly constructed infrastructure along Paris Avenue. Th section along Paris Avenue West would be temporary above ground power. The approximate distance along Paris Avenue is about 1,300 feet, and along Paris Avenue West is about 1,580 feet (0.3 mile)

The conceptual electrical layout (sheets C-10:C-18) were generated by 4Waters, based on information collected from Dominion. If any electrical upgrades are to be implemented, Dominion will undertake the preliminary and detailed design. In order to advance any electrical upgrades, Dominion requires a signed contract with the Town to start the design process. This contract would entail a security payment to ensure compensation for Dominion’s effort.

Dominion expressed rerouting the powerlines underground would be expensive, with a general costs of \$5,000,000 per mile of cable installed. In contrast, above ground powerline generally costs \$200,000 per mile of cable constructed.

As of February 2023, there was an approximate balance of \$500,000 in the rolling five (5) year fund, for the non-standard service fund (NSSF). When accessing this fund, the Town would be required to pay for half of electrical upgrades, with the NSSF matching the Town’s payment. If NSSF money is used for electrical upgrades, easements would be required, with the entire process being led by the Town.

The Town entered into a contract with Dominion on October 19, 2020 regarding municipal lighting. This contract stipulates the monthly payment schedule for street lighting within the Town, as shown on **Table 7**.

Table 7: Dominion Energy Monthly Cost

Rate	Item	Cost	Qty	Total
17	LED ATB0 Grey 72W	\$12.34	213	\$2628.42
17	LED ATB2 Grey 216W	\$20.07	46	\$923.22
			Total	\$3,551.64

Dominion Energy supplies and installs wiring, light poles and appurtenances along Paris Avenue for a monthly cost, which is included in the above monthly bill. To reroute the planned infrastructure underground would require additional expenses on behalf of Dominion. It is anticipated they would recoup this cost by renegotiating the 2020 contract.

Above Ground Infrastructure:

A presentation by Dominion was presented in October 2022 pertaining to converting the Town’s HID lights to LED Lighting, with the anticipated budget savings provided in **Table 8**. If the Town proceeds with this conversion, rerouting the power lines underground at this time may provide additional cost savings. Dominion will design their infrastructure, but the Town will need to engage them to start this process of relocating power cables/line underground. Dominion should be communicated with regarding potential savings of combining street lighting replacements with underground power relocations.

Table 8: Streetlighting Conversion Savings

Quantity	LED Light Fixture	Current LED Cost/Month	HID Light Fixture	Current HID Cost/Month	Wattage Savings (Per Fixture)	Incentive per Month (Per Fixture)	Incentive per Month (Total)	Net Customer Cost/Month	Savings per Month	Annual kWh Savings
66	ATB0 Grey 72w	\$ 814.44	100W MV OPEN 17	\$ 543.84	59	\$ 3.10	\$ 204.60	\$ 609.84	\$ (66.00)	15,576
16	ATB0 Grey 72w	\$ 197.44	175W MV OPEN	\$ 143.84	140	\$ 3.10	\$ 49.60	\$ 147.84	\$ (4.00)	8,960
3	ATB0 Grey 72w	\$ 37.02	100W HPS OPEN RET	\$ 27.51	46	\$ 3.10	\$ 9.30	\$ 27.72	\$ (0.21)	552
7	ATB0 Grey 72w	\$ 86.38	100W HPS OPEN	\$ 64.19	46	\$ 3.10	\$ 21.70	\$ 64.68	\$ (0.49)	1,288
58	ATB0 Grey 72w	\$ 715.72	150W HPS OPEN	\$ 584.06	99	\$ 3.10	\$ 179.80	\$ 535.92	\$ 48.14	22,968
59	ATB0 Grey 72w	\$ 728.06	175W MV CBRA OH	\$ 601.80	140	\$ 3.10	\$ 182.90	\$ 545.16	\$ 56.64	33,040
1	ATB0 Grey 72w	\$ 12.34	100W MH CLSD MNI	\$ 10.47	59	\$ 3.10	\$ 3.10	\$ 9.24	\$ 1.23	236
3	ATB0 Grey 72w	\$ 37.02	150W HPS COBRA	\$ 30.78	99	\$ 3.10	\$ 9.30	\$ 27.72	\$ 3.06	1,188
2	ATB2 Grey 216w	\$ 40.14	360W HPS COBRA	\$ 34.42	203	\$ 4.33	\$ 8.66	\$ 31.48	\$ 2.94	1,624
3	ATB2 Grey 216w	\$ 60.21	400W MV CLSD-OH	\$ 50.82	251	\$ 4.33	\$ 12.99	\$ 47.22	\$ 3.60	3,012
40	ATB2 Grey 216w	\$ 802.80	400W HPS COBRA	\$ 714.40	248	\$ 4.33	\$ 173.20	\$ 629.60	\$ 84.80	39,680
1	ATB2 Grey 216w	\$ 20.07	320W MH CLSD MNI	\$ 17.28	156	\$ 4.33	\$ 4.33	\$ 15.74	\$ 1.54	624
259		\$ 3,551.64		\$ 2,823.41			\$ 859.48	\$ 2,692.16	\$ 131.25	128,748

It is anticipated that permanent easements will be required for Dominion’s surface infrastructure. The planned switchgear areas (33’ by 17’) will require permanent easements and if located outside of the Town’s ROW or property then permanent easements will need to be obtained from the property owner. Drawings showing the location of these switchgears are shown in the 30% design drawings.

Prior to removal of power poles, all other utilities (internet, phone, etc.) will need to be disconnected from these structures. These additional private utilities will need to be relocated, preferably underground if the Town decides to advance the underground power relocation. The Town will want to discuss this relocation program with these other utilities to ensure they have time to relocate their infrastructure from Dominion’s power poles.

Underground Infrastructure:

Rerouting the power and lighting cables underground is a complex and costly undertaking, with limitations imposed by the conduits. Switch gears would have to be located approximately every five hundred feet (500'). These are shown on the Proposed Power Conduit and Structure drawings (C-10 through C-18). The size and number of the conduits is dependent on the projected future usage of these underground cables.

Other utilities that use fiber optic such as internet or telecommunications could also be routed underground. These may be included in the proposed conduit layout but should be verified with all utility companies regarding their needs.

7.0 COST ESTIMATES

Base Cost:

4Waters has prepared an estimate of probable construction costs based on the 30% Design, as provided below. The total Engineer’s Opinion of Probable Construction Costs for the Paris Avenue Thoroughfare Improvements project is \$16,125,000. Due to being based on the 30% design, a 25% contingency of \$3,225,000 was included in this overall construction budget. Below is a breakdown of the major construction activities for the Paris Avenue improvements, a detailed construction cost estimate is located in **Appendix I**.

Demolition	\$917,560
Utility Improvements	\$1,304,760
Landscaping and Site Furnishes	\$1,452,960
Site Preparation	\$1,642,030
Roadway Improvement	\$2,992,690
<u>Power and Street Lighting Improvements</u>	<u>\$4,590,000</u>
Subtotal	\$12,900,000
Contingency	\$3,225,000
Engineer's Opinion of Probable Construction Cost	\$16,125,000

“Utility Improvements” consist predominantly of stormwater infrastructure, with minor water and sanitary sewer structures being adjusted to the new roadway surface. BJWSA should be responsible for water and sanitary sewer improvements, so their costs have been excluded from this estimate.

This cost is based on 2024 values and constructed as one project, not as a phased project. Current material fluctuations and supply chain issues in the marketplace may continue to increase material costs.

Due to multiple engineering related tasks being completed (survey, geotechnical investigation, 30% design), the above costs exclude engineering effort. Additionally, some funding opportunities exclude engineering costs, so the provided budget is construction work only. For engineering costs, Phase III which includes 100% design, drawings, permitting, bidding assistance, and construction support for approximately 800 feet is approximately \$250,000.

Options:

Other than minor adjustments, the above construction costs exclude any effort pertaining to municipal water or sanitary sewers. Beaufort Jasper Water & Sewer Authority should be contacted about provisions for new water and sanitary along Paris Avenue.

Dominion Energy has provided guidance regarding estimating their anticipated costs, but do not guarantee any cost associated with their work. At over four and a half million dollars (\$4,590,000), the Town should confirm if the cost of relocating power underground is a worthwhile achievement. This cost is approximately one quarter (25%) of the total estimated construction budget and may not provide the anticipated benefits.

8.0 FUNDING

Due to the costs associated with improving Paris Avenue, it is anticipated that funding will be required. Below is a summary list of potential funding sources that may be considered.

- AARP
- RIA
- Federal Grants
- Tree Mitigation Bank (county)
- Stormwater
- Economic Development
- Safe Street Program (US DOT)
- Complete Streets (FHWA)
- Transportation Alternative Program (SC DOT)

The appropriate organizations should be contacted regarding available funding for Paris Avenue improvements. This could include County, State and Federal agencies that may have programs for these types of projects, some provided in **Appendix J**. Below in **Table 9** is a list of known organizations and their staff that have been contacted regarding funding possibilities. This list is not exhaustive, and other organizations should be contacted by the Town for ongoing funding sources.

Table 9: Funding Sources and Contacts

Funding	Type	Contact	Information
Lowcountry Council of Governments	Various	Jessica Dailey	jdailey@lowcountrycog.org (843) 473-3960
MRB Group	Complete Streets Safe Street Program	Joy Simpson	joy.simpson@mrbgroup.com (843) 992-0275
MRB Group	Transportation Alternative Program Various	Katie McFarland	katie.mcfarland@mrbgroup.com

Funding Sources:

Due this assignment being a streetscape project, a funding opportunity may be the Safe Street Program, which can be further investigated at <https://www.transportation.gov/grants/SS4A>. This program is overseen by the U.S. Department of Transportation and may be viable option for pursuing funding.

The Federal Highway Administration has a program called Complete Streets which also encompasses roadway improvements. More information about the requirements of this program is available at the adjacent QR Code or following link <https://highways.dot.gov/complete-streets>.

Additional funding sources may be available which can be pursued as the Town advances the Paris Avenue improvements.



9.0 RECOMMENDATIONS

Upon completion of this project phase, the Town should have an understanding of the challenges and ultimate outcome of the Paris Avenue streetscape project. This report along with the associated drawings should be reviewed and maintained by the Town for future reference. Below are some recommendations that should be considered by the Town in order to advance the project.

- Council should read and understand this Basis of Design report and seek clarification where required. Upon understanding the ramifications of this report, Council should vote to adopt it as a plan to proceed and move forward with this project.
- In addition to the two (2) funding agencies previously contacted, the Town should explore funding opportunities that may assist with the financial costs of improvement Paris Avenue. Most funding requirements have a matching component, that the Town will be required to fulfill in order to access the available monies.
- Creation of a business improvement district (BID) in which local businesses elect to pay an additional financial assessment in order to fund project(s) within their district's boundaries. This additional money would go towards creating a Paris Avenue Improvement fund, which could then be matched with other funding sources.
- The Town may wish to forego relocating power and lighting cable underground at this time, due to the large financial costs. This would have a considerable savings on the construction costs. If ultimately the Town decides to relocate the cables underground, it would be more economical to relocate them prior to any Paris Avenue Improvements.

The advertised open house hosted by the Town provided feedback from local residents and businesses about the direction in which they wanted Paris Avenue to be designed. The comments collected from this forum are located in **Appendix K** for the Town's use in determining how citizens would like the street to look.

Appendix A

Vicinity Map



Appendix A: Paris Ave Vicinity Map

Port Royal, SC

DISCLAIMER: This map is for reference and discussion purposes only. Data provided are derived from multiple sources with varying levels of accuracy. The information shown hereon is not intended for site specific use or design.



Appendix B

Geotechnical Investigation



Report of Subsurface Exploration & Geotechnical Evaluation

Paris Avenue Improvements

Four Waters Engineering, Inc

April 23, 2024

→ The Power of Commitment

57-C Sheridan Park Circle
Bluffton, South Carolina 29910
United States
www.ghd.com



Our Ref: 12632242-00 | Paris Avenue Improvements

April 23, 2024

Ms. Rachel Perley, EI
Four Waters Engineering, Inc
324 6th Avenue North
Jacksonville, Florida 32250

Subsurface Exploration & Geotechnical Evaluation

Dear Ms. Perley:

GHD is pleased to present the results of our subsurface investigation and geotechnical evaluation for the above-referenced project. As requested, we have mobilized to the project site to perform subsurface explorations to develop an interpretation of the subsurface conditions and to provide geotechnical information for the site. The purpose of our work has been to provide site preparation recommendations for the proposed street re-pavement, curb and gutter reconstruction/construction and sidewalk reconstruction/construction areas, to provide preliminary asphalt pavement cross-section recommendations for the anticipated street re-pavement, and to provide geotechnical related recommendations for underground utility installation including our opinion as to the suitability of the subsurface soils encountered for reuse as utility trench backfill.

Our services were performed in general accordance with our proposal dated February 1, 2024.

We appreciate the opportunity to work with you on this project. If there are any questions or comments, please do not hesitate to contact us at (843) 815-5120.

Regards


Robin M. Moutray, P.E.
843-815-0267
robin.moutray@ghd.com




Sean M. McCubbins, LEED® AP
843-815-0268
sean.mccubbins@ghd.com

Enclosures

cc: Mr. Michael Klink, P.E.; Four Waters Engineering, Inc.

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1. Project and Site Description

Relevant project information was received by GHD via email correspondence which included Sheets EX-1 through EX-9 and C-7 of a set of project documents titled, "Paris Avenue Streetscape Improvements", prepared by Four Waters Engineering and dated July 2023. The plan sheets depict the existing conditions of the project area, which is to include portions of both Paris Avenue from Ribaut Road to 7th Street and Paris Avenue West from Paris Avenue to Madrid Avenue in Port Royal, South Carolina. The locations of the alignments are depicted on **Figure A.1** included as **Appendix A**.

It is our understanding that the proposed project includes various improvements to and along these roadways. The anticipated improvements to and/or along the indicated project alignments based upon our recent conversation with you include the following:

- Re-routing and/or removal and replacement of existing longitudinal and/or lateral underground utilities beneath the pavement and/or sidewalks;
- Installation of new underground utilities beneath the pavement and/or sidewalks;
- Resurfacing of the roadway;
- Reconstruction of existing sidewalks; and
- Reconstruction of existing and/or addition of new curb and gutter along the roadway edges.

It is our understanding that a number of repaving scenarios could be required for this project, including the following:

- Reconstruction of the entire pavement width when utilities are removed / relocated / replaced;
- Reconstruction of the pavement section only above the utility trench without overlay of the entire pavement width; and
- Reconstruction of the pavement section only above the utility trench followed by overlay of the entire pavement width.

It is our further understanding that traffic loading is unknown for the roadway alignments. Since traffic loading is unknown, a traffic loading of not more than an equivalent to 15 Class 7 heavy trucks per day has been assumed for both road alignments.

The documents provided for our study indicated the locations of eight (8) Standard Penetration Test (SPT) borings to 10 feet deep with accompanying asphalt pavement cores at those locations.

It is our understanding that the purposes of the requested geotechnical site investigation have been to explore and evaluate the underlying in situ soils and groundwater conditions at the soil test boring locations, to provide site preparation recommendations for the proposed street re-pavement, curb and gutter reconstruction/construction and sidewalk reconstruction/construction areas, to provide preliminary asphalt pavement cross-section recommendations for the anticipated street re-pavement, and to provide geotechnical related recommendations for underground utility installation including our opinion as to the suitability of the subsurface soils encountered for reuse as utility trench backfill.

2. Field / Laboratory Methods & Procedures

The scope of our geotechnical field explorations included asphalt pavement cores and soil test borings at the eight (8) requested test locations. The approximate locations of the explorations are shown on **Figures A.2 through A.8**. A narrative of our various mobilizations to perform our fieldwork is provided below.

- A GHD professional mobilized to the project site and identified the requested test locations by referencing identifiable features depicted on the project documents provided. Areas ideal for positioning our test locations were marked on the pavement and a utility locate request ticket was submitted.
- The GHD professional returned to the project site, and the final test locations were determined based on marked utilities. At each location a 6-inch diameter core was extracted from the asphalt pavement surface. The thickness of the asphalt cores was measured in the field. Below the asphalt surfacing, aggregate base course was removed, and its thickness measured, where encountered. The materials were placed back in the hole until the soil test borings could be performed.
- A GHD drilling crew accompanied by the GHD professional mobilized to the site. Eight soil test borings (designated B-1 through B-8) were intended to be performed to depths of 10 feet at our previously cored test locations. However, unsafe traffic conditions at our test locations B-1 and B-2 prevented our creating a safe workspace with our drilling equipment and crew. As a result, these two locations were moved near to the edge of the northbound traffic lane. At test location B-1, we were able to perform our soil test boring. However, test location B-2 could not be drilled due to space limitations. We later mobilized two field personnel to perform another core and subsequent dynamic cone penetrometer (DCP) test, which was halted by a municipal inspector during the testing procedure. As a result, early cave-in of the soils resulted in a final test depth of approximately 7 feet.
- The soil test borings were conducted utilizing a Diedrich D-25 track mounted rig and advanced utilizing mud rotary drilling and cathead and rope methods. At all but test location B-1, closely spaced sampling from below the pavement surface was performed to the termination depth of approximately 10 feet. Due to the unknown location of onsite utilities at soil test boring location B-1 after it was moved, a hand-auger was performed to a depth of 4 feet and continuously spaced soil sampling was then performed to the termination depth of approximately 10 feet. During the sampling procedure, Standard Penetration Tests (SPT's) were conducted in general accordance with ASTM D1586 to obtain the standard penetration value of the soil. The standard penetration value (N) is defined as the number of blows of a 140-pound hammer, falling thirty inches, required to advance the split spoon sampler one foot. The sampler is lowered to the bottom of the drill hole and the number of blows recorded for each of three successive increments of six inches penetration. The "N" value is obtained by adding the second and third incremental values. The "N" values are reported on each boring log. The results of the SPT testing indicate the relative density and comparative consistency of the soils, and thereby provide a basis for estimating relative strength and compressibility of the soil profile components.
- At test location B-2, the soils were examined by manually twisting a steel auger into the soil and retrieving representative samples from the cuttings at regular depth intervals. Our personnel visually classified the soils encountered at each location in the field. The consistency of the soils encountered at various depths at each location was estimated with a Dynamic Cone Penetrometer (DCP). In the Cone Penetrometer test, a 1-1/2 inch conical point is seated 1-3/4 inches to penetrate loose cuttings, then driven two additional 1-3/4 inch increments with blows from a 15 pound hammer falling 20 inches. The hammer blows are recorded and provide an index to soil strength and density when properly evaluated.
- GHD mobilized field personnel to the project site, and where cave-in of the soils had not occurred, a stabilized groundwater depth was measured. At each location, the test location was plugged with bentonite and reheated hot mix asphalt was compacted into the hole at the pavement elevation.
- The soil samples obtained from the explorations were placed in individual containers, properly sealed and marked for identification. The soils samples were then transported to our laboratory for analysis and classification by a GHD professional in general accordance with ASTM D2487 (Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)).
- Selected samples of the soils collected from the borings were tested in our laboratory to determine their percent fines (ASTM D1140) and natural moisture content (ASTM D2216). The laboratory data was used to aid in the classification of the soils in accordance with ASTM D2487 and to further define their engineering properties. The laboratory test results are presented on the soil test boring logs in **Appendix B**.

3. Subsurface Conditions Encountered

A GHD professional developed the final log information from the field logs and visual review of the recovered soil samples in our laboratory. Similar soils were grouped into strata, with each stratum described in general accordance with the nomenclature used in ASTM D2487. Although indicated on the logs as distinct changes, the transition from one soil type or stratum to another may be gradual or may occur at slightly differing elevations than indicated between soil samples. Soil conditions may also vary from our findings at locations in areas of the site not explored.

Our pavement cores encountered variable pavement materials, including asphalt surfacing, sand asphalt base and limestone aggregate base course. A summary of the pavement components and thicknesses is provided in **Table 3.1**.

Table 3.1 Pavement Component Thickness Summary

Location	Total Asphalt Thickness (inches)	Sand Asphalt Base Thickness (inches)	Limestone Aggregate Base (inches)	Subbase USCS Soils Classification 0 – 2 feet below Sand Asphalt or Limestone Aggregate Base
B-1	5 (in 3 layers)	2.75	-	SP
B-2	1.75	-	5.25	SP
B-3	1.75	-	7.25	SP
B-4	1.75	4.75	-	SP
B-5	2.25	-	4.5	SP
B-6	3 (in 2 layers)	2.5	-	SP
B-7	1.5	3.5	-	SP
B-8	4.75	-	5.25	SP

For reference, a generalized stratigraphic profile below the pavement components developed from the test locations is provided in **Table 3.2**. For a more detailed description, please refer to **Appendix B**. The logs include the Unified Soil Classification System (USCS) symbols and groundwater levels at the time of our study.

Table 3.2 Generalized Stratigraphic Profile

Approximate Depth Below Ground Surface (feet)	Material Description	Relative Density from SPT / DCP testing
0 to 2	Fine SAND (SP)	Medium Dense to Dense
2 to 4	Fine SAND with trace to slight amounts of silt (SP, SP-SM)	Loose to Medium Dense
4 to 6	Fine SAND with trace to moderate amounts of silt / clay (SP, SP-SC, SM)	Very Loose to Loose
6 to 10	Fine SAND with trace to slight amounts of silt / clay (SP, SP-SM, SP-SC)	Loose

Notable variations and/or exceptions to the generalized stratigraphic profile (that would affect our geotechnical recommendations) were not encountered.

Where stabilized groundwater levels could be obtained, the depth to groundwater ranged from 4.5 to 5.75 feet. We expect groundwater levels will fluctuate depending upon the season, recent rainfall quantities in the area, changing drainage patterns during and post-development of this and surrounding areas, as well as other factors.

4. Conclusions and Recommendations

The following conclusions and recommendations are based on the project characteristics previously described, the data obtained in our field explorations, and our experience with similar subsurface conditions and development projects. If the final design grades are significantly different from those currently assumed, or if subsurface conditions differ from those disclosed by the borings are encountered during development, we should be notified so that we might review the following recommendations in light of such changes.

In general, it is our opinion that the subsurface conditions encountered by the soil test borings are suitable for support of the future construction following implementation of the site preparation and design recommendations discussed in the following sections of this report.

4.1 New Pavements / Repaving

The following pavement design guidelines are made without the benefit of specific traffic information and/or reference to any local minimum section standards and are intended as a general guide for the design engineer’s evaluation. Site design decisions may dictate alterations to certain aspects of these guidelines.

We have based our pavement design recommendations on the following assumptions:

- Traffic loading is no more than an equivalent to 15 Class 7 heavy trucks per day for both road alignments.
- The final layer of asphalt is placed at the same time as the initial lift of asphalt where two layers of asphalt are recommended.
- Site preparation procedures as outlined herein have been completed where necessary.
- All asphalt pavements are constructed in accordance with the guidelines of the latest applicable edition of the South Carolina Department of Transportation (SCDOT) Standard Specifications.

Based on the results of our pavement cores, the existing pavement sections along both Paris Avenue and Paris Avenue West are highly variable and likely the result of previous work along the roadways intermittently over time. We anticipate that where our cores indicate the existing pavement section includes an asphalt surface underlain by sand asphalt base, underground work has not occurred since paving practices replaced sand asphalt with aggregate base course.

As previously described, it is our understanding that a number of scenarios for pavement replacement could be required for this project. We have provided various asphalt pavement section options in **Table 4.1**.

Table 4.1 Pavement Section Options

Option	Asphaltic Concrete Surface Course	Asphaltic Concrete Intermediate Course	Asphaltic Base Course	Graded Aggregate Base Course	Sand Subbase ^(a)
Complete Reconstruction					
– Option 1	1½ inches	2 inches	-	6 inches	24 inches
– Option 2	1½ inches	1½ inches ^(b)	-	8 inches	24 inches
Mill / Overlay Only	2½ inches	-	4	6 inches	24 inches

^(a) Sand subbase should consist of inorganic, granular material with a maximum of 20 percent by weight passing the No. 200 sieve. Beneath the existing pavement components to the maximum depth of our explorations (10 feet), our test locations encountered shallow subgrade soils consisting of inorganic sands to at least 24 inches below the existing ground surface which are considered suitable to remain in place to be utilized as the recommended sand subbase below conventional asphalt pavements.

^(b) A surface course mix is recommended for use as the intermediate course due to the size of the aggregate that composes the asphalt mix in relation to the pavement layer thickness. Substituting this mix would likely aid in constructability by reducing the likelihood of aggregate segregation during paving.

4.2 Site Preparation

4.2.1 Demolition, Stripping and Grubbing

The initial step in site preparation should be the complete removal of all the items to be demolished, including existing utility and pavement materials as necessary, as well as any vegetation, topsoil and/or other deleterious materials from beneath and to 2 feet beyond the limits of the pavements. Of particular importance will be verification of proper procedures during demolition of the existing pavements and underground utilities. During demolition of the existing underground utilities, we recommend that an engineering professional or an experienced technician working under the supervision of a registered engineering professional periodically monitor the removal of the underground structure components in order to avoid encountering materials missed and/or loose soil pockets which would result in undue settlement of the future pavements and sidewalks. During demolition processes, the excavations must be backfilled with suitable material densified as recommended in Section 4.2.5. The backfilling process should be monitored by an experienced technician working under the supervision of a registered engineering professional.

While excavating for site utilities, the exposed soils should be carefully inspected for the presence of organic and/or deleterious materials that could be detrimental to pavements and concrete sidewalks. If encountered, these materials and the soils containing them should be removed and replaced with approved properly compacted structural fill.

4.2.2 Utility Abandonment

As an alternative to complete removal and backfilling, some existing underground utilities could be abandoned in-place by filling with flowable fill or 'lean' concrete. If utilized, measures should be taken to ensure that the flowable fill (or 'lean' concrete) fills the entire void within the utility.

4.2.3 Utility Installation

The soils encountered at our test locations are generally suitable for support of the anticipated utility construction the maximum depth of our explorations (10 feet), provided moisture control measures are maintained within the utility excavation.

The soils encountered at our test locations are considered suitable for reuse within the excavations, including within 2 feet of the bottom of the aggregate base course elevation. However, it should be realized that much of these soils will be excavated in a wet condition and will require additional effort to achieve the prescribed density and a stable condition. The soils should be backfilled in compacted lifts as recommended in **Section 4.2.5**.

As an alternative to soil backfill within the excavations below asphalt pavement, a flowable fill, or 'lean concrete' may be utilized in the excavations. The flowable fill should be backfilled to the bottom of the base course elevation.

4.2.4 Excavation Safety

All excavations should be braced in accordance with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) guidelines (29 CFR 1926, Subpart P, Excavations) or other applicable jurisdictional codes for permissible temporary side-slope ratios and/or shoring requirements.

We recommend that the Contractor determine the actual groundwater levels at the time of the construction to determine groundwater impact, if any, on the construction procedures. Results of our exploration indicate that dewatering will likely be required for utility construction at depths greater than approximately 4.5 feet. This dewatering system should be installed and operated to maintain the groundwater level at a minimum of 2 feet below the bottom of the excavation.

We recommend that the contractor exercise extreme caution in any decision to place personnel and equipment in unbraced excavations, particularly when wetted or subjected to surcharge loads or vibrational forces.

4.2.5 Fill / Backfill Placement

All fill/backfill soils in roadway and sidewalk areas should consist of inorganic, granular soils meeting the material and compaction recommendations as summarized in **Table 4.1**. All fill/backfill should be placed in level lifts not to exceed 12 inches loose thickness. However, in restricted working areas, if compaction is accomplished with lightweight, hand-guided compaction equipment, then the lift thickness should be limited to a maximum of 6 inches loose thickness.

Table 4.2 Fill / Backfill Placement Recommendations

Location of Fill	Composition	Compaction Effort as Determined by Modified Proctor Test (ASTM D1557)
Within 24 inches beneath Base Course	Inorganic SAND having no more than 20% silt/clay (SP, SP-SM, SP-SC, SM, SC)	98%
Within 24 inches beneath Concrete Curb / Concrete Crosswalks		
Below 24 inches beneath Base Course	Inorganic SAND having no more than 25% silt/clay (SP, SP-SM, SP-SC, SM, SC)	95%
Below 24 inches beneath Concrete Curb		
Beneath Concrete Sidewalks		

In-place density tests should be performed on each lift by an experienced engineering technician working under the direction of a licensed geotechnical engineer to verify that the recommended degree of compaction has been achieved.

4.2.6 Subgrade and Base Preparation

Immediately prior to placing the aggregate base course, the subgrade (subbase) soils should be moisture adjusted, if necessary, and compacted to a minimum of 98 percent of the soil's maximum dry density as determined by Modified Proctor test (ASTM D1557). The subgrade soils should be proofrolled to check for stable conditions.

The aggregate base course should be compacted to at least 100 percent of the maximum dry density as determined by the ASTM D1557. The base course should be proofrolled to verify stable conditions prior to asphalt paving. We recommend the placement of a prime coat on the aggregate base course if the base will remain exposed to the elements for a period longer than 2 weeks prior to paving. A prime coat helps fill voids, stabilize the fines, protect the base course, and promotes bonding to the asphalt course.

4.2.7 Milling, Paving and Overlays

Where milling of the existing asphalt does not require complete removal of the full thickness of the asphalt, we recommend that a visual assessment of the pavements be performed prior to pavement overlay, so that distresses can be addressed prior to paving.

Care should be taken in creating a pavement surface with sufficient cross slope that creates positive drainage to the curb and gutter. It should also be noted that, as with all asphalt pavements, routine maintenance such as sealing of cracks, timely repair of potholes, and periodic rejuvenation of the surface will be necessary throughout the useful life of the pavement.

5. Limitations

This report has been prepared by GHD for Four Waters Engineering and may only be used and relied on by Four Waters Engineering for the purpose agreed between GHD and Four Waters Engineering as set out in this report.

GHD otherwise disclaims responsibility to any person other than Four Waters Engineering arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

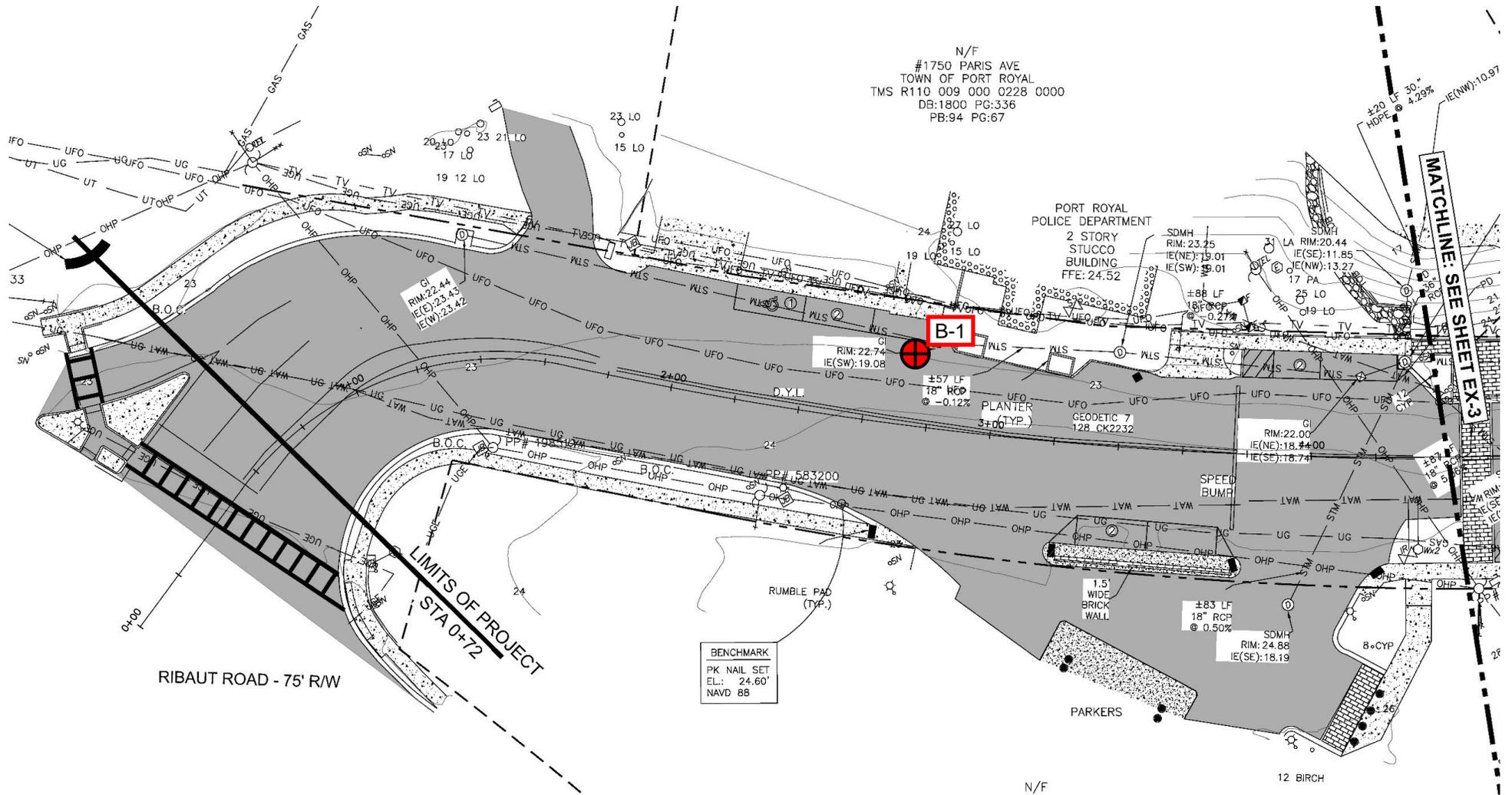
The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

Appendix A

Figures



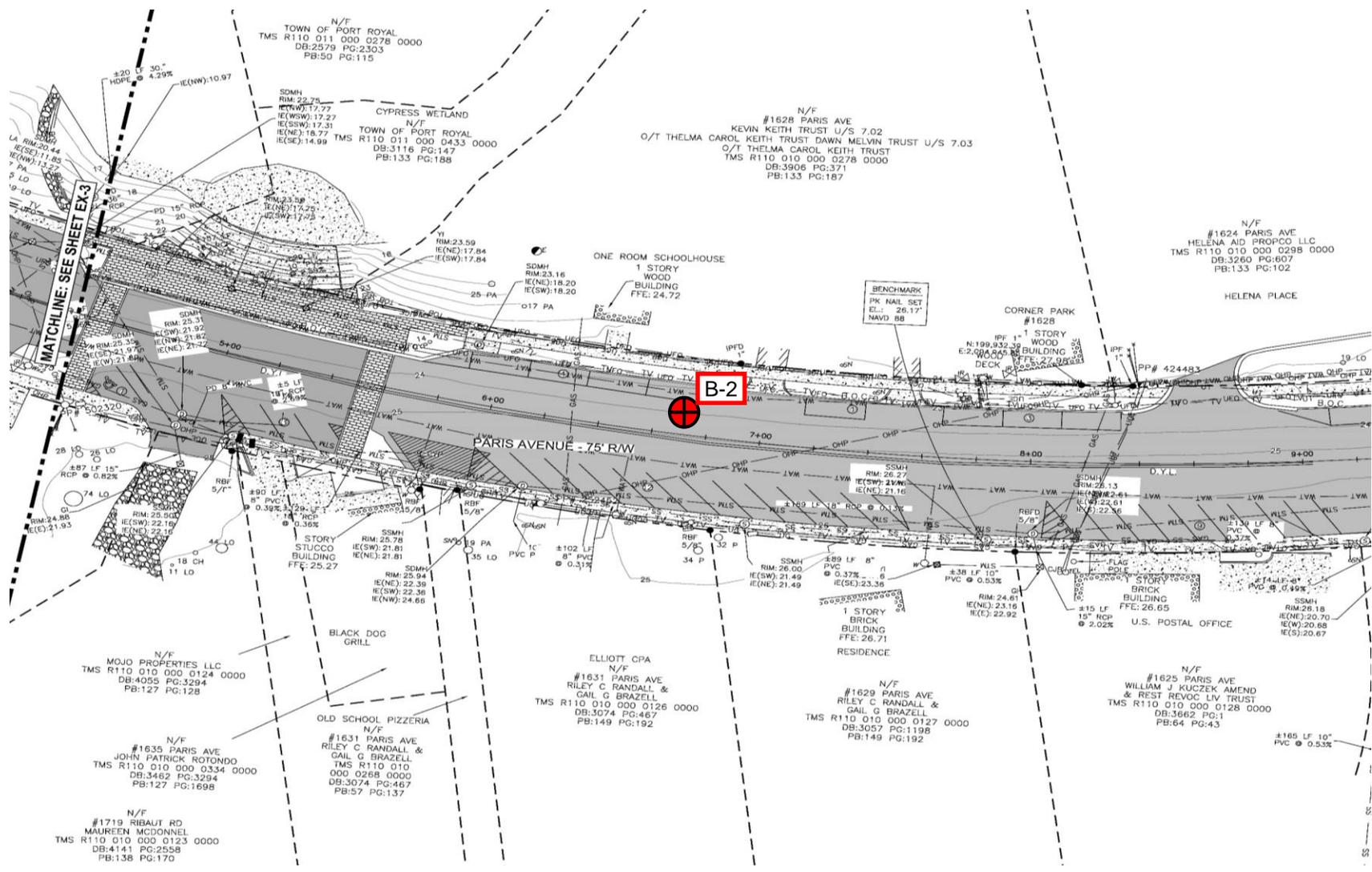
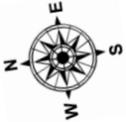
Figure A.1: Site Vicinity Map



NOTE: This drawing utilizes a copy of sheet "EX-2" from the document titled, "Paris Avenue Streetscape Improvements – Existing Conditions – Key Map", prepared by Four Waters Engineering and dated July 2023.

Legend
B-# Designation / approximate location of Standard Penetration Test (SPT) Boring

Figure A.2: Exploration Location Plan

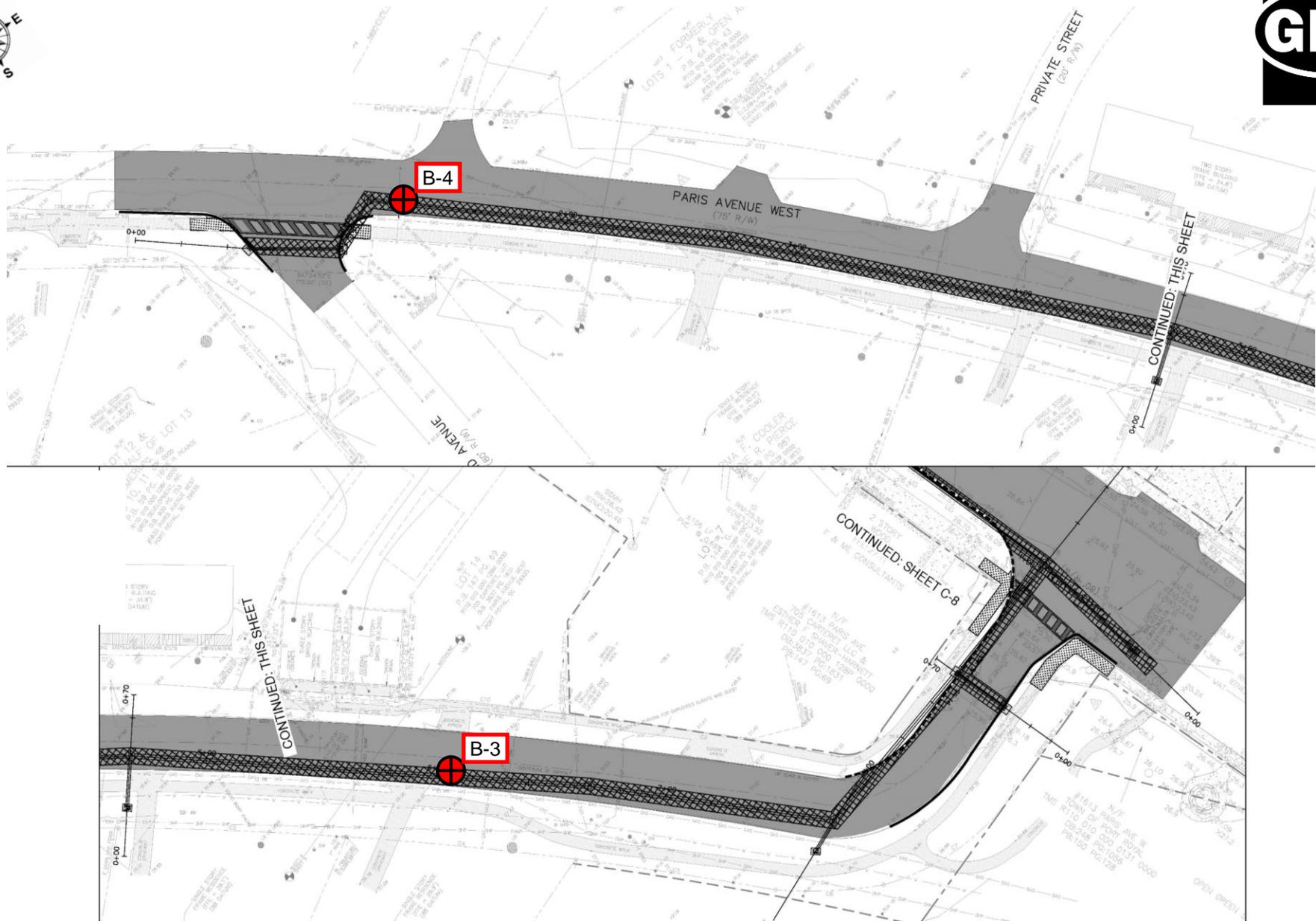


Legend

 **B-#** Designation / approximate location of Standard Penetration Test (SPT) Boring

NOTE: This drawing utilizes a copy of sheet "EX-3" from the document titled, "Paris Avenue Streetscape Improvements – Existing Conditions – Key Map", prepared by Four Waters Engineering and dated July 2023.

Figure A.3: Exploration Location Plan

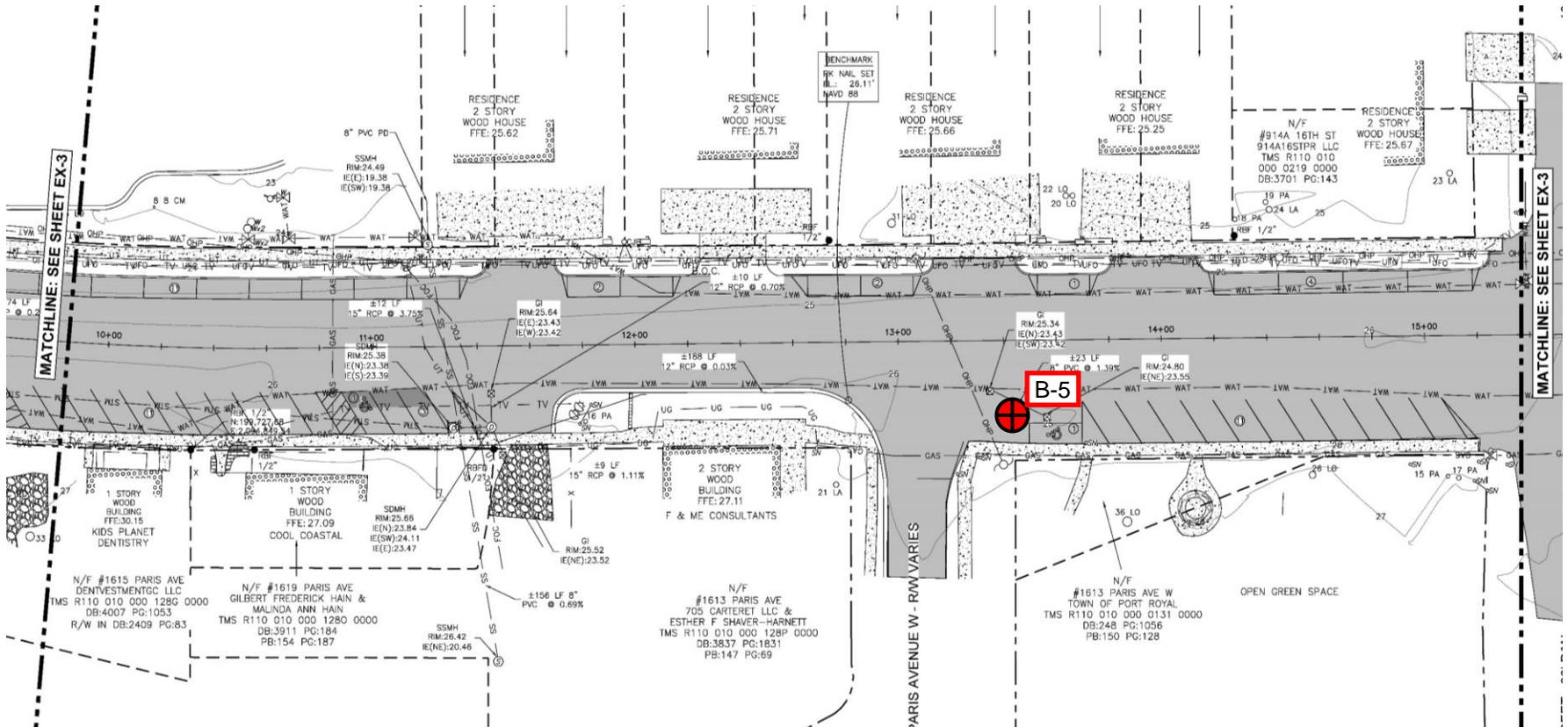
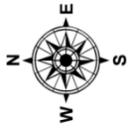


Legend

 **B-#** Designation / approximate location of Standard Penetration Test (SPT) Boring

NOTE: This drawing utilizes a copy of sheet "C-7" from the document titled, "Paris Avenue Streetscape Improvements – Existing Conditions – Key Map", prepared by Four Waters Engineering and dated July 2023.

Figure A.4: Exploration Location Plan

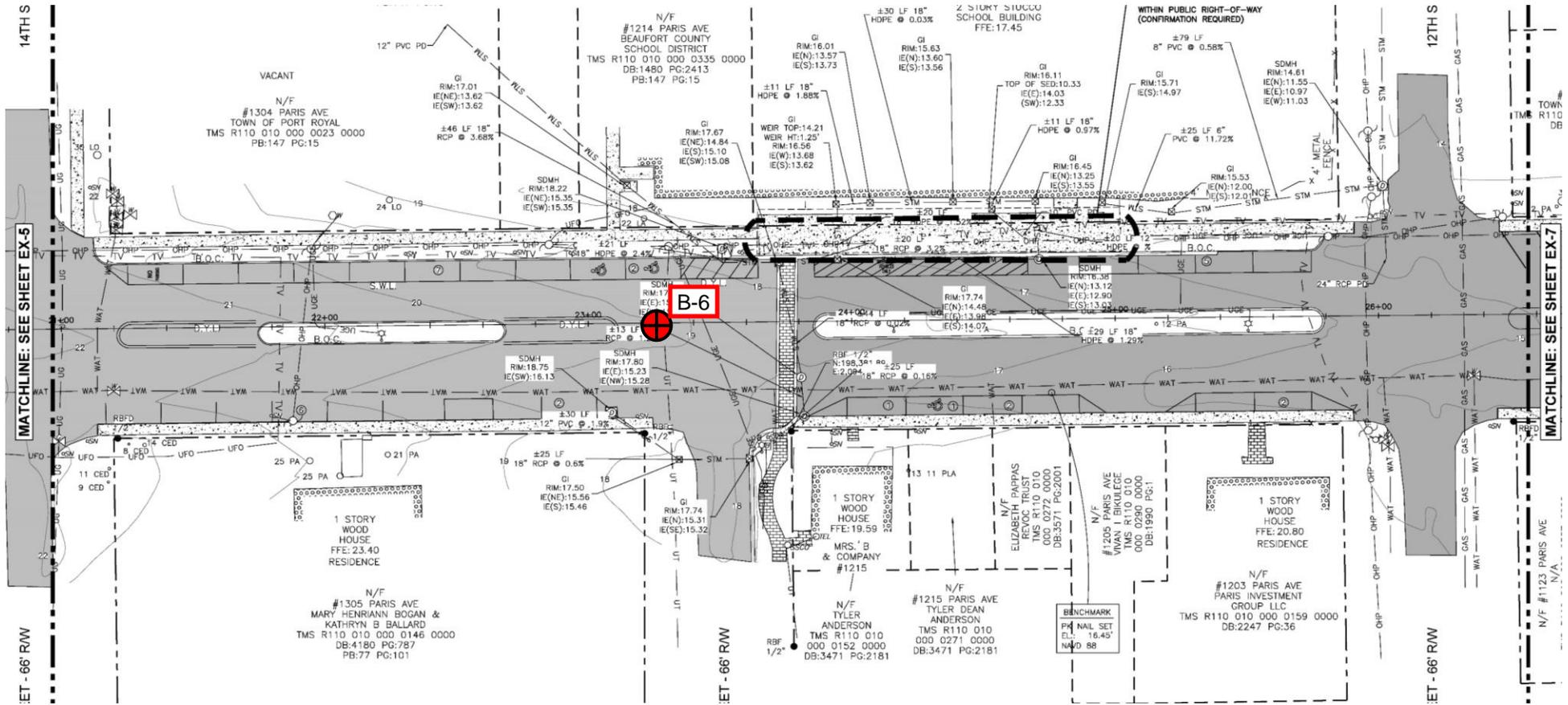
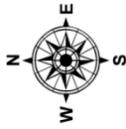


Legend

 **B-#** Designation / approximate location of Standard Penetration Test (SPT) Boring

NOTE: This drawing utilizes a copy of sheet "EX-4" from the document titled, "Paris Avenue Streetscape Improvements – Existing Conditions – Key Map", prepared by Four Waters Engineering and dated July 2023.

Figure A.5: Exploration Location Plan

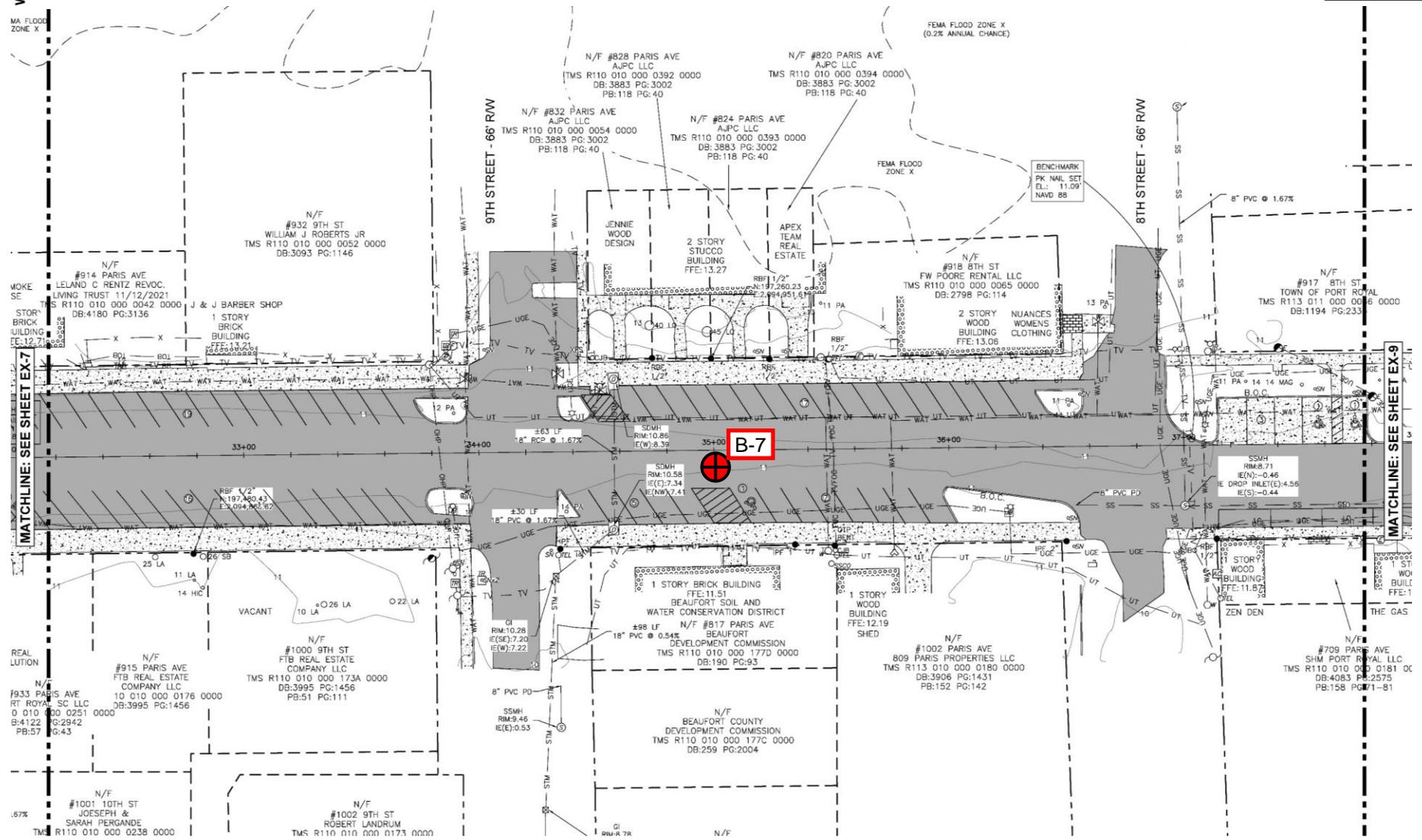
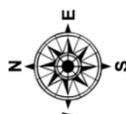


Legend

 **B-#** Designation / approximate location of Standard Penetration Test (SPT) Boring

NOTE: This drawing utilizes a copy of sheet "EX-6" from the document titled, "Paris Avenue Streetscape Improvements – Existing Conditions – Key Map", prepared by Four Waters Engineering and dated July 2023.

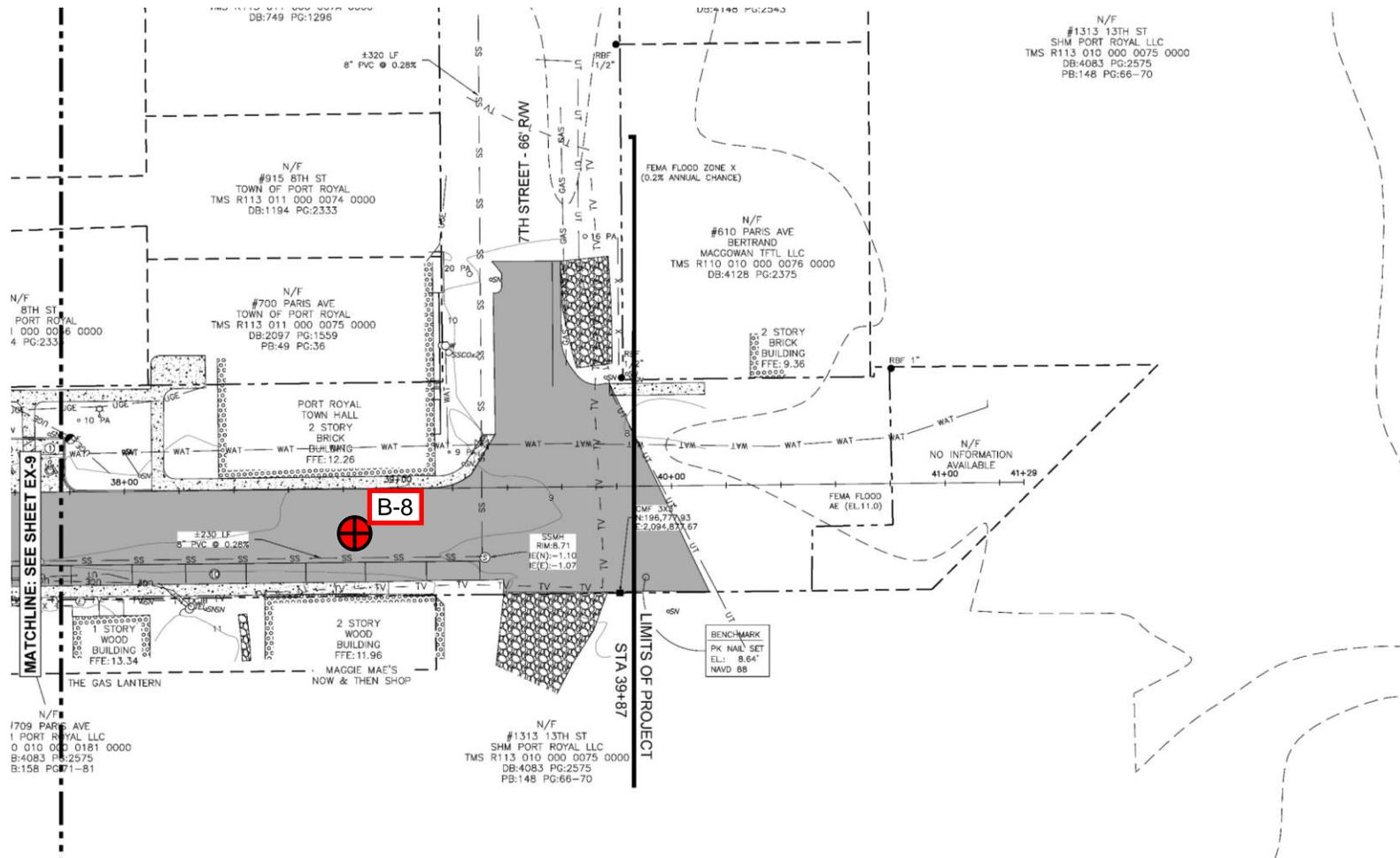
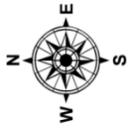
Figure A.6: Exploration Location Plan



B-# Designation / approximate location of Standard Penetration Test (SPT) Boring

NOTE: This drawing utilizes a copy of sheet "EX-8" from the document titled, "Paris Avenue Streetscape Improvements – Existing Conditions – Key Map", prepared by Four Waters Engineering and dated July 2023.

Figure A.7: Exploration Location Plan



Legend

 **B-#** Designation / approximate location of Standard Penetration Test (SPT) Boring

NOTE: This drawing utilizes a copy of sheet "EX-9" from the document titled, "Paris Avenue Streetscape Improvements – Existing Conditions – Key Map", prepared by Four Waters Engineering and dated July 2023.

Figure A.8: Exploration Location Plan

Appendix B

Boring Logs

Key to Soil Classification

Correlation of Penetration Resistance with Relative Density and Consistency

<u>Sands and Gravels</u>		<u>Silts and Clays</u>	
No. of Blows, <u>N</u>	Relative <u>Density</u>	No. of Blows, <u>N</u>	Relative <u>Density</u>
0 – 4	Very loose	0 – 2	Very soft
5 – 10	Loose	3 – 4	Soft
11 – 30	Medium dense	5 – 8	Firm
31 – 50	Dense	9 – 15	Stiff
Over 50	Very dense	16 – 30	Very stiff
		31 – 50	Hard
		Over 50	Very hard

Particle Size Identification (Unified Classification System)

Boulders:	Diameter exceeds 8 inches
Cobbles:	3 to 8 inches diameter
Gravel:	Coarse - 3/4 to 3 inches diameter Fine - 4.76 mm to 3/4 inch diameter
Sand:	Coarse - 2.0 mm to 4.76 mm diameter Medium - 0.42 mm to 2.0 mm diameter Fine - 0.074 mm to 0.42 mm diameter
Silt and Clay:	Less than 0.07 mm (particles cannot be seen with naked eye)

Modifiers

The modifiers provide our estimate of the amount of silt, clay or sand size particles in the soil sample.

Approximate Content	Modifiers	Field Moisture Description
≤ 5%:	Trace	Saturated: Usually liquid; very wet, usually from below the groundwater table
5% to 12%:	Slightly silty, slightly clayey, slightly sandy	Wet: Semisolid; requires drying to attain optimum moisture
12% to 30%:	Silty, clayey, sandy	Moist: Solid; at or near optimum moisture
30% to 50%:	Very silty, very clayey, very sandy	Dry: Requires additional water to attain optimum moisture

PROJECT: <i>Paris Avenue Evaluation</i>		LOG OF BORING: B-1
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DATE DRILLED: <i>2/28/2024</i>	DRILLER: <i>A. Nelson</i>	GROUND ELEVATION:
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DRILLING METHOD: <i>Mud Rotary</i>	BORING DEPTH: <i>10.00 Feet</i>	Notes: Location moved due to difficult traffic conditions; augered to 4' due to utilities not located.
---	--	--

WATER LEVEL:	WATER LEVEL (24-HRS): <i>4.5'</i>
---------------------	--

ANALYSIS					Depth feet	BLOW COUNTS	GROUND WATER	GRAPHIC LOG	USCS	GEOLOGIC DESCRIPTION
Moisture Content	% Passing 200 Sieve	Organic Content	Liquid Limit	Plasticity Index						
					0					5" Asphalt / 2.75" Sand asphalt base
					1	HA			SP	Yellowish brown fine SAND with trace limestone fragments (FILL)
					2				SP	Brownish yellow fine SAND
49.1	2.3				3	HA				
					4		☞		SP	Very loose brownish yellow fine SAND
					5	3				
					6				SP	Loose yellowish brown fine SAND
12.0	2.2				7	6				
					8					
					9	6				
					10					Boring terminated at 10 feet
					11					
					12					
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PROJECT: <i>Paris Avenue Evaluation</i>		LOG OF BORING: B-3
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DATE DRILLED: <i>2/27/2024</i>	DRILLER: <i>A. Nelson</i>	GROUND ELEVATION:
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DRILLING METHOD: <i>Mud Rotary</i>	BORING DEPTH: <i>10.00 Feet</i>	Notes:
---	--	---------------

WATER LEVEL:	WATER LEVEL (24-HRS):
---------------------	------------------------------

ANALYSIS					Depth feet	BLOW COUNTS	GROUND WATER	GRAPHIC LOG	USCS	GEOLOGIC DESCRIPTION
Moisture Content	% Passing 200 Sieve	Organic Content	Liquid Limit	Plasticity Index						
					0					1.75" Asphalt / 7.25" Limestone aggregate base course
					1	11			SP	Medium dense yellowish brown fine SAND with trace limestone fragments (FILL)
					2				SP	
					3	10				Loose brownish yellow fine SAND
					4				SP	Very loose brownish yellow fine SAND
					5	4				
					6				SP	Loose very pale brown fine SAND
					7	5				
3.1	0.7				8					
					9	9			SP-	Loose dark brown slightly silty fine SAND
					10				SM	Boring terminated at 10 feet
					11					
					12					
					13					
					14					
					15					
					16					
					17					
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PROJECT: <i>Paris Avenue Evaluation</i>		LOG OF BORING: B-4
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DATE DRILLED: <i>2/28/2024</i>	DRILLER: <i>A. Nelson</i>	GROUND ELEVATION:
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DRILLING METHOD: <i>Mud Rotary</i>	BORING DEPTH: <i>10.00 Feet</i>	Notes:
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WATER LEVEL:	WATER LEVEL (24-HRS): <i>5.75'</i>
---------------------	---

ANALYSIS					Depth feet	BLOW COUNTS	GROUND WATER	GRAPHIC LOG	USCS	GEOLOGIC DESCRIPTION
Moisture Content	% Passing 200 Sieve	Organic Content	Liquid Limit	Plasticity Index						
					0					1.75" Asphalt / 4.75" Sand asphalt base
					1	13			SP	Medium dense yellowish brown fine SAND with trace to some limestone fragments (FILL)
					2				SP	
					3	13				Medium dense brownish yellow fine SAND
					4				SM	Loose brownish yellow silty fine SAND
2.4	16.2				5	8	▼			
					6				SP	Loose very pale brown fine SAND
					7	6				
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					9	8				
					10					Boring terminated at 10 feet
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PROJECT: <i>Paris Avenue Evaluation</i>		LOG OF BORING: B-5
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DATE DRILLED: <i>2/27/2024</i>	DRILLER: <i>A. Nelson</i>	GROUND ELEVATION:
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DRILLING METHOD: <i>Mud Rotary</i>	BORING DEPTH: <i>10.00 Feet</i>	Notes:
---	--	---------------

WATER LEVEL:	WATER LEVEL (24-HRS):
---------------------	------------------------------

ANALYSIS					Depth feet	BLOW COUNTS	GROUND WATER	GRAPHIC LOG	USCS	GEOLOGIC DESCRIPTION
Moisture Content	% Passing 200 Sieve	Organic Content	Liquid Limit	Plasticity Index						
					0					2.25" Asphalt / 4.5" Limestone aggregate base course
					1	12			SP	Medium dense brown fine SAND (FILL)
					2				SP	Loose brownish yellow fine SAND
					3	7				
					4				SP	Very loose brownish yellow fine SAND
					5	4				
					6				SP	Very pale brown fine SAND
5.6	0.6				7	5				
					8				SP	Loose pale brown fine SAND
					9	10				
					10					Boring terminated at 10 feet
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PROJECT: <i>Paris Avenue Evaluation</i>		LOG OF BORING: B-6
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DATE DRILLED: <i>2/28/2024</i>	DRILLER: <i>A. Nelson</i>	GROUND ELEVATION:
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DRILLING METHOD: <i>Mud Rotary</i>	BORING DEPTH: <i>10.00 Feet</i>	Notes:
---	--	---------------

WATER LEVEL:	WATER LEVEL (24-HRS):
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ANALYSIS					Depth feet	BLOW COUNTS	GROUND WATER	GRAPHIC LOG	USCS	GEOLOGIC DESCRIPTION
Moisture Content	% Passing 200 Sieve	Organic Content	Liquid Limit	Plasticity Index						
7.8	2.5				0					3" Asphalt / 2.5" Sand asphalt base
					1	11			SP	Medium dense brown and brown fine SAND with limestone fragments (FILL)
					2				SP	Loose grayish brown fine SAND
					3	6				
					4				SP	Very loose very pale brown fine SAND
					5	4			SP	Loose pale brown fine SAND
					6					
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					10				Boring terminated at 10 feet	
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PROJECT: <i>Paris Avenue Evaluation</i>		LOG OF BORING: B-7
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DATE DRILLED: <i>2/28/2024</i>	DRILLER: <i>A. Nelson</i>	GROUND ELEVATION:
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DRILLING METHOD: <i>Mud Rotary</i>	BORING DEPTH: <i>10.00 Feet</i>	Notes:
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WATER LEVEL:	WATER LEVEL (24-HRS):
---------------------	------------------------------

ANALYSIS					Depth feet	BLOW COUNTS	GROUND WATER	GRAPHIC LOG	USCS	GEOLOGIC DESCRIPTION
Moisture Content	% Passing 200 Sieve	Organic Content	Liquid Limit	Plasticity Index						
12.3	5.5				0					1.5" Asphalt / 3.5" Sand asphalt base
					1	39			SP-SM	Very dense dark gray slightly silty fine SAND with some brick and limestone fragments (FILL)
					2				SP-SM	
					3	10				Loose dark gray slightly silty fine SAND
					4					Loose light brownish gray slightly clayey fine SAND
					5	5			SP-SC	
					6					
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PROJECT: <i>Paris Avenue Evaluation</i>		LOG OF BORING: B-8
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DATE DRILLED: <i>2/28/2024</i>	DRILLER: <i>A. Nelson</i>	GROUND ELEVATION:
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DRILLING METHOD: <i>Mud Rotary</i>	BORING DEPTH: <i>10.00 Feet</i>	Notes:
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WATER LEVEL:	WATER LEVEL (24-HRS):
---------------------	------------------------------

ANALYSIS					Depth feet	BLOW COUNTS	GROUND WATER	GRAPHIC LOG	USCS	GEOLOGIC DESCRIPTION
Moisture Content	% Passing 200 Sieve	Organic Content	Liquid Limit	Plasticity Index						
					0					4.75" Asphalt / 5.25" Limestone aggregate base course
7.6	4.8				1	20			SP	Medium dense yellowish brown fine SAND with trace limestone fragments (FILL)
					2				SP	Loose yellowish brown fine SAND
					3	10				
					4					
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					11					Boring terminated at 10 feet
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GHD

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Bluffton, South Carolina 29910, United States
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Document Status

Status Code	Revision	Author	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
S3	00	Robin M. Moutray	Sean M. McCubbins		Sean M. McCubbins		4-23-24

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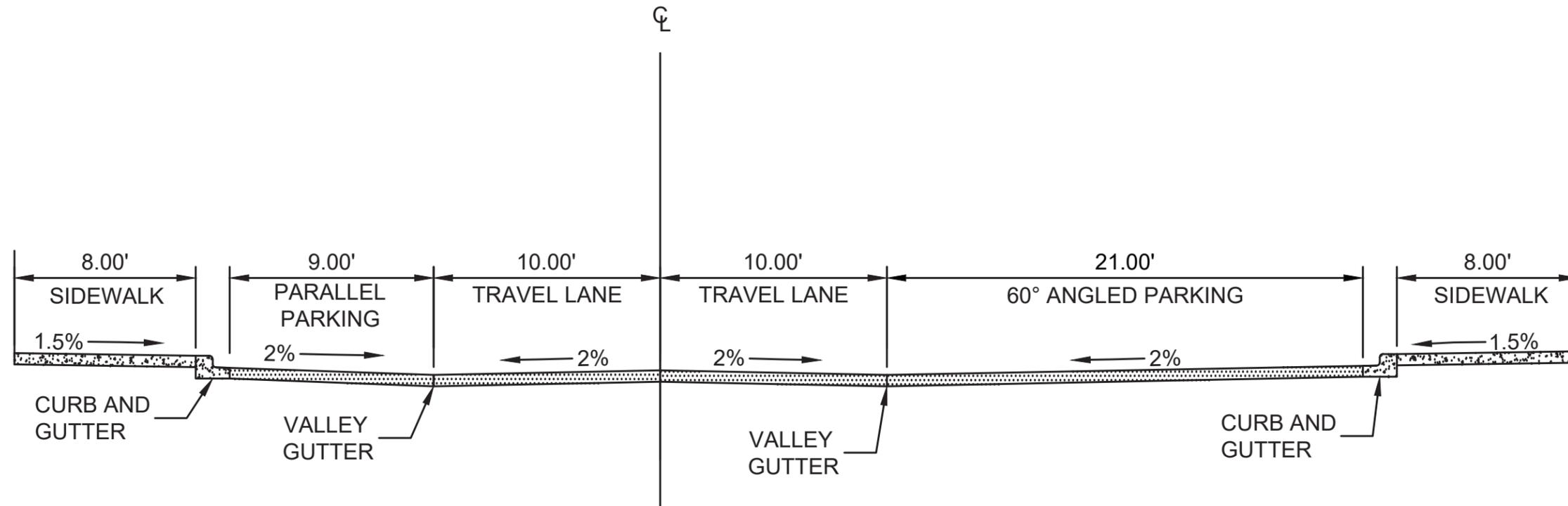


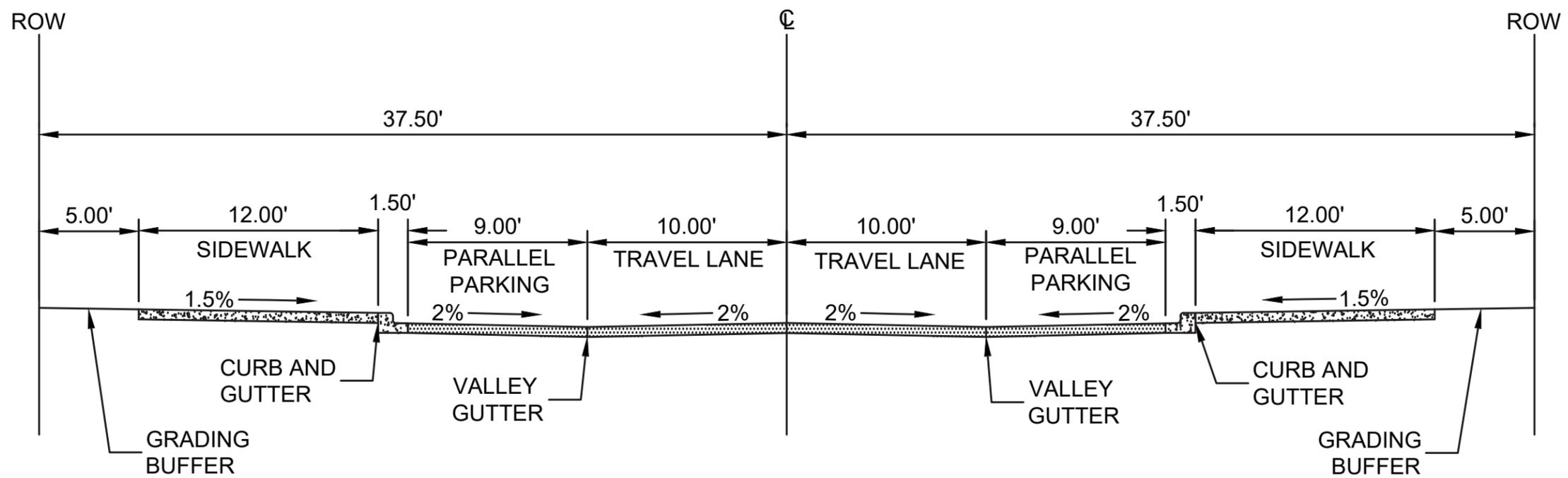
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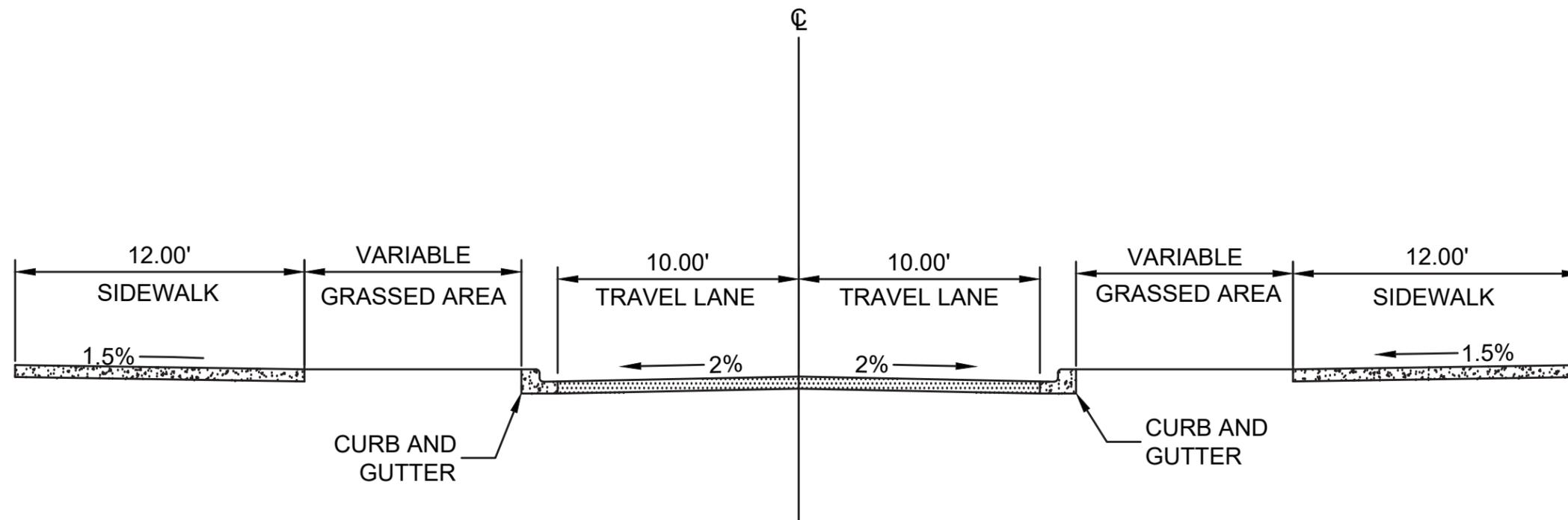
→ **The Power of Commitment**

Appendix C

Roadway Cross Sections

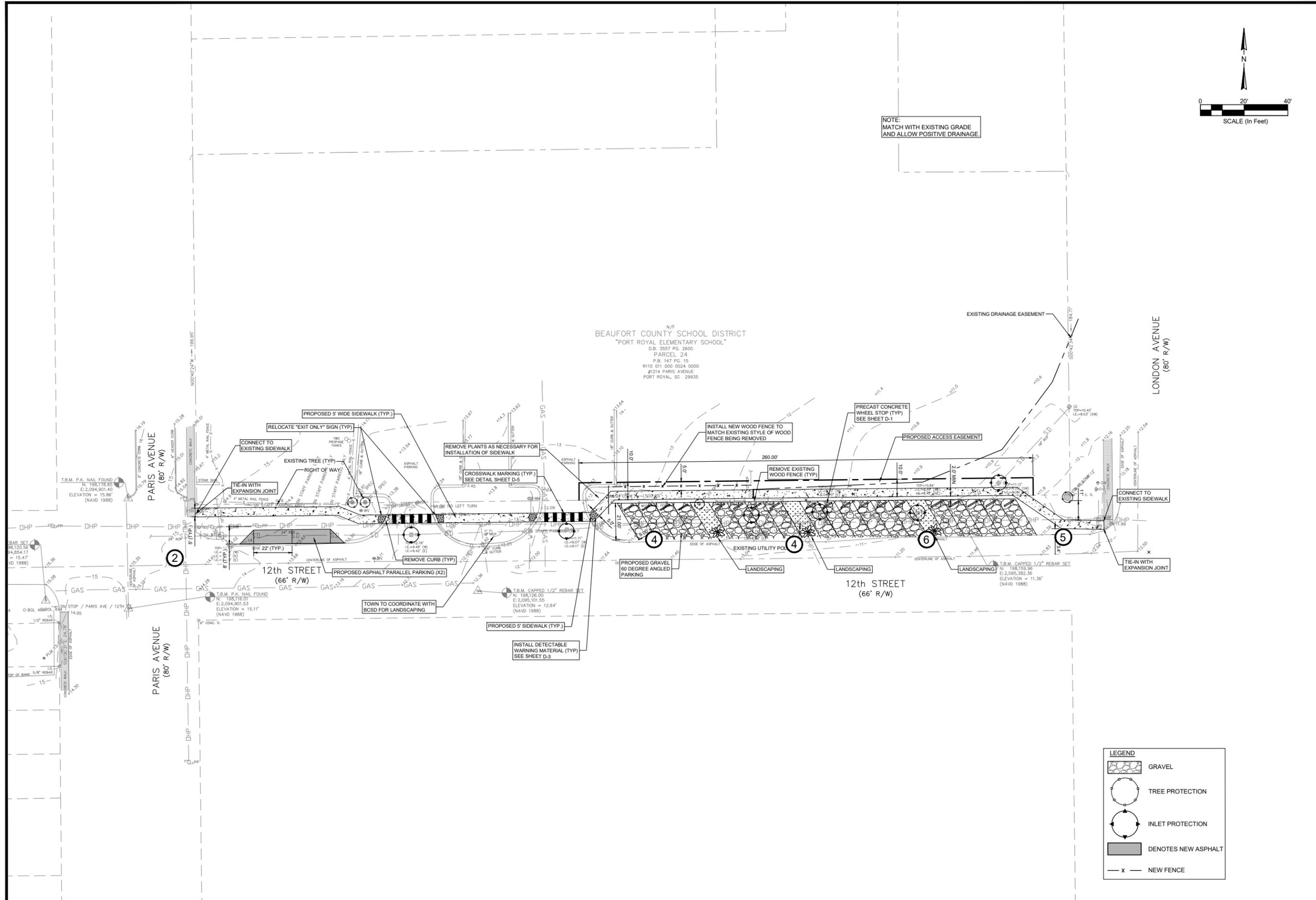






Appendix D

Supplemental Parking Drawings



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MICHAEL R. KLUNK, PE ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

REV. NO.	DATE	DRWN/CHK BY	DESCRIPTION
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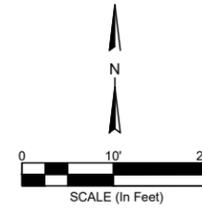
12TH STREET
TOWN OF PORT ROYAL ELEMENTARY SCHOOL
PROPOSED SIDEWALK AND PARKING
 TOWN OF PORT ROYAL
 PORT ROYAL, SOUTH CAROLINA

DESIGN MRK	DRWN BRH	JOB #	ISSUE DATE	ISSUE
		15-008-206	JANUARY 2024	100%

FOUR WATERS ENGINEERING
 324 6th AVE. N. JACKSONVILLE BEACH, FLORIDA 32250
 844-414-2400 S.C. COA # 51661 WWW.FWENG.COM

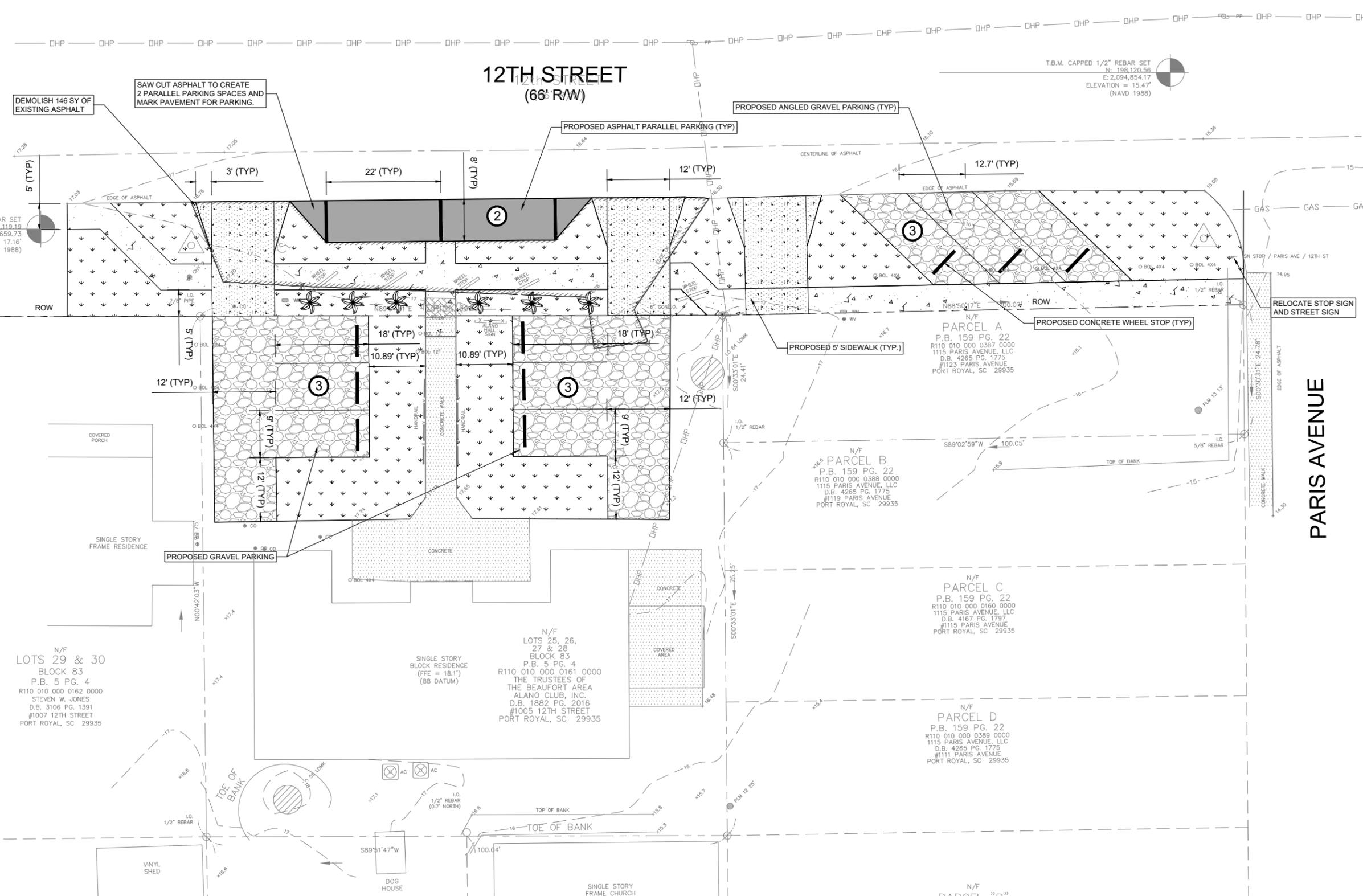
DRAWING NUMBER
C-1

- LEGEND**
-  DENOTES LIMITS OF GRAVEL PARKING AREAS. (288 SY TOTAL)
 -  DENOTES CONCRETE DRIVE. (100 SY TOTAL)
 -  DENOTES CONCRETE SIDEWALK (125 SY TOTAL)
 -  DENOTES SOD AREA (359 SY TOTAL)
 -  DENOTES AREA OF ASPHALT TO BE REMOVED (141 SY TOTAL)



T.B.M. P.K. 1
N: 198.120.56
E: 2,094.854.17
ELEVATION = 15.47
(NAVD 1988)

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REV/NO	DATE	DESCRIPTION
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12TH STREET
ALANO CLUB
PROPOSED SIDEWALK AND PARKING
TOWN OF PORT ROYAL
PORT ROYAL, SOUTH CAROLINA

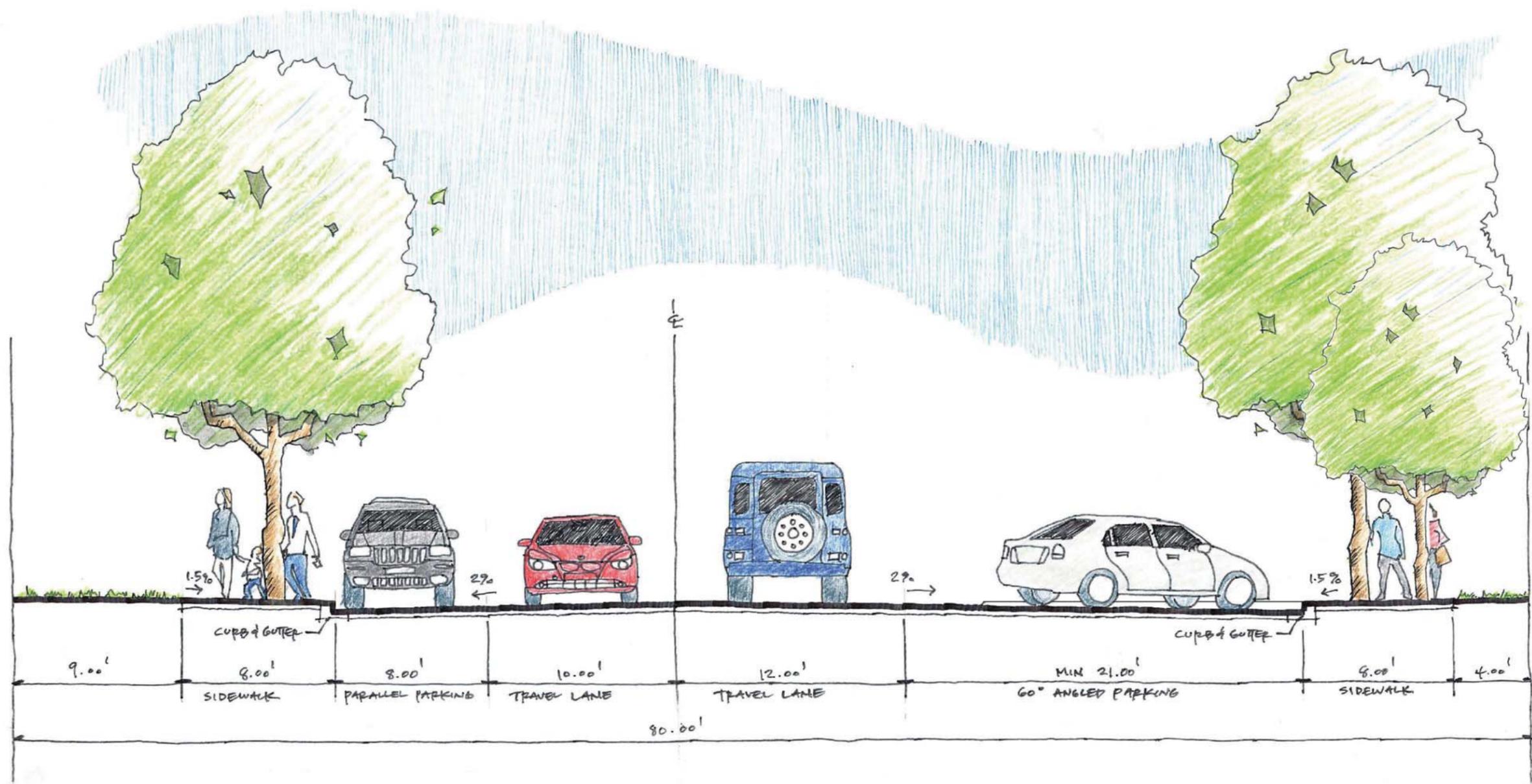
DESIGN MRK	BRH	DATE	ISSUE
15-008-206		OCTOBER 2023	90%

FOUR WATERS ENGINEERING
324 6th AVENUE N. JACKSONVILLE BEACH, FLORIDA 32250
844-414-2400 S.C. COA # 51661 WWW.FWENG.COM

DRAWING NUMBER
C-1

Appendix E

Preliminary Streetscape



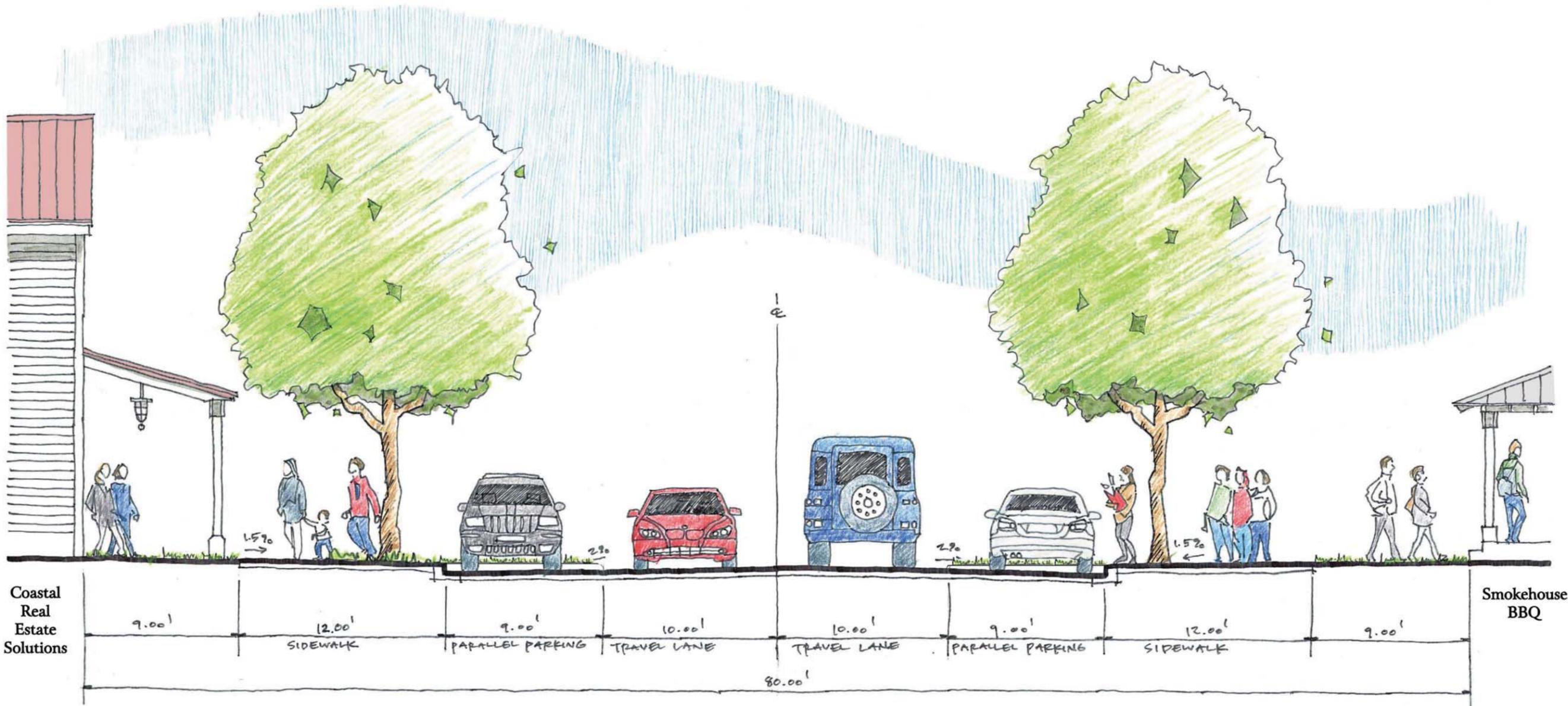
REV NO	DATE	DRWN	CHKD	BY	DESCRIPTION
1					
2					
3					
4					
5					
6					
7					

PARIS AVENUE THOROUGHFARE MASTER PLAN
**PRELIMINARY
STREETSCAPE**
 TOWN OF PORT ROYAL
 PORT ROYAL SOUTH CAROLINA

DESIGN	DRAWN
JKT	202303-02
JOB #	MAY 2024
ISSUE DATE	PRELIM
ISSUE	

FOUR WATERS ENGINEERING
 324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250
 944-414-2400 S.C. COA # 51861 WWW.FOURWATERS.COM

1
L109 Illustrative Street Section: Looking South Towards Paris Avenue West Intersection
 Not to Scale



Coastal
 Real
 Estate
 Solutions

Smokehouse
 BBQ

1
L110 Illustrative Street Section: Looking North Towards 10th Street Intersection
 Not to Scale

REV	NO	DATE	DRWN	CHKD	BY	DESCRIPTION
1						
2						
3						
4						
5						
6						
7						

PARIS AVENUE THOROUGHFARE MASTER PLAN
**PRELIMINARY
 STREETSCAPE**
 TOWN OF PORT ROYAL
 PORT ROYAL SOUTH CAROLINA

DESIGN	DRAWN	DATE	ISSUE
JKT		202305-02	
JOB #			
ISSUE		MAY 2024	
DATE			
ISSUE			PRELIM

**FOUR WATERS
 ENGINEERING**
 324 6th AVENUE JACKSONVILLE BEACH, FLORIDA 32250
 844-414-2400 S.C. COA # 51861 WWW.4WENG.COM

L110

Appendix F

Drainage Calculations

Four Waters Engineering, Inc.
STORM SEWER DESIGN SHEET



JOB NO. 15-5008

JOB NAME: Paris Avenue Streetscape

DESIGN STM= 25 YEAR
 N= 0.013

DATE: April 1, 2024 TIME: 8 42

AUTHOR: DRF File: P:\15-5008 Port Royal\4W Misc Services\01 Streetscape\07 Estimate

M.H. or C.B. No.	STA.	DRAINAGE AREA					TIME		RAIN- FALL INTEN- SITY in/hr	DIS- CHARGE Q cfs	LENGTH OF PIPE ft	SLOPE OF PIPE ft/ft	SIZE OF PIPE in	MEAN VELOCITY fps	CAPACITY FLOWING FULL cfs	INVERTS		T.G. ELEV ft	COVER ft
		A	Sum A	C	CA	Sum CA	t	Sum t								in	out		
		Acres	Acres		Acres	Acres	Min	Min											
CB-11	3420	1.500	1.500	0.85	1.275	1.275	10.00	10.00	7.70	9.8	280.00	0.30%	24	3.9	12.4	17.19	22.00	2.81	
CB-10	3140	1.500	3.000	0.85	1.275	2.550	1.20	11.20	7.45	19.0	280.00	0.30%	30	4.6	22.5	16.35	15.95	22.00	3.55
CB-9	2860	1.500	4.500	0.85	1.275	3.825	1.01	12.21	7.24	27.7	280.00	0.50%	30	5.9	29.0	15.11	15.11	22.00	4.39
CB-8	2580	1.500	6.000	0.85	1.275	5.100	0.79	13.00	7.09	36.2	280.00	0.40%	36	6	42.2	13.71	13.31	22.00	5.69
CB-7	2300	1.500	7.500	0.85	1.275	6.375	0.78	13.78	6.95	44.3	280.00	0.50%	36	6.7	47.2	12.19	12.19	22.00	6.81
CB-6	2020	1.500	1.500	0.85	1.275	7.650	0.70	14.48	6.83	52.3	280.00	0.30%	42	5.7	55.1	10.79	10.39	22.00	8.11
CB-5	1740	1.500	3.000	0.85	1.275	8.925	0.82	15.30	6.69	59.8	280.00	0.38%	42	6.4	62.0	9.55	9.55	22.00	8.95
CB-4	1460	1.500	4.500	0.85	1.275	10.200	0.73	16.02	6.58	67.1	280.00	0.50%	42	7.4	71.1	8.49	8.49	22.00	10.01
CB-3	1180	1.500	6.000	0.85	1.275	11.475	0.63	16.65	6.48	74.4	280.00	0.55%	42	7.8	74.6	7.09	7.09	22.00	11.41
CB-2	900	1.500	7.500	0.85	1.275	12.750	0.60	17.25	6.39	81.5	900.00	0.35%	48	6.8	85.0	5.55	5.15	22.00	12.85
HW-1	0	0.000		0.85	0.000		2.21	19.46								2.00			
CB-17	1300	1.500	1.500	0.85	1.275	1.275	10.00	29.46	5.00	6.4	280.00	0.15%	24	2.8	8.8	20.90	19.30	22.00	0.70
CB-16	1020	1.500	3.000	0.85	1.275	2.550	1.67	31.13	4.86	12.4	280.00	0.15%	30	3.2	15.9	18.88	18.48	22.00	1.02
CB-15	740	1.500	4.500	0.85	1.275	3.825	1.46	32.58	4.75	18.2	280.00	0.25%	30	4.2	20.5	18.06	18.06	22.00	1.44
CB-14	460	1.500	6.000	0.85	1.275	5.100	1.11	33.70	4.66	23.8	280.00	0.20%	36	4.2	29.8	17.36	16.96	22.00	2.04
CB-13	180	1.500	7.500	0.85	1.275	6.375	1.11	34.81	4.58	29.2	180.00	0.22%	36	4.4	31.3	16.40	16.40	22.00	2.60
HW-12	0	0.000		0.85	0.000		0.68	35.49								16.00			

Four Waters Engineering, Inc.
HYDRAULIC GRADE LINE SHEET



JOB NO. 20-1025

JOB NAME: Paris Avenue Streetscape

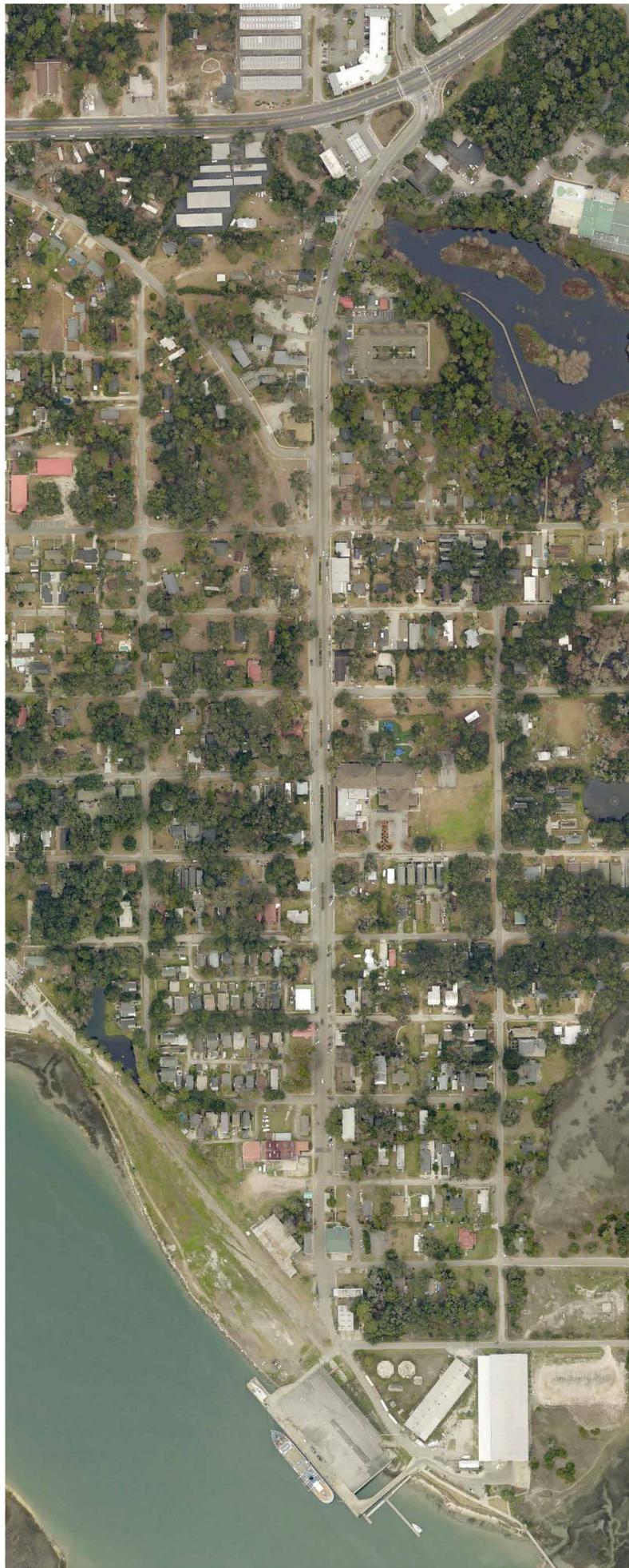
DESIGN STM= 100 YEAR

DATE: April 1, 2024 TIME: 8 43

AUTHOR: DRF File: P:\15-5008 Port Royal\4W Misc Services\01 Streetscape\07 Estimate

M.H. or C.B. no.	STA.	Sum CA	Sum t	RAIN- FALL INTEN- SITY in/hr	DIS CHARGE Q cfs	LENGTH OR PIPE ft	SLOPE OF PIPE ft/ft	SIZE OF PIPE in	Sf	SfL	TW or 0.80D ELEVATION		HW ELEV	T.C. ELEV	REMARKS
		Acres	Min								TW	0.80D			
CB-11	3420		10.00								#REF!	0.00	#REF!	22.00	#REF!
		1.275		9.58	12.2	280.00	0.30%	24	0.0029	0.82					
CB-10	3140		11.20								#REF!	17.95	#REF!	22.00	#REF!
		2.550		9.28	23.7	280.00	0.30%	30	0.0033	0.93					
CB-9	2860		12.21								#REF!	17.11	#REF!	22.00	#REF!
		3.825		9.05	34.6	280.00	0.50%	30	0.0071	1.99					
CB-8	2580		13.00								#REF!	15.71	#REF!	22.00	#REF!
		5.100		8.87	45.3	280.00	0.40%	36	0.0046	1.29					
CB-7	2300		13.78								#REF!	14.59	#REF!	22.00	#REF!
		6.375		8.71	55.5	280.00	0.50%	36	0.0069	1.94					
CB-6	2020		14.48								16.94	#REF!	#REF!	22.00	#REF!
		7.650		8.57	65.6	280.00	0.30%	42	0.0042	1.19					
CB-5	1740		15.30								15.75	12.35	15.75	22.00	Acceptable
		8.925		8.41	75.1	280.00	0.38%	42	0.0056	1.56					
CB-4	1460		16.02								14.20	11.29	14.20	22.00	Acceptable
		10.200		8.27	84.4	280.00	0.50%	42	0.0070	1.97					
CB-3	1180		16.65								12.23	9.89	12.23	22.00	Acceptable
		11.475		8.16	93.6	280.00	0.55%	42	0.0087	2.43					
CB-2	900		17.25								9.80	8.35	9.80	22.00	Acceptable
		12.750		8.05	102.7	900.00	0.35%	48	0.0051	4.60					
HW-1	0		19.46								2.00	5.20	5.20	0.00	Check
CB-17	1300		29.46								21.27	#REF!	#REF!	22.00	#REF!
		1.275		6.42	8.2	280.00	0.15%	24	0.0013	0.37					
CB-16	1020		31.13								20.90	20.48	20.90	22.00	Acceptable
		2.550		6.25	15.9	280.00	0.15%	30	0.0015	0.42					
CB-15	740		32.58								20.48	20.06	20.48	22.00	Acceptable
		3.825		6.12	23.4	280.00	0.25%	30	0.0033	0.91					
CB-14	460		33.70								19.57	19.36	19.57	22.00	Acceptable
		5.100		6.01	30.7	280.00	0.20%	36	0.0021	0.59					
CB-13	180		34.81								18.98	18.80	18.98	22.00	Acceptable
		6.375		5.92	37.7	180.00	0.22%	36	0.0032	0.58					
HW-12	0		35.49								16.00	18.40	18.40	0.00	Check

Appendix G Site Furnishes



APPENDIX G
**PARIS AVENUE
PRELIMINARY
STREETSCAPE**
PORT ROYAL, SOUTH CAROLINA
MAY 2024

PROVIDED FOR:



PROVIDED BY:



PURPOSE

Create a safe, functional, and dynamic public realm that accommodates the multi-modal transportation and gathering needs of the local community as well as visitors.

GOALS

1. Create a distinguished and accessible public realm of enduring quality.
2. Connect destinations and overcome existing physical barriers with walkable landscaped corridors, interpretative and way-finding systems, and engaging views.
3. Establish gateways into the primary corridor of the town.
4. Provide accommodations for daily vehicular traffic and occasional use as public venue.
5. Determine the streetscape needs based on the community's interest in ecology, recreation and public gathering.
6. Define vehicular and pedestrian spaces and articulate intersections to reduce conflict and create a safer public realm.
7. Define spaces for gathering, moving, utilities and service.
8. Provide traffic calming measures.

PREFERRED SITE FURNISHINGS:

MAGLIN 1200 SERIES

STYLE

INDUSTRIAL

MATERIALS

POWDER COATED STEEL (DARK BROWN)

WOOD (IPE)

CONFIGURATION

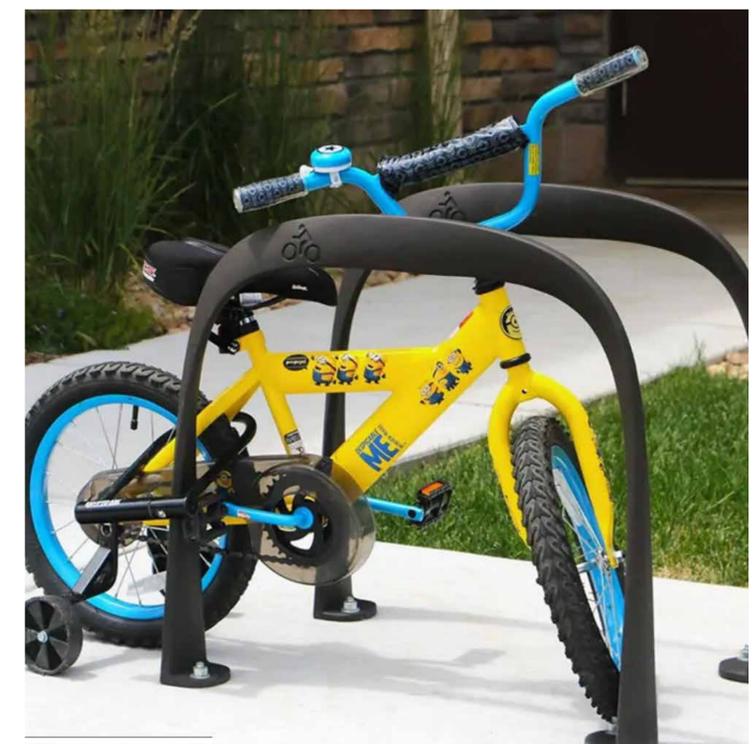
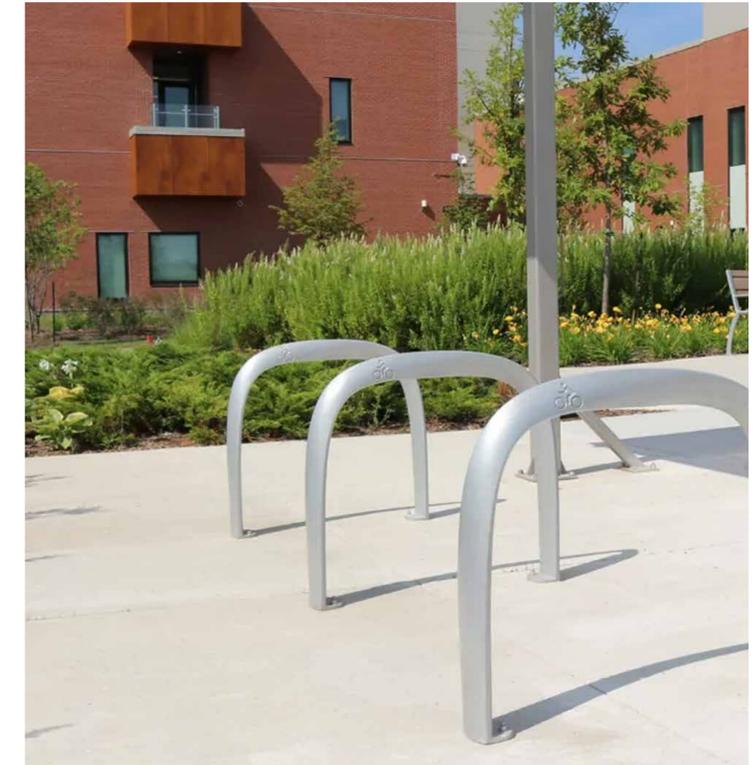
BACKLESS

BACKED

MOUNTING

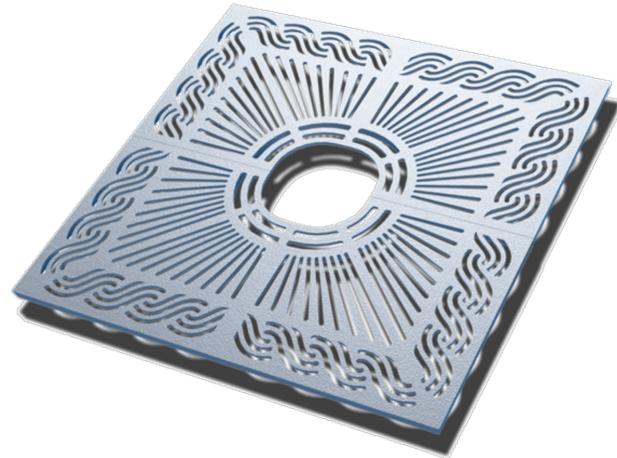
SURFACE

IN GROUND



PREFERRED SITE FURNISHINGS: TREE GRATES, GROUNDCOVER, PAVERS

METAL GRATE (IRONSMITH MARINA)



EVERGREEN GROUNDCOVER



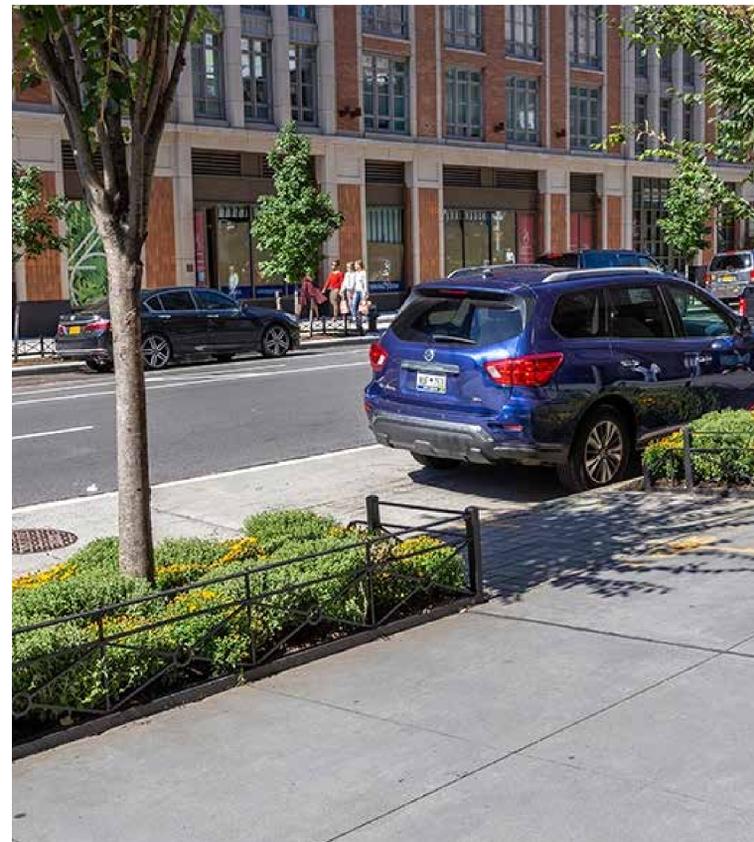
BRICK PAVER



BRICK HERRINGBONE STD. PAVERS



BRICK BASKETWEAVE STD. PAVERS



LANDSCAPING - PREFERRED STREET TREES



FRINGE TREE



SABAL PALMS



HIGHRISE LIVE OAKS

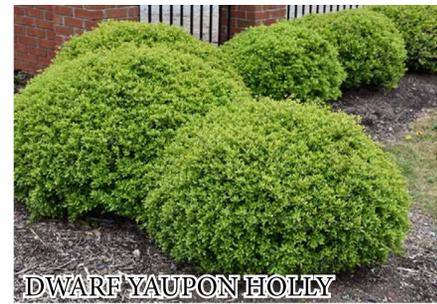
LANDSCAPING - PREFERRED SHRUBS



CAMELLIA



WAX MYRTLE



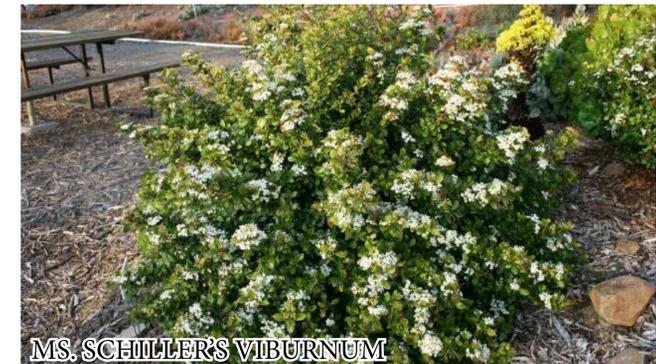
DWARF YAUPON HOLLY



PITTOSPORUM



NATIVE AZALEA



MS. SCHILLER'S VIBURNUM



SAW PALMETTO



PODOCARPUS

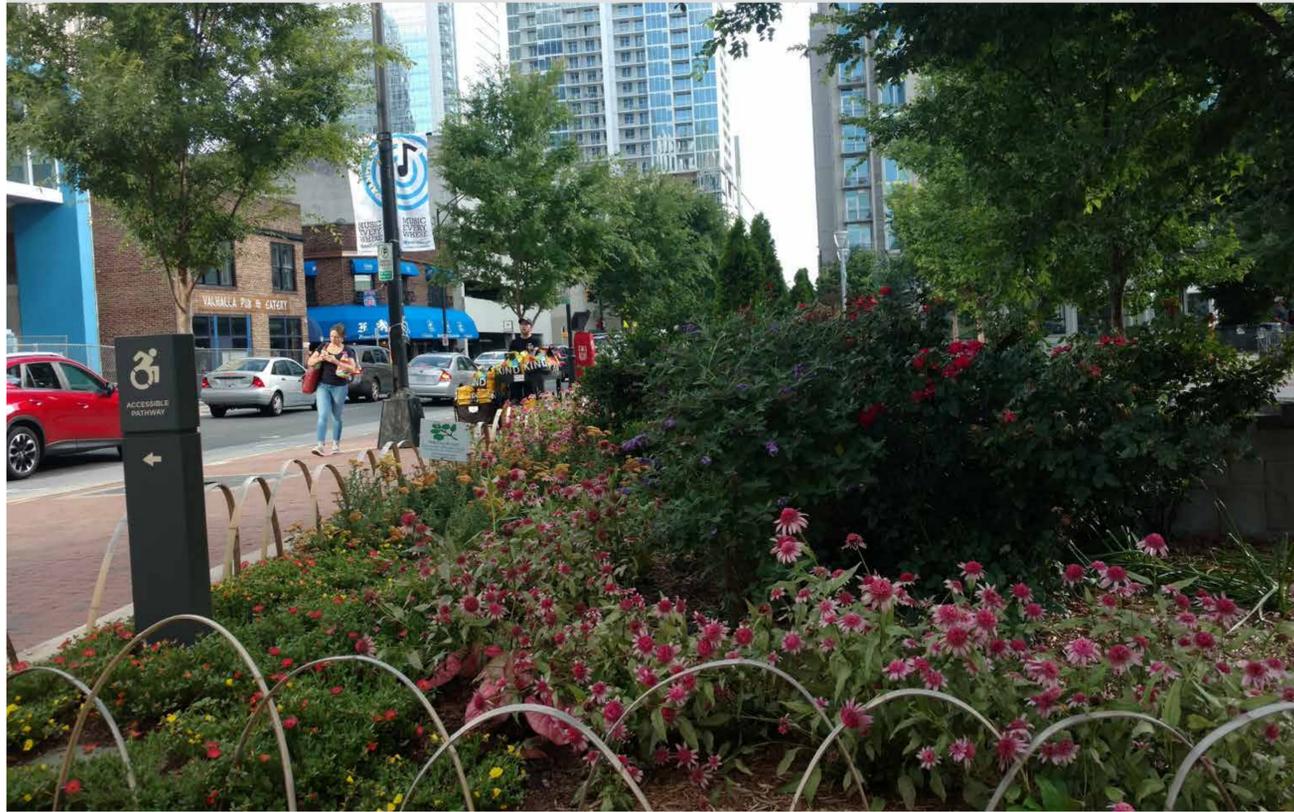


LOROPETALUM

SHRUB OPTIONS:

<u>TYPES</u>	<u>EXAMPLES</u>
UNDERSTORY	LOROPETALUM
MEDIUM	SANDANQUA VIBURNUMS
SMALL	YAUPON HOLLY
DECIDUOUS	SAW PALMETTO
EVERGREEN	WAX MYRTLE
FLOWERING	PODOCARPUS
UPRIGHT	PITTOSPORUM
SPREADING	MS. SCHILLER VIBURNUM

LANDSCAPING - PREFERRED GROWDCOVERS



MUHLY



RUDBECKIA



AFRICAN IRIS



PLUMBAGO



LANTANA



ASIATIC JASMINE



EUROPSYS

GROUND COVER OPTIONS:

<u>TYPES</u>	<u>EXAMPLES</u>	
SMALL	ECHINACEA	AUTUMN FERN
MEDIUM	EUROPSYS	JUNIPER
ANNUAL / SEASONAL	LANTANA	LIRIOPE
PERENNIAL	CAST IRON	PLUMBAGO
ORNAMENTAL GRASS	MAHONIA SOFT CARESS	ALPINIA
EVERGREEN	AFRICAN IRIS	SOCIETY GARLIC
UPRIGHT	ASIATIC JASMINE	FORTNIGHT LILY
SPREADING	MUHLY	
POLLINATORS	SPARTINA	
	CAREX	



SPARTINA



MAHONIA



JUNIPER



LIRIOPE



AUTUMN FERN



ALPINIA



FORTNIGHT LILY



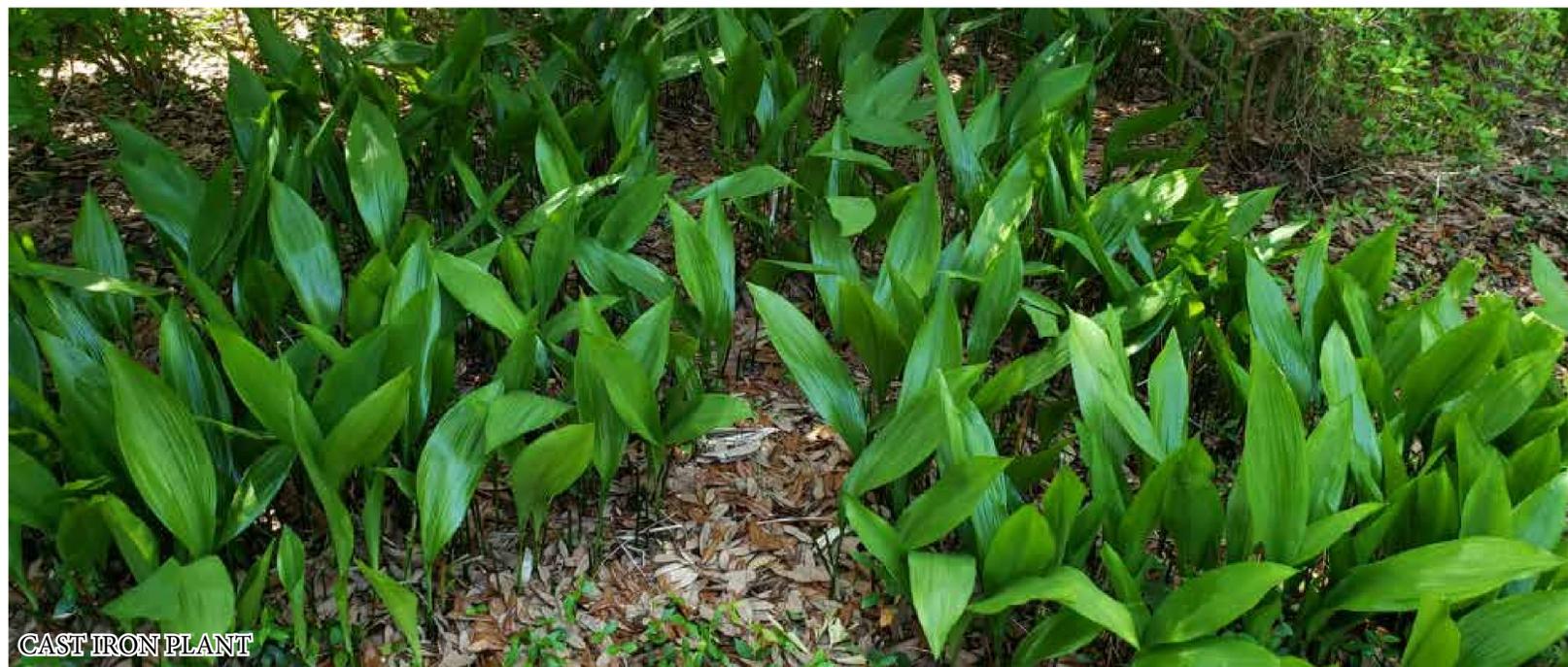
SOCIETY GARLIC



ECHINACEA

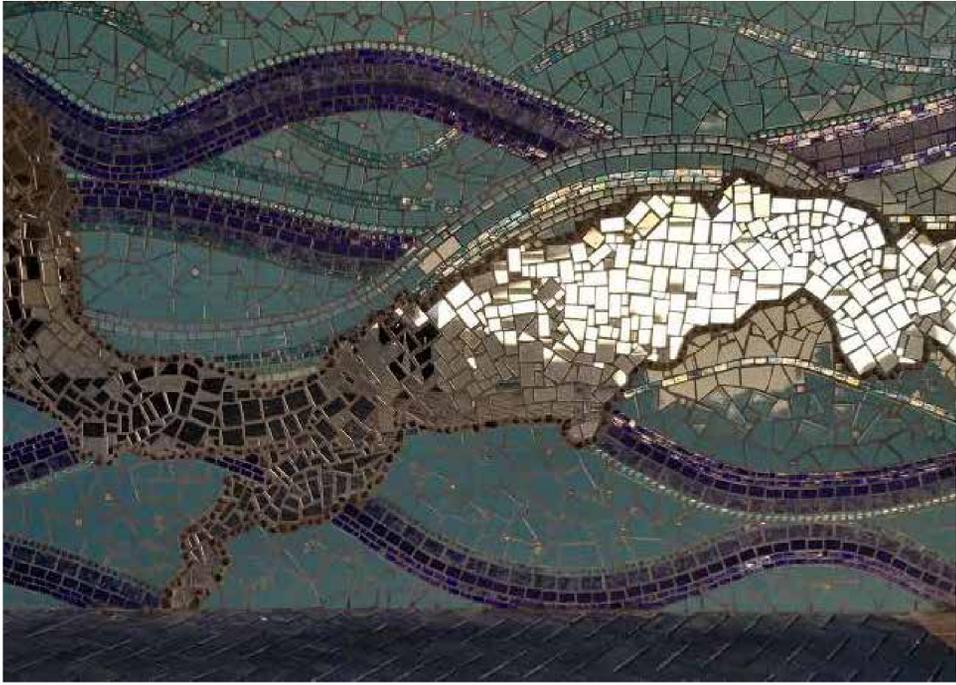


CAREX



CAST IRON PLANT

EXPERIENCE ENHANCEMENTS - ART



GREEN INFRASTRUCTURE OPTIONS:

<u>TYPES</u>	<u>MATERIALS</u>
SCULPTURE	SCRAP METAL
FOUNTAIN	BRICK
MURAL	STONE
TILE	CAST IRON
	CONCRETE
	GLASS



PREFERRED SIGNAGE TYPES

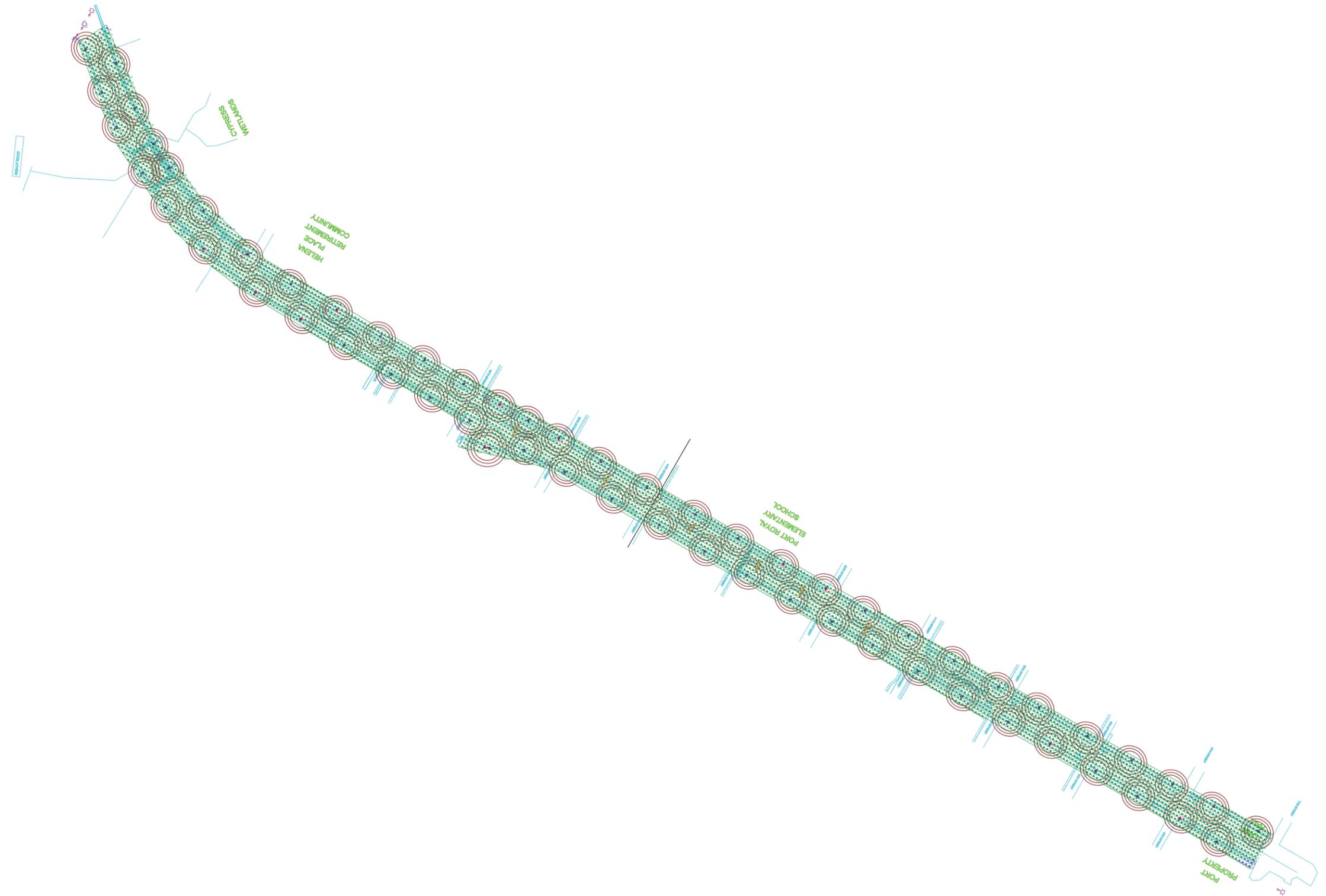


SIGNAGE OPTIONS: TYPES

- BUSINESS
- DIRECTIONAL (VEHICLE, BIKE, PEDESTRIAN)
- TRAFFIC
- FLAGS AND BANNERS
- GATEWAY
- HISTORIC OR ECOLOGICAL NARRATIVE
- MEMORIAL
- RULES

Appendix H

Dominion Energy Documents

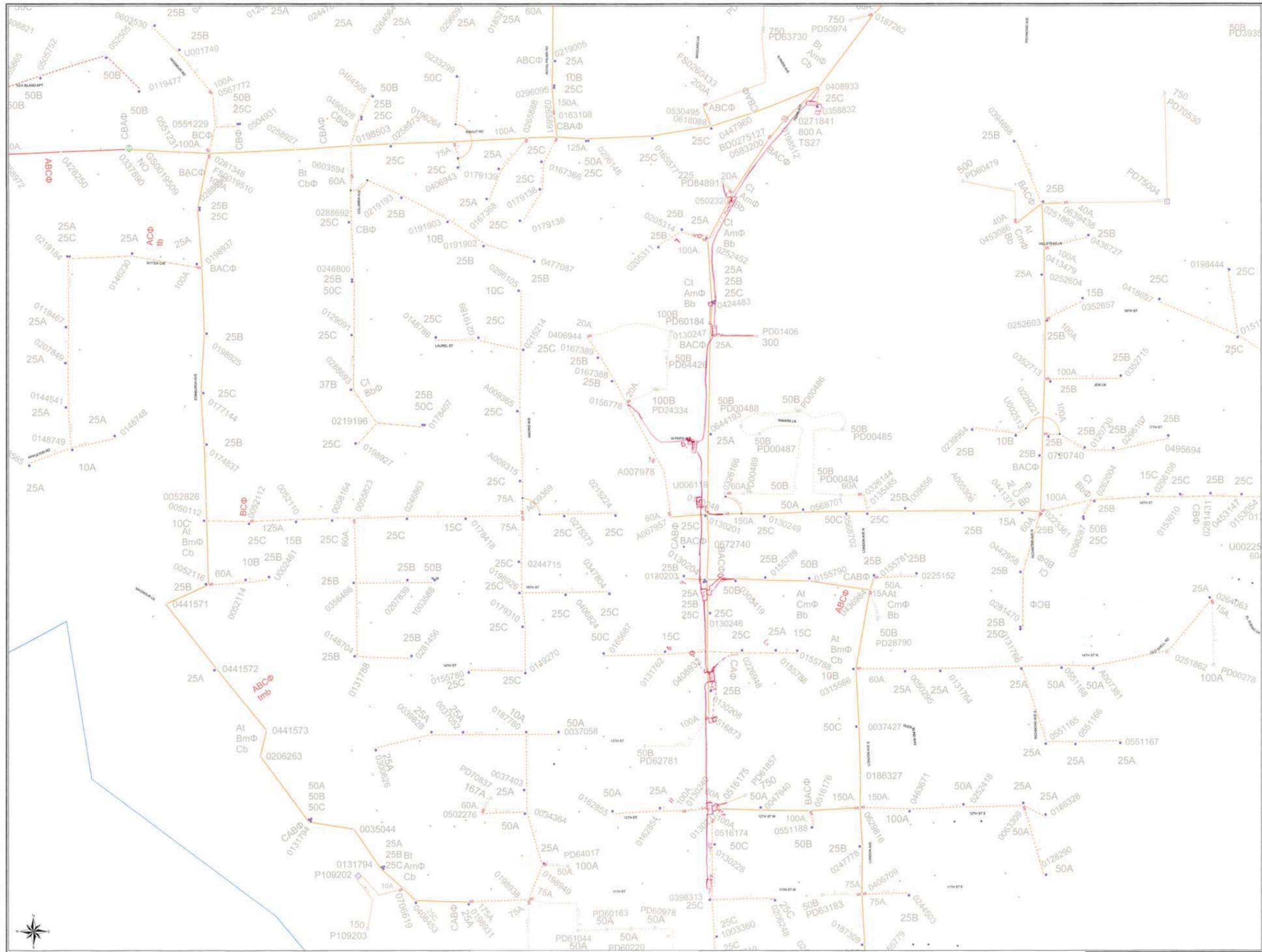


Dominion Energy

CLASSIFICATION, TYPE, SPECIFICATION, AND ADDITIONAL ATTRIBUTES MEET UTILITY GRADE REQUIREMENTS FOR ALL LIGHT FIXTURES, ASSOCIATED POLE MOUNTING HEIGHTS, AND POLES. PHOTOMETRIC PLANS ARE SUBJECT TO CHANGE BASED ON PREDICTED AND ACTUAL FIELD INSTALLATION LOCATION(S) AND ARE POTENTIALLY AFFECTED VIA OTHER GOVERNING AUTHORITIES IN THE INSTALLATION LOCATION(S). USE OF THIS PHOTOMETRIC PLAN IS SOLELY PERMITTED TO DOMINION ENERGY – LIGHTING SERVICES APPROVED PROJECTS. THE APPROVED PHOTOMETRIC PLAN MUST BE CONSTRUCTED VIA DOMINION ENERGY – LIGHTING SERVICES APPROVED PERSONNEL. USE OF THIS PHOTOMETRIC PLAN FOR FIELD INSTALLATIONS ARE LIMITED TO DOMINION ENERGY COMPANY CREWS AND DOMINION ENERGY CONTRACTORS. ALL DOMINION ENERGY APPROVED LIGHTING PLANS ADHERE TO THE MOST CURRENT NESC RULES AND REGULATIONS AT THE TIME OF THE PROJECT APPROVAL.

Statistics						
Description	Symbol	Avg	Min	Max/Min	Avg/Min	Max
Calc Zone #2	✕	1.1 fc	0.0 fc	N/A	N/A	6.5 fc

BATTERY CREEK



PLAN SAFETY INTO EVERY JOB

3 DAYS BEFORE DIGGING
IN SOUTH CAROLINA
CALL 811 OR 1-888-721-7877
PALMETTO UTILITY
PROTECTION SERVICE

Developer hereby approves this layout for construction. Any proposed change affecting this layout must be reported immediately to Dominion Energy South Carolina, Inc. All work required in connection with any proposed change will be borne by Developer. Current Dominion Energy South Carolina, Inc. overhead and underground policy at the time of construction will prevail. I hereby certify that I have the authority to approve this layout.

Original Approved By: _____ Title: _____ (Signature) Date: _____ (print name)

RIGHT OF WAY INFORMATION
RW Agent: _____
File Number: _____
Easement No.: _____
Coordinates: _____
Electric Eng. Tech.: _____
Gas Eng. Tech.: _____

W.O.# _____ W.R.# _____
STARTED BY: _____
COMPLETED BY: _____
CLOSED OUT BY: _____

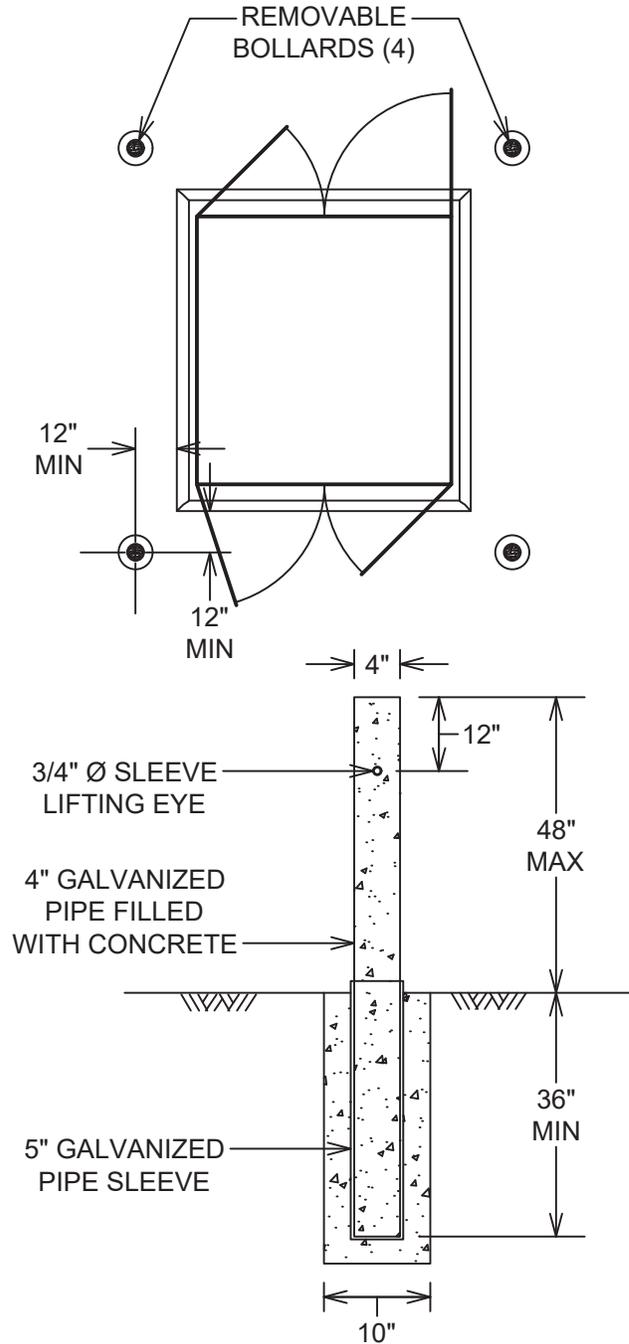
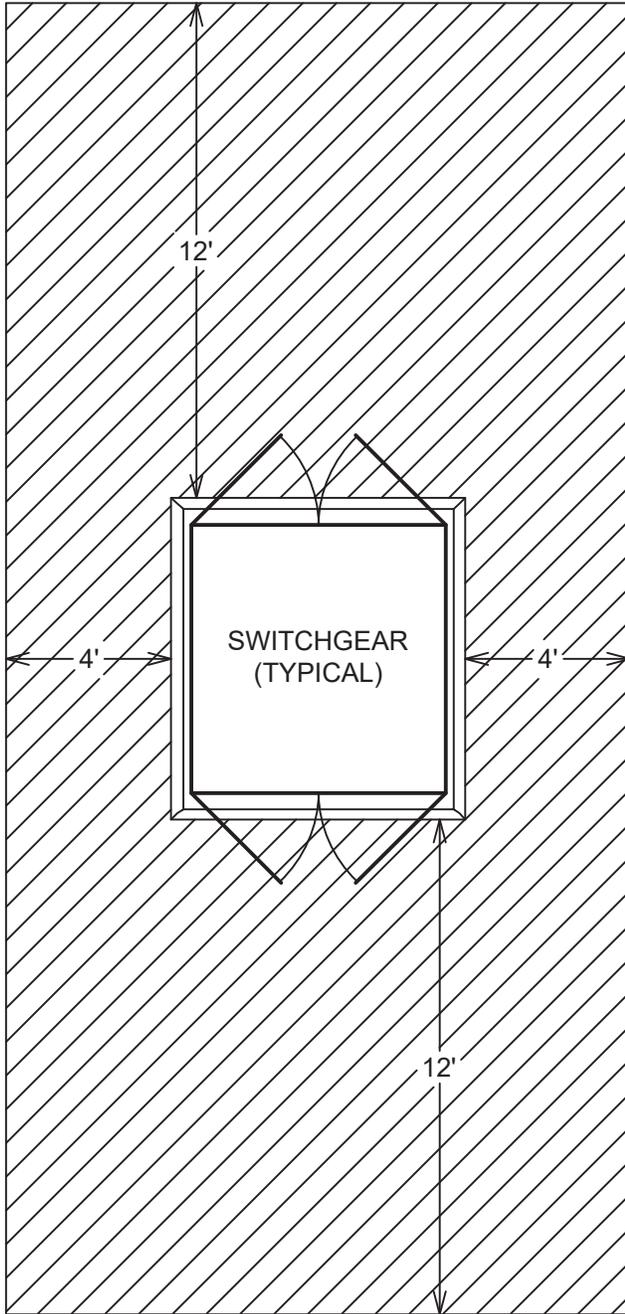
PROJECT TITLE: _____
REMARKS: _____
DESIGNER: _____
DATE: _____ DIST: _____
1 inch = 100 feet
DUR: _____
CHK: _____

PAD MOUNT SWITCHGEAR CLEARANCE REQUIREMENTS

BY JAL
DATE 05-09-17
REV. 0

12.01-04

FORMERLY DWG # PMS-3, S3



NOTES:

1. SEE DRAWING 12.01-01 FOR GENERAL INFORMATION AND NOTES.
2. PERMANENT AND/OR TEMPORARY OBSTRUCTIONS ARE NOT PERMITTED IN THE HATCHED AREA. OBSTRUCTIONS INCLUDE, BUT ARE NOT LIMITED TO TREES, SHRUBS, HVAC UNITS, GENERATORS, WALLS, FENCES AND/OR BUILDINGS.
3. BOLLARDS ARE REQUIRED WHERE VEHICLE TRAFFIC IS EXPECTED AND ARE INSTALLED AND MAINTAINED BY THE CUSTOMER.

**EFFECTIVE
DATE:
08-07-17**

**DISTRIBUTION CONSTRUCTION STANDARD
DOMINION ENERGY SOUTH CAROLINA, INC.**

GUIDE FOR LOCATING/SPOTTING 3 ϕ PAD-MOUNTED TRANSFORMER

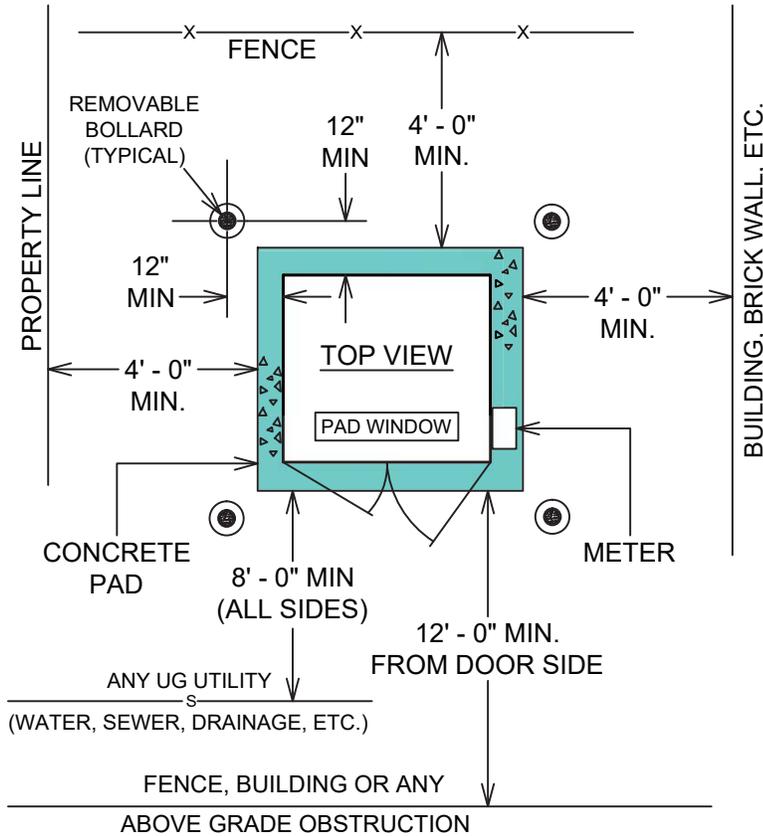
BY MWC

DATE 03-26-19

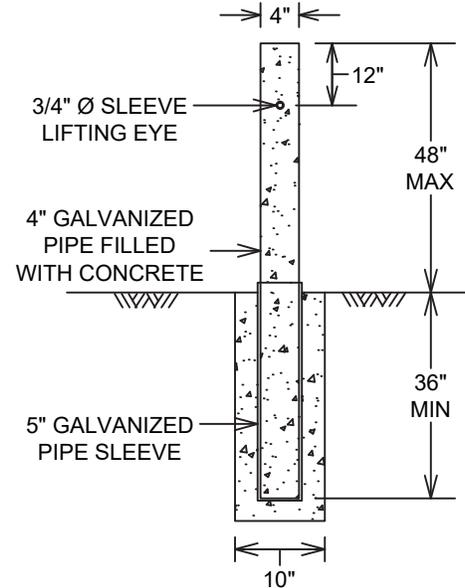
REV. 1

17.02-01D

REV. 1 (03/26/19) - CHANGED SCE&G TO COMPANY



REMOVABLE BOLLARD
4" GALVANIZED PIPE
FILLED WITH CONCRETE
WITH 5" GALVANIZED PIPE SLEEVE
(SEE NOTE 11)



NOTES:

1. PAD LOCATION AND ORIENTATION (DOORS/WINDOWS) MUST BE SPOTTED BY COMPANY REPRESENTATIVE. APPROVAL OF SITE BEFORE POURING CONCRETE IS RECOMMENDED. UNACCEPTABLE CONSTRUCTION WILL BE REJECTED AND CORRECTION REQUIRED BEFORE PLACEMENT OF COMPANY EQUIPMENT.
2. TRUCK ACCESS - 10 FEET MINIMUM CORRIDOR IS REQUIRED TO WITHIN 1 FOOT OF PAD FOUNDATION.
3. TRUCK WORK AREA - SETTING OR REMOVING TRANSFORMER REQUIRES KNUCKLE BOOM TRUCK AND TRAILER. THEREFORE 30' X 18' CLEAR WORK AREA ADJACENT TO TRANSFORMER PAD IS REQUIRED.
4. OVERHANGING VERTICAL CLEARANCE OF 40 FEET IS REQUIRED ABOVE CONCRETE PAD.
5. MINIMUM SAFE WORKING ZONE OF 12 FEET IS REQUIRED FROM TRANSFORMER ACCESS DOOR. ONLY EXCEPTION IS EASILY REMOVABLE FENCE/OBJECT.
6. IF ALL SIDES ARE SCREENED, AN INSIDE VENTILATION AREA OF 625 SQUARE FEET (25' X 25') MINIMUM MUST BE PROVIDED.
7. FUEL STORAGE TANKS, FUEL DISPENSING POINTS, AND CUSTOMER OWNED GENERATORS MUST BE A MINIMUM OF 20 FEET FROM THE PAD EDGE.
8. FLAMMABLE WALLS OR FENCING MUST BE MINIMUM OF 10 FEET FROM PAD EDGE.
9. NO UNDERGROUND UTILITIES UNDER OR WITHIN 8 FEET OF THE PAD (CONCRETE FOUNDATION).
10. MINIMUM "ABOVE GRADE" CLEARANCE ON ALL SIDES IS 4 FEET MINIMUM; EXCEPTION IS FRONT OR DOOR SIDE REQUIRING SAFE WORKING ZONE OF 12 FEET.
11. REMOVABLE BOLLARDS ARE REQUIRED WHERE VEHICLE TRAFFIC IS EXPECTED. THESE DEVICES ARE TO PROTECT THE PAD MOUNT TRANSFORMER FROM VEHICLE DAMAGE. REMOVABLE BOLLARDS ARE PROVIDED, INSTALLED AND MAINTAINED BY THE CUSTOMER.

**EFFECTIVE
DATE:
04-29-19**

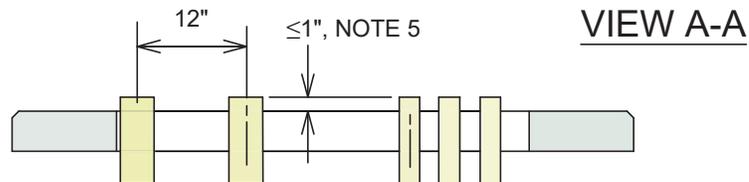
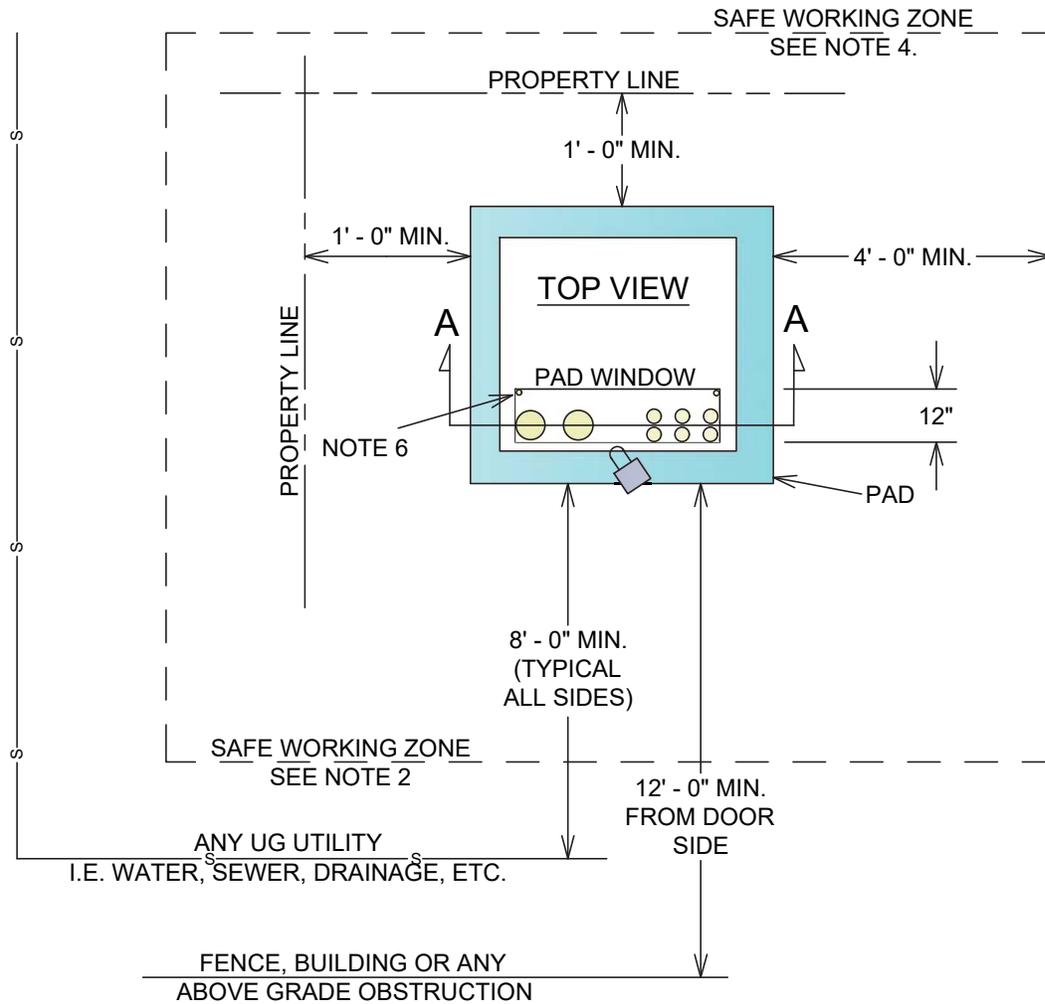
**DISTRIBUTION CONSTRUCTION STANDARD
DOMINION ENERGY SOUTH CAROLINA, INC.**

GUIDE FOR LOCATING/SPOTTING 1 ϕ PAD-MOUNTED TRANSFORMER

BY MWC
DATE 12-07-20
REV. 1

17.02-02B

REV. 1 (12/07/20) - CORRECTED SAFE WORKING ZONE NOTE REFERENCE



NOTES:

1. TRUCK ACCESS - 10 FEET MINIMUM CORRIDOR IS REQUIRED TO WITHIN 1 FOOT OF PAD FOUNDATION.
2. MINIMUM SAFE WORKING ZONE OF 12 FEET IS REQUIRED FROM TRANSFORMER FRONT/ACCESS DOOR.
3. FOREIGN UNDERGROUND UTILITIES (SEWAGE, WATER, DRAINAGE) MUST BE A MINIMUM OF 8 FEET FROM PAD.
4. MINIMUM "ABOVE GRADE" CLEARANCE AROUND TRANSFORMER FOR MAINTENANCE IS 4 FEET. ANY FENCE, SHRUB OR OTHER OBSTRUCTION WITHIN SAFE WORKING ZONE IS SUBJECT TO BE REMOVED.
5. CONDUITS MUST BE FLUSH OR UP TO 1 INCH ABOVE FINISHED PAD.
6. SEE DRAWING 08.03-01 FOR SINGLE PHASE PAD GROUNDING REQUIREMENTS.

EFFECTIVE
DATE:
08-07-17

**DISTRIBUTION CONSTRUCTION STANDARD
DOMINION ENERGY SOUTH CAROLINA, INC.**

Appendix I
Engineer's Opinion of Probable Construction Costs

Engineer's Opinion of Probable Construction Cost
Paris Avenue Thoroughfare Improvements
Master Plan (30% Design)

Item No.	Item	Quantity	Unit	Cost	Total
1	Bonding and Insurance (5% Max of Items)	1	LS	\$582,265	\$582,265
2	Mobilization/Demobilization (5% Max of Items)	1	LS	\$582,265	\$582,265
3	Construction Layout	60	Day	\$600	\$36,000
4	Preserve and Protect Private Property (structures)	1	LS	\$105,000	\$105,000
5	Preserve and Protect Private Property (non-structures)	1	LS	\$75,000	\$75,000
6	Tree Protection	1	LS	\$2,500	\$2,500
7	Tree Trimming and Demolition of Operations	1	LS	\$12,000	\$12,000
8	Traffic and Pedestrian Control	1	LS	\$175,000	\$175,000
9	Install and Maintain Silt Fence (Sediment & Erosion Control)	7,800	LF	\$5	\$39,000
10	Install Sediment Inlet Traps	94	EA	\$351	\$33,000
11	Demolition of Concrete Curb and Gutter	1,200	LF	\$10	\$12,000
12	Demolition of Concrete Curb (no gutter)	1,300	LF	\$8	\$10,400
13	Demolition of Concrete Median Island Curb	1,050	LF	\$8	\$8,400
14	Demolition of Asphalt Pavement (complete)	29,000	SY	\$25	\$725,000
15	Asphalt Milling of Cross Streets (40' distance)	2,000	SY	\$15	\$30,000
16	Demolition of Concrete Sidewalk (complete)	5,730	SY	\$12	\$68,760
17	Demolition of Concrete Entrance Drive within the Right-of-Way	6	EA	\$1,500	\$9,000
18	Demolition of Asphalt Entrance Drive within the Right-of-Way	12	EA	\$750	\$9,000
19	Demolition and Preserve Street Lights	9	EA	\$5,000	\$45,000
20	Relocate Dominion Energy Infrastructure Overhead along North Paris Avenue (powerline, poles)	0.30	mi.	\$200,000	\$60,000
21	Relocate Dominion Energy Infrastructure Underground (conduit, cabling, demolition of pole)	0.75	mi.	\$5,000,000	\$3,750,000
22	Install New Street Light	130	EA	\$6,000	\$780,000
23	Install 15" Precast Concrete Storm Sewer Pipe	3,100	LF	\$55	\$170,500
24	Install 18" Precast Concrete Storm Sewer Pipe	680	LF	\$75	\$51,000
25	Install 24" Precast Concrete Storm Sewer Pipe	870	LF	\$90	\$78,300
26	Install 30" Precast Concrete Storm Sewer Pipe	1,237	LF	\$130	\$160,810
27	Install 36" Precast Concrete Storm Sewer Pipe	470	LF	\$175	\$82,250
28	Install Precast Concrete Curb and Gutter Inlet/Catchbasin	94	EA	\$5,600	\$526,400
29	Install Precast Concrete Manhole	11	EA	\$6,000	\$66,000
30	30" Precast Wingwall and Treatment	3	EA	\$10,000	\$30,000
31	36" Precast Wingwall and Treatment	2	EA	\$12,000	\$24,000

Engineer's Opinion of Probable Construction Cost
Paris Avenue Thoroughfare Improvements
Master Plan (30% Design)

Item No.	Item	Quantity	Unit	Cost	Total
32	Regrade Paris Avenue and Driveways within Right-of-Way (including recompaction)	6.5	AC	\$150,000	\$975,000
33	Manhole Lid Adjusted to Grade	15	EA	\$1,000	\$15,000
34	Fire Hydrant Relocation	7	EA	\$6,500	\$45,500
35	Watermain Valve Adjusted to Grade	20	EA	\$500	\$10,000
36	Existing Utility Conflict Adjustment	10	EA	\$4,500	\$45,000
37	Construct Concrete Curb and Gutter	7,800	LF	\$25	\$195,000
38	Construct Asphalt Roadway (top and base course ONLY)	21,100	SY	\$40	\$844,000
39	Repave Asphalt Roadway Side Streets (40' distance)	2,000	SY	\$17	\$34,000
40	Brick Pavers Crosswalks	9,540	SF	\$15	\$143,100
41	Construct Concrete Sidewalk (Tabby type)	70,200	SF	\$9	\$631,800
42	Concrete Handicap Ramp	38	EA	\$1,400	\$53,200
43	Detectable Warning	51	SF	\$90	\$4,590
44	Reconstruct Concrete Entrance Drive within the Right-of-Way	6	EA	\$4,500	\$27,000
45	Reconstruct Asphalt Entrance Drive within the Right-of-Way	12	EA	\$2,500	\$30,000
46	5'x5' Tree Grates	136	EA	\$4,000	\$544,000
47	Site Furnishing (Benches, Trash Receptacles, Flower Pots)	1	LS	\$250,000	\$250,000
48	Install Pavement Markings and Striping (per SC DOT)	1	LS	\$40,000	\$40,000
49	Install Traffic Roadway Sign (per Manual on Uniform Traffic Control Devices)	1	LS	\$15,000	\$15,000
50	Palm Trees	3	EA	\$800	\$2,400
51	Overstory Street Trees	183	EA	\$300	\$54,900
52	Groundcover (See Plant Schedule for Spacing Options)	24,805	EA	\$12	\$297,660
53	Irrigation	32,000	SF	\$4.50	\$144,000
54	Landscape Area Sod (Repairs to Disturbed Areas)	32,000	SF	\$5	\$160,000
Subtotal					\$ 12,900,000
Contingency				25 %	\$ 3,225,000
Engineer's Opinion of Probable Construction Cost					\$ 16,125,000

Appendix J

Funding Sources



FUNDING SAFETY FOR ALL.

FHWA encourages implementation of projects and programs that improve safety, equity, and accessibility for all road users. Take the first step toward exploring federal funding opportunities for your Complete Streets Network.

[Federal Transit Administration Grant Programs](#)

[National Highway Performance Program](#)

[Surface Transportation Block Grant Program](#)

[Bridge Replacement and Rehabilitation Program](#)

[Highway Safety Improvement Program](#)

[Congestion Mitigation and Air Quality Improvement Program](#)

[Bridge Investment Program](#)

[Transportation Alternatives](#)

[Carbon Reduction Program](#)

[Tribal Transportation Program](#)

[Metropolitan Planning Funds](#)

[PROTECT](#)

[Railway-Highway Crossing Program](#)

[Statewide Planning and Research](#)

[Recreational Trails Program](#)

[Bridge Formula Program](#)

[Railroad Rehabilitation & Improvement Financing](#)

[TIFIA Program](#)

[Federal Lands and Tribal Transportation Programs](#)

[Tribal Transportation Program Safety Fund](#)

[ATTAIN](#)

[RAISE Discretionary Grants](#)

[INFRA Grants](#)

[Safe Streets and Roads for All Grants](#)

[Transit Oriented Development](#)

[Reconnecting Communities Pilot Program](#)

[Areas of Persistent Poverty Program](#)

[National Scenic Byways Program](#)

[Active Transportation Infrastructure Investment Program](#)



Interested in learning more? Visit the FHWA Complete Streets Funding site: <https://highways.dot.gov/complete-streets/make-complete-streets-default-approach>. In addition to funding, FHWA provides guidance, technical assistance, and other resources to improve safety in projects, policies, and procedures.

Transportation Alternatives Set-Aside Program (TAP)

The South Carolina Department of Transportation's (SCDOT) Transportation Alternatives (TA) Set-Aside Program was updated in 2022 based on guidance from the [Infrastructure Investment and Jobs Act \(IIJA\)](#). The program has been revised to include the IIJA specific:

- Emphasis on State technical assistance
- New population categories
- Prioritization of project location and impact in high-need areas as defined by the State

SCDOT further updated the TA Program to:

- Increase the emphasis on safety
- Prioritize eligible projects that align with SCDOT's Complete Streets Policy and/or are in SCDOT's 10-Year Plan, and projects in the STIP, TIPs, LRTPs, or other planning documents
- Increase partnerships and collaboration with local jurisdictions, COGs, MPOs, and TMAs
- Add funding rounds twice a year (April and October)
- Phase project awards to prevent funding lapses
- Increase the minimum grant request to \$400,000 (for a minimum total project of \$500,000)
- Remove the maximum grant cap. However, requests may not exceed the funds available in each population category for the applicable TAP round

The Transportation Alternatives Program funds *non-motorized* projects such as pedestrian and bicycle facilities and Safe Routes to Schools infrastructure. The TA program will assist SCDOT with accomplishing its [Complete Streets](#) initiative, which requires and encourages a safe, comfortable, integrated transportation network for all users, regardless of age, ability, income, ethnicity, or mode of transportation.

SCDOT will provide a TA workshop before the first funding round of each year (typically in March). While attendance is not mandatory, applicants are highly encouraged to attend. However, the training will also be recorded and posted online for those unable to attend in-person or view the live stream.

Please contact Amy Blinson, (803) 737-1952 or BlinsonAL@scdot.org, in the Office of Local Government Services with any questions related to the Transportation Alternatives Set-Aside Program.

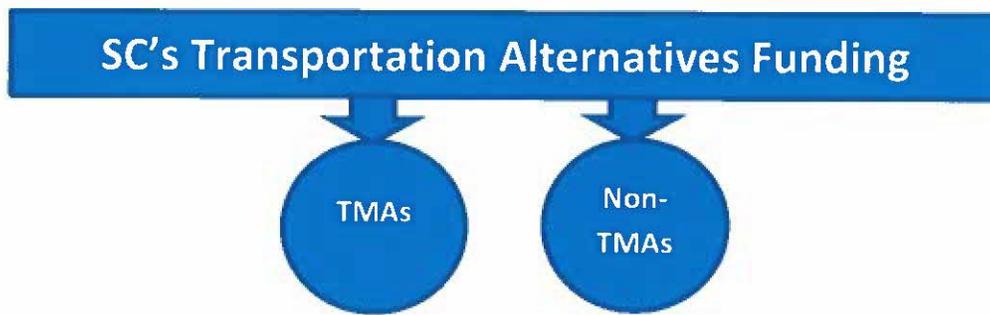
Revised: March 14, 2024

Transportation Alternatives Set-Aside Background

The Transportation Alternatives (TA) Program (officially known as the “Transportation Alternatives Set-Aside”) is a Federal reimbursement grant program funded through the US Department of Transportation’s Federal Highway Administration (FHWA).

The Transportation Alternatives Program allows local governments and other eligible entities to apply for grants for a variety of *non-motorized* transportation projects. The Transportation Alternatives Program was originally authorized under the 2012 Federal Transportation Funding Act, Moving Ahead for Progress in the 21st Century (MAP-21), which replaced the earlier Transportation Enhancement grant program. The 2021 Infrastructure Investment and Jobs Act (IIJA) continues funding the TA set-aside through 2026.

FHWA allocates Transportation Alternative funds to South Carolina through two population categories: **Transportation Management Areas (TMAs)** and **Non-Transportation Management Areas**.



Transportation Management Areas

A [Transportation Management Area](#) (TMA) is defined as a Metropolitan Planning Organization (MPO) with a population of 200,000 or greater. South Carolina currently has 6 TMAs. The amount of Transportation Alternatives funding allocated to each TMA is based on its population and is specifically identified in federal regulations.

Each TMA must develop and utilize a competitive selection process, approved by FHWA, to determine how its TA funds are awarded. ***SCDOT encourages TMAs to adopt project criteria similar to those found in this document to allow greater alignment of TA priorities statewide.*** TMAs are to provide SCDOT at least 30 days’ notice before opening up a competitive funding round, and are encouraged to plan around SCDOT’s annual rounds in April and October.

Applications for projects located in a TMA should be submitted to the corresponding MPO shown below. Additional contact information for the MPOs is included on the last page of this document. If you are uncertain if your project is located in a TMA, please reach out to the applicable MPO.

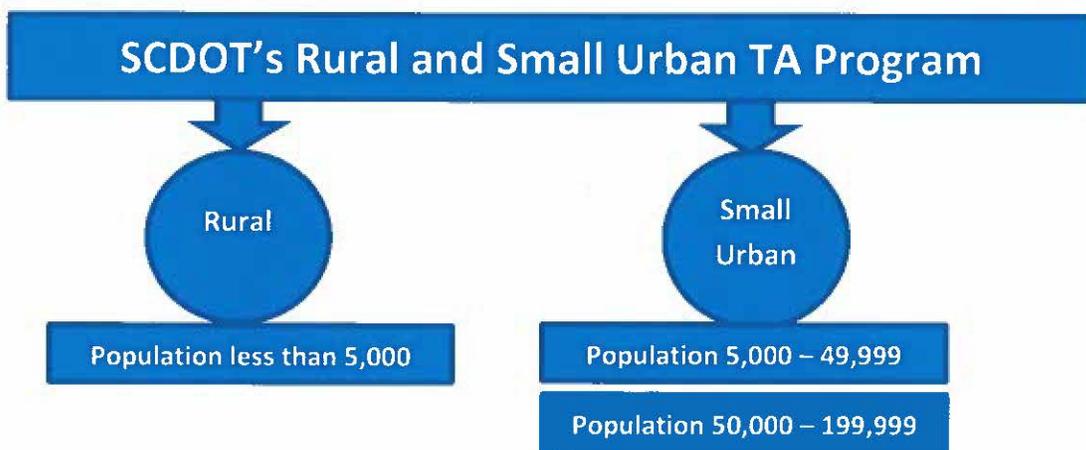
Transportation Management Area (TMA)	TMA Description	Metropolitan Planning Organization (MPO)
ARTS	Augusta Regional Transportation Study	Augusta Planning & Development Department
CHATS	Charleston Area Transportation Study	Berkeley-Charleston-Dorchester Council of Governments
COATS	Columbia Area Transportation Study	Central Midlands Council of Governments
GPATS	Greenville – Pickens Transportation Study	Greenville County Planning Department
GSATS	Grand Strand Area Transportation Study	Waccamaw Regional Planning & Development Council
RFATS	Rock Hill – Fort Mill Area Transportation Study	Rock Hill - Fort Mill Transportation Study

TMAs must identify their awarded TA projects in their Transportation Improvement Program (TIP) document. The TMA will then submit their Policy Committee-approved TA applications to SCDOT's Office of Local Government Services for final approval and issuance of award.

If an entity within a TMA applies for funding, but is unsuccessful, they may be eligible for SCDOT funds. The TMA must first notify SCDOT in writing that the entity would like to apply for funding. Then the TA Program Manager, depending on available funding, will work with that entity to submit an application in the next SCDOT funding round.

Non-Transportation Management Areas

SCDOT funds projects for entities located in **non-Transportation Management Areas** through the **Rural and Small Urban Transportation Alternatives Program**. IIJA defined new population sub-groups for this category of funding that are shown below.



IIJA Guidance for Transportation Alternatives

The IIJA-related revisions to the Transportation Alternatives Set-Aside retroactively took effect October 1, 2021, and apply to all funding obligated on or after this date, whether the funds were apportioned from the previous FAST Act or from IIJA.

IIJA requires a competitive TA grant application process that prioritizes project location and impact in high-need areas, such as low-income, transit-dependent or rural areas. It is at the discretion of each state to define their high-need areas. IIJA further encourages states to consult with their MPOs to ensure that MPO priorities are also taken into consideration.

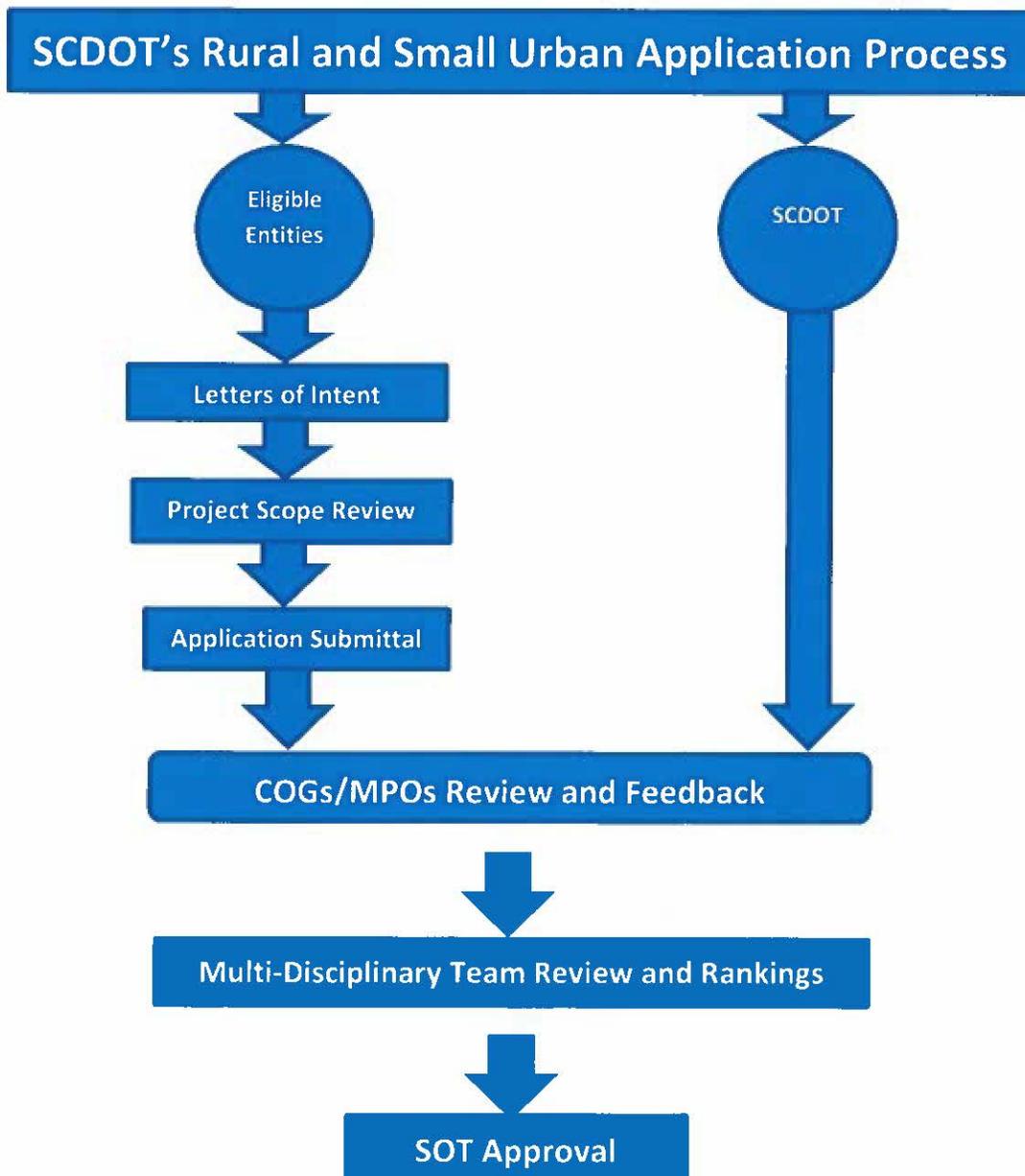
All statutory IIJA requirements have been incorporated into SCDOT's revised TA program.

SCDOT's Rural and Small Urban TA Application Process

SCDOT's TA application process takes a two-pronged approach to ensure the most efficient and impactful use of funds statewide.

Eligible entities are encouraged to apply for TA funding for locally-planned activities. SCDOT also will review its existing [10-Year Plan](#) project pipeline to identify TA-eligible activities in statewide planned projects. SCDOT will focus on projects that address documented non-motorized safety deficiencies and SCDOT's Complete Streets Policy, with priority going to projects that anticipate authorization within the next 24 months.

SCDOT will hold competitive rounds for Transportation Alternatives applications twice a year in April and October, and will coordinate with the MPOs serving populations less than 200,000 and the COGs to review and provide feedback on projects. After staff rates and ranks the applications, the Secretary of Transportation (SOT) will have final award approval. SCDOT's Rural and Small Urban TA process overview is further outlined below.



Letters of Intent

Applicants are encouraged to coordinate closely with the Transportation Alternatives Program Manager early in project development. Technical assistance, including on-site visits, is readily available upon request. This coordination is important to ensure that state and federal requirements are met, and that the project is eligible, viable and competitive. Additionally, SCDOT will provide an in-person/live-streamed TA workshop at least once a year. The workshop will also be recorded and posted online for later viewing.

SCDOT will issue a formal call for Letters of Intent twice a year in April and October. Applicants may submit **one** Letter of Intent per funding round, and may not submit another LOI if an application is still under review in the previous round. An applicant may not submit a Letter of Intent if they have an open TAP project that has less than 50% of construction completed. **Letters of Intent are mandatory** to apply for TA funds, and will be due to SCDOT's Office of Local Government Services by 4:00 pm on the advertised deadline date. Incomplete documentation or documentation received after the deadline will not be considered for the current round of funding.

The Letter of Intent form will ask for the following information:

- The applicant's name and contact information
- Who will manage the project – do you intend to manage the project as a Local Public Agency or do you want SCDOT to manage the project?
- The project location, including a site map, address, street/road name, route number, and mile points, if applicable.
- A project budget that includes the total project cost, the amount of TA funds requested, and local funding sources and amounts for match. **A detailed, itemized licensed engineer's cost estimate must be included to justify your budget request.** If a project is dependent upon other grants – i.e., Recreational Trails Program, Appalachian Regional Commission – being awarded in order to proceed, this information *must* be provided upfront.
- If eligible, do you need to receive match assistance from SCDOT, and the amount requested.
- A complete, comprehensive project description including the purpose and need of the project, and who the project will serve. Also include the project phases for which you are requesting funds: design, right of way (ROW) acquisition, and/or construction.
- A project timeline showing the proposed start and end dates for all phases of work.

Project Scope Review

The TA Program Manager will review the Letters of Intent for completeness, and verify federal eligibility. The project scope, technical factors, timelines, cost estimates, funding sources, and more will be further reviewed by additional SCDOT staff to ensure project feasibility.

Formal Application Submittal

Applicants with projects deemed eligible and feasible will be sent SCDOT's TA application form to complete and submit by the due date.

Projects not approved for the application phase will receive technical assistance, so that the applicant may reapply with a revised LOI in an upcoming round.

COG/MPO Review

During the application review, SCDOT will send each application to its respective Council of Government or Metropolitan Planning Organization for review and feedback. The COGs and MPOs may wish to utilize their Technical Advisory Committees for this purpose, depending on the number of applications received. Timely feedback from the COGs and MPOs will be provided to the SCDOT evaluation team for their consideration during the project scoring.

Multi-Disciplinary Evaluation Team

The TA Program Manager will convene an SCDOT team to evaluate and score the applications. The TA Program Manager will recommend if a project should receive matching assistance from SCDOT, and adjust the project's budget accordingly. Additional information on matching assistance is provided in the "Grant Match" guidelines that follow.

The TA Program Manager will rank the projects' scores from highest to lowest. A minimum score of 70 must be obtained in order for a project to be funded.

TA Awards

Projects will be awarded starting with the highest score until funding runs out *or* until all fundable projects (those with a score of 70 or more) have been funded. Any projects not funded can be re-submitted or rolled-over to the next round at the request of the applicant. Projects may only roll-over once; after that a new application and updated cost estimate must be submitted.

Staff will verify for which sub-allocation fund (Rural or Small Urban) the project qualifies. Any TA funds not awarded will be carried over into the next funding round.

Unless an applicant is requesting funds for construction only, **all awards will be phased**. For example, a project totaling \$1 million for design, right of way (ROW) acquisition, and construction will be awarded only the budget amounts required per phase. For example, Phase I would be awarded \$200,000 for design and ROW acquisition and Phase II would receive \$800,000 for construction after the first phase has been successfully completed. The "gating" of award amounts by phase was instituted to prevent TA funds from lapsing. Waiting to award Phase II funding until bid-ready construction estimates are completed will ensure that a project has up to 4 years to obligate funds and complete construction.

Gated projects will have funding priority through completion, assuming the project progresses successfully. A grantee may request Phase II funds as soon as SCDOT informs them that Phase I has been successfully completed, and does not have to wait for the next TA funding cycle to begin.

SCDOT Transportation Alternatives Program Guidelines

Overview

The TA Set-Aside law (23 U.S.C. 133 (h)) and IIJA allow states to establish Transportation Alternatives priorities. The Rural and Small Urban TA Program reflects SCDOT's priorities of non-motorized user safety, the 10-Year Plan, and Complete Streets. SCDOT encourages TMAs to adopt similar guidelines to align to these priorities.

IIJA also requires prioritization of **project location** and **impact in high need areas as defined by the state**, such as low-income, transit-dependent, and rural areas. In order to address South Carolina's traditionally underserved and underrepresented populations, SCDOT will give special consideration to projects that are located in **communities with populations under 5,000**, and projects located in **Tier III and Tier IV Counties** as defined by the SC Department of Revenue (SCDOR).

SCDOR annually ranks South Carolina's 46 counties based on unemployment rate and per capita income, and assigns each county a Tier. Tier IV represents counties with the highest unemployment rates and the lowest per capita income, and Tier I represents those counties with the lowest unemployment and highest per capita income. SCDOR publishes the annual rankings each December. The **2024 Rankings** are listed below:

TIER IV	TIER III	TIER II	TIER I
Abbeville Allendale Bamberg Barnwell Cherokee Chesterfield Dillon Lee Marion Marlboro Orangeburg Union Williamsburg	Calhoun Chester Clarendon Colleton Darlington Fairfield Greenwood Hampton Horry Laurens McCormick Sumter	Anderson Berkeley Edgefield Florence Georgetown Jasper Kershaw Pickens Richland Saluda Spartanburg	Aiken Beaufort Charleston Dorchester Greenville Lancaster Lexington Newberry Oconee York

Eligible Applicants

- Local governments
- Regional Transportation Authorities
- Transit Agencies
- Natural Resources or public lands agencies
- School Districts, local education agencies or schools (including colleges and universities)
- Tribal governments
- Metropolitan Planning Organizations (MPO) that serve population areas of *less than 200,000*
- Nonprofit entities
- Any other local or regional governmental entity with responsibility for or oversight of transportation (other than an MPO that serves a population of over 200,000 or a State agency) that the State determines to be eligible. This would include eligible COGs.

- SCDOT, at the request of an eligible applicant, may now sponsor a project; this means that SCDOT may submit a TA application if requested by an aforementioned eligible entity. SCDOT and an eligible MPO may partner with another eligible applicant to carry out a project.

Note: Under certain circumstances, an eligible entity within a TMA's boundaries with projects not funded by the TMA's TA program *may* be able to submit applications to SCDOT. Please contact the TA Program Manager for further information.

Eligible Projects

Construction, planning and design of:

- On-road and off-road pedestrian, bicycle, and other non-motorized transportation facilities that are *for transportation, not recreational, purposes*. Note: The term “pedestrians” is inclusive of all users of the pedestrian infrastructure, including persons with disabilities.
- Infrastructure-related projects that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.
- Safe Routes to Schools program infrastructure projects ([23 U.S.C. 208](#))
- Projects listed in an applicable SCDOT, COG/MPO non-motorized transportation, bicycle, or other related plans.
- Projects that meet [SCDOT's Complete Streets Departmental Directive](#)
- Projects that connect and develop documented regional or statewide non-motorized transportation networks.

Note: All projects must be [compliant](#) with all applicable SCDOT departmental, engineering, and planning directives; design, engineering, and construction standards and specifications; etc.

Examples of eligible projects include, but are not limited to:

- Installation of new sidewalks which provide connectivity to mass transit, schools, businesses, etc.
- Sidewalk improvements (i.e., widening, gap closures, repairs, curb ramps, curbs, gutters)
- On-street bicycle facilities (i.e., new or upgraded bicycle lanes, widened outside lanes or roadway shoulders, geometric improvements, traffic signs, pavement markings)
- Off-street bicycle and pedestrian facilities (i.e., multi-use bicycle and pedestrian trails and pathways for transportation purposes that are separated from a roadway)
- TAP-eligible components of traffic calming techniques, such as roundabouts, raised crossings, raised intersections, median refuges
- Pedestrian and bicycle crossing improvements (i.e., pavement markings, crossings, median refuges, raised crossings, raised intersections, and traffic control devices, including new or upgraded traffic signals, pavement markings, traffic stripes, in-roadway crossing lights, flashing beacons, pedestrian countdown signals)
 - **Please note:** Mast arm installation costs typically exceed the costs of standard signal supports, such as span wire with steel or concrete poles. Consequently, per [SCDOT Engineering Directive Memorandum #33](#), SCDOT will not pay costs above those required to install steel or concrete poles at an intersection. SCDOT will allow the installation of mast arms only in those instances where the local government having jurisdictional authority at the signalized intersection enters into an agreement with SCDOT concerning installation and maintenance of the mast arms. This agreement will stipulate that the local government must pay the difference in cost between a mast arm installation and a steel or concrete pole installation, including the cost of additional conduit required by the mast arm installation.
 - **What does this mean?** The entity requesting the mast arm will have to provide an increased local match to make up the difference in cost between a standard signal and a mast arm. Three hypothetical examples are shown below.

Signal Type	Total Project Cost	Maximum Amount Eligible for TAP Funding	Cost Difference	Total TAP Funding Provided*	Local Funding Required**
Standard Signal Pole(s)	\$250,000	\$250,000	\$ -	\$200,000	\$50,000
Mast Arm(s) Example A	\$400,000	\$250,000	\$150,000	\$200,000	\$200,000
Mast Arm(s) Example B	\$500,000	\$250,000	\$250,000	\$200,000	\$300,000
*Denotes 80% of maximum amount eligible for TAP funding					
**Denotes 20% local (non-federal) match of maximum amount eligible for TAP funding <u>PLUS</u> any cost difference from a Standard Signal					

- Lighting and other safety-related infrastructure tied to a bike/pedestrian safety issue
 - Transportation-related projects that improve accessibility and/or achieve ADA compliance (i.e., curb ramps, sidewalks, crosswalks, pedestrian signals, transit stops)
 - Maximizing existing right-of-way for accommodation of non-motorized modes and transit options that increase safety and connectivity
 - An eligible Highway Safety Improvement Program (HSIP) project with a non-motorized component
 - TA-eligible components of a broader motorized project
- Note:** Road projects will **not** be funded (this includes design, ROW acquisition, construction, etc.). TAP-eligible components of road projects *may* be funded, but the roadway project design and ROW acquisition must be completed **before** applying for the TAP-eligible components on roadways.

Activities Not Associated with SCDOT's TA Priorities

- Recreational Trails. Bicycle and pedestrian projects must be principally for transportation (getting people from point A to point B for commerce or educational purposes), rather than recreational purposes. (Purely recreational projects will be referred to the [Recreational Trails Program](#) administered by the SC Department of Parks, Recreation and Tourism.)
- Routine maintenance and operations
- General recreation and park facilities, playground equipment, sports fields, campgrounds, picnic areas, pavilions, or other facilities that do not serve an eligible TA or Safe Routes to Schools purpose.
- Promotional activities
- Acquisition of scenic easements and scenic or historic sites, and scenic or historic highway programs
- Landscaping and scenic enhancement as an independent project. Landscaping *may* be eligible as part of a TA-funded project, but it may not make up the majority of the costs. Details for long term landscape maintenance must be provided, along with details for the installation of an irrigation system (if deemed necessary) and will be the responsibility of the applicant consistent with SCDOT Policy.
- Historic preservation and rehabilitation of historic buildings, structures, or facilities
- Establishment of transportation museums
- Property acquisition for vehicular parking lots
- Other activities deemed ineligible by SCDOT

Grant Awards

The minimum grant request is \$400,000. With the required 20% match, this equals a minimum \$500,000 project. This amount can include, but is not limited to, preliminary engineering, right-of-way, and construction.

TAP awards were previously capped at \$400,000. **TAP awards are no longer capped.** However, grant requests may not exceed the total TAP amount available in the applicable population category for that round of funding. It is **highly recommended** that you contact the TA Program Manager prior to submitting a Letter of Intent if your proposed TAP request will exceed \$1 million.

Grant Match Information

Typically, the TA Set-Aside program may fund 80% of a project's eligible costs, with the applicant funding 20% in non-federal funds, i.e. local, state, or private funds. Please note that, with a few exceptions, other federal funds may not be used to match TA funds. Please contact the TA Program Manager if you have questions about matching fund eligibility.

The availability and percentage of a project's matching funds will be evaluated as part of the rating and ranking process. Applicants will be required to demonstrate that they have their match available upon award, as the applicant will be required to pay their match up front before work on their project may begin. Note: "In-kind" matches are not acceptable, only cash matches are allowed.

However, SCDOT recognizes that the capacity to provide matching funds varies among communities statewide, especially in rural, high need areas. Therefore, SCDOT may provide up to 100% of the non-federal share for projects located in Tiers III and IV counties, as defined by the SC Department of Revenue, and for projects in any communities (not within a TMA) with populations less than 5,000, regardless of their county tier designation. ***Applicants must request match assistance in their Letter of Intent and list the amount requested.***

Project Performance Period, Obligation, and Lapse

TA grants have a performance period of up to four (4) years. TA Set-Aside funds are available for *obligation* for a period of three (3) years after the last day of the fiscal year for which the funds were authorized. Thus, funds are available for obligation for *up to 4 years*, after which they lapse.

Example: A project funded with FFY 2024 funds would have until September 30, 2027 to be 100% obligated.

Merely awarding or committing TAP funds to a project is ***not*** obligating them. A TA obligation occurs when SCDOT has received an approval from FHWA to utilize federal funds to begin design, right-of-way, or construction activities. Once that approval has been obtained, SCDOT's annual TAP allocation is reduced by the obligated value, work may begin on the respective phase, and reimbursement may be sought for work performed.

Any TA funds not obligated within their performance period are subject to lapse, and will not be replaced by SCDOT. It will be the applicant's responsibility to cover any lapsed funds, as determined by SCDOT.

An applicant has **up to six months after award** to advance the project by having substantial work underway. If substantial work has not started after 6 months, SCDOT reserves the right to terminate its award.

As previously mentioned, projects will be awarded by phase, with each phase expected to be obligated and completed within 4 years. The "gating" of award amounts by phase was instituted to prevent TA funds from lapsing.

Please reach out to the TA Program Manager if you have any questions regarding performance period, obligation, and lapse.

Project Criteria

FHWA requires Transportation Alternative Set-Aside projects to be publicly solicited and selected through a competitive process carried out at the State and TMA levels. For the ***Rural and Small Urban TA Program***, SCDOT will solicit application twice a year, and coordinate project reviews with applicable COGs and MPOs.

Projects competing for funding under SCDOT's ***Rural and Small Urban Program*** will be rated and ranked using the following **Competitive Factors**:

Safety

The project addresses safety issues for those who walk, bike, or travel by other non-motorized means by taking substantial, comprehensive action to significantly reduce serious and fatal injuries on roadways.

Feasibility

The project is able to be successfully completed on time and within budget. The project has a realistic scope, schedule, and budget, and has available local match funding (as applicable).

Planning and Connectivity

The project is consistent with adopted non-motorized plans and policies. The project connects to an existing network (i.e., sidewalk or trail facilities), and/or has logical beginning and ending points.

Previously Awarded TA Projects

The applicant has successfully completed similar TA (or TA-eligible) projects on time and within budget, and has provided appropriate maintenance on previous projects as applicable.

Public Involvement

The applicant has engaged community members and other relevant stakeholders in the development of the project. There is broad support for the project.

Project Location and Impact in High-Need Areas

The project will provide far-reaching economic and community impacts, including access to educational and employment opportunities. The project will enhance livability and improve quality of life.

Scoring Matrix

Each application's Competitive Factors will be scored as Excellent, Above Average, Average, or Unsatisfactory. A range of scores for each category is provided. Some criterion receive automatic maximum scores depending on the project's alignment with SCDOT's TA priorities.

***Example:** A proposed project located in a community with a population less than 5,000 will automatically receive 12 points for the High Need Areas factor.*

**A maximum score of 100 points is available.
Applications must receive a *minimum* score of 70 to be considered for funding.**

FACTOR	EXCELLENT 16 – 20 Points	ABOVE AVERAGE 11 – 15 Points	AVERAGE 6 – 10 Points	UNSATISFACTORY 0 – 5 Points
Safety	<p>Project an SCDOT-documented safety issue. (20 points)</p> <p>Or</p> <p>Project clearly and specifically supports SCDOT's Complete Streets Policy, 10-Year Plan, Pedestrian and Bicycle Safety Action Plan (PBSAP) and/or is a Safe Routes to Schools project.</p>	<p>Project addresses a non-SCDOT documented safety issue. However, the applicant is able to provide qualitative and quantitative documentation of the project's safety-related benefits.</p>	<p>Project may potentially address a safety issue, but the project's primary purpose is not safety-related.</p> <p>Applicant did not provide quantifiable safety-related data.</p>	<p>The project does not demonstrate a safety benefit.</p> <p>The project may contribute to a safety hazard.</p>
Feasibility	<p>Applicant clearly demonstrates that the project can be completed on time and within budget.</p> <p>A professionally-prepared cost estimate has been provided.</p> <p>Match requirements have been met with documentation provided.</p> <p>Some preliminary engineering (if applicable) has occurred and is documented.</p> <p>Maintenance (if applicable) is addressed.</p> <p>The proposed project is part of a project that the applicant is actively funding.</p>	<p>Applicant has somewhat demonstrated that the project can be completed on time and within budget, but conclusive supporting documentation is lacking.</p> <p>Match requirements (if applicable) have been met.</p>	<p>Applicant <i>may</i> be able to complete the project on time and within budget, but there is no definitive supporting documentation to confirm this.</p> <p>Match requirements (if applicable) have been met.</p>	<p>Applicant does not appear capable of completing the project on time and within budget.</p> <p>Match requirements (if applicable) have not been met.</p>
Planning and Connectivity	<p>Project is in the TIP, STIP or LRTP. (20 points)</p> <p>Project is in other planning documents and provides connectivity in an existing network</p>	<p>Project connects to an existing network (i.e., sidewalk/trail facilities), closes gaps, and/or connects to education, business or recreational facilities.</p>	<p>Project has logical beginning and ending points, but does not connect to an existing network.</p>	<p>Project does not provide non-motorized transportation connectivity.</p> <p>The project may negatively impact future projects.</p>

	EXCELLENT 13 – 16 points	ABOVE AVERAGE 9 – 12 points	AVERAGE 5 – 8 points	UNSATISFACTORY 0 – 4 points
Previously Awarded TA Projects	Project is Phase II of a previously awarded TAP project (16 points) <i>Or</i> Applicant has successfully completed TA projects without lapsing funds.	Applicant has successfully completed similar non-TA and/or other federally funded projects.	Applicant has not completed similar projects, but appears capable of bringing the project to successful completion. <i>Or</i> SCDOT is administering the project.	Applicant previously received and lapsed TA funding or did not otherwise completed a TA project.
	EXCELLENT 10 – 12 points	ABOVE AVERAGE 7 – 9 points	AVERAGE 4 – 6 points	UNSATISFACTORY 0 – 3 points
Public Involvement	Applicant has documented successful engagement of diverse community members and other relevant stakeholders in the development of the project. (i.e., letters of support; CTC or other local funding secured).	Applicant has obtained some level of community support.	There are no known negative impacts to the community.	The project does not have community support.
Project Location and Impact in High-Need Areas	Project is located in a Tier IV County <i>or</i> in a municipality with a population of 5,000 or less. (12 points) <i>Or</i> Project will provide far-reaching economic and community impacts, including access to educational and employment opportunities. The project will enhance livability and improve quality of life.	Project is located in a Tier III community (9 points). <i>Or</i> Project will provide documented economic and/or community impact, such as access to educational or employment opportunities. The project will enhance livability and improve quality of life.	Project will provide economic and/or community impacts. The project will enhance livability and improve quality of life.	Project provides few, if any, beneficial impacts.

SCDOT Contact Information

Mailing Address: SCDOT
Office of Local Government Services
PO Box 191
Columbia, SC 29202-0191

Contact: Amy Blinson
Transportation Alternatives Program Manager
803-737-1952
BlinsonAL@scdot.org

Website: <https://www.scdot.org/projects/community-transportation-alternatives.aspx>

Transportation Management Areas Contact Information

ARTS – SC

Aiken County Planning &
Development
1930 University Parkway
Suite 2800
Aiken, SC 29801
803-642-1520

COATS

Central Midlands Council of
Governments
236 Stoneridge Drive
Columbia, SC 29210
803-376-5390

GPATS

Greenville County Planning
Department
301 University Ridge
Suite 3800
Greenville, SC 29601
864-467-7270

CHATS

Berkeley-Charleston-
Dorchester Council of
Governments
5790 Casper Padgett Way
North Charleston, SC 29406
843-529-0400

GSATS

Waccamaw Regional
Planning and Development
Council
1230 Highmarket Street
Georgetown, SC 29440
843-546-8502

RFATS

Rock Hill Fort Mill Area
Transportation Study
Post Office Box 11706
Rock Hill, SC 29731
803-326-2432



TRANSPORTATION ALTERNATIVES PROGRAM

MARCH 25, 2024



Program Background

- Funding from the USDOT's Federal Highway Administration (FHWA)
- The Transportation Alternatives Program (TAP) was established in 2012 by the Federal Transportation Funding Act, Moving Ahead for Progress in the 21st Century (MAP-21). It replaced the old Transportation Enhancement Program.
- The Infrastructure Investment and Jobs Act (IIJA) has funded TAP through 2026.

Transportation Alternatives Funding

FHWA sends TA funds to South Carolina
based on populations:

Transportation Management Areas (TMAs)

- Six areas in the state have populations of 200,000+:
ARTS, CHATS, COATS, GPATS, GSATS and RFATS

Non-TMAs (through SCDOT)

- Small Urban Areas: Populations greater than 5,000 but less than 200,000
- Non-Urban Areas: Populations less than 5,000

FFY24 TA Funding

Transportation Management Areas (TMAs)

\$6.98 million

- Each TMA determines how and when their TAP funds are distributed, and sets their minimum/maximum grant award.
- Counties/municipalities within a TMA must apply directly to the TMA for TAP projects.

Small Urban and Non-Urban Areas (Rural Program)

\$8.6 million

- Small Urban Area >50,000 but <200,000 population*: \$2.3 million
- Small Urban Area >5,000 but <50,000 population*: \$1.2 million
- Non-Urban Areas <5,000 population: \$5.1 million

*IIJA's new population break-outs

TA Program Priorities

IIJA Priorities

Project Location & Impact in High Need Areas

SCDOT Priorities*

Safety

10-Year Plan

Complete Street

**With special consideration to projects located in towns with populations of less than 5,000, or in Tier III & IV Counties, as defined by the SC Department of Revenue*

Eligible Applicants

- Local Governments
- School Districts and Schools
- Regional Transportation Authorities
- Natural Resource or Public Lands Agencies
- Tribal Governments
- MPOs serving populations < 200,000
- Non-Profits
- Any other local or regional entity with responsibility for oversight of transportation

Eligible Activities

Pedestrian Facilities

- Sidewalks/Multi-use Paths/On-road or Off-road trails
- Focus on Regional or State-wide Trails

Bicycle Facilities

- Multi-use Paths
- Paved Shoulders/Bike Lanes/Signage

Streetscape Projects

- Pedestrian Lighting, Crosswalks (including decorative crosswalks), Pedestrian Signals, etc.
- Minor Landscaping when part of an eligible construction project

Safe Routes To School Program

- Sidewalks, cross walks, etc.

Award & Match

Grant Award: \$500,000 total minimum request
No maximum cap*

*BUT, request may not exceed the funds available!

Match: 80/20 split

- SCDOT can provide match assistance in Tier III & IV counties, and to municipalities with populations less than 5,000

Award & Match

TIER IV	TIER III	TIER II	TIER I
Abbeville	Calhoun	Anderson	Aiken
Allendale	Chester	Berkeley	Beaufort
Bamberg	Clarendon	Edgefield	Charleston
Barnwell	Colleton	Florence	Dorchester
Cherokee	Darlington	Georgetown	Greenville
Chesterfield	Fairfield	Jasper	Lancaster
Dillon	Greenwood	Kershaw	Lexington
Lee	Hampton	Pickens	Newberry
Marion	Horry	Richland	Oconee
Marlboro	Laurens	Saluda	York
Orangeburg	McCormick	Spartanburg	
Union	Sumter		
Williamsburg			

Award & Match

Performance Period: Up to 4 years

- Funds not obligated are subject to lapse

Phased Awards

- All projects will be phased to avoid lapses

Award Process

Two Competitive Funding Rounds Annually

- Request for Letters of Intent in April & October
- Only 1 LOI per Applicant per funding round **NEW**
- Only TAP eligible activities – no road projects!

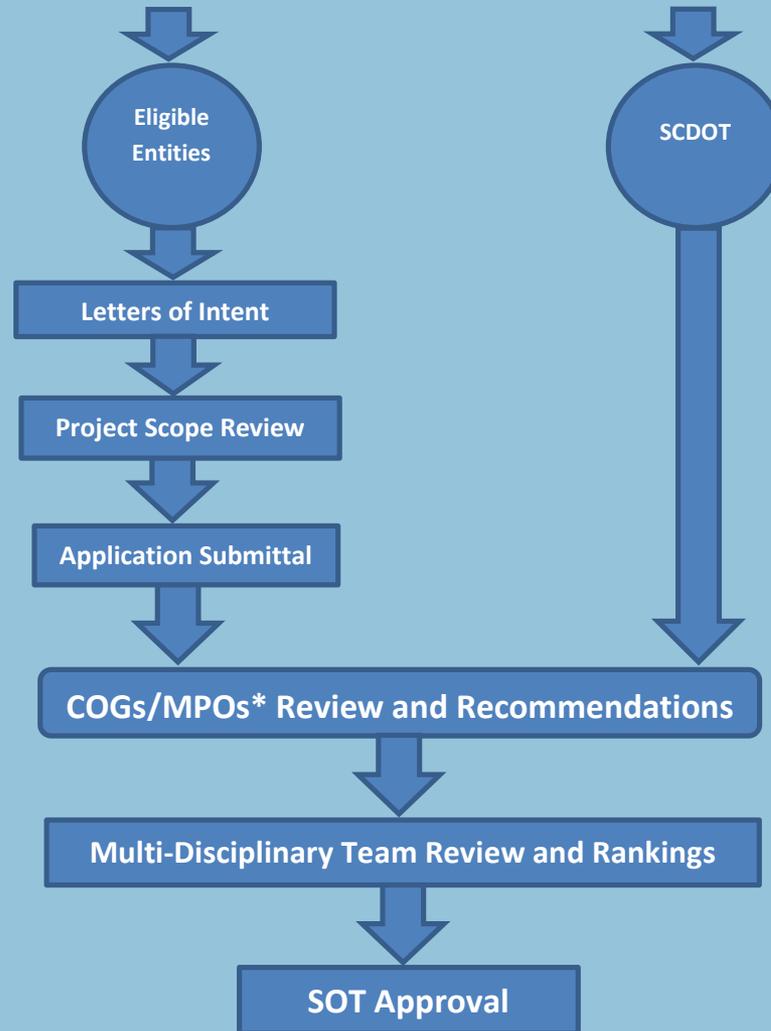
Project Rated and Ranked by Scoring Criteria focused on:

- Safety, Feasibility, Planning, Connectivity, Previous TAP Performance, Public Involvement

Projects Awarded Starting with Highest Score

- Award until run out of funds or minimally qualifying projects

Application Process



Letter of Intent

SCDOT Transportation Alternatives Set-Aside Program (TAP) 2024 Round 1 Letter of Intent

Email completed form and all required attachments to BlinsonAL@scdot.org by **May 3, 2024 at 4:00pm**
Applicants may submit only 1 project per round

Applicant: _____

Contact Person and Title: _____

(This person will be in direct contact with SCDOT and must be able to answer questions about the project)

Email: _____ Phone: _____

Type of Applicant: Local Government _____ MPO/COG _____ School/District _____ Other (_____)

Who will administer the project: SCDOT _____ Applicant will apply to be a Local Public Agency (LPA) _____

Project Title: _____

Project Budget: Are you requesting match assistance? Yes ___ No ___ If so, how much? \$ _____

Total Project Cost	80% TAP Request*	20% Local Match**
\$ _____	\$ _____	\$ _____

*Must be at least \$400,000 **Match assistance *may* be available for towns under 5,000 population and projects located in Tier III and IV counties. You must be prepared to cover all match requirements if SCDOT funding assistance is not provided.

➡ **You must attach a detailed, itemized licensed engineer's cost estimate to support your request** ⬅

Project Location: (street names, where the project begins and ends, and the linear feet)

Also attach a detailed map highlighting the information above.

Project description: (Responses must fit in the spaces provided)

Letter of Intent

Need for the project:

Who the project will serve:

Project components requested (i.e., design, right-of-way, acquisition, construction):

Current project phase (i.e., conceptual design, ROW acquisition, etc.): (Please attach any preliminary engineering or other documentation that supports your project status)

Letter of Intent

Proposed project timeline: Identify the timeframe for each major project phase needed. Check the appropriate boxes for the quarter(s) during which the activity will take place (beginning to end). Please remember that the awarded TAP funds *must be obligated within 4 years* of their program year, or the funds will lapse.

		2024				2025				2026				2027			
Phase		1Q	2Q	3Q	4Q												
	<i>Example: Utilities</i>			X	X	X											
1	Prelim Eng.																
2	Right of Way																
3	Utilities																
4	Construction																
5	Close-out																
6																	
7																	

_____	_____
Signature of Chief Elected or Administrative Official	Title
_____	_____
Printed Name	Date

If you have any questions, please call Amy Blinson, TAP Manager, at (803) 737-1952.

Late/incomplete forms will not be accepted

Project Cost Estimate

Your Letter of Intent **MUST** include a detailed cost estimate:

- Prepared by a professional engineer
- Details costs by line item
- Addresses TAP eligible components

Project Cost Estimate



Phase 1: Planning and Design	
Survey	\$35,000.00
Design	\$50,000.00
	\$85,000.00
Phase 2: Construction	
Sidewalks (1,584 linear ft @ \$200/ft with curb construction)	\$ 316,800.00
Shared-Use Pathway (1 mi. @ \$200,000/mi)	\$200,000.00
Bike/Pedestrian Lot	\$300,000.00
	\$816,800.00
Total	\$901,800.00

Project Cost Estimate

Preliminary Estimate



Estimate Date	3/2
Estimator	
Bid Data	
From	
August-10	Jan



Bid Data	Statewide
County	EDGEFIELD
Rd/Rt	US 25
File No.	
Proj. No.	

Construction Cost	\$238,669.96
PE and E & C	
Other (R/W, Utilities, Misc.)	
Total	\$ 238,669.96

Item Number	Description	Unit	Quantity	Price	Amount
1031000	MOBILIZATION	LS	1	\$5,500.00	\$5,500.00
1032010	BONDS AND INSURANCE	LS	1	\$3,000.00	\$3,000.00
1050800	CONSTRUCTION STAKES, LINES & GRADES	EA	1	\$4,000.00	\$4,000.00
1071000	TRAFFIC CONTROL	LS	1	\$5,200.00	\$5,200.00
2011000	CLEARING & GRUBBING WITHIN RIGHT OF WAY	LS	1	\$10,000.00	\$10,000.00
2031200	SITE EXCAVATION	LS	1	\$15,000.00	\$15,000.00
3069900	MAINTENANCE STONE	TON	50	\$57.53	\$2,876.43
6020005	PERMANENT CONSTRUCTION SIGNS (GROUND MOUNTED)	SF	256	\$8.96	\$2,292.98
7142513	18" R. C. PIPE CUL. BEVELED END SECTN-CL 3	EA	1	\$650.00	\$650.00
7143618	18" SMOOTH WALL PIPE	LF	428	\$83.42	\$35,704.55
7143624	24" SMOOTH WALL PIPE	LF	292	\$115.19	\$33,634.42
7143636	36" SMOOTH WALL PIPE	LF	60	\$142.47	\$8,548.00
7192010	DROP INLET (24" X 24")	EA	3	\$2,608.33	\$7,825.00
7192020	DROP INLET (24" X 36")	EA	1	\$2,780.16	\$2,780.16
7192105	MANHOLE	EA	2	\$3,525.41	\$7,050.81
7204100	CONCRETE SIDEWALK(4" UNIFORM)	SY	683	\$72.03	\$49,196.49
7204900	DETECTABLE WARNING MATERIAL	SF	25	\$51.60	\$1,290.10
7205000	CONCRETE DRIVEWAY(6" UNIFORM)	SY	138	\$81.75	\$11,280.84
7209000	PEDESTRIAN RAMP CONSTRUCTION	SY	50	\$162.61	\$8,130.73
8041020	RIP-RAP (CLASS B)	TON	111	\$85.68	\$9,510.27
8048210	GEOTEXTILE FOR EROSION CONTROL UNDER RIPRAP(CLASS 2)TYPE C	SY	141	\$4.50	\$635.02
8091010	RIGHT OF WAY MARKER(REBAR AND CAP)	EA	4	\$130.02	\$520.07
8091050	RIGHT OF WAY PLAT	LS	1	\$4,000.00	\$4,000.00
8100101	PERMANENT GRASSING FOR SMALL PROJECTS	ACRE	0.448	\$5,253.36	\$2,353.51
8151110	TEMPORARY EROSION CONTROL BLANKET (ECB)	MSY	0.889	\$1,781.51	\$1,583.76
8152004	INLET STRUCTURE FILTER - TYPE F (WEIGHTED)	LF	30	\$13.07	\$392.13
8152007	SEDIMENT TUBES FOR DITCH CHECKS	LF	100	\$10.17	\$1,017.12
8153000	SILT FENCE	LF	156	\$3.14	\$490.33
8156490	STABILIZED CONSTRUCTION ENTRANCE	SY	275	\$15.30	\$4,207.22

2024 Application Round

Tentative 2024 Round 1 Schedule

TAP Workshop	March 25, 2024
Request for Letters of Intent (LOI)	April 1, 2024
Deadline for Letters of Intent	May 3, 2024 (by 4:00 pm)
Project Scope Review	May - June 2024
Applications e-mailed	June 2024
Applications Due	July 2024 (1 month after e-mail)
Internal & External Reviews	July – August 2024
TAP Award Approvals & Letters	September 2024
Financial Participation Agreements	November 2024

Questions?

Need More Information?

Visit our website at:
<http://www.scdot.org>

Go to:
Programs and Projects
Specialty Programs
Transportation Alternatives Program

<https://www.scdot.org/projects/community-transportation-alternatives.aspx>

Or contact:
Amy Blinson
Transportation Alternatives Program Manager
(803) 737-1952
BlinsonAL@scdot.org

Appendix K

Public Comments



COOL. COASTAL. FAR FROM ORDINARY.

Council

Joe DeVito
Mayor

Darryl Owens
Mayor Pro Temp

Jerry Ashmore
Mary Beth Heyward
Kevin Phillips

Van Willis
Town Manager

T. Alan Beach
Chief of Police

Jeffrey S. Coppinger
Operations

Noah Krepps
Planning

**TOWN OF PORT ROYAL
Open House
Paris Avenue Improvements
Council Chambers, 700 Paris Avenue
August 9, 2023
4:00pm - 6:30 pm**

<u>NAME</u>	<u>ADDRESS</u>	<u>EMAIL</u>
Karen Wilm	908 Madrid	Karenulm@gmail.com
Kathy & John Peeler	14 Camp Lejeune	Kathleen.peeler@gmail.com
Sally Eskner/Buddy Brown	1022 11 th ST.	BUDDY BROWN REAL ESTATE@yahoo.com
Katy Perlin	809 Paris Ave	Katy@perlinwoodworking.com
Greg Shelton	1007 Madrid Ave	ganshelton1950@gmail.com
EARL JOYE	820 PARIS AVE	EARL@APEXTEAMLLC.CO
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RICHARD BEESLEY	223 WILLOW PT RD	beesley.richard@gmail.com
LORI PHELAN	1104B 13 th St.	phelan.lori58@gmail.com

NAME

ADDRESS

EMAIL

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Stephen Lohrenz	4614 Elinburg Drive	stephen.lorenz@gmail.com

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Bob Fidyk	" " "	
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jeremy levum	630 16 th st ext	
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David Stillwell	1108 14 th St	Stillwell028@earthlink.net
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Margan Irvine	925 9 th Street	ferminmargan@gmail.com

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Chris DePatt	1007 14 th St	chrisdeverpot48@gmail.com
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Flourtry	917 11 th Street	Taneta K Covell@gmail.com
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Debbie Ball	"	debbieball123@gmail.com
Don Hinton	2905 Ribersbank Dr.	Donniez42@outlook.com
Kathleen Palinski	919 8 th St	palinskiK@bellsouth.net
Scot Clark	1012 11 11 th St	scotc1012@gmail.com
Patty Clark	1012 11 th St.	pclark1012@gmail.com
Riley Randak	1629 Paris	Incr@earthlink.net
Barb Berry	5 th Street	bberry409@gmail.com
Lynne Hendricks	1514 OSR Port Royal	
Lolita Huckley Winters	Pebant Rd, Btk	bffba@gmail.com

WHY IS THE PARKING PROBLEM
ON 12TH NEAR ALANO HALL
BEING ADDRESSED BY
ADDING GOLF CART PARKING?
THE AREA DESIGNATED FOR
GOLF CARTS ON THE PLAN IS
ALWAYS USED BY FOLKS
GOING TO ALANO?



The Docks of Port Royal

Kevin Phillips

From: Kevin Phillips <kphillips@portroyal.org>
Sent: Wednesday, August 9, 2023 12:55 PM
To: Kevin Phillips
Subject: Fwd: My comments for tonight's meeting

Sent from my iPhone

Begin forwarded message:

From: Meghan <megwitz@gmail.com>
Date: August 9, 2023 at 11:43:11 AM EDT
To: Kevin Phillips <kphillips@portroyal.org>
Subject: My comments for tonight's meeting

CAUTION: This email originated from outside the Town of Port Royal's email system. Maintain caution when opening external links/attachments

Hi Kevin-

As someone who has seen Port Royal go from a quaint fishing town to a house stuffed, not so quaint as it used to be town I'd love to see those medians removed. They are a visual hazard. I've seen large trucks try to back out of these ridiculously small parallel parking spots and run right through them. It's hard to see the children crossing the street in front of the school. And just take up too much room in the road. But the biggest issue is the parallel parking. It's very difficult to see around the cars when pulling out of a side street and I've almost seen many accidents with folks just pulling out into traffic. That parking really needs to go. The sidewalks are plenty wide enough but a bike lane would really help. I would love to see underground utilities here for the basic reason of weather and power lines.

Thanks Kevin!
Meghan

Recommendations

- smaller sidewalk +
Return diagonal parking
- Plan for truck parking -
We have a Boat Ramp
in town!
- Use Native plants
Palms
Spartina Grass
-

Thank you for all the wonderful proposed improvements to our town. PLEASE PLEASE PLEASE consider implementing a speed table in front of Port Royal Elem (in both directions on Paris). Investing in the safety of our children is SO important. Motorists don't always respect signs or speed limits. But they have to slow down for an obstacle.

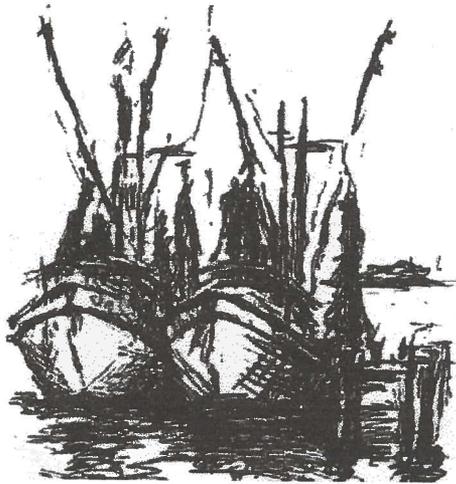


Thank you for sincerely considering ~~this~~ this request.

Karen Sartori
(512) 917-2875
1013 12th St.

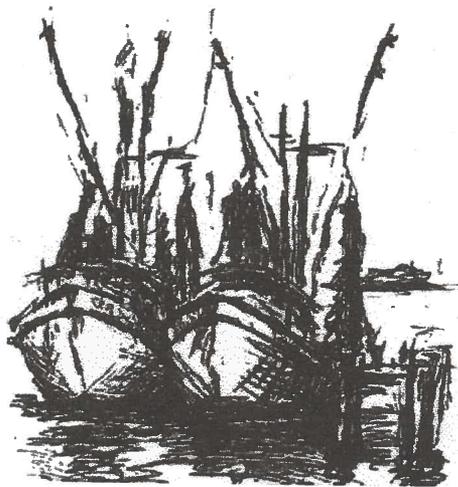
WHERE IS THE
MONEY COMING
FROM?

WHAT IS THE TIMEFRAME
TO COMPLETE THIS?

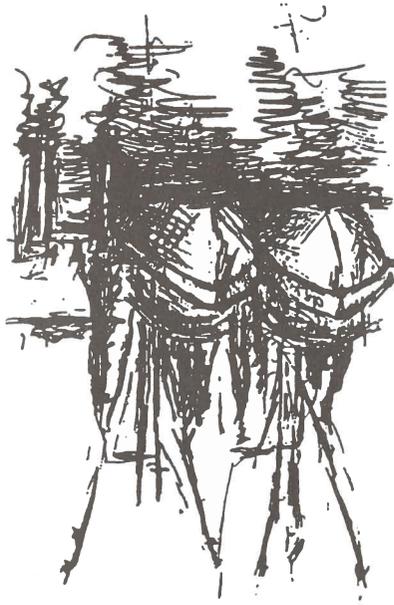


The Docks of Port Royal

Where is the money coming
from. Taxes, telephone
\$\$ how much?



The Docks of Port Royal



THE MOST IMPORTANT THING
IS PUTTING POWER UNDERGROUND

I come from small town in
NC & they have amazing
rest room area built between
some of shops. w/ picnic tables
outside. Eliminates the business
from dealing with it. Its in
West Jefferson, NC. if want to
visit.

Love the parking &
getting a sidewalk back
from parked cars. Line
of vision getting on Paris
much improved.

Could a stage or amphitheater be
considered for our music events.
I didn't see any consideration in
the plans.

Thank You
Will Murphy

My concern would be the disruption of business during Paris Ave Construction.

Interested in the scope, scale and timeline of the project.

Hopefully it will be done with business and quality of life of residents in mind.

When they did Boundary Street it was awful for all businesses. Many Closed still is an awkward plan on Boundary.

Add more Trash cans
w/ poop bags along
Paris Ave.

Please do not take the
medians away.

Do not see the necessity
of such wide sidewalks,

1. Need more speed tables on Pavis
2. Need speed tables each side of the school (12th & 13th)

Large range of vehicle dims — trucks to golf carts — uniform parking size for parallel parking is not optimal. for Pavis

As a citizen, I appreciate efforts to better the town - but at what cost? There is seldom downtown traffic, and there is minimal retail or restaurants -

More efforts should be made to keep the ambience that is Port Royal - "cool, coastal + ordinary" -

Many of these efforts are detracting from the uniqueness of PR - the grittiness



We are homogenizing the town - we who chose

to live here - not Bluffton, not Hilton Head - not a nice

The Docks of Port Royal

Make better not the
same as everywhere
else!

Elaine + Richard
Lauria

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Parkers
must have

2 openings

Boats / trailers

2 needed

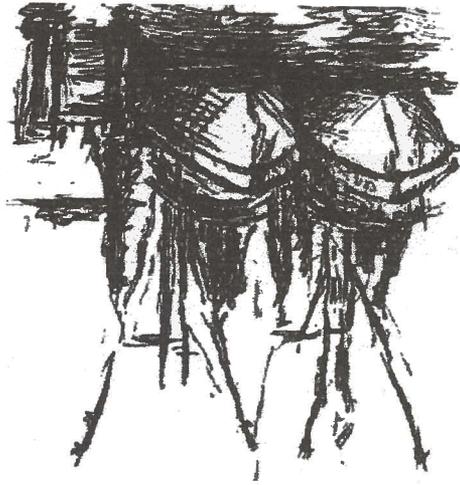
10/21/21

Submitted by Katy Perrin
Perrin Woodworking
809 Paris Ave

Fordwater Eng

Thank you for providing such a comprehensive plan for us to consider. Look forward to seeing this concept evolve with community input. It's a great start. Couple of thoughts:

Considering the town's plan to generate more visitors with the addition of new businesses (retail & restaurant) are we keeping in mind the need for increased parking?

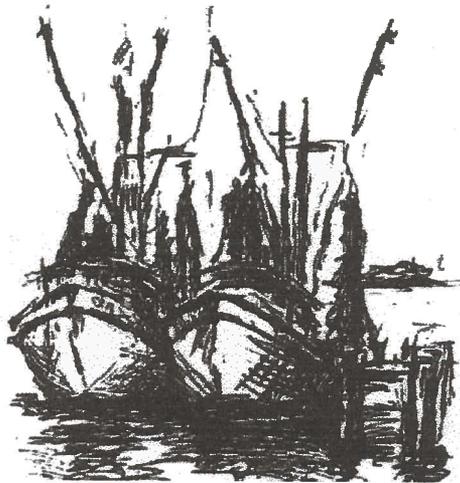


Is it possible the town will need to designate a certain # of spaces for business owners & their employees? And then determine traffic generated by each business.

EX: corner of 8th St & Paris Ave
Nuances & Perrin wood working
839 Paris currently under construction to open a gallery & market place this fall. Anticipating more traffic. This area currently high traffic commercial use.

As the owner of Nuances I'm concerned about the parking by my business. We have several customers needing parking at the same time. We current have about 8 space which is for my business plus the two apartmer above my business. The proposal shows the parking will change to two parallel spaces only. This is not sufficient. Most of my customers come from other towns and will need places to park cars (not golf carts). You may contact me at 803-487-2488 (c) or 843-470-110 with questions.

Laurie Thompson



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- Bike racks — San Diego has nice sculptural racks
- manhole/tree — cast iron covers — reflect Port Royal logo.
People taking etchings of designs from around the world is a thing

- ~~Are~~ there any opportunities for homeowners to tie into any of the designs in their own residences
 i.e. — Sabal palms to be a port royal type thing (of course at owners expense or with some financial help)
 - rest stops
 - library book drops



Has there been any exploration to get matching grants dollar and/or federal fundings

- Is the marina company throwing mail dollars? then stand to benefit

The Docks of Port Royal

Lori Phelan
1104A 134th St.

AS AN ADVOCATE FOR CHANGE
 I AM VERY MUCH FOR IMPROVING
 OUR TOWN. SPECIFICALLY, SIDEWALKS
 UNDERGROUND POWER LINES, ~~POWER~~
 IMPROVED LIGHTING. I DON'T SEE THE
 LINE WHEN YOU WANT TO ^{cross} THE
 UNIQUENESS AND SPECIALITY
 OF OUR SMALL TOWN. WHERE
 ARE THE RESTAURANTS AND
 STOPS THAT WILL DRAW
 CROWDS TO ENLARGE SIDEWALKS.

I MOVED TO CHARLESTON 15 YRS
 AGO AND WATCHED IT
 CHANGE -
 BETTER -
 BECAUSE
 OVER DEVELOP-
 MENT



AND NOT FOR
 WE LEFT
 TO THE
 AND

MOVED TO P.R BECAUSE
 OF THE SLOWER PACE. ^{concentrate} ~~and~~ BUILDING
 RETAIL, RESTAURANTS AND THE LIKE

The Docks of Port Royal

not large sidewalks, and
golf cart parking spaces.
I hope that you remind
yourselves of why P.R. is
unique - We're not
Bluffton or Beaufort
But Port Royal!

Thank you
Janet Foman

