

March 12, 2021

Mr. Jeff Walton

Associate Planner, Current and Historic Preservation

City of Wilmington Planning, Development, and Transportation

305 Chestnut Street

PO Box 1810

Wilmington, NC 28402-1810

Project Name: CFPUA Water Street Infrastructure / PS 9 Improvements

Subject: TRC Response Letter

Dear Mr. Walton:

On behalf of Cape Fear Public Utility Authority, we are submitting this formal response to TRC review comments provided on December 31, 2019 regarding the above referenced project. Please find responses in italics as follows:

1. **TRAFFIC IMPACT:** The site plan for the Pump Station Replacement has shown a new Streetscape for the intersection of Water Street and Walnut Street. The streetscape must accommodate the use of Public Transportation vehicles, Fire and Rescue Vehicles and Delivery vehicles.

The Water Street streetscape project was designed by WK Dickson as part of the City's street scape plan and is not a part of the Pump Station 9 Improvements project. The streetscape was included in the site plan for coordination purposes per the request of the City.

2. **TECHNICAL STANDARDS –ROADS:** 1. The proposed streetscape shows a narrowing of S. Water Street. Show a cross-section detail showing the existing street and the proposed changes to the streetscape, and intersection of S. Water Street and Walnut Street.

The Water Street streetscape project was designed by WK Dickson and is not a part of the Pump Station 9 Improvements project. The streetscape was included in the site plan for coordination purposes per the request of the City.

3. **TECHNICAL STANDARDS – ACCESS (driveway, sidewalk, and sight distance):**
 2. The existing pump station is adjacent to the Riverwalk and other pedestrian

sidewalks. Please ensure the project does not block access along the Riverwalk and S. Water Street sidewalks.

The Riverwalk will not be blocked by this project. The sidewalk along Water Street will not be blocked. CFPUA is purchasing an easement to allow work to occur in the Hilton parking lot which would include the sidewalk along the station (perpendicular to the Riverwalk and Water street); therefore, that sidewalk will not be available for pedestrians during construction.

4. Show driveways for adjacent lots and lots across the street. Please let me know if you have any questions or if I can be of further assistance as this development moves through the review process.

See Attachment A for revised plan sheet G00.1 which includes a vicinity map showing driveway locations for adjacent lots and lots across the street.

5. The existing building is the national register historic district. Even though its not historic, any demolitions require a 90-day stay before we can approve the demo. I just need a letter of intent to demo sent to the Historic Preservation Planner, to get that started.

A letter of intent to demolish was delivered to the Historic Preservation Planner. McKim & Creed received a voice mail from Ivy Freitag stating that the City no longer takes applications for demolitions within the national register historic district. They only accept applications for buildings in the local historic district or historic district overlays; therefore, there is nothing further that needs to be done for the Pump Station 9 Improvements project since it is not located within the local historic district or a historic district overlay.

6. Since public funding is involved, I will need the Section 106 permit or an email from the State Historic Preservation approving the project. You can start here: <https://www.ncdcr.gov/state-historic-preservation-office/environmental-review>

See Attachment B for the Section 106 approval by the State Historic Preservation Officer.

7. Sec. 18-60 (c) (1): Show a vicinity map showing the position of the subdivision with relation to surrounding streets, oriented in the same direction as the site plan.

See Attachment A sheet G00.1 which includes a vicinity map showing the position of the pump station with relation to surrounding streets, oriented in the same direction as the site plan.

8. Sec. 18-60 (c) (2): Show true North pointing towards the top of the map of both plan and location map.

See Attachment A sheet G00.1 with true North pointing toward the top of the map on both plan and location map.

9. Sec. 18-60 (c) (15): Show a proposed landscape plan. Mark on plans all proposed trees to be removed.

See Attachment A sheet G00.1. for the proposed landscape plan. See Attachment C for the tree removal plan which shows all proposed trees to be removed and replaced.

10. Sec. 18-60 (c) (17): Show written statements by the applicant that shall consist of:

- a. Method for handling solid waste disposal.

No solid waste is to be generated at the pump station; therefore, there is no formal method for solid waste disposal. During the demolition process, demolition materials shall be removed from the site by the Contractor. Any trash removal or solid waste disposal required during the construction process is the responsibility of the Contractor.

- b. What's the plan to remove trash from site?

See response to 10.a above.

- c. A tree preservation/removal permit is required

A tree preservation/removal permit was submitted to Jeff Walton, Associate Planner, Current and Historic Preservation with the City of Wilmington, on January 26, 2021.

11. Variance needed for front setbacks, I think you could add landscaping in front of the fence to dress up the street with the requirements of this section. [Setbacks along all public rights-of-way.] Along all public rights-of-way, at least fifty (50) percent of the building wall shall be set back within five (5) feet from the property line. For the remaining fifty (50) percent of the building wall, setbacks may be voluntarily increased to a depth no greater than fifteen (15) percent of the building height, provided that the following criteria are met:

- a. The non-planter areas of the setback shall be hardscaped, i.e. paved. Sixty (60) percent of the proposed hardscaped, non-planter setback areas shall be covered with pavers approved by the city engineer. Forty (40) percent of the proposed hardscaped, non-planter setback area may be paved with light-colored (not white) concrete in lieu of pavers.

See Attachment D for the approved variance.

- b. At least forty (40) percent of the edge of the public right-of-way shall be defined by a vertical element not greater than three (3) feet in height. No physical barrier shall entirely prevent the pedestrian public from entering the private property setback.

See Attachment D for the approved variance.

- c. Planters, raised, recessed, or contained shall be installed in the front setback area to accommodate canopy or understory trees at a minimum of one (1) tree per one thousand two hundred (1,200) square feet of increased front setback area between the outermost side facades of the building. The area used for the calculation of increased front setback shall not include the square footage beneath building overhangs and fountains or sculptures larger than three (3) square feet.

See Attachment D for the approved variance.

- d. Trees and any additional vegetation in the setback area shall meet the general landscaping requirements of section 18-448 of this chapter except subsections (c), (d), and (e) and opacity is not required.

See Attachment D for the approved variance.

- e. Trees and shrubs in the setback area shall be maintained by the owner to ensure that the material remains living and prospers.

See Attachment D for the approved variance.

12. Parking. All off-street parking shall adhere to the following requirements, or obtain a variance: *See Attachment D for the approved variance.*

- a. Surface parking. All surface parking lots shall adhere to the following requirements:
- b. Surface parking shall be located in the side or rear yards and shall be set back a minimum of ten (10) feet from the front plane of all street-facing facades. One-way drives shall be incorporated where possible.
- c. Surface parking shall not be located in front of any building. Surface parking shall be located to the interior of the block and/or behind buildings fronting rights-of-way, where possible, so as to not interrupt the continuity of the block face.
- d. Surface parking lots shall be screened from public streets by permanent walls, shrubbery or hedges at least three (3) feet but not more than five (5) feet in height.
- e. Surface parking shall be accessed via public or private alleyways where possible.
- f. All surface lots shall meet the shading requirements of Sec. 18-481 of this Chapter.

13. Street trees. For new commercial development, street tree plantings in below-grade planters shall be included in the public right-of-way at the rate of one (1) tree per thirty (30) feet of frontage.

- a. Coordinate with Engineering for street tree compliance with the North Water streetscape project. Your plan should reflect the proposed construction plans for both projects. Contact: Mike Naklicki, 341-5897

This project is not a commercial development but rather a public utility. See Attachment A for the revised plan sheet G00.1 which shows the North Water Streetscape project (designed and constructed by others). This Pump Station 9 project will include landscaping in front of the decorative fence to provide 100% opacity within three years as directed by the City of Wilmington.

14. Underground utilities. All new utilities shall be installed underground, except where such placement is prohibited or deemed impractical by the utility provider. Underground terminal facilities for street lighting along all public streets abutting the subject site shall be installed by the developer.

All new utilities shall be installed underground.

15. Variance Needed: Building entrances. Primary building entrances shall be clearly defined and shall be recessed at least five (5) feet or framed by an architectural element. Primary entrances should be clearly distinctive from other entrances. Secondary outside building entrances to upper floors on the primary facade shall align with the outermost window on the front facade.

See Attachment D for the approved variance.

16. Variance Needed: Massing and scale. Large expanses of flat, unadorned walls are prohibited. Facades shall incorporate architectural details, particularly at the pedestrian level. Building facades shall incorporate periodic transitions across the facade as stated below. The following design element standards shall apply to all new construction where applicable:

- a. Building facades shall be divided into distinct massing elements utilizing methods including but not limited to facade offsets, pilasters, change in materials, or fenestration (window arrangement). Transitions shall be no further apart than two-thirds of the height of the facade. The predominant orientation of fenestration within the facade shall be vertical.

See Attachment A sheet G00.1 which includes a revised pump station building design with distinct massing elements utilizing change in materials. The transition is no further than two-thirds apart.

- b. The exterior expression of the height at the street-level facade shall be no less than thirteen (13) feet, which may be delineated by methods including, but not limited to incorporation of a distinct horizontal architectural member, facade offsets, or a change in materials (not solely color) or fenestration.

See Attachment A sheet G00.1 which includes a revised pump station building design with an exterior expression which is no less than thirteen (13) feet. The revised design includes a change in material and color.

- c. Roofs shall be flat (low slope) with parapet walls, of barrel construction, or have a minimum pitch of four to twelve (4:12)
See Attachment A sheet G00.1 which includes a revised pump station building design with a flat roof and parapet walls.

17. Variance Needed: Street-level facades. New buildings shall front onto public sidewalks to reinforce pedestrian activity along public streets and pedestrian ways. A street-level facade that faces a public street, riverwalk, or sidewalk shall be predominately glazed by incorporating windows or doors of clear or lightly tinted glass that allow views into and out of the building. Windows shall extend from a sill or base not to exceed four (4) feet in height above the adjacent grade. Darkly tinted windows or window signs (interior or exterior) that block two-way visibility are prohibited along street-level facades; however, spandrel or colored glass may be used in the transom area above the door header. Exterior burglar bars, fixed "riot shutters," or similar security devices shall not be visible from the public right-of-way.

See Attachment D for the approved variance.

18. Additional treatments. HVAC equipment, air conditioning window units, and other electrical equipment shall not be located on street frontages. All such equipment shall be placed in the interior yards or on the roof of the building and screened from the right-of-way. Through-wall mechanical units are permitted on any facade if they are incorporated into the design of the building, flush with the facade on which they are located, concealed by a vent cover and have an internal drip system for condensation. Utility meters, transformers and fixed trash disposal receptacles that cannot be concealed from the public right of way shall be screened with an opaque fence or wall.

- a. Show location for compliance.

See Attachment A sheet G00.1 which includes a revised pump station building design with the HVAC unit placed on the roof. No electrical equipment shall be located on street frontages and shall be screened from the right-of-way. No through-wall mechanical units are to be used for this pump station.

19. Landscape Plan:

- b. Please include the city's street scape improvements for North Water Street for street tree compliance.

See Attachment A sheet G00.1 and G00.2. The City's street scape improvements project for North Water Street has been incorporated to show street tree compliance.

- c. The code would require a 3-foot opaque hedge in front of the fence to be planted to provide some buffer from the proposed asphalt surface.

See Attachment A sheet G00.1 for proposed landscaping plan. The fence shall be screened with shrubs and trees to achieve 100% opacity within three years. The types of plantings include Crepe Myrtle, Nellie R Stephens Holly, and Forsythia all of which are compatible with the climate conditions of the area.

20. Accurately illustrate the existing conditions on and surrounding this parcel. Show all adjacent traffic signs, lane configurations, traffic control devices and pavement markings on the site inventory plan. Please refer to the Technical Standards and Specifications Manual (link is below) Ch. VII C.1.a.2. for specific information and distance requirements. Contact Traffic Engineering at 341-7888 if you need assistance locating these elements.

<https://www.wilmingtonnc.gov/home/showdocument?id=1910>

See Attachment A sheet G00.1 which includes a vicinity map with existing conditions on and surrounding the parcel. The revised plan sheet includes traffic signs, traffic flow direction arrows, lane configurations, and pavement markings.

21. Show the full intersection of N Water St and Walnut St post-development. Lane configuration, lane width after curb extensions, size of on-street parking spaces, traffic signs, pavement markings, ADA ramps with detectable warning domes, street lights and any other intersection design elements.

See Attachment E for the WK Dickson street scape plans for the intersection of N Water St and Walnut St, post-development. Please note that this Pump Station 9 project does not include any intersection design components. The curb extension and all on-street parking spaces, traffic signs, pavement markings, ADA ramps, street lights are not a part of this project. All intersection and streetscape modifications are designed by WK Dickson as part of the City's street scape plan and we only show them on our site plans for coordination with this Pump Station 9 project.

22. Show the full length of N Water St street scape to be improved.

This project does not improve the N Water St street scape. This project installs a new wastewater pump station.

23. Identify any existing parking meters and marked parking stalls on N Water St on the plan.

See Attachment E for the WK Dickson street scape plans for the intersection of N Water St and Walnut St, post-development. Sheet C-8 shows the WK Dickson demolition plan for the intersection in front of Pump Station 9 including existing parking meter locations and marked parking stalls. Sheet C-14 shows the approved street scape with proposed parking meter locations and marked parking stalls. Please note that this Pump Station 9 project does not include the removal or installation of any parking meters or any intersection/parking stall improvements. All intersection and streetscape modifications are designed by WK Dickson as part of the City's street scape plan and we only show them on our site plans for coordination with this Pump Station 9 project.

24. TECHNICAL STANDARDS – DRIVEWAY ACCESS (Non-Major Thoroughfares):

- a. The driveway curb return must be at least 6.5' from intersecting property lines. [Chapter VII, C, Table 4 CofWTSSM]. A variance may be required for the driveways. Please co-ordinate with Engineering.
See Attachment E for WK Dickson street scape plans. Sheet C49 shows the City's standard detail for commercial driveway sections and profiles. Please note that this Pump Station 9 project will restore the existing driveway curb to its original condition.
- b. TECHNICAL STANDARDS – ACCESS (driveway, sidewalk, and sight distance): Show driveways for adjacent lots and lots across the street.
See Attachment A sheet G00.1 which includes a vicinity map with driveways for adjacent lots and lots across the street.
- c. Dimension driveway widths and tapers. [Sec.18-530 CofW LDC]
See Attachment E for WK Dickson street scape plans. Sheet C-14 shows a dimension of 11.8' for the CFPLA access driveway width. Sheet C-49 shows a width of 13' for driveway flares.
- d. The minimum two-lane driveway width is 23'. [7-9 CofW Tech Stds]
The Pump Station 9 access driveway is one-way.
- e. The maximum two-lane driveway width is 30'. [7-9 CofW Tech Stds]
The Pump Station 9 access driveway is one-way.
- f. Provide sidewalk detail SD 3-10 on the plan. [Sec. 18-529(b)(2) CofW LDC] 7. Provide curbing detail SD 3-11 on the plan. [Sec. 18-529(b)(2) CofW LDC]

- g. Show and apply the City's 20'x70' sight distance triangle at each driveway on the site plan and landscaping plan, if any. [Sec.18-529(c) (3) CofW LDC] [Sec. 18-812 CofW LDC].

See Attachment A sheet G00.2 which includes the proposed site plan and the City's sight distance triangle.

- h. Add a note indicating that all proposed vegetation within sight triangles shall not interfere with clear visual sight lines from 30"-10'. [Sec.18-556 CofW LDC]

See Attachment A sheet G00.2 which includes a note which states that all proposed vegetation within sight triangles shall not interfere with clear visual sight lines from 30" -10".

- i. TECHNICAL STANDARDS – ADA: 9. Detectable warning domes must be installed at the end of each sidewalk before entering drive aisle/crosswalk/pavement surface. [City/ADA standards].

See Attachment E for WK Dickson street scape plans. Sheet C47 shows the City's standard detail for perpendicular curb ramp adjacent to walking surface. The detail includes detectable warning domes. Please note that this Pump Station 9 project does not include the removal or installation of intersection improvements. All intersection and streetscape modifications are designed by WK Dickson as part of the City's street scape plan.

- j. Existing wheelchair ramps shall be retrofitted with flexible surface-applied detectable warning mats [Chapter II (E) (6) of CofWTSSM].

No wheelchair ramps are included in this project.

25. GENERAL NOTES TO ADD TO THE PLAN:

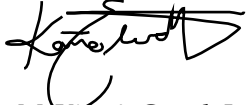
See Attachment A for revised plan sheets G00.1 and G00.2 which include the notes below:

- a. Street trees must be located a minimum of 15 feet from street lights. [CofW SD 15-17] B. All pavement markings in public rights-of-way and for driveways are to be thermoplastic and meet City and/or NCDOT standards. [Detail SD 11-03 and SD 15-13 CofW Tech Stds]
- b. All signs and pavement markings in areas open to public traffic are to meet MUTCD (Manual on Uniform Traffic Control Devices) standards. [Detail SD 15-13 CofW Tech Stds]
- c. All traffic control signs and markings off the right-of-way are to be maintained by the property owner in accordance with MUTCD standards.
- d. All parking stall markings and lane arrows within the parking areas shall be white.

- e. Any broken or missing sidewalk panels, driveway panels and curbing will be replaced.
- f. Contact 811 prior to contacting City of Wilmington, Traffic Engineering regarding the utilities in ROW.

Please let me know if you have any questions or need additional information.

Sincerely,



McKim & Creed, Inc.
Katie Elliott, EI

ATTACHMENT A

PLAN REVIEW TYPE	
Plan Review Type	Minor Site Plan Review

KEY INFORMATION	
Vicinity sketch or map	See VICINITY MAP this sheet
True north arrow, with north being at the top of the map	See VICINITY MAP this sheet
Scale of the map using engineer's scale both graphic and numeric	See VICINITY MAP this sheet

SITE DATA TABULATION	
Name of the Development	CFPUA Pump Station 9
Name of Property Owner	Cape Fear Public Utility Authority
Name, Address, and Phone of Designer	Stacey Magnus, 243 N Front Street Wilmington NC, 28401
Project Address	301 N Water St, Wilmington, NC 28401
Tax Parcel Number	R04720-001-004-000
Zoning district	Central Business District
Building Setback (Required)	5 ft
Building Setback (Proposed)	60 ft
Total Acreage within the Project Boundaries	4,510 sf
Building Size (SF) (Existing)	702
Building Size (SF) (Proposed)	773
Calculations for Building lot Coverage	$\text{Building Lot Coverage} = \frac{\text{Area of Structures in Project Area Boundary (ac)}}{\text{Total Area of Project Boundary (ac)}} = \frac{0.02}{0.10} = 0.20$
Number of Units	1
Number of Buildings	1
Building Height	15.5 ft
Number of Stories	1
Total Amount and Percent of Impervious surface before and after development	Total Amount (existing) = 2,490 SF Total Amount (proposed) = 3,049 SF Percent (existing) = 55% Percent (proposed) = 68%
Off Street parking calculations based on use	1 Service Truck
Minimum parking required	1
Maximum Parking required	1
CAMA Land use Classification	Urban

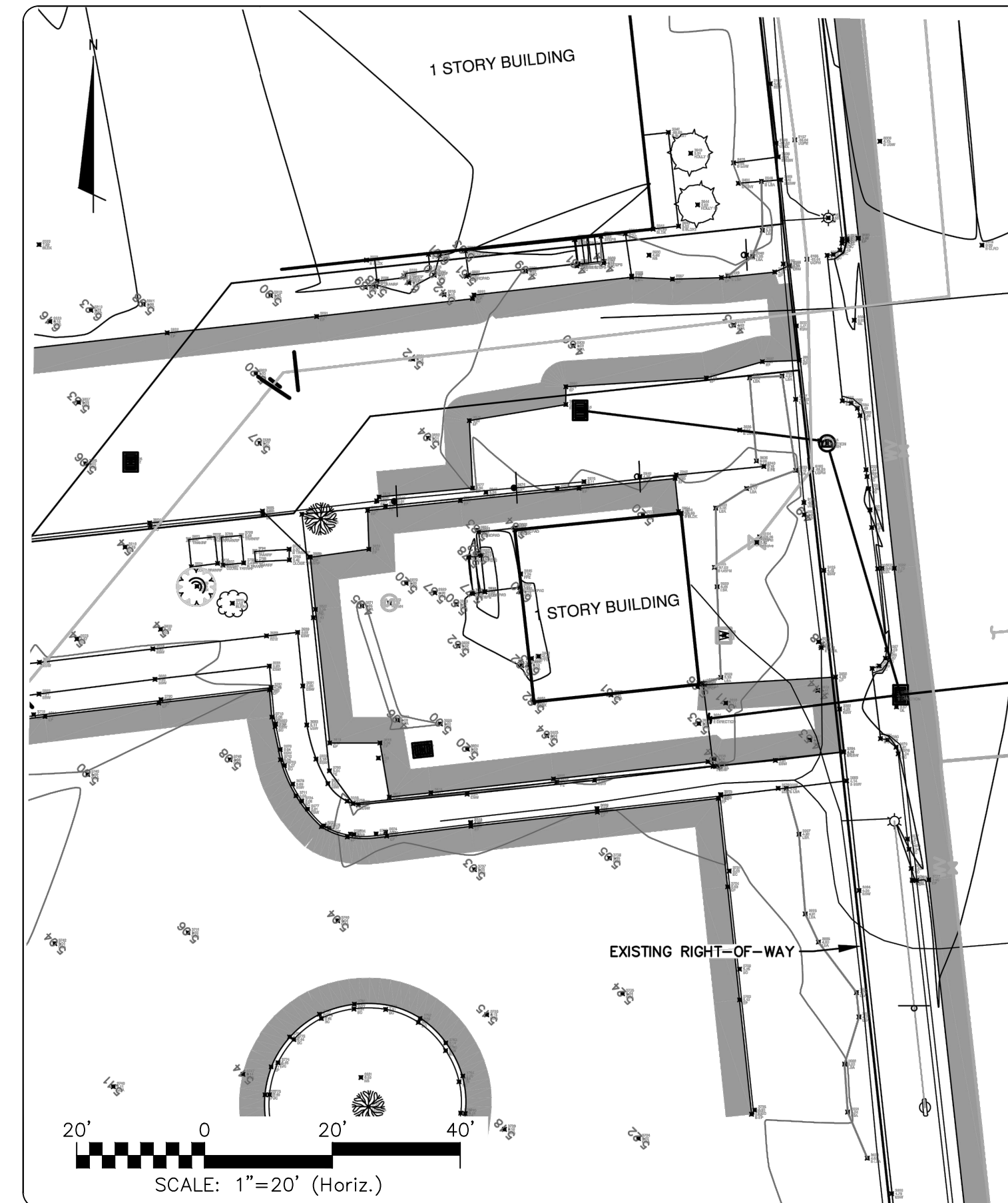
GENERAL INFORMATION	
Name of Property Owners of Adjacent Properties	CAPE FEAR TECHNICAL INSTITUTE SOHO WILMINGTON LLC
Zoning and Land Use of Adjacent Properties	Cape Fear Technical Institute: ADDRESS: 401 N Water Street, Wilmington, NC, 28401 ZONING: Central Business District (CBD) LAND USE: Urban SOHO Wilmington LLC: ADDRESS: 301 N Water Street, Wilmington, NC, 28401 ZONING: Central Business District (CBD) LAND USE: Urban
Proposed Streets with Cross Sections	See WK Dickson Sheet C49 for Details (attached)
Location and Size of Proposed recreational areas or open spaces	None
Existing easements:	
Widths	68 ft
Purposes noted	Public Utility Easement
Public or private	Public
Book and page numbers	BK: RB 6169 ; PG: 429-434
Current accurate topographical information based on mean sea level datum	See Existing Topo and Land Survey (this sheet)
Identify if in a special highway overlay district or any other zoning overlay district	No

BUILDING, STRUCTURE, AND USE INFORMATION	
Location of solid waste disposal	No solid waste will be generated on this sight.

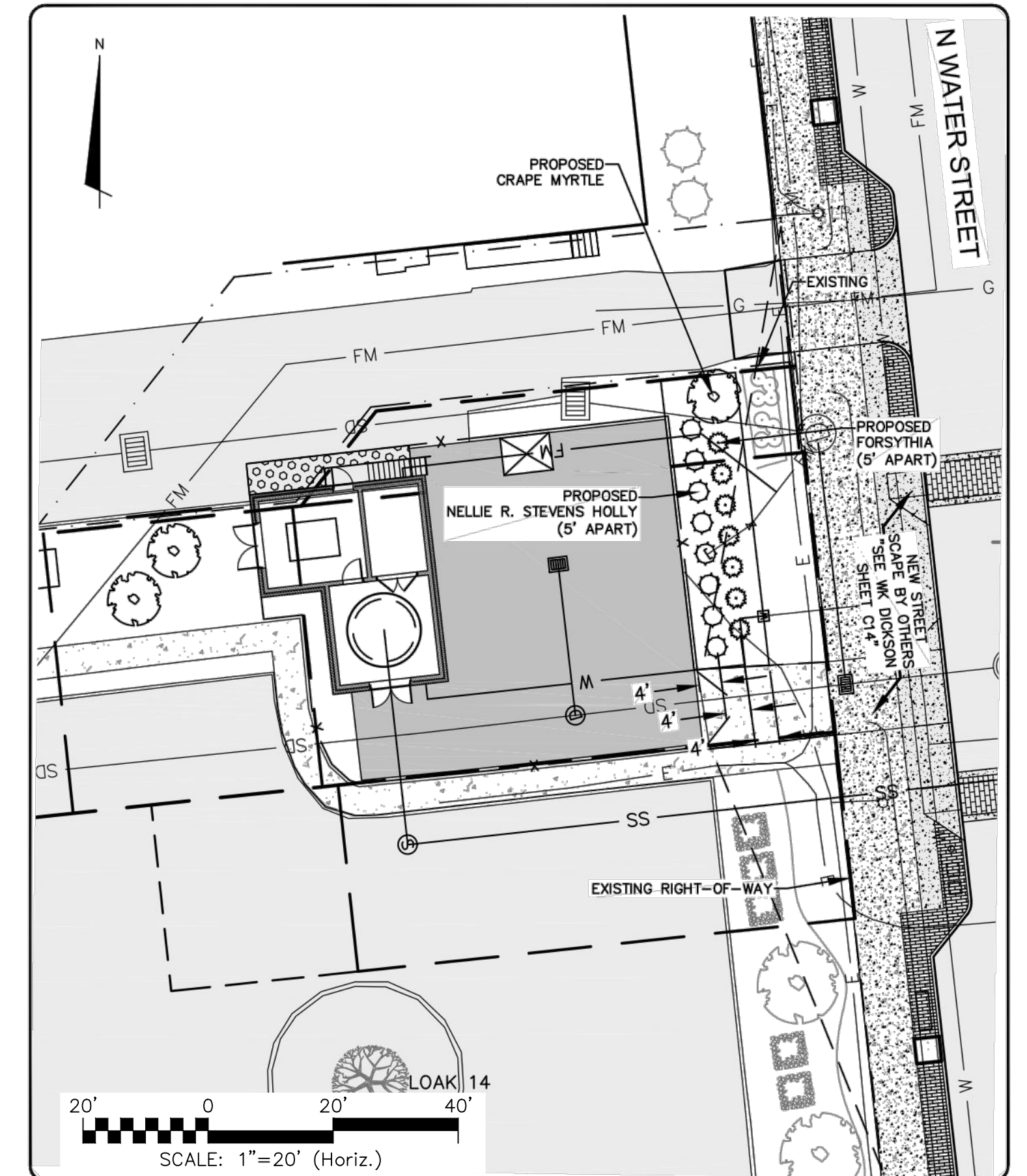
OTHER REQUIRED INFORMATION	
General location, ownership, and size of existing:	See Sheet G00.2 Existing Plan
Water	
Sanitary Sewer	
Storm drainage lines or systems	
Fire hydrants	
FEMA 100-Year floodplain line	See Proposed Building Elevations (this sheet)
Existing parcel lines for the entire tract	See Vicinity Map (this sheet)
General locations only, with sizes of proposed:	See Sheet G00.2 and WK Dickson Plan Sheet C28 (attached)
Water lines	
Fire hydrants	
Sewer lines	
Storm drainage lines	
Please provide the Water and Sewer Capacity needs (current and proposed zoning) with calculations in gallons per day based on state guide lines.	Water: <1 GPD (Current use) Water: <1 GPD (Proposed use) Sewer: 0 GPD (Current use) Sewer: 0 GPD (Proposed use)
Site Inventory map as required	See Existing Plan (G00.2)
Tree inventory if required by the LDC	See Existing Plan (G00.2)



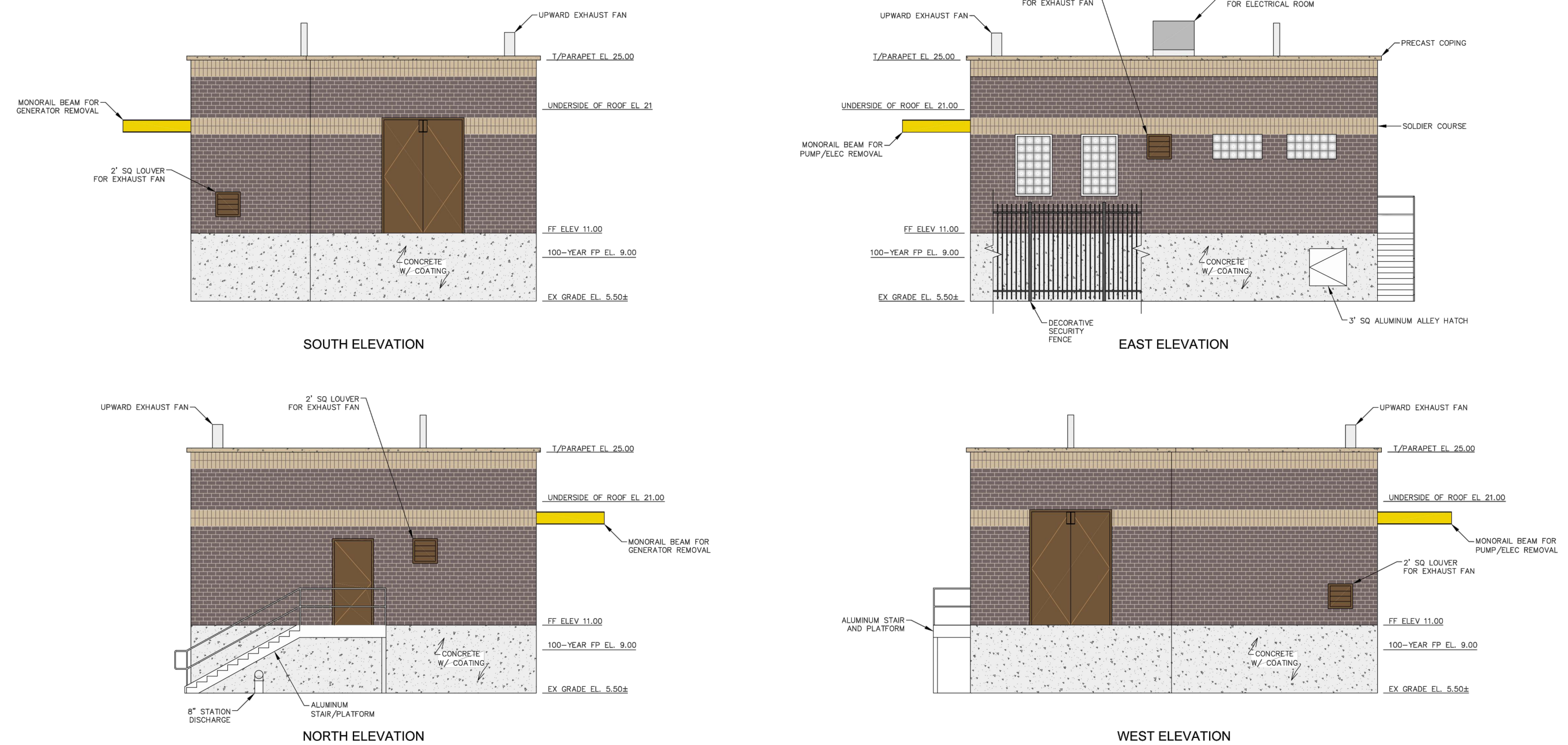
VICINITY MAP



EXISTING TOPO AND LOCATION SURVEY OF PROJECT AREA



PROPOSED LANDSCAPING PLAN

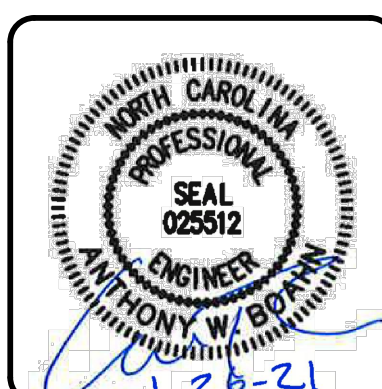


PROPOSED BUILDING ELEVATIONS
NOT TO SCALE



VICINITY MAP
ACCESS

REVNO.	DESCRIPTION	DATE
1	SUBMITTED FOR REVIEW	DEC 2020



MCKIM & CREED
 243 N. Front Street
 Wilmington, North Carolina 28401
 Phone: (910) 343-1048, Fax: (910) 251-8282
 NC License# F-1222
 www.mckimcreed.com

Cape Fear
 Public Utility Authority
 Stewardship. Sustainability. Service.

CAPE FEAR PUBLIC UTILITY AUTHORITY
WATER STREET INFRASTRUCTURE / PS9 IMPROVEMENTS
 GENERAL
INFORMATION AND PLANS FOR TRC REVIEW

DATE: NOVEMBER 2019	SCALE: HORIZONTAL: N/A	G00.1 DRAWING NUMBER
MCE PROJ. # 05367-0030	VERTICAL: N/A	
DRAWN: MTN		REVISION
DESIGNED: STM		
CHECKED: STM		
PROJ. MGR.: AWB		

STATUS: PRELIMINARY DESIGN
NOT FOR CONSTRUCTION



EXISTING PLAN AND PROPOSED DEMOLITION PLAN



PROPOSED SITE PLAN WITH PROPOSED LANDSCAPING

- NOTE:
1. ALL ELEVATIONS WITHIN THE PROJECT AREA ARE BELOW THE 100-YEAR FLOOD ELEVATION.
 2. ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLE SHALL NOT INTERFERE WITH CLEAR VISUAL SITE LINES FROM 30' - 10'.
 3. STREET TREES MUST BE LOCATED A MINIMUM OF 15 FEET FROM STREET LIGHTS. [COFW SD 15-17] B. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS. [DETAIL SD 11-03 AND SD 15-13 COFW TECH STDS]
 4. ALL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS. [DETAIL SD 15-13 COFW TECH STDS]
 5. ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
 6. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
 7. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.
 8. CONTACT 811 PRIOR TO CONTACTING CITY OF WILMINGTON, TRAFFIC ENGINEERING REGARDING THE UTILITIES IN ROW.

REV. NO.	DESCRIPTION	DATE
1	SUBMITTED FOR REVIEW	DEC 2020
REVISIONS		

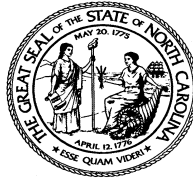
MCKIM & CREED
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 Wilmington, North Carolina 28401
 Phone: (910) 343-1048, Fax: (910) 251-8282
 NC License# F-1222
 www.mckimcreed.com

Cape Fear
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CAPE FEAR PUBLIC UTILITY AUTHORITY
WATER STREET INFRASTRUCTURE / PS9
IMPROVEMENTS
 GENERAL
INFORMATION AND PLANS FOR TRC REVIEW

DATE: NOVEMBER 2019	SCALE: G00.2
MCE PROJ. # 05367-0030	HORIZONTAL: N/A
DRAWN: MTN	VERTICAL: N/A
DESIGNED: STM	REVISION: N/A
CHECKED: STM	
PROJ. MGR.: AWB	
STATUS: PRELIMINARY DESIGN NOT FOR CONSTRUCTION	

ATTACHMENT B



**North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper

Secretary D. Reid Wilson

January 5, 2021

Katie Elliott
McKim & Creed
243 North Front Street
Wilmington, NC 28401

kelliott@mckimcreed.com

Re: Upgrade Pump Station (PS) 9, 301 North Water Street, Wilmington, New Hanover County,
ER 20-2446

Dear Ms. Elliott:

Thank you for your email of November 11, 2020, regarding the above-referenced undertaking. We have reviewed the submittal and offer the following comments.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

A handwritten signature in blue ink that reads "Renee Gledhill-Earley".

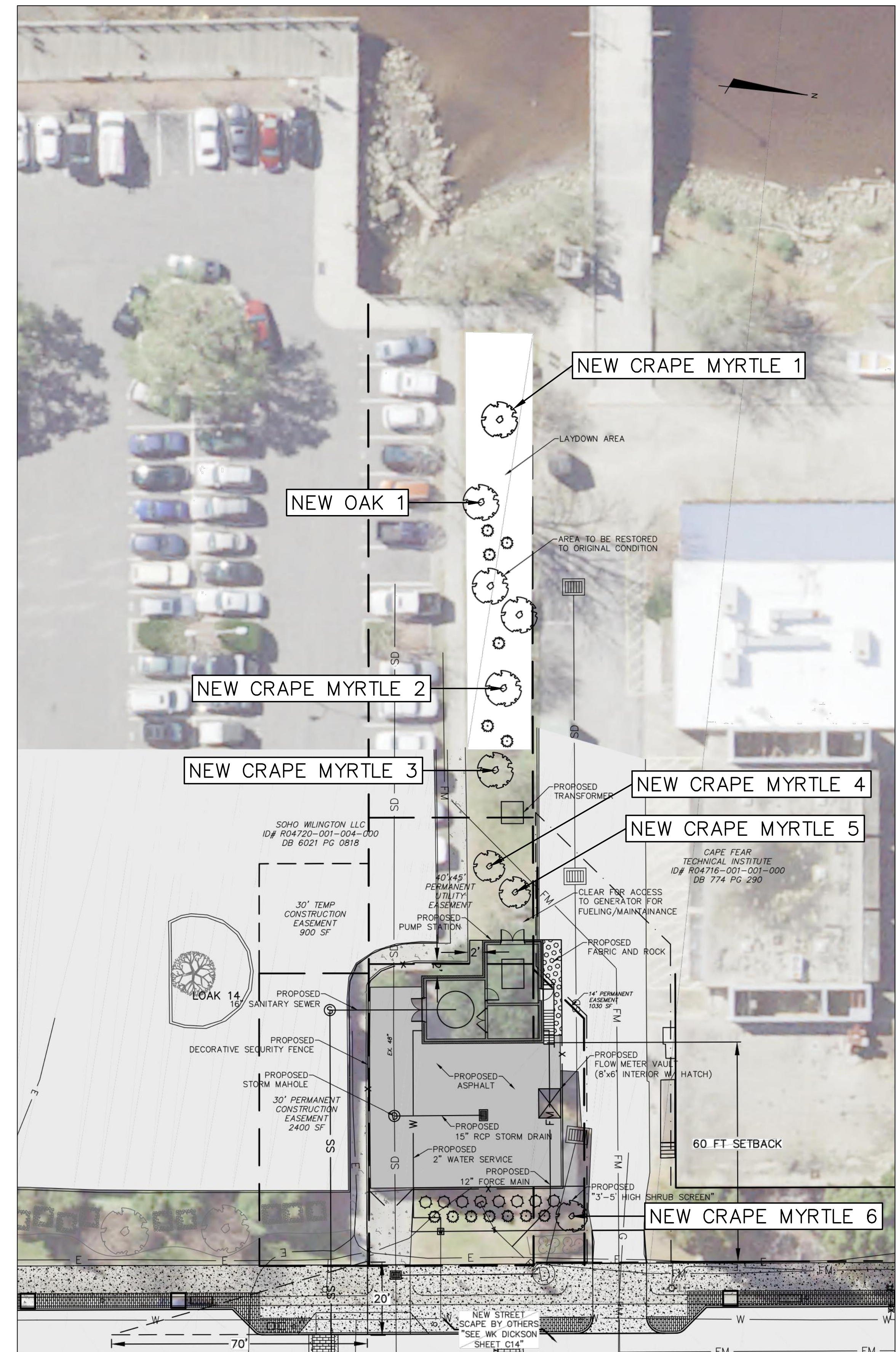
for Ramona Bartos, Deputy
State Historic Preservation Officer

ATTACHMENT C

NOTE:
 1. ALL ELEVATIONS WITHIN THE PROJECT AREA ARE BELOW THE 100-YEAR FLOOD ELEVATION.
 2. ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLE SHALL NOT INTERFERE WITH CLEAR VISUAL SITE LINES FROM 30' - 10'.

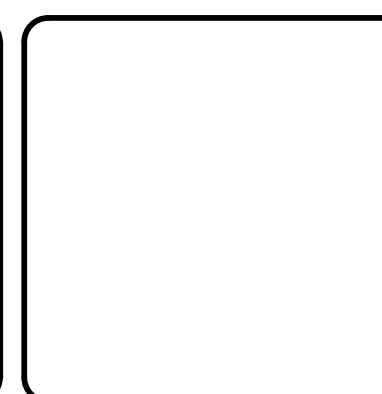
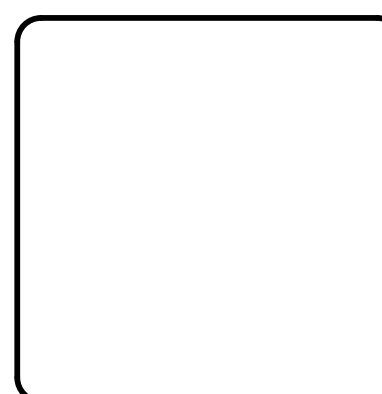


EXISTING PLAN AND PROPOSED DEMOLITION PLAN



PROPOSED SITE PLAN WITH PROPOSED LANDSCAPING

REV. NO.	DESCRIPTION	DATE
1	SUBMITTED FOR REVIEW	NOV 2019
REVISIONS		



MCKIM & CREED
 243 N. Front Street
 Wilmington, North Carolina 28401
 Phone: (910) 343-1048, Fax: (910) 251-8282
 NC License# F-1222
 www.mckimcreed.com

Cape Fear
 Public Utility Authority
 Stewardship. Sustainability. Service.

CAPE FEAR PUBLIC UTILITY AUTHORITY
WATER STREET INFRASTRUCTURE / PS9 IMPROVEMENTS
 GENERAL
INFORMATION AND PLANS FOR TRC REVIEW

DATE: NOVEMBER 2019	SCALE:
MCE PROJ. # 05367-0030	HORIZONTAL: N/A
DRAWN: MTN	VERTICAL: N/A
DESIGNED: STM	REVISION:
CHECKED: STM	
PROJ. MGR.: AWB	

G00.2
 DRAWING NUMBER
 N/A
 REVISION

STATUS: **PRELIMINARY DESIGN NOT FOR CONSTRUCTION**

ATTACHMENT D



**Planning, Development and
Transportation**

Zoning Administration
305 Chestnut Street
PO Box 1810
Wilmington, NC 28402-1810

910 254-0900
910 341-7801 fax
www.wilmingtonnc.gov
Dial 711 TTY/Voice



CERTIFIED/RETURN RECEIPT REQUESTED

September 23, 2020

Frank Styers
Cape Fear Public Utility Authority
235 Government Center Drive
Wilmington, NC 28403

**Ref: 301 North Water Street (AKA 401 North Water Street)
Case No: BADV-39-320**

Dear Mr. Styers:

On August 20, 2020, the City of Wilmington Board of Adjustment held a public hearing to consider your request for a variance to City Code Chapter 18, Section 18-196 to allow the reconstruction of an existing pump station for property located at 301 North Water Street (AKA 401 North Water Street).

A copy of the Order granting the variance outlining the Board's findings and conclusions is enclosed. Please call our office at 254-0900 if you have any questions.

Sincerely,

Drew Gaertner,
Associate Planner

DTG/dc

Enc.

Cc: Melissa Huffman, Asst. City Attorney (W/Encl.)

STATE OF NORTH CAROLINA
COUNTY OF NEW HANOVER

CITY OF WILMINGTON
BOARD OF ADJUSTMENT
FILE NO.: BADV-39-320

ORDER GRANTING A VARIANCE

This matter came before the Wilmington Board of Adjustment (hereinafter "Board") for a Quasi-judicial Hearing on August 20, 2020 to consider application number BADV-39-320 submitted by Cape Fear Public Utility Authority (hereinafter, "Applicant") for a variance to City Code Chapter 18, Section 18-196 to surface parking, entrances, and facades in the Central Business District at 301 North Water Street (aka 401 North Water Street).

The applicant was represented at the hearing by Tony Boahn, McKim & Creed (hereinafter "Agent"). Assistant City Attorney Melissa Huffman advised the Board of Adjustment.

This meeting was properly noticed and scheduled for hearing before the Board on August 20, 2020 and all people speaking at the hearing were duly sworn.

The Board having heard the evidence presented at the hearing makes the following:

FINDINGS OF FACT

1. The subject property is part of the original 1945 Corporate Limits of Wilmington.
2. The subject property consists of approximately 206,794 square feet and is zoned Central business District (CBD).
3. The site is currently developed with a hotel and a utility pump station.
4. The utility pump station was constructed circa 1959 per New Hanover County Tax records and is a use permitted by right in the Central Business District (CBD).
5. The applicant proposed to demolish the existing pump station and construct a new pump station.
6. In order to construct the new pump station without disrupting service, the existing pump station must remain in operation during the construction period. The applicant proposed to build the new pump station to the west of (behind) the existing pump station and demolish it after the new station becomes operational.
7. The applicant requested a variance to the following dimensional and design requirements set forth in LDC Section 18-196:
 - The requirement that buildings be built within 10 feet of the right-of-way per section 18-196(e)(2).
 - To the requirement that surface parking be placed to the rear of the proposed building per section 18-196(f)(2)(b).
 - To the requirement that the primary entrance be recessed 5 feet per section 18-196(h)(1).
 - To the requirement that buildings within the CBD have windows or doors of clear or lightly tinted glass that allows view into and out of the building per section 18-196(h)(3).

8. Section 18-196(e)(2) requires that along all public rights-of-way, at least fifty (50) percent of the building wall shall be within five (5) feet of the property line. For the remaining fifty (50) percent of the building wall, setbacks may be voluntarily increased to a depth no greater than fifteen (15) percent of the building height.
9. Because the applicant proposed to build the new pump station behind the existing pump station in order to keep it operational throughout the construction process, the new pump station would not be able to meet the maximum front setback from the public right-of-way.
10. The applicant testified that it is necessary to maintain operation of the existing pump station during construction in order to avoid having to bypass pumping for approximately eighteen (18) months. A pump bypass presents significant infrastructure challenges that could result in a potential sewer overflow or spill that would detrimentally impact the adjacent Cape Fear River and surrounding environment.
11. Staff agreed that this presented a substantial hardship and was within the spirit of the code to maintain public safety.
12. Section 18-196(f)(2)(b) requires that surface parking not be located in front of any building. Surface parking shall be located to the interior of the block and/or behind buildings fronting rights-of-way, where possible, so as to not interrupt the continuity of the block face.
13. The applicant testified that due to the construction of the new pump station behind the existing pump station, the space limitations of the site would not allow for parking to be built behind or to the side of the new pump station and it must be placed at the front of the proposed structure.
14. The applicant further testified that the proposed location of the new pump station precludes them from parking to the side or the rear of the building.
15. Additionally, a preexisting easement must remain open for servicing and removal of internal equipment during and after construction.
16. Section 18-196(h)(1) requires that primary building entrances shall be clearly defined and recessed at least five (5) feet or framed by an architectural element.
17. The applicant testified that because of the internal design of the pump station to encompass wet well rooms, auxiliary power generators, and an electrical room, the pump station would need to be enlarged in order to meet the entrance requirements of Section 18-196(h)(1).
18. Section 18-196(h)(3) requires that a street-level facade that faces a public street, the Riverwalk, or sidewalk shall be predominately glazed by incorporating windows or doors of clear or lightly tinted glass that allow views into and out of the building.
19. The applicant testified that because the building will be densely packed with monitoring equipment, auxiliary power systems, electrical panels, and other industrial equipment, providing windows or other features would not provide an aesthetically pleasing view for pedestrians as is the goal with this ordinance.
20. The March 19, April 16, May 21, June 18, and July 16 Board of Adjustment meetings were canceled due to the Covid-19 virus.
21. This matter was set for hearing before the Board of Adjustment on August 20, 2020.

CONCLUSIONS

Based upon the foregoing findings of fact, the Board concludes that the applicant is entitled a variance as required by North Carolina General Statutes §160A-388 and City Code Chapter 18, Land Development Code, Section 18-29 Powers and Duties:

1. Unnecessary hardship would result from the strict application of the ordinance.
2. The hardship results from conditions that are peculiar to the property, such as location, size, or topography.
3. The hardship did not result from actions taken by the applicant or the property owner.
4. The requested variance is consistent with the spirit, purpose, and intent of the ordinance, such that public safety is secured, and substantial justice is achieved.

THEREFORE, IT IS ORDERED that a variance to City Code Chapter 18, Section 18-196 to allow surface parking, entrances, and facades in the Central Business District with the following condition that the parking area be fully screened with trees and shrubs to obtain 100% opacity within three (3) years for property located at 301 North Water Street (aka 401 North Water Street) be granted.

SIGNED this 17th day of September, 2020.



Jack C. Morgan, III, Chairman



Debra Hornbuckle
Administrative Support Specialist

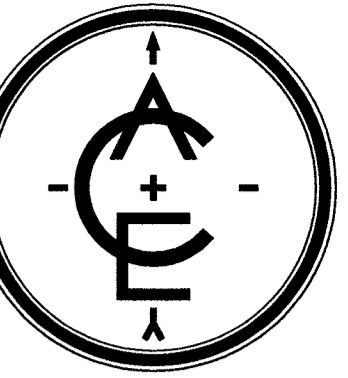
ATTEST:


Drew Gaertner
Associate Planner

Date Order Filed with Planning Office/Development Center: 9.22.2020

Date Order Mailed Certified Mail, Return Receipt Requested: 9.23.2020

ATTACHMENT E



ANDREW CONSULTING ENGINEERS

STRUCTURAL, MARINE & FORENSIC ENGINEERING AND PROJECT MANAGEMENT

3811 Peachtree Avenue Suite 300
Wilmington, NC 28403
P:910.202.5555 F:910.202.5558
www.AndrewEngineers.com
NC PE Firm License C-2461

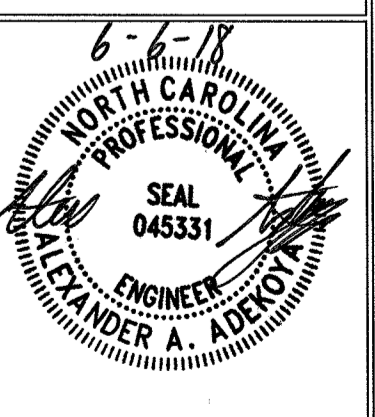
COPYRIGHT 2014. ALL RIGHTS RESERVED. PRINTED OR ELECTRONIC DRAWINGS AND DOCUMENTATION MAY NOT BE REPRODUCED IN ANY FORM WITHOUT WRITTEN PERMISSION FROM ANDREW CONSULTING ENGINEERS, P.C.

NO.	REVISIONS	DATE

BID DOCUMENT - NOT FOR CONSTRUCTION

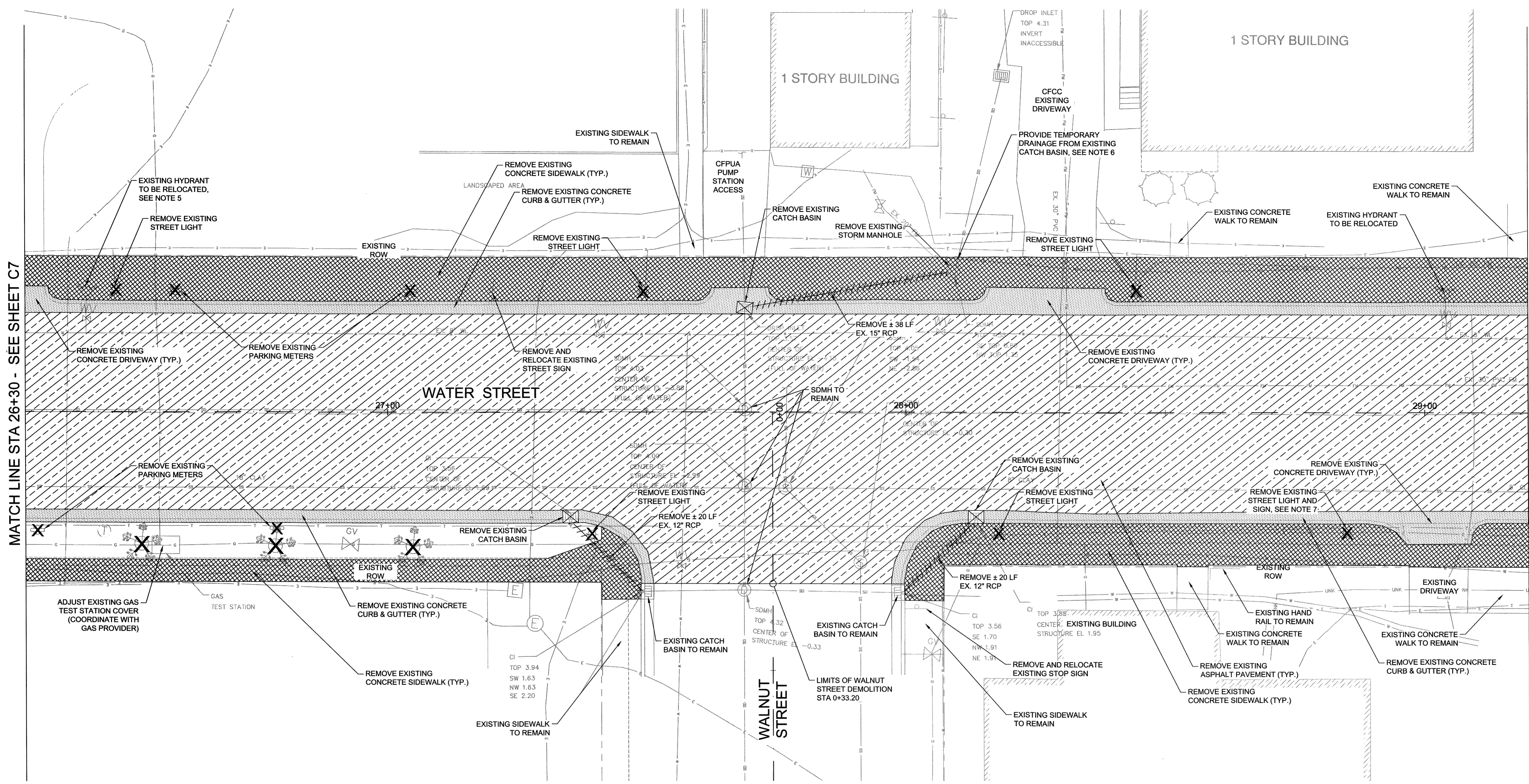
EXISTING CONDITIONS & DEMOLITION PLAN
WATER STREET & RIVERFRONT PARK IMPROVEMENTS
 PROJECT NO. CP1301
 WILMINGTON, NC

DESIGNED BY: AAA
 CHECKED BY: BT
 DRAWN BY: DJ
 DATE: JUNE 2018



13022

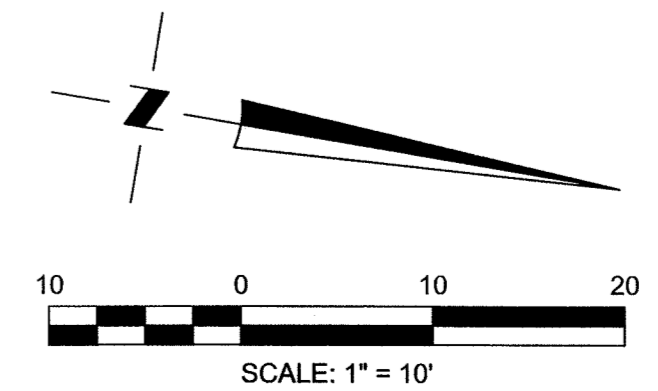
C8
OF 57



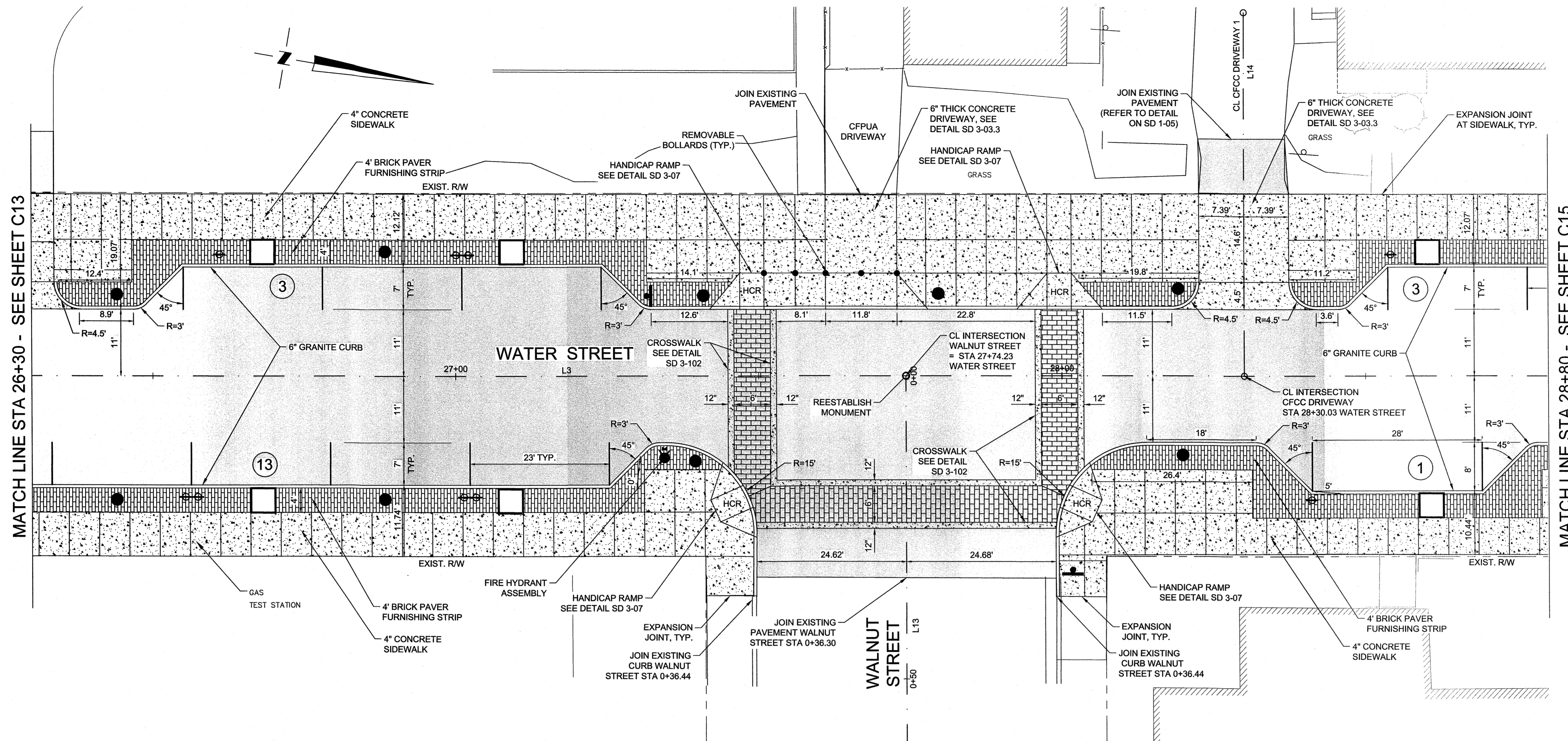
- NOTES:**
- ALL TREES SHOWN WITH TREE PROTECTION SHALL REMAIN. NO MECHANIZED EQUIPMENT SHALL BE USED AROUND TREE ROOTS. EXCAVATION AND BACKFILL SHALL BE PERFORMED BY HAND DIGGING ONLY.
 - SEE SHEET C2 FOR GENERAL DEMOLITION NOTES.
 - THE CONTRACTOR SHALL DISPOSE OF ALL REMOVED ITEMS IN A LOCATION APPROVED BY THE OWNER.
 - ANY DAMAGE TO ADJACENT SITE FEATURES SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
 - ONCE THE CONTRACTOR DISCONNECTS EXISTING FIRE HYDRANTS THEY SHALL BE ASSESSED TO DETERMINE IF THEY CAN BE RETAINED. COORDINATE HYDRANT INSPECTIONS WITH THE OWNER. ADD ALTERNATE #1 IS THE REPLACEMENT OF ALL EXISTING FIRE HYDRANTS LOCATED IN THE PROJECT LIMITS WITH NEW HYDRANTS.
 - THE CONTRACTOR TO COORDINATE REMOVAL AND RECONNECTION OF EXISTING CFCC STORM DRAINAGE SYSTEM TO ENSURE IT REMAINS IN SERVICE AT ALL TIMES.
 - THE CONTRACTOR SHALL STORE AND RETURN ALL EXISTING SIGNAGE THAT IS REMOVED TO THE OWNER.

EXISTING CONDITIONS & DEMOLITION LEGEND

- ASPHALT TO BE REMOVED
- CONCRETE STRIP, CURB & GUTTER TO BE REMOVED
- SIDEWALK TO BE REMOVED
- ASPHALT TO BE MILLED
- PROTECT TREE
- TREE TO BE REMOVED



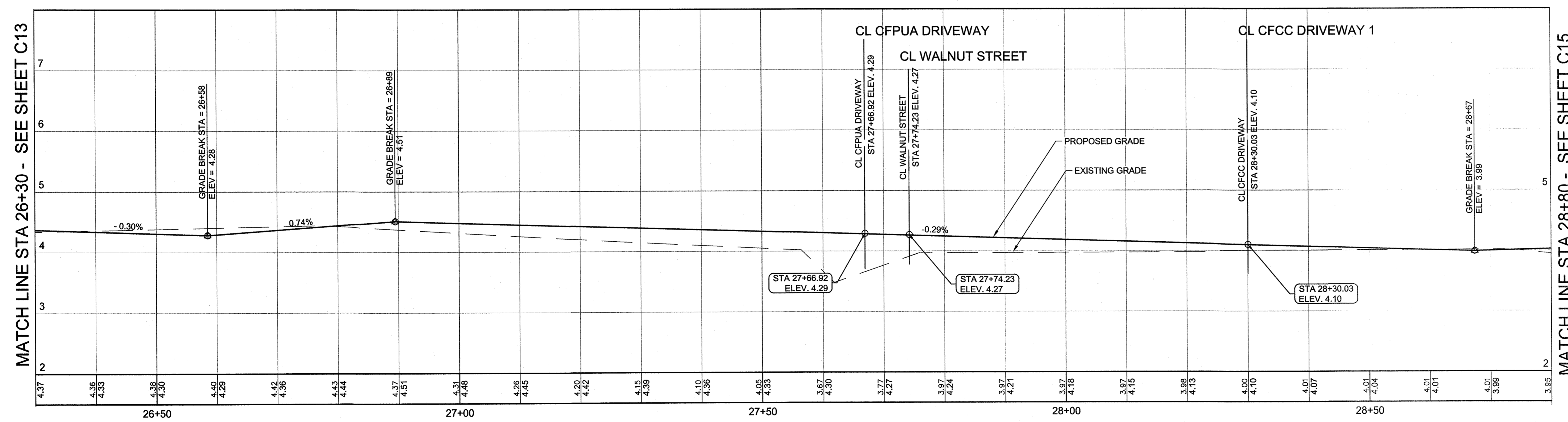
DWK DICKSON
 community infrastructure consultants
 909 MARKET STREET
 WILMINGTON, NC 28401
 (910) 762-4200
 Office Locations: North Carolina, South Carolina, Georgia, Tennessee
 WKO PROJECT #20130070.00.ML
 NC LICENSE NO. F-0374



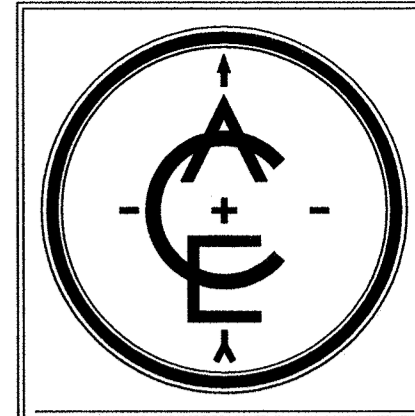
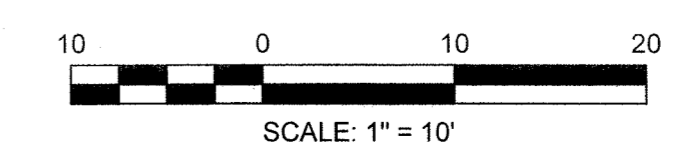
- NOTES:**
- ELEVATIONS TO LEFT OF STATIONS REPRESENT EXISTING GRADE. ELEVATIONS TO RIGHT OF STATIONS REPRESENT FINISH GRADE.
 - COORDINATE SIDEWALK JOINT PATTERN WITH THE OWNER PRIOR TO INSTALLING SIDEWALK FORMS. SIDEWALK JOINT PATTERNS SHALL BE IN ACCORDANCE WITH THE SIDEWALK DETAIL SD 3-10.
 - INSTALL EXPANSION JOINTS BETWEEN EXISTING AND PROPOSED CONCRETE SURFACES.
 - HANDICAP RAMPS SHOWN AS SYMBOLS ONLY. CONSTRUCT HANDICAP RAMPS PER DETAILS IN THESE PLANS.

LEGEND

	CONCRETE SIDEWALK/ CURB RAMP/DRIVEWAY
	ASPHALT PAVEMENT
	HANDICAP RAMP
	STREET LIGHT POLE
	GOOSENECK LIGHT POLE
	FIRE HYDRANT ASSEMBLY
	PARKING METER
	CONCRETE BAND
	PARKING SPACE COUNT
	TREE WELL
	BRICK FURNISHING STRIP
	STREET SIGN



PROFILE - WATER STREET
 SCALE: 1" = 10' HORIZONTAL
 1" = 1' VERTICAL



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 Wilmington, NC 28403
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 www.AndrewEngineers.com
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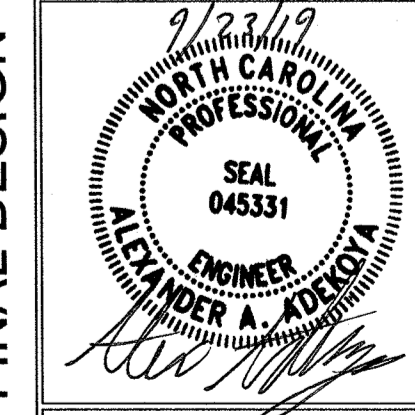
REVISIONS

NO.	DATE	DESCRIPTION
0	08/02/19	CONSTRUCTION DOCUMENTS
1	09/23/19	SEPTEMBER 2019 CITY REVISIONS

FINAL DESIGN - ISSUED FOR CONSTRUCTION

PLAN AND PROFILE
 WATER STREET STREETSCAPING & IMPROVEMENTS
 PHASE 2 PRINCESS STREET THROUGH WALNUT STREET
 WILMINGTON, NC

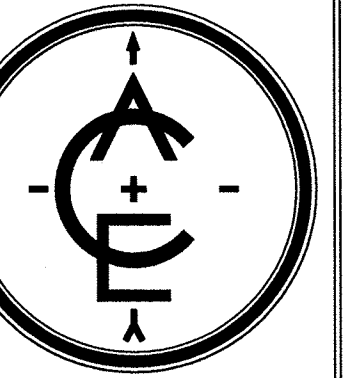
DESIGNED BY: AAA
 CHECKED BY: BT
 DRAWN BY: BM
 DATE: AUGUST 2019



13022

C14
OF 57

WK DICKSON
 community infrastructure consultants
 909 MARKET STREET
 WILMINGTON, NC 28401
 (910) 762-2200
 Office Locations: North Carolina, South Carolina, Georgia, Tennessee
 WKD PROJECT #20130070.00.WL
 NC LICENSE NO. F-0374

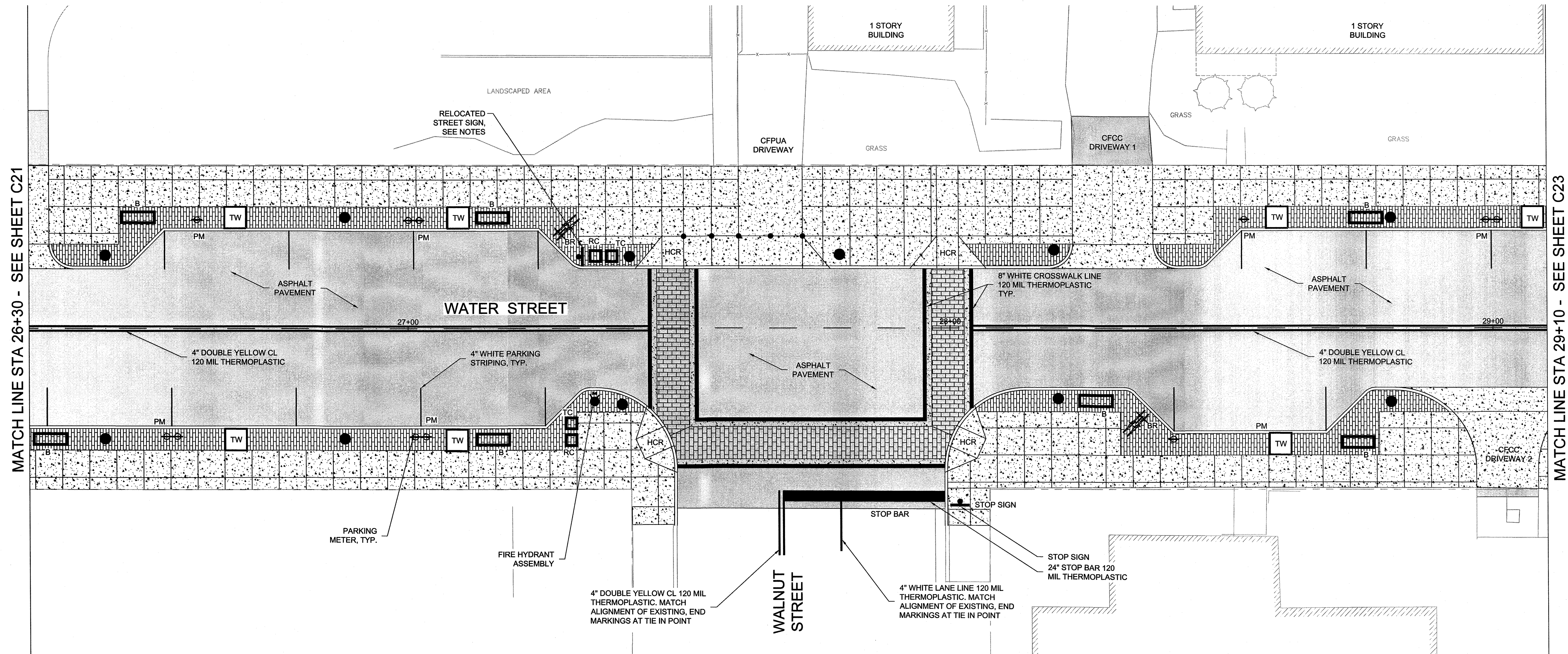


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NO.	REVISIONS	DATE
0	CONSTRUCTION DOCUMENTS	08/02/19



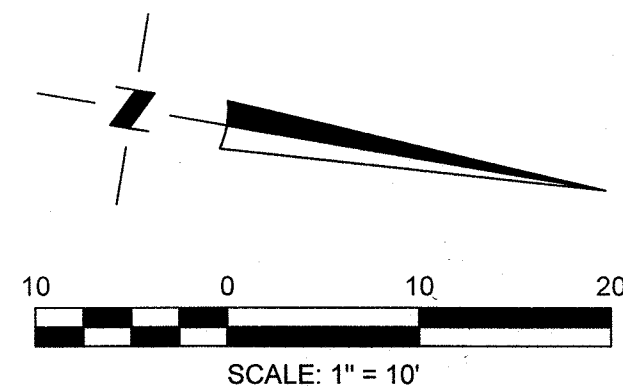
MATCH LINE STA 26+30 - SEE SHEET C21

MATCH LINE STA 29+10 - SEE SHEET C23

LEGEND

- | | | | |
|--|------------------------------|--|-----------------------|
| | ASPHALT ROADWAY | | HANDICAP RAMP |
| | BRICK PAVER FURNISHING STRIP | | STREET LIGHT POLE |
| | CROSSWALK PAVER | | LIGHT POLE |
| | 4" CONCRETE SIDEWALK | | TREE WELL |
| | | | BENCH |
| | | | BIKE RACK |
| | | | TRASH/RECYCLE CAN |
| | | | PARKING METER |
| | | | FIRE HYDRANT ASSEMBLY |
| | | | DOG FOUNTAIN |
| | | | HANDICAP RAMP |
| | | | STREET LIGHT POLE |
| | | | LIGHT POLE |
| | | | TREE WELL |
| | | | BENCH |
| | | | BIKE RACK |
| | | | TRASH/RECYCLE CAN |
| | | | PARKING METER |
| | | | FIRE HYDRANT ASSEMBLY |
| | | | DOG FOUNTAIN |

- NOTES:
- ALL BENCHES WITHIN BRICK PAVER FURNISHING STRIPS TO FACE AWAY FROM WATER STREET, UNLESS NOTED OTHERWISE.
 - ALL BENCHES SHALL BE 8" STANDARD BENCHES WITH CENTER ARM UNLESS, NOTED OTHERWISE.
 - WHERE BENCHES ARE INSTALLED IN THE FURNISHING STRIP, THE CONCRETE BENCH BASE SHALL BE INSTALLED UNDERNEATH THE BRICK PAVERS.
 - CONTACT TRAFFIC ENGINEERING AT (910) 341-7888 TO COORDINATE SIGNAGE AND MARKINGS PRIOR TO INSTALLATION.

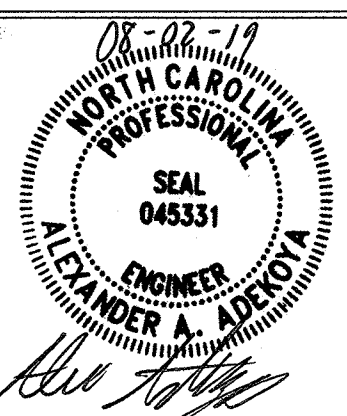


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(910) 762-4200
Office Locations: North Carolina, South Carolina, Georgia, Tennessee
WKD PROJECT #20130070.00.ML
NC LICENSE NO. F-0374

FINAL DESIGN - ISSUED FOR CONSTRUCTION

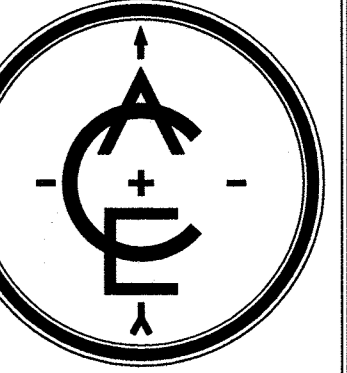
PAVING, AMENITIES AND MARKING PLAN
WATER STREET STREETSCAPING & IMPROVEMENTS
PHASE 2 PRINCESS STREET THROUGH WALNUT STREET
WILMINGTON, NC

DESIGNED BY: AAA
CHECKED BY: BT
DRAWN BY: BM
DATE: AUGUST 2019



13022

C22
OF 57



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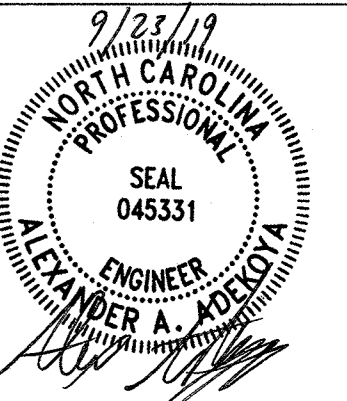
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NO.	REVISIONS	DESCRIPTION	DATE
0	CONSTRUCTION DOCUMENTS		08/02/19
1	SEPTMBER 2019 CITY REVISIONS		09/23/19

GRADING & DRAINAGE PLAN WATER STREET STREETSCLAPING & IMPROVEMENTS PHASE 2 PRINCESS STREET THROUGH WALNUT STREET WILMINGTON, NC

DESIGNED BY: AAA
CHECKED BY: BT
DRAWN BY: BM
DATE: AUGUST 2019

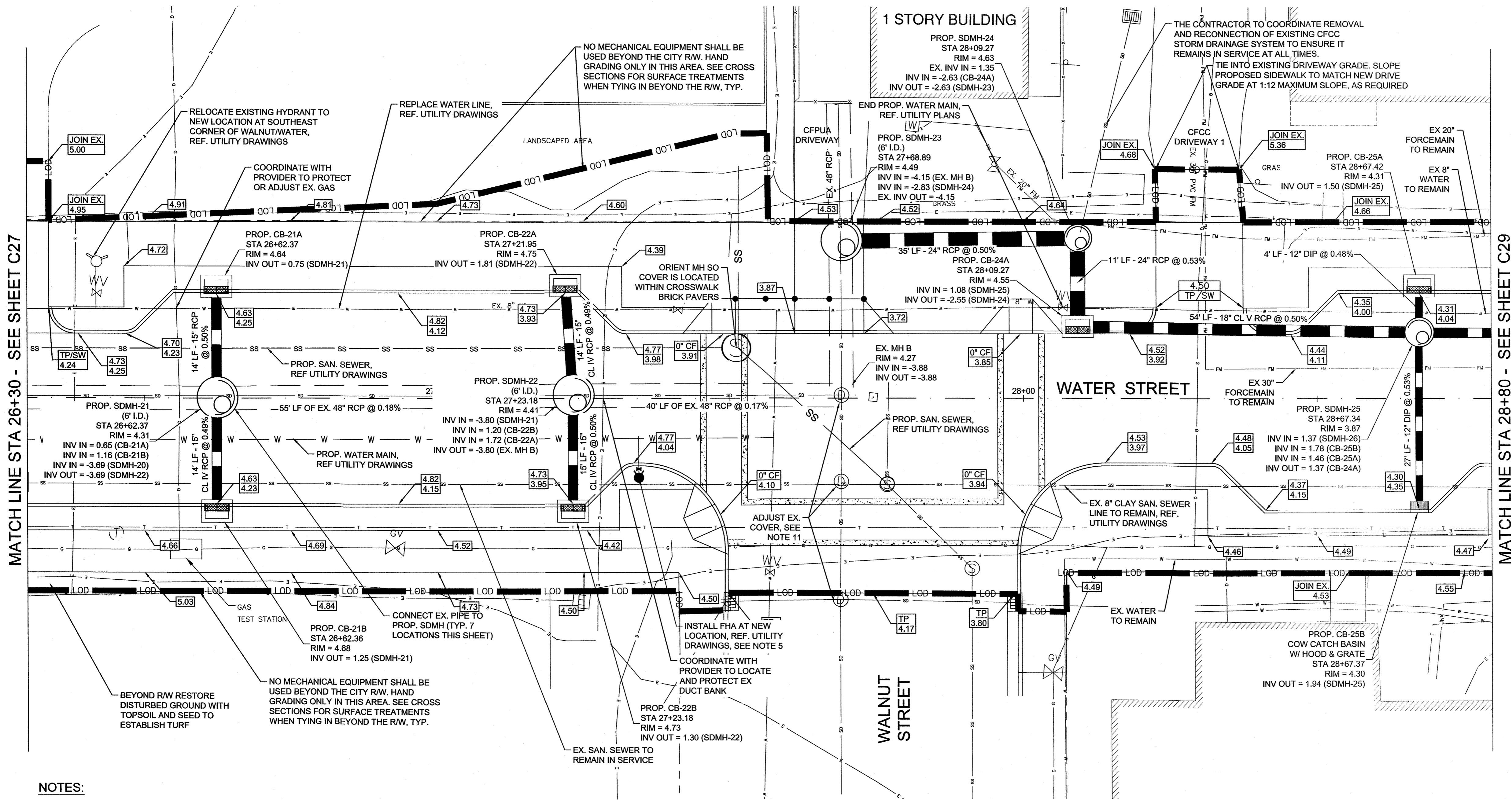


13022

C28

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community infrastructure consultants
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WILMINGTON, NC 28401
(910) 782-4200
Office Locations: North Carolina, South Carolina, Georgia, Tennessee
WKD PROJECT #20130070.00.NL NC LICENSE NO. F-0374



MATCH LINE STA 26+30 - SEE SHEET C27

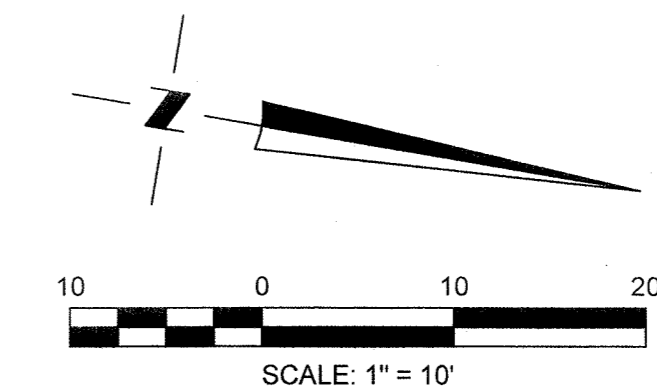
MATCH LINE STA 28+80 - SEE SHEET C29

NOTES:

- SEE PLAN, PROFILE, AND CROSS SECTIONS FOR ROADWAY ELEVATIONS.
- REFER TO SHEETS C30 - C32 FOR DRAINAGE STRUCTURE PROFILES.
- ALL WATER, SANITARY AND STORM SEWER WORK SHOWN BETWEEN STATIONS 18+50 AND 24+70, HAS BEEN COMPLETED BY OTHERS. REFERENCE THE CAPE FEAR PUBLIC UTILITY AUTHORITY PS 9 / WATER STREET INFRASTRUCTURE IMPROVEMENTS - PHASE II DRAWINGS, DEVELOPED BY MCKIM & CREED. FOR CONNECTION INFORMATION, INCLUDING FIRE HYDRANT AND YARD HYDRANT SERVICE LOCATIONS AND SEWER AND WATER LINE ABANDONMENT AND/OR REMOVALS.
- THE CONTRACTOR SHALL LOCATE AND PROTECT EXISTING VCP GRAVITY SANITARY SEWER. CONTRACTOR SHALL REPAIR PIPES DAMAGED DURING CONSTRUCTION. REPAIR OR REPLACEMENT SHALL BE APPROVED BY ENGINEER OF RECORD. DAMAGED SEWER PIPING SHALL BE REMOVED AND REPLACED TO NEAREST JOINT WITH PVC PIPE C900/C905. PVC INSIDE DIAMETER TO MATCH THE DAMAGED SEWER PIPE OR ONE SIZE LARGER. CONNECT PVC TO EXISTING USING APPROVED FERNCO COUPLING. INVERT FROM EXISTING TO NEW SHALL BE FLUSH. ECCENTRIC FERNCO MAY BE REQUIRED.
1. BETWEEN STATIONS 15+35 TO 17+08, THE CONTRACTOR MAY CHOOSE TO REPLACE THE EXISTING VCP GRAVITY SANITARY SEWER IN ITS ENTIRETY RATHER THAN ATTEMPT REPAIRS. AS PART OF THE MAIN REPLACEMENT, THE CONTRACTOR SHALL DEVELOP AND SUBMIT A BYPASS PUMPING PLAN FOR APPROVAL PER CFPWA SPECIFICATIONS.
- THE EXISTING FIRE HYDRANTS ARE TO BE INSPECTED AND RELOCATED IF APPROVED FOR REUSE BY THE CITY. ADD ALTERNATE 1 IS THE REPLACEMENT OF ALL EXISTING FIRE HYDRANTS LOCATED IN THE PROJECT LIMITS WITH NEW HYDRANTS.
- VERIFY LOCATION OF THE EXISTING AND PROPOSED WATER METERS TO SERVE THE DOG FOUNTAIN AND YARD HYDRANTS. CONTRACTOR SHALL INSTALL THE 3/4" WATER SERVICE LINES, BACKFLOW PREVENTION DEVICES WITH HEATED ENCLOSURES AND YARD HYDRANTS.
- AT ALL PLANTER BOX LOCATIONS THE CONTRACTOR SHALL INSTALL WATTS HY-800 YARD HYDRANTS, OR APPROVED EQUAL. YARD HYDRANTS SHALL BE LOCKABLE AND PAINTED BLACK.
- BACKFLOW PREVENTION DEVICES FOR WATER SERVICES SHALL BE PROVIDED WITH A HEATED HOT BOX FIBERGLASS DROP OVER ENCLOSURE HEZLVX.75, OR APPROVED EQUAL. THE ENCLOSURE SHALL BE PAINTED DARK BROWN.
- UTILITY IMPROVEMENTS MAY BE REQUIRED AT PROPOSED STORM DRAIN CROSSINGS. UTILITY CROSSINGS SHALL MEET ALL STATE STANDARDS FOR SEPARATION. REFERENCE CROSSING DETAILS. REFERENCE THE CAPE FEAR PUBLIC UTILITY AUTHORITY PS 9 / WATER STREET INFRASTRUCTURE IMPROVEMENTS - PHASE IV DRAWINGS, DEVELOPED BY MCKIM & CREED FOR PROPOSED WATER AND SEWER MAIN LOCATIONS/ELEVATIONS AND SERVICE TAP LOCATIONS.
- WHEN ROADWAY STREETSCLAPE CONSTRUCTION BEGINS BETWEEN STATIONS 18+50 AND 24+70, THE CONTRACTOR SHALL REMOVE EXISTING GRATE AND APPROXIMATELY 2'-6" OF BRICK FROM TOP OF EXISTING CATCH BASIN. CONVERT TO CURB INLET WITH NEW FRAME AND GRATE AS SHOWN IN CITY OF WILMINGTON DETAIL SD 2-01.
- THE CONTRACTOR IS RESPONSIBLE FOR FINAL ADJUSTMENTS TO RIM ELEVATIONS OF ALL SEWER DRAINAGE AND UTILITY STRUCTURE COVERS AND VALVE BOX LIDS TO PROPOSED GRADE. ADJUSTMENTS TO COVERS WILL NOT BE PAID FOR SEPARATELY AND SHALL BE INCIDENTAL TO THEIR RESPECTIVE LINE ITEMS.
- CONTRACTOR SHALL COORDINATE WITH UTILITY PROVIDERS TO CONFIRM LOCATION AND PROTECT/ADJUST CONFLICTING UTILITIES. CONTRACTOR SHALL MAKE PROVISIONS TO ADJUST TOP ELEVATIONS OF EXISTING UTILITY STRUCTURES TO BE FLUSH WITH THE PROPOSED GRADE.
- REFER TO TEMPORARY AND PERMANENT SEEDING NOTES ON C54.
- REFER TO THE EXISTING CONDITIONS AND DEMO PLAN FOR TREE PROTECTION. TREE PROTECTION SHALL BE MAINTAINED THROUGHOUT THE PROJECT.

LEGEND

- TOP OF CURB ELEVATION
- FLOWLINE ELEVATION
- FINISH SURFACE ELEVATION
- CATCH BASIN
- PRECAST STORM MANHOLE
- STORM DRAINAGE PIPE
- EXISTING CONTOUR



STANDARD DETAIL
CURBING

DATE: AUGUST, 2011
 DRAWN: PB/JSR
 CHECKED: DEC
 SCALE: NOT TO SCALE

WILMINGTON NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, N.C. 28402
 (910) 341-7807

SD 3-11

STANDARD DETAIL
SIDEWALK

DATE: OCTOBER, 2010
 DRAWN: PB/JSR
 CHECKED: DEC
 SCALE: NOT TO SCALE

WILMINGTON NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, N.C. 28402
 (910) 341-7807

SD 3-10

STANDARD DETAIL
INTERSECTION LAYOUT

DATE: AUGUST, 2011
 DRAWN: PB/JSR
 CHECKED: DEC
 SCALE: NOT TO SCALE

WILMINGTON NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, N.C. 28402
 (910) 341-7807

SD 3-09

STANDARD DETAIL
PERPENDICULAR CURB RAMP ADJACENT TO WALKING SURFACE

DATE: DECEMBER, 2010
 DRAWN: PB/JSR
 CHECKED: DEC
 SCALE: NOT TO SCALE

WILMINGTON NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, N.C. 28402
 (910) 341-7807

SD 3-07

STANDARD DETAIL
CONCRETE HEADER
 NOT TO SCALE

DATE: MAY, 2015
 DRAWN BY: JSR
 CHECKED BY: DEC, P.E.
 SCALE: NOT TO SCALE

WILMINGTON NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, N.C. 28402
 (910) 341-7807

SD 3-01.3

- NOTES:**
1. CONCRETE HEADER TO BE 3,000 PSI CONCRETE @ 28 DAYS.
 2. BROOM FINISH WITH 1/2" RADII ON EDGES.
 3. CONCRETE HEADER TO BE FLUSH WITH PAVERS.
 4. CONTROL JOINTS @ 5' ON CENTERS (EQUAL SPACING).
 5. CONCRETE HEADER TO BE POURED AFTER COMPACTION OF STONE SUBGRADE.

STANDARD DETAIL
LOCAL STREET WITH VERTICAL CURB
 (SECTION AND CROWN)

DATE: MAY, 2015
 DRAWN BY: JSR
 CHECKED BY: DEC, P.E.
 SCALE: NOT TO SCALE

WILMINGTON NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
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SD 3-01.3

STANDARD DETAIL
BRICK CROSSWALK

DATE: NOVEMBER, 2011
 DRAWN BY: JSR
 CHECKED BY: B.D.R., P.E.
 SCALE: NOT TO SCALE

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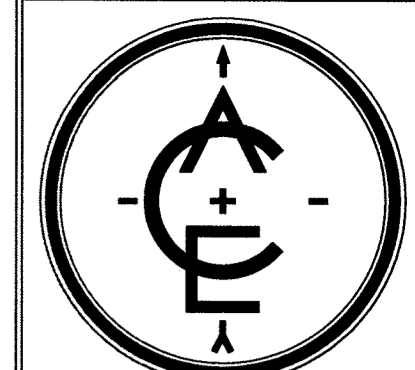
SD 3-102

STANDARD DETAIL
BRICK SIDEWALK USE FOR FURNISHING STRIP

DATE: NOVEMBER, 2011
 DRAWN BY: JSR
 CHECKED BY: B.D.R., P.E.
 SCALE: NOT TO SCALE

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SD 1-18



ANDREW CONSULTING ENGINEERS

STRUCTURAL, MARINE & FORENSIC ENGINEERING AND PROJECT MANAGEMENT

3811 Peachtree Avenue Suite 300
 Wilmington, NC 28403
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DATE	DESCRIPTION

NO.	REVISIONS	DESCRIPTION

BID DOCUMENT - NOT FOR CONSTRUCTION
DETAILS WATER STREET & RIVERFRONT PARK IMPROVEMENTS
PROJECT NO. CP1301
WILMINGTON, NC

DESIGNED BY: AAA
 CHECKED BY: BT
 DRAWN BY: DJ
 DATE: JUNE 2018

6-6-18

STANDARD DETAIL
PAVEMENT MARKINGS LINE TYPES

1-PAVEMENT MARKINGS AND SYMBOLS SHALL BE DESIGNED PER MUTCD WITH APPROVAL FROM CITY TRAFFIC ENGINEERING, AND INSTALLED IN ACCORDANCE WITH NCDOT DIVISION 12 SPECIFICATIONS.

2-GENERALLY, PERMANENT MARKINGS WILL BE UNIFORM AND SMOOTH AND WILL CONSIST OF 120MIL OF THERMOPLASTIC FOR ALL LINES AND SYMBOLS; TEMPORARY MARKINGS SHALL CONSIST OF 15 MIL PAINT, EVERY 6 MONTHS.

3-DURING APPLICATION THE EXISTING PAVEMENT SHALL NOT SHOW SIGNS OF MOISTURE AND BE CLEAN, FREE OF DIRT AND OIL, ETC. THERMOPLASTIC SHALL ONLY BE INSTALLED WHERE PAVEMENT IS 50' F AND RISING. PAINT SHALL ONLY BE INSTALLED WHERE PAVEMENT IS 40' F AND RISING.

DATE: DECEMBER, 2011
DRAWN BY: JSR
CHECKED BY: BDR, P.E.
SCALE: NOT TO SCALE

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PO BOX 1810
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SD 11-01

STANDARD DETAIL
MONUMENT CASTING DETAIL

DATE: 2001
DRAWN BY: JSR/CMR
CHECKED BY: B.P., P.E.
SCALE: NOT TO SCALE

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CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
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SD 14-05

STANDARD DETAIL
MONUMENT BASE

DATE: OCTOBER, 2012
DRAWN BY: JSR/CMR
CHECKED BY: B.P., P.E.
SCALE: NOT TO SCALE

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SD 15-01

STANDARD DETAIL
STREET & TRAFFIC SIGNS REFERENCE DETAIL

This Detail is for Reference Only. See Notes.

1) All signs and materials shall meet the requirements of MUTCD and City Traffic Engineering in effect at the time of construction. Designer and Contractor shall utilize the latest edition of "City of Wilmington Specifications for Installation of Street Name Signs, Traffic Control Signs and Signs Hardware" guideline. Special Designation signs (downtown, historic, parks, riverfront, cross city trail, etc.) shall adhere to COW Signage Plan and all associated policies.

2) Sign callouts, locations and dimensions are responsibility of the designer and shall be clearly indicated on a plan sheet. A Signs and Pavement Marking design sheet is necessary for larger projects, preferred to include a table with fonts, MUTCD#, name, size, lettering, posts, material, color, intensity, etc.

3) In advance of fabrication, Contractor may provide a sign order/or proof sheet from the supplier to City Traffic Engineering for compliance review of material specifications only.

4) All non-standard (decorative) sign posts and hardware installations require a NON-STANDARD TRAFFIC SIGN HARDWARE & MATERIALS AGREEMENT to be executed prior to acceptance. Contact City Traffic Engineering.

5) Contractor shall contact City Inspector prior to sign installation and final acceptance. Modifications may be required for compliance. All signs that are removed and not reinstalled shall be salvaged and delivered to the City.

6) Street name and traffic control signs shall be installed when streets are opened to the public.

7) Developer/HOA is responsible for proper maintenance of all signs until accepted by the City.

DATE: FEBRUARY, 2019
DRAWN BY: JSR
CHECKED BY: BDR, P.E.
SCALE: NOT TO SCALE

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SD 15-03

STANDARD DETAIL
TABLETOP CROSSWALK DETAIL

NOT TO SCALE

DATE: FEB 14, 2017
DRAWN BY: JSR
CHECKED BY: BDR, P.E.
SCALE: NOT TO SCALE

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SD 3-03.3

STANDARD DETAIL
COMMERCIAL DRIVEWAY PLAN (VERTICAL CURB)

1 OF 2

DATE: FEB 14, 2017
DRAWN BY: JSR
CHECKED BY: BDR, P.E.
SCALE: NOT TO SCALE

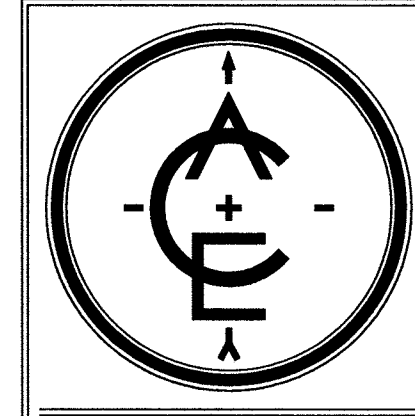
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PO BOX 1810
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SD 3-03.3

STANDARD DETAIL
COMMERCIAL DRIVEWAY SECTIONS (VERTICAL CURB)

2 OF 2

DATE: FEB 14, 2017
DRAWN BY: JSR
CHECKED BY: BDR, P.E.
SCALE: NOT TO SCALE

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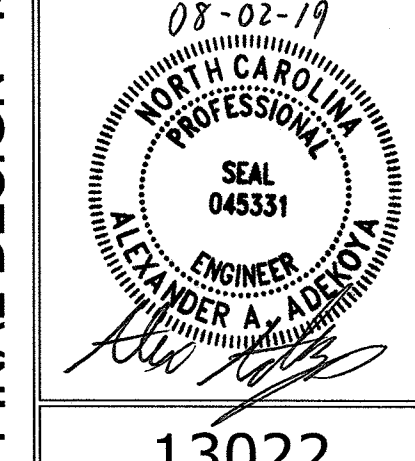
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REVISIONS	DESCRIPTION	DATE
0	CONSTRUCTION DOCUMENTS	08/02/19

DETAILS
WATER STREET STREETSICAPING & IMPROVEMENTS
PHASE 2 PRINCESS STREET THROUGH WALNUT STREET
WILMINGTON, NC

DESIGNED BY: AAA
CHECKED BY: BT
DRAWN BY: BM
DATE: AUGUST 2019



13022

C49
OF 57

FINAL DESIGN - ISSUED FOR CONSTRUCTION