CITY OF NEW BERN BOARD OF ALDERMEN MEETING JULY 14, 2020 – 6:00 P.M. CITY HALL COURTROOM 300 POLLOCK STREET

- 1. Meeting opened by Mayor Dana E. Outlaw. Prayer Coordinated by Alderman Aster. Pledge of Allegiance.
- 2. Roll Call.
- 3. Request and Petition of Citizens.

Consent Agenda

- 4. Consider Accepting a Petition to Annex Property Identified as Tax Parcel ID 8-209-13001 and Adopting a Resolution to Call for a Public Hearing on the Annexation.
- 5. Approve Minutes.

- 6. Conduct a Public Hearing on the Rezoning of 2409 Oaks Road; and
 a) Consider Adopting a Statement of Zoning Consistency or Inconsistency; and
 b) Consider Adopting an Ordinance Rezoning 2409 Oaks Road.
- 7. Conduct a Public Hearing and Consider Adopting an Amendment to the Historic District Guidelines.
- 8. Consider Adopting a Resolution Encouraging the NC Department of Transportation to Proceed with the NC Highway 43 Connector Project.
- 9. Consider Adopting a Resolution Approving the Sale of 2203 Chestnut Avenue.
- 10. Consider Adopting a Resolution Approving a Lease and License Agreement with the Friends of New Bern Fireman's Museum, Inc.
- 11. Consider Adopting a Resolution to Approve Amendments to the City of New Bern Water and Sewer Design Standards.
- 12. Consider Adopting a Resolution Approving a Memorandum of Agreement with the NC Office of Recovery and Resiliency for a Grant Award.
- 13. Consider Adopting an Amendment to the Capital Project Ordinance for the Resiliency and Hazard Mitigation Plan Grant Project Fund.
- 14. Consider Adopting a Resolution Authorizing the Implementation of Credit Card Services for Payment of Utility Bills and City Fees.

- 15. Consider Adopting an Amendment to the Capital Project Ordinance for the 2019 Electric Improvements Project Fund.
- 16. Consider Adopting a Resolution to Include the Redevelopment Commission in the City's Budgeting and Accounting System.
- 17. Consider Adopting a Budget Ordinance Amendment for the FY20-21 Annual Adopted Budget.
- 18. Appointment(s).
- 19. Attorney's Report.
- 20. City Manager's Report.
- 21. New Business.
- 22. Closed Session.
- 23. Adjourn.

Aldermen

Sabrina Bengel Jameesha Harris Robert V. Aster Johnnie Ray Kinsey Barbara J. Best Jeffrey T. Odham



CITY OF NEW BERN

300 Pollock Street, P.O. Box 1129 New Bern, NC 28563-1129 (252) 636-4000

Memo to: Mayor and Board of Aldermen

From: Mark A. Stephens, City Manager

Date: July 10, 2020

Re: July 14, 2020 Agenda Explanations

1. Meeting opened by Mayor Dana E. Outlaw. Prayer Coordinated by Alderman Aster. Pledge of Allegiance.

2. Roll Call.

Request and Petition of Citizens.

This section of the Agenda is titled Requests and Petitions of Citizens. This is an opportunity for public comment, and we thank you for coming to the Board of Aldermen meeting tonight to share your views. We value all citizen input.

Speaker comments are limited to a maximum of 4 minutes during the public comment period. At the conclusion of 4 minutes, each speaker shall leave the podium. Comments will be directed to the full board, not to an individual board member or staff member. Although the board is interested in hearing your comments, speakers should not expect any comments, action, or deliberation from the board on any issue raised during the public comment period.

In the board's discretion, it may refer issues to the appropriate city officials or staff for further investigation. If an organized group is present to speak on a common issue, please designate one person to present the group's comment, which shall be limited to a maximum of 4 minutes.

Dana E. Outlaw Mayor Mark A. Stephens City Manager Brenda E. Blanco City Clerk Mary M. Hogan Director of Finance

Consent Agenda

4. Consider Accepting a Petition to Annex Property Identified as Tax Parcel ID 8-209-13001 and Adopting a Resolution to Call for a Public Hearing on the Annexation.

(Ward 5) Clifford Parson, on behalf of Weyerhaeuser NR Company, has requested Tax Parcel 8-209-13001 be annexed into the City. The parcel is an approximate 11.02-acre tract of land located in West New Bern (formerly Craven 30). It is requested a public hearing be called for July 28, 2020 to consider this request for annexation. A memo from Jeff Ruggieri, Director of Development Services, is attached.

5. Approve Minutes.

Draft minutes from the special meeting on June 15, 2020 and the regular meeting on June 23, 2020 are provided for review and approval.

Conduct a Public Hearing on the Rezoning of 2409 Oaks Road; and a) Consider Adopting a Statement of Zoning Consistency or Inconsistency; and

b) Consider Adopting an Ordinance Rezoning 2409 Oaks Road.

(Ward 5) This public hearing was originally noticed for April 14, 2020 and has been continued twice due to the restrictions imposed by the Governor's Executive Order relative to the COVID-19 pandemic. A public hearing was ultimately held on June 23, 2020, and the issue of consistency or inconsistency was considered by the Board. After a statement of inconsistency was adopted, it was brought to the Board's attention that Alderman Kinsey did not understand the motion when he cast his vote. After much debate, the Board voted to reconsider that issue at this meeting. Subsequently, it has been determined that the public hearing held on June 23rd was not properly noticed. On the advice of the City Attorney, the public hearing has been re-noticed and will also be conducted at this meeting.

As a point of history, Nasr Algaradi requested to rezone a 0.25-acre parcel located at 2409 Oaks Road from R-6S Residential District to C-4 Neighborhood Business District. A previous request to rezone this property to C-3 Commercial District was denied by the Board of Aldermen due to the perceived impacts a vape/tobacco shop would have on the surrounding neighborhood. Mr. Algaradi has since amended his plans to utilize the property as a convenience store. He is, therefore, seeking to have the property rezoned as C-4 Neighborhood Business District. The Planning and Zoning Board unanimously approved this request at its March 3, 2020 meeting. A memo from Mr. Ruggieri is attached.

7. Conduct a Public Hearing and Consider Adopting an Amendment to the Historic District Guidelines.

The Historic Preservation Commission ("HPC") has approved revisions to the New Bern Historic District Guidelines, which are part of the Land Use Ordinance. The guidelines were last updated in early 2017, and the proposed revisions will address some new issues as well as clarify some of the grey areas. The revisions were unanimously approved by the HPC at their June 17, 2020 meeting and by the Planning & Zoning Board at its July 7, 2020 meeting. A memo from Matt Schelly, City Planner, is attached.

8. Consider Adopting a Resolution Encouraging the NC Department of Transportation to Proceed with the NC Highway 43 Connector Project.

The project to extend a 2.3-mile portion of the Highway 43 Connector has been placed on hold by the NC Department of Transportation ("NCDOT"). This resolution encourages NCDOT to move forward with the project, as it will promote and enhance economic development in New Bern and Craven County, as well as improve connectivity within the local community and between Greenville and New Bern. Failure to move forward with the project could negatively impact the area's economic growth.

9. Consider Adopting a Resolution Approving the Sale of 2203 Chestnut Avenue.

(Ward 2) After receiving a bid of \$375.00, the Board adopted a resolution on May 12, 2020 to initiate the upset bid process for 2203 Chestnut Avenue. The bid was advertised, but no additional bids were received. The property is a vacant 0.06-acre lot with a tax value of \$750.00. The offer represents 50% of the value. The property was acquired jointly by the City and County through tax foreclosure in May of 2019. The Commissioner's Deed states the taxes, interest, and penalties due to the City at the time of the foreclosure were \$556.45, and the City contributed \$480.99 toward the cost of the foreclosure proceeding. A memo from Brenda Blanco, City Clerk, is attached.

10. Consider Adopting a Resolution Approving a Lease and License Agreement with the Friends of New Bern Fireman's Museum, Inc.

(Ward 1) The lease and license agreements between the City and Friends of New Bern Fireman's Museum have expired, and new agreements are needed. The lease agreement covers the city-owned buildings at 420 and 422 Broad Street that are utilized by the museum. The license agreement covers the City's personal property that is located within the museum (artifacts, etc.). Both agreements are for a term of 10 years and will expire on June 30, 2030. A memo from Matt Montanye, Director of Public Works, is attached.

11. Consider Adopting a Resolution to Approve Amendments to the City of New Bern Water and Sewer Design Standards.

In 2007, the City's Water and Sewer Design Standards were originally issued for the purpose of providing a comprehensive guideline for developers, builders, and engineers who desired to extend, connect to, or otherwise alter the City's existing water or sewer infrastructure. The standards were most recently revised in January 2018 to reflect changes in state regulations, construction practices, and material standards. A review of the current version yielded several minor technical and grammatical changes that need to be made. Those changes have been incorporated and are outlined in the red-lined version that is attached. A memo from Jordan Hughes, City Engineer, is also attached.

12. Consider Adopting a Resolution Approving a Memorandum of Agreement with the NC Office of Recovery and Resiliency for a Grant Award.

The City has been awarded a \$328,500 grant from the NC Office of Recovery and Resiliency's Distressed Local Government Program. The award will be used to support the City's resiliency, recovery, and mitigation efforts over the next three years through the hiring of a consultant to assist staff with managing such projects. Three hundred thousand dollars will be used for capacity building measures, and the remaining balance will put toward funding a vehicle to support these efforts. A memo from Amanda Ohlensehlen, Community & Economic Development Manager, is attached.

13. Consider Adopting an Amendment to the Capital Project Ordinance for the Resiliency and Hazard Mitigation Plan Grant Project Fund.

The Resiliency and Hazard Mitigation Plan Grant Project Fund needs to be amended to recognize the \$328,500 grant funds referenced in the previous item, as well as \$70,000 from the State's Environmental Enhancement Grant Program to support phase two of a resiliency and mitigation plan, and \$5,000 from the NC Department of Cultural Resources to support phase one of the plan. A memo from Mary Hogan, Director of Finance, is attached.

14. Consider Adopting a Resolution Authorizing the Implementation of Credit Card Services for Payment of Utility Bills and City Fees.

The City currently uses third-party vendors to accept debit and credit cards for payment of utility costs and city fees. The vendors charge a convenience fee to the customer, and there is no cost to the City. However, staff has identified several benefits for both the City and its customers if this service were provided inhouse. To accomplish this, card machines must be purchased at a cost of \$1,750. The City will also incur recurring charges of \$6.95 a month for the PCI compliance fee and a small fee for each transaction. Mrs. Hogan will share a PowerPoint presentation to review these benefits and the anticipated costs to the City.

15. Consider Adopting an Amendment to the Capital Project Ordinance for the 2019 Electric Improvements Project Fund.

The City has received a \$320,000 grant from the Golden Leaf Foundation. These funds will be used to elevate identified electrical boxes and components to prevent future flood damage and increase system reliability during storm events. A memo from Mrs. Hogan is attached.

16. Consider Adopting a Resolution to Include the Redevelopment Commission in the City's Budgeting and Accounting System.

The Board adopted an ordinance on May 8, 2019 to create the Redevelopment Commission of the City of New Bern. Chapter 160A- of the NC General Statutes allows the operations of a Redevelopment Commission to be budgeted and accounted for in the City's budgeting and accounting system. The City Manager and Director of Finance are required to administer and control that portion of the budget. This resolution establishes the Commission as part of the City's budget. A memo from Mrs. Hogan is attached.

17. Consider Adopting a Budget Ordinance Amendment for the FY20-21 Annual Adopted Budget.

(Wards 1 and 3) On June 9, 2020, the City entered into a 10-year lease agreement with Craven Community College for the city-owned property at 106 and 114-120 Rhem Street. The old garage facility will be used to operate a diesel mechanic and heavy-equipment operator workforce training center. The lease required an upfront payment of \$175,000 from the College and annual payments of \$1. Those funds have been received and will be used by the City to upfit the garage facility. The budget amendment appropriates the funds designated for the improvements. Additionally, the amendment creates a new special revenue fund to account for revenues and expenditures of the Redevelopment Commission. The initial budget will be established with a transfer of \$455,000 from the General Fund, which are the proceeds from the sale of the Carolina Avenue property to the Housing Authority. A memo from Mrs. Hogan is attached.

18. Appointment(s).

- a) On June 25, 2019, Dr. Steve Stelma was appointed to serve as the veterinarian to review and make determinations of a dog's status with respect to whether it is vicious, dangerous, or potentially dangerous. This is an annual appointment, and Dr. Stelma needs to be reappointed or a new veterinarian appointed to serve in this capacity. A memo from Mrs. Blanco is attached with additional information.
- b) Mark Best's seat on the Police Civil Service Board has expired. He may continue to serve until a new appointment is made, but is ineligible to serve a consecutive term. Alderman Odham is next on the rotation to make an appointment to this Board. A memo from Mrs. Blanco is attached and describes the requirements and limitations of those appointed to this Board.

- 19. Attorney's Report.
- 20. City Manager's Report.
- 21. New Business.
- 22. Closed Session.
- 23. Adjourn.

AGENDA ITEM COVER SHEET



Agenda Item Title:

Consider adopting a Resolution to call for a Public Hearing to annex property identified as Tax Parcel ID 8-209-13001 owned by Weyerhaeuser NR Company.

Date of Meeting: 07/14/2020	Ward # if applicable: Ward 5
Department: Development Services	Person Submitting Item: Jeff Ruggieri, Director of Development Services
Call for Public Hearing: ⊠Yes□No	Date of Public Hearing: 7/28/2020

Explanation of Item:	The Board of Alderman is requested to call for a Public Hearing to consider annexation to the City of New Bern Parcel ID 8-209- 13001 owned by Weyerhaeuser NR Company, consisting of 11.02 +/- acres, located in West New Bern.
Actions Needed by Board:	Adopt a resolution.
Backup Attached:	Memo, Resolution, Certificate of Sufficiency, Signed Petition from property owners, Annexation map

Is item time sensitive? □Yes ⊠No	
Will there be advocates/opponents at the meeting? Yes No	

Cost of Agenda Item:

If this requires an expenditure, has it been budgeted and are funds available and certified by the Finance Director? \Box Yes \boxtimes No

Additional Notes:



NORTH CAROLINA Development Services 303 First Street, P.O. Box 1129 New Bern, NC 28563 (252)639-7581

MEMORANDUM

TO: Mayor Dana Outlaw, City of New Bern Board of Aldermen

FROM: Jeff Ruggieri, Director Development Services

DATE: July 2, 2020

SUBJECT: Consider adopting a Resolution to call for a Public Hearing to annex property identified as Tax Parcel ID 8-209-13001 owned by Weyerhaeuser NR Company.

Background

The Board of Alderman is requested to call for a public hearing to be held on July 28, 2020 at 6:00 p.m., or as soon thereafter as possible, to consider a request by property owner; Weyerhaeuser NR Company, seeking annexation to the City of New Bern Tax Parcel ID 8-209-13001 consisting of 11.02 +/- acres, which said parcel is located in West New Bern.

Recommendation

Consider Adopting a Resolution to Call for a public hearing to consider the annexation request by property owner; Weyerhaeuser NR Company, for Craven County Tax Parcel ID 8-209-13001.

Please contact Jeff Ruggieri at 639-7587 should you have any questions or need additional information.

RESOLUTION

THAT WHEREAS, the Board of Aldermen of the City of New Bern has received a petition from Weyerhaeuser NR Company, bearing date July 1, 2020, seeking annexation to the City of New Bern of a parcel of land consisting of 11.02 acres, more or less, which said parcel is a portion of property bearing Craven County parcel identification number 8-209-13001 lying south of NC Highway 43 and Atlantic and East Carolina Railroad in Number Eight (8) Township, Craven County, and more particularly identified on <u>Exhibits A and B</u> attached hereto and incorporated herein by reference; and

WHEREAS, the Board of Aldermen has caused the City Clerk to investigate the sufficiency of said petition and to certify the results of her investigation; and

WHEREAS, the Board of Aldermen has received the certification of the City Clerk attesting to the sufficiency of the petition; and

WHEREAS, the Board of Aldermen desires to conduct a public hearing on July 28, 2020, in the City Hall Courtroom at 6:00 p.m. on the question of annexing to the City of New Bern the above-described parcel of land owned by Weyerhaeuser NR Company.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN:

Section 1. That a public hearing will be conducted by the Board of Aldermen of the City of New Bern on July 28, 2020, in the City Hall Courtroom at 6:00 p.m., or as soon thereafter as the matter may be reached, on the question of annexing to the City of New Bern the parcel of land owned by Weyerhaeuser NR Company consisting of 11.02 acres, more or less, which said parcel is a portion of property bearing Craven County parcel identification number 8-209-13001 lying south of NC Highway 43 and Atlantic and East Carolina Railroad in Number Eight (8) Township, Craven County, North Carolina, the boundaries of which are shown on Exhibits A and B attached hereto and incorporated herein by reference.

Section 2. That a notice of public hearing shall be published once in the Sun-Journal at least ten (10) days prior to July 28, 2020.

ADOPTED THIS 14th DAY OF JULY, 2020.

DANA E. OUTLAW, MAYOR

BRENDA E. BLANCO, CITY CLERK

CERTIFICATE OF SUFFICIENCY

I, BRENDA E. BLANCO, City Clerk of the City of New Bern, North Carolina, do hereby certify that I have investigated the sufficiency of the Petition of Weyerhaeuser NR Company, requesting annexation by the City of New Bern of a parcel of land consisting of 11.02 acres, more or less, which said parcel is a portion of property bearing Craven County parcel identification number 8-209-13001 lying south of NC Highway 43 and Atlantic and East Carolina Railroad in Number Eight (8) Township, Craven County, which said Petition is dated July 1, 2020, and I do hereby certify that said Petition is in order in all respects.

THIS 14th DAY OF JULY, 2020.

BRENDA E. BLANCO, CITY CLERK

PETITION TO ANNEX

TO: BOARD OF ALDERMEN OF THE CITY OF NEW BERN

1. Weyerhaeuser NR Company, the undersigned owner of real property, respectfully requests that the area described in Paragraph 2 below be annexed to the City of New Bern.

2. The area to be annexed is contiguous to the City of New Bern, and the boundaries of such territory are more particularly described on Exhibit A attached hereto and incorporated herein by reference.

OWNER:

WEYERHAEUSER NR COMPANY

By:

-Docusigned by: Uifford P. Parson

Clifford P. Parson, Authorized Representative

Date: July 1, 2020

Mailing Address: Ward and Smith, P.A. Post Office Box 867 New Bern, NC 28563

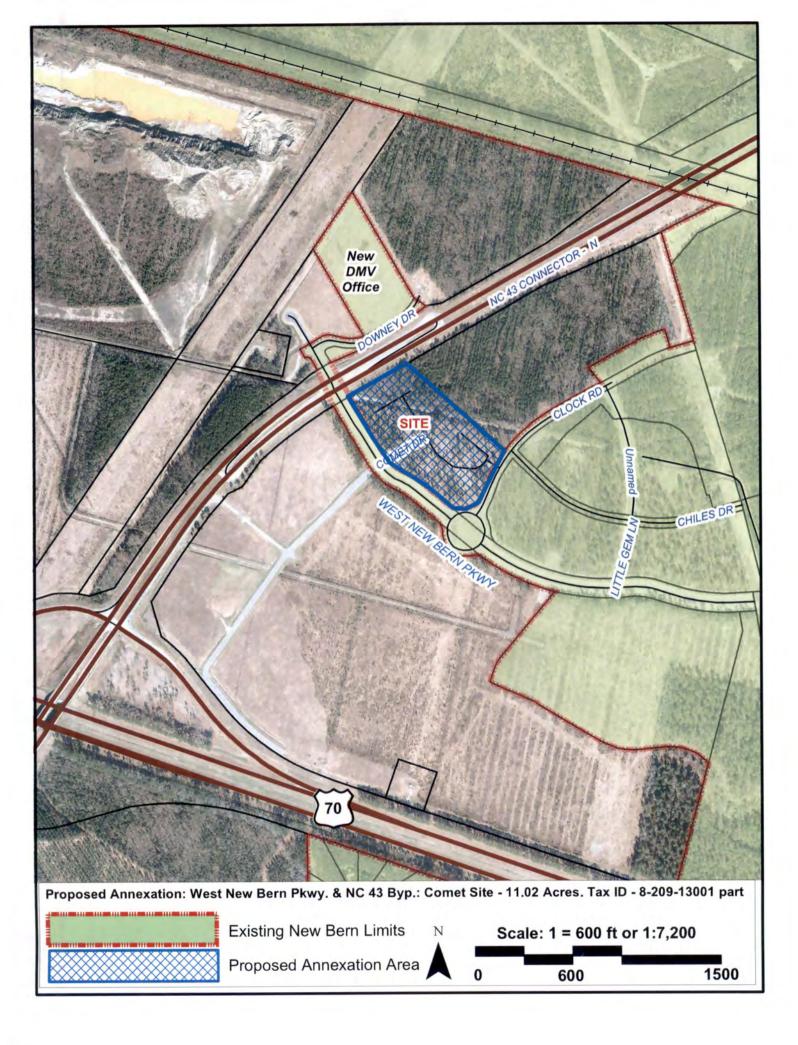
Exhibit A

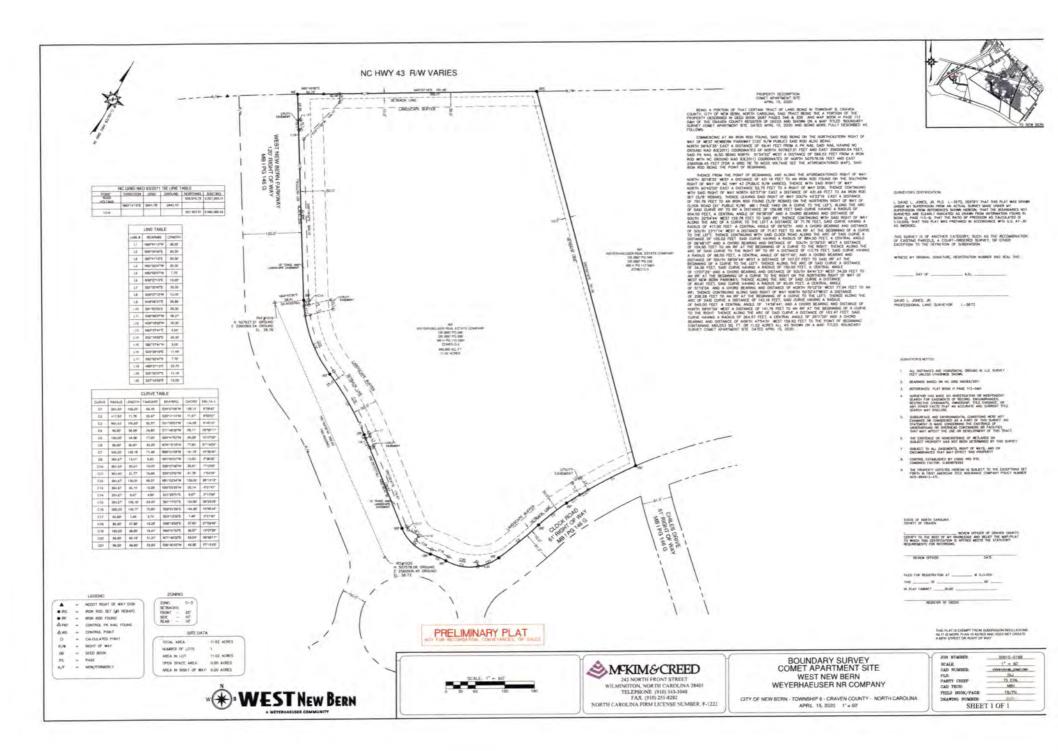
Being a portion of that certain tract of land being in Township 8, Craven County, City of New Bern, North Carolina, said tract being the a portion of the property described in Deed Book 2687 Pages 346 & 339 and Map Book H Page 113 G&H of the Craven County Register of Deeds and being more fully described as follows:

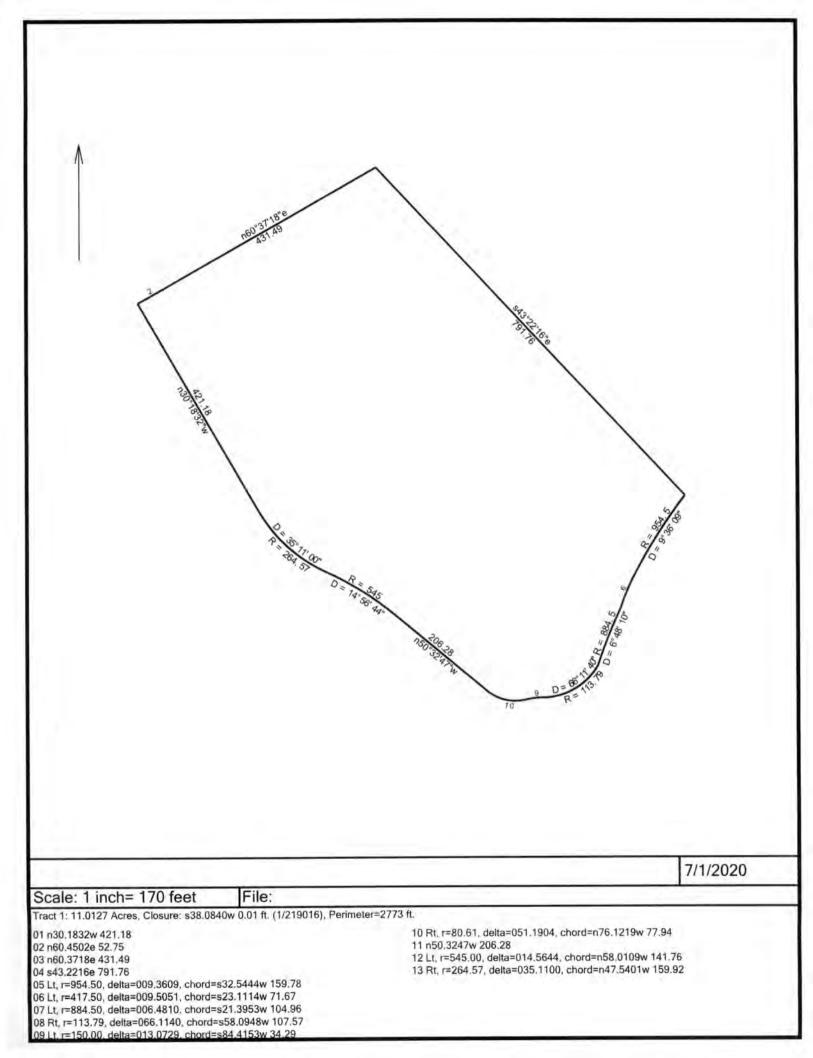
Commencing at an iron rod found, said rod being on the northeastern right of way of West Newbern Parkway (120' R/W Public) said rod also being North 56°43'35" East a distance of 59.41 feet from a pk nail said nail having NC Ground NAD 83(2011) coordinates of North 507927.51 feet and East 2560060.54 feet, said pk nail also being North 51°54'52" West a distance of 566.52 feet from a iron rod with NC Ground NAD 83(2011) coordinates of North 507578.06 feet and East 2560506.45 feet (for a grid tie to NCGS Voltage see the aforementioned map); said iron rod being the **Point of Beginning**.

Thence from the Point of Beginning; and along the aforementioned right of way North 30°18'32" West a distance of 421.18 feet to an iron rod found on the southern right of way of NC Hwy 43 (Public R/W varies); thence with said right of way North 60°45'02" East a distance 52.75 feet to a right of way disk; thence continuing with said right of way North 60°37'18" East a distance of 431.49 feet to an iron rod set (5/8" rebar); thence leaving said right of way South 43°22'16" East a distance of 791.76 feet to an iron rod found (5/8" rebar) on the northern right of way of Clock Road (61' Public R/W) Mb 1 Page 146G on a curve to the left; along the arc of said curve IRF to IRF a distance of 159.98 feet said curve having a radius of 954.50 feet, a central angle of 09°36'09" and a chord bearing and distance of South 32°54'44" West 159.78 feet to said IRF; thence continuing with said right of way along the arc of a curve to the left a distance of 71.76 feet, said curve having a radius of 417.50 feet, a central angle of 09°50'51" and a chord bearing and distance of South 23°11'14" West a distance of 71.67 feet to an IRF at the beginning of a curve to the left; thence continuing with said Clock Road along the arc of said curve a distance of 105.02 feet, said curve having a radius of 884.50 feet, a central angle of 06°48'10" and a chord bearing and distance of South 21°39'53" West a distance of 104.95 feet to an IRF at the beginning of a curve to the right; thence along the arc of said curve to the right IRF to IRF a distance of 113.79 feet, said curve having a radius of 98.50 feet, a central angle of 66°11'40", and a chord bearing and distance of South 58°09'48" West a distance of 107.57 feet to said IRF at the beginning of a curve to the left; thence along the arc of said curve a distance of 34.36 feet, said curve having a radius of 150.00 feet, a central angle of 13°07'29" and a chord bearing and distance of South 84°41′53" West 34.29 feet to an IRF at the beginning of a curve to the right on the northern right of way of West New Bern Parkway; thence along the arc of said curve a distance of 80.61 feet, said curve having a radius of 90.00 feet, a central angle of 51°19'04" and a chord bearing and distance of North 76°12'19" West 77.94 feet to an IRF; thence continuing along said right of way North 50°32'47" West a distance of 206.28 feet to an IRF at the beginning of a curve to the left; thence along the arc of said curve a distance of 142.16 feet, said curve having a radius of 545.00 feet, a central angle of 14°56'44", and a chord bearing and distance of North 58°01'09" West a distance of 141.76 feet to an IRF at the beginning of a curve to the right; thence along the arc of said curve a distance of 162.47 feet, said curve having a radius of 264.57 feet, a central angle of 35°11'00" and a chord bearing and distance of North 47°54'01" West 159.92 feet to the Point of Beginning. Containing 480,053 Sq. Ft. or 11.02 Acres.

ND: 4852-0545-6065, v. 1







AGENDA ITEM COVER SHEET



Agenda Item Title:

Consider Adopting an Ordinance for the Rezoning of 2409 Oaks Road from R-6S to C-4.

Date of Meeting: 07/14/2020	Ward # if applicable: Ward 5
Department: Development Services	Person Submitting Item: Jeff Ruggieri, Director of Development Services
Call for Public Hearing: □Yes⊠No	Date of Public Hearing: 6/23/2020

Explanation of Item:	Nasr Algaradi is requesting to rezone 2409 Oaks Road from R-6S Residential District to C-4 Neighborhood Business District.
Actions Needed by Board:	Adopt Ordinance
Backup Attached:	Memo, Ordinance, Consistency or Inconsistency Statements, Map

Is item time sensitive? □Yes ⊠No	
Will there be advocates/opponents at the meeting? □Yes □ No	

Cost of Agenda Item: N/A

If this requires an expenditure, has it been budgeted and are funds available and certified by the Finance Director? \Box Yes \boxtimes No

Additional Notes:



NORTH CAROLINA 303 First Street, P.O. Box 1129 New Bern, NC 28563 (252)639-7587

MEMORANDUM

TO: Mayor Dana Outlaw, City of New Bern Board of Aldermen

FROM: Jeff Ruggieri, Director Development Services

DATE: July 1, 2020

SUBJECT: Consider Adopting an Ordinance for the Rezoning of 2409 Oaks Road from R-6S to C-4.

Nasr Algaradi has requested consideration of an application to rezone a 0.25+/- acre tract located at 2409 Oaks Rd. The applicant has proposed to rezone the property from R-6S Residential District to C-4 Neighborhood Business District. On May 7th 2019, Mr. Algaradi came before the Planning and Zoning Board on a request to rezone this property to C-3 Commercial District, while the Planning and Zoning Board recommended approval to the Board of Aldermen, the Board of Aldermen denied this request to rezone the property due to the perceived impacts a vape/tobacco shop would have to the surrounding neighborhood. Mr. Algaradi has since amended his plans to instead use this property as a convenience store in the C-4 Neighborhood Business District. The C-4 Neighborhood Business District does not permit the use of the property as a tobacco/vape shop, thus addressing the concerns of neighboring property owners.

The parcel has historically been utilized as a commercial establishment and will provide neighborhood amenities for the surrounding residential area. In addition, commercially zoned parcels are directly across the street from the requested site.

During their March 3, 2020 meeting the Planning and Zoning Board unanimously voted in favor on the rezoning request from Mr. Algaradi.

Please contact Jeff Ruggieri at 639-7587 should you have questions or need additional information.

AN ORDINANCE TO AMEND THE ZONING MAP OF THE CITY OF NEW BERN SO AS TO CHANGE THE ZONING CLASSIFICATION OF PROPERTY OWNED BY NASR ABDO ALI ALGARADI CONSISTING OF APPROXIMATELY 0.25 ACRE LOCATED AT 2409 OAKS ROAD FROM THE ZONING CLASSIFICATION OF R-6S RESIDENTIAL DISTRICT TO C-4 NEIGHBORHOOD BUSINESS DISTRICT

THAT WHEREAS, Nasr Abdo Ali Algaradi owns real property at located 2409 Oaks Road in the City of New Bern, consisting of approximately 0.25 acre, more or less, and an application has been made to change the zoning classification of the subject property from R-6S Residential District to C-4 Neighborhood Business District consistent with the attached plat entitled "REZONING CASE: 2409 OAKS ROAD – Approx. 0.25+- Acres: PID: 8-019-008" prepared by the Development Services Department of the City of New Bern; and

WHEREAS, the Planning and Zoning Board unanimously recommended that said request be approved; and

WHEREAS, the Board of Aldermen of the City of New Bern conducted a duly advertised public hearing with respect to the proposed amendment on June 23, 2020, at which time all interested parties were given an opportunity to be heard; and

WHEREAS, the Board of Aldermen of the City of New Bern deems it advisable and in the public interest to effect said change, as the requested C-4 Neighborhood Business District classification is consistent with the City Land Use Plans and nearby land uses.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN:

Section 1. That the zoning map of the City of New Bern be and the same is hereby amended by changing the zoning classification of the subject property owned by Nasr Abdo Ali Algaradi located at 2409 Oaks Road in the City of New Bern, consisting of 0.25 acres, more or less, from R-6S Residential District to C-4 Neighborhood Business District as more specifically shown on the plat entitled "REZONING CASE: 2409 OAKS ROAD – Approx. 0.25+- Acres: PID: 8-019-008" prepared by the Development Services Department of the City of New Bern, a copy of which is attached hereto and incorporated herein by reference.

<u>Section 2</u>. That the Board deems it in the public interest to rezone the subject property consistent with the attached plat as the requested C-4 Neighborhood Business District classification is consistent with the City Land Use Plans and nearby land uses.

Section 3. That this ordinance shall be in full force and effect from and after its adoption and publication as required by law.

ADOPTED THIS 14th DAY OF JULY 2020.

DANA E. OUTLAW, MAYOR

BRENDA E. BLANCO, CITY CLERK

Craven County Parcel ID#8-019-008

STATEMENT OF ZONING INCONSISTENCY WITH ADOPTED PLANS

The Board of Aldermen of the City of New Bern finds the action to rezone Craven County Parcel ID #8-019-008 to C-4 Neighborhood Business District is not reasonable and is not in the public interest, and finds it to be inconsistent with the Regional Land Use Plan and nearby land uses in that the proposed C-4 Neighborhood Business District is incompatible with the uses permitted on nearby properties, and other properties in the vicinity. And that:

The proposed C-4 Neighborhood Business District would be incompatible with adjacent use and the Future Land Use Map found in the 2010 CAMA Regional Land Use Plan.

This certifies the above statement of zoning consistency was adopted by the Board of Aldermen on July 14, 2020.

Brenda E. Blanco, City Clerk

Craven County Parcel ID #8-019-008

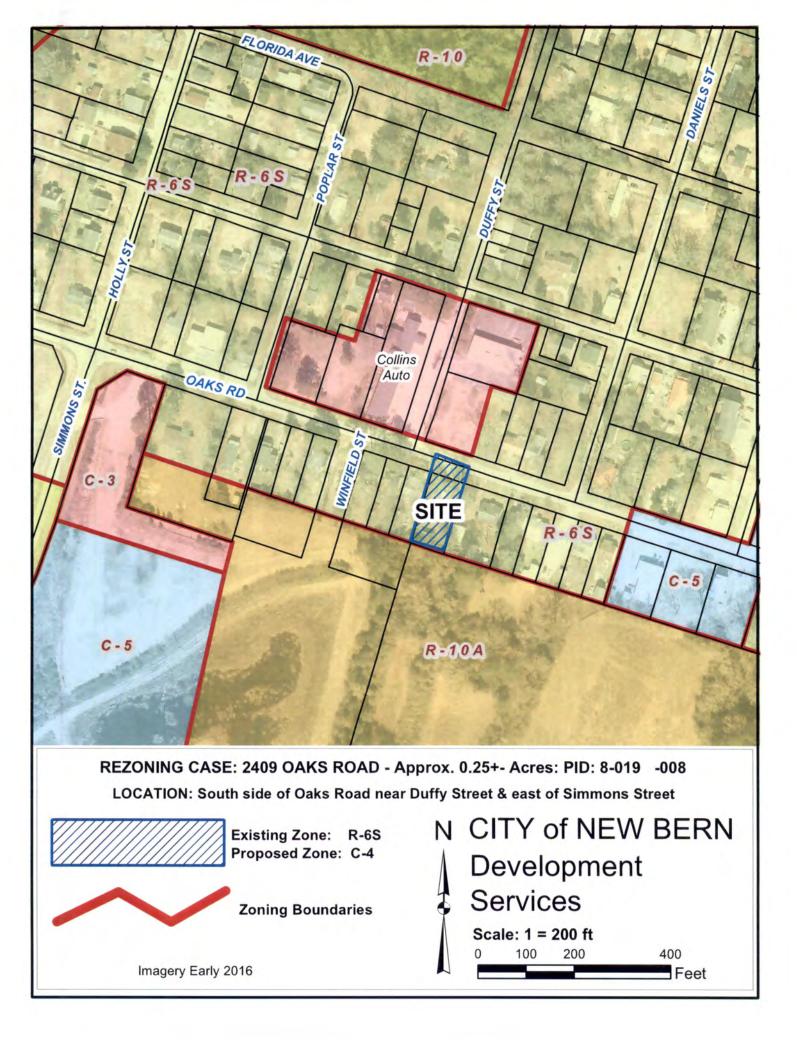
STATEMENT OF ZONING CONSISTENCY WITH ADOPTED PLANS

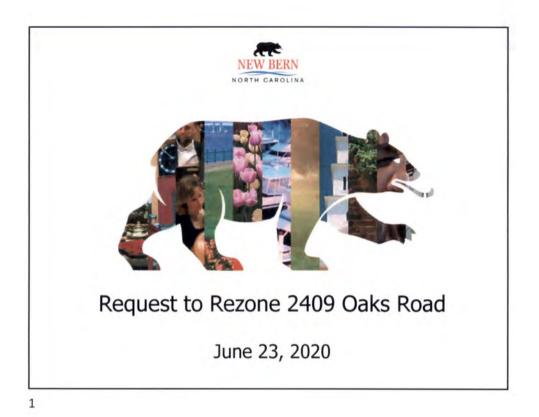
The Board of Aldermen of the City of New Bern finds the action to rezone Craven County Parcel ID #8-019-008 to C-4 Neighborhood Business District is reasonable and in the public interest, and consistent with the City Land Use Plans and nearby land uses. In that:

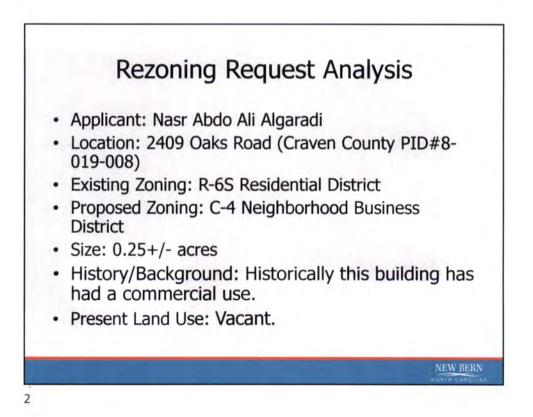
- 1. The C-4 Neighborhood Business District is deemed to be compatible with the "Developed" designation indicated in the Future Land Use Map found in the 2010 CAMA Regional Land Use Plan.
- The proposed C-4 Neighborhood Business District is deemed to be compatible with adjacent zoning classifications.
- The proposed C-4 Neighborhood Business District is deemed to be compatible with existing uses.

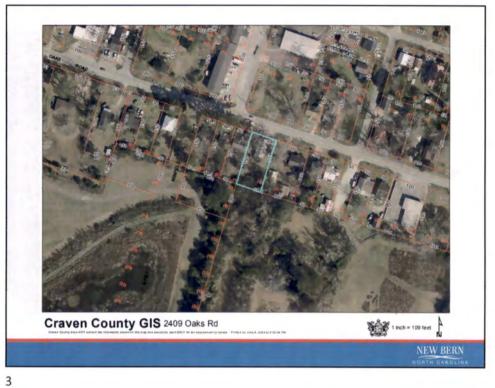
This certifies the above statement of zoning consistency was adopted by the Board of Aldermen on July 14, 2020.

Brenda E. Blanco, City Clerk

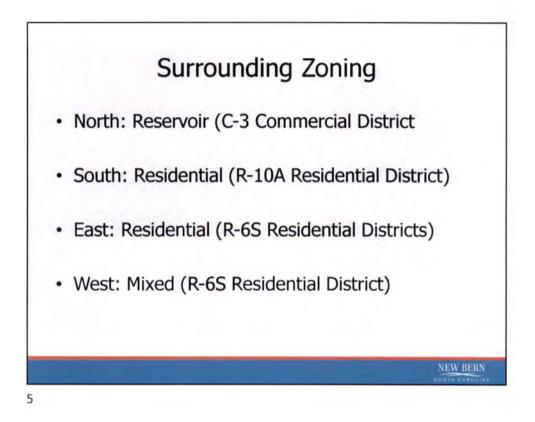


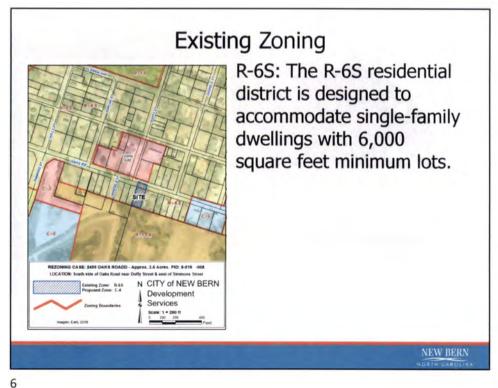


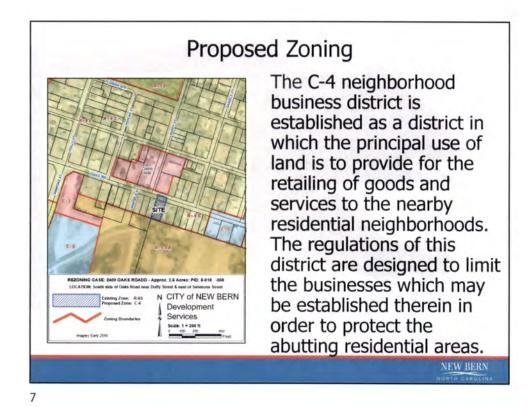


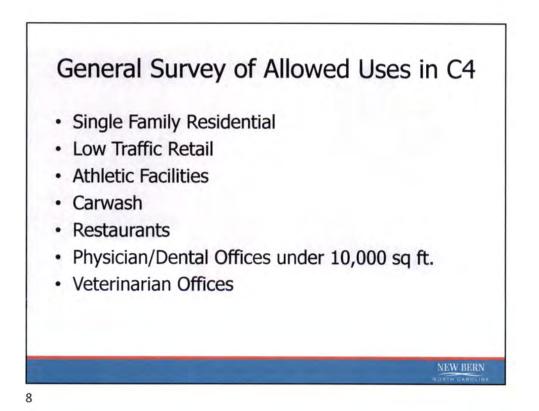


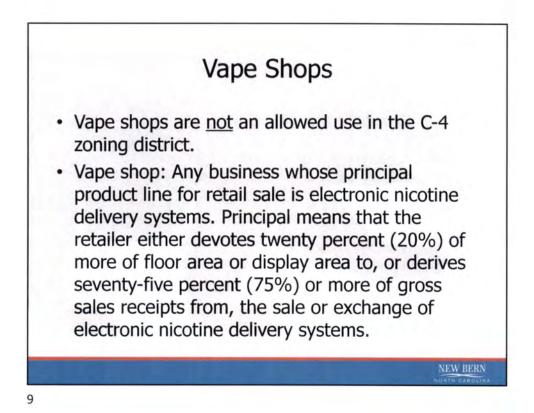


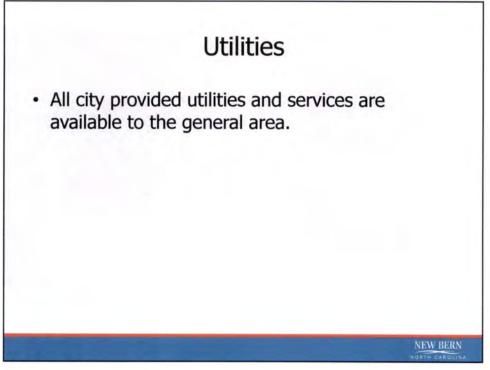


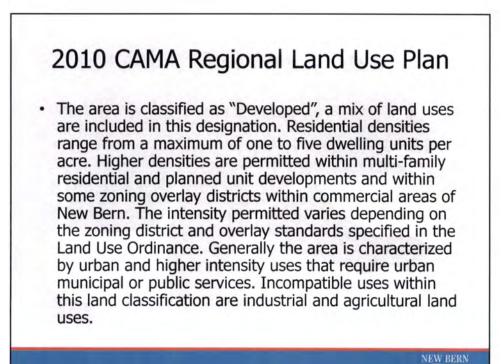


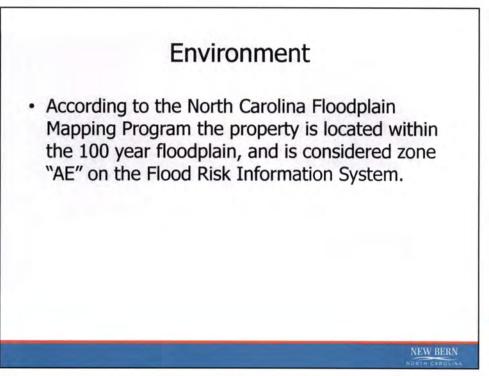


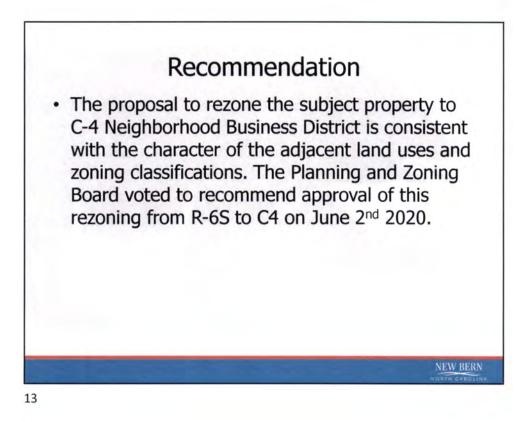












AGENDA ITEM COVER SHEET



Agenda Item Title:

Consider Adopting an Amendment to the Historic District Guidelines

Date of Meeting: July 14, 2020	Ward # if applicable: Ward 1
Department: Development Services	Person Submitting Item: Matt Schelly, City Planner
Call for Public Hearing: □Yes⊠No	Date of Public Hearing: 7/14/2020

Explanation of Item:	The HPC has approved changes to the Historic District Guidelines. Final approval is required by the Board of Aldermen as a Zoning Text Amendment.
Actions Needed by Board:	Conduct Public Hearing, Adopt Resolution
Backup Attached:	Memo, Resolution, Summary of Changes ("Approved Changes to the New Bern Historic District Guidelines"), Revised Historic District Guidelines

Is item time sensitive? ⊠Yes □No

Will there be advocates/opponents at the meeting?
Yes
No

Cost of Agenda Item: None

If this requires an expenditure, has it been budgeted and are funds available and certified by the Finance Director? \Box Yes \Box No

Additional Notes:



MEMORANDUM

TO: Mayor Dana Outlaw, City of New Bern Board of Aldermen

FROM: Matt Schelly, AICP, CZO, City Planner

DATE: June 25, 2020

SUBJECT: Consider Adopting an Amendment to the Historic District Guidelines.

The City of New Bern Historic Preservation Commission (HPC) has approved revisions to the New Bern Historic District Guidelines, a summary of these revisions is included. The Guidelines were last updated in early 2017, the new revisions are adjustments to the text of the Guidelines to cover some new issues as well as clarify some grey areas.

The Guidelines are part of the City's Land Use Ordinance (Section 15-420(b)) and therefore any changes to the Guidelines are, technically, a change to the text of the Land Use Ordinance, which requires a text amendment. Therefore, the revisions to the Guidelines will only be effective if the text amendment is approved by the Board of Aldermen.

At their regular meeting on June 17, 2020, the HPC modified a few of the proposed revisions and then voted unanimously to adopt them.

The revisions adopted by the HPC will be presented to the Planning & Zoning Board for their review, comment, and recommendation at their July 7 meeting.

Please contact Matt Schelly at 639-7583 or <u>schellym@newbernnc.gov</u> or Jeff Ruggieri at 639-7587 should you have questions or need additional information.

RESOLUTION TO ADOPT HISTORIC DISTRICT GUIDELINES

WHEREAS, pursuant to Section 15-420(b) of the Code of Ordinances of the City of New Bern, the New Bern Historic Preservation Commission has prepared and approved certain principles and guidelines not inconsistent with Part 3C of Article 19 of Chapter 160A of the North Carolina General Statutes for the construction, alterations, additions, moving, and demolition of structures located within the City's historic districts entitled "Historic District Guidelines," a copy of which is attached hereto; and;

WHEREAS, the New Bern Historic Preservation Commission recommends that the Board of Aldermen approve and adopt the Historic District Guidelines as required by Section 15-420(b) of the Code of Ordinances of the City of New Bern; and

WHEREAS, the Board of Aldermen of the City of New Bern has determined that it is in the best interest of the City to approve and adopt the Historic District Guidelines attached hereto.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN:

<u>Section 1</u>. That the Historic District Guidelines, a copy of which is attached hereto and incorporated herein by reference, be and the same is hereby approved and adopted.

<u>Section 2</u>. That an official copy of the Historic District Guidelines shall be kept and maintained in the City's development services office and available on the City's official website.

Section 3. That this ordinance shall be effective from and after the date of its adoption.

ADOPTED THIS 14th DAY OF JULY 2020.

DANA E. OUTLAW, MAYOR

BRENDA E. BLANCO, CITY CLERK



Historic District Guidelines

















City of New Bern Historic District Guidelines

Mayor:	Dana E. Outlaw
Board of Aldermen:	Ward 1: Sabrina Bengel
	Ward 2: Jameesha "Jamee" Harris
	Ward 3: Robert "Bobby" Aster
	Ward 4: Johnnie Ray Kinsey
	Ward 5: Barbara J. Best
	Ward 6: Jeffrey T. Odham
City Attorney:	Michael Scott Davis
City Manager:	Mark A. Stephens
Director of	
Development Services:	Jeffrey Ruggieri, AICP
City Planner and	
HPC Administrators:	Matthew Schelly, AICP, CZO, Reg. Arch.
New Bern Historic	
Preservation Commission:	Dr. Ruth Cox, Darden J. Eure, III, AIA, NCARB, James Bisbee,
	George Brake, Peggy Broadway, Christian Evans, Dr. Joseph
	Klotz, Ellen Sheridan, James O. Woods, Jr.
Advisors:	Ramona Bartos, John Wood, Laurie Mitchell - State Historic
	Preservation Office
Illustrations:	David Griffith

Guidelines Adopted by HPC: January 18, 2017 Guidelines Adopted by the Board of Alderman: March 28, 2017

Guidelines Revisions Adopted by the HPC: June 17, 2020 Guidelines Revisions Adopted by the Board of Aldermen: July 14, 2020

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1.1 Purpose and Intent of Historic Guidelines

The purpose of the New Bern Historic District Guidelines is to help preserve the historic character and architectural fabric of New Bern. Historic landmarks and districts provide a link to New Bern's history, people, events and architecture that defines the character of New Bern and shapes its present identity. The intent is not to prevent physical change or impose particular architectural styles, but to moderate changes while protecting architectural gems and reducing dislocation caused by random change. The goal is to maintain our community's individual character and "sense of place,"

This document serves as a guide to the New Bern Historic Preservation Commission and to property owners in the historic districts for maintenance, modifications, and additions to property. It summarizes procedures for review of proposed exterior changes and contains commentary and guidelines for a variety of activities that affect historic resources and the districts as a whole.

1.2 Your Responsibility as a Property Owner

Historic New Bern belongs to everyone. As an owner of a property within one of New Bern's local historic districts, you share a privilege as well as a responsibility. You benefit from protection of uncontrolled change, technical assistance for making changes that are sensitive to surrounding historic properties, and a pride of ownership of New Bern's historic fabric. However, you are not just a property owner; you are a steward to a part of New Bern's and North Carolina's history. As a steward of that heritage, you have a responsibility to preserve and maintain the distinctive characteristics of your property for the future. Any exterior change you make to a property, whether a structure or significant landscaping, requires you to contact Development Services to determine if a *Certificate of Appropriateness* is required. Failure to do so is a violation of New Bern's Land Use ordinance and is subject to fines.

1.3 New Bern's Historic Districts

German Palatine and Swiss colonists under Baron Christoph von Graffenried settled the City of New Bern in 1710 at the confluence of the Trent and Neuse Rivers. It possesses a rich historic and architectural heritage that is reflected in its historic districts.

The Downtown and Riverside historic districts contain a diversified collection of 18th, 19th and early 20th century residential and commercial buildings. Collectively these structures and their respective evolved landscapes stand as a testimony to New Bern's past and help to define the community's unique "sense of place."

The New Bern Historic Preservation Commission (HPC) was established to aid property owners in preserving New Bern's historic and architectural resources. Created on April 22, 1980, this body has the primary mission to advise owners regarding preservation options. The HPC is vested with the mandate "to promote, enhance, and preserve the character of the districts and to encourage preservation activities throughout the city." This is accomplished by designating historic districts and landmarks, controlling demolition, and reviewing proposed exterior changes and infill construction.

Downtown Historic District

The architecture of New Bern reflects the history of the town, and its sustained prosperity that historically has been subject and receptive to major architectural trends. Although Federal architecture was New Bern's special forte, a variety of other styles are represented. The minor streets are quiet, punctuated by buildings set on large well landscaped lots shaded by stately trees dotted with clumps of mistletoe. Adding serenity to the town are the Neuse and Trent Rivers, which provide a magnificent backdrop. This atmosphere prevailed throughout New Bern until the early 1950s when Broad Street became a major east-west artery, cleaving the city in two.

The city was established in 1710, and at the request of Baron von Graffenried, John Lawson devised and laid out the plan, which, with some additions, remains intact. He explains:

Since in America they do not like to live crowded, in order to enjoy a purer air, I accordingly ordered the streets to be very broad and the houses well separated one from the other. I marked three acres of land for each family, for house, barn, garden, orchard, hemp field, poultry yard and other purposes. I divided the village like a cross and in the middle I intended a church. One of the principal streets extended from the bank of the River Neuse straight on into the forest [Broad or Pollock Street] and the other principal street crossed it, running from the Trent River clear to the Neuse River (Middle or Craven Street). After that we planted stakes to mark the houses and to make the principal streets along and on the banks of the two rivers [East Front Street and South Front Street].

Not only did the street scheme survive, but the idea of not liking to "live crowded" is still in evidence. With the exception of construction accomplished since the mid-20th century and four mid-19th century row houses, all residences are separate freestanding buildings each with a generous yard.

Historically New Bern has been dependent for its livelihood on its rivers and governmental sponsorship. The city's role as occasional host of the itinerant colonial assembly, the colony's first permanent capital, and the seat of Craven County helped foster her emergence as a port, and therefore as a mercantile center.

Because of New Bern's externally oriented economy, the city was exposed to national stylistic trends, which quite obviously had a great effect on architecture. The vast majority of structures express a high degree of academicism successfully rendered by skilled and sensitive craftsmen. See Appendix for a map of the Downtown historic district. Nothing remains of the earliest buildings. A comparison of New Bern today with what C. J. Sauthier recorded on his 1769 map of the town finds only four buildings that tentatively are identified as surviving from that time.

Within the district, fourteen buildings with Georgian stylistic origins have been identified. The majority of them are simple, modest dwellings and most were updated during a later stylistic era. This is a scant number considering that more than thirty house carpenters and joiners are known to have been working in the county between 1748 and 1790. With the exception of a few houses attributed either to John Hawks or James Coor, the architect-builders of most buildings cannot be identified. It can be assumed that natural attrition combined with disasters like the hurricane of September 1769, and the fires in the fall of 1791 and 1794, and that of February 1798, which burned the Governor's Palace, eradicated much of the evidence of the early town.

Within the last two decades of the 18th century, the population of New Bern more than doubled, and the physical area of the town accordingly expanded north and west. Judging from remaining evidence, growth of the population and area continued in the first decades of the 19th century. Obviously, the town was enjoying a new high level of prosperity, a prosperity fueled by commercial and mercantile endeavors that enabled affluent merchants like John Harvey, Eli Smallwood and Isaac Taylor to build ambitious town houses. It was during this same era of prosperity that the town produced civic and cultural symbols of urbanity, most notably the New Bern Academy, the Masonic Temple and Theater, and the First Presbyterian Church.

The New Bern version of Federal architecture is Adamesque; it is restrained and elegant and, above all, sophisticated. A typical Federal domestic structure has the following elements: two and one half stories; a side hall plan, two rooms deep, three bays wide and four bays deep; a gable roof; gable dormers; exposed face interior end chimneys; a one-bay pedimented porch; an entrance composed of a six-panel door, with four flat above two flush panels, and geometrically ornamented transom above. Although interior treatments vary considerably, three-part mantels are universal.

While the side hall plan was certainly the most prevalent Federal form, center hall and asymmetrical versions were built as well. A concentration of those forms exists on Pollock Street in the area west of Tryon Palace, but others are scattered throughout the town. Usually they are two or two-and-one-half story frame structures, three of which are constructed of brick, and with gable roofs, although three have gambrel roofs, and Federal interior woodwork.

In the Federal era the authorship of several buildings can be attributed with varying degrees of certainty to Martin Stevenson, John Dewey, Robert Hay and Uriah Sandy, four of some forty architect-builders established in the county between 1790 and 1835. As in the Georgian era, this leaves the majority of structures unlinked to a specific designer.

The Federal style persisted in New Bern well into the 1840s, long after it had been superseded by the Greek Revival style in other towns. This was by no means a result of cultural lag; rather it would seem more likely to be a product of

conservative mercantile interests, a proposition set forth by Talbot Hamlin in Greek Revival Architecture in America.

The importance of such mercantile interests in New Bern, combined with the habits of the craftsmen, provide a cogent explanation for the longevity of the Federal style in the city.

The town clung so tenaciously to Federal architecture, in fact, that it scarcely acknowledged the existence of other styles. Concessions to the Greek Revival style usually appear on the interiors of buildings and take the form of symmetrically molded architraves with corner blocks. In only a very few cases are classical Greek motifs employed externally.

By the time New Bern rejoined the mainstream of architectural trends, the Greek Revival style was waning, and mid-19th century eclecticism was flourishing. The town began to experiment with new styles in the 1840s. The incidence of buildings constructed in the pre-Civil War eclectic era is lower than that of earlier eras. This is probably due in part to the suspended growth of both the population and wealth of New Bern.

While participating in the national architectural mainstream, New Bern retained a degree of independence of design and materials as evidenced in the coquina wall and arched gateway of Cedar Grove Cemetery constructed by the town in 1854.

The post-Civil War era saw New Bern fully integrated into the prevailing national stylistic modes of Second Empire, late Italianate Revival, Romanesque Revival, Queen Anne, Stick Style, Eastlake, and Shingle. A substantial portion of the late 19th century domestic structures, especially the more massive ones, have met with destruction, but a few of them, plus a number of smaller, more manageable houses survive.

In the early 20th century, New Bern experienced a building boom, which in volume came close to rivaling the Federal boom. The economic revitalization of the town was largely a result of the lumber industry, which produced magnates desirous of living in and capable of paying for the most impressive houses their money could buy. Obliging these clients was local architect Herbert Woodley Simpson, who is credited with the design of every important structure built in New Bern in the first two decades of the 20th century. A versatile designer, Simpson excelled in the Queen Anne and Neo-Classic Revival styles, and often combined the two. While practicality and "progress" have taken their toll on many of his impressive Neo-Classic Revival structures, a few have survived. They testify to the prosperity and taste of early 20th century New Bernians.

Riverside Historic District

The Riverside Historic District is composed of approximately 15 blocks of largely residential development along the banks of the Neuse River in northeast New Bern. Laid out in a grid pattern aligned with National Avenue, a preexisting street leading to the National Cemetery, subdivisions in 1894 and 1912 created New Bern's first suburb out of farmland. Within the Riverside District are modest, but representative one- and two-story examples of Classical Revival,

See Appendix for a map of the Riverside historic district. Late Queen Anne, Craftsman and Colonial Revival styles in a variety of house forms, principally with the traditional New Bern side hall plan. Also within the district are the Italian Renaissance Revival style Riverside School and the Gothic Revival influenced Riverside Methodist Church, as well as several small industrial and commercial buildings. There are 178 contributing and 35 noncontributing buildings within district boundaries. While many of the buildings have received some alteration, individually and as a group, they retain their integrity of design, setting, materials, workmanship and feeling.

National Avenue is the main street running through the district from the southeast to the northwest. To the east and parallel with it are North Pasteur and North Craven streets, the other principal roads. North Craven's east side provides one boundary of the district. The adjacent river property was originally platted as house lots, but was developed as industrial property and has gone through a series of uses. Running along the western side of the district is the line of the Atlantic and North Carolina Railroad, which predates Riverside and precluded the development of north-south roads to the west of National Avenue. The western boundary of the district follows the line of pre 1935 development in the side streets west of National Avenue.

Perpendicular to the main avenues are evenly spaced side streets, beginning with Guion Street at the south and reaching to North Avenue, whose south side forms the northern end of the district and defines the furthest extent of pre-World War II development.

The former farmland on which Riverside was platted is flat. Large oaks line National Avenue on both sides, and the remainder of the district is characterized by the presence of a considerable number of mature trees of a variety of species located in no particular pattern.

The two subdivisions which made up Riverside each had a different system of laying out lots, neither of which was completely uniform. Lots were also recombined before building, creating further variety in lot size. In the 1894 plat, larger lots were laid out along the west side of National Avenue, but the largest and most pretentious houses in the district are found equally along both sides of National Avenue. The east side of National Avenue and the remainders of the blocks were laid out with long, narrow lots, some with only 41-foot frontages. The relative uniformity of appearance in Riverside owes much to New Bern traditions of building close to the street, thus creating consistent setbacks, and of placing houses close together.

There is no formal open space within the district. The largest open space is a half block on Dunn Street between North Pasteur and North Craven streets, formerly the site of a tobacco factory. Another set of undeveloped lots is located at the southeast corner of North Pasteur Street and Avenue D, adjacent to the Maola Company and individual undeveloped lots are scattered throughout the district. The interiors of the alley-less blocks contain trees, gardens, garages, and other outbuildings.

With only a handful of exceptions, buildings in the Riverside district are relatively modest, owner or contractor designed, with simple or no

ornamentation. All are one or two stories and although there is a scattering of brick houses throughout the district, the greater number are frame, sheathed with clapboards or wood shingles. Standing seam metal roofs predominate.

Many of the residences in the district have garages, some contemporaneous with the house or constructed before the 1930s, and almost always located at the rear of the property. Most are relatively small, of frame construction, and with gable roofs. Exceptions include the hipped roofed, brick garage of the William Dunn House and the garage apartment of the Turnbull House.

Domestic building in the Riverside district is almost entirely in four styles: late Queen Anne, Classical Revival, Craftsman and Colonial Revival. These styles are applied to a variety of house forms. The most common house form in the district, and one that was popular in other areas of New Bern in the early 20th century, is the narrow and deep, two or three bay gable end two story house. These frame houses have side hall plans, often with rear ells, and generally either a small portico or a full width porch at the front. One variant of this house type has a gable roofed, two-story bay at one corner of the front elevation, like 1112 and 1114 National Avenue. Another variant of the form has a hipped instead of gable roof, with or without a front dormer. Both Guion and Dunn Streets have rows of these simple dwellings constructed as rental housing. More sophisticated versions of the same house have pedimented gables, classically detailed porches and wings or bays, like the William T. Hill House at 1202 National Avenue or the Smith-Hawkins House at 1214 North Pasteur.

Another well represented house type in the district is the foursquare; two or three bays wide, with a hipped roof and a full width porch across the front. Unlike foursquares elsewhere, however, these houses for the most part employ the side hall plan. A number of good frame examples of this form are located on both sides of the 1200 and 1300 blocks of National Avenue. Also located on National Avenue are several large, Classical Revival styled foursquares with L-shaped front porches, including the J. O. Baxter House and the O. A. Kafer House. A variety of bungalows may be found in the district, mostly in the Craftsman or Classical Revival styles, and predominantly of frame construction. Most typical are cross gable forms like the D. M. Parker House at 1408 National Avenue. Bungalows with jerkin headed front gables or hipped roofs are also common. At the northeast corner of the district are a row of three, one story frame bungalows whose gabled front porches have a distinctive exposed trusswork. Perhaps the most unusual bungalow in the district is the one at 1412 National Avenue, which has three oversized, hipped wall dormers protruding through its hipped roof.

The oldest house in the district, the mansard roofed William R. Guion House at 1203 National Avenue, is its only Second Empire influenced residence.

Two buildings in the district attributed to architect Herbert Woodley Simpson have noteworthy designs outside the vernacular tradition. The Prairie Style William Dunn House at 1404 National Avenue has a high, pressed brick first floor with a broad arch at the front that supports the shingled upper floor. Its complex slate roof with deep eaves has multiple hipped dormers. Behind the house is a hipped roofed, brick garage with tin shingled dormers on each elevation. Across the street from the Dunn House is the Robert Turnbull House, a Colonial/Classical Revival style residence sheathed in wide cypress boards that presents an asymmetrically arranged broad front to the street, dominated by an off center, Tuscan-columned front porch.

Riverside Graded School and Riverside United Methodist Church, the two institutional buildings in the district, are distinctive in design. The Riverside Graded School of 1922 is a well composed, two story Italian Renaissance design in red brick with glazed terra cotta trim and barrel tiled cornices. Riverside Methodist Church, constructed 1919-1920, is an unusual adaptation of the Late Gothic Revival style to an essentially square church, with an octagonal central sanctuary that rises above the rest of the building.

1.4 Historic Preservation Commission

The New Bern Historic Preservation Commission (HPC) is a public board in the City of New Bern responsible for preserving the City's historic and cultural resources. Enabling North Carolina statutes and New Bern city ordinances related to preservation are provided in a separate document on the City of New Bern website. The HPC's guidelines, policies and procedures can also be found on the City of New Bern website or by contacting the HPC administrator in the Department of Development Services.

The HPC is composed of nine members appointed by the Board of Aldermen to serve a three-year term, and not more than two consecutive terms. Members must reside within the City's corporate limits or within its designated Extraterritorial Planning Jurisdiction, and have a demonstrated special interest, experience or education in architecture, history, historic preservation or related field.

Meetings

The HPC meets on the first and third Wednesday of each month. The first Wednesday of each month is the HPC's work session. Property owners may consult the HPC about a specific project, but there is no public comment on a proposal. The third Wednesday of the month is the HPC's regular business meeting where public hearings are held for *Certificate of Appropriateness* (COA) applications. The applicant, or representative of the applicant, must be present to approve a COA. The HPC also considers other matters at this meeting that require formal action. The location, meeting times and agendas are published on the City of New Bern website. Work sessions and regular business meetings are open to the public.

1.5 Key Concepts

The HPC's jurisdiction extends over exterior attributes of an entire property. Changes are evaluated in terms of impact on the property and the surrounding area. Key factors considered by the HPC in evaluating exterior changes or infill construction are described more fully.

Contributing and Noncontributing Structures

A contributing structure is at least 50 years old and is listed in the Department of Interior's historic district inventory of structures. The inventory is created as part of the process for designating the historic districts. As buildings reach 50 years in age, they may also be considered contributing structures.

A *noncontributing structure* is usually less than 50 years in age or is considered not to have significant historic, architectural or cultural value. Changes to noncontributing structures require a COA to ensure compatibility with the surrounding historic fabric of contributing structures.

Determining if Change is Not Incongruous

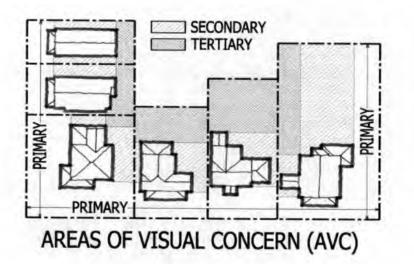
The HPC is tasked with using the historic guidelines to determine whether changes to a structure, both contributing and noncontributing, are *not incongruous*, or complimentary to the special character of the historic districts. A number of factors are considered including:

- relationship to other structures on adjacent properties, the street and the historic districts
- mass, proportion, scale, style, details and materials proposed for use

The applicant must prove that their proposed changes are not incongruous. The HPC can deny an application only if it determines that the proposed changes are incongruous.

Areas of Visual Concern

Each portion of a property is divided into Areas of Visual Concern (AVC).



The **Primary AVC** is the most important area because it is generally located directly adjacent to the street, and therefore, is the most visible. Inappropriate changes in Primary AVC severely alter the character of a building or site and compromise the integrity of the streetscape. Thus, great care is taken to ensure appropriate changes in this area.

The **Secondary AVC** includes areas that are not directly adjacent to the street but are visible from the street. A secondary area plays an important role in defining the character of the site because of the transitional space between the public street and private rear yard.

The **Tertiary AVC** includes areas generally not visible from the street. Areas concealed from street view afford the greatest flexibility to accommodate changes within the context of the guidelines.

Scope of Changes

New Bern's historic guidelines cover only exterior changes to properties in the historic districts. Exterior changes are divided into four categories.

Normal maintenance and repair constitutes work that does not involve a change in material or design of a structure's exterior architectural features, or landscaping that does not significantly change a property's appearance from the street.

Replacement-in-kind means repairing an existing feature or replacing a feature using the exact same material, size, scale, and detail. Only replace architectural features that have deteriorated beyond a state where they can be repaired. Do not remove or replace original architectural features, such as doors or windows, out of convenience. Property owners shall contact the Department of Development Services before proceeding with replacement-in-kind work.

Minor work constitutes alterations to a structure or site that do not significantly impact a property and are consistent with the New Bern Historic District Guidelines. A listing of minor works is found on the City of New Bern website. The HPC administrator may issue a COA for minor work items. The HPC administrator may at any time forward minor work items to the HPC for formal review. *Property owners shall contact the Department of Development Services before proceeding with minor work*.

Major work constitutes alterations to a structure or site not classified as a minor work, including infill construction or demolition, and those changes located within in a Primary AVC. Major works must be approved by the HPC and receive a COA. A summary of the COA process is described in the guidelines and is detailed in the *HPC Policies and Procedures*. Refer to the New Bern Historic District Guidelines for allowable exterior changes, and contact the HPC administrator for technical assistance.

Determining Contributing Structures

In-depth surveys of contributing structures within New Bern's historic districts are infrequently conducted, overlooking potentially important structures that

have come of age and now meet the Department of Interior and the State Historic Preservation Office (SHPO) criteria for contributing structures. In certain cases, records from past surveys may be incomplete, conflicting or disputed by the owner.

When a COA application involves a structure not listed in the inventory, the first step is to determine whether it is a contributing structure.

- Any unlisted building 50 years of age or greater will be evaluated for contributing structure status. An unlisted building determined to be more than 50 years of age does not have to be treated as a contributing structure if the HPC determines that it has no architectural, cultural, or historical significance. Any structure less than 50 years of age will be considered noncontributing unless the HPC finds that it clearly possesses exceptional architectural, cultural, or historical merit.
- The age of a structure will be based on relevant information including tax assessor data, deeds, historical surveys, maps and pictures of verifiable sources and dates. The HPC will also consult with the SHPO and ask for a documented evaluation. In the event that the HPC and SHPO cannot make a reasonable determination of the age, the applicant shall have the privilege of stipulating the age.
- Findings and relevant information leading to contributing status will be documented.
- If the determination of a structure is based solely upon age, the property owner may request a detailed SHPO review to confirm its status. Following SHPO review, the HPC will consider the evaluation in making a final determination.

The HPC will update the inventory list to include newly designated contributing structures.

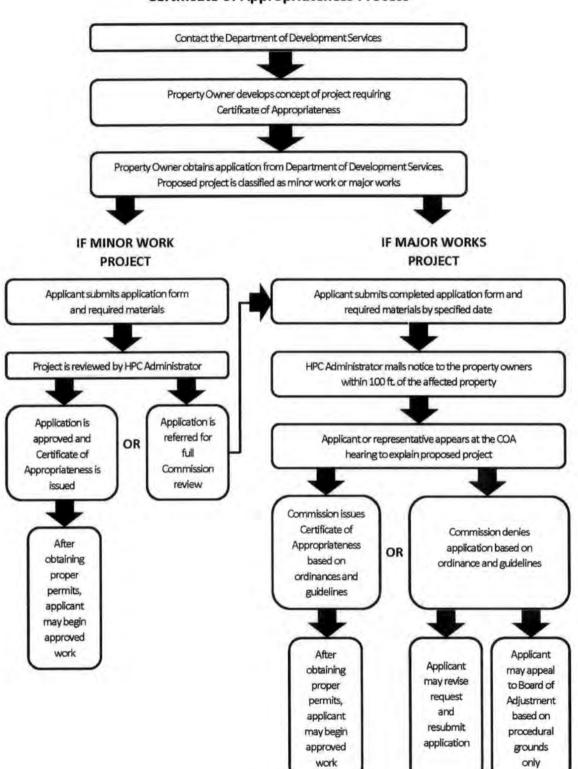
1.6 Obtaining a Certificate of Appropriateness

A Certificate of Appropriateness (COA) is required before making changes to the exterior of a property in the historic districts. Changes are categorized as *minor works*, which are alterations that do not significantly impact a property, and *major works*, which are significant alterations that affect the appearance or architectural fabric of a property.

A COA application must be submitted to the Department of Development Services, and may require a COA hearing and approval by the HPC. COA applications are obtained from the City of New Bern website or from the City of New Bern's Department of Development Services.

Property owners considering projects in the historic districts are encouraged to take advantage of free technical advice and design assistance offered by the HPC and Department of Development Services staff prior to submission of a COA application. Staff is available to answer questions and guide applicants through the COA process.

Additional permits, such as building permits, may be required for a project. A COA does not supersede land use and zoning requirements and does not replace requirements for other permits.



Certificate of Appropriateness Process

Review Process for Minor Works

Minor works are changes that do not significantly impact a property and are consistent with the New Bern Historic District Guidelines. A COA for a minor work typically does not require a formal public hearing. The HPC administrator will advise the property owner to ensure compliance with historic guidelines. The HPC administrator may submit a minor work application to the HPC for formal approval depending on the nature of the proposed changes. The HPC administrator can issue a COA for minor work items after a completed application is reviewed with the applicant.

A list of minor works that can be approved by the HPC Administrator is maintained and updated by the HPC. The complete list is available on the City of New Bern website. The HPC, during a design review work session, can direct the HPC Administrator to process applications of limited scope as a minor work.

Review Process for Major Works

Major works are significant exterior alterations to a structure or site, including additions, infill construction and demolition. Major works must be approved by the HPC and receive a COA.

Design Review

A *Design review* of a COA application can lead to faster approval and is strongly recommended for any **major works**.

The purpose of the design review is to:

- · Familiarize an applicant with historic guidelines
- Familiarize the HPC with an application
- Provide project feedback
- Address application questions or issues

A design review can take place before formal submission of an application. Large, complex projects often require multiple design reviews.

The HPC administrator will help determine if a design review by the HPC is needed. Design reviews are typically held during the HPC's work sessions on the first Wednesday of the month.

Application Submission and Formal Review Process

A complete COA application **including supporting materials** must be submitted to the Department of Development Services at least fourteen calendar days prior to the HPC's next regular meeting in order for a COA hearing to be placed on the agenda. COA applications are available for public review in the Department of Development Services.

The HPC administrator is responsible for ensuring that a COA application is complete and complies with applicable city ordinances and codes. Application issues are communicated to the applicant. Ultimately, the HPC will determine the completeness of an application, and additional information may be required.

Hearings

The HPC is required by state statutes and city ordinances to conduct a hearing on proposed major changes to a property in the local historic districts. A hearing is conducted as a quasi-judicial hearing, where a decision is based on the evidence and testimony presented by the applicant and those who have standing. Allowable testimony and evidence must directly relate to relevant guidelines. The applicant has the burden of proving that proposed changes are not incongruous with New Bern Historic District Guidelines. The HPC cannot deny changes unless they are determined to be incongruous.

A *COA hearing* is the typical type of hearing for an application. Property owners within 100 feet of the project are assumed to have standing to provide testimony at a COA hearing.

A *public hearing* may be called by the HPC for a large project that may materially affect property owners beyond 100 feet. The HPC may elevate a COA application to a *public hearing*. In such an event, property owners beyond 100 feet are assumed to have standing to provide testimony.

Hearings normally occur at the HPC's regular meetings on the third Wednesday of each month. The property owner or their designated representative must attend the public hearing, present the application, and address application questions and concerns.

The HPC may approve, approve with conditions, or deny a COA application. Action on an application must be taken within 180 days of submission. Action on most applications is decided at the hearing. Work may not proceed until the owner has an approved COA in hand.

Preconstruction Conference

If a COA has been issued by the HPC, a preconstruction conference may be required prior to the issuance of building permits. This meeting is arranged by the applicant with the Department of Development Services to discuss the COA and to ensure that the project is executed as specified. Meeting attendees must include the following:

- Property owner or designated representative
- Contractor
- Chief building inspector
- HPC administrator

1.7 Archeology

The historic districts of New Bern are more than a collection of buildings and their associated landscapes. Historic resources are very likely to include artifacts that are below ground and within the rivers. Archaeological artifacts can provide important clues regarding the location and configuration of long removed outbuildings, additions, porches, and landscape features such as walkways and plantings. Remnants such as foundations, wells, postholes, trash pits, shipwrecks and submerged pilings may also show the evolution of building development and human activities associated with a site. This knowledge conveys an understanding of our interactions with the environment throughout history.

The geographic location of the City at the confluence of the Neuse and Trent Rivers has made this area an ideal settlement extending back to prehistoric times. Several archaeological sites have been located and studied within the historic districts; however, it is very likely that unknown archaeological resources will be identified through the natural course of ground disturbing activities. Given this probability, efforts must be made to protect valuable resources in their natural, undisturbed setting upon discovery.

1.8 Additional Support

Public and private organizations involved in local preservation efforts can be found in Section 8. Appendices.

State Historic Preservation Office

The *State Historic Preservation Office (SHPO)* assists citizens, organizations, local governments and state and federal agencies in identifying and protecting places significant in North Carolina history. The SHPO frequently provides information and technical assistance related to COA applications to property owners and the HPC.

The main SHPO office is in Raleigh, with regional offices in Asheville and Greenville. SHPO prepares nominations submitted to the National Register; oversees the statewide architectural survey; administers the Certified Local Government program, Rehabilitation Tax Credit program and Environmental Review; and provides public awareness and training programs.

Certified Local Government (CLG) Program

The *Certified Local Government (CLG) Program* is a federal program administered by the SHPO that allows local governments to participate in the national historic preservation program. A benefit of CLG status is eligibility to compete for CLG historic preservation grant funds. In North Carolina, the following is required for local government certification:

- Have an active and legally adequate historic preservation commission, with a
 designated paid staff person, that enforces appropriate state and local
 legislation for the designation and protection of historic properties.
- Maintain a system for surveying and inventorying historic properties that is compatible with the statewide survey.
- Provide adequate public participation in the local historic preservation program, including the process of recommending properties for the National Register of Historic Places.
- Satisfactorily perform responsibilities delegated under the 1966 National Historic Preservation Act.

National Park Service Technical Briefs

The National Park Service provides *Preservation Briefs* for guidance on preserving, rehabilitating, and restoring historic buildings. These publications

recognize and resolve commonly encountered problems, and recommend methods and approaches for rehabilitating historic buildings. The HPC may use preservation briefs for guidance when evaluating a COA application. Refer to http://www.nps.gov/tps/how-to-preserve/briefs.htm.

1.9 Worksheet for COA Evaluation

A worksheet is available to aid in the navigation of the Historic District Guidelines and to help evaluate proposed changes in a COA application. (See the next page.) Rows in the worksheet correspond to the sections in the Guidelines. Columns correspond to types of changes. Boxes shaded in green under a column heading are most likely to apply to a type of change and should be considered first. Unshaded boxes may also apply to a COA application depending on the nature of proposed changes.

This worksheet can be downloaded from the HPC website or it can be obtained from the HPC administrator. The green shading identifies guideline sections that are likely applicable to the type of proposed changes.

Type of Proposed Changes	Modifications	Additions	Infil Construction	Replacement in Kind
Overview and Concepts (Part 1) Property Owner Responsibilities Minor vs Major Work Obtaining a COA Contributing vs Noncontributing Archeology				
Site and Setting (Part 2) Development Pattern Placement of Primary Structures Public and Open Spaces Utilities Landscaping Fences and Garden Walls Accessory Structures Parking Signage Waterfront Modifications				
Design Attributes (Part 3) Cale, Mass and Proportion Form and Rhythm Texture Details				
Design Components (Part 4) Foundations Walls, Trim and Ornamentation Windows, Doors, and Openings Entrances Roofs Decks and Patios Accessibility and Life Safety				
Materials (Part 5) Masonry Wood Metals Paint Contemporary Materials				
Preservation (Part 6) Maintenance of Materials Prevention of Demolition by Neglect Relocation Demolition				

2. Site and Setting

2.1 Development Pattern

Project Planning Considerations

Development patterns have been in existence far longer than zoning, and existing buildings establish an understandable rhythm along the streetscape without historical regard for land use. The historic districts of New Bern have three types of development patterns, each of which is a record of a particular era in urban development and evolution.

Dense Fabric

A pattern of *dense fabric* features minimal yards, if any, most often reduced to small planting beds or planters. A dense fabric is created by structures that typically abut the front property line and share a common wall with neighboring structures. The streetscape is a defined facade, with periodic openings accommodating narrow walkways that generally lead to an alley or interior of the block. An example is the downtown commercial district.

Institutional uses, particularly churches, are often emphasized within a dense fabric pattern by slightly setting back from the right of way and side property lines and breaking the continuous building line to create a focal point within the development pattern.

Tight Weave

A *tight weave* pattern is the most common, representing a consistent rhythm of facade to landscape. Structures that create a tight weave pattern have a front yard, and generally sit forward on a lot and front the street. Side yards tend to be narrow, ranging in widths that only accommodate pedestrians to widths sufficient for vehicle passage. The rear yard tends to be larger and is buffered from the street by a primary structure, creating privacy and garden areas. An example is the typical residential street in Riverside or Downtown.

Buildings within the *tight weave* development pattern have variable setbacks from the right of way but occur within a narrow range that parallels the streetscape. Although there are exceptions, the majority of structures front the street ten to twenty-five feet from the right of way. This placement creates a front yard transitional space where the structure bridges between the public streetscape and the private rear yard. The rhythm of structures is spaced closely enough to create a defined edge, but this edge is softened with penetrating side yards.

Waterfront Development

Waterfront development is a pattern that typically features an isolated structure on an oversized parcel. These properties front the Trent and Neuse Rivers and are surrounded by expanses of landscaping or parking. The footprint, scale and proportion of structures tend to be oversized as compared to more historic development. Wharves historically lined the waterfront of New Bern, driving its early economy and creating the financial resources that spawned the *dense fabric* and *tight weave* development patterns. Following transformation by urban



Example of dense fabric development pattern.



Example of tight weave development pattern.

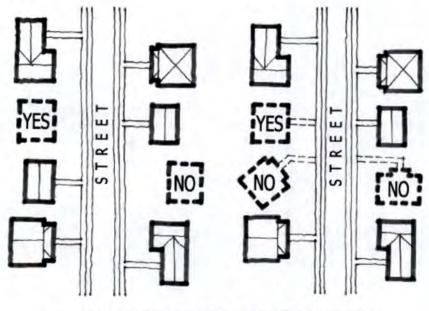
2. Site and Setting

renewal, property values and economies of scale have given birth to the modern *waterfront development* pattern.

Placement of structures within the *waterfront development* pattern is a response to a more modern, larger scale where building functions are influenced by the automobile. Building scale is significantly larger than nearby historic structures, and views of the river largely play into building organization and use. Waterfront development typically fronts the public walkway along the rivers, and placement tends to be toward the center of the land parcel leaving relatively large expanses within front and side setbacks, much of which is used to support parking or storm water management. Consistent placement and complimentary design elements unify the streetscape and visually buffer more than two hundred years of architecture from the rivers.

Placement of Structures

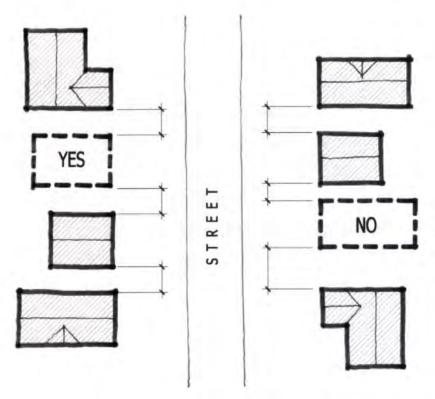
The relationship between open space, building mass and scale in the historic districts is essential to preserving the character of the streetscape and the historic districts as a whole. Separations between buildings provide areas for plantings and gardens. The repetition of these elements establishes a streetscape rhythm that enhances the pedestrian experience. Parcels are subdivided and lots are developed over time, creating variations in the ratio of open space to building mass from block to block. Preserve the established open space to building mass relationship created by historic structures on a given block.



PLACEMENT OF STRUCTURES



Example of waterfront development pattern.



SPACING OF STRUCTURES

One of the most important character defining features of the historic districts is the presence of view sheds, or view corridors, that highlight particular buildings or capture pockets of open space. Views to and from the Trent and Neuse Rivers, the patterns and rhythms established by buildings within the streetscape, and profiles of landmarks on the skyline communicate the totality of New Bern's historic districts.

Guidelines for Development Pattern

- 2.1.1 Maintain the established development pattern for placement of infill construction. The relationship of a structure to the property boundaries should be similar to those up the street, down the street and in most cases, across the street.
- 2.1.2 There are areas within the historic districts where the development pattern may have been weakened by vacant lots and nonconforming structures. In such areas, preference shall be given to contributing structures when defining the development pattern for infill construction.
- 2.1.3 The footprint, scale and proportion of infill construction shall be in keeping with neighboring properties. In general, it is not appropriate to construct a three-story structure in an area that is dominated by one-story structures.

2.2 Public and Open Spaces

Project Planning Considerations

New Bern is fortunate to incorporate parks and public spaces within its historic districts. These open spaces contribute to New Bern's scenic beauty and quality of life. Small alley parks, large waterfront parks, neighborhood playgrounds and sculpture gardens promote a pedestrian friendly atmosphere. When planning parks and public spaces, it is important to consider their location, views, impact on adjacent properties and potential public uses. For example, space for a pavilion or bandstand can be created in a waterfront park by encircling a large lawn with a waterfront promenade. This creates an ideal location for gatherings and events.

Guidelines for Public and Open Spaces

- 2.2.1 Introduce public art, statuary, artifacts, memorials, and fountains as focal points in spaces that do not obscure historic buildings or their architectural features. Consider the scale and historic context of art features when determining the setting and location.
- 2.2.2 Incorporate streetscape furniture and pavement treatments recommended in the New Bern Urban Design Plan when improving sidewalks and streets within the right of way. Furniture, trash receptacles, mailboxes, newspaper racks and similar elements shall be of a scale that does not detract from historic properties.
- 2.2.3 Locate playgrounds and play equipment in Secondary and Tertiary AVCs. Do not obscure historic buildings or their architectural features.

The Urban Design Plan can be found on the City of New Bern's website.

2.3 Utilities

Project Planning Considerations

Integrating utilities into historic district landscapes is one of the greatest challenges. Multiple installations of disorganized utilities often result in visual clutter. Locate utilities and equipment in a manner that preserves landscape features and historic building fabric. Frequently, utility equipment must be elevated above the floodplain. Locate equipment in Secondary and Tertiary AVCs, and screen items from public view with vegetation, fencing and similar site constructions. Install underground utilities when possible.

Work within the right of way requires a COA. Improvements proposed by private property owners and public utility providers, regardless of ownership or source of funding, are subject to evaluation for compatibility with historic district streetscapes.

Illumination of the streetscape within historic districts provides visibility and security, and is encouraged. Exterior lighting can be effectively used to highlight and reinforce a building's architectural character or to establish a landscape theme. Do not implement lighting that creates distraction by overemphasizing a structure or site. Lamping shall emit a warm spectrum, or white, light.



Place satellite dishes in a Secondary AVC or in areas that are not visible from the public right of way.



Utilities shielded from view with hedges.

Guidelines for Utilities

- 2.3.1 Locate equipment in Secondary and Tertiary AVCs and screen items from public view with vegetation, fencing and similar site constructions. It is recommended that utilities be consolidated in common locations.
- 2.3.2 Paint equipment and exposed utilities to compliment mounting surfaces and reduce their visibility.
- 2.3.3 Install utilities underground when possible to minimize visual clutter. Use mechanical methods to bore beneath landscaping, sidewalks, drives and fences.
- 2.3.4 Evaluate utilities and equipment installed in the public right of way, such as utility poles, street lights, railroad crossing signals, signal boxes and similar items, for their visual impact on the streetscape. Install multiple utilities on common poles.
- 2.3.5 Consider a selection of tree species that will not interfere with overhead utility distribution. Where conflict occurs, replace canopy trees with smaller scale, understory trees and shrubs.
- 2.3.6 Install light fixtures in locations that complement the character of historic structures and sites. It is not appropriate to replace original light fixtures. Lamping shall emit a white light. Illumination shall provide visibility and security without overemphasizing a structure, parking area or site.
- 2.3.7 Incorporate street and pedestrian light fixtures referenced in the New Bern Urban Design Plan when improving sidewalks and streets within the right of way.

2.4 Landscaping

Project Planning Considerations

Landscape elements play an important role in defining the "cultural environment" of New Bern's historic districts. Mature trees, hedgerows, foundation plantings, gardens, grassy lawns, patios, fences, and walls contribute to the character of streetscapes and structures. Improvements within the right of way, such as curbing, sidewalks, planting strips and trees, also enhance the landscape. These landscape features are typical to a *tight weave development pattern* and enhance the pedestrian experience.

Private lawn and garden areas also characterize the historic districts. Gardens are generally located in rear yards, or in the side yards of larger lots. These lush landscapes, both formal and informal in presentation, are characterized by a variety of plantings ranging from mature canopy trees to flowering shrubs to perennial bulbs. Preserve and propagate plant species that are indigenous to New Bern.

Many gardens are surrounded by fences, walls or hedgerows that delineate property lines and demarcate boundaries between private lots and public rights of way. Preserve historic fences, walls, and plant rows. Introduce new elements to the landscape that are compatible with the site and with the styles of fencing found throughout the districts.



This house in the Riverside Historic district has a traditional landscape of mature street trees, a hedgerow, mature shrubs, and seasonal plantings near the porch.

2. Site and Setting

The *dense fabric development pattern* is landscaped within the public right of way. The New Bern Urban Design Plan recommends streetscape improvements that unify blocks of tightly abutting structures. Enrich the pedestrian experience by selectively placing sidewalk pavement, lighting, street trees, public art and street furniture between curbing and the building frontage.

Guidelines for Landscaping

- 2.4.1 Maintain mature canopy trees. Mature tree removal and its replacement species must be recommended by a certified arborist. Replace removed trees with a similar canopy species at or near the location of the removed tree. Locate canopy trees to define the street edge at maturity.
- 2.4.2 Maintain a planting strip between the curb and sidewalk in the *tight* weave development pattern. The predominant plantings in this area shall be grass and trees. Walkways connecting the curb and sidewalk shall not exceed a width of six feet. Align walkways with building entrances.
- 2.4.3 Use plant materials that are indigenous to the historic districts. It is not appropriate to use contemporary edging materials such as landscaping timbers or plastic borders.
- 2.4.4 Incorporate trees, shrubbery, and other landscape features around the periphery of a lot and within parking areas.
- 2.4.5 Locate accessory structures and similar site improvements to avoid removing healthy, mature trees of desirable species.
- 2.4.6 Eliminate lichen, ivy, and other forms of vegetation from structures to prevent damage and to allow for adequate surface ventilation and drainage.
- 2.4.7 Create focal points that highlight public art, statuary, fountains, and structures such as pergolas and gazebos. Place these elements in areas that do not obscure historic buildings or their architectural features.
- 2.4.8 Use street trees and landscaping elements to reinforce right of way view corridors that extend to the rivers. Locate focal points at street terminations; however, the scale of landscaping elements shall not obstruct water views.



The Mary Kistler Stoney Garden is a reconstruction representative of 19th century New Bern and is part of the Tryon Palace complex.

2.5 Fences and Garden Walls

Project Planning Considerations

Fences and garden walls have traditionally been used to delineate property lines and demarcate boundaries between private lots and the public right of way. A variety of fencing types and materials are found within New Bern's historic districts. Fence styles in wood, brick, masonry, marl, cast iron, wrought iron and natural plant materials have been popular for more than two hundred years. Fences and walls often architecturally relate to a principal structure. Repetition of fences and walls provides definition and continuity to the streetscape.

A variety of materials and patterns combined with brick piers are commonly found in the historic districts. The predominant fencing material is wood, although a number of fences are fabricated from iron or constructed of marl. Use



Articulated brick walls and picket fences are used throughout the historic districts.

low fences in a Primary AVC to enable clear views of the building and its entrance. Use tall fences in a Tertiary AVC to enclose yards for privacy. Planted hedges of boxwood and ligustrum are often used to define property lines and decorate yards.

Guidelines for Fences and Garden Walls

- 2.5.1 Fences and walls based on historic designs are encouraged. Incorporate materials and configurations that relate to the architecture of the principal structure on the site. Use fences and walls to demarcate property lines and screen private areas.
- 2.5.2 In a Primary AVC, erect low fences and walls with a vertical dimension of four feet or less. Space rectangular wood planks about one inch apart. Space square wood and iron pickets about three inches apart. Orient pickets vertically.
- 2.5.3 In Secondary and Tertiary AVCs, erect tall fences and walls with a vertical dimension of six feet or less. Tall fences that abut a structure shall terminate at an architectural feature. Transition low fencing to taller fencing at an architectural feature.
- 2.5.4 It is not appropriate to use utilitarian fences in a Primary AVC. In addition, it is not appropriate to use chain link fencing in the historic districts.
- 2.5.5 Consider hedgerows as alternatives to fences and walls.
- 2.5.6 Screen existing chain link fences with vegetation such as ivy, climbing vines or evergreen shrubbery.

2.6 Accessory Structures

Project Planning Considerations

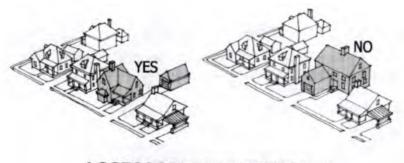
Outbuildings and accessory buildings have always been a part of New Bern's historic districts and its development history. Privies, barns, carriage houses, kitchens and sheds were once found on lots of all sizes. Today, few of these original accessory buildings survive. By the turn of the twentieth century and into the mid twentieth century, the need for new types of accessory buildings emerged. Today, outbuildings and accessory buildings include garages, storage sheds, greenhouses, and playhouses. Attached garages are not appropriate in the historic districts.



Historic outbuildings and accessory structures like this garage add to the character and diversity of the historic districts.

2. Site and Setting

Illustration of appropriate placement of garages:



ACCESSORY STRUCTURES

Guidelines for Accessory Structures

2.6.1	Locate accessory structures in Secondary or Tertiary AVCs, and behind primary structures when possible. Accessory structures are to be secondary to the primary structure in regard to mass, scale, form, and texture.
2.6.2	It is appropriate for outbuildings, and similar structures with substantial foundations, to have a similar form and detailing as the primary structure. Reduce these elements in scale to compliment the outbuilding massing, and incorporate less ornate and simpler elements than found on the primary structure.
2.6,3	Accessory structures such as sheds, gazebos, pergolas, arbors, trellises, and similar types of site improvements with minimal foundations are to serve as focal points within rear yard landscapes. These forms and detailing have little relationship to historic fabric and can be easily

removed without creating permanent damage.

2.7 Parking

Project Planning Considerations

The widespread reliance on the automobile, and the desirable character of the historic districts, results in pressure to accommodate increasingly more vehicles. The historic districts were largely developed prior to the introduction of automobiles, and many properties do not include driveways or off-street parking. Street parking is limited, and most driveways are narrow compared to today's standards. Driveways and parking frequently supplement the parking capacity available. Configure access to off street parking in a manner that avoids important landscape features and maintains the integrity of development patterns.



A low brick wall, street trees and plantings effectively screen this large surface parking lot.



Customized business signs add character to the historic districts and should be preserved and maintained.

Guidelines for Parking

- 2.7.1 Confine driveways on narrow lots to the Secondary AVC.
- 2.7.2 Use driveways to access off street parking areas located in the Tertiary AVC. Areas for vehicular use shall not exceed more than 50% of the rear yard in the *tight weave development pattern*.
- 2.7.3 It is not appropriate to incorporate off street parking in the Primary AVC within the *dense fabric development pattern*. In addition, it is not appropriate to locate parking lots on corners within the historic districts.
- 2.7.4 Contain loose paving materials within masonry, concrete, steel, or similar types of fixed edging. It is not appropriate to use contemporary drive and parking edging materials such as landscape timbers or plastic borders.
- 2.7.5 Screen parking lots with fences, walls and hedgerows to create edges that separate vehicular space from pedestrian space. Parking screens should have a vertical dimension of four feet or less.

2.8 Signage

Project Planning Considerations

Signs contribute to the unique character and visual quality of the historic districts, and when treated with sensitivity, benefit the community. Appropriately place signage on building facades and within rights of way to enhance the streetscape environment. Inappropriately placed signs obstruct architectural features, create visual clutter, and disrupt the harmony of the streetscape.

Conventional vehicle, directional and informational signs within the right of way often erode the integrity of the streetscape and disrupt the pedestrian experience. Transportation authorities have jurisdiction over their placement, quantity, and standardized format. Consolidate public signs whenever possible on uniform poles to reduce visual clutter.

Architectural signage identifies businesses, franchises and the goods and services offered. Successful signage relies on graphic simplicity that is designed to complement the texture and detail of the surrounding architectural facade. Consider scale, shape, location, materials, font, and illumination when evaluating signage contexts.

Guidelines for Signage

- 2.8.1 Signage shall incorporate proportions and dimensional details of the surrounding architectural facade. Locate wall signs on lintels or within the sign frieze area. Where multiple storefronts are within a common architectural facade, provide unifying elements such as coordinated lighting, height, border, font, and material treatments.
- 2.8.2 Drive fasteners for signs in mortar joints to prevent damage to the masonry units.

2. Site and Setting

- 2.8.3 Locate freestanding signs in areas that do not obscure architectural elements or important features. Soften the presence of signposts with landscaping and edging.
- 2.8.4 Use back lighting and front lighting fixture types. Internally illuminated signs are not appropriate for structures built prior to 1920. Electric signs shall not flash, blink or have illuminated revolving content.

2.9 Waterfront Modifications

Project Planning Considerations

The confluence of the Trent and Neuse Rivers has shaped the history of New Bern and provided a means for trade and economic development. Historically, the New Bern waterfront consisted of wharves, docks, lumber mills, and rail yards. Wharves and docks have been largely replaced by a waterfront park, hotels, condominiums, and similar types of modern development. It is desirable to maintain public access to the historic riverfront for citizens and tourists alike. Piers and bulkheads are part of every waterfront community. Carefully plan these to incorporate the waterfront promenade and the special character offered by the rivers.

Simultaneously consult with the Coastal Area Management Agency (CAMA), the City of New Bern and the HPC administrator prior to submitting an application for a COA for waterfront modifications. Coordinated input between regulatory bodies results in the most harmonious balance of regulatory and design requirements.

Guidelines for Waterfront Modifications

- 2.9.1 Construct piers with wood decking or concrete panels. Piers shall have a narrow width that generally extends perpendicular and parallel to the shoreline.
- 2.9.2 It is not appropriate to incorporate pavilions, platforms, gazebos, screened rooms, roofed structures, boat sheds and similar constructions on piers.
- 2.9.3 Finish bulkheads with a wood or concrete cap. Reserve space for future waterfront promenade extensions between the bulkhead and other site constructions as described by the New Bern Urban Design Plan.
- 2.9.4 Provide unobtrusive, soft lighting that follows the flow of walkways. Use functional, utilitarian light fixtures, and avoid highly ornate ones.



The piers and bulkheads at the waterfront park are consistent with the design guidelines. They are built of wood and concrete, and do not diminish scenic views.

3. Design Attributes

Aesthetics and design influence the character of the historic districts. Building use and form evolves as infill and adaptive reuse projects take place. Modifications, additions and infill construction shall compliment the scale, pattern, materials, proportion and mass of surrounding historic architectural resources. Well designed additions and infill structures enhance the quality of the historic districts by contributing context and style reflective of growth while also creating a record of the technological evolution of modern construction materials and methods.

3.1 Design Principles

The following design principles typically apply to additions and infill construction, but may also apply to site and setting, design components and modifications.

Scale, Mass and Proportion

The *scale* of a building is its relative size. *Human scale* refers to how we perceive the size of a structure and its components in relationship to the human body. The relationship, or scale, of an architectural detail becomes quite evident when one is standing very close. *Overall scale* compares building form to that of nearby buildings, structures and open spaces. Construction that ignores scale disrupts the harmony of the streetscape.

Mass describes the shape, size and visual weight of a structure. Scale is typically an analysis of attributes in predominantly two dimensions with a set proportion. Mass describes a volume, and evaluates a structure in three dimensions.

Proportion refers to the interrelationship of vertical to horizontal. This can be applied to the overall building mass, an opening for a window or door, or the characteristics of a column. Proportion has been used in architecture for thousands of years to create a sense of natural order. Buildings and spaces composed of harmonious proportions inherently relate to the human form, and create a pleasing environment.

Architectural details organize the perceived mass and scale of buildings. Façade features such as rooflines, pilasters, friezes, columns, piers and patterns subdivide building planes into smaller, articulated panels that create visual texture.

Buildings in any given development pattern are generally similar in scale and mass, and façade proportions have a strong vertical orientation. Infill construction should respect these characteristics. Facade articulation, windows and doors should also reinforce the vertical orientation of the composition.

Rooftop expression is a combination of architectural elements that occurs above the cornice line. New Bern's *dense fabric development* pattern is dominated by two story buildings with a range of scales and low sloped roofs. This mix of multi-storied buildings incorporates a variety of decorative and styled cornices,



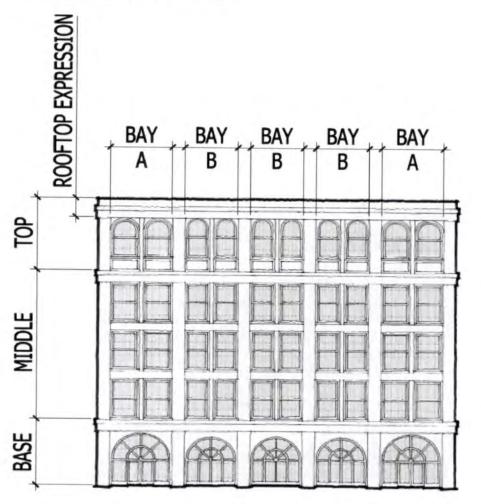
The wide cornice, overhang, and brackets add character to this building.



This block of buildings shares the same scale.

3. Design Attributes

parapets, towers, cupolas and other rooftop appurtenances that uniquely identifies each. Facades can typically be broken into three basic components: a base, middle and top. These elements relate to architecture as the feet, torso and head relate to the human body. The feet provide stability, the torso provides height and bulk, and the head provides identity.



FORM & RHYTHM

Within the *tight weave development pattern*, buildings are traditionally two stories in height with sloped roofs. Facades are typically organized in a series of bays, deriving their character from articulated front porches, entry doors and window configurations.

Form and Rhythm

Form and *rhythm* refer to the regular or harmonious recurrence of lines, shapes, forms and details in a building. All buildings contain design components that are repetitive. Roof form and pitch, the ratio of solids to voids in a wall plane, and the placement of windows, doors, cornices and parapets establish a pattern that



These buildings illustrate variety in scale.



These buildings illustrate a variety of parapets, dimensions and forms.

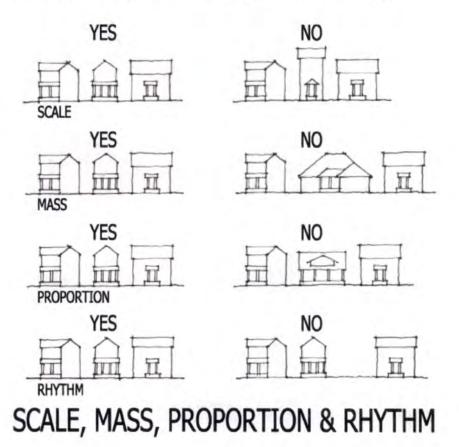


Baxter's unique curved coping creates visual interest when compared to the parapets and cornice lines of surrounding buildings.

characterizes a building, streetscape or district. Considered together, these elements create a visual rhythm and unify the facade of the structure.



These upper story windows represent an excellent example of rhythm across multiple facades.



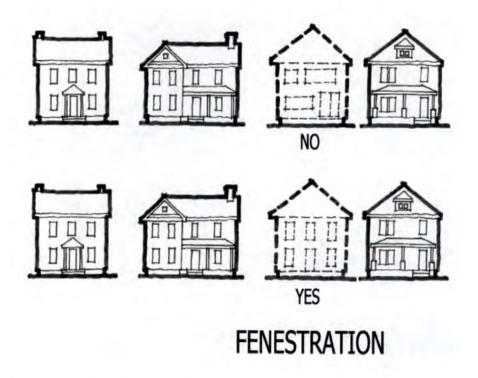
A pediment parapet highlights the classical facade of this building.

Texture

Texture refers to the use and interaction of a variety of materials and details in a building. Roofs, porches, bays, chimneys, decorative exterior trim, siding and windows articulate building facades and create visual interest. Articulate the top, middle and base of a building to create texture. Additions and infill construction should provide a degree of texture similar to surrounding buildings.

Details

Details are the elements that describe architectural building styles, features and ornament. New Bern's three hundred year evolution has produced a rich and varied palette of details that creates a visually delightful setting for pedestrians, students and admirers of architecture. Additions and infill construction should allow architectural styles to evolve while incorporating established details that characterize New Bern's historic districts. Contemporary and compatible design is encouraged. However, it is recommended that additions and infill construction reflect and reinterpret traditional building detailing.



Guidelines for Design Principles

- 3.1.1 Consider the scale, mass and proportion inherent to the surrounding historic development pattern, and design modifications that incorporate these characteristics. Use basic shapes and forms that are common to the historic districts.
- 3.1.2 Windows, doors and openings shall be compatible in proportion, shape, location, size and quantity with those on surrounding historic structures. Avoid large expanses of blank walls. Establish bays, visually subdivide facades and delineate building elevations to create form and rhythm.
- 3.1.3 Discretely use rooftop appurtenances such as spires, cupolas and towers to articulate rooflines. Compliment the scale, form and proportion of the structure, and use rooftop appurtenances to identify a building entry or similar massing focal point.
- 3.1.4 Use details to articulate facades, and the openings within facades. Appropriately detail the base, body and edges of facades to create texture and visual interest.
- 3.1.5 Avoid creating a false sense of historical development. It is not appropriate to apply historic architectural styles to infill construction. Creative interpretation of traditional detailing and ornamentation is encouraged.

3.2 Modifications

Project Planning Considerations

Modifications encompass changes, replacements and potential improvements to historic design components and architectural features. The intent of New Bern Historic District Guidelines is to allow modifications to occur within a framework that preserves the character and fabric of the historic districts.

Guidelines for Modifications

3.2.1	Select materials that are consistent with the structure. Limit the palette to those materials that were available at the time a building was originally constructed.
3.2.2	Modifications to a structure should not conceal, damage or remove significant design components or architectural features.
3.2.3	Replace historic design components only if they are damaged beyond repair. Replacement for convenience is not appropriate. Use materials and details that match the original.
3.2.4	Rebuild missing or insensitively altered design components based on documented evidence of the original configuration.
3.2.5	It is not appropriate to introduce features and details that will create a false sense of historic development.

3.3 Additions

Project Planning Considerations

Additions to historic buildings should never compromise the integrity of the structure or its site. Additions that are not incongruous respect the mass, scale and proportion of the primary structure, and do not obscure or destroy distinguishing, character defining architectural features, forms and materials.

Consider site features and view corridors when designing additions. Minimize disturbance to mature vegetation. Limit the footprint of additions to maintain private open spaces, particularly in Tertiary AVCs. Contemporary interpretation of historic style and details is encouraged to differentiate additions from the original building. However, replication of historic style and details is often appropriate for work confined to a limited area.

Guidelines for Additions

- 3.3.1 Locate additions in a Secondary or Tertiary AVC to minimize the impact on primary, character defining elevations. Limit the footprint of additions to maintain private open spaces.
- 3.3.2 Use roof forms and pitches that are similar to those found on the primary structure. Delineate the addition from the plane of the primary structure by creating slight offsets and corners.

3. Design Attributes

3.3.3 Incorporate materials and details derived from the primary structure. Extend the architectural hierarchy of the primary structure to the addition. Architectural embellishments and detailing are often simplified on less visible Secondary and Tertiary AVC elevations.

3.4 Infill Construction

Project Planning Considerations

Infill construction is the process of constructing a building on an empty parcel. Infill construction eliminates vacant lots and gaps in the urban fabric, and contributes to the architectural evolution of the streetscape.

An infill structure should reflect its time of design. The intent of New Bern Historic District Guidelines is not to impose particular architectural styles, but to guide change that protects and contributes to the character of the historic districts. Evaluate the context and sensitivity of the immediate area, and shape infill construction to positively impact the overall district.

Contemporary materials may be used on infill construction. They are to be appropriately proportioned, used in traditional ways and installed in a traditional manner. Contemporary materials not meeting these requirements should not be extensively used on infill construction.

Guidelines for Infill Construction

- 3.4.1 Maintain the relationship between building mass and open space that exists on the block or streetscape.
- 3.4.2 The predominant material of an infill building shall visually emulate the palette of materials traditionally found in the historic districts.
- 3.4.3 Use of modern materials is acceptable as a means of continuing the evolution of architecture through time. However, the use of aluminum and vinyl siding, faux brick and stone, stamped concrete and similar imitation materials is not appropriate.
- 3.4.4 Contemporary materials shall be appropriately proportioned, used in traditional ways and installed in a traditional manner.



Contemporary and traditional materials used on this new house maintain the character of the historic districts.



This building is located in the transitional edge between dense fabric and tight weave development patterns. The use of a modern blonde brick and patterned masonry is appropriate for this infill construction.

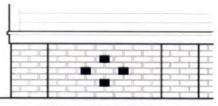
4. Design Components

4.1 Foundations

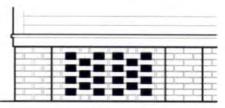
Project Planning Considerations

A foundation not only maintains the structural integrity of a building, but the materials, dimensions, features and details also contribute to its character. Foundations for some of New Bern's earliest buildings were constructed of marl or "shell rock," often in combination with brick. Framed buildings in New Bern were typically constructed on wood sills elevated by brick piers. Areas between piers were either left open or enclosed with wooden lattice. Brick panels were also commonly added between piers. These masonry infilled sections were generally recessed behind the face of the brick pier, visually delineating structural members from nonstructural members.

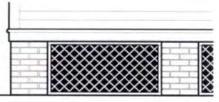
Decorative metal vents or pierced brick lattice were frequently built into foundation walls to provide crawl space ventilation. Masonry and stone foundation walls generally were not painted, although some received a pargeting of stucco that was painted.



SOLID MASONRY (DECORATIVE VENT HOLES, OR MANUFACTURED VENT ACCEPTABLE)



BRICK LATTICE



WOOD LATTICE

INFILL BETWEEN FNDN. PIERS



An example of a marl and brick foundation.



An example of brick lattice.

4. Design Components

Brick foundations are often delineated with a rowlock water table course or contrasting brick bond. Various historic foundation treatments were constructed between piers, including solid masonry with vent holes, brick lattice or pierced brick, and brick pier with wood lattice infill.

Guidelines for Foundations

- 4.1.1 Adhere to Guidelines for retention of historic fabric when altering foundation components.
- 4.1.2 When infilling between brick piers, recess brick curtain walls 1 to 2 inches to visually delineate piers.
- 4.1.3 Use traditional materials when constructing foundations. Concrete block should receive a veneer of stucco, brick or other appropriate masonry material.
- 4.1.4 Locate foundation features such as vents and access doors in areas that will not detract from the architectural character of the building. Coordinate with other architectural features when possible, such as aligning vents and access doors with windows above or centering them between piers.

4.2 Walls, Trim and Ornamentation

Project Planning Considerations

Buildings in New Bern's historic districts exhibit a variety of exterior sheathing and masonry materials, trims and ornamentation that chronicle the evolution of architectural styles in the City. Most buildings in the historic districts are of wood frame construction. Masonry construction is more common in the dense fabric development pattern where noncombustible material is used to prevent the spread of fire to adjacent buildings.

Historic structures display a variety of decorative elements that contribute to the visual richness of the architecture. Columns, cornices, doors, windows, sawn work, shingles, balustrades, clapboards, floors and bracketing are elements that collectively define the architectural style.

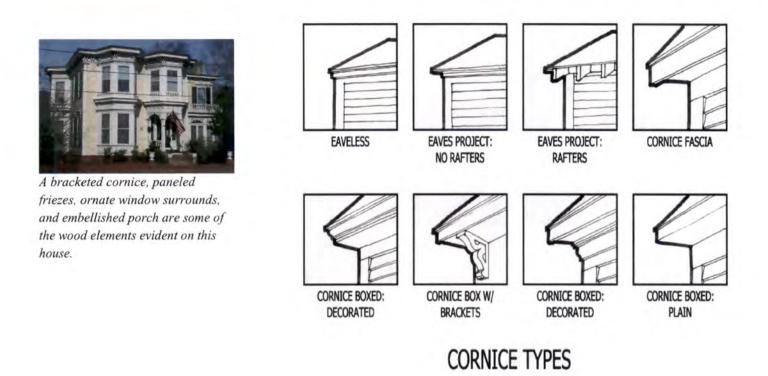
Trims are the ornamental details that terminate the edges of roof overhangs, the edges of openings, and walls sheathed with wood. Typical trims are window and door casings, and skirt, frieze and corner boards. Trims can incorporate embellishments that convey an architectural style such as cornices with modillion blocks, dentil work, turned porch posts with sawn work brackets and classical columns with turned baluster railing.

In similar ways, masonry is often enhanced by carefully articulating and detailing brick walls. Inset panels with contrasting bond, corbelling, cornices, parapets, sill and head articulation, and banding are a few of the many ways that masonry materials are placed in ornamental ways. It is not uncommon to combine wood trim cornices, pediments, columns and balustrades with masonry walls to replicate architectural features more commonly associated with wood siding constructions.



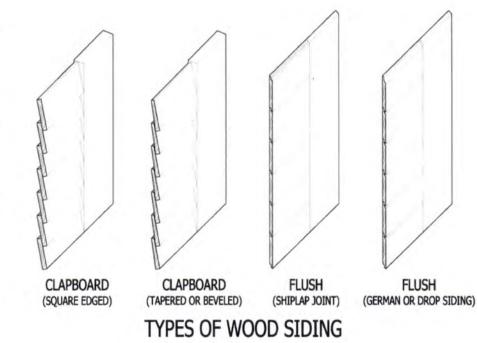
This house displays clapboard, decorative shingles and an abundance of decorative wooden elements that contribute to the character of its fenestration.

New Bern Historic District Guidelines

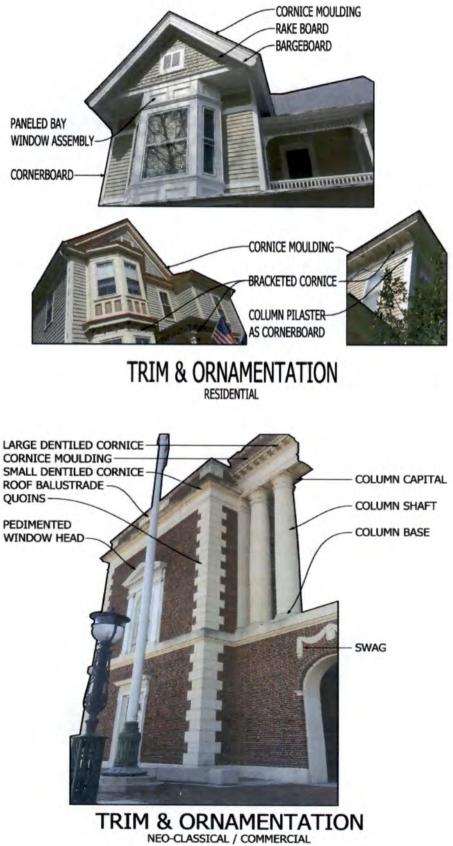




This house in the Riverside Historic District has a brick masonry veneer at the first floor and wood shingle siding at the second floor.



4. Design Components



The majority of New Bern's architectural resources were "modernized" in the late 19th century by updating walls, trim and ornamentation to conform to the prevailing architectural taste of the time.

Guidelines for Walls, Trim and Ornamentation

4.2.1 Adhere to Guidelines for retention of historic fabric when altering wall components. 4.2.2 It is not appropriate to introduce trim or ornamentation to a contributing structure without documentary evidence that such elements historically existed. 4.2.3 It is not appropriate to cover wood siding, trim and ornamentation with a contemporary material on a contributing structure. 4.2.4 Incorporate wood trims and articulate masonry appropriately for the application. 4.2.5 Primary structures are generally more ornate and detailed. Accessory structures are generally subordinate to the primary structure and have minimal ornamentation, if any, and simplified details.

4.3 Windows, Doors and Openings

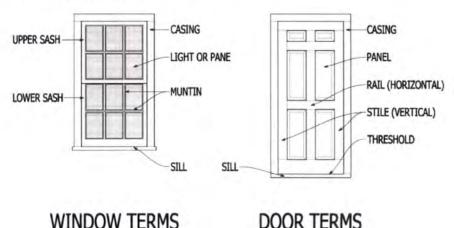


An example of a historic wood door that has been appropriately repaired instead of replaced.

Project Planning Considerations

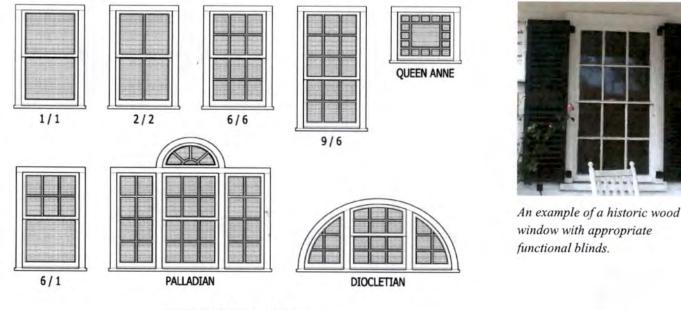
Windows and doors influence architectural character through their location, pattern or fenestration, shape, size, proportion and style. They are also functional elements that provide natural light, ventilation and a visual connection between the building interior and the outside world.

Exterior doors in the historic districts exhibit a remarkable amount of diversity. Solid paneled doors and doors with fixed glass upper panels are typical. Detail variations reinforce each building's architectural character through applied ornamentation. For example, there are various raised and flat panel configurations, decorative false wood graining and varnish treatments, ornamental leaded, beveled, etched and opaque glass, any combination of which uniquely identifies a structure.

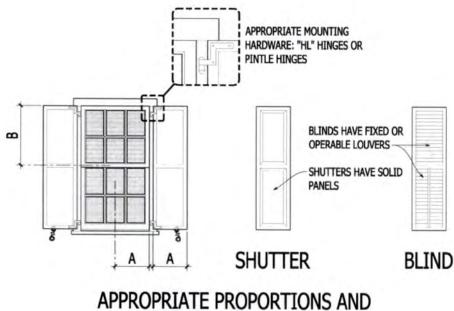


4. Design Components

Window styles reflect changes in technology through time and are important indicators of a building's architectural style and age. Most windows in the historic districts are wood with double hung sash. In general, earlier windows are smaller and have more numerous panes of glass in the sash. They were made by hand and often constructed with pegs. By the late 19th century, windows were mass-produced and technological advances in glass production allowed larger glass panes to be manufactured. Ornamental leaded and stained-glass windows also became popular by the century's end.



WINDOW TYPES



MOUNTING OF SHUTTERS / BLINDS

Retain original doors and windows to protect the integrity of historic resources. It is not appropriate to use false window muntins or snap in grills. Glazing should have true divided light muntins, or three-dimensional grilles affixed to both the interior and exterior of the glass. Provide shadow bars between insulated glass panes. It is not appropriate to add window and door openings to contributing structures in the Primary AVC. Openings in Secondary and Tertiary AVCs should not diminish the original design or damage the historic features. Window and door openings shall have a vertical orientation or be square. Shutters and blinds should relate proportionately to window openings. It is not appropriate to install shutters or blinds directly to the wall substrate. Whether operable or fixed, shutters or blinds shall have operable hinge and holdback hardware.

Guidelines for Windows, Doors and Openings

4.3.1	Adhere to Guidelines for retention of historic fabric when altering window, door and opening components.
4.3.2	Add window and door openings in Secondary or Tertiary AVCs in locations that do not diminish the original design. In general, openings shall have a vertical orientation or be square.
4.3.3	Glazing should have true divided light muntins, or three-dimensional grilles affixed to both the interior and exterior of the glass. Provide shadow bars between insulated glass panes.
4.3.4	Relate shutters and blinds proportionately to window openings. Whether operable or fixed, shutters or blinds shall have operable hardware including hinge and holdback hardware.
4.3.5	Tinted, opaque, and reflective glazing is not appropriate in historic windows.
4.3.6	Install storm windows and storm doors that do not obscure architectural detailing and trim. Proportion storm window sashes to align with window sashes. Proportion storm door stiles and rails to align with door stiles and rails.
4.3.7	Install fabric awnings that do not conceal architectural features or damage historic building fabric. It is not appropriate to use metal awnings.



The brick piers and tapered posts are characteristic of the Craftsman Bungalow style of architecture.

4.4 Entrances

Project Planning Considerations

Exterior entrances and porches are defining features of historic character. Prominent entrances were typically embellished with rich architectural ornamentation and were often "updated" to reflect current architectural tastes. Doors, windows, trims, columns, turned posts, railings and balusters, cornices and steps were frequently detailed in a coordinated way to convey the "style" of a structure. Variations in form and detail create diversity among an otherwise identical grouping of entrances and porches.

Porches are found on most wood framed structures in New Bern's historic districts, and consist of a roof cover, columns, and floor on a masonry foundation.

4. Design Components

Usually located on the street façade, porches often wrap around two or more corners. Back porches, side porches and sleeping porches are typically found in the historic districts. More rare are balconies, which are constructed at upper floors, and do not have columns or a means of support extended to foundations. Most porches are one story in height, but two story variations can be found on structures constructed between the 1790s and the 1840s. Many of the city's early to mid-19th century wood framed buildings have small entrance porches or porticos embellished with classically inspired detailing. During the Victorian period, entrance porticos were often replaced with larger porches. Significant porch and entry changes chronicle the evolution of the structure over time.

Traditional porch framing carries wood floorboards that are butted together or milled with a tongue and groove joint. Floorboard ends are laid perpendicular to the house and projected approximately 1 to 2 inches beyond the skirt board. The projected ends are sometimes rounded or bull nosed to minimize water penetration into the open wood grain. Framing spans are supported by brick piers or a continuous brick foundation, and sloped for drainage.

A variety of column types supported roof structures. Square chamfered posts were used throughout the 18th and 19th centuries, spanning between the Georgian and Italianate styles. Classical columns and colonettes, most commonly of Doric and Tuscan design, were incorporated into entrance porticos and porches of the Federal, Greek Revival and Colonial Revival periods. Square posts, often with heavy caps and applied or inset panels and trims, were also favored during the Greek Revival and Colonial Revival periods. Turned posts gained widespread use during the Queen Anne period of the late 19th and early 20th centuries.

Ceilings of porches exhibited a variety of finishes. Many of New Bern's earliest examples had exposed framing without ceilings. Main structural supports were often beaded on the lower edges. Porch ceilings of the early to mid-19th century often were finished with plaster, particularly beneath the second floor of double-tiered porches where exposure to rain was limited. Otherwise, individual boards with beaded edges were typically butted together or evenly spaced to create a decorative effect. Later in the century, tongue and groove beaded board became popular and remained so throughout the early 20th century.

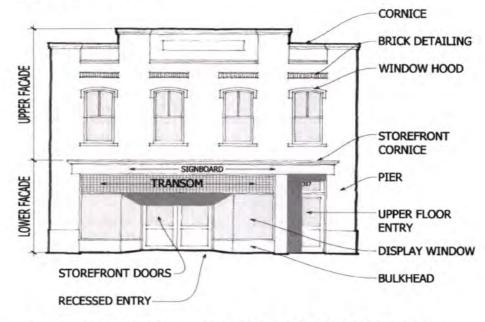
Use documentary evidence of original configurations to reconstruct entrances and porches that have been insensitively altered or removed. Add architectural ornamentation when there is historical evidence of such features. Where documentary evidence is not available, furnish appropriate design elements that are consistent with the character of the building or its style.

It is not appropriate to enclose or screen porches, entrances or balconies in Primary AVCs. Enclose and screen porches in Secondary and Tertiary AVCs in a manner that preserves historic features. It is inappropriate to use stock entrance doors, porch railings and other ornaments that do not proportionally relate to the building. Modern porch balusters convey a different visual appearance because they are generally taller and thinner. Center balusters between the rails, and space them about 3 inches apart to increase the visual weight. It is not appropriate to replace wooden stairs and flooring with concrete or brick. In addition, it is not appropriate to replace wooden porch supports and railing with



The door, transom, molded surround, corner blocks, pilasters, columns, entablature, flat roof, and stair combine to compose this fine entrance

iron supports and railing.



ELEMENTS OF A STOREFRONT FACADE

Guidelines for Entrances

- 4.4.1 Adhere to Guidelines for retention of historic fabric when altering entrance components.
- 4.4.2 Reconstruct entrances and porches based on documentary evidence of the original configuration. Add architectural ornamentation when there is historical evidence of such features.
- 4.4.3 Recess entrances within the *dense fabric development pattern* where the facade aligns with the front property line. Incorporate traditional facade elements such as storefront cornices, transoms, display windows and bulkheads.
- 4.4.4 Provide porches, entrance doors, railings, and other ornaments that proportionally relate to the building. Appropriate balustrades often convey a heavier visual appearance. Center balusters between the top and bottom rails and space them about three inches apart.
- 4.4.5 Enclose and screen porches in Secondary and Tertiary AVCs in a manner that preserves historic features. Walls and screens should not obscure columns and balustrades.

4.5 Roofs

Project Planning Considerations

New Bern's historic districts reflect a variety of roof forms and features that have evolved over the past three hundred years. Roof form plays a dominant role in defining building character. Massing, pattern, scale, texture, and material

4. Design Components

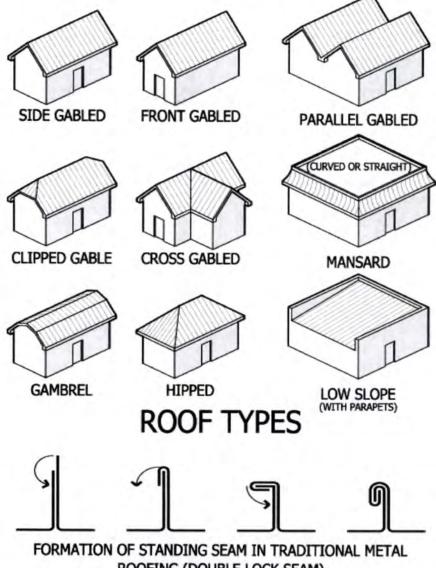
selections further enhance character. Changes in pitch, overhang, and roof line chronicle additions to historic buildings over time.

Wood shingles were the predominant roofing material in New Bern during the 18th and 19th centuries. In 1922, following the Great Fire in New Bern, standing seam metal became the principal roofing material. This post fire character survives largely intact today.

The gable roof is most common in New Bern's historic districts. Side and front gable examples are abundant, along with more complex cross and multi gable roof varieties. Hipped roofs also appear with frequency in the historic districts, and many are articulated by dormers and lower cross gables. Gambrel roofs, flat roofs, shed roofs, and to a lesser extent, mansard roofs further diversify the types found in New Bern's historic districts.



Standing seam metal is a common roof material in the historic districts resulting from reduced insurance rates following the Great Fire of 1922.



ROOFING (DOUBLE LOCK SEAM)

Guidelines for Roofs

- 4.5.1 Adhere to Guidelines for retention of historic fabric when altering roof components.
- 4.5.2 Alterations to roof forms such as changes in roof pitch, the introduction of dormers, skylights or rooftop ornamentation shall not be undertaken in a Primary AVC.
- 4.5.3 Retain rooftop architectural features such as chimneys, dormers, towers, cupolas, cresting, finials, parapet walls and decorative roof patterns and colors.
- 4.5.4 Standing seam metal roofs shall have a pan width no greater than 24 inches. Pans shall be completely flat without corrugation. Provide double locked seams with flush ridge and hip flashings on contributing structures.
- 4.5.5 It is not appropriate to replace concealed, built in gutter systems with fascia-mounted gutters.
- 4.5.6 Locate rooftop appurtenances such as ventilators, antennae, satellite dishes, mechanical equipment and similar items in a manner that is not visible from the public right of way.

4.6 Decks and Patios

Project Planning Considerations

Functioning as an outdoor living area in a similar fashion as the traditional porch, decks have become popular gathering areas for a variety of outdoor activities. As with other changes, careful attention must be given to placement in order to avoid compromising historic building integrity and character. Decks, patios, plazas, and pavers are generally constructed at grade, and should be structurally separated from the building to allow removal without damaging historic resources.

Locate decks in Secondary and Tertiary AVCs, and screen the underside with shrubbery, fencing, lattice, or masonry. Deck railings, skirt boards, posts, piers, and screen infill should architecturally relate to the house in a manner similar to a porch. Whenever possible, decks should be close to the ground with minimal presence. Lowering the profile eliminates requirements for handrails and extensive screening.

Guidelines for Decks and Patios

- 4.6.1 Adhere to Guidelines for retention of historic fabric when altering deck components.
- 4.6.2 Locate decks in Secondary and Tertiary AVCs, and screen the underside with shrubbery, fencing, lattice, or masonry.
- 4.6.3 Structurally separate decks to allow removal without damaging the historic structure.
- 4.6.4 Construct low profile decks and patios that eliminate requirements for handrails and excessive screening.



The deck on this house is located in a Secondary AVC screened by shrubbery, and it has a foundation similar to the main structure.

4. Design Components

4.7 Accessibility and Life Safety

Project Planning Considerations

Meeting contemporary accessibility and life safety standards is one of the greatest design challenges facing historic properties. Balance the preservation of significant features with providing appropriate levels of life safety and accessibility accommodation.

Adaptive reuse of a historic property often requires life safety and accessibility modifications. Building code officials recognize that it is difficult to translate conventional requirements to historic buildings, and apply alternative codes specifically intended for non-conforming buildings. These provisions make historic building adaptive reuse more practical and preserve architectural features.

Design accessibility and life safety solutions that have the least impact on historic resources and character. Locate ramps, lifts, fire stairs, fire doors and similar accommodations in visually unobtrusive areas. Construct modifications to allow removal without causing permanent damage to the historic resource.

Guidelines for Accessibility and Life Safety

- 4.7.1 Adhere to Guidelines for retention of historic fabric when altering accessibility and life safety components.
- 4.7.2 Locate ramps, lifts, fire stairs and fire doors in visually unobtrusive areas. Avoid accommodations within a Primary AVC when possible.
- 4.7.3 Make accommodations compatible with the character of the building by replicating balustrade and door opening detailing. Use landscaping to soften the presence of accommodations in a Primary AVC.



The metal stair railing was added to this porch stair as a safety feature. The use of a simple metal design does not detract from the historic porch and identifies it as a later addition.



This wheelchair ramp is a good example of subtly incorporating accessibility at the front of a building when necessary.

5. Materials

5.1 Masonry

Project Planning Considerations

Because of its extreme durability and beauty, some of New Bern's most important buildings are constructed of masonry.

There is a difference between modern bricks and historic bricks. Historic bricks are softer, and more likely to chip and crack when laid with modern mortar. Use softer, lime-based mortar with historic brick.

Masonry materials found in the historic districts include brick, stucco, stone, concrete masonry units, architectural concrete masonry units, slate and terracotta tile.

Guidelines for Masonry

5.1.1	Adhere to Guidelines for retention of historic fabric when altering masonry materials.
5.1.2	Match the masonry bond, or pattern, of masonry materials found in adjoining work. In general, new material should be the same size, color, and texture of that existing.
5.1.3	The size, color, texture and bond, or pattern, of masonry and mortar creates the intended finished appearance. It is not appropriate to paint masonry that has not been previously painted.
5.1.4	Select mortar with appropriate strength properties for masonry units involved. A commonly used mix for softer, historic masonry is one-part portland cement, two parts hydrated lime and nine parts sand.
5.1.5	Provide a veneer of brick, stucco, or other appropriate material over concrete masonry units. Architectural concrete masonry units such as rusticated, split face or similar types may be substituted for stone masonry construction.
5.1.6	It is not appropriate to use water repellants or sealers on masonry because these treatments often trap moisture and accelerate spalling.

5.2 Wood

Project Planning Considerations

Craftsmen have preferred wood because it is easily shaped by carving, sawing, splitting, planing, and turning. Handcrafted architectural features are present on many of the City's earliest buildings. However, technological changes in the mid to late 19th century allowed most wooden building components to be mass produced.

5. Materials

Pressure treated wood has a tendency to warp and split during the drying process, particularly if not kiln dried. Slow kiln dried, pressure treated wood is less likely to warp and split, and should be used when possible. Slow kiln dried wood products are specially ordered.

Wood is often the medium selected to communicate architectural styles. Eaves, rakes, porches, entrances, siding, trim and ornamentation details are found in the historic districts.

Guidelines for Wood

- 5.2.1 Adhere to Preservation Guidelines for retention of historic fabric when altering wood materials.
- 5.2.2 Construct wood assemblies similar to that found in adjoining work. In general, new material should be the same dimension and shape of that existing.

5.3 Metals

Project Planning Considerations

New Bern's historic districts contain a variety of elements that are fabricated from architectural metals. Fences, gates, roofs, rooftop appurtenances such as cresting and finials, gutters, downspouts, hardware, railings and cornices are but a few of the elements that are cased, wrought, pressed or rolled using iron, copper, tin, aluminum, steel or bronze. These traditional building materials add a visual and textural richness to the historic districts.

Guidelines for Metals

- 5.3.1 Adhere to Guidelines for retention of historic fabric when altering metal materials.
- 5.3.2 Use metal fabrications found in adjoining work. In general, new material should be the same dimension, shape, and alloy of that existing.
- 5.3.3 Use full weld iron and steel fabrication techniques. Welds shall be properly dressed, or ground smooth.
- 5.3.4 Provide aluminum fabrications with welded joints or blind, mechanical connections having concealed fasteners.

5.4 Paint

Project Planning Considerations

Preservation of most historic wood and metal surfaces requires a sound paint film to protect against the elements. Water, wind, and ultraviolet light severely weaken wood fibers over time, and contribute to the corrosion of certain metals. In addition to its protective role, coordinated paint colors highlight architectural features and emphasize architectural style.



An ornamental iron gate and balustrade adds character to the streetscape while identifying the path to the building entrance.



The metal cornice and columns on this storefront are unique features that should be preserved.

Employ paint analysis techniques, such as microscopic investigation, to determine historic paint schemes and finish techniques. Select harmonious paint colors that accentuate detailing and architectural style. Paint is applied to bare wood in multiple coats, and generally consists of a primer base coating followed by two coats of finish paint.

Guidelines for Paint

- 5.4.1 Adhere to Guidelines for retention of historic fabric when altering painted materials.
- 5.4.2 Select paint and sealant coatings that are harmonious with adjoining work. In general, new material shall be a compatible formulation with the substrate of application.
- 5.4.3 Apply primer coatings to front and back wood surfaces prior to cutting and fitting. Prime end cuts before installation. Apply finish paint coatings to exposed primed surfaces.
- 5.4.4 Consider using opaque stain in lieu of paint on flooring, fencing, and similar wood surfaces exposed to foot traffic or weather.
- 5.4.5 Waterfront wood constructions such as docks and piers may be allowed to naturally weather in lieu of receiving paint coatings.
- 5.4.6 It is not appropriate to apply paint, water repellant or sealant coatings to unpainted surfaces such as masonry, stone, copper, and bronze.
- 5.4.7 Masonry painting may be permitted where severe damage, patching and surface repair has diminished the aesthetic integrity. When warranted, latex paint is a durable and adherent masonry coating to be considered.
- 5.4.8 Remove paint from masonry with a chemical paint remover specifically formulated for this purpose. Test in an inconspicuous location and discontinue use if damage or discoloration occurs.
- 5.4.9 It is not appropriate to paint exterior doors that were historically false grained, stained or varnished. It is not appropriate to leave surfaces such as porch flooring, deck flooring or railings unpainted.

5.5 Contemporary Materials

Project Planning Considerations

A careful balance of material consistency versus material variety helps define a sense of place in the historic districts. While variations in historic materials do exist, they ultimately fall within a palette available to New Bern builders during the previous two centuries. These limitations created a thread of continuity from one cycle of building styles to the next. Today, many materials are available from beyond our region, and manufacturing processes enable the creation of contemporary materials that threaten to break the thread of continuity that unifies the historic districts.

Contemporary materials shall be similar to their counterparts traditionally found on historic structures. Use of contemporary and nontraditional materials for infill



The palette of exterior colors accentuates the architectural style of this Italianate house.

5. Materials

construction is an acceptable means of continuing the evolution of architecture through time, provided they convey appropriate historic characteristics.

Guidelines for Contemporary Materials

- 5.5.1 In general, contemporary material shall match the dimension, shape and texture of their counterparts commonly found in the historic districts.
- 5.5.2 Use contemporary and nontraditional materials in traditional ways. Apply materials in a traditional manner that conveys the same visual appearance as historic materials.
- 5.5.3 Contemporary and nontraditional materials should convey appropriate historic material characteristics, and will be evaluated on a case-by-case basis for appearance, dimension, texture, color, sheen, visual weight and similar characteristics.
- 5.5.4 Aluminum siding, vinyl siding, masonite siding, artificial brick sheathing, thin set stone veneer, stamped concrete and similar types of contemporary materials that imitate historic materials are not appropriate in the historic districts.
- 5.5.5 Cement board with a smooth finish is acceptable as the predominant siding material for infill construction and non-historic accessory structures.
- 5.5.6 Contemporary materials such as synthetic slate and fiberglass asphalt shingles are acceptable for sloped roofing regardless of building age. Select fiberglass asphalt shingles from a darker color palette. Contemporary membrane and roll roofing are acceptable for low-sloped roofs with a 1 inch per foot pitch or less regardless of building age.
- 5.5.7 Contemporary signage materials such as foam and vinyl lettering are acceptable regardless of building age. Confine these materials within the signage border.

6. Preservation

6.1 Maintenance of Materials

Preserve and retain historic material. Retain chimneys, dormers, towers, cupolas, cresting, finials, stone parapet copings, decorative roofing patterns and similar rooftop appurtenances. Retain entrances, porches, balconies, decorative fenestration, ornamentation and similar design components. Retain lintels, sills, trim, shutters, decorative molding and similar design components. Retain doors, windows and balustrades, and maintain their locations in Primary AVCs. It is not appropriate to replicate or replace historic windows and doors for the sole purpose of improved thermal performance.

When maintenance and repair are warranted, preserve and retain character defining architectural elements and historic detailing. Preference shall be given to repairing historic material versus replacing historic material. Repair historic design components by using patching, consolidating, reinforcing and splicing methods that incorporate matching, salvaged historic materials when available.

Use surviving components and elements as templates for reconstructing and replicating missing design components and elements. Where no such elements exist, rely on research documentation for reconstruction of lost design components and elements. Custom fabricate replicas and reconstructions with the spacing, proportion, dimension, cross section and profile of the template, or in accordance with relevant documentation. Replace individual members in a design component, when required, with custom fabricated, replica members. Replicate design components that are too deteriorated to repair.

Guidelines for Masonry Maintenance

6.1.1	Retain and preserve the original form, pattern, color and texture of masonry. Maintain masonry features such as decorative vents, grilles, latticework, water tables and banding.
6.1.2	Clean masonry surfaces with low pressure water washing, and use a mild detergent if residue is stubborn.
6.1.3	Avoid using power tools such as saws and routers to remove deteriorated mortar joints. Machine removal often results in brick damage and joint enlargement.
6.1.4	Duplicate the profile and tooling of original mortar joints when repointing.

6. Preservation

Guidelines for Wood Maintenance

6.1.5	Retain and preserve siding, fenestration, trim and ornamentation. Maintain wood features such as beaded and shaped edges, lathe turned profiles and decorative surfaces that have been milled, joined and routed.
	Touled.

- 6.1.6 Remove paint and other loose material with scrapers, sand paper and similar moderately abrasive hand tools. Remove mold and mildew with low pressure water washing and a mild detergent.
- 6.1.7 Use epoxy to reinforce and rebuild deteriorated wood. When original wood is too damaged to repair, only cut and replace damaged sections.

Guidelines for Metal Maintenance

6.1.8	Retain and preserve metal fabrications, ornamentation and hardware.
	Maintain metal features such as wrought iron fencing, decorative
	medallions and hardware for doors, windows and shutters.

- 6.1.9 Clean metal surfaces with wire brushes, sand paper and similar moderately abrasive hand tools to remove rust, paint and other loosely adhered material. Use chemical solvent cleaners only if hand preparation methods prove ineffective.
- 6.1.10 Maintain paint, lacquer and other coatings that protect metals from corrosion and deterioration.

Guidelines for Paint Maintenance

6.1.11	Maintain paint coatings that seal and weatherproof materials exposed
	to the elements. Routinely reapply paint coatings on steps, porch
	flooring, siding and roofs.

- 6.1.12 Prepare surfaces to receive coatings by using methods that do not damage or deteriorate the substrate.
- 6.1.13 Consider using flexible coating systems to prolong the life of metal roofing.

6.2 Prevention of Demolition by Neglect

Property owners are responsible for maintaining and repairing their property. Regular maintenance and repair protects the structural integrity of a building and keeps it in a safe and usable condition. Unabated deterioration over prolonged periods causes irreversible damage. Allowing a building to deteriorate and fall into disrepair through deferred maintenance is effectively causing demolition by neglect.

The historic districts embody a uniqueness that conveys identity and contributes to sense of place. Preserve buildings by undertaking a program of routine inspections, maintenance and repairs of masonry, metal, wood, paint and similar materials.

Focus routine inspections on the condition of materials. Maintain architectural features. Ensure that roofs are weathertight and free of water infiltration. Periodically examine foundations for firm, solid and stable support, without evidence of active insect infestations. Slope grades to convey water away from foundations. Accessible spaces beneath buildings are to be free of excessive moisture. Keep perimeter walls in good repair, with exterior surfaces serving as an effective barrier against moisture intrusion. Protect interiors from the elements by maintaining the structural integrity of windows, doors and openings.

Guidelines for Prevention of Demolition by Neglect

- 6.2.1 Perform routine inspections to evaluate the conditions of materials.
- 6.2.2 Preserve historic design components and materials by implementing repairs appropriate for the substrates encountered.
- 6.2.3 Repair historic design components by using patching, consolidating, reinforcing and splicing methods that incorporate matching, salvaged historic materials.
- 6.2.4 Replicate missing and deteriorated design components with custom fabricated members that match the spacing, proportion, dimension, cross section and profile of material being replaced.
- 6.2.5 Materials are to be replaced in kind when maintenance and repairs are warranted. Maintenance and repair of incongruent material is permitted; however, wholesale replacement of incongruent material with the same or another incongruent material is not appropriate.
- 6.2.6 Boarded windows and doors are not an acceptable maintenance and repair practice. Temporary approval may be given to board windows and doors temporarily until permanent repairs and replacements are implemented; however, boarding shall be painted or sheathed with prefinished sheet metal.

6.3 Relocation

Moving a historic structure is considered the alternative of last resort for preventing demolition. It invariably results in a substantial loss of building context and original material. Relocation also distorts the architectural development pattern of the city. If warranted, every effort should be made to move the building intact as a single unit. If this is not possible, move by partial disassembly. If either of these methods is deemed infeasible, complete disassembly and reassembly may be an option. Undertake careful planning to properly support, transport and reassemble relocated buildings.

Moving a contributing structure without prior approval from the State Historic Preservation Office and the National Park Service will result in automatic delisting of the structure from the National Register of Historic Places.

6. Preservation

Guidelines for Relocation

6.3.1	Preference shall be given to relocating a structure within a historic district.
6.3.2	Prepare drawings and photographically document the original site prior to relocating historic resources.

6.3.3 Minimize the loss of historic fabric in executing the relocation. Protect against damage caused by shifting load bearing points, vibration and lateral drifting.

6.4 Demolition

The success of preservation depends on adaptive reuse of historic resources to meet current needs. If adaptive reuse in a sensible manner is not feasible, owners should consider seeking an alternative property for their purposes. Demolition is an irreversible action resulting in a permanent loss of the integrity and character of historic resources. Preparation of a demolition COA application should include a detailed report on the history of the structure and property from the SHPO.

Demolition cannot be denied for a noncontributing structure. Demolition of a contributing structure requires a two-part COA where demolition is first considered, and if allowed, followed by consideration of the redevelopment plan. Demolition shall not proceed unless both parts of the COA are approved.

If demolition is denied, the property owner is required to maintain the property and its structures to prevent demolition by neglect.

The HPC may deny the demolition of a structure or site if it is currently listed in the National Register of Historic Places.

Guidelines for Demolition

6,4.1	Demolition of a noncontributing structure shall not be denied by the HPC.
6.4.2	It is not appropriate to demolish a viable contributing structure in order to create an infill construction opportunity.
6.4.3	The HPC reserves the right to postpone demolition until development and building permits are approved for redevelopment plans.
6.4.4	Prepare drawings and photographically document the site prior to demolition. Include photographs of interiors, exteriors, architectural elements and context within the streetscape.
6.4.5	Notify preservation organizations, and allow for the salvage of design components, architectural features and building materials for reuse.

In rendering a decision on a demolition COA, the HPC should address the following considerations:

Considerations for Evaluation

Consideration 1: Address the historical, cultural and architectural significance of the structure.

- Is it a contributing structure?
- Is it significant because of its historic use, an event, a person, a builder or an architect?
- Is it the last or the oldest example of a certain building type?

Consideration 2: Address the integrity of the structure.

- What are the conditions of foundations, floors, walls, windows, doors and roofs?
- Is it a hazard to public health, safety and welfare?

Consideration 3: Address attempted preservation efforts.

- Have options for rehabilitation been explored with preservation organizations?
- Has the applicant been unsuccessful in seeking alternatives to demolition?
- Have alternatives for structure relocation and sale of the property been pursued?

7. Definitions and Architectural Terms

Key definitions and architectural terms are provided to facilitate discussions between the HPC and applicants.

7.1 Definitions

Adaptive Reuse – Converting a building from the use for which it was designed to another use. For example, changing a house to accommodate an office.

Aggrieved Party – Someone, or some entity, that 1) owns an interest in the property affected by the decision and 2) the property involved is specially affected by the decision to an extent different from other property owners in the community. Aggrieved parties may include the applicant for a COA, an owner of a neighboring property that is nearby the property for which the COA is sought, or the city through its staff. (Definition from the University of North Carolina Institute of Government)

Applicant – An individual who submits a COA application. This can be a property owner or their designated representative. For example, a contractor could represent the property owner.

Area of Visual Concern (AVC) - See Section 1.5.

Articulation – The manner or method of jointing parts such that each part is clear and distinct in relation to the others.

Benchmark – An established point from which all vertical dimensions are measured.

Certificate of Appropriateness (COA) - A document awarded by a preservation commission or architectural review board allowing an applicant to proceed with proposed alteration, demolition or construction in a designated historic area or site, following a determination of the proposal's suitability according to applicable criteria.

COA Hearing - See Section 1.6.

Certified Historic Structure – For the purpose of the federal preservation tax incentives, any structure subject to depreciation as defined by the Internal Revenue Service Code that is listed individually on the National Register of Historic Places or located in a registered historic district and certified by the Secretary of the Interior as being of historic significance to the district.

Certified Rehabilitation – Any rehabilitation of a certified historic structure that the Secretary of the Interior has determined is consistent with the historical character of the property or the district in which the property is located.

7. Definitions and Architectural Terms

Certified Local Government Program – In 1980, Congress amended the National Historic Preservation Act of 1966 to require each state to establish a procedure by which local governments may be certified to participate in the national framework of historic preservation programs. This requirement has become the "Certified Local Government (CLG) Program" in which many North Carolina counties and cities participate.

Context – Those elements of the man-made and natural landscape that collectively define the character of a building, site or district.

Contributing Structure - See Section 1.5.

Cultural Resource – A building, structure, district, site, object or document that is of significance in American history, architecture, archeology or culture.

Demolition by Neglect – The destruction of a building through abandonment or lack of maintenance.

Design Guidelines – Criteria developed by preservation commissions and architectural review boards to identify design concerns and to help property owners undertake rehabilitation and construction that respects the character of designated buildings or districts.

Design Review – The process of ascertaining whether modifications to historic and other structures, settings and districts meets standards of appropriateness established by a governing or advisory review board.

Details - See Section 3.1.

Fabric – The physical material of a building, structure or city connoting an interweaving of component parts.

Form - See Section 3.1.

Infill – See Section 3.4.

Harmony - Pleasing agreement of parts in color, size, scale, texture and material.

Hearing - See Section 1.6.

Historic district – A geographically definable area with a significant concentration of buildings, structures, sites, spaces or objects unified by past events, physical development, design, setting, materials, workmanship, sense of cohesiveness or related historic and aesthetic associations. The significance of a district may be recognized through listing on a local, state or national landmarks register and may be protected legally through enactment of a local historic district ordinance administered by a historic district board or commission.

Historic Preservation Commission (HPC) - See Section 1.4.

Human Scale - A combination of qualities in architecture or the landscape that

provides an appropriate relationship to human size, enhancing rather than diminishing the importance of people.

Landmarks Register – A listing of buildings, districts and objects designated for historical, architectural or other special significance that may carry protection for listed properties.

Major Works - See Section 1.6.

Mass - See Section 3.1.

Minor Works - See Section 1.6.

Not incongruous - See Section 1.5.

Preservation – Generally, the process of saving old and historic buildings, sites, structures and objects from destruction or deterioration, and providing for their continued use by means of restoration, rehabilitation or adaptive reuse and continued maintenance. The Secretary of Interior's Standards for Rehabilitation define it as "the act or process of applying measures to sustain the existing form, integrity and materials of a historic property. It may include stabilization work, where necessary, as well as ongoing maintenance of the historic building materials."

Public Hearing - See Section 1.6.

Proportion - See Section 3.1.

Quasi-judicial Hearing - See Section 1.6.

Rehabilitation – "The act or process of returning a property to a state of utility through repair or alteration which makes possible an efficient contemporary use while preserving those portions or features of the property which are significant to its historical, architectural and cultural values" as defined by the Secretary of Interior's Standards for Rehabilitation.

Renovation – Modernization of an old or historic building that may produce inappropriate alteration or eliminate important features and details.

Restoration – "The act or process of accurately recovering the form and details of a property and its setting as it appeared at a particular period of time by means of removal of latter work or by the replacement of missing earlier work" as defined in the Secretary of the Interior's Standards for Rehabilitation.

Rhythm - See Section 3.1.

Scale - See Section 3.1.

Section 106 – The provision of the National Historic Preservation Act of 1966 that requires the head of a federal agency financing or licensing a project to make a determination of the effect of the project or property on or eligible for the

7. Definitions and Architectural Terms

National Register of Historic Places. This is the only protection the National Register provides for listed properties.

State Historic Preservation Office (SHPO) - See Section 1.8.

Stabilization – "The act or process of applying measures designed to establish a weather resistant enclosure and the structural stability of unsafe or deteriorated property while maintaining the essential form as it exists at present," according to the Secretary of Interior's Standards for Rehabilitation.

Standing – Legal justification to participate in a hearing related to a COA application. This generally includes 1) the property owner or their representative for a COA, and 2) an owner of a neighboring property that may be materially affected by the COA. An association may have standing if 1) they have an existence not solely for the purpose of the COA, 2) their interests are germane to the association 's purpose, and 3) an individual with standing is a member of the association and has asked the association for assistance. Definition from the UNC Institute of Government.

Tax Incentive – A tax reduction designed to encourage private investment in historic preservation and rehabilitation projects.

Texture - See Section 3.1.

7.2 Architectural Terms

Alkyd Resin Paint – A common modern paint incorporating alkyd, which is one group of thermoplastic synthetic resins used as a vehicle for the pigment. Alkyd resin paint is often confused with oil paint.

Aluminum Siding – Sheets of exterior architectural covering, usually with a colored finish, fabricated of aluminum to approximate the appearance of wooden siding. Aluminum siding was developed in the early 1940s and became increasingly common in the 1950s and the 1960s.

Amenity – A building, object, area or landscape feature that makes an aesthetic contribution to the environment rather than one that is purely utilitarian.

Arbor – A small structure with vines or other plants trained over latticework on a frame that provides a shady place. A true arbor by definition also includes a bench sheltered underneath for seating. Another structure often referred to as an arbor is a trellis covered gateway, often built above a gate within a larger fence or garden wall.

Arcade – A series of arches supported on piers or columns attached to or detached from a wall.

Arch – A structure formed of wedge shaped stones, bricks or other objects laid to maintain one another firmly in position. A rounded arch generally represents classical or Romanesque influence whereas a pointed arch denotes Gothic

influences.

Architrave – The lowest part of an entablature, sometimes used by itself as a casing for a window or door.

Art Deco – A style of decorative arts and architecture popular in the 1920s and 1930s characterized by use of geometric, angular forms; also referred to as Moderne or Art Moderne.

Asbestos Siding – Dense, rigid board containing a high proportion of asbestos fibers bonded with portland cement; resistant to fire, flame, or weathering and having a low resistance to heat flow. It is usually applied as large overlapping shingles. Asbestos siding was readily avalable in the 1950s.

Ashlar – A style of stonework consisting of individual stones that are shaped and tooled to have even faces and square edges.

Asphalt Shingle – A shingle manufactured from saturated construction fiberglass felts coated with asphalt and finished with mineral granules on the side exposed to the weather.

Asphalt Siding – Siding manufactured from saturated construction felts coated with asphalt and finished with mineral granules on the side exposed to the weather. It sometimes displays designs seeking to imitate brick or stone. Asphalt siding was applied to many buildings in the 1950s.

Attic Ventilator – A screened or louvered opening, sometimes in decorative shapes, located in gables or soffits. Victorian styles sometimes feature sheet soffits or metal ventilators mounted on the roof ridge above the attic.

Awning – A roof like covering of canvas, often adjustable, over a window, a door, etcetera, to provide protection against the sun, rain and wind. Aluminum awnings were developed in the 1950s.

Balustrade - A low barrier formed of balusters, or uprights, supporting a railing.

Band or Band Course, Bandmold, Belt – Flat wall trim running horizontally that denotes a division in the wall plane or a change in level.

Bargeboard or Vergeboard – A wooden member, usually decorative, suspended from and following the slope of a gable roof. Bargeboards are used on buildings inspired by Gothic forms.

Bay – An opening or division along the face of a structure. For example, a wall with a door and two windows is three bays wide. A bay can also be a projection of a room or facade having windows.

Beltcourse – A projecting course of bricks or other material forming a narrow horizontal strip across the wall of a building, usually to delineate the line between stories, and also referred to as a string course.

7. Definitions and Architectural Terms

Beveled Glass – Glass panes whose edges are ground and polished at a slight angle so that patterns are created when panes are set adjacent to one another.

Board and Batten – A method of covering exterior walls using vertical boards, with narrow strips of wood or battens used to cover the joints between boards.

Bond - The pattern in which bricks are laid.

Bracket – A divide, either ornamental, structural, or both, set under a projecting element, such as the eaves of a house.

Bulkhead - The panels below the display windows on a commercial storefront.

Bungalow Style – An early 20th century architectural style that grew out of the Arts and Crafts movement of the 19th century. Its basic characteristics are long, low profiles; overhanging, bracketed eaves; wide engaged porches with square, squat brick piers supporting wood posts; and informal interior arrangements.

Buttress – A vertical mass of masonry projecting from or built against a wall to give additional strength at the point of maximum stress. Sometimes wooden buttresses are added to frame Gothic Revival style buildings as decorative, but not supporting features.

Capital – The topmost member, usually decorated or molded, of a column or pilaster.

Cararra Glass – Pigmented structural glass developed and popularized in the early 20th century for facing Art Deco and Art Modern-style commercial buildings.

Casing – The exposed trim molding, framing or lining around a door or a window. Casings may be either flat or molded.

Cast Iron - Iron that has been shaped by being melted and cast in a mold.

Caulking – A resilient mastic compound, often having a silicone, bituminous or rubber base; used to seal cracks, fill joints, prevent leakage and provide waterproofing.

Cementitious Board – A material composed of cement, sand and cellulose fiber. It was first introduced in the early twentieth century as a substitute for slate. Today cementitious board has a variety of uses including exterior siding and roofing.

Center-Hall Plan – A plan in which the hall or passage extends through the center of a house and is flanked by two or more rooms.

Chalking – The formation of a powder surface condition from the disintegration of a binder or an elastomer in a paint coating caused by weathering or an otherwise destructive environment.

Chamfer - A beveled edge or corner.

Chamfered Post – A square post with the edges of its corners cut away or beveled.

Checking – Small cracks in a film of paint or varnish that do not completely penetrate to the previous coat. Crack patterns are roughly similar to a checkerboard.

Clapboard or Weatherboard – Horizontal wooden boards that are tapered toward the upper edge and laid to cover a portion of a similar board underneath and to be covered by a similar one above. The exposed face of clapboard is usually less than 6 inches wide. This was common outer facing in the nineteenth and early twentieth century buildings.

Classical – Embodying or based on the principles and forms of Greek and Roman architecture.

Clerestory – Windows located relatively high in a wall that often form a continuous band. This was a feature of many Gothic cathedrals and was later adapted to many Revival styles.

Clipped Gable – The peak of a gable which is truncated for decorative effect; often the roof overhangs the missing peak.

Colonial Revival Style – Late 19th and early 20th century style that combines features of Classical and Colonial architecture.

Colonnette – A small-scale column, generally employed as a decorative element on mantels, overmantels and porticoes.

Column – A vertical shaft or pillar that supports or appears to support a load.

Common Bond – A method of laying brick where one course of headers is laid for every three, five or seven courses of stretchers.

Composition Board – A building board, usually intended to resemble clapboard, fabricated from wood or paper fabric under pressure and at an elevated temperature, usually with a binder.

Composite Lumber – A material composed of a mixture of wood fiber, plastic and a bonding agent. Ingredients are proportioned to form a material that is denser, stronger and heavier than wood lumber.

Coping - The cap or the top course of a masonry wall.

Corbel – A projection, or building out, from a masonry wall, sometimes to support a load and sometimes for decorative effect.

Corner Block – A square piece, either plain or decorated that forms a corner of a window or door surround.

7. Definitions and Architectural Terms

Corner Boards – Vertical boards nailed on the external corners of frame buildings to provide a method of finishing and joining the ends of the weatherboards.

Cornice – Any predominant molded and projecting horizontal member that crowns an architectural composition, such as a storefront or a parapet wall.

Craftsman Style – Prevalent in the first few decades of the 20th century, this style is usually characterized by a nonsymmetrical façade and front porch with porte cochere to one side. Architectural components typically include exposed roof beams, triangular knee braces at gables and low to moderately sloped roofs. Common exterior finish materials include wood shingles, clapboard and stucco.

Crenulation – Alternating indentations and raised sections of a parapet, creating a toothlike profile sometimes known as a battlement. Crenulation is a detail found most commonly in the Gothic Revival style.

Cresting – Ornamental ironwork, often highly decorative, used to embellish the ridge of a gable roof or the curb or upper cornice of a mansard roof.

Crossette – A lateral projection of the head of the molded architrave or surround of a door, window, mantel or paneled overmantel; also known as an "ear" or "dog-ear".

Crown Molding – The upper molding of a cornice, often serving to cap or crown the vertical facing or fascia of a boxed cornice. Also, the term is frequently given to the molding used to decorate the joints between walls and a ceiling.

Cupola – A small structure, usually polygonal, built on top of a roof or tower, mostly for ornamental purposes.

Deck – An uncovered porch supported on posts, usually at the rear of a building; popular in modern residential design.

Dentil – Small, closely spaced blocks, often toothlike, used as an ornamental element of a classical cornice.

Dogtrot Plan – A plan in which two pens with their own chimneys separated by an open center passage.

Dormer – A structure containing a window, or windows that project through a pitched roof.

Doric Order – A classical order characterized by simple unadorned capitals supporting a frieze of vertically grooved tablets or triglyphs set at intervals.

Dormer Window – An upright window, set in a sloping roof, with vertical sides and front, usually with a gable, shed or hip roof.

Double-Hung Window - A window with two sashes that open and close by

sliding up and down in a cased frame.

Double-Pile House – A center-hall plan house that is two rooms deep on each side of the hall.

Double-Shoulder Chimney – An exterior chimney the sides of which angle inward to form shoulders twice as it ascends from the base to the cap.

Downspout – A vertical pipe, often of sheet metal, used to conduct water from a roof drain or gutter to the ground or cistern.

Dressed – Descriptive of stone, brick or lumber that has been prepared, shaped or finished by cutting, planing, rubbing or sanding one or more of its faces.

Eave - The part of a sloping roof that projects beyond the wall.

Eclectic or Eclecticism – A method of design in architecture in which elements from a variety of stylistic sources are selected and combined in new and original ways.

Elevation – A drawing showing the vertical elements of a building, either exterior or interior, as a direct projection to a vertical plane.

Ell – A secondary wing or extension of a building, often a rear addition, positioned at right angles to the principal mass.

Eminent Domain – The power of a government to acquire private property for public benefit after payment of just compensation to the owner.

Enabling Legislation – Federal or state laws that authorize governing bodies within their jurisdictions to enact particular measures or delegate powers such as enactment of local landmarks and historic district ordinances, zoning and taxation.

Engaged Porch – A porch, the roof of which is continuous structurally with that of the main building roof.

English Bond – A method of laying brick wherein one course is laid with stretchers and the next with headers, thus bonding the double thickness of brick together and forming a high strength bond of alternating courses of stretchers and headers.

Entablature – The horizontal part of a Classical order of architecture, usually positioned above columns or the frieze; the uppermost element is the cornice.

Escutcheon – A protective plate, sometimes decorated, surrounding, the keyhole of a door, a light switch or similar device.

Etched Glass – Glass whose surface has been cut away with a strong acid or by abrasive action into a decorative pattern.

Extended Use - Any process that increases the useful life of an old building, e.g.

7. Definitions and Architectural Terms

adaptive use or continued use.

Exterior End Chimney – A chimney located outside the walls of a house, usually against the gable end of a building.

Facade - The face or front of a building.

Fanlight – A semicircular window, usually above a door or window, with radiating muntins suggesting a fan.

Fascia – A flat board with a vertical face that forms the trim along the edge of a flat roof, or along the horizontal, or eave side of a pitched roof. The rain gutter is often mounted on it.

Fluting – Shallow, concave grooves running vertically on the shaft of a column, pilaster or other surface.

Federal Style – The style of architecture popular in America from the Revolution through the early 19th century, and from about 1800-1840 in North Carolina. The style is characterized by the use of delicate Classical ornament.

Fenestration - The arrangement and design of windows on a building.

Finial – an ornament, usually turned on a lathe, placed on the apex of an architectural feature such as a gable, turret or pediment.

Flashing – A thin impervious material placed in construction to prevent water penetration, to provide water drainage, or both, especially between a roof and a wall.

Flemish Bond – A method of laying brick where headers and stretchers alternate in each course and, vertically, headers are placed over stretchers to form a bond and give a distinctive cross pattern.

Flush Siding – An exterior wall treatment consisting of closely fitted horizontal boards with joints that are carefully formed to be hidden and flush, giving a very uniform, flat siding appearance.

Foundation – The supporting portion of a structure below the first floor construction, or below grade, including footings.

French Window – A long window reaching to the floor level and opening in two leaves like a pair of doors.

Fretwork – A geometrically meandering strap pattern; a type of ornament consisting of narrow fillet or band that is folded, crossed and interlaced.

Frieze – The middle portion of a Classical entablature, located above the architrave and below the cornice. The term is usually used to describe the flat, horizontal board located above the weatherboards of most houses.

Gable – The triangular portion of a wall formed or defined by the two sides of a double sloping roof; often referred to as an "A" roof.

Galvanize - To coat steel or iron by immersing it in a bath of molten zinc.

Gambrel Roof – A gambrel or gambrel roof is a usually symmetrical two-sided roof with two slopes on each side. The upper slope is positioned at a shallow angle, while the lower slope is steep.

Gazebo – A small structure or garden pavilion usually sited to capture a particular view. Gazebos can be freestanding or attached to a garden wall, and they are characterized by a roof and partially open sides. The most popular shape is octagonal or round.

Georgian Style – The prevailing style of the eighteenth century in Great Britain and the North American Colonies, so named after George I, George II and George III. It is derived from Classical, Renaissance and Baroque forms.

German Siding – Wooden siding with a concave upper edge that fits into a corresponding rabbet in the siding above.

Gingerbread - Thin, curvilinear ornamentation produced with machine powered saws.

Glazed Header – A brick having a glossy, dark coating ranging in color from gray green to almost black, formed on the outer surface through direct exposure to flame and intense heat during the firing process. In Flemish bond brickwork, this glazed surface is often used for decorative effect by laying the brick so that the glazed ends or headers are exposed to form a pattern in the wall.

Glue-Chip Glass – A patterned glass with a surface resembling frost crystals common in turn of the century houses and bungalows.

Gothic Arch – A pointed arch commonly used in Gothic Revival architecture especially churches.

Gothic Revival Style – The nineteenth-century revival of the forms and ornament of medieval Gothic European architecture, characterized by the use of the pointed arch, buttresses, pinnacles and other Gothic details in a decorative fashion. The style was popular for church architecture in North Carolina well into the 20th Century.

Greek Revival Style – The mid-19th century revival of the forms and ornamentation of the architecture of ancient Greece.

Gutter – A shallow channel of metal or wood set immediately below or built in along the eaves of a building to catch and carry off rainwater.

Hall Parlor Plan – A traditional vernacular plan consisting of two principal rooms: a larger "hall," often nearly square, and an adjoining smaller "parlor." In most instances, the hall was entered directly from the outside and had a fireplace

7. Definitions and Architectural Terms

centered on the end wall; it was the room where most domestic activities took place. The smaller parlor tended to be used for sleeping.

Header - The end of a brick, sometimes glazed.

Hipped Roof – A roof that slopes back equally from each side of a building. A hip roof can have a pyramidal form or have a slight ridge.

House Museum – A museum whose structure itself is of historical or architectural significance and whose interpretation relates primarily to the building's architecture, furnishings and history.

Interior End Chimney – A chimney positioned on the interior side of the gable end of a house.

Italianate Style – A revival of elements of Italian Renaissance architecture popular during the mid and late 19th century, characterized by the presence of broad projecting or overhanging cornices supported by ornate sawn brackets. Other features include the use of arched windows and heavy hoodmolds.

Jamb - The vertical sides of an opening, usually for a door or a window.

Jerkin Head Roof – A roof whose end has been formed into a shape midway between a gable and a hip, resulting in a truncated or "clipped" appearance; sometimes called clipped gable.

Joist – One of a series of parallel timbers or beams, usually set on edge, that span a room from wall to wall to support a floor or ceiling; a beam to which floorboards, ceiling boards or plaster laths are nailed.

Keystone – The central wedge-shaped stone at the crown of an arch or in the center of a lintel.

Landscape – The totality of the built or human influenced habitat experienced at any one place. Dominant features are topography, plant cover, buildings or other structures and their patterns.

Latex Paint – A paint having a latex binder, which is an emulsion of finely dispersed particles of natural or synthetic rubber or plastic materials in water.

Lattice – A network, often diagonal, of interlocking lath or other thin strips used as screening, especially in the base of a porch.

Light - A pane of glass.

Lintel – A beam of wood or stone that spans an opening; in masonry construction it frequently supports the masonry above the opening.

Lunette – A semicircular opening.

Mansard Roof - A four sided double pitch roof characteristic of the Second

Empire Style.

Mixed Use – A variety of authorized activities in an area or a building as distinguished from the isolated uses and planned separatism prescribed by many zoning ordinances.

Mildew – A fungus that grows and feeds on paint, cotton and linen fabrics, etcetera, that are exposed to moisture; causes discoloration and decomposition of the surface.

Modillion – A horizontal bracket, often in the form of a plain block, ornamenting, or sometimes supporting, the underside of the cornice.

Molding – A decorative band having a constant profile or having a pattern in low relief, generally used in cornices or as trim around openings.

Mortar – A mixture of portland cement, lime, putty and sand in various proportions used for laying bricks or stones. Until the use of hard portland cement became prevalent, the softer lime clay or lime sand mortars and masonry cement were common.

Mortise and Tenon – A joint made by one member having its end cut as a projecting tongue, or tenon, that fits exactly into a groove or hole, or mortise, in the other member. Once joined in this fashion, the two pieces are often secured by a peg.

Mullion – A vertical member dividing a window area and forming part of the window frame.

Muntin – A molding forming part of the frame of a window sash and holding one edge of a pane.

Newel Post – The principal post used to terminate the railing or balustrade of a flight of stairs.

Neoclassical Style – A style of architecture popular during the first half of the twentieth century. Elements draw heavily from Greek Revival and early Classical revival.

Ogee – A double curve formed by the combination of a convex and concave line, similar to an s-shape.

Oil Paint – A paint in which a drying oil, usually linseed oil, is the vehicle for the pigment; rarely used as a house paint since the mid twentieth century when it was commonly replaced by alkyd resin paints.

Ornamentation – In architecture, applied embellishment in various styles that is a distinguishing characteristic of buildings, furniture, and household items. Ornamentation often occurs on entablatures, columns, and the tops of buildings and around entryways and windows, especially in the form of moldings.

7. Definitions and Architectural Terms

Palladian Window – A window design featuring a central arched opening flanked by lower square headed openings separated from them by columns, pilasters, piers or narrow vertical panels.

Panel – A portion of a flat surface set off by molding or some other decorative device.

Parapet - A low wall along a roof or terrace, used as decoration or protection.

Patio – An open, outdoor living space adjacent to a building, usually surfaced with stone, tile or concrete and at ground level.

Pediment – A crowning element of porticoes, pavilions, doorways and other architectural features, usually of low triangular form with a cornice extending across its base and carried up the raking sides; sometimes broken in the center as if to accommodate an ornament; sometimes of segmental, elliptical or serpentine form.

Pen – A one room structure, the term is typically used when referring to log buildings. Many dwellings erected by the first settlers of the North Carolina piedmont were single pen structures. Many of these dwellings were expanded into two pen houses following the double pen, saddlebag or dogtrot plans.

Pergola – A long and narrow, linear structure with pillars to support flat crossbeams and an open latticework that is often covered in vines to shade a walkway. Although sometimes called an arbor, a pergola is a trellis structure over a walkway and may extend from a building, connect buildings or protect an open terrace. Pergolas can also extend from a door to a garden feature, such as a pool.

Pilaster – A shallow pier or rectangular column projecting only slightly from or engaged to a wall. Pilasters are usually decorated like columns with a base, shaft and capital.

Porte Cochere – A projecting porch that provides protection for vehicles and people entering a building; a common feature of the early 20th century Colonial Revival and Bungalow styles.

Portico – A roofed space, open or partly enclosed, often with columns and a pediment that forms the entrance and centerpiece of the facade of a building.

Portland Cement – A very hard and strong hydraulic cement made by heating a slurry of clay and limestone in a kiln. Water is the catalyst that activates hardening.

Primer – A paint applied as a first coat that serves the function of sealing and filling on wood, plaster and masonry.

Queen Anne Style – A popular late 19th century revival of early 18th century English architecture, characterized by irregularity of plan and massing with a variety of textures.

Quoin – Ornamental blocks of wood, stone, brick or stucco placed at the corners of a building and projecting slightly from the front of the facade.

Rafters – Structural timbers rising from the plate at the top of a wall to the ridge of the roof and supporting the roof covering.

Raised panels – A portion of a flat surface, as in the panel of a door or wainscoting that is distinctly set off from the surrounding area by a molding or other device and is raised above the surrounding area.

Rake – Trim members that run parallel to a roof slope and form the finish between the wall and a gable roof extension.

Repointing – Raking out deteriorated mortar and filling with surface mortar to repair the joint.

Returns – Horizontal portions of a cornice that extend part of the way across the gable end of a structure at eave level.

Roofing Tile – A tile for roofing, usually of burnt clay; available in many configurations and types, such as plain tiles, single lap tiles and interlocking tiles.

Rusticated Stone – Masonry or wood in which each principal face is rough or highly patterned with a tooled margin.

Saddlebag Plan – A plan in which two single pen rooms are joined together, separated by a single interior chimney.

Sandblasting – An extremely abrasive method of cleaning brick, masonry or wood that involves directing high powered jets of sand against a surface.

Sanding – Flattening down, rubbing and smoothing a surface with abrasive paper cloth either by hand or by machine.

Sash – The frame, usually of wood, that holds the panes of glass in a window; may be movable or fixed; may slide in a vertical plane or may be pivotal.

Sawnwork – Ornamentation in cutout planking, formed with a bandsaw. Popular in the 1880s and the 1890s, this decorative detailing is flat.

Second Empire Style – An eclectic style derived from the grand architecture of the French Second Empire of Napoleon III from 1852-1870, popularly used in America from the 1860s to the 1880s, especially for public buildings, and characterized by heavy ornament and high mansard roofs with dormers.

Segmental Arch - An arch formed on a segment of a circle or an ellipse.

Sense of Place – The sum of the attributes of a locality, neighborhood or property that give it a unique and distinctive character.

7. Definitions and Architectural Terms

Shed Room – A one story appendage to a larger structure, covered by a simple shed or sloping roof that "leans" against the principal building mass.

Sheet Metal – A flat, rolled metal product, rectangular in cross section and form; when used as roofing material, usually terne or zinc-plated.

Shingle – A roofing unit of wood, asphalt, slate, tile or other material cut to stock lengths, widths and thicknesses; used as an exterior covering on roofs and applied in a overlapping fashion.

Shoulder – The sloping shelf or ledge created on the side of a masonry chimney where the width of the chimney changes.

Shutters and blinds – Small solid panels hinged on the exterior of windows, and sometimes doors, to be operable. Blinds are similar, but with wooden louvers.

Sidelight – A framed area of fixed glass of one or more panes positioned to either side of a door or window opening.

Sill – A heavy horizontal timber positioned at the bottom of a wood framed structure that rests on top of the foundation; also, the horizontal bottom member of a door or window frame.

Soffit – The exposed undersurface of any overhead component of a building, such as an arch, balcony, beam, cornice, lintel or vault.

Spindle Frieze – A row of lathe turned spindles included as the uppermost decorative feature of a gallery or porch below the cornice; also known as an openwork frieze.

Street Furniture – Municipal equipment placed along streets including light fixtures, fire hydrants, police and fire call boxes, signs, benches and kiosks.

Streetscape – The distinguishing character of a particular street is created by its width, degree of curvature, paving materials, street furniture, forms of surrounding buildings and the presence of vegetation, especially trees, along the curb or sidewalk.

Stretcher - The long face of a brick when laid horizontally.

String Course – A projecting course of bricks or other material forming a narrow horizontal strip across the wall of a building, usually to delineate the line between stories, also referred to as a belt course.

Stucco – An exterior finish, usually textured, composed of portland cement, lime and sand mixed with water. Older type stucco may be mixed from softer masonry cement rather than portland cement.

Style – A type of architecture distinguished by special characteristics of structure and ornament and often related in time; also, a general quality of distinctive character.

Surround – The border or casing of a window or door opening, sometimes molded.

Terneplate – Sheet metal coated with terne metal, which is an alloy of lead containing up to 20 percent tin.

Terra Cotta – A ceramic material, molded decoratively and often glazed, used for facing buildings or as inset ornament.

Textured Siding – Wood cut in various flat patterns, such as half rounds or scallops, and applied to portions of facades to create a picturesque or romantic look. This treatment was generally used in Queen Anne style buildings. Surface textures are often found in diamond, scallop, staggered butt or composite patterns.

Tongue and Groove – A joinery system in which boards are milled with a tongue on one side and a groove on the other so that they can be tightly joined with a flush surface alignment.

Townscape – The relationship of buildings, shapes, spaces and textures that give a town or area its distinctive visual character or image.

Trabeated – A method of construction employing posts and lintels; hence, a term used to describe a standard Greek Revival entrance door having a transom and sidelights.

Tracery – An ornamental division of an opening, especially a large window, usually made with wood. Tracery is found in buildings of Gothic influence.

Transom - A narrow horizontal window unit above a door.

Turned - Fashioned on a lathe, as in a baluster, newel or porch post.

Turret - A small tower, usually corbelled from a corner.

Viewshed – A geographical area that is visible from a location, including surrounding points that are in the line of sight with that location, and excluding points that are beyond the horizon or obstructed by terrain, buildings, trees and similar features.

Vernacular – In architecture, as in language, the nonacademic local expressions of a particular region. For example, a vernacular Greek Revival structure may exhibit forms and details that are derived from the principles of formal Classical architecture but are executed by local builders in an individual way that reflects both local or regional needs, tastes, climatic conditions, technology and craftsmanship.

Victorian – The general term used to describe the wide variety of eclectic revival styles that were introduced in British and American architecture during the reign of Queen Victoria from 1837-1901.

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Vinyl Siding – Sheets of thermal plastic compound made from chloride or vinyl acetates, as well as some plastics made from styrene and other chemicals, usually fabricated to resemble clapboard.

Visual Pollution – Anything that, because of its placement or intrinsic nature, is offensive to the sense of sight, e.g., garbage dumps.

Vitrolite – Pigmented structural glass developed and popularized in the early 20th century for facing Art Deco and Art Modern style commercial buildings.

Water Blasting – A cleaning method similar to sandblasting except that water is used as the abrasive. As in sandblasting, high-pressure water jets can damage wood and masonry surfaces.

Water Table – A belt course differentiating the foundation of a masonry building from its exterior walls.

Weatherboard – Wood siding consisting of overlapping horizontal boards usually thicker at one edge than the other.

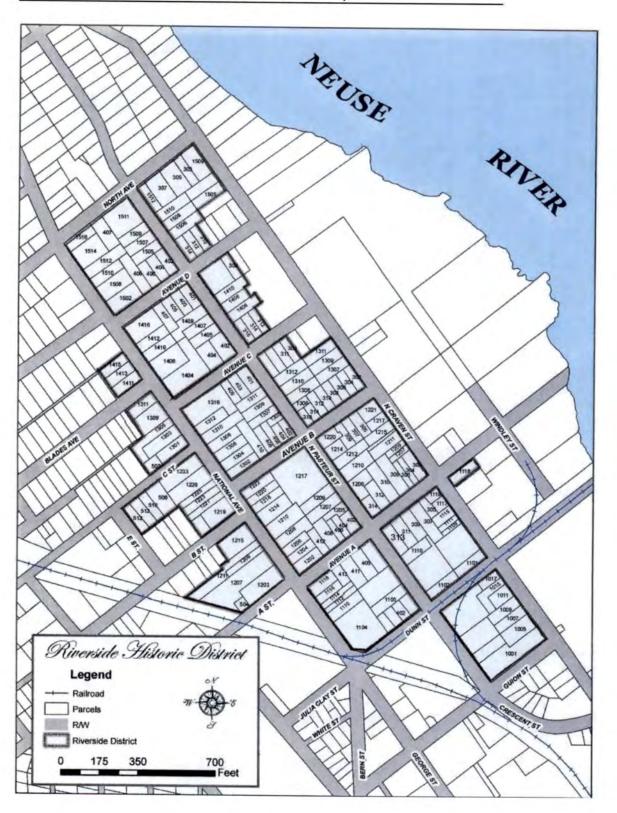
Wrought Iron – Iron that is rolled or hammered into shape, never melted. In general, wrought iron is not commercially available and ornamental iron is used in its place.

8. Appendices



8.1 Downtown Historic District Map

8.2 Riverside Historic District Map



8.3 Department of Interior Standards for the Treatment of Historic Properties

These standards promote consistent and responsible historic preservation practices for the protection of the country's cultural resources. There are four treatment standards in hierarchical order: Preservation, Rehabilitation, Restoration, and Reconstruction. Contact SHPO or visit their website for additional information on the treatment standards.

Standards for Preservation

The Standards for Preservation place a high premium on the retention of historic fabric through conservation, maintenance and repair. It reflects a building's continuum over time, through successive occupancies, and the respectful changes and alterations that are made.

- A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.
- The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
- 3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
- Changes to a property that have acquired historic significance in their own right will be retained and preserved.
- Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
- 6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.
- Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
- Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

Standards for Rehabilitation

The Standards for Rehabilitation emphasize the retention and repair of historic materials, but more latitude is provided for replacement because it is assumed the property is more deteriorated prior to work. These standards form the foundation of the Commission's design review criteria and the basis for New Bern's historic district guidelines.

- A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
- The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
- Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
- Changes to a property that have acquired historic significance in their own right will be retained and preserved.
- Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
- 6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new features will match the old in design, color, texture, and where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
- Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
- 8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
- 9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
- 10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Standards for Restoration

The Standards for Restoration are focused on the retention of materials from a particular time in a property's history, while permitting the removal of materials from other periods.

- A property will be used as it was historically or be given a new use which reflects the property's restoration period.
- Materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces, and spatial relationships that characterize the period will not be undertaken.
- 3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
- Materials, features, spaces, and finishes that characterize other historical periods will be documented prior to their alteration or removal.
- Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.
- Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials.
 - Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by adding conjectural features, features from other properties, or by combining features that never existed together historically.
 - Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
 - Archeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
 - 10. Designs that were never executed historically will not be constructed.

Standards for Reconstruction

The Standards for Reconstruction establish limited opportunities to recreate a non surviving site, landscape, building, structure, or object in all new materials.

- Reconstruction will be used to depict vanished or non-surviving portions of a property when documentary and physical evidence is available to permit accurate reconstruction with minimal conjecture, and such reconstruction is essential to the public understanding of the property.
- Reconstruction of a landscape, building, structure, or object in its historic location will be preceded by a thorough archeological investigation to identify and evaluate those features and artifacts which are essential to an accurate reconstruction. If such resources must be disturbed, mitigation measures will be undertaken.
- Reconstruction will include measures to preserve any remaining historic materials, features, and spatial relationships.
- 4. Reconstruction will be based on the accurate duplication of historic features and elements substantiated by documentary or physical evidence rather than on conjectural designs or the availability of different features from other historic properties. A reconstructed property will re-create the appearance of the non-surviving historic property in materials, design, color, and texture.
- 5. A reconstruction will be clearly identified as a contemporary re-creation.
- 6. Designs that were never executed historically will not be constructed.

8.4 Links to Other Resources

New Bern Land Use Ordinance

http://library.municode.com/HTML/11332/level2/PTIICOOR_APXALAUS.html

New Bern Ordinance on Preservation

https://www.municode.com/library/nc/new_bern/codes/code_of_ordinances?nod eId=PTIICOOR_APXALAUS_ARTXXINEBEHIDI

New Bern Ordinance on Waterfront Overlay Districts

https://library.municode.com/HTML/11332/level3/PTIICOOR_APXALAUS_A RTXXIIINEBEWAOVDI.html

New Bern Ordinance on Neighborhood Conservation Overlay Districts

https://library.municode.com/HTML/11332/level3/PTIICOOR_APXALAUS_A RTXXVNECOOVDI.html

New Bern Urban Design Plan

http://www.newbern-nc.org/departments/development/ed/plans-projects/

New Bern Historic Preservation Commission Web Site

http://www.newbern-nc.org/departments/development/historicpreservation/historic-preservation-commission/

New Bern Historic District Guidelines

http://www.newbern-nc.org/departments/development/historic-preservation/historic-preservation-guidlines/

Historic Preservation Commission Policies and Procedures

http://www.newbern-nc.org/departments/development/historicpreservation/historic-preservation-procedure/

New Bern Preservation Plan

http://www.newbern-nc.org/departments/development/ed/plans-projects/

National Park Service Preservation Briefs

http://www.nps.gov/tps/how-to-preserve/briefs.htm



Development Services Department 303 First St. P.O. Box 1129 New Bern, NC 28563 (252) 639-7581

HISTORIC PRESERVATION COMMISSION

APPROVED CHANGES TO THE NEW BERN HISTORIC DISTRICT GUIDELINES June 18, 2020 ** SUBJECT TO FINAL APPROVAL BY THE BOARD OF ALDERMEN **

Note: Text in *italics* is present in the current guidelines. **Bold** text indicates new text to be added. Text with strikethrough is to be removed.

Section 1.4, Historic Preservation Commission. [Add text, in bold, to the existing text, in italics, as follows:]

The HPC meets on the first and third Wednesday of each month. The first Wednesday of each month is the HPC's work session. Property owners may consult the HPC about a specific project, but there is no public comment on a proposal. The third Wednesday of the month is the HPC's regular business meeting where public hearings are held for Certificate of Appropriateness (COA) applications. The **applicant, or representative of the applicant, must be present to approve a COA.** The HPC also considers other matters at this meeting that require formal action. The location, meeting times and agendas are published on the City of New Bern website. Work sessions and regular business meetings are open to the public.

Section 1.6, Obtaining a Certificate of Appropriateness. [Add text and remove the already out-of-date minor works listing as follows:]

A list of minor works that can be approved by the HPC Administrator is maintained and updated by the HPC. The complete list is available on the City of New Bern website. The HPC, during a design review work session, can direct the HPC Administrator to process applications of limited scope as a minor work.

A partial list of minor work items:

- Tree and shrubbery planting and removal
- Minor residential landscaping projects
- Residential driveways and walkways

- Patios and sidewalks in Secondary and Tertiary AVCs
- Fences in secondary and Tertiary AVCs
- Arbors and pergolas in Tertiary AVCs
- Masonry repointing
- Mechanical equipment in secondary and Tertiary AVCs
- Flat and low slope roof replacements
- Skylights within Tertiary AVCs
- Storm windows and doors
- Temporary signs and "historic home" identification signs
- Removal of incongruous synthetic siding where original siding exists underneath
- Doors, door frames and associated door trim in tertiary areas which are compatible with original sizes, designs, configurations and materials
- Storefront canvas awnings
- Signage

Section 1.6, Obtaining a Certificate of Appropriateness. [The text in italics is to remain and suggest removing supporting materials text, in strikethrough, from the Guidelines and adding them to the COA instructions sheets, as follows:]

Major works are significant exterior alterations to a structure or site, including additions, infill construction and demolition. Major works must be approved by the HPC and receive a COA.

Supporting materials for a major works application typically include the following:

- Site plan with a North arrow
- Drawings indicating desired changes
- Photographs of existing conditions, surrounding buildings and properties
- Key dimensions and measurements
- Material samples, cut sheets and specifications
- Landscaping details and species

Section 1.9, Worksheet for COA Evaluation. Add text as follows:

This worksheet can be downloaded from the HPC website or it can be obtained from the HPC administrator. The green shading identifies guideline sections that are likely applicable to the type of proposed changes.

Guideline 2.3.1. Add text as follows:

Locate equipment in Secondary and Tertiary AVCs and screen items from public view with vegetation, fencing and similar site constructions. It is recommended that utilities be consolidated in common locations.

Guideline 2.3.4. Add text as follows:

Evaluate utilities and equipment installed in the public right-of-way, such as utility poles, street lights, railroad crossing signals, signal boxes and similar items, for their visual impact on the street. Install multiple utilities on common poles.

Guideline 2.4.1. Modify text as follows:

Maintain mature street canopy trees. Mature tree removal and its replacement species must be recommended by a certified arborist. Replace distressed removed trees with a similar canopy species at or near the location of the removed tree. Locate canopy trees to that defines the street edges.

Guideline 2.7.2. Modify text as follows:

Use driveways to access off street parking areas located in the Tertiary AVC. Areas for vehicular use shall not exceed more than 50% of the rear yard in the tight weave development pattern.

Guideline 2.9.1 Add text as follows:

Construct piers with wood decking or concrete panels. Piers shall have a narrow width that generally extends perpendicular and parallel to the shoreline.

Guideline 4.2.4. Modify text as follows:

Incorporate wood trims and articulate masonry appropriately for the application. Primary structures are generally more ornate and detailed. Accessory structures are generally subordinate to the primary structure and have minimal ornamentation, if any, and simplified details.

Create Guideline 4.2.5 as follows:

Primary structures are generally more ornate and detailed. Accessory structures are generally subordinate to the primary structure and have minimal ornamentation, if any, and simplified details.

Guideline 4.3.5. Modify text as follows:

Tinted, opaque and reflective glazing is not appropriate in historic windows.

Guideline 4.4.4. Modify text as follows:

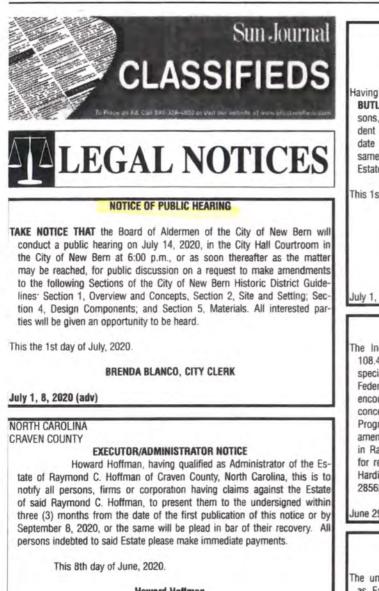
Provide porches, entrance doors, porch railings and other ornaments that proportionally relate to the building. Appropriate porch balustrades often convey a heavier visual appearance. Center balusters between the top and bottom rails and space them about three inches apart.

Guideline 5.3.4. Add text as follows:

Provide aluminum fabrications with welded joints or blind, mechanical connections having concealed fasteners.

Guideline 5.4.4. Add text as follows:

Modify text as follows: Consider using opaque stain in lieu of paint on porch flooring, deck flooring fencing and similar wood surfaces exposed to foot traffic or weather.



Howard Hoffman c/o Kellum Law Firm John T. Briggs **219 Broad Street** New Bern, NC 28560

June 10, 17, 24, July 1, 2020 (adv)

NORTH CAROLINA SUPERIOR COURT DIVISION **CRAVEN COUNTY**

NORTH CAROLINA SUPERIOR COURT DIVISION **CRAVEN COUNTY** ADMINISTRATORS NOTICE

Having qualified as Administrator of the Estate of JEFFREY MICHAEL BUTLER late of Craven County, North Carolina, this is to notify all persons, firms or corporations having claims against the Estate of said decedent to present them to the undersigned within three months from the date of the first publication of this notice or OCTOBER 1, 2020, or the same will be pleaded and bar their recovery. All persons indebted to said Estate please make immediate payment.

This 1st day of July, 2020.

Alan Clark, Administrator c/o Charles K. McCotter, Jr. PO Box 12800 New Bern NC 28561-2800 252-635-1005

July 1, 8, 15, 22, 2020 (adv)

PUBLIC NOTICE

The Individuals with Disabilities Education Act (IDEA-Part B, Public Law 108.446) Project is presently being amended. The Project describes the special education programs that Craven County Schools proposes for Federal funding for the 2020-2021 School Year. Interested persons are encouraged to review amendments to the Project and make comments concerning the implementation of special education under this Federal Program. All comments will be considered prior to submission of the amended Project to the North Carolina Department of Public Instruction in Raleigh, North Carolina. The IDEA-Part B Project is open to the public for review and comments during June 30th-July 3rd in the office of Lynn Hardison, Exceptional Children Director, at 3600 Trent Rd New Bern, NC 28562.

June 29, July 1, 2020 (adv)

NOTICE TO CREDITORS NORTH CAROLINA, CRAVEN COUNTY

The undersigned, Joy Darlene Overton, having qualified on June 9, 2020, as Executrix of the Estate of SHIRLEY W. STALEY aka Shirley Mason Williford Staley, late of Craven County, does hereby notify all persons having claims against the Estate to present them to the undersigned in care of White & Allen, P.A., 901 College Court, New Bern, North Carolina 28562, on or before SEPTEMBER 17, 2020, or this Notice will be pleaded in bar of their recovery. All persons indebted to the Estate are requested to make immediate payment to Joy Darlene Overton, Executrix, in care of White & Allen, P.A., 901 College Court, New Bern, North Carolina 28562.

This the 17th day of June, 2020.

Destant Destates Formation of the



MEDICAL

ASSISTANT

weeding, planting, pruning, grading

& sod, fertilizer, landscape design, stump grinding, small to medium

tree, brush & leaf removal,

French drains & more!

AGENDA ITEM COVER SHEET



Agenda Item Title:

Consider Adopting a Resolution in Encouraging NCDOT to Proceed with NC Highway 43 Connector Project

Date of Meeting: 07/14/20	Ward # if applicable:
Department: City Clerk	Person Submitting Item: Brenda Blanco
Call for Public Hearing: □Yes⊠No	Date of Public Hearing:

Explanation of Item:	NCDOT has delayed the NC 43 Connector project. The proposed resolution encourages them to proceed with the project, as it will enhance and facilitate economic development in New Bern and Craven County.
Actions Needed by Board:	Consider adopting the resolution
Backup Attached:	Resolution

Is item time sensitive? □Yes ⊠No

Will there be advocates/opponents at the meeting?
Yes
No

Cost of Agenda Item:

If this requires an expenditure, has it been budgeted and are funds available and certified by the Finance Director? \Box Yes \Box No

Additional Notes:

RESOLUTION

WHEREAS, the NC Department of Transportation ("NCDOT") has construction planned for the extension of the NC 43 Connector from US17 Business, which is one of the main retail/commercial corridors in New Bern, to south of US70/US17/I-42 in Craven County. The project is identified as TIP# R-4463A and will extend a 2.3-mile section of the NC 43 Connector via a four-laned, median-divided, partial control of access facility on new location. The connection will provide access from Vanceboro and northern portions of Craven County to New Bern and I-42, as well as provide better connectivity between Greenville and New Bern. Construction was scheduled to begin in September 2019, but has been delayed by NCDOT.

WHEREAS, the areas of US17 Business (Dr. Martin Luther King, Jr. Boulevard) and US70/US17/I-42 have seen significant increase in residential and commercial growth over recent years, and there is tremendous opportunity and anticipation for continued growth. However, the extension of the NC 43 Connector is a key component to facilitating this growth. The project will help alleviate existing and future congestion, improve mobility in the region and reliability of the road network, provide connectivity for the local community, and reduce traffic accidents. It will also provide additional access for residential and multi-use developments, enhance accessibility to commercial projects, and enhance regional mobility for freight traffic.

WHEREAS, failure to move forward with the NC 43 Connector project will threaten and detrimentally impact economic development in the City of New Bern and Craven County.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN:

That the City supports and encourages NCDOT to pursue the completion of the NC 43 Connector in Fiscal Year 2020/2021, as the project will promote and enhance economic development in New Bern and Craven County, as well as improve connectivity between Greenville and New Bern and within the local community.

ADOPTED THIS 14th DAY OF JULY, 2020.

DANA E. OUTLAW, MAYOR

BRENDA E. BLANCO, CITY CLERK

AGENDA ITEM COVER SHEET



Agenda Item Title:

Consider Adopting a Resolution Approving the Sale of 2203 Chestnut Avenue

Date of Meeting: 7/14/2020	Ward # if applicable: 2
Department: City Clerk	Person Submitting Item: Brenda Blanco
Call for Public Hearing: □Yes⊠No	Date of Public Hearing: N/A

Explanation of Item:	An offer of \$375.00 was received for the purchase of 2203 Chestnut Avenue, and the Board adopted a resolution on 05/12/20 to initiate the upset bid process. The bid was advertised, but no additional bids were received.
Actions Needed by Board:	Consider adopting resolution
Backup Attached:	Memo, resolution, offer to purchase, maps of the property, tax property card

Is item time sensitive? □Yes ⊠No

Will there be advocates/opponents at the meeting?
Yes
No

Cost of Agenda Item:

If this requires an expenditure, has it been budgeted and are funds available and certified by the Finance Director? \Box Yes \Box No

Additional Notes:

Aldermen

Sabrina Bengel Jameesha Harris Robert V. Aster Johnnie Ray Kinsey Barbara J. Best Jeffrey T. Odham



CITY OF NEW BERN

300 Pollock Street, P.O. Box 1129 New Bern, NC 28563-1129 (252) 636-4000 Dana E. Outlaw Mayor Mark A. Stephens City Manager Brenda E. Blanco City Clerk Mary M. Hogan Director of Finance

Memorandum

- TO: Mayor and Board of Aldermen
- FROM: Brenda Blanco, City Clerk

DATE: July 1, 2020

SUBJECT: Sale of 2203 Chestnut Avenue

In December 2019, the Board received an offer to purchase 2203 Chestnut Avenue and voted to initiate the upset bid process. The offer was advertised, and an upset bid was received. The Board voted to sell the property to the upset bidder, who subsequently decided against the purchase and failed to close on the property.

The original bidder then tendered a bid of \$375.00 to start a new upset bid process. The Board accepted the bid and adopted a resolution on May 12, 2020 to again initiate the upset bid process. This bid was advertised, but no additional bids were received. The property is a vacant 0.06-acre lot with a tax value of \$750.00, and the offer represents 50% of the value. The property was acquired jointly by the City and County through tax foreclosure in May of 2019. The Commissioner's Deed states the taxes, interest and penalties due to the City at the time of the foreclosure were \$556.45, and the City contributed \$480.99 toward the cost of the foreclosure proceeding.

/beb

RESOLUTION

THAT WHEREAS, the City of New Bern and Craven County have received an offer to purchase a parcel of property owned by the City and County identified as 2203 Chestnut Avenue, and being more particularly described herein; and

WHEREAS, the Board of Aldermen is authorized to sell the City's interest in the property pursuant to North Carolina General Statute §160A-269; and

WHEREAS, the offer to purchase was in the sum of \$375.00, and said offer was advertised as required by said statute; that no increased bids were received; and

WHEREAS, the Board of Aldermen deems it advisable and in the best interest of the City to sell its interest in the subject property to the successful bidder and to convey its interest in said property by quitclaim deed.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN:

Section 1. That the last and highest bid of JK Investment Holdings LLC in the sum of \$375.00 for said parcel identified as 2203 Chestnut Avenue, and being more particularly described herein, be and the same is hereby accepted as to the City's interest in said property, and the Mayor and the City Clerk be and they are hereby authorized and directed to execute a quitclaim deed to the purchaser for the City's interest in said property.

<u>Section 2</u>. That a copy of said quitclaim deed is attached hereto and incorporated herein by reference, and the original deed shall be delivered to said purchaser once the same has been executed on behalf of the City and County, upon payment of the purchase price.

Section 3. That the subject property is more particularly described as follows:

All that certain lot or parcel of land lying and being situate in Number Eight (8) Township, Craven County, North Carolina, and being more particularly described as follows:

The western one-half of Lot No. 408 lying and being situated in Number Eight (8) Township, Craven County, North Carolina, in that area known as Pembroke, a map or plot of which is recorded in Map Book 1 at Pages 164 and 165 in the Office of the Register of Deeds of Craven County.

Being also that same property conveyed to Craven County and the City of New Bern by Commissioner's Deed recorded May 3, 2019 in Book 3569 at Page 529 of the Craven County Registry.

ADOPTED THIS 14th DAY OF JULY, 2020.

DANA E. OUTLAW, MAYOR

BRENDA E. BLANCO, CITY CLERK

Prepared by and return to:

Michael Scott Davis DAVIS HARTMAN WRIGHT PLLC 209 Pollock Street New Bern, NC 28560

Tax Parcel No. 8-037-001 Revenue Stamps: \$0.00

STATE OF NORTH CAROLINA

COUNTY OF CRAVEN

QUITCLAIM DEED

THIS QUITCLAIM DEED, made this 14th day of July, 2020, by and between the **CITY OF NEW BERN**, a municipal corporation of the State of North Carolina, and **CRAVEN COUNTY**, a body politic and corporate of the State of North Carolina ("Grantors"); to **JK INVESTMENT HOLDINGS LLC**, a North Carolina limited liability company, whose mailing address is 2600 New Bern Avenue, New Bern, North Carolina 28562, ("Grantee");

WITNESSETH:

That said Grantors for and in consideration of the sum of TEN DOLLARS (\$10.00) and other good and valuable consideration to Grantors paid by the Grantee, the receipt of which is hereby acknowledged, have remised and released, and by these presents do remise, release and forever quitclaim unto the Grantee, Grantee's heirs and assigns, the following described property, to wit:

SEE <u>EXHIBIT A</u> ATTACHED HERETO AND INCORPORATED HEREIN BY REFERENCE.

The property herein conveyed does not include the primary residence of a Grantor.

DAVIS HARTMAN WRIGHT PLLC Attorneys at Law 209 Pollock Street New Bern, NC 28560 TO HAVE AND TO HOLD the above described lot or parcel of land and all privileges and appurtenances thereunto belonging to the Grantee, Grantee's heirs and assigns, free and discharged from all right, title, claim or interest of the said Grantors or anyone claiming by, through or under the Grantors.

IN TESTIMONY WHEREOF, the **CITY OF NEW BERN** has caused this instrument to be executed as its act and deed by its Mayor, attested by its City Clerk, and its seal to be hereunto affixed, all by the authority of its Board of Aldermen, and **CRAVEN COUNTY** has caused this instrument to be executed as its act and deed by the Chairman of its Board of Commissioners, attested by its Clerk, and its seal to be hereunto affixed, all by the authority of its Board of Commissioners, as of the day and year first above written.

CITY OF NEW BERN

(SEAL)

By:

DANA E. OUTLAW, MAYOR

ATTEST:

BRENDA E. BLANCO, CITY CLERK

STATE OF NORTH CAROLINA

COUNTY OF CRAVEN

I, ______, Notary Public in and for said County and State, do hereby certify that on the ______ day of July, 2020, before me personally appeared DANA E. OUTLAW, with whom I am personally acquainted, who, being by me duly sworn, says that he is the Mayor and that BRENDA E. BLANCO is the City Clerk for the City of New Bern, the municipal corporation described in and which executed the foregoing instrument; that he knows the common seal of said municipal corporation; that the seal affixed to the foregoing instrument is said common seal; that the name of the municipal corporation was subscribed thereto by the said Mayor; that the said common seal was affixed, all by order of the Board of Aldermen of said municipal corporation; and that the said instrument is the act and deed of said municipal corporation.

WITNESS my hand and official seal this the _____ day of July, 2020.

Notary Public

My Commission Expires:

CRAVEN COUNTY

(SEAL)

By:

Chairman, Craven County Board of Commissioners

ATTEST:

Clerk, Craven County Board of Commissioners

STATE OF NORTH CAROLINA

COUNTY OF CRAVEN

I, ______, Notary Public in and for said County and State, do hereby certify that on the _____ day of _____, 2020, before me personally appeared THOMAS F. MARK, with whom I am personally acquainted, who, being by me duly sworn, says that he is the Chairman of the Board of Commissioners for Craven County, and that NAN HOLTON is the Clerk of the Board of Commissioners for Craven County, the body politic and corporate described in and which executed the foregoing instrument; that he knows the common seal of said body politic and corporate; that the seal affixed to the foregoing instrument is said common seal; that the name of the body politic and corporate was subscribed thereto by the said Chairman; that the said common seal was affixed, all by order of the Board of Commissioners of said body politic and corporate; and that the said instrument is the act and deed of said body politic and corporate.

WITNESS my hand and official seal this the ____ day of _____, 2020.

Notary Public

My Commission Expires:

EXHIBIT A

All that certain lot or parcel of land lying and being situate in Number Eight (8) Township, Craven County, North Carolina, and being more particularly described as follows:

The western one-half of Lot No. 408 lying and being situated in Number Eight (8) Township, Craven County, North Carolina, in that area known as Pembroke, a map or plot of which is recorded in Map Book 1 at Pages 164 and 165 in the Office of the Register of Deeds of Craven County.

Being also that same property conveyed to Craven County and the City of New Bern by Commissioner's Deed recorded May 3, 2019 in Book 3569 at Page 529 of the Craven County Registry.

Subject to restrictive covenants and easements of record.

NORTH CAROLINA

OFFER TO PURCHASE AND CONTRACT

CRAVEN COUNTY

<u>JK INVESTMENT HOIDIMS LLC</u>, as Buyer, hereby offers to purchase and CRAVEN COUNTY and the CITY OF NEW BERN, collectively as Seller, upon acceptance of said offer, agrees to sell and convey, all of that plot, piece or parcel of land described below (hereafter referred to as the "Property"), upon the following terms and conditions:

1. REAL PROPERTY: Located in or near the City of New Bern, Craven County, North Carolina. being known as and more particularly described as:

Street Address:	2203	CHESTNUT	AVE
Subdivision Nam	ne: Pe	MBROKE	_
Tax Parcel 1D No		037 -001	1
Plat Reference			

Plat Reference:

Being all of that property more particularly described in Deed Book 3569, Page 529 in the Craven County Registry.

PURCHASE PRICE: The purchase price is \$375.00 and shall be paid as follows:

- (a) \$_______, EARNEST MONEY DEPOSIT with this offer by 🖾 cash □ bank check □ certified check to be held by Seller until the sale is closed, at which time it will be credited to Buyer, or until this contract is otherwise properly terminated. In the event this offer is not accepted, then all earnest monies shall be refunded to Buyer. In the event of breach of this contract by Seller, all earnest monies shall be refunded to Buyer upon Buyer's request. In the event of breach of this contract by Buyer, then all earnest monies shall be forfeited to Seller upon Seller's request, but such forfeiture shall not affect any other remedies available to Seller for such breach.
- (b) \$ 355.00 , BALANCE of the purchase price in cash or readily available funds at Closing.

3. CONDITIONS:

- (a) This contract is not subject to Buyer obtaining financing.
- (b) The Property must be in substantially the same or better condition at Closing as on the date of this offer, reasonable wear and tear excepted.
- (c) The Property is being sold subject to all liens and encumbrances of record, if any.
- (d) Other than as provided herein, the Property is being conveyed "as is".
- (e) This contract is subject to the provisions of G.S. §160A-269. Buyer acknowledges that this contract is subject to certain notice provisions and the rights in others to submit upset bids in accordance therewith.
- (f) Title shall be delivered at Closing by QUITCLAIM DEED

4. SPECIAL ASSESSMENTS: Seller makes no warranty or representation as to any pending or confirmed governmental special assessments for sidewalk, paving, water, sewer, or other improvements on or adjoining the Property, or pending or confirmed owners' association special assessments. Buyer shall take title subject to all pending assessments, if any.

5. PAYMENT OF TAXES: Any ad valorem taxes to which the Property is subject shall be paid in their entirety by Buyer.

6. EXPENSES: Buyer shall be responsible for all costs with respect to any title search, title insurance, recording of the deed, and its legal fees. Seller shall pay for preparation of a deed and all other documents necessary to perform Seller's obligations under this agreement, and for any excise tax (revenue stamps) required by law.

7. EVIDENCE OF TITLE: Not Applicable.

9. POSSESSION: Unless otherwise provided herein, possession shall be delivered at Closing.

10. PROPERTY INSPECTION, APPRAISAL, INVESTIGATION:

(a) This contract is not subject to inspection, appraisal or investigation, as the Property is being bought "as is." Seller makes no representation as to water, sewer, conditions, title, access, or fitness for any intended use.

(b) CLOSING SHALL CONSTITUTE ACCEPTANCE OF THE PROPERTY IN ITS THEN EXISTING CONDITION.

11. RIGHT OF ENTRY, RESTORATION AND INDEMNITY: Buyer and Buyer's agents and contractors shall not have the right to enter upon the Property for any purpose without advance written permission of the Seller. If such permission is given, Buyer will indemnify and hold Seller harmless from all loss, damage, claims, suits or costs, which shall arise out of any contract, agreement, or injury to any person or property as a result of any activities of Buyer and Buyer's agents and contractors relating to the Property. This indemnity shall survive this contract and any termination hereof.

12. OTHER PROVISIONS AND CONDITIONS: (ITEMIZE ALL ADDENDA TO THIS CONTRACT AND ATTACH HERETO.): None.

Buyer Initials KDL

Seller Initials

13. RISK OF LOSS: The risk of loss or damage by fire or other casualty prior to Closing shall be upon Seller.

14. ASSIGNMENTS: This contract may not be assigned without the written consent of all parties, but if assigned by agreement, then this contract shall be binding on the assignee and the assignee's heirs, successors or assigns (as the case may be).

15. PARTIES: This contract shall be binding upon and shall inure to the benefit of the parties, i.e., Buyer and Seller and their heirs, successors and assigns. As used herein, words in the singular include the plural and the masculine includes the feminine and neuter genders, as appropriate.

16. SURVIVAL: If any provision herein contained which by its nature and effect is required to be observed, kept or performed after the Closing, it shall survive the Closing and remain binding upon and for the benefit of the parties hereto until fully observed, kept or performed.

17. ENTIRE AGREEMENT: This contract contains the entire agreement of the parties and there are no representations, inducements or other provisions other than those expressed herein. All changes, additions or deletions hereto must be in writing and signed by all parties.

18. NOTICE AND EXECUTION: Any notice or communication to be given to a party herein may be given to the party or to such party's agent. This offer shall become a binding contract (the "Effective Date") when signed by both Buyer and Seller and such signing is communicated to the offering party. This contract is executed under seal in signed multiple originals, all of which together constitute one and the same instrument, with a signed original being retained by each party, and the parties adopt the word "SEAL" beside their signatures below.

	SELLER	
	CRAVEN COUNTY	
SEAL)	By:	(SEAL)
21	Its:	
	Date:	
-		
-		
	CITY OF NEW BERN	
(SEAL)	By:	(SEAL)
	Its:	
200	Date:	
-		
2		
		SEAL) By: Its:

Buyer Initials FRC

Seller Initials

Craven County Geographic Information System

Craven County does NOT warrant the information shown on this page and should be used ONLY for tax assessment purposes. This report was created by Craven County GIS reporting services on 12/5/2019 12:05:10 PM

Parcel ID : Owner : Mailing Address : Property Address : Description : Lot Description :	CRAVEN	-001 COUNTY & NEW BERN-CITY (128 NEW BERN NC 28563 STNUT AVE BROKE	DF	
Assessed Acreage : Deed Reference : Recorded Survey : Estate Number :	0.061 3569-0529 5-2-	Calculated Acreage : Recorded Date :	0.060 5 3 2019	
Land Value :	\$750	Tax Exempt :	Yes	

Improvement Value : Total Value :	\$0 \$750	# of improvements :	0
City Name :	NEW BERN	Fire tax District :	
Drainage District :		Special District :	

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VACANT-RESIDENTIAL TRACT

Recent Sales Information

SALE DATE	Sellers Name	Buyers Name	Sale Type	Sale Price
5/3/2019	ROBINSON, WILLIAM	CRAVEN COUNTY & NEW BERN-CITY OF	STRAIGHT TRANSFER	\$4,500
1/1/1969	ROBINSON, WILLIAM	ROBINSON, WILLIAM JAMES HRS	MULTI-PARCEL- '	\$0

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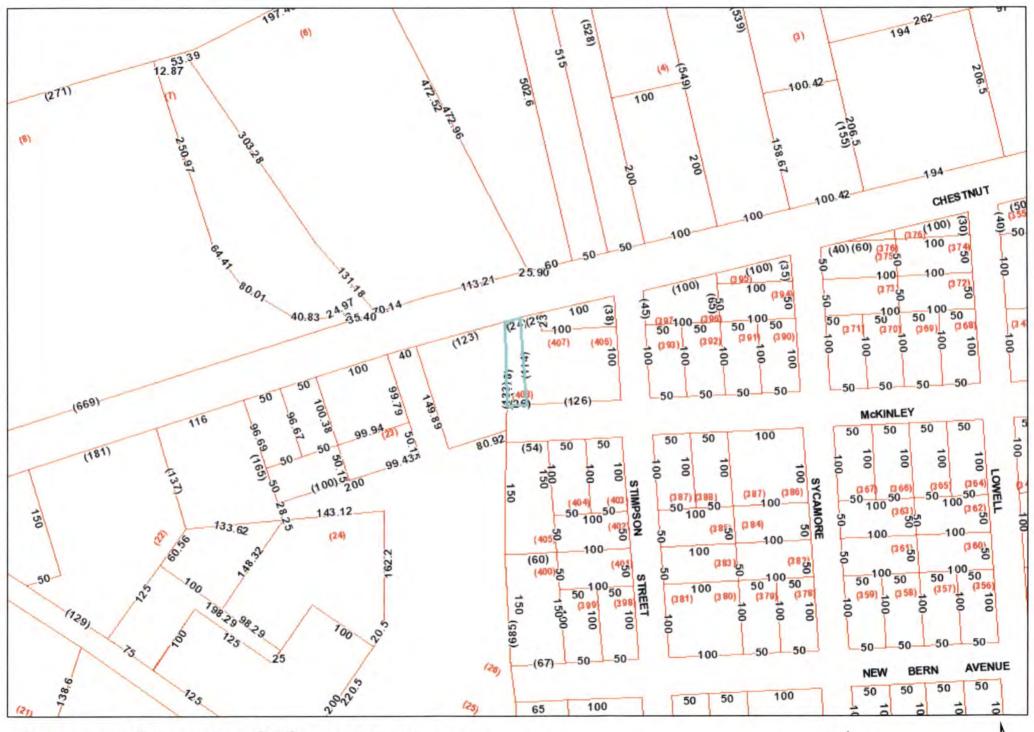
List of Improvements to Site

No improvements listed for this parcel

Land use :







Craven County GIS 2203 Chestnut Ave



N

Craven County does NOT warrant the Information shown on this map and should be used ONLY for tax assessment purposes. Printed on December 5, 2019 at 9.55.40 AM



Craven County GIS 2203 Chestnut Ave



1 inch = 130 feet

Craven County does NOT warrant the information shown on this map and should be used ONLY for tax assessment purposes. Printed on December 5, 2019 at 9.56.49 AM

Doc No: 10037197 Recorded: 05/03/2019,11:25:24 AM Fee Amt: \$35.00 Page 1 of 2 Revenue Tax: \$9.00 CRAVEN County,North Carolina Sherri B. Richard Register of Deeds

Bk 3569 Pg 529

Prepared by: Zacchaeus Legal Services

Revenue Stamps \$9.00

STATE OF NORTH CAROLINA

COMMISSIONER'S DEED ID# 8 037 001

COUNTY OF CRAVEN

This deed, made this 10th day of April, 2019, by MARK D. BARDILL, Commissioner, to the County of Craven and the City of New Bern of P.O. Box 1128, New Bern, North Carolina, 28563. WITNESSETH:

That whereas the said MARK D. BARDILL was appointed Commissioner under an order of the District Court, in the tax foreclosure proceeding entitled Craven County versus The Heirs, Assigns and Devisees of Willie Gertrude Robinson and spouse, if any, Linda Darden and spouse, if any, and the City of New Bern, et al, File No. 05-CVD-679; and said MARK D. BARDILL was directed by said Order as Commissioner to sell the land hereinafter described at public sale after due advertisement according to law; and

Whereas, the said MARK D. BARDILL, Commissioner, did on the 6th day of February, 2019, offer the land hereinafter described at a public sale at the Craven County Courthouse door, in New Bern, North Carolina, and then and there the said County of Craven and the City of New Bern became the last and highest bidder for said land for the sum of \$4,179.83; and no upset or increased bid having been made within the time allowed by law, and said sale having been confirmed by said Court, and said MARK D. BARDILL, Commissioner, having been ordered to execute a deed to said purchaser upon payment of the purchase money;

Now, therefore, for and in consideration of the premises and the sum of \$4,179.83, receipt of which is hereby acknowledged, the said MARK D. BARDILL, Commissioner, does by these presents, hereby bargain, sell, grant, and convey to the said County of Craven and the City of New Bern, and their successors, heirs and assigns that certain parcel or tract of land, situated in Number Eight Township, Craven County, North Carolina, and described as follows:

That certain tract or parcel of land in the City of New Bern, Craven County, North Carolina, and being more particularly described as follows: The western one-half of lot No. 408 lying and being situated in Number Eight Township, Craven County, North Carolina, in that area known as Pembroke, a map or plot of which is recorded in Map Book 1, at Page 164, 165 in the office of the Register of Deeds of Craven County.

Subject to restrictive covenants and easements of record.

Parcel Identification Number: 8 037 001

To have and to hold the aforesaid tract of land, to the said County of Craven and the City of New Bern, and their successors, heirs and assigns forever, in as full and ample manner as said MARK D. BARDILL, Commissioner as aforesaid, is authorized and empowered to convey the same.

The title conveyed by this Commissioner's Deed is held pursuant to 105-376, with the County of Craven having disbursed \$1,814.93 and the City of New Bern having disbursed \$480.99 in reimbursable costs, that taxes, interest and penalties due the County of Craven which constitute a 1st and prior lien as of the date of sale total \$1,112.46, that taxes, interest and penalties due the City of New Bern which constitute a 1st and prior lien as of the date of sale total \$556.45. Upon subsequent sale of the property, the proceeds will be distributed between the County of Craven and the City of New Bern pursuant to Section 105-376.

In witness whereof, the said MARK D. BARDILL, Commissioner, hath hereunto set his hand and seal.

(SEAL) MARK D. BARDILL, Commissioner

NORTH CAROLINA PAMLICO COUNTY

I, Shelly Caraway of said County, do hereby certify that MARK D. BARDILL, Commissioner, Grantor, personally appeared before me this day and acknowledged the execution of the foregoing deed.

Witness my hand and official seal this the 10th day of April, 2019.

Notary Public

My commission expires: 07/01/2023



Doc No: 10037197 Bk 3569 Pg 530

AGENDA ITEM COVER SHEET

Agenda Item Title:

Consider adopting resolution approving lease and license agreement with Friends of New Bern Fireman's Museum Inc. for the property located at 420 Broad Street and 422 Broad Street.

Date of Meeting: 7/14/2020	Ward # if applicable: 1
Department: Public Works	Person Submitting Item: Matt Montanye, Director of Public Works
Call for Public Hearing: □Yes⊠No	Date of Public Hearing: N/A

Explanation of Item:	Consider adopting resolution approving lease and license agreement with Friends of New Bern Fireman's Museum Inc. for the property located at 420 Broad Street and 422 Broad Street and owned by the City of New Bern.
Actions Needed by Board:	Approve resolution.
Backup Attached:	Memo Letter of request

Is item time sensitive? ⊠Yes □No

Will there be advocates/opponents at the meeting? \Box Yes \boxtimes No

Cost of Agenda Item:

If this requires an expenditure, has it been budgeted and are funds available and certified by the Finance Director? \Box Yes \Box No

Additional Notes: N/A



NORTH CAROLINA

Public Works Department P.O. Box 1129, 1004 S. Glenburnie Road New Bern, N.C. 28563-1129 Phone: (252) 639-7501 Fax: (252) 636-1848

June 25, 2020

Memo to: Mayor and Board of Aldermen

From: Matt Montanye, Director of Public Works

Re: Consider adopting resolution approving lease and license agreement with Friends of New Bern Fireman's Museum, Inc., for the property at 420 Broad Street and 422 Broad Street and owned by the City of New Bern.

Background Information:

Friends of New Bern Fireman's Museum Inc. has requested to renew lease and license agreement between the City of New Bern and Friends of New Bern Fireman's Museum Inc. for property located at 420 Broad Street and 422 Broad Street. The proposed lease and license agreement would be effective July 1, 2020, for a period of ten (10) years at a rate of \$1.00 per year with an option to renew for an additional ten (10) years.

Recommendation:

It is recommended that the Board of Aldermen consider approving the attached lease and license agreement. If you have any questions concerning this matter, please feel free to contact me directly.

cc: Scott Davis, City Attorney

RESOLUTION

BE IT RESOLVED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN:

That the Lease Agreement and License Agreement by and between the City of New Bern and Friends of New Bern Fireman's Museum, Inc., copies of which are attached hereto and incorporated herein by reference, be and the same are hereby approved, and the Mayor and City Clerk are hereby authorized and directed to execute the same for and on behalf of the City.

ADOPTED THIS 14th DAY OF JULY, 2020.

DANA E. OUTLAW, MAYOR

BRENDA E. BLANCO, CITY CLERK

NORTH CAROLINA CRAVEN COUNTY

LICENSE AGREEMENT

THIS LICENSE AGREEMENT is made and entered into this 14th day of July, 2020, effective as of the 1st day of August, 2020, by and between the CITY OF NEW BERN ("City"), a North Carolina municipal corporation, and FRIENDS OF NEW BERN FIREMEN'S MUSEUM, INC. ("Museum"), a North Carolina nonprofit corporation which has its principal office and place of business in the City of New Bern, Craven County, North Carolina.

WITNESSETH:

THAT WHEREAS, the City and the Museum have entered into a Lease Agreement effective as of August 1, 2020, wherein the City is leasing to the Museum the former New Bern Fire Station located on Broad Street, and surrounding real property (collectively, the "Property"); and

WHEREAS, the Museum agrees to utilize the Property for the purpose of supporting, operating, and promoting the New Bern Firemen's Museum; and

WHEREAS, the City owns certain personal property located in the New Bern Firemen's Museum located at 408 Hancock Street, as well as in the building upon the Property, which forms the New Bern Firemen's Museum collection (hereinafter, the "Collection"); and

WHEREAS, the City has agreed that the Museum might license the Collection for the purposes stated herein; and

WHEREAS, the parties entered into a license agreement effective as of January 1, 2015, with such license expiring on June 30, 2020; and

WHEREAS, the parties have agreed upon the terms of a new license, and wish to reduce their agreement to writing.

NOW, THEREFORE, subject to the terms and conditions hereinafter set forth, said City does hereby license unto said Museum, and said Museum does hereby accept as licensee of said City, the Collection:

1. <u>Description of Collection</u>. An inventory constituting the Collection is attached hereto as Exhibit A, and shall be updated during the term of this License. All additions to the Collection shall become the property of the City, and in no event shall the Museum own any personal property donated for use or display at the New Bern Firemen's Museum without the City's consent.

 <u>Term</u>. This License shall begin as of the 1st day of August, 2020 and, unless sooner terminated as herein provided, shall exist and continue until midnight on the 30th day of June, 2030.

3. <u>Option to Renew</u>. The Museum shall have the option to renew this License Agreement for one ten (10) year term by giving the City written notice of its intention to renew the License Agreement at least ninety (90) days prior to the expiration of the initial term of the Agreement. Upon renewal, all of the terms of this Agreement shall be effective.

4. <u>Early Termination</u>. Should the Museum breach any provision of this License, and fail to cure such breach within ten (10) days notice thereof, the City shall have the option to immediately terminate this License, all consistent with Section 9.

 <u>Use of Property</u>. The Museum agrees to utilize the Collection for the purpose of supporting, operating, and promoting the New Bern Firemen's Museum.

6. <u>Maintenance of Property</u>. The Museum shall maintain and preserve the Collection consistent with its Artifact Collection and Preservation Policy attached hereto as Exhibit B. Thereafter, any violation by the Museum of the Artifact Collection and Preservation Policy shall constitute a breach of this License, subjecting the same to early termination by the City.

7. <u>License Fee</u>. As a license fee for the Collection, the Museum agrees to maintain the Collection consistent with the provisions of this License, and to pay the sum of ONE DOLLAR (\$1.00) per annum during the term of this License, the first such payment to be made contemporaneously with the execution of this instrument, and each subsequent annual payment to be made on or before the anniversary date of this instrument.

8. <u>Insurance</u>. The City shall insure the Collection as it sees fit in its sole discretion. The Museum shall maintain general liability insurance in such amounts as it deems necessary to protect it from any liability arising from the Collection.

9. <u>Assignment</u>. The Museum may not assign this License without the prior written consent of the City. Any assignment approved by the City shall not operate to release or discharge Museum from any of the duties or obligations hereunder, except to the extent such duties and obligations are actually performed, unless the City agrees otherwise in writing.

10. Events of Default and Remedies. It is expressly agreed that, if the Museum shall neglect to make any payment of rent when due or neglect to do and perform any matter or thing herein agreed to be done and performed by it and shall remain in default thereof for a period of ten (10) days after written notice from the City calling attention to such default, the City may declare this License terminated and cancelled and take possession of said Collection without prejudice to any other legal remedy it may have on account of such default

11. <u>Notices</u>. All notices required to be given with respect to any matter pertaining to this License shall be sent by certified mail, return receipt requested, and shall be deemed delivered or served when deposited in the United States mail, postage prepaid, addressed to Museum at the address of the Property and to City at the following address:

Tenant
Friends of New Bern Firemen's Museum, Inc.
Attn: President
408 Hancock Street
New Bern, N.C. 28560

Either the Museum or the City may change the address to which notices are to be sent to them by giving written notice of such change of address to the other party as herein provided.

12. <u>Indemnification</u>. The Museum shall indemnify the City against any liability or expense incurred by the City which arises from the license of the Collection; provided, however, no such indemnification shall be required with respect to liabilities or expenses incurred by the City which arises by reason of the affirmative negligence of the City.

13. <u>Entire Agreement</u>. This License contains the entire agreement between the City and the Museum and cannot be changed or terminated except by written instrument subsequently executed by the parties hereto.

14. <u>Binding Effect</u>. All the terms and conditions of this License shall be binding upon and shall apply and inure to the benefit of the parties hereto, and their heirs, successors, legal representatives and assigns.

15. <u>Governing Law</u>. This License shall be construed and interpreted in accordance with the laws of the State of North Carolina.

IN TESTIMONY WHEREOF, the CITY OF NEW BERN has caused this instrument to be executed in its corporate name by its Mayor and its corporate seal to be affixed and attested by its City Clerk, all by authority duly given of its Board of Aldermen; and FRIENDS OF NEW BERN FIREMEN'S MUSEUM, INC, has caused this document to be executed by its President and attested by its Secretary, all by authority duly given by its Board of Directors, all as of the day and year first above written; this Agreement being executed in duplicate originals, one of which is retained by each of the parties.

CITY OF NEW BERN

[SEAL]

By:___

DANA E. OUTLAW, MAYOR

ATTEST:

BRENDA E. BLANCO, CITY CLERK

FRIENDS OF NEW BERN FIREMEN'S MUSEUM, INC.

[SEAL]

By:___

PRESIDENT

ATTEST:

SECRETARY

NORTH CAROLINA CRAVEN COUNTY

I, ______, a notary public in and for said county and state, do hereby certify that on the _____ day of July, 2020, before me personally appeared DANA E. OUTLAW, with whom I am personally acquainted, who, being by me duly sworn, says that he is the Mayor and that BRENDA E. BLANCO is the City Clerk of the City of New Bern, the municipal corporation described in and which executed the foregoing instrument; that he knows the common seal of said municipal corporation; that the seal affixed to the foregoing instrument is said common seal; that the name of the municipal corporation was subscribed thereto by the said Mayor; that the said common seal was affixed, all by order of the Board of Aldermen of said municipal corporation; and that the said instrument is the act and deed of said municipal corporation.

WITNESS my hand and notarial seal, this _____ day of July, 2020.

Notary Public

My commission expires:

NORTH CAROLINA CRAVEN COUNTY

This is to certify that on the _____ day of July, 2020, before me personally appeared with whom I am personally acquainted, who, being by me

duly sworn, says:

That he/she is ______ President and ______ is the Secretary of FRIENDS OF NEW BERN FIREMEN'S MUSEUM, INC., the corporation described in and which executed the foregoing instrument; that he/she knows the common seal of said corporation; that the seal affixed to the foregoing instrument is said common seal, and the name of the corporation was subscribed thereto by the said President, attested by said Secretary, and said common seal was affixed, all by authority duly conferred, and that said instrument is the act and deed of said corporation.

WITNESS my hand and notarial seal, this _____ day of July, 2020.

Notary Public

My commission expires:

EXHIBIT A

The inventory constituting the Collection is extensive, and is available for review at the Museum office located at 408 Hancock Street in New Bern.

EXHIBIT B

New Bern Firemen's Museum Preservation Plan and Policy:

The Museum underwent a CAP assessment in 1992 conducted by conservator, Marc Williams through a grant from the IMLS Heritage Preservation CAP Program. The first CAP assessment identified many collections care issues and those were addressed prior to the ReCAP assessment which took place on August 11 and 12, 2008. Ed McManus, recently retired Conservator of the National Air and Space Museum and Bill McCrea, of the Museum of History in Raleigh, NC recommended that the Museum focus on environmental controls for the collection.

The Friends of the New Bern Firemen's Museum actively supports and promotes the preservation and protection of the collections entrusted to its care. The treatment of objects is guided by the principle that *the integrity of the object should be preserved in every way possible*. In areas housing the objects, this treatment includes, but is not limited to, maintaining optimum levels of heating, cooling, and humidity; maintaining UV filters on windows; and ensuring security by keeping objects under constant scrutiny when visitors are in the building.

To meet the ethical, legal and educational concerns related to these responsibilities, and to maintain the highest standards of practice the Friends of the New Bern Firemen's Museum collaborates with the North Carolina State Historic Preservation Office (SHPO). Periodic visits by an SHPO officer ensure ongoing adherence to best preservation practices.

NORTH CAROLINA

CRAVEN COUNTY

LEASE AGREEMENT

THIS LEASE AGREEMENT is made and entered into this 14th day of July, 2020, effective as of the 1st day of August, 2020, by and between the CITY OF NEW BERN ("Lessor"), a North Carolina municipal corporation, and FRIENDS OF NEW BERN FIREMEN'S MUSEUM, INC. ("Lessee"), a North Carolina nonprofit corporation which has its principal office and place of business in the City of New Bern, Craven County, North Carolina.

WITNESSETH:

THAT WHEREAS, the Lessor owns the former New Bern Fire Station located on Broad Street ("Building"), and surrounding real property more particularly described in Exhibit A attached hereto and incorporated herein by reference (collectively, "Property A"); and

WHEREAS, the Lessee was incorporated for the purpose of supporting, operating, and promoting the New Bern Firemen's Museum; and

WHEREAS, the Lessor has agreed that the Lessee might use the Property for the purposes stated herein; and

WHEREAS, the parties entered into an Amended and Restated Lease Agreement effective as of July 1, 2015, with such lease expiring on June 30, 2020; and

WHEREAS, the parties have agreed upon the terms of a new Lease, and wish to reduce their agreement to writing.

NOW, THEREFORE, subject to the terms and conditions hereinafter set forth, said Lessor does hereby let and lease unto said Lessee, and said Lessee does hereby accept as tenant of said Lessor, the Property.

TO HAVE AND TO HOLD said Property, together with all privileges and appurtenances thereunto belonging to it, the said Lessee, its successors and assigns, for the term and upon the conditions hereinafter set forth:

1. <u>Description of Property</u>. The term "Property" as used herein shall mean the former New Bern Fire Station located on Broad Street ("Building"), and surrounding real property more particularly described in Exhibit A attached hereto and incorporated herein by reference, and the adjoining property identified as 422 Broad Street more particularly described in Exhibit A attached hereto and incorporated herein by reference. Additionally, the Lessor

reserves the right to place utility facilities, traffic facilities, railroad facilities, and any other similar equipment upon the Property during the term of this Lease. Should the Lessor need to place, or caused to be placed, such facilities upon the Property, the Lessor shall notify Lessee of the Lessor's intent to do so.

2. <u>Term</u>. This Lease shall begin as of the 1st day of August, 2020 and, unless sooner terminated as herein provided, shall exist and continue until midnight on the 30th day of June, 2030.

3. <u>Option to Renew</u>. Lessee shall have the option to renew this Lease for one ten (10) year term by giving Lessor written notice of Lessee's intention to renew the Lease at least ninety (90) days prior to the expiration of the initial term of the Lease. Upon renewal, all of the terms of this Lease shall be effective.

4. <u>Early Termination</u>. The parties hereto have simultaneously executed a License Agreement dated July 9, 2020 and effective August 1, 2020. Should the City terminate the License Agreement consistent with the provisions therein, this Lease shall automatically terminate as of the date of termination of the License Agreement.

5. <u>Use of Property</u>. The Lessee agrees to utilize the Property for the purpose of supporting, operating, and promoting the New Bern Firemen's Museum.

6. <u>Rent</u>. As rental for the said Property, the Lessee agrees to maintain the Buildings and Property, as set forth herein, and to pay the sum of ONE DOLLAR (\$1.00) per annum during the term of this Lease, the first such payment to be made contemporaneously with the execution of this instrument, and each subsequent annual payment to be made on or before the anniversary date of this instrument.

7. <u>Utilities</u>. All applications and connections for utility services required by Lessee in conjunction with Lessee's use and occupancy of the Property shall be made in the name of Lessee only, and Lessee shall be solely responsible for obtaining such services and for the payment of all charges for such services as they become due. Such utility services include, but are not limited to, sewer, water, gas, electricity, trash removal and telephone services ("Utility Services"). The Board of Aldermen may make certain contributions toward utility services on behalf of Lessee in its sole discretion.

8. <u>Repair and Maintenance</u>. Lessor, at Lessor's sole cost and expense, shall at all times during the term of this Lease maintain the windows, roof and exterior structure of

Buildings in good condition and repair. Lessee shall use all reasonable precautions to prevent waste, damage or injury to the Buildings and shall keep the Buildings in a clean and sanitary condition and in conformity with all laws, statutes, ordinances, regulations and other requirements of any governmental authority having jurisdiction thereof. Lessee shall be responsible for all other expenses associated with the maintenance and repair of the Buildings. All repairs and replacements shall be of quality and class at least equal to the quality and class of the Buildings at the time of entry by Lessee. The Board of Aldermen may make certain contributions toward repairs and maintenance on behalf of Lessee in its sole discretion.

9. <u>Alterations and Improvements</u>. Lessee may only make changes, alterations or improvements to the Buildings and Property with the prior written consent of Lessor. If approved by Lessor, such work shall be done in accordance with the requirements of local ordinances and public authorities having jurisdiction thereof. Lessee shall make no such change, alteration or improvement which substantially affects the structural integrity of the Buildings or substantially decreases the value of the Buildings. It is expressly agreed that all alterations and additions that are made by Lessee to the Buildings and Property during the term of this Lease shall be and become a permanent part of the real estate and, as such, the property of the Lessee shall be and remain the property of the Lessee and may be removed by it upon the termination of this Lease. All other improvements shall be considered a part of the real estate.

10. <u>Insurance</u>. The Lessor shall maintain hazard insurance on the improvements located on the Property, including contents owned by Lessor, in such amount as Lessor may determine in its sole discretion. Lessor shall also maintain general liability insurance in such amount as it deems necessary to protect the CITY OF NEW BERN. The Lessee shall pay to the Lessor annually on or before the 1st day of July of each year, the actual expenses incurred by the Lessor to provide said coverage, both hazard and liability, but not more than the sum of TWO THOUSAND FIVE HUNDRED DOLLARS (\$2,500.00). In lieu of payment of Lessor's expense in providing general liability insurance in connection with the use of the Property, Lessee may, if it elects to do so, carry its own liability insurance in an amount no less than FIVE HUNDRED THOUSAND DOLLARS (\$500,000.00), so long as the CITY OF NEW BERN is a named insured therein. In such event, the Lessee shall provide the Lessor with a Certificate of Insurance.

11. <u>Damage or Destruction of Buildings</u>. Should the Buildings be damaged or destroyed by fire, the Lessor shall be under no obligation to repair or replace the improvements located on said Property, and, should it elect not to repair or replace, this Lease shall thereupon terminate, unless the Lessee shall advise the Lessor, in writing, within thirty (30) days of the date of damage or destruction, that it proposes, at its own expense, to repair or replace the improvements located on said Property and proceeds to do so within twelve (12) months of the loss.

12. <u>Assignment or Subletting</u>. Lessee may assign this Lease or sublet a portion of the Property only with the prior written consent of Lessor. Any assignment or subletting approved by Lessor shall not operate to release or discharge Lessee from any of the duties or obligations hereunder, except to the extent such duties and obligations are actually performed, unless Lessor agrees otherwise in writing.

13. <u>Quiet Possession</u>. Landlord agrees that Tenant shall, upon paying the rent and performing the covenants of this Lease, quietly have, hold and enjoy the Property during the term of this Lease.

14. <u>Events of Default and Remedies</u>. It is expressly agreed that, if the Lessee shall neglect to make any payment of rent when due or neglect to do and perform any matter or thing herein agreed to be done and performed by it and shall remain in default thereof for a period of ninety (90) days after written notice from the Lessor calling attention to such default, the Lessor may declare this Lease terminated and cancelled and take possession of said Property without prejudice to any other legal remedy it may have on account of such default

15. <u>Notices</u>. All notices required to be given with respect to any matter pertaining to this Lease shall be sent by certified mail, return receipt requested, and shall be deemed delivered or served when deposited in the United States mail, postage prepaid, addressed to Lessee at the address of the Property and to Lessor at the following address:

Landlord	Tenant
City of New Bern	Friends of New Bern Firemen's Museum, Inc.
Attn: Director of Public Works	Attn: President
P.O. Box 1129	420 Broad Street
New Bern, N.C. 28563	New Bern, N.C. 28560

Either Lessee or Lessor may change the address to which notices are to be sent to them by giving written notice of such change of address to the other party as herein provided.

16. <u>Indemnification</u>. Lessee shall indemnify Lessor against any liability or expense incurred by Lessor which arises from the use and occupancy of the Buildings and Property by Lessee; provided, however, no such indemnification shall be required with respect to liabilities or expenses incurred by Lessor which arises by reason of the affirmative negligence of Lessor.

17. <u>Memorandum of Lease</u>. This Lease shall not be recorded, but Lessee and Lessor, at either's request, shall execute a memorandum of lease for recording purposes which shall contain only the information required by Section 47-118 of the North Carolina General Statutes.

18. <u>Entire Agreement</u>. This Lease contains the entire agreement between Lessor and Lessee and cannot be changed or terminated except by written instrument subsequently executed by the parties hereto.

19. <u>Binding Effect</u>. All the terms and conditions of this Lease shall be binding upon and shall apply and inure to the benefit of the parties hereto, and their heirs, successors, legal representatives and assigns.

20: <u>Governing Law</u>. This Lease shall be construed and interpreted in accordance with the laws of the State of North Carolina.

IN TESTIMONY WHEREOF, the CITY OF NEW BERN has caused this instrument to be executed in its corporate name by its Mayor and its corporate seal to be affixed and attested by its City Clerk, all by authority duly given of its Board of Aldermen; and FRIENDS OF NEW BERN FIREMEN'S MUSEUM, INC, has caused this document to be executed by its President and attested by its Secretary, all by authority duly given by its Board of Directors, all as of the day and year first above written; this Agreement being executed in duplicate originals, one of which is retained by each of the parties.

[Signatures Appear on Following Page]

CITY OF NEW BERN

[SEAL]

By:____

DANA E. OUTLAW, MAYOR

ATTEST:

BRENDA E. BLANCO, CITY CLERK

FRIENDS OF NEW BERN FIREMEN'S MUSEUM, INC.

[SEAL]

By:___

PRESIDENT

ATTEST:

SECRETARY

NORTH CAROLINA CRAVEN COUNTY

I, ______, a notary public in and for said county and state, do hereby certify that on the _____ day of July, 2020, before me personally appeared DANA E. OUTLAW, with whom I am personally acquainted, who, being by me duly sworn, says that he is the Mayor and that BRENDA E. BLANCO is the City Clerk of the City of New Bern, the municipal corporation described in and which executed the foregoing instrument; that he knows the common seal of said municipal corporation; that the seal affixed to the foregoing instrument is said common seal; that the name of the municipal corporation was subscribed thereto by the said Mayor; that the said common seal was affixed, all by order of the Board of Aldermen of said municipal corporation; and that the said instrument is the act and deed of said municipal corporation.

WITNESS my hand and notarial seal, this _____ day of July, 2020.

Notary Public

My commission expires:

NORTH CAROLINA CRAVEN COUNTY

This is to certify that on the _____ day of July, 2020, before me personally appeared with whom I am personally acquainted, who, being by me

duly sworn, says:

That he/she is ______ President and _______ is the Secretary of FRIENDS OF NEW BERN FIREMEN'S MUSEUM, INC., the corporation described in and which executed the foregoing instrument; that he/she knows the common seal of said corporation; that the seal affixed to the foregoing instrument is said common seal, and the name of the corporation was subscribed thereto by the said President, attested by said Secretary, and said common seal was affixed, all by authority duly conferred, and that said instrument is the act and deed of said corporation.

WITNESS my hand and notarial seal, this _____ day of July, 2020.

Notary Public

My commission expires:

Exhibit A

Property A:

That certain property located at 420 Broad Street in the City of New Bern, bearing Craven County parcel number 8-002-D-081, and more particularly illustrated on the Craven County GIS image attached hereto.

Property B:

That certain property located at 422 Broad Street in the City of New Bern, bearing Craven county parcel number 8-002-D-082, and more particularly illustrated on the Craven County GIS image attached hereto.

AGENDA ITEM COVER SHEET



Agenda Item Title:

Adopt resolution to approve amendments to the City of New Bern Water and Sewer Design Standards"

Date of Meeting: 7/14/2020	Ward # if applicable: all
Department: Public Utilities – Water Resources	Person Submitting Item: Jordan Hughes
Call for Public Hearing: □Yes⊠No	Date of Public Hearing: N/A

Explanation of Item:	Approval of amendments to the City of New Bern of New Bern Water and Sewer Design Standards to reflect recent changes in State regulations, material standards, and construction practices.
Actions Needed by Board:	Adopt resolution approving amendments to the City of New Bern Water and Sewer Design Standards.
Backup Attached:	Memo from Jordan Hughes, "red-line" of the proposed revisions, a "clean" copy of the proposed revisions, and draft resolution for approving the partial release of easement.

Is item time sensitive? ⊠Yes □No

Will there be advocates/opponents at the meeting?
Yes
No

Cost of Agenda Item: N/A

If this requires an expenditure, has it been budgeted and are funds available and certified by the Finance Director? \Box Yes \Box No

Additional Notes:



CITY OF NEW BERN

Department of Public Utilities Water Resources 527 NC Highway 55 West, P.O. Box 1129 New Bern, NC 28563-1129 (252) 639-7526

MEMORANDUM

TO:	Mayor and Board of Aldermen
FROM:	Jordan B. Hughes P.E., City Engineer
DATE:	June 29, 2020
SUBJECT:	Recommendation to Revise the City of New Bern Water & Sewer Design
	Standards.

Background Information:

The "City of New Bern Water and Sewer Design Standards" was originally issued by the City Engineer in November of 2007. The purpose of this document was to provide a comprehensive guideline for developers, builders, and engineers who desire to extend, connect to, or otherwise alter the City's existing water and/or sewer infrastructure. As State regulations, construction practices, and material standards evolve over time, this document has needed to be periodically evaluated and revised to keep current and be consistent with these changes. The most recent revision was issued in January 2018.

City staff have recently reviewed the current version of design standards, finding several minor technical and grammatical changes that need to be made. Once the first draft of the revisions was completed, the draft was submitted to a group of "stakeholders" for review and comment. This stakeholder group consisted of developers, home builders, utility contractors and engineers who collectively represented a broad range of the local development community. Feedback from the stakeholders group was incorporated into the final draft of revisions.

Recommendation:

Staff is recommending that the attached revisions be adopted, effective with the issuance of the updated "City of New Bern Water and Sewer Design Standards".

Attached please find a "red-line" copy of the proposed revisions, a clean copy of the proposed revisions and a draft resolution for adopting the revisions to the "City of New Bern Water and Sewer Design Standards".

Please contact me if there are any questions or if additional information should be required.

RESOLUTION TO APPROVE AMENDMENTS TO THE CITY OF NEW BERN WATER AND SEWER DESIGN STANDARDS

THAT WHEREAS, the Board of Aldermen of the City of New Bern approved and adopted the "City of New Bern Water and Sewer Design Standards" in 2007; and

WHEREAS, the City of New Bern Water and Sewer Design Standards have been revised from time to time to reflect changes in State regulations, material standards, and construction practices; and

WHEREAS, the Board of Aldermen of the City of New Bern deems it advisable and in the public interest to effect certain revisions to the City of New Bern Water and Sewer Design Standards to reflect recent changes in State regulations, material standards, and construction practices, all as provided in City of New Bern Water and Sewer Design Standards as amended on July 14, 2020, a copy of which is attached hereto and incorporated herein by reference as Exhibit A.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN:

<u>Section 1</u>. That the Board of Aldermen hereby approves and adopts the City of New Bern Water and Sewer Design Standards as amended on July 14, 2020, a copy of which is attached hereto and incorporated herein by reference as Exhibit A.

Section 2. This ordinance shall be effective from and after July 15, 2020.

ADOPTED THIS 14th DAY OF JULY, 2020.

DANA E. OUTLAW, MAYOR

BRENDA E. BLANCO, CITY CLERK

EXHIBIT A



WATER & SEWER DESIGN STANDARDS

July 2020

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SECTION 5.0	MATERIAL SPECS. FOR WATER & SEWER EXTENSIONS
SECTION 6.0	TESTING REQUIREMENTS
SECTION 7.0	REQUIREMENTS DURING CONSTRUCTION AND PROJECT CLOSEOUT
SECTION 8.0	STANDARD WATER AND SEWER DETAILS

WATER DETAILS	SEWER DETAILS
W1 - TYPICAL WATER SERVICE CONNECTION	S1 - TYPICAL SEWER SERVICE CONNECTION ELEVATION
W2 - TYPICAL 2" WATER SERVICE CONNECTION	S2 - DEEP-CUT SEWER SERVICE ELEVATION
W3 - TYPICAL FIRE HYDRANT ASSEMBLY	S3 - TYPICAL IN-LINE WYE
W4 - TYPICAL VALVE AND VALVE BOX	S4 - TYPICAL PRECAST MANHOLE
W5 - THRUST BLOCKING AND ANCHORING	S5 - TYPICAL MANHOLE OVER EXISTING SEWER MAIN
W6 - THRUST COLLAR DETAIL	S6 - TYPICAL INSIDE DROP MANHOLE
W7 - PIPE ENCASEMENT DETAIL	S7 - TYPICAL POLYPROPYLENE PLASTIC STEP
W8 - MANUAL AIR RELEASE VALVE	S8 - TYPICAL MANHOLE INVERTS
W9 - PERMANENT 2" END-OF-LINE BLOWOFF	S9 - BEDDING FOR GRAVITY SEWER PIPE
W10 - HDPE TO DIP TRANSITION	S10 - BEDDING FOR WATER MAINS AND SEWER FORCE MAIN
W11 - RESTRAINED END CAP	S11 - AUTOMATIC AIR RELEASE VALVE - OFFSET
W12 - TYPICAL TAPPING SADDLE	S12 - AUTOMATIC AIR RELEASE VALVE - DIRECT
W13 - WATER CROSSING OVER SEWER LINE (<18")	S13 - TYPICAL DUPLEX SUBMERSIBLE LIFT STATION
W14 - WATER CROSSING UNDER SEWER LINE	S14 - TYPICAL LIFT STATION PUMP CONTROL PANEL
W15 - SHALLOW WATER CROSSING BELOW STORM	S15 - WATER/SEWER MAIN CROSSING UNDER A DITCH
W16 - TYPICAL 2" WATER MAIN CONNECTION	S16 - WATER/SEWER MAIN CROSSING UNDER STORM/UTILITY PIPE
	S17 - WATER/SEWER MAIN CROSSING OVER STORM/UTILITY PIPE
	S18 - LOWERING WATER/SEWER MAIN UNDER UTILITY CONFLICT

APPENDIX - A: PIPE RESTRAINT CHARTS

SECTION 1.0

INTRODUCTION

1.1 GENERAL

The purpose of this document is to provide a guideline for Property Owners, Developers and Engineers to assist with design of plans and specifications for projects which will become part of the City of New Bern water and/or sewer system. All proposed utility projects shall meet or comply with all applicable requirements set forth by the North Carolina Department of Environmental Quality (NCDEQ) and the standards contained herein. A project which shall require a variation from these requirements must be approved by the City of New Bern Department of Public Utilities prior to permitting.

1.2 CONTACT INFORMATION

All correspondence regarding proposed water & wastewater projects shall be directed to the City Engineer at the following address:

Mr. Jordan B. Hughes, P.E. City Engineer City of New Department of Public Utilities P.O. Box 1129,New Bern, N.C. 28563 Phone: (252) 639-7527 Email: hughesj@newbernnc.gov

1.3 SYSTEM INFORMATION

1.3.1 Water System

Name:City of New BernOwner:City of New BernPWS I.D. No.:04-25-010WSMP No.:01-00769County:Craven

1.3.2 Sanitary Sewer System

The City of New Bern WWTF – Permit Number NC0025384 The City of New Bern Collection System – Permit Number WQCS00052

1.3.3 Low Pressure S.T.E.P. Sanitary Sewer System

The City of New Bern Township No. 7 Lagoon WWTF – Permit No. WQ0003765

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SECTION 2.0

PLAN APPROVAL AND PERMIT SUBMITTAL

2.1 PLAN AND SPECIFICATION SUBMITTAL

Two (2) complete sets of plans, specifications, design calculations, and all other relative information shall be submitted for review to the City of New Bern Department of Public Utilities for any project which proposes to tap, extend, or otherwise alter the existing City of New Bern water or sanitary sewer systems. All modifications to the project plans and specifications which are requested after review by the City Engineer must be complete and shown on revised plans prior to the project approval.

2.2 PERMIT APPLICATIONS

2.2.1 Commercial Sewer Use Permits (S.T.E.P. System Only)

All businesses requesting to connect to the City of New Bern low pressure S.T.E.P sewer system will have to make application for and obtain a Commercial Sewer Use Permit. The permit application has to be submitted to and approved by the Department of Public Utilities prior to establishing a water and sewer account with the City. Permit applications can be pickedup at the City of New Bern Water Resources Administration Office or downloaded from the City of New Bern webpage at <u>www.newbernnc.gov</u>.

The permit shall be non-transferable and shall be issued to the business owner not the property owner. Therefore, the permit will have to be renewed upon change of business owner or building occupancy use.

Businesses applying for a commercial sewer use permit for an existing building must have a daily designed sewer flow of less than 1,000 gallons per day or less than 120% of the average daily flow of the previous business, whichever is greater. The average daily flow of the previous business shall be based on actual water use records from the most recent 12 month period that the business was in operation. The daily designed sewer flow rate for the new business shall be based on the flow rate allocation criteria set forth in the most recent version of the City of New Bern Schedule of System Development fees and Connection fees.

Businesses applying for a new S.T.E.P system connection to serve a newly constructed building must meet the requirements of Section 4.4

2.2.2 State Water and Sewer System Extension Permits

Projects which will require an extension of the City of New Bern water system or sanitary sewer system shall be permitted through the appropriate State agency with the City of New Bern listed as the permit applicant. Once the proposed plans and specifications have been approved by the City of New Bern Department of Public Utilities, permit applications shall be executed by the City and returned to the responsible engineer for submittal to the appropriate State agency. The project engineer and/or developer shall be responsible for submitting all required fees and attachments that must accompany permit applications.

SECTION 3.0

DESIGN GUIDELINES FOR WATER & SEWER SYSTEM EXTENSIONS

3.1 GENERAL

At a minimum, all proposed water and sewer extensions shall be required to meet the design requirements contained in this sections as well as all requirements set forth by the NCDEQ. In any case where the City of New Bern standards and the NCDEQ are not the same, the more stringent of the two shall apply.

3.2 PROPOSED WATER & SEWER MAINS

3.2.1 Sizing of Water and Sewer Mains

All proposed water and sewer main extensions shall be sized according the latest requirements of NCDEQ and the standards set forth by the North Carolina Administrative Code. The City of New Bern reserves the right to increase the size of proposed mains as needed to accommodate future development within the general vicinity of the proposed project area as outlined in Section 74-74 of the Code of Ordinances of the City of New Bern.

3.2.2 Horizontal Location of Proposed Water & Sewer Mains

All proposed water and sewer mains shall be located within existing street rights-of-way or within a permanent utility easement. The minimum width of permanent utility easements for water mains and sewer force mains shall be ten feet (10'). The minimum width of permanent utility easements for gravity sewers shall be twenty feet (20'). All proposed water and sewer mains shall be located a minimum of ten feet (10') away from any existing or proposed permanent structure.

3.2.3 Vertical Location of Proposed Water & Sewer Mains

All proposed water and sewer mains shall be designed to provide at least three feet (3') of cover from the top of the pipe to the finished grade. At locations where this requirement cannot be met the main shall be constructed with ductile iron pipe.

Sewer force mains shall be designed where possible with uniform grade between low points and high points of the alignment. Air release valves shall be installed at all high points as described in section 3.6. Sewer force mains shall be installed to the designed grade to ensure that all high points are accounted for and air release valves are installed in the proper locations.

3.2.4 Separation of Water Mains and Sanitary Sewer Mains

Water mains shall be laid at least ten feet (10') laterally from existing or proposed sewers, unless local conditions or barriers prevent a ten foot (10') lateral separation in which case the following is required:

The water main shall be laid in a separate trench, with the elevation of the bottom of the water main at least eighteen inches (18") above the top of the sewer;

or

The water main shall be laid in the same trench as the sewer with the water main located at one side on a bench of undisturbed earth, and with the elevation of the bottom of the water main at least eighteen inches (18") above the top of the sewer.

3.2.5 Water and Sewer Main Crossings

A water main that crosses a sewer shall be laid a minimum vertical distance of 18 inches from the outside of the water main and the outside of the sewer, either above or below the sewer but, if practicable, the water main shall be located above the sewer. One full length of water pipe shall be located so that both joints will be as far from the sewer as possible.

3.2.6 Fire Flow Requirements for Water Mains

Fire Flow requirements for all proposed development shall be determined by the City of New Bern Fire Department (252) 639-2931.

3.2.7 Pressure Requirements for Water Mains

Water mains shall be designed to maintain a minimum residual pressure of twenty (20) psi at peak demand during fire flow. Peak Demand shall be determined as described in Title 15A, Subchapter 18C of the North Carolina Administrative Code.

3.2.8 Reaction Anchorage and Thrust Blocking

All exposed piping with mechanical couplings, push-on, mechanical joints, or similar joints subject to internal pressure shall be rodded or restrained with mechanical restraints (grip-rings, mega lugs, etc.) to preclude separation of joints. All mechanical joint tees, valves, all horizontal bends, vertical bends deflecting twenty two and one half $(22 \frac{1}{2})$ degrees or more, and plugs which are installed in buried piping (subjected to internal hydrostatic heads in excess of thirty feet (30')) shall be provided with

suitable reaction blocking <u>and</u> restrained with mechanical restraints (griprings, mega lugs, etc.) acceptable for preventing movement of the pipe caused by internal pressure. The pipeline shall be restrained on either side of the fitting as indicated in the Pipe Restraint Chart listed in **Appendix-A**. Concrete blocking shall extend from the fitting to solid undisturbed earth and shall be installed so that all joints are accessible for repair. The fittings shall be wrapped in plastic to protect the fitting, bolts, and nuts from being permanently set in concrete and facilitate access for repair.

3.2.9 Detectable Tape and Tracer Wire

Detectable warning tape shall be installed on all water and sewer main extensions. Tracer wire shall be installed on all water and sewer main extensions, and all water/sewer services. The color of the detectable tape shall meet the standards of the AWWA color code.

All tracer wire must be maintained as a single strand in order to be effective. Brakes, gaps or distortion shall be cause for the contractor to repair the wire to the proper working order. The tracer wire shall be brought to the surface and located in a standard meter box at the following locations:

- At all bends and changes in horizontal direction.
- At all valves the tracer wire shall run along the exterior of the valve box and through a notch cut in the top (see detail W4).
- At the ends of a directional bore.
- Any location where two sections of tracer wire need to be spliced together. No underground wire connections shall be permitted.
- On straight runs of pipe, at 500' intervals.

3.3 PROPOSED WATER & SEWER SERVICES

3.3.1 Location of Water & Sewer Services

All projects shall provide for individual water and sewer services to be installed at each lot or residential unit. Services shall be installed flush to finished grade along the limit of the street right-of-way and at the center of the parcel or lot to be served. Services shall not be located within sidewalks, driveways, or other paved areas which are subject to vehicular traffic. Service pipe or tubing shall be installed perpendicular to the main.

3.3.2 Water Service Sizing

Water meters shall be sized by the City of New Bern Department of Public Utilities based on water demand data provided by the Developer and/or Engineer.

3.3.3 Water Service Connections

Water services shall be designed with a corporation stop, an angle stop,

polyethylene service tubing, and a meter box.

3.3.3.1 Corporation Stops

Taps shall be located at 10:00 or 2:00 o'clock with respect to the circumference of the pipe. Taps shall alternate from one side of the pipe to the other side, whenever possible, and be at least 12" apart. In the event two taps are made on the same side of the pipe in succession, they must be a minimum of 24" apart. All service taps shall be made using a double strap service saddle.

3.3.3.2 Angle Stops

Angle stops shall be installed so as not to cause a bind on the pipe once the meter is installed. The angle meter stop shall be perfectly plumb, 3" to 5" from the back of the meter box, centered between the sides of the meter box, and 3" to 4" above the bottom of the meter box.

3.3.3.3 Service Tubing

The water service tubing shall be one continuous piece of pipe from the corporation stop to the angle meter stop, with no unions. Each water service line shall run perpendicular to the main and straight to the meter with no kinks and/or bends.

3.3.3.4 Meter Boxes

Water meter boxes shall be placed on, no less than four (4), common brick to prevent settling. Meter boxes shall have four inches (4") of stone under the brick to aid in drainage.

3.3.4 Gravity Sewer Service Connection

Gravity sewer services shall be designed with a wye connection, a cleanout placed at the right-of-way and service piping. The minimum size of a gravity sewer service shall be four inches (4").

3.3.4.1 Wye Connections

Gravity sewer service line taps shall be located at 10:00 or 2:00 with respect to the circumference of the pipe. The sewer service line tap fitting shall be appropriate for the type of pipe being used.

3.3.4.2 Clean-outs

The sewer service line clean-outs shall be made using a long sweep wye on the sewer service line. A one foot (1') extension shall be placed on the through section of the wye with a cap glued in place. A single piece of sewer service line pipe shall be extended to grade from the wye, with a cap glued in place and contained within an approved clean-out box, which shall be set flush to finished grade. The final clean-out cap shall have a slotted top or inverted nut. No raised nut clean-out caps will be permitted.

3.3.4.3 Service Piping

The sewer service line shall be constructed with the longest piece of pipe available from the manufacturer and the least amount of fittings. Couplings shall not be allowed on the sewer service lines to join short pieces together.

3.4 PROPOSED FIRE HYDRANTS

3.4.1 Location of Fire Hydrants

Proposed fire hydrants shall be placed within the street right-of-way and where possible at street intersections. On curbed streets the hydrant shall be placed no closer than two feet (2') and no further than five feet (5') from the back of the curb. On streets without curbing the hydrant shall be placed between the top of the ditch back slope and the right-of-way boundary. In no case will the hydrant be allowed to be placed in the ditch slopes. All hydrants shall be installed so that the pumper nozzle is perpendicular to the roadway and the centerline of the nozzle is a minimum of eighteen inches (18") and a maximum of twenty-four inches (24") above finished grade.

3.4.2 Spacing of Fire Hydrants

The spacing of proposed fire hydrants shall meet the following requirements:

Residential Areas:	Hydrants shall be spaced with a maximum of
	1000 feet between hydrants.
Commercial Areas:	Hydrants shall be spaced with a maximum of 400 feet between hydrants.
Industrial Areas:	Hydrants shall be spaced with a maximum of 200 feet between hydrants.

The spacing length shall be measured along vehicle access routes which will allow for proper hose placement.

3.4.3 Fire Hydrant Assembly

All proposed fire hydrant assemblies shall include a water main tee, a hydrant leg, a gate valve, a riser, and the hydrant. Hydrants shall be installed perpendicular to water mains. Hydrant elbow shall be tied through all fittings and valves to the hydrant tee with the use of stainless steel threaded rods.

3.5 PROPOSED GATE VALVES

Gate valves shall be provided at all intersection of proposed water and sewer force mains. At each intersection a valve shall be provided for all but one of the branches (i.e. two (2) valves at a tee and three (3) valves at a cross).

3.6 PROPOSED AIR RELEASE VALVES

3.6.1 Location of Air Release Valves

Air release valves shall be located at all high points along pressure mains where the distance between the high point and the low point in the pressure main exceeds ten feet (10') in elevation. The City of New Bern Department of Public Utilities may require additional air release valves to be provided at other locations where it is determined that the possibility exists for the accumulation of excess air in the main.

3.6.2 Air Release Valve Assembly

All air release valves other than temporary blow-offs shall be automatic in type. The proposed ARV manholes shall be installed so that the manhole cover is flush with the existing grade and they shall not be installed in the centerline of any existing ditch or swale. If needed, these manholes shall be installed to back of the existing ditch and the ARV will be piped to the force main with the appropriate sized brass pipe.

3.7 PROPOSED BLOW-OFFS

3.7.1 Location of Blow-Offs

Manual blow-off assemblies shall be provided at dead-ends of all pressure mains.

3.7.2 Six Inch (6") and Larger Water Mains

At dead-end locations on all water mains six inches (6") in diameter and larger a standard fire hydrant shall be provided as a blow-off assembly.

3.7.3 Four Inch (4") and Smaller Water Mains

At dead-end locations on all water mains four inches (4") in diameter and smaller an end-of-line blow-off assembly shall be provided (See Detail W9)

3.7.4 Sewer Force Mains

At dead-end locations on all sewer force mains an end-of-line blow-off assembly shall be provided. in a meter box. (See Detail W9)

3.8 PROPOSED BACKFLOW PREVENTION ASSEMBILES

Backflow prevention assemblies shall be required for all applications if which the potential exists for the public water supply to be contaminated by the backflow from a private water system. The degree of protection required shall depend on the severity and type of possible contaminant. Protection requirements and device locations may vary by project and will be reviewed on an individual basis by the City of New Bern Department of Public Utilities.

3.9 PROPOSED SANITRY SEWER MANHOLES

3.9.1 Location of Proposed Manholes

All proposed gravity sanitary sewer mains shall be designed so that a manhole is installed at all locations where changes in horizontal alignment, vertical grade, or pipe diameter are required. The maximum distance between manholes as measured along the sewer main shall be 425 feet.

3.9.2 Manholes in Paved Areas

Where practical design allows, all manholes located within paved areas shall be set along the center line of the road and out of designated parking spaces.

3.9.3 Manhole Base

All precast concrete manholes shall be placed on a stable stone base. The depth of the stone base may vary depending on site soil conditions and actual depth of stone needed will be field determined by a representative for the City of New Bern, but shall consist of a minimum of 6 inches of stone leveling course beneath the base section. The manhole base shall be provided with a minimum of a 6" extended base section.

3.9.4 Drop Manholes

Manholes with sewer pipes entering 2 $\frac{1}{2}$ feet, or more, above the bottom shall have an inside drop manhole connections installed. All drop manholes shall have a minimum inside diameter of 5 feet.

3.10 PROPOSED PUMP STATIONS

3.10.1 Option to Use Pump Stations

In the design of all proposed sanitary sewer system extensions every effort and consideration shall be made to use conventional gravity sewer for the system extension. The use of pump stations and force mains shall only be permitted when the proposed extension can not be properly connected to the existing gravity system due to local conditions or when existing gravity sewer is unavailable.

3.10.2 Sizing of Proposed Pump Stations

Proposed pump stations shall be sized as required by the NCDEQ guidelines for the proposed property usage. The City of New Bern reserves the right to increase the size of proposed pump stations as needed to accommodate anticipated future development within the general vicinity of the proposed project area as outlined in Section 74-74 of the Code of Ordinances of the City of New Bern.

3.10.3 Pump Station Site

All proposed pump stations shall be placed on a site (50'x 50' min.) within the project area with a ground elevation above that of the flood plain. The site shall be graded to direct drainage away from the wet well structure. The site shall be accessible by an access road. At a minimum, the access road shall be twelve foot (12') wide and constructed of six inches (6'') of compacted ABC stone. The site shall be enclosed by a vinyl coated, galvanized chain-link fence with a lockable gate. Compacted stone shall be placed within the entire fenced area. A concrete pad shall be poured to create a level surface between the wet well access and the control panel. An elevated area light shall be installed at the site, as well as a frost proof yard hydrant.

3.10.4 Pump Station Structure

3.10.4.1 Wet Well

All proposed wet well structures shall be constructed of precast concrete sections with the diameter as required by design and in no case less than six feet (6'). The top section shall be flat with the access openings cast in. Access openings and covers shall be sized and placed to allow for pump removal. A mushroom style vent shall also be cast in the top section of the wet well. Where applicable, the vent shall be piped to the area light pole and extended 36" above grade.

3.10.4.2 Pumps

All proposed pump stations shall use a duplex pump system. Pumps shall be submersible in type and of equal size and pumping capacity. Pumps shall be mounted on a guide rails and have a chain lifting system. Pumps shall be sized per the recommendations of the pump manufacturer for the designed flow.

3.10.4.3 Check Valves

Check valves shall be installed on each of the pump discharge lines. Check valves shall be the lever and weight type and installed in precast concrete valve vault. The valve vault shall be equipped with a lockable access cover and a sump drain, which shall be piped to return back into the wet well.

3.10.4.4 Control and Electrical Components Rack

All electrical components and pump controls shall be located on a single rack within the pump station site. The rack and rack supports shall be constructed of stainless steel or aluminum and installed on a concrete slab. The rack shall have a minimum thickness of ¼ inch. A sun shield shall be provided across the entire length of the rack.

3.10.4.5 Pump Station Piping

All piping in the wet well, check valve vault, and additional piping within the pump station site shall be 401 lined ductile iron. All piping within the pump station site shall have the same diameter.

3.10.4.6 Alternative Power Source

The alternative power source for all proposed pump stations shall be a generator or an independently powered back-up pumping system.

For pump stations with a designed average daily flow of less than 15,000 gallons per day, the pump station shall be equipped with a manual emergency transfer switch and hook-up for the generator.

For pump stations with a designed average daily flow of 15,000 gallons per day or more, the pump station shall be equipped with a permanently mounted generator and an automatic emergency transfer switch capable of running both pumps under full load or an independently powered back-up pumping system with a pumping rate equal to both of the primary pumps. For either application, a concrete pad shall be provided along with a fuel tank capable of handling enough fuel to operate for 24 hours.

SECTION 4.0

GUIDELINES FOR USE OF THE TOWNSHIP NO. 7 LOW PRESSURE S.T.E.P. SEWER SYSTEM

4.1 GENERAL

This section identifies special requirements which are applicable to all customers located within the City of New Bern S.T.E.P. System Coverage Area. The boundaries of the S.T.E.P. System Coverage Area are illustrated in Figure 4.1 at the end of this Section.

Existing S.T.E.P. System users that are not within the boundaries of the S.T.E.P system coverage area will be required to connect to the City's Conventional Sewer System for any new development or substantial redevelopment. "Substantial Redevelopment" will include development activities on a parcel in which the total cost (cumulative over 5 year period) of the proposed improvements to the existing structures exceeds 50% of the assessed, pre-construction value of the structures.

4.2 GENERAL REQUIREMENTS FOR S.T.E.P. SYSYEM USE

- 4.2.1 The City of New Bern will only provide (1) S.T.E.P. service per building lot. To be considered eligible for connection to the S.T.E.P. sewer system, a building lot shall meet one of the following conditions:
 - A. For parcels platted prior to July 1, 2014: The parcel shall be located in an area currently served by the S.T.E.P. system and the lot must front a road right-of-way or utility easement where a S.T.E.P. system main currently exist.
 - B. For parcels which are subdivided after July 1, 2014: The parcel shall be a minimum of 10,000 square feet and have at least 60 feet of frontage along a road right-of-way or utility easement where a S.T.E.P. system main currently exist.

New permits for the extension of S.T.E.P. system mains shall be prohibited.

- 4.2.2 The City of New Bern Department of Public Utilities will have final determination on service availability and shall have the right to refuse service if the existing infrastructure in a particular area cannot handle additional loading.
- 4.2.3 To determine if a lot will be eligible for connection to the S.T.E.P. sewer system, the property owner shall contact the City of New Bern Customer Service Representative at (252) 639-7596. No lot will be provided service without a Sewer Availability letter issued by the City of New Bern Department of Public Utilities.

- 4.2.4 The required System Development Fees and Connection fees for S.T.E.P. system users will be based on the schedule of fees as set forth by the City of New Bern Board of Aldermen.
- 4.2.5 Once S.T.E.P. system service is established at a property, the property owner shall be responsible for repairing or replacing the S.T.E.P. tank, at his/her own expense when notified in writing by the City of New Bern that tank repairs, tank replacement, or the removal of solids is necessary.

4.3 REQUIREMENTS FOR RESIDENTIAL INSTALLATION AND USE

- 4.3.1 Only one residence per eligible building lot will be allowed to connect to the S.T.E.P. system. However, duplexes and other multi-family units will be allowed by meeting the following requirements:
 - 4.3.1.1 Each unit shall be on a separate lot as recorded at the Craven County Register of Deeds.
 - 4.3.1.2 Each unit shall pay the applicable System Development fees and Connection fees based on the schedule of fees as set forth by the City of New Bern Board of Aldermen
 - 4.3.1.3 Each unit shall be responsible for installation of the electrical service and S.T.E.P. tank as outlined in Sections 4.3.4 and 4.3.5.
 - 4.3.1.4 A common onsite S.T.E.P. System will also be permitted for multifamily buildings provided that the onsite tank is sized by a N.C. Professional Engineer, the electrical service is provided as outlined in Section 4.4.6 and that the electrical service for the onsite S.T.E.P. system be a common building service, separate from any of the unit services.
- 4.3.2 For residential properties wanting to connect to the S.T.E.P. system, the property owner shall be responsible for obtaining a Sewer Availability letter, paying the required System Development fees and Connection fees, providing the required electrical service, and installing the S.T.E.P. tank.
- 4.3.3 After the City Engineer has determined sewer service is available and issued the property owner a sewer availability letter, the applicable System Development fees and Connection fees can be paid during normal business hours at the City of New Bern Customer Service Office located at 606 Fort Totten Drive.
- 4.3.4 The property owner shall install (2) twenty amp three wire electrical circuits stubbed out from the residence as described below:(Also as approved by Craven County Building Inspections Department).

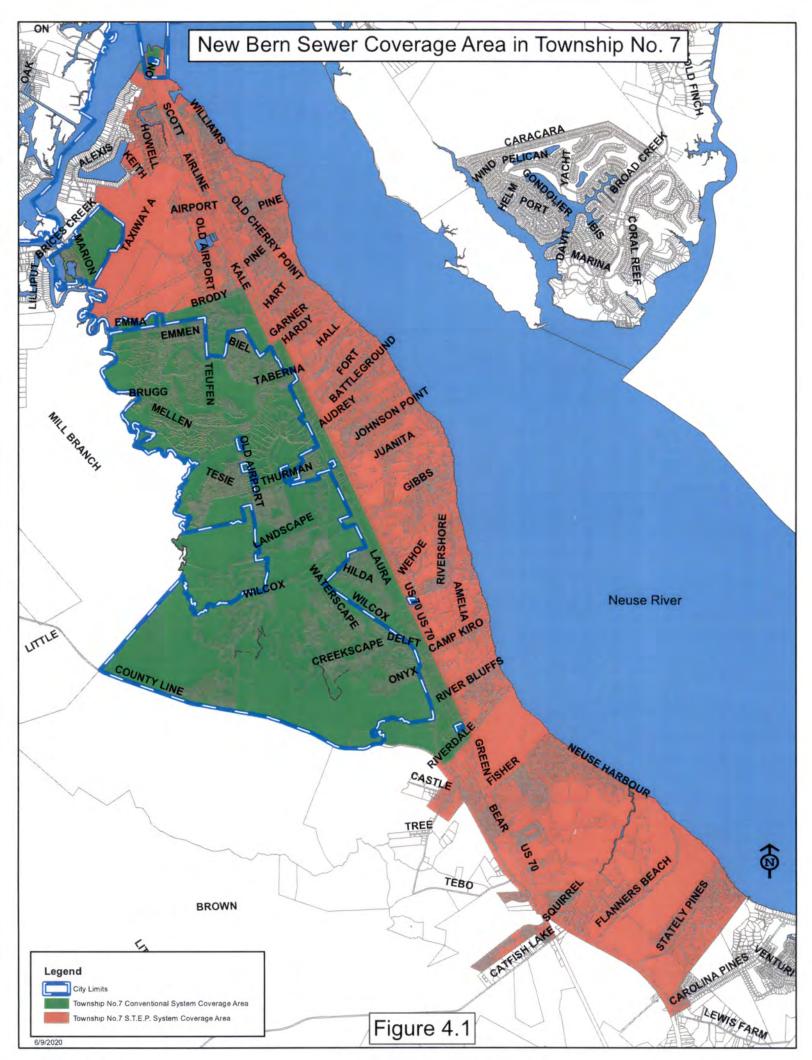
- 4.3.4.1 The power supply wiring should be installed within 20 feet of the discharge end of the S.T.E.P. tank. The control panel location should be visible from the road.
- 4.3.4.2 Two (2) twenty amp circuits on separate circuit breakers are required. One circuit is required for the pump and the other for the control panel.
- 4.3.4.3 The control panel will be mounted by the City as part of the pump installation.
- 4.3.4.4 Note that special provisions may be necessary for installations below the flood plain elevation of 10 feet above mean sea level. Any exceptions must meet the latest applicable National Electric Code
- 4.3.5 The S.T.E.P. tank to be installed by the property owner shall be a 1,300 gallon vacuum tested precast concrete septic tank/pump tank combination. A concrete riser ring shall be provided if needed to adjust ring and cover to final grade. A watertight manhole ring and cover shall be provided for access to the pump. The tank shall be manufactured by Futrells Precast, Inc. of Deep Run, N.C. (252-568-3481) or The Stallings Company, Inc. of Greenville, N.C. (252-756-0267). The tank installer will need to contact the City of New Bern at (252) 639-7597 to witness the installation and vacuum testing of the S.T.E.P. tank at the time of installation.
- 4.3.6 Once the tank and electrical service have been installed, and the System Development fees and Connection fees are paid, the City of New Bern will schedule the installation of the pump components and the connection of the sewer service. The actual installation time will depend on the City's current work load

4.4 REQUIREMENTS FOR COMMERCIAL INSTALLATION AND USE

- 4.4.1 For commercial developments wanting to connect to the S.T.E.P. system, the property owner shall be responsible for obtaining a Sewer Availability letter, a Commercial Sewer Permit, paying the applicable System Development fees and Connection fees, providing the required electrical service, and installing the S.T.E.P. tank.
- 4.4.2 To be eligible for connection to the S.T.E.P. system, a commercial development must meet the requirements outlined in Section 4.2.1 and the proposed development shall have an average daily designed flow of less than 1,000 gallons per day based on the flow rate allocation criteria set forth in the most recent version of the City of New Bern Schedule of System Development fees and Connection fees.
- 4.4.3 After the City Engineer has determined sewer service is available and issued the property owner a sewer availability letter, the applicable System Development fees and Connection fees can be paid during normal business

hours at the City of New Bern Customer Service Office located at 606 Fort Totten Drive.

- 4.4.4 Occupants of commercial buildings shall obtain a Commercial Sewer Permit prior to occupying a commercial building which is connected to the S.T.E.P. System. To obtain a Commercial Sewer Use Permit, the building occupant shall contact the City of New Bern Customer Service Representative at (252) 639-7596. All occupant use of commercial buildings connected to the S.T.E.P. System must meet the requirements of Sections 4.4.2.
- 4.4.5 If the existing onsite S.T.E.P tank and electrical service for an existing building does not conform to the requirements of Section 4.4.5, Section, 4.4.6 and Section 4.4.7, then these components will be required to be brought into compliance as part of issuing a new Commercial Sewer Use Permit.
- 4.4.6 The property owner shall install (1) Single pole, 20 amp circuit and (1) double pole, 40 amp circuit for the electrical supply to the pumps and control panel as described below: (Also as approved by Craven County Building Inspections Department).
 - 4.4.6.1 The power supply wiring should be installed within 20 feet of the discharge end of the S.T.E.P. tank. The control panel location should be visible from the road.
 - 4.4.6.2 Two circuits on separate circuit breakers are required. One circuit is required for the pumps and the other for the control panel.
 - 4.4.6.3 The control panel will be mounted by the City as part of the pump installation.
 - 4.4.6.4 Note that special provisions may be necessary for installations below the flood plain elevation of 10 feet above mean sea level. Any exceptions must meet the latest applicable National Electric Code
- 4.4.7 For proposed commercial developments with an average daily designed flow of <u>less</u> than 400 gallons per day, the developer shall install the onsite S.T.E.P. tank outlined in Section 4.3.5.
- 4.4.8 For proposed commercial developments with an average daily designed flow of more than 400 gallons per day and for all multiple occupant developments, the developer shall have the onsite S.T.E.P. tank sized by a N.C. professional engineer. The engineer shall certify that the designed onsite S.T.E.P tank has adequate septic and storage capacity to be used in conjunction with the City's standard S.T.E.P, system pumps.



SECTION 5.0

MATERIAL SPECIFICATIONS FOR WATER & SEWER EXTENSIONS

5.1 PIPE FOR GRAVITY SEWER MAINS

5.1.1 PVC Pipe

All Polyvinyl Chloride (PVC) pipe used in the construction of gravity sewer main extensions shall meet the following standards:

Pipe:	Pipe shall meet the requirements of ASTM D3034	
Dimensions:	Standard Dimension Ratio (SDR) 35	
Material:	Pipe shall be constructed of PVC conforming to ASTM D1784, Minimum cell classification of 12454B.	
Joints:	Joints shall be push-on type with elastomeric gaskets conforming to ASTM F477	
Fittings:	PVC fittings shall conform to ASTM D3034, 7.4	

5.1.2 Ductile Iron Pipe

All Ductile Iron Pipe (DIP) used in the construction of gravity sewer main extensions shall meet the following standards:

Pipe:	Class 50 Ductile iron conforming to ANSI/AWWA A21.51/C-151
Fittings:	Ductile Iron conforming to ANSI/AWWA A21.11/C-110
Joints:	Mechanical joints conforming to ANSI/AWWA A21.11/C- 111 or push-on joint conforming to ANSI/AWWA A21.51/C-151
Lining:	All pipes and fittings shall be lined with Protecto 401 or approved equal.
Coating:	All pipes and fittings shall be coated on the exterior with bituminous coating approximately 1 mil thick.

5.2 PIPE FOR SEWER FORCE MAINS

5.2.1 PVC Pipe

All PVC used in the construction of sewer force mains shall meet the following standards:

Pipe:	Pipe shall conform to the standards of AWWA C-900
Dimensions:	Standard Dimension Ratio (SDR) 18 for both bell and pipe thickness
Material:	Pipe shall be constructed of PVC conforming to ASTM D1784, Minimum cell classification of 12454B.
Pressure:	Pipe shall be pressure rated at 150 psi
Joints:	Joints shall be push-on type with elastomeric gaskets conforming to ASTM F477. For fusible C-900 joints shall be butt-fused conforming to the requirements of ASTM D638 and ASTM D1599.
Fittings:	Ductile Iron conforming to ANSI/AWWA A21.11/C-110
Restraint	
Devices:	Restraint devices for use on PVC joints shall be constructed of high strength ductile iron, ASTM A536, Grade 65-45-12 and shall incorporate machined serration on the inside diameter to provide positive restraint, exact fit, full circle contact and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be of high strength, low alloy material in accordance with ANSI/AWWA C111/A21.11, latest version thereof. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. Restraining devices for "push on" joints shall be Star Pipe Products Pipe Restrainers, Series 1100, Romac Industries, Inc. Style 611, or approved equal. Restraining devices for mechanical joints shall be Romac Industries, Inc. Grip-Ring or approved equal.
	Dimensions: Material: Pressure: Joints: Fittings: Restraint

5.2.2 Ductile Iron Pipe

All Ductile Iron Pipe (DIP) used in the construction of sewer force mains shall meet the following standards:

Pipe:	Class 50 Ductile iron conforming to ANSI/AWWA		
	A21.51/C-151		
-			

Joints:	Mechanical joints conforming to ANSI/AWWA A21.11/C- 111 or push-on joint conforming to ANSI/AWWA A21.51/C-151
Lining:	All pipes and fittings shall be lined with Protecto 401 or approved equal
Coating:	All pipes and fittings shall be coated on the exterior with bituminous coating approximately 1 mil thick.
Restraint	
Devices:	Restraint devices for use on DIP joints shall be constructed of high strength ductile iron, ASTM A536, Grade 65-45-12 and shall incorporate machined serration on the inside diameter to provide positive restraint, exact fit, full circle contact and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be of high strength, low alloy material in accordance with ANSI/AWWA C111/A21.11, latest version thereof. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. Restraining devices for "push on" joints shall be Uni-Flange Block Buster Series 1390-C, Romac Industries, Inc. Style 611, or approved equal. Restraining devices for mechanical joints shall be Romac Industries, Inc. Grip-Ring or approved equal.

5.2.3 High Density Polyethylene (HDPE) Pipe

All HDPE used in the construction of sewer force mains shall meet the following standards:

Pipe:	Pipe shall meet the requirements of AWWA C-906
Dimensions:	Standard Dimension Ratio (SDR) 9 for pipe thickness
Material:	Pipe shall be constructed of PE 3408 conforming to ASTM D1248, Minimum cell classification of 345434E.
Pressure:	Pipe shall be pressure rated at 200 psi
Joints:	All pipe and fittings shall be butt fusion jointed utilizing procedures, tools and equipment recommended by the pipe manufacturer
Fittings:	Fittings for HDPE Pipe shall be miter fusion fabricated and shall provide a pressure rating equal to that of the pipe. Molded butt fittings shall be manufactured in accordance with ASTM D-3261.

5.3 PIPE FOR WATER MAINS

5.3.1 PVC Pipe 4" and Larger

All PVC used in the construction of water mains four inches (4") in diameter and larger shall meet the following standards:

Pipe: Pipe shall conform to the standards of AWWA C-900 Dimensions: Standard Dimension Ratio (SDR) 18 for both bell and pipe thickness Material: Pipe shall be constructed of PVC conforming to ASTM D1784, Minimum cell classification of 12454B. Pressure: Pipe shall be pressure rated at 150 psi Joints: Joints shall be push-on type with elastomeric gaskets conforming to ASTM F477. For fusible C-900 joints shall be butt-fused conforming to the requirements of ASTM D638 and ASTM D1599. Fittings: Ductile Iron conforming to ANSI/AWWA A21.11/C-110 Restraint Devices: Restraint devices for use on PVC joints shall be constructed of high strength ductile iron, ASTM A536, Grade 65-45-12 and shall incorporate machined serration on the inside diameter to provide positive restraint, exact fit, full circle contact and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be of high strength, low alloy material in accordance with ANSI/AWWA C111/A21.11, latest version thereof. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. Restraining devices for "push on" joints shall be Star Pipe Products Pipe Restrainers, Series 1100, Romac Industries, Inc. Style 611, or approved equal. Restraining devices for mechanical joints shall be Romac Industries. Inc.

5.3.2 PVC Pipe 3" and Smaller

All PVC used in the construction of water mains three inches (3") and smaller in diameter shall meet the following standards:

Pipe: Pipe shall meet the requirements of ASTM D2241

Grip-Ring or approved equal.

Dimensions:	Standard Dimension Ratio (SDR) 21 for both bell and pipe thickness
Material:	Pipe shall be constructed of PVC conforming to ASTM D1784, Minimum cell classification of 12454B.
Pressure:	Pipe shall be pressure rated at 200 psi
Joints:	Joints shall be push-on type with elastomeric gaskets conforming to ASTM F477
Fittings:	Fittings shall be Schedule 80 PVC with solvent weld joints

5.3.3 Ductile Iron Pipe

All Ductile Iron Pipe (DIP) used in the construction of water mains shall meet the following standards:

Pipe:	Class 50 Ductile iron conforming to ANSI/AWWA A21.51/C-151
Fittings:	Ductile Iron conforming to ANSI/AWWA A21.11/C-110
Joints:	Mechanical joints conforming to ANSI/AWWA A21.11/C- 111 or push-on joint conforming to ANSI/AWWA A21.51/C-151
Lining:	All pipes and fittings shall be lined in accordance with ANSI/AWWA A21.4/C-104
Coating:	All pipes and fittings shall be coated interior and exterior with bituminous coating approximately 1 mil thick.
Restraint	
Devices:	Restraint devices for use on DIP joints shall be constructed of high strength ductile iron, ASTM A536, Grade 65-45-12 and shall incorporate machined serration on the inside diameter to provide positive restraint, exact fit, full circle contact and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be of high strength, low alloy material in accordance with ANSI/AWWA C111/A21.11, latest version thereof. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. Restraining devices for "push on" joints shall be Uni-Flange Block Buster Series 1390-C, Romac Industries, Inc. Style 611, or approved equal. Restraining devices for mechanical joints shall be Romac Industries, Inc. Grip-Ring or approved equal.

5.3.4 High Density Polyethylene (HDPE) Pipe

All HDPE used in the construction of water mains shall meet the following standards:

Pipe:	Pipe shall meet the requirements of AWWA C-906	
Dimensions:	Standard Dimension Ratio (SDR) 9 for pipe thickness	
Material:	Pipe shall be constructed of PE 3408 conforming to ASTM D1248, Minimum cell classification of 345434E.	
Pressure:	Pipe shall be pressure rated at 200 psi	
Joints:	All pipe and fittings shall be butt fusion jointed utilizing procedures, tools and equipment recommended by the pipe manufacturer	
Fittings:	Fittings for HDPE Pipe shall be miter fusion fabricated and shall provide a pressure rating equal to that of the pipe. Molded butt fittings shall be manufactured in accordance with ASTM D-3261.	

5.4 SANITARY SEWER SERVICES

5.4.1 Gravity Sewer Services

All materials used in the construction of gravity sewer services shall meet the following standards:

Pipe:	Schedule 40 PVC - Drain, Waste, and Vent (DWV) conforming to the requirements of ASTM D2665
Material:	Pipe shall be constructed of PVC conforming to ASTM D1784, Minimum cell classification of 12454B.
Fittings:	Fittings shall be Schedule 40 PVC conforming to ASTM F1866 with solvent weld joints. Joint primer shall conform to ASTM F656 and joint solvent shall conform to ASTM D2564
Clean-out:	Service clean-out shall use a standard wye and clean-out plug as made or recommended by the pipe manufacturer.
Clean-out	
Box:	Clean-out boxes shall be constructed of cast iron conforming to ASTM A-48 Class 30B, with an asphalt coated finish. The box shall be a minimum of 10.5" H and have a minimum clear opening of 6.75". The word "SEWER" shall be cast into the lid. Box shall be Sigma Model CO-373S or approved equal.

Service

Connection: Service connection shall use a standard wye made or approved by the pipe manufacturer

5.4.2 S.T.E.P. System Services

All materials used in the construction of S.T.E.P system services shall meet the following standards:

- Tank: All individual S.T.E.P systems shall use a vacuum tested, precast concrete septic tank/ pump tank combination. A concrete riser ring shall be provided to adjust ring and cover to final grade. A standard manhole ring and cover shall be provided for access to the pump chamber. Tanks for residential use shall be manufactured by The Stallings Company, Inc. of Greenville, N.C. (252-756-0267) or Futrells Precast, Inc. of Deep Run, N.C. (252- 568-3481).
- Pump: The effluent pump shall be of the submersible type capable of delivering a flow and total dynamic head (TDH) as determined for each installation, and shall be sufficient to pump effluent to the mainline pressure pipe for elimination. The maximum pump shutoff head shall not exceed seventyfive percent (75%) of the working pressure of the pipe. Pump shall comply with the following:
 - Pump shall be specifically designed and rated to pump sewage effluent into pressure wastewater collection systems.
 - b. All residential effluent pumps shall be Zoeller model 163 pumps or approved equal.
 - c. All pumps supplied must be constructed per (and bear the label of) an authorized testing authority such as Underwriter's Laboratories, Inc. (UL) for effluent duty.
 - d. Pumps shall have a thirty-five-foot (35') long extra heavy-duty (SO) multi-conductor NEC rated electrical cord with ground to motor plug.
 - e. The submersible pump shall pass a ³/₄ " spherical solid.
 - f. Pump motor shall be of the submersible type.
 - g. Motor shall be Single Phase, 230 Volts, 60 Hertz, 3500 RPM minimum or equal.
 - h. Single-phase motors shall be thermally protected with an automatic reset feature.

Control Panel:

The pump control panel shall be CSI or approved equal simplex pump control/alarm panel with the following features:

		 a. All control components shall be contained in a single NEMA 4X fiberglass enclosure. The enclosure shall be of one piece, weatherproof construction and gray in color. Enclosure cover shall be hinged with a stainless steel piano hinge and be lockable with two (2) stainless steel latches. b. The panel shall be equipped with a red alarm light and an integrated audible alarm to indicate "high level" alarms. A silence switch for the audible alarm shall be located on the exterior of the panel. The audible alarm shall produce a minimum of 80 decibels of sound
		 c. Level indication and pump operation shall be controlled with float switches.
P	lipe:	Service pipe shall be 1 ½ inch CTS, polyethylene conforming to the standards of ANSI/AWWA C901. Pipe shall be made of PE3408 material with a standard dimension ratio of 9 (SDR 9) and a pressure rating of 200 psi. The pipe shall be green in color.
	ervice addles:	Service saddles shall be brass with stainless steel straps and/or bolts. Saddles shall have (AWWA) CC threads. Saddles with straps shall be the double strap type. Saddles shall be manufactured by McDonald, Ford, Romac, or approved equal.
C	Corporation	
	Stops:	Corporation stops shall be bronze body with (AWWA) CC tapered threaded inlet and compression connection outlet. Corporation stops shall be manufactured by McDonald, Ford, Muller, or approved equal.
E	Ball	stand of the standard standard
V	/alve:	Ball valves shall be bronze body and have a stainless steel ball & handle, with a quarter turn, lever handled shut-off. Ball valves shall be manufactured by McDonald, Ford, Muller, or approved equal.
	Check	
N	/alve:	Check valves shall be PVC wye-Check valves having IP threaded type pipe connections. The valve shall incorporate a weighted piston seat carrier as the sealing closure. Valve end (bonnet) shall be configured with a removal eye pin. Valve body shall be constructed of PVC which meets or exceeds the requirements of ASTM D-1784. The valve shall have a minimum pressure rating of 150 psi. The check shal be a 1 ¹ / ₂ ", wye-check threaded to accept 1 ¹ / ₂ " MIP brass fitting on both ends. The wye-check shall have a continuous stainless steel reinforcing ring around the outside of the threads to prevent fittings from being over tightened. Check valves shall be manufactured by Spear, George Fischer or approved equal. 26
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Meter

Box:

Meter Boxes shall be constructed of cast iron conforming to ASTM A-48 Class 30B, with an asphalt coated finish. Dimensions shall be 20" L x 10" W x 12" H. The word "SEWER" shall be cast into the lid. Box shall be manufactured by Capital Foundry, East Jordan Iron Works, Charlotte Pipe and Foundry, or approved equal.

5.5 WATER SERVICES

All materials used in the construction of water services shall meet the following standards:

Pipe:	Service pipe shall be one inch (1") "CTS" polyethylene tubing conforming to the standards of ANSI/AWWA C901. Pipe shall be made of PE3408 material with a standard dimension ratio of 9 (SDR 9) and a pressure rating of 200 psi. The tubing shall be blue in color.
Service	blue in color.
Saddles:	Service saddles shall be brass with stainless steel straps and/or bolts. Saddles shall have (AWWA) CC threads. Saddles with straps shall be the double strap type. Saddles shall be constructed of No-Lead brass in accordance with AWWA C- 800. Saddles shall be manufactured by McDonald, Ford, Muller, or approved equal.
Corporation	
Stops:	Corporation stops shall be bronze body with (AWWA) CC tapered threaded inlet and compression connection outlet. Corporation stops shall be constructed of No-Lead brass in accordance with AWWA C-800Corporation stops shall be manufactured by McDonald, Ford, Muller, or approved equal.
Angle	
Stop:	Angle stops shall be bronze body with compression connections for the inlet and outlet. Ball valves shall have a stainless steel ball and a lockable, quarter turn, tee handled shut-off. Angle stops shall be constructed of No-Lead brass in accordance with AWWA C-800. Ball valves shall be manufactured by McDonald, Ford, Muller, or approved equal.
	In shallow water service installations straight meter valves shall be utilized instead of angle stops at locations where the service tubing has to come through the side of the meter box instead of up through the bottom. The straight meter valves shall be either Muller Model B-24350 or Ford Model B43. Both valves will have a swivel meter nut on one side and a compression type pack joint for CTS tubing on the other side, along with a lockable wing.

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Meter

Box:

Meter Boxes shall be standard MBX-1 size, constructed of cast iron conforming to ASTM A-48 Class 30B, with an asphalt coated finish. Dimensions shall be 20" L x 10" W x 12" H. The Box shall be manufactured by Capital Foundry, East Jordan Iron Works, Charlotte Pipe and Foundry, or approved equal. The box lid shall be the standard "City of New Bern" polymer lid (DFW Plastics, Inc. Model No. DFW1219SS-AF1MA-LID

5.6 VALVES AND VALVE BOXES

5.6.1 Gate Valves

Gate valves shall be resilient seated and conform to AWWA C-509 for water and other liquids. Gate valves shall be iron bodied bronze mounted having non-rising stems and mechanical joints. Gate valves shall open counter clockwise, have a standard 2 inch square operating nut, and a caston direction arrow. Gate valves shall be manufactured by Mueller, Clow, American, or approved equal.

5.6.2 Butterfly Valves

Butterfly valves 20" and smaller shall conform to AWWA C504 for class 150B. Butterfly valves shall be iron bodied mechanical point with cast iron valve discs ASTM A-436 Type 1, Stainless steel valve shafts Type 316 recognized synthetic compound valve seals bonded to withstand 75 lbs. Pull butterfly valves shall be fitted with sleeve-type corrosion resistant bearings and self-adjusting valve packing. Valve operators for butterfly valve shall conform to AWWA C 504 with 2 inch square operating nut. The valve operators shall be the self-locking type designed to hold the valve in any position without creeping or fluttering. Butterfly valves shall open counter-clockwise. Butterfly valves shall be manufactured by American, Clow, Mueller, Pratt, or approved equal.

5.6.3 Tapping Sleeve & Valve

Tapping sleeves, sleeve flange and all required hardware shall be constructed of stainless steel and have a minimum working pressure of 150 psi. Tapping sleeves shall be manufactured by Ford, Muller, Romac or approved equal. Tapping valves shall meet all the requirements for gate valves as set forth in Section 5.6.1.

5.6.4 Valve Box

Valve boxes shall be constructed of cast iron and rated for H-20 traffic loading. Valve boxes shall be two (2) piece adjustable screw type telescopic valve boxes with the tops marked SEWER or WATER for their relative use and location. Valve Boxes shall be manufactured by Capital Foundry, East Jordan Iron Works, Charlotte Pipe and Foundry, or approved equal.

5.7 AIR RELEASE VALVES

5.7.1 Automatic Air Release Valves

Automatic Air Release Valves shall be automatic float operated valves designed to release accumulated air from a piping system while the system is in operation and under pressure.

The valve body, cover, orifice, float and linkage mechanism shall be constructed of Type 316 stainless steel. Non-metallic floats or linkage mechanisms are not acceptable. The orifice button shall be Viton for simple lever valves and Buna-N for compound lever designs. Automatic air release valves shall be Crispin UX20.

5.7.2 Manual Air Release Valves

Manual air release valves shall consist of the same materials as specified in Section 5.5 and shown in Detail W-8.

5.8 FIRE HYDRANTS

Fire hydrants shall conform to AWWA C502. Fire hydrants shall be manufactured with two (2) 2 $\frac{1}{2}$ inch hose nozzles and one (1) 4 $\frac{1}{2}$ inch pumper nozzle. All threads shall conform to the standard for the City of New Bern. All hydrant legs shall be six inch (6") ductile iron pipe with a mechanical joint valve. All hydrants furnished shall have a minimum 3'-6" inch bury depth hydrant. Hydrants shall be ordered for the correct bury depth so that extensions are not needed to properly set the final fire hydrant grade. All hydrants furnished are to be bronze to bronze threads between the seat or seat ring and the seat attaching assembly with a drain ring. Fire hydrants shall be dry top type with a breakable traffic feature assuring the hydrant remains closed should it be broken off at the ground level. In addition to the factory coat, all hydrants shall be mainted after installation using high grade exterior enamel paint. All fire hydrants shall be Mueller Cat. No. A421, 4 $\frac{1}{2}$ " or American-Darling Mark73-5 with New Bern standard Storz connector on the pumper nozzle.

5.9 MANHOLES

All materials used in the construction of manholes shall meet the following standards:

5.9.1 Sections

All manholes shall be constructed using precast concrete sections conforming to ASTM C-478.

5.9.2 Steps

Manhole steps shall be constructed of 0.5" diameter, grade 60 steel

bars. The steps shall have a plastic coating and meet the requirements of Federal Specification RR-F-621C.

5.9.3 Ring and Cover

Manhole rings and covers shall be constructed of Class 30 cast iron conforming to ASTM A48, and shall be traffic bearing. The words "SANITARY SEWER" shall be cast in top of the cover. Rings and covers shall be manufactured by Capital Foundry, East Jordan Iron Works, Charlotte Pipe and Foundry, or approved equal.

In locations were the rim elevation of the manhole is below the 100year flood elevation for the area, the manhole shall be provided with the water-tight ring and cover. In addition, all water tight manhole shall be vented above the flood elevation.

5.9.4 Flexible Pipe Sleeve

Pipe sleeves with stainless steel clamps conforming to ASTM C-923 shall be used for pipe to manhole connections. The pipe sleeve shall be design and constructed to provide a flexible watertight seal.

5.9.5 Inverts

Inverts shall be precast into the bottom section of the manhole.

5.9.6 Grout

All perforations pick holes, seams, transitions, joints and leaks shall be sealed with hydraulic cement or approved equal.

5.9.7 Joint Wrap

The exterior of all manhole joints shall be wrapped with a butyl joint wrap with plastic backing. The wrap shall be a minimum of 6" wide, 0.050" thick and conform to ASTM C 877 (Type III).

5.9.8 Joint Seal

Each manhole joint shall be sealed using a butyl-rubber based flexible sealant conforming to the requirements of ASTM C-990 and have a minimum round equivalent of 1".

5.10 PUMP STATIONS

All materials used in the construction of pump stations shall meet the following standards:

5.10.1 Wet Well Structure

All components of the wet well structure shall conform to the requirements for manholes as described in Section 5.9.

5.10.2 Pumps

Sanitary sewer wastewater pumps shall be manufactured by Flygt, or approved equal which meets the following requirements:

Pump

Construction: Major pump components shall be of grey cast iron, ASTM A-48, Class 35B, with smooth surfaces devoid of blow holes or other irregularities. All exposed nuts or bolts shall be AISI type 304 stainless steel construction. All metal surfaces coming into contact with the pumpage, other than stainless steel or brass, shall be protected by a factory applied spray coating of acrylic dispersion zinc phosphate primer with a polyester resin paint finish on the exterior of the pump.

> Sealing design shall incorporate metal-to-metal contact between machined surfaces. Critical mating surfaces where watertight sealing is required shall be machined and fitted with Nitrile or Viton rubber O-rings. Fittings will be the result of controlled compression of rubber O-rings in two planes and O-ring contact of four sides without the requirement of a specific torque limit.

> Rectangular cross sectioned gaskets requiring specific torque limits to achieve compression shall not be considered as adequate or equal. No secondary sealing compounds, elliptical O-rings, grease or other devices shall be used.

Cooling System:

Motors are sufficiently cooled by the surrounding environment or pumped media. A water jacket is not required.

Cable Entry

Seal:

The cable entry seal design shall preclude specific torque requirements to insure a watertight and submersible seal. The cable entry shall consist of a single cylindrical elastomer grommet, flanked by washers, all having a close tolerance fit against the cable outside diameter and the entry inside diameter and compressed by the body containing a strain relief function, separate from the function of sealing the cable. The assembly shall provide ease of changing the cable when necessary using the same entry seal. The cable entry junction chamber and motor shall be separated by a stator lead sealing gland or terminal board, which shall isolate the interior from foreign material gaining access through the pump top. Epoxies, silicones, or other secondary sealing systems shall not be considered acceptable.

Motor: The pump motor shall be a NEMA B design, induction type with a squirrel cage rotor, shell type design, housed in an air filled, watertight chamber. The stator windings shall be insulated with moisture resistant Class H insulation rated for 180°C (356°F). The stator shall be insulated by the trickle impregnation method using Class H monomer-free polyester resin resulting in a winding fill factor of at least 95%. The motor shall be inverter duty rated in accordance with NEMA MG1, Part 31. The stator shall be heat-shrink fitted into the cast iron stator housing. The use of multiple step dip and bake-type stator insulation process is not acceptable. The use of bolts, pins or other fastening devices requiring penetration of the stator housing is not acceptable. The motor shall be designed for continuous duty handling pumped media of 40°C (104°F) and capable of up to 15 evenly spaced starts per hour. The rotor bars and short circuit rings shall be made of cast aluminum. Thermal switches set to open at 125°C (260°F) shall be embedded in the stator end coils to monitor the temperature of each phase winding. These thermal switches shall be used in conjunction with and supplemental to external motor overload protection and shall be connected to the control panel. The junction chamber containing the terminal board shall be hermetically sealed from the motor by an elastomer compression seal. Connection between the cable conductors and stator leads shall be made with threaded compression type binding posts permanently affixed to a terminal board. The motor and the pump shall be produced by the same manufacturer.

The combined service factor (combined effect of voltage, frequency and specific gravity) shall be a minimum of 1.15. The motor shall have a voltage tolerance of plus or minus 10%. The motor shall be designed for operation up to 40°C (104°F) ambient and with a temperature rise not to exceed 80°C. A performance chart shall be provided upon request showing curves for torque, current, power factor, input/output kW and efficiency. This chart shall also include data on starting and no-load characteristics.

The power cable shall be sized according to the NEC and ICEA standards and shall be of sufficient length to reach the control panel without the need of any splices. The outer jacket of the cable shall be oil resistant chlorinated polyethylene rubber. The motor and cable shall be capable of continuous submergence underwater without loss of watertight integrity to a depth of 65 feet or greater.

The motor horsepower shall be adequate so that the pump is non-overloading throughout the entire pump performance curve from shut-off through run-out.

Bearings: The pump shaft shall rotate on two bearings. Motor bearings shall be permanently grease lubricated. The upper bearing shall be a single deep groove ball bearing. The lower bearing shall be a two row angular contact bearing to compensate for axial thrust and radial forces. Single row lower bearings are not acceptable.

Mechanical Seal:

Each pump shall be provided with a tandem mechanical shaft seal system consisting of two totally independent seal assemblies. The seals shall operate in a lubricant reservoir that hydro-dynamically lubricates the lapped seal faces at a constant rate. The lower, primary seal unit, located between the pump and the lubricant chamber, shall contain one stationary and one positively driven rotating, corrosion resistant tungsten-carbide ring. The upper, secondary seal unit, located between the lubricant chamber and the motor housing, shall contain one stationary and one positively driven rotating, corrosion resistant tungsten-carbide seal ring. Each seal interface shall be held in contact by its own spring system. The seals shall require neither maintenance nor adjustment nor depend on direction of rotation for sealing. The position of both mechanical seals shall depend on the shaft. Mounting of the lower mechanical seal on the impeller hub will not be acceptable. For special applications, other seal face materials shall be available.

The following seal types shall not be considered acceptable nor equal to the dual independent seal specified: shaft seals without positively driven rotating members, or conventional double mechanical seals containing either a common single or double spring acting between the upper and lower seal faces. No system requiring a pressure differential to offset pressure and to effect sealing shall be used.

Each pump shall be provided with a lubricant chamber for the shaft sealing system. The lubricant chamber shall be designed to prevent overfilling and to provide lubricant expansion capacity. The drain and inspection plug, with positive anti-leak seal shall be easily accessible from the outside. The seal system shall not rely upon the pumped media for lubrication. The motor shall be able to operate dry without damage while pumping under load.

Seal lubricant shall be FDA Approved, nontoxic.

Pump and motor shaft shall be the same unit. The pump shaft is an extension of the motor shaft. Couplings shall not be acceptable. The pump shaft shall be stainless steel – ASTM A479 S43100-T.

If a shaft material of lower quality than stainless steel – ASTM A479 S43100-T is used, a shaft sleeve of stainless steel – ASTM A479 S43100-T is used to protect the shaft material. However, shaft sleeves only protect the shaft around the lower mechanical seal. No protection is provided for in the oil housing and above. Therefore, the use of stainless steel sleeves will not be considered equal to stainless steel shafts.

Impeller: The impeller(s) shall be of gray cast iron, Class 35B, dynamically balanced, double shrouded non-clogging design having a long throughlet without acute turns. The impeller(s) shall be capable of handling solids, fibrous materials, heavy sludge and other matter found in wastewater. Whenever possible, a full vaned, not vortex, impeller shall be used for maximum hydraulic efficiency; thus, reducing operating costs.

Wear

Pump Shaft:

- Rings: A wear ring system shall be used to provide efficient sealing between the volute and suction inlet of the impeller. Each pump shall be equipped with a brass, or nitrile rubber coated steel ring insert that is drive fitted to the volute inlet.
- Volute: Pump volute(s) shall be single-piece grey cast iron, Class 35B, non-concentric design with smooth passages large enough to pass any solids that may enter the impeller.
- Protection: All stators shall incorporate thermal switches in series to monitor the temperature of each phase winding. The thermal switches shall open at 125°C (260°F), stop the motor and activate an alarm.

5.10.3 Control Panel

All pump stations shall be provided with a control panel capable of operating the pump station across all flow requirements. The control panel shall be sized to match the voltage, phase, and load requirements of the station pumps. The control panel shall be configured as indicated on the New Bern standard control panel schematic. The control panel shall be produced by Multitrode, Inc., Pete Duty & Associates, Inc., Southern Flow, Inc. RS Integrators, Inc., or approved equal and be provided with the following general options:

- NEMA 4X Stainless steel enclosure with inner dead-front door, 3 point latch handle, enclosure light, and stainless steel sun shield.
- The Entire panel shall be UL/CUL approved
- Distribution, neutral & ground blocks
- · Main & Generator(if needed) circuit breakers interlocked
- Generator Receptacle(if needed) size and model to be determined by City
- Pump & control circuit breakers
- Control transformer
- Full voltage motor starters
- Indicator lights as illustrated on the New Bern standard schematic
- Hand-Off-Auto switches on the inner door
- Condensation strip heater for enclosure
- 12VDC battery, charger, and power supply
- Voltage phase monitoring
- 3-phase surge protection
- Hour meters mounted on inner door
- Convenience 120V GFCI power outlet and circuit breaker
- · Current transformers for amps monitoring
- Multitrode Multismart Pump Station Manager:
 - DNP3/MODBUS communication enabled
 - Flow calculation enabled
- New Bern Standard
- 1.5 meter primary liquid level sensing probe
- Ball float backup liquid level sensing system
- Alarm light and audible horn

For stations with pumps 60 HP or greater, the control panel shall be provided with a variable frequency drive (VFD) for each pump. Control panels with VFDs shall also be provided with appropriately sized auxiliary cooling system for the control panel. For stations with pumps between 25 and 60 HP, the control panel shall be provided with "soft start" motor starters for each pump.

5.10.4 Pressure Gauges

Each discharge pipe leaving the pump station shall be provided with a pressure gauge. The pressure gauge shall be located on top of the discharge pipe located within the valve vault. Each pressure gauge shall be oriented in a manner in which it is easily readable from above grade, without the

need to enter the valve vault. Each gauge shall be provided with a ¹/₄ turn brass ball valve that separates that gauge from the discharge pipe. The pressure gauge shall be liquid filled with single PSI indicator marks. The pressure gauge shall cover the full operational pressure range of the pump station.

5.10.5 Piping

All piping within the wet well structure and through the valve vault shall be Ductile Iron Pipe (DIP) conforming to the following standards:

Class 50 Ductile iron conforming to ANSI/AWWA A21.51/C-151			
Ductile Iron conforming to ANSI/AWWA A21.10/C-110			
Flanged joints conforming to ANSI A21.4			
All pipes and fittings shall be lined with Protecto 401 or approved equal.			
The exterior of all exposed pipes, fittings, and valves shall be coated with 2 coats (total 8 mils dried thickness) of Tnemec N69 Hi-Build Epoxoline II.			

5.10.6 Check Valves

Check valves shall be provided on each pump discharge line and be located in a precast concrete valve vault. Check valves shall be horizontal mounted, swing type with a bronze disc and cast iron body. Check valves shall be manufactured by Muller, American Darling, Apco Valves or an approved equal.

5.10.7 Access Hatches

Aluminum access hatches shall be provided for both the wet well and the valve vault. The frame shall be one piece and constructed of aluminum or stainless steel with integral concrete anchors. The cover(s) shall be constructed of one-quarter inch (1/4") thick diamond pattern plating, reinforced to withstand a live load three hundred pounds-per-square foot (300 psf). The cover(s) shall include a handle for raising and have a safety handle for locking in the open position. Access hatches shall be provided with a factory installed padlock hasp for locking each cover. All hatch hardware and hinges shall be constructed on stainless steel.

5.10.8 Vent Pipe

All proposed pump stations shall include a mushroom type vent for the wet well structure. The vent shall be constructed of four inch (4"), class 150 cast iron vent pipe. Vent outlets shall be provided with a two (2) mesh, 14 gauge, bronze wire screen.

5.10.9 Guide Bracket Assembly

Two (2) guide bars shall be provided for the raising and lowering of each pump. Guide bars shall be stainless steel pipe, extending from the lower guide holders to the upper guide holders. Lower guide holders shall be integral with the pump discharge connection. Guide bars shall not support any portion of the weight of the pumps.

5.10.10 Conduit

All conduit utilized in the construction of pump stations shall meet the NEC standards of for location and use. All conduits between the control panel and the wet well shall be no smaller than 1.5" and the conduits for the pump leads shall be no smaller than 2". All conduit from the wet well shall have a pull box (C-box) located prior to entering any panel. The pull box shall be sealed on both sides with removable sealer.

5.11 GENERATOR

All pump stations with a calculated average daily design flow of 15,000 gallons per day or more shall be provided with an onsite backup diesel generator with an automatic transfer switch. The generator shall be sized to provide full load of all pumps along with any auxiliary items located at the station. The generator shall be produced by Atlantic Cummins, MTU Onsite Energy, CAT Electric Power, Power Secure, Kohler or approved equal and be provided with the following general options:

- Tier 3 EPA Emissions Certified.
- UL2200 Listed.
- NFPA 110 alarm package.
- · Radiator with engine driven fan.
- · Output breaker mounted on generator.
- Steel weather protective enclosure, Level 2 sound attenuation.
- Sub-base fuel tank sized for min. of 24 hours at full load.
- · Battery rack with battery and charger.
- · Control panel with auto starts/stops, alarms, & shut downs.
- Coolant/block heater.

The generator shall be provided with the appropriate size automatic transfer switch housed in a NEMA 4X cabinet. The transfer switch shall include an integrated engine exerciser/exercise clock.

5.12 ENCASEMENT PIPE

Encasement pipe be uncoated steel pipe conforming to the standards of AWWA C200. Pipe sections shall be joined by a continuous weld. The minimum wall thickness shall be as follows:

Encasement Pipe Dia.	Wall Thickness			
14"	0.216"			
16" – 24"	0.250"			
30"	0.312"			
36"	0.375"			
42"	0.438"			
48"	0.500"			

Encasement pipe install under a railroad shall meet the minimum wall thickness requirements as set forth by the governing railroad authority.

SECTION 6.0

TESTING REQUIREMENTS

6.1 <u>GENERAL</u>

All items which require testing shall be promptly cleaned and ready for testing after installation. Meeting all testing requirements specified herein shall be a condition of acceptance of the item by the City of New Bern. In no case shall an item be accepted into the City of New Bern municipal water or sanitary system without passing the required testing. A representative of the City of New Bern Department of Public Utilities must be on site to witness all required testing procedures. The City of New Bern Department of Public Utilities (252-639-7523) requires a 48 hour notice for each test.

6.2 WATER MAINS

6.2.1 Leakage Testing

All pressure pipe shall be tested in accordance with current AWWA standards; AWWA C600 for ductile iron pipe and AWWA605 for PVC pipe. All proposed water mains shall be subjected to a leakage test under the specified hydrostatic pressure. The pressure shall be maintained constant at one hundred fifty pounds per square inch (150 psi) (plus or minus five psi) during the entire time that line leakage measurements are being made.

The water lines are to be flushed thoroughly to remove all dirt and debris which may have collected in the line. After flushing has been completed, the pipelines shall be tapped on top at a point furthest from the point that the lines are to be filled with water. The valve at the end of the line shall be left open, and the valve between the new water line and the City Water System opened slightly to allow the water to enter the new pipe slowly. Once the pipe is full, the valve at the end of the line shall be left open until the valve between the new water line and the City Water System is completely shut off. At no time shall the City Water System valve be open without an outlet in the new pipe system. A representative of the City of New Bern is the only authorized operator of valves within the City Water System.

Leakage measurements shall not be started until a constant test pressure has been established; compression of air trapped in unvented pipes or fittings will give false leakage readings under changing pressure conditions. After the test pressure to be used has been established and stabilized, the line leakage shall be measured by means of a water meter installed on the line side of the force pump, and the leakage test shall extend over a total period of not less than four (4) hours. Line leakage is defined as the total amount of water introduced into the line as measured by the meter during the leakage test. The pipeline or section being tested will not be accepted if it has a leakage rate in excess of:

$L = \frac{S \times D \times (square root of P)}{148,000}$

where L = allowable leakage in gallons per hour, S = length of pipe in feet, D = nominal diameter of the pipe in inches, and P = average test pressure during the leakage test in pounds per square inch (150 psi).

All visible leaks shall be repaired. The Contractor shall locate and repair leaking joints to the extent required to reduce the total leakage to an acceptable amount. All joints in piping shall be watertight and free from visible leaks during the prescribed test. Each leak which is discovered within one year after final acceptance of the work shall be located and repaired by and at the expense of the Contractor.

6.2.2 Disinfection

After passing the leakage test, all water mains shall be disinfected in accordance with AWWA C-651, and as specified herein. The valve at the end of the line shall be left open, and the valve between the new water line and the City Water System opened slightly to allow the water to enter the new pipe slowly. Chlorine is then to be applied under pressure by an ejector pump (or equal) to the water entering the new pipeline. Chlorine will be added in sufficient quantities to give an overall chlorine residual to the water of at least fifty (50) parts per million. Once the pipe is fully chlorinated, a representative of the City of New Bern Department of Public Utilities shall be contacted to perform a high chlorine test. At no time during testing shall the City Water System valve be open without an outlet in the new pipe system. A representative of the City of New Bern is the only authorized operator of the valves within the City Water System.

After the water main passes the high chlorine test the pipeline is to be valved off and the chlorinated water allowed remaining in the line for twenty four (24) hours. After the twenty four (24) period, the chlorine residual in the line must be at least ten (10) parts per million. After passing the chlorine residual test, the pipe line is to be thoroughly flushed until no evidence of chlorine exists as determined by the Orthotolidine Test.

After flushing the line, the Contractor shall furnish sterilized bottles and take water samples from various points along the line as directed and witnessed by the City of New Bern. A minimum of two samples shall be taken in any instance. The Contractor shall send the samples to an approved testing laboratory, for bacteriological analysis. If the analysis reveals that no bacteria is present and the requirements for final inspection have passed, the pressure pipe system may be placed into service upon written notification from the City Engineer.

The City of New Bern reserves the right to modify and/or change the test, test procedures, and/or passing level results without prior notice.

6.3 SANITARY SEWER MAINS

6.3.1 Gravity Sewer Mains

Each section of proposed gravity sewer shall be promptly cleaned and tested after installation. The following test shall be performed on proposed gravity sewer mains:

<u>Air Test</u> – All proposed gravity sewer mains shall be air tested in accordance with ASTM C-828, ASTM C-924 and the following. Such tests shall consist of securely plugging the sewer line between manholes, pumping the section full of air to 4.0 psi and holding this pressure for at least two (2) minutes. Then the pressure should be reduced to 3.5 psi and the time recorded for the pressure to drop 1.0 psi to the new pressure of 2.5 psi. If groundwater is present, all test pressures shall be adjusted by adding 0.43 psi for each foot of groundwater head that exist above the pipe invert. The time required for the pressure drop shall exceed the minimum test time given in the chart below,

Diameter Test	Minimum Test Time	Time for	Time for Longer Lengths (sec)	Specification Time for Length (L) Shown (min:sec)							
	(Min)			100 ft	150 ft	200 ft	250 ft	300 ft	350 ft	400 ft	450 ft
4	3:46	597	.380 (L)	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	.854 (L)	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8	7:34	298	1.520(L)	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10	9:26	239	2.374(L)	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	199	3.418(L)	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	5.342(L)	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18	17:00	133	7.692(L)	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41

<u>Deflection Test</u> - A Deflection test shall be performed on all sanitary sewer mains constructed of non-ferrous materials. This test shall be performed after all grading, paving, and compaction work has been completed. The allowable deflection shall be 4.5% of the nominal inside diameter of the pipe. The deflection shall be measured by the use of the mandrel test.

<u>Closed Circuit T.V. Inspection</u> – All proposed gravity sewer mains shall undergo a closed circuit T.V. inspection prior to being accepted by the City of New Bern. The City of New Bern will conduct the inspection. Any slumps, high points, low points, swells, standing water, accumulations of dirt and debris, rolled gaskets, leaks or other defects shall be corrected by the Contractor prior to any other test being performed. The City Engineer shall have the final decision on all discrepancies.

6.3.2 Sewer Force Mains

All proposed sewer force mains shall be subjected to a leakage test under the specified hydrostatic pressure. The test pressure shall be one and onehalf times the maximum working pressure of the pipe segment. The test pressure shall be maintained constant (plus or minus five psi) during the entire time that line leakage measurements are being made.

The sewer force mains are to be flushed thoroughly to remove all dirt and debris which may have collected in the line. After flushing has been completed, the force main shall be filled slowly with water. One end of the pipe shall be vented to allow the release of air during filling. Once the force main is full of water all vents shall be closed and a pump shall be used to increase the pressure in the force main to the required test pressure.

Leakage measurements shall not be started until a constant test pressure has been established; compression of air trapped in unvented pipes or fittings will give false leakage readings under changing pressure conditions. After the test pressure to be used has been established and stabilized, the line leakage shall be measured by means of a water meter installed on the line side of the force pump, and the leakage test shall extend over a total period of not less than two (2) hours.

Line leakage is defined as the total amount of water introduced into the line as measured by the meter during the leakage test. The pipeline or section being tested will not be accepted if it has a leakage rate in excess of:

 $L = \underline{S \times D \times (square root of P)}{148,000}$

Where L = allowable leakage in gallons per hour, S = length of pipe in feet, D = nominal diameter of the pipe in inches, and P = average test pressure during the leakage test in pounds per square inch.

All visible leaks shall be repaired. The Contractor shall locate and repair leaking joints to the extent required to reduce the total leakage to an acceptable amount. All joints in piping shall be watertight and free from visible leaks during the prescribed test. Each leak which is discovered within one year after final acceptance of the work shall be located and repaired by and at the expense of the Contractor.

6.4 MANHOLES

All manholes on proposed sewer main extensions shall be vacuum tested as specified herein. Manholes shall be tested after complete assembly. Stub-outs, manhole boots and pipe plugs shall be secured to prevent movement while the vacuum is drawn. A measured vacuum of 10 inches of mercury shall be established in the manhole. Acceptance standards for leakage shall be established from the elapsed time for a negative pressure change from 10 inches to nine inches of mercury. The maximum allowable leakage rate for a four-foot diameter manhole shall be in accordance with the following:

Minimum Elapsed Time for a

Manhole Depth	Pressure Change of 1" Hg
10 ft. or less	60 seconds
>10 ft. but < 15 ft.	75 seconds
>15 ft. but < 25 ft.	90 seconds

For manholes five feet in diameter, add an additional 15 seconds and for manholes six feet in diameter, add an additional 30 seconds to the time requirements for four foot diameter manholes.

If the manhole fails the test, necessary repairs shall be made and the vacuum test and repairs shall be repeated until the manhole passes the test. The extent and type of repairs that may be allowed shall be subject to the approval of the City Engineer. Leaks shall be repaired on the outside of the manhole unless otherwise approved by the City Engineer.

If manhole joint mastic is completely pulled out during the vacuum test, the manhole shall be disassembled and the mastic replaced.

6.5 PUMP STATION TESTING AND START-UP

Prior to the acceptance of a pump station, a run test and start-up shall be completed by a representative of the pump and generator manufacturer. During the start-up the pump station will be required to operate under the anticipated loading and system conditions. All pumps and control functions shall be tested during the start-up procedure. All possible run situations shall be tested to ensure proper flow is maintained at actual system pressures. The City of New Bern Department of Public Utilities shall be contacted at least 48 prior to conducting the pump station start-up. The contractor shall not discharge the new pump station into the existing City system without approval from the City of New Bern. The following items should be complete prior to scheduling the pump station start-up:

- Electrical work inspected and an energizing permit issued by the appropriate agency.
- The electrical service established with the City of New Bern as the customer.
- Verify the rotation of the pumps.
- Confirm that all main line valves and air release valves are open and in proper working order.

6.6 S.T.E.P. SYSTEM TANKS

All S.T.E.P. system tanks shall be vacuum tested by the manufacturer prior to delivery. Upon delivery all tanks shall be set in place and vacuum tested again by the tank installer to insure that no seals were damaged in the delivery and installation of the tank. The onsite test shall be performed in the presence of a City of New Bern representative. Tanks shall be tested with the riser and manhole ring installed. All testing equipment shall be supplied by the tank provider.

All tank inlets and outlets shall be sealed and a measured vacuum of 3.5 inches of mercury shall be established in the tank and held for a period of five (5) minutes. During the test period no leakage shall be allowed. If the tank fails the test, necessary repairs shall be made and the vacuum test and repairs shall be repeated until the tank passes the test. The extent and type of repairs that may be allowed shall be subject to the approval of the City Engineer.

6.7 TAPPING SLEEVES

Prior to making any tap on an existing City of New Bern water or sewer main, the tapping sleeve or saddle shall pass a pressure test. The tapping sleeve shall be hydrostatically tested through the test plug for a period of five (5) minutes. During the test period, no leakage shall be allowed. Air testing of tapping sleeves shall not be permitted.

SECTION 7.0

REQUIREMENTS DURING CONSTRUCTION AND PROJECT CLOSEOUT

7.1 PRIOR TO CONSTRUCTION

The following shall be completed prior to any construction commencing on water or sewer extension projects:

7.1.1 Notice to Proceed Issued The City of New Bern

Once the City of New Bern Department of Public Utilities has approved the proposed design and confirmed that all required permits, encroachment agreements, and utility easements have been executed and issued by the appropriate agencies, a notice to proceed will be issued by the City to the Contractor.

7.1.2 Material Inspection

Once all materials are on site, the Contractor shall contact the City of New Bern Water Resources Project Coordinator (252-639-7523) to schedule an onsite inspection of all proposed construction materials. No material shall be used in utility construction until the material inspection has been performed.

7.1.3 Shop Drawing Submittal

Shop Drawings shall be submitted to the City of New Bern Department of Public Utilities for review of the following items:

- Pumps
- Control Panels
- Lift Station Electrical Components
- Generator
- Booster Pumps
- RPZ
- Automatic Air Release Valves

7.1.4 N.C. ONE CALL

The NC One Call Center (1-800-632-4949) shall be contacted a minimum of forty-eight (48) hours prior to beginning excavation. The Contractor shall be responsible for keeping locate tickets current and contacting the One Call Center if unmarked utilities should be encountered.

7.1.5 Contractor to Notify The City of New Bern

At least forty-eight (48) hours prior to the start of any construction, the contractor shall notify the City of New Bern Department of Public Utilities (252-639-7523). Depending on the nature of the project the City Engineer may require that a preconstruction conference be held to discuss the details of the project.

7.2 DURING CONSTRUCTION

7.2.1 Notices to Property Owners and Local Utilities

The Contractor shall notify adjacent property owners and utilities when the project execution may affect adjacent properties. The contractor shall notify the appropriate authorities when the project operations will interrupt access or utility service to the property owner or tenant. Utilities and other agencies shall be contacted at least twenty four (24) hours prior to cutting or closing streets, or excavating near underground utilities or pole lines.

7.2.2 General Safety Requirements

Excavations shall provide adequate working space and clearance as necessary to provide proper pipe installation and work safety. Excavations performed on NCDOT rights of way shall be protected from traffic utilizing the NCDOT Uniform Traffic Control Manual (latest edition). Minimum requirements shall include proper signage, flagmen, protective vests and hardhats as outlined in the manual. The Contractor shall provide a Competent Person for trench construction on site, as outlined in OSHA regulations, for all excavations that exceed four feet (4') in depth. The City Engineer may stop work for any violation of the aforementioned regulations when the safety of any person acting as a representative, agent, or employee of the Contractor is considered in imminent danger. Work may continue only after the violation has been rectified and the City Engineer grants permission to proceed.

7.2.3 Connections to Existing Water or Sewer Mains

The Contractor shall make all necessary connections to existing water lines, unless otherwise directed by the City of New Bern. The City shall be notified at least twenty four (24) hours prior to making such connections. Taps shall be made only in the presence of the City of New Bern Water Resources Project Coordinator or a duly assigned representative of the City of New Bern Department of Public Utilities. At all times, the Contractor shall protect existing facilities against adverse conditions or substances and damage.

Connections to existing water and sewer lines shall be planned in advance with all required equipment, materials, and labor on hand prior to undertaking the connections. Work shall proceed continuously around the clock if necessary to complete connections in minimum time. Operation of valves or other equipment on the existing water system shall be under the direct supervision of the City of New Bern.

7.2.4 Site Administration

The Contractor shall be responsible for all areas of the site under construction or occupied for administrative or storage purposes. The Contractor shall be responsible for all Subcontractors in their performance on the project. The Contractor will be responsible for the actions of all employees and other persons on the project to insure proper use and preservation of property and existing facilities, except when these responsibilities are specifically reserved to others. The Contractor has the right to exclude from the construction site any persons who are not directly related to the construction process or the inspection of the work by the Owner. The contractor may require all persons on the construction site to observe all operational or safety regulations required of his employees. The Contractor shall keep the project site free from accumulations of waste materials and rubbish at all times.

7.2.5 Project Inspections

For all proposed water and sewer extension projects, the Developer shall provide complete engineering services which shall include construction observation. It shall be the responsibility of the Project Engineer and ultimately the Developer, to insure that all construction is completed as shown on the plans which have been approved for construction by the City of New Bern.

The City of New Bern Water Resources Project Coordinator will periodically visit the site during construction and will be on site for all testing and inspections as required by the City of New Bern. It is NOT the duty of the City of New Bern Water Resources Project Coordinator to direct construction, provide solutions to design problems or maintain record drawings. These services shall be provided by the Project Engineer.

7.3 PROJECT CLOSEOUT

7.3.1 General

All items listed in this section must be completed before the City of New Bern will accept any new construction as part of the City's municipal water and sewer system.

7.3.2 Final Inspection

Upon completion of construction and all required testing, the Contractor shall contact the City of New Bern Water Resources Project Coordinator to schedule a final inspection. During the final inspection the Water Resources Project Coordinator will insure that all aspects of the water and sewer construction have been completed in compliance with the current City standards. The Contractor shall provide all personal and tools which will be required for opening manholes, exercising valves, and flowing hydrants. The City of New Bern prefers for the streets within the development to be paved at the time of final inspection. If the streets have not been paved, then all structures within the street shall be set in place with concrete prior to requesting the final inspection. Valve boxes shall be set in a minimum of a 18"x18"x18" block of concrete and manhole rings shall be set in a minimum of a 36"x36"x18" block of concrete.

During the final inspection, the Water Resources Project Coordinator will create a punch-list if any deficiencies are discovered. The Contractor shall complete all items described on the punch-list prior to requesting a reinspection.

7.3.3 Record Drawings

Upon completion of all utility projects, the Project Engineer shall submit an "As Built" set of plans to the City Engineer. All As Built information on the plans shall be clearly identified (bold text, different text, boxed-out, etc.). Proposed information which has changed shall be marked through. The "As Built" plans shall indicate the horizontal and vertical location of all installed utilities. All bends, reducers, and valves shall be located with at least two (2) measurements to existing features (back of curb, utility pole, hydrant, etc.). Horizontal pipe location shall be shown at one hundred foot intervals along the pipe as measured from the back of curb or the edge of pavement. For sewer force mains the elevation of the installed pipeline shall be indicated on the record drawings in 50' intervals. All elevations shown shall be based on a datum elevation from an existing USGS monument. The record drawings shall be submitted in the following formats:

- 1. (1) Sets of Plans 24" x 36" on Standard Bond Paper
- (1) CD or flash drive containing the project drawing files in PDF format.

7.3.4 Utility Easements

Prior to project acceptance, a final plat of the development shall be recorded with the Craven County Register of Deeds. The final development plat shall clearly illustrate all proposed utility easements.

7.3.5 Engineer's Certification

For projects which involve the extension of the City of New Bern water system the Project Engineer shall submit to the City a copy of the Engineer's Certification stating that the completed water system extension conforms to the approved plans and specifications as required by the NCDEQ. For projects which involve the extension of the City of New Bern sewer system the Project Engineer shall submit to the City a copy of the Engineer's Certification stating that the completed sewer system extension conforms to the approved plans and specifications as required by the NCDEQ.

7.3.6 Total Project Cost

Upon completion of all construction, the Project Engineer shall submit to the City Engineer the total cost all improvements related to the water and sewer system. This submittal shall include the Contractor's original Bid and all additional Change Orders.

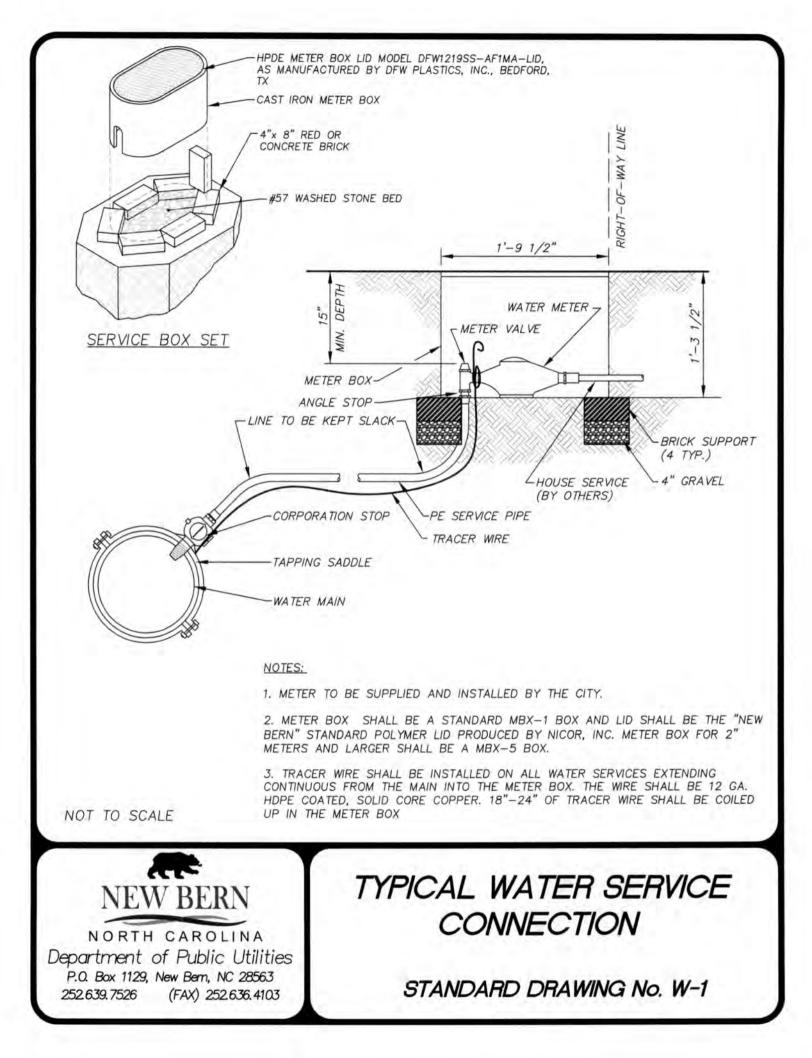
7.3.7 Warranty

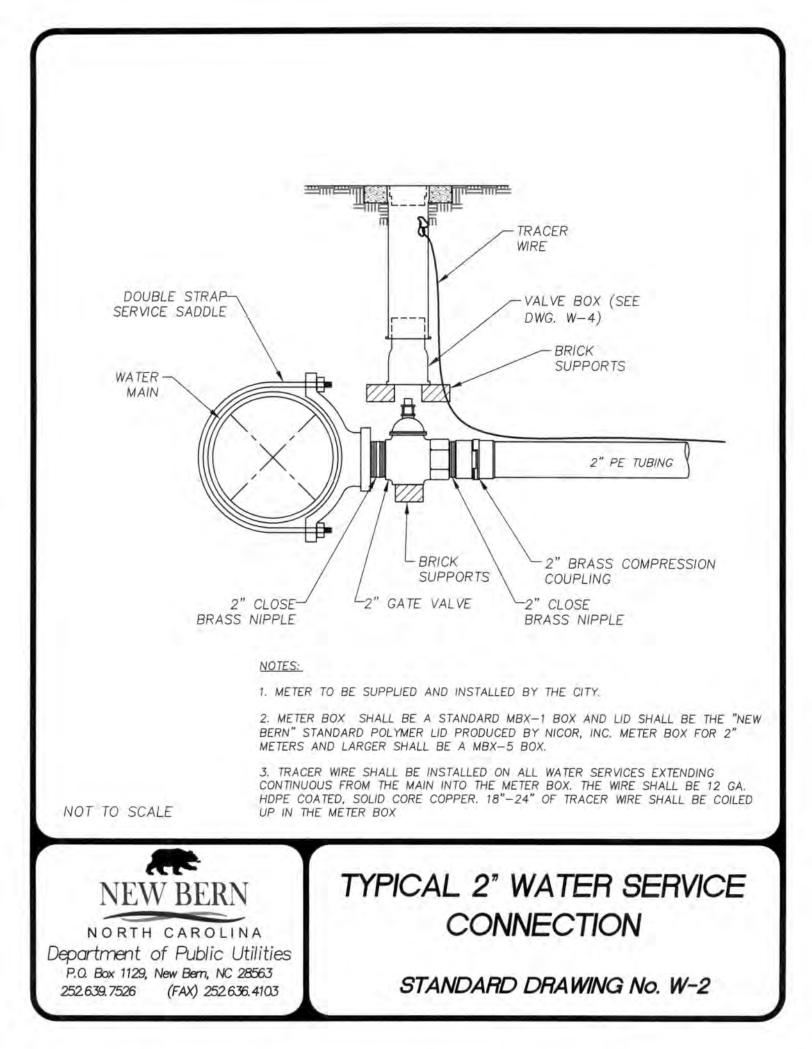
The Developer shall warrant all water and sewer work to be free of defects in materials or workmanship for a period of two (2) years. The warranty period shall begin from the date of City's acceptance of the project for permanent operation and maintenance.

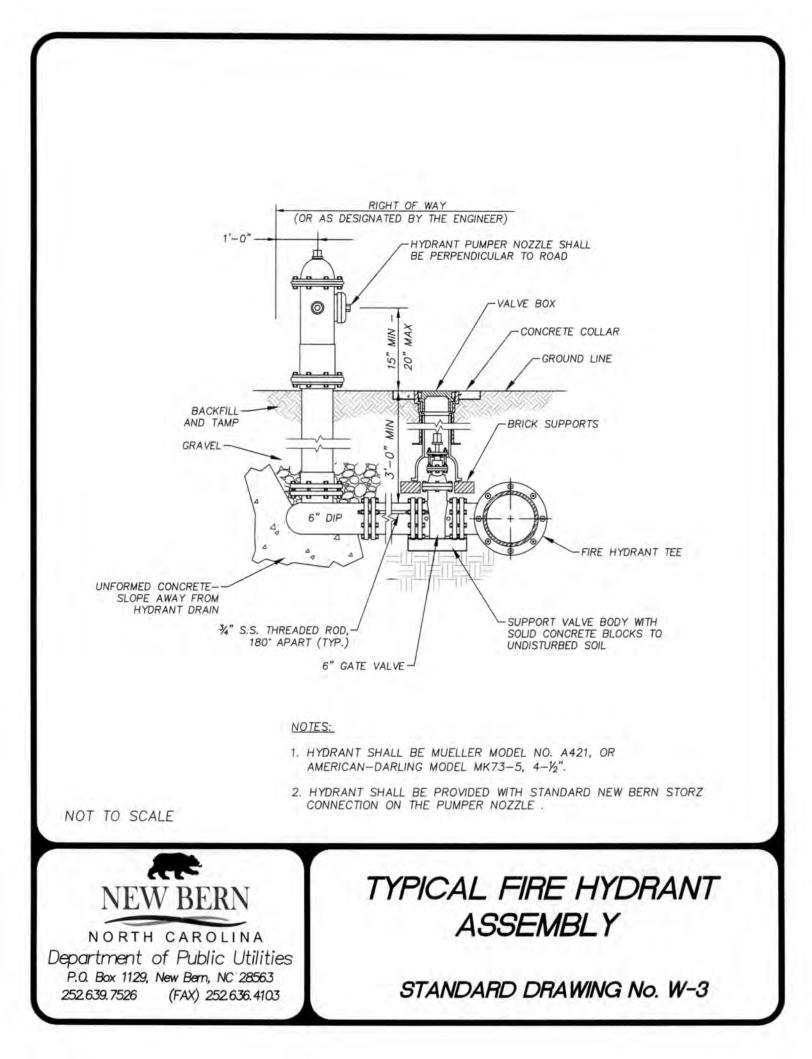
7.3.8 Final Acceptance

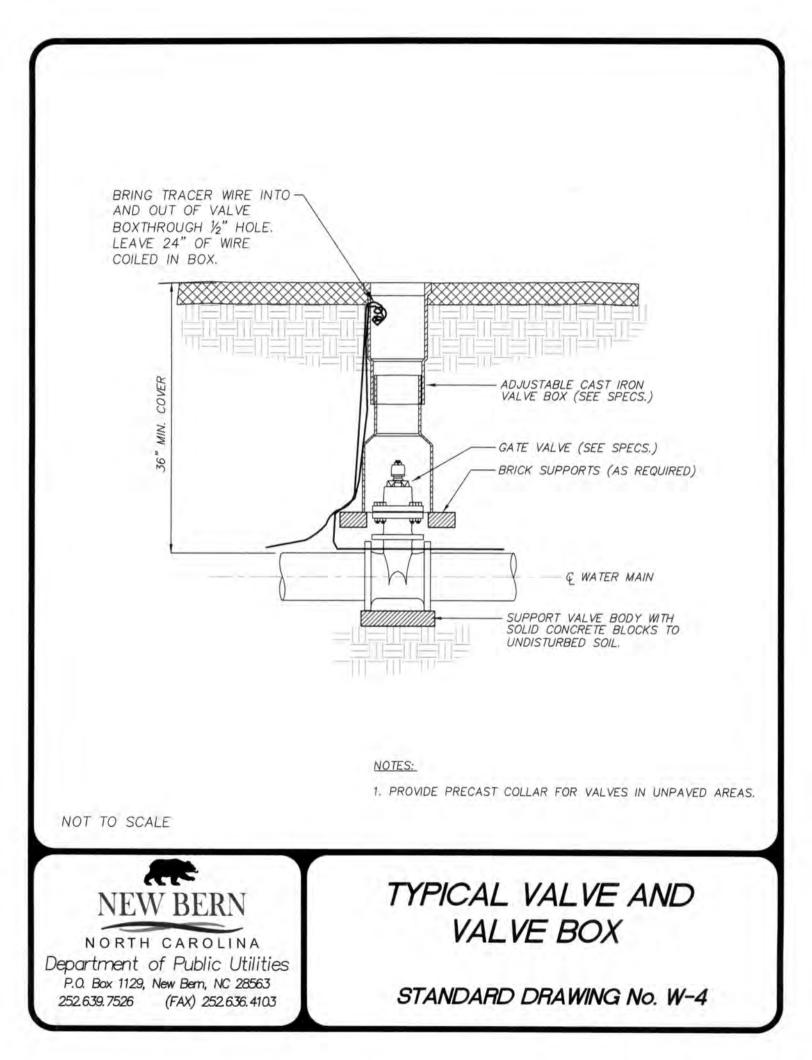
Once the items listed in 7.3.1 - 7.3.6 have been completed the City Engineer will issue the letter of acceptance, which will outline the terms, if any of the infrastructure acceptance and set the start/end dates for the (2) year warranty period.

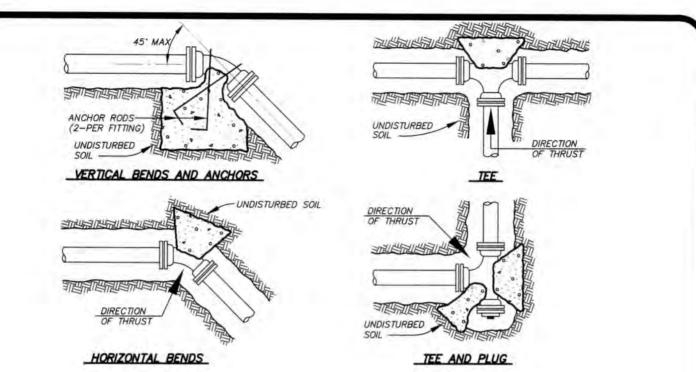
SECTION 8.0 STANDARD WATER & SEWER DETAILS











CONCRETE THRUST BLOCKING SCHEDULE				CONCRETE SCHEDULE VERTICAL BENDS				ANCHOR ROD SIZE			
FITTING	BEARING AREA IN SQUARE FEET					MIN. CU. YARDS CONCRETE				FOR VERTICAL	
	TEE/PLUG	90*	45'	22-1/2'	11-1/4	90*	45'	22-1/2	11-1/2	BEND AND ANCHORS	
4"	1	2	1	7	1	1	1	1	1		
6"	3	3	2	1	1	1	1	1	1	1/2"	
8"	4	6	3	2	1	2	2	1	1	7 /4"	
10"	7	9	5	3	2	3	3	2	1	3/4"	
12"	9	12	7	4	2	5	3	2	1		
14"	12	17	9	5	3	6	4	3	2	7/8"	
16"	16	22	12	6	3	8	6	3	2	110	
18"	20	27	15	8	4	10	7	4	2		
20"	24	34	18	10	5	12	9	5	3		
24"	34	48	26	14	7	17	12	7	4	1-1/8"	
30"	53	75	41	21	11	27	19	10	5		
36"	77	108	59	30	15	38	27	15	8	1-3/8"	

NOTES:

1. MINIMUM BEARING AREA (IN SQUARE FEET) AGAINST UNDISTURBED TRENCH WALL OF SAND.

2. AREAS SHOWN ARE FOR 150 PSI TEST PRESSURE. IF TEST PRESSURE IS OTHER THAN 150 PSI, ADJUST AREA OF REACTION BACKING IN DIRECT PROPORTION.

3. OTHER SOIL CONDITIONS :

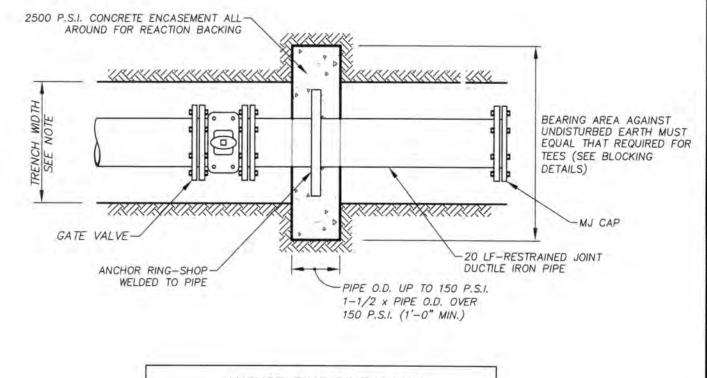
CEMENTED SAND OR HARDPAN – MULTIPLY ABOVE BY 0.5 GRAVEL OR HARD DRY CLAY – MULTIPLY ABOVE BY 0.7 SOFT CLAY – MULTIPLY ABOVE BY 2.0 <u>MUCK</u>: SECURE ALL FITTINGS WITH APPROVED HARNESS OR TIE ROD CLAMPS, WITH CONCRETE REACTION BACKING THE SAME AS LISTED FOR SAND CONDITIONS.

NOT TO SCALE



THRUST BLOCKING AND ANCHORING SCHEDULE

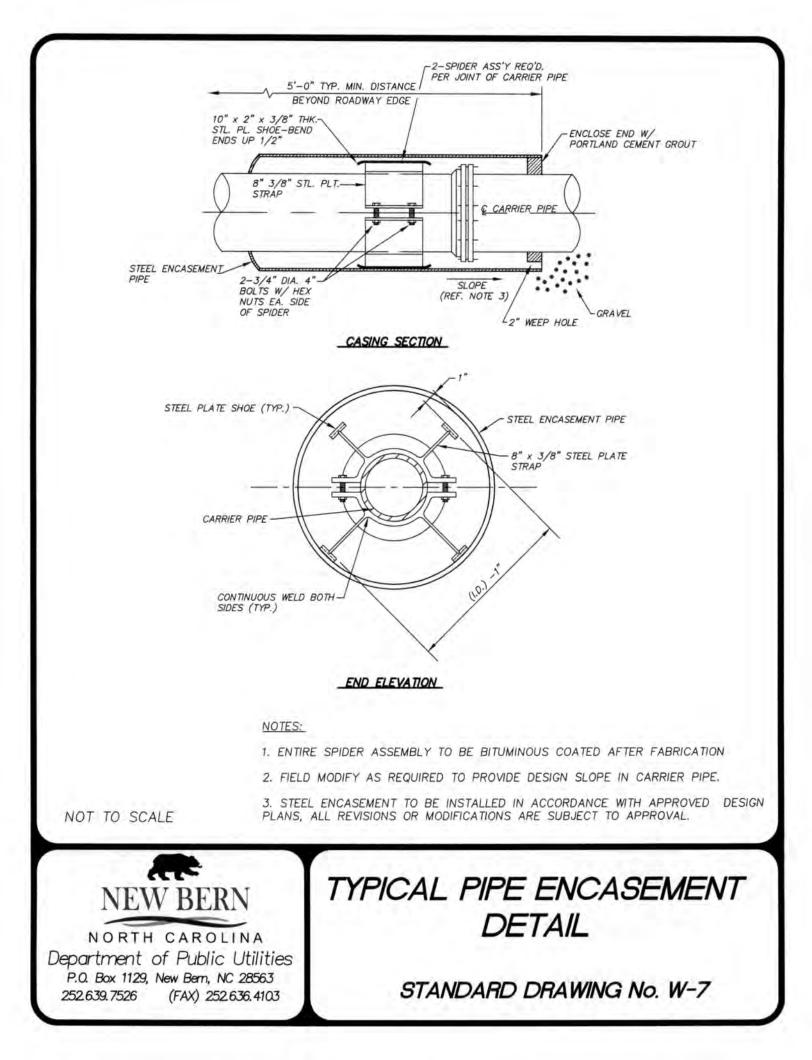
STANDARD DRAWING No. W-5

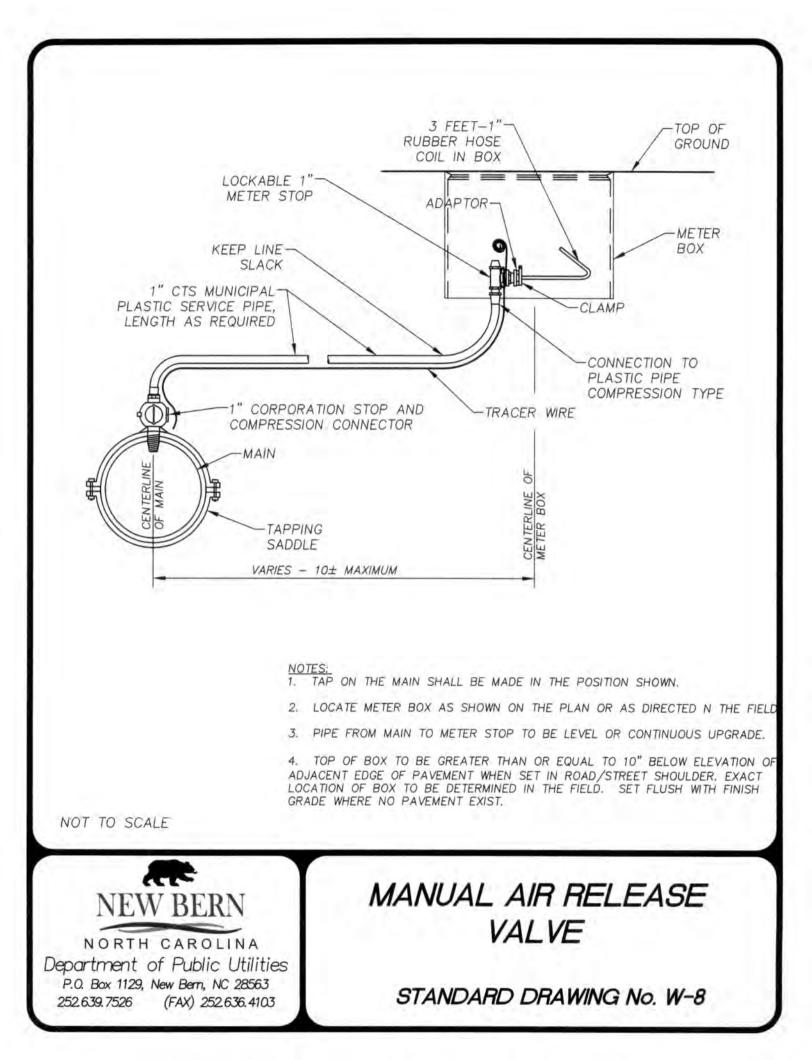


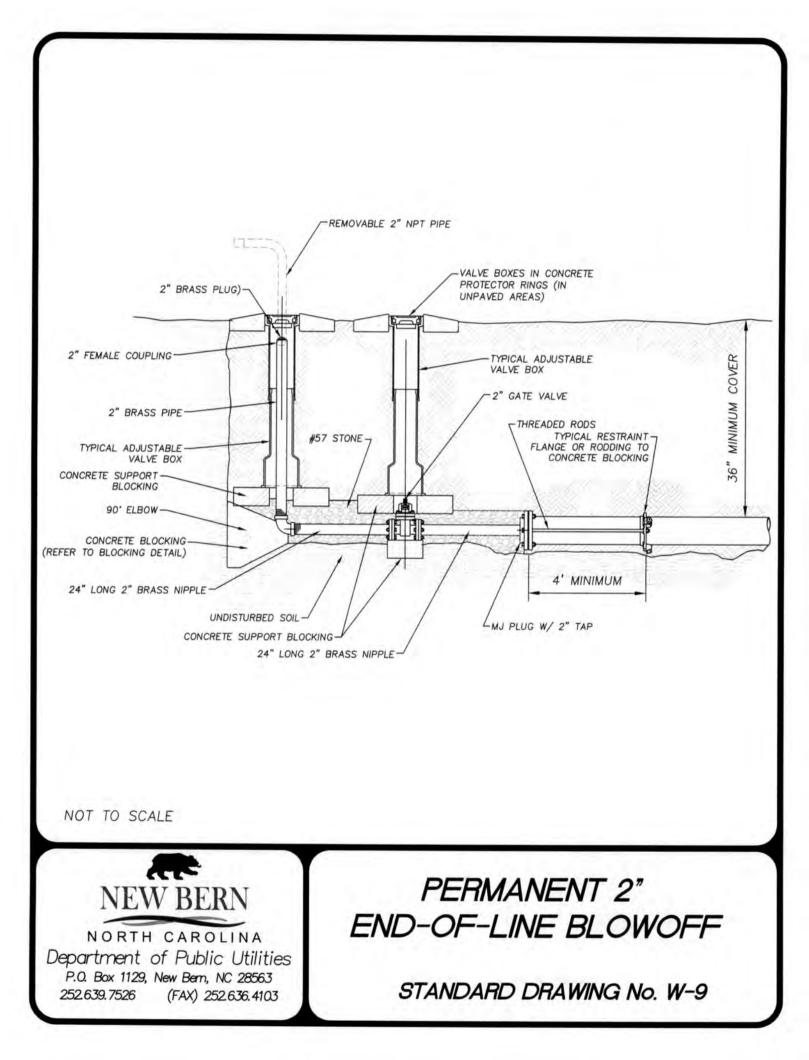
ANCH	OR RING DIMENS	IONS
NOMINAL PIPE SIZE	O.D. OF RINGS	THICKNESS
4" - 12"	PIPE O.D. + 6"	1/2"
16" - 24"	PIPE O.D. + 7"	3/4"

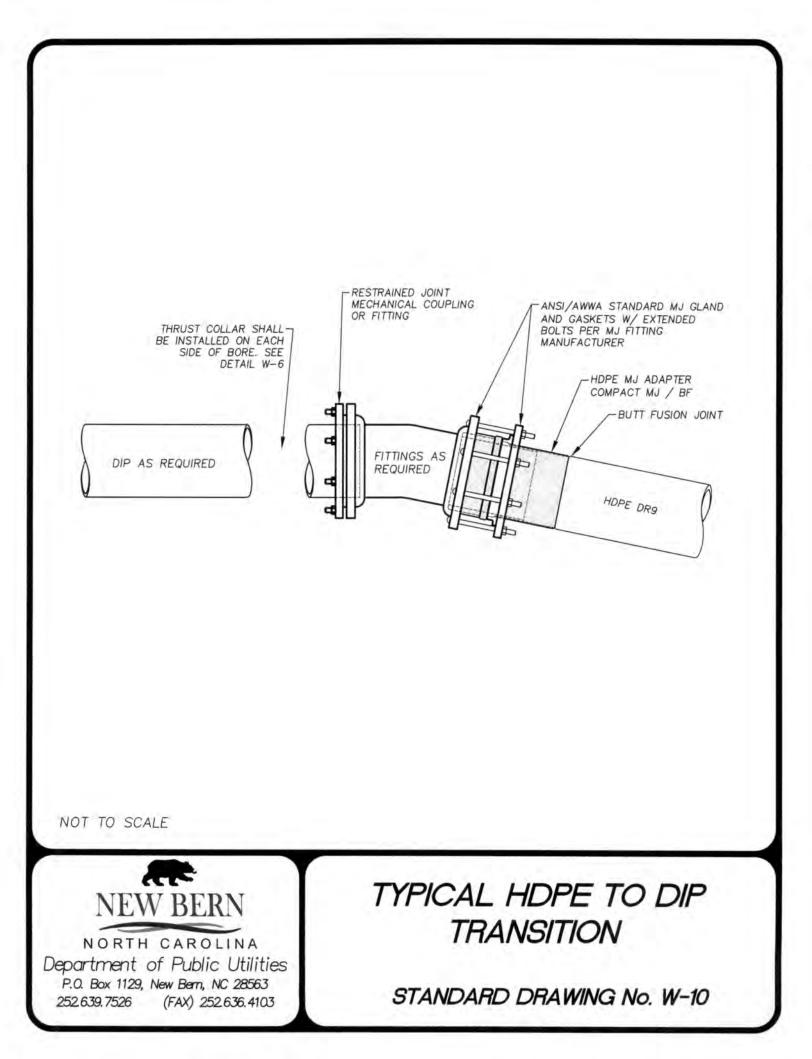
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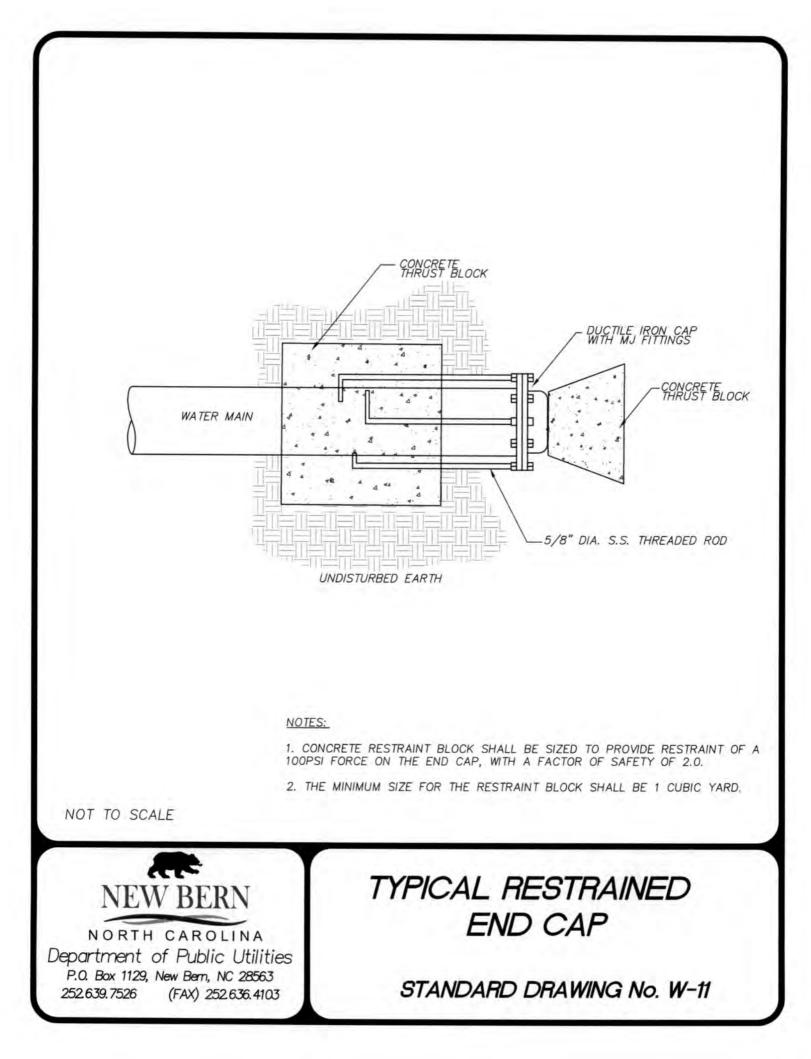


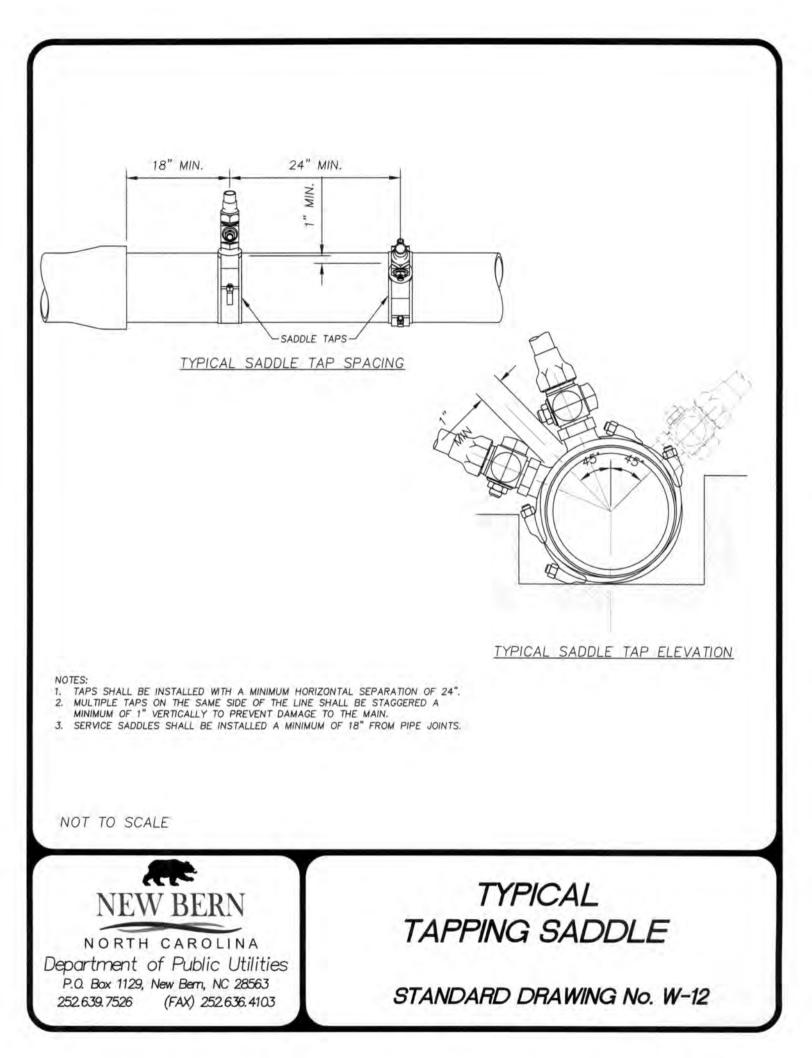


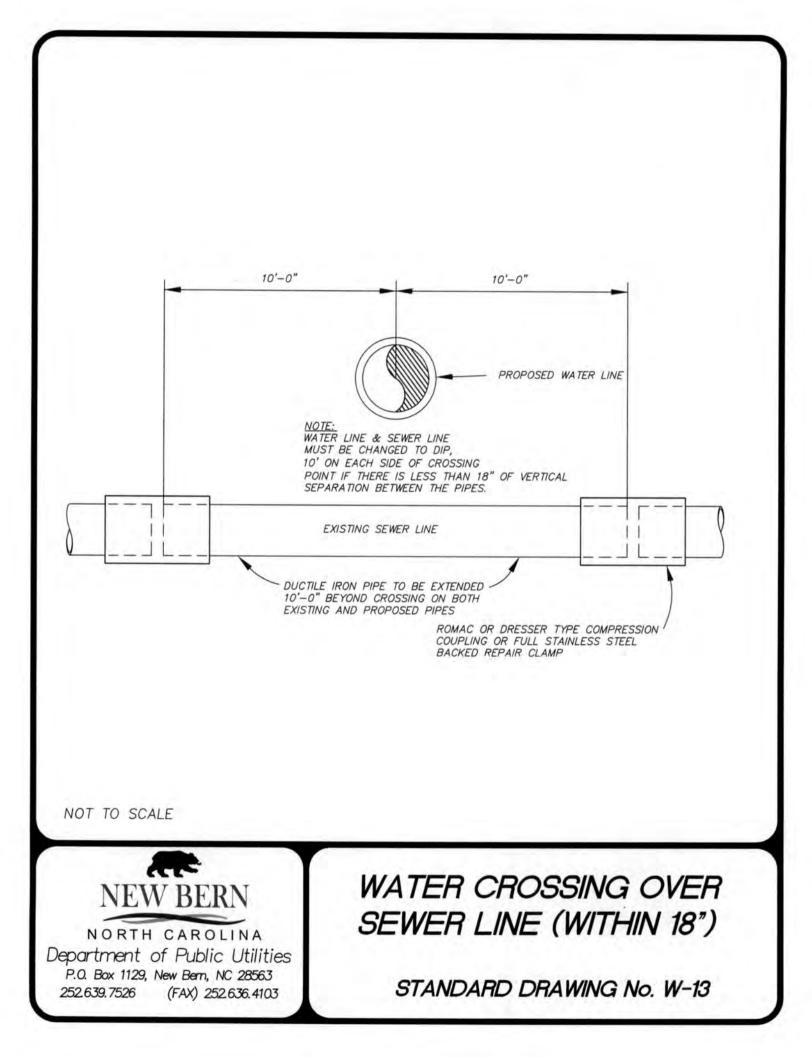


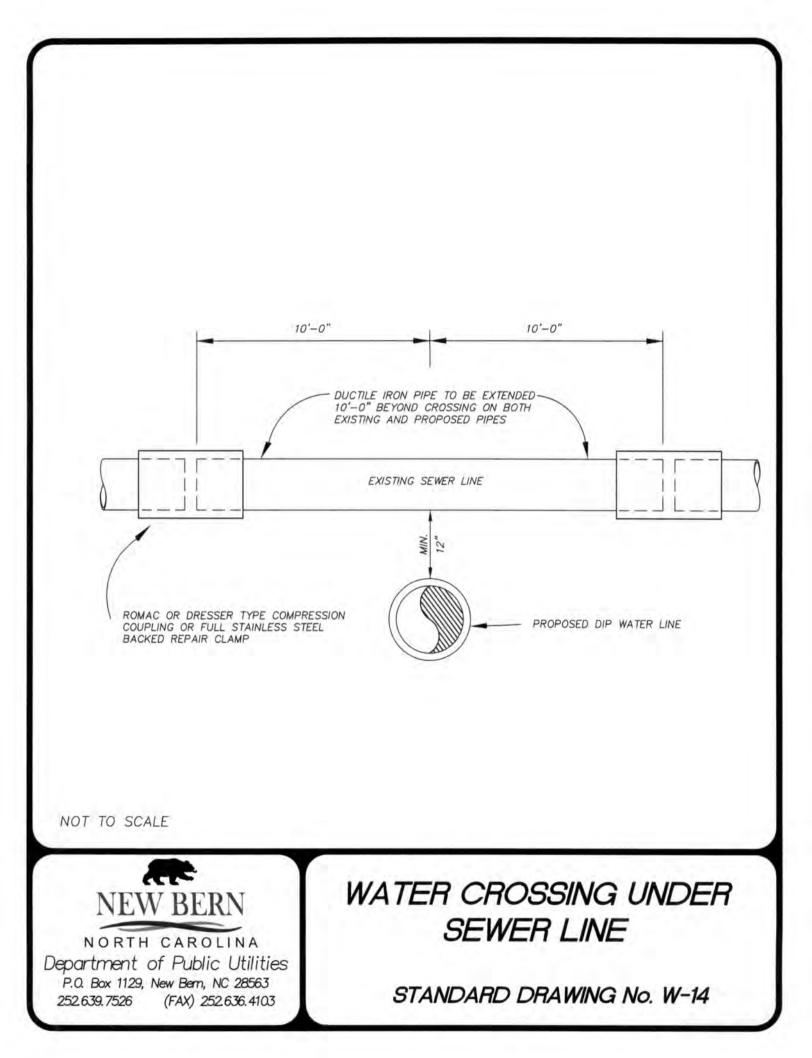


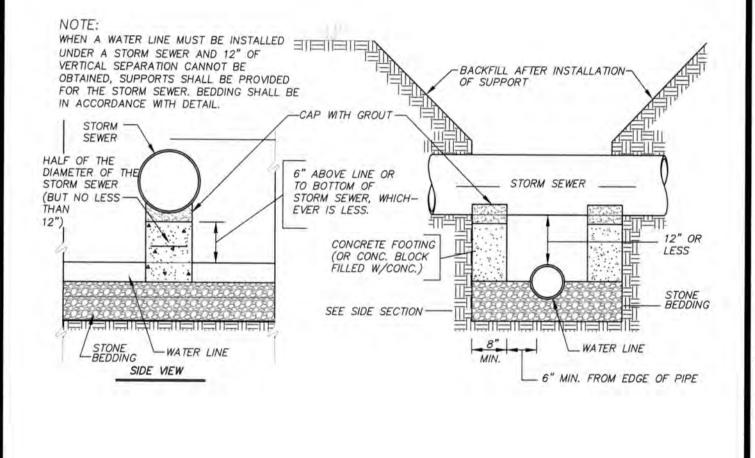






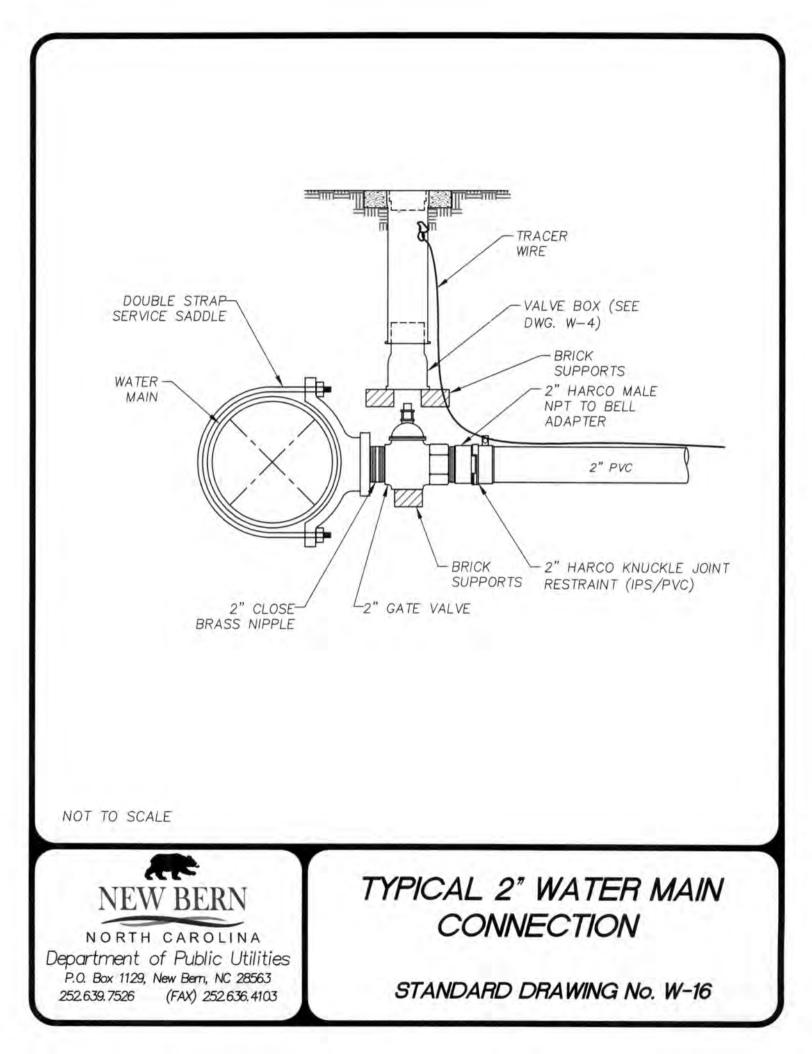


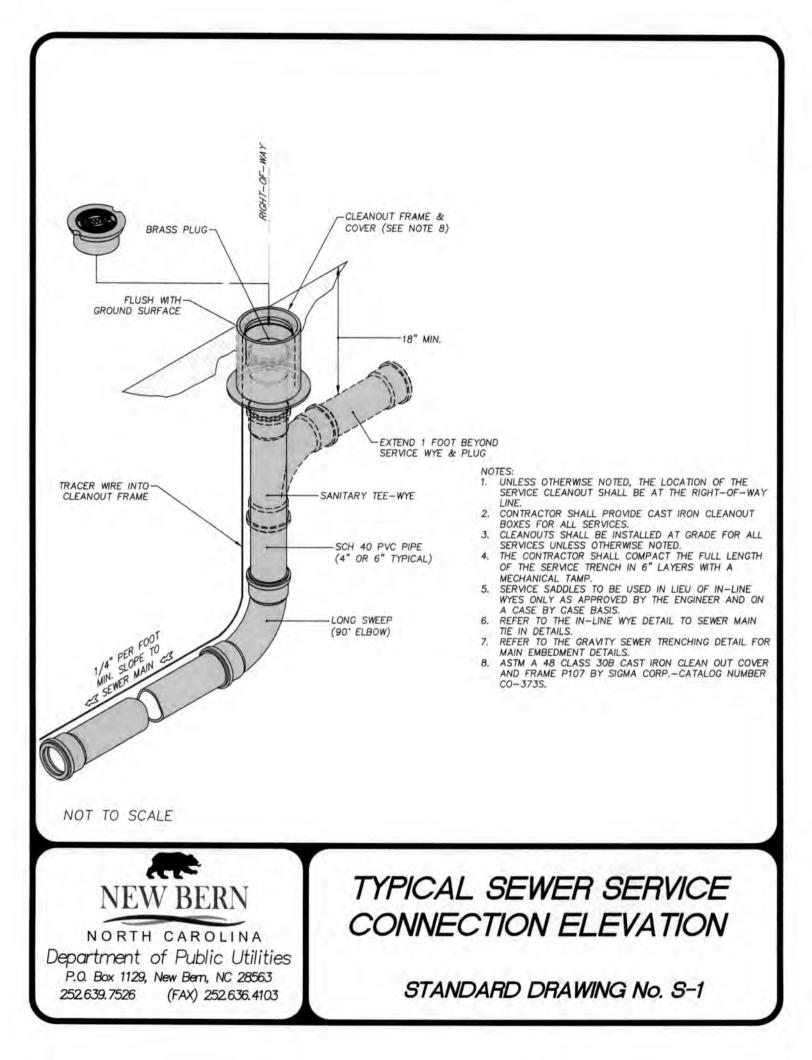


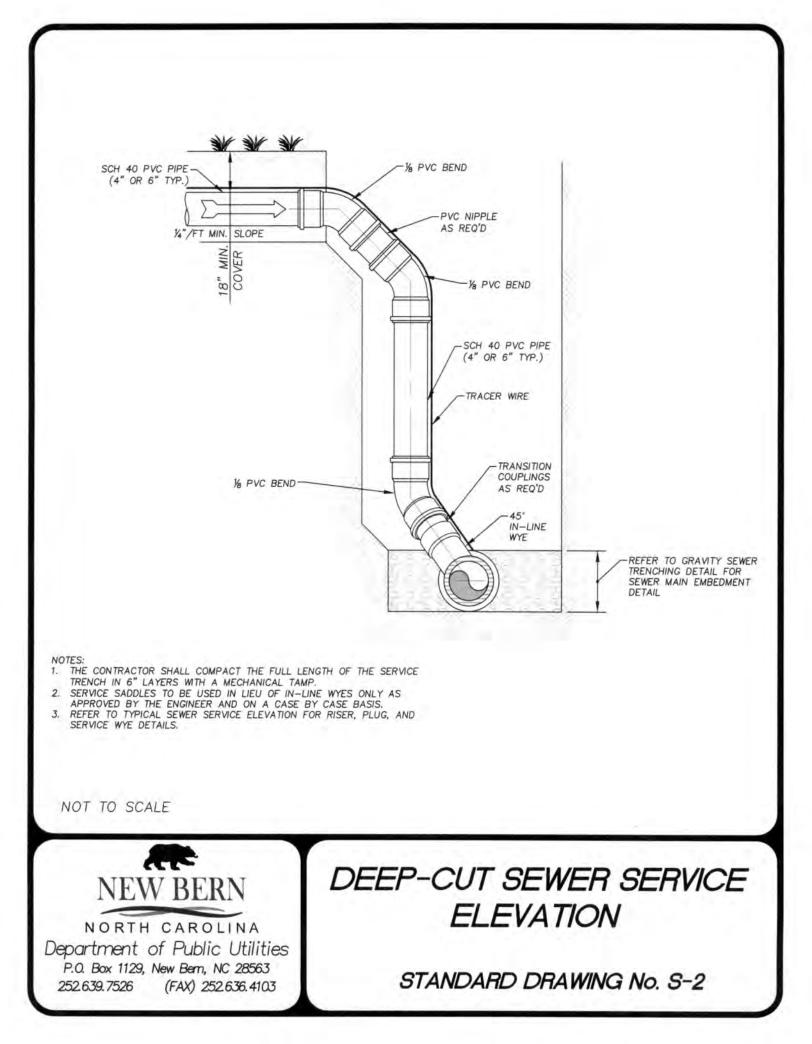


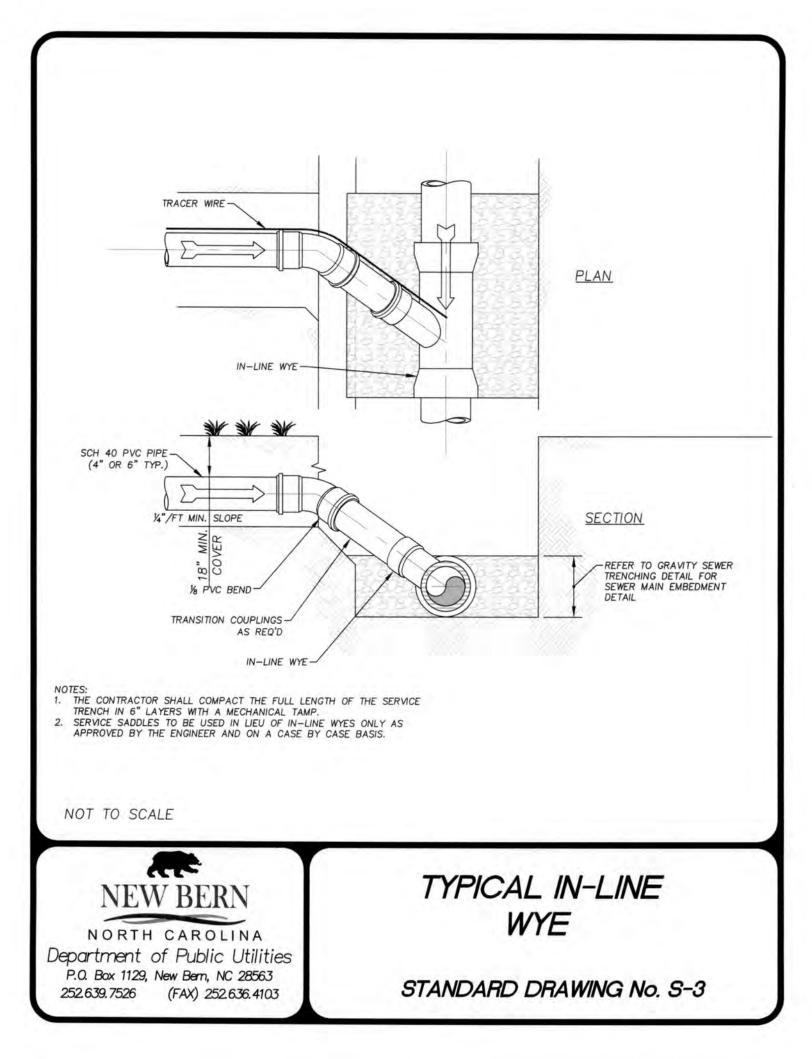
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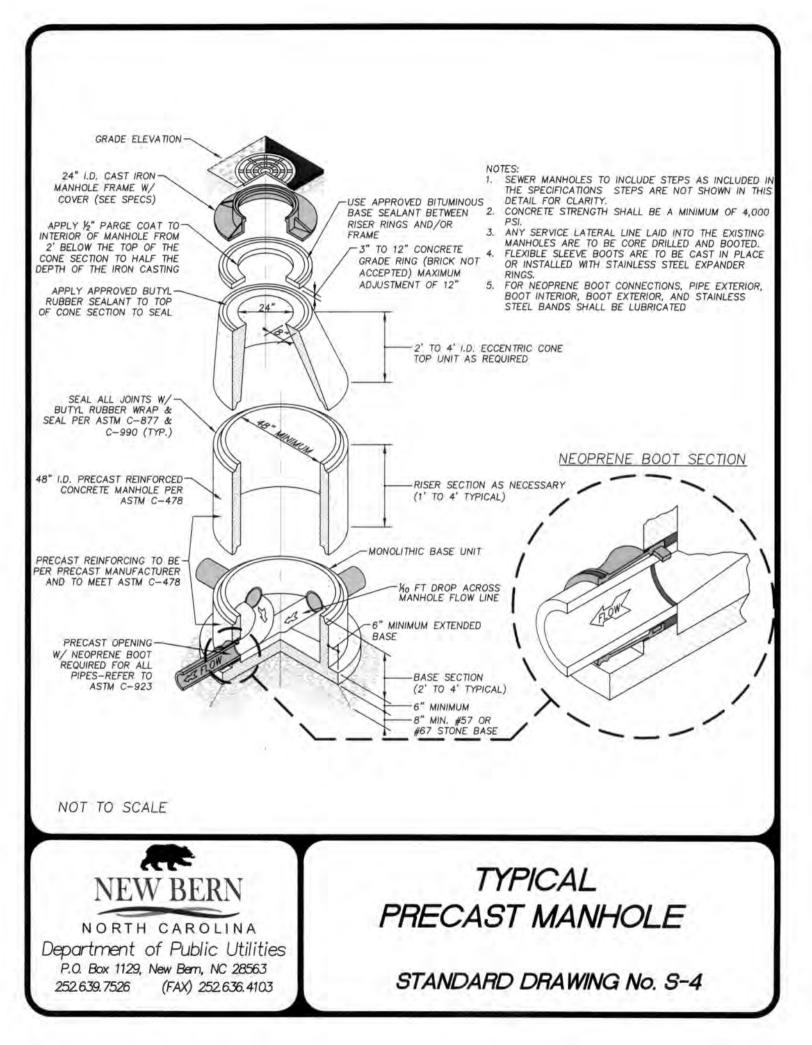


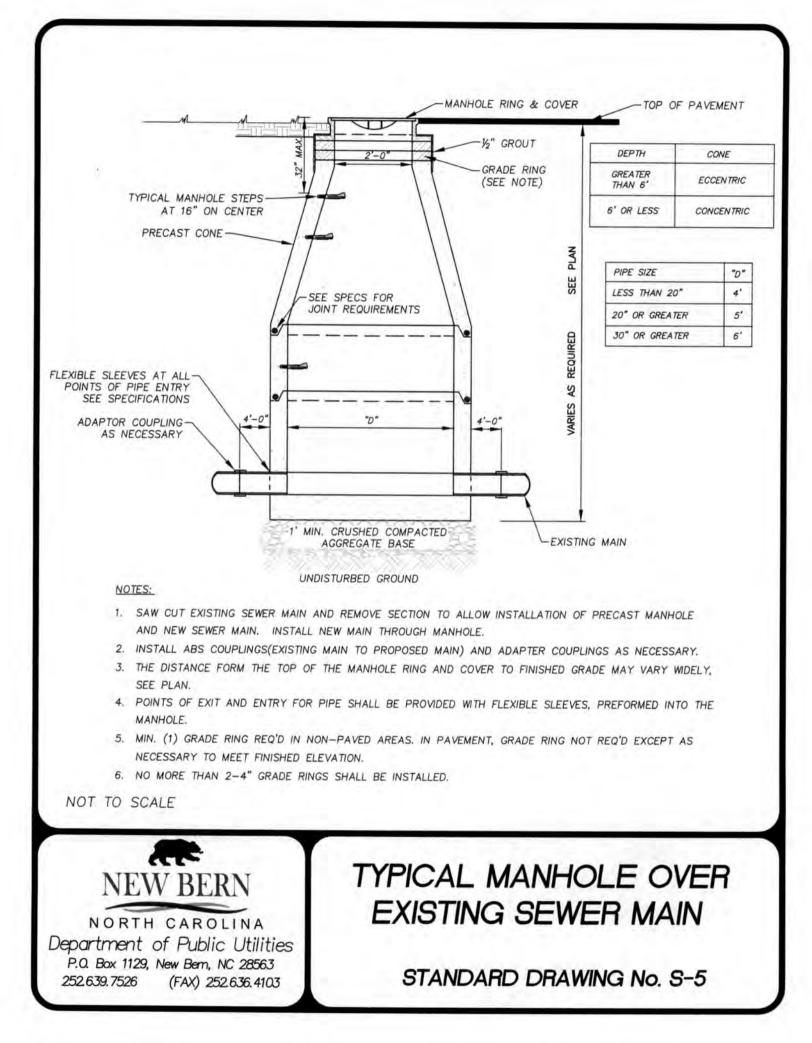


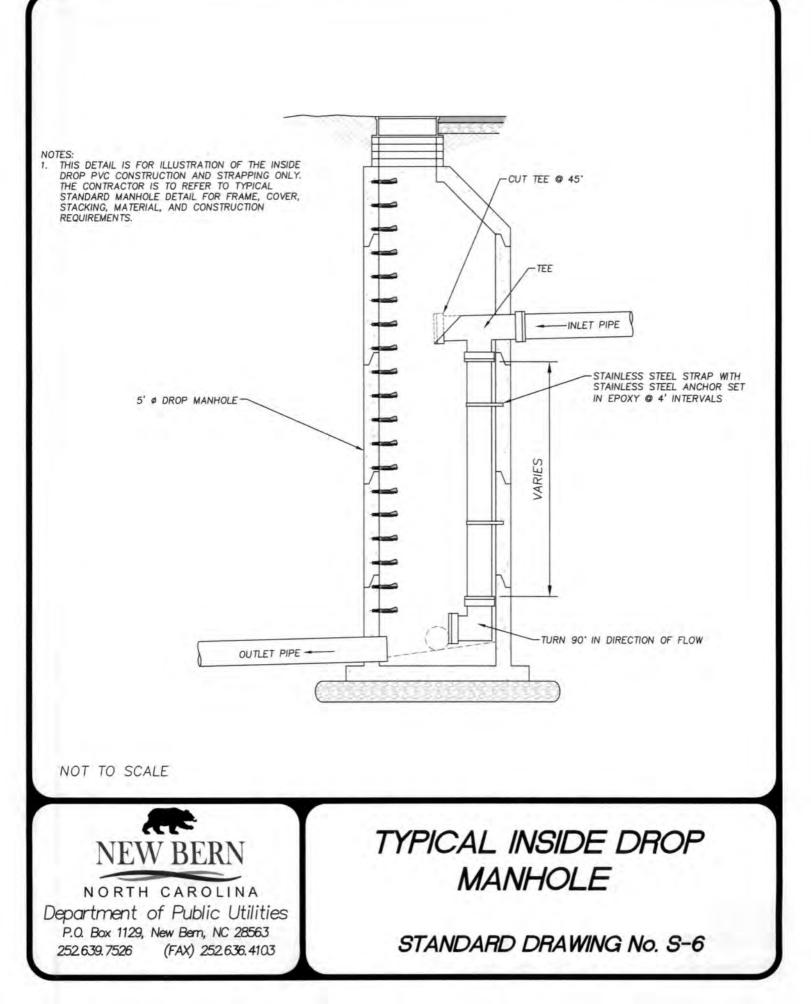


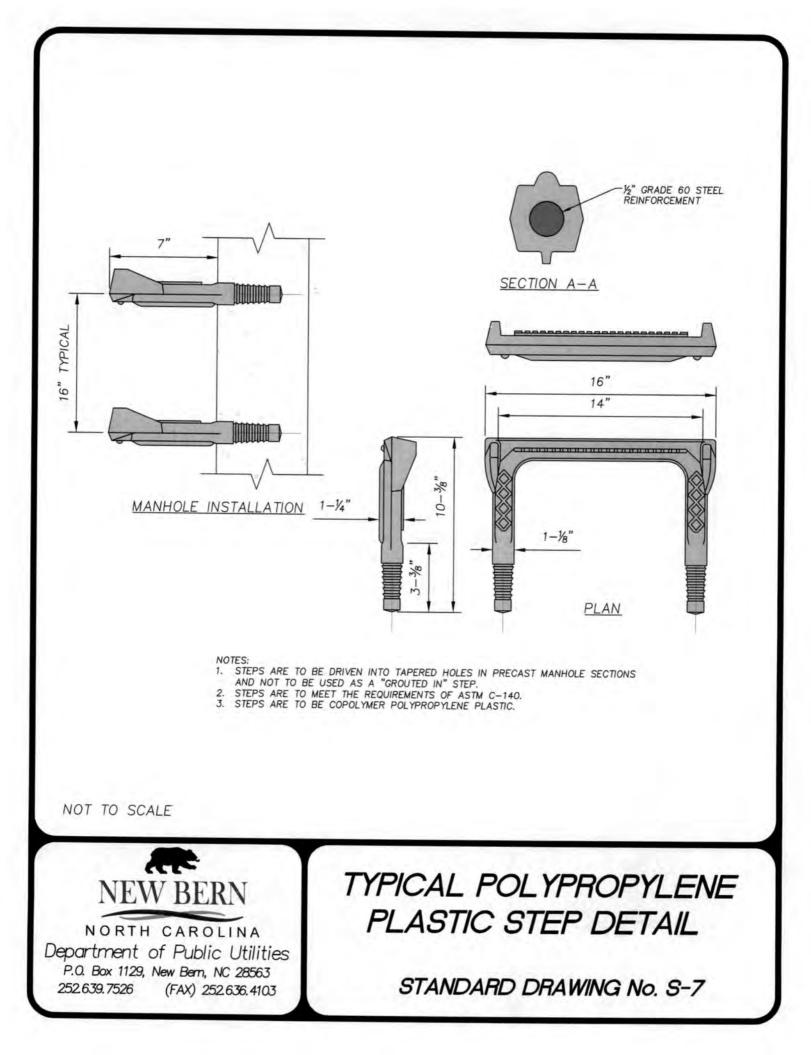


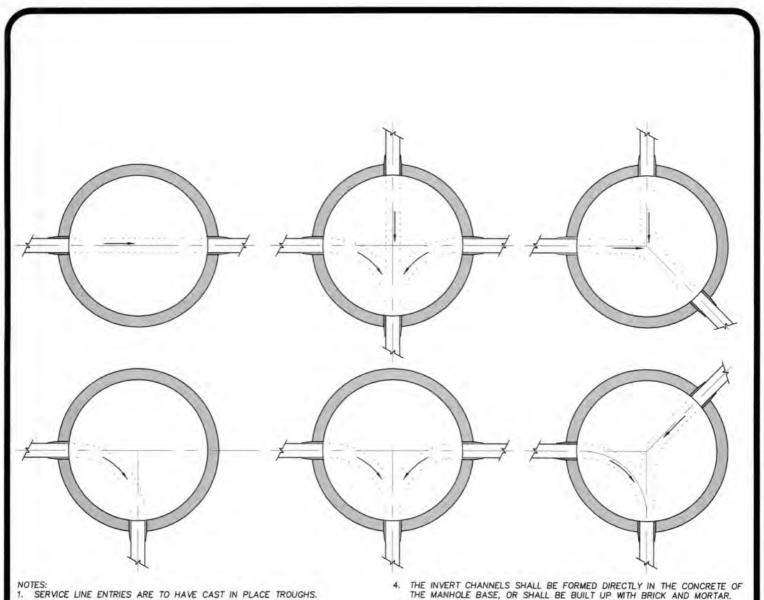












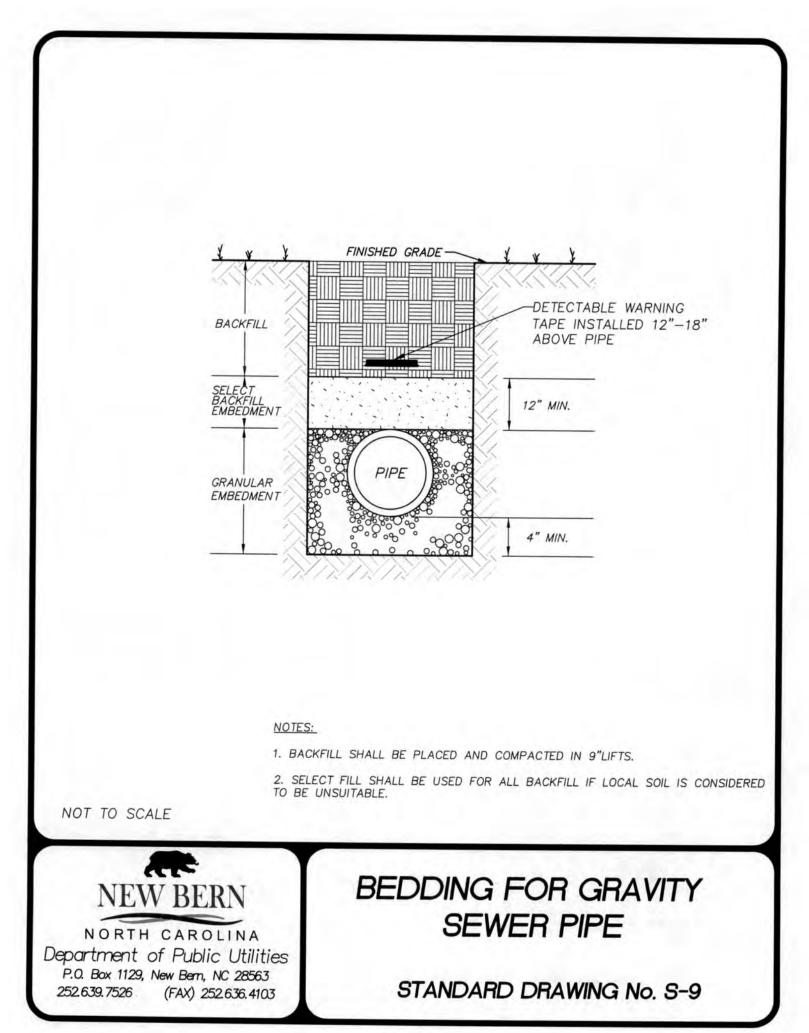
- SERVICE LINE ENTRIES ARE TO HAVE CAST IN PLACE TROUGHS. ACCURATELY SHAPE THE INVERTS TO A SMOOTH SEMI-CIRCLE CONFORMING TO THE INSIDE CONTOUR OF THE ADJACENT SEWER SECTIONS. 2.
- SECTIONS. ALL ENTERING BRANCHES AND CHANGES IN DIRECTIONS SHALL BE FORMED BY A CIRCULAR CURVE IN THE INVERT AS LARGE A RADIUS AS THE SIZE OF THE MANHOLE WILL PERMIT. CHANGES IN SIZE AND GRADE OF THE CHANNELS SHALL BE MADE GRADUALLY AND EVENLY.
- 3.
- 5
- THE INVERT CHANNELS SHALL BE FORMED DIRECTLY IN THE CONCRETE OF THE MANHOLE BASE, OR SHALL BE BUILT UP WITH BRICK AND MORTAR. MINIMUM CONCRETE STRENGTH SHALL BE 4,000 PSI. THE FLOOR OF THE MANHOLE OUTSIDE THE CHANNELS SHALL BE SMOOTH AND SHALL SLOPE TOWARD THE CHANNELS NOT LESS THAN 1 INCH PER FOOT NOR MORE THAN 2 INCHES PER FOOT. THE TOP OF THE CONCRETE PERIMETER SHELF SHALL BE NO LOWER THAN THE ELEVATION OF THE PIPE SPRING LINE AT THE MANHOLE WALL INTERIOR. 6
- 7. INTERIOR.

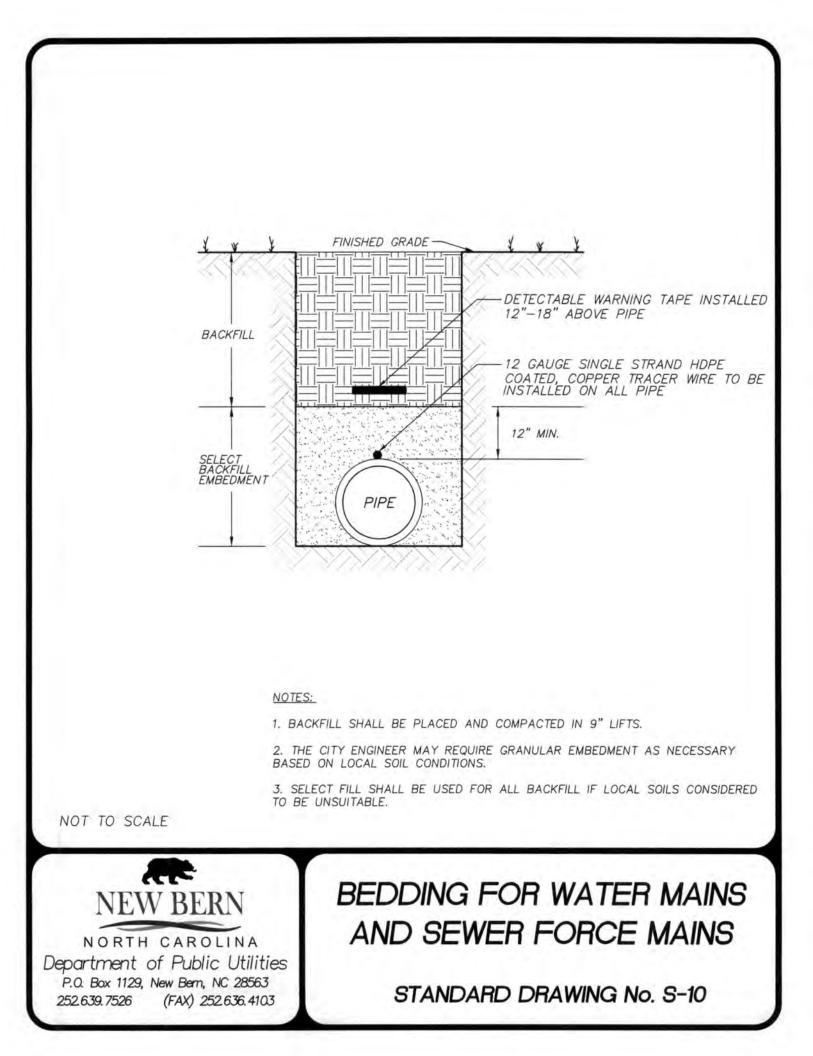
NOT TO SCALE

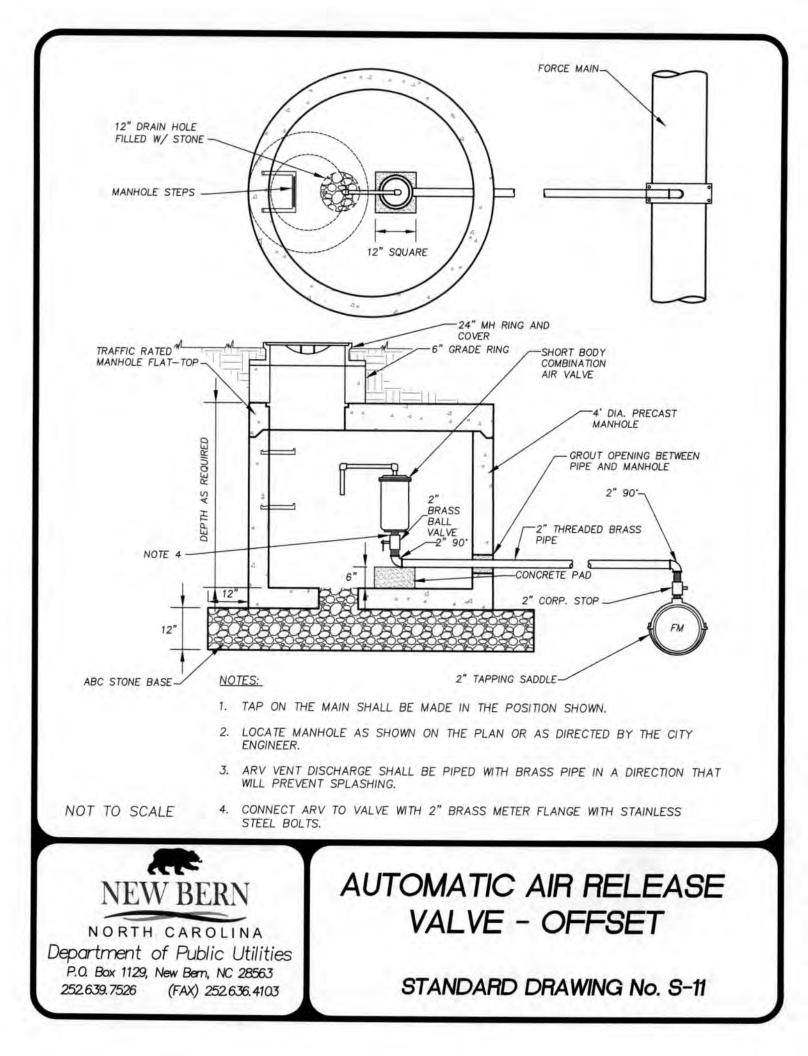


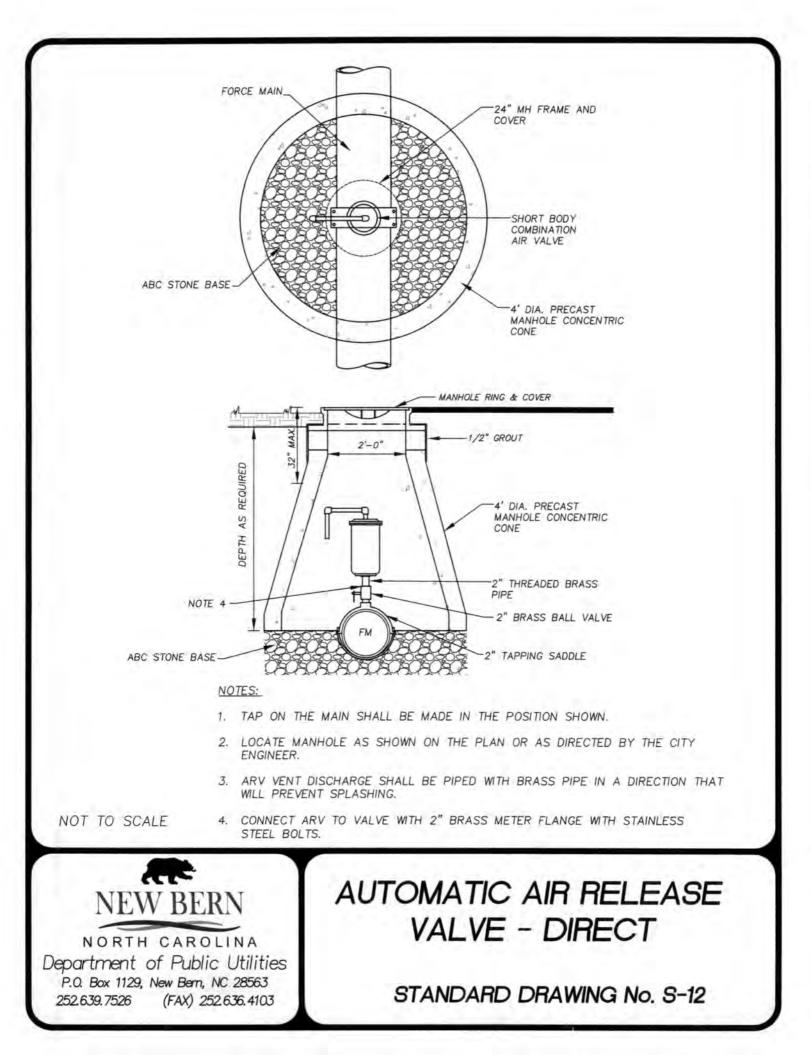
TYPICAL MANHOLE **INVERTS**

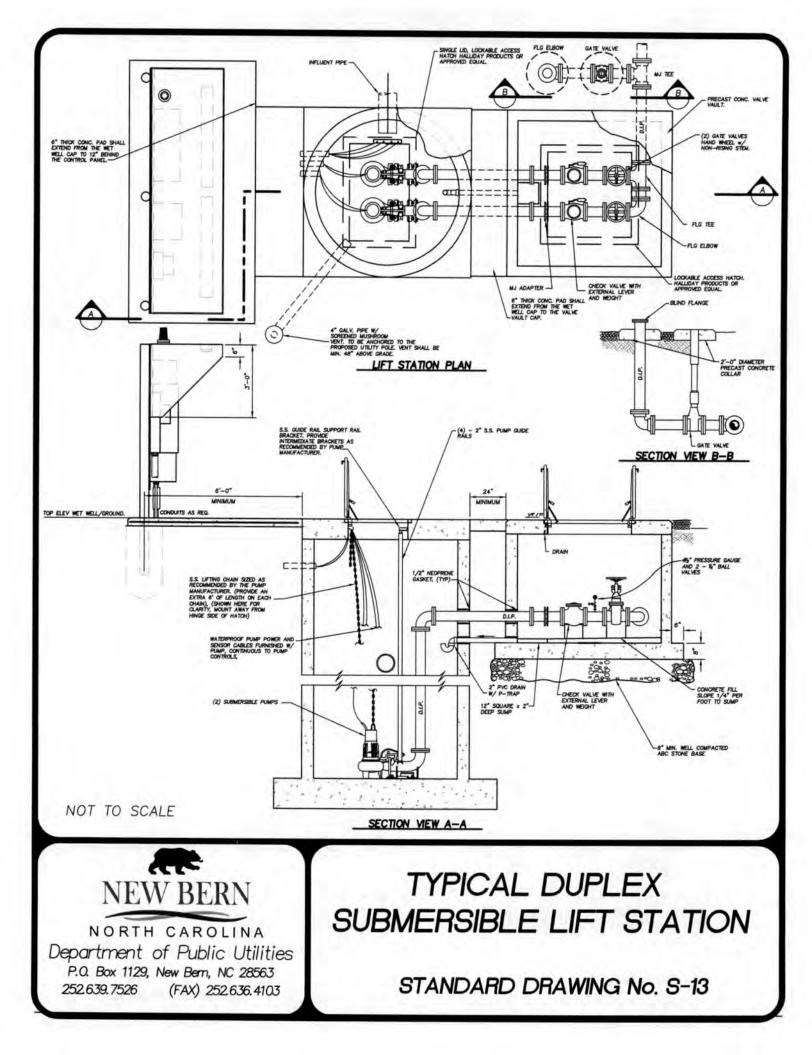
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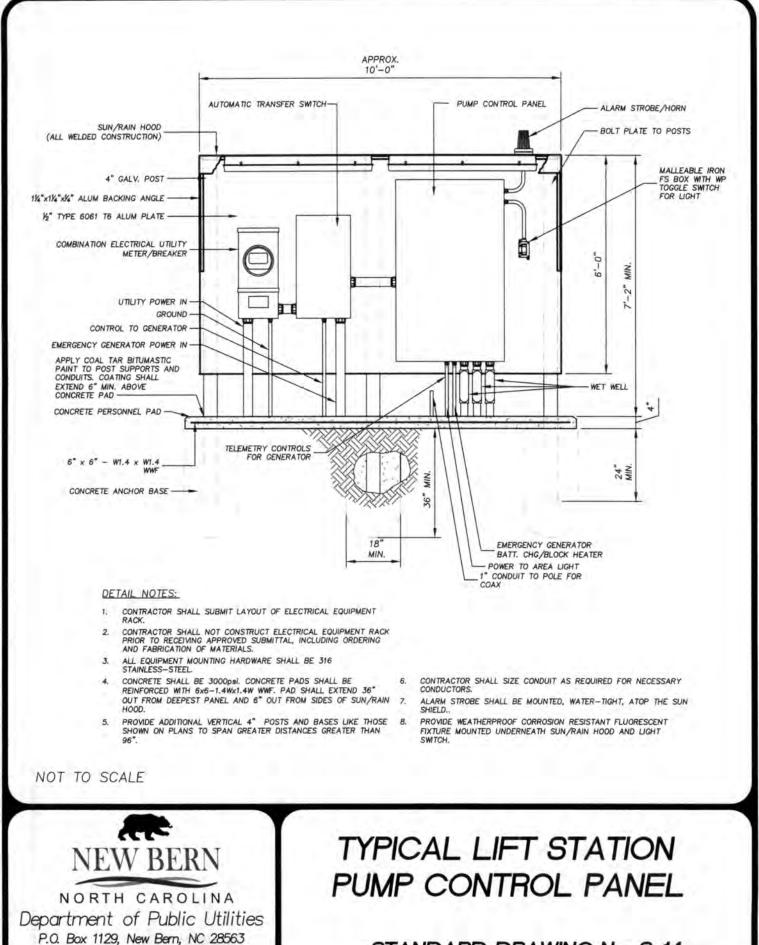








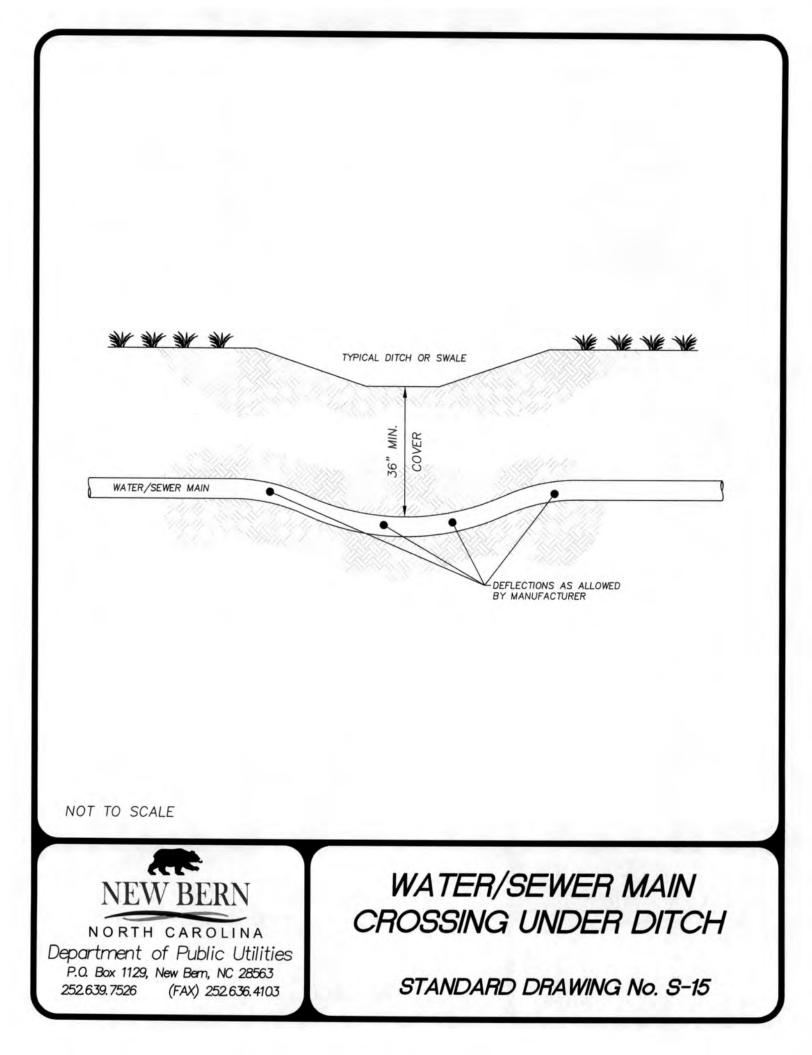


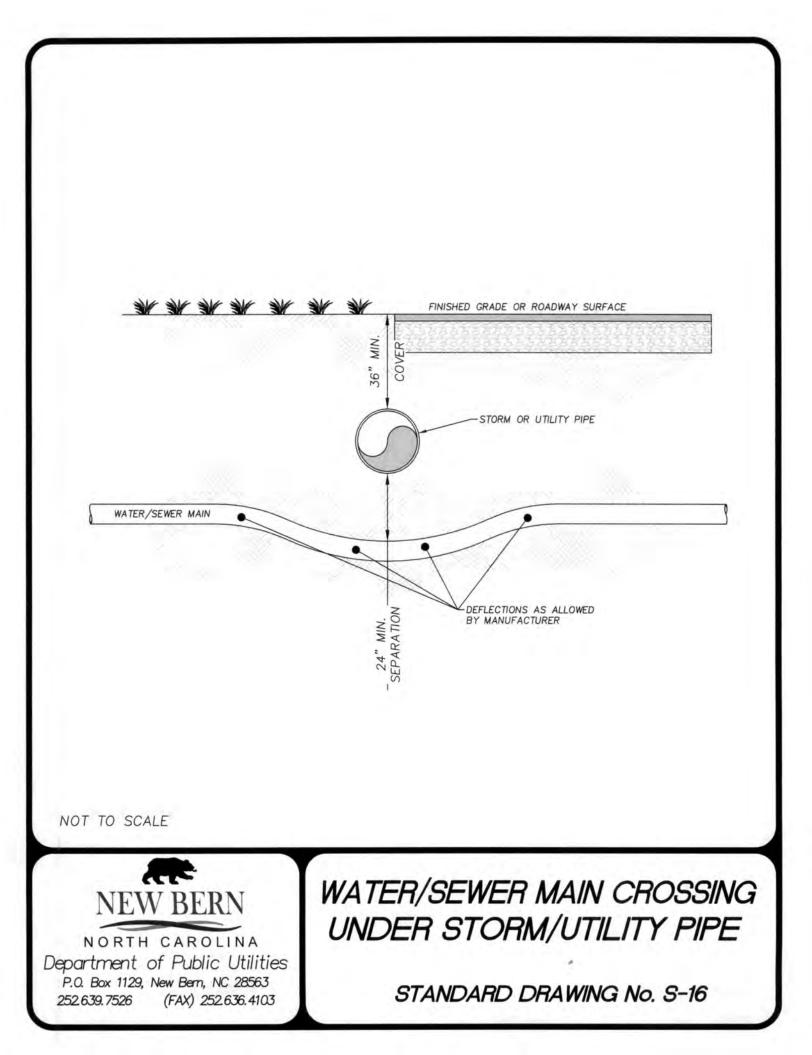


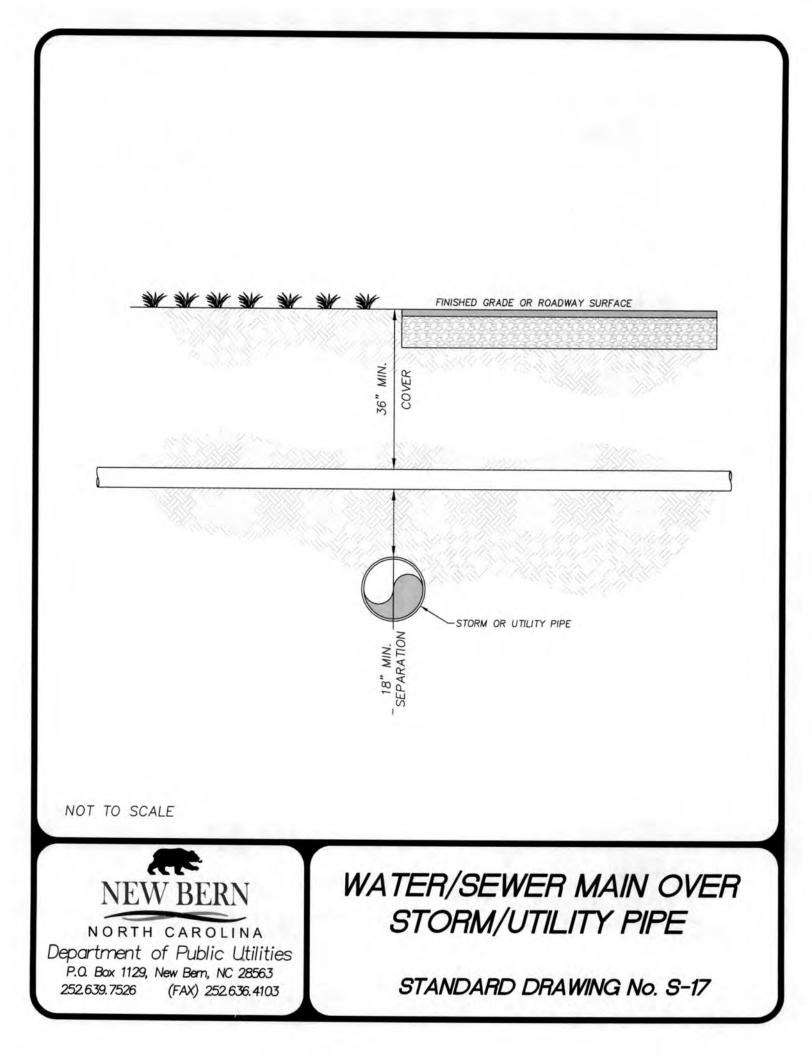
ew Bern, NC 28563 (FAX) 252.636.4103

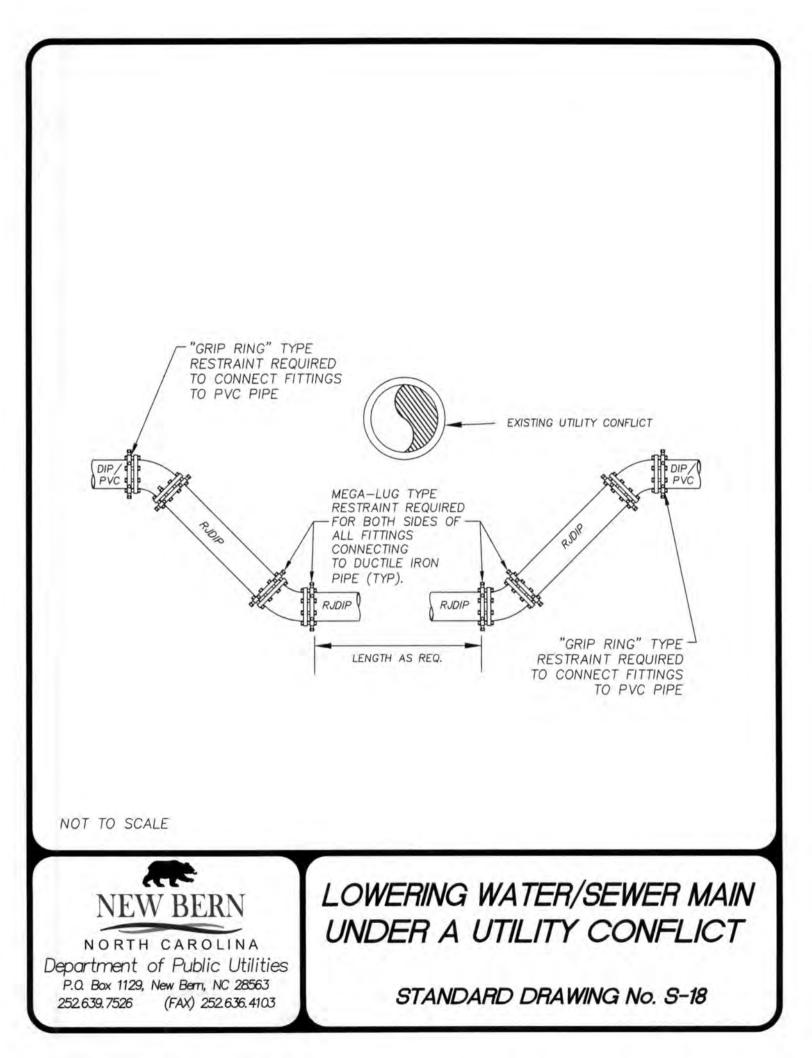
252,639,7526

STANDARD DRAWING No. S-14









PIPE RESTRAINT CHARTS

Pipe Size (inch)	Bend Angle	Pipeline Restraint Req. (feet)		
	11.25	2		
	22.5	5		
4"	30	6		
4	45	10		
	60	14		
	90	24		
	11.25	3		
	22.5	7		
6"	30	9		
0	45	14		
	60	19		
	90	33		
	11.25	4		
	22.5	9		
8"	30	11		
8	45	18		
	60	25		
	90	43		
	11.25	5		
	22.5	10		
10"	30	14		
10	45	21		
	60	30		
	90	52		
	11.25	6		
	22.5	12		
12"	30	16		
12	45	25		
	60	35		
	90	60		

H	orizontal	&	V	ertical	U) Bends

Vertical Down Bends Pipeline Restraint Req. Bend Pipe Size (inch) Angle (feet) 11.25 22.5 4" 11.25 22.5 6" 11.25 22.5 8" 11.25 22.5 10" 11.25 22.5 12"

Tees, Reducers, Caps

Fitting Type	Size (inch)	Pipeline Restraint Req. (feet)
	4	35
	6	52
Tee	8	70
	10	85
	12	101
	6x4	30
	8x6	32
	10x4	74
Reducer	10x6	58
Reducer	10x8	31
	12x4	93
	12x6	78
	12x10	31
	4	41
	6	59
Cap	8	76
	10	92
	12	107

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W3 - TYPICAL FIRE HYDRANT ASSEMBLY	S3 - TYPICAL IN-LINE WYE
W4 - TYPICAL VALVE AND VALVE BOX	S4 - TYPICAL PRECAST MANHOLE
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APPENDIX - A: PIPE RESTRAINT CHARTS

SECTION 1.0

INTRODUCTION

1.1 GENERAL

The purpose of this document is to provide a guideline for Property Owners, Developers and Engineers to assist with design of plans and specifications for projects which will become part of the City of New Bern water and/or sewer system. All proposed utility projects shall meet or comply with all applicable requirements set forth by the North Carolina Department of Environmental Quality (NCDEQ) and the standards contained herein. A project which shall require a variation from these requirements must be approved by the City of New Bern Department of Public Utilities prior to permitting.

1.2 CONTACT INFORMATION

All correspondence regarding proposed water & wastewater projects shall be directed to the City Engineer at the following address:

Mr. Jordan B. Hughes, P.E. City Engineer City of New Department of Public Utilities P.O. Box 1129,New Bern, N.C. 28563 Phone: (252) 639-7527 Fax: (252) 636-4103 Email: hughesj@newbern-nenewbernnc.gov.org

1.3 SYSTEM INFORMATION

1.3.1 Water System

Name:City of New BernOwner:City of New BernPWS I.D. No.:04-25-010WSMP No.:01-00769County:Craven

1.3.2 Sanitary Sewer System

The City of New Bern WWTF – Permit Number NC0025384 The City of New Bern Collection System – Permit Number WQCS00052

1.3.3 Low Pressure S.T.E.P. Sanitary Sewer System

The City of New Bern Township No. 7 Lagoon WWTF – Permit No. WQ0003765

SECTION 2.0

PLAN APPROVAL AND PERMIT SUBMITTAL

2.1 PLAN AND SPECIFICATION SUBMITTAL

Two (2) complete sets of plans, specifications, design calculations, and all other relative information shall be submitted for review to the City of New Bern Department of Public Utilities for any project which proposes to tap, extend, or otherwise alter the existing City of New Bern water or sanitary sewer systems. All modifications to the project plans and specifications which are requested after review by the City Engineer must be complete and shown on revised plans prior to the project approval.

2.2 PERMIT APPLICATIONS

2.2.1 <u>Commercial Sewer Use Permits (S.T.E.P. System Only)</u>

All businesses requesting to connect to the City of New Bern low pressure S.T.E.P sewer system will have to make application for and obtain a Commercial Sewer Use Permit. The permit application has to be submitted to and approved by the Department of Public Utilities prior to establishing a water and sewer account with the City. Permit applications can be picked-up at the City of New Bern Department of Public Utilities Water Resources Administration Office or downloaded from the City of New Bern webpage at www.newbern-nc.orgwww.newbernnc.gov.

The permit shall be non-transferable and shall be issued to the business owner not the property owner. Therefore, the permit will have to be renewed upon change of business owner or building occupancy use.

Businesses applying for a commercial sewer use permit for an existing building must have a daily designed sewer flow of less than 1,000 gallons per day or less than 120% of the average daily flow of the previous business, whichever is greater. The average daily flow of the previous business shall be based on actual water use records from the most recent 12 month period that the business was in operation. The daily designed sewer flow rate for the new business shall be based on the flow rate allocation criteria set forth in the most recent version of the City of New Bern Schedule of System Development fees and Connection fees.

Businesses applying for a new S.T.E.P system connection to serve a newly constructed building must meet the requirements of Section 4.4

2.2.2 State Water and Sewer System Extension Permits

Projects which will require an extension of the City of New Bern water system or sanitary sewer system shall be permitted through the appropriate State agency with the City of New Bern listed as the permit applicant. Once the proposed plans and specifications have been approved by the City of New Bern Department of Public Utilities, permit applications shall be executed by the City and returned to the responsible engineer for submittal to the appropriate State agency. The project engineer and/or developer shall be responsible for submitting all required fees and attachments that must accompany permit applications.

SECTION 3.0

DESIGN GUIDELINES FOR WATER & SEWER SYSTEM EXTENSIONS

3.1 GENERAL

At a minimum, all proposed water and sewer extensions shall be required to meet the design requirements contained in this sections as well as all requirements set forth by the NCDEQ. In any case where the City of New Bern standards and the NCDEQ are not the same, the more stringent of the two shall apply.

3.2 PROPOSED WATER & SEWER MAINS

3.2.1 Sizing of Water and Sewer Mains

All proposed water and sewer main extensions shall be sized according the latest requirements of NCDEQ and the standards set forth by the North Carolina Administrative Code. The City of New Bern reserves the right to increase the size of proposed mains as needed to accommodate future development within the general vicinity of the proposed project area as outlined in Section 74-74 of the Code of Ordinances of the City of New Bern.

3.2.2 Horizontal Location of Proposed Water & Sewer Mains

All proposed water and sewer mains shall be located within existing street rights-of-way or within a permanent utility easement. The minimum width of permanent utility easements for water mains and sewer force mains shall be ten feet (10'). The minimum width of permanent utility easements for gravity sewers shall be twenty feet (20'). All proposed water and sewer mains shall be located a minimum of ten feet (10') away from any existing or proposed permanent structure.

3.2.3 Vertical Location of Proposed Water & Sewer Mains

All proposed water and sewer mains shall be designed to provide at least three feet (3') of cover from the top of the pipe to the finished grade. At locations where this requirement cannot be met the main shall be constructed with ductile iron pipe.

Sewer force mains shall be designed where possible with uniform grade between low points and high points of the alignment. Air release valves shall be installed at all high points as described in section 3.6. Sewer force mains shall be installed to the designed grade to ensure that all high points are accounted for and air release valves are installed in the proper locations.

3.2.4 Separation of Water Mains and Sanitary Sewer Mains

Water mains shall be laid at least ten feet (10°) laterally from existing or proposed sewers, unless local conditions or barriers prevent a ten foot (10°) lateral separation in which case the following is required:

The water main shall be laid in a separate trench, with the elevation of the bottom of the water main at least eighteen inches (18") above the top of the sewer;

or

The water main shall be laid in the same trench as the sewer with the water main located at one side on a bench of undisturbed earth, and with the elevation of the bottom of the water main at least eighteen inches (18") above the top of the sewer.

3.2.5 Water and Sewer Main Crossings

A water main that crosses a sewer shall be laid a minimum vertical distance of 18 inches from the outside of the water main and the outside of the sewer, either above or below the sewer but, if practicable, the water main shall be located above the sewer. One full length of water pipe shall be located so that both joints will be as far from the sewer as possible.

3.2.5.1 Crossing a Water Main over a Sewer Main

Whenever it is necessary for a water main to cross over a sewer main, the water main shall be laid at such an elevation that the bottom of the water main is at least eighteen inches (18") above the top of the sewer. If location conditions or barriers prevent an eighteen inch (18") vertical separation then both the water main and the sewer main shall be constructed of ductile iron pipe and with joints that are equivalent to water main standards for a distance of ten feet (10') on each side of the point of crossing.

3.2.5.2 Crossing a Water Main under a Sewer Main

Whenever it is necessary for a water main to cross under a sewer main, both the water and sewer main shall be constructed of ductile iron pipe and with joints equivalent to water main standards for a distance of ten feet (10') on each side of the point of crossing.

3.2.6 Fire Flow Requirements for Water Mains

Fire Flow requirements for all proposed development shall be determined by the City of New Bern Fire Department (252) 639-2931.

3.2.7 Pressure Requirements for Water Mains

Water mains shall be designed to maintain a minimum residual pressure of twenty (20) psi at peak demand during fire flow. Peak Demand shall be determined as described in Title 15A, Subchapter 18C of the North Carolina Administrative Code.

3.2.8 Reaction Anchorage and Thrust Blocking

All exposed piping with mechanical couplings, push-on, mechanical joints, or similar joints subject to internal pressure shall be rodded or restrained with mechanical restraints (grip-rings, mega lugs, etc.) to preclude separation of joints. All mechanical joint tees, valves, all horizontal bends, vertical bends deflecting twenty two and one half (22 ½) degrees or more, and plugs which are installed in buried piping (subjected to internal hydrostatic heads in excess of thirty feet (30')) shall be provided with suitable reaction blocking and restrained with mechanical restraints (grip-rings, mega lugs, etc.) acceptable for preventing movement of the pipe caused by internal pressure. The pipeline shall be restrained on either side of the fitting as indicated in the Pipe Restraint Chart listed in **Appendix-A**. Concrete blocking shall extend from the fitting to solid undisturbed earth and shall be installed so that all joints are accessible for repair. The fittings shall be wrapped in plastic to protect the fitting, bolts, and nuts from being permanently set in concrete and facilitate access for repair.

3.2.9 Detectable Tape and Tracer Wire

Detectable warning tape shall be installed on all water and sewer main extensions. Tracer wire shall be installed on all water and sewer main extensions, and all water/sewer services. The color of the detectable tape shall meet the standards of the AWWA color code.

All tracer wire must be maintained as a single strand in order to be effective. Brakes, gaps or distortion shall be cause for the contractor to repair the wire to the proper working order. The tracer wire shall be brought to the surface and located in a standard meter box at the following locations:

- At all bends and changes in horizontal direction.
- At all valves the tracer wire shall run along the exterior of the valve box and through a notch cut in the top (see detail W4).
- At the ends of a directional bore.
- Any location where two sections of tracer wire need to be spliced together. No underground wire connections shall be permitted.
- On straight runs of pipe, at 500' intervals.

3.3 PROPOSED WATER & SEWER SERVICES

3.3.1 Location of Water & Sewer Services

All projects shall provide for individual water and sewer services to be installed at each lot or residential unit. Services shall be installed flush to finished grade along the limit of the street right-of-way and at the center of the parcel or lot to be served. Services shall not be located within sidewalks, driveways, or other paved areas which are subject to vehicular traffic. Service pipe or tubing shall be installed perpendicular to the main.

3.3.2 Water Service Sizing

Water meters shall be sized by the City of New Bern Department of Public Utilities based on water demand data provided by the Developer and/or Engineer.

3.3.3 Water Service Connections

Water services shall be designed with a corporation stop, an angle stop, polyethylene service tubing, and a meter box.

3.3.3.1 Corporation Stops

Taps shall be located at 10:00 or 2:00 o'clock with respect to the circumference of the pipe. Taps shall alternate from one side of the pipe to the other side, whenever possible, and be at least 12" apart. In the event two taps are made on the same side of the pipe in succession, they must be a minimum of 24" apart. <u>All Service service taps on PVC pipe shall be made using a double strap service saddle. Service taps on four inch (4") or larger ductile iron pipe may be installed by direct tapping of the main.</u>

3.3.3.2 Angle Stops

Angle stops shall be installed so as not to cause a bind on the pipe once the meter is installed. The angle meter stop shall be perfectly plumb, 3" to 5" from the back of the meter box, centered between the sides of the meter box, and 3" to 4" above the bottom of the meter box.

3.3.3.3 Service Tubing

The water service tubing shall be one continuous piece of pipe from the corporation stop to the angle meter stop, with no unions. Each water service line shall run perpendicular to the main and straight to the meter with no kinks and/or bends.

3.3.3.4 Meter Boxes

Water meter boxes shall be placed on, no less than four (4), common brick to prevent settling. Meter boxes shall have four inches (4") of

stone under the brick to aid in drainage.

3.3.4 Gravity Sewer Service Connection

Gravity sewer services shall be designed with a wye connection, a cleanout placed at the right-of-way and service piping. The minimum size of a gravity sewer service shall be four inches (4").

3.3.4.1 Wye Connections

Gravity sewer service line taps shall be located at 10:00 or 2:00 with respect to the circumference of the pipe. The sewer service line tap fitting shall be appropriate for the type of pipe being used.

3.3.4.2 Clean-outs

The sewer service line clean-outs shall be made using a long sweep wye on the sewer service line. A one foot (1') extension shall be placed on the through section of the wye with a cap glued in place. A single piece of sewer service line pipe shall be extended to grade from the wye, with a cap glued in place and contained within an approved clean-out box, which shall be set flush to finished grade. Residential developments with multiple lots shall leave the cleanouts stubbed up 3' to 4' above grade until the private sewer has been connected to the clean-out, at which point the clean-out shall be lowered to be flush with the finished grade. The final clean-out cap shall have a slotted top or inverted nut. No raised nut clean-out caps will be permitted. An approved clean-out box shall be provided for all right-of-way clean-outs.

3.3.4.3 Service Piping

The sewer service line shall be constructed with the longest piece of pipe available from the manufacturer and the least amount of fittings. Couplings shall not be allowed on the sewer service lines to join short pieces together.

3.4 PROPOSED FIRE HYDRANTS

3.4.1 Location of Fire Hydrants

Proposed fire hydrants shall be placed within the street right-of-way and where possible at street intersections. On curbed streets the hydrant shall be placed no closer than two feet (2') and no further than five feet (5') from the back of the curb. On streets without curbing the hydrant shall be placed

between the top of the ditch back slope and the right-of-way boundary. In no case will the hydrant be allowed to be placed in the ditch slopes. All hydrants shall be installed so that the pumper nozzle is perpendicular to the roadway and the centerline of the nozzle is a minimum of eighteen inches (18") and a maximum of twenty-four inches (24") above finished grade.

3.4.2 Spacing of Fire Hydrants

The spacing of proposed fire hydrants shall meet the following requirements:

Residential Areas:	Hydrants shall be spaced with a maximum of
	1000 feet between hydrants.
Commercial Areas:	Hydrants shall be spaced with a maximum of 400 feet between hydrants.
Industrial Areas:	Hydrants shall be spaced with a maximum of 200 feet between hydrants.

The spacing length shall be measured along vehicle access routes which will allow for proper hose placement.

3.4.3 Fire Hydrant Assembly

All proposed fire hydrant assemblies shall include a water main tee, a hydrant leg, a gate valve, a riser, and the hydrant. Hydrants shall be installed perpendicular to water mains. Hydrant elbow shall be tied through all fittings and valves to the hydrant tee with the use of stainless steel threaded rods.

3.5 PROPOSED GATE VALVES

Gate valves shall be provided at all intersection of proposed water and sewer force mains. At each intersection a valve shall be provided for all but one of the branches (i.e. two (2) valves at a tee and three (3) valves at a cross).

3.6 PROPOSED AIR RELEASE VALVES

3.6.1 Location of Air Release Valves

Air release valves shall be located at all high points along pressure mains where the distance between the high point and the low point in the pressure main exceeds ten feet (10') in elevation. The City of New Bern Department of Public Utilities may require additional air release valves to be provided at other locations where it is determined that the possibility exists for the accumulation of excess air in the main.

3.6.2 Air Release Valve Assembly

All air release valves other than temporary blow-offs shall be automatic in type. The proposed ARV manholes shall be installed so that the manhole cover is flush with the existing grade and they shall not be installed in the centerline of any existing ditch or swale. If needed, these manholes shall be installed to back of the existing ditch and the ARV will be piped to the force main with the appropriate sized brass pipe.

3.7 PROPOSED BLOW-OFFS

3.7.1 Location of Blow-Offs

Manual blow-off assemblies shall be provided at dead-ends of all pressure mains.

3.7.2 Six Inch (6") and Larger Water Mains

At dead-end locations on all water mains six inches (6") in diameter and larger a standard fire hydrant shall be provided as a blow-off assembly.

3.7.3 Four Inch (4") and Smaller Water Mains

At dead-end locations on all water mains four inches (4") in diameter and smaller an end-of-line blow-off assembly shall be provided (See Detail W9)

3.7.4 Sewer Force Mains

At dead-end locations on all sewer force mains an end-of-line blow-off assembly shall be provided. in a meter box. (See Detail W9)

3.8 PROPOSED BACKFLOW PREVENTION ASSEMBILES

Backflow prevention assemblies shall be required for all applications if which the potential exists for the public water supply to be contaminated by the backflow from a private water system. The degree of protection required shall depend on the severity and type of possible contaminant. Protection requirements and device locations may vary by project and will be reviewed on an individual basis by the City of New Bern Department of Public Utilities.

3.9 PROPOSED SANITRY SEWER MANHOLES

3.9.1 Location of Proposed Manholes

All proposed gravity sanitary sewer mains shall be designed so that a manhole is installed at all locations where changes in horizontal alignment, vertical grade, or pipe diameter are required. The maximum distance between manholes as measured along the sewer main shall be 425 feet.

3.9.2 Manholes in Paved Areas

Where practical design allows, all manholes located within paved areas shall be set along the center line of the road and out of designated parking spaces.

3.9.3 Manhole StructureBase

3.9.3.1 Base

Installation of all<u>All</u> precast concrete manholes <u>shall be placed on a stable</u> stone base. The depth of the stone base may vary depending on site soil conditions and actual depth of stone needed will be field determined by a representative for the City of New Bern, but shall consist of a minimum of 6 inches of stone leveling course beneath the base section. The manhole base shall be provided with a minimum of a 6" extended base section.

3.9.4 Drop Manholes

Manholes with sewer pipes entering $2\frac{1}{2}$ feet, or more, above the bottom shall have an inside drop manhole connections installed. All drop manholes shall have a minimum inside diameter of 5 feet.

3.9.3.2 Sections

All manholes shall be constructed using precast concrete sections conforming to ASTM C-478.

3.9.3.3 Steps

Manhole steps shall be constructed of 0.5" diameter, grade 60 steel bars. The steps shall be have a plastic coating and meet the requirements of ASTM C-140. (See Detail S7)

3.9.3.4 Ring and Cover

Manhole rings and covers shall be constructed of Class 30 cast iron conforming to ASTM A48, and shall be traffic bearing. The words "SANITARY SEWER" shall be cast in top of the cover. Rings and covers shall be manufactured by Capital Foundry, East Jordan Iron Works, Charlotte Pipe and Foundry, or approved equal.

3.9.3.5 Flexible Pipe Sleeve

Pipe sleeves with stainless steel clamps conforming to ASTM C-923 shall be used for pipe to manhole connections. The pipe sleeve shall

be design and constructed to provide a flexible watertight seal.

3.9.3.6 Inverts

Inverts shall be precast into the bottom section of the manhole.

3.9.3.7 Grout

All perforations pick holes, seams, transitions, joints and leaks shall be sealed with hydraulic cement or approved equal.

3.9.3.8 Drop Manholes

Manholes with sewer pipes entering 2 ½ feet, or more, above the bottom shall have an inside drop manhole connections installed. All drop manholes shall have a minimum inside diameter of 5 feet.

3.10 PROPOSED PUMP STATIONS

3.10.1 Option to Use Pump Stations

In the design of all proposed sanitary sewer system extensions every effort and consideration shall be made to use conventional gravity sewer for the system extension. The use of pump stations and force mains shall only be permitted when the proposed extension can not be properly connected to the existing gravity system due to local conditions or when existing gravity sewer is unavailable.

3.10.2 Sizing of Proposed Pump Stations

Proposed pump stations shall be sized as required by the NCDEQ guidelines for the proposed property usage. The City of New Bern reserves the right to increase the size of proposed pump stations as needed to accommodate anticipated future development within the general vicinity of the proposed project area as outlined in Section 74-74 of the Code of Ordinances of the City of New Bern.

3.10.3 Pump Station Site

All proposed pump stations shall be placed on a site (50'x 50' min.) within the project area with a ground elevation above that of the flood plain. The site shall be graded to direct drainage away from the wet well structure. The site shall be accessible by an access road. At a minimum, the access road shall be twelve foot (12') wide and constructed of six inches (6'') of compacted ABC stone. The site shall be enclosed by a vinyl coated, galvanized chain-link fence with a lockable gate. Compacted stone shall be placed within the entire fenced area. A concrete pad shall be poured to create a level surface between the wet well access and the control panel. An elevated area light shall be installed at the site, as well as a frost proof yard hydrant.

3.10.4 Pump Station Structure

3.10.4.1 Wet Well

All proposed wet well structures shall be constructed of precast concrete sections with the diameter as required by design and in no case less than six feet (6'). The top section shall be flat with the access openings cast in. Access openings and covers shall be sized and placed to allow for pump removal. A mushroom style vent shall also be cast in the top section of the wet well. Where applicable, the vent shall be piped to the area light pole and extended 36" above grade. τ

3.10.4.2 Pumps

All proposed pump stations shall use a duplex pump system. Pumps shall be submersible in type and of equal size and pumping capacity. Pumps shall be mounted on a guide rails and have a chain lifting system. Pumps shall be sized per the recommendations of the pump manufacturer for the designed flow.

3.10.4.3 Check Valves

Check valves shall be installed on each of the pump discharge lines. Check valves shall be the spring and leverlever and weight type and installed in precast concrete valve vault. The valve vault shall be equipped with a lockable access cover and a sump drain, which shall be piped to return back into the wet well.

3.10.4.4 Control and Electrical Components Rack

All electrical components and pump controls shall be located on a single rack within the pump station site. The rack and rack supports shall be constructed of stainless steel or aluminum and installed on a concrete slab. The rack shall have a minimum thickness of ¹/₄ inch. A sun shield shall be provided across the entire length of the rack.

3.10.4.5 Pump Station Piping

All piping in the wet well, check valve vault, and additional piping within the pump station site shall be <u>401 lined</u> ductile iron. All piping within the pump station site shall have the same diameter.

3.10.4.6 Alternative Power Source

The alternative power source for all proposed pump stations shall be a generator or an independently powered back-up pumping system.

For pump stations with a designed average daily flow of less than 15,000 gallons per day, the pump station shall be equipped with a manual emergency transfer switch and hook-up for the generator.

For pump stations with a designed average daily flow of 15,000 gallons per day or more, the pump station shall be equipped with a permanently mounted generator and an automatic emergency transfer switch capable of running both pumps under full load or an independently powered back-up pumping system with a pumping rate equal to both of the primary pumps. For either application, a concrete pad shall be provided along with a fuel tank capable of handling enough fuel to operate for 24 hours.

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SECTION 4.0

GUIDELINES FOR USE OF THE TOWNSHIP NO. 7 LOW PRESSURE S.T.E.P. SEWER SYSTEM

4.1 <u>GENERAL</u>

This section identifies special requirements which are applicable to all customers located within the City of New Bern S.T.E.P. System Coverage Area. The boundaries of the S.T.E.P. System Coverage Area are illustrated in Figure 4.1 at the end of this Section.

Existing S.T.E.P. System users that are not within the boundaries of the S.T.E.P system coverage area will be required to connect to the City's Conventional Sewer System for any new development or substantial redevelopment. "Substantial Redevelopment" will include development activities on a parcel in which the total cost (cumulative over 5 year period) of the proposed improvements to the existing structures exceeds 50% of the assessed, pre-construction value of the structures.

4.2 GENERAL REQUIREMENTS FOR S.T.E.P. SYSYEM USE

- 4.2.1 The City of New Bern will only provide (1) S.T.E.P. service per building lot. To be considered eligible for connection to the S.T.E.P. sewer system, a building lot shall meet one of the following conditions:
 - A. For parcels platted prior to July 1, 2014: The parcel shall be located in an area currently served by the S.T.E.P. system and the lot must front a road right-of-way or utility easement where a S.T.E.P. system main currently exist.

B. For parcels which are subdivided after July 1, 2014: The parcel shall be a minimum of 10,000 square feet and have at least 60 feet of frontage along a road right-of-way or utility easement where a S.T.E.P. system main currently exist.

New permits for the extension of S.T.E.P. system mains shall be prohibited.

- 4.2.2 The City of New Bern Department of Public Utilities will have final determination on service availability and shall have the right to refuse service if the existing infrastructure in a particular area cannot handle additional loading.
- 4.2.3 To determine if a lot will be eligible for connection to the S.T.E.P. sewer system, the property owner shall contact the City of New Bern Customer Service Representative at (252) 639-7596. No lot will be provided service without a Sewer Availability letter issued by the City of New Bern Department of Public Utilities.
- 4.2.4 The required System Development Fees and Connection fees for S.T.E.P. system users will be based on the schedule of fees as set forth by the City of New Bern Board of Aldermen.
- 4.2.5 Once S.T.E.P. system service is established at a property, the property owner shall be responsible for repairing or replacing the S.T.E.P. tank, at his/her own expense when notified in writing by the City of New Bern that tank repairs, tank replacement, or the removal of solids is necessary.

4.3 REQUIREMENTS FOR RESIDENTIAL INSTALLATION AND USE

- 4.3.1 Only one residence per eligible building lot will be allowed to connect to the S.T.E.P. system. However, duplexes and other multi-family units will be allowed by meeting the following requirements:
 - 4.3.1.1 Each unit shall be on a separate lot as recorded at the Craven County Register of Deeds.
 - 4.3.1.2 Each unit shall pay the applicable System Development fees and Connection fees based on the schedule of fees as set forth by the City of New Bern Board of Aldermen
 - 4.3.1.3 Each unit shall be responsible for installation of the electrical service and S.T.E.P. tank as outlined in Sections 4.3.4 and 4.3.5.
 - 4.3.1.4 <u>A common onsite S.T.E.P.</u> System will also be permitted for multifamily buildings provided that the onsite tank is sized by a N.C. <u>Professional Engineer</u>, the electrical service is provided as outlined in Section 4.4.6 and that the electrical service for the onsite S.T.E.P.

system be a common building service, separate from any of the unit services.

- 4.3.2 For residential properties wanting to connect to the S.T.E.P. system, the property owner shall be responsible for obtaining a Sewer Availability letter, paying the required System Development fees and Connection fees, providing the required electrical service, and installing the S.T.E.P. tank.
- 4.3.3 After the City Engineer has determined sewer service is available and issued the property owner a sewer availability letter, the applicable System Development fees and Connection fees can be paid during normal business hours at the City of New Bern Customer Service Office located at 606 Fort Totten Drive.
- 4.3.4 The property owner shall install (2) twenty amp three wire electrical circuits stubbed out from the residence as described below:(Also as approved by Craven County Building Inspections Department).
 - 4.3.4.1 The power supply wiring should be installed within 20 feet of the discharge end of the S.T.E.P. tank. The control panel location should be visible from the road.
 - 4.3.4.2 Two (2) twenty amp circuits on separate circuit breakers are required. One circuit is required for the pump and the other for the control panel.
 - 4.3.4.3 The control panel will be mounted by the City as part of the pump installation.
 - 4.3.4.4 Note that special provisions may be necessary for installations below the flood plain elevation of 10 feet above mean sea level. Any exceptions must meet the latest applicable National Electric Code
- 4.3.5 The S.T.E.P. tank to be installed by the property owner shall be a 1,300 gallon vacuum tested precast concrete septic tank/pump tank combination. A concrete riser ring shall be provided if needed to adjust ring and cover to final grade. A watertight manhole ring and cover shall be provided for access to the pump. The tank shall be manufactured by Futrells Precast, Inc. of Deep Run, N.C. (252-568-3481) or The Stallings Company, Inc. of Greenville, N.C. (252-756-0267). The tank installer will need to contact the City of New Bern at (252) 639-7597 to witness the installation and vacuum testing of the S.T.E.P. tank at the time of installation.
- 4.3.6 Once the tank and electrical service have been installed, and the System Development fees and Connection fees are paid, the City of New Bern will schedule the installation of the pump components and the connection of the sewer service. The actual installation time will depend on the City's current work load

4.4 REQUIREMENTS FOR COMMERCIAL INSTALLATION AND USE

- 4.4.1 For commercial developments wanting to connect to the S.T.E.P. system, the property owner shall be responsible for obtaining a Sewer Availability letter, a Commercial Sewer Permit, paying the applicable System Development fees and Connection fees, providing the required electrical service, and installing the S.T.E.P. tank.
- 4.4.2 To be eligible for connection to the S.T.E.P. system, a commercial development must meet the requirements outlined in Section 4.2.1 and the proposed development shall have an average daily designed flow of less than 1,000 gallons per day based on the flow rate allocation criteria set forth in the most recent version of the City of New Bern Schedule of System Development fees and Connection fees.
- 4.4.3 After the City Engineer has determined sewer service is available and issued the property owner a sewer availability letter, the applicable System Development fees and Connection fees can be paid during normal business hours at the City of New Bern Customer Service Office located at 606 Fort Totten Drive.
- 4.4.4 Occupants of commercial buildings shall obtain a Commercial Sewer Permit prior to occupying a commercial building which is connected to the S.T.E.P. System. To obtain a Commercial Sewer Use Permit, the building occupant shall contact the City of New Bern Customer Service Representative at (252) 639-7596. All occupant use of commercial buildings connected to the S.T.E.P. System must meet the requirements of Sections 4.4.2.
- 4.4.5 If the existing onsite S.T.E.P tank and electrical service for an existing building does not conform to the requirements of Section 4.4.5, Section, 4.4.6 and Section 4.4.7, then these components will be required to be brought into compliance as part of issuing a new Commercial Sewer Use Permit.
- 4.4.6 The property owner shall install (1) Single pole, 20 amp circuit and (1) double pole, 40 amp circuit for the electrical supply to the pumps and control panel as described below:(Also as approved by Craven County Building Inspections Department).
 - 4.4.6.1 The power supply wiring should be installed within 20 feet of the discharge end of the S.T.E.P. tank. The control panel location should be visible from the road.
 - 4.4.6.2 Two circuits on separate circuit breakers are required. One circuit is required for the pumps and the other for the control panel.
 - 4.4.6.3 The control panel will be mounted by the City as part of the pump installation.

- 4.4.6.4 Note that special provisions may be necessary for installations below the flood plain elevation of 10 feet above mean sea level. Any exceptions must meet the latest applicable National Electric Code
- 4.4.7 For proposed commercial developments with an average daily designed flow of <u>less</u> than 400 gallons per day, the developer shall install the onsite S.T.E.P. tank outlined in Section 4.3.5.
- 4.4.8 For proposed commercial developments with an average daily designed flow of more than 400 gallons per day and for all multiple occupant developments, the developer shall have the onsite S.T.E.P. tank sized by a N.C. professional engineer. The engineer shall certify that the designed onsite S.T.E.P tank has adequate septic and storage capacity to be used in conjunction with the City's standard S.T.E.P. system pumps.

SECTION 5.0

MATERIAL SPECIFICATIONS FOR WATER & SEWER EXTENSIONS

5.1 PIPE FOR GRAVITY SEWER MAINS

5.1.1 PVC Pipe

All Polyvinyl Chloride (PVC) pipe used in the construction of gravity sewer main extensions shall meet the following standards:

Pipe: Pipe shall meet the requirements of ASTM D3034

Dimensions: Standard Dimension Ratio (SDR) 35

- Material: Pipe shall be constructed of PVC conforming to ASTM D1784, Minimum cell classification of 12454B.
- Joints: Joints shall be push-on type with elastomeric gaskets conforming to ASTM F477
- Fittings: PVC fittings shall conform to ASTM D3034, 7.4
- 5.1.2 Ductile Iron Pipe

All Ductile Iron Pipe (DIP) used in the construction of gravity sewer main extensions shall meet the following standards:

Pipe: Class 50 Ductile iron conforming to ANSI/AWWA A21.51/C-151

Fittings:	Ductile Iron conforming to ANSI/AWWA A21.11/C-110
Joints:	Mechanical joints conforming to ANSI/AWWA A21.11/C- 111 or push-on joint conforming to ANSI/AWWA A21.51/C-151
Lining:	All pipes and fittings shall be lined with Protecto 401 or approved equal.
Coating:	All pipes and fittings shall be coated on the exterior with bituminous coating approximately 1 mil thick.

5.2 PIPE FOR SEWER FORCE MAINS

5.2.1 PVC Pipe

All PVC used in the construction of sewer force mains shall meet the following standards:

Pipe:	Pipe shall conform to the standards of AWWA C-900
Dimensions:	Standard Dimension Ratio (SDR) 18 for both bell and pipe thickness
Material:	Pipe shall be constructed of PVC conforming to ASTM D1784, Minimum cell classification of 12454B.
Pressure:	Pipe shall be pressure rated at 150 psi
Joints:	Joints shall be push-on type with elastomeric gaskets conforming to ASTM F477. For fusible C-900 joints shall be butt-fused conforming to the requirements of ASTM D638 and ASTM D1599.
Fittings:	Ductile Iron conforming to ANSI/AWWA A21.11/C-110
Restraint	
Devices:	Restraint devices for use on PVC joints shall be constructed of high strength ductile iron, ASTM A536, Grade 65-45-12 and shall incorporate machined serration on the inside diameter to provide positive restraint, exact fit, full circle contact and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be of high strength, low alloy material in accordance with ANSI/AWWA C111/A21.11,

latest version thereof. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. Restraining devices for "push on" joints shall be Star Pipe Products Pipe Restrainers, Series 1100, Romac Industries, Inc. Style 611, or approved equal. Restraining devices for mechanical joints shall be Romac Industries, Inc. Grip-Ring or approved equal.

5.2.2 Ductile Iron Pipe

All Ductile Iron Pipe (DIP) used in the construction of sewer force mains shall meet the following standards:

Class 50 Ductile iron conforming to ANSI/AWWA A21.51/C-151
Ductile Iron conforming to ANSI/AWWA A21.11/C-110
Mechanical joints conforming to ANSI/AWWA A21.11/C- 111 or push-on joint conforming to ANSI/AWWA A21.51/C-151
All pipes and fittings shall be lined with Protecto 401 or approved equal
All pipes and fittings shall be coated on the exterior with bituminous coating approximately 1 mil thick.
Restraint devices for use on DIP joints shall be constructed of high strength ductile iron, ASTM A536, Grade 65-45-12 and shall incorporate machined serration on the inside diameter to provide positive restraint, exact fit, full circle contact and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be of high strength, low alloy material in accordance with ANSI/AWWA C111/A21.11, latest version thereof. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. Restraining devices for "push on" joints shall be Uni-Flange Block Buster Series 1390-C, Romac Industries, Inc. Style 611, or approved equal. Restraining devices for mechanical joints shall be Romac Industries, Inc. Grip-Ring or approved equal.

5.2.3 High Density Polyethylene (HDPE) Pipe

All HDPE used in the construction of sewer force mains shall meet the following standards:

Pipe:	Pipe shall meet the requirements of AWWA C-906
Dimensions:	Standard Dimension Ratio (SDR) 9 for pipe thickness
Material:	Pipe shall be constructed of PE 3408 conforming to ASTM D1248, Minimum cell classification of 345434E.
Pressure:	Pipe shall be pressure rated at 200 psi
Joints:	All pipe and fittings shall be butt fusion jointed utilizing procedures, tools and equipment recommended by the pipe manufacturer
Fittings:	Fittings for HDPE Pipe shall be miter fusion fabricated and shall provide a pressure rating equal to that of the pipe. Molded butt fittings shall be manufactured in accordance with ASTM D-3261.

5.3 PIPE FOR WATER MAINS

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5.3.1 PVC Pipe 4" and Larger

All PVC used in the construction of water mains four inches (4") in diameter and larger shall meet the following standards:

Pipe:	Pipe shall conform to the standards of AWWA C-900
Dimensions:	Standard Dimension Ratio (SDR) 18 for both bell and pipe thickness
Material:	Pipe shall be constructed of PVC conforming to ASTM D1784, Minimum cell classification of 12454B.
Pressure:	Pipe shall be pressure rated at 150 psi
Joints:	Joints shall be push-on type with elastomeric gaskets conforming to ASTM F477. For fusible C-900 joints shall be butt-fused conforming to the requirements of ASTM D638 and ASTM D1599.
Fittings:	Ductile Iron conforming to ANSI/AWWA A21.11/C-110
Restraint	
Devices:	Restraint devices for use on PVC joints shall be constructed of high strength ductile iron, ASTM A536, Grade 65-45-12 and shall incorporate machined serration on the inside diameter to provide positive restraint, exact fit, full circle contact and support of the pipe in an even and uniform manner. Bolts and

connecting hardware shall be of high strength, low alloy material in accordance with ANSI/AWWA C111/A21.11, latest version thereof. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. Restraining devices for "push on" joints shall be Star Pipe Products Pipe Restrainers, Series 1100, Romac Industries, Inc. Style 611, or approved equal. Restraining devices for mechanical joints shall be Romac Industries, Inc. Grip-Ring or approved equal.

5.3.2 PVC Pipe 3" and Smaller

All PVC used in the construction of water mains three inches (3") and smaller in diameter shall meet the following standards:

Pipe:	Pipe shall meet the requirements of ASTM D2241	
Dimensions:	Standard Dimension Ratio (SDR) 21 for both bell and pipe thickness	
Material:	Pipe shall be constructed of PVC conforming to ASTM D1784, Minimum cell classification of 12454B.	
Pressure:	Pipe shall be pressure rated at 200 psi	
Joints:	Joints shall be push-on type with elastomeric gaskets conforming to ASTM F477	
Fittings:	Fittings shall be Schedule 80 PVC with solvent weld joints	

5.3.3 Ductile Iron Pipe

All Ductile Iron Pipe (DIP) used in the construction of water mains shall meet the following standards:

Pipe:	Class 50 Ductile iron conforming to ANSI/AWWA A21.51/C-151
Fittings:	Ductile Iron conforming to ANSI/AWWA A21.11/C-110
Joints:	Mechanical joints conforming to ANSI/AWWA A21.11/C- 111 or push-on joint conforming to ANSI/AWWA A21.51/C-151
Lining:	All pipes and fittings shall be lined in accordance with ANSI/AWWA A21.4/C-104
Coating:	All pipes and fittings shall be coated interior and exterior with bituminous coating approximately 1 mil thick.

Restraint Devices:

Restraint devices for use on DIP joints shall be constructed of high strength ductile iron, ASTM A536, Grade 65-45-12 and shall incorporate machined serration on the inside diameter to provide positive restraint, exact fit, full circle contact and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be of high strength, low alloy material in accordance with ANSI/AWWA C111/A21.11, latest version thereof. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. Restraining devices for "push on" joints shall be Uni-Flange Block Buster Series 1390-C, Romac Industries, Inc. Style 611, or approved equal. Restraining devices for mechanical joints shall be Romac Industries, Inc. Grip-Ring or approved equal.

5.3.4 High Density Polyethylene (HDPE) Pipe

All HDPE used in the construction of water mains shall meet the following standards:

Pipe:	Pipe shall meet the requirements of AWWA C-906
Dimensions:	Standard Dimension Ratio (SDR) 9 for pipe thickness
Material:	Pipe shall be constructed of PE 3408 conforming to ASTM D1248, Minimum cell classification of 345434E.
Pressure:	Pipe shall be pressure rated at 200 psi
Joints:	All pipe and fittings shall be butt fusion jointed utilizing procedures, tools and equipment recommended by the pipe manufacturer
Fittings:	Fittings for HDPE Pipe shall be miter fusion fabricated and shall provide a pressure rating equal to that of the pipe. Molded butt fittings shall be manufactured in accordance with ASTM D-3261.

5.4 SANITARY SEWER SERVICES

5.4.1 Gravity Sewer Services

All materials used in the construction of gravity sewer services shall meet the following standards:

Pipe: Schedule 40 PVC - Drain, Waste, and Vent (DWV) conforming to the requirements of ASTM D2665

Material: Pipe shall be constructed of PVC conforming to ASTM

D1784, Minimum cell classification of 12454B.

Fittings: Fittings shall be Schedule 40 PVC conforming to ASTM F1866 with solvent weld joints. Joint primer shall conform to ASTM F656 and joint solvent shall conform to ASTM D2564
Clean-out: Service clean-out shall use a standard wye and clean-out plug as made or recommended by the pipe manufacturer.
Clean-out Box: Clean-out boxes shall be constructed of cast iron conforming to ASTM A-48 Class 30B, with an asphalt coated finish. The box shall be a minimum of 10.5" H and have a minimum clear opening of 6.75". The word "SEWER" shall be cast into the lid. Box shall be Sigma Model CO-373S or approved equal.

Service	
Connection:	Service connection shall use a standard wye made or
	approved by the pipe manufacturer

5.4.2 S.T.E.P. System Services

All materials used in the construction of S.T.E.P system services shall meet the following standards:

- Tank: All individual S.T.E.P systems shall use a vacuum tested, precast concrete septic tank/ pump tank combination. A concrete riser ring shall be provided to adjust ring and cover to final grade. A standard manhole ring and cover shall be provided for access to the pump chamber. Tanks for residential use shall be manufactured by The Stallings Company, Inc. of Greenville, N.C. (252-756-0267) or Futrells Precast, Inc. of Deep Run, N.C. (252- 568-3481).
- Pump: The effluent pump shall be of the submersible type capable of delivering a flow and total dynamic head (TDH) as determined for each installation, and shall be sufficient to pump effluent to the mainline pressure pipe for elimination. The maximum pump shutoff head shall not exceed seventyfive percent (75%) of the working pressure of the pipe. Pump shall comply with the following:
 - a. Pump shall be specifically designed and rated to pump sewage effluent into pressure wastewater collection systems.
 - b. All residential effluent pumps shall be Zoeller model 163 pumps or approved equal.

	Control	 c. All pumps supplied must be constructed per (and bear the label of) an authorized testing authority such as Underwriter's Laboratories, Inc. (UL) for effluent duty. d. Pumps shall have a thirty-five-foot (35') long extra heavy-duty (SO) multi-conductor NEC rated electrical cord with ground to motor plug. e. The submersible pump shall pass a ³/₄ " spherical solid. f. Pump motor shall be of the submersible type. g. Motor shall be Single Phase, 230 Volts, 60 Hertz, 3500 RPM minimum or equal. h. Single-phase motors shall be thermally protected with an automatic reset feature.
	Control Panel:	The pump control panel shall be CSI or approved equal simplex pump control/alarm panel with the following features:
		a. All control components shall be contained in a single NEMA 4X fiberglass enclosure. The enclosure shall be of one piece, weatherproof construction and gray in color. Enclosure cover shall be hinged with a stainless steel piano hinge and be lockable with two (2) stainless steel latches.
		 b. The panel shall be equipped with a red alarm light and an integrated audible alarm to indicate "high level" alarms. A silence switch for the audible alarm shall be located on the exterior of the panel. The audible alarm shall produce a minimum of 80 decibels of sound pressure. c. Level indication and pump operation shall be controlled with float switches.
	Pipe:	Service pipe shall be 1 ½ inch CTS, polyethylene conforming to the standards of ANSI/AWWA C901. Pipe shall be made of PE3408 material with a standard dimension ratio of 9 (SDR 9) and a pressure rating of 200 psi. The pipe shall be green in color.
	Service	
	Saddles:	Service saddles shall be brass with stainless steel straps and/or bolts. Saddles shall have (AWWA) CC threads. Saddles with straps shall be the double strap type. Saddles shall be manufactured by McDonald, Ford, Romac, or approved equal.
	Corporation	
	Stops:	Corporation stops shall be bronze body with (AWWA) CC tapered threaded inlet and compression connection outlet. Corporation stops shall be manufactured by McDonald, Ford, Muller, or approved equal.
	Ball	
	Valve:	Ball valves shall be bronze body and have a stainless steel

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ball <u>& handle</u>, with a quarter turn, lever handled shut-off. Ball valves shall be manufactured by McDonald, Ford, Muller, or approved equal.

Check Valve:

Check valves shall be PVC wye-Check valves having IP threaded type pipe connections. The valve shall incorporate a weighted piston seat carrier as the sealing closure. Valve end (bonnet) shall be configured with a removal eye pin. Valve body shall be constructed of PVC which meets or exceeds the requirements of ASTM D-1784. The valve shall have a minimum pressure rating of 150 psi. The check shal be a 1 $\frac{1}{2}$ ", wye-check threaded to accept 1 $\frac{1}{2}$ " MIP brass fitting on both ends. The wye-check shall have a continuous stainless steel reinforcing ring around the outside of the threads to prevent fittings from being over tightened. Check valves shall be manufactured by Spear, George Fischer or approved equal.

Meter

Box:

Meter Boxes shall be constructed of cast iron conforming to ASTM A-48 Class 30B, with an asphalt coated finish. Dimensions shall be 20" L x 10" W x 12" H. The word "SEWER" shall be cast into the lid. Box shall be manufactured by Capital Foundry, East Jordan Iron Works, Charlotte Pipe and Foundry, or approved equal.

5.5 WATER SERVICES

All materials used in the construction of water services shall meet the following standards:

Pipe:	Service pipe shall be one inch (1") "CTS" polyethylene tubing conforming to the standards of ANSI/AWWA C901. Pipe shall be made of PE3408 material with a standard dimension ratio of 9 (SDR 9) and a pressure rating of 200 psi. The tubing shall be blue in color.
Service	
Saddles:	Service saddles shall be brass with stainless steel straps and/or bolts. Saddles shall have (AWWA) CC threads. Saddles with straps shall be the double strap type. Saddles shall be constructed of No-Lead brass in accordance with AWWA C- 800. Saddles shall be manufactured by McDonald, Ford, Muller, or approved equal.
Corporation	
Stops:	Corporation stops shall be bronze body with (AWWA) CC tapered threaded inlet and compression connection outlet. Corporation stops shall be constructed of No-Lead brass in accordance with AWWA C-800Corporation stops shall be manufactured by McDonald, Ford, Muller, or approved equal.

Angle	
Stop:	Angle stops shall be bronze body with compression connections for the inlet and outlet. Ball valves shall have a stainless steel ball and a lockable, quarter turn, tee handled shut-off. Angle stops shall be constructed of No-Lead brass in accordance with AWWA C-800. Ball valves shall be manufactured by McDonald, Ford, Muller, or approved equal.
	In shallow water service installations straight meter valves shall be utilized instead of angle stops at locations where the service tubing has to come through the side of the meter box instead of up through the bottom. The straight meter valves shall be either Muller Model B-24350 or Ford Model B43. Both valves will have a swivel meter nut on one side and a compression type pack joint for CTS tubing on the other side, along with a lockable wing.
Meter	
Box:	Meter Boxes shall be standard MBX-1 size, constructed of cast iron conforming to ASTM A-48 Class 30B, with an asphalt coated finish. Dimensions shall be 20" L x 10" W x 12" H. The Box shall be manufactured by Capital Foundry,

5.6 VALVES AND VALVE BOXES

5.6.1 Gate Valves

Gate valves shall be resilient seated and conform to AWWA C-509 for water and other liquids. Gate valves shall be iron bodied bronze mounted having non-rising stems and mechanical joints. Gate valves shall open counter clockwise, have a standard 2 inch square operating nut, and a caston direction arrow. Gate valves shall be manufactured by Mueller, Clow, American, or approved equal.

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East Jordan Iron Works, Charlotte Pipe and Foundry, or approved equal. The box lid shall be the standard "City of New Bern" polymer lid (DFW Plastics, Inc. Model No.

5.6.2 Butterfly Valves

Butterfly valves 20" and smaller shall conform to AWWA C504 for class 150B. Butterfly valves shall be iron bodied mechanical point with cast iron valve discs ASTM A-436 Type 1, Stainless steel valve shafts Type 316 recognized synthetic compound valve seals bonded to withstand 75 lbs. Pull butterfly valves shall be fitted with sleeve-type corrosion resistant bearings and self-adjusting valve packing. Valve operators for butterfly valve shall conform to AWWA C 504 with 2 inch square operating nut. The valve operators shall be the self-locking type designed to hold the valve in any position without creeping or fluttering. Butterfly valves shall open counter-

clockwise. Butterfly valves shall be manufactured by American, Clow, Mueller, Pratt, or approved equal.

5.6.3 Tapping Sleeve & Valve

Tapping sleeves, <u>sleeve flange</u> and all required hardware shall be constructed of stainless steel and have a minimum working pressure of 150 psi. Tapping sleeves shall be manufactured by Ford, Muller, Romac or approved equal. Tapping valves shall meet all the requirements for gate valves as set forth in Section 5.6.1.

5.6.4 Valve Box

Valve boxes shall be constructed of cast iron and rated for H-20 traffic loading. Valve boxes shall be two (2) piece adjustable screw type telescopic valve boxes with the tops marked SEWER or WATER for their relative use and location. Valve Boxes shall be manufactured by Capital Foundry, East Jordan Iron Works, Charlotte Pipe and Foundry, or approved equal.

5.7 AIR RELEASE VALVES

5.7.1 Automatic Air Release Valves

Automatic Air Release Valves shall be automatic float operated valves designed to release accumulated air from a piping system while the system is in operation and under pressure.

The valve body, cover, orifice, float and linkage mechanism shall be constructed of Type 316 stainless steel. Non-metallic floats or linkage mechanisms are not acceptable. The orifice button shall be Viton for simple lever valves and Buna-N for compound lever designs. Automatic air release valves shall be Crispin UX20.

5.7.2 Manual Air Release Valves

Manual air release valves shall consist of the same materials as specified in Section 5.5 and shown in Detail W-8.

5.8 FIRE HYDRANTS

Fire hydrants shall conform to AWWA C502. Fire hydrants shall be manufactured with two (2) 2 $\frac{1}{2}$ inch hose nozzles and one (1) 4 $\frac{1}{2}$ inch pumper nozzle. All threads shall conform to the standard for the City of New Bern. All hydrant legs shall be six inch (6") ductile iron pipe with a mechanical joint valve. All hydrants furnished shall have a minimum 3'-6" inch bury depth hydrant. Hydrants shall be ordered for the correct bury depth so that extensions are not needed to properly set the final fire hydrant grade. All hydrants furnished are to be bronze to bronze threads between the seat or seat ring and the seat attaching assembly with a drain ring. Fire hydrants shall be dry top type with a breakable traffic feature assuring the hydrant remains closed should it be broken off at the ground level. In addition to the factory coat,

all hydrants shall be painted after installation using high grade exterior enamel paint. All fire hydrants shall be Mueller Cat. No. A421, 4 ¹/₂" or American-Darling Mark73-5 with New Bern standard Storz connector on the pumper nozzle.

5.9 MANHOLES

All materials used in the construction of manholes shall meet the following standards:

5.9.1 Base

Installation of all precast concrete manholes shall consist of a minimum of 6 inches of stone leveling course beneath the base section. All manhole shall be provided with a minimum of a 6" extended base section.

5.9.25.9.1 Sections

All manholes shall be constructed using precast concrete sections conforming to ASTM C-478.

5.9.3<u>5.9.2</u> Steps

Manhole steps shall be constructed of 0.5" diameter, grade 60 steel bars. The steps shall be have a plastic coating and meet the requirements of Federal Specification RR-F-621C.

5.9.45.9.3

Ring and Cover

Manhole rings and covers shall be constructed of Class 30 cast iron conforming to ASTM A48, and shall be traffic bearing. The words "SANITARY SEWER" shall be cast in top of the cover. Rings and covers shall be manufactured by Capital Foundry, East Jordan Iron Works, Charlotte Pipe and Foundry, or approved equal.

In locations were the rim elevation of the manhole is below the 100year flood elevation for the area, the manhole shall be provided with the water-tight ring and cover. In addition, all water tight manhole shall be vented above the flood elevation.

5.9.5 5.9.4 Flexible Pipe Sleeve

Pipe sleeves with stainless steel clamps conforming to ASTM C-923 shall be used for pipe to manhole connections. The pipe sleeve shall be design and constructed to provide a flexible watertight seal.

5.9.65.9.5 Inverts

Inverts shall be precast into the bottom section of the manhole.

5.9.75.9.6 Grout

All perforations pick holes, seams, transitions, joints and leaks shall be sealed with hydraulic cement or approved equal.

5.9.8 Drop Manholes

Manholes with sewer pipes entering 2 ½ feet, or more, above the bottom shall have an inside drop manhole connections installed. All drop manholes shall have a minimum inside diameter of 5 feet.

5.9.95.9.7 Joint Wrap

The exterior of all manhole joints shall be wrapped with a butyl joint wrap with plastic backing. The wrap shall be a minimum of 6" wide, 0.050" thick and conform to ASTM C 877 (Type III).

5.9.105.9.8 Joint Seal

Each manhole joint shall be sealed using a butyl-rubber based flexible sealant conforming to the requirements of ASTM C-990 and have a minimum round equivalent of 1".

5.10 PUMP STATIONS

All materials used in the construction of pump stations shall meet the following standards:

5.10.1 Wet Well Structure

All components of the wet well structure shall conform to the requirements for manholes as described in Section 5.9.

5.10.2 Pumps

Sanitary sewer wastewater pumps shall be manufactured by Flygt, or approved equal which meets the following requirements:

Pump

Construction: Major pump components shall be of grey cast iron, ASTM A-48, Class 35B, with smooth surfaces devoid of blow holes or other irregularities. All exposed nuts or bolts shall be AISI type 304 stainless steel construction. All metal surfaces coming into contact with the pumpage, other than stainless steel or brass, shall be protected by a factory applied spray coating of acrylic dispersion zinc phosphate primer with a polyester resin paint finish on the exterior of the pump.

Sealing design shall incorporate metal-to-metal contact between machined surfaces. Critical mating surfaces where watertight sealing is required shall be machined and fitted with Nitrile or Viton rubber O-rings. Fittings will be the result of controlled compression of rubber O-rings in two planes and O-ring contact of four sides without the requirement of a specific torque limit.

Rectangular cross sectioned gaskets requiring specific torque limits to achieve compression shall not be considered as adequate or equal. No secondary sealing compounds, elliptical O-rings, grease or other devices shall be used.

Cooling System:

Motors are sufficiently cooled by the surrounding environment or pumped media. A water jacket is not required.

Cable Entry Seal:

The cable entry seal design shall preclude specific torque requirements to insure a watertight and submersible seal. The cable entry shall consist of a single cylindrical elastomer grommet, flanked by washers, all having a close tolerance fit against the cable outside diameter and the entry inside diameter and compressed by the body containing a strain relief function, separate from the function of sealing the cable. The assembly shall provide ease of changing the cable when necessary using the same entry seal. The cable entry junction chamber and motor shall be separated by a stator lead sealing gland or terminal board, which shall isolate the interior from foreign material gaining access through the pump top. Epoxies, silicones, or other secondary sealing systems shall not be considered acceptable.

Motor: The pump motor shall be a NEMA B design, induction type with a squirrel cage rotor, shell type design, housed in an air filled, watertight chamber. The stator windings shall be insulated with moisture resistant Class H insulation rated for 180°C (356°F). The stator shall be insulated by the trickle impregnation method using Class H monomer-free polyester resin resulting in a winding fill factor of at least 95%. The motor shall be inverter duty rated in accordance with NEMA MG1, Part 31.The stator shall be heat-shrink fitted into the cast iron stator housing. The use of multiple step dip and bake-type stator insulation process is not acceptable. The use of bolts, pins or other fastening devices requiring penetration of the stator housing is not acceptable. The motor shall be designed for continuous duty handling pumped media of 40°C (104°F) and capable of up to 15 evenly spaced starts per hour. The rotor bars and short circuit rings shall be made of cast aluminum. Thermal switches set to open at 125°C (260°F) shall be embedded in the stator end coils to monitor the temperature of each phase winding. These thermal switches shall be used in conjunction with and supplemental to external motor overload protection and shall be connected to the control panel. The junction chamber containing the terminal board shall be hermetically sealed from the motor by an elastomer compression seal. Connection between the cable conductors and stator leads shall be made with threaded compression type binding posts permanently affixed to a terminal board. The motor and the pump shall be produced by the same manufacturer.

The combined service factor (combined effect of voltage, frequency and specific gravity) shall be a minimum of 1.15. The motor shall have a voltage tolerance of plus or minus 10%. The motor shall be designed for operation up to 40°C (104°F) ambient and with a temperature rise not to exceed 80°C. A performance chart shall be provided upon request showing curves for torque, current, power factor, input/output kW and efficiency. This chart shall also include data on starting and no-load characteristics.

The power cable shall be sized according to the NEC and ICEA standards and shall be of sufficient length to reach the junction boxcontrol panel without the need of any splices. The outer jacket of the cable shall be oil resistant chlorinated polyethylene rubber. The motor and cable shall be capable of continuous submergence underwater without loss of watertight integrity to a depth of 65 feet or greater.

The motor horsepower shall be adequate so that the pump is non-overloading throughout the entire pump performance curve from shut-off through run-out.

Bearings: The pump shaft shall rotate on two bearings. Motor bearings shall be permanently grease lubricated. The upper bearing shall be a single deep groove ball bearing. The lower bearing shall be a two row angular contact bearing to compensate for axial thrust and radial forces. Single row lower bearings are not acceptable.

Mechanical

Seal:

Each pump shall be provided with a tandem mechanical shaft seal system consisting of two totally independent seal assemblies. The seals shall operate in a lubricant reservoir that hydro-dynamically lubricates the lapped seal faces at a constant rate. The lower, primary seal unit, located between the pump and the lubricant chamber, shall contain one stationary and one positively driven rotating, corrosion resistant tungsten-carbide ring. The upper, secondary seal unit, located between the lubricant chamber and the motor housing, shall contain one stationary and one positively driven rotating, corrosion resistant tungsten-carbide seal ring. Each seal interface shall be held in contact by its own spring system. The seals shall require neither maintenance nor adjustment nor depend on direction of rotation for sealing. The position of both mechanical seals shall depend on the shaft. Mounting of the lower mechanical seal on the impeller hub will not be acceptable. For special applications, other seal face materials shall be available.

The following seal types shall not be considered acceptable nor equal to the dual independent seal specified: shaft seals without positively driven rotating members, or conventional double mechanical seals containing either a common single or double spring acting between the upper and lower seal faces. No system requiring a pressure differential to offset pressure and to effect sealing shall be used.

Each pump shall be provided with a lubricant chamber for the shaft sealing system. The lubricant chamber shall be designed to prevent overfilling and to provide lubricant expansion capacity. The drain and inspection plug, with positive anti-leak seal shall be easily accessible from the outside. The seal system shall not rely upon the pumped media for lubrication. The motor shall be able to operate dry without damage while pumping under load.

Seal lubricant shall be FDA Approved, nontoxic.

Pump Shaft:

Pump and motor shaft shall be the same unit. The pump shaft is an extension of the motor shaft. Couplings shall not be acceptable. The pump shaft shall be stainless steel – ASTM A479 S43100-T.

If a shaft material of lower quality than stainless steel – ASTM A479 S43100-T is used, a shaft sleeve of stainless steel – ASTM A479 S43100-T is used to protect the shaft material. However, shaft sleeves only protect the shaft around the lower mechanical seal. No protection is provided for in the oil housing and above. Therefore, the use of

stainless steel sleeves will not be considered equal to stainless steel shafts.

- Impeller: The impeller(s) shall be of gray cast iron, Class 35B, dynamically balanced, double shrouded non-clogging design having a long throughlet without acute turns. The impeller(s) shall be capable of handling solids, fibrous materials, heavy sludge and other matter found in wastewater. Whenever possible, a full vaned, not vortex, impeller shall be used for maximum hydraulic efficiency; thus, reducing operating costs.
- Wear
- Rings: A wear ring system shall be used to provide efficient sealing between the volute and suction inlet of the impeller. Each pump shall be equipped with a brass, or nitrile rubber coated steel ring insert that is drive fitted to the volute inlet.
- Volute: Pump volute(s) shall be single-piece grey cast iron, Class 35B, non-concentric design with smooth passages large enough to pass any solids that may enter the impeller.
- Protection: All stators shall incorporate thermal switches in series to monitor the temperature of each phase winding. The thermal switches shall open at 125°C (260°F), stop the motor and activate an alarm.

5.10.3 Control Panel

All pump stations shall be provided with a control panel capable of operating the pump station across all flow requirements. The control panel shall be sized to match the voltage, phase, and load requirements of the station pumps. The control panel shall be configured as indicated on the New Bern standard control panel schematic. The control panel shall be produced by Multitrode, Inc., Pete Duty & Associates, Inc., Southern Flow, Inc. RS Integrators, Inc., or approved equal and be provided with the following general options:

- NEMA 4X Stainless steel enclosure with inner dead-front door, 3 point latch handle, enclosure light, and stainless steel sun shield.
- The Entire panel shall be UL/CUL approved
- Distribution, neutral & ground blocks
- Main & Generator(if needed) circuit breakers interlocked
- Generator Receptacle(if needed) size and model to be determined by City
- Pump & control circuit breakers
- Control transformer
- Full voltage motor starters
- Indicator lights as illustrated on the New Bern standard schematic

- Hand-Off-Auto switches on the inner door
- Condensation strip heater for enclosure
- 12VDC battery, charger, and power supply
- Voltage phase monitoring
- 3-phase surge protection
- Hour meters mounted on inner door
- Convenience 120V GFCI power outlet and circuit breaker
- Current transformers for amps monitoring
- Multitrode Multismart Pump Station Manager:
 - DNP3/MODBUS communication enabled
 - o Flow calculation enabled
- New Bern Standard
- 1.5 meter primary liquid level sensing probe
- · Ball float backup liquid level sensing system
- Alarm light and audible horn

For stations with pumps 25–60 HP or greater, the control panel shall be provided with a variable frequency drive (VFD) for each pump. Control panels with VFDs shall also be provided with appropriately sized auxiliary cooling system for the control panel. For stations with pumps between 25 and 60 HP, the control panel shall be provided with "soft start" motor starters for each pump.

5.10.4 Pressure Gauges

Each discharge pipe leaving the pump station shall be provided with a pressure gauge. The pressure gauge shall be located on top of the discharge pipe located within the valve vault. Each pressure gauge shall be oriented in a manner in which it is easily readable from above grade, without the need to enter the valve vault. Each gauge shall be provided with a ¼ turn brass ball valve that separates that gauge from the discharge pipe. The pressure gauge shall be liquid filled with single PSI indicator marks. The pressure gauge shall cover the full operational pressure range of the pump station.

5.10.5 Piping

All piping within the wet well structure and through the valve vault shall be Ductile Iron Pipe (DIP) conforming to the following standards:

Pipe:	Class 50 Ductile iron conforming to ANSI/AWWA A21.51/C-151
	A21.51/C-151
Fittings:	Ductile Iron conforming to ANSI/AWWA A21.10/C-110

Joints:	Flanged joints conforming to ANSI A21.4	
Lining:	All pipes and fittings shall be lined with Protecto 401 or approved equal.	
Coating:	The exterior of all exposed pipes, fittings, and valves shall be coated with 2 coats (total 8 mils dried thickness) of Tnemec N69 Hi-Build Epoxoline II.	

5.10.6 Check Valves

Check valves shall be provided on each pump discharge line and be located in a precast concrete valve vault. Check valves shall be horizontal mounted, swing type with a bronze disc and cast iron body. Check valves shall be manufactured by Muller, American Darling, Apco Valves or an approved equal.

5.10.7 Access Hatches

Aluminum access hatches shall be provided for both the wet well and the valve vault. The frame shall be one piece and constructed of aluminum or stainless steel with integral concrete anchors. The cover(s) shall be constructed of one-quarter inch (1/4") thick diamond pattern plating, reinforced to withstand a live load three hundred pounds-per-square foot (300 psf). The cover(s) shall include a handle for raising and have a safety handle for locking in the open position. Access hatches shall be provided with a factory installed padlock hasp for locking each cover. All hatch hardware and hinges shall be constructed on stainless steel.

5.10.8 Vent Pipe

All proposed pump stations shall include a mushroom type vent for the wet well structure. The vent shall be constructed of four inch (4"), class 150 cast iron vent pipe. Vent outlets shall be provided with a two (2) mesh, 14 gauge, bronze wire screen.

5.10.9 Guide Bracket Assembly

Two (2) guide bars shall be provided for the raising and lowering of each pump. Guide bars shall be stainless steel pipe, extending from the lower guide holders to the upper guide holders. Lower guide holders shall be integral with the pump discharge connection. Guide bars shall not support any portion of the weight of the pumps.

5.10.10 Conduit

All conduit utilized in the construction of pump stations shall meet the NEC standards of for location and use. All conduits between the control panel

and the wet well shall be no smaller than 1.5" and the conduits for the pump leads shall be no smaller than 2". All conduit from the wet well shall have a pull box (C-box) located prior to entering any panel. The pull box shall be sealed on both sides with removable sealer.

5.11 GENERATOR

All pump stations with a calculated average daily design flow of 15,000 gallons per day or more shall be provided with an onsite backup diesel generator with an automatic transfer switch. The generator shall be sized to provide full load of all pumps along with any auxiliary items located at the station. The generator shall be produced by Atlantic Cummins, MTU Onsite Energy, CAT Electric Power, Power Secure, Kohler or approved equal and be provided with the following general options:

- Tier 3 EPA Emissions Certified.
- UL2200 Listed.
- NFPA 110 alarm package.
- Radiator with engine driven fan.
- Output breaker mounted on generator.
- Steel weather protective enclosure, Level 2 sound attenuation.
- Sub-base fuel tank sized for min. of 24 hours at full load.
- Battery rack with battery and charger.
- · Control panel with auto starts/stops, alarms, & shut downs.
- Coolant/block heater.

The generator shall be provided with the appropriate size automatic transfer switch housed in a NEMA 4X cabinet. The transfer switch shall include an integrated engine exerciser/exercise clock.

5.12 ENCASEMENT PIPE

Encasement pipe be uncoated steel pipe conforming to the standards of AWWA C200. Pipe sections shall be joined by a continuous weld. The minimum wall thickness shall be as follows:

Encasement Pipe Dia.	Wall Thickness
14"	0.216"
16"-24"	0.250"
30"	0.312"
36"	0.375"
42"	0.438"
48"	0.500"

Encasement pipe install under a railroad shall meet the minimum wall thickness requirements as set forth by the governing railroad authority.

SECTION 6.0

TESTING REQUIREMENTS

6.1 GENERAL

All items which require testing shall be promptly cleaned and ready for testing after installation. Meeting all testing requirements specified herein shall be a condition of acceptance of the item by the City of New Bern. In no case shall an item be accepted into the City of New Bern municipal water or sanitary system without passing the required testing. A representative of the City of New Bern Department of Public Utilities must be on site to witness all required testing procedures. The City of New Bern Department of Public Utilities (252-639-7523) requires a 48 hour notice for each test.

6.2 WATER MAINS

6.2.1 Leakage Testing

All pressure pipe shall be tested in accordance with current AWWA standards; AWWA C600 for ductile iron pipe and AWWA605 for PVC pipe. All proposed water mains shall be subjected to a leakage test under

the specified hydrostatic pressure. The pressure shall be maintained constant at one hundred fifty pounds per square inch (150 psi) (plus or minus five psi) during the entire time that line leakage measurements are being made.

The water lines are to be flushed thoroughly to remove all dirt and debris which may have collected in the line. After flushing has been completed, the pipelines shall be tapped on top at a point furthest from the point that the lines are to be filled with water. The valve at the end of the line shall be left open, and the valve between the new water line and the City Water System opened slightly to allow the water to enter the new pipe slowly. Once the pipe is full, the valve at the end of the line shall be left open until the valve between the new water line and the City Water System is completely shut off. At no time shall the City Water System valve be open without an outlet in the new pipe system. A representative of the City of New Bern is the only authorized operator of valves within the City Water System.

Leakage measurements shall not be started until a constant test pressure has been established; compression of air trapped in unvented pipes or fittings will give false leakage readings under changing pressure conditions. After the test pressure to be used has been established and stabilized, the line leakage shall be measured by means of a water meter installed on the line side of the force pump, and the leakage test shall extend over a total period of not less than four (4) hours.

Line leakage is defined as the total amount of water introduced into the line as measured by the meter during the leakage test. The pipeline or section being tested will not be accepted if it has a leakage rate in excess of:

 $L = \frac{S \times D \times (square root of P)}{148,000}$

where L = allowable leakage in gallons per hour, S = length of pipe in feet, D = nominal diameter of the pipe in inches, and P = average test pressure during the leakage test in pounds per square inch (150 psi).

All visible leaks shall be repaired. The Contractor shall locate and repair leaking joints to the extent required to reduce the total leakage to an acceptable amount. All joints in piping shall be watertight and free from visible leaks during the prescribed test. Each leak which is discovered within one year after final acceptance of the work shall be located and repaired by and at the expense of the Contractor.

6.2.2 Disinfection

After passing the leakage test, all water mains shall be disinfected in accordance with AWWA C-651, and as specified herein. The valve at the end of the line shall be left open, and the valve between the new water line and the City Water System opened slightly to allow the water to enter the

new pipe slowly. Chlorine is then to be applied under pressure by an ejector pump (or equal) to the water entering the new pipeline. Chlorine will be added in sufficient quantities to give an overall chlorine residual to the water of at least fifty (50) parts per million. Once the pipe is fully chlorinated, a representative of the City of New Bern Department of Public Utilities shall be contacted to perform a high chlorine test. At no time during testing shall the City Water System valve be open without an outlet in the new pipe system. A representative of the City of New Bern is the only authorized operator of the valves within the City Water System.

After the water main passes the high chlorine test the pipeline is to be valved off and the chlorinated water allowed remaining in the line for twenty four (24) hours. After the twenty four (24) period, the chlorine residual in the line must be at least ten (10) parts per million. After passing the chlorine residual test, the pipe line is to be thoroughly flushed until no evidence of chlorine exists as determined by the Orthotolidine Test.

After flushing the line, the Contractor shall furnish sterilized bottles and take water samples from various points along the line as directed and witnessed by the City of New Bern. A minimum of two samples shall be taken in any instance. The Contractor shall send the samples to an approved testing laboratory, for bacteriological analysis. If the analysis reveals that no bacteria is present and the requirements for final inspection have passed, the pressure pipe system may be placed into service upon written notification from the City Engineer.

The City of New Bern reserves the right to modify and/or change the test, test procedures, and/or passing level results without prior notice.

6.3 SANITARY SEWER MAINS

6.3.1 Gravity Sewer Mains

Each section of proposed gravity sewer shall be promptly cleaned and tested after installation. The following test shall be performed on proposed gravity sewer mains:

<u>Air Test</u> – All proposed gravity sewer mains shall be air tested in accordance with ASTM C-828, ASTM C-924 and the following. Such tests shall consist of securely plugging the sewer line between manholes, pumping the section full of air to 4.0 psi and holding this pressure for at least two (2) minutes. Then the pressure should be reduced to 3.5 psi and the time recorded for the pressure to drop 1.0 psi to the new pressure of 2.5 psi. If groundwater is present, all test pressures shall be adjusted by adding 0.43 psi for each foot of groundwater head that exist above the pipe invert. The time required for the pressure drop shall exceed the minimum test time given in the chart below,

Diameter Test Time for (in) (Min) Minimum		Length for	Time for Longer	Specification Time for Length (L) Shown (min:sec)							
	Minimum Test Time (ft)	Lengths (sec)	100 ft	150 ft	200 ft	250 ft	300 ft	350 ft	400 ft	450 ft	
4	3:46	597	.380 (L)	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	.854 (L)	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8	7:34	298	1.520(L)	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10	9:26	239	2.374(L)	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	199	3.418(L)	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	5.342(L)	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18	17:00	133	7.692(L)	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41

<u>Deflection Test</u> - A Deflection test shall be performed on all sanitary sewer mains constructed of non-ferrous materials. This test shall be performed after all grading, paving, and compaction work has been completed. The allowable deflection shall be 4.5% of the nominal inside diameter of the pipe. The deflection shall be measured by the use of the mandrel test.

<u>Closed Circuit T.V. Inspection</u> – All proposed gravity sewer mains shall undergo a closed circuit T.V. inspection prior to being accepted by the City of New Bern. The City of New Bern will conduct the inspection. Any slumps, high points, low points, swells, standing water, accumulations of dirt and debris, rolled gaskets, leaks or other defects shall be corrected by the Contractor prior to any other test being performed. The City Engineer shall have the final decision on all discrepancies.

6.3.2 Sewer Force Mains

All proposed sewer force mains shall be subjected to a leakage test under the specified hydrostatic pressure. The test pressure shall be one and onehalf times the maximum working pressure of the pipe segment. The test pressure shall be maintained constant (plus or minus five psi) during the entire time that line leakage measurements are being made.

The sewer force mains are to be flushed thoroughly to remove all dirt and debris which may have collected in the line. After flushing has been completed, the force main shall be filled slowly with water. One end of the pipe shall be vented to allow the release of air during filling. Once the force main is full of water all vents shall be closed and a pump shall be used to increase the pressure in the force main to the required test pressure.

Leakage measurements shall not be started until a constant test pressure has been established; compression of air trapped in unvented pipes or fittings will give false leakage readings under changing pressure conditions. After the test pressure to be used has been established and stabilized, the line leakage shall be measured by means of a water meter installed on the line side of the force pump, and the leakage test shall extend over a total period of not less than two (2) hours. Line leakage is defined as the total amount of water introduced into the line as measured by the meter during the leakage test. The pipeline or section being tested will not be accepted if it has a leakage rate in excess of:

 $L = \underline{S \times D \times (square root of P)}$ $\frac{133,200}{148,000}$

Where L = allowable leakage in gallons per hour, S = length of pipe in feet, D = nominal diameter of the pipe in inches, and P = average test pressure during the leakage test in pounds per square inch.

All visible leaks shall be repaired. The Contractor shall locate and repair leaking joints to the extent required to reduce the total leakage to an acceptable amount. All joints in piping shall be watertight and free from visible leaks during the prescribed test. Each leak which is discovered within one year after final acceptance of the work shall be located and repaired by and at the expense of the Contractor.

6.4 MANHOLES

All manholes on proposed sewer main extensions shall be vacuum tested as specified herein. Manholes shall be tested after complete assembly. Stub-outs, manhole boots and pipe plugs shall be secured to prevent movement while the vacuum is drawn. A measured vacuum of 10 inches of mercury shall be established in the manhole. Acceptance standards for leakage shall be established from the elapsed time for a negative pressure change from 10 inches to nine inches of mercury. The maximum allowable leakage rate for a four-foot diameter manhole shall be in accordance with the following:

Minimum Elapsed Time for a

Manhole Depth	Pressure Change of 1" Hg
10 ft. or less	60 seconds
> 10 ft. but < 15 ft.	75 seconds
> 15 ft. but < 25 ft.	90 seconds

For manholes five feet in diameter, add an additional 15 seconds and for manholes six feet in diameter, add an additional 30 seconds to the time requirements for four foot diameter manholes.

If the manhole fails the test, necessary repairs shall be made and the vacuum test and repairs shall be repeated until the manhole passes the test. The extent and type of repairs that may be allowed shall be subject to the approval of the City Engineer. Leaks shall be repaired on the outside of the manhole unless otherwise approved by the City Engineer. If manhole joint mastic is completely pulled out during the vacuum test, the manhole shall be disassembled and the mastic replaced.

6.5 PUMP STATION TESTING AND START-UP

Prior to the acceptance of a pump station, a run test and start-up shall be completed by a representative of the pump and generator manufacturer. During the start-up the pump station will be required to operate under the anticipated loading and system conditions. All pumps and control functions shall be tested during the start-up procedure. All possible run situations shall be tested to ensure proper flow is maintained at actual system pressures. The City of New Bern Department of Public Utilities shall be contacted at least 48 prior to conducting the pump station start-up. The contractor shall not discharge the new pump station into the existing City system without approval from the City of New Bern. The following items should be complete prior to scheduling the pump station start-up:

- Electrical work inspected and an energizing permit issued by the appropriate agency.
- The electrical service established with the City of New Bern as the customer.
- Verify the rotation of the pumps.
- Confirm that all main line valves and air release valves are open and in proper working order.

6.6 S.T.E.P. SYSTEM TANKS

All S.T.E.P. system tanks shall be vacuum tested by the manufacturer prior to delivery. Upon delivery all tanks shall be set in place and vacuum tested again by the tank installer to insure that no seals were damaged in the delivery and installation of the tank. The onsite test shall be performed in the presence of a City of New Bern representative. Tanks shall be tested with the riser and manhole ring installed. All testing equipment shall be supplied by the tank provider.

All tank inlets and outlets shall be sealed and a measured vacuum of 3.5 inches of mercury shall be established in the tank and held for a period of five (5) minutes. During the test period no leakage shall be allowed. If the tank fails the test, necessary repairs shall be made and the vacuum test and repairs shall be repeated until the tank passes the test. The extent and type of repairs that may be allowed shall be subject to the approval of the City Engineer.

6.7 TAPPING SLEEVES

Prior to making any tap on an existing City of New Bern water or sewer main, the tapping sleeve or saddle shall pass a pressure test. The tapping sleeve shall be hydrostatically tested through the test plug for a period of five (5) minutes. During

the test period, no leakage shall be allowed. Air testing of tapping sleeves shall not be permitted.

SECTION 7.0

REQUIREMENTS DURING CONSTRUCTION AND PROJECT CLOSEOUT

7.1 PRIOR TO CONSTRUCTION

The following shall be completed prior to any construction commencing on water or sewer extension projects:

7.1.1 Notice to Proceed Issued The City of New Bern

Once the City of New Bern Department of Public Utilities has approved the proposed design and confirmed that all required permits, encroachment agreements, and utility easements have been executed and issued by the appropriate agencies, a notice to proceed will be issued by the City to the Contractor.

7.1.2 Material Inspection

Once all materials are on site, the Contractor shall contact the City of New Bern Water Resources Project Coordinator (252-639-7523) to schedule an

onsite inspection of all proposed construction materials. No material shall be used in utility construction until the material inspection has been performed.

7.1.3 Shop Drawing Submittal

Shop Drawings shall be submitted to the City of New Bern Department of Public Utilities for review of the following items:

- Pumps
- Control Panels
- Lift Station Electrical Components
- Generator
- Booster Pumps
- RPZ
- Automatic Air Release Valves

7.1.4 N.C. ONE CALL

The NC One Call Center (1-800-632-4949) shall be contacted a minimum of forty-eight (48) hours prior to beginning excavation. The Contractor shall be responsible for keeping locate tickets current and contacting the One Call Center if unmarked utilities should be encountered.

7.1.5 Contractor to Notify The City of New Bern

At least forty-eight (48) hours prior to the start of any construction, the contractor shall notify the City of New Bern Department of Public Utilities (252-639-7523). Depending on the nature of the project the City Engineer may require that a preconstruction conference be held to discuss the details of the project.

7.2 DURING CONSTRUCTION

7.2.1 Notices to Property Owners and Local Utilities

The Contractor shall notify adjacent property owners and utilities when the project execution may affect adjacent properties. The contractor shall notify the appropriate authorities when the project operations will interrupt access or utility service to the property owner or tenant. Utilities and other agencies shall be contacted at least twenty four (24) hours prior to cutting or closing streets, or excavating near underground utilities or pole lines.

7.2.2 General Safety Requirements

Excavations shall provide adequate working space and clearance as necessary to provide proper pipe installation and work safety. Excavations performed on NCDOT rights of way shall be protected from traffic utilizing the NCDOT Uniform Traffic Control Manual (latest edition). Minimum requirements shall include proper signage, flagmen, protective vests and hardhats as outlined in the manual. The Contractor shall provide a Competent Person for trench construction on site, as outlined in OSHA regulations, for all excavations that exceed four feet (4') in depth. The City Engineer may stop work for any violation of the aforementioned regulations when the safety of any person acting as a representative, agent, or employee of the Contractor is considered in imminent danger. Work may continue only after the violation has been rectified and the City Engineer grants permission to proceed.

7.2.3 Connections to Existing Water or Sewer Mains

The Contractor shall make all necessary connections to existing water lines, unless otherwise directed by the City of New Bern. The City shall be notified at least twenty four (24) hours prior to making such connections. Taps shall be made only in the presence of the City of New Bern Water Resources Project Coordinator or a duly assigned representative of the City of New Bern Department of Public Utilities. At all times, the Contractor shall protect existing facilities against adverse conditions or substances and damage.

Connections to existing water and sewer lines shall be planned in advance with all required equipment, materials, and labor on hand prior to undertaking the connections. Work shall proceed continuously around the clock if necessary to complete connections in minimum time. Operation of valves or other equipment on the existing water system shall be under the direct supervision of the City of New Bern.

7.2.4 Site Administration

The Contractor shall be responsible for all areas of the site under construction or occupied for administrative or storage purposes. The Contractor shall be responsible for all Subcontractors in their performance on the project. The Contractor will be responsible for the actions of all employees and other persons on the project to insure proper use and preservation of property and existing facilities, except when these responsibilities are specifically reserved to others. The Contractor has the right to exclude from the construction site any persons who are not directly related to the construction process or the inspection of the work by the Owner. The contractor may require all persons on the construction site to observe all operational or safety regulations required of his employees. The Contractor shall keep the project site free from accumulations of waste materials and rubbish at all times.

7.2.5 Project Inspections

For all proposed water and sewer extension projects, the Developer shall provide complete engineering services which shall include construction observation. It shall be the responsibility of the Project Engineer and ultimately the Developer, to insure that all construction is completed as shown on the plans which have been approved for construction by the City of New Bern.

The City of New Bern Water Resources Project Coordinator will periodically visit the site during construction and will be on site for all testing and inspections as required by the City of New Bern. It is NOT the duty of the City of New Bern Water Resources Project Coordinator to direct construction, provide solutions to design problems or maintain record drawings. These services shall be provided by the Project Engineer.

7.3 PROJECT CLOSEOUT

7.3.1 General

All items listed in this section must be completed before the City of New Bern will accept any new construction as part of the City's municipal water and sewer system.

7.3.2 Final Inspection

Upon completion of construction and all required testing, the Contractor shall contact the City of New Bern Water Resources Project Coordinator to schedule a final inspection. During the final inspection the Water Resources Project Coordinator will insure that all aspects of the water and sewer construction have been completed in compliance with the current City standards. The Contractor shall provide all personal and tools which will be required for opening manholes, exercising valves, and flowing hydrants. The City of New Bern prefers for the streets within the development to be paved at the time of final inspection. If the streets have not been paved, then all structures within the street shall be set in place with concrete prior to requesting the final inspection. Valve boxes shall be set in a minimum of a 36"x36"x18" block of concrete.

During the final inspection, the Water Resources Project Coordinator will create a punch-list if any deficiencies are discovered. The Contractor shall complete all items described on the punch-list prior to requesting a reinspection.

7.3.3 Record Drawings

Upon completion of all utility projects, the Project Engineer shall submit an "As Built" set of plans to the City Engineer. All As Built information on the plans shall be clearly identified (bold text, different text, boxed-out, etc.). Proposed information which has changed shall be marked through. The "As Built" plans shall indicate the horizontal and vertical location of all installed utilities. All bends, reducers, and valves shall be located with at least two (2) measurements to existing features (back of curb, utility pole, hydrant, etc.). Horizontal pipe location shall be shown at one hundred foot intervals along the pipe as measured from the back of curb or the edge of pavement. For sewer force mains the elevation of the installed pipeline shall be indicated on the record drawings in 50' intervals. All elevations shown shall be based on a datum elevation from an existing USGS monument. The record drawings shall be submitted in the following formats:

- 1. (21) Sets of Plans 24" x 36" on Standard Bond Paper
- (1) Compact DiskCD or flash drive containing the project drawing files in PDF format.
- 7.3.4 Utility Easements

Prior to project acceptance, a final plat of the development shall be recorded with the Craven County Register of Deeds. The final development plat shall clearly illustrate all proposed utility easements.

7.3.5 Engineer's Certification

For projects which involve the extension of the City of New Bern water system the Project Engineer shall submit to the City a copy of the Engineer's Certification stating that the completed water system extension conforms to the approved plans and specifications as required by the NCDEQ.

For projects which involve the extension of the City of New Bern sewer system the Project Engineer shall submit to the City a copy of the Engineer's Certification stating that the completed sewer system extension conforms to the approved plans and specifications as required by the NCDEQ.

7.3.6 Total Project Cost

Upon completion of all construction, the Project Engineer shall submit to the City Engineer the total cost all improvements related to the water and sewer system. This submittal shall include the Contractor's original Bid and all additional Change Orders.

7.3.7 Warranty

The Developer shall warrant all water and sewer work to be free of defects in materials or workmanship for a period of two (2) years. The warranty period shall begin from the date of City's acceptance of the project for permanent operation and maintenance.

7.3.8 Final Acceptance

Once the items listed in 7.3.1 - 7.3.6 have been completed the City Engineer will issue the letter of acceptance, which will outline the terms, if any of the infrastructure acceptance and set the start/end dates for the (2) year warranty period.

1

AGENDA ITEM COVER SHEET



Agenda Item Title:

Consider Adopting a Resolution Approving a Memorandum of Agreement with the North Carolina Office of Recovery and Resiliency (NCORR).

Date of Meeting: July 14, 2020	Ward # if applicable: N/A
Department: Development Services	Person Submitting Item: Amanda Ohlensehlen, Community & Economic Development Manager
Call for Public Hearing: □Yes⊠No	Date of Public Hearing:

Explanation of Item:	The Board is asked to Consider Adopting a Resolution Approving a Memorandum of Agreement with the North Carolina Office of Recovery and Resiliency (NCORR) for the Administration of the State Recovery Grant for Financially Distressed Local Governments.
Actions Needed by Board:	Adopt a Resolution.
Backup Attached:	Memo, Resolution, Memorandum of Agreement, and Grant Application

Is item time sensitive? ⊠Yes □No

Will there be advocates/opponents at the meeting? Yes No

Cost of Agenda Item: N/A

If this requires an expenditure, has it been budgeted and are funds available and certified by the Finance Director? Yes No

Additional Notes:

Aldermen

Sabrina Bengel Jameesha Harris Robert V. Aster Johnnie Ray Kinsey Barbara J. Best Jeffrey T. Odham



CITY OF NEW BERN

300 Pollock Street, P.O. Box 1129 New Bern, NC 28563-1129 (252) 636-4000

MEMORANDUM

Dana E. Outlaw Mayor Mark A. Stephens City Manager Brenda E. Blanco City Clerk Mary M. Hogan Director of Finance

- TO: Mayor Outlaw and Board of Aldermen
- FROM: Amanda Ohlensehlen Community & Economic Development Manger

DATE: July 1, 2020

SUBJECT: Consider Adopting a Resolution Approving a Memorandum of Agreement with the North Carolina Office of Recovery and Resiliency (NCORR).

Background

The City of New Bern has been awarded a grant in the amount of \$328,500 distributed through the North Carolina Office of Recovery and Resiliency (NCORR) Distressed Local Government Program. The Board of Aldermen is asked to consider executing a Memorandum of Agreement ("MOA") for the administration of the grant. This grant award will build capacity to support the City's resiliency, recovery, and mitigation efforts over the next three years.

The NCORR State Recovery Grant for Financially Distressed Local Governments will allow the City to hire a consultant to assist City Staff in managing targeted resiliency, recovery, and mitigation projects throughout the City of New Bern. The grant with provide support for planning, engineering, GIS, administration services, and other activities related to resiliency, community recovery and mitigation in the wake of Hurricane Florence. It will help the community with preparedness plans for future disasters and increase staff capacity to respond to and mitigate disaster effects. \$300,000 of these funds go to capacity building measures and the remaining balance goes to funding a vehicle to support these efforts.

The MOA is attached for review along with the grant application. This grant award will build capacity to support the City's resiliency, recovery, and mitigation efforts over the next three years.

Please contact Amanda Ohlensehlen at 252-639-7580 if you have questions or need additional information.

Everything Comes Together Here

RESOLUTION

BE IT RESOLVED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN:

That the Memorandum of Agreement by and between the North Carolina Office of Recovery and Resiliency and the City of New Bern, said Agreement having an effective date of July 1, 2020, a draft copy of which is attached hereto and incorporated herein by reference, be and the same is hereby approved, and the Mayor and City Clerk are hereby authorized to sign an electronic version of this agreement on behalf of the City once the same has been finalized and reviewed and approved by the City Attorney.

ADOPTED THIS 14th DAY OF JULY, 2020.

DANA E. OUTLAW, MAYOR

BRENDA E. BLANCO, CITY CLERK

STATE GRANTS FOR FINANCIALLY DISTRESSED LOCAL GOVERNMENTS

MEMORANDUM OF AGREEMENT BETWEEN THE NORTH CAROLINA OFFICE OF RECOVERY AND RESILIENCY AND THE CITY OF NEW BERN

GRANT NUMBER: NCORR-FDLG-031 MOA AMOUNT: \$328,500 PERIOD OF PERFORMANCE: 3 YEARS FROM THE DATE OF ENACTMENT RECIPIENT TAX ID/EIN: 56-6000235

PURPOSE:

This Grant Agreement is hereby entered into by and between the North Carolina Office of Recovery and Resiliency ("NCORR") and the City of New Bern. This Agreement is authorized pursuant to Section 2.1 (4c) of North Carolina Session Law 2019-224 and Section 1.2 (3b) of North Carolina Session Law 2019-250.

1. EFFECTIVE TERM:

This Agreement shall be effective starting July 1, 2020 and this Agreement shall terminate on July 1, 2023 or upon the full expenditure of grant funds and the submission of RECIPIENT'S final report, which ever comes first.

2. NCORR'S DUTIES & PAYMENT PROVISIONS:

NCORR shall ensure that funds allocated and disbursed pursuant to Session Law 2019-224 and Session Law 2019-250, comply with the intent and guidance found in the Session Law and ensure compliance with related state statutes and financial management standards.

NCORR shall disburse to the City of New Bern, a total of \$328,500 for the purposes set out in RECIPIENT'S application for grant funds (see attached). Upon signature of this agreement by the parties, the funds will be transferred to RECIPIENT within 5 business days.

3. RECIPIENT'S DUTIES:

RECIPIENTS shall provide the following information:

- a. RECIPIENT agrees it shall, before and during the term of this Agreement, use the grant award to cover the costs of (i) non-disaster-related operating expenses; (ii) disaster-related expenses denied by the federal government for reimbursement; and (iii) disaster recovery capacity building expenses listed in RECIPIENT'S grant application.
- b. RECIPIENT shall not expend awarded grant funds on federally reimbursable expenses under the Federal Emergency Management Agency (FEMA) Public Assistance program or the National Flood Insurance Program (NFIP), the Community Development Block Grant for Disaster Recovery (CDBG-DR), or any other federally reimbursable expense.
- c. After the first nine months of the grant period, RECIPIENT may submit to NCORR a recommended grant budget to redirect and reprogram any unobligated award funds to uses not covered in the original grant proposal. Allowable proposed uses include:

- i. General operating expenses such as payroll, non-disaster-related vendor payments, and debt service or disaster recovery capacity building, or
- ii. Building disaster recovery capacity through hiring up to two time-limited positions not to exceed 3 years, the purchase of a vehicle to support disaster recovery; the purchase of contracted disaster recovery services, or entering into agreements with other governmental agencies of RECIPIENT'S area Council of Government.
- d. Both NCORR and RECIPIENT agree that this Agreement shall be interpreted as to not minimize or impair RECIPIENT's eligibility to secure FEMA or related recovery funding support.
- e. RECIPIENT agrees that grant funds paid through this Agreement shall be accounted for in a separate fund and accounting structure within RECIPIENT's central accounting system. RECIPIENT agrees to manage all accounts payable disbursements, check register disbursements and related transactions in a detailed manner that supports fully transparent accounting of all financial transactions associated with grant funding allocations described in Section 2 above. For end-of-year financial reporting purposes, this separate fund should be consolidated with the General Fund of the reporting entity.
- f. RECIPIENT understands and acknowledges that total direct Grant program funding level available under this Agreement is \$328,500

4. QUARTERLY PROGRESS REPORTS:

RECIPIENT agrees to provide Quarterly Progress Reports to be sent electronically from RECIPIENT to NCORR and shall at a minimum include:

- a. Period beginning balance of the Unspent Grant Amount
- b. Total expenditures incurred or disbursed (aggregate totals):
 - i. For each purpose set out in the grant application (payroll, vendor payments, engineering services contract for disaster recovery, etc.),
 - ii. For the period, year to date, and grant period, and
 - iii. Brief description of specific expenses funded with awarded grant funds for the quarter.
- c. Period ending Grant balance of RECIPIENT.

Quarterly Progress Reports shall be emailed to ncorrgrants@ncdps.gov. Reporting Deadlines are on April 7, July 7, October 7, and January 7 of each year of this agreement. ATTACHMENT A is a copy of the quarterly progress report template.

5. AGREEMENT ADMINISTRATORS:

All notices permitted or required to be given by one Party to the other and all questions about the Agreement from one Party to the other shall be addressed and delivered to the other Party's Agreement Administrator. The name, post office address, street address, telephone number, fax number, and email address of the Parties' respective initial Agreement Administrators are set out below. Either Party may change the name, post office address, street address, telephone number, or email address of its Agreement Administrator by giving timely written notice to the other Party.

For NCORR				
IF DELIVERED BY US POSTAL SERVICE	IF DELIVERED BY ANY OTHER MEANS			
Mary Massey NCORR Budget Manager PO Box 110465 Durham, NC 27709	Mary Massey NCORR Budget Manager Mary.Massey@ncdps.gov			

For F	RECIPIENT
IF DELIVERED BY US POSTAL SERVICE	IF DELIVERED BY ANY OTHER MEANS
City of New Bern	City of New Bern
Dana Outlaw, Mayor	Dana Outlaw, Mayor
300 Pollock Street	300 Pollock Street
New Bern, NC 28560-1129	New Bern, NC 28560-1129
	outlawd@newbernnc.gov
	(252) 639-7580

6. MONITORING AND AUDITING:

RECIPIENT acknowledges and agrees that, from and after the date of execution of this Agreement and for three (3) year following its termination, the books, records, documents and facilities of RECIPIENT are subject to being audited, inspected and monitored at any time by NCORR upon its request (whether in writing or otherwise). RECIPIENT further agrees to provide NCORR staff and staff of the Office of State Auditor with access to financial and accounting records to support internal audit, financial reporting and related requirements.

RECIPIENT acknowledges and agrees that, with regard to the Grant funds, it will be subject to the audit and reporting requirements prescribed in N.C.G.S. 159-34, Local Government Budget and Fiscal Control Act – Annual Independent Audit, rules and regulations. Such audit and reporting requirements may vary depending upon the amount and source of Grant funding received by RECIPIENT and are subject to change.

7. SITUS:

This Agreement shall be governed by the laws of North Carolina and any claim for breach or enforcement of this Agreement shall be filed in State court in Wake County, North Carolina.

8. COMPLIANCE WITH LAW:

RECIPIENT shall remain an independent RECIPIENT and as such shall be wholly responsible for the Grant terms and RECIPIENT responsibilities described in this Agreement. RECIPIENT shall be responsible for compliance with all laws, ordinances, codes, rules, regulations, licensing requirements and other regulatory matters that are applicable to the conduct of their Grant performance under this Agreement, including those of Federal, State, and local agencies having appropriate jurisdiction. Recipient is reminded that all funds are subject to the requirements of the Local Government Budget and Fiscal Control Act, including but not limited to all budgeting and pre-audit requirements.

9. CLAW-BACK:

NCORR reserves the right to de-obligate any remaining award funds after this Agreement's expiration date or before the expiration date of this Agreement, should RECIPIENT violate the terms of this Agreement or should it become apparent RECIPIENT will not be able to expend the funds prior to the expiration date of this Agreement.

10. TERMINATION OF AGREEMENT:

This Agreement may be terminated, if RECIPIENT repays the grant amount in full, prior to the term end date. Section 6 shall survive termination as explained in that section.

11. AMENDMENTS:

This Agreement may be amended in writing which documents approval of changes by both NCORR and RECIPIENT. If RECIPIENT requests a term extension or revision of Agreement terms, it shall provide to NCORR for their review and approval a detailed request that includes documented financial management reason(s) for amending the terms of this Agreement.

12. AGREEMENT CLOSE-OUT PROCESS:

RECIPIENT agrees to submit to NCORR a complete performance and expenditure status report (final report) within ninety (90) days after: (i) expiration of the Agreement term or (ii) July 1, 2023 whichever comes first.

13. AUTHORIZED SIGNATURE WARRANTY:

The undersigned represent and warrant that they are authorized to bind their principals to the terms of this Agreement.

In Witness Whereof, the RECIPIENT and NCORR have executed this Agreement and intend to be bound by its terms.

SIGNING ON BEHALF OF NCORR:

SIGNING ON BEHALF OF RECIPIENT:

Michael A. Sprayberry Director, North Carolina Office of Recovery and Resiliency Dana Outlaw, Mayor City of New Bern

Date

Date

APPROVED AS TO PROCEDURES BY:

Jonathan Doerr, Deputy General Counsel Lead Counsel for NCORR Tara Williams-Brown, Controller Department of Public Safety

Date

North Carolina Office of Recovery & Resiliency

State Recovery Grants for Financially Distressed Local Governments/Tribal Governments Application

Fiscal Year 2020

Disaster Declaration

Please select the Presidential Disaster Declarations that apply to your county, incorporated municipality, or tribal government.

X Hurricane Florence (DR-4393)

1 CONTACTS

Enter requested information for all contacts listed below.

Applicant

Applicant This is the agency apply	ing for grai	nts.		
Applying agency	City of	New Bern		
Street address	303 First Street			
City	New Be	New Bern 28563-11		Click or tap here to enter text.
Email	ohlense	ehlena@newbernnc.gov		
EIN/Tax ID number	56-6000235			
DUNS number	075547	208		
Your name	Amand	la Ohlensehlen		
Are you authorized to a	pply for gra	ints on behalf of the appl	ying agency?	Yes
Field help Applying agency Street address, City, ZIP + 4, Email		The name of the agency applying for the grant. The phone, street address (not PO Box), city, nine-digit zip code, and email of the applying agency.		
EIN/Tax ID number		The unique nine-digit identification number of the agency. Your Financial personnel should be able to provide this number.		
DUNS number		The unique eight-digit identification number of the agency. Your financial personnel should be able to provide this number.		
Your name		The name of the individual completing this application.		

Grant point of contact

this contact for any s	e se	tions regurating the grants. T	here is an opportunity to override		
Name	Amanda Ohlensehlen				
Agency	City of New Bern				
Title	Community and Economic Development Manager				
Phone (work)	252-639-7580 Phone (mobile) 252-876-2881				
Street address	303 First Ave.				
City	New Bern	ZIP + 4	28563-1129		
Email	ohlensehlena@newbernnc.gov				
ield help					
Name	The name of the contact.				

Agency	The name of the agency of the contact.
Title	The title within the agency of the contact.
Phone, Street address, City, ZIP + 4, email	The phone number, street address (not PO Box), city, nine-digit zip code, and email of the contact.

EM program manager

EM program This is the loo	manager cal EM grants manager.
Name	Amanda Ohlensehlen
Email	ohlensehlena@newbernnc.gov
ield help	
Name	The name of the program manager.

Email The email address of the program manager.

Finance director

Finance dire The signatur	ctor e of the finance director of the agency is required for the memorandum of agreement.
Name	Mary Hogan
Email	hoganm@newbernnc.gov
ield help	
Name	The name of the finance director.

Email The email of the finance director.

Grant MOA signatory

add them in the "Appends" se	ction. There is an oppor	tory is provided. If ev tunity to override this	en more signatories are required, contact for any specific grant.
Name	Mayor Dana Outlaw		
Agency	City of New Bern		
Title	Mayor	· · · · · · · · · · · · · · · · · · ·	
Street address (not PO Box)	300 Pollock Street		
City	New Bern	ZIP + 4	28560-1129
Email	outlawd@newbernnc	.gov	
Name	Brenda Blanco		
Agency	City of New Bern		
Title	Clerk		
Street address (not PO box)	300 Pollock Street		
City	New Bern	ZIP + 4	28560-1129
Email	blancob@newbernnc.	gov	

Name

The individual who signs the memorandum of agreement on behalf of the applicant.

Agency The agency name of the signatory.

Title The title within the agency of the signatory.

Street address,The street address (not PO Box), city, nine-digit zip code, and email of the signatory.City, ZIP + 4, email

2 STATE GRANTS FOR FINANCIALLY DISTRESSED LOCAL GOVERNMENTS – TOTAL PROPOSAL SHALL NOT EXCEED \$1,000,000

- A. Request for grant funds to cover non-disaster-related operating budget expenses, including:
- General payroll obligations
- Payments to vendors for goods and services **not related** to disaster response and recovery, where nonpayment would result in a negative financial outcome
- Disaster Response and Recovery Expenses denied for federal reimbursement
- Disaster-related repairs to facilities and infrastructure denied for federal reimbursement
- Debt service payments

General information		
Enter information describing the		
Proposed Expense Type	Click or tap here to enter text.	
Description of need		
Expense Amount	Click or tap here to enter text.	
Anticipated Expense Date	Click or tap here to enter text.	
General information Enter information describing the	request for funds.	
Proposed Expense Type	Click or tap here to enter text.	
Description of need		
Expense Amount	Click or tap here to enter text.	
Anticipated Expense Date	Click or tap here to enter text.	
General information Enter information describing the	request for funds.	
Proposed Expense Type	Click or tap here to enter text.	
Description of need		
Expense Amount	Click or tap here to enter text.	
Anticipated Expense Date	Click or tap here to enter text.	
General information Enter information describing the	request for funds.	
Proposed Expense Type	Click or tap here to enter text.	
Description of need		
Expense Amount	Click or tap here to enter text.	
Anticipated Expense Date	Click or tap here to enter text.	
Subtotal Amount	Click or tap here to enter text.	

Field help

Proposed Expense Type	The name of the expense to be covered. The field can be a maximum of 30 characters.
Description of need	A brief description of the expense need to be covered by grant funds.
Expense Amount	Total dollar amount of the expenses to be covered by the grant.
Anticipated Expense Date	Expected date of when the grant funds would be expensed.
Subtotal Amount	Cumulative sum of the Expense Amounts listed above.

- B. Request for grant funds to provide one-time capacity building for disaster recovery, including:
- No more than two disaster recovery-related positions, including salary, benefits, and operating expenses for up to three years.
- Contracted services for disaster recovery or agreements with other local governments or the local Council of Government to support disaster recovery efforts for up to three years.
- One vehicle to support disaster recovery activities.

Requested Funds for Position #1 Enter information describing the requ	est for funds
Proposed Position	Click or tap here to enter text.
Description of Disaster Recovery Support	
Annual Salary	Click or tap here to enter text.
Annual Benefits	Click or tap here to enter text.
Annual Operating Costs	Click or tap here to enter text.
Total Annual Cost for Position	Click or tap here to enter text.
Cumulative Cost over 3 years	Click or tap here to enter text.
Requested Funds for Position #2	
Enter information describing the requ	est for funds.
Proposed Position	Click or tap here to enter text.
Description of Disaster Recovery Support	
Annual Salary	Click or tap here to enter text.
Annual Benefits	Click or tap here to enter text.
Annual Operating Costs	Click or tap here to enter text.
Total Annual Cost for Position	Click or tap here to enter text.
Cumulative Cost over 3 years	Click or tap here to enter text.
Requested Funds for Contracted Serv Enter information describing the requ	
Proposed Contract(s) Type	Resiliency Consultant/Consulting Firm
Support	 and mitigation projects throughout the City of New Bern. Assist in coordinating and administering resiliency, recovery & mitigation grants. Assist Staff with engineering, planning, GIS and administrative services as they relate to preparedness.
Annual Anticipated Expenses	100,000.00
Cumulative Cost over 3 years	300,000.00
Requested Funds for Agreements wit Enter information describing the requ	h other Local Governments or Council of Government est for funds.
Proposed Agreement Expense Type	Click or tap here to enter text.
Description of Disaster Recovery Support	
Annual Anticipated Expenses	Click or tap here to enter text.
Cumulative Cost over 3 years	Click or tap here to enter text.
Requested Funds for a Vehicle Enter information describing the requi	est for funds.
Proposed Vehicle	Ford F-150 Pick-up Truck
Description of Disaster Recovery Support	To be used for travel to assess and manage targeted recovery mitigation and resiliency projects for hurricane-affected sites throughout the City of New Bern.
Expenditure Amount	\$28,495.00
Anticipated Expense Date	6/1/2020
Subtotal – Grant Request for one-time + any <i>Expenditure Amount</i> for a vehic	e capacity building for disaster recovery (any <i>Cumulative Cost over 3 years</i> cle)

Field help		
Proposed Position	The name of the position to be funded. The field can be a maximum of 30 characters.	
Proposed Contract(s) Type	The name(s) of the proposed contracts to be funded. The field can be a maximum of 30 characters.	
Proposed Agreement Expense Type	The name(s) of the proposed agreements with outside organizations to be funded. The field can be a maximum of 30 characters.	
Proposed Vehicle	Type of vehicle to be purchased.	
Description of Disaster Recovery Support	A brief description how this request will specifically support the local government's or tribal government's disaster recovery effort.	
Annual Salary	Annual direct salary or wage expenditures.	
Annual Benefits	Annual fringe benefits cost for this position.	
Annual Operating Costs	Annual operating costs for this position, including supplies, equipment, and travel expenditures.	
Total Annual Cost for Position	Total of salary, benefits, and operating costs for one year.	
Annual Anticipated Expenses	Total annual expense amount for the contract(s) or agreement(s).	
Expenditure Amount	Anticipated purchase cost of the vehicle.	
Cumulative Cost over 3 years	Total Annual Cost of Position summed over 3 years	
Description of Disaster Recovery Support	Brief description of how the vehicle will support the local government's or tribal government's disaster recovery efforts.	
Anticipated Expense Date	Expected date of when the grant funds would be expensed.	
Subtotal	Sum of any proposed Cumulative Cost over 3 years and proposed Expenditure Amount for a vehicle.	

C. Total Proposed Grant Amount - Not to exceed \$1,000,000

Total Proposed Grant	from the Financially Distressed Local Government	Program – Not to exceed \$1,000,00	
Subtotal Amount for non-disaster-related operating budget expenses Subtotal Amount for one-time capacity building for disaster recovery Grand Total – not to exceed \$1,000,000		Click or tap here to enter text.	
		\$328,495.00	
		\$328,495.00	
for non-disaster- related operating budget expenses			
Subtotal Amount for one-time capacity building for disaster	Subtotal from Section 2.B. for one-time capacity	v building for disaster recovery	

Grand Total

4 CERTIFICATION

Certification Review each certifi	fication item and check where appropriate.
I certify that:	X This application includes complete and accurate information.
	X Submission of the grant proposal does not guarantee funding.
	X Grant proposals through the State Grants for Financially Distressed Local Governments do not include expenses that are federally reimbursable through federal disaster response, recovery, or resiliency programs.

The sum of all of the amounts - not to exceed \$1,000,000

5 APPENDICES

Add any information not accommodated by the application form here.

Information About Current Financial Standing

Please complete and submit the "NCORR Application Unit Financial Information" Excel Worksheet. Please be sure to complete all fields for the Interim Current Fiscal Year to Date.

Debt Service

Current Debt Service		
General Fund Debt Service – FY 2019-20	2,344,814	
All non-General Fund Debt Service – FY 2019-20	7,314,646	

Insufficient budget to cover Operating Expenses, such as payroll and vendor payments

General Description of the Budgetary Challenge Enter additional information in the space below. None

Diminishing tax or enterprise revenues due to outmigration of population or other disruptions to public services

General Description of the Budgetary Challenge Enter additional information in the space below. None

Increased risk of not servicing debt payments

General Description of Debt Service Challenges Enter additional information in the space below. None

Local Government or Tribal Government Approved Budget for FY 2019-20

Enter URL for the online published approved budget for FY 2019-20 /www.newbernnc.gov/FY20%20Final%20Budget%20Completed.pdf

If your organization does not publish an online budget, please attach a pdf copy of your jurisdiction's approved budget.

Brief Position Descriptions for Requested Grant Funds

For local governments and tribal governments applying for a grant under the State Grants for Financially Distressed Local Governments program, please attach brief position descriptions for any disaster recovery positions proposed in your application package.

Federal Reimbursement Denial for Disaster Related Expenses

For local governments or tribal governments applying for a grant under the State Grants for Financially Distressed Local Governments program to cover "disaster response and recovery expenses" or "disasterrelated repairs to facilities and infrastructure," please provide documentation of denial by a federal agency.

AGENDA ITEM COVER SHEET



Agenda Item Title:

Consider adopting an amendment to the Resiliency and Hazard Mitigation Plan Grant Project Fund.

Date of Meeting: 07/14/2020	Ward # if applicable:
Department: Finance	Person Submitting Item: Mary M. Hogan, Director of Finance
Call for Public Hearing: □Yes⊠No	Date of Public Hearing:

Explanation of Item:	Consider adopting an amendment to the Resiliency and Hazard Mitigation Plan Grant Project Fund to recognize various grants totaling \$403,500.
Actions Needed by Board:	Adopt ordinance amendment.
Backup Attached:	Memo, Ordinance Amendment

Is item time sensitive? ⊠Yes □No

Will there be advocates/opponents at the meeting? Yes No

Cost of Agenda Item:

If this requires an expenditure, has it been budgeted and are funds available and certified by the Finance Director? \Box Yes \Box No

Additional Notes:



TO: City Manager, Honorable Mayor and Members of the Board of Aldermen
FROM: Mary M. Hogan - Director of Finance
DATE: June 30, 2020
RE: Amendment to the Resiliency and Hazard Mitigation Plan Grant Project Fund

Background Information

The City of New Bern has received funding to develop a Resiliency and Hazard Mitigation Plan for the entire city, which includes assessment and development of a series of mitigation measures to address areas of vulnerability. The City applied for and received funding through the following resources:

From the North Carolina Office of Recovery and Resiliency, in the amount of \$328,500 to support the costs associated with contracting with a consultant/consulting firm to assist the City's project in managing targeted resiliency, recovery, and mitigation projects and assist staff with engineering, planning, GIS and administrative services as related to the preparedness.

From the State of North Carolina through the Environmental Enhancement Grant Program in the amount of \$70,000 to support Phase Two: Priority and Plan Development of the Resiliency and Hazard Mitigation Plan.

From the North Carolina Department of Cultural Resources in the amount of \$5,000 for a Duke Energy Foundation Grant to support Phase One: Data Collection and Analysis of the Resiliency and Hazard Mitigation Plan.

Requested Action

The Board considers adopting the enclosed budget amendment at its meeting on July 14, 2020.

AMENDMENT TO THE CAPITAL PROJECT ORDINANCE RESILIENCY and HAZARD MITIGATION PLAN GRANT PROJECT FUND

BE IT ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN:

Section 1. That Section 4 of the Resiliency and Hazard Mitigation Plan Grant Project Fund Ordinance adopted on March 10, 2020 is hereby amended to recognize additional appropriation:

Increase: Development Services - SRF \$403.500

Section 2. That Section 3 of the Resiliency and Hazard Mitigation Plan Grant Project Fund Ordinance adopted on March 10, 2020 is hereby amended to recognize grant revenue from the following sources:

North Carolina Office of Recovery and Resiliency\$328,500State of North Carolina, Environmental Enhancement Grant70,000North Carolina Dept. of Cultural Resources, Duke Energy Grant5,000

Increase: Grant Revenues

\$403,500

Section 3. This amendment shall become effective upon adoption.

ADOPTED THIS 14TH DAY OF JULY, 2020.

DANA E. OUTLAW, MAYOR

BRENDA E. BLANCO, CITY CLERK

AGENDA ITEM COVER SHEET



Agenda Item Title:

Consider adopting a resolution for use of credit and debit card processing.

Date of Meeting: 07/14/2020	Ward # if applicable:	
Department: Finance	Person Submitting Item: Mary M. Hogan, Director of Finance	
Call for Public Hearing: □Yes⊠No	Date of Public Hearing:	

Explanation of Item:	Credit Card Power Point Presentation for acceptance of credit and debit cards.	
Actions Needed by Board:	Adopt resolution	
Backup Attached:	Memo, Resolution, PowerPoint Presentation	

Is item time sensitive? □Yes ⊠No	
Will there be advocates/opponents at the meeting? \Box Yes \boxtimes No	

Cost of	Agenda	Item:
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If this requires an expenditure, has it been budgeted and are funds available and certified by the Finance Director? \Box Yes \Box No

Additional Notes:



TO: City Manager, Honorable Mayor and Members of the Board of Aldermen

- FROM: Mary M. Hogan Director of Finance
- DATE: June 30, 2020
- RE: Presentation of Credit Card Acceptance

Background Information

The enclosed Power Point presentation highlights the customer-focused benefits of accepting credit and debit cards as an approved payment options, the costs to the City to implement and ongoing monthly fees. Also enclosed is a resolution authorizing staff to proceed with the proposed payment options.

Requested Action

The Board considers adopting the enclosed resolution at its meeting on July 14, 2020.

RESOLUTION

WHEREAS, the City of New Bern currently utilizes third-party vendors to process credit card payments on behalf of the City for utility bills and various City fees. The City incurs no costs for this service, as the vendors charge a convenience fee directly to the customer; and

WHEREAS, it will be beneficial to both the City and its customers if the City were to provide this service inhouse. To initiate this procedural change, the City will need to purchase credit card machines and incur a nominal monthly compliance fee, as well as per-cost transaction fees.

BE IT RESOLVED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN:

1. That the Director of Finance is authorized to initiate the acceptance of credit and debit cards as an approved payment option for utility bills and various City fees; and

2. The Director is further authorized to purchase the equipment needed to implement this process and to pay the fees associated with the service.

ADOPTED THIS 14th DAY OF JULY, 2020.

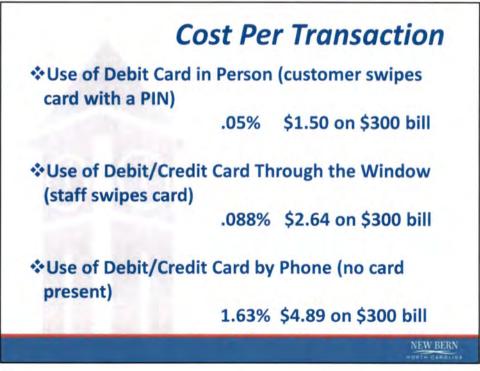
DANA E. OUTLAW, MAYOR

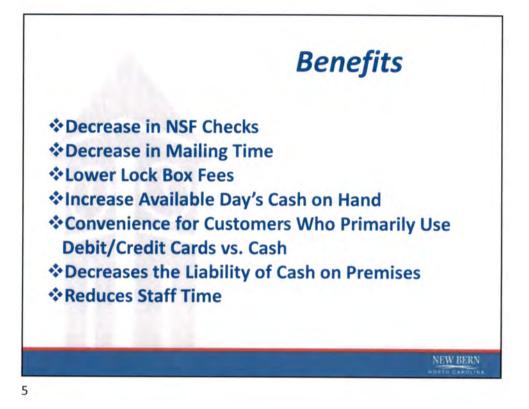
BRENDA E. BLANCO, CITY CLERK



2	ng Utility Bill nent Options
PAYMENT OPTIONS	USTOMER FEES
Any Walmart in New Bern	\$2.00 fee
Any Food Lion in New Bern	\$2.00 fee
Any Piggly Wiggly in New Bern	\$2.00 fee
On-line/City Website	\$4.95 fee
USPS Mail Po	ostage/Mailing costs
Bank Draft Fi	ree
In-Person Fi	ree
Pre-Pay App Fi	ree
	NEW BERN











AGENDA ITEM COVER SHEET



Agenda Item Title:

Consider adopting an amendment to the 2019 Electric Improvements Project Fund.

Date of Meeting: 07/14/2020	Ward # if applicable:
Department: Finance	Person Submitting Item: Mary M. Hogan, Director of Finance
Call for Public Hearing: □Yes⊠No	Date of Public Hearing:

Consider adopting an amendment to the 2019 Electric Improvements Project Fund to recognize a Golden LEAF grant in the amount of \$320,000.
Adopt ordinance amendment.
Memo, Ordinance Amendment

Is item time sensitive? ⊠Yes □No

Will there be advocates/opponents at the meeting?
Set Yes
No

Cost of Agenda Item:

If this requires an expenditure, has it been budgeted and are funds available and certified by the Finance Director? \Box Yes \Box No

Additional Notes:



TO: City Manager, Honorable Mayor and Members of the Board of Aldermen

- FROM: Mary M. Hogan Director of Finance
- DATE: June 30, 2020

RE: Amendment to the 2019 Electric Improvements Project Fund

Background Information

Residents of the City of New Bern were without power for several days following Hurricane Florence as utility crews worked to restore service. Ground level electrical boxes were submerged or damaged by debris. In response to the high number of outages occurring during extreme weather events, the City has developed a comprehensive plan focusing on electric infrastructure, New Bern Utilities Disaster Recovery and Resiliency Plan, which is comprised of three mitigation projects designed to address areas of vulnerability in the City's utility system. To assist with funding the project, the City applied for and received a Golden LEAF grant award in the amount of \$320,000. The Golden LEAF Disaster Recovery and Resiliency grant funds will be used to elevate identified electrical components to prevent future flood damage and increase system reliability during storm events.

Requested Action

The Board considers adopting the enclosed budget amendment at its meeting on July 14, 2020.

AMENDMENT TO THE CAPITAL PROJECT ORDINANCE 2019 ELECTRIC IMPROVEMENTS PROJECT FUND

BE IT ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN:

Section 1. That Section 3 of the 2019 Electric Improvements Project Fund Ordinance adopted on March 26, 2019 is hereby amended to recognize additional appropriation:

Increase: 2019 Electric Improvements

\$320,000

Section 2. That Section 4 of the 2019 Electric Improvements Project Fund Ordinance adopted on March 26, 2019 is hereby amended to recognize grant revenue from the Golden LEAF Foundation:

Increase: Grant Revenues

\$320,000

Section 3. This amendment shall become effective upon adoption.

ADOPTED THIS 14TH DAY OF JULY, 2020.

DANA E. OUTLAW, MAYOR

BRENDA E. BLANCO, CITY CLERK

AGENDA ITEM COVER SHEET



Agenda Item Title: Consider adopting a resolution to include the Redevelopment Commission in the City's budgeting and accounting system.

Date of Meeting: 07/14/2020	Ward # if applicable:
Department: Finance	Person Submitting Item: Mary M. Hogan, Director of Finance
Call for Public Hearing: □Yes⊠No	Date of Public Hearing:

Explanation of Item:	Resolution to provide that the budgeting and accounting system of the Redevelopment Commission be part of the City's budgeting and accounting system.
Actions Needed by Board:	Adopt resolution
Backup Attached:	Memo, Resolution

Is item time sensitive? □Yes ⊠No	1
Will there be advocates/opponents at the meeting? \Box Yes \boxtimes No	

Cost of Agenda Item:
If this requires an expenditure, has it been budgeted and are funds available
and certified by the Finance Director? Yes No

Additional Notes:



Office of the Director of Finance

TO: City Manager, Honorable Mayor and Members of the Board of Aldermen
FROM: Mary M. Hogan - Director of Finance
DATE: July 9, 2020
RE: Resolution to include the Redevelopment Commission in the City's budget

RE: Resolution to include the Redevelopment Commission in the City's budgeting and accounting system.

Background Information

On May 8, 2018, the Board of Aldermen adopted an ordinance creating the Redevelopment Commission of the City of New Bern. Chapter 160A-505.1 of the North Carolina General Statutes allows the operations Redevelopment Commission to be budgeted and accounted for in the City's budgeting and accounting system; and requires that the "budget officer" (City Manager) and "finance officer" (Director of Finance) administer and control that portion of budget relating to the operations of the commission. The enclosed resolution provides that the Redevelopment Commission budgeting and accounting system.

Requested Action

The Board considers adopting the enclosed resolution at its meeting on July 14, 2020.

RESOLUTION

WHEREAS, on May 8, 2018 the Board of Aldermen of the City of New Bern adopted an ordinance creating the Redevelopment Commission of the City of New Bern to function within the territorial limits of the City of New Bern in accordance with the provisions of article 22 of Chapter 160A of North Carolina General Statutes; and

WHEREAS, Chapter 160A-505.1 allows for the Redevelopment Commission budgeting and accounting system to be part of the City's budgeting and accounting system.

BE IT RESOLVED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN:

 For the purposes of the Local Government Budget and Fiscal Control Act, the Redevelopment Commission of the City of New Bern shall be considered a department of the City of New Bern. The operations of the Commission shall be budgeted and accounted for as if the operations were those of a public enterprise of the municipality; and

 The budget of the Commission shall be prepared and submitted in the same manner and according to the same procedures as are the budgets of other departments and agencies of the municipality; and the budget ordinance of the municipality shall provide for the operations of the Commission; and

 The budget officer and finance officer of the municipality shall administer and control that portion of the municipality's budget ordinance relating to the operations of the commission.

ADOPTED THIS 14th DAY OF JULY, 2020.

DANA E. OUTLAW, MAYOR

BRENDA E. BLANCO, CITY CLERK

AGENDA ITEM COVER SHEET



Agenda Item Title:

Consider adopting an amendment to the FY 2020-21 annual adopted budget.

Date of Meeting: 07/14/2020	Ward # if applicable:
Department: Finance	Person Submitting Item: Mary M. Hogan, Director of Finance
Call for Public Hearing: □Yes⊠No	Date of Public Hearing:

Explanation of Item:	Consider adopting an amendment to the FY 2020-21 annual adopted budget which acknowledges additional revenues available for appropriation and creates the new Redevelopment Fund.
Actions Needed by Board:	Adopt ordinance amendment.
Backup Attached:	Memo, Ordinance Amendment

Is item time sensitive? ⊠Yes □No

Will there be advocates/opponents at the meeting?
Yes
No

Cost of Agenda Item:

If this requires an expenditure, has it been budgeted and are funds available and certified by the Finance Director? \Box Yes \Box No

Additional Notes:



TO: City Manager, Honorable Mayor and Members of the Board of Aldermen

- FROM: Mary M. Hogan Director of Finance
- DATE: June 30, 2020
- RE: Amendments to the FY 2020-21 Operating Budget

Background Information

Redevelopment Fund:

 This amendment creates a new special revenue fund, Redevelopment Fund, which will be used to account for revenues and expenditures of the Redevelopment Commission of the City of New Bern. The initial budget will be established with a transfer from the General Fund in the amount of \$455,000.

General Fund:

- 1. This amendment acknowledges proceeds of \$455,000 for the sale of 801 Carolina Avenue and authorizes a transfer of \$455,000 to the Redevelopment Fund.
- 2. This budget amendment allocates funds in the General Fund for the improvements to the Old City Garage, located at 106 and 114-120 Rhem Street. The City previously approved a lease agreement for this property with Craven Community College. The revenues were received in fiscal year 2019-2020, therefore this amendment will appropriate the funds designated for the improvements from the fund balance. The garage will be used to operate the Diesel Mechanic and Heavy Equipment Operator Workforce Training Center. Per the lease agreement, the City is responsible to upfit and remodel the premises in accordance to Exhibit B, which is outlined as follows:

Parking/Road Improvements	\$ 48,000
HVAC Improvements	\$ 15,000
Electrical Improvements	\$ 5,000
Paint/Repair Building Exterior	\$ 12,000

Everything comes together here.

Interior Garage Improvements:	\$ 70,000
Interior Office/Classroom Improvements:	\$ 15,000
Contingencies:	\$ 10,000
Total:	\$175,000

Secondly, this amendment creates a special revenue fund, the Redevelopment Fund

Requested Action

The Board considers adopting the enclosed budget amendment at its meeting on July 14, 2020.

CITY OF NEW BERN, NORTH CAROLINA REQUESTED AMENDMENT TO Fiscal Year 2020-2021

FROM: Mary M. Hogan, Director of Finance

Meeting Date: July 14, 2020

EXPLANATION:

The General Fund is amended to allocate funds for the improvements to the Old City Garage, located at 106 and 114-120 Rhem Street. The City previously approved a lease agreement for this property with Craven Community College. The garage will be used to operate the Diesel Mechanic and Heavy Equipment Operator Workforce Training Center. Per the lease agreement, the City is responsible to upfit and remodel the premises outlined in Exhibit B of the Lease Agreement, which includes: parking/road improvements, HVAC and electrical improvements, paint/repair building exterior, interior office/classroom improvements, and contingencies, totaling \$175,000. The revenues were received in fiscal year 2019-2020. This amendment will appropriate the funds designated for the improvements from the fund balance. Secondly, this amednment acknowledges proceeds from the sale of 801 Carolina Avenue and authorizes a transfer from the general fund to the redevelopment fund, both in the amount of \$455,000. Lastly, this ordinance amendment creates a new special revenue fund, the Redevelopment Fund, and acknowledges a transfer from the general fund in the amount of \$455,000.

BE IT ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN THAT THE 2020-2021 Annual Budget ORDINANCE IS AMENDED AS FOLLOWS:

	Section 1	 Appropriations
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Schedule	A - GENERAL FUND		
Increase:	Public Works		
	Public Buildings	\$	175,000
	Interfund Transfers - Out		455,000
		\$	630,000
Schedule	U - REDEVELOPMENT FUND		
Increase:	Redevelopment	\$	455,000
	Section 2 - Estimated Reven	ues	
Schedule	A - GENERAL FUND		
Increase:	Miscellaneous Revenue- Sale of Assets	\$	455,000
	Fund Balance Appropriated	\$	175,000
		\$	630,000
Schedule	U - REDEVELOPMENT FUND		
Increase:	Interfund Transfers - In	\$	455,000

NATURE OF TRANSACTION:

ADDITIONAL REVENUE AVAILABLE FOR APPROPRIATION TRANSFER WITHIN ACCOUNTS OF SAME FUND OTHER :

> APPROVED BY THE BOARD OF ALDERMEN AND ENTERED ON MINUTES DATED JULY 14, 2020 AGENDA ITEM NUMBER _____

BRENDA E. BLANCO, CITY CLERK

Aldermen

Sabrina Bengel Jameesha Harris Robert V. Aster Johnnie Ray Kinsey Barbara J. Best Jeffrey T. Odham



CITY OF NEW BERN 300 Pollock Street, P.O. Box 1129 New Bern, NC 28563-1129 (252) 636-4000 Dana E. Outlaw Mayor Mark A. Stephens City Manager Brenda E. Blanco City Clerk Mary M. Hogan Director of Finance

Memorandum

TO: Mayor and Board of Aldermen

FROM: Brenda Blanco, City Clerk

DATE: July 1, 2020

SUBJECT: Appointment of Veterinarian to Review Dangerous Dogs

On June 25, 2019, Dr. Steve Stelma was appointed to serve as the veterinarian to review and make determinations of a dog's status with respect to whether it is vicious, dangerous or potentially dangerous. This is an annual appointment, and Dr. Stelma needs to be reappointed or a new veterinarian appointed to serve in this capacity.

As a reminder, the Dangerous Dog Board was established to hear any appeals of the veterinarian's decision. That Board consists of three seats, only one of which has been filled. The Police Department is working to identify qualified and interested persons to serve in the two vacant seats. Those appointees must be a NC licensed veterinarian, professional dog obedience trainer, or registered veterinary technician.

/beb

Aldermen

Sabrina Bengel Jameesha Harris Robert V. Aster Johnnie Ray Kinsey Barbara J. Best Jeffrey T. Odham



CITY OF NEW BERN 300 Pollock Street, P.O. Box 1129 New Bern, NC 28563-1129 (252) 636-4000 Dana E. Outlaw Mayor Mark A. Stephens City Manager Brenda E. Blanco City Clerk Mary M. Hogan Director of Finance

Memorandum

- TO: Alderman Jeffrey Odham
- FROM: Brenda Blanco, City Clerk

DATE: July 1, 2020

SUBJECT: Appointment of Police Civil Service Board

Mark Best's seat on the Police Civil Service Board has just expired. He may continue to serve until a new appointment is made, but is ineligible to serve a consecutive term. You are next on the rotation to make an appointment to this Board.

Any person, other than a member of the Board of Aldermen, an elective officer, a member or employee of the Police Department, a person who has served as a volunteer in the Police Department within the previous 36 months, or an employee of the City, who is a qualified voter in the municipal election in the City, shall be eligible to serve on this Board.

/beb