

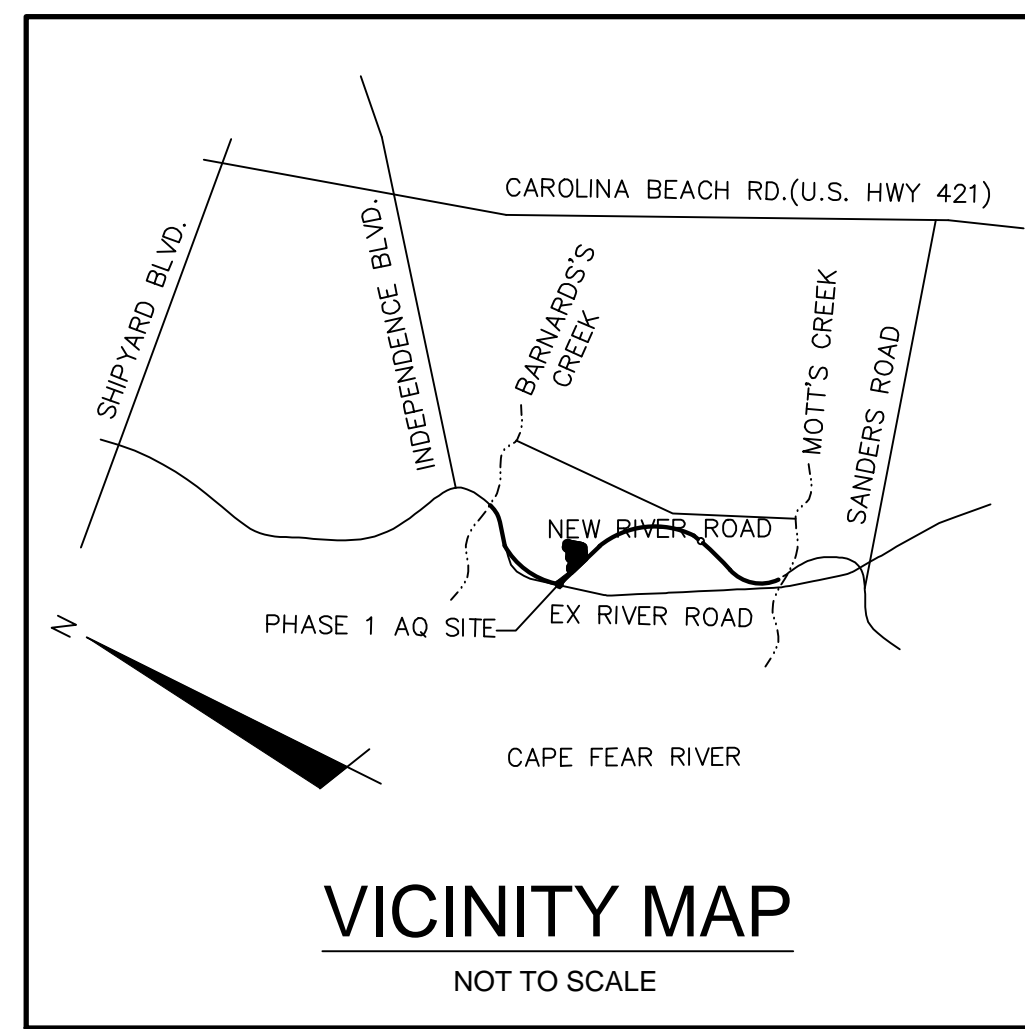
# RIVERLIGHTS

## PHASE I AGE QUALIFIED

### CITY OF WILMINGTON, NC

MARCH 2015

## SUBDIVISION REVIEW BOARD SUBMITTAL

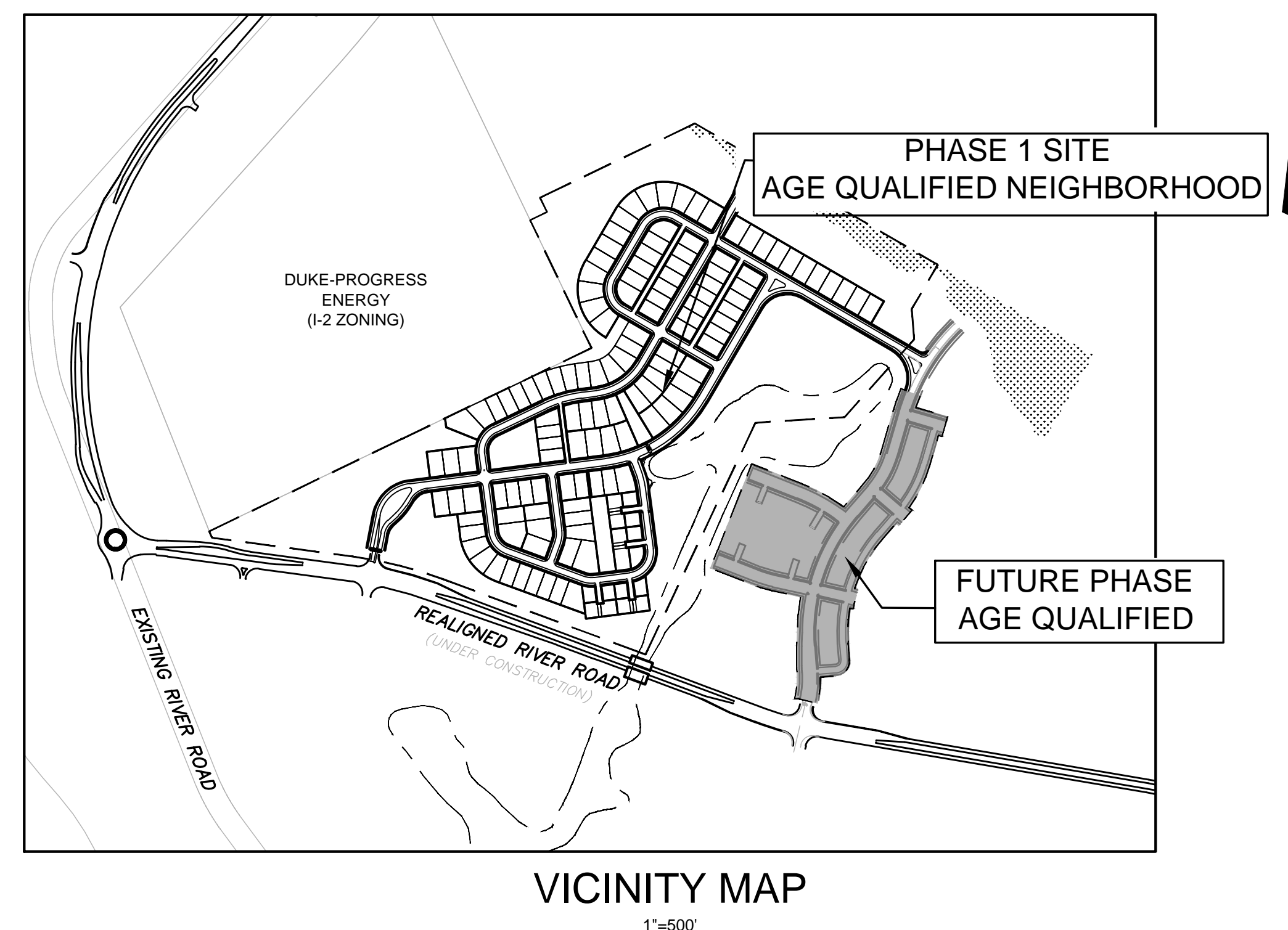


### SHEET INDEX

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17	CU-101	UTILITY PLAN
18	CU-102	UTILITY PLAN
19	CU-103	UTILITY PLAN
36	CL-101	LANDSCAPE CONCEPT PLAN

### COUNTY AND AGENCY CONTACTS

- A. City of Wilmington**  
 Planning Department  
 102 North Third Street  
 PO BOX 1810  
 Wilmington, NC 28402-1810  
 (910)341-7800  
 Contact: Ron Satterfield  
 Email: Ron.Satterfield@wilmingtonnc.gov
- B. City of Wilmington**  
 Engineering  
 212 Operations Center Drive  
 PO BOX 1810  
 Wilmington, NC 28402-1810  
 (910) 341-7807  
 Contact: Rob Gordon  
 Email: Rob.Gordon@wilmingtonnc.gov
- C. New Hanover County**  
 Sediment and Erosion Control  
 230 Government Center Drive, Suite 160  
 Wilmington, NC 28403  
 (910) 798-7432  
 Contact: Beth Wetherill  
 Email: BWetherill@nhcgov.com
- D. Cape Fear Public Utility Authority**  
 235 Government Center Drive  
 Wilmington, NC 28403  
 (910) 332-6626  
 Contact: David Dailey  
 Email: David.Dailey@cfpua.org
- E. NCDENR**  
 Division of Environmental Health  
 Public Water Supply Section  
 1634 Mail Service Center  
 Raleigh, NC 27699-1634  
 (919) 715-3226  
 Contact: Henri Ou  
 Email: heinrich.ou@ncdenr.gov



### PROJECT DATA

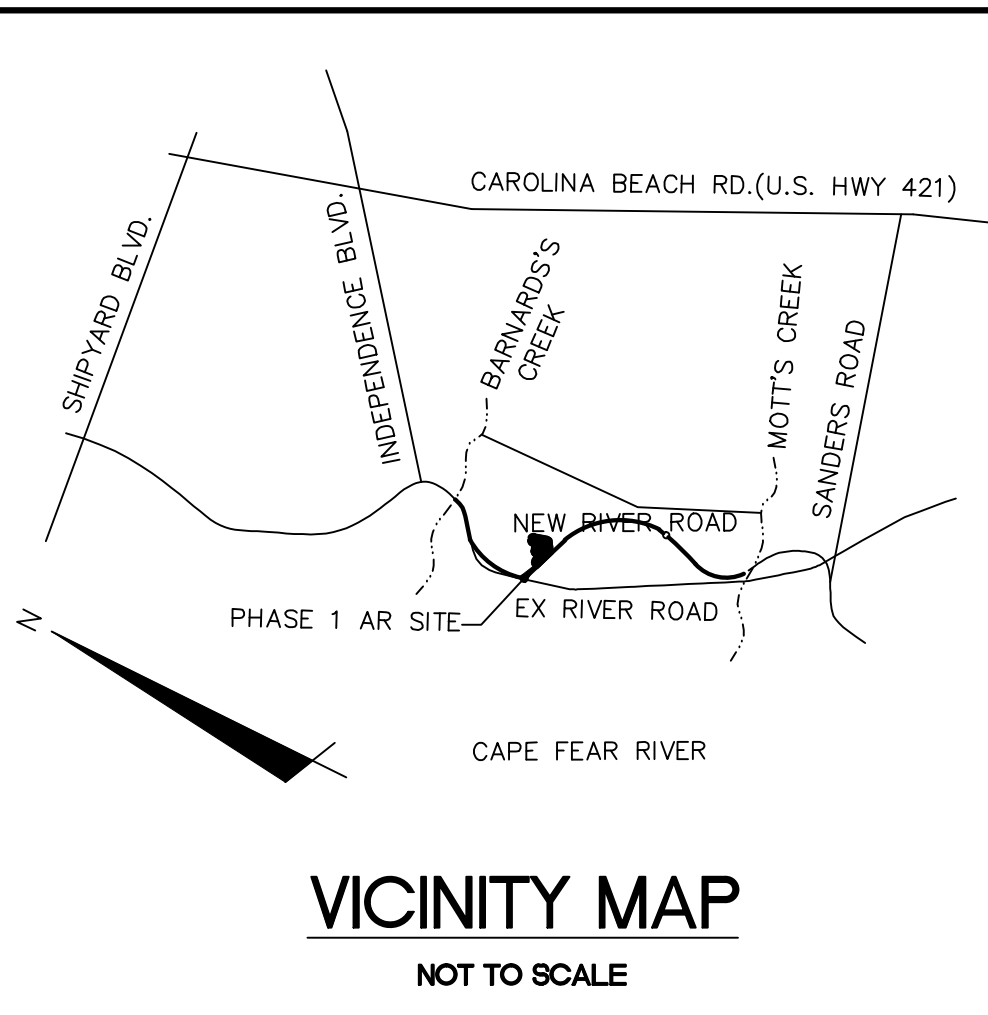
**NAME OF PROJECT:**  
 RIVERLIGHTS- PHASE 1 AGE QUALIFIED NEIGHBORHOOD  
 WILMINGTON, NORTH CAROLINA

**OWNER/DEVELOPER:**  
 NNP IV-CAPE FEAR RIVER, LLC  
 3410 RIVER ROAD, SUITE 103  
 WILMINGTON, NC 28412

**PREPARED BY:**  
 MCKIM & CREED, INC  
 243 NORTH FRONT ST  
 WILMINGTON, NC 28401  
 PHONE: (910)343-1048  
 FAX: (910)251-8282  
 CONTACT: KATHRYN ESPINOZA, PE  
 EMAIL: KESPINOZA@MCKIMCREED.COM

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





- GENERAL NOTES:**
- FLOODPLAIN INFORMATION WAS OBTAINED FROM NC FLOODPLAIN MAPPING FLOOD RISK INFORMATION SYSTEM PROGRAM. RIVERLIGHTS IS LOCATED WITHIN FIRM MAP 3720312400K, PANEL 3124 AS REVISED JUNE 02, 2006.
  - ITEMS DESIGNATED AS "PROPOSED" ARE PART OF THE RIVER ROAD REALIGNMENT PROJECT THAT IS CURRENTLY UNDER CONSTRUCTION. RIVER ROAD CONSTRUCTION TO BE COMPLETE SPRING 2016.
  - WETLANDS SHOWN IN THIS PORTION OF RIVERLIGHTS WERE DESCRIBED AS POCOSIN WETLAND AND CONSERVATION RESOURCE SETBACK LINES WERE GENERATED AS 25' MINIMUM OUTSIDE OF THE RESOURCE.
  - FINISHED FLOOR ELEVATIONS OFF ALL INHABITABLE STRUCTURES WILL BE MIN. 2'-FEET ABOVE BASE FLOOD ELEVATION
  - RIVERLIGHTS PHASE 1 AGE QUALIFIED COMMUNITY DOES NOT CONTAIN ANY LOCAL, STATE, OR FEDERALLY RECOGNIZED HISTORIC STRUCTURES OR ARCHEOLOGICAL SITES ON SITE. RIVERLIGHTS WAS ISSUED A NOTICE OF NO FURTHER ACTION LETTER DATED JUNE 2, 2008 FOLLOWING COMPLETION OF AN EA/SEPA DOCUMENT.

**CONSERVATION RESOURCE SETBACK TABLE**

CONSERVATION RESOURCE	RES	COMM
POCOSIN	25'	50'
SAVANNAH	25'	50'
BRACKISH/SALT MARSH	75'	100'

REFERENCE: LDC 18-341 (d) 5h

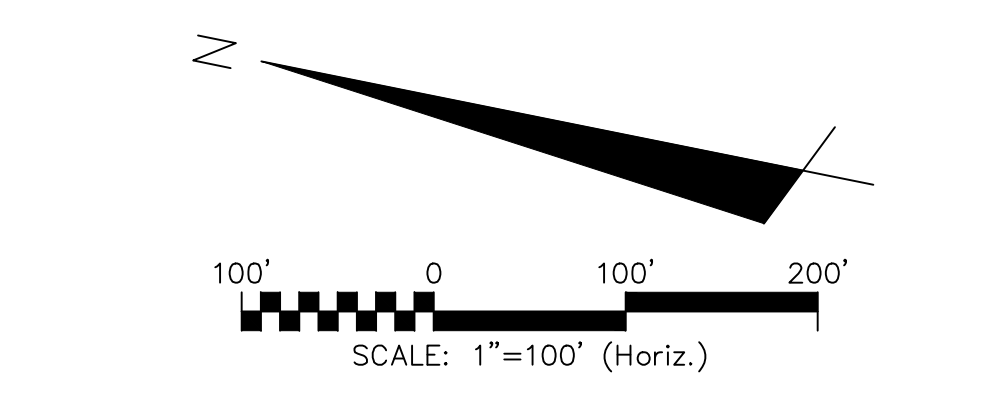
**LEGEND**

- RBC = REBAR & CAP
- ⊙ = POWER POLE
- ⊙ = SANITARY SEWER MANHOLE
- ⊙ = WETLAND
- OHE = OVERHEAD ELECTRIC LINE
- COO = CITY OF WILMINGTON CONSERVATION RESOURCE SETBACK LINE
- SS = SANITARY SEWER MAIN

**TREE LEGEND**

- ⊙ = CEDAR
- ⊙ = GUM
- ⊙ = OAK
- ⊙ = MAPLE
- ⊙ = PINE

**NOTE:** EXISTING TREE CALIPER INCH SIZE IS SHOWN WITHIN THE TREE SYMBOL



REVNO.	DESCRIPTIONS / REVISIONS	DATE

SEAL

PRELIMINARY - DO NOT USE FOR CONSTRUCTION

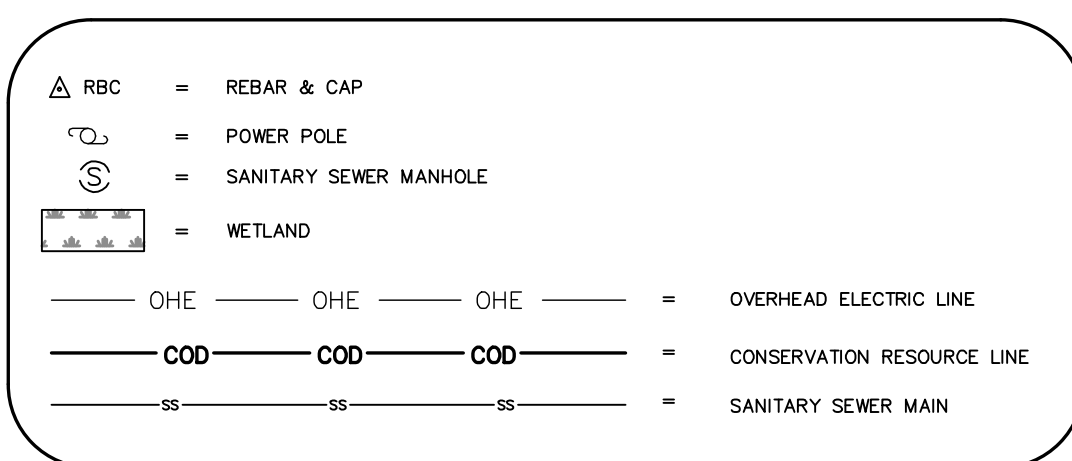
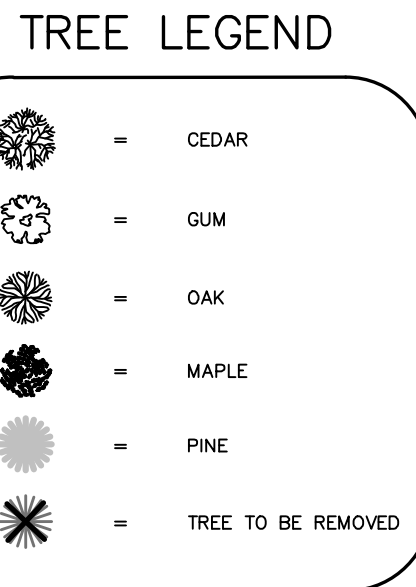
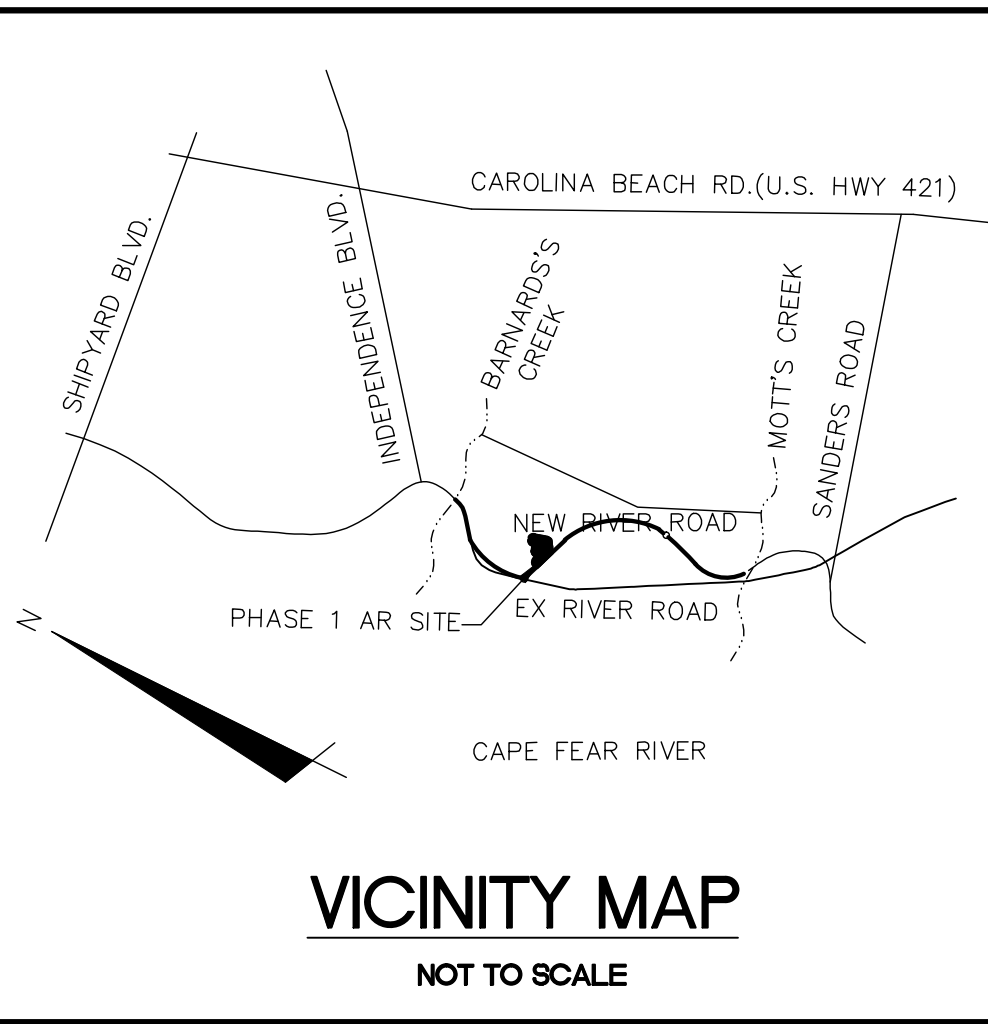
**MCKIM & CREED**  
 243 North Front Street  
 Wilmington, North Carolina 28401  
 Phone: (910)343-1048, Fax: (910)251-8282  
 License: F-1222  
 www.mckimcreed.com

**RIVERLIGHTS**  
 NORTH AMERICA SEKISUI HOUSE, LLC  
 by  
**Newland COMMUNITIES**

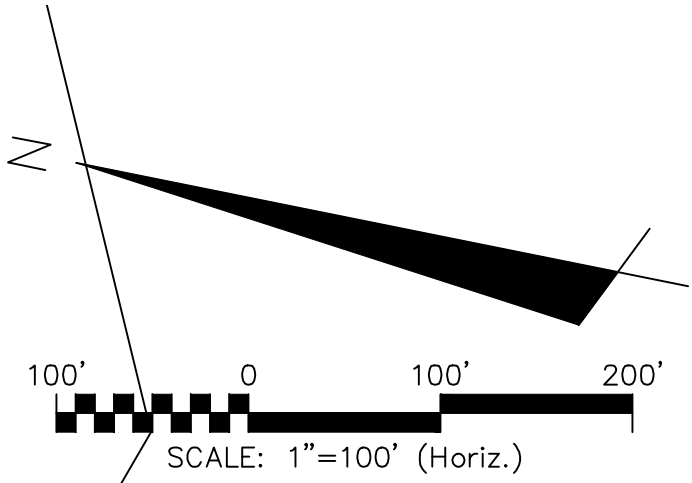
**RIVERLIGHTS  
 AGE QUALIFIED - PHASE 1**

**EXISTING CONDITIONS /  
 SITE INVENTORY PLAN**

DATE: 03/04/2015	SCALE: 1"=100'	MAC FILE NUMBER: CX-101
MCE PROJ. # 02735-0125	HORIZONTAL: 1"=100'	DRAWING NUMBER: 4
DRAWN: EEM/KCBE	VERTICAL: N/A	REVISION: A
DESIGNED: KCBE	STATUS: PRELIMINARY PLANS	
CHECKED: NIL		
PROJ. MGR: RMC		



- DEMOLITION NOTES:**
- NO EARTH DISTURBING ACTIVITIES SHALL COMMENCE UNTIL ALL PERIMETER EROSION CONTROL MEASURES ARE IN PLACE IN ACCORDANCE WITH THE EROSION CONTROL SEQUENCE SHOWN IN THESE PLANS.
  - NO EARTH-DISTURBING ACTIVITY OR OTHER WORK SHALL TAKE PLACE WITHIN WETLANDS AREAS NOTED ON SURVEY. CONTRACTOR SHALL FIELD VERIFY WETLAND LIMITS FLAGGING IS IN PLACE AND SHALL NOT ENTER WETLAND AREAS. IF WETLAND FLAGGING IS MISSING OR OTHERWISE DAMAGED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTE WETLAND LIMITS AND PREVENT DISTURBANCE OR OTHER ACTIVITY WITHIN WETLANDS.
  - THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL PROPERTY CORNER MONUMENTS, AND SHALL HAVE, AT HIS EXPENSE. ALL CORNER MONUMENTS REPLACED WHICH ARE DISTURBED BY CONSTRUCTION ACTIVITIES.
  - CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS, AT HIS EXPENSE, DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS.
  - CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH ALL REGULATIONS GOVERNING THE DEMOLITION, REMOVAL, TRANSPORTATION AND DISPOSAL DO ALL DEMOLITION DEBRIS.
  - CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS FOR EXCAVATION AND TRENCHING PROCEDURES. CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, ETC. AS NECESSARY FOR THESE OPERATIONS, AND SHALL COMPLY WITH ALL OSHA PERFORMANCE CRITERIA.
  - CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ALL UTILITIES AND APPURTENANCES TO REMAIN.



REVNO.	DESCRIPTIONS	DATE
A	CITY OF WILMINGTON SUBDIVISION REVIEW BOARD SUBMITAL	03/04/2019

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RIVERLIGHTS  
by Newland COMMUNITIES  
NORTH AMERICA SEKISUI HOUSE, LLC

RIVERLIGHTS  
AGE QUALIFIED - PHASE 1  
**TREE REMOVAL PLAN**

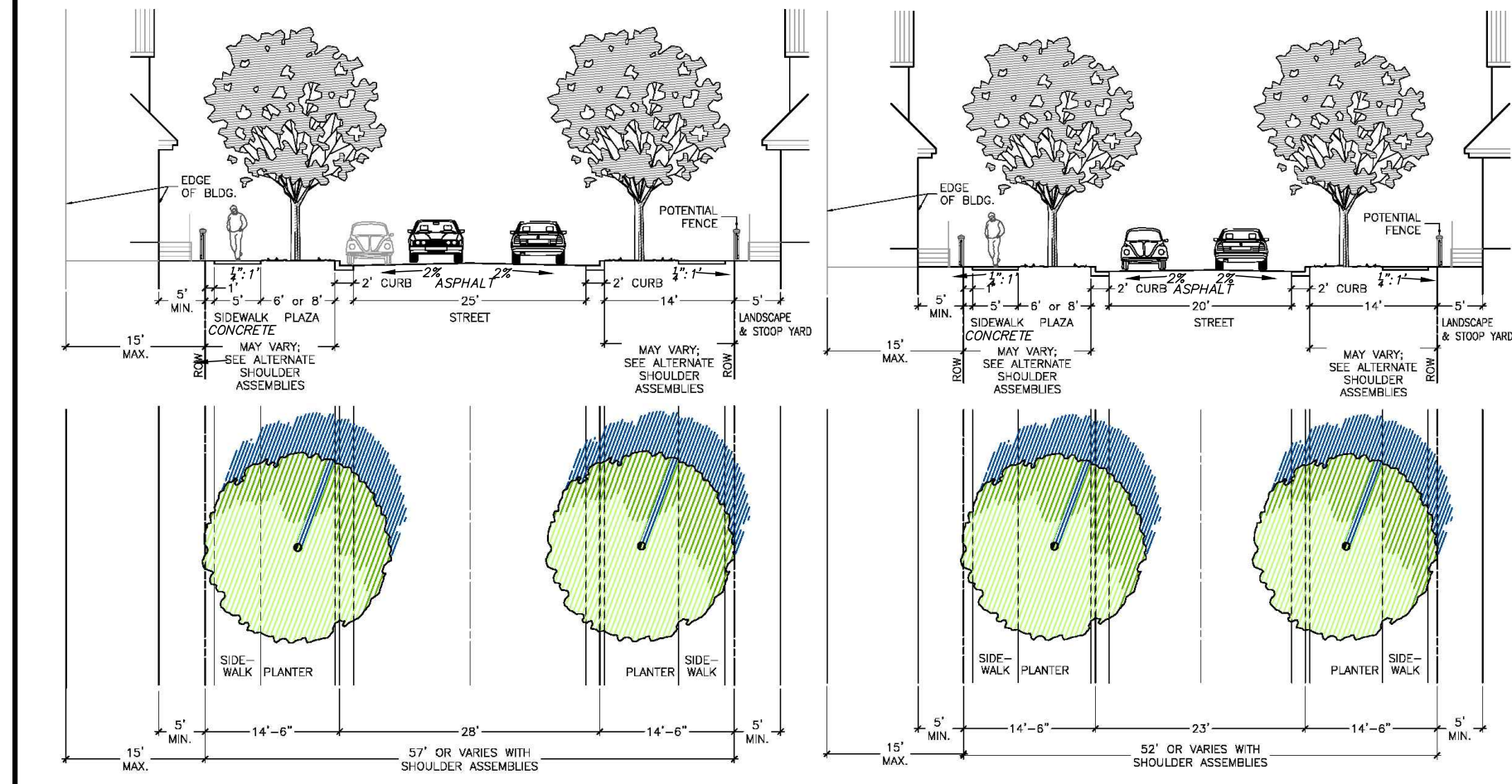
DATE: 03/04/2019	SCALE: CX-102
MCE PROJ. # 02735-0125	HORIZONTAL: 1"=100'
DRAWN: EEM/KCBE	VERTICAL: N/A
DESIGNED: KCBE	REVISION: 5
CHECKED: NIL	STATUS: PRELIMINARY PLANS
PROJ. MGR.: RMC	

SITE DATA TABLE		AGE QUALIFIED NEIGHBORHOOD—PHASE 1	
PARCEL ADDRESS	4410 RIVER ROAD		
TAX PARCEL IDENTIFICATION NUMBER	R07000-006-009-000		
ZONING DISTRICT	R-7/CD CLUSTER		
CAMA LAND USE CLASSIFICATION	TRANSITION		
WATER BODY CLASSIFICATION	SC		
TOTAL ACREAGE WITHIN RIVER LIGHTS BOUNDARY	1,329.41 ACRES ( 57,909,099.6 SF)		
TOTAL ACREAGE PHASE 1 AGE QUALIFIED BOUNDARY	65.6 ACRES (2,857,536.0 SF)		
PROPOSED NUMBER OF LOTS	141 SINGLE FAMILY		
FUTURE AMENITY SITE	2.46 ACRES (107,543.97 SF)		
TOTAL WETLANDS WITHIN PROJECT TRACT	1.95 ACRES (84,869.0 SF)		
TOTAL WETLANDS IMPACTS	0 ACRES (0 SF)		
CONSERVATION RESOURCE CALCULATIONS	REQUIRED	PROPOSED	
AREA INSIDE COD SETBACK	1.26 AC (54,922.4 SF)	3.06 AC (133,241.1 SF)	
OPEN SPACE CALCULATIONS*			
TOTAL OPEN SPACE REQUIRED	462.24 ACRES (20,133,432.0 SF)*		
TOTAL OPEN SPACE PROPOSED	26.16 ACRES (1,139,529.6 SF)		

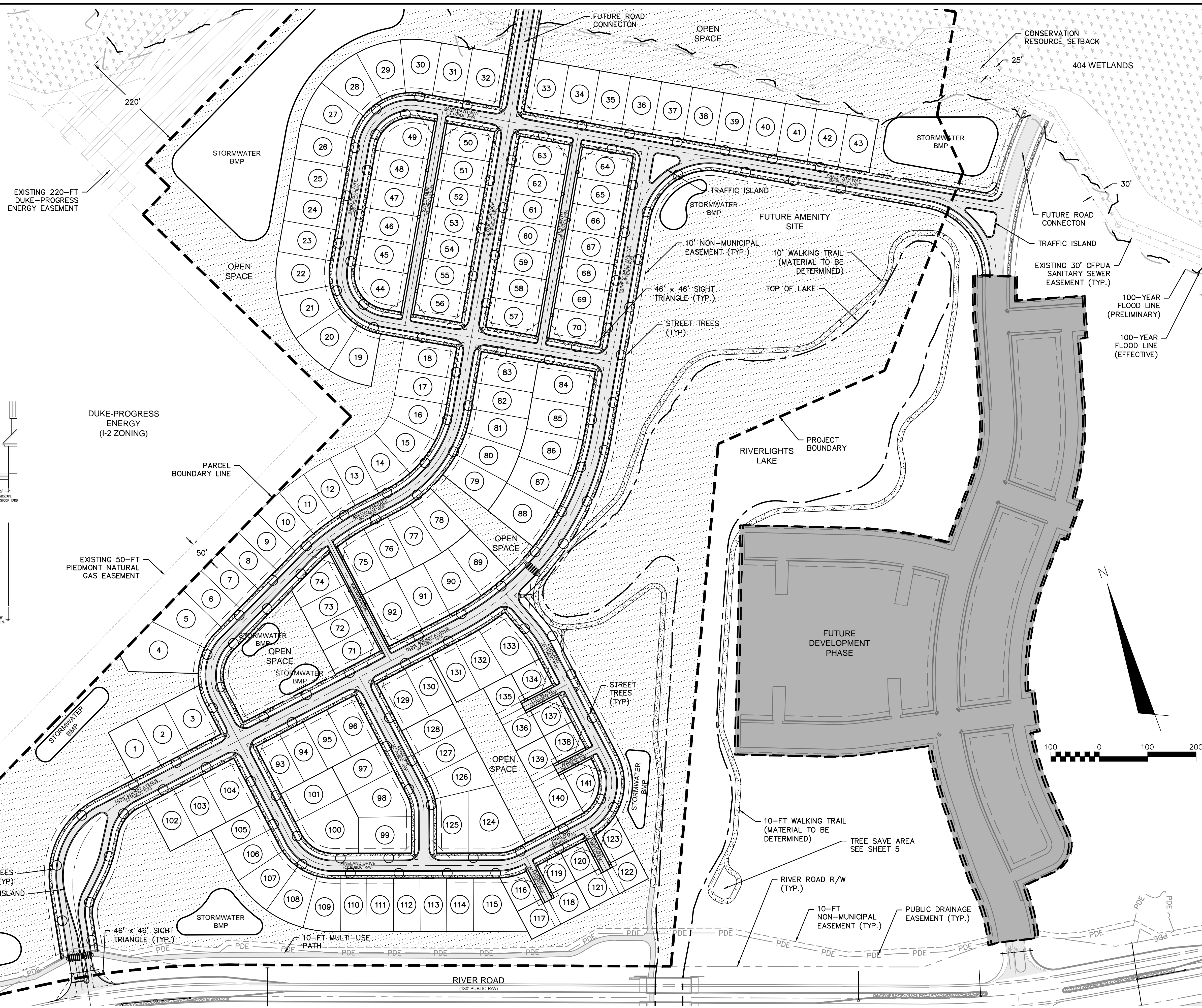
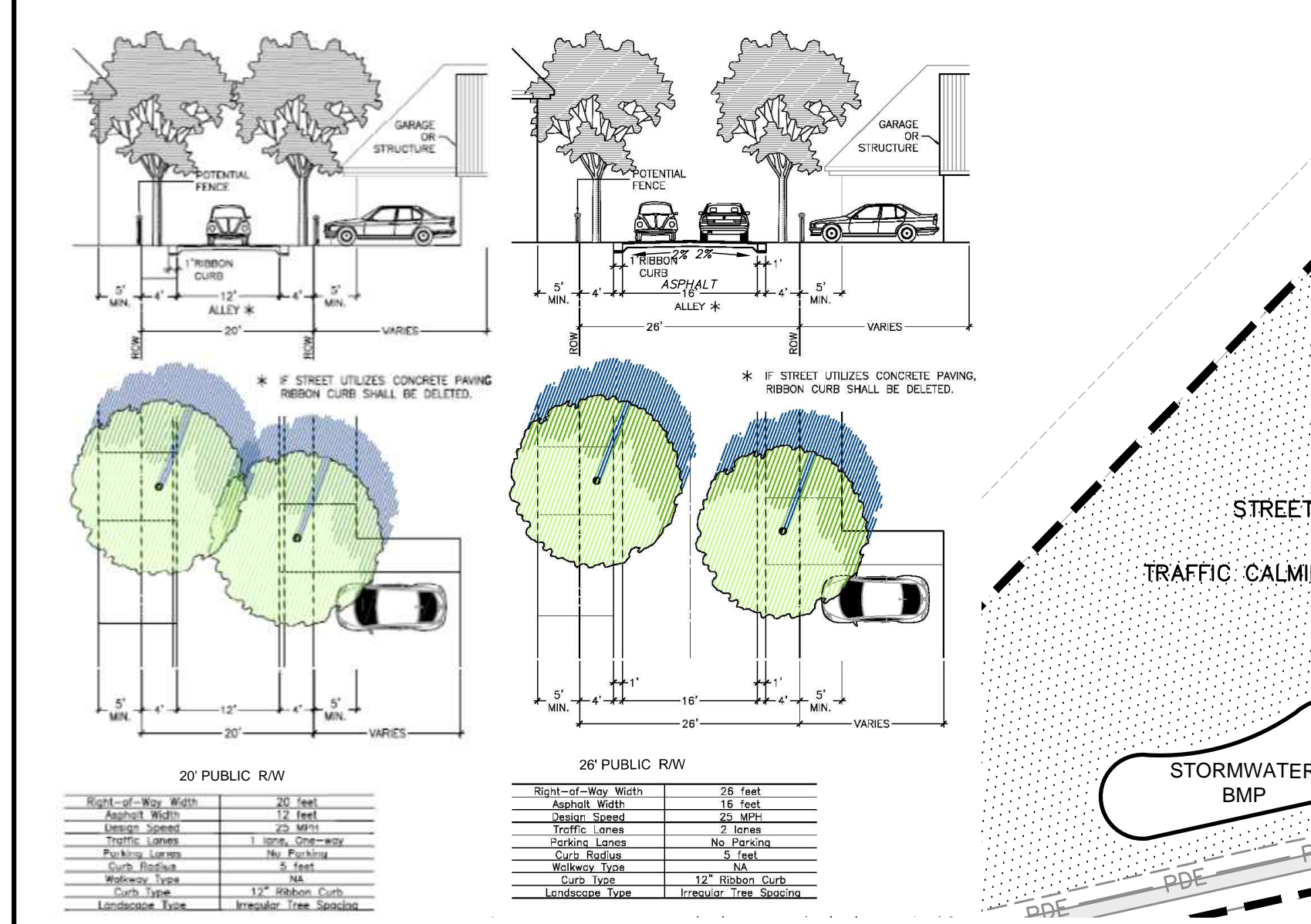
\*PROPOSED R7-CD CLUSTER FOR ENTIRE RIVER LIGHTS DEVELOPMENT = 1,155.6 ACRES  
 ( @ 40% OPEN SPACE ) = 462.24 ACRES REQUIRED FOR ENTIRE RIVER LIGHTS DEVELOPMENT

**GENERAL NOTES:**

- A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAT.
- 10 FT SEPARATION REQUIRED BETWEEN BUILDINGS.
- ZERO LOT LINES ARE PERMITTED IN CLUSTER SUBDIVISIONS.
- ZONING AND LAND USE OF ADJACENT PROPERTIES IS AS FOLLOWS:  
 NORTH - FUTURE R7-CD CLUSTER / TRANSITION  
 SOUTH - FUTURE R7-CD CLUSTER / TRANSITION  
 EAST - FUTURE R7-CD CLUSTER / TRANSITION  
 WEST - I-2 / TRANSITION AND CONSERVATION AREA



57' PUBLIC RW		52' PUBLIC RW	
Right-of-Way Width	57 feet	Right-of-Way Width	52 feet
Asphalt Width	24 feet	Asphalt Width	24 feet
Concrete Width	12 feet	Concrete Width	12 feet
Traffic Lanes	2 lanes	Traffic Lanes	2 lanes
Shoulder Lanes	2 lanes	Shoulder Lanes	No Parking
Garage Driveway	10 feet	Garage Driveway	10 feet
Walkway Type	3 light shoulders	Walkway Type	3 light shoulders
Light Type	600 x 2	Light Type	600 x 2
Landscaping Type	10' x 10' tree	Landscaping Type	10' x 10' tree



REVNO.	DESCRIPTIONS	DATE

SEAL  
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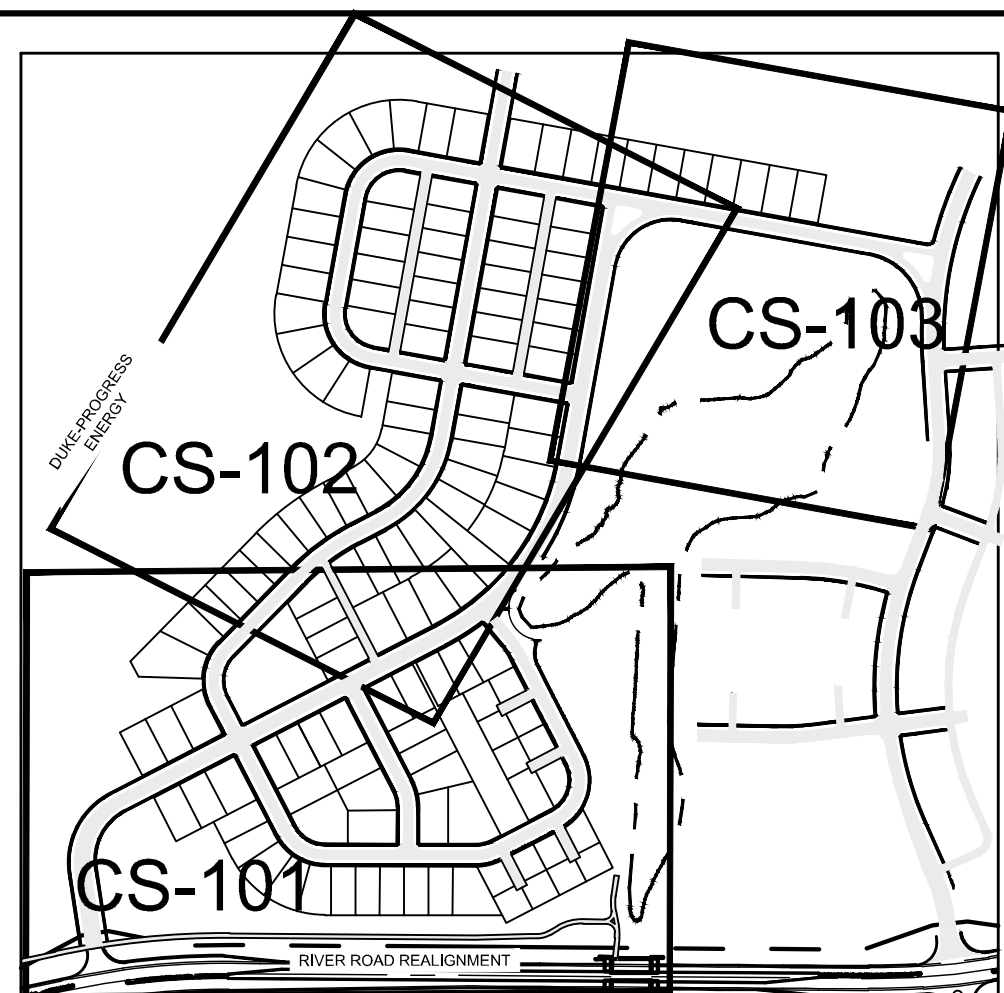
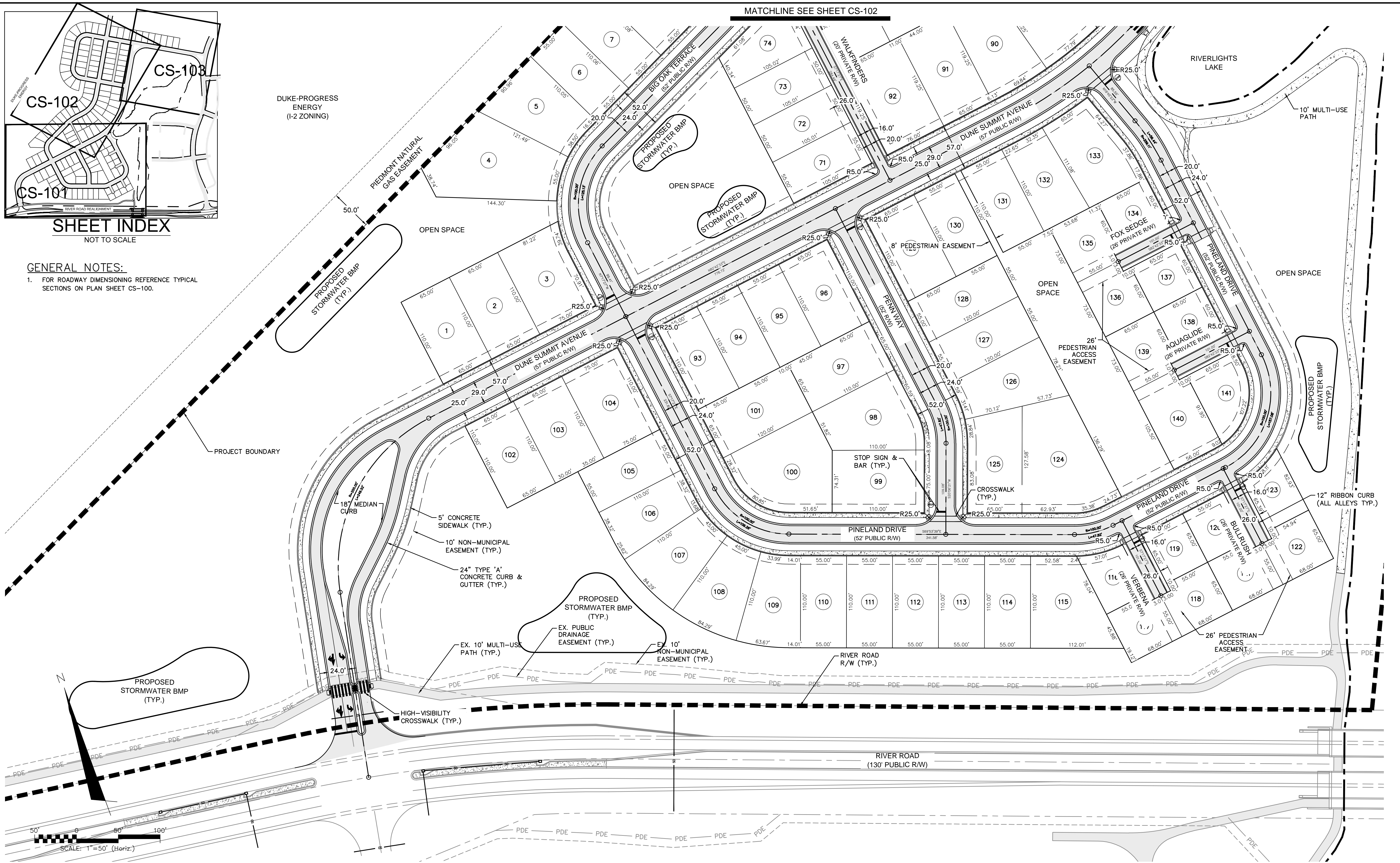
**MCKIM & CREED**  
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 Wilmington, North Carolina 28401  
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 License: F-1222  
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**RIVERLIGHTS**  
 by Newland COMMUNITIES  
 NORTH AMERICA SEKISUI HOUSE, LLC

**RIVERLIGHTS AGE QUALIFIED - PHASE 1**  
**OVERALL SITE PLAN**

DATE:	03/04/2015	SCALE:		MAC FILE NUMBER:	CS-100
MCE PROJ. #	02735-0125	HORIZONTAL:	1"=50'	DRAWING NUMBER:	7
DRAWN:	EEM/KCBE	VERTICAL:	N/A		
DESIGNED:	KCBE				
CHECKED:	NUL				
PROJ. MGR.:	RMC				
STATUS: PRELIMINARY PLANS					REVISION: ---

MATCHLINE SEE SHEET CS-102

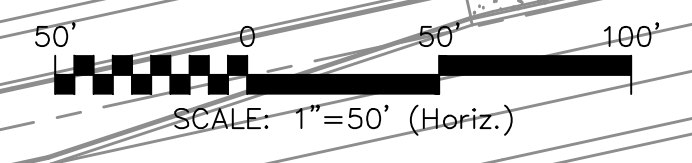


### SHEET INDEX

NOT TO SCALE

#### GENERAL NOTES:

- FOR ROADWAY DIMENSIONING REFERENCE TYPICAL SECTIONS ON PLAN SHEET CS-100.



SCALE: 1"=50' (Horiz.)

REV. NO.	DESCRIPTION	DATE
A	CITY OF WILMINGTON SUBDIVISION REVIEW BOARD SUBMITTAL	03/04/2015

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 Wilmington, North Carolina 28401  
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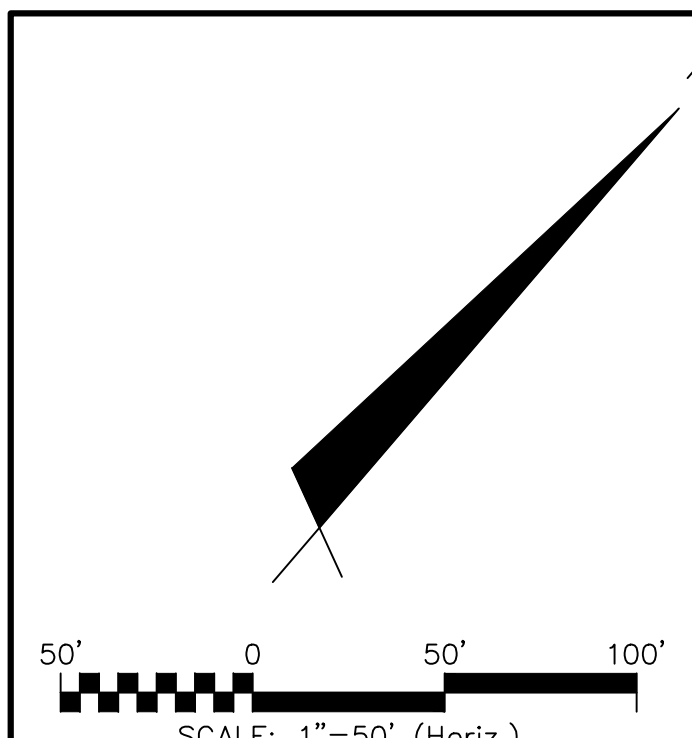
**RIVERLIGHTS**  
 Newland by COMMUNITIES  
 NORTH AMERICA SENIUS HOUSE, LLC

**RIVERLIGHTS**  
 AGE QUALIFIED - PHASE 1  
 SITE PLAN

DATE:	03/04/2015
MCE PROJ. #	02735-0125
DRAWN	EEM/KCBE
DESIGNED	KCBE
CHECKED	NJL
PROJ. MGR.	RMC

SCALE	MAC FILE NUMBER
HORIZONTAL: 1"=50'	CS-101
VERTICAL: N/A	DRAWING NUMBER
	14
	REVISION

STATUS: PRELIMINARY PLANS



CITY OF WILMINGTON  
CONSERVATION OF RESOURCES  
LINE PER LDC ARTICLE 6,  
DIVISION III, SECTION 18-341

EXISTING 30' CPWA  
SANITARY SEWER  
EASEMENT (TYP.)

EXISTING CPWA  
SANITARY SEWER

PROJECT BOUNDARY

PRELIMINARY  
100-YEAR  
FLOODPLAIN

EFFECTIVE  
100-YEAR  
FLOODPLAIN

MATCHLINE SEE SHEET CS-101

MATCHLINE SEE SHEET CS-103

REV. NO.	DESCRIPTIONS	DATE
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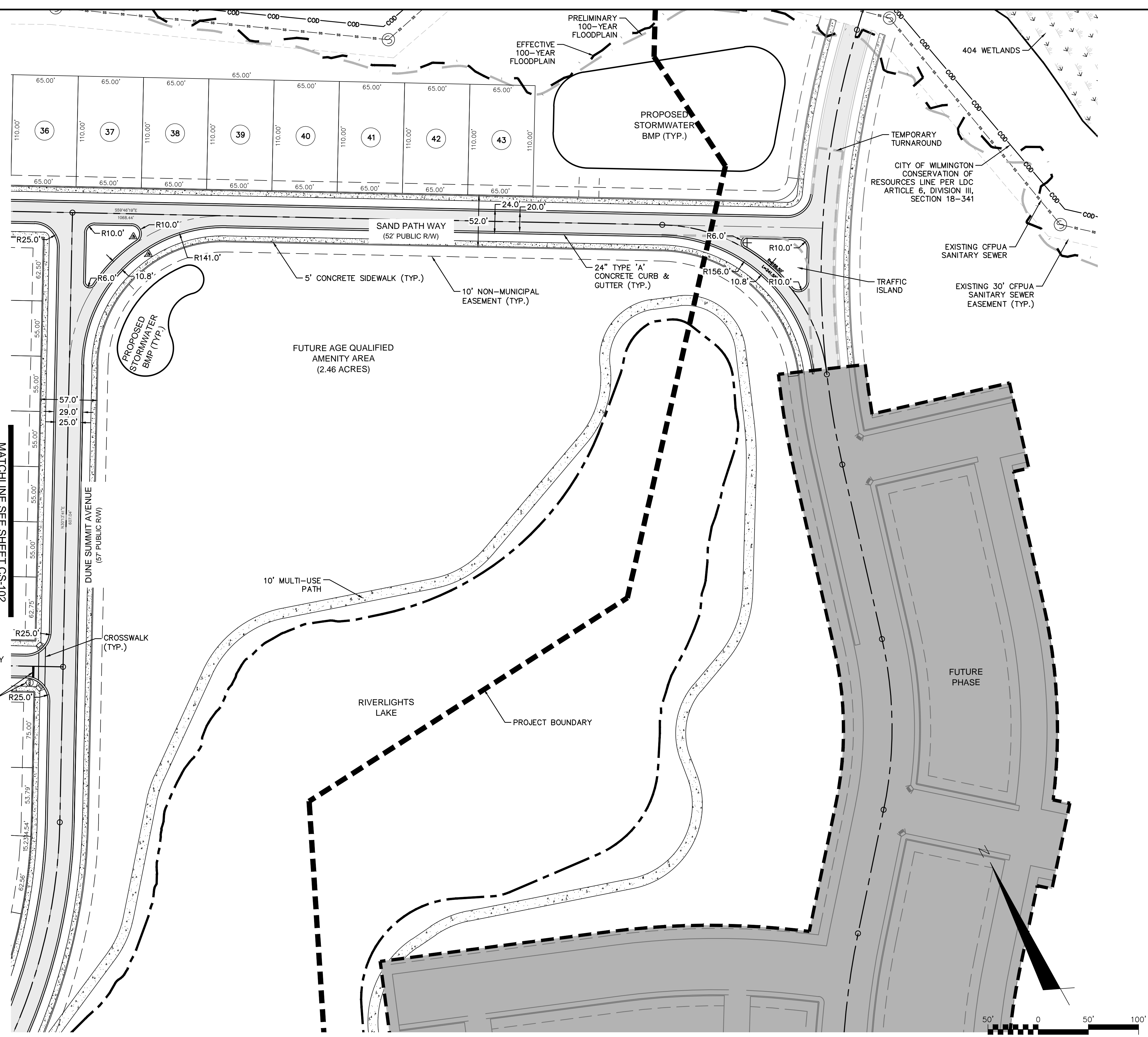
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Newland by COMMUNITIES

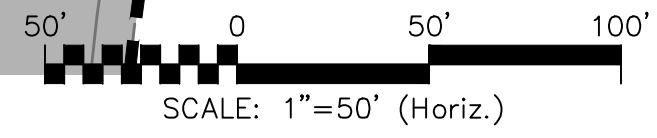
**RIVERLIGHTS  
AGE QUALIFIED - PHASE 1**

**SITE PLAN**

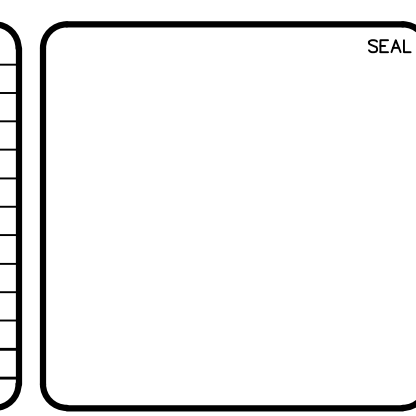
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DRAWN: EEM/KCBE	VERTICAL: N/A	
DESIGNED: KCBE		
CHECKED: NJL		
PROJ. MGR: RMC		
STATUS: PRELIMINARY PLANS		REVISION: ---



MATCHLINE SEE SHEET CS-102



REV. NO.	DESCRIPTIONS	DATE
A	CITY OF WILMINGTON SUBDIVISION REVIEW BOARD SUBMITTAL	03/04/2015



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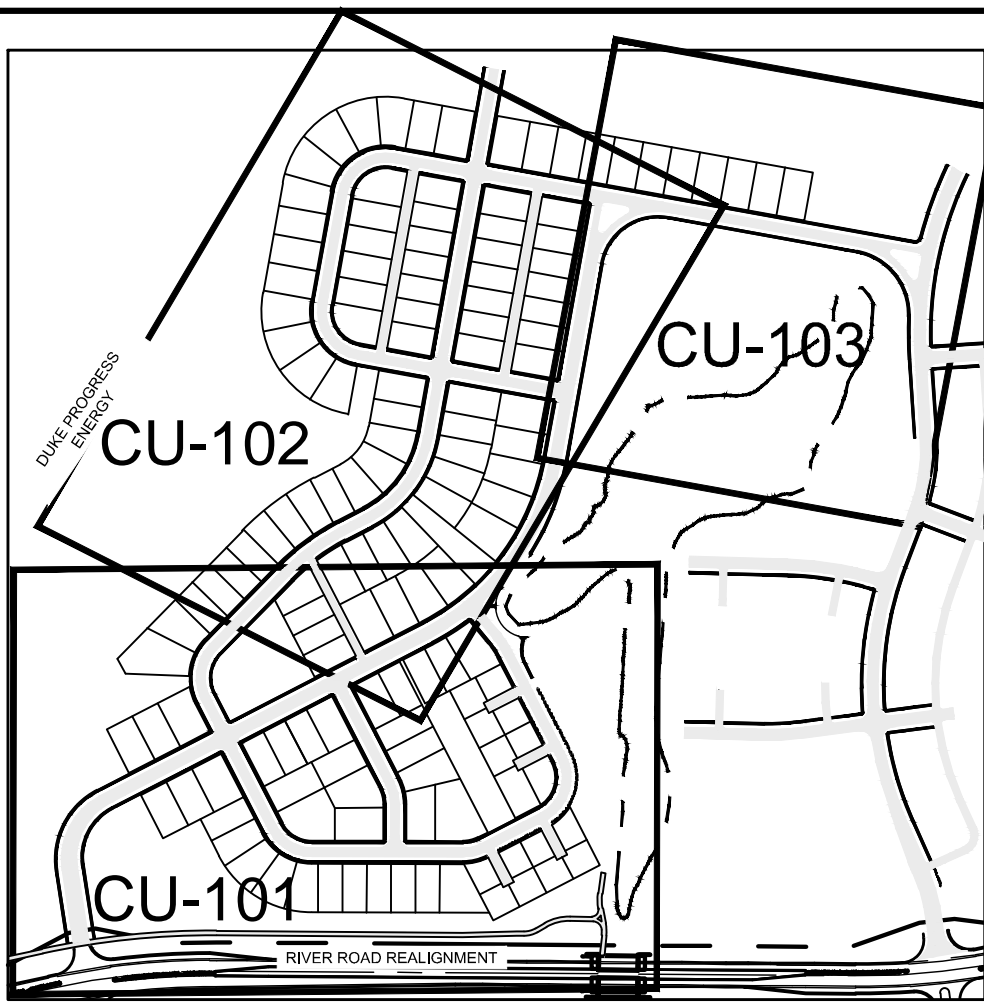
**RIVERLIGHTS**  
Newland by COMMUNITIES

RIVERLIGHTS  
AGE QUALIFIED - PHASE 1

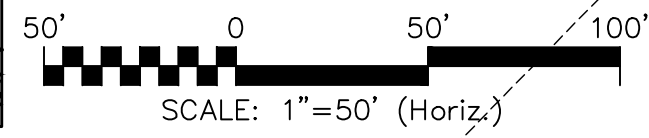
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**SITE PLAN**

DATE: 03/04/2015	SCALE: 1"=50'	M&C FILE NUMBER: CS-103
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DRAWN: EEM/KCBE	VERTICAL: N/A	
DESIGNED: KCBE		
CHECKED: NJL		
PROJ. MGR: RMC		
STATUS: PRELIMINARY PLANS		

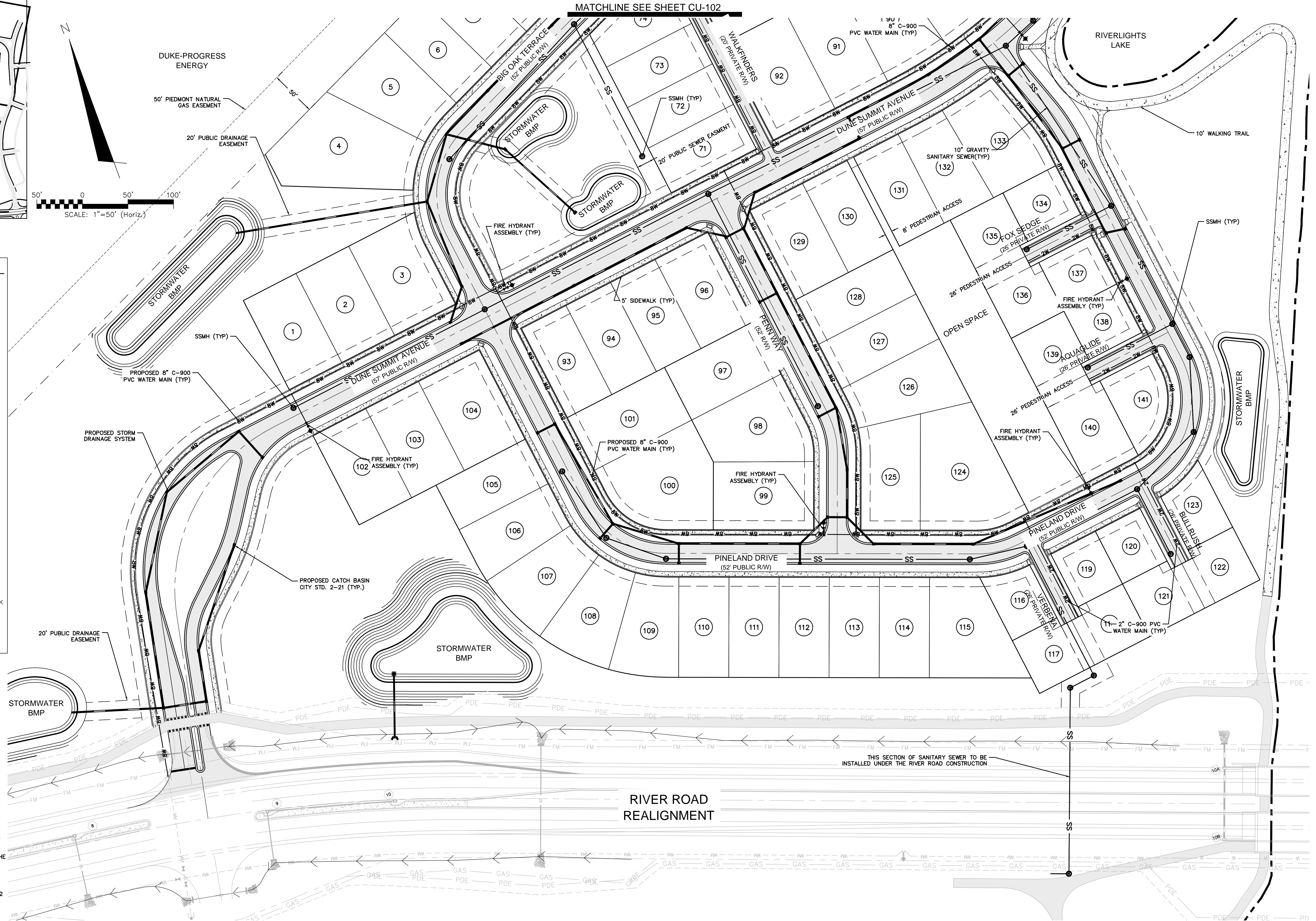


**SHEET INDEX**  
NOT TO SCALE



**LEGEND**

SS	SANITARY SEWER LINE
BW	WATER MAIN
(thick BW)	STORMWATER DRAINAGE
(dashed SS)	EXISTING SANITARY SEWER LINE
(dashed W)	EXISTING WATER MAIN
(dashed FM)	EXISTING FORCE MAIN
(thick BW)	STORMWATER DRAIN
(triangle)	STORMWATER OUTLET
(circle)	EXISTING MANHOLE
(circle with dot)	SANITARY SEWER MANHOLE
(circle with cross)	SANITARY SEWER CLEANOUT
(square)	WATER METER
(square with cross)	FIRE HYDRANT ASSEMBLY (FHA)
(dashed line)	ROADWAY CENTERLINE
(dashed line)	ROW
(dashed line)	LOT LINE
(dashed line)	PRELIMINARY 100-YR FLOOD LINE
(dashed line)	EFFECTIVE 100-YR FLOOD LINE
(dashed line)	CONSERVATION RESOURCE SETBACK
(dashed line)	UTILITY EASEMENT
(dashed line)	EXISTING WETLANDS



- GENERAL NOTES:**
- CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING. 1-800-632-4949
  - THE BELLSOUTH CONTACT IS STEVE DAYVAULT, BUILDING INDUSTRY CONSULTANT (910) 392-8712. CONTACT HIM PRIOR TO STARTING THE PROJECT IN ORDER TO FACILITATE GOOD COMMUNICATION AND MAXIMUM FLEXIBILITY.
  - THE PROCESS FOR TELEPHONE CABLE PLACEMENT:
    - FINAL GRADE WILL NEED TO BE ESTABLISHED
    - POWER WILL PLACE THEIR CABLE FIRST APPROX 3 FT DEEP
    - BELLSOUTH/CABLE TV WILL THEN PLACE THEIR CABLE APPROX 2 FT DEEP
  - ALL UTILITIES, BOTH PUBLIC AND PRIVATE, THAT SERVE A PROJECT SHALL BE UNDERGROUND.

REV. NO.	DESCRIPTIONS	DATE
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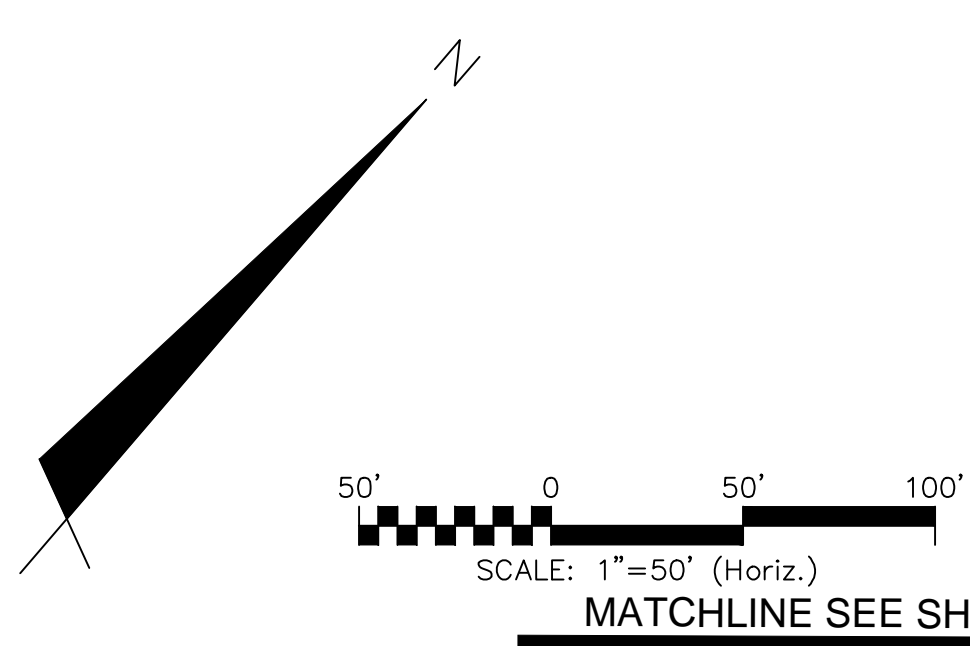
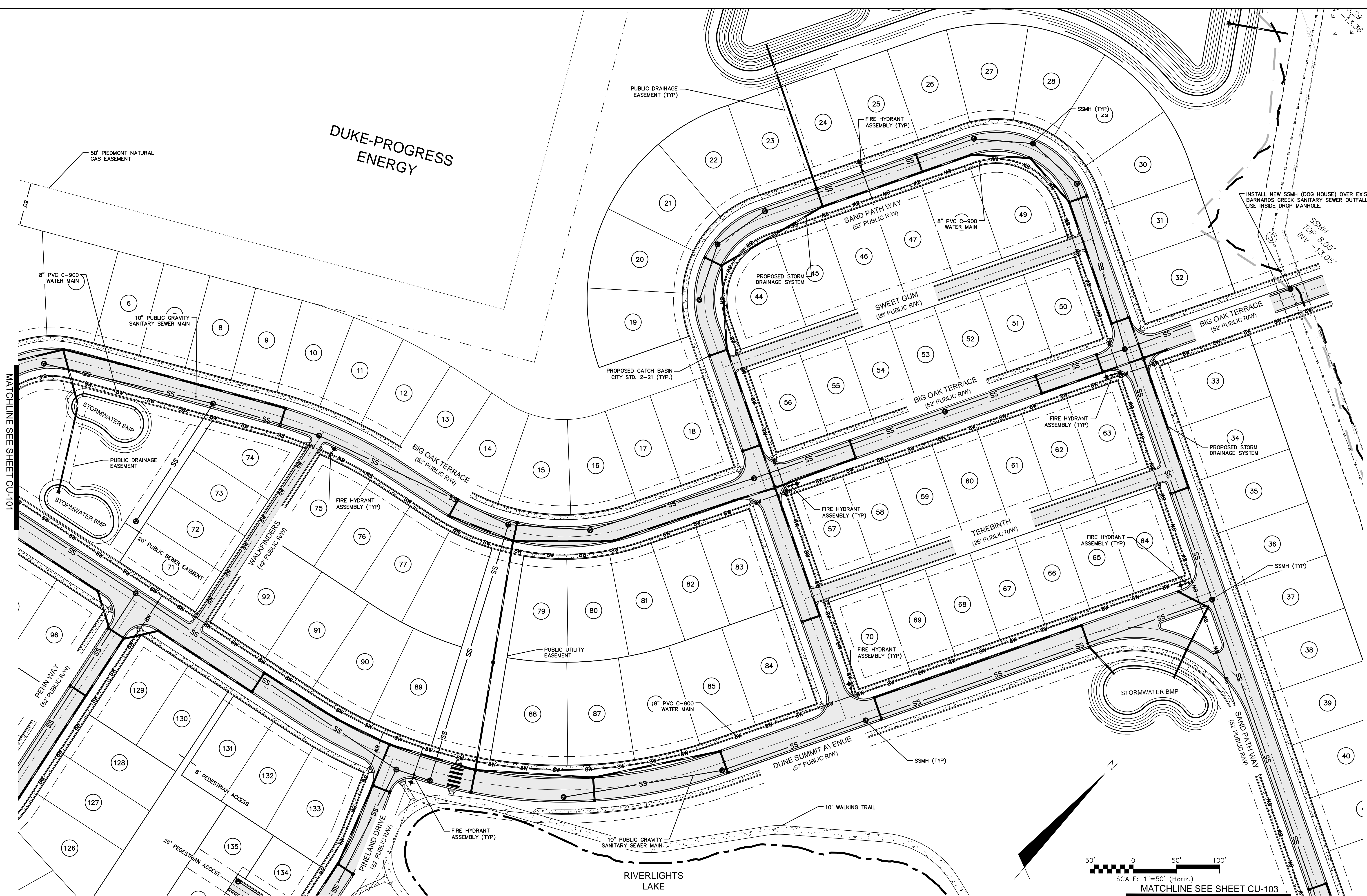
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**RIVERLIGHTS**  
Newland by COMMUNITIES  
NORTH AMERICA SENESCU HOUSE, LLC

**RIVERLIGHTS**  
AGE QUALIFIED - PHASE 1  
**UTILITY PLAN**

DATE: 03/04/2015	SCALE: HORIZONTAL: 1"=50'	MAC FILE NUMBER: CU-101
MCE PROJ. # 02735-0125	CHECKED: NJL	DRAWING NUMBER: 17
DRAWN: EEM/KCBE	PROJ. MGR: RMC	REVISION: ----
DESIGNED: KCBE	STATUS: PRELIMINARY PLANS	





REV. NO.	DESCRIPTIONS	DATE
A	CITY OF WILMINGTON SUBDIVISION REVIEW BOARD SUBMITTAL	03/04/2015

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**RIVERLIGHTS**  
 by  
 Newland COMMUNITIES

**RIVERLIGHTS  
AGE QUALIFIED - PHASE 1**

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**UTILITY PLAN**

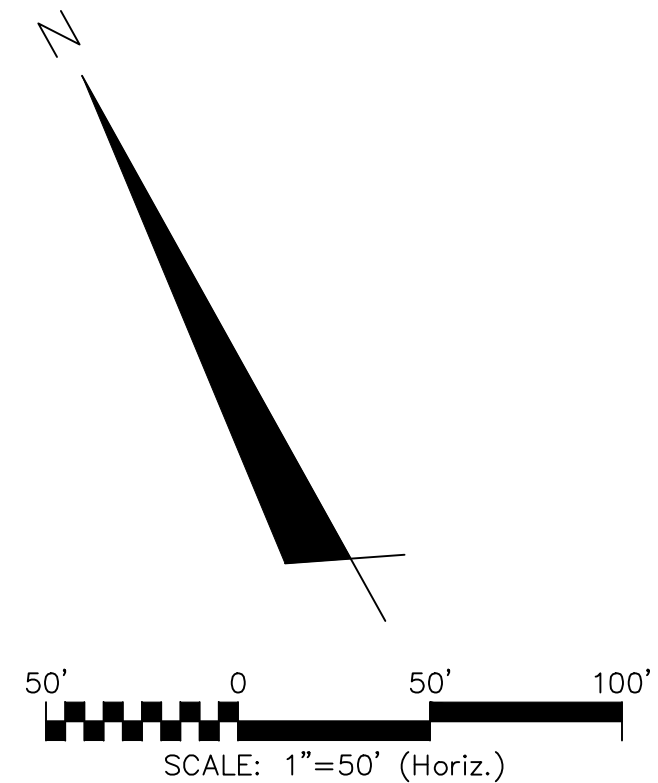
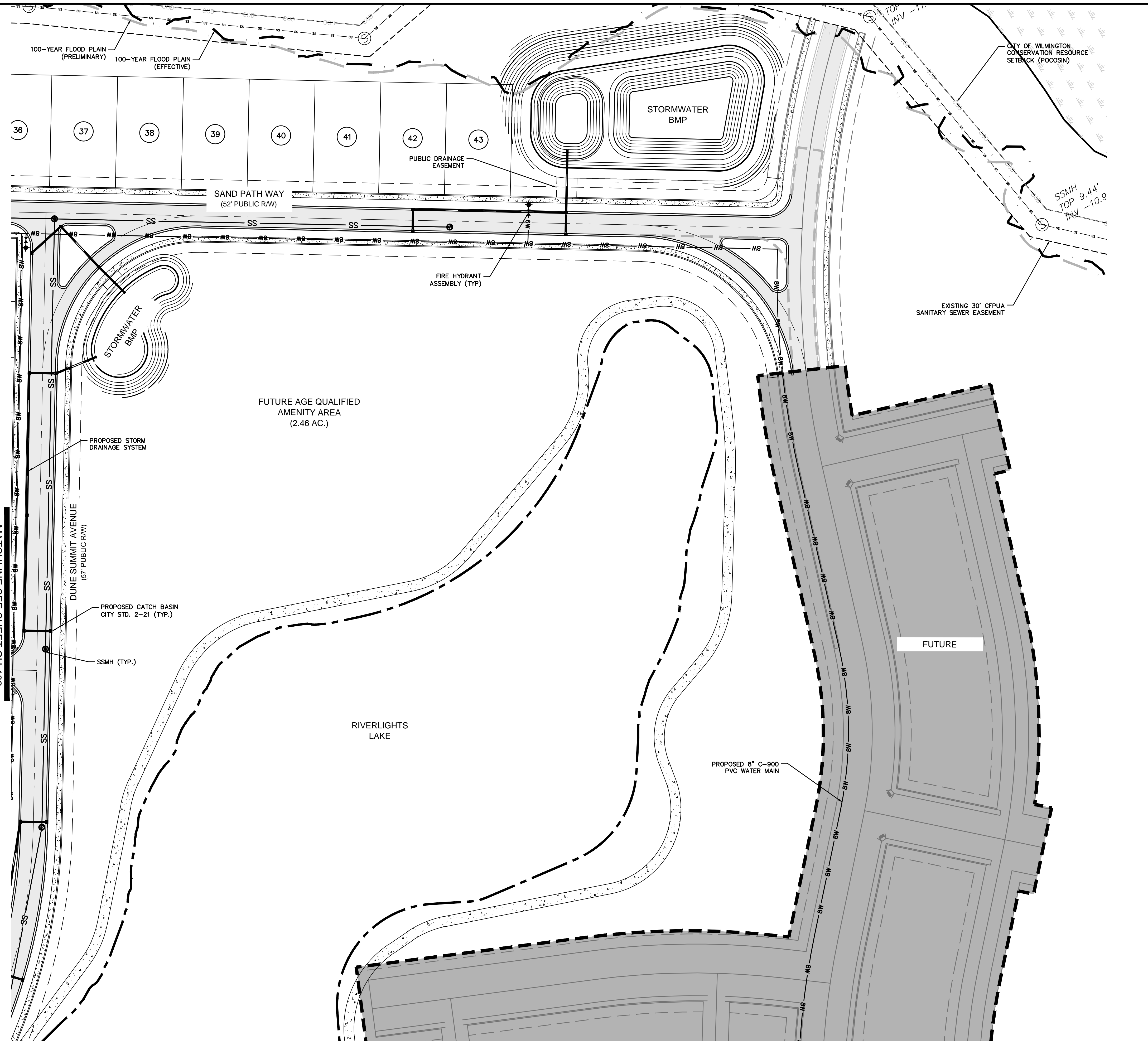
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DRAWN: EEM/KCBE	VERTICAL: N/A	REVISION: ----
DESIGNED: KCBE	STATUS: <b>PRELIMINARY PLANS</b>	
CHECKED: NJL		
PROJ. MGR: RMC		

**UTILITY NOTES:**

- SCHEDULE A PRECONSTRUCTION MEETING WITH CAPE FEAR PUBLIC UTILITY AUTHORITY 48 HOURS PRIOR TO CONSTRUCTION OF WATER AND SEWER LINES.
- WATER AND SANITARY SEWER UTILITY MAINS ARE PRIVATE BEYOND THE PUBLIC STREET RIGHT-OF-WAY.
- THIS PROJECT SHALL COMPLY WITH THE CFPWA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND NCDENR HAS ISSUED THE "FINAL APPROVAL".
- ALL COMMERCIAL WATER SERVICES AND ANY IRRIGATION SYSTEMS SUPPLIED BY CFPWA WATER SHALL HAVE A BACKFLOW PREVENTION DEVICE ACCEPTABLE TO CFPWA AND APPROVED BY USFCO/CCHR OR ASSE.
- BACKFLOW PREVENTION AND METERS WILL BE PROVIDED FOR BOTH FIRE LINES (RPDA) AND DOMESTIC SERVICE (RPZ). FIRE LINE BACKFLOW PREVENTER AND DOMESTIC SERVICE BACKFLOW PREVENTER WILL BE LOCATED AS SHOWN ON THE UTILITY PLANS. INSTALLER OF BACKFLOW PREVENTERS MUST CONTACT CFPWA PRIOR TO INSTALLING UNITS TO GIVE CFPWA THE OPTION TO VERIFY INSTALLATION PROCEDURES.
  - REDUCED PRESSURE PRINCIPLE ASSEMBLY FOR DOMESTIC WATER SERVICE
  - REDUCE PRESSURE DETECTOR ASSEMBLY WILL BE UTILIZED FOR THE BACKFLOW PREVENTER ON THE FIRE SERVICE.
- IF THE CONTRACTOR DESIRES CFPWA WATER FOR CONSTRUCTION HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
- WATER: 1.5" & 2" PVC MAINS SHALL BE CONSTRUCTED USING ASTM D2241, IPS, GASKETED PIPE, SDR 21. 4"-12" PVC MAINS AND SERVICES SHALL BE CONSTRUCTED USING AWWA C-900 PVC, CL235 (DR-18).
- SANITARY SEWER: FOR PIPE SIZES 4" AND 6" PIPE SHALL BE SCH 40 CONFORMING TO THE REQUIREMENTS OF ASTM D1785 WITH SOLVENT WELD JOINTS CONFORMING TO ASTM D2872. FOR PIPE SIZES 8" THROUGH 12", PIPE SHALL BE CLASS 150, DR18 CONFORMING TO THE REQUIREMENTS OF AWWA C900 WITH ELASTOMERIC PUSH-ON JOINTS CONFORMING TO ASTM D3212 OR ASTM D3139.
- WATER AND SEWER SERVICES CANNOT BE ACTIVATED ON NEW MAINS UNTIL ENGINEER'S CERTIFICATION AND AS-BUILTS ARE RECEIVED AND "FINAL APPROVAL" ISSUED BY PUBLIC WATER SUPPLY SECTION OF NCDENR AND "FINAL ENGINEERING CERTIFICATION" ISSUED BY DIVISION OF WATER QUALITY OF NCDENR.
- PVC WATER MAINS AND POLYETHYLENE SERVICES ARE TO BE MARKED WITH NO. 10 SINGLE STRAND INSULATED COPPER WIRE INSTALLED THE ENTIRE LENGTH AND STRAPPED TO THE PIPES WITH DUCT TAPE. THE INSULATED WIRE IS TO BE STRIPPED TO BARE WIRE AND SECURED TO ALL VALVES. THIS WIRE IS TO BE ACCESSIBLE AT ALL FIRE HYDRANTS AND WATER METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES.
- SITE UTILITY CONTRACTOR TO PROVIDE WATER AND SANITARY SEWER SERVICE TO WITHIN 5 FEET OF THE BUILDING. CONTRACTOR SHALL COORDINATE SITE PLAN CONNECTIONS WITH THE ARCHITECTURAL BUILDING PLANS.
- MAXIMUM BENDING RADIUS FOR 8" C-900 PVC WATER MAIN BENDS IS 380' (ONE-HALF MANUFACTURER'S RECOMMENDED ALLOWABLE LONGITUDINAL BENDING).
- MANHOLES SHALL BE INSTALLED AT EACH DEFLECTION OF LINE AND/OR GRADE WITH A MINIMUM DROP OF 0.2 FEET. MANHOLES FOR SEWERS GREATER THAN 21 INCHES IN DIAMETER SHALL BE 5 FOOT MANHOLES. MANHOLES FOR SEWERS 12 FEET OR DEEPER SHALL BE MINIMUM 5 FOOT DIAMETER. MANHOLE TOPS SHALL BE SET FLUSH WITH PAVEMENT WHERE INSTALLED IN A STREET.
- SERVICE CONNECTIONS FOR THE SANITARY SEWER LINES SHOULD BE PERPENDICULAR FROM THE MAIN LINE TO THE EDGE OF THE SERVICED LOT'S RIGHT OF WAY LINE OR EASEMENT WITH A MINIMUM GRADE OF 1/4" INCH/FOOT FOR 4 INCH AND .6 FOOT/100 FOOT FOR 6 INCH. ALL CLEANOUTS SHALL EXTEND A MINIMUM OF 6 INCHES ABOVE THE FINISHED GRADE. WHERE A SERVICE LINE IS CONNECTED TO A MANHOLE, THE LINE SHALL TERMINATE AT THE EDGE OF THE INVERT IN THE MANHOLE. NO CLEANOUTS SHALL BE PLACED IN STREETS, SIDEWALKS, PARKING AREAS, OR DRIVEWAYS.
- ALL SANITARY SEWER LINES ARE 8" PVC SDR 35 UNLESS OTHERWISE NOTED AND ALL WATER MAIN LINES ARE 8" DI CLASS 350 UNLESS OTHERWISE NOTED. ALL SANITARY SEWER SERVICES ARE 4" SCHEDULE 40 PVC AND ALL WATER MAIN SERVICES ARE 1".
- SANITARY SEWER WITHIN PRIVATE EASEMENTS TO BE OWNED, OPERATED AND MAINTAINED BY HOME OWNERS ASSOCIATION OR AGENT THEREOF.
- UNDERGROUND UTILITIES: ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND, EXCEPT WHERE SUCH PLACEMENT IS PROHIBITED OR DEEMED IMPRACTICAL BY THE UTILITY PROVIDER. UNDERGROUND TERMINAL FACILITIES FOR STREET LIGHTING ALONG THE PUBLIC STREETS ABUTTING THE SUBJECT SITE SHALL BE INSTALLED BY THE DEVELOPER.
- MINIMUM OF 36" COVERAGE ABOVE ALL WATERMANS.
- MINIMUM OF 36" VERTICAL SEPARATION BETWEEN WATERLINES AND STORMDRAIN CURB INLETS.

**RELATION OF WATER MAINS TO SEWERS:**

- LATERAL SEPARATION OF SEWERS AND WATER MAINS: WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10 FOOT LATERAL SEPARATION, IN WHICH CASE:
  - THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, OR
  - THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND ABOVE THE TOP OF THE SEWER.
- CROSSING A WATER MAIN OVER A SEWER MAIN: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 24 INCHES ABOVE THE TOP OF THE SEWER MAIN. UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION - IN WHICH CASE BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
- 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 MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
- CROSSING A SEWER MAIN/WATER MAIN OVER OR UNDER A STORM DRAIN: WHENEVER IT IS NECESSARY FOR A SEWER MAIN/WATER MAIN TO CROSS A STORM DRAIN PIPE, THE SEWER MAIN/WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE OUTSIDE OF THE SEWER MAIN/WATER MAIN NEAREST TO THE OUTSIDE OF THE STORM DRAIN PIPE SHALL MAINTAIN A 24 INCH CLEAR SEPARATION DISTANCE HORIZONTAL, OR THE SEWER MAIN/WATER MAIN SHALL EITHER BE CONSTRUCTED OF DUCTILE IRON PIPE OR ENCASED IN EITHER CONCRETE OR DUCTILE IRON PIPE FOR AT LEAST 5 FEET ON EITHER SIDE OF THE CROSSING.



REV. NO.	DESCRIPTIONS	DATE
A	CITY OF WILMINGTON SUBDIVISION REVIEW BOARD SUBMITTAL	03/04/2015

SEAL

PRELIMINARY - DO NOT USE FOR CONSTRUCTION

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**RIVERLIGHTS**  
 by Newland COMMUNITIES

North America Series House, LLC

**RIVERLIGHTS  
 AGE QUALIFIED - PHASE 1**

**UTILITY PLAN**

DATE: 03/04/2015	SCALE: 1"=50'	MAC FILE NUMBER: CU-103
MCE PROJ. # 02735-0125	HORIZONTAL: 1"=50'	DRAWING NUMBER: 19
DRAWN: EEM/KCBE	VERTICAL: N/A	REVISION: ----
DESIGNED: KCBE		
CHECKED: NJL		
PROJ. MGR: RMC		
STATUS: PRELIMINARY PLANS		

PLANT LIST

Table with columns: SYM, BOTANICAL NAME, COMMON NAME, CALYR, MIN. HT., MIN. SPR., REMARKS. Section: CANOPY / SHADE / STREET TREES.

Table with columns: SYM, BOTANICAL NAME, COMMON NAME, CALYR, MIN. HT., MIN. SPR., REMARKS. Section: EVERGREEN TREES.

Table with columns: SYM, BOTANICAL NAME, COMMON NAME, CALYR, MIN. HT., MIN. SPR., REMARKS. Section: ORNAMENTAL GRASSES.

Table with columns: SYM, BOTANICAL NAME, COMMON NAME, CALYR, MIN. HT., MIN. SPR., REMARKS. Section: VINES.

Table with columns: SYM, BOTANICAL NAME, COMMON NAME, CALYR, MIN. HT., MIN. SPR., REMARKS. Section: FLOWERING / UNDERSTORY TREES.

Table with columns: SYM, BOTANICAL NAME, COMMON NAME, CALYR, MIN. HT., MIN. SPR., REMARKS. Section: EVERGREEN SHRUBS / EVERGREEN PALMS.

Table with columns: SYM, BOTANICAL NAME, COMMON NAME, CALYR, MIN. HT., MIN. SPR., REMARKS. Section: DECIDUOUS SHRUBS.

Table with columns: SYM, BOTANICAL NAME, COMMON NAME, CALYR, MIN. HT., MIN. SPR., REMARKS. Section: GROUNDCOVERS.

Table with columns: SYM, BOTANICAL NAME, COMMON NAME, CALYR, MIN. HT., MIN. SPR., REMARKS. Section: PERENNIALS.



Site Circulation - Multiuse Pathways, Sidewalks and Boardwalks NOT TO SCALE



Age Qualified Amenity NOT TO SCALE

AGE QUALIFYING PLANTING NARRATIVE
The landscape design for the age qualified areas of Riverlights will integrate sustainable landscape design principles in order to provide a cohesive planting composition for the development.

Revision table with columns: REVNO, DESCRIPTION, DATE.

PRELIMINARY - DO NOT USE FOR CONSTRUCTION

MCKIM & CREED logo and contact information: 243 North Front Street, Wilmington, North Carolina 28401.

RIVERLIGHTS logo and Newland Communities branding.

RIVERLIGHTS AGE QUALIFIED - PHASE 1 LANDSCAPE CONCEPT PLAN

Project metadata including DATE (03/04/2015), SCALE (1"=50'), and MAC FILE NUMBER (CL-101).