STROUD ENGINEERING, P.A.

CONSULTING ENGINEERS
102-D CINEMA DRIVE
WILMINGTON, NORTH CAROLINA 28403
(910) 815-0775

Pender County Planning Dept.
Attn. Ron Meredith
PO Box 1519
Burgaw, NC 28425

RE: MDP 2nd submittal for Pender Land Greenway Park
Cover letter list of completed requested items as per your comments August 2016

Mr. Ron Meredith

This cover letter is intended to address the comments received by email sent to Jimmy Fentress, Jr. P.E. on (8/24/16) in addition to your meeting with Tracy Lowe and myself on 8/31/2016 regarding requested items outstanding on the current plan for Pender Land Greenway Park MDP.

1.) Proposed Buffers: **Buffering Descriptions are noted on MDP (Sheet 1 of 3) as per Pender County UDO Article 8.2.6, (A-1, B-1, & C-1)**
2.) Chord Distance for lots 26, 28 & 30: **Now revised to 30' on cover sheet**
3.) Phases Final Plat Contents: **Understood however not pertinent to this submittal. Phases are compliant as shown.**
4.) Road Names: **Stroud is currently working with one of the owners on a Theme Name and all will be submitted to Jan Dawson and coordinated with 911 addressing.**
5.) Open Space Calculation: **Open Space is addressed and shown on sheet 1 of 3.**
6.) Tree Survey: **To be provided as a condition of approval and prior to staff sign off.**
7.) Sidewalk Location: **All sidewalks are shown on one side of the street within Phase 1, Sec. 1 & 2, Single Family Detached areas.**
    Pedestrian Access: **There are 3 Cul-De-Sacs within Phase 1, Sec. 1 & Sec. 2 that require a Pedestrian Access to the proposed Park Area. Please see all three sheets with a 60' Access.**
    Alleyways: **Are noted as a 30' Alleyway in Phase 1, Sec. 2, (lots 1-8).**
8.) Stormwater Plans: **Grading direction and general storm water infrastructure are now shown on sheets 2 & 3.**
9.) Permits for preliminary Plan: **Understood as not necessary for this submittal given we are soliciting Board review and conditional approval and not yet staff sign off on the Preliminary Plan.**
10.) Roadway Info as per NCDOT: **Details shown on Preliminary Plan (sheets 2 of 3 & 3 of 3).**

11.) Recreational Unit Cost Estimate: **It is the intent of the developer to provide a public park and that the cost of the dedicated improvements shall be credited toward meeting the recreational unit requirement. Please find the attached cost estimate to be considered in lieu of Recreational units provided within the subdivisions proper.**

12.) Lot Square Footage: **All Single Family Detached lots show requested areas**

13.) Housing Type: **Shown on MDP, as per Pender County UDO Article 4.15**

Single Family Detached Housing: **Shown on Sheet 1 of 3 as per Pender County UDO (Article 4.14)**

14.) Data Density: **Attached on MDP**

Number of dwelling units: **Shown on MDP with Calculations addressed**

Non Residential Development: **Addressed on MDP**

Wetland Calculation: **Addressed on MDP**

Rights of way: **Addressed**

Active & Passive areas & Calculations: **Addressed on MDP**

15.) Structural Separation: **Is shown under Single Family Detached Housing (Article: 4.1.4)**

I hope that this adequately addresses your concerns and secures us on the October Planning Board agenda. Please feel free to contact us with any additional items or revisions that you may need in this regard.

Thanks,

James H. Fentress Jr. PE, PLS

Cc Eugene Smith

Attachments

JHF/tl

File W:\master\PW-169\MDP Cover Letter to Ron Meredith for 2nd submittal.doc

ENGINEER'S PRELIMINARY COST ESTIMATE
PROJECT: PENDER LAND GREENWAY PARK
PARKLAND RECREATIONAL UNIT DEDICATION

DEVELOPER: PENDER LAND HOLDINGS, INC.
ENGINEER: STROUD ENGINEERING, P.A.
DATE: SEPTEMBER 7, 2016

NO.	DESCRIPTION	QUANITY	UNIT	UNIT COST	TOTAL COST
	GENERAL WORK				
1	BUSHOG	14	ACRE	$550.00	$7,700.00
2	CLEARING AND GRUBBING	2.3	ACRE	$8,500.00	$19,656.54
3	STRIPPING ROUTE	1889	CY	$5.00	$9,444.44
4	8' WIDE PAVED FOOT PATH	3,358	LF	$30.00	$100,734.00
5	BOARDWALK	700	LF	$65.00	$45,500.00
6	LAND GRANT (PCTD ASSESSED VALUE)	42	ACRE	$1,820.00	$76,804.00
				SUBTOTAL	**$259,838.99**
				CONSTRUCTION TOTAL	**$259,838.99**
	CONTINGENCY				
	10% CONTINGENCY	1	LS	$25,983.90	$25,983.90
				SUBTOTAL	**$25,983.90**
	DESIGN SERVICES				
	PARK PLANNING	1	LS	$14,000.00	$14,000.00
	ENGINEERING	1	LS	$8,000.00	$8,000.00
	SURVEYING	1	LS	$6,000.00	$6,000.00
				SUBTOTAL	**$28,000.00**

TOTAL ESTIMATED CONSTRUCTION COST **$313,822.89**

NORTH CAROLINA PROFESSIONAL SEAL 20643 ENGINEER JAMES H. FENTRESS, JR.

9/7/2016

STROUD ENGINEERING, P.A.

CONSULTING ENGINEERS
102-D CINEMA DRIVE
WILMINGTON, NORTH CAROLINA 28403
(910) 815-0775

September 7, 2016

Pender County Planning Department
Attn: Ron Meredith
P.O. Box 1519
Burgaw, NC 28425

Re: Master Development Plan Narrative
163.5 Acres shown at Map Book 46, Page 70
PIN's 4204-61-5445-0000, 4204-41-7997-0000,
4204-52-2665-0000 & 4204-51-3743-0000

Mr. Meredith:

On behalf of Gene Smith, President of Pender Land Holdings, Inc., I respectfully request consideration of the attached Master Development Plan application. This plan proposes mixed use development per the Pender County Unified Development Ordinance's PD requirements. The initial phase will include two residential subdivisions and a Public Park dedication intended to extend the Hampstead Kiwanis Park. The first subdivision will have larger lots and be accessed off of Country Club Road. The second subdivision will form lots more consistent with those existing in adjacent Belvedere Plantation and be accessed by extension of its road network. The public park dedication is intended to connect Azalea Drive to the existing Hampstead Kiwanis Park with a proposed greenway pedestrian trail meandering through prior planned fairway and wetland areas to connect into the existing and planned park path network. The developer has engaged the park planner of record to create this public amenity. The pedestrian trail will be developed with the first phase of this development. Mr. Smith envisions other passive activities for the park. Public garden plot leases, cultural and environmental orientation as well as exercise stations are proposed. We are currently working with the park planner in this ambition. The developer will realize reasonable expense in the development of this public park. It is our intention to get credit for this expense to offset the Recreational Units required for the proposed subdivisions. The cost of the park will far and exceed the cost of the required recreational units.

Public water and sewer service exists for the single family residential development. The future multi-family and commercial uses will primarily access the realigned US Highway 17 corridor north of the planned controlled access leading onto the Hampstead Bypass. In as much as these plans are not finalized, our planning for these uses is limited at this time to conceptually designated areas and related densities.

The fifty eight single family lot subdivision fronting Country Club Road along with the Park Dedication will be Phase 1A followed by the sixty three lot subdivision created by extending Bluebird Lane will be a subsequent Phase 1B. Conditional Preliminary Plan approval is requested for these first phases coincidental to the Master Development Plan process.

The attached development plan is proposed on these merits. Please accept this application and its pertinent submittals as satisfying the ordinance requirements. We are eager to provide any additional information that may be necessary.

Sincerely,

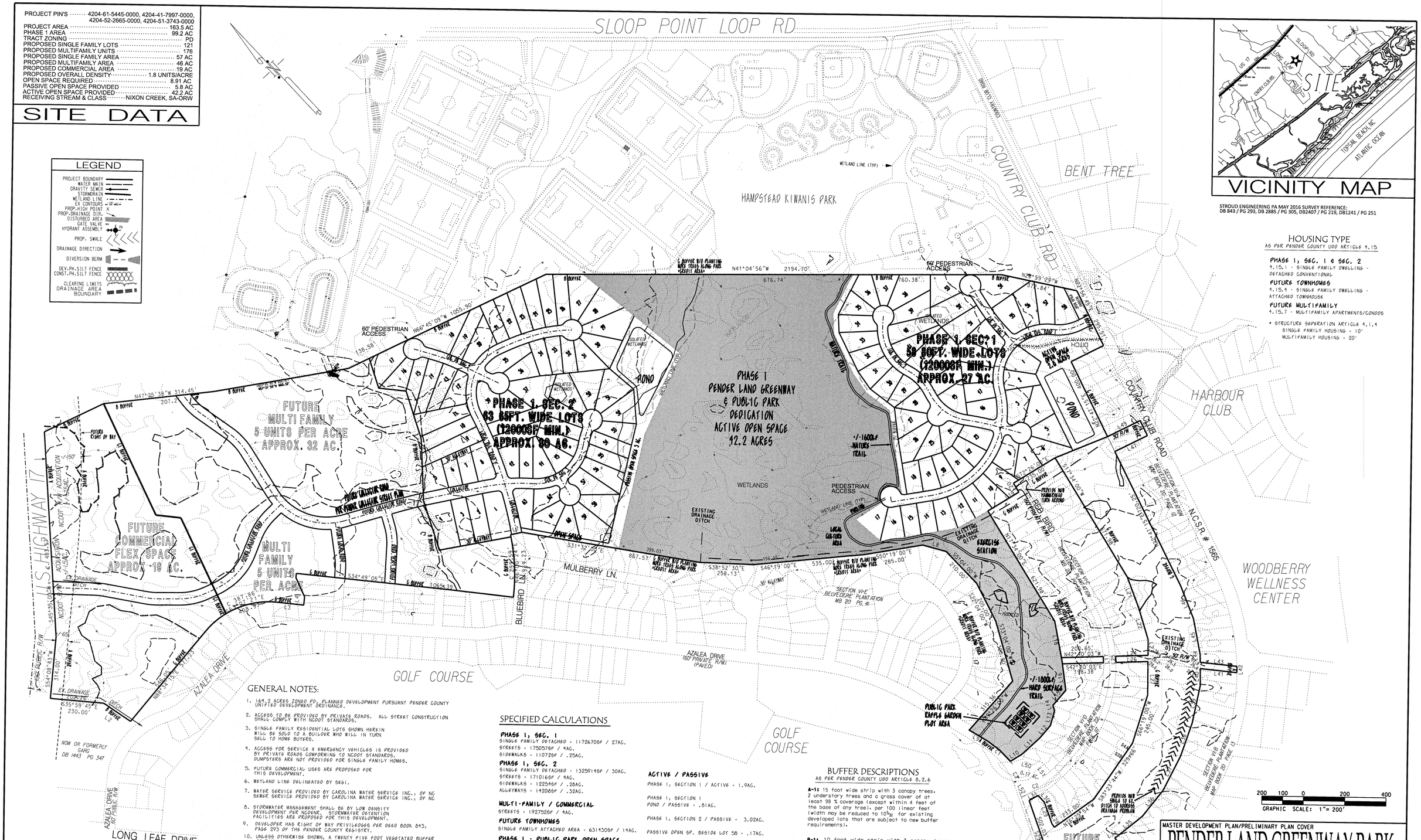
James H. Fentress Jr. PE, PLS
Stroud Engineering, PA

Attachments

JHF/jf
W:\Master\PW-169\Wpd\Master Development Plan Cover 090716.doc

PROJECT PIN'S	4204-61-5445-0000, 4204-41-7997-0000, 4204-52-2665-0000, 4204-51-3743-0000
PROJECT AREA	163.5 AC
PHASE 1 AREA	99.2 AC
TRACT ZONING	PD
PROPOSED SINGLE FAMILY LOTS	121
PROPOSED MULTIFAMILY UNITS	176
PROPOSED SINGLE FAMILY AREA	57 AC
PROPOSED MULTIFAMILY AREA	46 AC
PROPOSED COMMERCIAL AREA	19 AC
PROPOSED OVERALL DENSITY	1.8 UNITS/ACRE
OPEN SPACE REQUIRED	8.91 AC
PASSIVE OPEN SPACE PROVIDED	5.8 AC
ACTIVE OPEN SPACE PROVIDED	42.2 AC
RECEIVING STREAM & CLASS	NIXON CREEK, SA-ORW

SITE DATA



VICINITY MAP

STROUD ENGINEERING PA MAY 2016 SURVEY REFERENCE:
DB 843 / PG 293, DB 2885 / PG 305, DB2407 / PG 219, DB1241 / PG 251

LEGEND

PROJECT BOUNDARY
WATER MAIN
GRAVITY SEWER
STORMDRAIN
WETLAND LINE
EX CONTOURS
PROP. HIGH POINT
PROP. DRAINAGE DIR.
DISTURBED AREA
GATE VALVE
HYDRANT ASSEMBLY
PROP. SWALE
DRAINAGE DIRECTION
DIVERSION BERM
DEV. PH. SILT FENCE
CONST. PH. SILT FENCE
CLEARING LIMITS
DRAINAGE AREA BOUNDARY

HOUSING TYPE

AS PER PENDER COUNTY UDO ARTICLE 4.15

PHASE 1, SEC. 1 & SEC. 2
4.15.1 - SINGLE FAMILY DWELLING - DETACHED CONVENTIONAL

FUTURE TOWNHOMES
4.15.4 - SINGLE FAMILY DWELLING - ATTACHED TOWNHOUSE

FUTURE MULTIFAMILY
4.15.7 - MULTIFAMILY APARTMENTS/CONDOS

* STRUCTURE SEPERATION ARTICLE 4.1.4
SINGLE FAMILY HOUSING - 10'
MULTIFAMILY HOUSING - 20'

GENERAL NOTES:

1. 164.2 ACRES ZONED PD, PLANNED DEVELOPMENT PURSUANT PENDER COUNTY UNITED DEVELOPMENT ORDINANCE.
2. ACCESS TO BE PROVIDED BY PRIVATE ROADS. ALL STREET CONSTRUCTION SHALL COMPLY WITH NCDOT STANDARDS.
3. SINGLE FAMILY RESIDENTIAL LOTS SHOWN HEREIN WILL BE SOLD TO A BUILDER WHO WILL IN TURN SELL TO HOME BUYERS.
4. ACCESS FOR SERVICE & EMERGENCY VEHICLES IS PROVIDED BY PRIVATE ROADS CONFORMING TO NCDOT STANDARDS. DUMPSTERS ARE NOT PROVIDED FOR SINGLE FAMILY HOMES.
5. FUTURE COMMERCIAL USES ARE PROPOSED FOR THIS DEVELOPMENT.
6. WETLAND LINE DELINEATED BY SSSI.
7. WATER SERVICE PROVIDED BY CAROLINA WATER SERVICE INC., OF NC
SEWER SERVICE PROVIDED BY CAROLINA WATER SERVICE INC., OF NC
8. STORMWATER MANAGEMENT SHALL BE BY LOW DENSITY DEVELOPMENT PER NCDENR. STORMWATER DETENTION FACILITIES ARE PROPOSED FOR THIS DEVELOPMENT.
9. DEVELOPER HAS RIGHT OF WAY PRIVILEDGES PER DEED BOOK 843, PAGE 293 OF THE PENDER COUNTY REGISTRY.
10. UNLESS OTHERWISE SHOWN, A TWENTY FIVE FOOT VEGETATED BUFFER TO REMAIN ALONG ADJACENT PROPERTIES AND WETLANDS FOR EROSION CONTROL PURPOSES.
11. THE PROPERTY IS LOCATED WITHIN THE DRAINAGE BASIN OF NIXON'S CREEK
12. ZONING - PD

RESIDENTIAL SETBACKS	COMMERCIAL SETBACKS
FRONT - 25'	FRONT - 30'
REAR - 15'	REAR - 20'
SIDE - 10'	SIDE - 15'
CORNER - 15'	CORNER - 15'
MIN. CHORD - 30'	MIN. CHORD - 50'
MAX. BUILDING HEIGHT - 35'	MAX. BUILDING HEIGHT - 35'
MINIMUM LOT WIDTH 65'	MINIMUM LOT WIDTH 100'
MINIMUM LOT SIZE 10,000 SF	MINIMUM LOT SIZE 20,000 SF

13. EXISTING TRAFFIC COUNT ON US HWY 17 IS 31,000 TRIPS PER DAY IN 2012 PER THE NCDOT US HWY. 210 CORRIDOR STUDY.
14. PROPOSED DEVELOPMENT WILL ADD 2150 TRIPS PER DAY, 300 PEAK HOUR TRIPS.
15. THE OPEN SPACE SHOWN ON THIS PLAN IS PROPOSED PARK DEDICATION FOR PUBLIC USE. IT WILL SERVE AS AN EXTENSION OF THE HAMPSTEAD KIWANIS PARK. PROPOSED TO BE AN ACTIVE AND CULTURAL PARK.

SPECIFIED CALCULATIONS

PHASE 1, SEC. 1
SINGLE FAMILY DETACHED - 1172670SF / 27AC.
STREETS - 175057SF / 4AC.
SIDEWALKS - 11072SF / .25AC.

PHASE 1, SEC. 2
SINGLE FAMILY DETACHED - 1325914SF / 30AC.
STREETS - 171016SF / 4AC.
SIDEWALKS - 12254SF / .28AC.
ALLEYWAYS - 14206SF / .32AC.

MULTI-FAMILY / COMMERCIAL
STREETS - 192752SF / 4AC.

FUTURE TOWNHOMES
SINGLE FAMILY ATTACHED AREA - 631430SF / 14AC.

PHASE 1 - PUBLIC PARK OPEN SPACE
AREA - 1837414SF / 42.2AC.

TOTAL STREETS - 12.69AC.
TOTAL SIDEWALKS - .53AC.

WETLANDS - TOTAL - 50.62AC.
PHASE 1, SECTION 1 - .70AC.
PHASE 1, SECTION 2 - 1.10AC.

PARKLAND AREA - 31.4AC.

FURURE COMM./MULTIFAMILY - 16.9AC.
FUTURE TOWNHOMES - .44AC.

ACTIVE / PASSIVE
PHASE 1, SECTION 1 / ACTIVE - 1.9AC.

PHASE 1, SECTION 1
POND / PASSIVE - .61AC.

PHASE 1, SECTION 2 / PASSIVE - 3.02AC.

PASSIVE OPEN SP. 86610E LOT 55 - .17AC.

TOTAL ACTIVE - 44.1AC.
TOTAL PASSIVE - 4AC.

BUFFER DESCRIPTIONS

AS PER PENDER COUNTY UDO ARTICLE 8.2.6

A-1: 15 foot wide strip with 3 canopy trees, 2 understory trees and a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree), per 100 linear feet (width may be reduced to 10^{+}_{32} for existing developed lots that are subject to new buffer requirements).

B-1: 10 foot wide strip with 3 canopy trees, 4 understory trees and a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree), per 100 linear feet

C-1: 10 foot wide strip with a 6 foot high wood stockade, basket weave, or other solid wood fence and 2 canopy trees and a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree), per 100 linear feet

NORTH CAROLINA PROFESSIONAL SEAL 20043 ENGINEER JAMES H. FENTRESS, JR.

JAMES H. FENTRESS, JR., P.E.
DATE 9/7/2016

MASTER DEVELOPMENT PLAN/PRELIMINARY PLAN COVER

PENDER LAND GREENWAY PARK

TOPSAIL TOWNSHIP | PENDER COUNTY | NORTH CAROLINA

OWNER: PENDER LAND HOLDINGS, INC.
ADDRESS: PO BOX 967
HAMPSTEAD, NC 28443
PHONE: (910) 270-4017

STROUD ENGINEERING, P.A.
102-D CINEMA DRIVE
WILMINGTON, NC 28403
(910) 815-0775

DESIGNED:	JHF
DRAWN:	JHF
APPROVED:	JHF
DATE:	5/16/2016
SCALE:	1"= 200'
	SHEET 1 OF 3

PROJECT NO.: PW-169

PROJECT NO.: PW-169
DRAWING NAME.: F:/MASTER/PW-169/DGN/MASTER DEVELOPMENT PLAN.DGN

PROJECT PIN	4204-61-5445-0000
PROJECT AREA	26 AC
TRACT ZONING	PD
PROPOSED SINGLE FAMILY LOTS	58
PROPOSED SINGLE FAMILY AREA	26 AC
RECEIVING STREAM & CLASS	NIXON CREEK, SA-ORW

SITE DATA

REVISIONS			
BY	NO.	DATE	DESCRIPTION

PRELIMINARY PLAN

PENDER LAND GREENWAY PARK

PHASE 1, SECTION 1

TOPSAIL TOWNSHIP — PENDER COUNTY — NORTH CAROLINA

OWNER: PENDER LAND HOLDINGS, INC.
ADDRESS: PO BOX 967, HAMPSTEAD, NC 28443
PHONE: (910) 270-4017

STROUD ENGINEERING, P.A. C-0647
102-D CINEMA DRIVE
WILMINGTON, NORTH CAROLINA 28403
(910) 815-0775 (910) 815-0593 FAX

DESIGNED:	JHF
DRAWN:	TLL
APPROVED:	JHF
DATE:	5/26/2016
SCALE:	1" = 60'
SHEET	2 OF 3

NORTH CAROLINA PROFESSIONAL SEAL 20843 ENGINEER JAMES H. FENTRESS, JR.

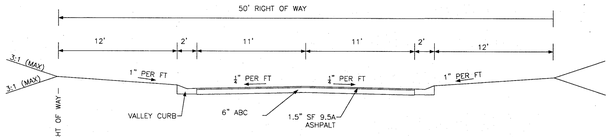
JAMES H. FENTRESS, JR., P.E. — DATE 9/7/2016

PROJECT NO.: PW-169
DRAWING NO.: W:/MASTER/PW-169

PROJECT NO.: PW-169

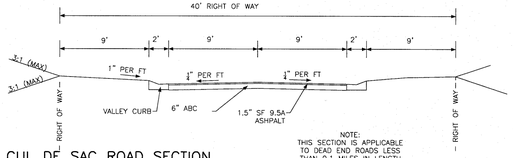
PROJECT PIN	4204-61-5445-0000
PROJECT AREA	29 AC
TRACT ZONING	PD
PROPOSED SINGLE FAMILY LOTS	63
PROPOSED SINGLE FAMILY AREA	29 AC
RECEIVING STREAM & CLASS	NIXON CREEK, SA-ORW

SITE DATA



LOCAL RESIDENTIAL ROAD SECTION

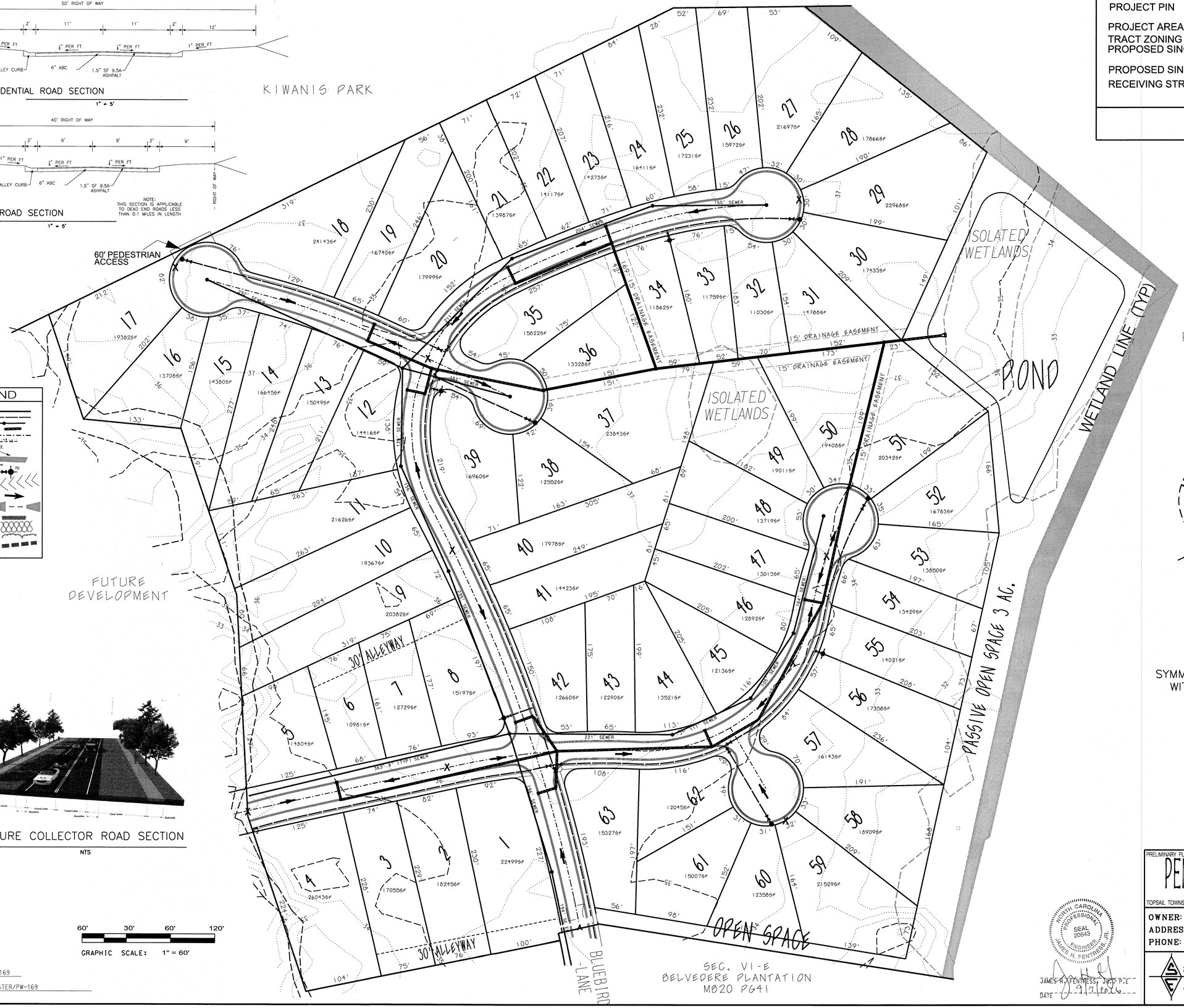
1" = 5'



CUL DE SAC ROAD SECTION

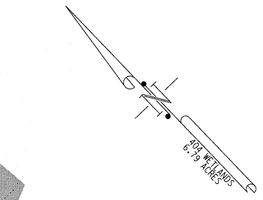
NOTE: THIS SECTION IS APPLICABLE TO DEAD END ROADS LESS THAN 0.1 MILES IN LENGTH

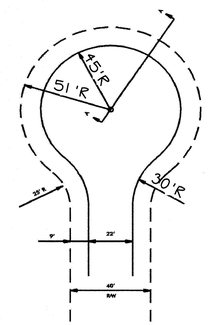
1" = 5'



LEGEND

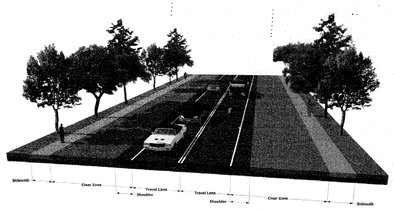
- PROJECT BOUNDARY
- WATER MAIN
- GRAVITY SEWER
- STORMDRAIN
- WETLAND LINE
- EX CONTOURS
- PROP.HIGH POINT
- PROP.DRAINAGE DIR.
- DISTURBED AREA
- GATE VALVE
- HYDRANT ASSEMBLY
- PROP. SWALE
- DRAINAGE DIRECTION
- DIVERSION BERM
- DEV.PH.SILT FENCE
- CONST.PH.SILT FENCE
- CLEARING LIMITS
- DRAINAGE AREA BOUNDARY





SYMMETRICAL CUL-DE-SAC WITH CURB & GUTTER

NTS



FUTURE COLLECTOR ROAD SECTION

NTS

60' 30' 60' 120'

GRAPHIC SCALE: 1" = 60'

PROJECT NO.: PW-169

DRAWING NO.: W:/MASTER/PW-169

REVISIONS

BY	NO.	DATE	DESCRIPTION

PRELIMINARY PLAN

PENDER LAND GREENWAY PARK

PHASE 1, SECTION 2

TOPSAIL TOWNSHIP — PENDER COUNTY — NORTH CAROLINA

OWNER: PENDER LAND HOLDINGS, INC.

ADDRESS: PO BOX 967
HAMPSTEAD, NC 28443

PHONE: (910) 270-4017

STROUD ENGINEERING, P.A.
C-0647
102-D CINEMA DRIVE
WILMINGTON, NORTH CAROLINA 28403
(910) 815-0775 (910) 815-0593 FAX

DESIGNED: JHF

DRAWN: TLL

APPROVED: JHF

DATE: 5/26/2016

SCALE: 1" = 60'

SHEET 3 OF 3

NORTH CAROLINA PROFESSIONAL SEAL 20643 ENGINEER JAMES H. FENTRESS, JR.

JAMES H. FENTRESS, JR., P.E.

DATE 9/7/2016