

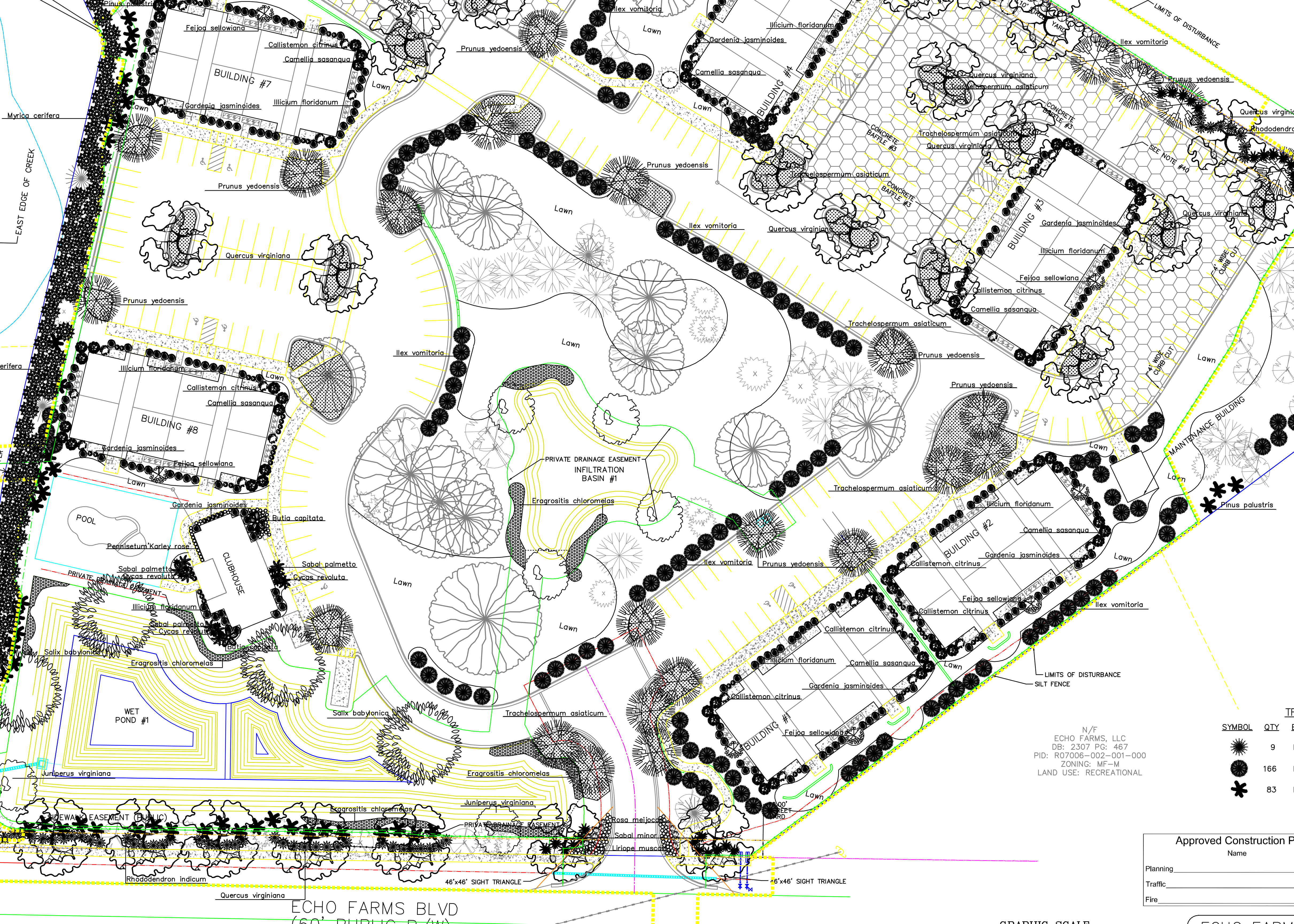
N/F
CITY OF WILMINGTON
DB: 1272 PG: 650
PID: R06500-004-001-003
ZONING: R-15
LAND USE: UNUSED

N/F
CITY OF WILMINGTON
DB: 1272 PG: 650
PID: R06500-004-001-004
ZONING: R-15
LAND USE: UNUSED

N/F
JOANN McKENNA TRUST
DB: 5128 PG: 2275
PID: R07007-004-001-000
ZONING: O&I-1
LAND USE: UNUSED

N/F
ECHO FARMS, LLC
DB: 2307 PG: 467
PID: R07006-002-001-000
ZONING: MF-M
LAND USE: RECREATIONAL

N/F
ECHO FARMS, LLC
DB: 2307 PG: 467
PID: R07006-002-001-000
ZONING: MF-M
LAND USE: RECREATIONAL



TREE MITIGATION PLANTINGS

SYMBOL	QTY	BOTANICAL NAME / COMMON NAME	CALIPER
	9	DIOSPYROS VIRGINIANA / COMMON PERSIMMON	2" (MIN.)
	166	ILEX VOMITORIA / YAUPON HOLLY	2" (MIN.)
	83	PINUS PALUSTRIS / LONGLEAF PINE	PLUGS

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

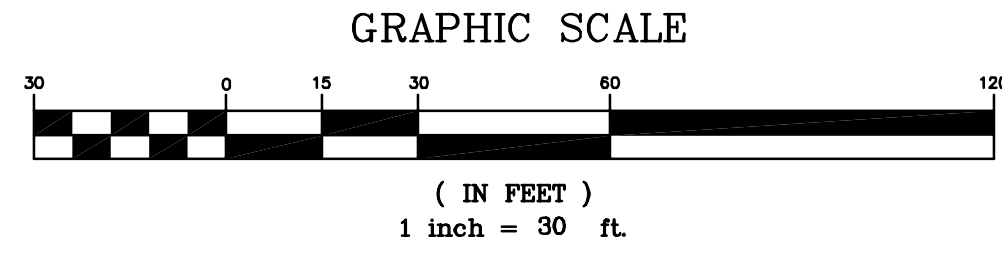
WILMINGTON
NORTH CAROLINA

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____



ECHO FARM APARTMENTS

4010 CAROLINA BEACH ROAD
WILMINGTON TOWNSHIP
NEW HANOVER COUNTY
NORTH CAROLINA

DATE: 2-18-2016
SCALE: 1"=30'
DRAWN BY: DDC
REVISION DATE: 2-23-2016

LAND-DESIGN SOUTH
Landscape Architect-Asia
105 B CORAL DRIVE
WRIGHTSVILLE BEACH, NC 28480
910 550 8788

LANDSCAPE PLAN

Developer: ECHO FARM APARTMENTS, LLC
10 S. CAROLINA DRIVE
WILMINGTON, NORTH CAROLINA 28403
PHONE: 910-251-9030

SHEET NO:
L-1

LANDSCAPE NOTES

- CONTRACTOR SHALL IDENTIFY ALL UNDERGROUND UTILITIES PRIOR TO LANDSCAPE INSTALLATION.
- TREES SHALL BE LOCATED A MINIMUM OF 5' FROM SEWER/WATER CONNECTIONS.
- ALL PLANT MATERIALS SHALL CONFORM TO THE STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
- ALL SHRUB BEDS AND PLANTING AREAS, EXCLUDING SEEDED AREAS SHALL BE MULCHED WITH 2" OF DOUBLE SHREDDED HARDWOOD MULCH.
- MIX EXISTING SOIL WITH THE SOIL AMENDMENTS AND SLOW RELEASE FERTILIZER IN THE QUANTITIES RECOMMENDED BY THE SOIL TESTING LABORATORY.
- ANY AND ALL PLANT SUBSTITUTIONS SHALL BE APPROVED BY LANDSCAPE ARCHITECT.
- THE CONTRACTOR SHALL PREPARE ALL SEEDED AREAS TO ASSURE THAT THE SUBGRADE HAS BEEN ROLLED TO ACCEPT THE SEED. ALL TURF AREAS MUST BE IRRIGATED OR HAND WATERED AND SHOULD PROVIDE A SMOOTH SURFACE FREE OF UNLEVEL GROUND.
- IRRIGATION SHALL BE DESIGNED AND INSTALLED BY A LICENSED IRRIGATION CONTRACTOR IN THE STATE OF NORTH CAROLINA.
- STREET TREES SHALL BE PLANTED AS CLOSE TO THE CITY REGULATIONS AS POSSIBLE. HOWEVER SITE CONDITIONS INCLUDING THE LOCATIONS OF SIGNS, ETC. MAY REQUIRE ADJUSTMENT FROM PROPOSED PLAN.
- PROPOSED POND BANK STABILIZATION WILL INCLUDE ORNAMENTAL GRASSES FROM TOP OF BANK TO WATER LEVEL AND WILL COMPLY WITH CITY OF WILMINGTON STANDARD SD 15-16.
- ALL PROPOSED PLANTINGS WITHIN SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHTLINES FROM 30"-10' IN ACCORDANCE WITH SECTION 18-556 OF THE CITY OF WILMINGTON LAND DEVELOPMENT CODE. IN CASES WHERE SIGHT TRIANGLES INTERFERE WITH OTHER REQUIRED BUFFER OR PLANTING AREAS, THE SIGHT DISTANCE TRIANGLES SHALL BE MAINTAINED TO ALLOW FOR PROPER SIGHT LINES.
- ALL TREES SHALL BE ADJUSTED AS NEEDED WITH ALL LIGHT LOCATIONS.

Plant Table

Broadleaf Deciduous				
Quantity	Symbol	Scientific Name	Common Name	Planting Size
31	●	<i>Prunus yedoensis</i>	Yoshino Cherry	2" cal
4	●	<i>Salix babylonica</i>	Babylon weeping willow	2" cal

Broadleaf Evergreen				
Quantity	Symbol	Scientific Name	Common Name	Planting Size
94	●	<i>Camellia sasanqua</i>	Dark pink camellia	3-gal
11	●	<i>Cycas revoluta</i>	Sago palm	3-gal
10	●	<i>Feijoa sellowiana</i>	Pineapple guava	3-gal
96	●	<i>Gardenia jasminoides</i>	'August beauty' gardenia	3-gal
297	●	<i>Illicium floridanum</i>	Florida anise	3-gal
37	●	<i>Quercus virginiana</i>	Southern live oak	2" cal
13	●	<i>Rosa meijocosa</i>	Red drift rose	3-gal
140	●	<i>Rhododendron indicum</i>	George Tabor azalea	3-gal
156	●	<i>Myrica cerifera</i>	Southern wax myrtle	6'
47	●	<i>Callistemon citrinus</i>	Bottlebrush	3-gal
66	●	<i>Ilex vomitoria</i>	Yaupon holly (Existing hedge)	HEDGE

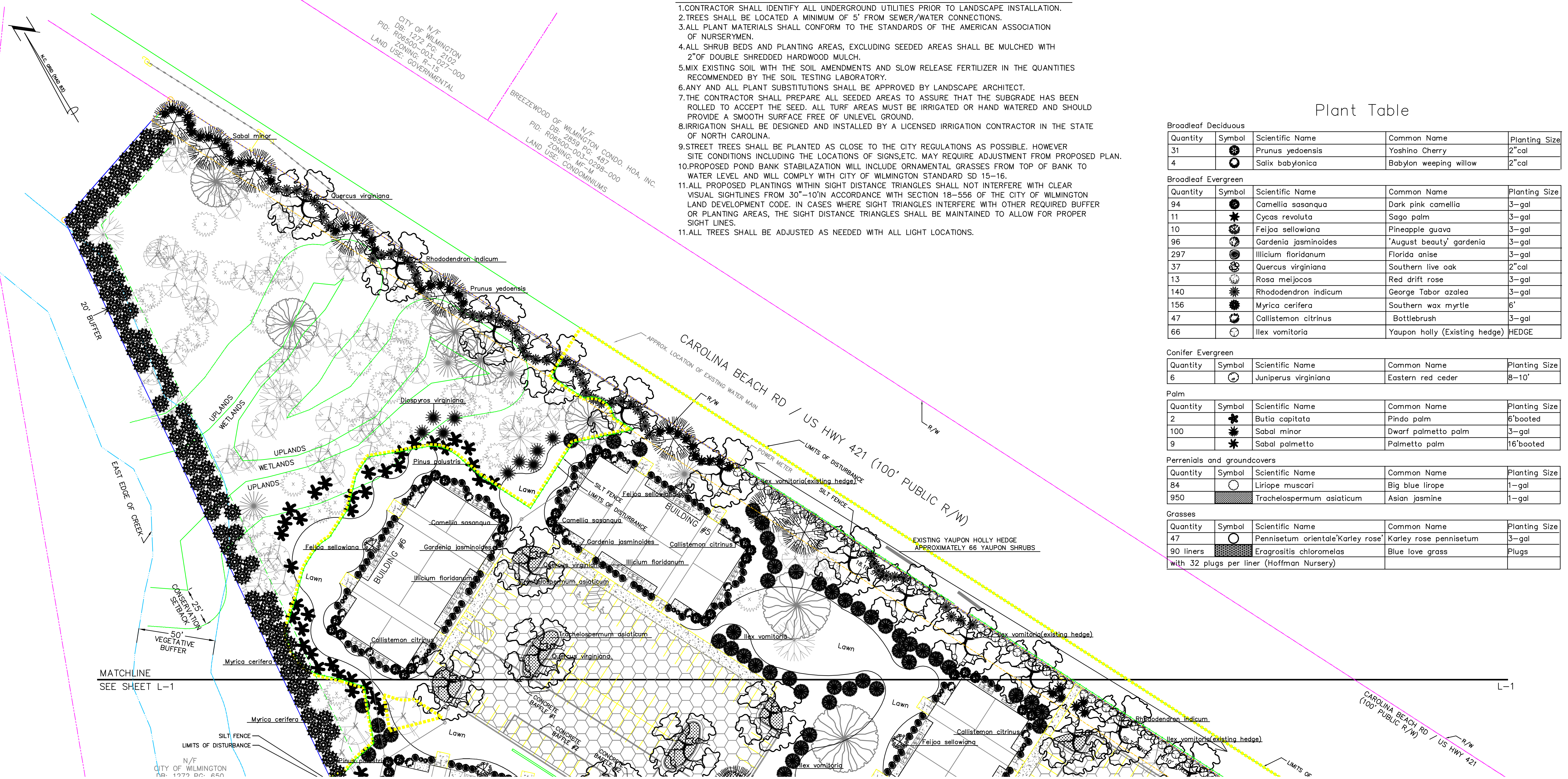
Conifer Evergreen				
Quantity	Symbol	Scientific Name	Common Name	Planting Size
6	●	<i>Juniperus virginiana</i>	Eastern red cedar	8-10'

Palm				
Quantity	Symbol	Scientific Name	Common Name	Planting Size
2	●	<i>Butia capitata</i>	Pindo palm	6' bootied
100	●	<i>Sabal minor</i>	Dwarf palmetto palm	3-gal
9	●	<i>Sabal palmetto</i>	Palmetto palm	16' bootied

Perennials and groundcovers				
Quantity	Symbol	Scientific Name	Common Name	Planting Size
84	●	<i>Liriope muscari</i>	Big blue liriope	1-gal
950	●	<i>Trachelospermum asiaticum</i>	Asian jasmine	1-gal

Grasses				
Quantity	Symbol	Scientific Name	Common Name	Planting Size
47	●	<i>Pennisetum orientale</i>	Karley rose	3-gal
90 liners	●	<i>Eragrostis chloromelas</i>	Blue love grass	Plugs

with 32 plugs per liner (Hoffman Nursery)



LANDSCAPE CALCULATIONS:

TREES PER DISTURBED ACRE
 9.63 ACRES X 15 = 144.45, 144 TREES REQUIRED
 STREET YARD - CAROLINA BEACH ROAD (PRIMARY FRONTAGE)
 STREET FRONTAGE = 1,103.55 FT
 REQUIRED STREETYARD = 18 X 1,103.55 = 19,863.90 SF
 PROVIDED STREETYARD = 19,937.57 SF
 IMPERVIOUS AREA = 90.51 SF
 PERCENT IMPERVIOUS = 90.51/19,937.57 X 100% = 0.46%
 REQUIRED PLANTING = 90.51/600 = 33.23, 33 CANOPY TREES (OR 3 UNDERSTORY TREES PER 1 CANOPY TREE)
 33.23 X 6 = 199.38, 199 SHRUBS
 PROVIDED PLANTING = 30 TREES & 3 EXISTING TREES TO REMAIN = 33 TREES
 306 SHRUBS

STREETYARD - ECHO FARMS BLVD (SECONDARY FRONTAGE)
 STREET FRONTAGE = 463.83 - 37.33 = 432.30 FT
 REQUIRED STREETYARD = 18 X 432.30/2 = 3890.70 SF
 PROVIDED STREETYARD = 3,461.82 + 578.81 = 4,040.63 SF
 IMPERVIOUS AREA = 233.20
 PERCENT IMPERVIOUS = 233.20/4,040.63 X 100% = 5.78%
 REQUIRED PLANTING = 4,040.63/600 = 6.74, 7 CANOPY TREES (OR 3 UNDERSTORY TREES PER 1 CANOPY TREE)
 6.74 X 6 = 40.44, 40 SHRUBS
 PROVIDED PLANTING = 8 TREES & 8 EXISTING TREES TO REMAIN = 16 TREES
 53 SHRUBS

INTERIOR SHADING
 PARKING FACILITY AREA [PARKING LOT AREA TO BACK OF CURB (OR BACK OF SIDEWALK ADJACENT TO PARKING SPACES)]
 MINUS LANDSCAPE ISLANDS PLUS PRIVATE STREET (INCLUDING PORTION WITHIN ECHO FARMS BLVD ROW) = 124,085 SF
 REQUIRED INTERIOR SHADING (IS) = 0.2 X 124,085 = 24,817 SF
 PROVIDED INTERIOR SHADING (IS) = 17 LIVE OAKS @ 707 = 12,019
 16 YOSHINO CHERRY @ 707 = 11,312
 1 EXISTING PINE @ 353 = 353
 4 EXISTING HARDWOODS @ 707 = 2,828
 TOTAL (IS) = 26,512

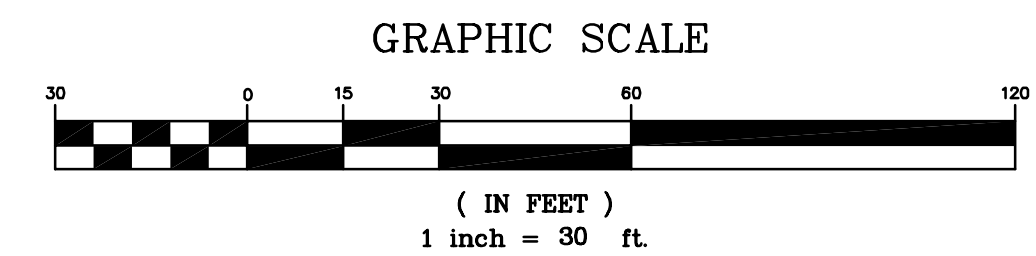
LANDSCAPE CALCULATIONS:

FOUNDATION PLANTING - FRONT OR REAR OF BUILDINGS #1-8 (PER FRONT OR REAR OF BUILDING ADJACENT TO PARKING/DRIVE AISLE)
 REQUIRED FOUNDATION PLANTING = [(30.73' X 112.54') + (0.5' X 10.82' X 31.86') + (0.5' X 10.62' X 31.86')] X 0.12 = 455.61 SF
 PROVIDED FOUNDATION PLANTING (BUILDINGS #1 & 3-8) = 508.48 SF
 PROVIDED FOUNDATION PLANTING (BUILDING #2) = 560.10 SF

FOUNDATION PLANTING SIDE OF BUILDINGS #1, 2, 3, 4, 7, & 8 (PER SIDE OF BUILDING ADJACENT TO PARKING/DRIVE AISLE)
 REQUIRED FOUNDATION PLANTING = [(31.44' X 51.19') + (0.5' X 12.63' X 50.53')] X 0.12 = 231.43 SF
 PROVIDED FOUNDATION PLANTINGS (BUILDINGS #1 & 2) = 262.12 SF
 PROVIDED FOUNDATION PLANTINGS (BUILDINGS #3 & 4) = 236.31 SF
 PROVIDED FOUNDATION PLANTINGS (BUILDING #7) = 267.45 SF
 PROVIDED FOUNDATION PLANTINGS (BUILDING #8) = 280.41 SF

FOUNDATION PLANTING - FRONT OF CLUBHOUSE
 REQUIRED FOUNDATION PLANTING = [(8.98' X 14.09') + (11.31' X 31.43') + (8.98' X 19.98') + (13.81' X 4.61' X 0.5) + 87.47 SF] X 0.12 = 93.69 SF
 PROVIDED FOUNDATION PLANTING = 169.84 SF

FOUNDATION PLANTING - FRONT OF MAINTENANCE BUILDING
 REQUIRED FOUNDATION PLANTING = [(10.00' X 20.00') + (0.5' X 6.67' X 20.00')] X 0.12 = 32 SF
 PROVIDED FOUNDATION PLANTING = 33.42 SF



Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

ECHO FARM APARTMENTS

4010 CAROLINA BEACH ROAD
 WILMINGTON TOWNSHIP
 NEW HANOVER COUNTY
 NORTH CAROLINA

LAND-DESIGN SOUTH
 LANDSCAPE ARCHITECT-ASLA
 105 B CORAL DRIVE
 WRIGHTSVILLE BEACH, N.C. 28400
 910 650 8786

LANDSCAPE PLAN

Developer: ECHO FARM APARTMENTS, LLC
 10 S. CAROLINA DRIVE
 WILMINGTON, NORTH CAROLINA 28403
 PHONE: 910-251-5030

DATE: 2-18-2016
 SCALE: 1"=30'
 DRAWN BY: DDC
 REVISION DATE: 2-23-2016

SHEET NO:
 L-2