

TRACT AREA--14.78 AC
--643.816.80 SF
ZONING--MF-M
PROPOSED UNITS--200
UNITS PER ACRE--13.53
TAX PIN--R04812-001-004-000
DEED BOOK/PAGE--6018/1545
CAMA LUC--URBAN
EXISTING BUA--0 SF
PROPOSED BUA--1,409.77 SF
--6.62 AC
% BUA--44.80%
RECIPIENT STREAM--SMITH CREEK
CLASSIFICATION--CWSW
SETBACKS--
FRONT--35' REO'D 35' PROP.
REAR--25' REO'D 25' PROP.
SIDE--20' REO'D 20' PROP.
CORNER--N/A
MAX HEIGHT--35'

SITE DATA

NOTES:

- THIS SITE IS NOT RECOGNIZED AS A LOCAL, STATE OR FEDERALLY HISTORIC OR ARCHAEOLOGICAL SITE.
- THERE ARE NO KNOWN CEMETERIES, BURIAL SITES, OR BURIAL GROUNDS ON THIS SITE.
- THERE ARE NO KNOWN PROTECTED SPECIES OR HABITATS ON THIS SITE.
- THERE ARE NO EXISTING OR PROPOSED THROUGHFARES, BIKE ROUTES, PEDESTRIAN SIDEWALKS OR TRAILS AND TRANSIT FACILITIES ON THIS SITE, EXCEPT THOSE DEPENDENT ON THIS PLAN.
- IMPROVEMENTS DO NOT ENCROACH INTO THE CONSERVATION RESOURCE SETBACK.
- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS' TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
- ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED FROM ANY CONSTRUCTION EQUIPMENT THAT MAY CAUSE GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.
- NO EQUIPMENT IS ALLOWED ON SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING IS INSTALLED AND APPROVED. PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AND CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION METHODS.
- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND DRIVEWAYS ARE TO BE REMOVED, COMPACTED AND MEET CITY AND/OR NCDOT STANDARDS.
DETAIL SD-13 COFWM TECH STD'S
- OPEN CUTS ARE OPEN TO PUBLIC. CONTACT TRAFFIC ENGINEERING REGARDING THE INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
- TRAFFIC CONTROL DEVICES INCLUDING STOP SIGNS (PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS [DETAIL SD-13 COFWM TECH STD'S]
- CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE LOCATED ON THE PLAN.
- ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
- TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING PRIOR TO ACTUAL STRIPING.
- ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN DRIVEWAY OR TURNING AREAS SHALL BE MAINTAINED.
- STOP SIGNS AND STREET SIGNS TO REMAIN IN PLACE DURING CONSTRUCTION.
- ASTLE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS PER CITY OF WILMINGTON STANDARDS. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT IN ANY TREE AREA. NOTICE TO PLACES TO BE OPEN CONTACT 341-5888 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
- INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS.
- IT SHALL BE THE RESPONSIBILITY OF THE SUBDIVIDER TO ERECT OFFICIAL STREET NAME SIGNS AT ALL INTERSECTIONS AND AT THE POINT WHERE THE DRIVEWAY ENTERS THE HIGHWAY. THE TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL. THE SUBDIVIDER MAY ACQUIRE AND ERECT OFFICIAL STREET NAME SIGNS OR MAY PURCHASE THEM FROM THE CITY OF WILMINGTON. THE SUBDIVIDER SHALL PAY THE COST OF SUCH INSTALLATION. CONTACT TRAFFIC ENGINEERING AT 341-7888 TO DISCUSS INSTALLATION OF OFFICIAL STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
- ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS OR CURB CHIPS MUST BE REPLACED.
- A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON FOR REVIEW AND APPROVAL PRIOR TO THE PREPARATION OF THE FINAL PLAN.
- SD-15-14 COFWM TECH STD'S
- IF PROPOSED VEGETATION WITH SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30"-10'-.
- CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS IN ADVANCE TO OBTAIN PERMISSION TO CROSS THE ROADWAY.
- INTERNATIONAL BUILDING CODE TYPE V WOOD FRAME CONSTRUCTION IS PROPOSED.
- CONTRACTOR SHALL PROVIDE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDING(S).
- CONTRACTOR SHALL MAINTAIN AN ALL-WEATHER ACCESS FOR VEHICLES TO THE BUILDING(S) DURING CONSTRUCTION.
- UNDERGROUND FIRE LINE AND PRIVATE WATER MAINS MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT BEFORE THE COMMENCEMENT OF THE BUILDING.
- THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-343-0696 FOR ADDITIONAL INFORMATION.
- FIRE HYDRANTS SHALL BE IN SUFFICIENT NUMBER TO ACCOMMODATE FLOW REQUIREMENTS.
- CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO DISCUSS STREET LIGHTING OPTIONS AND STREET SIGN INSTALLATION.
- FOR MORE INFORMATION CALL THE CITY OF WILMINGTON 1-800-632-4949 PRIOR TO DOING ANY DIGGING, CLEARING, OR GRADING.

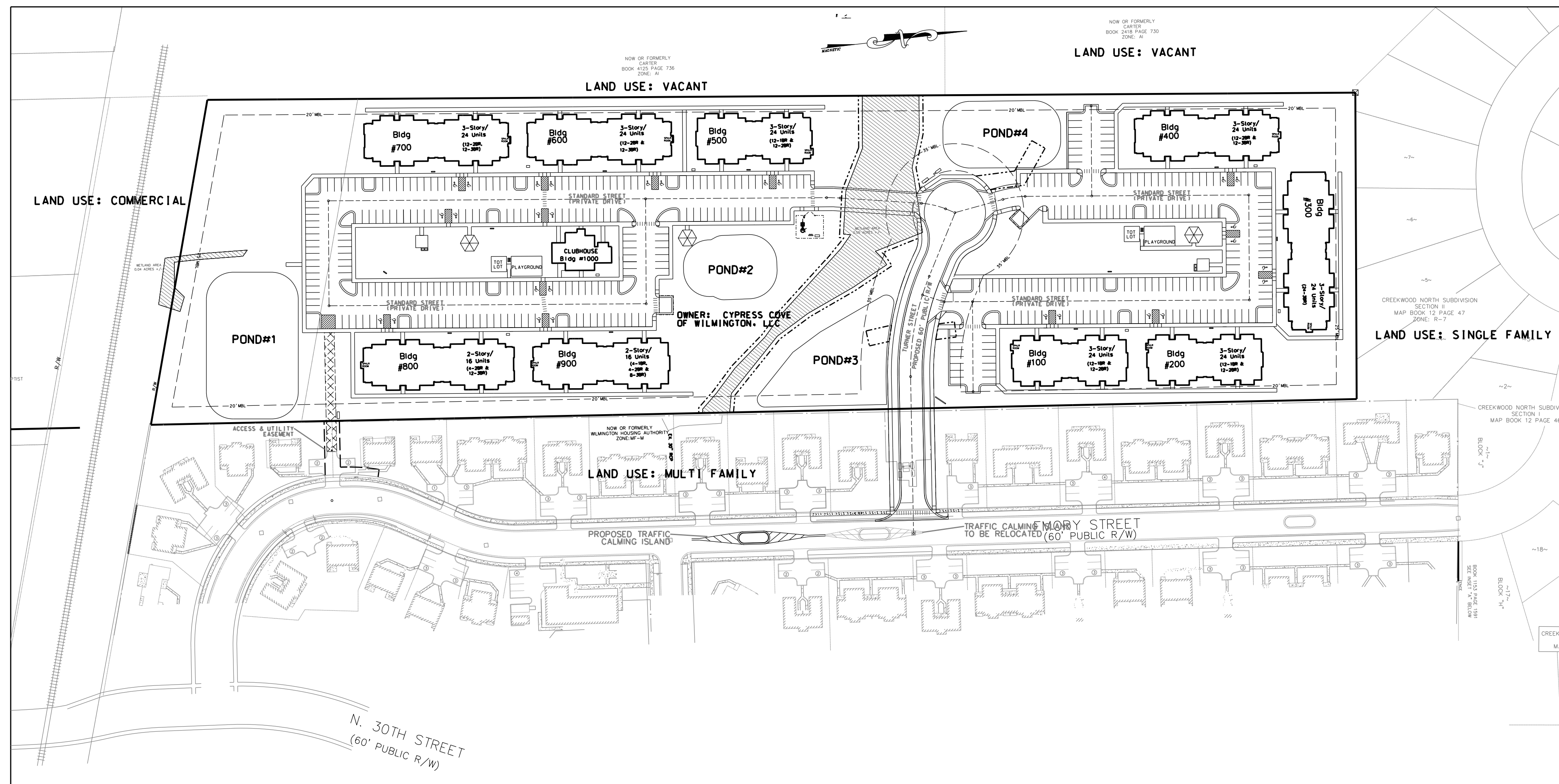
CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER AND WATER NOTES:

1. WATER AND SEWER SERVICES SHALL MEET CAPE FEAR PUBLIC UTILITY AUTHORITY (CPFUA) DETAILS AND SPECIFICATIONS.
2. SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
3. SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
4. ALL SERVICES LYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF THE 30" DIP WITH PRES. REC. 401 POLYMERIC POXY LINING.
5. MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
6. ALL FLEXIBLE COUPLINGS SHALL BE APPROVED.
7. ALL STAINLESS STEEL FASTENERS SHALL BE 316.
8. PROJECT SHALL COMPLY WITH CPFUA CROSS CONNECTION CONTROL REGULATIONS. CONTRACTOR SHALL NOT BE REQUIRED TO COMPLY UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL. CALL 910-343-3910 FOR INFORMATION.
9. IF THE CONTRACTOR PERFORMS CPFA WATER OR CONSTRUCTION, HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE WATER MAIN.
10. ANY IRRIGATION SYSTEM SUPPLIED BY CPFA WATER SHALL COMPLY WITH THE CPFUA CROSS CONNECTION CONTROL REGULATIONS. CALL 910-343-3910 FOR INFORMATION.
11. ANY IRRIGATION SYSTEM SHALL BE EQUIPPED WITH RAIN AND FREEZER SENSOR (SHALL UTILIZE MOISTURE SENSORS).
12. ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CPFA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USFCCCHOR OR ASSE.
13. CONTRACTOR TO FIELD VERIFY EXISTING WATER AND SEWER SERVICE LINES AND LOCATIONS. IF WATER LINES TO CONSTRUCTION, ENGINEER TO BE NOTIFIED OF ANY CONFLICTS.

WILMINGTON, NC

APRIL 14th, 2017

REVISÉD: JUNE 6th, 2017



SITE PLAN - SCALE: 1"=100'

BUILDING DATA				OPEN SPACE CALCULATIONS			
BUILDING #	NUMBER OF UNITS	FOOTPRINT AREA (SF)	# OF STORIES	BUILDING SQUARE FOOTAGE	BUILDING HEIGHT		
1	12-1BR & 12-2BR	8,686	3	25,300	32'10"-1/2"	TRACT AREA	= 14.78 AC
2	12-1BR & 12-2BR	8,686	3	25,300	32'10"-1/2"	POND #1	= 0.46 AC
3	24-3BR	11,544	3	33,769	34'3"-1/2"	POND #2	= 0.26 AC
4	12-2BR & 12-3BR	10,591	3	30,223	34'3"	POND #3	= 0.27 AC
5	12-1BR & 12-2BR	8,686	3	25,300	32'10"-1/2"	POND #4	= 0.40 AC
6	12-2BR & 12-2BR	10,591	3	30,223	34'3"	REMAINING AREA	= 13.39 AC
7	12-2BR & 12-3BR	10,591	3	30,223	34'3"		
8	4-2BR & 12-3BR	11,068	2	21,583	34'3"	OPEN AREA REQUIRED = 35% OF 13.39 AC	
9	4-1BR, 4-2BR & 8-3BR	10,101	2	19,683	34'3"	OPEN AREA REQUIRED = 4.69 AC	
CLUBHOUSE	N/A	2,900	2	2,902	29'1"		
TOTALS	40-1BR UNITS 80-2BR UNITS 80-3BR UNITS 200 UNITS TOTAL	93,444 SF BUILDING COVERAGE = 6,322 SF PER ACRE = 14.51% COVERAGE		244,506 SF		PASSIVE AREAS PROVIDED = 2.36 AC ACTIVE AREAS PROVIDED = 2.85 AC TOTAL OPEN SPACE PROVIDED = 5.21 AC	

PARKING DATA		FLOOD DATA	
PARKING REQ'D = 400 (NCHFA 2016 OAP) PARKING SPACES = 400 TOTAL PARKING REQ'D (WILMINGTON) = 1.5 SPACE PER 1 BEDROOM UNITS, 2 SPACES PER 2 BEDROOM UNIT & 2.25 SPACES PER 3 BEDROOMS AND GREATER UNITS PARKING REQ'D (WILMINGTON) = (40x1.5)+(80x2.25)=400 SPACES REQ'D PARKING PROVIDED = 400 SPACES HANDICAP(H/C) PARKING REQ'D (WILMINGTON) = 2% OF 400 = 8 SPACES REQ'D HANDICAP(H/C) PARKING PROVIDED = 28 SPACES BICYCLE PARKING REQUIRED = 25 SPACES BICYCLE PARKING PROVIDED = 35 SPACES		MAP NUMBER: 3720313800J PANEL: 3138 ZONE:X	

SHEET #C01 OF 10
PROJECT #:PM858-36'-001
DESIGN FILE #: Construction Drawings.dgn

SHEET INDEX	
SHEET	DESCRIPTION
1.0	COVER
2.0	SURVEY SOUTH
2.1	SURVEY NORTH
3.0	OVERALL SITE PLAN
3.1	OA SITE PLAN W/TREE SURVEY
3.2	DETAILED SITE PLAN - SOUTH
3.3	DETAILED SITE PLAN - NORTH
4.0	EROSION CONTROL PLAN - SOUTH
4.1	EROSION CONTROL PLAN - NORTH
5.0	DRAINING & DRAINAGE - SOUTH
5.1	DRAINING & DRAINAGE - NORTH
6.0	OVERALL UTILITY PLAN
6.1	UTILITY PLAN & PROFILE 1
6.2	UTILITY PLAN & PROFILE 2
6.3	UTILITY PLAN & PROFILE 3
6.4	UTILITY PLAN & PROFILE 4
7.0	LIFT STATION DETAILS
8.0	POND/EROSION CONTROL DETAILS
9.0	SITE & UTILITY DETAILS
9.1	SITE & UTILITY DETAILS
9.2	SITE & UTILITY DETAILS
10.0	TRAFFIC CALMING ISLAND DETAILS

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: Permit #

Signed: _____

Approved Construction Plan	
Name	Date
Planning	
Public Utilities	
Traffic	
Fire	

REVISIONS:

No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & ACOL
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

PIN:R04812-001-004-000

COVER SHEET

CYPRESS COVE APARTMENTS

821 EMORY STREET

WILMINGTON TWSP., NEW HANOVER COUNTY, NORTH CAROLINA

CLIENT: CYPRESS COVE OF

ADDRESS: WILMINGTON, LLC
PO BOX 3400

ADDRESS: FU BOX 2400
BEAUFORT, NC 28516

PHONE • 352 504 3000

PHONE: 252-504-3996

STROUD ENGINEERING

151A HIGHWAY 24
MOREHEAD CITY, N.C. 28552

V MOREHEAD CITY, N.C. 28557
(252) 247-7479 LIC

CHARLES M. CULLIPH

DESIGNED:

CMC

DRAWN:
CMC

CHECKED:

	CMC
--	-----

APPROVED:
CMC

DATE:

7 | DATE: 4/10/1

SCALE:

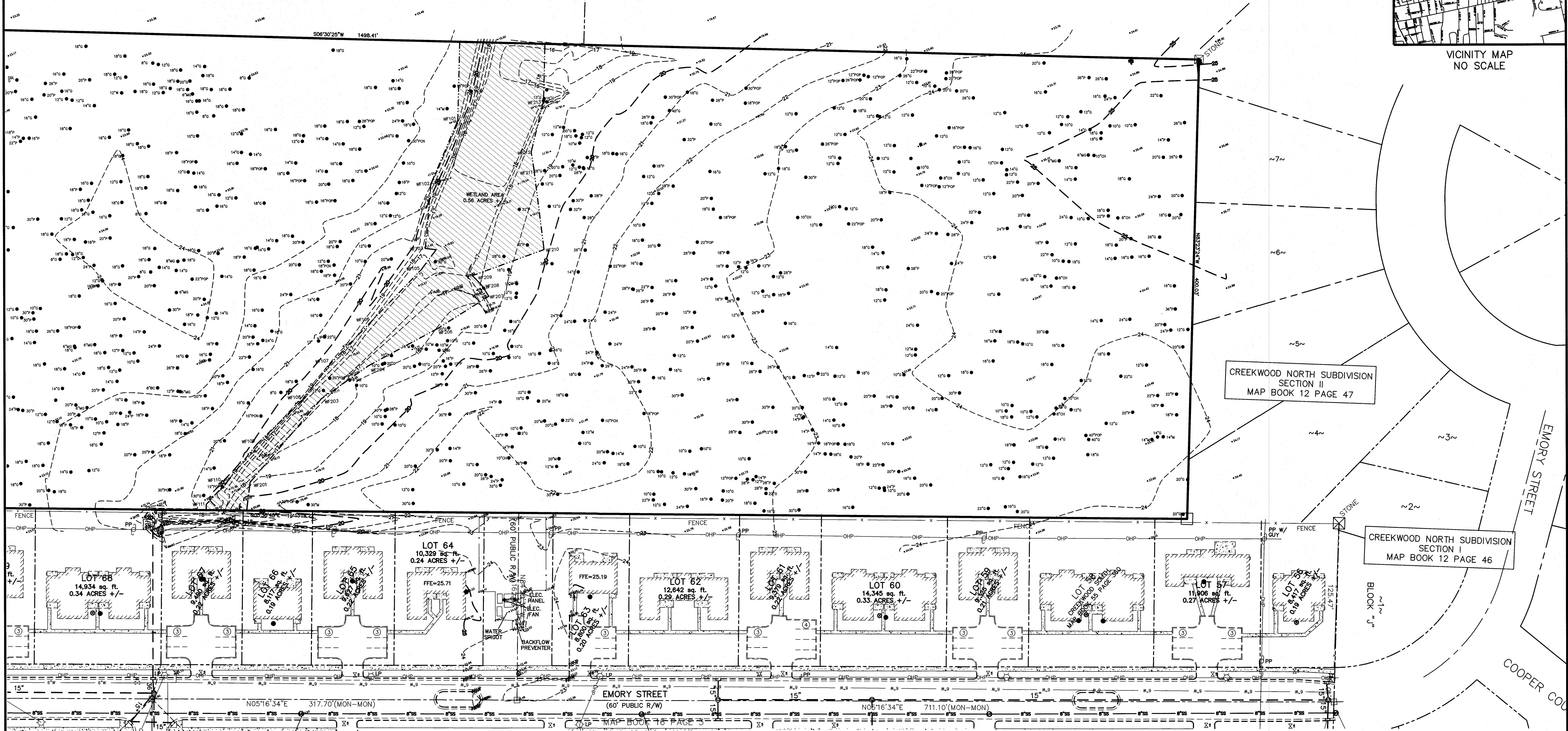
1"=100'

NOW OR FORMERLY
CARTER
BOOK 4125 PAGE 736

NOW OR FORMERLY
CARTER
BOOK 2418 PAGE 730



VICINITY MAP
NO SCALE



CREEKWOOD NORTH SUBDIVISION
SECTION II
MAP BOOK 12 PAGE 47

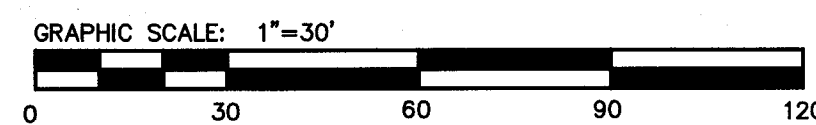
CREEKWOOD NORTH SUBDIVISION
SECTION I
MAP BOOK 12 PAGE 46

BOUNDARY TREE AND TOPOGRAPHIC SURVEY
EAST CAROLINA COMMUNITY DEVELOPMENT INC.
REAL PROPERTIES LLC
TRACT
BOOK 4717 PAGE 513
14.51 ACRES +/-
WILMINGTON TOWNSHIP NEW HANOVER COUNTY
NORTH CAROLINA

CLIENT:
EAST CAROLINA COMMUNITY DEVELOPMENT INC.
C/O STROUD ENGINEERING
ATTN: JIMMY FENTRESS, PE
102 CINEMA DRIVE, Suite 102D
Wilmington, NC 28403

MICHAEL UNDERWOOD and ASSOCIATES, P.A.
102 CINEMA DRIVE, SUITE A
WILMINGTON, NC 28403
PHONE: 910-815-0650
FAX: 910-815-0383
E-MAIL: mua@bizccr.com Firm License #C-0615

SURVEYED: AA
DRAWN BY: TBM
CHECKED BY: MNU
APPROVED: MNU
DATE: OCT. 16
SCALE: 1"=30'



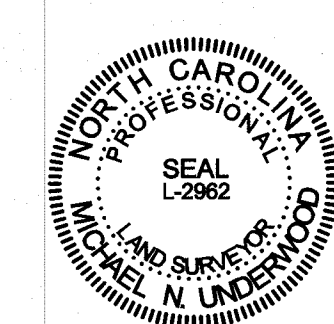
SURVEY REFERENCE
BOOK 4717 PAGE 513
MAP BOOK 55 PAGE 360
MAP BOOK 16 PAGE 3

LEGEND
EIP EXISTING IRON PIPE
IPS IRON PIPE SET
ECM EXISTING CONCRETE MONUMENT
NPS NO POINT SET

UTILITY STATEMENT
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED
FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS.
THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND
UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE
AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR
FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES
SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH
HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY
AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR
HAS NOT PHYSICALLY LOCATED UNDERGROUND UTILITIES.

NOTE:
THIS SURVEY IS SUBJECT TO ANY INFORMATION
THAT WOULD BE REVEALED BY A CURRENT TITLE
OPINION.

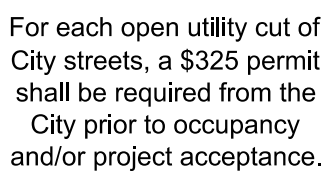
CERTIFICATE:
THIS SURVEY IS OF AN EXISTING PARCEL OF LAND AND
DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING
STREET.
Michael N. Underwood
MICHAEL N. UNDERWOOD, P.L.S. L-2962



NORTH CAROLINA
NEW HANOVER COUNTY

I, MICHAEL N. UNDERWOOD, CERTIFY THAT THIS PLAT WAS
DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY
MADE UNDER MY SUPERVISION DESCRIPTION AS SHOWN ON
THE FACE OF THIS PLAT RATIO OF PRECISION AS CALCULATED
BY COMPUTER IS 1/10,000 + THAT THE BOUNDARIES NOT
SURVEYED ARE SHOWN BY BROKEN LINES PLOTTED FROM
INFORMATION REFERENCED THAT THIS PLAT WAS PREPARED
IN ACCORDANCE WITH "THE STANDARDS OF PRACTICE FOR
LAND SURVEYING IN NORTH CAROLINA" WITNESS MY ORIGINAL
SIGNATURE, LICENSE NUMBER AND SEAL THIS 16TH
DAY OF OCTOBER, A.D., 2016

MICHAEL N. UNDERWOOD, P.L.S.
LICENSE NUMBER L-2962
SEAL OR STAMP ©2016 MICHAEL UNDERWOOD and ASSOCIATES, P.A.

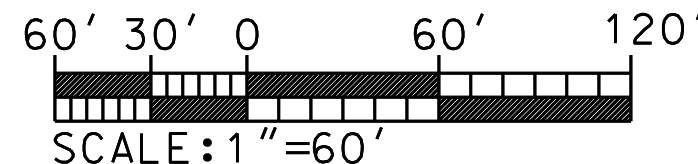


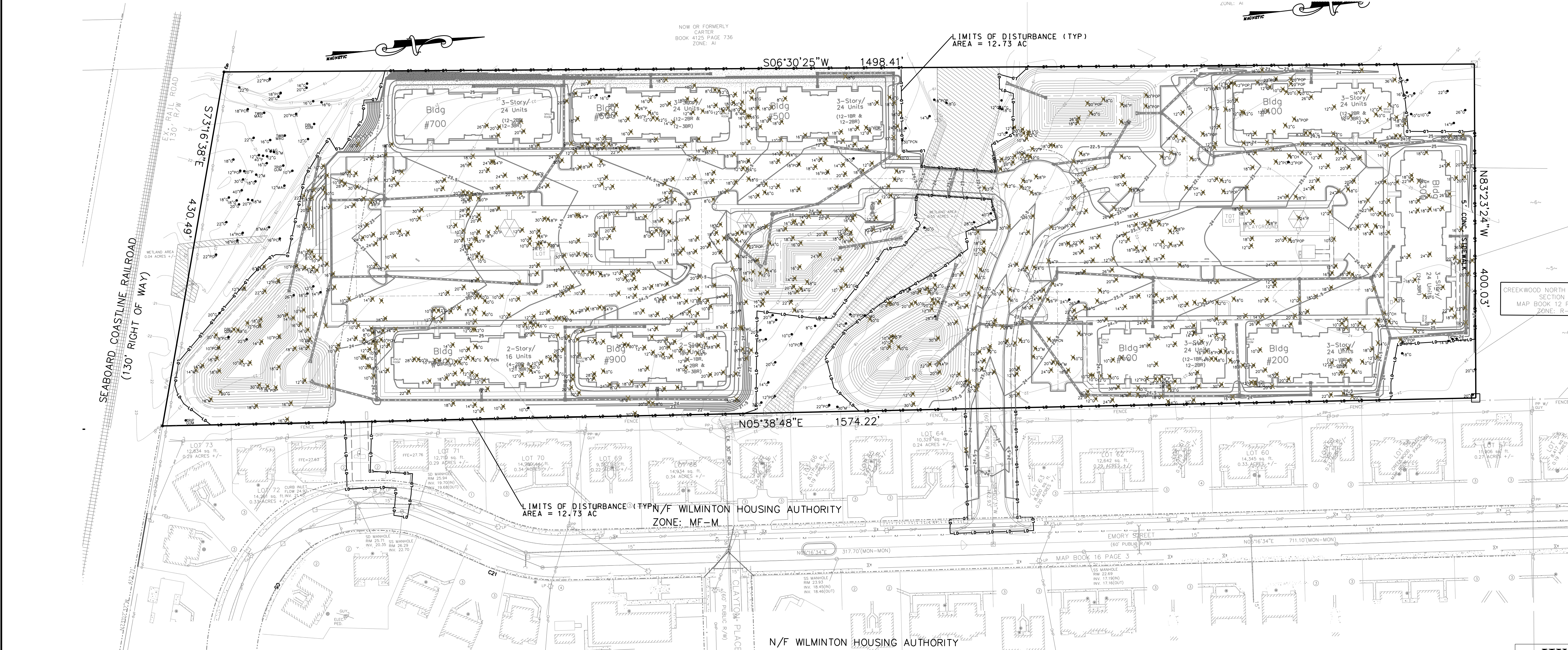
Fire _____

No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & ACOE
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

CHARLES M. CULLIPHER P.E.	SCALE: 1"=60'
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SHEET #C3.1 OF 10
PROJECT #:PM858-36'-001
DESIGN FILE #: Construction Drawings.dgn





- NOTES:
1. TREES INSIDE OF THE PROPOSED LIMITS OF DISTURBANCE ARE PROPOSED TO BE REMOVED. TREES OUTSIDE OF THE PROPOSED LIMITS OF DISTURBANCE SHALL REMAIN.
 2. THE LIMITS OF DISTURBANCE AND THE PROPOSED COMBINATION SILT/TREE PROTECTION FENCE ARE LOCATED IN THE SAME POSITION. FOR CLARITY, ONLY THE LIMITS OF DISTURBANCE LINE IS SHOWN ON THIS PLAN. SEE THE EROSION CONTROL PLANS AND DETAILS FOR SILT AND TREE PROTECTION FENCING.

- LEGEND
- LD LIMITS OF DISTURBANCE (SEE NOTE #2 THIS SHEET)
 - 12" P TREE TO BE REMOVED
 - 12" P TREE TO REMAIN

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name _____ Date _____

Planning _____

Public Utilities _____

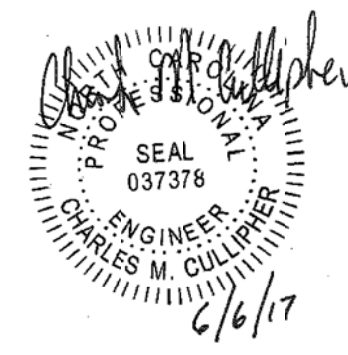
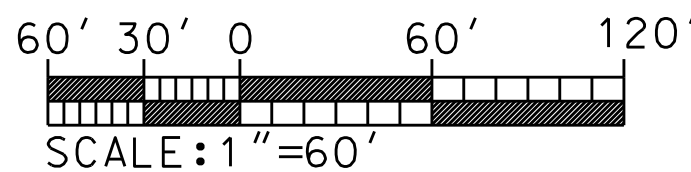
Traffic _____

Fire _____

REVISIONS:

No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & ACCE
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

SHEET #C3.1 OF 10
PROJECT #: PM858-36'-001
DESIGN FILE #: Construction Drawings.dgn



PIN: R04812-001-004-000

SITE PLAN WITH TREE SURVEY

CYPRESS COVE APARTMENTS

821 EMORY STREET
WILMINGTON TWSP., NEW HANOVER COUNTY, NORTH CAROLINA

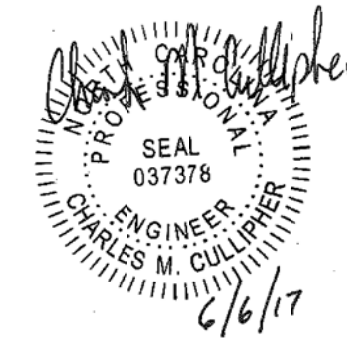
CLIENT: CYPRESS COVE OF WILMINGTON, LLC
ADDRESS: PO BOX 2400
BEAUFORT, NC 28516
PHONE: 252-504-3996

DESIGNED: CMC
DRAWN: CMC
CHECKED: CMC
APPROVED: CMC

STROUD ENGINEERING, P.A.
151A HIGHWAY 24
MOREHEAD CITY, N.C. 28557
(252) 247-7479
LICENSE NO. C-0647

DATE: 4/10/17
SCALE: 1"=60'

CHARLES M. CULLIPHER P.E.



COASTAL PLAIN SITE STABILIZATION SCHEDULE

1. Fertilize and lime per recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.
2. Incorporate lime/fertilizer 4-6 inches.
3. Roughen steep slopes by tracked machinery.
4. Select species based on season. Refer to tables.
5. Broadcast seeds evenly and cover by raking or dragging a chain. Firm soil by rolling.
6. Apply straw mulch at a rate 1-2 tons per acre. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.
7. Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

PERMANENT SEEDING TABLE 1

Seeding Dates	Recommended Planting	Rate (lb/ac)
Feb. 15 - Apr. 1	Tall Fescue Mixture	see table 2
Sep. 1 - Nov. 1	Hybrid Bermudagrass	see table 2
Apr. 1 - Aug. 1	Common Bermudagrass	see table 2
Mar. 1 - Jul. 1	Centipede grass	see table 2

PERMANENT SEEDING TABLE 2a-LOW MAINTENANCE MIXTURES

Site Description	Recommended Planting	Rate (lb/ac)
Well to poorly drained soils	Tall Fescue Mixture	80
	Pensacola Bahiagrass	50
	Kobe Lespedeza	40
Dry to well drained soils	Pensacola Bahiagrass	50
	Common Bermudagrass	30
	Kobe Lespedeza	10
	German Millet	10
Swales	Common Bermudagrass	40-80

PERMANENT SEEDING TABLE 2b-HIGH MAINTENANCE MIXTURES

Site Description	Recommended Planting	Rate (lb/ac)
Well to poorly drained soils	Tall Fescue Mixture	200
	Rye Grain	25
Dry to well drained soils	Hybrid Bermudagrass	50
Well drained sandy loam to sand, lawns.	Centipede grass	10-20

Notes:
For seeding outside of recommended dates and/or for temporary stabilization, refer to temporary seeding table.

For highly erosive areas or as directed by an engineer, sod shall be provided.

TEMPORARY SEEDING TABLE

Seeding Dates	Recommended Planting	Rate (lb/ac)
Dec. 1 - Apr. 15	Kobe Lespedeza with Rye Grain	120
Apr. 15 - Aug. 15	German Millet	40
Aug. 15 - Dec. 1	Rye Grain	120

SOD INSTALLATION

1. Fertilize and lime per recommendations of soil tests or apply 100 lb/1,000 sf ground agricultural limestone and 25 lb/1,000 sf fertilizer. In the fall, use 10-10-10. In the spring, use 5-10-10.
2. Incorporate lime/fertilizer 4-6 inches.
3. Rake or harrow to achieve a smooth final grade.
4. Roll to achieve a smooth, firm surface on which to lay the sod.
5. Lightly rake and irrigate top layer of soil just prior to installation.
6. Lay sod in a staggered, brick-like pattern with the longest dimension perpendicular to the slope. Avoid gaps. Use a knife to fit irregular shapes.
7. Roll sod lightly after installation to ensure good sod to soil contact.
8. Irrigate initially to wet soil to a depth of 4". Keep soil moist for 2-3 weeks thereafter or until sod has taken root.

LEGEND

MBL	MINIMUM BUILDING LINE
⊙	PARKING COUNT
□	INLET PROTECTION
-SF/TP-	PROPOSED COMBINATION TREE PROTECTION & SILT FENCE
-SF-	PROPOSED SILT FENCE
-LD-	LIMITS OF DISTURBANCE
▨	404 WETLANDS
▤	PASSIVE OPEN AREA (AKA AREA TO REMAIN)

LAND DISTURBANCE = 12.73 AC

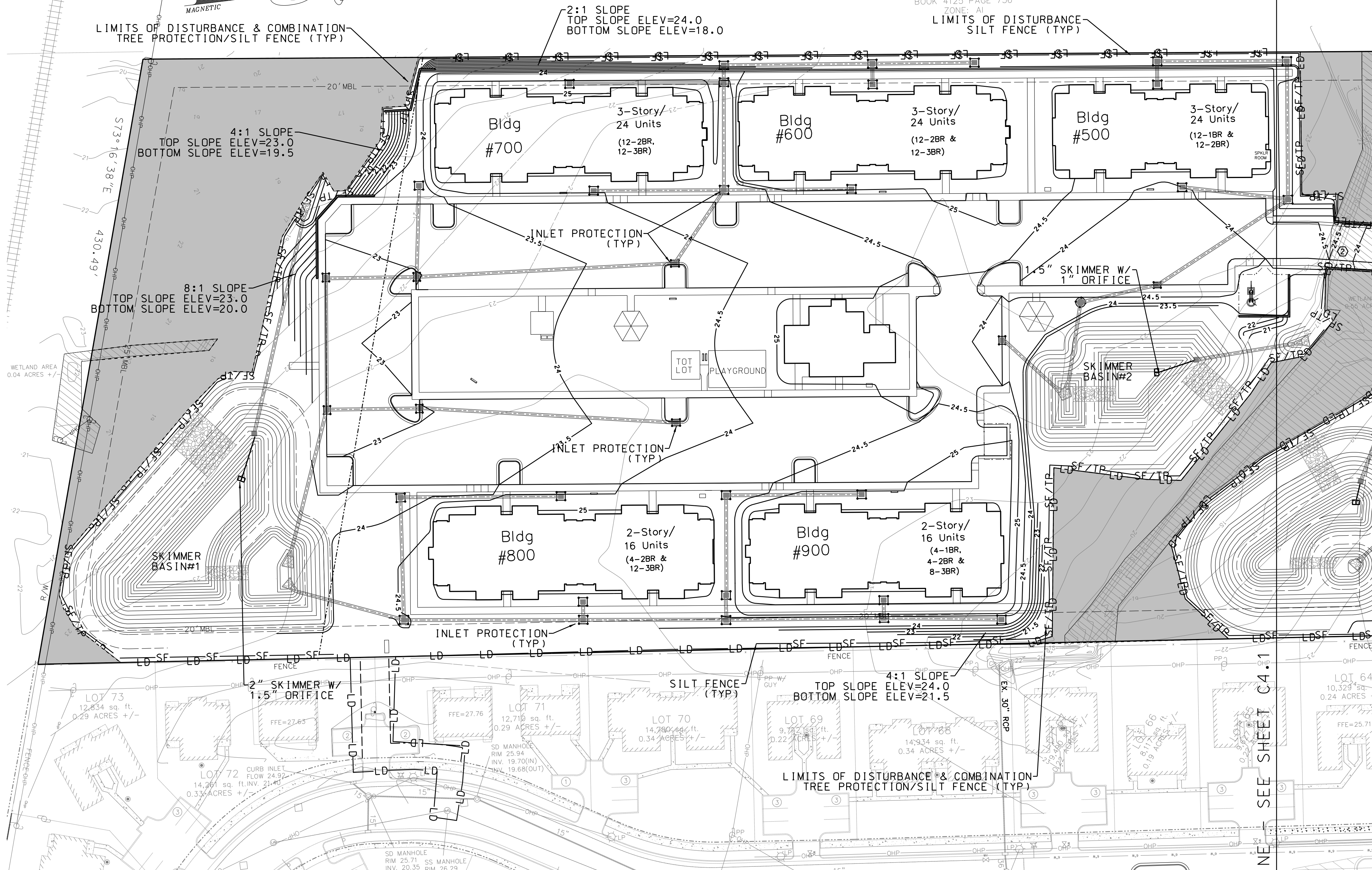
ALL DENUDED AREAS SHALL BE STABILIZED WITHIN 7 DAYS OF BEING BROUGHT TO ROUGH FINAL GRADE

SEE SHEET C-08 FOR EROSION CONTROL DETAILS AND CONSTRUCTION SEQUENCE

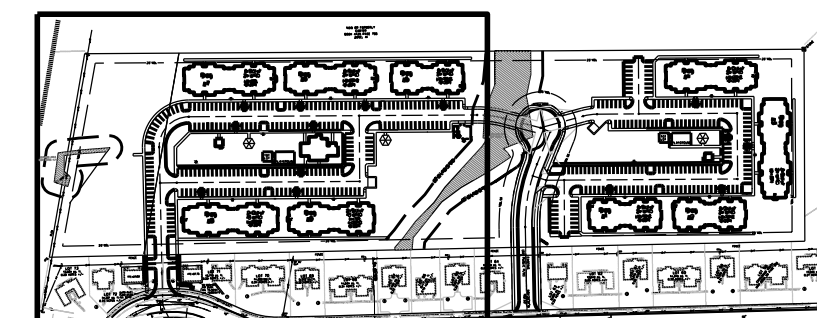
40' 20' 0 40' 80'
SCALE: 1"=40'

NOW OR FORMERLY
CARTER
BOOK 4125 PAGE 736
ZONES A

LIMITS OF DISTURBANCE
TREE PROTECTION/SILT FENCE (TYP)



SHEET C4.0



KEY PLAN

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name	Date
Planning	
Public Utilities	
Traffic	
Fire	

REVISIONS:

No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & A.C.E.
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

PIN:R04812-001-004-000

EROSION CONTROL PLAN - SOUTH

CYPRESS COVE APARTMENTS

821 EMORY STREET

WILMINGTON TWP.. NEW HANOVER COUNTY, NORTH CAROLINA

CLIENT: CYPRESS COVE OF WILMINGTON, LLC
ADDRESS: PO BOX 2400 BEAUFORT, NC 28516

PHONE: 252-504-3996

STRoud ENGINEERING, P.A.

151A HIGHWAY 24
MOREHEAD CITY, N.C. 28557
(252) 247-7479

LICENSE NO. C-0647

CHARLES M. CULLIPHER P.E.

DESIGNED: CMC
DRAWN: CMC
CHECKED: CMC
APPROVED: CMC
DATE: 4/10/17
SCALE: 1"=40'

COASTAL PLAIN SITE STABILIZATION SCHEDULE

1. Fertilize and lime per recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 150 lb/acre 10-10-10 fertilizer.
2. Incorporate lime/fertilizer 4-6 inches.
3. Roughen steep slopes by tracked machinery.
4. Select species based on season. Refer to tables.
5. Broadcast seeds evenly and cover by raking or dragging a chain. Firm soil by rolling.
6. Apply straw mulch at a rate 1-2 tons per acre. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.
7. Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other ddmge.

PERMANENT SEEDING TABLE 1

Seeding Dates	Recommended Planting	Rate (lb/ac)
Feb. 15 - Apr. 1	Tall Fescue Mixture	see table 2
Sep. 1 - Nov. 1		
Apr. 1 - Aug. 1	Hybrid Bermudagrass	see table 2
Apr. 1 - Jul. 15	Common Bermudagrass	see table 2
Mar. 1 - Jul. 1	Centipedegrass	see table 2

PERMANENT SEEDING TABLE 2a-LOW MAINTENANCE MIXTURES

Site Description	Recommended Planting	Rate (lb/ac)
Well to poorly drained soils	Tall Fescue Mixture	80
	Pensacola Bahiagrass	50
	Kobe Lespedeza	40
Dry to well drained soils	Pensacola Bahiagrass	50
	Common Bermudagrass	30
	Kobe Lespedeza	10
	German Millet	10
Swales	Common Bermudagrass	40-80

PERMANENT SEEDING TABLE 2b-HIGH MAINTENANCE MIXTURES

Site Description	Recommended Planting	Rate (lb/ac)
Well to poorly drained soils	Tall Fescue Mixture	200
	Rye Grain	25
Dry to well drained soils	Hybrid Bermudagrass	50
Well drained sandy loam to sand, lawns.	Centipedegrass	10-20

Notes:

For seeding outside of recommended dates and/or for temporary stabilization, refer to temporary seeding table.

For highly erosive areas or as directed by an engineer, sod shall be provided.

TEMPORARY SEEDING TABLE

Seeding Dates	Recommended Planting	Rate (lb/ac)
Dec. 1 - Apr. 15	Kobe Lespedeza with Rye Grain	50
		120
Apr. 15 - Aug. 15	German Millet	40
Aug. 15 - Dec. 1	Rye Grain	120

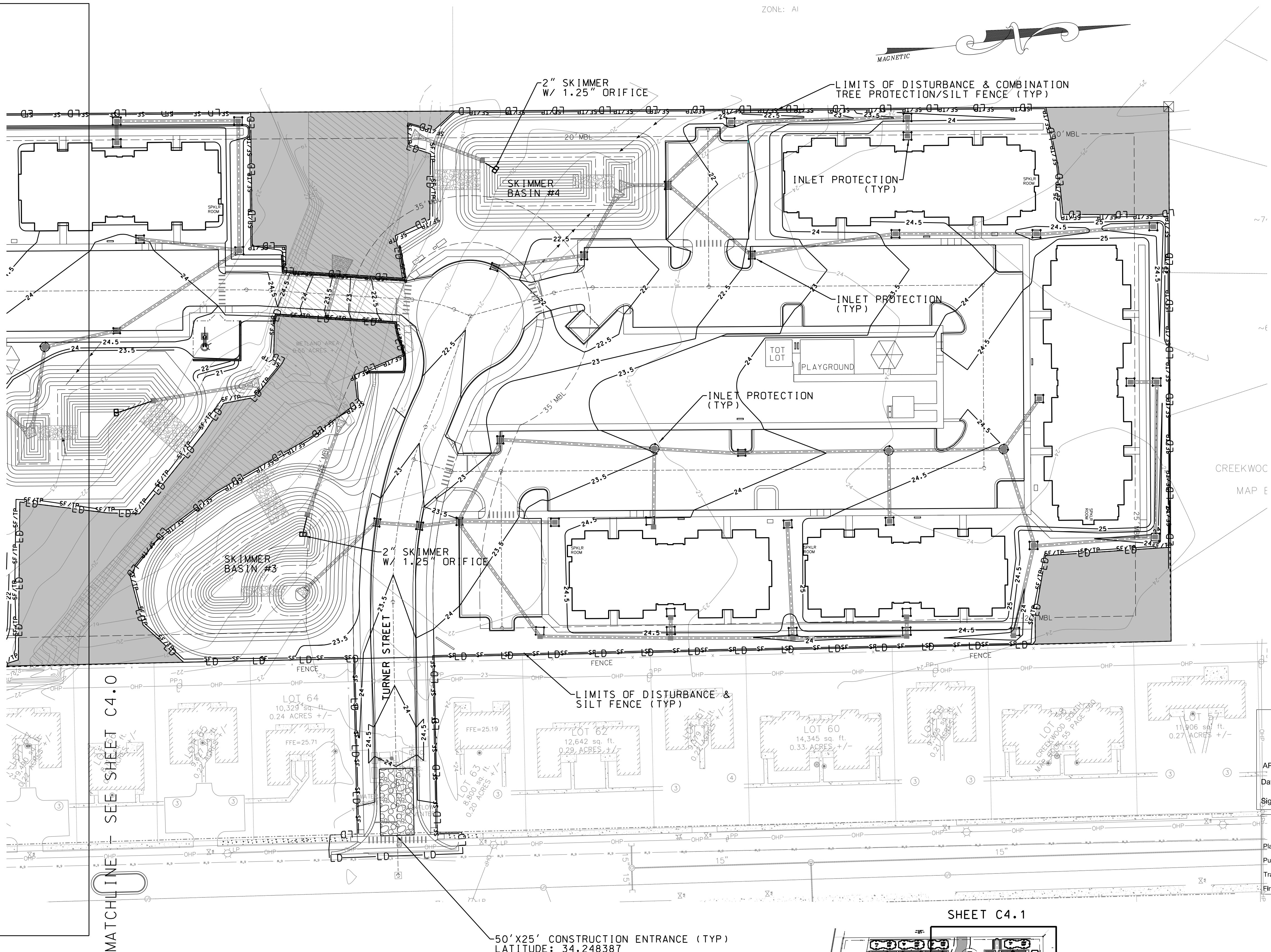
SOD INSTALLATION

1. Fertilize and lime per recommendations of soil tests or apply 100 lb/1,000 sq ground agricultural limestone and 25 lb/1,000 sq fertilizer. In the fall, use 10-10-10. In the spring, use 5-10-10.
2. Incorporate lime/fertilizer 4-6 inches.
3. Rake or harrow to achieve a smooth final grade.
4. Roll to achieve a smooth, firm surface on which to lay the sod.
5. Lightly rake and irrigate top layer of soil just prior to installation.
6. Lay sod in a staggered, brick-like pattern with the longest dimension perpendicular to the slope. Avoid gaps. Use a knife to fit irregular shapes.
7. Roll sod lightly after installation to ensure good sod to soil contact.
8. Irrigate initially to wet soil to a depth of 4". Keep soil moist for 2-3 weeks thereafter or until sod has taken root.

LEGEND

MBL	MINIMUM BUILDING LINE
⊙	PARKING COUNT
□	INLET PROTECTION
—SF/TP—	PROPOSED COMBINATION TREE PROTECTION & SILT FENCE
—SF—	PROPOSED SILT FENCE
—LD—	LIMITS OF DISTURBANCE
▨	404 WETLANDS
▨	PASSIVE OPEN AREA (AKA AREA TO REMAIN)

SHEET #C4.1 OF 10
PROJECT #PMB58-36-001
DESIGN FILE #: Construction Drawings.dgn



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name _____ Date _____

Planning _____

Public Utilities _____

Traffic _____

Fire _____

REVISIONS:

No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & A.C.E.
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

PIN:R04812-001-004-000

EROSION CONTROL PLAN - NORTH

CYPRESS COVE APARTMENTS

821 EMORY STREET
WILMINGTON TWP., NEW HANOVER COUNTY, NORTH CAROLINA

CLIENT: CYPRESS COVE OF WILMINGTON, LLC
ADDRESS: PO BOX 2400 BEAUFORT, NC 28516

PHONE: 252-504-3996

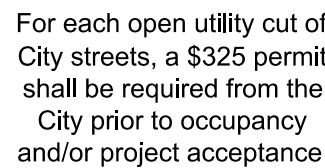
DESIGNED: CMC
DRAWN: CMC
CHECKED: CMC
APPROVED: CMC

STROUD ENGINEERING, P.A.
151A HIGHWAY 24
MOREHEAD CITY, N.C. 28557
(252) 247-7479
LICENSE NO. C-0647

DATE: 4/10/17
SCALE: 1"=40'

CHARLES M. CULLIPHER P.E.

40' 20' 0 40' 80'
SCALE: 1"=40'



Date: _____ Permit # _____

Signed:

Approved Construction Plan

Planning _____

Public Utilities _____

Traffic _____

Fire _____

REVISIONS:

No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & ACOE
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

PIN:R04812-001-004-00C

GRADING PLAN-SOUTH

821 EMORY STREET

WILMINGTON TWSP., NEW HANOVER COUNTY, NORTH CAROLINA

CLIENT: CYPRESS COVE OF

ADDRESS: WILMINGTON, LLC
PO BOX 2400

BEAUFORT, NC 28

PHONE: 252-504-3996

STROUD ENGINEERING, P.A.

151A HIGHWAY 24
MOREHEAD CITY, N.C. 28557
(252) 247-7479 LICENSE NO. C-0647

CHARLES M. CULLIPHER P.E.

DESIGNED:

CMC
DRAWN:

DRAWN.
CMC



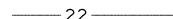
CHECKED:

APPROVED:

CMC
DATE:
4/10/1

SCALE:
1"=40'

LEGEND

	STORM PIPE
	PROPOSED CONTOUR
	EXISTING CONTOUR
DI	DROP INLET
CB	CATCH BASIN
FES	FLARED END SECTION
RCP	REINFORCED CONCRETE PIPE
MH	MANHOLE
YI	PLASTIC YARD INLET
TW 11.0*	TOP & BOTTOM OF WALL
BW 7.0	EXPOSED AT GRADE. SUBGRADE DEPTHS BY OTHERS
17.5	TOP & BOTTOM OF CURB
17.0	
18.0	SPOT ELEVATION
STD.C&G	STANDARD 24" CATCHMENT CURB AND GUTTER
HP	LOCAL HIGH POINT

FES-1 INV = 13.00	FES-1A INV = 13.00	
CB-2 RIM = 22.50 INV = 17.50	D1-1 RIM = 24.25 INV = 21.16	CB-21 RIM = 23.75 INV = 19.04
D1-2A RIM = 23.70 INV = 18.47	Y1-12 RIM = 25.00 INV = 21.50	D1-22 RIM = 24.80 INV = 19.23
D1-3 RIM = 24.30 INV = 18.99	D1-13 RIM = 24.25 INV = 21.75	Y1-23 RIM = 25.40 INV = 21.40
D1-4 RIM = 24.00 INV = 19.69	D1-14 OMITTED	Y1-24 RIM = 25.25 INV = 22.25
Y1-5 RIM = 24.25 INV = 21.00	Y1-15 RIM = 24.50 INV = 21.10	D1-25 RIM = 24.95 INV = 19.46
D1-6 RIM = 24.00 INV = 20.39	CB-16 RIM = 22.30 INV = 19.40	D1-26 RIM = 22.00 INV = 19.50
D1-7 RIM = 24.00 INV = 20.45	CB-17 OMITTED	Y1-27 RIM = 24.40 INV = 21.40
D1-8 RIM = 24.25 INV = 20.89	CB-18 RIM = 22.00 INV = 18.50	D1-28 RIM = 23.00 INV = 20.10
Y1-9 RIM = 24.80 INV = 21.80	CB-19 RIM = 22.30 INV = 19.40	Y1-29 RIM = 25.25 INV = 20.25
CB-10 RIM = 23.75 INV = 21.25	D1-20 RIM = 23.65 INV = 20.00	D1-30 RIM = 23.00 INV = 20.50

FES-31
INV = 13.00

CB-32
RIM = 23.80
INV = 18.00

FES-33
INV = 13.00

MH-34
RIM = 24.40
INV = 17.50

CB-35
RIM = 23.50
INV = 18.20

DI-36
RIM = 23.60
INV = 19.14

YI-37
RIM = 24.10
INV = 21.10

DI-38
RIM = 23.15
INV = 19.97

DI-39
RIM = 23.25
INV = 20.75

YI-40
RIM = 24.35
INV = 21.35

FES-A
INV = 17.50
OS-A
RIM = 22.40
INV = 17.50
SEE POND DETAIL
SHEET C8.0 FOR
RISER DETAIL

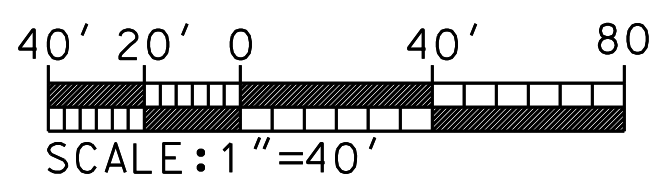
FES-B
INV = 17.50

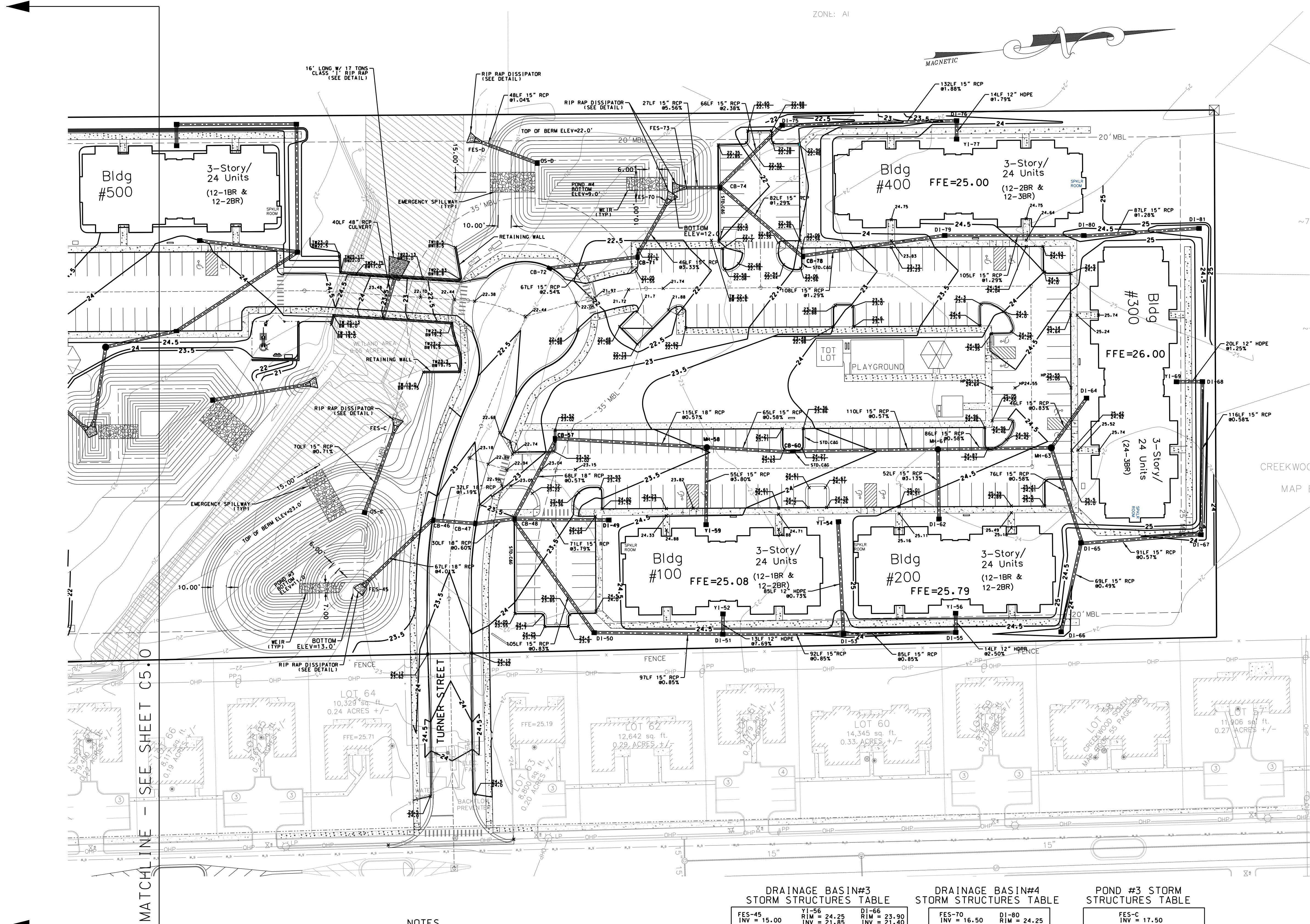
OS-B
RIM = 21.50
INV = 17.00
SEE POND DETAIL
SHEET C8.0 FOR
RISER DETAIL

KEY PLAN

NOTES

1. ALL SIDEWALKS SHALL HAVE A MAXIMUM OF 2% CROSS SLOPE PROVIDING POSITIVE DRAINAGE FROM BUILDINGS FLOWING TOWARDS ROADS, PARKING AREAS, AND ADJACENT DRAINAGE STRUCTURES.
2. ALL PRIVATE CURB & GUTTER SHALL BE SPILL CURB AND GUTTER UNLESS LABELED AS "STD. C&G" ON GRADING PLANS.
3. ALL CURB & GUTTER WITHIN PROPOSED 60' R/W SHALL BE CITY OF WILMINGTON STANDARD 24" CURB & GUTTER





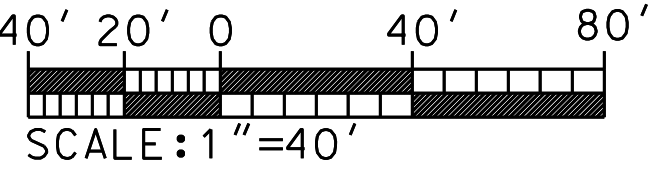
MATCHLINE - SEE SHEET C5.0

LEGEND

- 24" PROPOSED PIPE
- 22" EXISTING PIPE
- DI DROP INLET
- CB CATCH BASIN
- FES FLARED END SECTION
- RCP REINFORCED CONCRETE PIPE
- MH MANHOLE
- YI PLASTIC YARD INLET
- TW 11.0' BW 7.0' TOP & BOTTOM OF WALL EXPOSED AT GRADE. SUBGRADE DEPTHS BY OTHERS
- 17.5' TOP & BOTTOM OF CURB
- 17.0' SPOT ELEVATION
- 18.0' SPOT ELEVATION
- STD.C&G STANDARD 24" CATCHMENT CURB AND GUTTER
- HP LOCAL HIGH POINT

NOTES

- ALL SIDEWALKS SHALL HAVE A MAXIMUM OF 2% CROSS SLOPE PROVIDING POSITIVE DRAINAGE FROM BUILDINGS FLOWING TOWARDS ROADS, PARKING AREAS, AND ADJACENT DRAINAGE STRUCTURES.
- ALL PRIVATE CURB & GUTTER SHALL BE SPILL CURB AND GUTTER UNLESS STATED OTHERWISE ON PLANS.
- ALL CURB & GUTTER WITHIN PROPOSED 60' R/W SHALL BE CITY OF WILMINGTON STANDARD 24" CURB & GUTTER



DRAINAGE BASIN#3 STORM STRUCTURES TABLE

FES-45 INV = 15.00	YI-56 RIM = 24.25 INV = 21.85	DI-66 RIM = 23.90 INV = 21.40
CB-46 RIM = 23.08 INV = 17.50	CB-57 RIM = 22.97 INV = 21.58	DI-67 RIM = 23.90 INV = 21.58
CB-47 RIM = 23.08 INV = 17.88	MH-58 RIM = 23.52 INV = 19.11	DI-68 RIM = 24.75 INV = 22.25
CB-48 RIM = 23.15 INV = 18.06	YI-59 RIM = 24.20 INV = 21.85	DI-69 RIM = 25.00 INV = 22.50
DI-49 RIM = 24.00 INV = 21.00	DI-50 RIM = 24.10 INV = 19.18	DI-51 RIM = 24.00 INV = 20.00
YI-52 RIM = 24.00 INV = 21.00	DI-62 RIM = 24.75 INV = 21.75	MH-63 RIM = 24.60 INV = 20.62
DI-53 RIM = 24.70 INV = 20.78	DI-64 RIM = 24.90 INV = 21.00	DI-65 RIM = 24.25 INV = 21.06
YI-54 RIM = 24.40 INV = 21.40	DI-65 RIM = 24.25 INV = 21.06	

DRAINAGE BASIN#4 STORM STRUCTURES TABLE

FES-70 INV = 16.50	DI-80 RIM = 24.25 INV = 20.64
CB-71 RIM = 21.50 INV = 17.20	DI-81 RIM = 24.25 INV = 21.75
CB-72 RIM = 22.20 INV = 18.20	FES-73 INV = 16.50
CB-74 RIM = 21.60 INV = 16.84	DI-75 RIM = 22.40 INV = 18.07
DI-76 RIM = 23.55 INV = 20.55	YI-77 RIM = 23.80 INV = 20.80
CB-78 RIM = 22.45 INV = 17.90	DI-79 RIM = 23.80 INV = 19.29

POND #3 STORM STRUCTURES TABLE

FES-C INV = 17.50
DS-C RIM = 21.50 INV = 17.00

POND #4 STORM STRUCTURES TABLE

FES-D INV = 16.50
DS-D RIM = 20.50 INV = 16.00

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____

Approved Construction Plan
Name _____ Date _____
Planning _____
Public Utilities _____
Traffic _____
Fire _____

REVISIONS:

No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & A.C.E.
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

PIN:R04812-001-004-000

GRADING PLAN-NORTH

CYPRESS COVE APARTMENTS

821 EMORY STREET
WILMINGTON TWP., NEW HANOVER COUNTY, NORTH CAROLINA

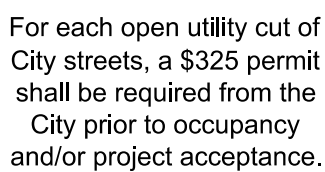
CLIENT: CYPRESS COVE OF WILMINGTON, LLC
ADDRESS: PO BOX 2400 BEAUFORT, NC 28516
PHONE: 252-504-3996

DESIGNED: CMC
DRAWN: CMC
CHECKED: CMC
APPROVED: CMC

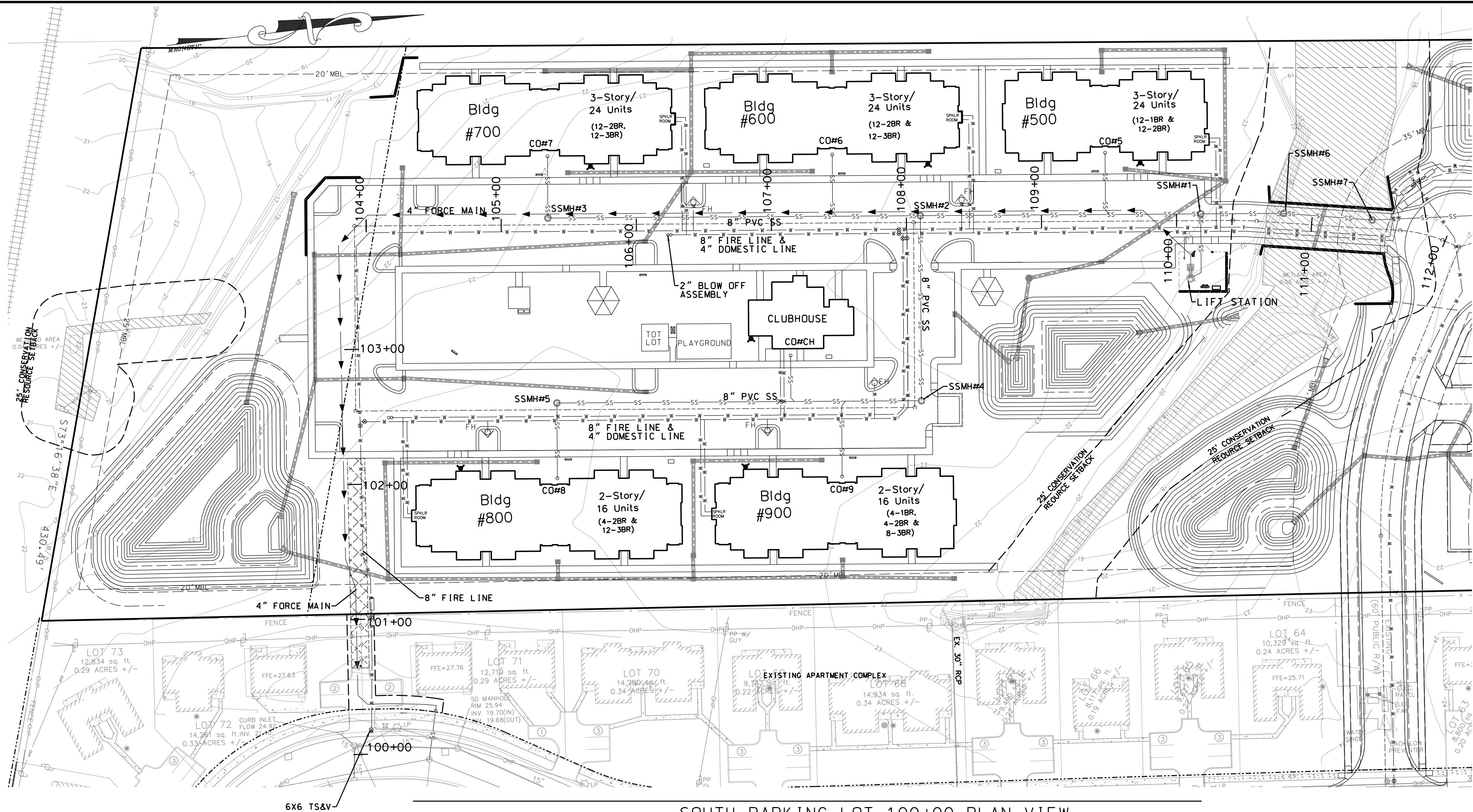
STROUD ENGINEERING, P.A.
151A HIGHWAY 24
MOREHEAD CITY, N.C. 28557
(252) 247-7479
LICENSE NO. C-0647

DATE: 4/10/17
SCALE: 1"=40'

CHARLES M. CULLIPHER P.E.



- SHEET #C6.0 OF 10
PROJECT #:PM858-36'-001
DESIGN FILE #: Construction Drawings.dgn



SOUTH PARKING LOT 100+00 PLAN VIEW

PIPE MATERIAL NOTES:

2" WATER MAINS SHALL BE ASTM D2241 SDR 21 CLASS 200 PVC.
6" AND 8" WATER MAINS SHALL BE AWWA C900 DR 18 CLASS 150 PVC.
WHERE REQUIRED, DUCTILE IRON WATER SHALL CONFORM TO AWWA C104, C111, C150, C151, AND C153.

GRAVITY SEWER MAINS SHALL BE AWWA C900 DR 18 CLASS 150 PVC.
WHERE REQUIRED, DUCTILE IRON SEWER SHALL CONFORM TO AWWA C151.
ALL PROPOSED GRAVITY SEWER IS 8 INCHES IN DIAMETER.

FORCE MAINS SHALL BE AWWA C900 DR 18 CLASS 150 PVC.
WHERE REQUIRED, DUCTILE IRON FORCE MAINS SHALL CONFORM TO AWWA C150 AND C151.

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL MATERIAL DETAILS.
WHERE A DISCREPANCY OCCURS, THE PROJECT SPECIFICATIONS CONTROL.

STORM DRAINS SHALL BE CLASS IV RCP.

PVC WATER MAINS SHALL BE BLUE. DIP WATER MAINS SHALL BE MARKED WITH A CONTINUOUS BLUE STRIPE.

PVC SEWER MAINS SHALL BE GREEN. DIP SEWER MAINS SHALL BE MARKED WITH A CONTINUOUS GREEN STRIPE.

CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES:

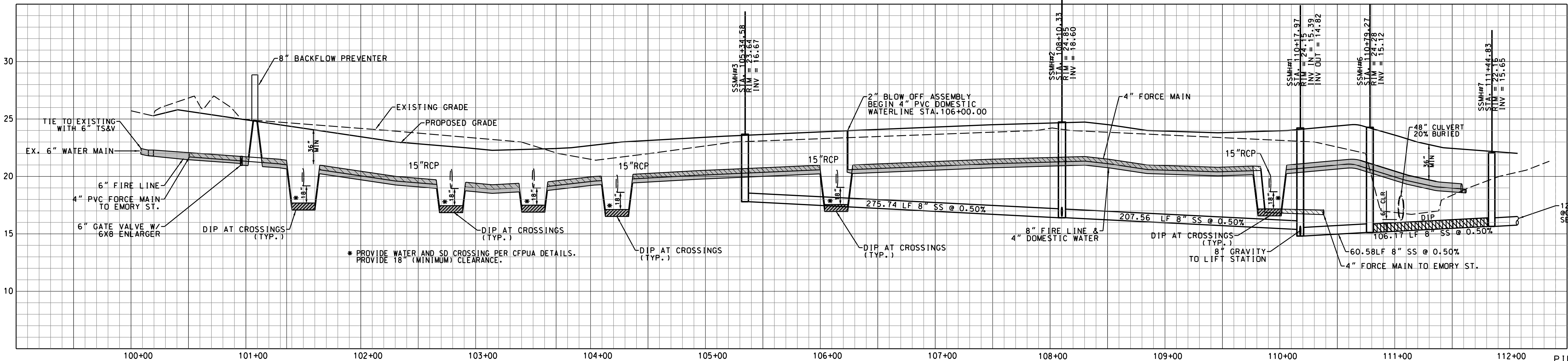
- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL
- SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
- SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
- ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50 DIP WITH PROTECTO 401 CERAMIC EPOXY LINING.
- MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
- NO FLEXIBLE COUPLINGS SHALL BE USED.
- ALL STAINLESS STEEL FASTENERS SHALL BE 316.

LEGEND

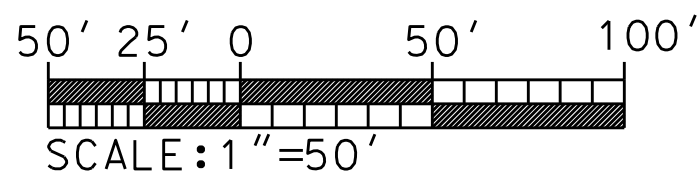
- PROPOSED 4" FORCE MAIN (PROFILE)
- PROPOSED STORM DRAINAGE
- PROPOSED SANITARY SEWER
- PROPOSED WATER
- PROPOSED FIRE HYDRANT
- PROPOSED FORCE MAIN
- PROPOSED CLEAN OUT
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED CENTERLINE
- PROPOSED WATER LINE (PROFILE)

CLEAN OUT TABLE

CO#5	RIM=24.75	INV=21.75
CO#6	RIM=25.16	INV=22.50
CO#7	RIM=23.67	INV=21.50
CO#7	RIM=23.67	INV=21.50
CO#9	RIM=23.16	INV=22.50
CO#CH	RIM=25.16	INV=22.50



SOUTH PARKING LOT 100+00 PROFILE
EXTENDED FOR WATERLINE CONNECTION TO EMORY ST.
(PRIVATE)



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: Permit #

Signed:

Approved Construction Plan	
Name	Date
Planning	
Public Utilities	
Traffic	
Fire	

REVISIONS:

No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & ACOE
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

PIN:R04812-001-004-000

UTILITY PLAN AND PROFILE - 1

CYPRESS COVE APARTMENTS

821 EMORY STREET

WILMINGTON TWP., NEW HANOVER COUNTY, NORTH CAROLINA

CLIENT: CYPRESS COVE OF WILMINGTON, LLC
ADDRESS: PO BOX 2400
BEAUFORT, NC 28516

PHONE: 252-504-3996

STRoud ENGINEERING, P.A.

151A HIGHWAY 24
MOREHEAD CITY, N.C. 28557
(252) 247-7479

LICENSE NO. C-0647

CHARLES M. CULLIPHER P.E.

DESIGNED: CMC

DRAWN: CMC

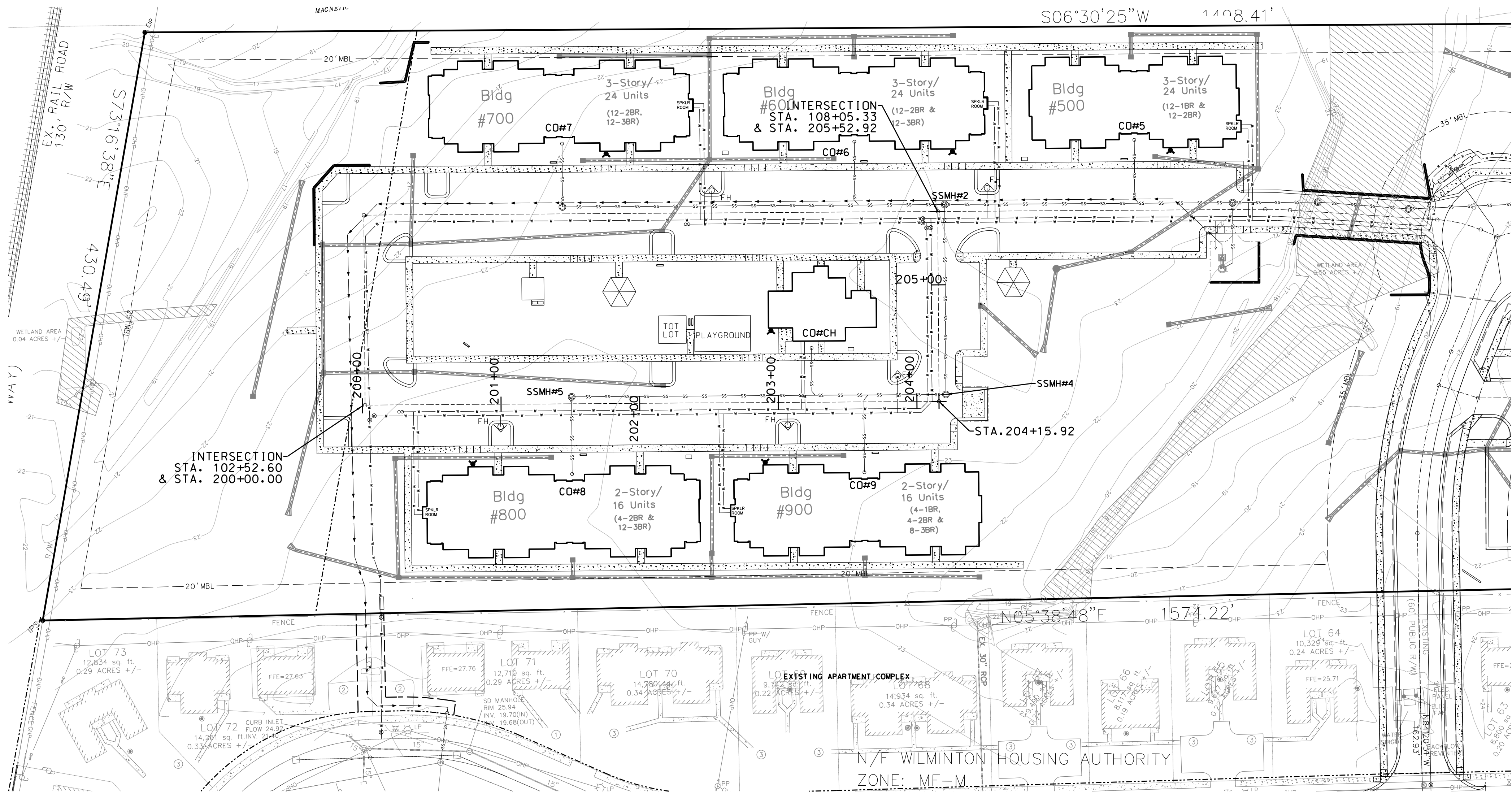
CHECKED: CMC

PROF: CMC

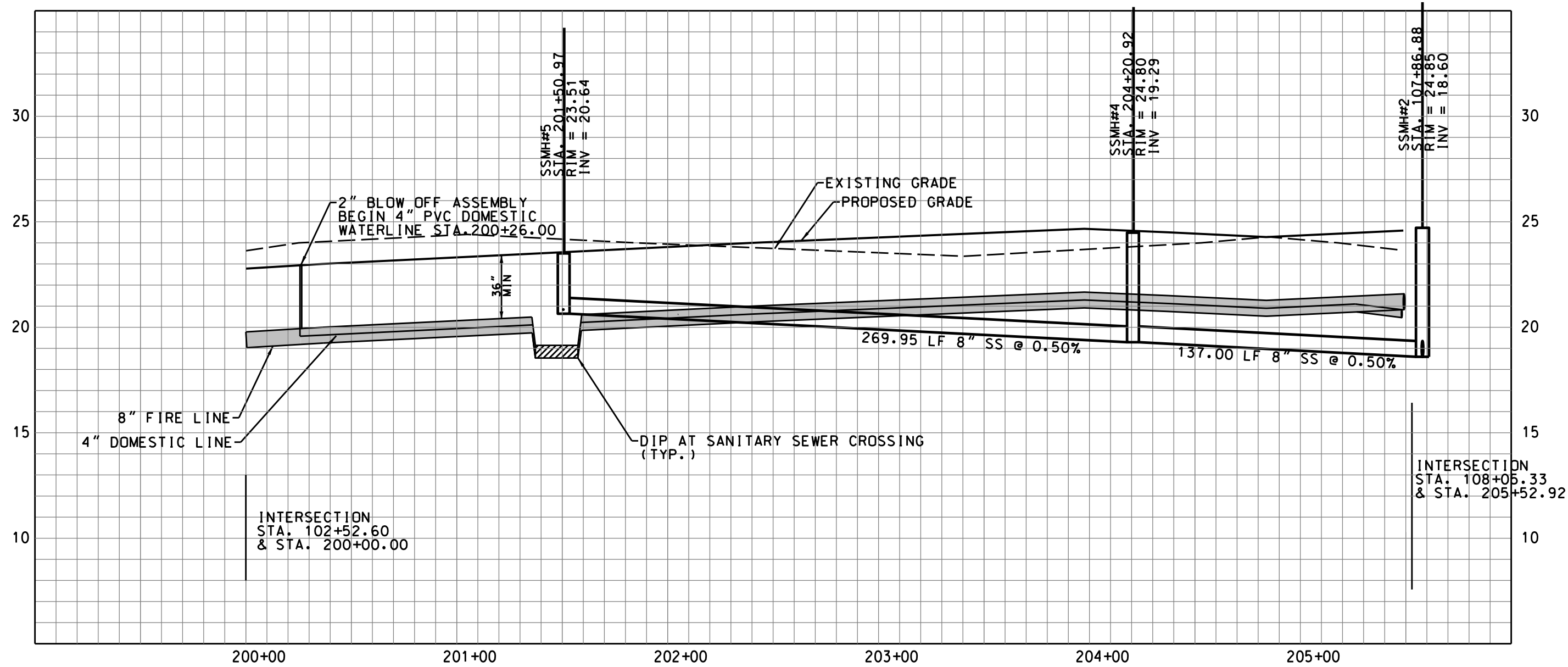
APPROVED: CMC

DATE: 6/11/17

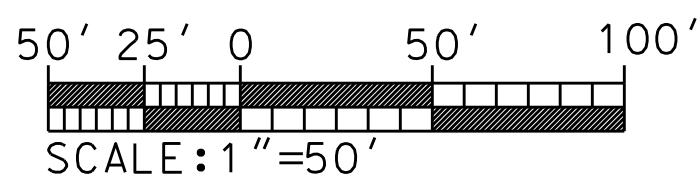
SCALE: 1"=50'



SOUTH PARKING LOT 200+00 PLAN VIEW



SOUTH PARKING LOT 200+00 PROFILE (PRIVATE)



PIPE MATERIAL NOTES:

2" WATER MAINS SHALL BE ASTM D2241 SDR 21 CLASS 200 PVC.
6" AND 8" WATER MAINS SHALL BE AWWA C900 DR 18 CLASS 150 PVC.
WHERE REQUIRED, DUCTILE IRON WATER SHALL CONFORM TO AWWA C104, C111, C150, C151, AND C153.

GRAVITY SEWER MAINS SHALL BE AWWA C900 DR 18 CLASS 150 PVC.
WHERE REQUIRED, DUCTILE IRON SEWER SHALL CONFORM TO AWWA C151.
ALL PROPOSED GRAVITY SEWER IS 8 INCHES IN DIAMETER.

FORCE MAINS SHALL BE AWWA C900 DR 18 CLASS 150 PVC.
WHERE REQUIRED, DUCTILE IRON FORCE MAINS SHALL CONFORM TO AWWA C150 AND C151.

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL MATERIAL DETAILS.
WHERE A DISCREPANCY OCCURS, THE PROJECT SPECIFICATIONS CONTROL.

STORM DRAINS SHALL BE CLASS IV RCP.

PVC WATER MAINS SHALL BE BLUE. DIP WATER MAINS SHALL BE MARKED WITH A CONTINUOUS BLUE STRIPE.

PVC SEWER MAINS SHALL BE GREEN. DIP SEWER MAINS SHALL BE MARKED WITH A CONTINUOUS GREEN STRIPE.

CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES:

- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL.
- SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
- SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
- ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50 DIP WITH PROTECTO 401 CERAMIC EPOXY LINING.
- MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
- NO FLEXIBLE COUPLINGS SHALL BE USED.
- ALL STAINLESS STEEL FASTENERS SHALL BE 316.

LEGEND

- PROPOSED 4" FORCE MAIN (PROFILE)
- PROPOSED STORM DRAINAGE
- PROPOSED SANITARY SEWER
- PROPOSED WATER
- PROPOSED FIRE HYDRANT
- PROPOSED FORCE MAIN
- PROPOSED CLEAN OUT
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED CENTERLINE
- PROPOSED WATER LINE (PROFILE)

CLEAN OUT TABLE

CO#5	RIM=24.75	INV=21.75
CO#6	RIM=25.16	INV=22.50
CO#7	RIM=23.67	INV=21.50
CO#8	RIM=23.67	INV=21.50
CO#9	RIM=25.16	INV=22.50
CO#CH	RIM=25.16	INV=22.50

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

WILMINGTON
NORTH CAROLINA

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name _____ Date _____

Planning _____

Public Utilities _____

Traffic _____

Fire _____

REVISIONS:

No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & ACOE
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

PIN:R04812-001-004-000

UTILITY PLAN AND PROFILE - 2

CYPRESS COVE APARTMENTS

821 EMORY STREET

WILMINGTON TWSP., NEW HANOVER COUNTY, NORTH CAROLINA

CLIENT: CYPRESS COVE OF WILMINGTON, LLC

ADDRESS: PO BOX 2400 BEAUFORT, NC 28516

PHONE: 252-504-3996

DESIGNED: CMC

DRAWN: CMC

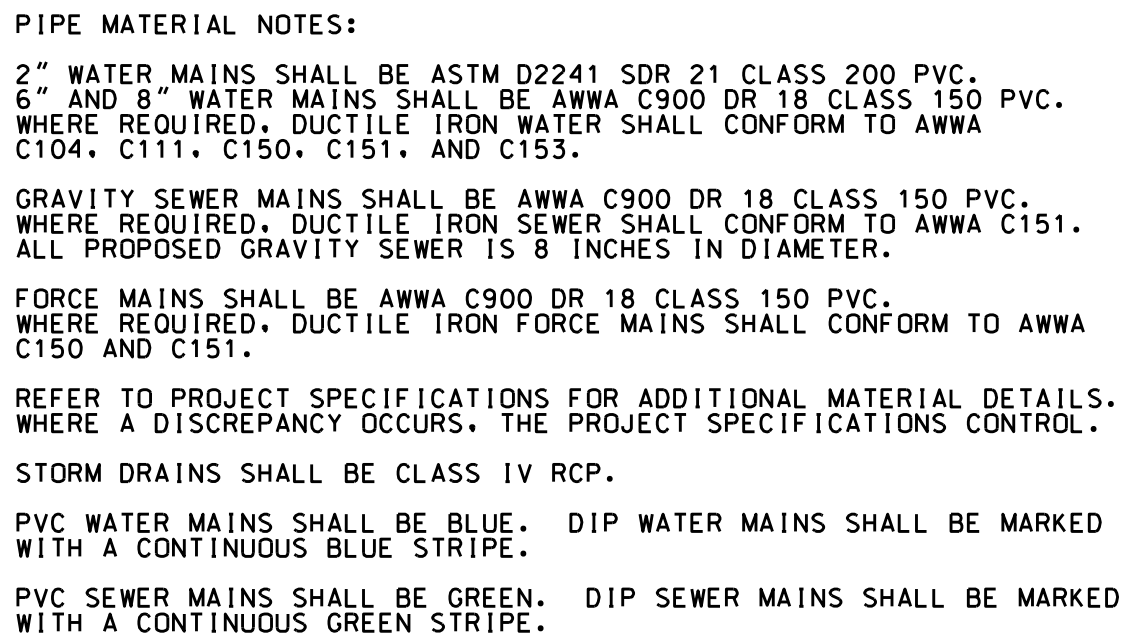
CHECKED: CMC

APPROVED: CMC

DATE: 4/10/17

SCALE: 1"=50'

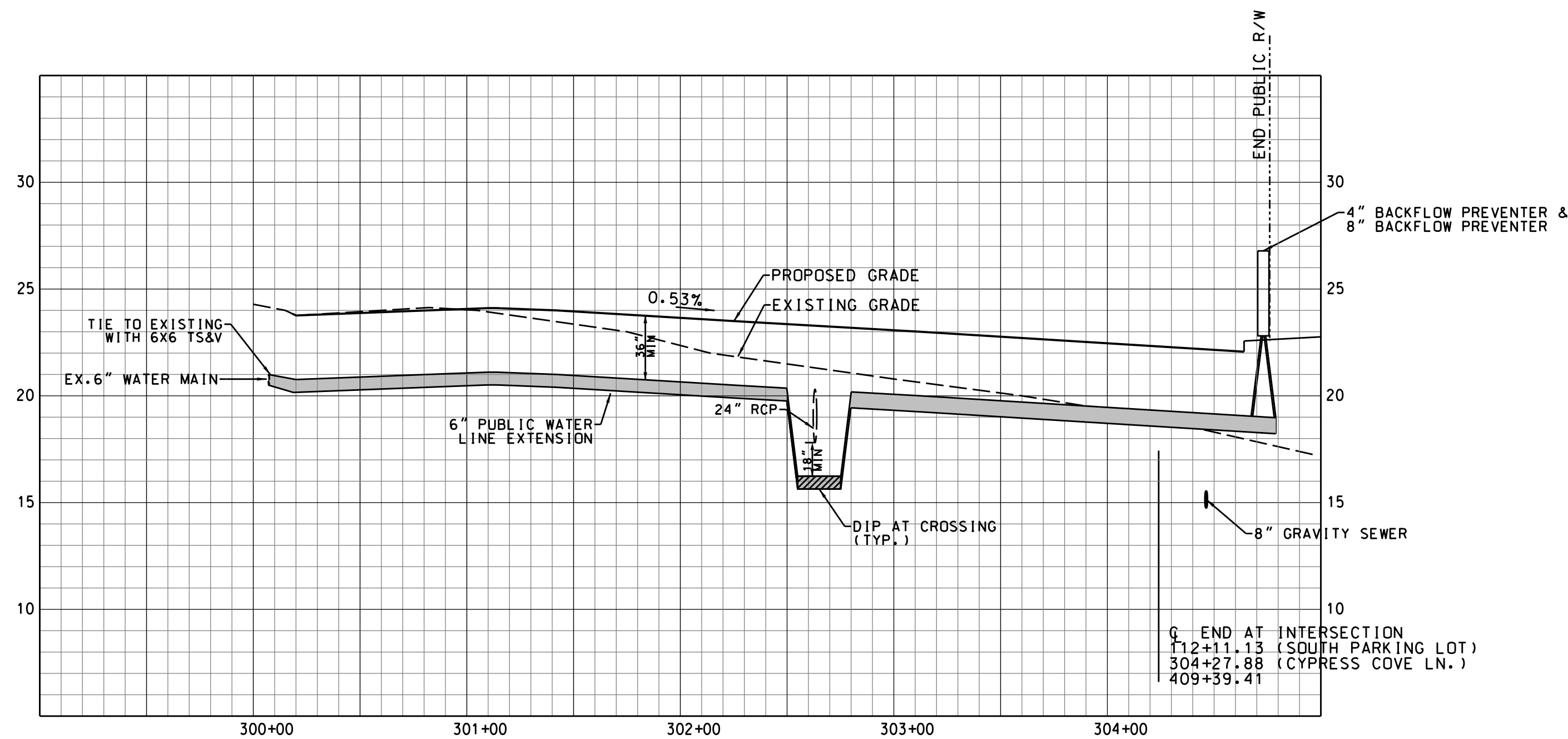
CHARLES M.CULLIPHER P.E.



CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES:











- 1. SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
- 2. SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES LOCATED DE-CAUSE ARE REQUIRED TO BE PERPENDICULAR TO LINE OF ORIGINATE IN MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
- 3. ALL SERVICE TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED TO 50' TO 60' DEPTH. PROTECTO 401 CERAMIC EPOXY LINING.
- 4. MINIMUM 10' TO UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND SHOWN FOR NEW DEVELOPMENTS.
- 5. NO 12" DIA. COUPLINGS SHALL BE USED.
- 6. ALL STAINLESS STEEL FASTENERS SHALL BE 316.

TURNER STREET PLAN VIEW
60' PUBLIC RIGHT-OF-WAY



TURNER STREET PROFILE
(PUBLIC)

LEGEND

	PROPOSED 4" FORCE MAIN (PROFILE)
	PROPOSED STORM DRAINAGE
	PROPOSED SANITARY SEWER
	PROPOSED WATER
	PROPOSED FIRE HYDRANT
	PROPOSED FORCE MAIN
	PROPOSED CLEAN OUT
	PROPOSED SANITARY SEWER MANHOLE
	PROPOSED CENTER LINE
	PROPOSED WATER LINE (PROFILE)

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: Permit #

Signed: _____

Approved Construction Plan

Name _____ Date _____

Planning

Public Utilities

Traffic

Fire _____

REVISIONS:

No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & ACOE
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

PIN:R04812-001-004-000

UTILITY PLAN AND PROFILE - 3

CYPRESS COVE APARTMENTS

821 EMORY STREET

WILMINGTON TWSP., NEW HANOVER COUNTY, NORTH CAROLINA

CLIENT: CYPRESS COVE OF
WILMINGTON, LLC
ADDRESS: PO BOX 2400
BEAUFORT, NC 28516

BUONE: 050 504 7000

 STROUD ENGINEERING, P.A.

151A HIGHWAY 24
MOREHEAD CITY, N.C. 28557
(252) 242-7479 LICENSE NO C-0642

[illegible]

CHARLES M. CULLIPHER P.E.

DESIGNED:

CMC
DRAWN:

DRAWN.
CMC

CHECKED:

CMC

APPROVED:
CMC

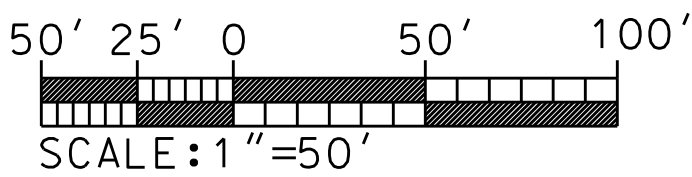
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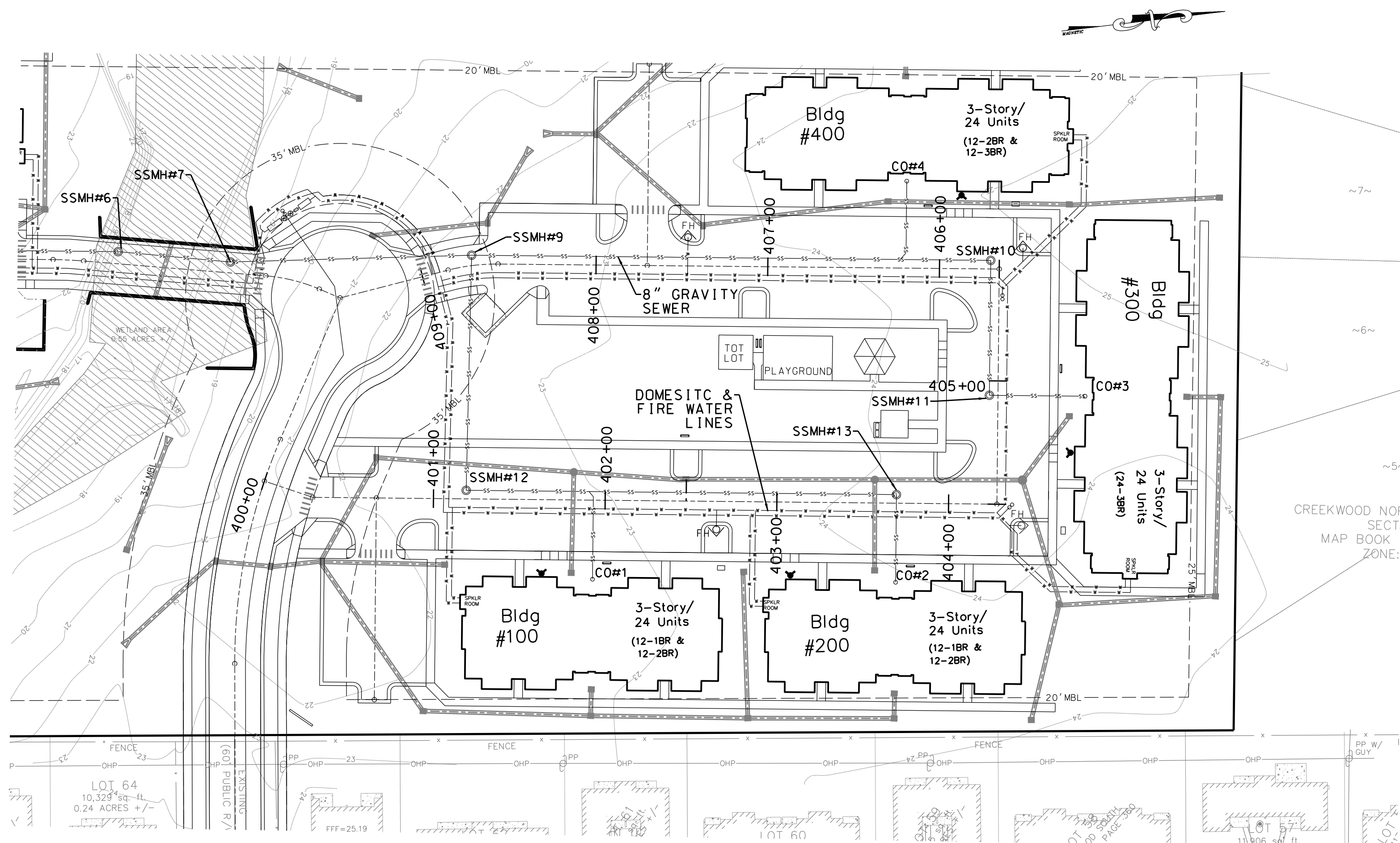
4/10/1

SCALE:
1" = 50'

-30

SHEET #C6.3 OF 10
PROJECT #:PM858-36'-001
DESIGN FILE #: Construction Drawings.dgn





NORTH PARKING LOT PLAN VIEW

PIPE MATERIAL NOTES:

2" WATER MAINS SHALL BE ASTM D2241 SDR 21 CLASS 200 PVC.
6" AND 8" WATER MAINS SHALL BE AWWA C900 DR 18 CLASS 150 PVC.
WHERE REQUIRED, DUCTILE IRON WATER SHALL CONFORM TO AWWA C104, C111, C150, C151, AND C153.

GRAVITY SEWER MAINS SHALL BE AWWA C900 DR 18 CLASS 150 PVC;
WHERE REQUIRED, DUCTILE IRON SEWER SHALL CONFORM TO AWWA C151.
ALL PROPOSED GRAVITY SEWER IS 8 INCHES IN DIAMETER.

FORCE MAINS SHALL BE AWWA C900 DR 18 CLASS 150 PVC.
WHERE REQUIRED, DUCTILE IRON FORCE MAINS SHALL CONFORM TO AWWA C150 AND C151.

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL MATERIAL DETAILS.
WHERE A DISCREPANCY OCCURS, THE PROJECT SPECIFICATIONS CONTROL.

STORM DRAINS SHALL BE CLASS IV RCP.

PVC WATER MAINS SHALL BE BLUE. DIP WATER MAINS SHALL BE MARKED WITH A CONTINUOUS BLUE STRIPE.

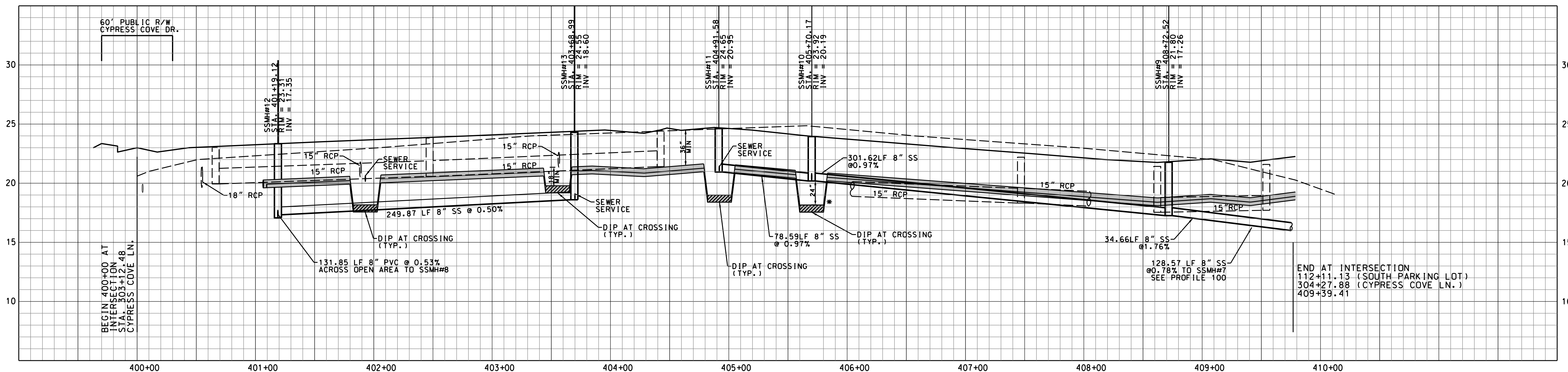
PVC SEWER MAINS SHALL BE GREEN. DIP SEWER MAINS SHALL BE MARKED WITH A CONTINUOUS GREEN STRIPE.

CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES:

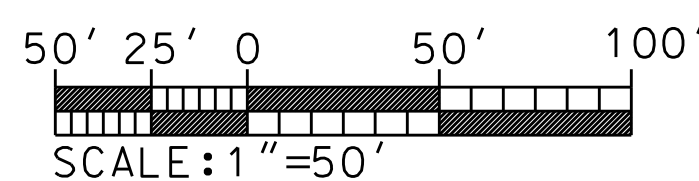
- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
- SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
- ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50 DIP WITH PROTECTO 401 CERAMIC EPOXY LINING.
- MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
- NO FLEXIBLE COUPLINGS SHALL BE USED.
- ALL STAINLESS STEEL FASTENERS SHALL BE 316.

LEGEND	
	PROPOSED 4" FORCE MAIN (PROFILE)
	PROPOSED STORM DRAINAGE
	PROPOSED SANITARY SEWER
	PROPOSED WATER
	PROPOSED FIRE HYDRANT
	PROPOSED FORCE MAIN
	PROPOSED CLEAN OUT
	PROPOSED SANITARY SEWER MANHOLE
	PROPOSED CENTERLINE
	PROPOSED WATER LINE (PROFILE)

CLEAN OUT TABLE		
CO#1	RIM=24.50	INV=21.83
CO#2	RIM=24.21	INV=22.54
CO#3	RIM=25.17	INV=22.50
CO#4	RIM=24.33	INV=21.66



NORTH PARKING LOT PROFILE (PRIVATE)



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____
Approved Construction Plan
Name _____ Date _____
Planning _____
Public Utilities _____
Traffic _____
Fire _____

REVISIONS:

No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & ACOE
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

PIN:R04812-001-004-000

UTILITY PLAN AND PROFILE - 4

CYPRESS COVE APARTMENTS

821 EMORY STREET

WILMINGTON TWP., NEW HANOVER COUNTY, NORTH CAROLINA

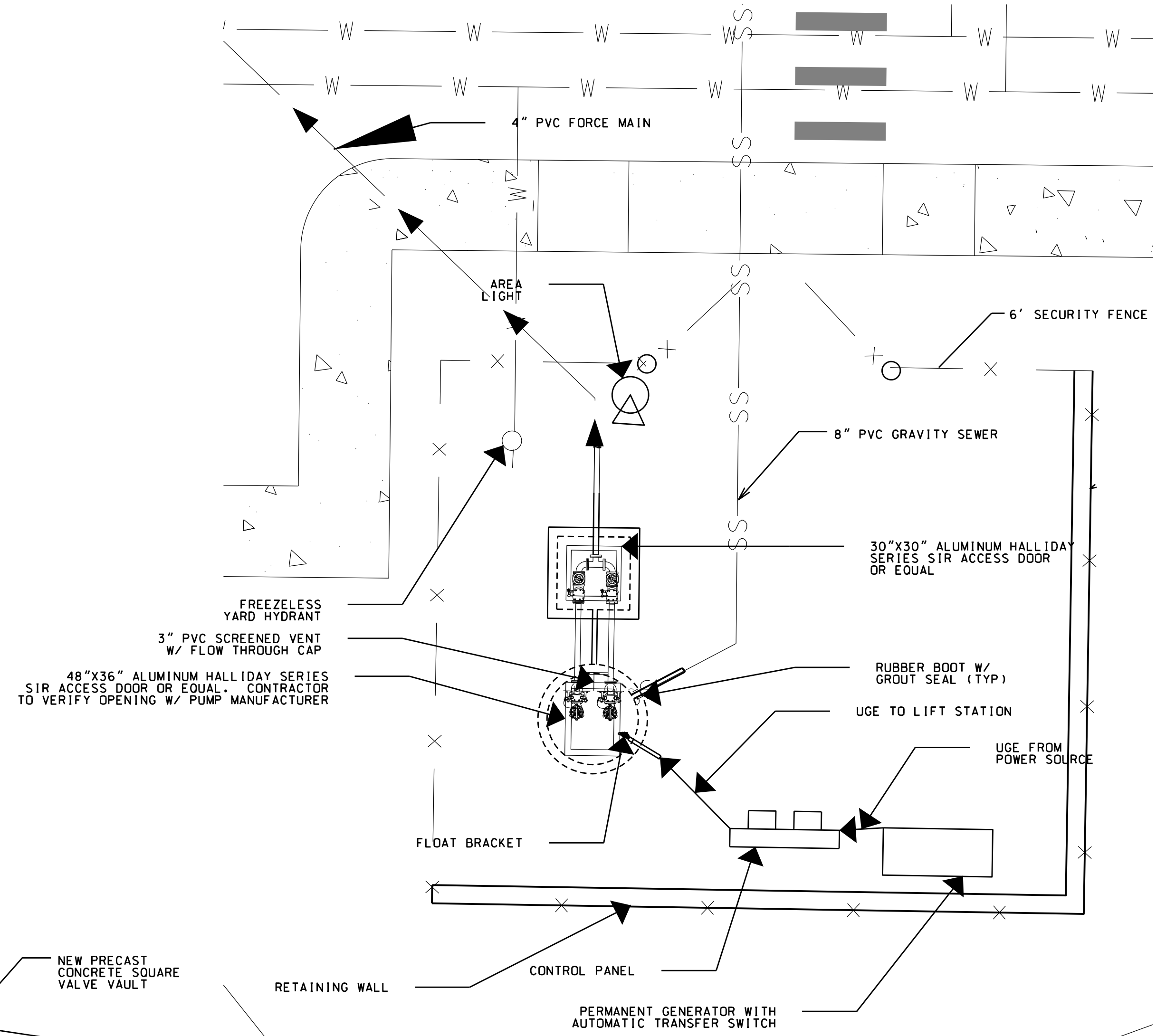
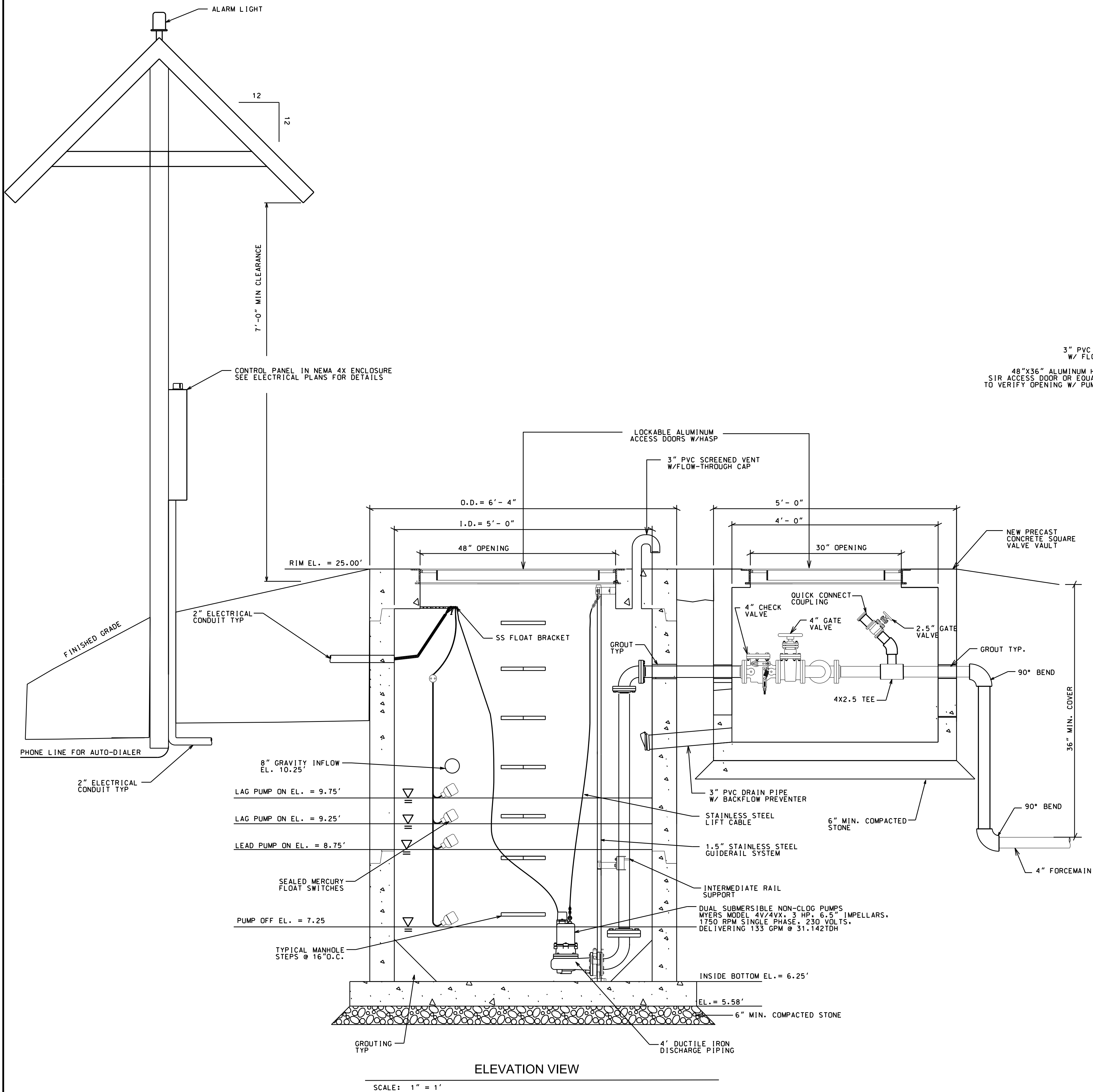
CLIENT: CYPRESS COVE OF WILMINGTON, LLC
ADDRESS: PO BOX 2400 BEAUFORT, NC 28516
PHONE: 252-504-3996

DESIGNED: CMC
DRAWN: CMC
UTILITIES: CMC
PROFILES: CMC

APPROVED: CMC
DATE: 6/6/17
SCALE: 1"=50'

STROUD ENGINEERING, P.A.
151A HIGHWAY 24
MOREHEAD CITY, N.C. 28557
(252) 247-7479
LICENSE NO. C-0647

CHARLES M. CULLIPHER P.E.



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit #: _____

Signed: _____

Approved Construction Plan

Name _____ Date _____

Planning _____

Public Utilities _____

Traffic _____

Fire _____

REVISIONS:			
No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & ACOE
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

PIN: R04812-001-004-000

LIFT STATION DETAILS

CYPRESS COVE APARTMENTS

821 EMORY STREET
WILMINGTON TWSP., NEW HANOVER COUNTY, NORTH CAROLINA

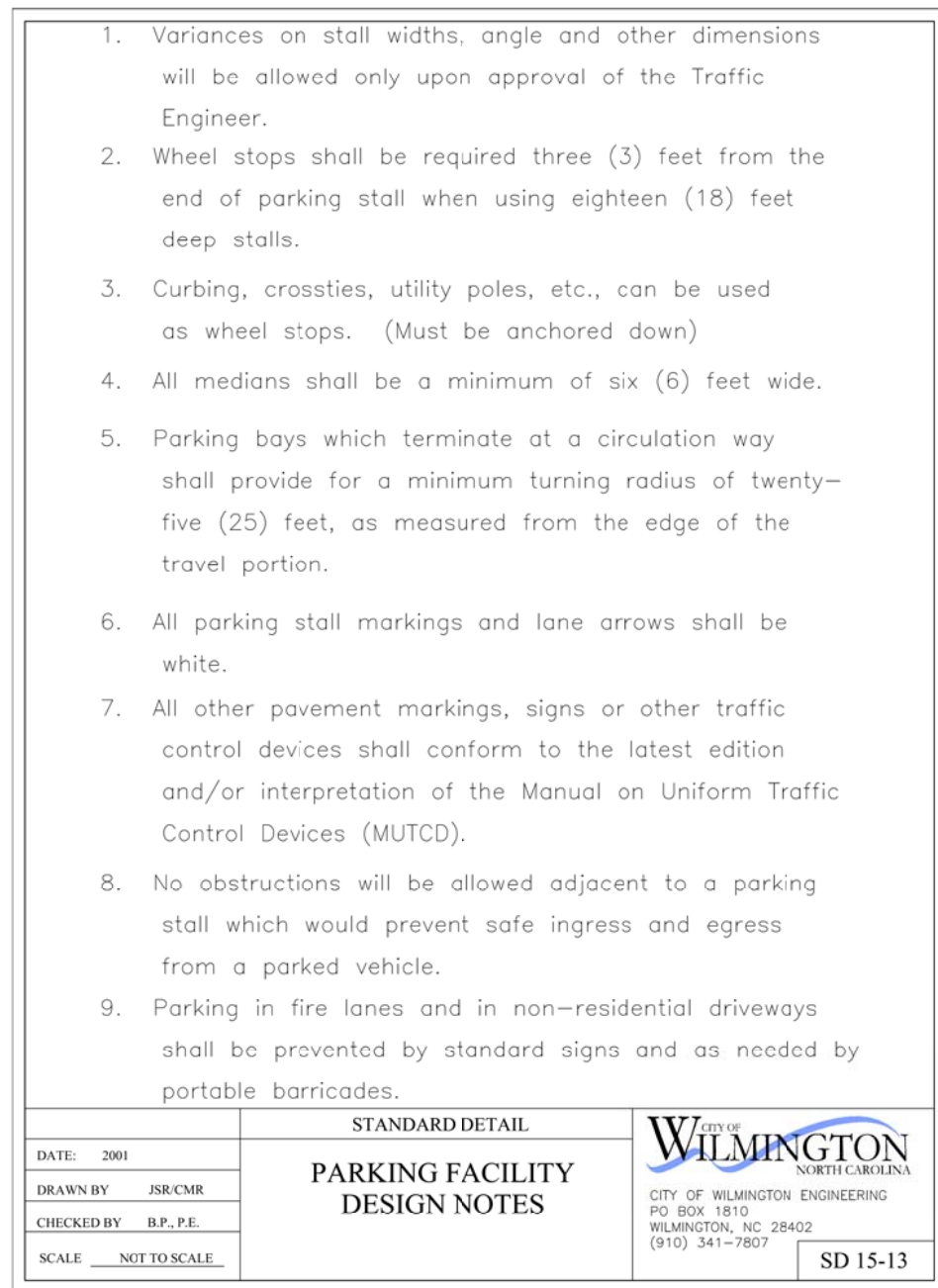
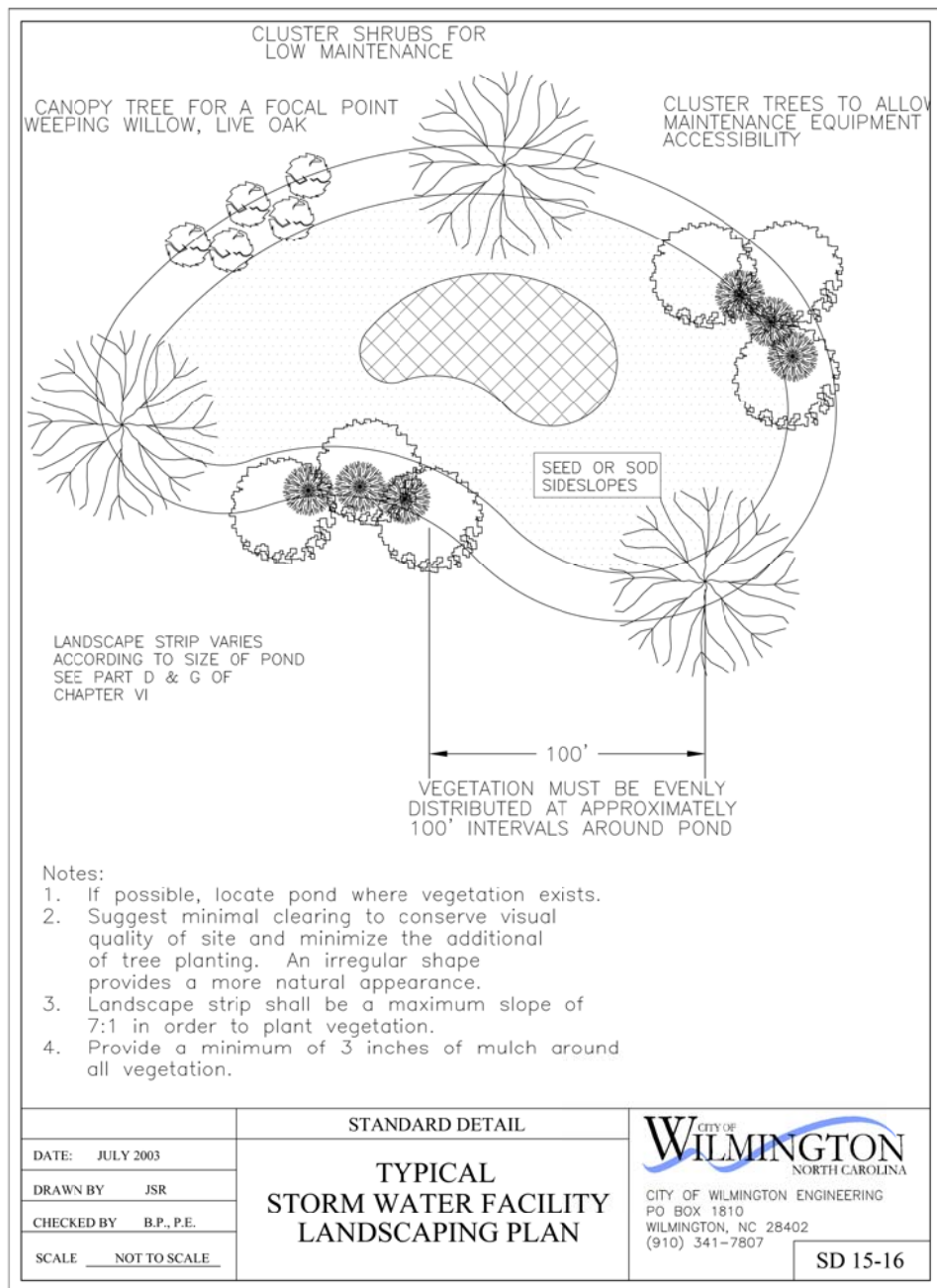
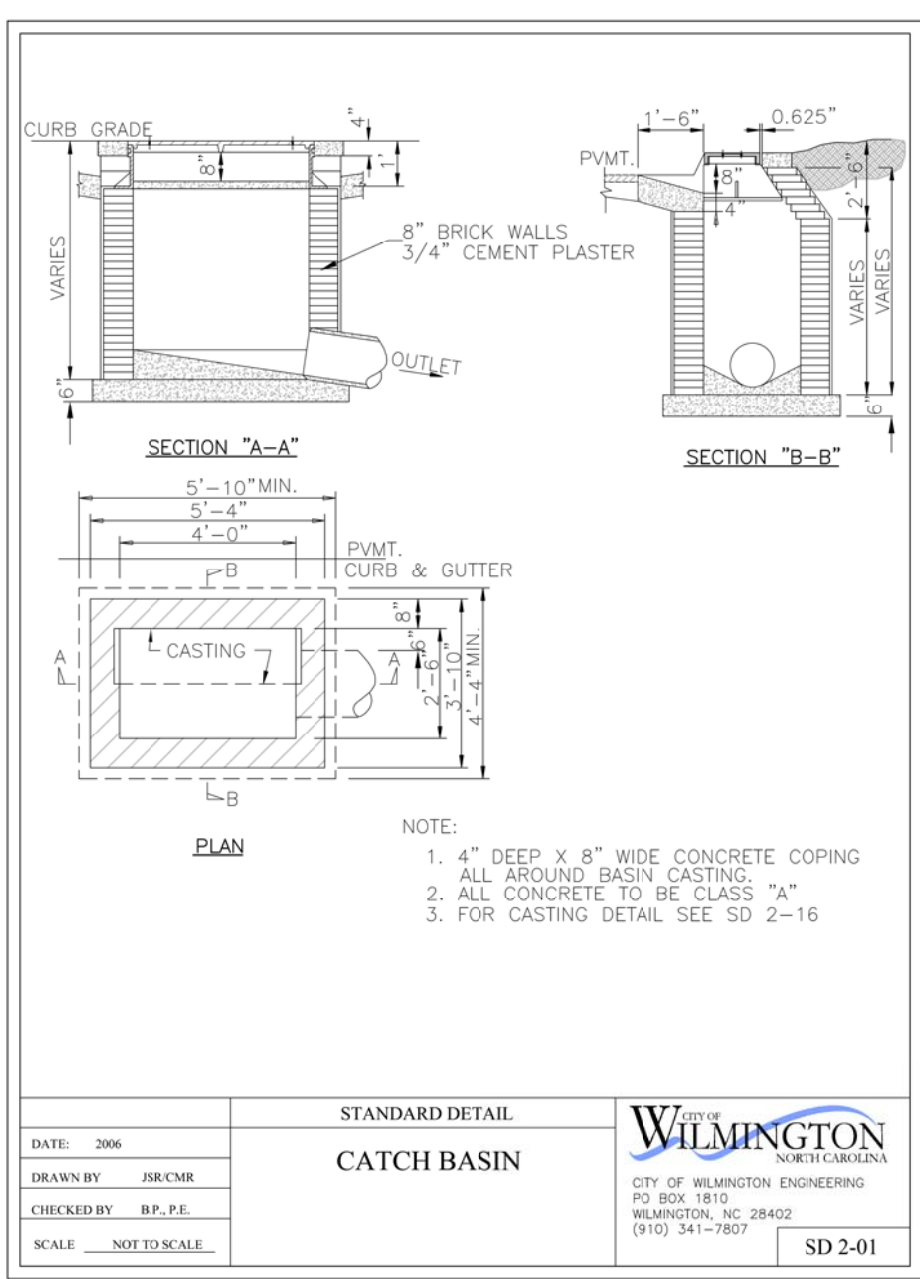
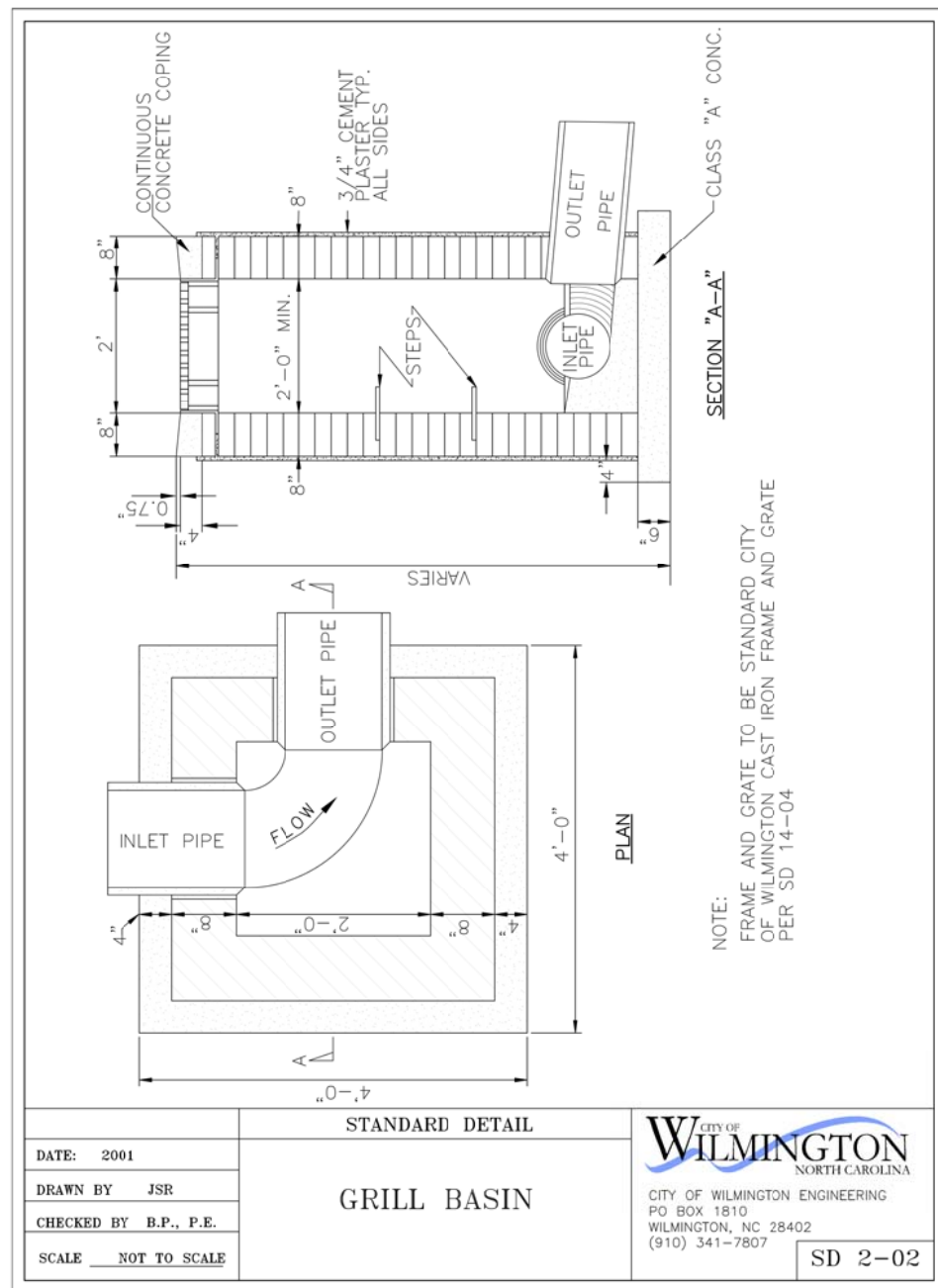
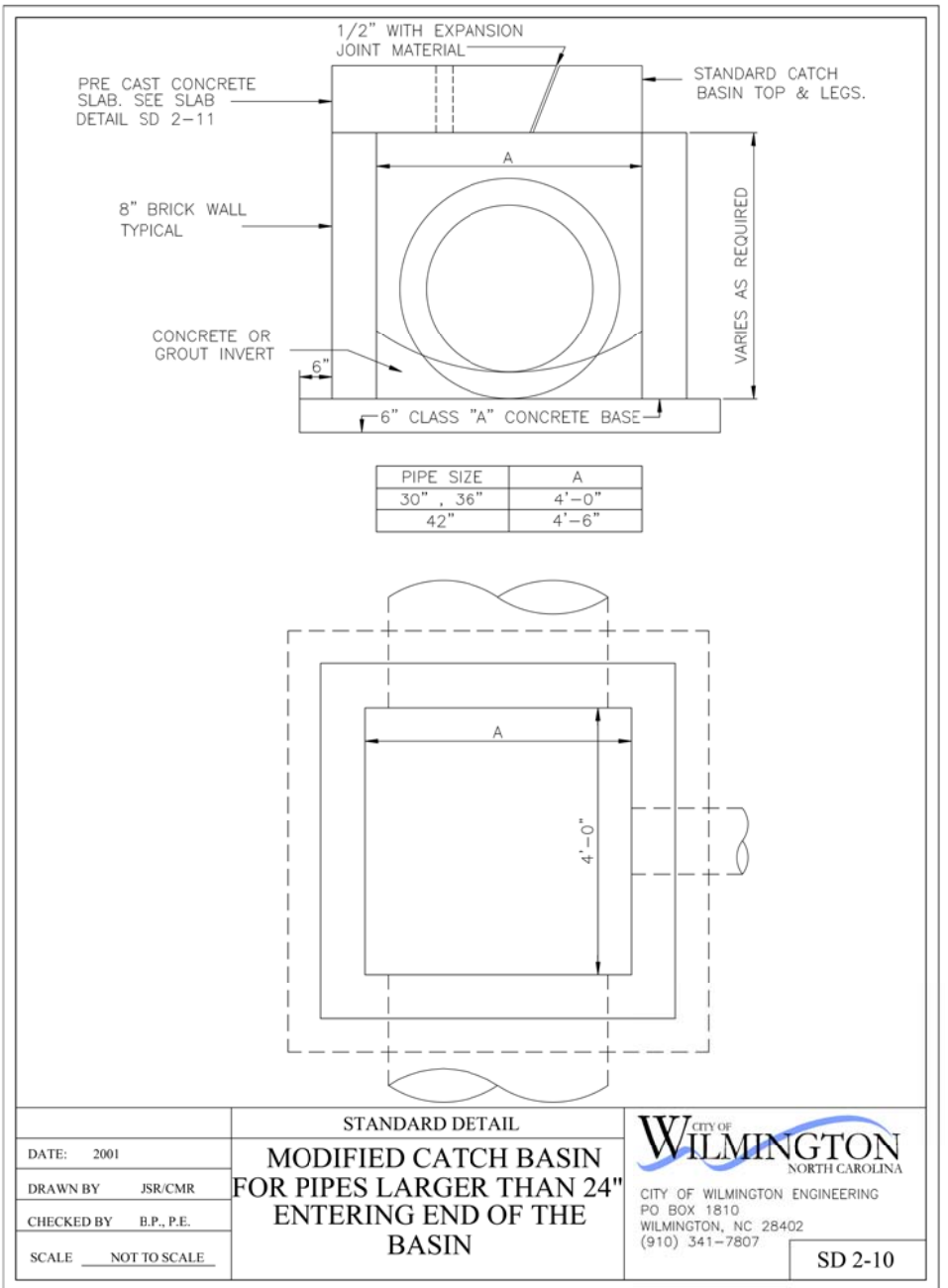
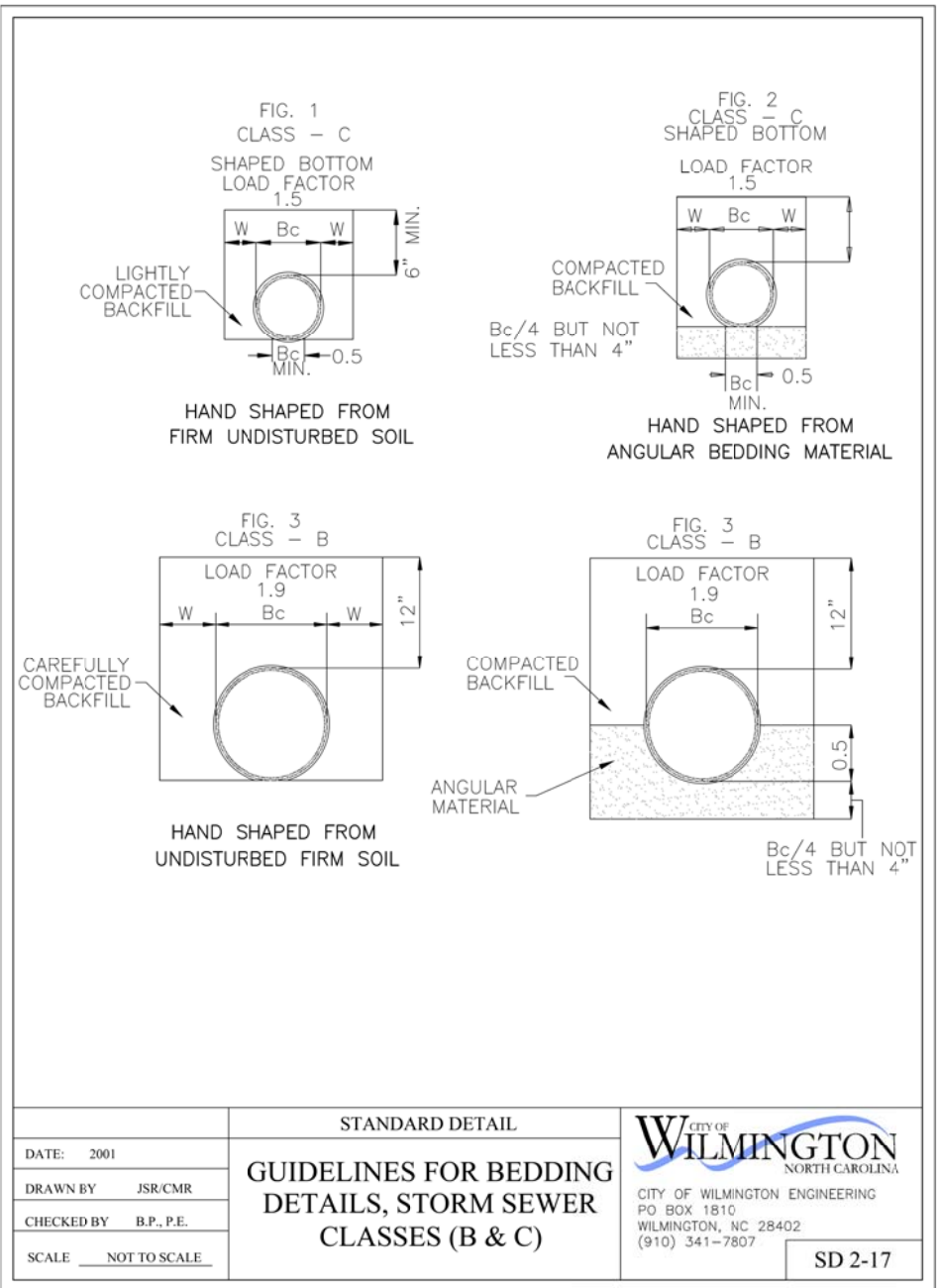
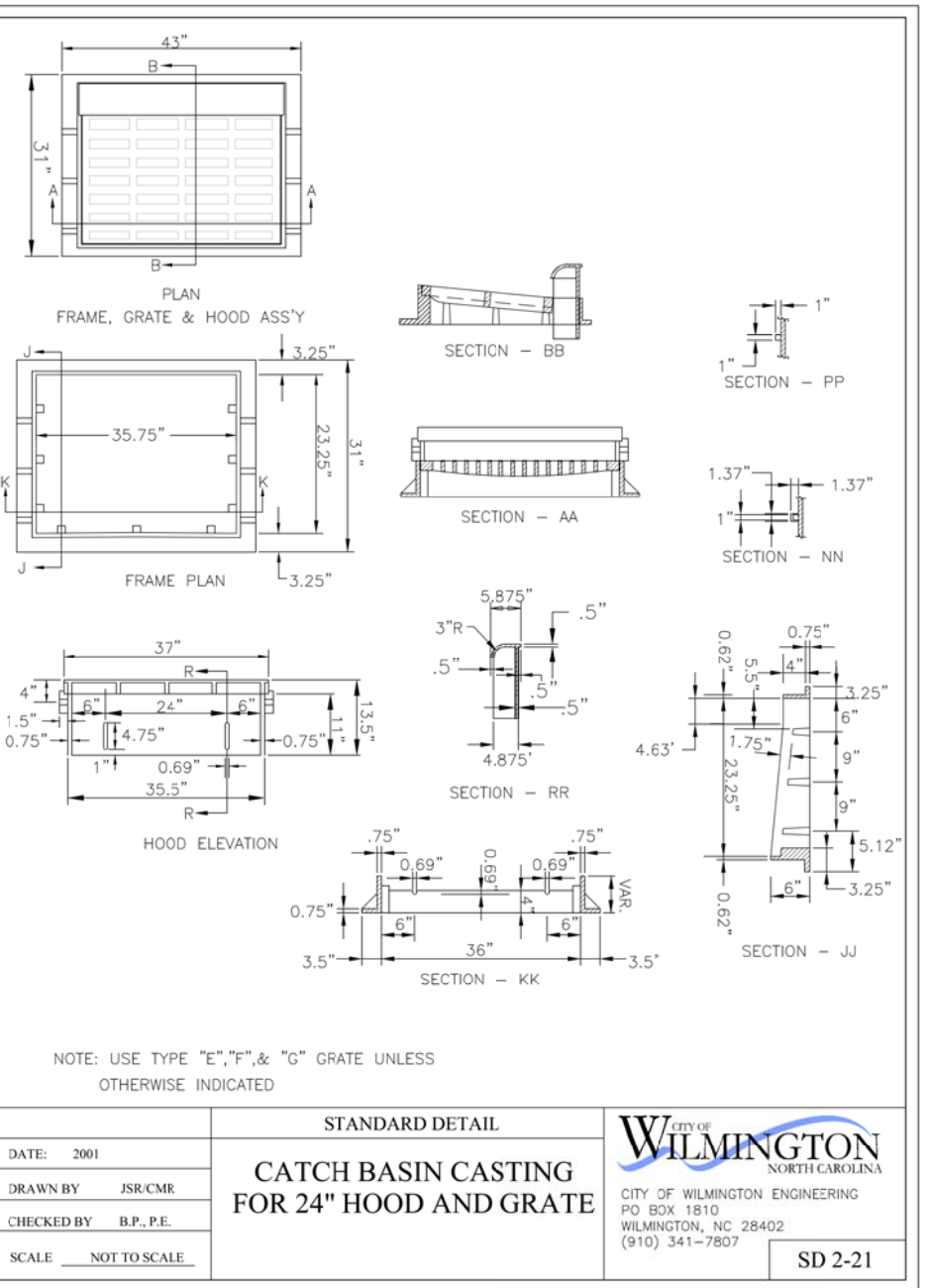
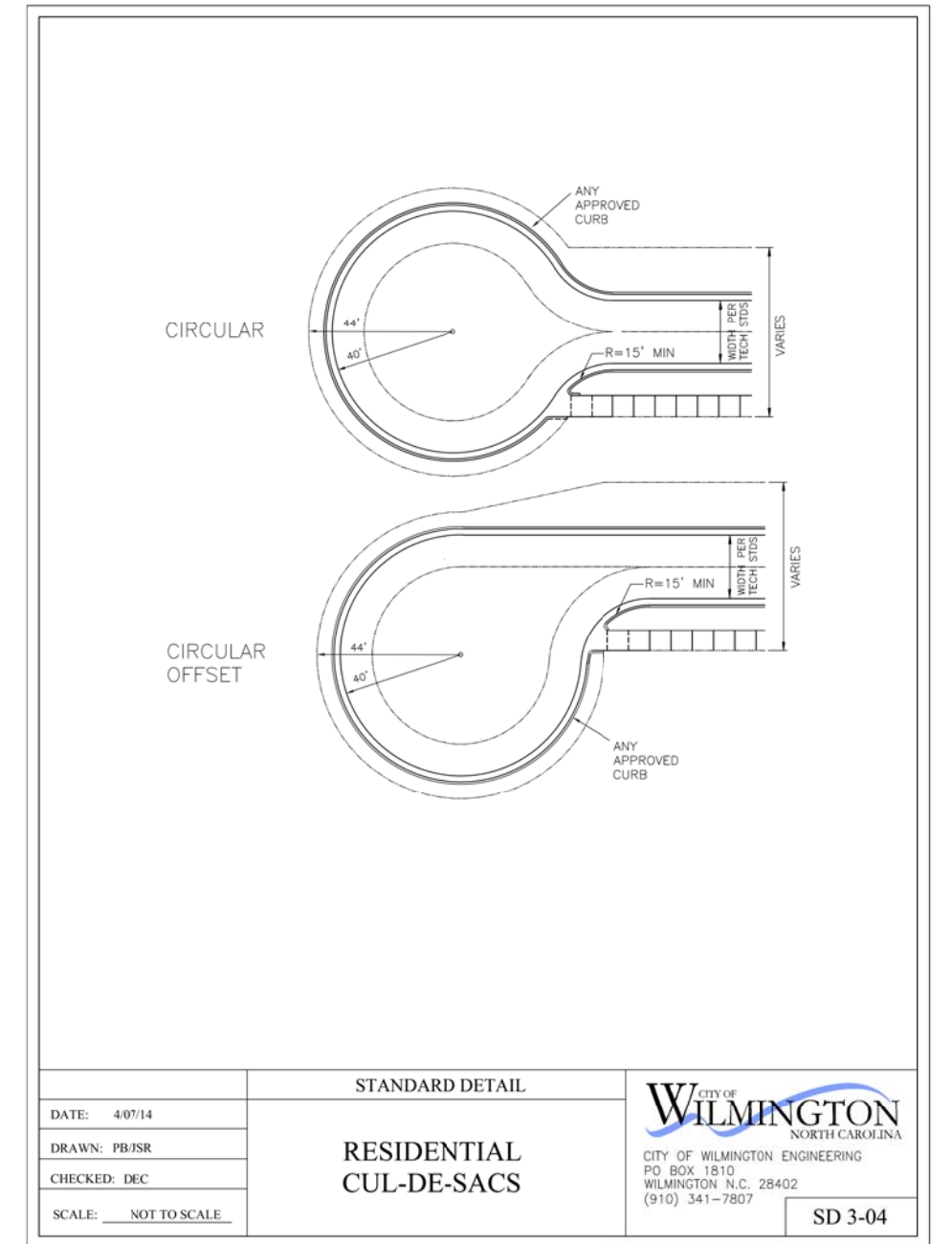
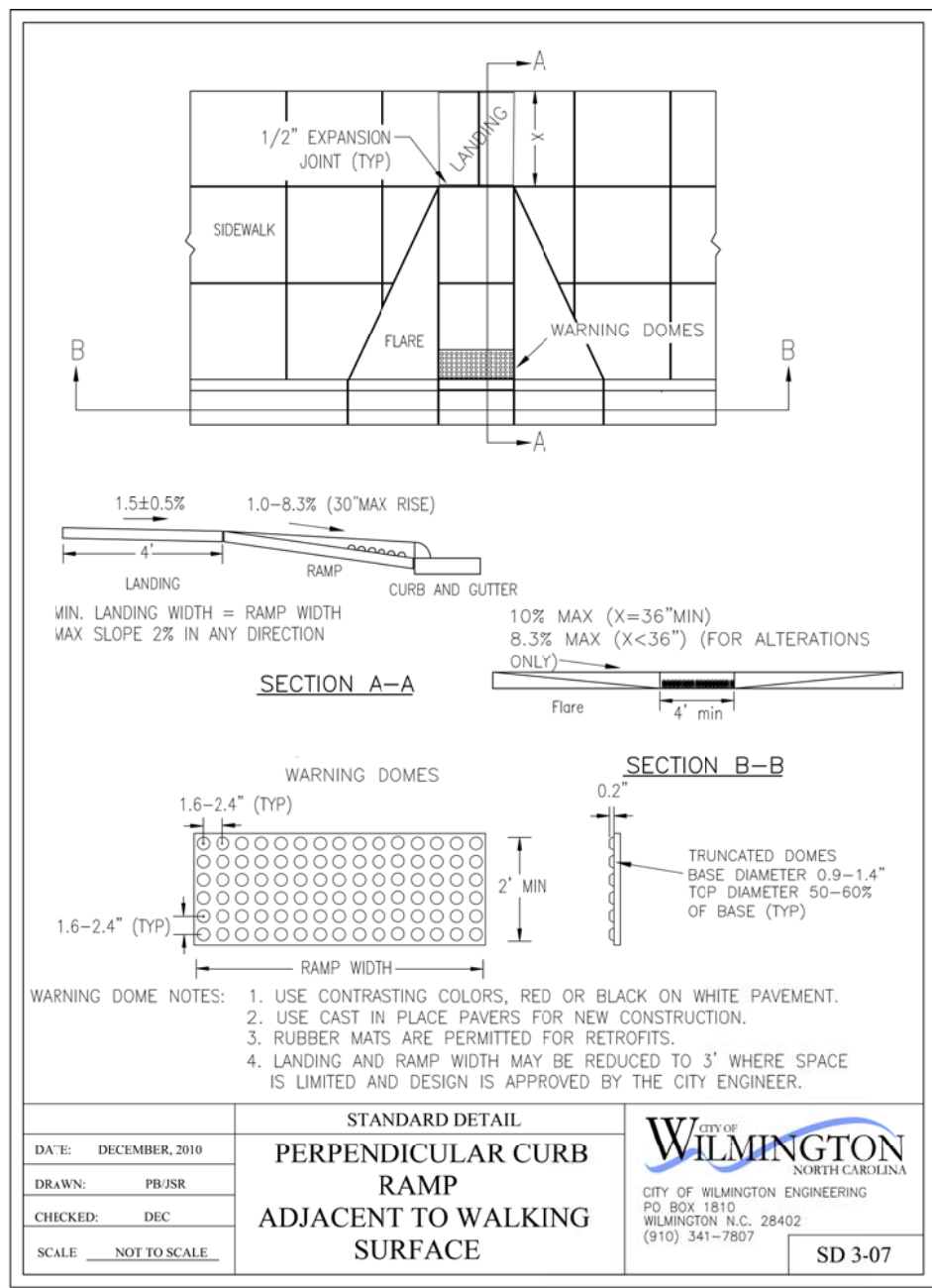
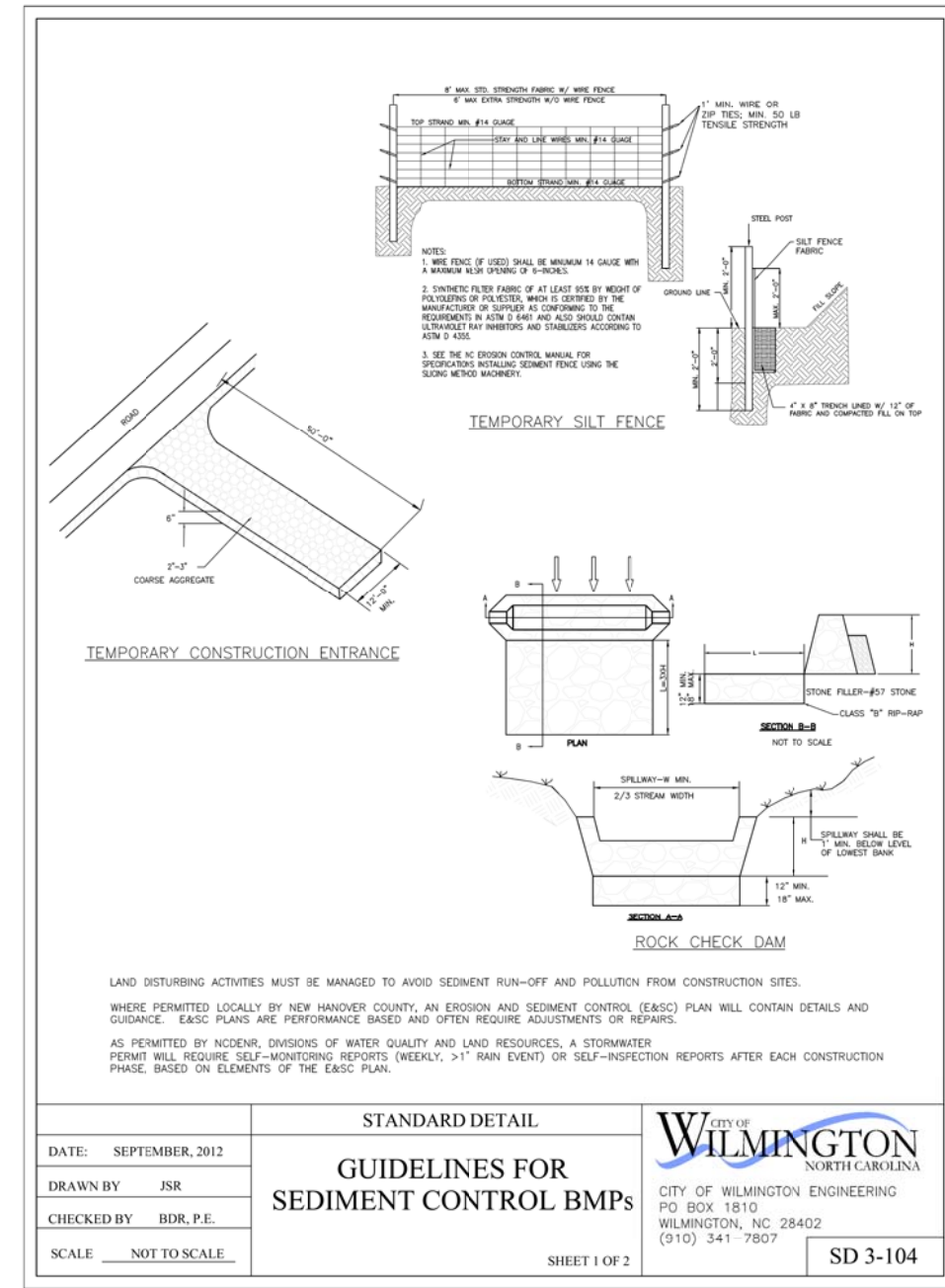
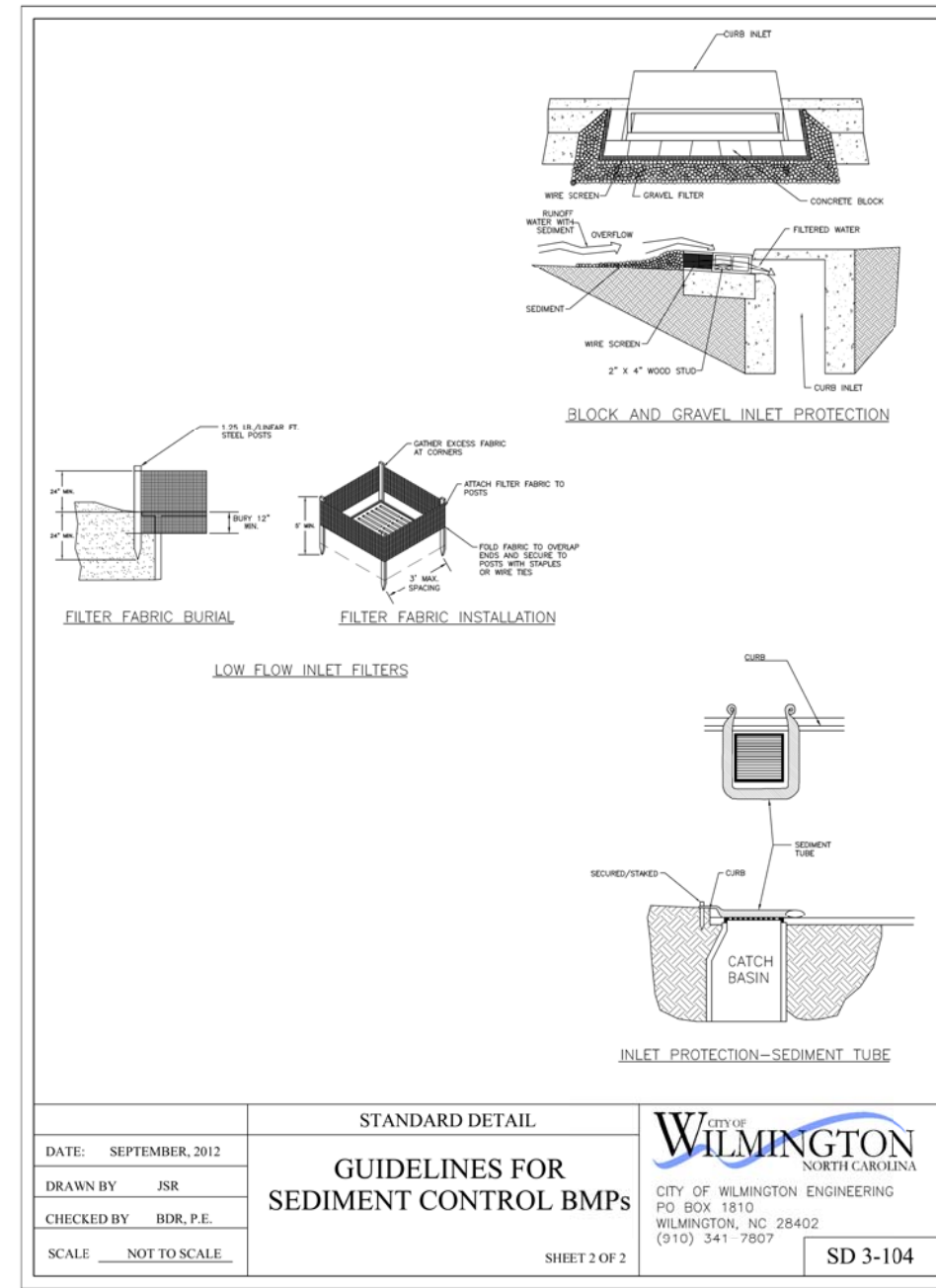
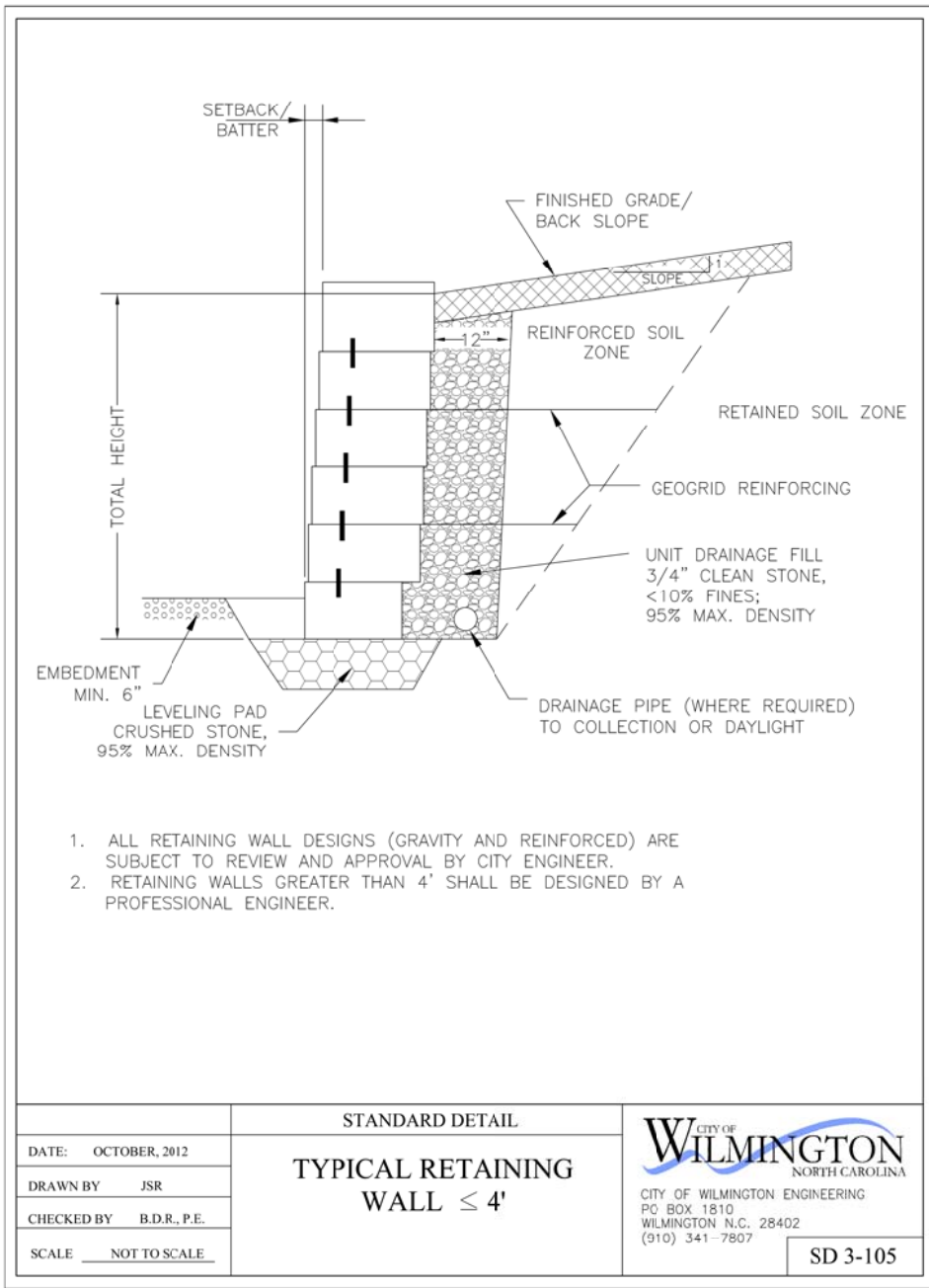
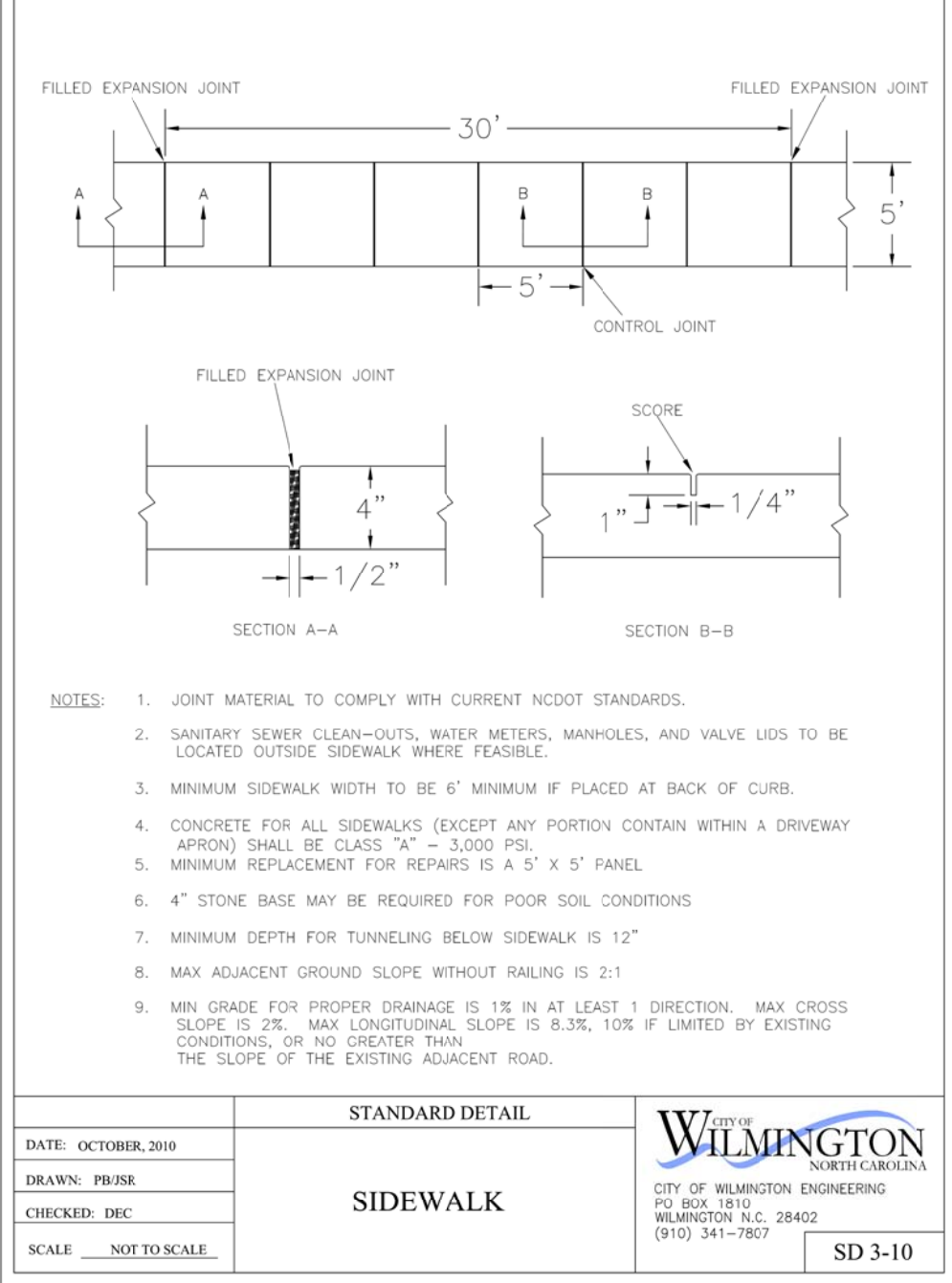
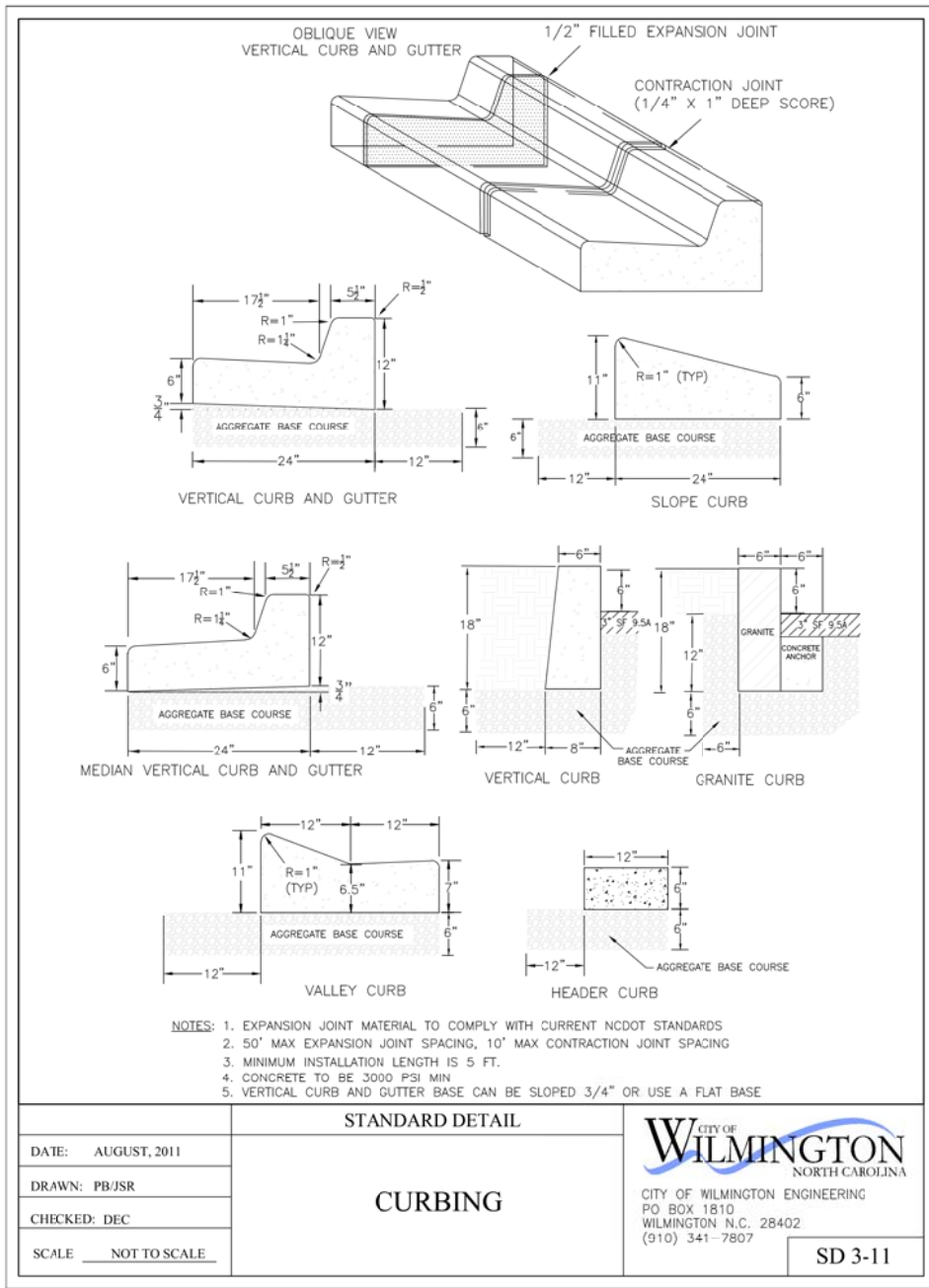
CLIENT: CYPRESS COVE OF WILMINGTON, LLC
ADDRESS: PO BOX 2400 BEAUFORT, NC 28516
PHONE: 252-504-3996

DESIGNED: CMC
DRAWN: CMC
CHECKED: CMC
APPROVED: CMC

STROUD ENGINEERING, P.A.
151A HIGHWAY 24
MOREHEAD CITY, N.C. 28557
(252) 247-7479 LICENSE NO. C-0647

DATE: 4/10/17
SCALE:

CHARLES M. CULLIPHER P.E.



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name _____ Date _____

Planning _____

Public Utilities _____

Traffic _____

Fire _____

REVISIONS:			
No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & ACOE
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

PIN:R04812-001-004-000

SITE DETAILS

CYPRESS COVE APARTMENTS

821 EMORY STREET

WILMINGTON TWP.. NEW HANOVER COUNTY, NORTH CAROLINA

CLIENT: CYPRESS COVE OF WILMINGTON, LLC
ADDRESS: PO BOX 2400 BEAUFORT, NC 28516

PHONE: 252-504-3996

STROUD ENGINEERING, P.A.

151A HIGHWAY 24 MOREHEAD CITY, N.C. 28557
(252) 247-7479 LICENSE NO. C-0647

CHARLES M. CULLIPHER P.E.

DESIGNED: CMC
DRAWN: CMC
CHECKED: CMC
APPROVED: CMC

DATE: 4/10/17
SCALE: 1"=50'

TOP VIEW

ADA ACCESSIBILITY GUIDELINE - ADAAG CONFORMANCE

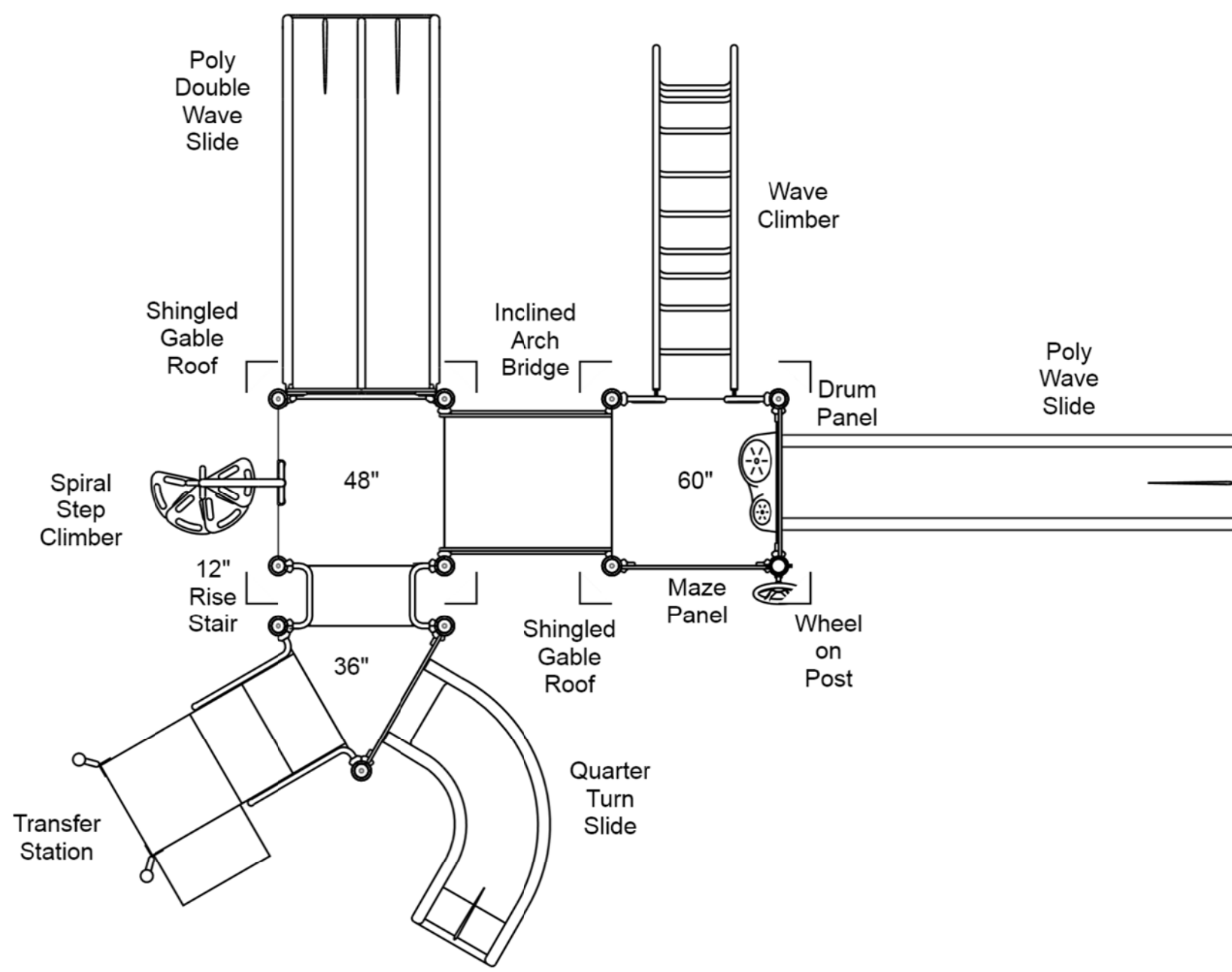
ELEVATED	ACCESSIBLE	RAMP ACCESSIBLE	GROUND	TYPES
6	6/3	0	2/2	2/2

R35
FOR KIDS
AGES
5-12

GENERAL NOTES:

This conceptual plan is based on information provided prior to construction. Detailed site information, including the following, should be obtained, evaluated, and utilized in the final project design. Exact site dimensions, topography, existing utilities, soil conditions and drainage solutions.

WARNING: Accessible safety surfacing material is required beneath and around this equipment that has a critical height value (Fall Height) appropriate for the highest accessible part of this equipment. Refer to the CPSC's Handbook For Public Playground Safety, Section 4: Surfacing.



STRUCTURE#: BEBDOA
PROJECT#: PSS151106A
DATE: 11/6/2015 | DRAWN BY: JTW

MIN. USE ZONE: 37' x 32'

PLAYCRAFT REP:
Playground Safety Services, Inc.

SITE PLAN

ADA ACCESSIBILITY GUIDELINE - ADAAG CONFORMANCE

ELEVATED	ACCESSIBLE	RAMP ACCESSIBLE	GROUND	TYPES
11	9/6	0	2/4	2/3

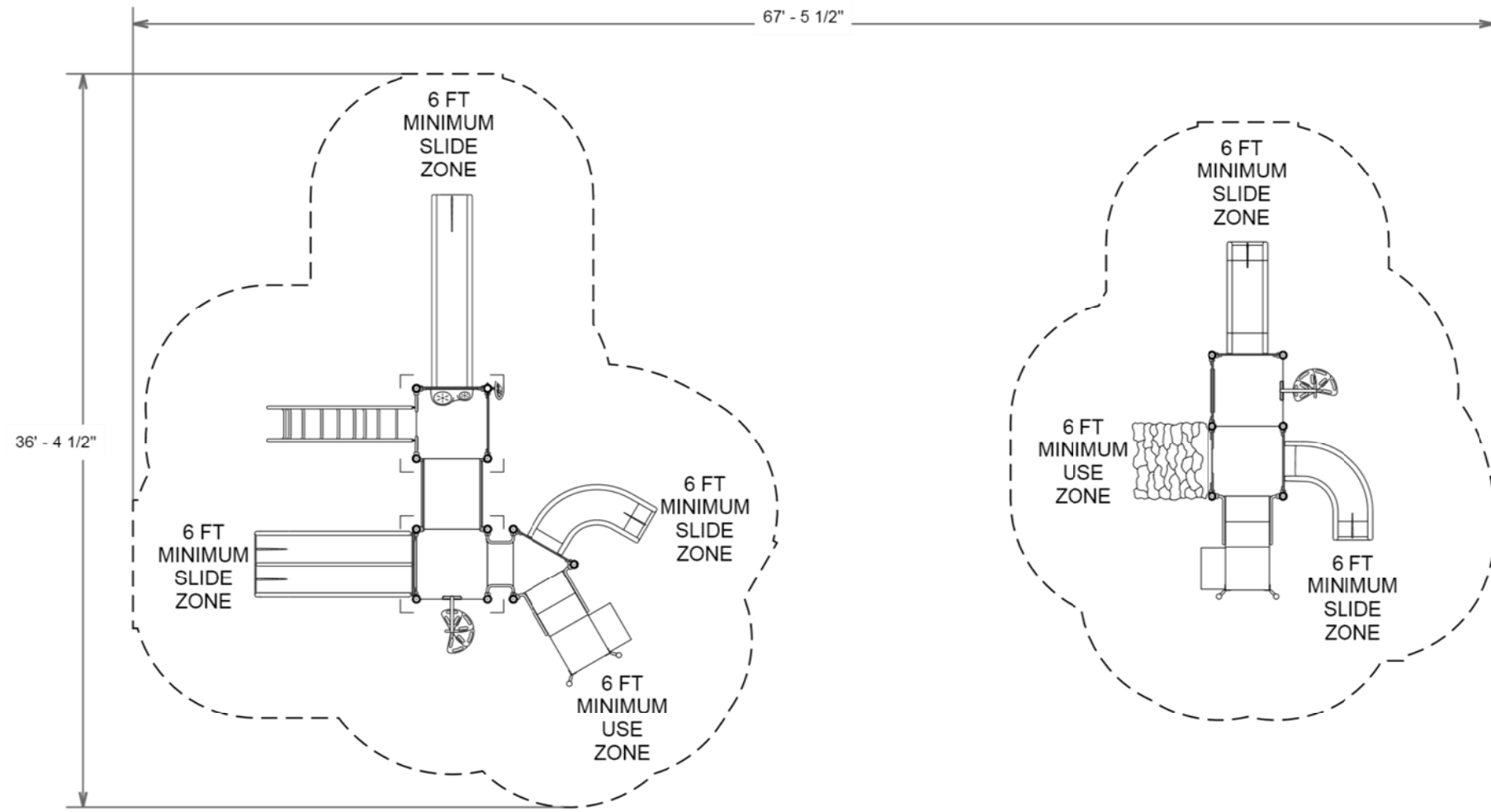
R35
FOR KIDS
AGES
[Mixed]

GENERAL NOTES:

This Preliminary Site Plan is based on measurements that were provided in the initial planning phase. All dimensions must be verified prior to the submission of a purchase order. Krauss Craft, Inc. will not be held responsible for any discrepancies between actual dimensions and dimensions submitted in the planning phase.

The Minimum Use Zone for a play structure is based on the product design at the time of proposal. Components and structure designs may be subject to change which may affect dimensions. Therefore, before preparing the site, we strongly recommend obtaining final drawings from the factory (available after the order is placed and included in the Assembly Manual).

WARNING: Accessible safety surfacing material is required beneath and around this equipment that has a critical height value (Fall Height) appropriate for the highest accessible part of this equipment. Refer to the CPSC's Handbook For Public Playground Safety, Section 4: Surfacing.



PROJECT#: PSS151106A
DATE: 11/6/2015 | DRAWN BY: JTW

MIN. USE ZONE: 68' x 37'

PLAYCRAFT REP:
Playground Safety Services, Inc.

TOP VIEW

ADA ACCESSIBILITY GUIDELINE - ADAAG CONFORMANCE

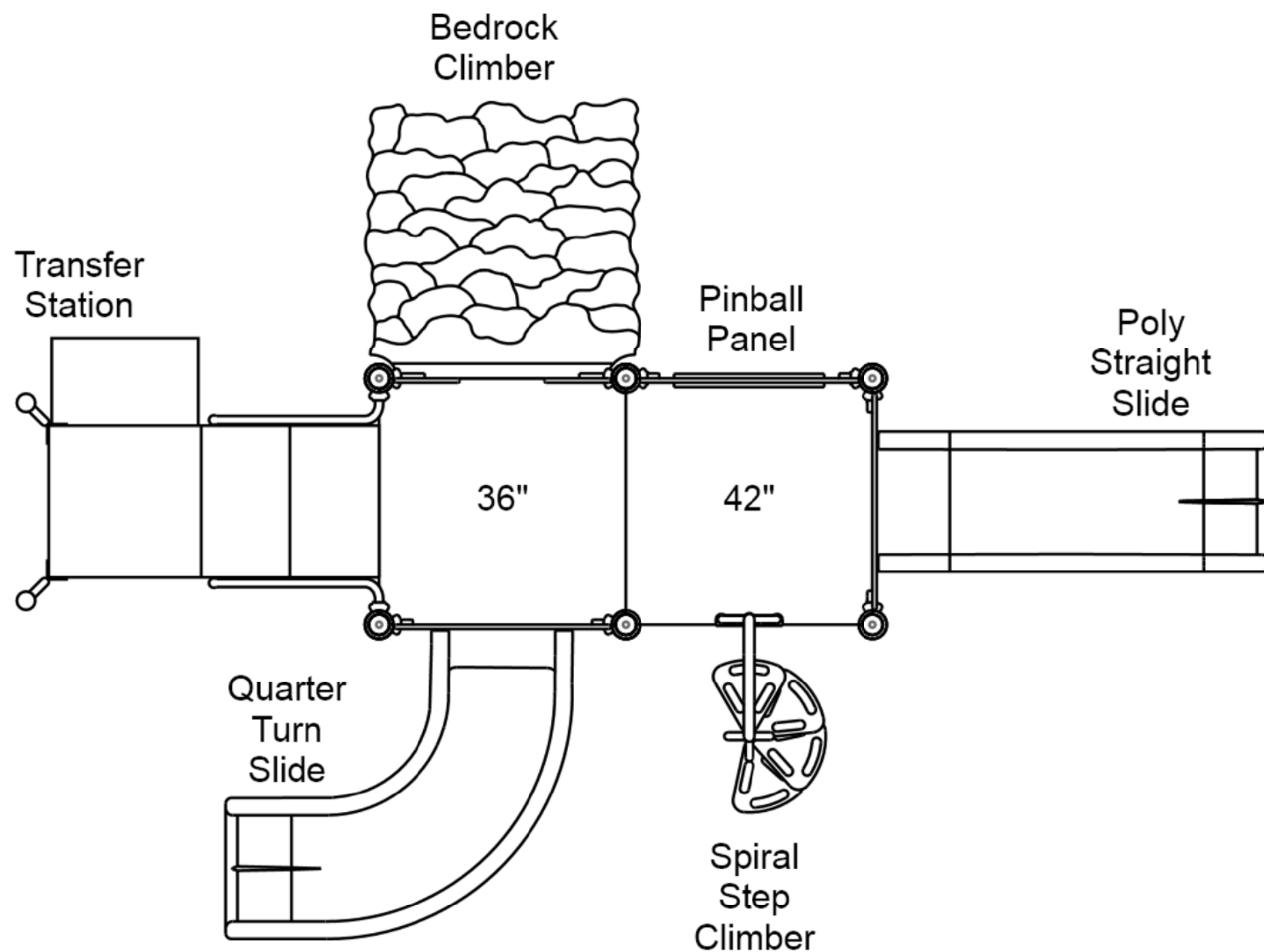
ELEVATED	ACCESSIBLE	RAMP ACCESSIBLE	GROUND	TYPES
5	3/3	0	0/2	0/2

R35
FOR KIDS
AGES
2-5

GENERAL NOTES:

This conceptual plan is based on information provided prior to construction. Detailed site information, including the following, should be obtained, evaluated, and utilized in the final project design. Exact site dimensions, topography, existing utilities, soil conditions and drainage solutions.

WARNING: Accessible safety surfacing material is required beneath and around this equipment that has a critical height value (Fall Height) appropriate for the highest accessible part of this equipment. Refer to the CPSC's Handbook For Public Playground Safety, Section 4: Surfacing.

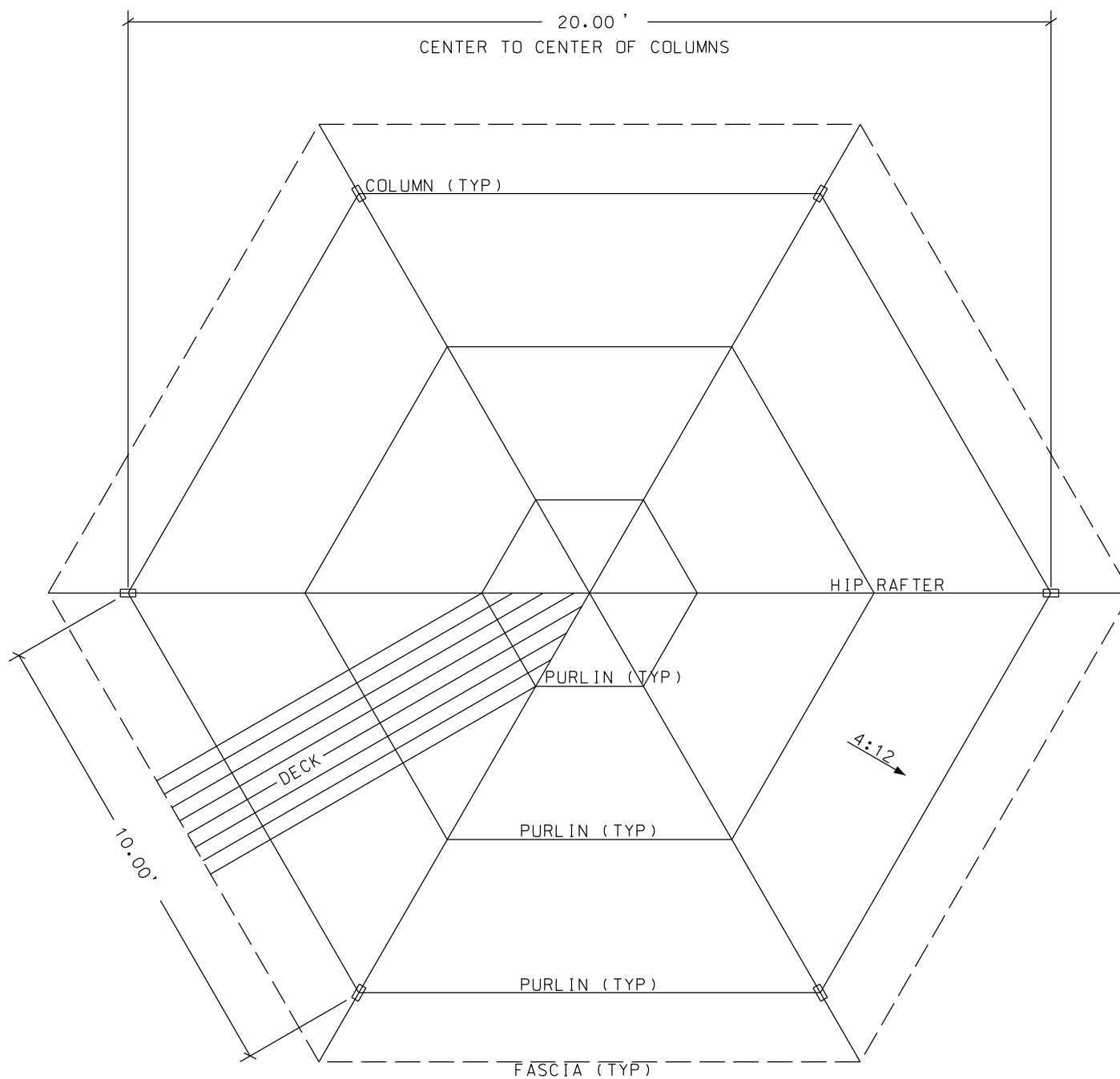


STRUCTURE#: 33592A
PROJECT#: PSS151106A
DATE: 11/6/2015 | DRAWN BY: JTW

MIN. USE ZONE: 30' x 24'

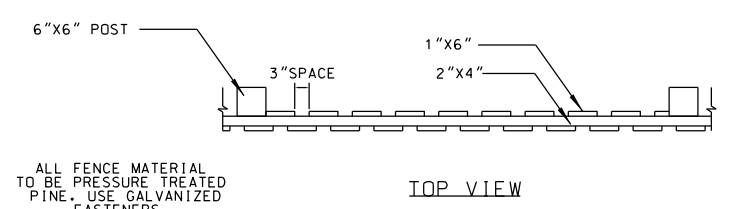
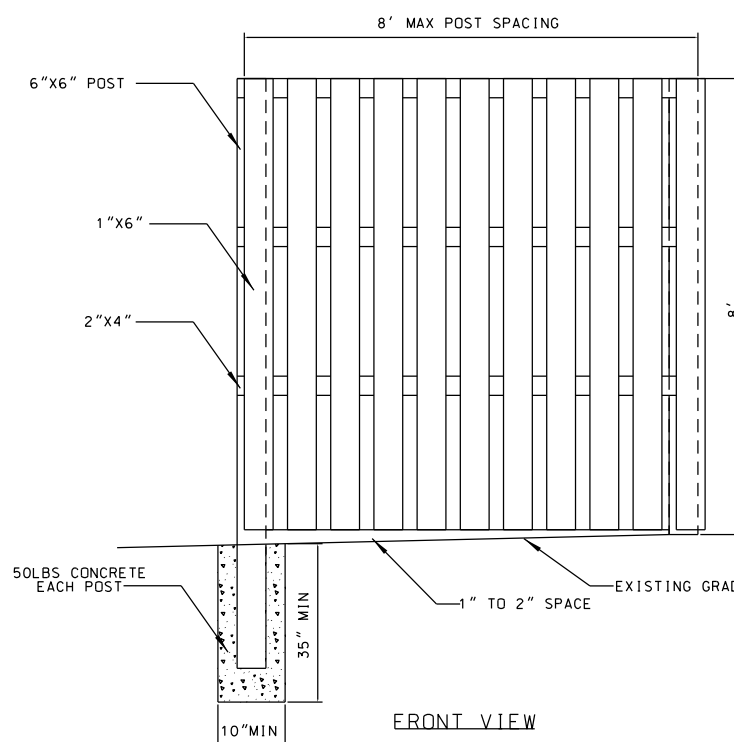
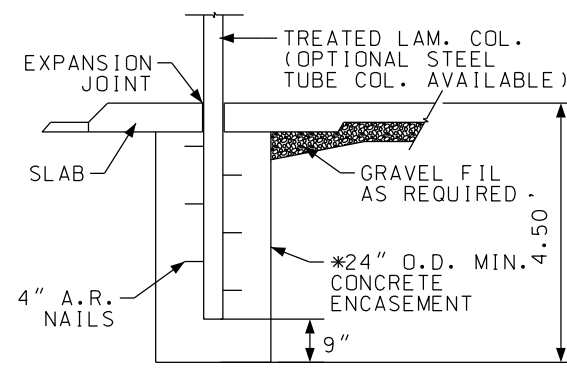
PLAYCRAFT REP:
Playground Safety Services, Inc.

ROOF FRAMING - 25' MAGNOLIA



FRAMING PLAN

GAZEBO DETAILS
NTS



DUMPSTER ENCLOSURE DETAIL
NTS

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____

Approved Construction Plan
Name _____ Date _____
Planning _____
Public Utilities _____
Traffic _____
Fire _____

REVISIONS:

No.	BY	DATE	DESCRIPTION
1	CMC	3/20/17	PER WLM H.A. & ACCE
2	CMC	4/6/17	PER WLM S.R.B.
3	CMC	4/10/17	PER WLM T.R.C.
4	CMC	6/6/17	PER WLM COMMENTS

PIN:R04812-001-004-000

SITE DETAILS

CYPRESS COVE APARTMENTS

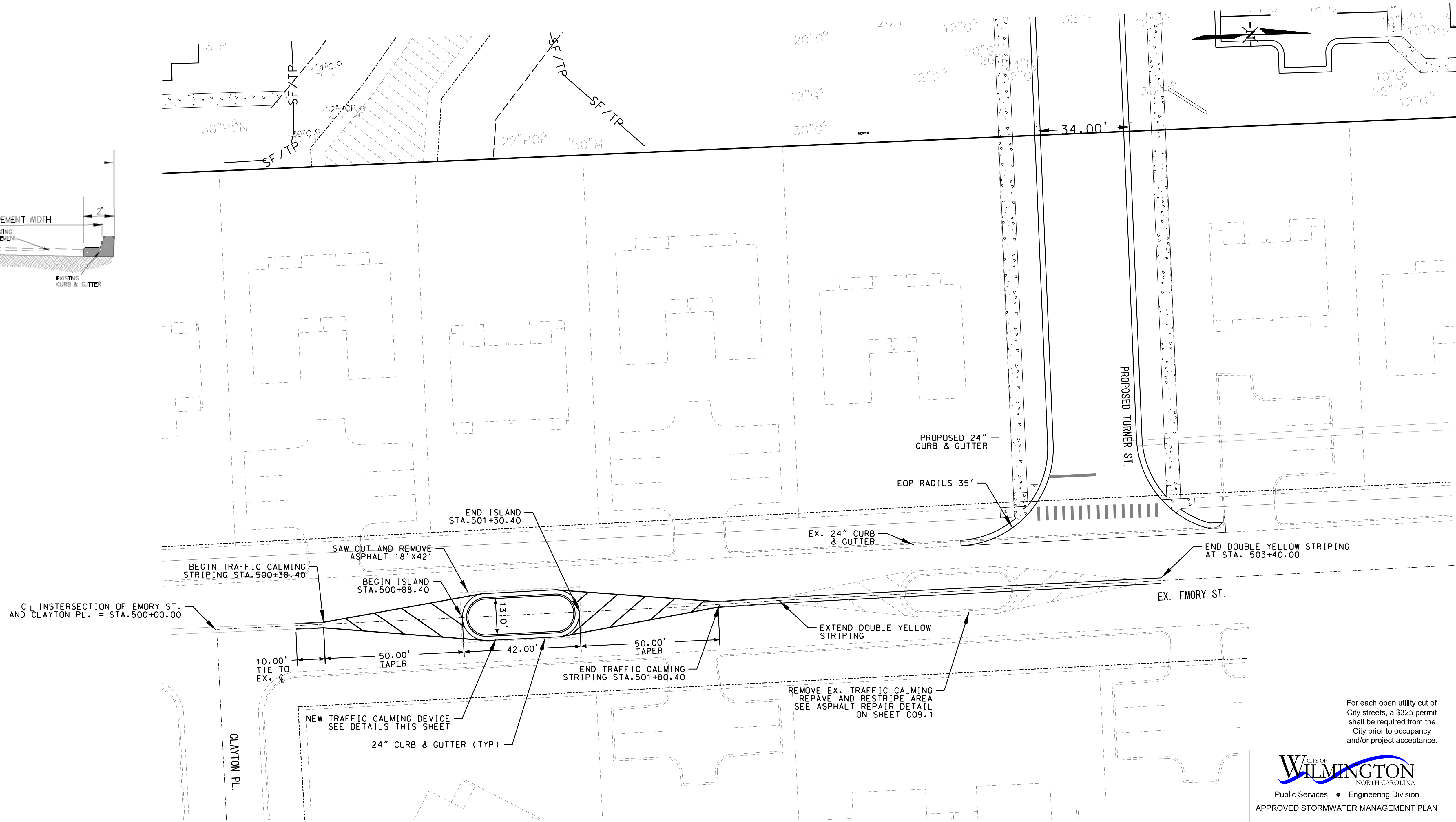
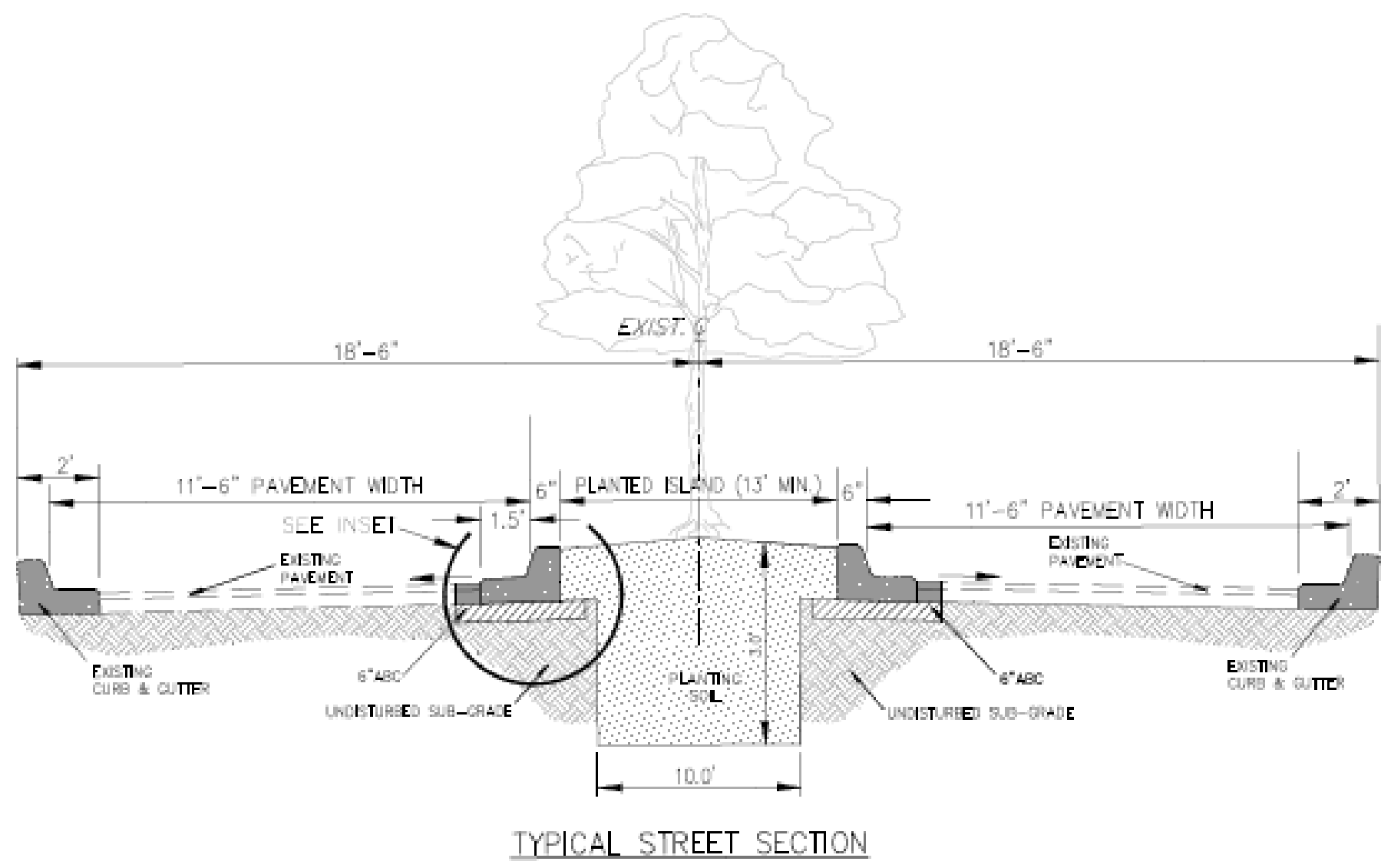
821 EMORY STREET

WILMINGTON TWSP., NEW HANOVER COUNTY, NORTH CAROLINA

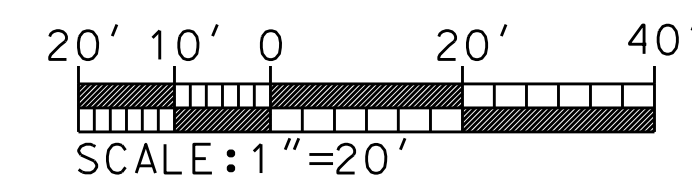
CLIENT: CYPRESS COVE OF WILMINGTON, LLC
ADDRESS: PO BOX 2400 BEAUFORT, NC 28516
PHONE: 252-504-3996

DESIGNED: CMC
DRAWN: CMC
CHECKED: CMC
APPROVED: CMC
DATE: 4/10/17
SCALE: 1"=50'

STROUD ENGINEERING, P.A.
151A HIGHWAY 24
MOREHEAD CITY, N.C. 28557
(252) 247-7479
LICENSE NO. C-0647
CHARLES M. CULLIPHER P.E.



TRAFFIC CALMING ISLAND PLAN VIEW



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____

Approved Construction Plan
Name _____ Date _____
Planning _____
Public Utilities _____
Traffic _____
Fire _____

REVISIONS:			
No.	BY	DATE	DESCRIPTION
4	CMC	6/6/17	PER WLM COMMENTS

PIN:R04812-001-004-000
TRAFFIC CALMING DEVICE

CYPRESS COVE APARTMENTS
821 EMORY STREET
WILMINGTON TWSP., NEW HANOVER COUNTY, NORTH CAROLINA

CLIENT: CYPRESS COVE OF WILMINGTON, LLC
ADDRESS: PO BOX 2400 BEAUFORT, NC 28516
PHONE: 252-504-3996

DESIGNED: CMC
DRAWN: CMC
CHECKED: CMC
APPROVED: CMC
DATE: 4/10/17
SCALE: 1"=40'

STROUD ENGINEERING, P.A.
151A HIGHWAY 24
MOREHEAD CITY, N.C. 28557
(252) 247-7479
LICENSE NO. C-0647

CHARLES M. CULLIPHER P.E.