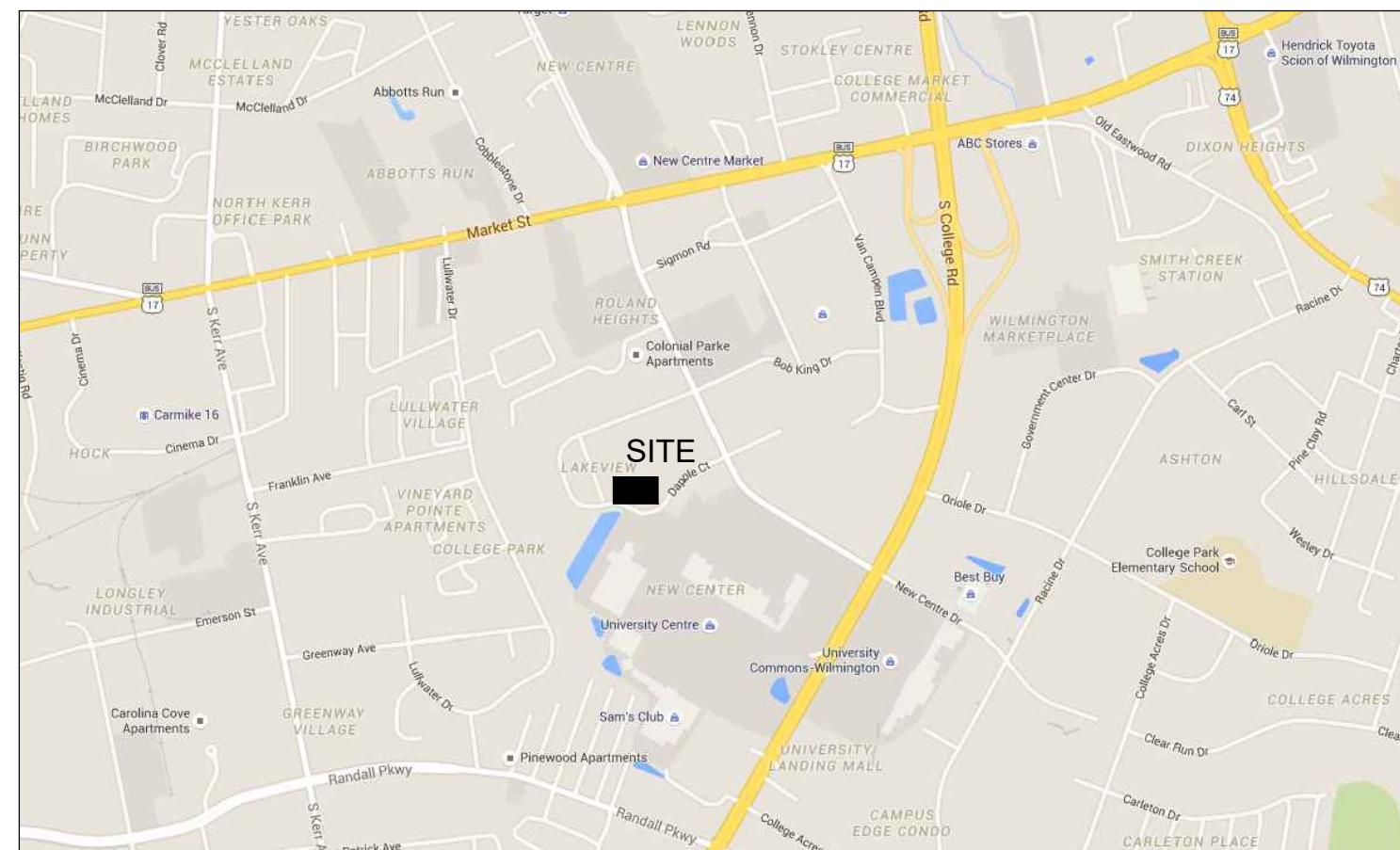


HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER

137 DAPPLE COURT
CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA

PRELIMINARY SITE DRAWINGS REGULATORY REVIEW SET ISSUED 05-17-2016 REVISED 07-21-2016



LOCATION MAP
SCALE: NTS

CIVIL DRAWING INDEX:

COVER SHEET	C-00
EXISTING CONDITIONS SURVEY & DEMOLITION PLAN	C-01
TREE REMOVAL PLAN	C-02
PROPERTY OWNERSHIP PLAN	C-03
SITE LAYOUT PLAN	C-04
SITE UTILITY PLAN	C-05
SITE GRADING, & DRAINAGE PLAN	C-06
SITE HYDROLOGY PLAN	C-07
EROSION CONTROL PLAN	C-08
NOTES AND DETAILS	D-01
NOTES AND DETAILS	D-02
NOTES AND DETAILS	D-03
NOTES AND DETAILS	D-04
LANDSCAPING PLAN	L-01
TOTAL NUMBER OF DRAWINGS:	14

LEGEND

WATER	SITE DEVELOPMENT	MISCELLANEOUS UTILITIES
—W— EXISTING WATER LINE	—SS— EX. STORM SEWER PIPE	○ EX. LIGHT POLE
—W— WATERLINE	—SS— PROPOSED STORM SEWER	□ EX. LIGHT (WALL PACK)
⊕ EX. VALVE	□ EX. STORM STRUCTURE	□-□-□ PROPOSED LIGHT POLE
⊕ PROPOSED WATER VALVE	▨ CATCH BASIN	○ EX. UTILITY POLE
⊕ POST INDICATOR VALVE (PIV)	▨ DROP INLET	○ UTILITY POLE
M EX. WATER METER	⊕ EX. STORM SEWER MANHOLE	○ EX. GUY WIRE
M WATER METER	⊕ STORM SEWER MANHOLE	⊕ EX. ELECTRICAL METER
⊕ EX. FIRE HYDRANT	—RD— EX. ROOF DRAIN LEADER	—OHP— EX. OVERHEAD ELECTRIC LINE
⊕ FIRE HYDRANT	—RD— ROOF DRAIN LEADER	—OHP— PROPOSED OVERHEAD ELECTRIC LINE
⊕ REDUCER FITTING	○ EX. ROOF DRAIN DOWNSPOUT	—UGP— EX. UNDERGROUND ELECTRIC LINE
⊕ PLUG FITTING	⊕ ROOF DRAIN DOWNSPOUT	—UGP— PROPOSED UNDERGROUND ELECTRIC LINE
⊕ WATERLINE TEE	▨ EX. CURB AND GUTTER	⊕ EX. TELEPHONE PEDESTAL
⊕ WATERLINE CROSS	▨ CURB AND GUTTER	⊕ TELEPHONE PEDESTAL
⊕ FIRE DEPARTMENT CONNECTION (FDC)	--- EXISTING PROPERTY LINE	⊕ EX. TELEPHONE MANHOLE
⊕ WATERLINE BLOWOFF	--- PROPERTY LINE	—OHT— EX. OVERHEAD TELEPHONE LINE
⊕ EX. WELL CASING	⊕ BENCHMARK AND/OR SURVEY CONTROL MARKER	—OHT— OVERHEAD TELEPHONE LINE
SS EXISTING SANITARY SEWER	⊕ SOIL BORING LOCATION	—OFO— EX. OVERHEAD FIBER LINE
SAN SANITARY SEWER MAIN	--- LIMITS OF DISTURBANCE	—OFO— OVERHEAD FIBER LINE
○ EX. SEWER MANHOLE	○ EX. TREE	—OHC— EX. OVERHEAD COMMUNICATIONS LINE
○ SEWER MANHOLE	○ EX. SHRUB	—OHC— OVERHEAD COMMUNICATIONS LINE
○ CLEANOUT	--- EX. FENCE	—UGC— EX. UNDERGROUND COMMUNICATIONS LINE
○ EXISTING CLEANOUT	--- PROPOSED FENCE	—UGC— UNDERGROUND COMMUNICATIONS LINE
G EX. GAS LINE	--- EX. TOPOGRAPHIC CONTOUR	—OHU— EX. OVERHEAD UTILITY LINE-MULTIPLE UTILITIES
G GAS LINE	FG XXX PROPOSED SPOT ELEVATION	○ BOLLARD
⊕ EX. GAS VALVE	⊕ EX. SIGN	⊕ PROPERTY MARKER/IRON PIPE
⊕ EX. GAS METER	⊕ SIGN	⊕ EX. SURVEY MONUMENT

CIVIL SERIES DRAWING ABBREVIATIONS:

@-AT	DS-DOWNSPOUT	MECH-MECHANICAL	R/W-RIGHT OF WAY
AC-ACRE	EA-EACH	MH-MANHOLE	REQD-REQUIRED
AFG- ABOVE FINISHED GRADE	EIP-EXISTING IRON PIPE	MIN-MINIMUM	RCP-REINFORCED CONCRETE PIPE
APPR-APPROXIMATE	ELEC-ELECTRICAL	MJ-MECHANICAL JOINT	SAN-SANITARY SEWER
ASSY-ASSEMBLY	E/P-EDGE OF PAVEMENT	NIC-NOT IN CONTRACT	SDWK-SIDEWALK
B/C-BOTTOM OF CURB	EX-EXISTING	OHE-OVERHEAD ELECTRIC	SF-SQUARE FOOT
BOC-BACK OF CURB	F/C-FACE OF CURB	OHP-OVERHEAD POWER	SPT-SPOT GRADE
B/L-BASE LINE	FDC-FIRE DEPARTMENT CONNECTION	OHT-OVERHEAD TELEPHONE	SS-SANITARY SEWER
BM-BOOK OF MAPS	FFE-FINISHED FLOOR ELEVATION	PB-PLAT BOOK	STA-STATION
BMP-BEST MANAGEMENT PRACTICE	FG-FINISHED GRADE	PC-POINT OF CURVATURE	STD-STANDARD
BW-BOTTOM OF WALL	FH-FIRE HYDRANT	PED-PEDESTRIAN	STM-STORM
CB-CATCH BASIN	FL-FLOW LINE	PG-PAGE	STMH-STORM SEWER MANHOLE
C&G-CURB AND GUTTER	FM-FORCE MAIN	PH-PHASE	SWM-STORMWATER MANAGEMENT
CL-CENTERLINE	FT-FOOT	PI-POINT OF INTERSECTION	T-TELEPHONE
CL-CLASS	G-GAS	PIV-POST INDICATOR VALVE	T/C-TOP OF CURB
CMP-CORRUGATED METAL PIPE	GND-GROUND	PKG-PARKING	TCM-TELEPHONE MANHOLE
CO-CLEANOUT	GV-GATE VALVE	P/L-PROPERTY LINE	TS&V-TAPPING SLEEVE AND VALVE
COMM-COMMUNICATIONS	HDPE-HIGH DENSITY POLYETHYLENE	PS-PUMP STATION	UGE-UNDERGROUND ELECTRIC
CONC-CONCRETE	HORIZ-HORIZONTAL	PT-POINT OF TANGENCY	UNK-UNKNOWN
CONN-CONNECTION	IN-INCHES	PP-POWER POLE	UP-UTILITY POLE
CY-CUBIC YARD	INV-INVERT	PVC-POLYVINYL CHLORIDE	VAR-VARIABLE
DB-DEED BOOK	IP-IRON PIPE	PVMT-PAVEMENT	VERT-VERTICAL
DCV-DOUBLE CHECK VALVE	IPS-IRON PIPE SET	PWR-POWER	W-WITH
DDCV-DOUBLE DETECTOR CHECK VALVE	L-LENGTH	R-RADIUS	WM-WATER METER
DIP-DUCTILE IRON PIPE	LF-LINEAR FOOT	RD-ROOF DRAIN	W/O-WITHOUT
DR-DRIVEWAY	LP-LIGHT POLE	RJ-RESTRAINED JOINT	WL-WATERLINE
	LS-LIFT STATION	RPZ-REDUCED PRESSURE ZONE	WSEL-WATER SERVICE ELEVATION
			WV-WATER VALVE

Civil Engineer:

The Curry Engineering Group, PLLC
NC License # P-0799
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Fuquay-Varina, NC 27526
919.552.0849 (o)
Contact: Zak Shipman, PE
zak@curryeng.com

Surveyor:

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Wilmington, NC 28403
910.815.0650
Contact: Mr. Mike Underwood, PLS
mua@bizec.rr.com

Developer:

Hawthorne Residential Partners
806 Green Valley Road, Suite 311
Greensboro, NC 27408
336.275.9511
Contact: Ms. Beverly Greear
bgreear@hrpliving.com

Architect:

Planworx Architecture, PA
5711 Six Forks Road, Suite 100
Raleigh, NC 27609
919.846.8100
Contact: Mr. Robert Clifford
rclifford@planworx.com

APPROVED CONSTRUCTION PLAN

	NAME	DATE
PLANNING		
TRAFFIC		
FIRE		



Public Services • Engineering Division

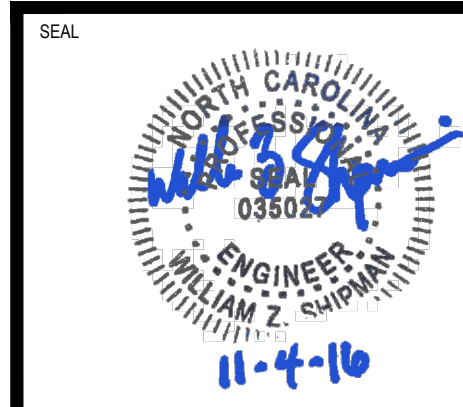
APPROVED DRAINAGE PLAN

Date: _____ Permit # _____

Signed: _____

SURVEY DATUM INFORMATION:

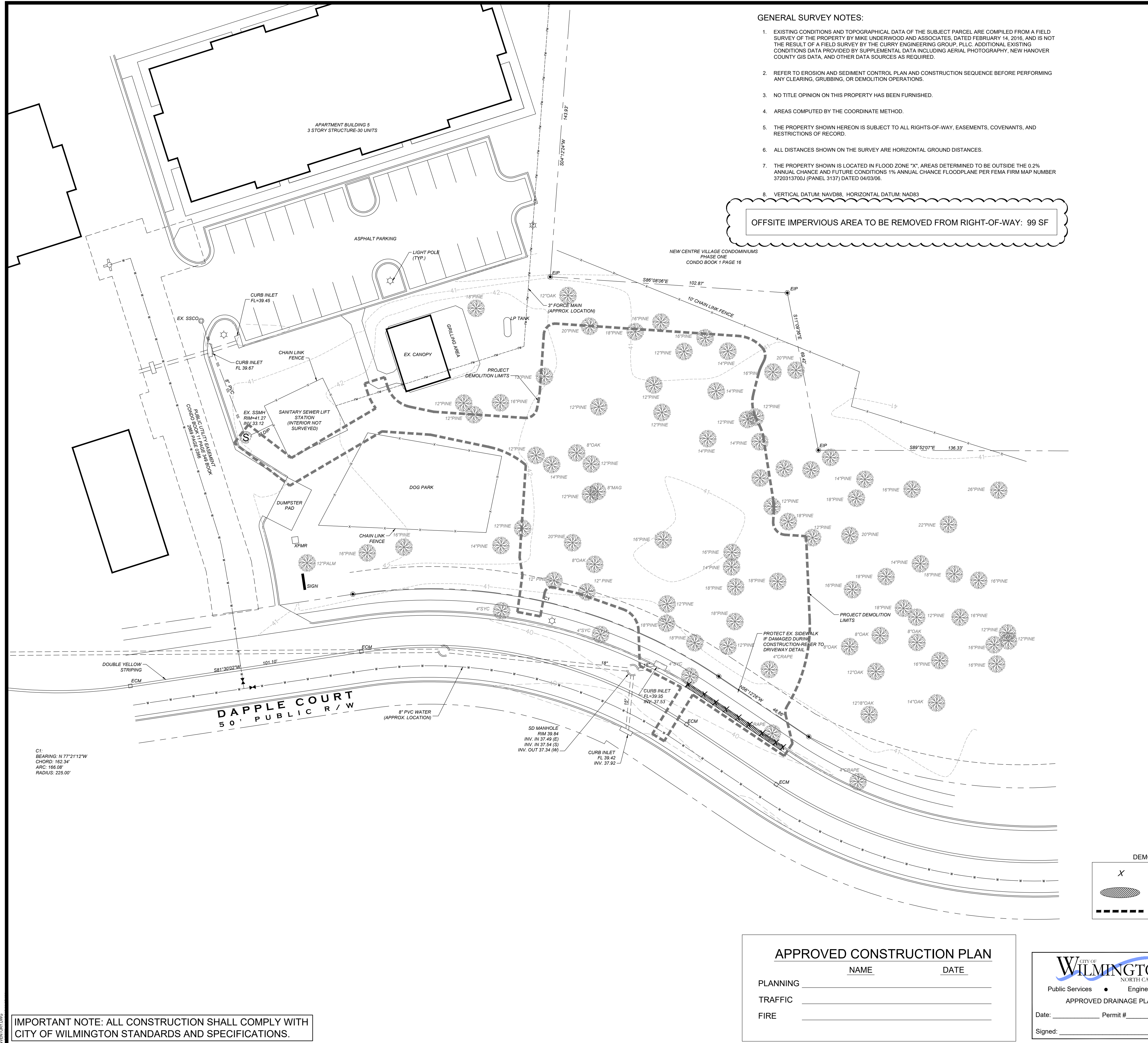
HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD88



HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
137 DAPPLE COURT WILMINGTON, NORTH CAROLINA

COVER SHEET

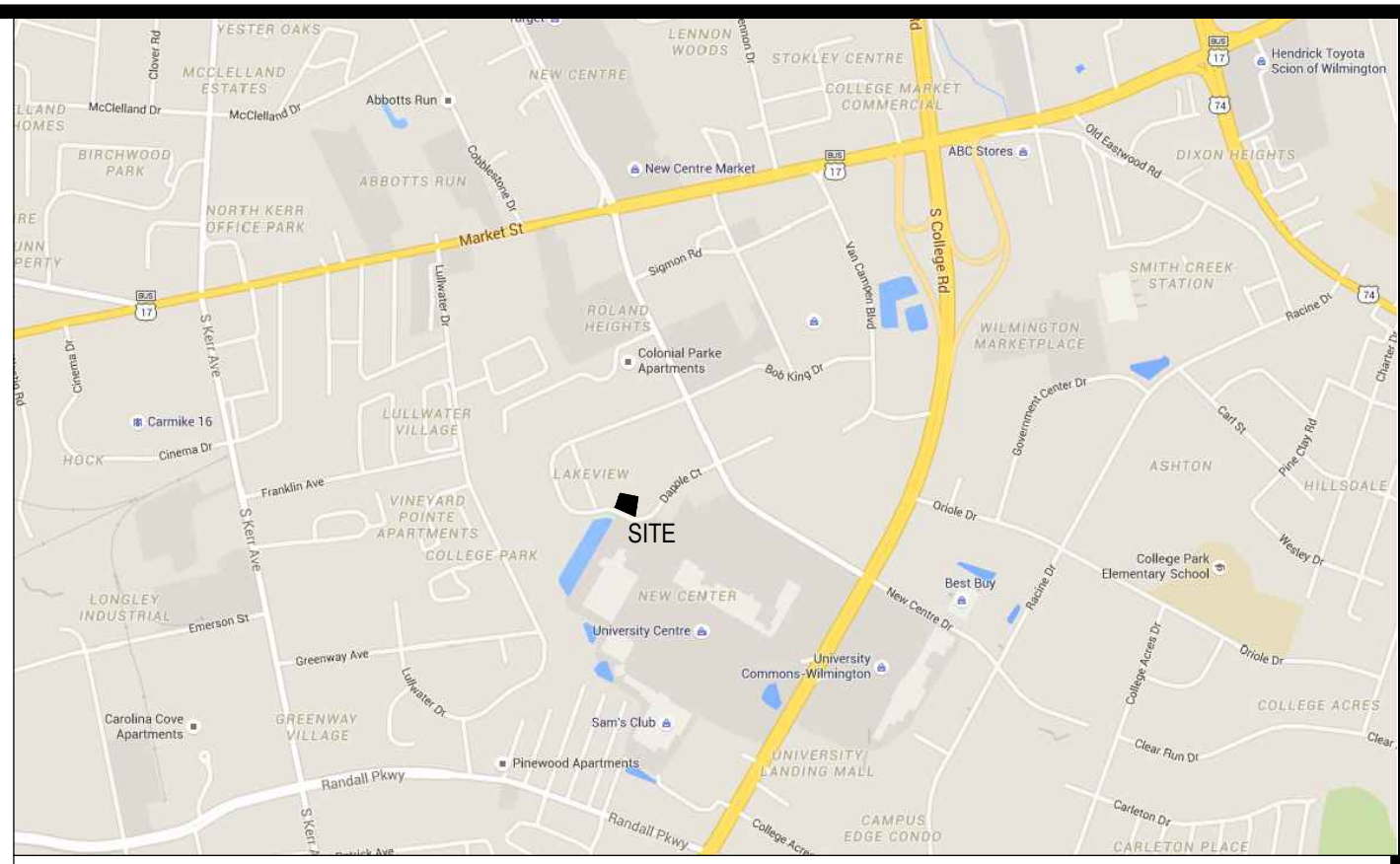
C-00



GENERAL SURVEY NOTES:

- EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY MIKE UNDERWOOD AND ASSOCIATES, DATED FEBRUARY 14, 2016, AND IS NOT THE RESULT OF A FIELD SURVEY BY THE CURRY ENGINEERING GROUP, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, NEW HANOVER COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
- REFER TO EROSION AND SEDIMENT CONTROL PLAN AND CONSTRUCTION SEQUENCE BEFORE PERFORMING ANY CLEARING, GRUBBING, OR DEMOLITION OPERATIONS.
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- AREAS COMPUTED BY THE COORDINATE METHOD.
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- THE PROPERTY SHOWN IS LOCATED IN FLOOD ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE AND FUTURE CONDITIONS 1% ANNUAL CHANCE FLOODPLANE PER FEMA FIRM MAP NUMBER 3720313700J (PANEL 3137) DATED 04/03/06.
- VERTICAL DATUM: NAVD88, HORIZONTAL DATUM: NAD83

OFFSITE IMPERVIOUS AREA TO BE REMOVED FROM RIGHT-OF-WAY: 99 SF

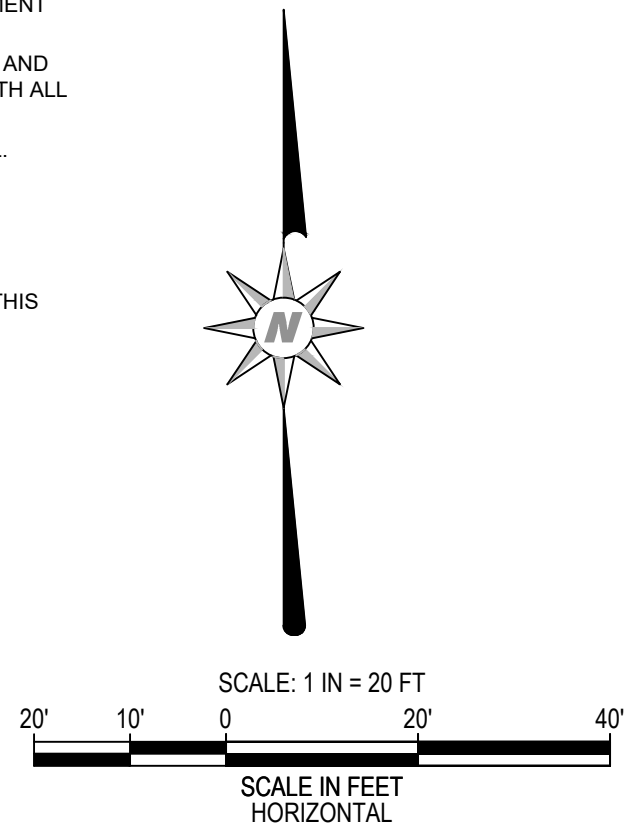
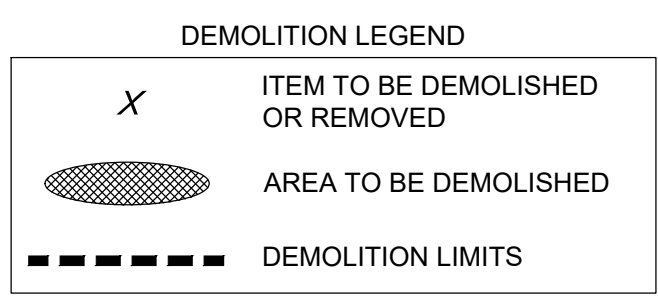


DEMOLITION NOTES:

- REMOVE/DEMOLISH/ABANDON EXISTING FEATURES AFTER EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AND AFTER THE APPROVAL OF THE ENGINEER.
- DO NOT INTERRUPT EXISTING UTILITY SERVICES FOR FACILITIES OCCUPIED BY THE OWNER OR OTHERS EXCEPT WHEN PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE ACCEPTABLE TEMPORARY UTILITY SERVICES.
 - (1): NOTIFY ENGINEER NOT LESS THAN 72 HOURS IN ADVANCE OF PROPOSED UTILITY SERVICE INTERRUPTIONS.
 - (2): DO NOT PROCEED WITH UTILITY INTERRUPTIONS WITHOUT RECEIVING WRITTEN PERMISSION FROM THE DESIGN ENGINEER.
- SUBSURFACE UTILITIES AND FEATURES DENOTED ON THIS PLAN SHOULD BE CONSIDERED APPROXIMATE IN NATURE AND HAVE NOT BEEN FIELD VERIFIED WITH TRADITIONAL SUE OR UNDERGROUND UTILITY LOCATION OR MARKING METHODS. CONTRACTOR IS RESPONSIBLE FOR SUBSURFACE UTILITY EXPLORATION, INCLUDING UTILITY "POTHOLING" OR BY THE EXCAVATION OF TEST PITS AS NECESSARY TO DETERMINE THE UTILITY LOCATION, DEPTHS, AND MATERIALS.
- VERIFY LOCATIONS AND SIZES OF ALL EXISTING FEATURES PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTATION OF EXISTING FEATURES THROUGH THE USE OF PHOTOGRAPHY, VIDEO, OR OTHER RECORDS PRIOR TO DISTURBANCE ON SITE.
- LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION, AND REPAIR ANY DAMAGES TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION.
- REMOVE ALL EXISTING ON-SITE TRASH AND DEBRIS. TRASH SHALL BE REMOVED AND DISPOSED OF IN A LEGAL MANNER. NOTIFY OWNER AND ENGINEER IF ANY HAZARDOUS MATERIALS (ASBESTOS, LEAD PAINT, ETC.) ARE ENCOUNTERED.
- REMOVE SIDEWALK, CURB AND GUTTER, AND OTHER CONCRETE SECTIONS BY SAWCUTTING THE NEAREST CONTROL JOINT AWAY FROM THE AREA DESIGNATED TO BE REMOVED ON THE DEMOLITION PLAN.
- SAWCUT PAVEMENT IN ALL LOCATIONS WHERE ABUTTING SIDEWALK OR NEW PAVEMENT IS EXISTING.
- DRAWINGS DO NOT SHOW ALL EXISTING UTILITIES. EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD PRIOR TO INSTALLATION OF ANY NEW UTILITY SERVICES OR LINES. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OBTAINED THROUGH VARIOUS DATA SOURCES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. CALL THE APPROPRIATE UTILITY COMPANIES 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITY SERVICES OR LINES.
- NOTIFY AND COORDINATE ANY REQUIRED RELOCATION AND/OR REMOVAL OF EXISTING UNDERGROUND UTILITIES, POLES, METERS, OR OTHER ABOVE GROUND APPURTENANCES WITH THE APPROPRIATE UTILITY PROVIDER (I.E. POWER, TELEPHONE, CABLE, AND NATURAL GAS/PROPANE) PRIOR TO THE START OF SELECTIVE DEMOLITION WORK.
- ARRANGE SELECTIVE DEMOLITION SCHEDULE SO AS NOT TO INTERFERE WITH OWNER'S USE OF THE PROPERTY.
- SHOULD UNCHARTED OR INCORRECTLY CHARTED EXISTING UTILITIES BE IDENTIFIED, CONTACT THE ENGINEER IMMEDIATELY FOR INSTRUCTIONS. PROVIDE A SCALED DRAWING OF THE UNCHARTED OR INCORRECTLY CHARTED UTILITY FOR USE BY THE ENGINEER IN PREPARING ADDITIONAL DIRECTIONS.
- CONTRACTOR SHALL MAINTAIN A CLEAN WORK SITE, FREE OF DEBRIS, TRASH, OR OTHER CONSTRUCTION MATERIALS. AREAS SUBJECT TO SITE CONSTRUCTION ADJACENT TO THE PUBLIC RIGHT OF WAY AND PEDESTRIAN SIDEWALKS SHALL BE LEFT "ROOM CLEAN" AT THE END OF EACH WORK DAY.
- CONTRACTOR SHALL VERIFY AND CONFIRM LOCATION OF STAGING AND LAYDOWN AREA, MATERIALS STORAGE AREA, AND SUBCONTRACTOR PARKING WITH THE PROPERTY OWNER AND/OR PROPERTY MANAGEMENT PRIOR TO BEGINNING WORK ON SITE.

DEMOLITION SEQUENCE:

- INSTALL TREE PROTECTION FENCING IF REQUIRED, ACCORDING TO THE DRAWINGS.
- INSTALL THE NECESSARY EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- REMOVE AND/OR DEMOLISH EXISTING UNDERGROUND POWER AND OTHER UTILITIES WITHIN THE PROJECT AREA. COORDINATE WITH ALL APPROPRIATE UTILITY PROVIDERS PRIOR TO REMOVAL.
- REMOVE EXISTING TREES THAT ARE APPROVED FOR REMOVAL.
- REMOVE EXISTING ASPHALT, CONCRETE, GRAVEL, AND OTHER SURFACES AS SHOWN.
- REMOVE EXISTING ROOT MAT, TOPSOIL, AND OTHER ORGANIC MATERIALS FROM THE CONSTRUCTION AREA AS REQUIRED.
- REMOVE ANY ADDITIONAL EXISTING FEATURES AS SHOWN ON THIS PLAN.



APPROVED CONSTRUCTION PLAN

NAME	DATE
PLANNING _____	_____
TRAFFIC _____	_____
FIRE _____	_____

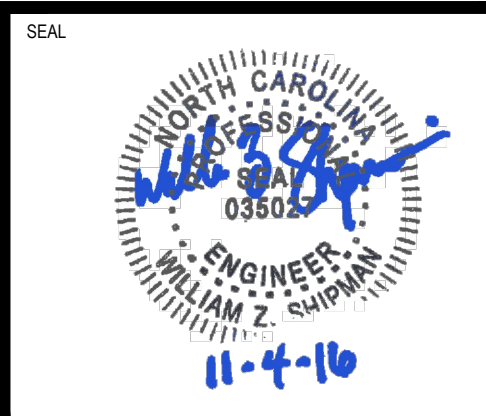
CITY OF WILMINGTON
NORTH CAROLINA

Public Services • Engineering Division

APPROVED DRAINAGE PLAN

Date: _____ Permit # _____

Signed: _____



IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.

HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
137 DAPPLE COURT WILMINGTON, NORTH CAROLINA
EXISTING CONDITIONS & DEMOLITION PLAN

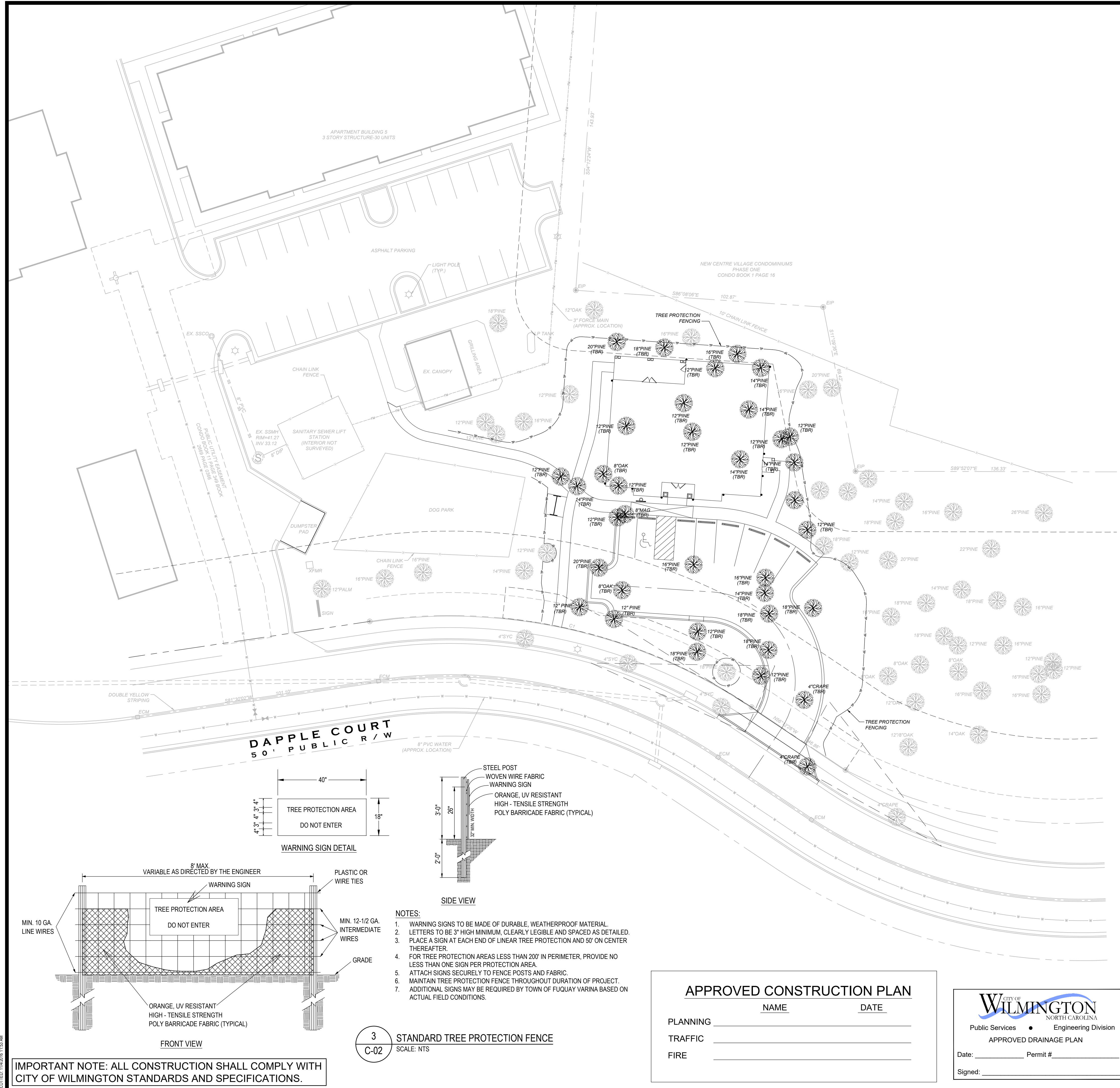
2025 S. Energy Avenue
Fayetteville, NC 28405
P: (910) 438-2849
F: (910) 438-2849
www.curryeng.com
CURRY ENGINEERS EST. 1978
NORTH CAROLINA
WILLIAM Z. SHIPMAN
ENGINEER
03505
11-4-16

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CURRY ENGINEERS EST. 1978
NORTH CAROLINA
WILLIAM Z. SHIPMAN
ENGINEER
03505
11-4-16

C-01

REVISIONS	DATE	BY	DESCRIPTION
2	10-12-16	PER. TRC	COMMENT
1	07-21-16	PER. TRC	COMMENT

DATE: 05-17-16
FILE NO: 2015-083
HORZ. SCALE: SCALE
VERT. SCALE: SCALE
SHEET SIZE: 24 x 36



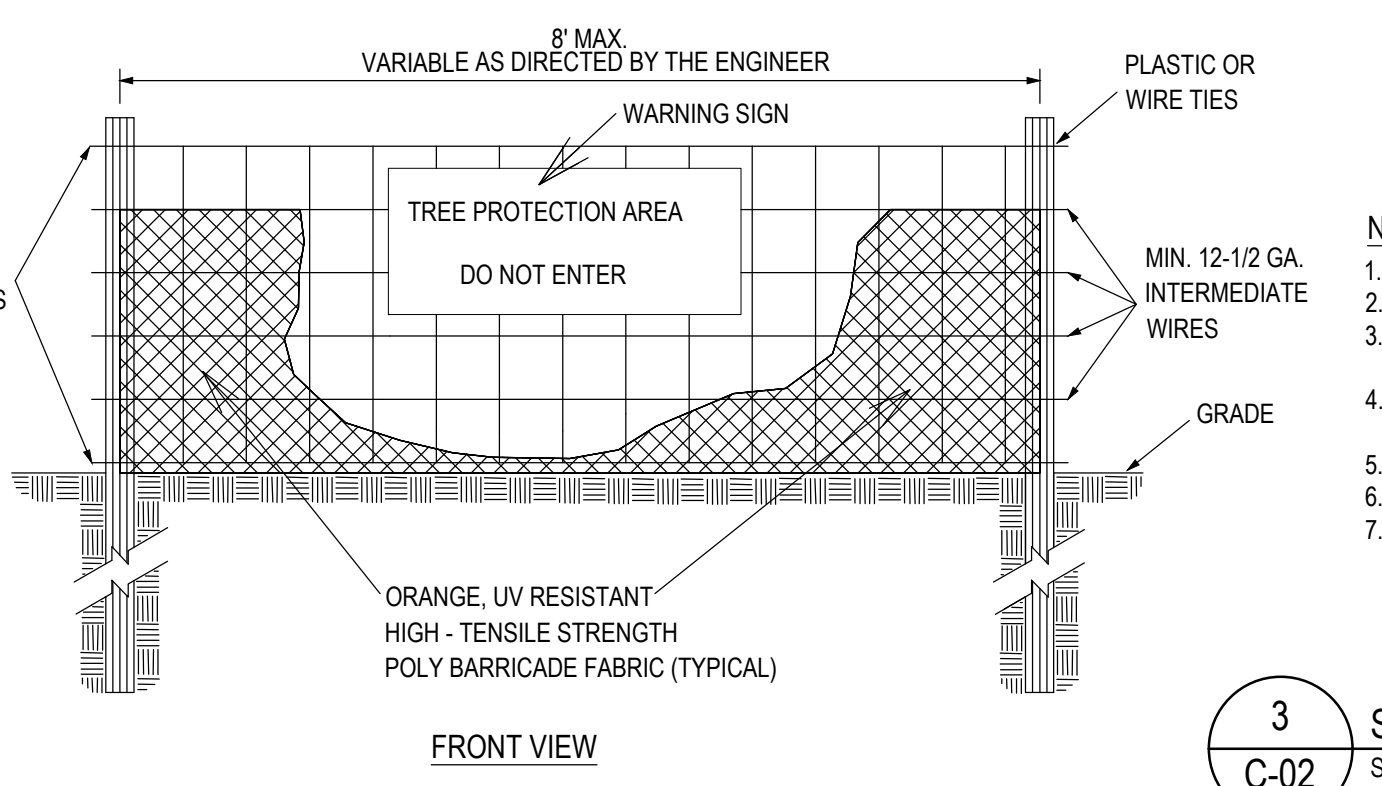
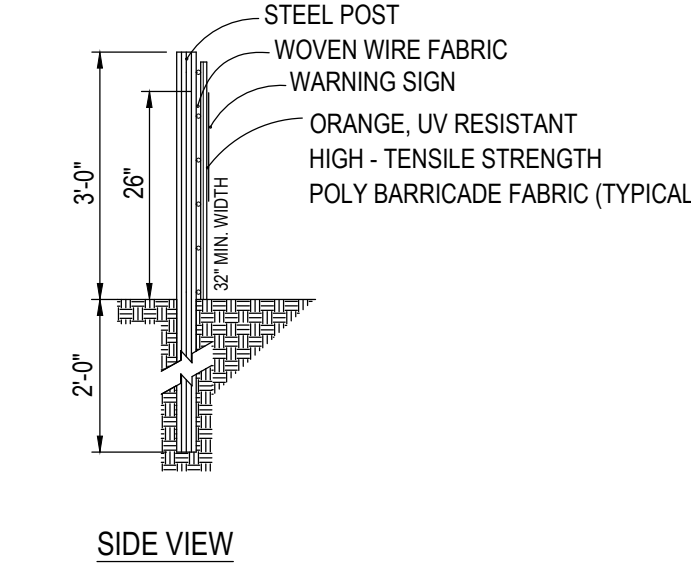
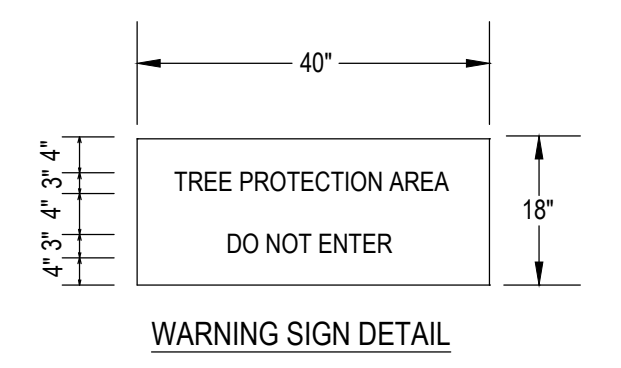
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 - VERTICAL DATUM: NAVD83, HORIZONTAL DATUM: NAD83

HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
 137 DAPPLE COURT WILMINGTON, NORTH CAROLINA
 TREE REMOVAL PLAN

206 S. Ferry Street
 Fayetteville, NC 27308
 P: (919) 952-2943
 F: (919) 952-2943
 EST. 1980
 CURRY ENGINEERS & ARCHITECTS
 WILMINGTON, NC
 NC LIC. NO. P-0789

Curry
 ENGINEERING
 C-02

DAPPLE COURT
 50' PUBLIC R/W

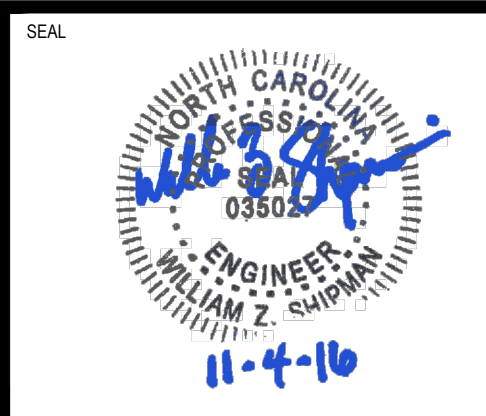
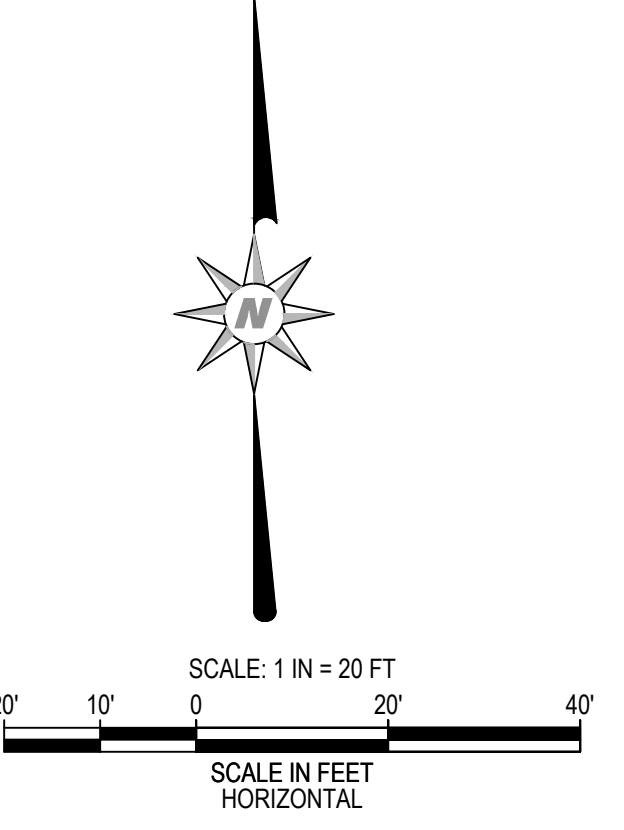


- NOTES:
- WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.
 - LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
 - PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.
 - FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA.
 - ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
 - MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.
 - ADDITIONAL SIGNS MAY BE REQUIRED BY TOWN OF FUQUAY VARINA BASED ON ACTUAL FIELD CONDITIONS.

APPROVED CONSTRUCTION PLAN

NAME	DATE
PLANNING _____	_____
TRAFFIC _____	_____
FIRE _____	_____

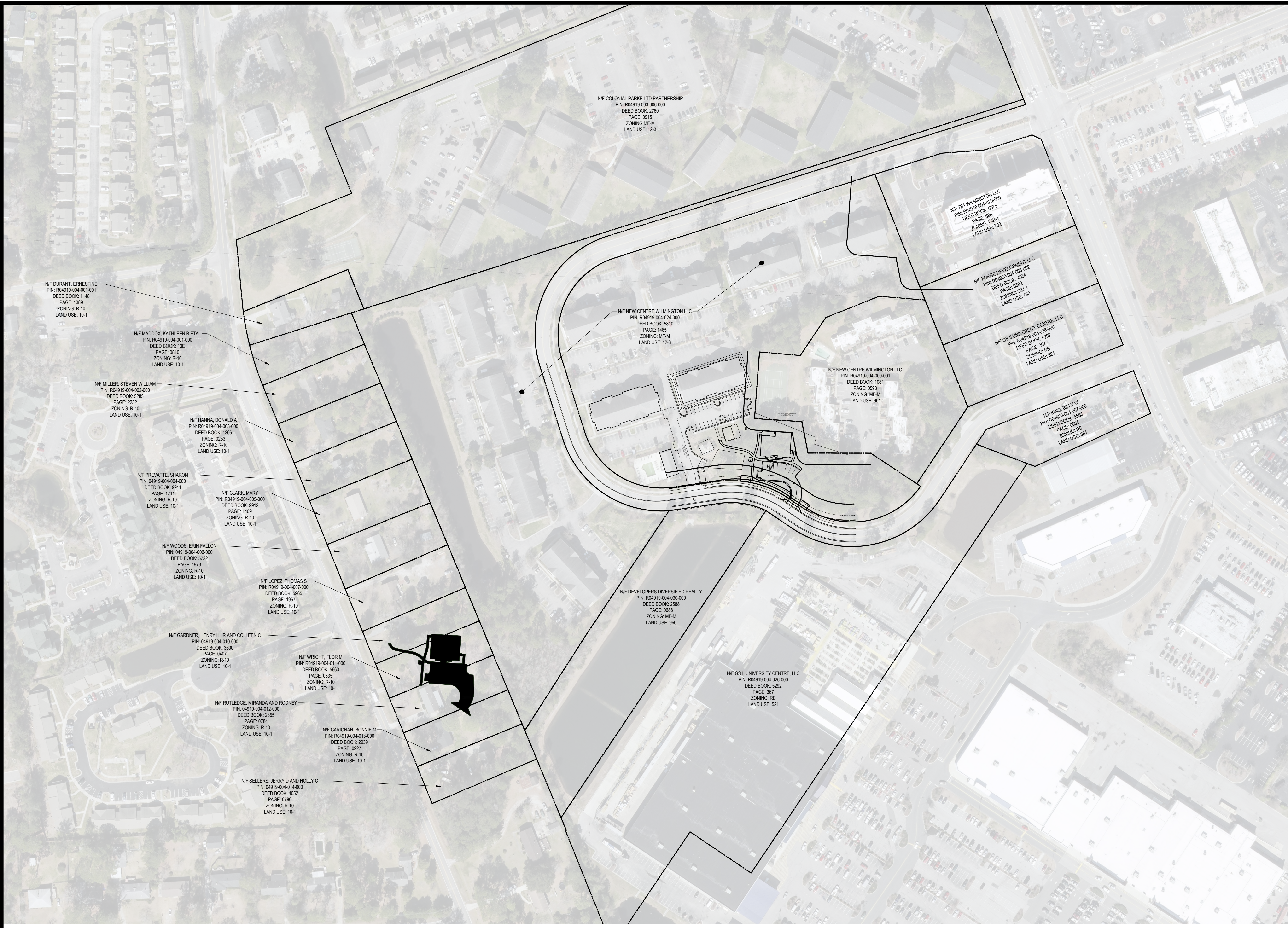
CITY OF WILMINGTON NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED DRAINAGE PLAN
 Date: _____ Permit # _____
 Signed: _____



PROJECT: 1604010201030150015.80 NEW CENTRE FITNESS CENTRE/ANSWER SHEET PLANSHEET FILED: 02/06/2016 11:53 AM
 PLOTTED: 11/20/16 11:53 AM

IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.

3 STANDARD TREE PROTECTION FENCE
 C-02 SCALE: NTS



HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
137 DAPPLE COURT WILMINGTON, NORTH CAROLINA
PROPERTY OWNERSHIP PLAN

REVISIONS

2	10-12-16	PER TRC COMMENT
1	07-21-16	PER TRC COMMENT

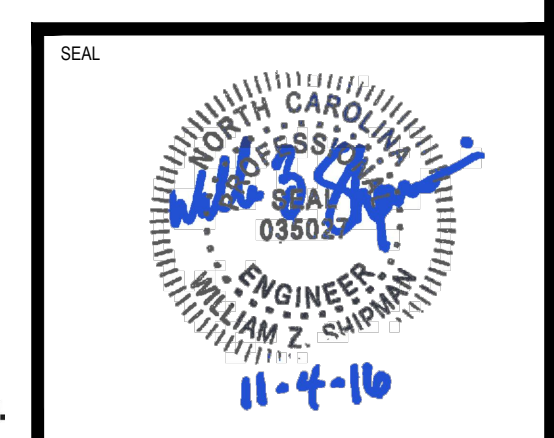
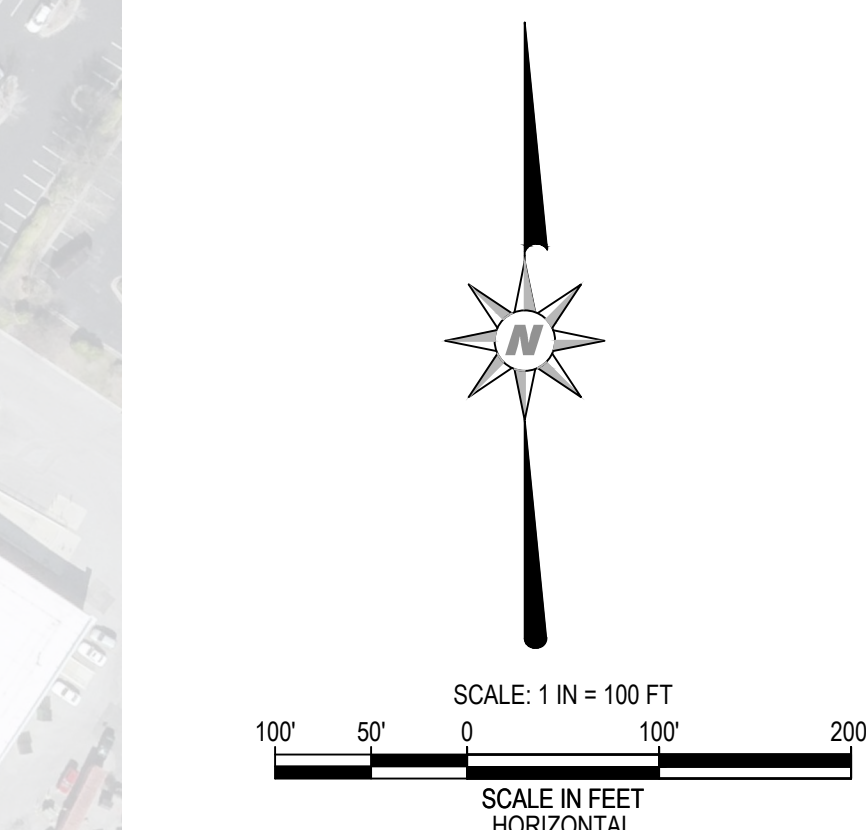
DATE: 05-17-16
FILE NO: 2015-083

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APPROVED CONSTRUCTION PLAN

NAME	DATE
PLANNING _____	_____
TRAFFIC _____	_____
FIRE _____	_____

City of **WILMINGTON** NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date: _____ Permit # _____
Signed: _____



206 S. Energy Park
Wilmington, NC 27408
P: 919.832.2845
F: 919.832.2845

Curry
ENGINEERING

11-4-10
C-03

REVISIONS

2	10-12-16	PER TRC COMMENT
1	07-21-16	PER TRC COMMENT

DATE: 05-17-16
FILE NO: 2015-083

STREET TREES NOTE: 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.

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- VERTICAL DATUM: NAVD88, HORIZONTAL DATUM: NAD83
- ALL PROPOSED VEGETATION WITHIN SITE DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SITE LINES FROM 30' TO 10'.
- PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.

CITY OF WILMINGTON STANDARD NOTES:

- PRIOR TO 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 THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING, 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 PROPOSED 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 FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
- ONCE STREETS ARE OPEN TO TRAFFIC, 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 SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
- CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN.
- CALL TRAFFIC ENGINEERING AT 910-341-7888 FORTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.
- TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKINGS PRIOR TO ACTUAL STRIPING.
- ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREA SHALL BE WHITE.
- ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER.
- STOP SIGNS AND STREET SIGNS TO REMAIN IN PLACE DURING CONSTRUCTION.
- TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS.
- A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET.
- ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS, AND CURBING WILL BE REPLACED.
- CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
- WATER AND SEWER SERVICE SHALL MEET CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) DETAILS AND SPECIFICATIONS.
- PROJECT SHALL COMPLY WITH CFPUA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METERS CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL. CALL 910-343-3910 FOR INFORMATION.
- IF THE CONTRACTOR DESIRES CFPUA WATER FOR CONSTRUCTION, HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPERS SIDE OF THE WATER METER BOX.
- ANY IRRIGATION SYSTEM SUPPLIED BY CFPUA WATER SHALL COMPLY WITH THE CFPUA CROSS CONNECTION CONTROL REGULATIONS. CALL 910-343-3910 FOR INFORMATION.
- ANY IRRIGATION SYSTEMS SHALL BE EQUIPPED WITH A RAIN AND FREEZE SENSOR.
- ANY BACKFLOW PREVENTION DEVICES REQUIRED BY CFPUA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USFCOCCR OR ASSE.
- CONTRACTOR TO FIELD VERIFY EXISTING WATER AND SEWER SERVICE LOCATIONS, SIZES, AND MATERIALS PRIOR TO CONSTRUCTION. ENGINEER TO BE NOTIFIED OF ANY CONFLICTS.
- CONTRACTOR SHALL MAINTAIN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
- UNDERGROUND FIRE LINES MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-341-0696. CALL 910-343-3910 FOR INFORMATION.
- NO OBSTRUCTIONS ARE PERMITTED IN THE SPACE BETWEEN THIRTY (30) INCHES AND TEN (10) FEET ABOVE THE GROUND WITHIN THE TRIANGULAR SITE DISTANCE.
- CONTACT THE NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 PRIOR TO DOING ANY DIGGING, CLEARING, OR GRADING.

WATER AND SEWER CAPACITY NEEDS

WATER:	44,400	GPD (CURRENT USE)
WATER:	46,000	GPD (PROPOSED USE)
SEWER:	44,400	GPD (CURRENT USE)
SEWER:	46,000	GPD (PROPOSED USE)

OVERALL PROPERTY WATER/SEWER CALCULATIONS:

#1 BEDROOM UNITS: 180 @ 120 GPD
 #2 BEDROOM UNITS: 120 @ 240 GPD

180 UNITS x 120 GPD + 120 UNITS x 240 GPD = 43,200 GPD

EXISTING POOL: 10 GPD/PERSON
 ESTIMATED PEAK USAGE: 120 PEOPLE/DAY OR 1200 GPD

TOTAL WATER/SEWER DEMAND: 44,400 GPD

NEW CLUBHOUSE/FITNESS CENTER FACILITY: 50 GPD/100 SF
 PROPOSED WATER DEMAND: 1573 GPD—ASSUME 1600 GPD

SITE DATA TABLE

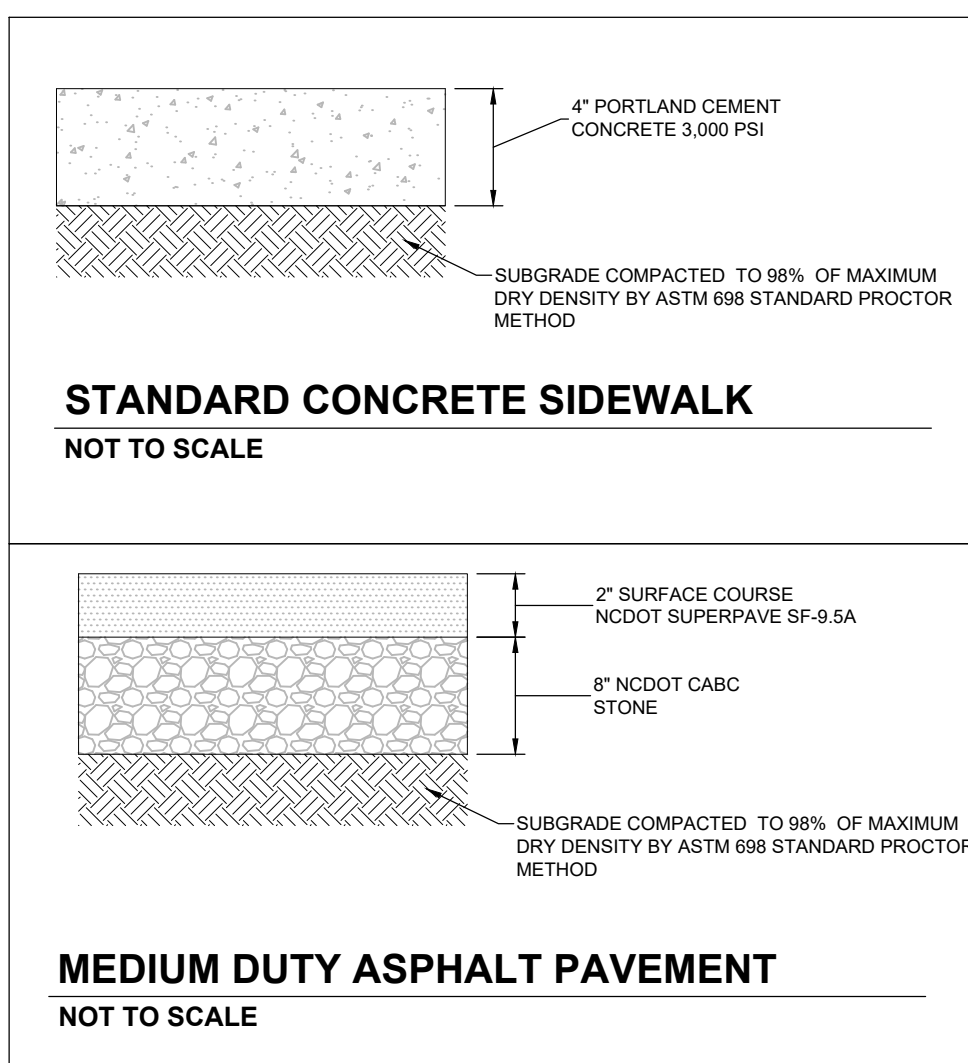
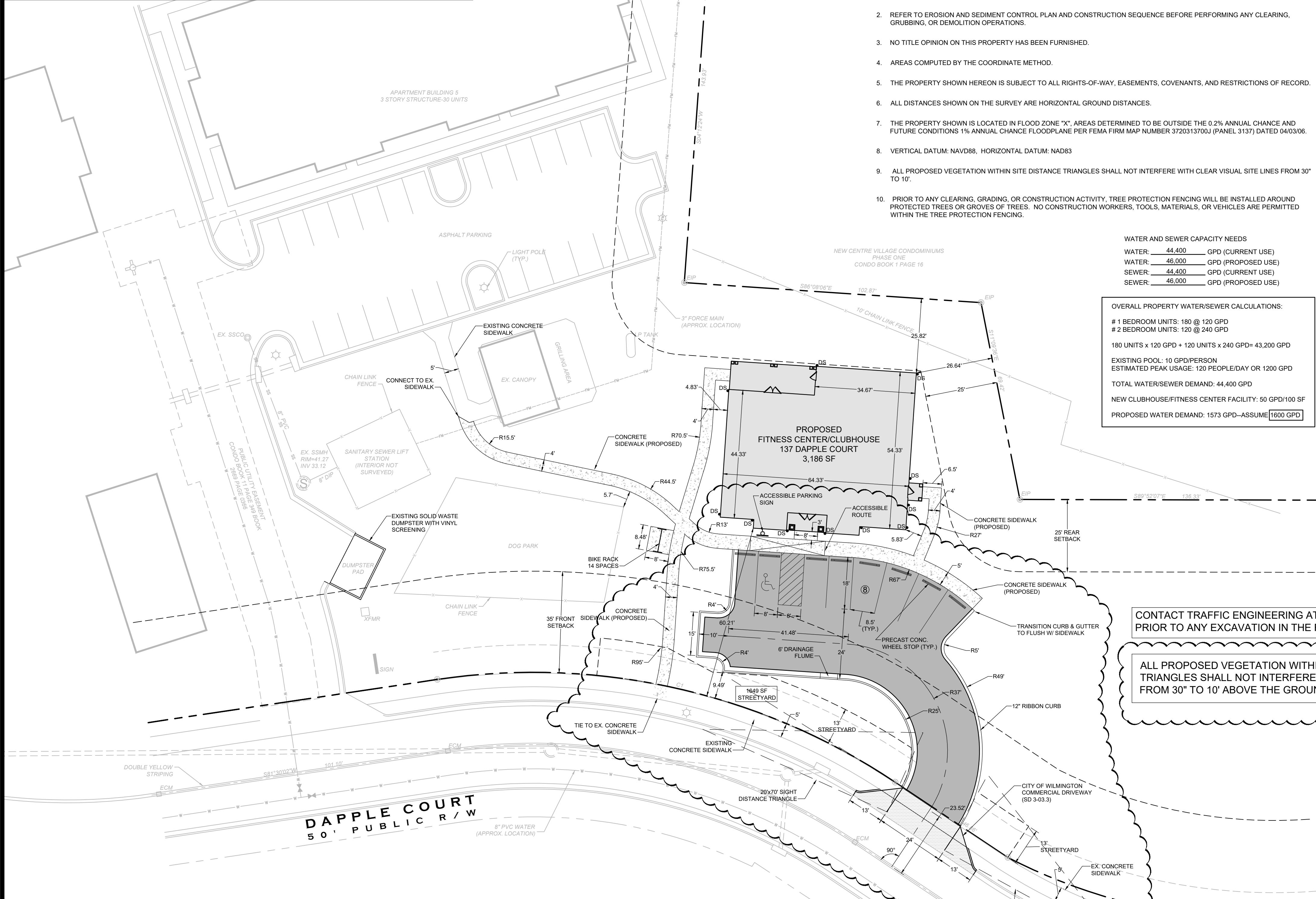
PROJECT NAME:	HAWTHORNE AT NEW CENTRE FITNESS CENTER ADDITION	
PROPERTY OWNER:	NEW CENTRE WILMINGTON, LLC	
PHYSICAL ADDRESS:	137 DAPPLE COURT	
PROPERTY PIN:	R04919-004-024-000	
PROJECT AREA:	0.35 ACRES	
PROPERTY AREA:	15.39 ACRES	
ZONING DISTRICT:	MF-M	
OVERLAY DISTRICT:	N/A	
BUILDING SETBACKS:	REQUIRED MIN.:	PROPOSED:
	FRONT: 35'	FRONT: 60.21'
	SIDE: 20'	SIDE: 26.61'
	REAR: 25'	REAR: 25.2'
BUILDING SIZE:	3,186 SF (EXCLUDES COVERED PORCH)	
BUILDING LOT COVERAGE:	EX. RESIDENTIAL BUILDINGS: 101,295 SF (FROM RECORDS) PROPOSED FITNESS CENTER: 3,186 SF	
	TOTAL BUILDING AREA: 103,399 SF BLC % = 104,481 SF / (15.39 AC * 43560) = 15.59%	
BUILDING HEIGHT:	19'-5"	
NUMBER OF STORIES:	1	
IMPERVIOUS AREAS:	9,895 SF (ON-SITE NEW IMPERVIOUS) 293 SF (OFF-SITE NEW IMPERVIOUS) 9,990 (TOTAL NEW IMPERVIOUS)	
EXISTING BUILDINGS:	101,295 SF	PROPOSED BUILDINGS: 104,920 SF
EXISTING ASPHALT & CURB:	263,236 SF	PROPOSED ASPHALT & CURB: 267,759 SF
EXISTING CONCRETE:	42,032 SF	PROPOSED CONCRETE: 43,512 SF
		PROPOSED OTHER: 67 SF
		PROPOSED OFFSITE: 295 SF
EXISTING, TOTAL SITE:	406,563 SF	PROPOSED, TOTAL SITE: 416,553 SF
CAMA LAND USE CLASSIFICATION:	DEVELOPED	

PARKING CALCULATIONS:

EXISTING RESIDENTIAL UNIT COUNT:	
# OF 1 BEDROOM UNITS:	180
# OF 2 BEDROOM UNITS:	120
PROPOSED FITNESS CENTER ADDITION:	3,186 SF
CITY OF WILMINGTON REQUIRED PARKING CRITERIA:	
1 BEDROOM RESIDENTIAL:	1.5 SPACES PER UNIT
2 BEDROOM RESIDENTIAL:	2 SPACES PER UNIT
FITNESS CENTER:	1 SPACE PER 400 SF MIN 1 SPACE PER 200 SF MAX
REQUIRED PARKING:	
1 BEDROOM RESIDENTIAL:	270 SPACES
2 BEDROOM RESIDENTIAL:	240 SPACES
FITNESS CENTER:	8 SPACES MINIMUM 16 SPACES MAXIMUM
TOTAL MINIMUM REQUIRED:	516 SPACES
PROVIDED PARKING:	
EX. PARKING SPACES-MAIN BLDGS:	549
PROPOSED FINAL PARKING:	
EX. PARKING SPACES-MAIN BUILDINGS TO REMAIN:	549
PROPOSED SPACES IN FITNESS CENTER LOT:	8
TOTAL PARKING SPACES:	557
NEW ACCESSIBLE PARKING REQ'D:	1
NEW ACCESSIBLE PARKING PROVIDED:	1
EXISTING BICYCLE PARKING PROVIDED:	8 SPACES (4 RACKS)
TOTAL BICYCLE PARKING REQ'D-EXISTING:	20 SPACES
NEW BICYCLE PARKING REQ'D:	12 SPACES (1 RACK)
NEW BICYCLE PARKING PROVIDED:	14 SPACES (1 RACK)

CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.

ALL PROPOSED VEGETATION WITHIN THE SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' TO 10' ABOVE THE GROUND.



PROPOSED BUILDING CONSTRUCTION TYPE: V-B

WATER PROVIDER: CAPE FEAR PUBLIC UTILITY AUTHORITY
 SANITARY SEWER PROVIDER: CAPE FEAR PUBLIC UTILITY AUTHORITY

IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.

APPROVED CONSTRUCTION PLAN

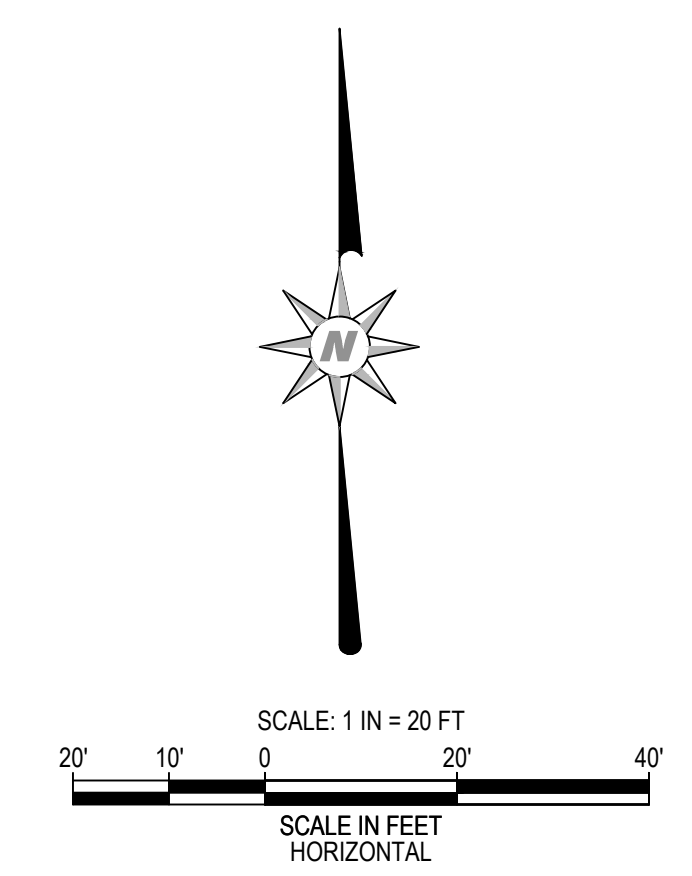
NAME	DATE
PLANNING _____	_____
TRAFFIC _____	_____
FIRE _____	_____

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division

APPROVED DRAINAGE PLAN

Date: _____ Permit # _____

Signed: _____



HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
137 DAPPLE COURT WILMINGTON, NORTH CAROLINA
SITE PLAN

206 S. Tryon Avenue
 Charlotte, NC 28208
 P: 704.366.2943
 F: 704.366.2944

ENGINEERS TO WILMINGTON, NORTH CAROLINA
 EST. 1978

Curry
 ENGINEERING

NC LIC. NO. P-0799

C-04

REVISIONS

NO.	DATE	DESCRIPTION
1	07-21-16	PER. TRC COMMENT
2	10-12-16	PER. TRC COMMENT

DATE: 05-12-16
 FILE NO: 2015-083
 HORZ. SCALE: AS SHOWN
 VERT. SCALE: AS SHOWN
 SHEET SIZE: 24" x 36"

WATER AND SEWER CAPACITY NEEDS

WATER:	44,400	GPD (CURRENT USE)
WATER:	46,000	GPD (PROPOSED USE)
SEWER:	44,400	GPD (CURRENT USE)
SEWER:	46,000	GPD (PROPOSED USE)

OVERALL PROPERTY WATER/SEWER CALCULATIONS:

1 BEDROOM UNITS: 180 @ 120 GPD
 # 2 BEDROOM UNITS: 120 @ 240 GPD
 180 UNITS x 120 GPD + 120 UNITS x 240 GPD = 43,200 GPD

EXISTING POOL: 10 GPD/PERSON
 ESTIMATED PEAK USAGE: 120 PEOPLE/DAY OR 1200 GPD

TOTAL WATER/SEWER DEMAND: 44,400 GPD

NEW CLUBHOUSE/FITNESS CENTER FACILITY: 50 GPD/100 SF

PROPOSED WATER DEMAND: 1573 GPD--ASSUME 1600 GPD

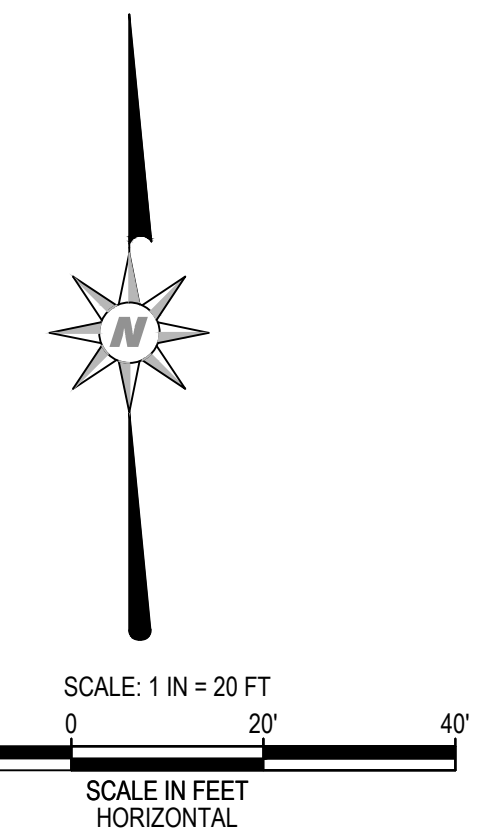
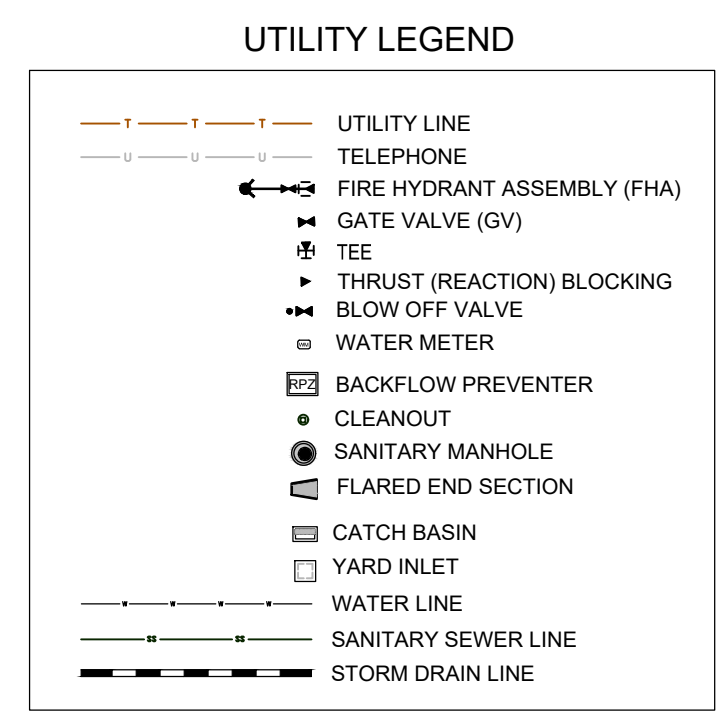
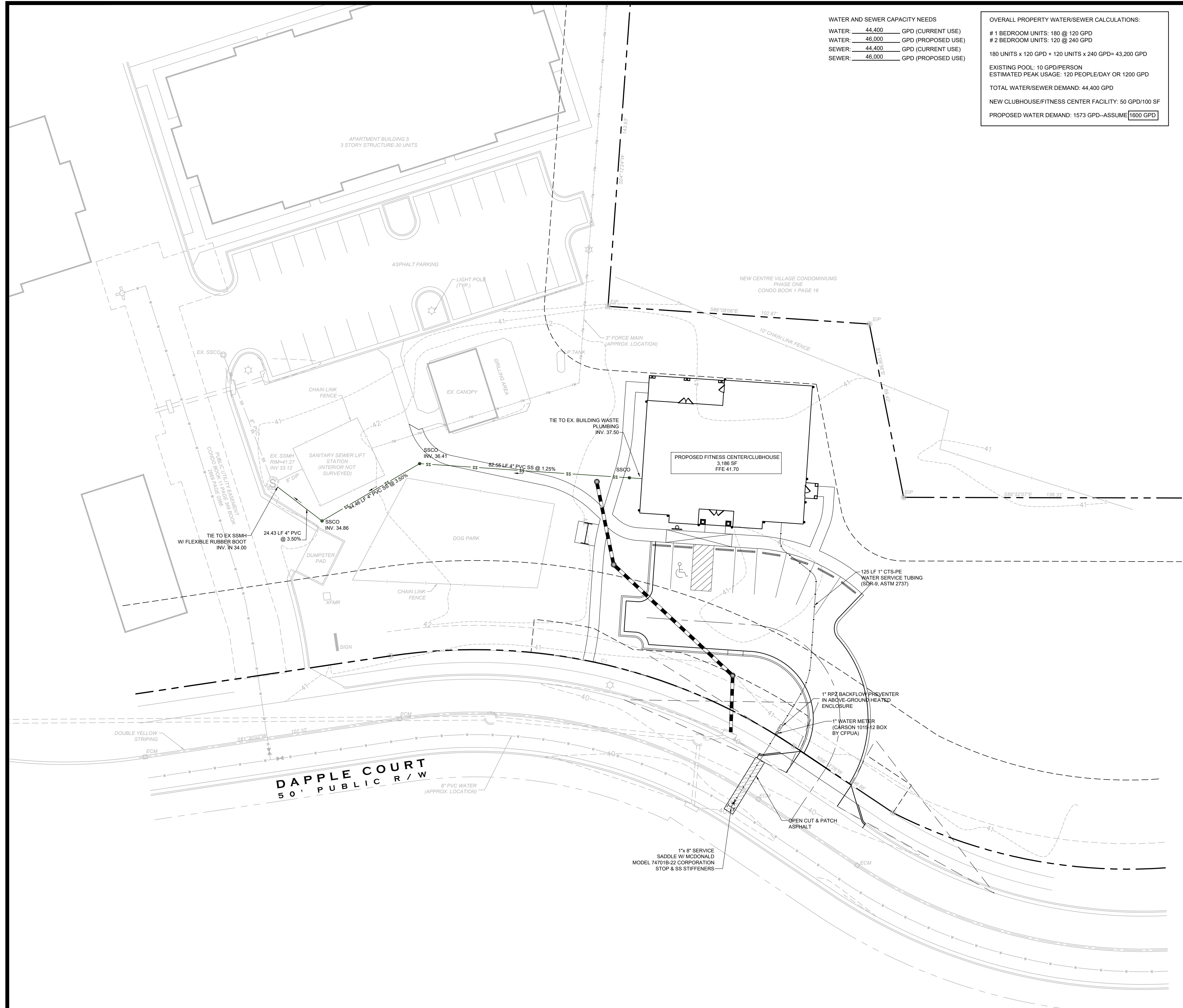
- GENERAL NOTES:
- EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY MIKE UNDERWOOD AND ASSOCIATES, DATED FEBRUARY 14, 2016, AND IS NOT THE RESULT OF A FIELD SURVEY BY THE CURRY ENGINEERING GROUP, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, NEW HANOVER COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
 - COMPLY WITH LOCAL SPECIFICATIONS WITH REGARDS TO MATERIALS, INSTALLATION, AND TESTING OF THE WATER AND SEWER LINES. IN THE EVENT OF A CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN UNLESS OTHERWISE NOTED ON THE PLANS.
 - COORDINATE WITH ALL APPROPRIATE UTILITY PROVIDERS FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS. WATER AND SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) STANDARDS AND SPECIFICATIONS.
 - ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS AND/OR TESTING REQUIRED BY CODES OR UTILITY SERVICE PROVIDERS SHALL BE PERFORMED PRIOR TO THE FINAL CONNECTION OF SERVICE.
 - CONTRACTOR SHALL NOTIFY CFPUA INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
 - CONTRACTOR SHALL MAINTAIN MINIMUM COVER REQUIREMENTS ON ALL WATER AND SEWER LINES AT ALL TIMES DURING CONSTRUCTION.
 - UNDERGROUND UTILITY LINES SHALL BE INSTALLED, INSPECTED, AND APPROVED PRIOR TO BACKFILLING.
 - EXISTING UNDERGROUND UTILITY LINES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN NATURE AND FIELD VERIFIED PRIOR TO CONSTRUCTION ACTIVITY.

LOCATION OF SANITARY SEWERS IN RELATION TO WATER AND STORM SEWERS:

- A. SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A 10 FOOT SEPARATION, THE APPROPRIATE REVIEWING AGENCY (DEH OR DENR) MAY ALLOW DEVIATION ON A CASE BY CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATER MAIN, PROVIDED THAT THE WATER MAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AND AT AN ELEVATION SO THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
- B. IF IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS DESCRIBED ABOVE OR ANYTIME THE SEWER IS OVER THE WATER MAIN, BOTH WATER MAIN AND SEWER MUST BE CONSTRUCTED OF FERROUS PIPE COMPLYING WITH PUBLIC WATER SUPPLY DESIGN STANDARDS AND BE PRESSURE TESTED TO 150 PSI TO ASSURE WATERTIGHTNESS BEFORE BACKFILLING.
- C. A 24 INCH VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER LINES OR FERROUS PIPE SPECIFIED.
- CROSSINGS:
- A. SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.
- B. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, ONE OF THE FOLLOWING METHODS MUST BE SPECIFIED
- THE SEWER SHALL BE DESIGNED AND CONSTRUCTED OF FERROUS PIPE AND SHALL BE PRESSURE TESTED AT 150 PSI TO ASSURE WATERTIGHTNESS PRIOR TO BACKFILLING, OR
 - EITHER THE WATER MAIN OR THE SEWER LINE MAY BE ENCASED IN A WATERTIGHT CARRIER PIPE WHICH EXTENDS 10 FEET ON BOTH SIDES OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER MAIN. THE CARRIER PIPE SHALL BE OF MATERIALS APPROVED BY THE REGULATORY AGENCY OF USE IN WATER MAIN CONSTRUCTION.

NOTE: WATER AND SANITARY SEWER SERVICE LATERALS TO BE PRIVATELY OWNED AND MAINTAINED.

IMPORTANT NOTE: EXISTING SEWER LINES SHOWN ARE LOCATED FROM ABOVE GROUND EVIDENCE AND AVAILABLE HISTORICAL RECORDS. PIPE DIAMETERS, DEPTHS, AND MATERIALS WERE UNABLE TO BE DETERMINED VIA TRADITIONAL SURVEY METHODS AND SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF DISCREPANCIES ARE NOTED.



APPROVED CONSTRUCTION PLAN

	NAME	DATE
PLANNING		
TRAFFIC		
FIRE		

CITY OF WILMINGTON NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED DRAINAGE PLAN

Date: _____ Permit # _____
 Signed: _____

SEAL

11-4-16



IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.

HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
 137 DAPPLE COURT WILMINGTON, NORTH CAROLINA
 UTILITY PLAN

206 S. Energy Plaza
 Cary, NC 27513
 P: 919.683.2943
 F: 919.683.2943

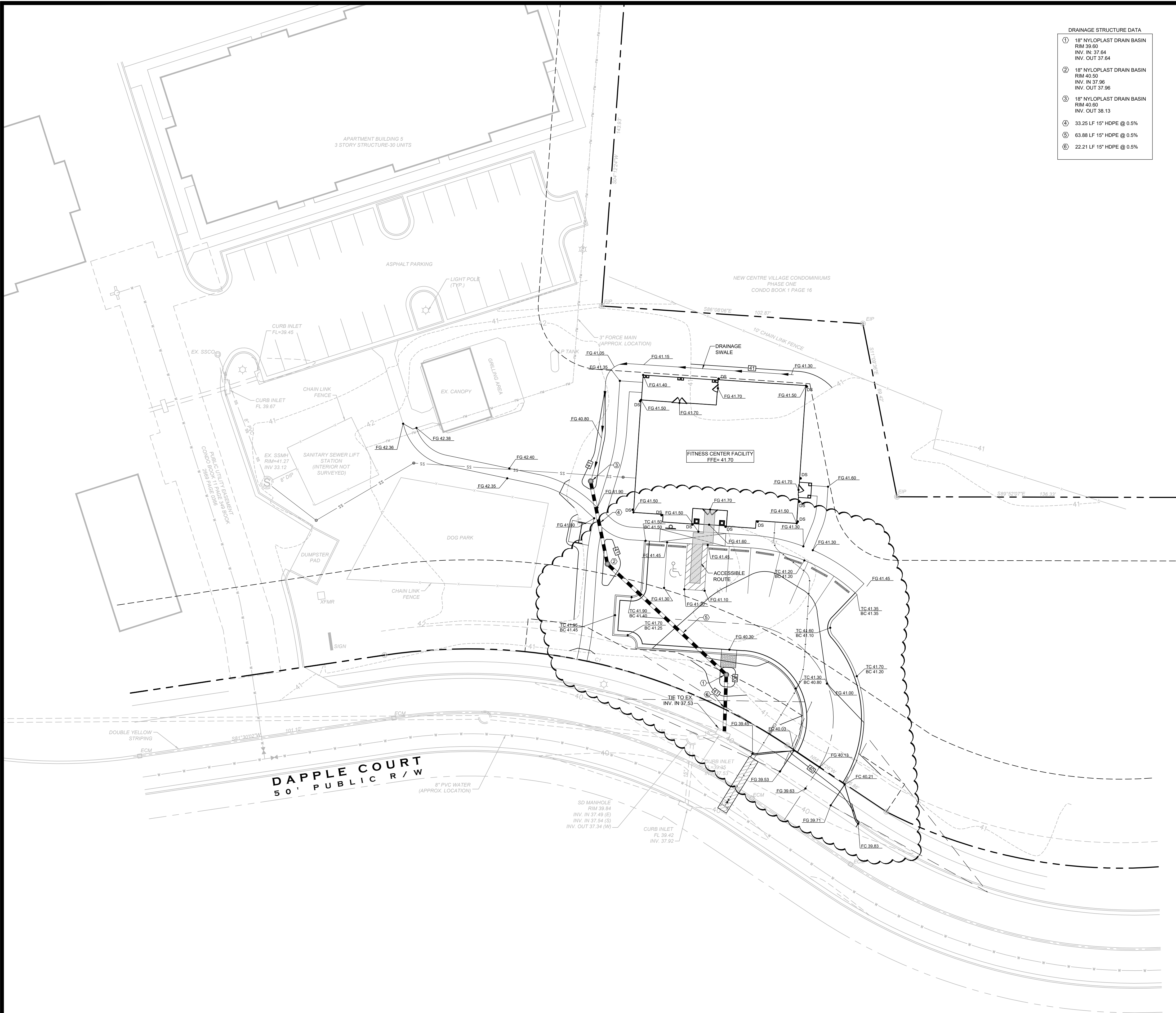
ENGINEERS 10
 EST. 1978

Curry ENGINEERING
 C-05

REVISIONS

NO.	DATE	DESCRIPTION
1	07-21-16	PER. TRC COMMENT
2	10-12-16	PER. TRC COMMENT

DATE: 05-17-16
 FILE NO: 2015-083
 HORIZ. SCALE: SCALE
 VERT. SCALE: SCALE
 SHEET SIZE: 24 x 36



DRAINAGE STRUCTURE DATA

①	18" NYLOPLAST DRAIN BASIN	RIM 39.60	INV. IN 37.64	INV. OUT 37.64
②	18" NYLOPLAST DRAIN BASIN	RIM 40.50	INV. IN 37.96	INV. OUT 37.96
③	18" NYLOPLAST DRAIN BASIN	RIM 40.60	INV. IN 38.13	INV. OUT 38.13
④	33.25 LF 15" HDPE @ 0.5%			
⑤	63.88 LF 15" HDPE @ 0.5%			
⑥	22.21 LF 15" HDPE @ 0.5%			

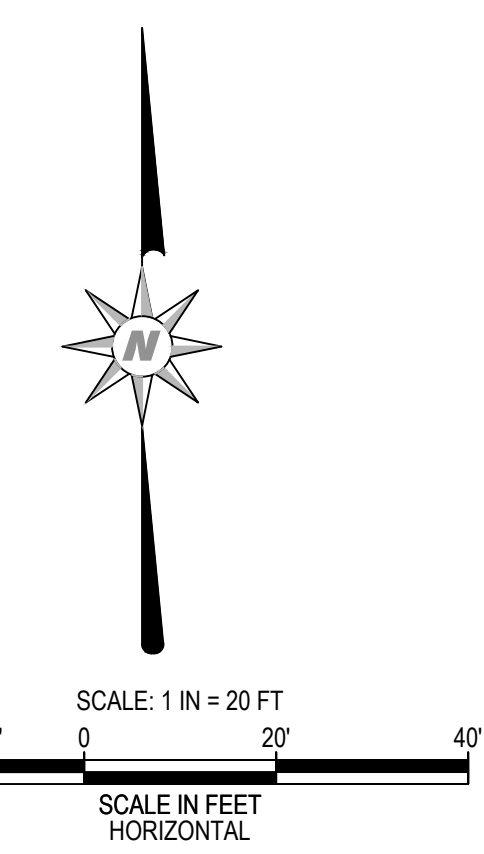
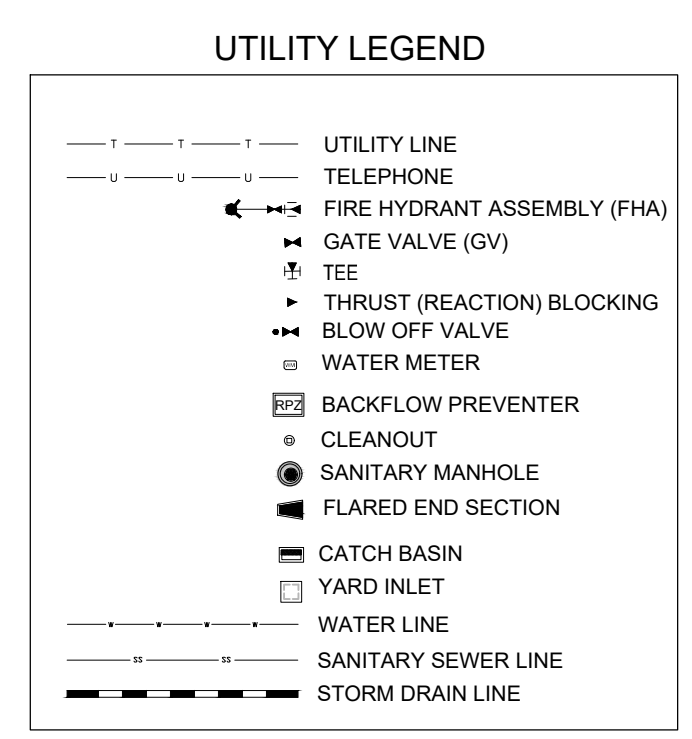
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 - COMPLY WITH LOCAL SPECIFICATIONS WITH REGARDS TO MATERIALS, INSTALLATION, AND TESTING OF THE WATER AND SEWER LINES. IN THE EVENT OF A CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN UNLESS OTHERWISE NOTED ON THE PLANS.
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 - UNDERGROUND UTILITY LINES SHALL BE INSTALLED, INSPECTED, AND APPROVED PRIOR TO BACKFILLING.
 - EXISTING UNDERGROUND UTILITY LINES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN NATURE AND FIELD VERIFIED PRIOR TO CONSTRUCTION ACTIVITY.
 - ACCESSIBLE PARKING SPACES SHALL CONFORM WITH ADAAG REGULATIONS AND NC BUILDING CODE. THE MAXIMUM SLOPE IN ANY ACCESSIBLE PARKING AREA IS 2% IN ANY DIRECTION. THE MAXIMUM LONGITUDINAL SLOPE OF ANY ACCESSIBLE ROUTE SHALL BE 5% AND THE MAXIMUM CROSS SLOPE OF ANY ACCESSIBLE ROUTE SHALL BE 2%. CONCRETE FLATWORK AREAS ALONG THE ACCESSIBLE ROUTE WHICH DO NOT COMPLY WITH APPLICABLE ADAAG REGULATIONS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

REVISIONS

2	10-12-16	PER TRC COMMENT
1	07-21-16	PER TRC COMMENT

DATE: 05-17-16
 FILE NO.: 2015-0683
 HORZ. SCALE: SCALE
 VERT. SCALE: SCALE
 CONC. SHEET SIZE: 24 x 36

HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
137 DAPPLE COURT WILMINGTON, NORTH CAROLINA
GRADING & DRAINAGE PLAN



APPROVED CONSTRUCTION PLAN

	NAME	DATE
PLANNING		
TRAFFIC		
FIRE		

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

IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.

SEAL

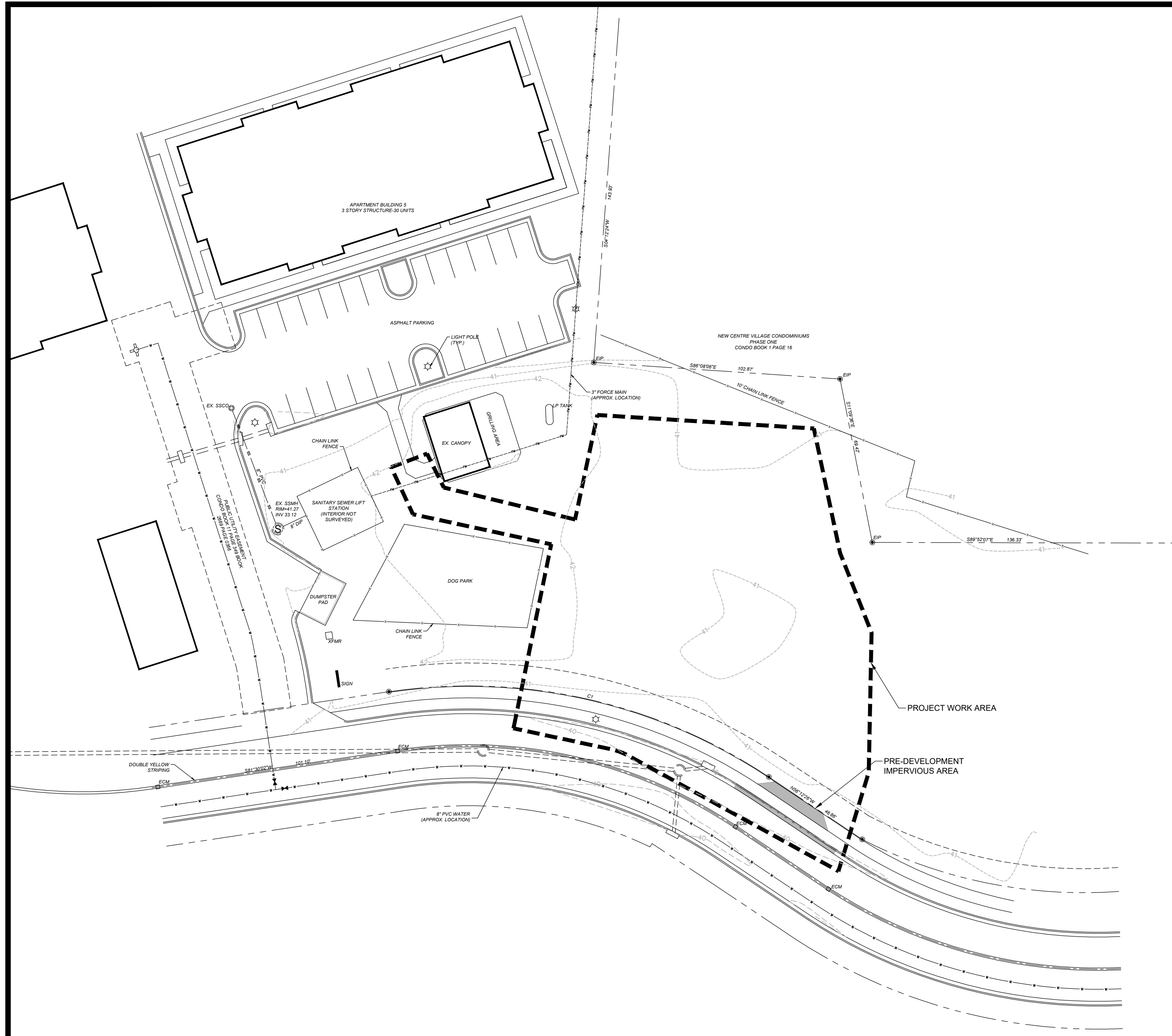
 WILLIAM Z. SHIPMAN
 ENGINEER
 11-4-16

206 S. Tryon Street
 Fayetteville, NC 27305
 P: 704.839.5200
 F: 704.839.5200

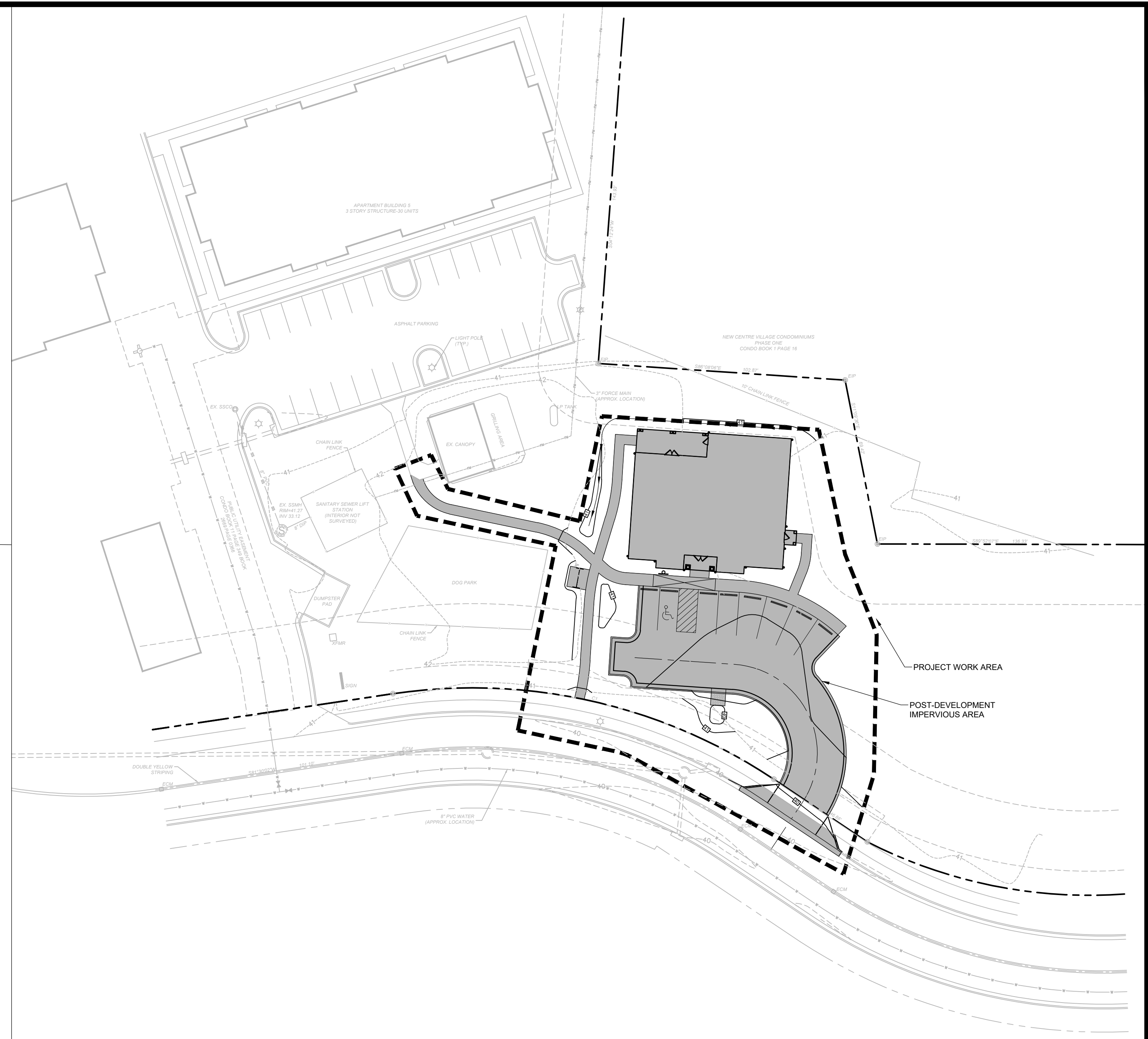
WILLIAM Z. SHIPMAN
 ENGINEER
 NC LIC. NO. P-0799

C-06

PROJECT: 2015-0683, 137 DAPPLE COURT FITNESS CENTER, PLAN SHEET 68 OF 124, GRADING AND DRAINAGE PLAN, PLOTTED: 11/03/16 12:03 PM



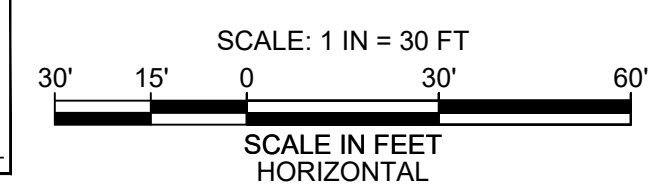
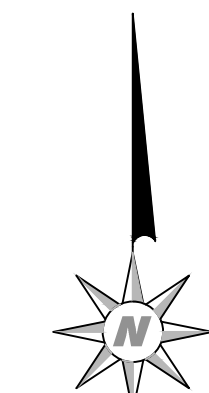
PRE-DEVELOPMENT DRAINAGE AREA AND IMPERVIOUS AREAS
SCALE: 1"=30'



POST-DEVELOPMENT DRAINAGE AREA AND IMPERVIOUS AREAS
SCALE: 1"=30'

PRE DEVELOPMENT		POST DEVELOPMENT	
IMPERVIOUS AREA:	141 SF (0.006 AC.)	9,990 SF (0.23 AC.)	


PRE DEVELOPMENT		POST DEVELOPMENT	
EXISTING BUILDINGS:	101,295 SF	PROPOSED BUILDINGS:	104,920 SF
EXISTING ASPHALT & CURB:	263,236 SF	PROPOSED ASPHALT & CURB:	267,750 SF
EXISTING CONCRETE:	42,032 SF	PROPOSED CONCRETE:	43,512 SF
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		PROPOSED TOTAL SITE:	416,553 SF
		PERCENTAGE INCREASE:	2.45%

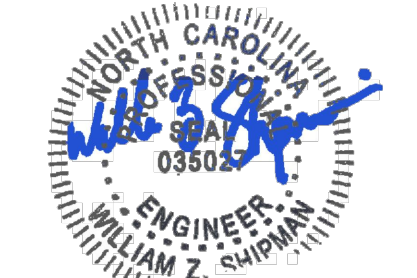


IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.

APPROVED CONSTRUCTION PLAN

	NAME	DATE
PLANNING	_____	_____
TRAFFIC	_____	_____
FIRE	_____	_____


 Public Services • Engineering Division
APPROVED DRAINAGE PLAN
 Date: _____ Permit # _____
 Signed: _____



 11-4-16

HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
137 DAPPLE COURT WILMINGTON, NORTH CAROLINA
HYDROLOGY PLAN

REVISIONS

NO.	DATE	PER. TRC COMMENT
2	10-12-16	PER. TRC COMMENT
1	07-21-16	PER. TRC COMMENT

DATE: 05-17-16
 FILE NO.: 2015-083
 HORZ. SCALE: SCALE
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206 S. Energy Plaza
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 P: 919.952.2943
 F: 919.952.2943

 CURRY ENGINEERING
 NC LIC. NO. P-0799
C-07

PROJECT: 137 DAPPLE COURT CLUBHOUSE & FITNESS CENTER ASSISTIVE PLANS SHEET HYDROLOGY PLANS
 PLOTTED: 11/02/2016 11:27 AM

NPDES STABILIZATION TABLE		
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SHOALS, DITCHES, & SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW ZONES)	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HOW ZONES

LATITUDE: 34°14'18"N
LONGITUDE: 77°52'45"W

NPDES PERMIT NCG 010000 PLAN NOTES:

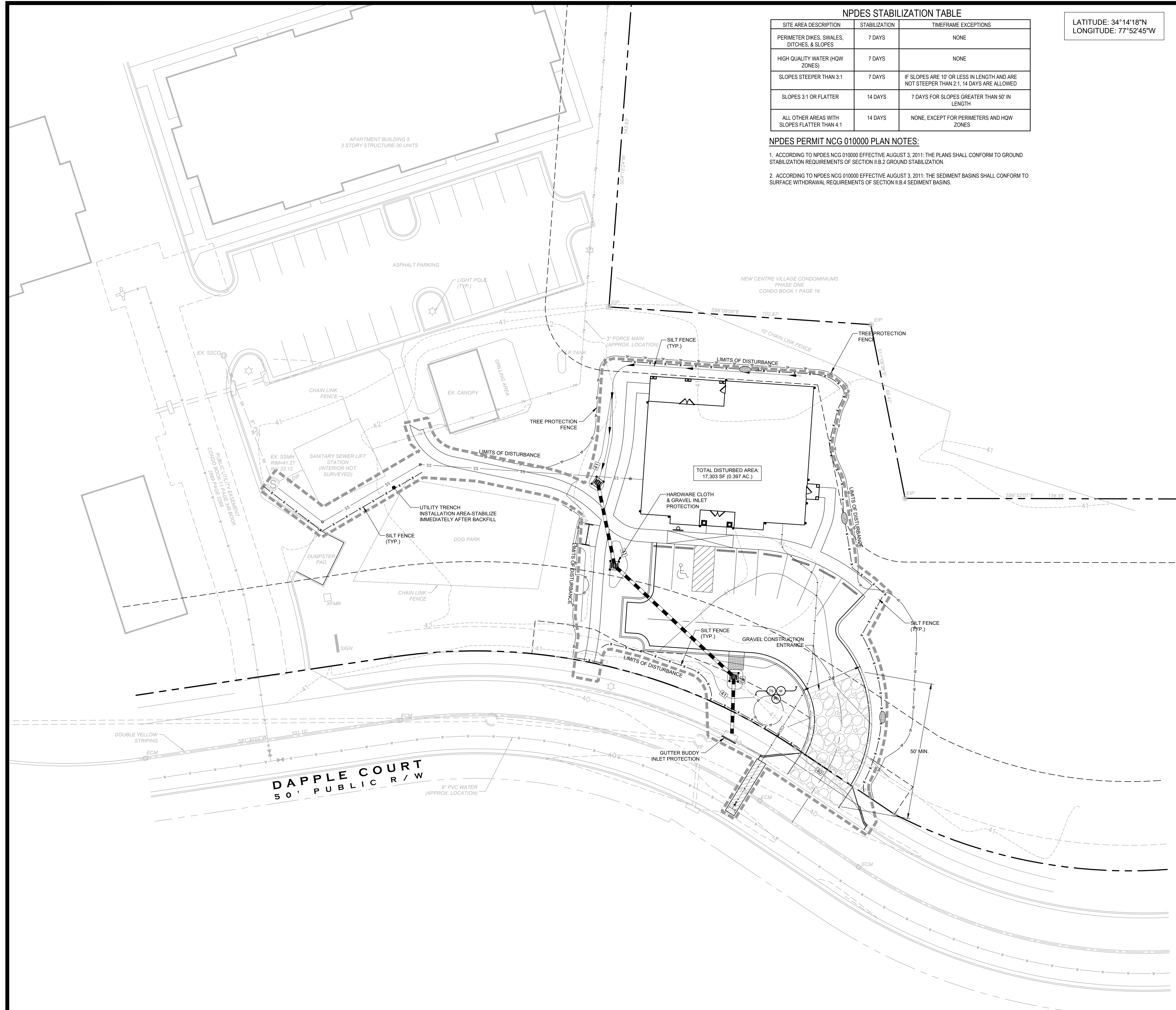
1. ACCORDING TO NPDES NCG 010000 EFFECTIVE AUGUST 3, 2011: THE PLANS SHALL CONFORM TO GROUND STABILIZATION REQUIREMENTS OF SECTION II.B.2 GROUND STABILIZATION.
2. ACCORDING TO NPDES NCG 010000 EFFECTIVE AUGUST 3, 2011: THE SEDIMENT BASINS SHALL CONFORM TO SURFACE WITHDRAWAL REQUIREMENTS OF SECTION II.B.4 SEDIMENT BASINS.

GENERAL SITE PLAN NOTES:

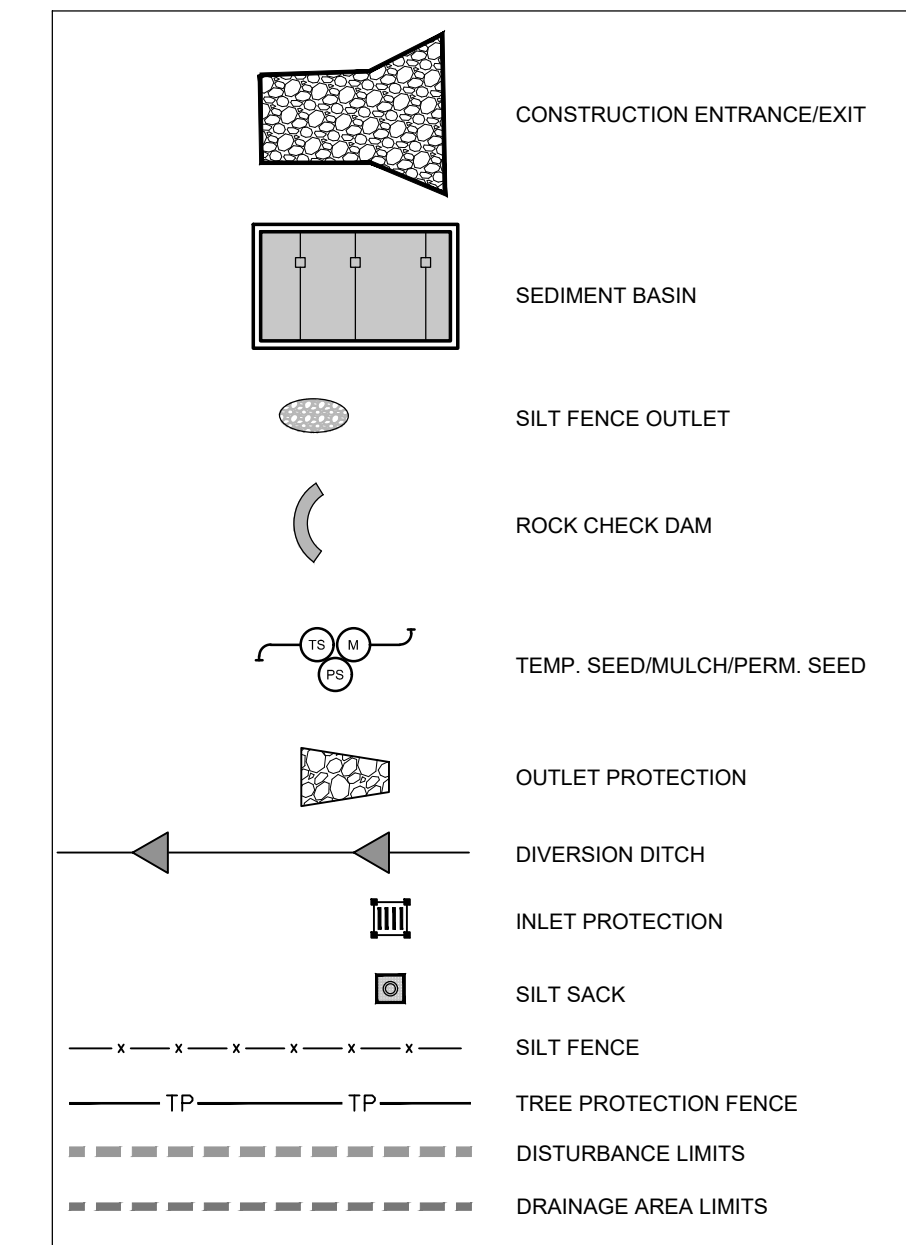
1. EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY MIKE UNDERWOOD AND ASSOCIATES, DATED FEBRUARY 14, 2016, AND IS NOT THE RESULT OF A FIELD SURVEY BY THE CURRY ENGINEERING GROUP, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, NEW HANOVER COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
2. REFER TO EROSION AND SEDIMENT CONTROL PLAN AND CONSTRUCTION SEQUENCE BEFORE PERFORMING ANY CLEARING, GRUBBING, OR DEMOLITION OPERATIONS.
3. ALL DISTANCES SHOWN ON THE SURVEY ARE HORIZONTAL GROUND DISTANCES.
4. THE PROPERTY SHOWN IS LOCATED IN FLOOD ZONE "X". AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE AND FUTURE CONDITIONS 1% ANNUAL CHANCE FLOODPLANE PER FEMA FIRM MAP NUMBER 3720313700J (PANEL 3137) DATED 04/03/06.
5. PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.

EROSION CONTROL CONSTRUCTION SEQUENCE:

1. A LAND DISTURBANCE PRECONSTRUCTION CONFERENCE IS REQUIRED PRIOR TO ANY DISTURBANCE ON SITE. THIS PRECONSTRUCTION CONFERENCE MAY BE COMBINED WITH OTHER PRECONSTRUCTION MEETINGS AS NECESSARY. THE MEETING SHALL BE BETWEEN THE OWNER, NEW HANOVER COUNTY INSPECTIONS STAFF (IF REQUIRED), THE ENGINEER, AND GENERAL CONTRACTOR. THE CONTRACTOR SHALL SCHEDULE THE MEETING TO OCCUR AT LEAST 48 HOURS PRIOR TO ANY DISTURBANCE ON SITE.
2. INSTALL SILT FENCE AROUND THE PERIMETER OF THE WORK SITE, DISTURBING ONLY THOSE AREAS NECESSARY TO INSTALL THE FENCE. REMOVE EXISTING FEATURES AS NEEDED TO INSTALL THE FENCE, AS OUTLINED ON THE DEMOLITION PLAN.
3. PLACE PEDESTRIAN BARRICADES ON SIDEWALKS AS SHOWN ON THE DEMOLITION PLAN AND EROSION CONTROL PLAN.
4. ONCE SILT FENCE IS INSTALLED, BEGIN CLEARING, GRUBBING, AND STRIPING OF THE SITE. STRIP AND STOCKPILE TOPSOIL FOR SIFTING, DRYING, AND TESTING.
5. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT AND SIDEWALK AS SHOWN ON THE DEMOLITION PLAN. DISPOSE OF CONSTRUCTION DEBRIS IN AN APPROVED LANDFILL.
6. BEGIN ROUGH GRADING THE SITE TO CREATE A BUILDING PAD AS NEEDED. PLACE FILL MATERIAL UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER.
7. BEGIN CONSTRUCTION OF NEW BUILDING FACILITY.
8. INSTALL ROOF DRAINAGE LEADERS, DRAIN TILE, AND OTHER STORMWATER PIPING.
9. INSTALL CONCRETE FLATWORK AND SIDEWALK AREAS. COMPLETE FINE GRADING OF ANY DISTURBED AREAS.
10. STRIPE PARKING LOT AND INSTALL FINAL SITE IMPROVEMENTS (BOLLARDS, WHEEL STOPS, ETC.).
11. INSTALL LANDSCAPING SHRUBS, TREES, AND GROUND COVER. STABILIZE ALL REMAINING DISTURBED AREAS WITH PERMANENT SEEDING OR SOD AS SHOWN ON THE LANDSCAPING PLANS.
12. ONCE SITE IS PERMANENTLY STABILIZED, REMOVE ALL SILT FENCE AND OTHER TEMPORARY EROSION CONTROL MEASURES. STABILIZE REMAINING FINAL AREAS ALTERED DURING THE REMOVAL OF EROSION CONTROL MEASURES.



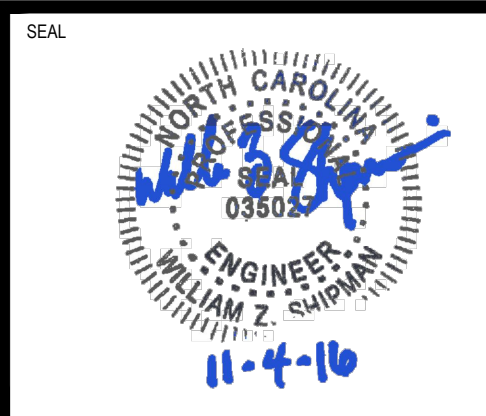
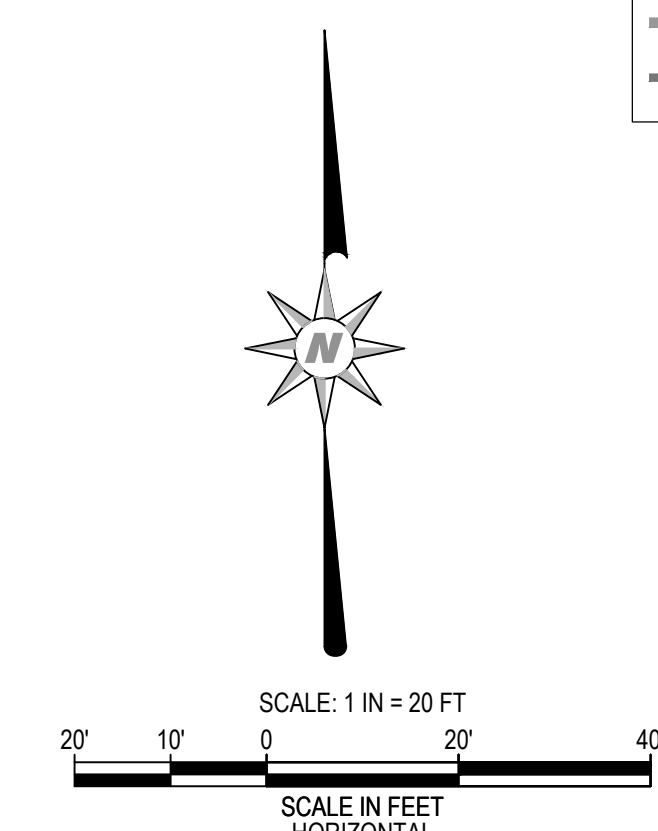
EROSION CONTROL LEGEND



APPROVED CONSTRUCTION PLAN

	NAME	DATE
PLANNING	_____	_____
TRAFFIC	_____	_____
FIRE	_____	_____

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



IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.

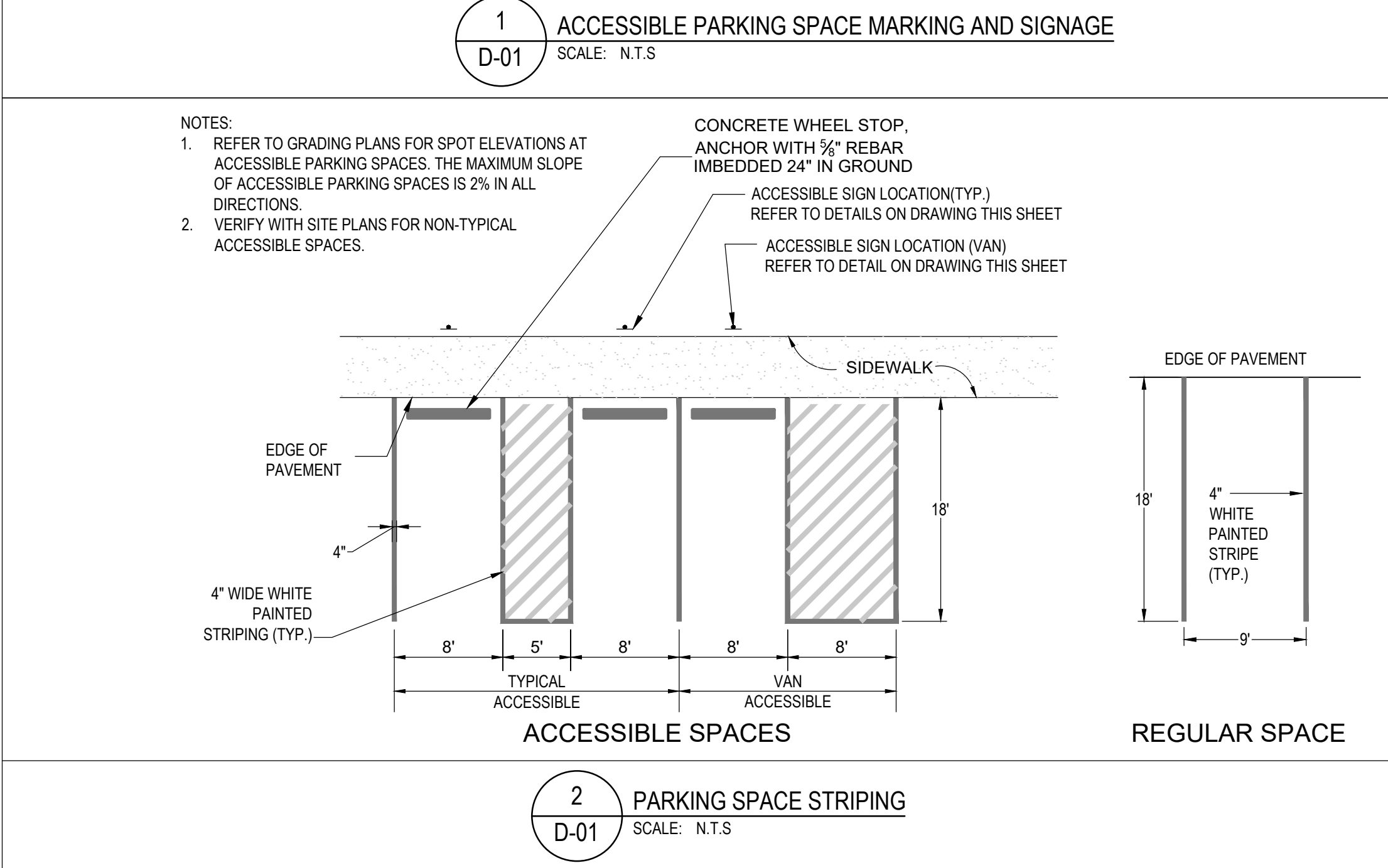
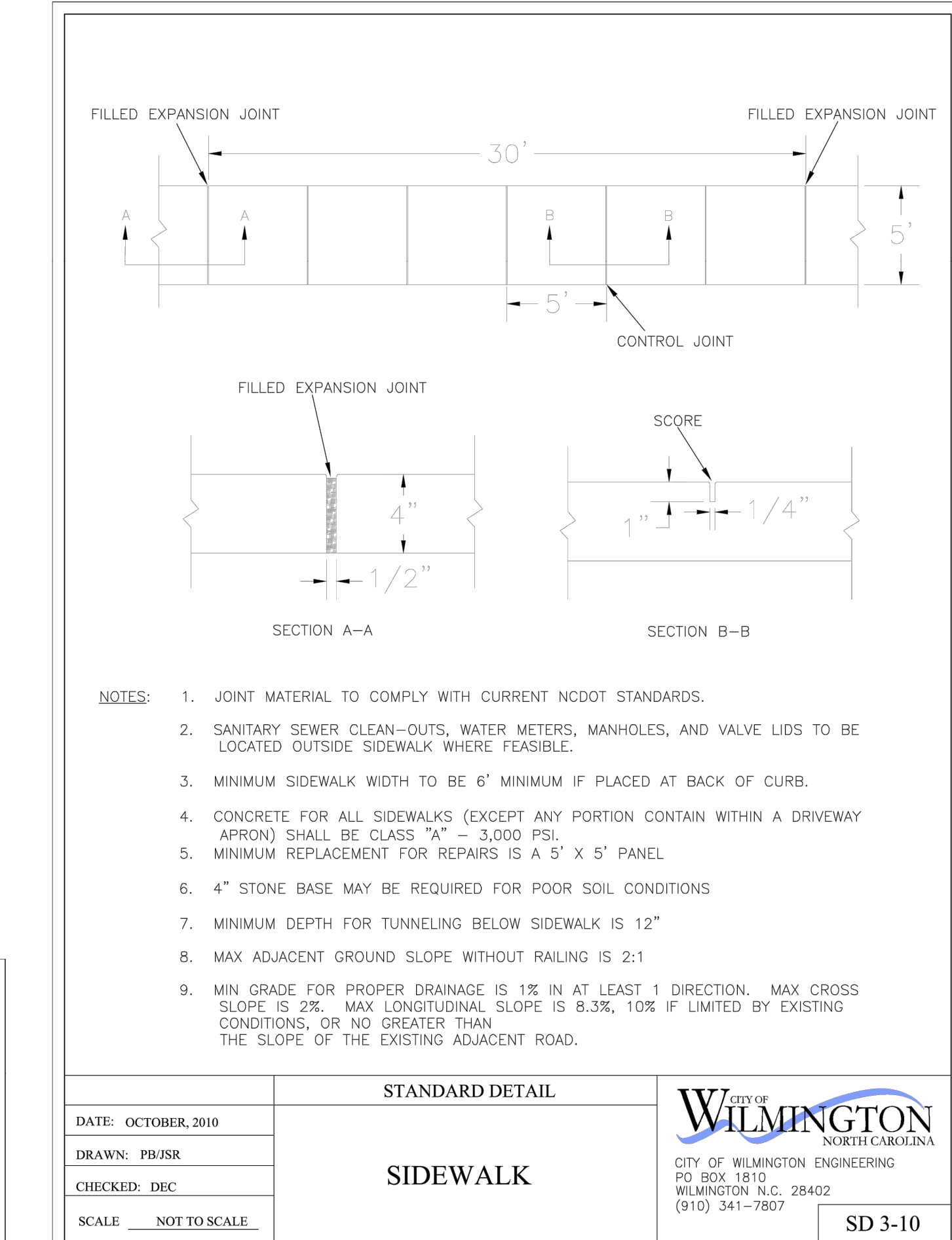
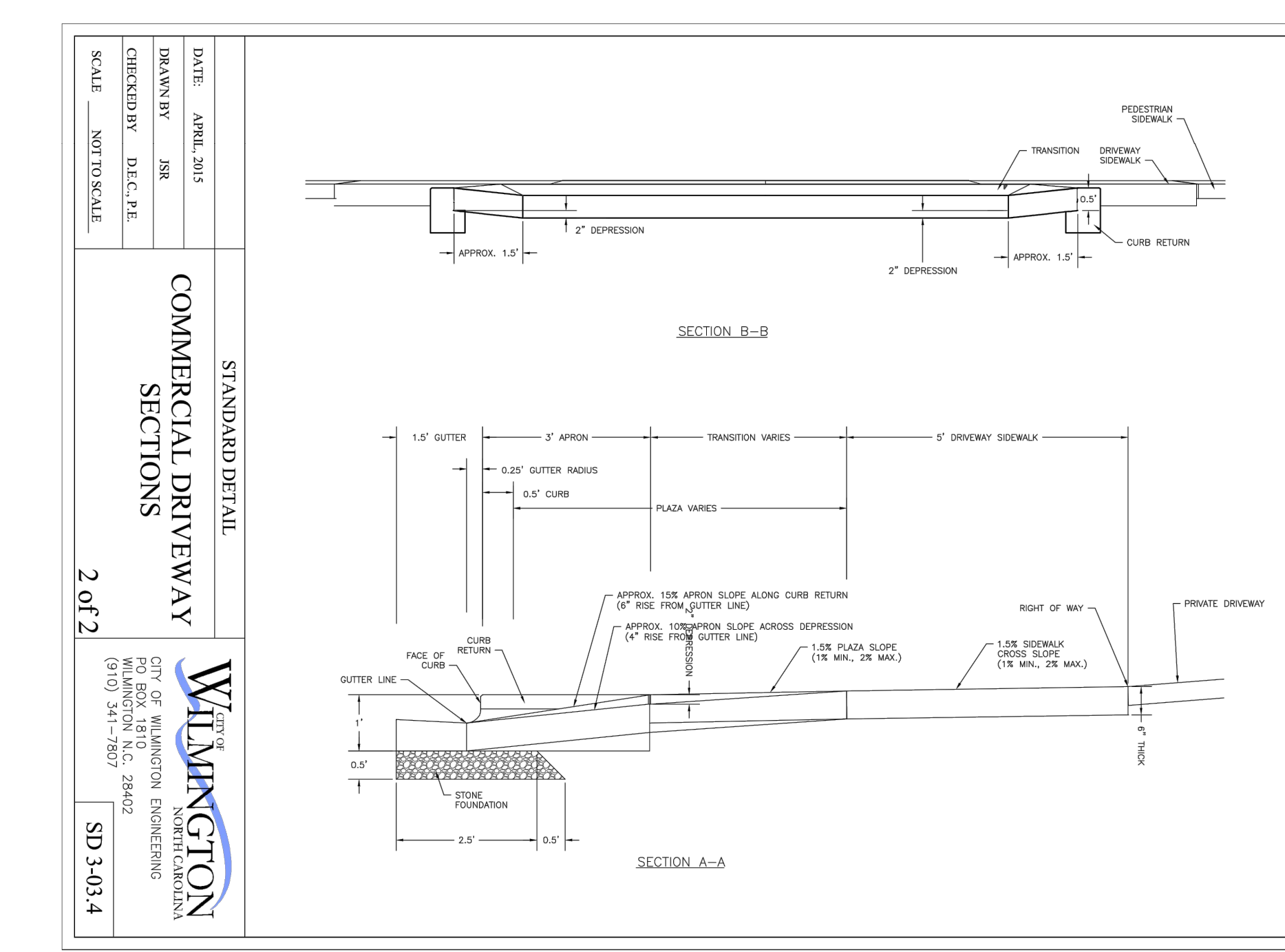
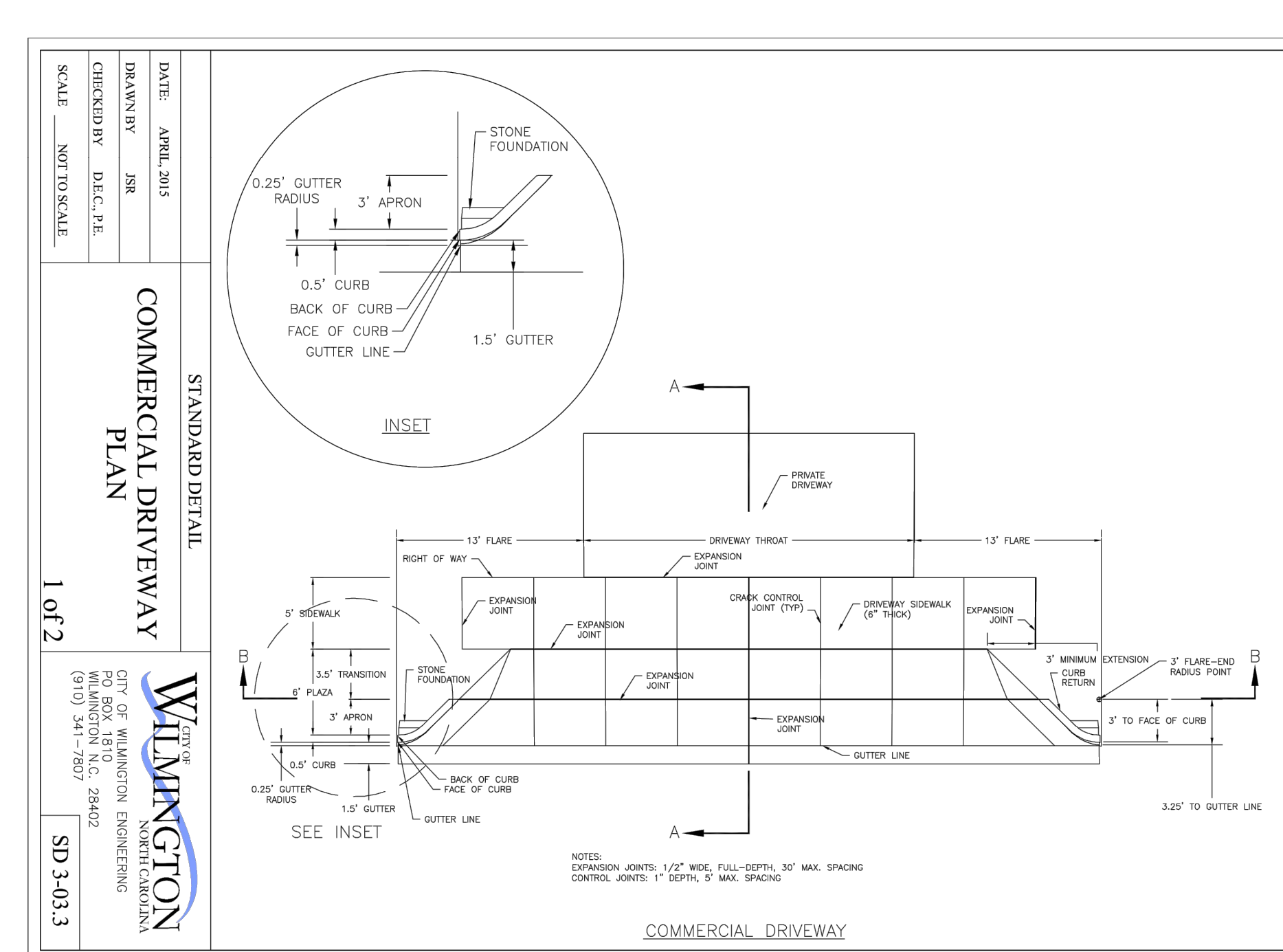
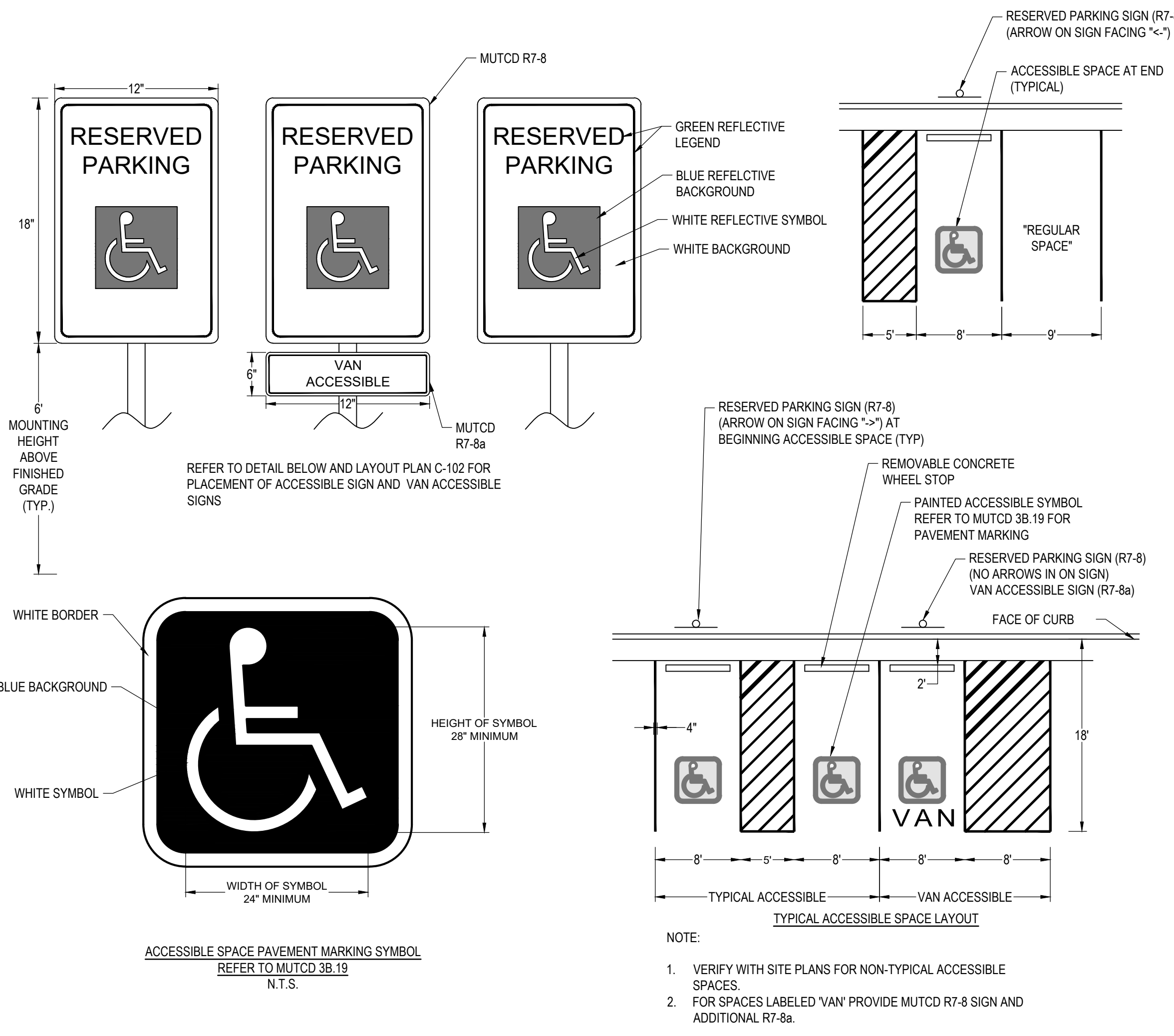
HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
137 DAPPLE COURT WILMINGTON, NORTH CAROLINA
EROSION CONTROL PLAN

206 S. Trypani Avenue
Cary, NC 27513
P: (919) 952-2943
F: (919) 952-2943
CURRY ENGINEERS & ARCHITECTS
EST. 1978
NC LIC. NO. P-0799

Curry
ENGINEERING
C-08

NO.	DATE	DESCRIPTION
1	07-21-16	PER. TRC COMMENT
2	10-12-16	PER. TRC COMMENT

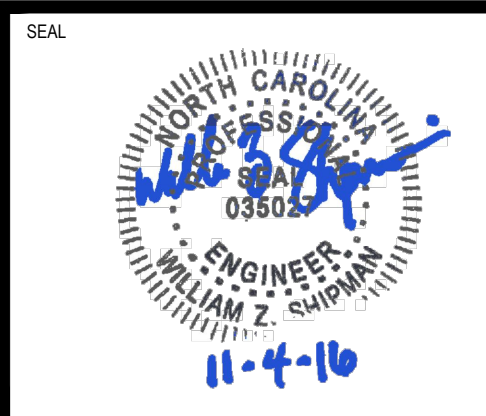
DATE: 05-17-16
FILE NO: 2015-083
HORZ. SCALE: SCALE
VERT. SCALE: SCALE
SHEET SIZE: 24 x 36



APPROVED CONSTRUCTION PLAN

NAME	DATE
PLANNING	
TRAFFIC	
FIRE	

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date: _____ Permit # _____
Signed: _____



NOT FOR CONSTRUCTION

HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
137 DAPPLE COURT WILMINGTON, NORTH CAROLINA

NOTES AND DETAILS

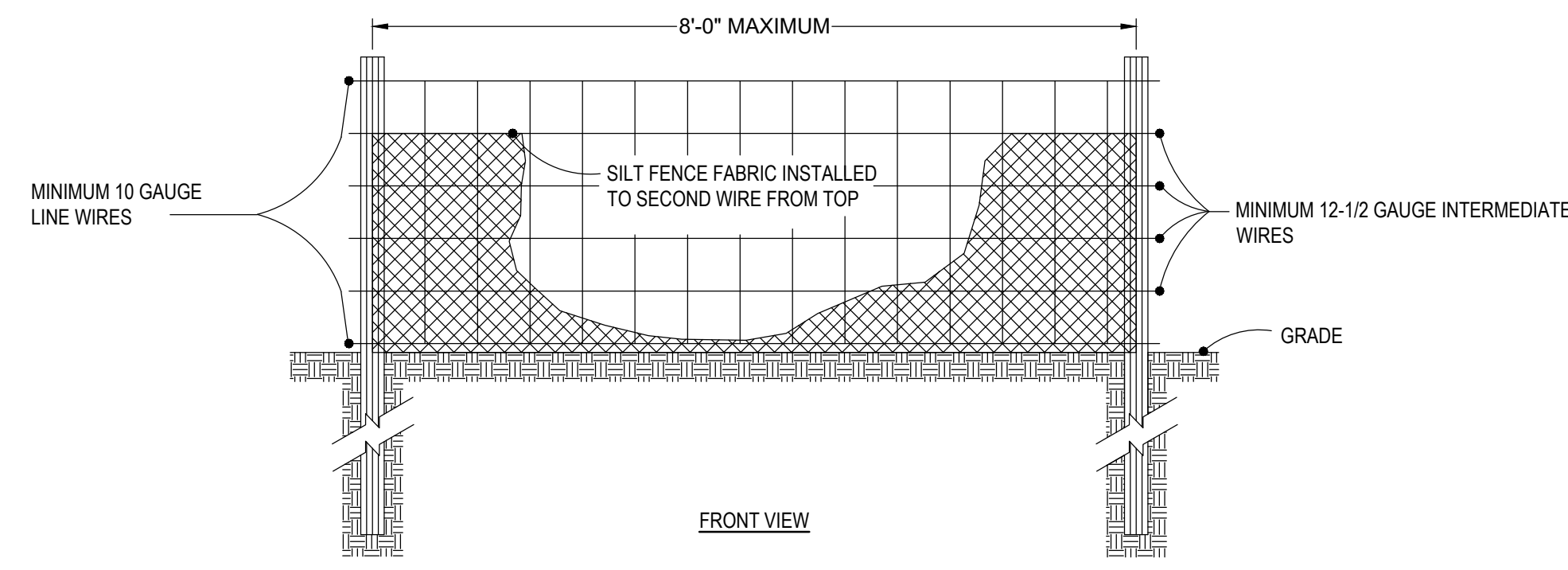
Curry
ENGINEERING

206 S. Energy Plaza
Fifth Floor
Wilmington, NC 28402
EST. 1978
N.C. LIC. NO. P-0799

REVISIONS

2	10-12-16	PER TRC COMMENT
1	07-21-16	PER TRC COMMENT

DATE: 05-17-16
FILE NO: 2015-083
HORZ. SCALE: SCALE
VERT. SCALE: SCALE
ORIG. SHEET SIZE: 24 x 36



SILT FENCE CONSTRUCTION SPECIFICATIONS:

MATERIALS:

1. USE A SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D-6451, WHICH IS SHOWN IN PART IN TABLE 6.62B.

SYNTHETIC FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USEABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120° F.

2. ENSURE THAT POSTS FOR SEDIMENT FENCES ARE 1.25 LBS/LINEAR FEET MINIMUM STEEL WITH A MINIMUM LENGTH OF 5 FEET. MAKE SURE THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC.

3. FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC, USE WIRE FENCE WITH A MINIMUM 14 GAUGE AN DA MAXIMUM MESH SPACING OF 6 INCHES.

CONSTRUCTION:

1. CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS.

2. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE THE GROUND SURFACE. (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE).

3. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.

4. SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE A MINIMUM 50 POUND TENSILE STRENGTH.

5. WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES.

6. EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.

Table 6.62b Specifications For Sediment Fence Fabric

Temporary Silt Fence Material Property Requirements				
Test Material	Units	Supported ¹ Silt Fence	Un-Supported ¹ Silt Fence	Type of Value
Grab Strength	ASTM D 4632	N (lbs)		
Machine Direction		400	550	MARV
		(90)	(90)	
X-Machine Direction		400	450	MARV
		(90)	(90)	
Permittivity ²	ASTM D 4491	sec-1	0.05	MARV
Apparent Opening Size ²	ASTM D 4751	mm	0.60	Max. ARV ³
		(US Sieve #)	(30)	
Ultraviolet Stability	ASTM D 4355	% Retained Strength	70% after 500h of exposure	70% after 500h of exposure
			Typical	

¹ Silt Fence support shall consist of 14 gage steel wire with a mesh spacing of 150 mm (6 inches), or prefabricated polymer mesh of equivalent strength.

² These default values are based on empirical evidence with a variety of sediment. For environmentally sensitive areas, a review of previous experience and/or site or regionally specific geotextile tests in accordance with Test Method D 5141 should be performed by the agency to confirm suitability of these requirements.

³ As measured in accordance with Test Method D 4632.

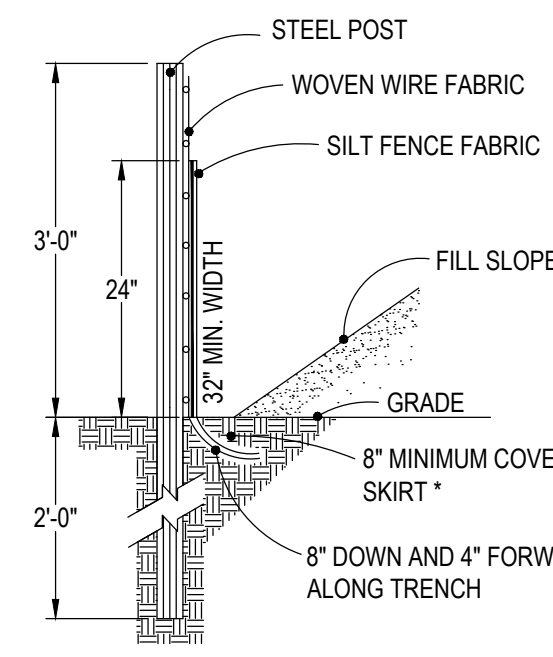
NOTE:
USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.

MAINTENANCE
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

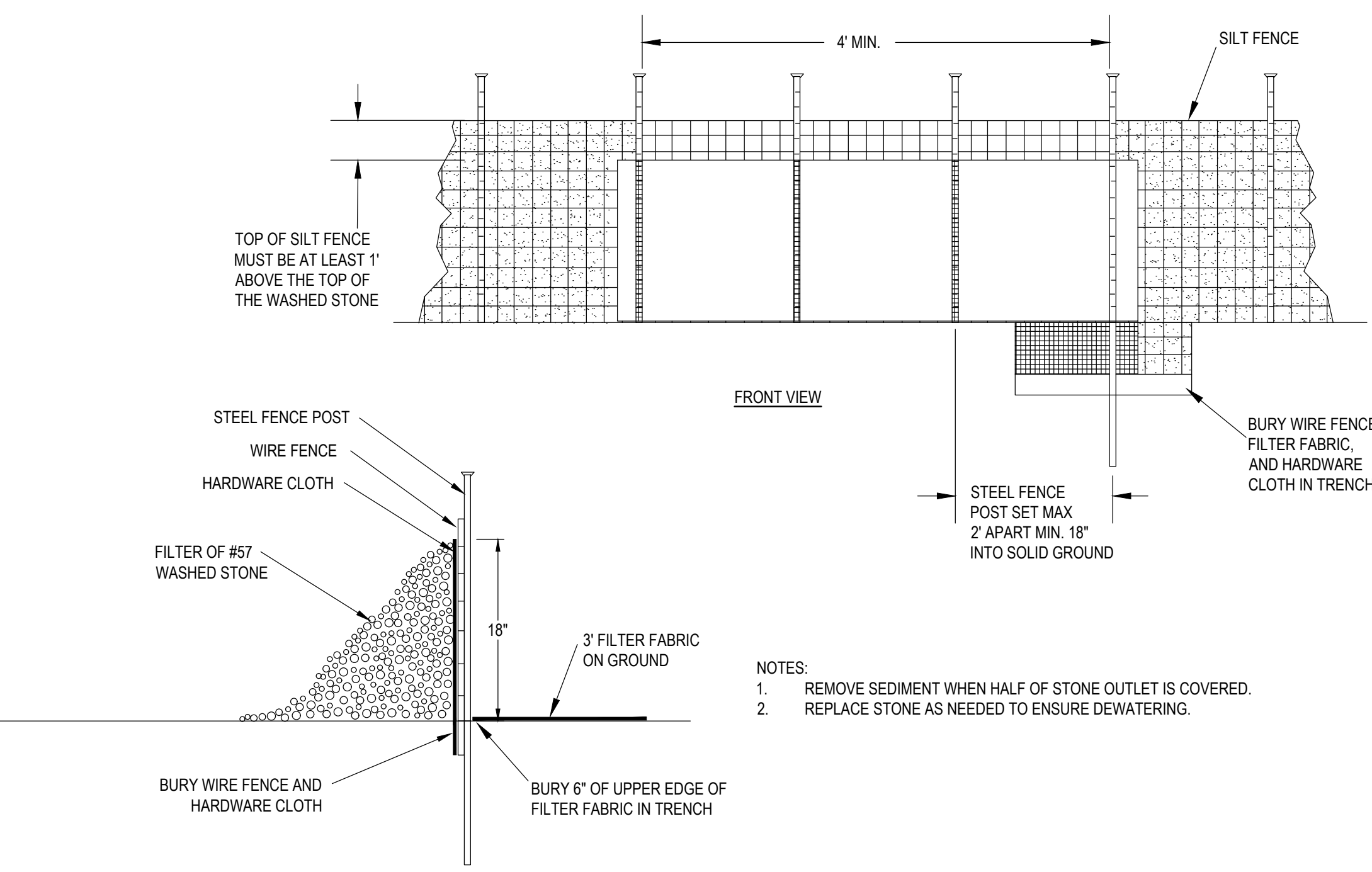
SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS WHEN DEPTH OF SEDIMENT REACHES 12" TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



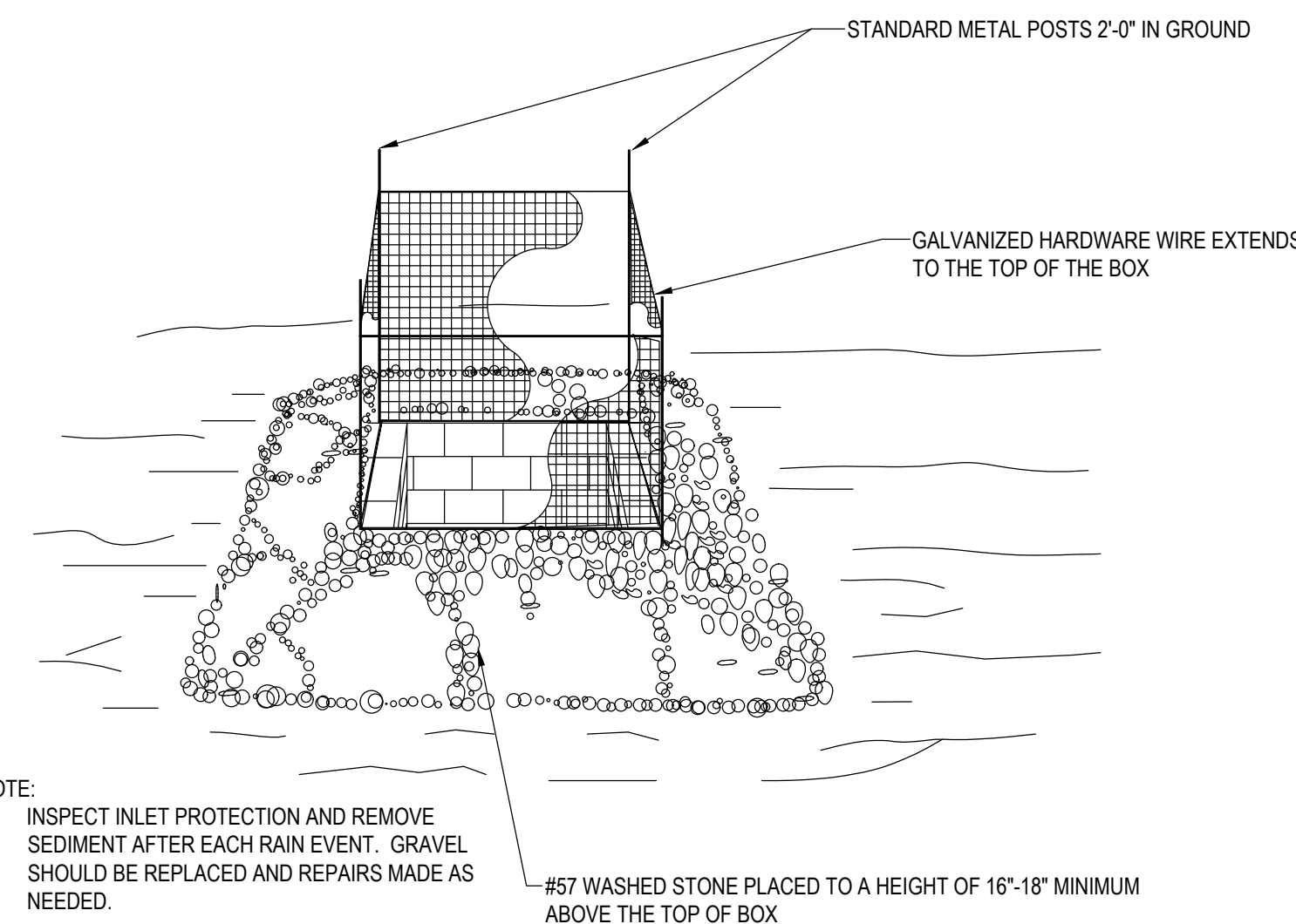
1 SILT FENCE DETAIL (NCDENR 6.62)
SCALE: N.T.S.



NOTES:
1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.

MAINTENANCE
SEE SILT FENCE THIS SHEET FOR MAINTENANCE INFORMATION.

2 SILT FENCE OUTLET (NCDENR 6.62)
SCALE: N.T.S.



NOTE:
1. INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH RAIN EVENT. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.

4 HARDWARE CLOTH AND GRAVEL INLET PROTECTION
SCALE: N.T.S.

(TS) TEMPORARY SEEDING

SEEDING MIXTURE

COOL SEASON SEPTEMBER 1 - FEBRUARY 28

SPECIES	RATE (lb/ACRE)
SOFT RED WINTER WHEAT	120

WARM SEASON MARCH 1 - AUGUST 31

SPECIES	RATE (lb/ACRE)
GERMAN, BROWN TOP, OR FOX TAIL MILLET	65

SOIL AMENDMENTS
TILL SOIL TO A DEPTH OF 4". APPLY LIME AT A RATE OF 70 LB PER 100 SF, OR 1.5 TONS PER ACRE. APPLY 10-20-20 FERTILIZER AT A RATE OF 20 LBS PER 1000 SF OR 850 LBS PER ACRE. THE FERTILIZER SHOULD BE EITHER SLOW TIME RELEASE OR APPLIED IN TWO APPLICATIONS, HALF AT TIME OF PLANTING AND THE SECOND HALF AFTER PERMANENT SEED GERMINATES.

MULCH
APPLY 4,000 lb/ACRE STRAW. THE GROUND SHOULD BE COMPLETELY COVERED WITH NO BARE SPOT LARGER THAN A QUARTER, THEN TACKED WITH EMULSIFIED ASPHALT. EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE HEAVY ENOUGH THAT THE ENTIRE AREA APPEARS BLACK IN COLOR.

MAINTENANCE
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

EROSION CONTROL MATTING SHALL BE PROVIDED ON ALL SLOPES 3:1 AND GREATER.

(PS) PERMANENT SEEDING

PERMANENT SODDING:
PROVIDE BERMUDA SOD IN ACCORDANCE WITH LANDSCAPE DRAWINGS REFER TO MAINTENANCE SPECIFICATIONS AND REQUIREMENTS FOR PERMANENT SODDING.

PREPARE SEEDBED BY RIPPING, CHISELING, HARROWING, OR PLOWING TO DEPTH OF SIX INCHES SO AS TO PRODUCE A LOOSE, FRIABLE SURFACE. REMOVE ALL STONES, BOULDERS, STUMPS, OR DEBRIS FROM THE SURFACE WHICH WOULD PROHIBIT GERMINATION OR PLANT GROWTH.

APPLY LIME AND FERTILIZER ACCORDING TO SOIL TEST, OR APPLY 300 LB/ACRE 10-10-10 FERTILIZER.

PERMANENT SEEDINGS:

COOL SEASON SEPTEMBER 1- FEBRUARY 28

SPECIES	RATE (LB/ACRE)
SOFT RED WINTER WHEAT	50
COMMON BERMUDA (HULLED)	25
COMMON BERMUDA (UNHULLED)	25

WARM SEASON MARCH 1- AUGUST 31

SPECIES	RATE (LB/ACRE)
GERMAN, BROWN TOP, OR FOX TAIL MILLET	50
COMMON BERMUDA (HULLED)	50

SOIL AMENDMENTS
TILL SOIL TO A DEPTH OF 4". APPLY LIME AT A RATE OF 70 LB PER 100 SF, OR 1.5 TONS PER ACRE. APPLY 10-20-20 FERTILIZER AT A RATE OF 20 LBS PER 1000 SF OR 850 LBS PER ACRE. THE FERTILIZER SHOULD BE EITHER SLOW TIME RELEASE OR APPLIED IN TWO APPLICATIONS, HALF AT TIME OF PLANTING AND THE SECOND HALF AFTER PERMANENT SEED GERMINATES.

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MAINTENANCE
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

APPROVED CONSTRUCTION PLAN

NAME _____ DATE _____

PLANNING _____

TRAFFIC _____

FIRE _____

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN

Date: _____ Permit # _____

Signed: _____



HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
137 DAPPLE COURT WILMINGTON, NORTH CAROLINA
NOTES AND DETAILS

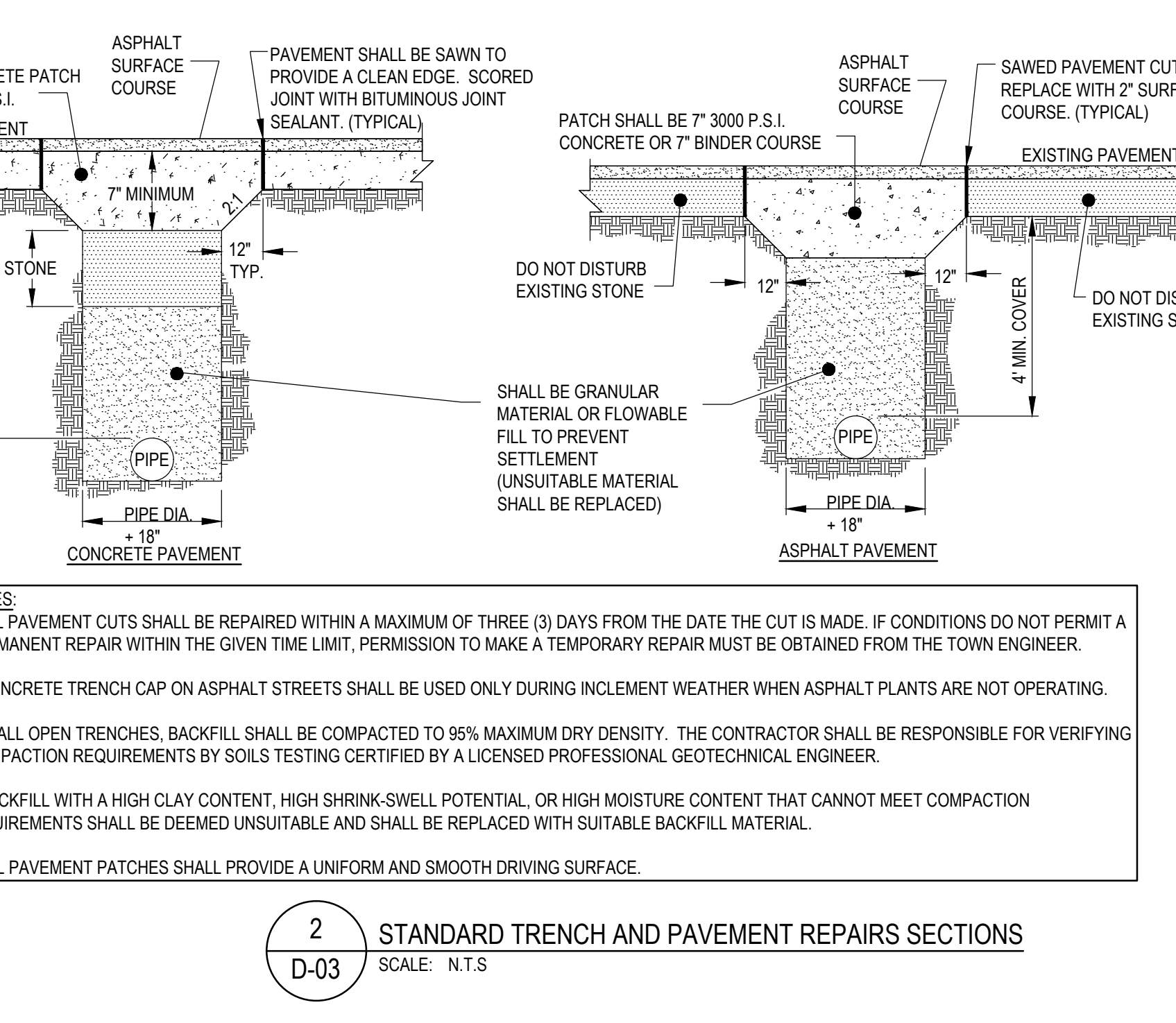
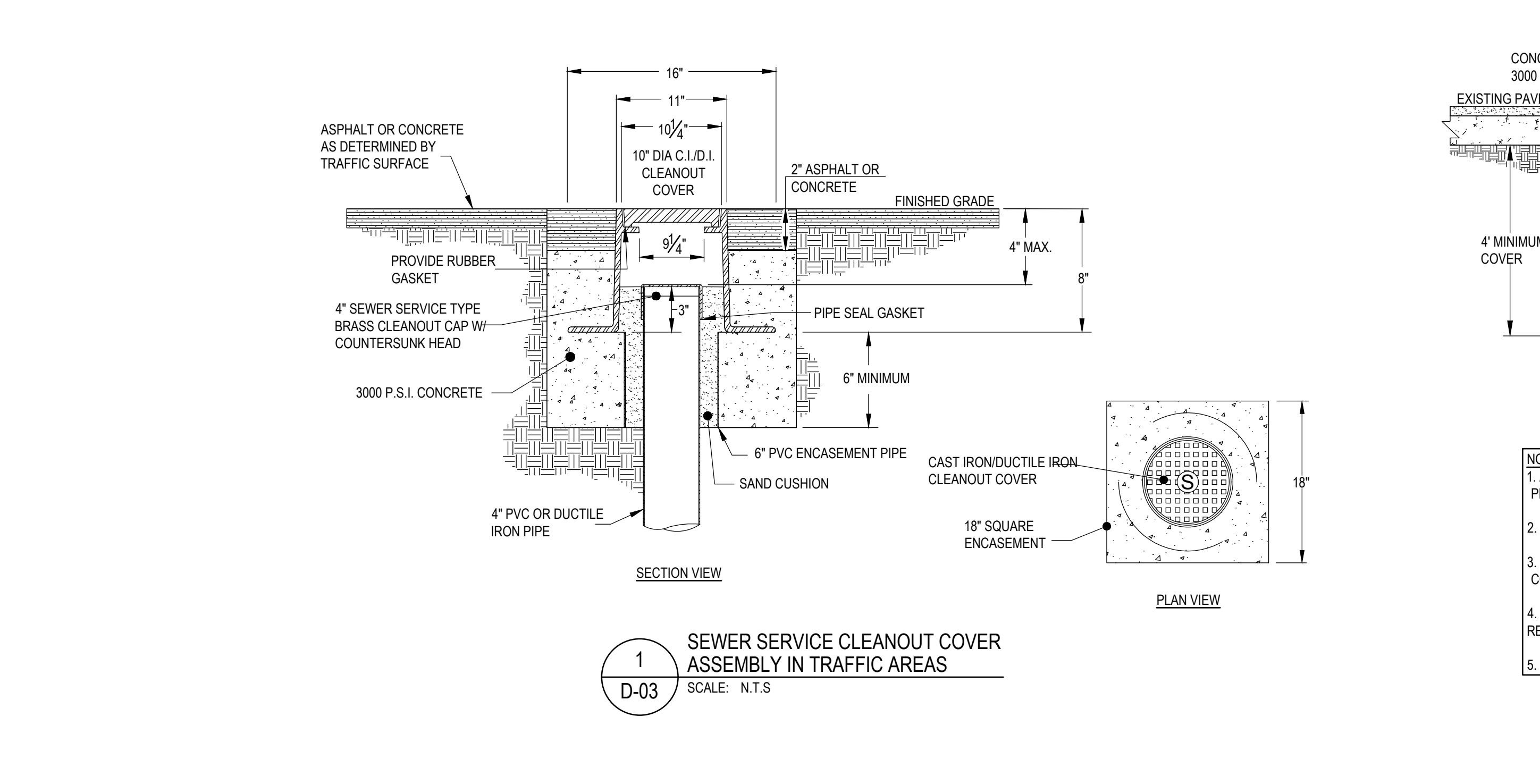
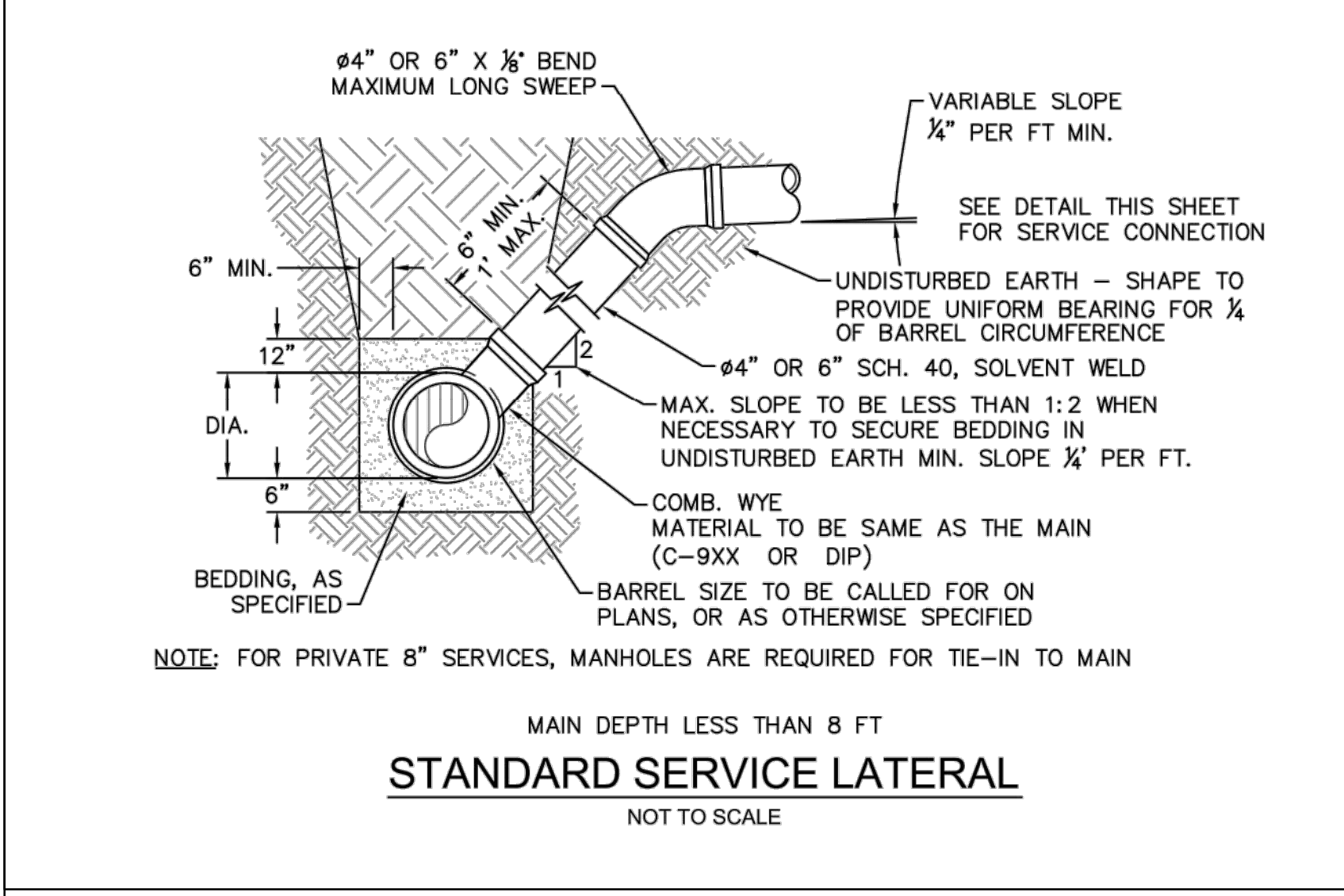
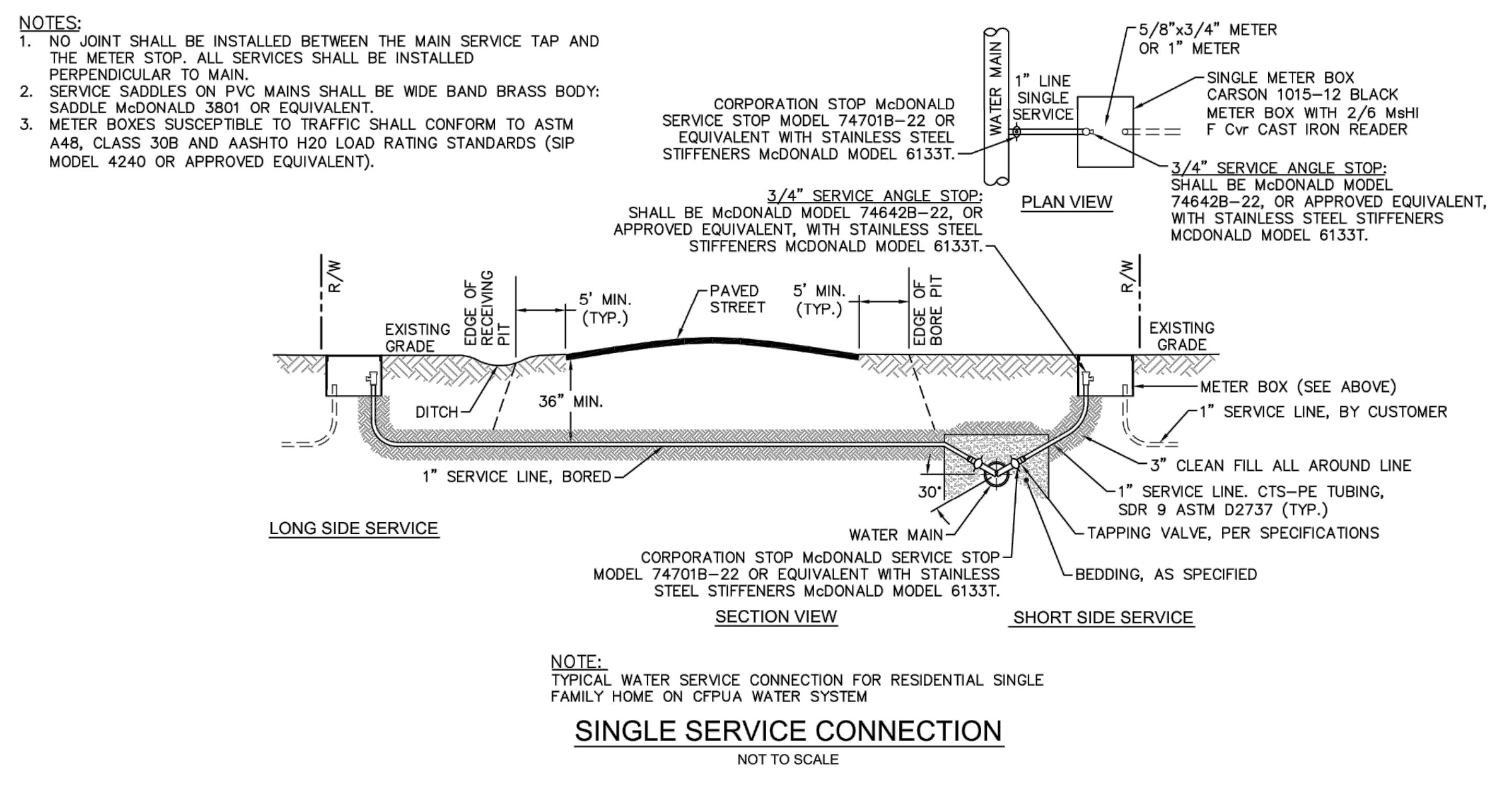
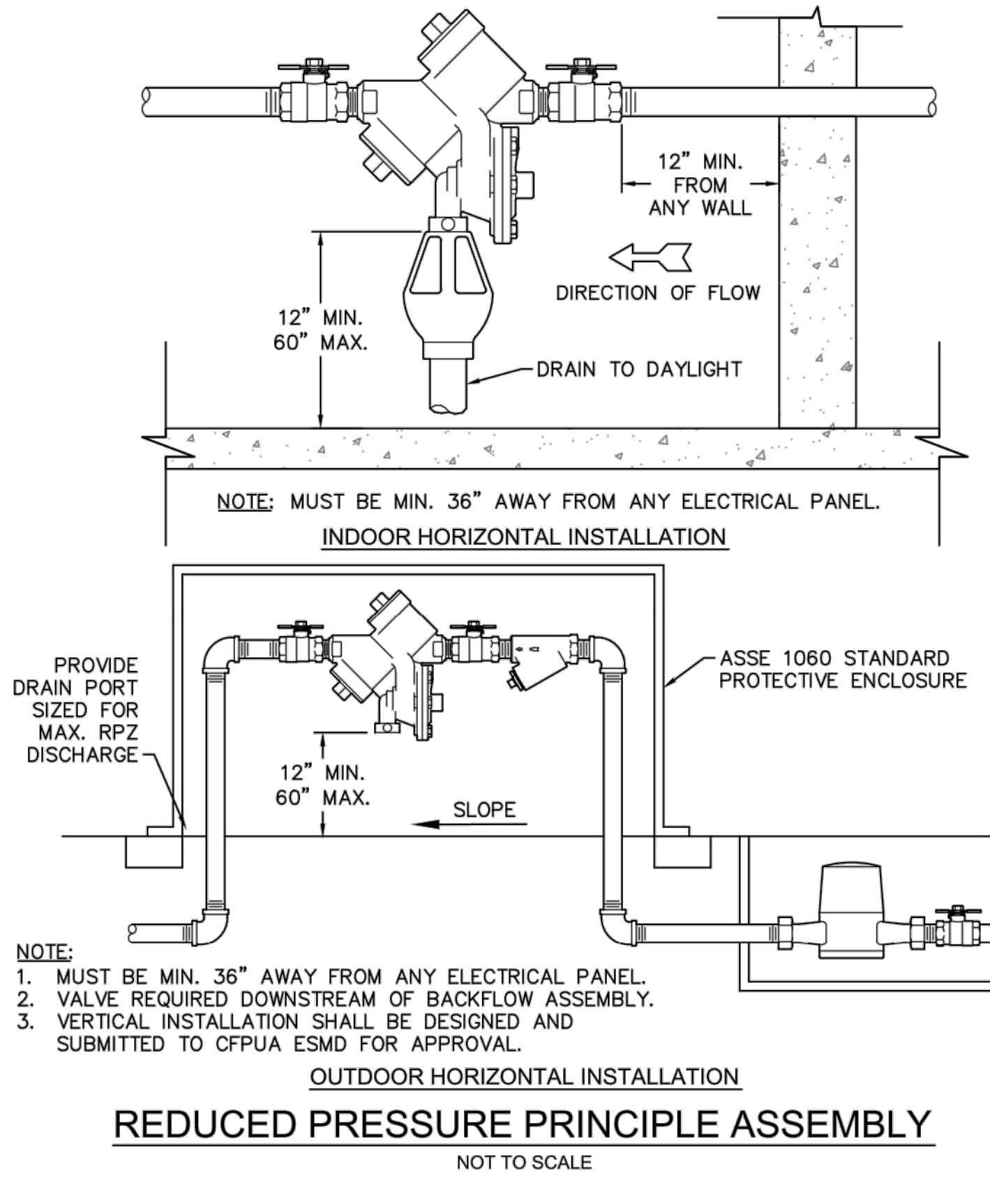
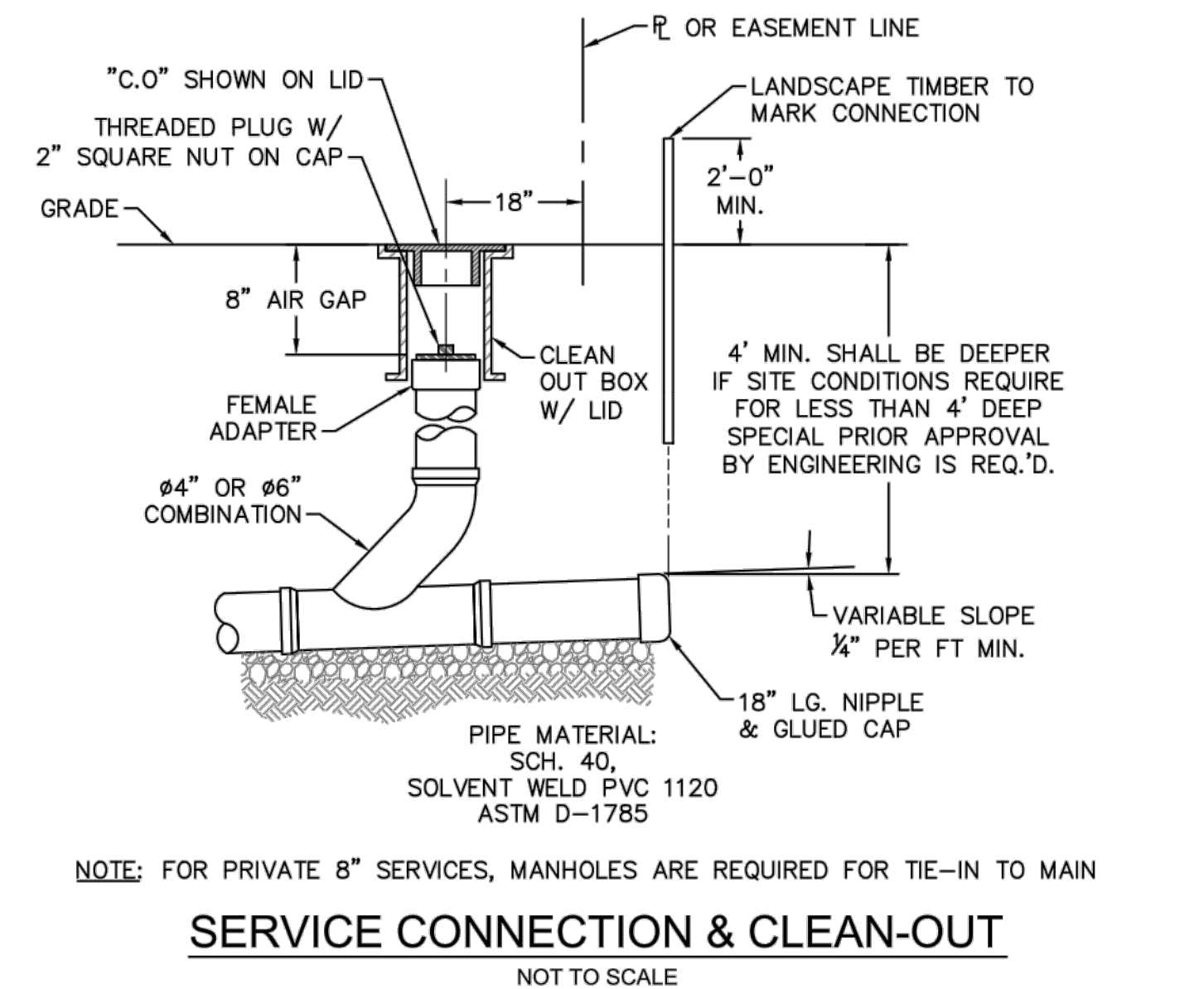
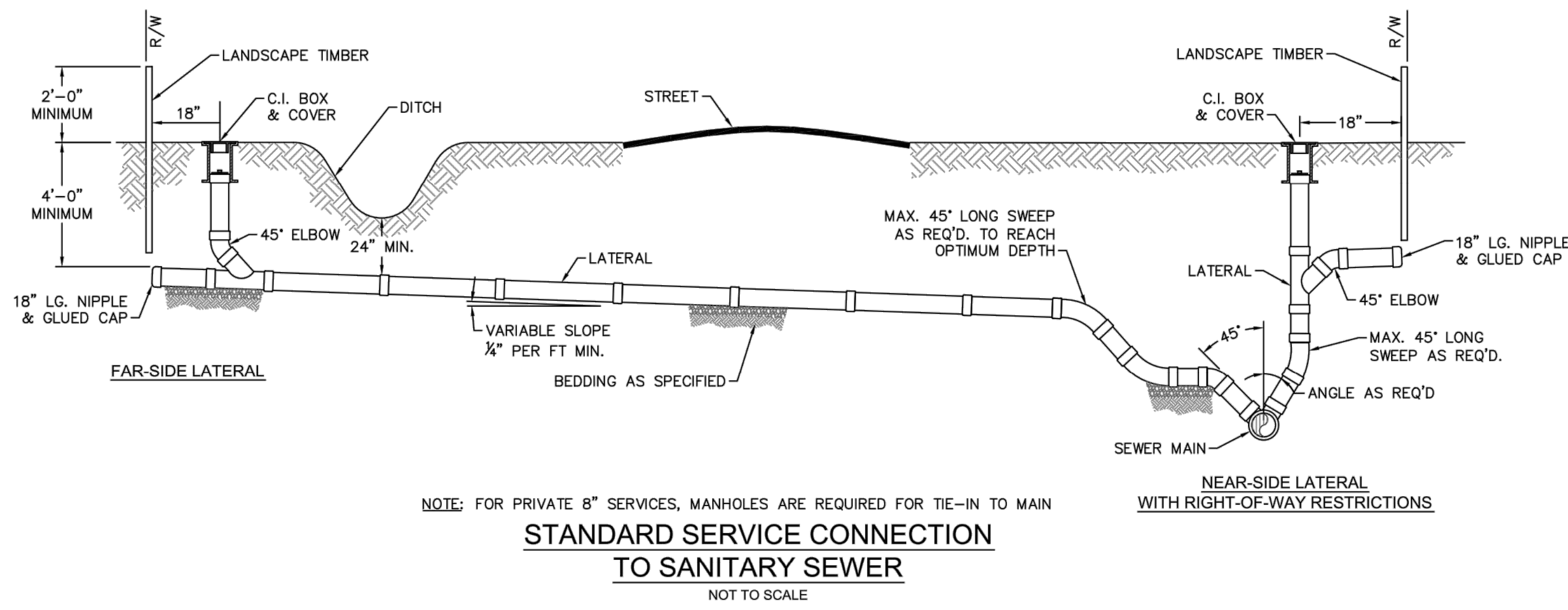
206 S. Ferry Avenue
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F: 910.342.2843
E: info@curryeng.com

Curry
ENGINEERING

EST. 1978

NC LIC. NO. P-0799

D-02



APPROVED CONSTRUCTION PLAN

NAME _____ DATE _____

PLANNING _____

TRAFFIC _____

FIRE _____

CITY OF WILMINGTON
Public Services • Engineering Division
APPROVED DRAINAGE PLAN

Date: _____ Permit # _____

Signed: _____

Curry ENGINEERING
11-4-10

HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
137 DAPPLE COURT WILMINGTON, NORTH CAROLINA

NOTES AND DETAILS

REVISIONS

1	07-21-16	PER TRC COMMENT
2	10-12-16	PER TRC COMMENT

DATE: 05-17-16
HORZ. SCALE: SCALE
VERT. SCALE: SCALE
FILE NO: 2015-083
ORIG. SHEET SIZE: 24 x 36

2016 S. Energy Avenue
Wilmington, NC 28408
P: 910-342-2949
F: 910-342-2948

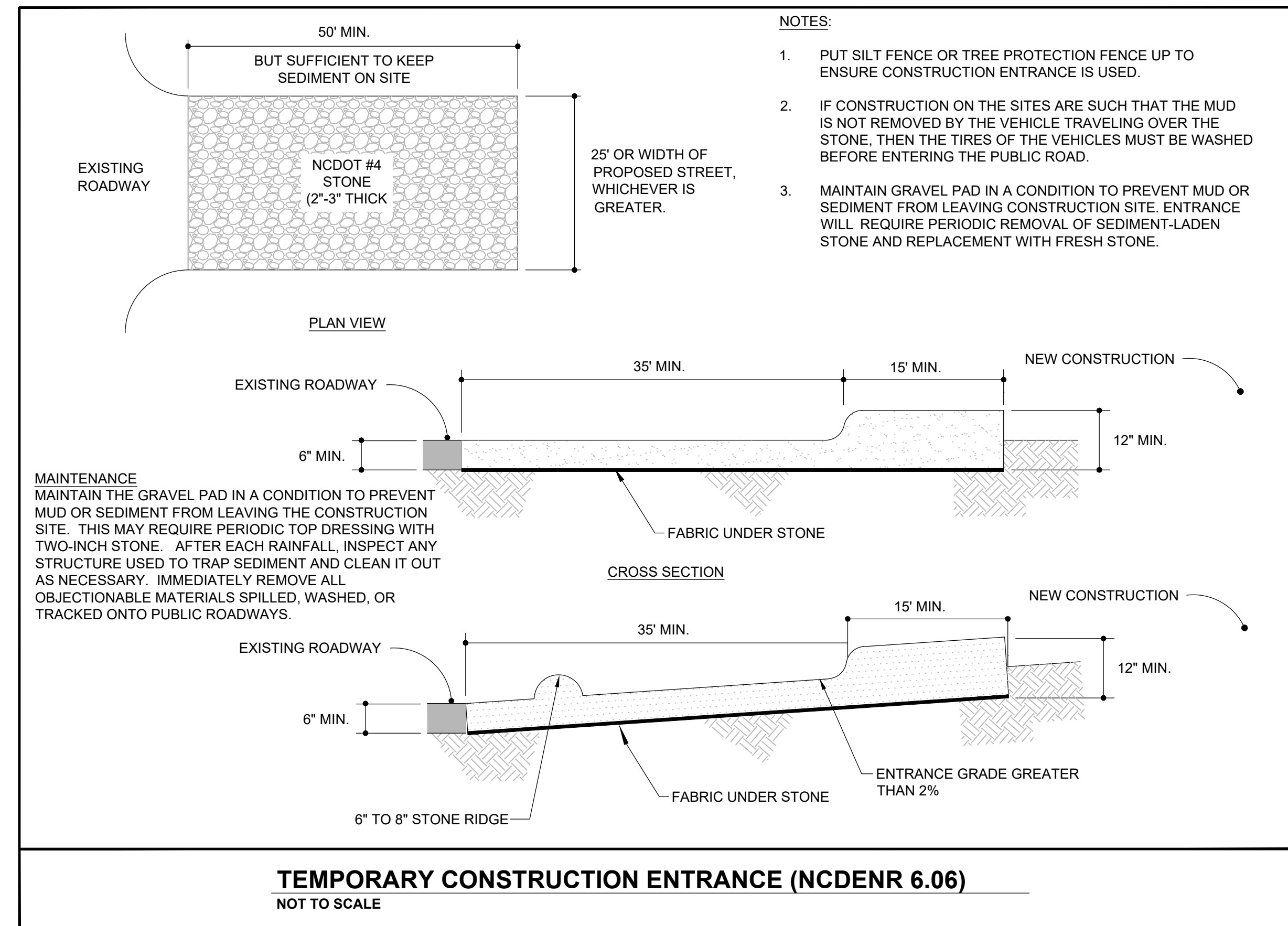
ENGINEERS TO WILMINGTON, NORTH CAROLINA
EST. 1987
N.C. LIC. NO. P-0799

Curry ENGINEERING

D-03

PROJECT: 16166, 2015-2016 NEW CENTRE FITNESS CENTER ASSISTIVE PLANSHEET FLESDIA NOTES AND DETAILING
PLOTTED: 11/02/16 10:24 AM

IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.



- NOTES:**
1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
 2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
 3. MAINTAIN GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING CONSTRUCTION SITE. ENTRANCE WILL REQUIRE PERIODIC REMOVAL OF SEDIMENT-LADEN STONE AND REPLACEMENT WITH FRESH STONE.

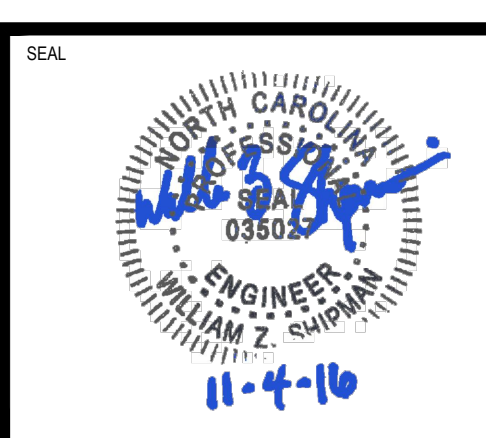
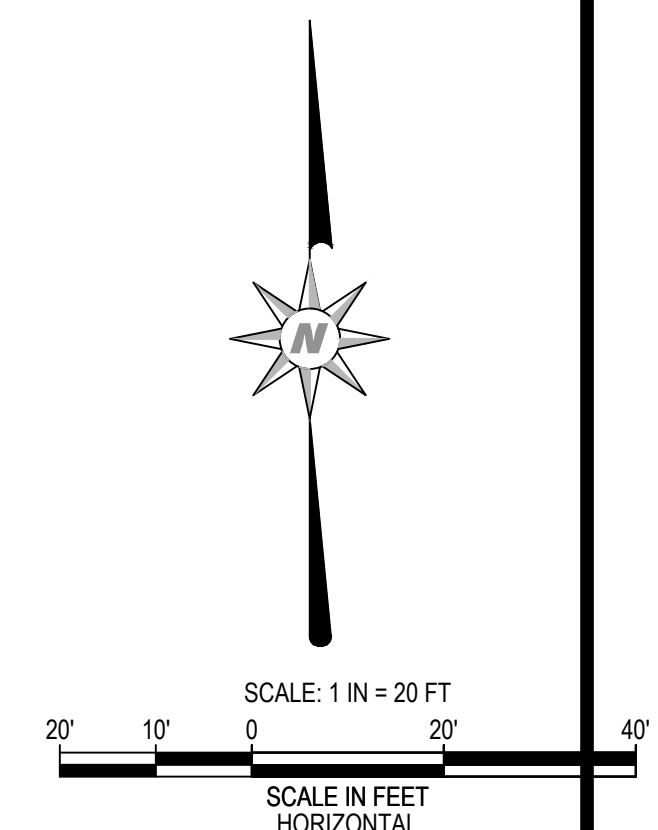
TEMPORARY CONSTRUCTION ENTRANCE (NCDENR 6.06)
NOT TO SCALE

APPROVED CONSTRUCTION PLAN

	<u>NAME</u>	<u>DATE</u>
PLANNING	_____	_____
TRAFFIC	_____	_____
FIRE	_____	_____

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN

Date: _____ Permit # _____
Signed: _____



HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
137 DAPPLE COURT WILMINGTON, NORTH CAROLINA
NOTES AND DETAILS

206 S. Tenth Avenue
Wilmington, NC 28405
P: 910 342-2943
F: 910 342-2943

EST. 1958
ENGINEERS 10
ARCHITECTS 10
PLANNERS 10
CITY OF WILMINGTON, NC
NC LIC. NO. P-0799

Curry
ENGINEERING

D-04

NO.	DATE	DESCRIPTION
1	07-21-16	PER. TRC COMMENT
2	10-12-16	PER. TRC COMMENT

FILE NO. 2015-083
HORZ. SCALE: SCALE
VERT. SCALE: SCALE
SHEET SIZE: 24 x 36

STREET YARD CALCULATION
 DISTRICT ZONING: MF-M
 MULTIPLIER: 12 (PER 18-477)
 PROJECT FRONTAGE: 132 LF (MINUS DRIVEWAY)
 REQUIRED STREET YARD= 12 x 132 LF= 1584 SF
 USE 13' AVERAGE WIDTH STREET YARD ACROSS FRONTAGE (9' MIN. AT SHALLOWEST)
 REQUIRED # OF CANOPY TREES: 1584 SF/ 600 SF= 2.64 ---USE 3 CANOPY TREES
 REQUIRED # OF SHRUBS: 1584 SF/ 600 SF= 2.64
 2.64 x 6 SHRUBS= 16 SHRUBS REQUIRED

PARKING AREA SHADING CALCULATION:
 PARKING AREA: 5,183 SF
 REQUIRED SHADED AREA: 1,036 SF (20% TOTAL)
 PROVIDED SHADED AREA: 1,592 SF OR 30.72%
 (USING 10' RADIUS FOR UNDERSTORY TREES, 15' RADIUS FOR CANOPY TREES, AND ACTUAL RADIUS FOR EXISTING)

FOUNDATION PLANTING CALCULATION:
 BUILDING FACE AREA: 826.67 SF
 REQUIRED FOUNDATION PLANTINGS AREA: 99 SF (12%)
 PROVIDED FOUNDATION PLANTINGS AREA: 226 (27.34%)

PLANT SCHEDULE						
TYPE	QUANTITY	KEY	BOTANICAL NAME	COMMON NAME	PLANTING SIZE	COMMENTS
TREES						
DUT	4	LI	LAGERSTROEMIA INDICA x 'MUSKOGEE'	MUSKOGEE CRAPE MYRTLE	8'-10" HEIGHT, MULTI-STEM	B&B
ST	9	QA	QUERCUS ALBA	WHITE OAK	2.5" CAL., 10' HEIGHT (MIN)	B&B-SINGLE STEM ONLY
SHRUBS						
ES	8	CSC	CAMELLIA SASANQUA 'CHANSONETTE'	CHANSONETTE CAMELLIA	7 GALLON, 24" HT.	CONTAINER
ES	6	EAA	AZALEA x 'CONLEE' PP#10567	AUTUMN AMETHYST ENCORE AZALEA	18" HEIGHT MIN.	CONTAINER
DS	6	HAA	HYDRANGEA ARBORESCENS 'ANNABELLE'	ANNABELLE HYDRANGEA	24" HEIGHT MIN.	CONTAINER
ES	9	NO	NERIUM OLEANDER	OLEANDER	24" HEIGHT MIN.	CONTAINER
ES	33	PT	PITTOSPORUM TOBIRA	JAPANESE PITTOSPORUM	24" HEIGHT MIN.	CONTAINER
ES	10	RX	ROSA x 'KNOCKOUT'	KNOCKOUT ROSE	24" HEIGHT MIN.	CONTAINER

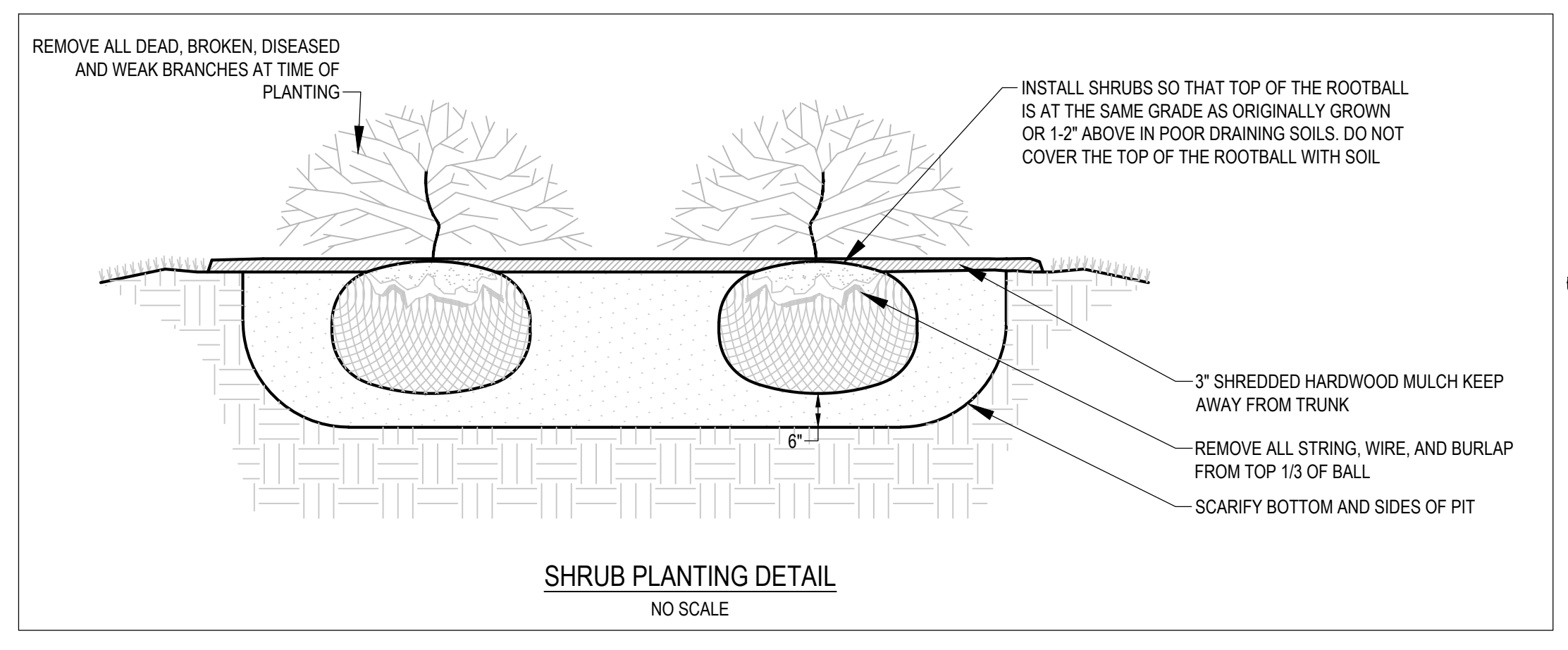
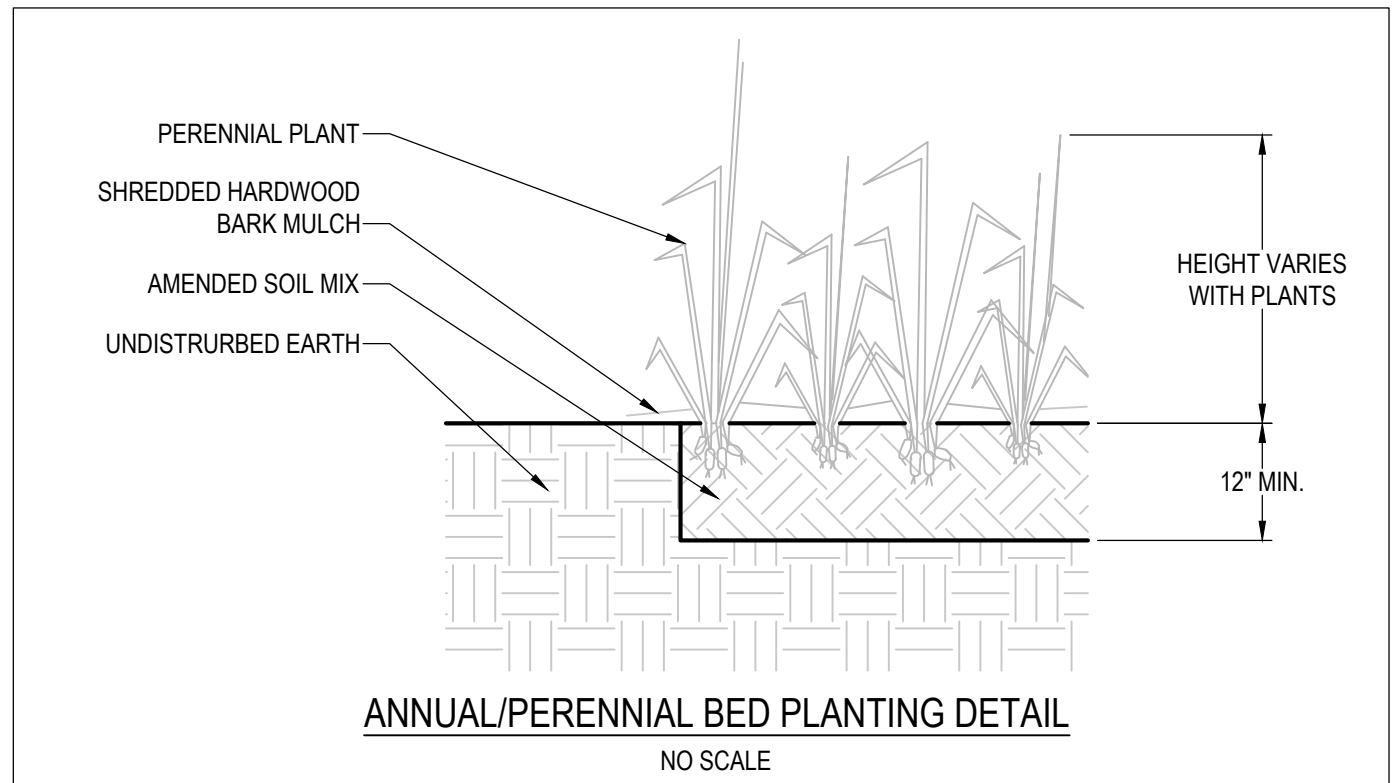
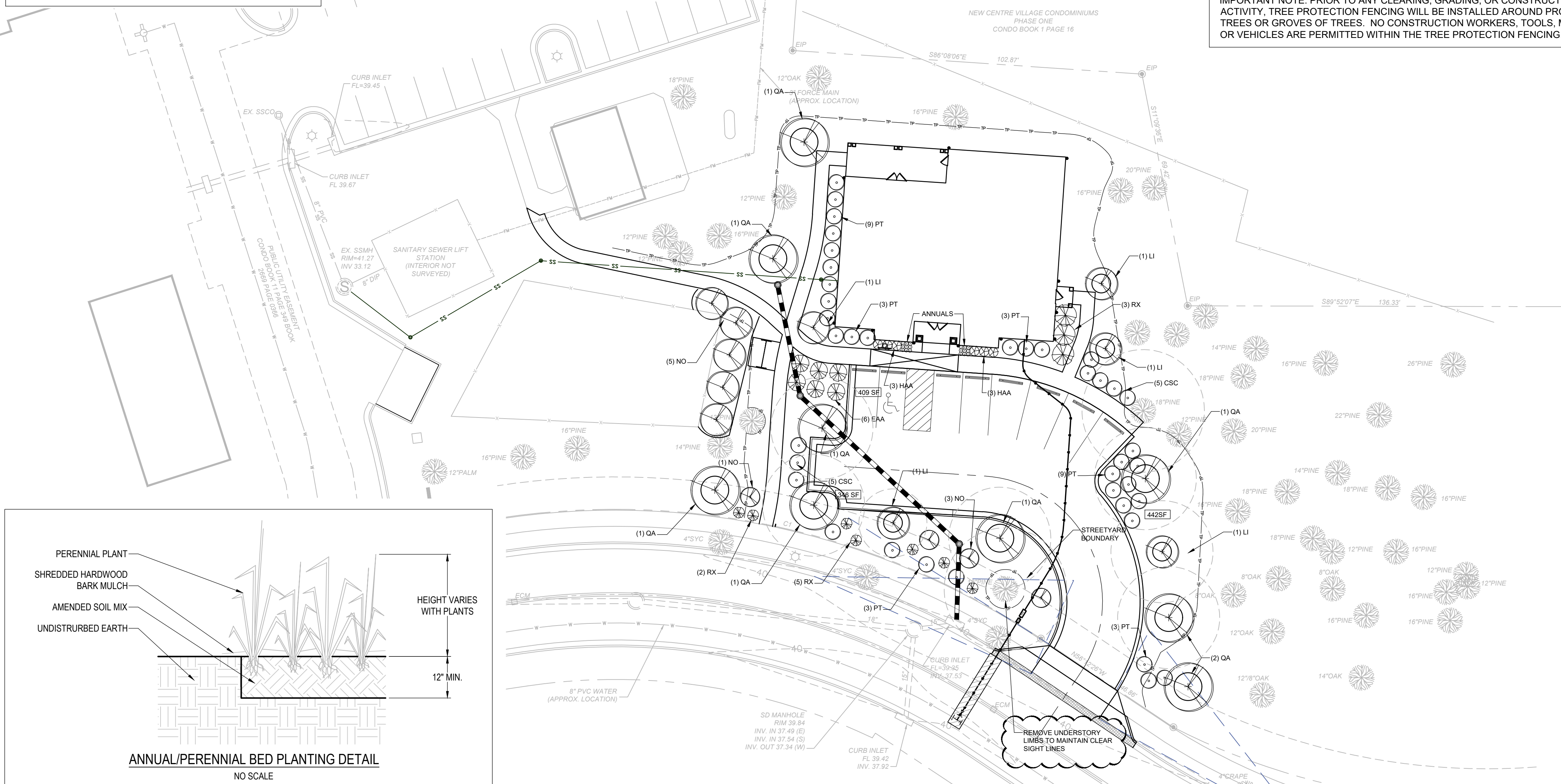
TYPE/USE LEGEND
 PLANT TYPE: ST= SHADE TREE; DUT= DECIDUOUS UNDERSTORY TREE; EUT= EVERGREEN UNDERSTORY TREE; ES= EVERGREEN SHRUB;

IMPORTANT NOTE: PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.

- GENERAL NOTES:**
- EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY MIKE UNDERWOOD AND ASSOCIATES, DATED FEBRUARY 14, 2016, AND IS NOT THE RESULT OF A FIELD SURVEY BY THE CURRY ENGINEERING GROUP, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, NEW HANOVER COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
 - PRIOR TO THE COMMENCEMENT OF ANY ACTIVITIES REQUIRING A BUILDING OR ZONING PERMIT AN ON-SITE PRECONSTRUCTION MEETING IS REQUIRED BETWEEN THE DEVELOPER AND CITY OF WILMINGTON INSPECTION STAFF TO REVIEW PROCEDURES FOR THE PROTECTION AND MANAGEMENT OF ALL LANDSCAPE ELEMENTS THAT ARE TO REMAIN AS IDENTIFIED ON THE LANDSCAPING PLANS.
 - CONTACT THE NC ONE CALL CENTER (811) FOR LOCATIONS OF ALL UTILITY LINES. TREES SHALL BE LOCATED A MINIMUM OF FIVE FEET FROM WATER AND SEWER CONNECTIONS. NOTIFY THE ENGINEER IF ANY CONFLICTS OR DISCREPANCIES ARE NOTED.
 - VERIFY ALL PLANT MATERIAL QUANTITIES ON THE PLAN PRIOR TO BIDDING. PLANT LIST TOTALS ARE SHOWN FOR CONVENIENCE ONLY AND SHALL BE CONFIRMED PRIOR TO SUBMITTING BIDS.
 - PROVIDE PLANT MATERIALS OF QUANTITY, SIZE, GENUS, SPECIES, AND VARIETY INDICATED ON THE PLANS, UNLESS EXPRESS WRITTEN PERMISSION IS ISSUED FROM THE OWNER OR THE ENGINEER INDICATING OTHERWISE. FINAL PLANT SELECTION MAY BE SUBJECT TO SEASONAL AVAILABILITY AND MAY BE ALTERED OR MODIFIED BY THE OWNER AS DESIRED.
 - ALL PLANT MATERIALS AND INSTALLATION SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK." IF SPECIFIED PLANT MATERIAL IS NOT AVAILABLE, SUBMIT PROOF OF NON-AVAILABILITY TO THE ENGINEER, TOGETHER WITH PROPOSAL FOR THE USE OF EQUIVALENT MATERIAL, VARIETIES, OR CULTIVARS.
 - PROVIDE AND INSTALL ALL PLANTS AS IN ACCORDANCE WITH DETAILS AND CONTRACT SPECIFICATIONS.

- CONSTRUCTION/INSTALLATION:**
- THE OWNER AND/OR ENGINEER RESERVES THE RIGHT TO REJECT ANY PLANTS AND MATERIALS THAT ARE IN AN UNHEALTHY OR UNSIGHTLY CONDITION, AS WELL AS PLANTS AND MATERIALS THAT DO NOT CONFORM TO ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK."
 - LABEL AT LEAST ONE TREE AND SHRUB OF EACH VARIETY AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING THE DESIGNATION OF BOTANICAL AND COMMON NAME.
 - INSTALL LANDSCAPE PLANTINGS AT ENTRANCES/EXITS AND PARKING AREAS ACCORDING TO PLANS SO THAT MATERIALS WILL NOT INTERFERE WITH SIGHT DISTANCES.
 - CONTRACTOR IS RESPONSIBLE FOR WATERING ALL PLANT MATERIAL DURING INSTALLATION AND UNTIL FINAL INSPECTION AND ACCEPTANCE BY OWNER. CONTRACTOR SHALL NOTIFY THE OWNER OF CONDITIONS WHICH AFFECTS THE GUARANTEE.

- INSPECTIONS/GUARANTEE:**
- UPON COMPLETION OF LANDSCAPE INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR WHO WILL VERIFY THE COMPLETENESS, INCLUDING THE REPLACEMENT OF ALL DEAD PLANT MATERIAL. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A FINAL INSPECTION BY THE ENGINEER.
 - ALL EXTERIOR PLANT MATERIALS SHALL BE GUARANTEED FOR ONE FULL YEAR AFTER DATE OF FINAL INSPECTION AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH. DEFECTS RESULTING FROM NEGLIGENCE BY THE OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH ARE BEYOND THE CONTRACTORS CONTROL ARE NOT THE RESPONSIBILITY OF THE CONTRACTOR.
 - PLANT MATERIAL QUANTITIES AND SIZES WILL BE INSPECTED FOR COMPLIANCE WITH APPROVED PLANS BY A SITE PLAN REVIEW AGENT OF THE PLANNING DEPARTMENT PRIOR TO THE RELEASE OF THE CERTIFICATE OF OCCUPANCY.
 - REMOVE ALL GUY WIRES AND STAKES 12 MONTHS AFTER INSTALLATION.



ALL PROPOSED VEGETATION WITHIN THE SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' TO 10' ABOVE THE GROUND.

APPROVED CONSTRUCTION PLAN

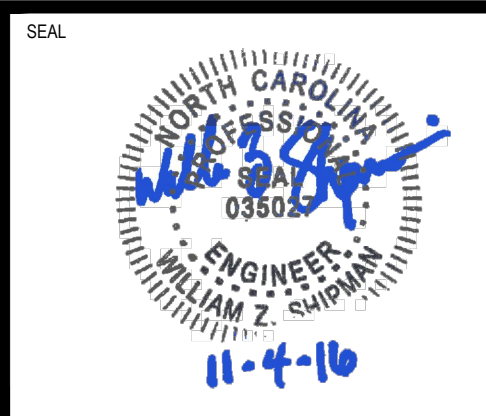
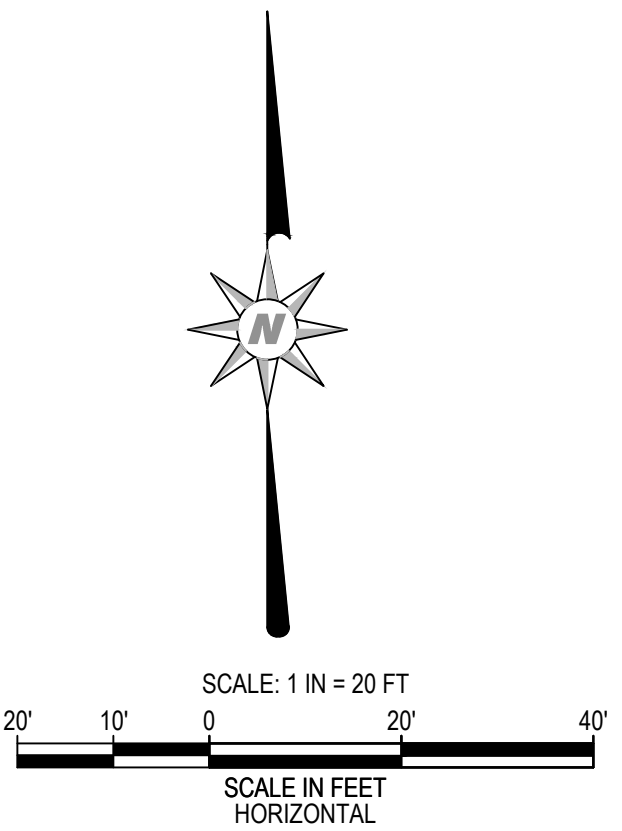
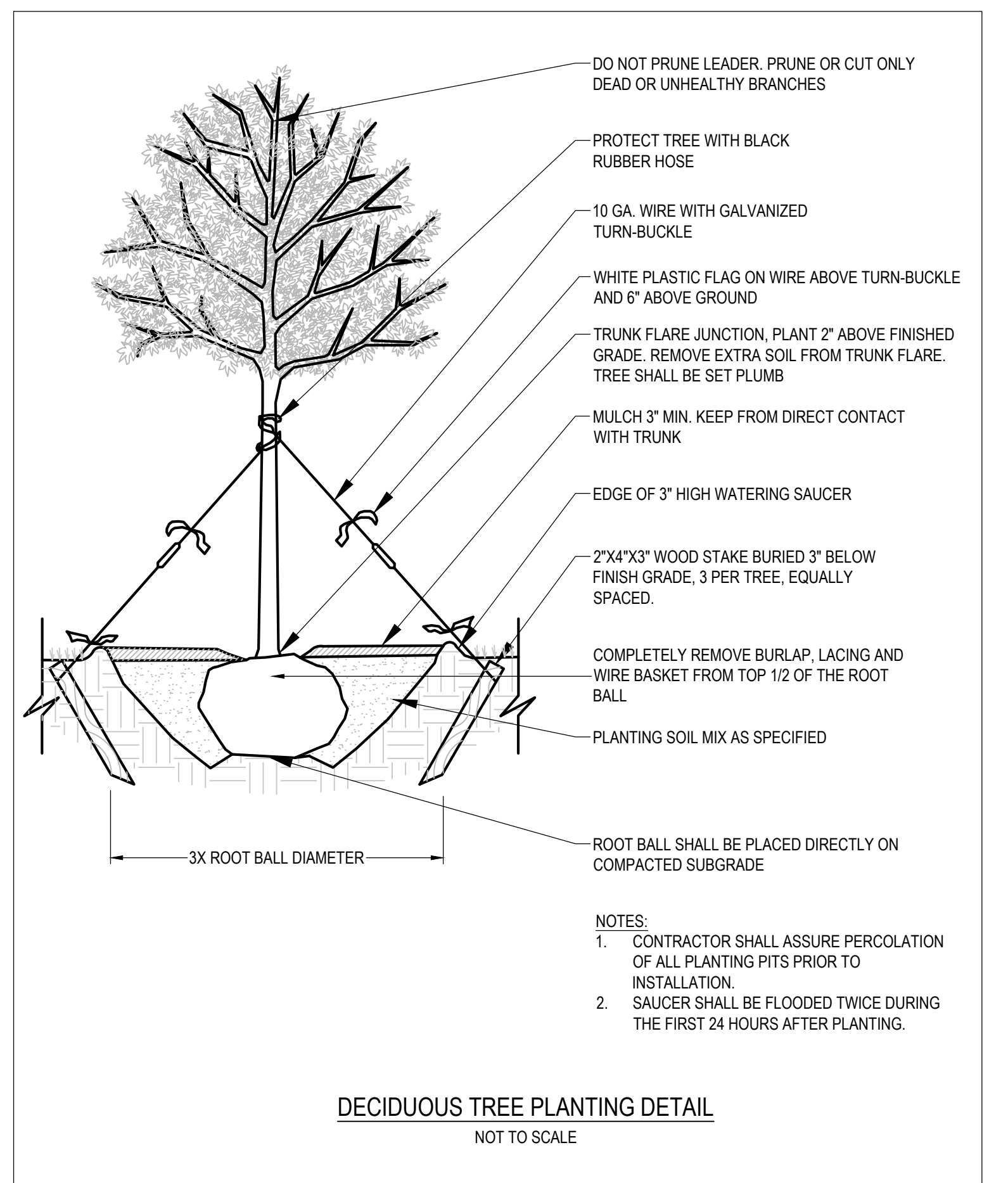
NAME	DATE
PLANNING _____	_____
TRAFFIC _____	_____
FIRE _____	_____

APPROVED DRAINAGE PLAN

City of Wilmington
 Public Services • Engineering Division

Date: _____ Permit # _____

Signed: _____



HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
 137 DAPPLE COURT WILMINGTON, NORTH CAROLINA
 LANDSCAPE PLAN

206 S. Tryon Street
 Wilmington, NC 28402
 910.343.2244
 www.curryeng.com

Curry ENGINEERING

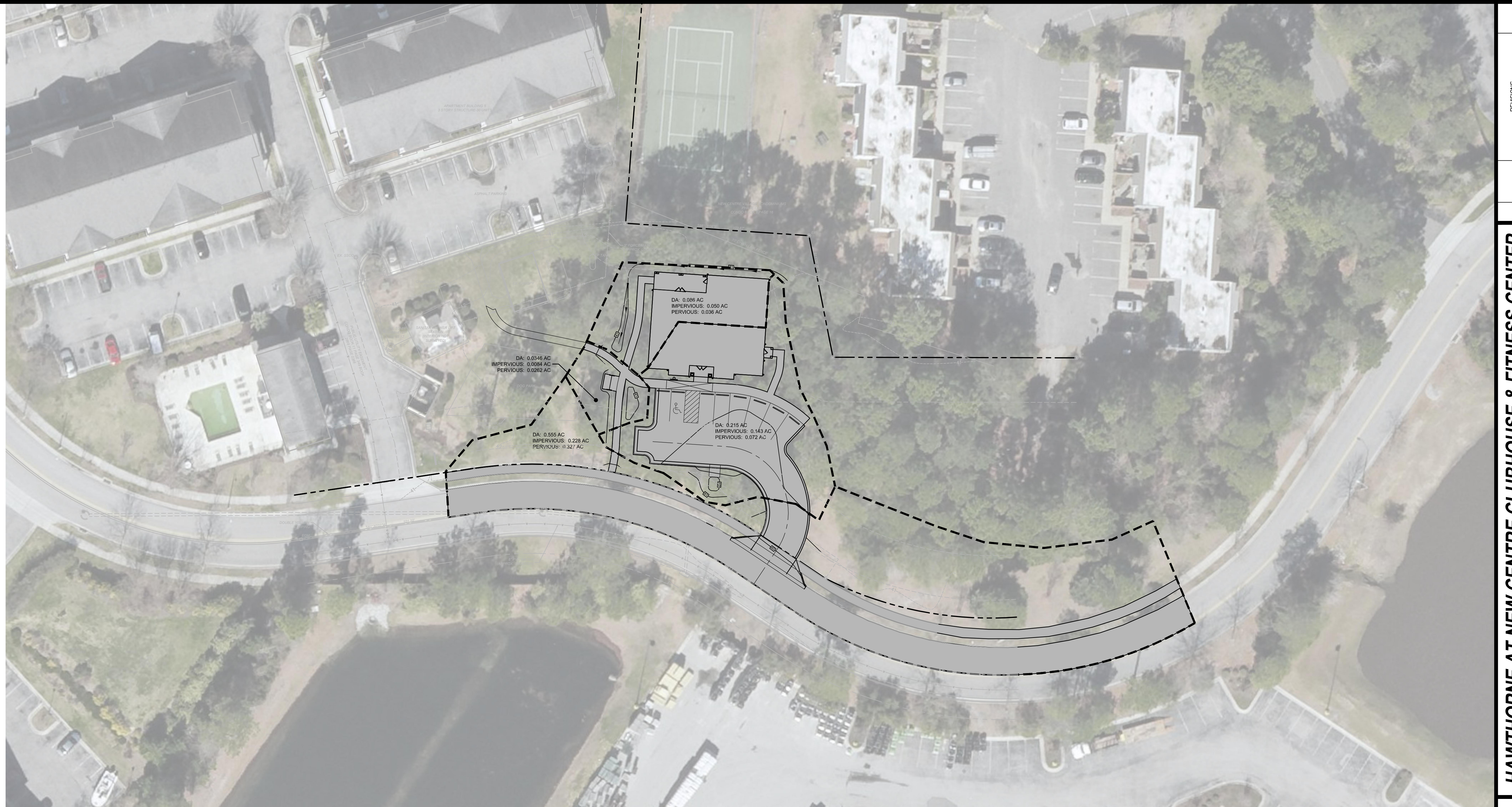
NC LIC. NO. P-0799

L-01

PROJECT FILES: Z:\2016\137 DAPPLE COURT WILMINGTON, NORTH CAROLINA\HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER\LANDSCAPE PLAN\LANDSCAPE PLAN.DWG
 PLOTTED: 11/20/16 12:54 PM

NO.	DATE	DESCRIPTION
1	07-21-16	PER. TRC COMMENT
2	10-12-16	PER. TRC COMMENT

DATE: 05-17-16
 FILE NO: 2015-083
 HORZ. SCALE: AS SHOWN
 VERT. SCALE: 1" = 4'



PIPE NETWORK DRAINAGE AREA MAP
SCALE: 1"=30'

PROJECT: 11-04-16, 137 DAPPLE COURT WILMINGTON, NORTH CAROLINA. CENTER: PLAN SHEET FILE: 11-04-16.DWG. DATE: 11/04/16. 11-04-16.DWG

IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.

APPROVED CONSTRUCTION PLAN

	NAME	DATE
PLANNING	_____	_____
TRAFFIC	_____	_____
FIRE	_____	_____

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED DRAINAGE PLAN

Date: _____ Permit # _____

Signed: _____

SCALE: 1 IN = 30 FT

SCALE IN FEET
HORIZONTAL

SEAL

HAWTHORNE AT NEW CENTRE CLUBHOUSE & FITNESS CENTER
137 DAPPLE COURT WILMINGTON, NORTH CAROLINA
PIPE NETWORK DRAINAGE MAP

NO.	DATE	DESCRIPTION
2	10-12-16	PER TRC COMMENT
1	07-21-16	PER TRC COMMENT
DATE: 05-17-16		
FILE NO: 2015-083		
HORZ. SCALE: SCALE		
VERT. SCALE: SCALE		
SHEET SIZE: 24 x 36		

Curry
ENGINEERING

EST. 1978
1000 W. MARKET STREET
WILMINGTON, NC 28401
PH: 910.343.2243
F: 910.343.2243
206 S. FARMER AVENUE
WILMINGTON, NC 28405

NIC LIC. NO. P-0799

EXH. 1