CITY OF WILMINGTON STANDARD NOTES

1. 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.
2. ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO ENSURE THAT NO CLEARING, GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.
3. 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.
4. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
5. 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.
6. 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.
7. CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN.
8. CALL TRAFFIC ENGINEERING AT 910-341-7888 FORTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.
9. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING PRIOR TO ACTUAL STRIPING.
10. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
11. ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER.
12. STOP SIGNS AND STREET SIGNS TO REMAIN IN PLACE DURING CONSTRUCTION.
13. TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS.
14. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET.
15. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS, OR CURBING WILL BE REPLACED.
16. CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
17. WATER AND SEWER SERVICE SHALL MEET CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) DETAILS AND SPECIFICATIONS.
18. PROJECT SHALL COMPLY WITH CFPUA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL. CALL 910-343-3910 FOR INFORMATION.
19. 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 DEVELOPER'S SIDE OF THE WATER METER BOX.
20. ANY IRRIGATION SYSTEM SUPPLIED BY CFPUA WATER SHALL COMPLY WITH THE CFPUA CROSS CONNECTION CONTROL REGULATIONS. CALL 919-343-3910 FOR INFORMATION.
21. ANY IRRIGATION SYSTEM SHALL BE EQUIPPED WITH A RAIN AND FREEZE SENSOR.
22. ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CFPUA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCCCHR OR ASSE.
23. CONTRACTOR TO FIELD VERIFY EXISTING WATER AND SEWER SERVICE LOCATIONS, SIZES AND MATERIALS PRIOR TO CONSTRUCTION. ENGINEER TO BE NOTIFIED OF ANY CONFLICTS.
24. NO OBSTRUCTIONS ARE PERMITTED IN THE SPACE BETWEEN THIRTY (30) INCHES AND TEN (10) FEET ABOVE THE GROUND WITHIN THE SIGHT DISTANCE TRIANGLE.
25. CONTACT THE NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 PRIOR TO DOING ANY DIGGING, CLEARING, OR GRADING
26. CONTACT 811 PRIOR TO CONTACTING CITY OF WILMINGTON, TRAFFIC ENGINEERING REGARDING THE UTILITIES IN ROW.

FIRE & LIFE SAFETY NOTES

1. THE TYPE OF BUILDING CONSTRUCTION ACCORDING TO THE INTERNATIONAL BUILDING CODE SHALL BE TYPE 5B SPRINKLED.
2. NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIALS DELIVERED TO THE JOB SITE.
3. HYDRANT MUST BE WITHIN 150' OF THE FDC (MEASURED AS THE TRUCK DRIVES FOR PRACTICAL USE).
4. LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT.
5. FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
6. PRIVATE UNDERGROUND FIRE LINES REQUIRE A SEPARATE UNDERGROUND FIRE LINE PERMIT FROM THE WILMINGTON FIRE AND LIFE SAFETY DIVISION (910-343-0696).
7. ALL ISOLATION VALVES WITHIN THE "HOT BOX" AND BETWEEN THE "HOT BOX" AND THE RISER ROOM MUST BE ELECTRONICALLY SUPERVISED.
8. CONTRACTOR SHALL SUBMIT A RADIO SIGNAL STRENGTH STUDY FOR ALL MULTI-STORY COMMERCIAL BUILDINGS AND ALL SINGLE STORY COMMERCIAL BUILDINGS EXCEEDING 7500 SF. THE STUDY SHALL DEMONSTRATE THAT EXISTING EMERGENCY RESPONDER RADIO SIGNAL LEVELS MEET THE REQUIREMENTS OF SECTION 510 OF THE 2018 NC FIRE CODE.
9. ADDITIONAL FIRE PROTECTION AND ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
10. CONTRACTOR SHALL MAINTAIN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.

LEGEND

PROJECT BOUNDARY
EX WATER MAIN
EX FORCE MAIN
STORMDRAIN
EX CONTOURS 14 15
SILT FENCE
DISTURBED AREA

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

OPEN SPACE CALCULATIONS (35% OF PROJECT MIN)

149,986 SF X 35% = 52,495 SF (62,028 SF PROVIDED)

OPEN SPACE IS TOTAL PROJECT AREA (149,986 SF) LESS: BUA (80,683 SF), LANDSCAPE ISLANDS (5,763 SF), AND FOUNDATION PLANTINGS (1,512 SF) = 62,028 SF

RECREATION SPACE (50% OF REQUIRED OPEN SPACE MIN)

52,495 SF X 50% = 26,248 SF (31,919 SF PROVIDED)

ACTIVE REC SPACE (50% OF RECREATION SPACE MIN)

26,248 SF X 50% = 13,124 SF (14,516 SF PROVIDED)

PASSIVE REC SPACE (50% OF RECREATION SPACE MIN)

26,248 SF X 50% = 13,124 SF (17,403 SF PROVIDED)

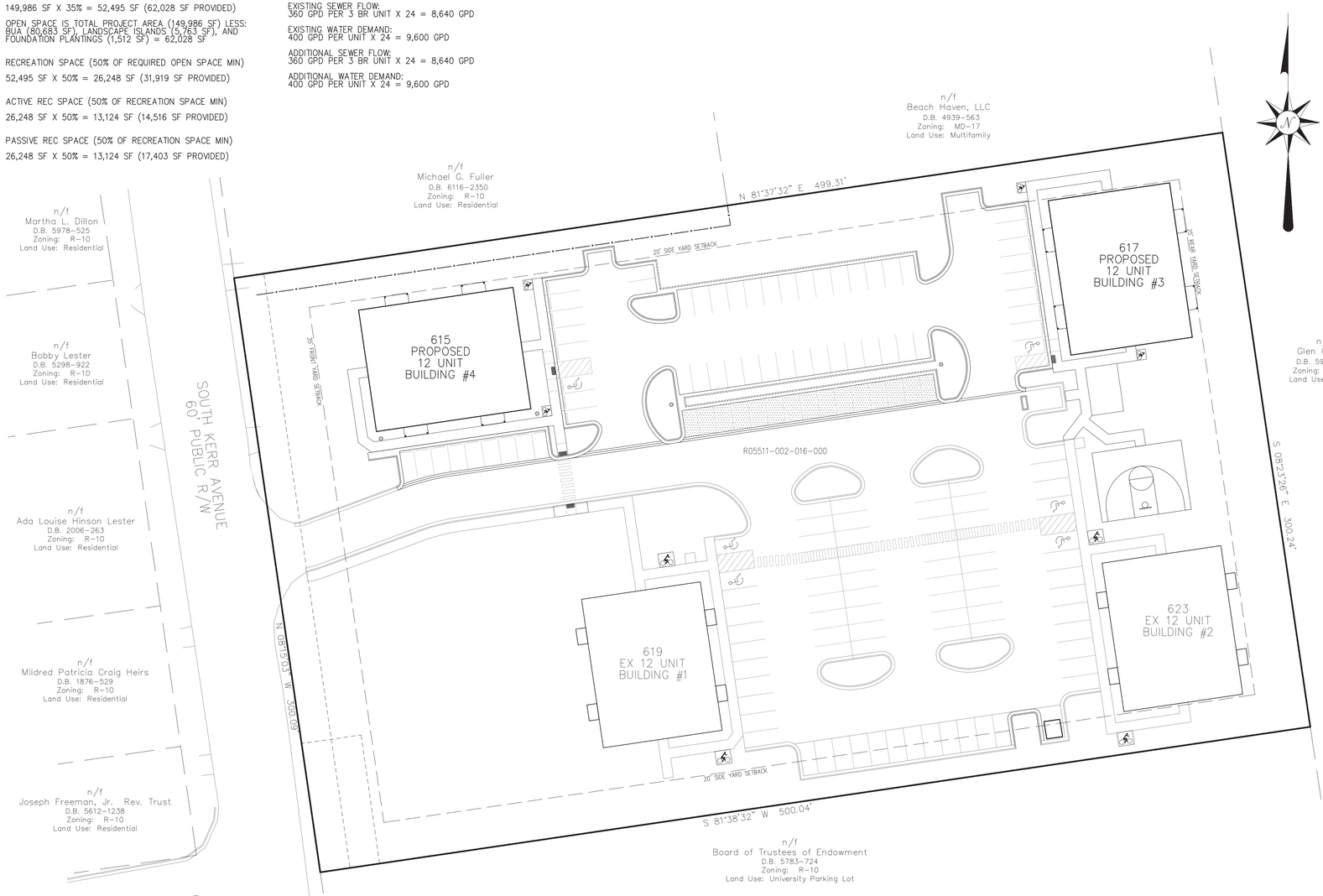
UTILITY CALCULATIONS

EXISTING SEWER FLOW:
360 GPD PER 3 BR UNIT X 24 = 8,640 GPD

EXISTING WATER DEMAND:
400 GPD PER UNIT X 24 = 9,600 GPD

ADDITIONAL SEWER FLOW:
360 GPD PER 3 BR UNIT X 24 = 8,640 GPD

ADDITIONAL WATER DEMAND:
400 GPD PER UNIT X 24 = 9,600 GPD



NOTES

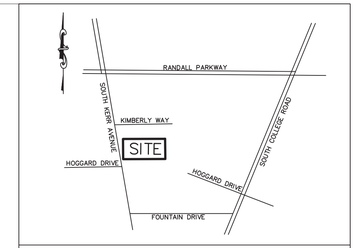
1. EXISTING FEATURES AND BOUNDARY DATA BY STROUD ENGINEERING, P.A..
2. NO WETLANDS OR SURFACE WATERS EXIST WITHIN OR ADJACENT TO THE PROJECT AREA.
3. THE PROJECT IS OUTSIDE THE 100 YEAR FLOOD ZONE PER FIRM PANEL 3720313700K.
4. AN NHC EROSION CONTROL PERMIT IS REQUIRED FOR PROJECTS DISTURBING MORE THAN 1 ACRE. CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES AS NOTED ON THE PLANS.
5. NCDEQ AND CITY OF WILMINGTON STORMWATER PERMITS ARE SHALL BE REQUIRED PRIOR TO BEGINNING WORK.
6. NO WATER OR SEWER MAIN EXTENSIONS ARE PROPOSED. CFPUA PLAN APPROVAL SHALL BE REQUIRED PRIOR TO BEGINNING WORK.
7. CITY OF WILMINGTON FIRE SERVICES AND CFPUA APPROVAL IS REQUIRED FOR PRIVATE FIRE LINE
8. NO EXTENSIONS OF PUBLIC OR PRIVATE RIGHTS OF WAY ARE PROPOSED. CITY OF WILMINGTON PLAN APPROVAL SHALL BE REQUIRED PRIOR TO BEGINNING WORK.
9. SOLID WASTE REMOVAL BY PRIVATE CONTRACTOR.
10. PHASE 2 SHALL NOT EXCEED 72 BEDROOMS.

IN ACCORDANCE WITH CD-7-1214-M520, THE FOLLOWING CONDITIONS SHALL APPLY:

1. THE USE AND DEVELOPMENT OF THE PROPERTY SHALL COMPLY WITH ALL REGULATIONS AND REQUIREMENTS IMPOSED BY THE LAND DEVELOPMENT CODE, THE CITY OF WILMINGTON TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL, AND ANY OTHER APPLICABLE FEDERAL, STATE, OR LOCAL LAW, ORDINANCE OR REGULATION, AS WELL AS ANY CONDITIONS STATED BELOW. IN THE EVENT OF CONFLICT, THE MORE STRINGENT REQUIREMENT OR HIGHER STANDARD SHALL APPLY.
2. APPROVAL OF THIS CONDITIONAL DISTRICT REZONING DOES NOT CONSTITUTE TECHNICAL APPROVAL OF THE SITE PLAN. FINAL APPROVAL BY THE TECHNICAL REVIEW COMMITTEE AND THE ISSUANCE OF ALL REQUIRED PERMITS MUST OCCUR PRIOR TO RELEASE OF THE PROJECT FOR CONSTRUCTION.
3. IF, FOR ANY REASON, ANY CONDITION FOR APPROVAL IS FOUND TO BE ILLEGAL OR INVALID OR IF THE APPLICANT SHOULD FAIL TO ACCEPT ANY CONDITION FOLLOWING APPROVAL, THE APPROVAL OF THE SITE PLAN FOR THE DISTRICT SHALL BE NULL AND VOID AND OF NO EFFECT AND PROCEEDINGS SHALL BE INSTITUTED TO REZONE THE PROPERTY TO ITS PREVIOUS ZONING CLASSIFICATION.
4. THE USE AND DEVELOPMENT OF THE SUBJECT PROPERTY SHALL BE IN ACCORDANCE WITH THE SITE PLAN AND ELEVATION APPROVED BY CITY COUNCIL.
5. A 10 FOOT WIDE MULTI USE PATH SHALL BE PROVIDED ALONG SOUTH KERR AVENUE.
6. A PEDESTRIAN CONNECTION SHALL BE INSTALLED BETWEEN THE ADJACENT MULTIFAMILY DEVELOPMENTS TO THE NORTH AND EAST.
7. ALL REGULATED TREES OUTSIDE OF ESSENTIAL SITE IMPROVEMENTS MUST BE RETAINED OR MITIGATED AND ALL SIGNIFICANT TREES LOCATED OUTSIDE OF PROPOSED BUILDING FOOTPRINTS (UP TO A 25% LOT COVERAGE) SHALL BE RETAINED.
8. A MINIMUM OF 4 BICYCLE PARKING SPACES SHALL BE PROVIDED ON THE SITE.
9. EXTERIOR SITE LIGHTING SHALL BE INSTALLED SO AS NOT TO SHINE DIRECTLY ONTO ADJACENT PARCELS AND SHALL BE LIMITED TO FULL CUTOFF TYPE FIXTURES.
10. A CONCEPTUAL SITE LIGHTING PLAN SHALL BE SUBMITTED PRIOR TO CONSTRUCTION RELEASE.
11. ANY FREESTANDING SIGN(S) ON THE SITE SHALL BE MONUMENT STYLE WITH LANDSCAPING AROUND THE BASE OF THE SIGN; NO POLE SIGNS SHALL BE PERMITTED AND INTERNAL ILLUMINATION SHALL BE PROHIBITED.
12. THE USE OF PINE STRAW AS GROUND COVER SHALL BE PROHIBITED WITH TEN (10) FEET OF ANY COMBUSTIBLE EXTERIOR CONSTRUCTION.
13. ALL APPLICABLE CITY, STATE, AND FEDERAL REGULATIONS SHALL BE FOLLOWED.

30 15 0 30 60
GRAPHIC SCALE: 1" = 30'

PRELIMINARY



VICINITY MAP

SITE DATA

PARCEL ID	R05511-002-016-000
MAP BOOK/PAGE	72/223
DEED BOOK/PAGE	6616/2210
ZONING	MD-17 (CD) (CD-7-1214-M520)
CAMA LUC	URBAN
PROPERTY AREA	3.44 AC
	149,986 SF
BUA	
BUILDING	9,320 SF
SIDEWALKS/REC SPACE	4,399 SF
PARKING/DRIVE AISLE	19,876 SF
RESERVE	556 SF
TOTAL NEW BUA	31,939 SF
EXISTING RETAINED	46,650 SF
REMOVED BUA	4,633 SF
TOTAL NEW+RETAINED BUA	1.85 AC
	80,596 SF
% OF PROPERTY	53.7 %
TOTAL BUILDING COVERAGE	12.4 %
DISTURBANCE LIMITS	1.0 AC
RECIEVING STREAM	BURNT MILL CREEK
CLASSIFICATION	C;SW
STREAM INDEX	18-74-63-2
SOIL TYPES	SEAGATE, BAYMEADE, PANTEGO
PROPOSED USE	RESIDENTIAL
ALLOWABLE DENSITY	17 UNITS/AC
PROPOSED UNITS	48
PROPOSED DENSITY	14 UNITS/ACRE
TOTAL SQUARE FOOTAGE	57,600 GSF
NUMBER OF STORIES	3
MINIMUM LOT AREA	NA
MAXIMUM BLDG HEIGHT	35'
PROPOSED BLDG HEIGHT	35'
MINIMUM FRONT YARD	35'
MINIMUM SIDE YARD	20'
MINIMUM REAR YARD	25'

PARKING CALCULATIONS

2.25 SPACES PER 3 BR UNIT X 48 = 108 (MIN)

2.5 SPACES PER 3 BR UNIT X 48 = 120 (MAX)

25% INCREASE (30 SPACES) ALLOWED WITH PERVIOUS PAVEMENT

24 ADDITIONAL SPACES PROVIDED
24 SPACES (MIN) SHALL BE CONSTRUCTED OF PERVIOUS PAVEMENT

27 PERVIOUS SPACES PROVIDED (12 EX AND 15 PROPOSED)

144 SPACES PROVIDED (72 EX AND 72 PROPOSED)

48 BIKE SPACES PROVIDED (24 EX AND 24 PROPOSED)

5 ADA SPACES REQUIRED, 6 PROVIDED. ALL EXISTING AND PROPOSED ADA SPACES ARE VAN ACCESSIBLE

VEHICLE TRIP GENERATION

THE ITE TRIP GENERATION MANUAL PROVIDES THE FOLLOWING ESTIMATES OF TRIPS:

EXISTING APARTMENTS (ITE CODE 220) W/ 24 DWELLING UNITS:

AM PEAK HOUR TRIPS: 12
PM PEAK HOUR TRIPS: 15
DAILY TRIPS: 160

PROPOSED APARTMENTS (ITE CODE 220) W/ 24 DWELLING UNITS:

AM PEAK HOUR TRIPS: 12
PM PEAK HOUR TRIPS: 15
DAILY TRIPS: 160

REMOVE 2 SINGLE FAMILY DWELLINGS: (ITE CODE 210)

AM PEAK HOUR TRIPS ELIMINATED: 2
PM PEAK HOUR TRIPS ELIMINATED: 2
DAILY TRIPS ELIMINATED: 19

NET TOTAL (NET CHANGE):

AM PEAK HOUR TRIPS: 22 (+10)
PM PEAK HOUR TRIPS: 28 (+13)
DAILY TRIPS: 301 (+141)

A TRAFFIC IMPACT ANALYSIS IS NOT PROPOSED.

SHEET INDEX

SEAHAWK COVE - PHASE II
615, 617, 619, 621 & 623 S. KERR AVENUE
WILMINGTON, NC 28403

DEVELOPER/OWNER:
SEAHAWK COVE SH, LLC
305 PETTIGREW DRIVE
WILMINGTON, NC 28412
(910) 367-9782

STROUD ENGINEERING, P.A.
102-D CINEMA DRIVE
WILMINGTON, NC 28403
(910) 815-0775 LICENSE # C-0647

SCALE: 1" = 30'
SHEET: 1 OF 11
COVER

615 PROPOSED 12 UNIT BUILDING #4

617 PROPOSED 12 UNIT BUILDING #3

619 EX 12 UNIT BUILDING #1

623 EX 12 UNIT BUILDING #2

SOUTH KERR AVENUE 60' PUBLIC R/W

HOGGARD DRIVE PUBLIC R/W

FUTURE 10' WIDE MULTI USE PATH (BY OTHERS) PROVIDE PAYMENT IN LIEU

10' BUFFER

6' TALL OPAQUE WOOD FENCE

15' PUBLIC PEDESTRIAN & NON VEHICULAR ACCESS EASEMENT FOR FUTURE MULTI USE TRAIL

10' X 555' AASHTO LEFT SIGHT TRIANGLE

35' FRONT YARD SETBACK

20' SIDE YARD SETBACK

25' REAR YARD SETBACK

6 PROPOSED BIKE PARKING SPACES

CONCRETE WHEELSTOPS

PROVIDE 4" CURBING IN LIEU OF CONCRETE WHEELSTOPS

HC STALL SIGNAGE

RAMP

DETECTABLE WARNING MAT (TYP)

5' SIDEWALK

YARD LIGHT

PROP HYD

3,986 SF ACTIVE OPEN SPACE

9 COMPACT SPACES (DENOTE WITH PAINT)

15' PERVIOUS CONCRETE SPACES

RAISED PLANTER

GRILLING PATIO

CONCRETE SUN DECK

TIE TO EX SIDEWALK

EX 5' CONCRETE SIDEWALK

8,050 SF ACTIVE OPEN SPACE

CONCRETE BASKETBALL COURT

CUT IN CURB RAMP AT PROPOSED CROSSWALK STRIPING

EX 24' DRIVE AISLE

EX 24' ASPHALT DRIVEWAY

6 EX BIKE PARKING SPACES

DENOTE 4 COMPACT SPACES WITH PAINT

5' CROSSWALK

RETAIN 60 (TOTAL) EXISTING ASPHALT PARKING SPACES

RESTRIPE 4 INTERIOR ROWS TO ACCOMODATE A 5' CROSSWALK

EX HYD

PROVIDE OPAQUE WOOD DUMPSTER ENCLOSURE

RETAIN 13 EXISTING PERVIOUS CONCRETE PARKING SPACES

2,480 SF ACTIVE OPEN SPACE

17,403 SF PASSIVE OPEN SPACE

AASHTO DECISION POINT

SIDEWALK CONNECTION TO FUTURE 10' WIDE MULTI USE PATH

10' X 70' NCDOT SIGHT TRIANGLE

29' X 70' SDW SIGHT TRIANGLE

FUTURE 10' WIDE MULTI USE PATH (BY OTHERS) PROVIDE PAYMENT IN LIEU

10' X 480' AASHTO RIGHT SIGHT TRIANGLE

EXISTING WAVE BUS STOP

EX 65' X 30' PUBLIC UTILITY EASEMENT

20' SIDE YARD SETBACK

20 10 0 20 40

GRAPHIC SCALE: 1" = 20'

PRELIMINARY

SEAHAWK COVE – PHASE II 615, 617, 619, 621 & 623 S. KERR AVENUE WILMINGTON, NC 28403	DEVELOPER/OWNER: SEAHAWK COVE SH, LLC 305 PETTIGREW DRIVE WILMINGTON, NC 28412 (910) 367-9782	STROUD ENGINEERING, P.A. 102-D CINEMA DRIVE WILMINGTON, NC 28403 (910) 815-0775 LICENSE # C-0647	SCALE: 1" = 20' SHEET: 2 OF 11 SITE PLAN

SIDEWALK AND JOB FENCING NOTES:

ACCESS TO EXISTING SIDEWALK SHALL BE MAINTAINED TO THE GREATEST EXTENT PRACTICABLE.

MUTCD R9.9 "SIDEWALK CLOSED" SIGNAGE SHALL BE UTILIZED WHEN CLOSURE IS NECESSARY.

ORANGE 4' JOBSITE FENCING SHALL BE INSTALLED AT ENTRANCE POINTS TO PROJECT AT THE CONCLUSION OF EACH WORKDAY.

TREE PROTECTION AREA SPECIAL CONDITIONS:

WHEN GRADING OR EXCAVATION MUST OCCUR UNDER CANOPIES OF SIGNIFICANT TREES, TREE ROOTS SHALL BE PRUNED USING APPROPRIATE ARBORICULTURE TOOLS AND PRACTICES.

TREE REMOVAL LEGEND

- REGULATED TREE TO BE REMOVED — PINE 12"+
- REGULATED TREE TO BE RETAINED — PINE 12"+
- SIGNIFICANT TREE TO BE REMOVED — OAK 36"+
- SIGNIFICANT TREE TO BE RETAINED — OAK 36"+

TREE DATA

REGULATED TREES	REMOVED	RETAINED	TOTAL
FLOWERING (4"–7")	4	3	7
HARDWOODS (8"–23")	17	21	38
PINES (12"–23")	11	33	44
SIGNIFICANT TREES			
FLOWERING (8"+)	2	4	6
HARDWOODS (24"+)	0	2	2
PINES (SHEFFOT (24"+)	0	1	1
PINES (OTHER) (32"+)	0	0	0

NOTES:

SIGNIFICANT TREE MITIGATION CALCULATIONS

SIGNIFICANT TREES REMOVED:

15" BRADFORD PEAR

MITIGATION REQUIRED = 15" X 2 X 25% X 0.33 = 3 TREES

8" DOGWOOD

MITIGATION REQUIRED = 8 X 2 X 100% X 0.33 = 6 TREES

MITIGATION TREE PLANTINGS MAY INCLUDE RIVER BIRCH, LIVE OAK, LONG LEAF PINE, OR OTHER CANOPY SPECIES.

TREES PLANTINGS FOR INTERIOR LANDSCAPING, STREETYARD, AND BUFFER STRIPS SHALL NOT BE COUNTED TOWARDS MITIGATION.

IN ADDITION TO MITIGATION OF SIGNIFICANT TREES, RETAIN OR PLANT 15 TREES (2" CALIPER) PER ACRE OF DISTURBANCE. 1 ACRE OF NEW DISTURBANCE X 15 = 15 TREES REQUIRED (SATISFIED THROUGH RETAINING TREES)

EXISTING TREES SHALL BE RETAINED TO THE GREATEST EXTENT PRACTICABLE REGARDLESS OF SPECIES OR SIZE

ALL REGULATED TREES TO BE REMOVED ARE IN LOCATIONS WHICH CONFLICT WITH ESSENTIAL SITE IMPROVEMENTS.

TREE SPECIES LEGEND

PLAN ABBREV.	COMMON NAME	SCIENTIFIC NAME
MPL	RED MAPLE	ACER RUBRUM
CR MR	CRAPE MYRTLE	LAGERSTROEMIA INDICA
CHERRY	BLACK CHERRY	PRUNUS SEROTINA
BRD PR	BRADFORD PEAR	PYRUS CALLERYANA
LRL OK	LAUREL OAK	QUERCUS LAURIFOLIA
WTR OK	WATER OAK	QUERCUS NIGRA
PINE	LOBLOLLY PINE	PINUS TAEDA
GUM	SWEETGUM	LIQUIDAMBAR STYRACIFLUA
DGWD	DOGWOOD	CORNUS FLORIDA
MAG	SOUTHERN MAGNOLIA	MAGNOLOA GRANDIFLORA
HOL	AMERICAN HOLLY	ILEX OPACA
CYPRESS	BALDCYPRESS	TAXODIUM DISTICHUM
COTNWD	EASTERN COTTONWOOD	POPULUS DELTOIDES
CEDAR	WHITE CEDAR	CHAMAECYPARIS THYOIDES

TREE NOTES:

TREE PRESERVATION/REMOVAL PERMIT IS REQUIRED PRIOR TO CLEARING AND LAND DISTURBANCE.

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

PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.

LABEL PROTECTIVE FENCING WITH SIGNS TO BE PLACED EVERY 50 LINEAR FEET, OR AT LEAST 2 PER AREA, IN BOTH ENGLISH AND SPANISH STATING: "TREE PROTECTION AREA: DO NOT ENTER"

GRAPHIC SCALE: 1" = 20'

PRELIMINARY

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DEVELOPER/OWNER:
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STROUD ENGINEERING, P.A.
102-D CINEMA DRIVE
WILMINGTON, NC 28403
(910) 815-0775 LICENSE # C-0647

SCALE: 1" = 20'
SHEET: 3 OF 11
EXISTING CONDITIONS, TREE PROTECTION, & DEMOLITION PLAN

SIGNIFICANT TREE MITIGATION CALCULATIONS

SIGNIFICANT TREES REMOVED:

15" BRADFORD PEAR

MITIGATION REQUIRED = 15" X 2 X 25% X 0.33 = 3 TREES

8" DOGWOOD

MITIGATION REQUIRED = 8 X 2 X 100% X 0.33 = 6 TREES

MITIGATION TREE PLANTINGS MAY INCLUDE RIVER BIRCH, LIVE OAK, LONG LEAF PINE, OR OTHER CANOPY SPECIES.

TREES PLANTINGS FOR INTERIOR LANDSCAPING, STREETYARD, AND BUFFER STRIPS SHALL NOT BE COUNTED TOWARDS MITIGATION.

IN ADDITION TO MITIGATION OF SIGNIFICANT TREES, RETAIN OR PLANT 15 TREES (2" CALIPER) PER ACRE OF DISTURBANCE. 1 ACRE OF NEW DISTURBANCE X 15 = 15 TREES REQUIRED (SATISFIED THROUGH RETAINING TREES)

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TREE DATA

REGULATED TREES	REMOVED	RETAINED	TOTAL
FLOWERING (4"-7")	4	3	7
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PINES (12"-23")	11	33	44
SIGNIFICANT TREES			
FLOWERING (8"+)	2	4	6
HARDWOODS (24"+)	0	2	2
PINES (SELECT) (24"+)	0	1	1
PINES (OTHER) (32"+)	0	0	0
NOTES:			

TREE REMOVAL LEGEND

REGULATED TREE TO BE REMOVED	PINE
REGULATED TREE TO BE RETAINED	PINE 24"
SIGNIFICANT TREE TO BE REMOVED	OAK 26"
SIGNIFICANT TREE TO BE RETAINED	OAK 36"

TREE SPECIES LEGEND

PLAN ABBREV.	COMMON NAME	SCIENTIFIC NAME
MPL	RED MAPLE	ACER RUBRUM
CR MR	CRAPE MYRTLE	LAGERSTROEMIA INDICA
CHERRY	BLACK CHERRY	PRUNUS SEROTINA
BRD PR	BRADFORD PEAR	PYRUS CALLERYANA
LRL OK	LAUREL OAK	QUERCUS LAURIFOLIA
WTR OK	WATER OAK	QUERCUS NIGRA
PINE	LOBLOLLY PINE	PINUS TAEDA
GUM	SWEETGUM	LIQUIDAMBAR STYRACIFLUA
DGWD	DOGWOOD	CORNUS FLORIDA
MAG	SOUTHERN MAGNOLIA	MAGNOLOA GRANDIFLORA
HOL	AMERICAN HOLLY	ILEX OPACA
CYPRESS	BALDCYPRESS	TAXODIUM DISTICHUM
COTTNWD	EASTERN COTTONWOOD	POPULUS DELTOIDES
CEDAR	WHITE CEDAR	CHAMAECYPARIS THYOIDES

LANDSCAPE SCHEDULE

SYMBOL	SPECIES	CATAGORY	MINIMUM SIZE	NO.
	LIVE OAK	LARGE SHADE TREE	2 INCH CALIPER	13
	CRAPE MYRTLE	SMALL TREE	5 GAL POT	15
	AZALEA	SHRUB	12 INCH HEIGHT	18
	DWARF PITTOSPORUM	SHRUB	12 INCH HEIGHT	37
	ASIATIC JASMINE	GROUNDCOVER	2.5 QT POT	85

LANDSCAPING CALCULATIONS

STREETYARD

100 LF PROPERTY FRONTAGE WITH NO DRIVEWAY = 100 LF

STREETYARD MULTIPLIER = 18 X 100 = 1,800 SF REQUIRED (1,800 SF PROVIDED)

STREETYARD IS ADJACENT TO OVERHEAD POWER LINES--PROVIDE UNDERSTORY TREES
3 UNDERSTORY TREE PER 600 SF = 9 REQUIRED (9 PROVIDED)

6 SHRUBS PER 600 SF = 18 REQUIRED (18 PROVIDED)

PARKING AREA INTERIOR SHADING

32,008 SF BUA X 20% = 6,401 SF REQUIRED (8,482 SF PROVIDED)

PROVIDE/RETAIN 8 CANOPY TREES AT 707 SF EA = 5,656 SF
PROVIDE 9 UNDERSTORY TREES AT 314 SF EA = 2,826 SF

PARKING AREA PERIMETER -- NA

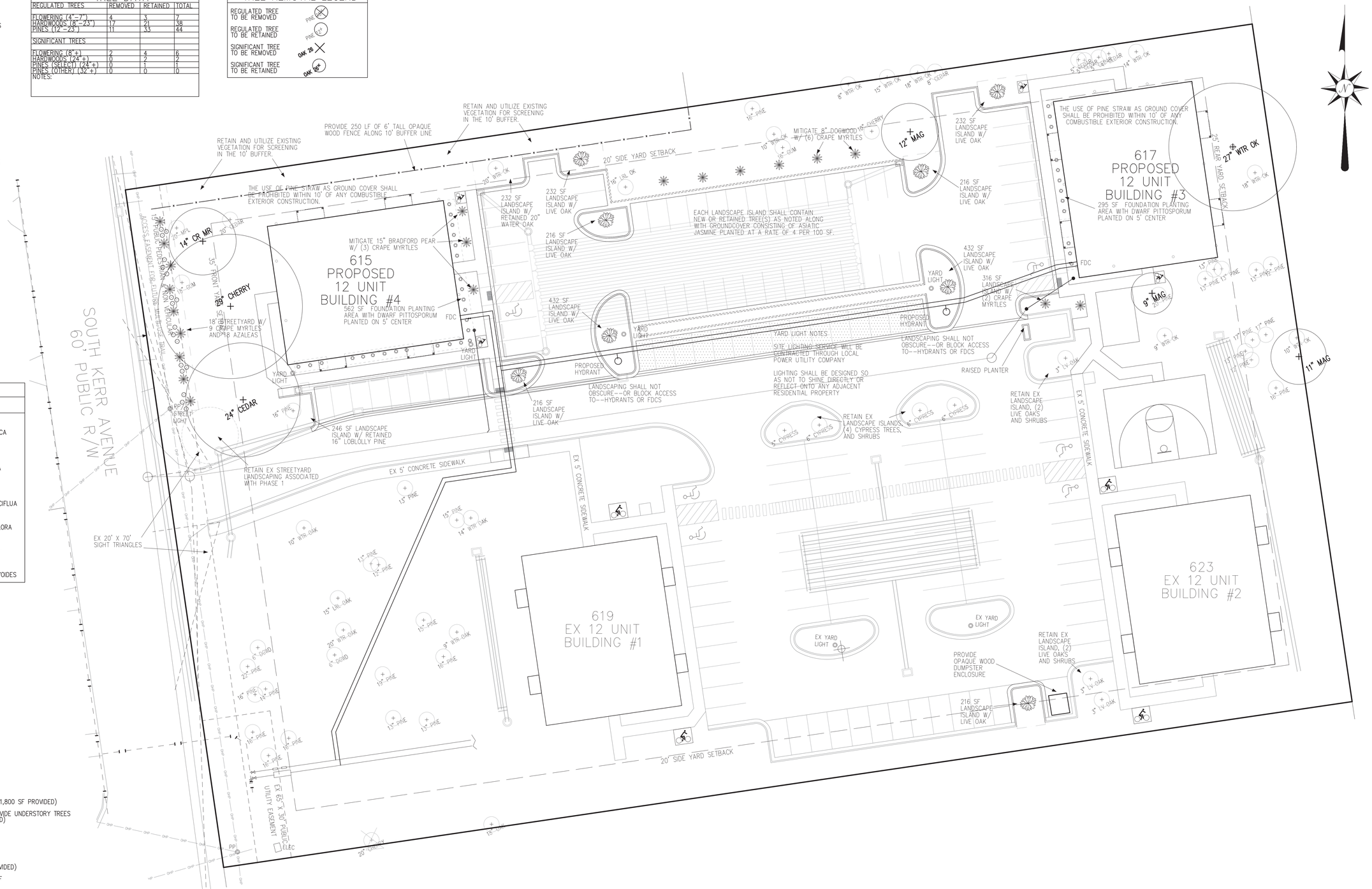
FOUNDATION PLANTING CALCULATIONS

BUILDING #3--

30 FT FACADE HEIGHT X 75 LF OF FACADE ADJACENT TO PARKING/DRIVE AISLE =
2,250 SF X 12% = 270 SF REQUIRED (295 SF PROVIDED)

BUILDING #4--

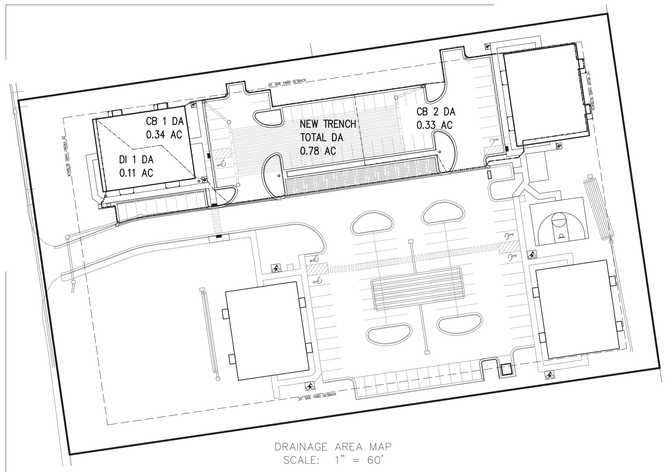
30 FT FACADE HEIGHT X 135 LF OF FACADE ADJACENT TO PARKING/DRIVE AISLE =
4,050 SF X 12% = 486 SF REQUIRED (562 SF PROVIDED)



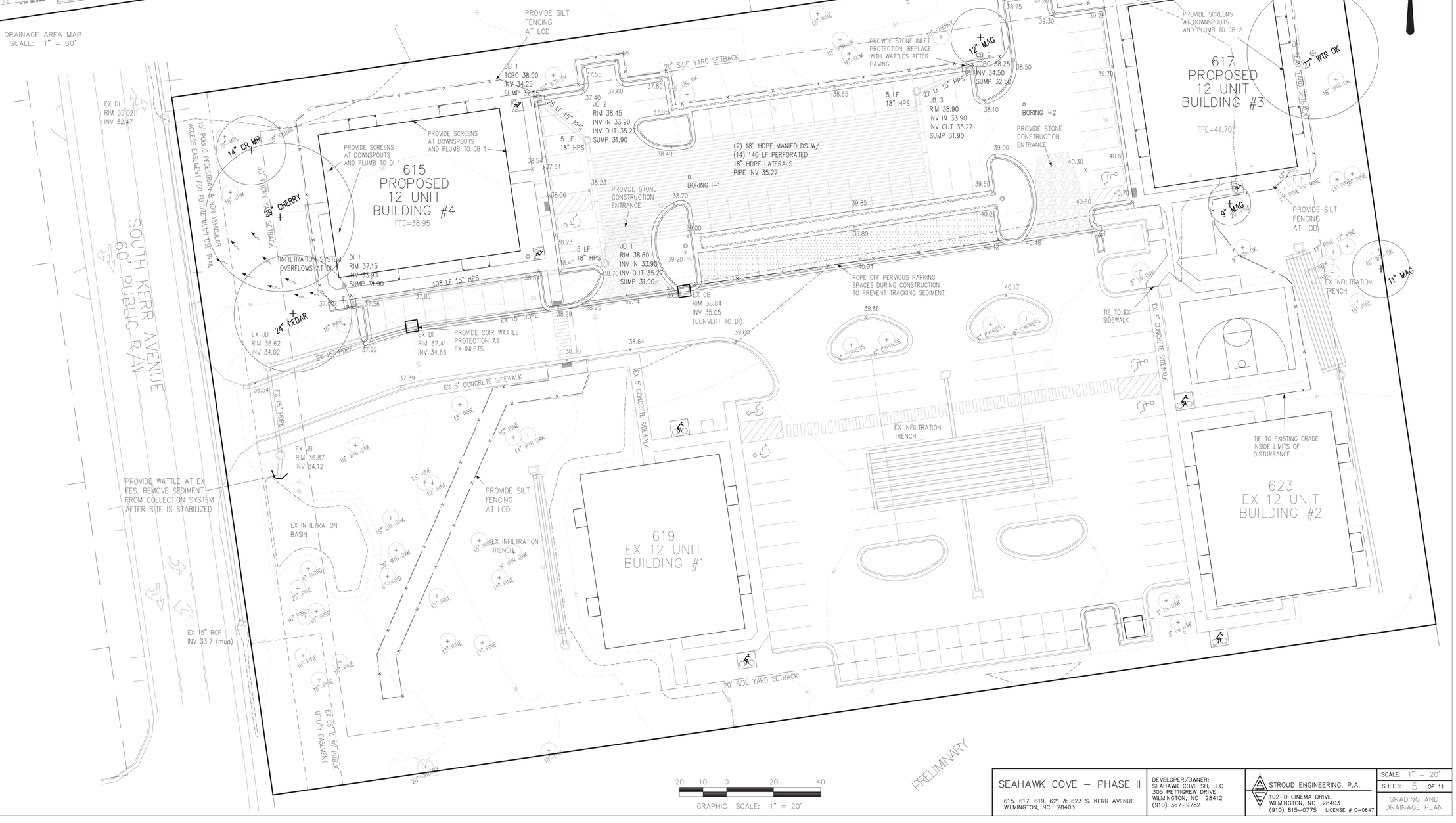
GRAPHIC SCALE: 1" = 20'

PRELIMINARY

SEAHAWK COVE – PHASE II 615, 617, 619, 621 & 623 S. KERR AVENUE WILMINGTON, NC 28403	DEVELOPER/OWNER: SEAHAWK COVE SH, LLC 305 PETTIGREW DRIVE WILMINGTON, NC 28412 (910) 367-9782	STROUD ENGINEERING, P.A. 102-D CINEMA DRIVE WILMINGTON, NC 28403 (910) 815-0775 LICENSE # C-0647	SCALE: 1" = 20' SHEET: 4 OF 11 LANDSCAPING PLAN

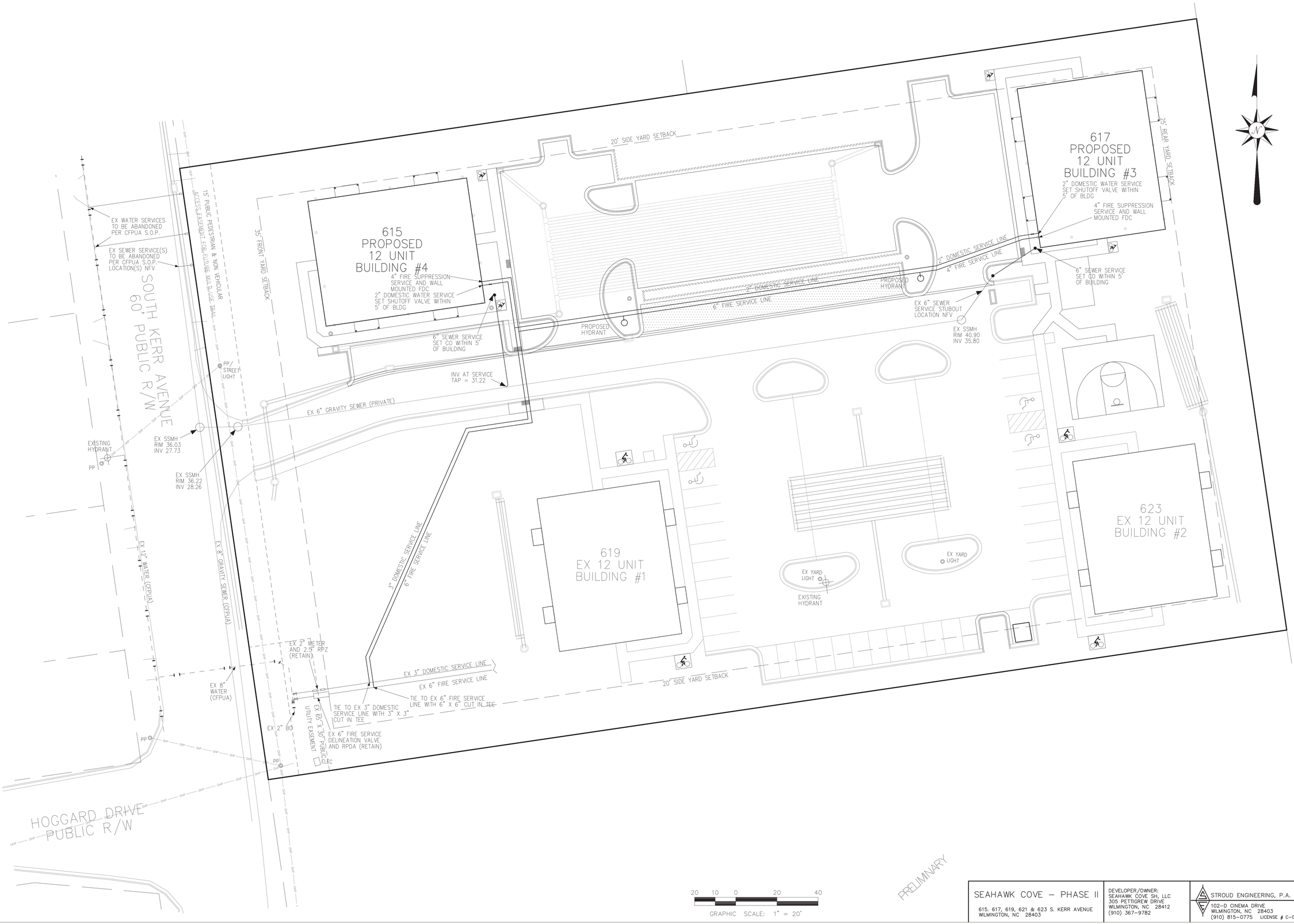


DRAINAGE AREA MAP
SCALE: 1" = 60'



20 10 0 20 40
GRAPHIC SCALE: 1" = 20'

SEAHAWK COVE – PHASE II 615, 617, 619, 621 & 623 S. KERR AVENUE WILMINGTON, NC 28403	DEVELOPER/OWNER: SEAHAWK COVE SH, LLC 305 PETTIGREW DRIVE WILMINGTON, NC 28412 (910) 367-9782	STROUD ENGINEERING, P.A. 102-D CINEMA DRIVE WILMINGTON, NC 28403 (910) 815-0775 LICENSE # C-0647	SCALE: 1" = 20' SHEET: 5 OF 11 GRADING AND DRAINAGE PLAN

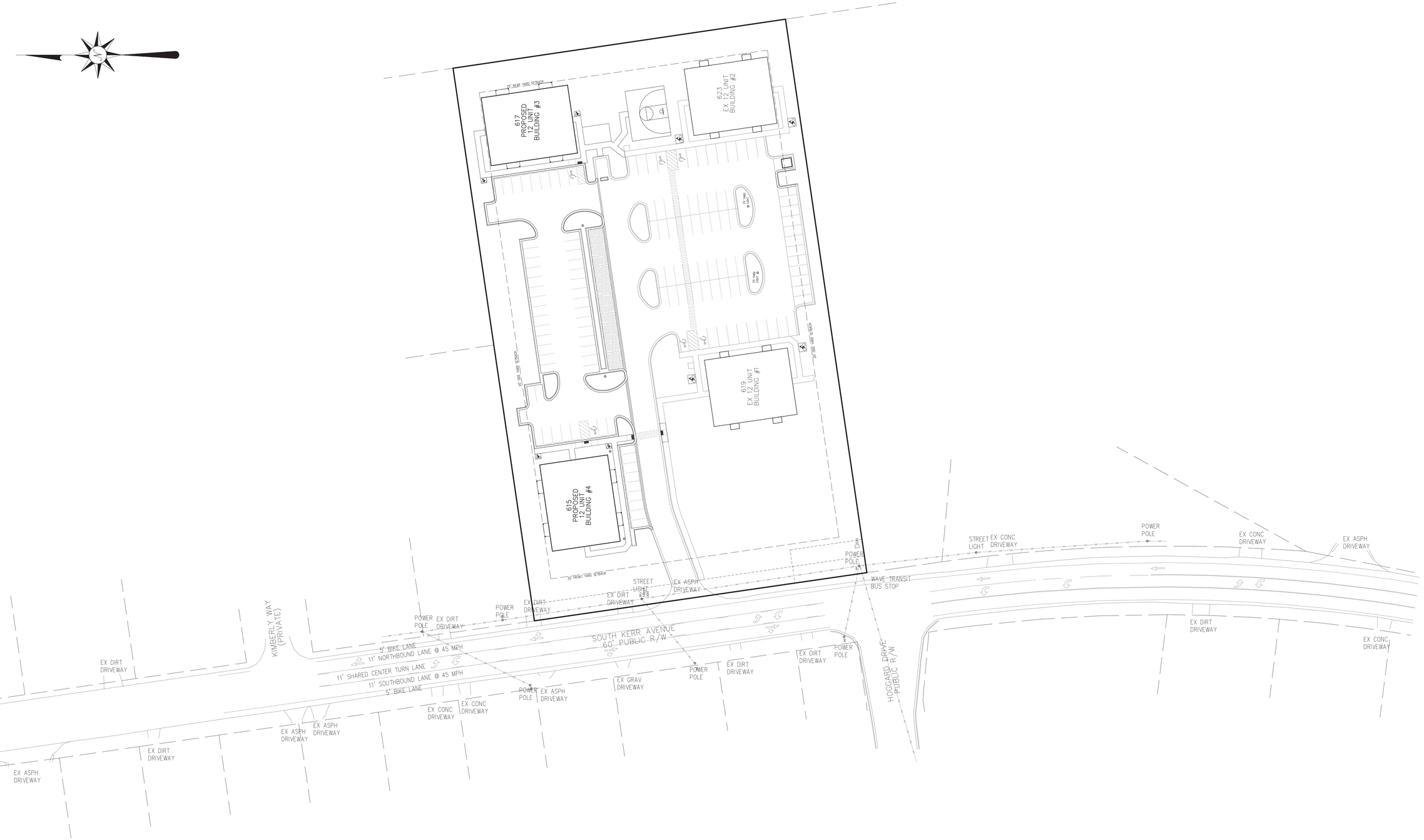


20 10 0 20 40

GRAPHIC SCALE: 1" = 20'

PRELIMINARY

SEAHAWK COVE – PHASE II 615, 617, 619, 621 & 623 S. KERR AVENUE WILMINGTON, NC 28403	DEVELOPER/OWNER: SEAHAWK COVE SH, LLC 305 PETTIGREW DRIVE WILMINGTON, NC 28412 (910) 367-9782	STROUD ENGINEERING, P.A. 102-D CINEMA DRIVE WILMINGTON, NC 28403 (910) 815-0775 LICENSE # C-0647	SCALE: 1" = 20' SHEET: 6 OF 11 UTILITY PLAN

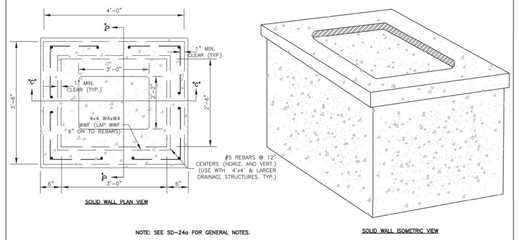


40 20 0 40 80

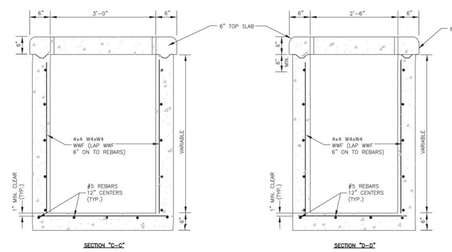
GRAPHIC SCALE: 1" = 40'

PRELIMINARY

SEAHAWK COVE – PHASE II 615, 617, 619, 621 & 623 S. KERR AVENUE WILMINGTON, NC 28403	DEVELOPER/OWNER: SEAHAWK COVE SH, LLC 305 PETTIGREW DRIVE WILMINGTON, NC 28412 (910) 367-9782	STROUD ENGINEERING, P.A. 102-D CINEMA DRIVE WILMINGTON, NC 28403 (910) 815-0775 LICENSE # C-0647	SCALE: 1" = 40' SHEET: 7 OF 11 ROADWAY INVENTORY



NOTE: SEE SD-24a FOR GENERAL NOTES.

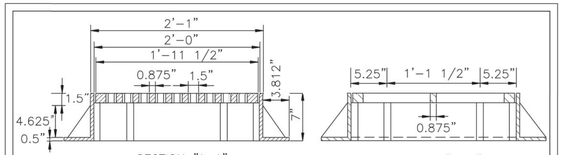


DATE: 2001	STANDARD DETAIL	CITY OF WILMINGTON NORTH CAROLINA
DRAWN BY JSR/CMR	PRECAST DRAINAGE STRUCTURE SOLID WALL	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, NC 28402 (910) 341-7807
CHECKED BY B.P., P.E.		
SCALE NOT TO SCALE		SD 2-24

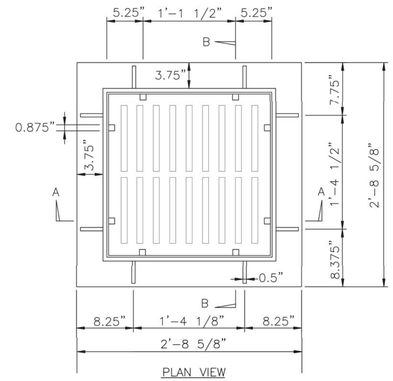
GENERAL NOTES:

* USE 4000 PSI CONCRETE, PROVIDE FOR H-20 TRAFFIC LOADING.
* PRCVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FAVRIC CONFORMING TO ASTM A185,
* PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704
* PROVIDE FORMED OPENINGS, FOR PIPE TO PROVIDE REQUIRED SIZE AND LOCATION. SEAL OPENINGS WITH HYDRAULIC CEMENT.
* ALL ELEMENTS PRECAST TO MEET ASTM C913.
* SET ON 6" WASHED STONE
* FRAME AND GRATE HEIGHT MAY BE ADJUSTED WITH BRICK.
* PRCVIDE PRECAST STURCTURES OVER 4'-0" IN DEPTH WITH STEPS/LADDER INSTALLED IN ACCORDANCE WITH ASHA STANDARD 1910.27 AND AS FIELD CONDITIONS DICTATE.
* WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR AS LONG AS THE SAME AREA OF STEEL IS PROVIDED,
* SEAL JOINTS WITH A FLEXIBLE BUTYL RUBBER BASE CONFORMING TO FEDERAL SPECIFICATION SS-S-21A, AASHTO M-19B, TYPE B - BUTYL RUBBER.
* USE FRAME AND GRATE AS PER SD 14-04
* GRCUT INVERT TO PROVIDE SMOOTH FLOW

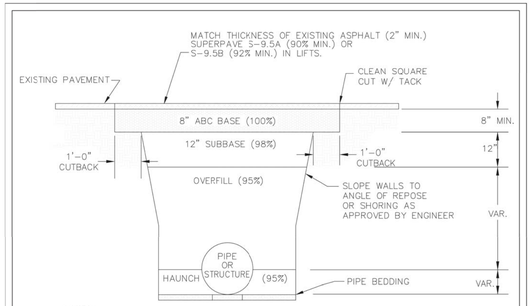
DATE: 08/2020	STANDARD DETAIL	CITY OF WILMINGTON NORTH CAROLINA
DRAWN BY JSR/CMR	PRECAST DRAINAGE STRUCTURE GENERAL NOTES	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, NC 28402 (910) 341-7807
CHECKED BY B.P., P.E.		
SCALE NOT TO SCALE		SD 2-24a



MINIMUM AVERAGE WEIGHT
FRAME 195 LBS.
GRATE 145 LBS.



DATE: 2001	STANDARD DETAIL	CITY OF WILMINGTON NORTH CAROLINA
DRAWN BY JSR/CMR	DROP INLET CASTINGS	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, NC 28402 (910) 341-7807
CHECKED BY B.P., P.E.		
SCALE NOT TO SCALE		SD 14-04



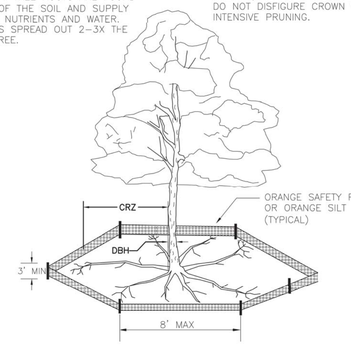
NOTES:

1. CONTRACTOR SHALL ENSURE BOTTOM OF TRENCH IS SUITABLE FOR INSTALLATION AND DOES NOT REQUIRE FOUNDATION CONDITIONING STONE.
2. FILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE.
3. SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION, (I.E. #57, ABC, CRUSHED LIMESTONE, CLEAN SAND, FLOWABLE FILL, ETC).
4. SOIL SHALL BE INSTALLED IN 6"-8" LIFTS AND COMPACTED BY A MECHANIZED TAMPER (I.E JUMPING JACK), HOWEVER, VIBRATORY ROLLERS > 18" WIDTH MAY BE USED FOR LARGER EXCAVATIONS. THE PLATE TAMP METHOD SHALL NOT BE USED.
5. ALL APPROVED CASTINGS SHALL BE SET FLUSH TO GRADE AND SUPPORTED IF APPLICABLE.
6. COMPACT MATERIALS TO MINIMUM % DENSITY SHOWN IN DIAGRAM AS DETERMINED BY THE STANDARD PROCTOR METHOD ASTM D-698-A FOR SOILS; AND ASTM D-698-C FOR ABC STONE; AND BY NUCLEAR GAUGE OR CORE SAMPLE FOR ASPHALT.
7. CUTBACKS OF ASPHALT SHALL BE PREPARED ON EDGE OF EXCAVATION OVER TOP OF UNDISTURBED SOIL.

DATE: MAY, 2013	STANDARD DETAIL	CITY OF WILMINGTON NORTH CAROLINA
DRAWN BY JSR	PAVEMENT REPAIRS- UTILITY CUTS	CITY OF WILMINGTON ENGINEERING OFFICE 212 OPERATIONS CENTER DRIVE WILMINGTON N.C. 28412 (910) 341-7807
CHECKED BY D.E.C., P.E.		
SCALE NOT TO SCALE		SD 1-05

NOTE:
THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.

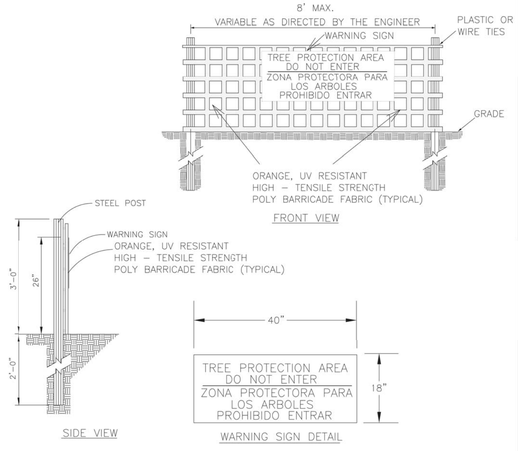
NOTE:
CROWN OF THE TREE IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN, FILTER THE AIR, REDUCE WIND AND SOFTEN NOISE. DO NOT DISFIGURE CROWN WITH INTENSIVE PRUNING.



NOTES:

1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATTS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
4. WHERE SIDEWALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK, SHALL BE IMPLEMENTED AS NECESSARY.
5. FOR ALL TREES, CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK IS PROHIBITED. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIALS OR EQUIPMENT SHALL BE STORED BENEATH TREES. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
6. FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF $500/DAY. DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.

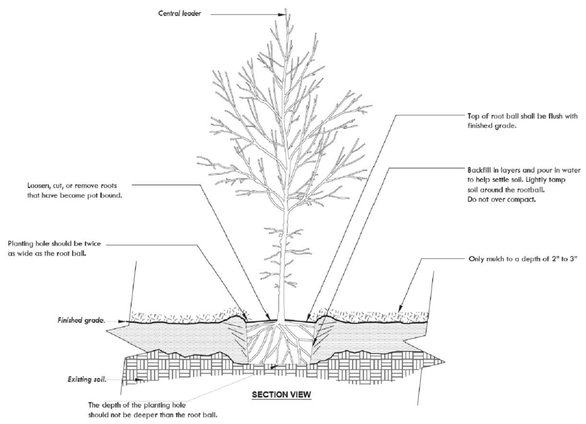
DATE: JAN, 2015	STANDARD DETAIL	CITY OF WILMINGTON NORTH CAROLINA
DRAWN BY JSR	TREE PROTECTION DURING CONSTRUCTION SHEET 1 of 2	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, NC 28402 (910) 341-7807
CHECKED BY RDG, P.E.		
SCALE NOT TO SCALE		SD 15-09



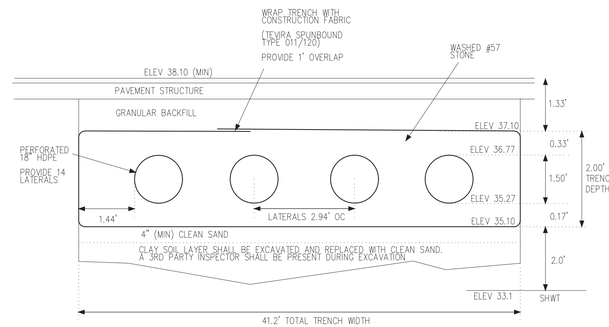
NOTES:

1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 100' IN PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA.
4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT.
5. TREE PROTECTION FENCING AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION.
6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

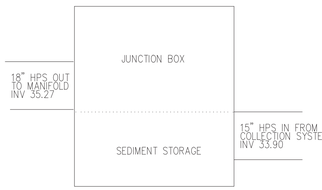
DATE: JAN, 2015	STANDARD DETAIL	CITY OF WILMINGTON NORTH CAROLINA
DRAWN BY JSR	TREE PROTECTION DURING CONSTRUCTION SHEET 2 of 2	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, NC 28402 (910) 341-7807
CHECKED BY RDG, P.E.		
SCALE NOT TO SCALE		SD 15-09



TREE PLANTING DETAIL
NTS



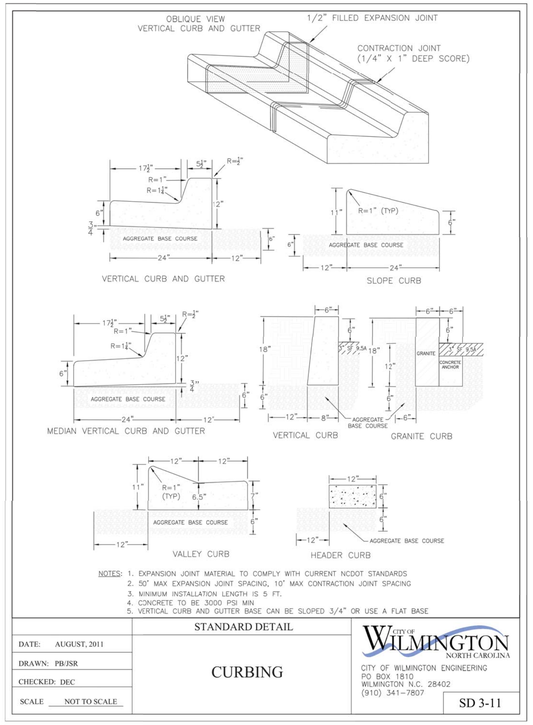
INFILTRATION TRENCH DETAIL
NTS



JUNCTION BOX DETAIL
NTS

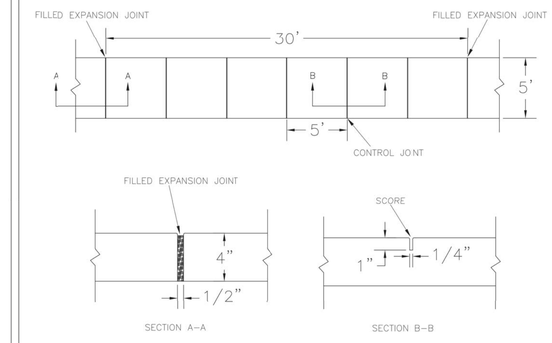
PRELIMINARY

SEAHAWK COVE - PHASE II 615, 617, 619, 621 & 623 S. KERR AVENUE WILMINGTON, NC 28403	DEVELOPER/OWNER: SEAHAWK COVE SH, LLC 305 PETTIGREW DRIVE WILMINGTON, NC 28412 (910) 367-9782	STROUD ENGINEERING, P.A. 102-D CINEMA DRIVE WILMINGTON, NC 28403 (910) 815-0775 LICENSE # C-0647	SCALE: AS NOTED SHEET: 8 OF 11 DETAILS



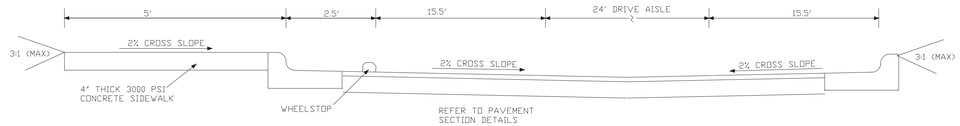
NOTES:
1. EXPANSION JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS
2. 50' MAX EXPANSION JOINT SPACING, 10' MAX CONTRACTION JOINT SPACING
3. MINIMUM INSTALLATION LENGTH IS 5 FT.
4. CONCRETE TO BE 3000 PSI MIN.
5. VERTICAL CURB AND GUTTER BASE CAN BE SLOPED 3/4" OR USE A FLAT BASE

DATE: AUGUST, 2011	STANDARD DETAIL	CITY OF WILMINGTON NORTH CAROLINA CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON N.C. 28402 (910) 341-7807
DRAWN: PB/JSR	CURBING	
CHECKED: DEC		
SCALE NOT TO SCALE		SD 3-11



NOTES:
1. JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
2. SANITARY SEWER CLEAN-OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
3. MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
4. CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAIN WITHIN A DRIVEWAY APRON) SHALL BE CLASS "A" - 3,000 PSI.
5. MINIMUM REPLACEMENT FOR REPAIRS IS A 5' X 5' PANEL
6. 4" STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS
7. MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12"
8. MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1
9. MIN GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1 DIRECTION. MAX CROSS SLOPE IS 2%. MAX LONGITUDINAL SLOPE IS 8.3%, 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THE SLOPE OF THE EXISTING ADJACENT ROAD.

DATE: OCTOBER, 2010	STANDARD DETAIL	CITY OF WILMINGTON NORTH CAROLINA CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON N.C. 28402 (910) 341-7807
DRAWN: PB/JSR	SIDEWALK	
CHECKED: DEC		
SCALE NOT TO SCALE		SD 3-10

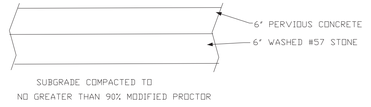


TYPICAL PARKING LOT SECTION

NTS

ASPHALT PAVEMENT SECTION

NTS



PERVIOUS CONCRETE PAVEMENT SECTION

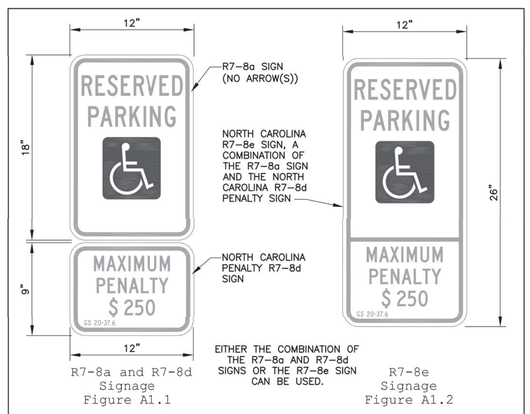
NTS

NOTES:

VERIFY COMPACTION OF INSITU SOILS PRIOR ROLLING.

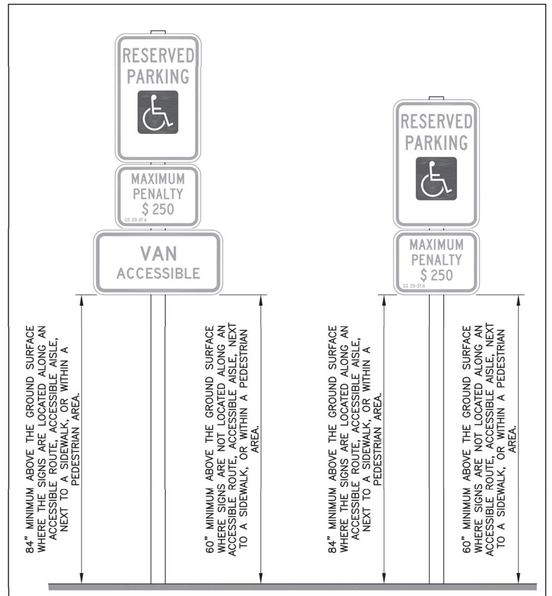
SCARIFY SOIL PRIOR TO PLACING STONE.

FENCE OR ROPE OFF PERVIOUS PARKING AREA FOR THE DURATION OF CONSTRUCTION TO PREVENT CONSTRUCTION TRAFFIC FROM PARKING ON PREPARED SUBGRADE, STONE BASE, OR FINISHED CONCRETE

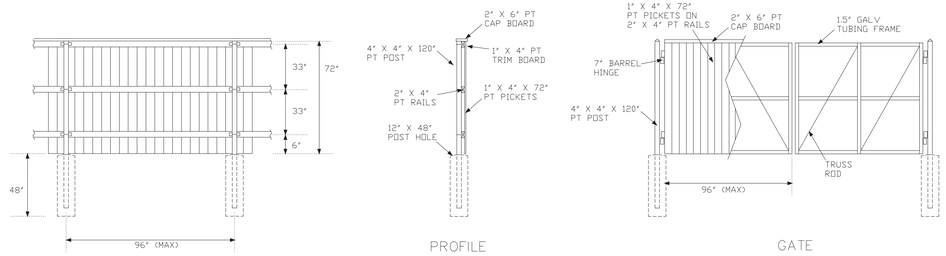


FOR DESIGN OF ACCESSIBLE SIGNS, SEE THE FOLLOWING:
- *2009 MUTCD* OR LATEST EDITION.
- 2004 EDITION OF THE STANDARD HIGHWAY SIGNS AND THE 2012 SUPPLEMENT OR LATEST EDITION.
- NORTH CAROLINA 2009 SUPPLEMENT TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES OR LATEST EDITION
- NCDOT DRAWING H-1_S FOR SIGNS SP00075, SP00076, AND SP00077.

DATE: NOVEMBER 8, 2016	Accessible Parking Signs	CITY OF WILMINGTON TRAFFIC ENGINEERING P.O. Box 1810 • Wilmington, NC 28402 • (910) 341-7800
REVISED: -		
DRAWN BY: DALE THOMPSON		
CHECKED BY: RANDALL GLAZIER		
SCALE: NOT TO SCALE		DETAIL NO.: TE7-01



DATE: NOVEMBER 8, 2016	Accessible Parking Signs Mounting Configuration and Mounting Heights	CITY OF WILMINGTON TRAFFIC ENGINEERING P.O. Box 1810 • Wilmington, NC 28402 • (910) 341-7800
REVISED: -		
DRAWN BY: DALE THOMPSON		
CHECKED BY: RANDALL GLAZIER		
SCALE: NOT TO SCALE		DETAIL NO.: TE7-02



WOODEN OPAQUE FENCE AND DUMPSTER ENCLOSURE

NTS

PRELIMINARY

SEAHAWK COVE - PHASE II 615, 617, 619, 621 & 623 S. KERR AVENUE WILMINGTON, NC 28403	DEVELOPER/OWNER: SEAHAWK COVE SH, LLC 305 PETTIGREW DRIVE WILMINGTON, NC 28412 (910) 367-9782	STROUD ENGINEERING, P.A. 102-D CINEMA DRIVE WILMINGTON, NC 28403 (910) 815-0775 LICENSE # C-0647	SCALE: AS NOTED SHEET: 9 OF 11 DETAILS

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

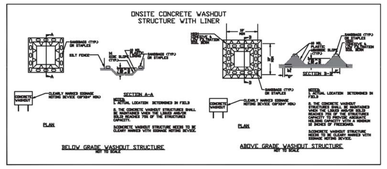
PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

NORTH CAROLINA *Environmental Quality*



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING | EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual day rainfall information is available, record the cumulative rain measurement for those un-attended days (anc this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDCs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetlnd has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing anc grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevtions shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been noted.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes [After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring. Inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill cr release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible***. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days,*** a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days,*** a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NORTH CAROLINA *Environmental Quality*

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING | EFFECTIVE: 04/01/19

EROSION & SEDIMENT CONTROL MAINTENANCE PLAN

1. ALL EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF INCH RAINFALL.

2. ALL POINTS OF EGRESS WILL HAVE CONSTRUCTIONS ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2" OF #4 STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL SPILLED, WASHED, OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS.

3. SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTION, BLOCK AND GRAVEL INLET PROTECTION, ROCK DOUGHNUT INLET PROTECTION, ROCK PIPE INLET PROTECTION, AND GUTTERBUDDY INLET PROTECTOIN WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS AS DESIGNED. DEBRIS WILL BE REMOVED FROM THE ROCK AND HARWARE CLOTH TO ALLOW PROPER DRAINAGE. SILT SACKS WILL BE EMPTIED ONCE A WEEK AND AFTER EVERY RAIN EVENT. SEDIMENT WILL BE REMOVED FROM AROUND BEAVER DAMS, DANDY SACKS/SOCKS, AND GUTTERBUDDIES ONCE A WEEK AND AFTER EVERY RAIN EVENT. NOTE THAT THE GUTTERBUDDY IS REUSABLE AND SHOULD BE STORED OUT OF DIRECT SUNLIGHT BETWEEN JOBS.

4. DIVERSION DITCHES WILL BE CLEANED OUT IMMEDIATLEY TO REMOVE SEDIMENT OR OBSTRUCTIONS FROM THE FLOW AREA. THE DIVERSION RIDGES WILL ALSO BE REPAIRED. SWALES MUST BE RESTABLIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY PHASE OF PHASE OF ACTIVITY ASSOCIATED WITH A SWALE.

5. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL. STAKE SPACING WILL BE 6 FEET (MAX) WITH THE USE OF EXTRA STRENGHT FABRIC WITHOUT WIRE BACKING. STAKE SPACING WILL BE 8 FEET (MAX) WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED. IF ROCK FILTERS ARE USED AT LOW POINTS IN THE SEDIMENT FENCE, THE ROCK WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF FULL OF SEDIMENT, NO LONGER DRAINS AS DESIGNED, OR IS DAMGED.

6. SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND BASINS WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR WHEN THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE FIRST BAFFLE. IN SKIMMER BASINS, FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN.

7. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL SLOPES WILL BE SLABILIZED WITHIN 21 CALENDAR DAYS. ALL OTHER AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS.

8. FLOCCULANTS WILL BE USED TO ADDRESS TURBIDITY ISSUES. THE PUMPS, TANKS, HOSES AND INJECTION SYSTEMS WILL BE CHECKED FOR PROBLEMS OR TURBID DISCHARGES DAILY.

9. REPAIR OR REPLACE SPLIT, TORN, UNRAVELING, OR SLUMPING WATTLES. REMOVE SEDIMENT FROM BEHIND WATTLES ONCE IT HAS ACCUMULATED TO ONE-HALF THE WATTLE DIAMETER.

CONSTRUCTION SEQUENCE

1. INSTALL INLET PROTECTION, SILT FENCE, AND STONE CONSTRUCTION ENTRANCES.
2. CLEAR & GRADE
3. INSTALL UNDERGROUND UTILITIES
4. INSTALL PAVEMENT
5. PROVIDE 100% VEGETATIVE COVER OF ALL DISTURBED SOILS.
6. CLEAN SEDIMENT FROM PIPES AFTER STABILIZATION.

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 machinary.
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 daMGe.

PERMANENT SEEDING TABLE 1

Seeding Dates	Recommended Planting	Rate (lb/ac)
Feb. 15 – Apr. 1 Sep. 1 – Nov. 1	Tall Fescue Mixture	see table 2
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 Pensacola Bahiagrass Kobe Lespedeza	80 50 40
Dry to well drained soils	Pensacola Bahiagrass Common Bermudagrass Kobe Lespedeza German Millet	50 30 10 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 Rye Grain	200 25
Dry to well drained soils	Hybrid Bermudagrass	50
Well drained sandy loam to sand, towns.	Centipedegrass	10-20

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

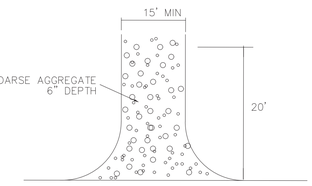
For highly erosive areas or as directed by an engineer, sod shall be provided.

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

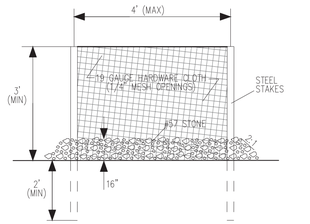
SOD INSTALLATION

1. Fertilize and lime per recommendations of soil tests or apply 100 lb/1,000 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.



CONSTRUCTION ENTRANCE DETAIL

NTS



STONE INLET PROTECTION

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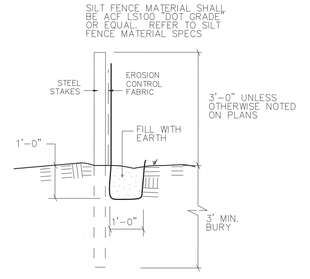
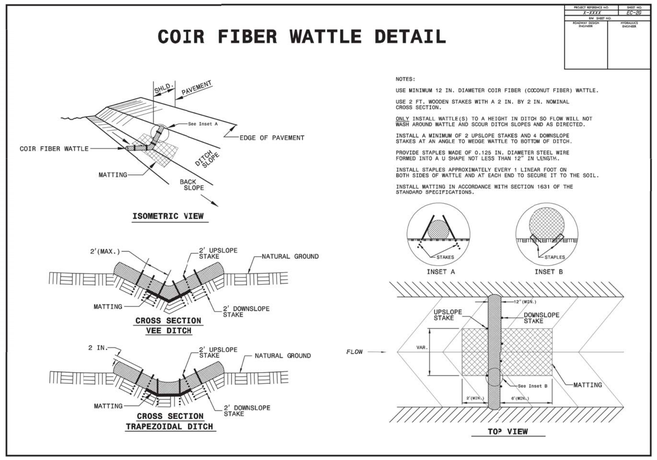


TYPICAL SILT FENCE

NTS

NOTE: POSTS TO BE SPACED 6 FT O.C. OR 8 FT O.C. W/ 14 GAUGE 6 X 6 WIRE MESH REINFORCEMENT. WOODEN POSTS ARE NOT ACCEPTABLE

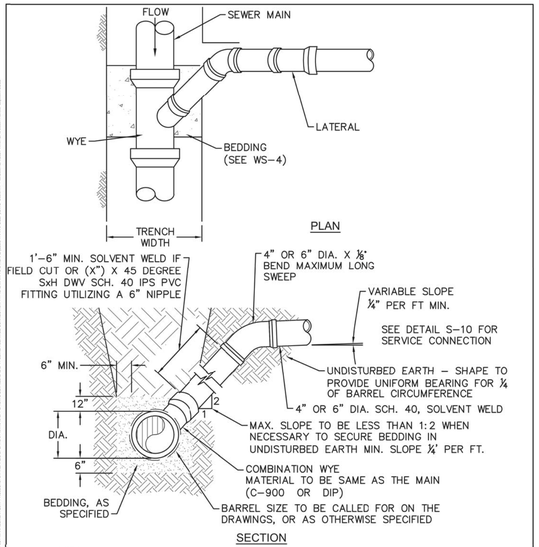
COIR FIBER WATTLE DETAIL



PRELIMINARY

SEAHAWK COVE – PHASE II 615, 617, 619, 621 & 623 S. KERR AVENUE WILMINGTON, NC 28403	DEVELOPER/OWNER: SEAHAWK COVE SH, LLC 305 PETTIGREW DRIVE WILMINGTON, NC 28412 (910) 367-9782	STROUD ENGINEERING, P.A. 102-D CINEMA DRIVE WILMINGTON, NC 28403 (910) 815-0775 LICENSE # C-0647

SCALE: AS NOTED
SHEET: 10 OF 11
DETAILS



NOTES:

1. FOR PRIVATE 8" SERVICES, MANHOLES ARE REQUIRED FOR CONNECTION TO SYSTEM AND AT THE PROPERTY LINE, WITH REQUIRED EASEMENT.
2. ALL SERVICES CONNECTING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF DIP, WITH PROTECTIVE LINING.

DETAIL:		DETAIL NO:
SEWER SERVICE CONNECTION - MAIN to LATERAL (LESS THAN 8' DEEP)		S-11
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/2022	SHEET NO: -

CAPE FEAR PUBLIC UTILITY AUTHORITY
235 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
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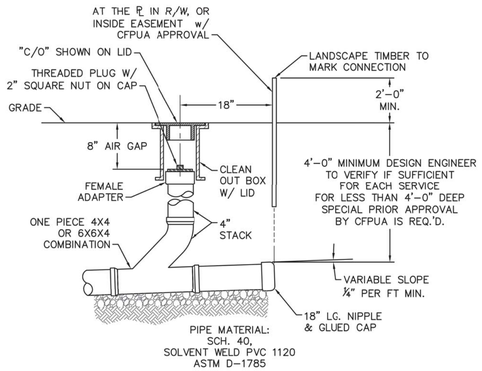

NOTES:

1. FOR PRIVATE 8" SERVICES, MANHOLES ARE REQUIRED FOR CONNECTION TO SYSTEM AND AT THE PROPERTY LINE, WITH REQUIRED EASEMENT.
2. CLEANOUTS SHALL BE LOCATED A MINIMUM OF 6 FEET FROM ALL PROPERTY CORNERS.

DETAIL:		DETAIL NO:
SEWER SERVICE CONNECTION - TYPICAL CLEAN-OUT		S-13
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/2022	SHEET NO: -

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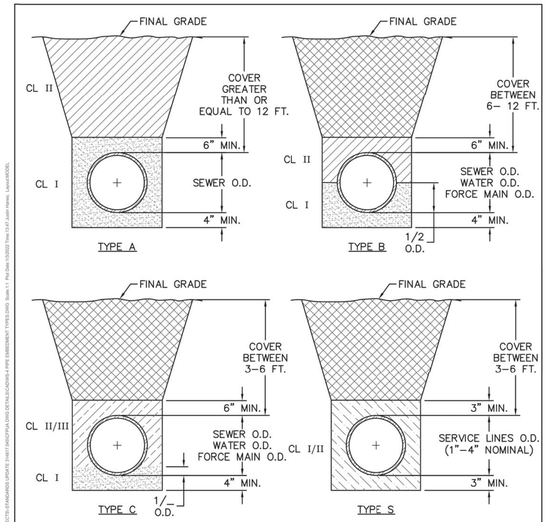

COMPACTION NOTES:

1. ALL ZONES: 95% STD EFFORT PER ASTM D698, EXCEPT AS STATED IN COMPACTION NOTE 2.
2. 12" SUBGRADE UNDER PAVEMENT: 98% STD EFFORT PER ASTM D698.
3. BEDDING REQUIREMENTS FOR SEWER FORCE MAINS AND WATER MAINS WITHIN TYPE A THROUGH TYPE S CONDITIONS, SHALL BE FOLLOWED IF IT HAS BEEN DETERMINED THAT UNSUITABLE SOILS EXIST WITHIN THE EXCAVATED TRENCH. OTHERWISE BEDDING FOR SEWER FORCE MAINS AND WATER MAINS MAY BE CLASS I OR CLASS II.

DETAIL:		DETAIL NO:
PIPE EMBEDMENT TYPES		WS-4
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/2022	SHEET NO: -

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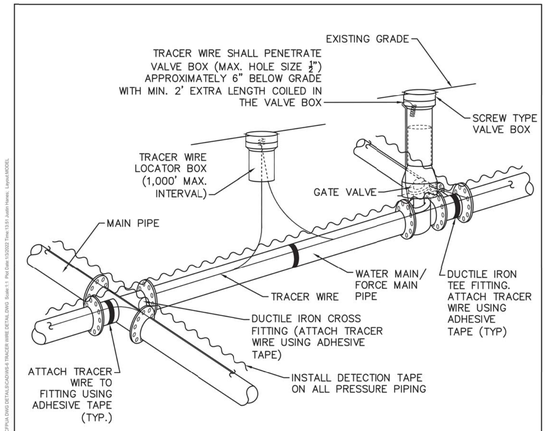

NOTES:

1. TRACER WIRE SHALL BE INSTALLED PER THE CFPUA MSM.
2. WIRE SHALL BE STRAPPED TO ALL PVC PIPING WITH ADHESIVE TAPE AT 12 FOOT INTERVALS.
3. SECURE WIRE TO ALL TEE AND CROSS FITTINGS WITH ADHESIVE TAPE.
4. ALL SPLICES IN THE WIRE SHALL BE MADE WITH 3M DBR DIRECT BURY SPLICE KITS.

DETAIL:		DETAIL NO:
TRACER WIRE DETAIL		WS-6
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/2022	SHEET NO: -

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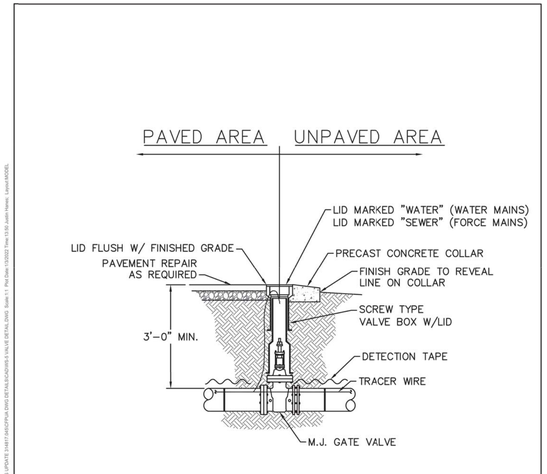

NOTES:

1. TRACER WIRE SHALL PENETRATE VALVE BOX THROUGH DRILLED HOLE APPROX. 6" BELOW GRADE WITH MINIMUM 2–FEET EXTRA LENGTH COILED IN THE VALVE BOX. SEE WS–6.

DETAIL:		DETAIL NO:
VALVE DETAIL		WS-5
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/2022	SHEET NO: -

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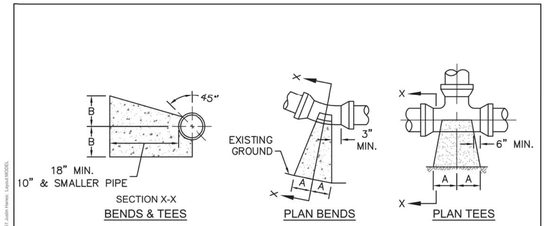

SIZE	90 BENDS A	90 BENDS B	45 BENDS A	45 BENDS B	22–1/2 BENDS A	22–1/2 BENDS B	TEES/PLUGS A	TEES/PLUGS B	45 VERT. BENDS
3"	8"	6"	5"	6"	3"	7"	6"	8"	27"
4"	8"	9"	5"	8"	3"	11"	6"	9"	28"
6"	14"	11"	9"	9"	8"	8"	12"	9"	36"
8"	16"	16"	12"	12"	10"	13"	14"	13"	42"
10"	18"	22"	15"	14"	14"	16"	18"	15"	50"
12"	20"	28"	18"	17"	16"	16"	22"	18"	62"
14"	26"	29"	21"	19"	18"	18"	26"	20"	72"
16"	33"	29"	25"	21"	20"	21"	32"	21"	83"
18"	40"	30"	28"	24"	22"	23"	36"	24"	88"

NOTES:

1. THRUST BLOCKING IS NOT PERMITTED EXCEPT IN SPECIAL INSTALLATIONS WHERE DESIGNED BY ENGINEER AND APPROVED BY CFPUA.
2. ALLOW 7–DAY MINIMUM CONCRETE CURE TIME BEFORE PLACING LOAD ON THRUST BLOCK
3. BASED ON 150 PSI TEST PRESSURE AND 2,000 PSF SOIL BEARING CAPACITY.
4. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.
5. PIPE & FITTINGS TO BE WRAPPED IN 10 MIL PLASTIC PRIOR TO THRUST BLOCK BEING POURED.

DETAIL:		DETAIL NO:
THRUST BLOCK		WS-13
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/2022	SHEET NO: -

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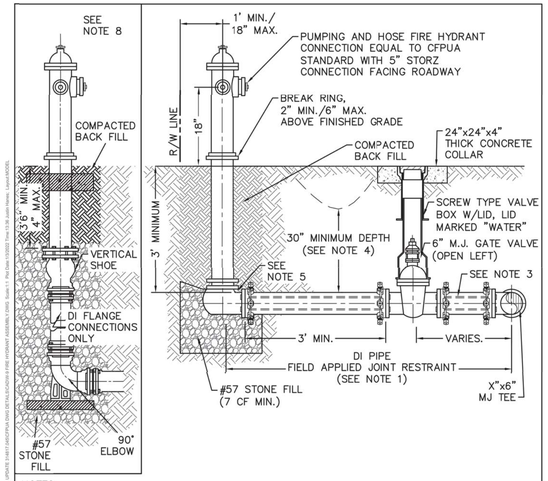

NOTES

1. JOINT RESTRAINT SYSTEMS SHALL BE WEDGE ACTION STYLE FOR DI.
2. WHEN HYDRANT LEGS REQUIRE FULL LENGTH PIPE SECTIONS, OVER BELL RESTRAINT SYSTEM SHALL HAVE 316 STAINLESS STEEL HARNESS AND FASTENERS.
3. CONTINUOUS 316 STAINLESS STEEL RODS (TEE TO VALVE AND VALVE TO HYDRANT) MAY BE USED WITH COR–BLUE MJ T–BOLT AND GASKET KITS, AS AN ALTERNATIVE.
4. HYDRANT AND VALVE SHALL BE PLACED OUTSIDE DITCH LIMITS.
5. WEEP HOLES OPEN AND UNBLOCKED TO DRAIN.
6. MJ TEE SHALL BE RESTRAINED ON EACH SIDE OF MAIN *PLUS MAIN VALVES, FITTING*, OR JOINTS WITHIN 10–FEET OF MJ TEE.
7. TRACING WIRE SHALL EXTEND ALONG HYDRANT LATERAL AND UP TO FINISHED GRADE WITH 2–FEET EXTENDED ABOVE THE BREAK RING OF HYDRANT.
8. HYDRANT TO UTILIZE A VERTICAL SHOE WHEN INSTALLED 5' IN DEPTH OR GREATER.

DETAIL:		DETAIL NO:
FIRE HYDRANT ASSEMBLY		W-9
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/2022	SHEET NO: -

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CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD NOTES:

1. ALL PROPOSED ADDITIONS TO THE CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) WATER DISTRIBUTION AND SANITARY SEWER COLLECTION SYSTEMS, AS SHOWN AND SPECIFIED HEREIN, SHALL BE DESIGNED AND CONSTRUCTED TO CONFORM TO STATE RULES AND THE CFPUA'S MINIMUM TECHNICAL STANDARDS. THE CFPUA MINIMUM TECHNICAL STANDARDS ARE CONTAINED IN THE CURRENT DESIGN GUIDANCE MANUAL, MATERIAL SPECIFICATION MANUAL, TECHNICAL SPECIFICATIONS FOR CONSTRUCTION, AND STANDARD DRAWING DETAILS.
2. SEWER MANHOLE INSERTS REQUIRED AT ALL MANHOLES. STAINLESS STEEL MANHOLE INSERTS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
3. WATER AND SEWER SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE 18" INSIDE RIGHT–OF–WAY LINE. SEWER SERVICES IN CUL–DE–SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN END OF LINE MANHOLE AND TERMINATE 18" INSIDE RIGHT–OF–WAY LINE.
4. ALL SEWER SERVICES CONNECTING INTO DUCTILE IRON MAINS SHALL ALSO BE CONSTRUCTED OF DIP.
5. MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
6. NO FLEXIBLE COUPLINGS SHALL BE USED.
7. ALL STAINLESS STEEL FASTENERS SHALL BE TYPE 316.
8. CLEANOUTS SHALL BE LOCATED A MINIMUM OF 6 FEET FROM ALL PROPERTY CORNERS.
9. WATER METER BOXES ARE TO BE A MINIMUM OF 5 FEET FROM THE PROPERTY CORNER.
10. UNUSED SERVICES SHALL BE ABANDONED. ABANDONED WATER SERVICES SHALL BE DISCONNECTED FROM MAIN.
11. A MINIMUM OF 10' OF MAIN LINE, 5' UPSTREAM AND 5' DOWNSTREAM SHALL BE REPLACED FOR NEW SEWER SERVICE CONNECTIONS TO EXISTING CLAY GRAVITY SEWER MAINS.
12. A MINIMUM OF 20' OF MAIN LINE, 10' UPSTREAM AND 10' DOWNSTREAM SHALL BE REPLACED FOR NEW CUT IN MANHOLES ON EXISTING CLAY GRAVITY SEWER MAINS
13. PROVIDE A MINIMUM DISTANCE OF SIX (6) INCHES BETWEEN EDGE OF MANHOLE CORE HOLES AND MANHOLE BARREL JOINTS. PROVIDE A MINIMUM DISTANCE OF SIX (6) INCHES BETWEEN EDGES OF CORE HOLES. CORING THE MANHOLE CONE IS NOT PERMITTED
14. WATER MAIN AND FORCE MAIN PIPE INSTALLED BY OPEN CUT SHALL BE BURIED AT A MINIMUM OF THREE (3) FEET AND A MAXIMUM OF FIVE (5) FEET BELOW FINISHED GRADE. DEPTHS GREATER THAN FIVE (5) FEET MUST BE APPROVED BY CFPUA.
15. ALL MANHOLE MAIN LINE AND SERVICE PIPING TO BE INSTALLED AT A MINIMUM OF CROWN TO CROWN OF THE LARGEST DIAMETER PIPE.

DETAIL: STANDARD NOTES (REQUIRED ON ALL PLAN AND PROFILE SHEETS)		DETAIL NO:
		WS-14
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/2022	SHEET NO: -

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PRELIMINARY

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STROUD ENGINEERING, P.A.
102–D CINEMA DRIVE
WILMINGTON, NC 28403
(910) 815–0775 LICENSE # C–0647

SCALE: AS NOTED
SHEET: 11 OF 11
UTILITY DETAILS