R05018-004-001-000
WINDEMERE PRESBYTERIAN CHURCH
2013-05-21
BK005738 PG001937
ZONING: R-15

R05018-005-001-000
BULLUCK SUSAN K
1981-06-01
BK001187 PG001836
ZONING: R-15

R05019-002-008-000
REYES SMITHLEY MICHELLE
2018-07-18
BK006156 PG002207
ZONING: R-15

R05019-004-008-000
SCHUT MICHAEL G
2016-09-06
BK005999 PG001744
ZONING: R-15

R05000-003-006-001
ROMAN CATHOLIC DIOCESE RALEIGH
2014-03-03
BK005800 PG002056
ZONING: R-15

R05000-004-010-000
AUTUMN HALL NVT LLC
2010-06-11
BK005491 PG000380
ZONING: MX

TANBRIDGE RD.

BRETONSHIRE RD.

(150' R/W)

(150' PUBLIC R/W)

CAROLINA BAY DR.
60' PUBLIC ROW

AUTUMN HALL DR.*
100' PUBLIC ROW

CURRITUCK DR.
50' PUBLIC ACCESS
AND UTILITY EASEMENT

PROPOSED 20' PUBLIC ACCESS EASEMENT

PROJECT AREA

PROJECT LIMITS

COMMERCIAL BLDG 4
FFE=33.0

COMMERCIAL BLDG 3
FFE=33.0

* COFFEE SHOP

* OFFICE

* MIXED USE BUILDING 1

* RESIDENTIAL BUILDING 3

* RESIDENTIAL BUILDING 2

NOVANT MEDICAL OFFICE BUILDING 2 STORY 40,000 SF FFE = 34.00 (193 PARKS)

TRACT 38-3 222,223 SF 5.10 AC

LOT 7

LOT 9

TRAFFIC SIGNAL

15" FES WITH CLASS B RIP RAP ENERGY DISSIPATOR INV. IN =25.0 INV. OUT =25.0

JB-N25 NCDOT SPEC. (#840.34, 840.54). T=29.90 I=29.90

CI-N18(NCDOT) T=33.10 EP I=27.50

CI-N17(NCDOT) T=32.45 I=29.00

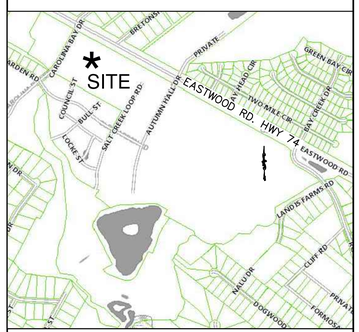
DT-MN2 NCDOT SPEC. (#852.06 & 840.14). T=EXISTING (33.2±). I=29.70

32.65' 208.94' 32.65' 70.21'

* BUILDINGS, ROADWAY, AND UTILITIES PREVIOUSLY APPROVED UNDER AUTUMN HALL COMMERCIAL PHASE 1.

LOCATION MAP

NTS



SITE DATA TABLE

USE:	OFFICE/RETAIL/RESTAURANT/RESIDENTIAL
PARCEL AREA:	73.37 ACRES (3,196,000 SF)
PARCEL ID#:	R05000-004-147-000
PARCEL OWNER:	TRASK D WEBSTER REVOCABLE TRUST
MAP ID#:	314708.97.1975.000
ADDRESS:	1202 EASTWOOD ROAD
ZONING:	MX/SHOD
PROPOSED PARCEL USE:	OFFICE
BUILDING FOOTPRINT:	17,128 SF EACH (BLDG 3&4); 34,256 SF TOTAL
CAMA LAND USE:	WATERSHED RESOURCE PROTECTION
SOILS:	Le / Ly / Be
BUILDING SETBACKS MX: (REQUIRED)	20' MIN. FROM MX BOUNDARY 50' MIN. FROM US AND NC HIGHWAYS AND MAJOR THOROUGHFARES INTERIOR: NO MINIMUM, WITHIN 10' OF INTERNAL STREET R/W PREFERED.
BUILDING SETBACKS: (PROPOSED)	75' MIN. WITH 25% SHOD REDUCTION
SHOD SETBACKS:	BUILDING: 100' (75' MIN. WITH 25% SHOD REDUCTION) PARKING: 50' (37.5' MIN. WITH 25% SHOD REDUCTION) INTERIOR SIDE: 20' *ADDITIONAL STREETYARD PLANTINGS ARE REQUIRED WHEN TAKING THE SHOD 25% REDUCTION
PROJECT AREA:	233,794 SF (5.37 AC)
BUILDING LOT COVERAGE:	15% ±

IMPERVIOUS AREAS WITHIN PROJECT AREA: R1

BUILDING=	36,049 SF (ROOF AREA)
ASPHALT, CONCRETE, CURB & GUTTER=	91,996 SF
SIDEWALK=	8,228 SF
FUTURE=	0 SF
TOTAL IMPERVIOUS AREA=	136,273 SF
% IMPERVIOUS LOT COVERAGE=	60.4%

ADDITIONAL IMPERVIOUS AREA TO AUTUMN HALL MASTER PERMIT (SWB 040333)

SIDEWALK=	1,911 SF R1
REMOVED ASPHALT, CONCRETE, C&G=	417 SF

LANDSCAPING: SEE PLANS BY MIHALY LAND DESIGN
- –FOUNDATION PLANTINGS (12%)
- –LANDSCAPING REQ'D INTERIOR (AS PER O&I REGULATIONS):
- –STREET TREES ARE REQUIRED ALONG ALL STREETS AND SHALL BE A MIN. 3" CALIPER LOCATED AT MIN. 50' O.C.

OPEN SPACE FOR MX DEVELOPMENT: –

TRASH SERVICE: –

DISTURBED AREA LIMITS: 5.0 ACRES (218,130 SF) R1

WATER/SEWER DEMANDS
BUSINESS OCCUPANCY = 175 OCCUPANTS X 25 GPD/PERSON = 4,375 GPD EACH BUILDING TOTAL = 8,750 GPD

PARKING REQUIREMENTS

PARKING REQUIREMENT PER USE, NO MINUMUM REQUIREMENT IN MX ZONE

OFFICE: 1 PER 200 SF GFA MAX.
1 PER 300 SF GFA MIN.
BLDG 3: 170/113
BLDG 4: 170/113

BICYCLE PARKING: 5 BICYCLE PARKING FOR THE FIRST 25 CAR PARKING SPACES. EACH ADDITIONAL ONE HUNDRED (100) AUTOMOBILE PARKING SPACES ABOVE THE TWENTY-FIVE (25) MINIMUM SHALL REQUIRE PROVISIONS FOR PARKING AN ADDITIONAL FIVE (5) BICYCLES UP TO A BICYCLE PARKING SYSTEM THAT CAN ACCOMMODATE A MAXIMUM OF TWENTY (20) BICYCLES.

PARKING PROVIDED: 267 REGULAR SPACES
6 HANDICAP SPACES
273 SPACES TOTAL
20 BIKE PARKING SPOTS PROVIDED
R1

Building Data Table

	Construction Type	Height	Stories
Building 3	V-B	34'	2 (Each 17,128 SF)
Building 4	V-B	34'	2 (Each 17,128 SF)

SCALE: 1" = 50'

0 50 100 150

ESTIMATED TRIP GENERATION

	Weekday AM Peak Hour of Generator			Weekday PM Peak Hour of Generator		
*	Enter	Exit	Total	Enter	Exit	Total
	104	14	118	25	115	140

THIS SITE IS PART OF THE PREVIOUSLY APPROVED ORIGINAL TIA BY RKA AUTUMN HALL.

SYMBOL	DATE	DESCRIPTION	
R1	9/28/22	UPDATED PARKING LAYOUT, SIDEWALKS, & ADDED DUMPSTER. ADJUSTED GRADING, DRAINAGE AREAS, & IMPERVIOUS AREAS.	RPH

REVISIONS

LEGEND

- PROPERTY LINE
- DISTURBED AREA LIMITS
- 25 PROPOSED CONTOUR
- TEMPORARY SILT FENCE
- PROPOSED STORMDRAIN PIPE
- PROPOSED WATERLINE
- PROPOSED SANITARY SEWER (GRAVITY)
- 41.35 PROPOSED SPOT ELEVATION FLOW LINE
- 41.85 PROPOSED SPOT ELEVATION TOP OF CURB
- 41.85 PROPOSED SPOT ELEVATION FINISH GRADE
- FLARED END SECTION WITH RIP-RAP ENERGY DISSIPATOR
- DROP INLET WITH INLET PROTECTION (DI)
- CURB INLET WITH INLET PROTECTION (CI)
- JUNCTION BOX WITH INLET PROTECTION (JB)
- PROPOSED FIRE HYDRANT
- 21 EXISTING CONTOUR
- 15"P EXISTING TREE TO BE SAVED
- 15"P EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING
- PROPOSED ASPHALT
- PROPOSED CONCRETE

OVERALL SITE PLAN
AUTUMN HALL COMMERCIAL BLDG 3&4
1202 EASTWOOD ROAD
WILMINGTON, NC
NEW HANOVER COUNTY

DEVELOPER
WEB TRASK C/O MIKE BROWN
CAPE FEAR COMMERCIAL, LLC
6336 OLEANDER DRIVE, SUITE 1
WILMINGTON, NC 28403
344-1010 (P) 622-4657 (CELL)

NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.
1900 EASTWOOD RD., SUITE #11
WILMINGTON, NC 28403
PHONE (910) 343-9653
1429 ASH-LITTLE RIVER RD. NW
ASH, NC 28420
PHONE (910) 287-5900
Licence #C-3641

21117

DES.	JST
CK'D.	JPN
DRWN.	DGC
DATE	10/17/22

C0

EASTWOOD RD. / HWY 74

CAROLINA BAY DR.

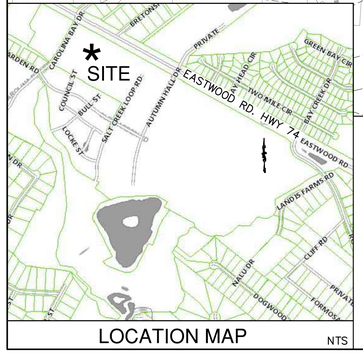
AUTUMN HALL DR.

Ly

Le

Le

Be



LOCATION MAP NTS

TREE REMOVAL TABLE

REGULATED PINES	REGULATED OAKS
16" (1)	8" (1)
23" (1)	9" (5)
	10" (1)
	11" (4)
	12" (2)
	14" (1)
	16" (1)
	DOUBLE 8"/10"(1)
	DOUBLE 9"/12"(1)

NOTE:
1) THIS PROPERTY IS NOT WITHIN 100 YEAR FLOOD PLAIN.

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

Approved Construction Plan

	Name	Date
Planning		
Traffic		
Fire		

NCDENR PWSS WATER PERMIT #:	
WATER CAPACITY:	GPD
DWQ SEWER PERMIT #:	
SEWER CAPACITY:	GPD
SEWER SHED # AND PLANT:	
SEWER TO FLOW THROUGH NEI:	YES or NO (CIRCLE ONE)

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

SCALE: 1" = 40'
0 40 80 120

PARCEL ADDRESS:	1202 EASTWOOD ROAD
PARCEL ID#:	R05000-004-147-000
MAP ID#:	314708.97.1975.000
PARCEL OWNER:	TRASK D WEBSTER REVOCABLE TRUST
PARCEL AREA:	73.37 ACRES (3,196,000 SF)
ZONING:	MX/R15/SHOD
SOIL TYPES:	Le, Ly, Be, Se, Jo, W

CAMA LAND USE: WATERSHED RESOURCE PROTECTION
WETLANDS: SEE PLAN
NO CAMA AEC OR SETBACKS WITHIN SITE AREA

HISTORICAL SITE:	NONE
CEMETERY:	NONE
FORESTED AREA:	SEE PLAN FOR TREE SURVEY
ENDANGERED SPECIES/HABITAT:	NONE REPORTED

SITE INVENTORY PLAN
AUTUMN HALL COMMERCIAL BLDG 3&4
1202 EASTWOOD ROAD
WILMINGTON, NC
NEW HANOVER COUNTY

DEVELOPER
WEB TRASK C/O MIKE BROWN
CAPE FEAR COMMERCIAL, LLC
6336 OLEANDER DRIVE, SUITE 1
WILMINGTON, NC 28403
344-1010 (P) 622-4657 (CELL)

NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.
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PHONE (910) 343-9653
1429 ASH-LITTLE RIVER RD. NW
ASH, NC 28420
PHONE (910) 287-5900
Licence #C-3641

21117

DES. JST
CKD. JPN
DRWN. DGC
DATE 10/17/22

I-1

GRADING, DRAINAGE AND EROSION CONTROL PLAN
AUTUMN HALL COMMERCIAL BLDG 3&4
1202 EASTWOOD ROAD
WILMINGTON, NC
NEW HANOVER COUNTY

DEVELOPER
WEB TRASK C/O MIKE BROWN
CAPE FEAR COMMERCIAL, LLC
6336 OLEANDER DRIVE, SUITE 1
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NORRIS & TUNSTALL
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WILMINGTON, NC 28403
PHONE (910) 343-9653
1429 ASH-LITTLE RIVER RD. NW
ASH, NC 28420
PHONE (910) 287-5900
Licence #C-3641

21117

DES.	JST
CKD.	JPN
DRWN.	DGC
DATE	10/17/22

C1

NOTES:
1) SITE MUST CONFORM TO ALL ADA REGULATIONS. MAX LONGITUDINAL SLOPE ON ADA ACCESS IS 5% (1'V: 20'H). MAX CROSS SLOPE IS 2% (1/4" PER FOOT).
2) ALL ROOF DRAIN DOWNSPOUTS SHALL CONNECT TO THE STORM DRAINAGE SYSTEM. ALL DOWNSPOUTS SHALL HAVE AIR GAPS (OVERFLOWS) PRIOR TO CONNECTING TO THE STORM DRAINAGE SYSTEM.
3) ALL ROOF DRAINAGE PIPING SHALL BE C900 PVC OR HDPE WITH ROOF DRAIN CLEANOUTS AT ALL JUNCTIONS.
4) BUILDING CONDENSATE DRAINS SHALL NOT CONNECT TO THE STORM DRAINAGE SYSTEM UNLESS THEY ARE DESIGNED AND ANALYZED BY THE MEP.

NOTES – STORMWATER:
1) STORMWATER AS–BUILTS ARE REQUIRED FOR ALL STORM DRAINAGE CONVEYANCES.
2) STORMWATER CONVEYANCES THAT CARRY PUBLIC STORMWATER MUST BE VIDEOED.

SYMBOL	DATE	DESCRIPTION	BY
R3	9/28/22	UPDATED PARKING LAYOUT, SIDEWALKS, & ADDED DUMPSTER. ADJUSTED GRADING, DRAINAGE AREAS, & IMPERVIOUS AREAS.	RPH
R2	3/1/22	UPDATED BUILDING LAYOUT AND PARKING. ADJUSTED GRADING, UTILITIES AND DRAINAGE AREAS.	RPH
R1	1/28/22	ADDED PUE AROUND WATER METERS. RELOCATED FIRE LINE VALVES TO BE 18" INSIDE EASEMENT.	RPH

REVISIONS

SCALE: 1" = 30'
0 30 60 90

SYMBOL	DATE	REVISIONS	BY
R1	2/28/22	ADDED PUE AROUND WATER METERS. RELOCATED FIRE LINE VALVES TO BE 18' INSIDE EASEMENT.	RPH

UTILITY PLAN
AUTUMN HALL COMMERCIAL BLDG 3&4
1202 EASTWOOD ROAD
WILMINGTON, NC
NEW HANOVER COUNTY

DEVELOPER
WEB TRASK C/O MIKE BROWN
CAPE FEAR COMMERCIAL, LLC
6336 OLEANDER DRIVE, SUITE 1
WILMINGTON, NC 28403
344-1010 (P) 622-4657 (CELL)

NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.
1429 ASH-LITTLE RIVER RD. NW
ASH, NC 28420
PHONE (910) 287-5900

1900 EASTWOOD RD., SUITE #11
WILMINGTON, NC 28403
PHONE (910) 343-9633

Licence #C-3641

21117

DES.	JST
CKD.	JPN
DRWN.	DGC
DATE	10/17/22

C2

(1) FIRE HYDRANT
8" X 6" TEE
6" GV

(2) FIRE WATER
8" X 6" TEE
8" GV
6" GV
6" GV AT ROW
6" CAP

(3) FIRE WATER
8" X 4" TEE
4" GV (2) LOCATE
(1) 18" INSIDE ROW

(4) 4" DCDA BFP IN AN ABOVE GROUND ENCLOSURE.

(5) DOMESTIC WATER
8" X 4" TEE
4" GV
3" WATER METER AND BACKFLOW PREVENTER AS PER CFPUA STANDARDS.
REDUCE TO 3" WL AFTER METER.

(6) DOMESTIC WATER
2" SERVICE SADDLE
2" GV
2" METER SETTER AND BOX AT ROW

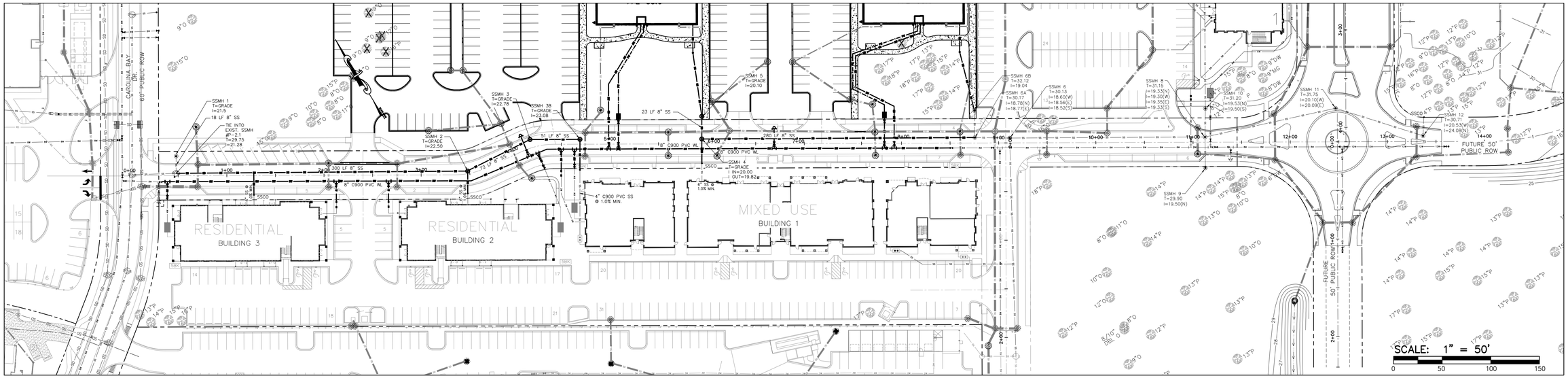
(8) DOMESTIC WATER
2" SERVICE SADDLE
2" GV
1-1/2" WATER METER AND BACKFLOW PREVENTER AS PER CFPUA STANDARDS.
1-1/2" SERVICE

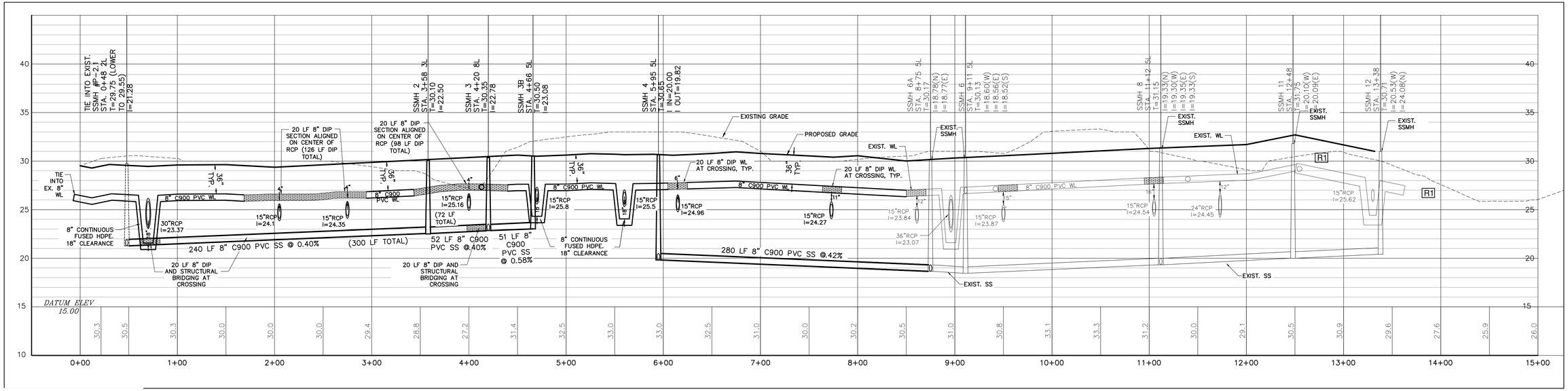
(9) FIRE WATER
8" X 6" TEE
6" GV
6" GV AT ROW

(10) 6" DCDA BFP IN AN ABOVE GROUND ENCLOSURE.

NOTES:
1) THE CONTRACTOR SHALL VERIFY ALL UTILITY CONNECTION WITH MEPPLAS AND ENGINEERS PRIOR TO BEGINNING CONSTRUCTION.
2) BACK FLOW PREVENTION DEVICES MUST MEET THE AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE USC APPROVED LIST AND ALSO MEET AWWA STANDARDS. BACK FLOW PREVENTERS MUST BE INSTALLED PER RULE 0.0408(b)(4)(f).
3) THERE SHALL BE 3' MINIMUM SEPARATION REQUIRED FOR ALL TAPS, JOINTS, FITTINGS, AND SERVICE SADDLES.
4) EASEMENTS WILL BE REQUIRED AROUND METER BOXES. SIZE TO BE DETERMINED.
5) LOCATE ALL VALVES, METERS, MANHOLES, AND CLEANOUTS OUTSIDE SIDEWALK WHERE FEASIBLE.
6) FIRE LINE DELINEATION VALVES TO BE 18" INSIDE EASEMENT.

SCALE: 1" = 30'
0 30 60 90





HORIZ. 1" = 50'
VERT. 1" = 5'

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.

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

Approved Construction Plan

	Name	Date
Planning		
Traffic		
Fire		

NCDENR PWSS WATER PERMIT #:	
WATER CAPACITY:	GPD
DWQ SEWER PERMIT #:	
SEWER CAPACITY:	GPD
SEWER SHED # AND PLANT:	
SEWER TO FLOW THROUGH NEI:	YES or NO (CIRCLE ONE)

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

* ALL SEWER IS PRIVATE.
ALL WATER IS PUBLIC

REV NO.	DESCRIPTION	DATE
	REVISIONS	

R1: 3.19.20 REVISED WL TO 12"

CURRITUCK DR.

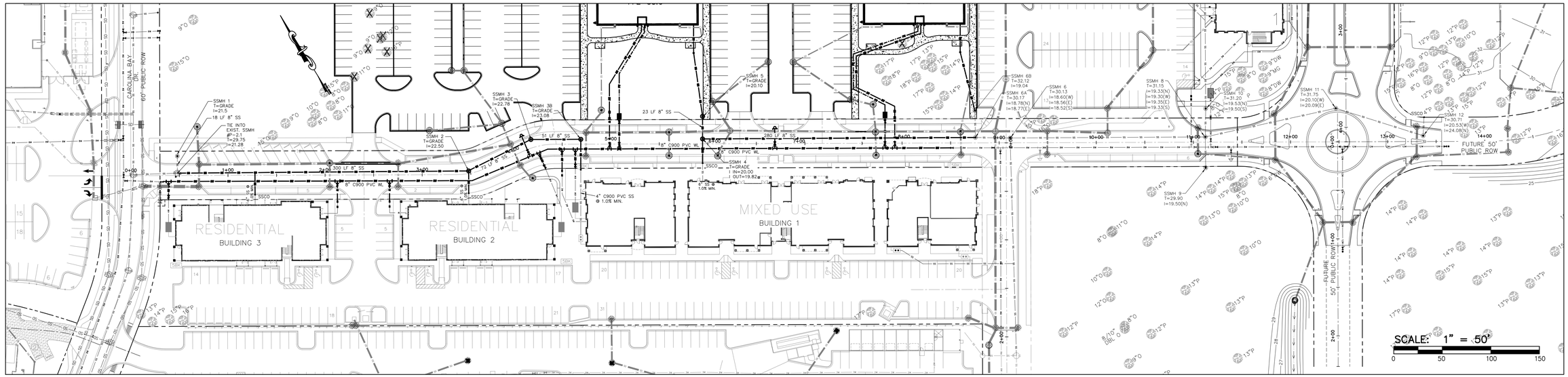
Cape Fear Public Utility Authority

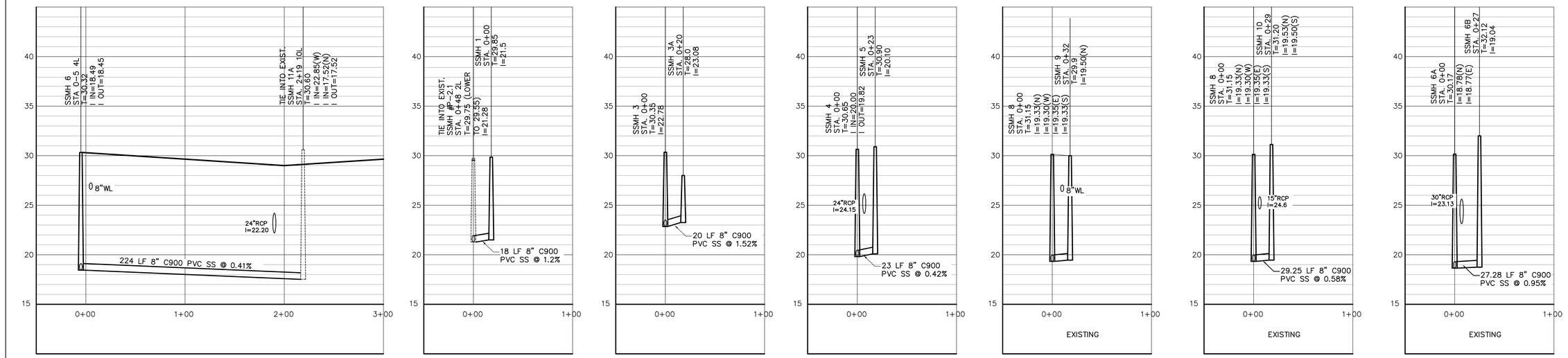
NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.
1900 EASTWOOD RD., SUITE 101
WILMINGTON, NC 28403
PHONE (910) 343-9633
1429 ASH LITTLE RIVER RD. NW
ASH, NC 28420
PHONE (910) 287-5900

AUTUMN HALL COMMERCIAL PH 1
WATERLINE LAYOUT AND SANITARY SEWER PLAN & PROFILE

DATE: 10/17/22
SCALE: 1" = 50' 1" = 5'
DRAWN: NKS
CHECKED: JST
PROJECT NO: 21117

SHEET NO:
PR1





HORIZ. 1" = 50'
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CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD NOTES:

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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.

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

Approved Construction Plan

	Name.	Date.
Planning		
Traffic		
Fire		

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

NCDENR PWSS WATER PERMIT #: _____
WATER CAPACITY: _____GPD
DWQ SEWER PERMIT #: _____
SEWER CAPACITY: _____GPD
SEWER SHED # AND PLANT: _____
SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)

* ALL SEWER IS PRIVATE.
ALL WATER IS PUBLIC

REV NO.	DESCRIPTION	DATE
	REVISIONS	

Cape Fear Public Utility Authority

NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.
1900 EASTWOOD RD.
SUITE 101
WILMINGTON, NC 28403
PHONE (910) 343-9633
1429 ASH-LITTLE
RIVER RD. NW
ASH, NC 28420
PHONE (910) 287-5900

CURRITUCK DR.

AUTUMN HALL COMMERCIAL PH 1
WATERLINE LAYOUT AND SANITARY SEWER
PLAN & PROFILE

DATE: 10/17/22
SCALE: 1" = 50'
1" = 5'
DRAWN: NKS
CHECKED: JST
PROJECT NO: 21117

SHEET NO:
PR2

EASTWOOD RD.

EXISTING STOP SIGN

EXISTING DEVELOPMENT SIGN

CL N17(NCDOT) T=32.45 l=29.00

37.5' SHOD PARKING SETBACK

75' SETBACK (25% SHOD REDUCTION)

CAROLINA BAY DR.

PROJECT AREA

(FUTURE DEVELOPMENT)

PUBLIC SIDEWALK LOCATED OUTSIDE THE ROW SHALL BE PLACED IN A PUBLIC PEDESTRIAN ACCESS EASEMENT

15" FES WITH CLASS B RIP RAP ENERGY DISSIPATOR

JB-N25-NCDOT SPEC #840.54, 840.541

INV. OUT=25.0

PROPOSED 20' PUBLIC ACCESS EASEMENT

450.4'

172.7'

DUMPSTER (12'x15') SEE DETAIL

DUMPSTER (12'x15') SEE DETAIL

PROJECT AREA

PROJECT AREA

HC ACCESSIBLE PARKING RAMP WITH DOME MATTING AND SIGNAGE (TYP.)

HC ACCESSIBLE PARKING RAMP WITH DOME MATTING AND SIGNAGE (TYP.)

COMMERCIAL BLDG 4

FFE=33.0

COMMERCIAL BLDG 3

FFE=33.0

BIKE PARKING (5 TYP.)

BIKE PARKING (5 TYP.)

BIKE PARKING (5 TYP.)

170.4'

5' SIDEWALK

20'x70' SIGHT TRIANGLE TYP.

20'x70' SIGHT TRIANGLE TYP.

20'x70' SIGHT TRIANGLE TYP.

23.0' TYP.

CURRITUCK DR. 50' PUBLIC ACCESS AND UTILITY EASEMENT

STRIPING FOR PEDESTRIAN CROSSING AND CURB CUT RAMP. TYP. (SEE DETAIL)

STRIPING FOR PEDESTRIAN CROSSING AND CURB CUT RAMP. TYP. (SEE DETAIL)

STRIPING FOR PEDESTRIAN CROSSING AND CURB CUT RAMP. TYP. (SEE DETAIL)

PROPOSED PUE

PROPOSED PUE

RESIDENTIAL BUILDING 3

RESIDENTIAL BUILDING 2

MIXED USE BUILDING 1

NOTES – SOLID WASTE:

1) DUMPSTER BETWEEN BUILDING 2 & 3 TO BE SHARED.
2) DUMPSTER IS PROVIDED FOR BUILDING 4.
3) DUMPSTERS SHALL BE SCREENED WITH LIVING AND NON–LIVING MATERIAL. SCREENING SHALL BE A MINIMUM OF 6' IN HEIGHT ALONG THE FRONT & SIDE OF ANY LOT AND 8' ALONG ANY SIDE OR REAR PROPERTY LINE.

NOTES – UTILITIES:

1) ALL ELECTRIC, CABLE TV, TELEPHONE FACILITIES, FIRE ALARM CONDUITS, STREET LIGHTING WIRING, AND OTHER CONDUITS AND SIMILAR FACILITIES SHALL BE PLACED UNDERGROUND.

VARIANCE FROM 500'/800' RULE REQUIRED

SCALE: 1" = 30'

0 30 60 90

SYMBOL	DATE	DESCRIPTION	BY
		REVISIONS	
R1	2/28/22	ADDED PUE AROUND WATER METERS. ADJUSTED LOCATION OF FDC & VALVES TO BE 18" INSIDE EASEMENT.	RPH
R2	9/28/22	UPDATED PARKING LAYOUT, SIDEWALKS AND ADDED DUMPSTER. ADJUSTED GRADING AND DRAINAGE AREAS	RPH

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LAYOUT PLAN
AUTUMN HALL COMMERCIAL BLDG 3&4
1202 EASTWOOD ROAD
WILMINGTON, NC
NEW HANOVER COUNTY

DEVELOPER
WEB TRASK C/O MIKE BROWN
CAPE FEAR COMMERCIAL, LLC
6336 OLEANDER DRIVE, SUITE 1
WILMINGTON, NC 28403
344-1010 (P) 622-4657 (CELL)

NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.
1429 ASH-LITTLE RIVER RD. NW
ASH, NC 28420
PHONE (910) 287-5900
1900 EASTWOOD RD., SUITE #11
WILMINGTON, NC 28403
PHONE (910) 343-9653
Licence #C-3641

21117

DES.	JST
CKD.	JPN
DRWN.	DGC
DATE	10/17/22

C3

DA 1A
DA 1B
DA 2A
DA 2B
DA 8
DA 4-7
DA 4-5
DA 4-4
DA 4-3
DA 4-2
DA 4-1
DA 4-8
DA 4-D
DA 4-C
DA 4-A
DA 4-B
DA 4
DA 3-5
DA 3-4
DA 3-6
DA 3-3
DA 3-7
DA 3-2
DA 3-8
DA 3-1
DA-3D
DA-3C
DA-3A
DA-3B
DA-3
DA-15A
DA-15B
COMMERCIAL BLDG 4
FFE=33.0
COMMERCIAL BLDG 3
FFE=33.0
DA 22
DA 23
DA 24
DA 25
DA 25A
DA 26
DA 26A
DA 27
DA 28
DA37
DA38
DA39
DA40
DA41
DA42
DA 33
DA 34
DA 35
DA36
DA 43
DA 44
DA 45
DA 46
DA 47
RESIDENTIAL BUILDING 3
RESIDENTIAL BUILDING 2
MIXED USE BUILDING 1
15" FES WITH CLASS B RIP RAP ENERGY DISSIPATOR
INV. OUT=25.0
JB-N25-NCDOT SPEC
CI-N17(NCDOT) T=32.45 I=29.00
CAROLINA BAY DR.
60' PUBLIC ROW
R3

SYMBOL	DATE	DESCRIPTION	BY
R3	9/28/22	UPDATED PARKING LAYOUT AND SIDEWALKS AND ADDED DUMPSTER. ADJUSTED GRADING AND DRAINAGE AREAS	RPH
R2	2/28/22	UPDATED BUILDING LAYOUT AND PARKING. ADJUSTED GRADING, UTILITIES AND DRAINAGE AREAS.	RPH
R1	1/27/22	ADDED PUE AROUND WATER METERS. RELOCATED FIRE LINE VALVES TO BE 18" INSIDE EASEMENT.	RPH

REVISIONS

SCALE: 1" = 30'
0 30 60 90

DRAINAGE PLAN
AUTUMN HALL COMMERCIAL BLDG 3&4
1202 EASTWOOD ROAD
WILMINGTON, NC
NEW HANOVER COUNTY

DEVELOPER
WEB TRASK C/O MIKE BROWN
CAPE FEAR COMMERCIAL, LLC
6336 OLEANDER DRIVE, SUITE 1
WILMINGTON, NC 28403
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NORRIS & TUNSTALL
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1900 EASTWOOD RD., SUITE #11
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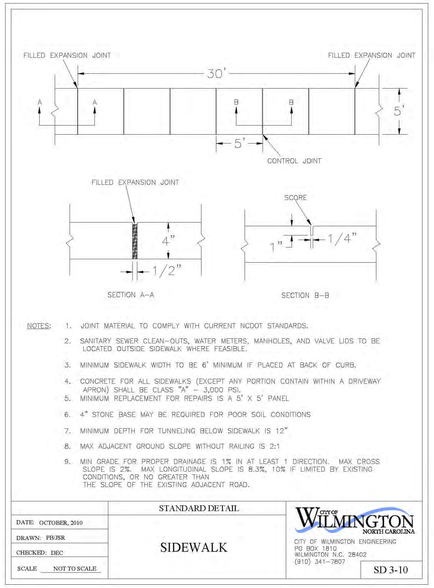
ASH, NC. 28420
PHONE (910) 287-5900
Licence #C-3641

21117

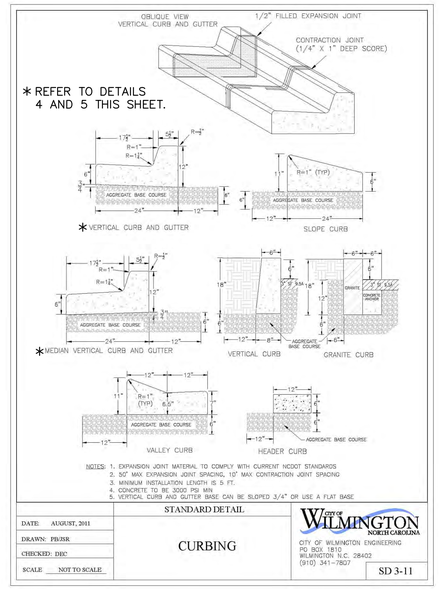
DES.	JST
CKD.	JPN
DRWN.	DGC
DATE	10/17/22

C4



NOT TO SCALE

1 C.O.W. STANDARD SIDEWALK DETAIL



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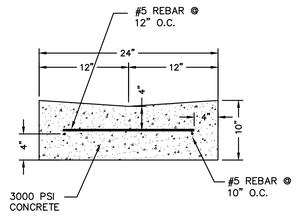
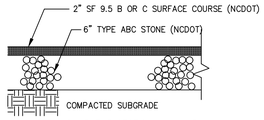


NOT TO SCALE

3 REINFORCED VALLEY GUTTER DETAIL



NOT TO SCALE

6 TYPICAL PARKING LOT PAVEMENT SECTION

NOTE: CURB TYPE DEPENDS ON GRADES SHOWN ON GRADING PLAN. GRADES INDICATING FALL AWAY FROM CURB SHALL BE SPILL OFF TYPE CURB. GRADES INDICATING CURB ACCEPTING FLOW SHALL BE FLOW LINE TYPE.

NOT TO SCALE

4 SPILL-OFF CURB SECTION

NOTE: CURB TYPE DEPENDS ON GRADES SHOWN ON GRADING PLAN. GRADES INDICATING FALL AWAY FROM CURB SHALL BE SPILL OFF TYPE CURB. GRADES INDICATING CURB ACCEPTING FLOW SHALL BE FLOW LINE TYPE.

NOT TO SCALE

5 FLOW LINE CURB SECTION

NOTES AND DETAILS
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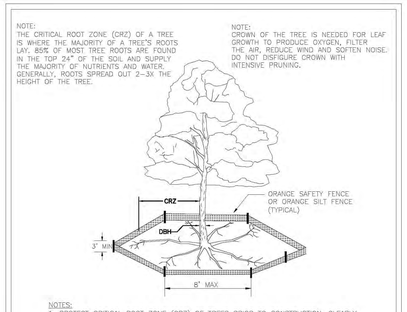
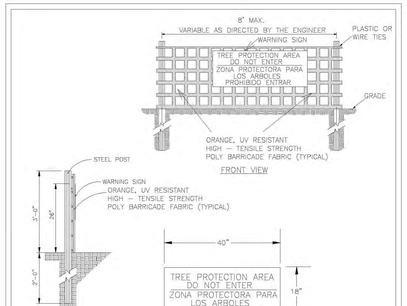
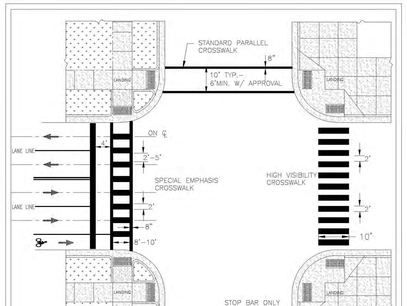
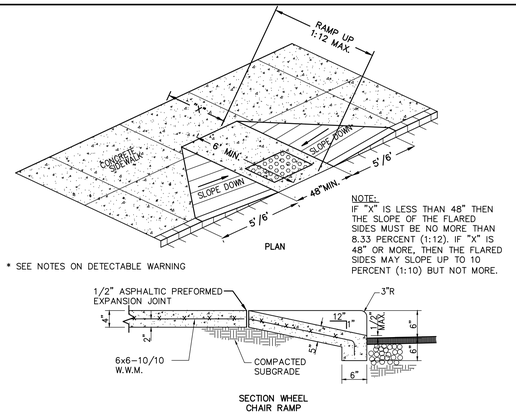
DES. JST
CKD. JPN
DRWN. DGC
DATE 10/17/22

C5









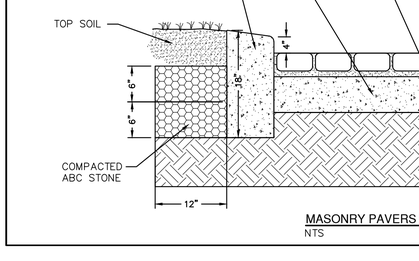
SIDEWALK, CURB CUT AND WHEEL CHAIR RAMP DETAIL

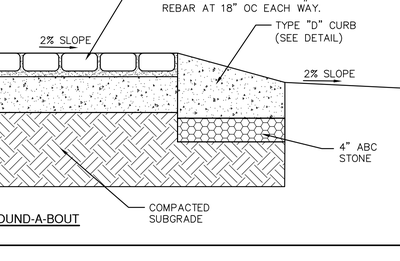
FIRE AND LIFE SAFETY NOTES:

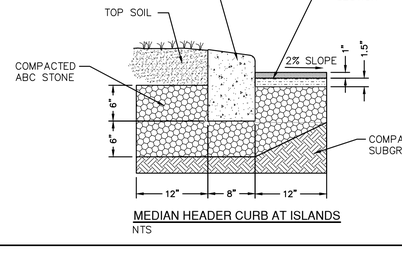
1. FIRE HYDRANTS MUST BE WITHIN 150' OF THE FIRE DEPARTMENT CONNECTION.
2. THE FIRE DEPARTMENT CONNECTION MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
3. LANDSCAPING AND PARKING CANNOT BLOCK OR IMPEDE THE FIRE DEPARTMENT CONNECTIONS OR FIRE HYDRANTS. A 3' CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE FIRE HYDRANT CONNECTION AND THE FIRE HYDRANT.
4. FIRE HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
5. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS.
6. NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIALS BEING DELIVERED TO THE JOB SITE.
7. THE CONTRACTOR WILL MAINTAIN ALL—WEATHER EMERGENCY ACCESS TO CONSTRUCTION SITE AT ALL TIMES.
8. TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALLOWS PASSAGE BY VEHICLES.
9. UNDERGROUND FIRE LINE AND PRIVATE WATER MAINS 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—343—0696 FOR ADDITIONAL INFORMATION.
10. A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.
11. HYDRANTS SHALL BE OF SUFFICIENT NUMBERS TO ACCOMODATE BASE FIRE FLOW REQUIREMENTS OF THE STRUCTURE.
12. ADDITIONAL FIRE PROTECTION AND/OR ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
13. THE CONTRACTOR SHALL SUBMIT A RADIO SIGNAL STRENGTH STUDY THAT DEMONSTRATES THAT EXISTING EMERGENCY RESPONDER RADIO SIGNAL LEVELS MEET THE REQUIREMENTS OF SEC. 510 OF THE 2018 FIRE CODE.
14. BUILDING CONSTRUCTION TYPE:
15. PRIVATE UNDERGROUND FIRE LINES REQUIRE A SEPARATE UNDERGROUND FIRE LINE PERMIT FROM THE WILMINGTON FIRE AND LIFE SAFETY DIVISION 910—343—0696
16. ALL ISOLATION VALVES WITHIN THE "HOT BOX" AND BETWEEN THE "HOT BOX" AND THE RISER ROOM MUST BE ELECTRICALLY SUPERVISED.

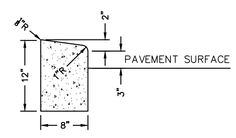
CITY OF WILMINGTON STANDARD NOTES:

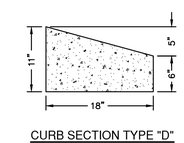
1. CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING AT 1—800—632—4949.
2. PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING;
3. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS—OF—WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
4. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
5. INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
6. ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT—OF—WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
7. 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.
8. IT SHALL BE THE RESPONSIBILITY OF THE SUBDIVIDER TO ERECT OFFICIAL STREET NAME SIGNS AT ALL INTERSECTIONS ASSOCIATED WITH THE SUBDIVISION IN ACCORDANCE WITH THE TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL. THE SUBDIVIDER MAY ACQUIRE AND ERECT OFFICIAL STREET NAME SIGNS OR MAY CHOOSE TO CONTRACT WITH THE CITY TO INSTALL THE STREET SIGNS AND THE SUBDIVIDER SHALL PAY THE COST OF SUCH INSTALLATION. CONTACT TRAFFIC ENGINEERING AT 341—7888 TO DISCUSS INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. POSTED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
9. CONTACT 811 PRIOR TO CONTACTING CITY OF WILMINGTON TRAFFIC ENGINEERING REGARDING THE UTILITIES IN THE RIGHT—OF—WAY.
10. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341—5899 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
11. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS, AND CURBING WILL BE REPLACED.
12. CONTACT TRAFFIC ENGINEERING AT 341—7888 TO DISCUSS STREET LIGHTING OPTIONS.
13. 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 343—3910 FOR INFORMATION.
14. 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.
15. ANY IRRIGATION SYSTEM SUPPLIED BY CFPUA WATER SHALL COMPLY WITH CFPUA CROSS CONNECTION CONTROL REGULATIONS. CALL 332—6558 FOR INFORMATION.
16. ANY BACKFLOW PREVENTION DEVICES REQUIRED BY CFPUA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCCCHR OR ASSE.
17. WHEN PVC WATER MAINS AND/OR POLYETHYLENE SERVICES ARE PROPOSED, THE PIPES ARE TO BE MARKED WITH NO. 10 INSULATED SINGLE STRAND COPPER WIRE INSTALLED THE ENTIRE LENGTH AND SECURED TO ALL VALVES. THIS WIRE IS TO BE ACCESSIBLE AT ALL FIRE HYDRANTS AND WATER METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES.
18. THE NUMBER AND SPACING OF DRIVEWAYS FOR ALL INTERCONNECTED SITES WILL BE DETERMINED BY THE COMBINED FRONTAGE OF THE INTERCONNECTED PROPERTIES.
19. UNDERGROUND FIRE LINE MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC ROW TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910—343—0696 FOR ADDITIONAL INFORMATION.
20. A LANDSCAPE PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEER DIVISION AND PARKS AND RECREATIN DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAT.
21. IF AND IRRIGATION SYSTEM IS PLANNED FOR THE SITE, UTILIZE MOISTURE SENSORS.
22. ALL PROPOSED VEGETATION WITHIN THE SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30"—10'.
23. PLEASE CONSIDER INCORPORATING XERIC LANDSCAPING FOR ALL NEW LANDSCAPING.
24. THE CONTRACTOR WILL MAINTAIN ALL—WEATHER EMERGENCY ACCESS TO CONSTRUCTION SITE AT ALL TIMES.
25. STREET TREES MUST BE LOCATED A MINIMUM OF 15' FROM STREET LIGHTS.

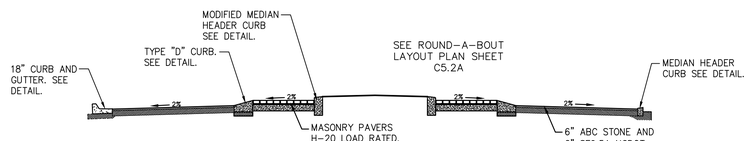


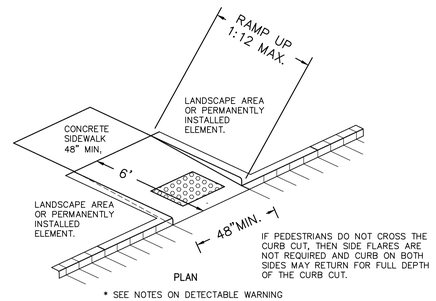






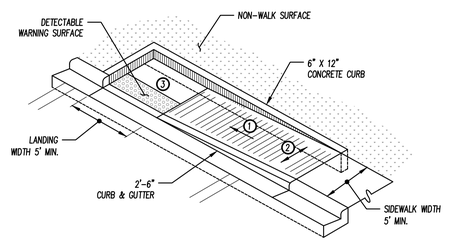






SIDEWALK, CURB CUT AND WHEEL CHAIR RAMP DETAIL

NOTE:
1. RAMP SHALL HAVE A DETECTABLE WARNING COMPLYING WITH ADA GUIDELINES:
2. THE DETECTABLE WARNINGS AT CURB RAMPS SHALL BE 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
3. MARKED CROSSINGS THAT ARE RAISED TO THE SAME LEVEL AS THE ADJOINING SIDEWALK SHALL BE PRECEDED BY A 24 INCH DEEP DETECTABLE WARNING EXTENDING THE FULL WIDTH OF THE MARKED CROSSING.
4. DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 IN (23 MM), A HEIGHT OF NOMINAL 0.2 IN (5 MM) AND A CENTER—TO—CENTER SPACING OF NOMINAL 2.35 IN (60 MM) AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT—ON—DARK, OR DARK—ON—LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHOULD CONTRAST BY AT LEAST 70% — REFER TO ADA GUIDELINES FOR DEFINITION OF "CONTRAST".
5. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND—ON—CANE CONTACT.



TYPE 1A

1. 8.33% (12:1) MAX. RAMP SLOPE
2. CROSS SLOPE: 2.00%
3. CURB RAMPS REQUIRE A (4'-0") MIN. LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

NCDOT TYPE 1A CURB RAMP

DEVELOPER
WEB TRASK C/O MIKE BROWN
CAPE FEAR COMMERCIAL, LLC
6336 OLEANDER DRIVE, SUITE 1
WILMINGTON, NC 28403
344-1010 (P) 622-4657 (CELL)

NOTES AND DETAILS
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WILMINGTON, NC
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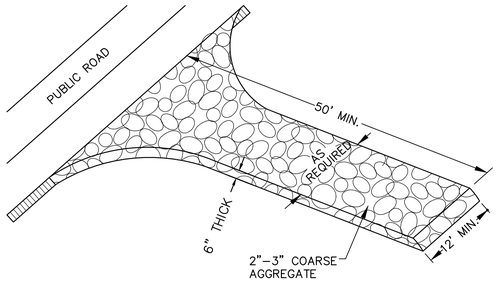
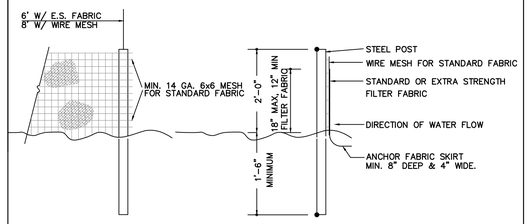
C5.1



NOT TO SCALE

1 TEMPORARY GRAVELLED CONSTRUCTION ENTRANCE

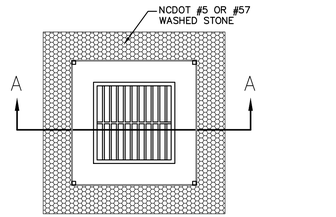


NOTES:

1. SYN. FENCE FABRIC SHALL BE MIN. OF 30" IN WIDTH WITH 30 LB/IN TENSILE STRENGTH FOR STANDARD FABRIC AND 50 LB/IN FOR EXTRA STRENGTH.
2. FABRIC SHALL BE CONTINUOUS LENGTH. IF JOINTS ARE NECESSARY, LAP FABRIC POST TO POST.
3. STEEL POST SHALL BE MIN 4' IN HEIGHT AND BE OF THE SELF-FASTENER STEEL ANGLE TYPE.

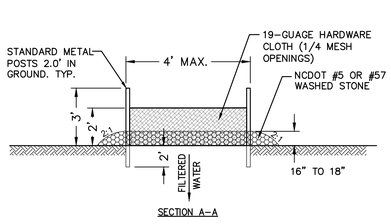
NOT TO SCALE

2 TEMPORARY SILT FENCE



CONSTRUCTION SEQUENCE:
1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
2. DRIVE 5' STEEL POST 2' INTO THE GROUND SURROUNDING THE INLET. SPACE POST EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4' APART.
3. SURROUND THE POST WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POST AT THE TOP, MIDDLE AND BOTTOM. PLACING A 2' FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
4. PLACE CLEAN GRAVEL (NCDOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16" TO 18" AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
5. ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
6. COMPACT THE AREA PROPERLY AND STABILIZE IT WITH GROUNDCOVER.

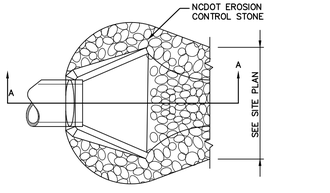
MAINTENANCE:
INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REMOVE SEDIMENT WHEN ACCUMULATION REACHES HALF THE DEPTH OF ROCK. REPLACE STONE WHEN IT NO LONGER DRAINS AS DESIGNED.



SECTION A–A

NOT TO SCALE

3 HARDWARE CLOTH AND GRAVEL INLET PROTECTION



SECTION A – A

NOTE: FILTER FABRIC AND STONE SHALL BE TOED UNDER FLARED END SECTION

NOT TO SCALE

4 ENERGY DISSIPATOR DETAIL

TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

SEEDING MIXTURE

SPECIES	RATE (lb/acre)	(lb/1000 sf)
RYE (GRAIN)	120	2.75

SEEDING DATES:
MOUNTAINS – AUG. 15 – DEC. 15
COASTAL PLAIN AND PIEDMONT – AUG. 15 – DEC. 15
SOIL AMENDMENTS:
FOLLOW SOIL TEST OR APPLY 2,000 lb/acre GROUND AGRICULTURAL LIMESTONE AND 1,000 lb/acre 10–10–10 FERTILIZER.
MULCH:
APPLY 4,000 lb/acre STRAW. 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.
MAINTENANCE:
REPAIR AND REFERTILIZE DAMAGE AREAS IMMEDIATELY. TOP DRESS WITH 50 lb/acre OF NITROGEN IN MARCH, IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 lb/acre KOBE (PIEDMONT AND COASTAL PLAIN) OR KOREAN (MOUNTAINS) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER

SEEDING MIXTURE

SPECIES	RATE (lb/acre)	(lb/1000 sf)
GERMAN MILLET	40	0.92

IN THE PIEDMONT AND MOUNTAINS, A SMALL–STEMMED SUDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 lb/acre.

SEEDING DATES:
MOUNTAINS – MAY 15 – AUG. 15
PIEDMONT – MAY 1 – AUG. 15
COASTAL PLAIN – APR. 15 – AUG. 15
SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 lb/acre GROUND AGRICULTURAL LIMESTONE AND 750 lb/acre 10–10–10 FERTILIZER.
MULCH:
APPLY 4,000 lb/acre STRAW. 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.
MAINTENANCE:
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

SEEDING MIXTURE

SPECIES	RATE (lb/acre)	(lb/1000 sf)
RYE (GRAIN)	120	2.75
ANNUAL LESPEDEZA (KOBE IN PIEDMONT AND COASTAL PLAIN, KOREAN IN MOUNTAINS)	50	1.15

OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE.

SEEDING DATES:

MOUNTAINS –	ABOVE 2,500 FEET:	FEB. 15 – MAY 15
	BELOW 2,500 FEET:	FEB. 1 – MAY 1
PIEDMONT –		JAN. 1 – MAY 1
COASTAL PLAIN –		DEC. 1 – APRIL 15

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 lb/acre GROUND AGRICULTURAL LIMESTONE AND 750 lb/acre 10–10–10 FERTILIZER.
MULCH:
APPLY 4,000 lb/acre STRAW. 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.
MAINTENANCE:
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

PERMANENT SEEDING RECOMMENDATIONS FOR FALL AND EARLY SPRING

SEEDING MIXTURE

SPECIES	RATE (lb/acre)	(lb/1000 sf)
TALL FESCUE	80	1.84
PENSACOLA BAHIAGRASS	50	1.15
SERICEA LESPEDEZA	30	0.69
KOBE LESPEDEZA	10	0.23

SEEDING NOTES:
1. FROM SEPT. 1 THRU MAR. 1, USE UNSCARIFIED SERICEA SEED.
2. ON POORLY DRAINED SITES OMIT SERICEA AND INCREASE KOBE TO 30 lbs/acre.
3. WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA AND INCREASE KOBE TO 40 lbs/acre.

NURSE PLANTS: BETWEEN APR. 15 AND AUG. 15, ADD 10 lbs/acre GERMAN MILLET OR 15 lbs/acre SUDANGRASS. PRIOR TO MAY 1 OR AFTER AUG. 15 ADD 25 lbs/acre RYE (GRAIN).

SEEDING DATES:	BEST	POSSIBLE
EARLY SPRING:	FEB 15–MAR. 20	FEB.15–APR. 30
FALL:	SEPT. 1–SEPT. 30	SEPT. 1–OCT. 31

SOIL AMENDMENTS:
APPLY LIME AND FERTILIZE ACCORDING TO SOIL TESTS, OR APPLY 3,000–5,000 lbs/acre (68.9–114.8 lbs/1,000 sf) GROUND AGRICULTURAL LIMESTONE (USE THE LOWER RATE ON SANDY SOILS) AND 1,000 lbs/acre (22.9 lbs/1,000 sf) 10–10–10 FERTILIZER.
MULCH:
APPLY 4,000 lb/acre (91.8 lbs/1,000 sf) GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.
MAINTENANCE:
IF GROWTH IS LESS THAN FULLY ADEQUATE, REFERTILIZE IN THE SECOND YEAR, ACCORDING TO SOIL TESTS OR TOPDRESS WITH 500 lbs/acre (11.5 lbs/1,000 sf) 10–10–10 FERTILIZER. MOW AS NEEDED WHEN SERICEA IS OMITTED FROM THE MIXTURE. RESEED, FERTILIZE, AND MULCH DAMAGED AREAS IMMEDIATELY.

PERMANENT SEEDING RECOMMENDATIONS FOR LATE SPRING AND EARLY SUMMER

SEEDING MIXTURE

SPECIES	RATE (lb/acre)	(lb/1000 sf)
PENSACOLA BAHIAGRASS	50	1.15
SERICEA LESPEDEZA	30	0.69
COMMON BERMUDA	10	0.23
GERMAN MILLET	10	0.23

SEEDING NOTES:
1. WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA.
2. USE COMMON BERMUDAGRASS ONLY ON ISOLATED SITES WHERE IT CANNOT BECOME A PEST. BERMUDAGRASS MAY BE REPLACED WITH 5 lbs/acre CENTIPEDEGRASS.

SEEDING DATES:
APRIL 1–JULY 15
SOIL AMENDMENTS:
APPLY LIME AND FERTILIZE ACCORDING TO SOIL TESTS, OR APPLY 3,000 lbs/acre (68.9 lbs/1,000 sf) GROUND AGRICULTURAL LIMESTONE AND 500 lbs/acre (11.5 lbs/1,000 sf) 10–10–10 FERTILIZER.
MULCH:
APPLY 4,000 lb/acre (91.8 lbs/1,000 sf) GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.
MAINTENANCE:
REFERTILIZE THE FOLLOWING APRIL WITH 50 lbs/acre (1.15 lbs/1,000 sf) NITROGEN. REPEAT AS GROWTH REQUIRES. MAY BE MOWED ONLY ONCE A YEAR. WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA AND MOW AS OFTEN AS NEEDED.

EROSION CONTROL NOTES AND MAINTENANCE PLAN:

1. ALL EROSION AND SEDIMENT 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 CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP–DRESSED WITH AN ADDITIONAL 2 INCHES 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 AND ROCK PIPE INLET PROTECTION 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 HARDWARE CLOTH TO ALLOW PROPER DRAINAGE. SILT SACKS WILL BE EMPTIED ONCE A WEEK AND AFTER EVERY RAIN EVENT. SEDIMENT WILL BE REMOVED FROM AROUND WATTLES, BEAVER DAMS, DANDY SACKS AND SOCKS ONCE A WEEK AND AFTER EVERY RAIN EVENT.

4. DIVERSION DITCHES WILL BE CLEANED OUT IMMEDIATELY TO REMOVE SEDIMENT OR OBSTRUCTIONS FROM THE FLOW AREA. THE DIVERSION RIDGES WILL ALSO BE REPAIRED. SWALES MUST BE TEMPORARILY STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY 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 STRENGTH FABRIC, WITHOUT WIRE BACKING. STAKE SPACING WILL BE 8 FEET MAX. WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED. IF ROCK FILTERS ARE DESIGNED 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 DAMAGED.

6. SEDIMENT WILL BE REMOVED FROM SEDIMENT TRAPS WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. THE 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 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED AND KEPT CLEAN WEEKLY.

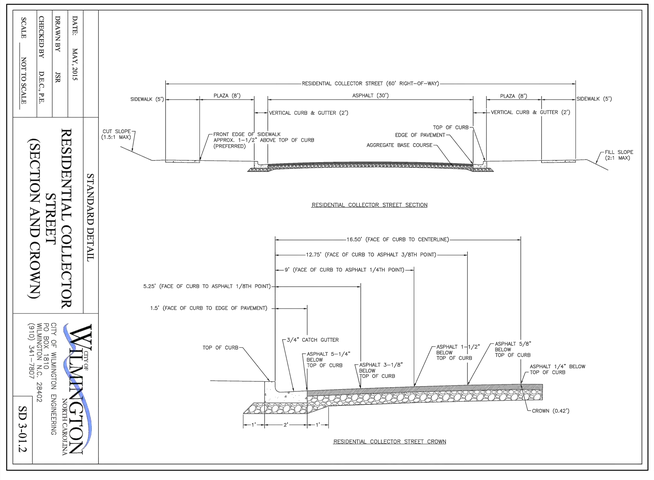
7. SEDIMENT WILL BE REMOVED FROM THE SEDIMENT BASIN WHEN THE DESIGN STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR IF THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED FROM BAFFLES WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN.

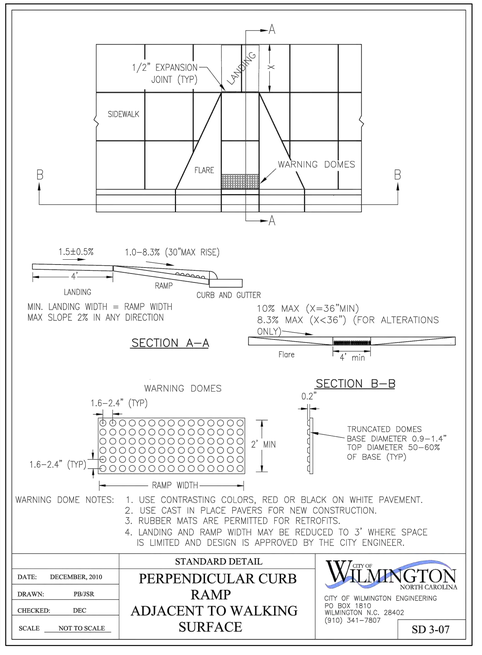
8. LAND QUALITY REQUIRES:
ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED, ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN, TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL SLOPES WILL BE STABILIZED WITHIN 21 CALENDAR DAYS. ALL OTHER AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS.
WATER QUALITY REQUIRES:
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 PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, ALL SLOPES STEEPER THAN 3' HORIZONTAL TO 1' VERTICAL (3:1) AND ALL HIGH QUALITY WATER (HQW) ZONES SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN SEVEN (7) CALENDAR DAYS FROM THE LAST LAND–DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND–DISTURBING ACTIVITY.

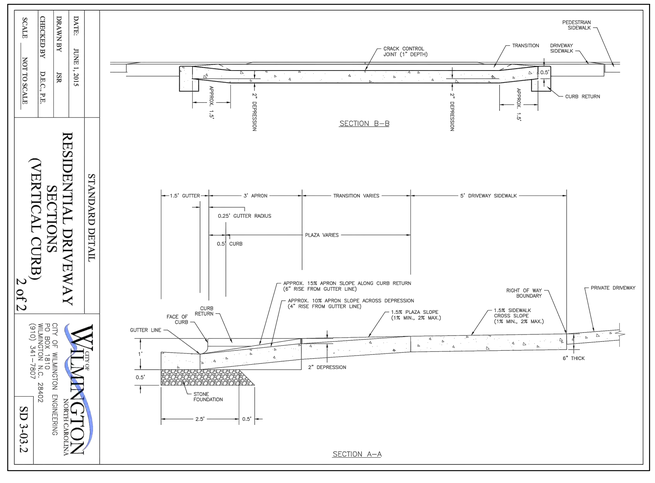
9. FLOCCULANTS WILL BE USED TO ADDRESS TURBIDITY ISSUES. THE PUMPS, TANKS, HOSES AND INJECT SYSTEMS WILL BE CHECKED FOR PROBLEMS OR TURBID DISCHARGES DAILY.

10. BASIN OUTLET STRUCTURES AND SKIMMERS SHALL WITHDRAW WATER FROM THE SURFACE.

11. CONCRETE WASHOUTS SHOULD BE INSPECTED DAILY AND AFTER HEAVY RAINS. DAMAGES SHOULD BE REPAIRED PROMPTLY. IF FILLED TO OVER 75% CAPACITY WITH RAIN WATER IT SHOULD BE VACUUMED OR ALLOWED TO EVAPORATE TO AVOID OVERFLOWS. BEFORE HEAVY RAINS THE CONTAINERS LIQUID LEVEL SHOULD BE LOWERED OR THE CONTAINER COVERED TO AVOID AN OVER FLOW DURING RAIN. WHEN SOLIDS HAVE HARDENED THEY SHOULD BE REMOVED AND RECYCLED.







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NOTES AND DETAILS
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DEVELOPER
WEB TRASK C/O MIKE BROWN
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21117

DES.	JST
CKD.	JPN
DRWN.	DGC
DATE	10/17/22

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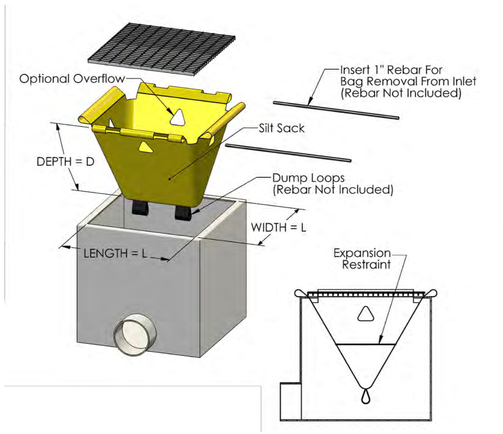
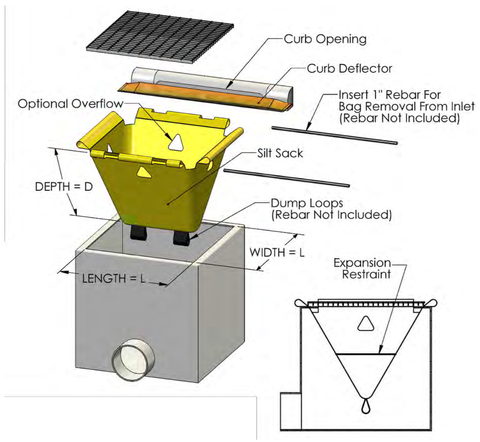


NOT TO SCALE

1 SILT SACK DETAIL FOR DROP INLETS



NOT TO SCALE

2 SILT SACK DETAIL FOR CURB INLETS

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE OPENING SIZE OF THE EXISTING OR PROPOSED CATCH BASIN OR DROP INLET. THE SILTSACK WILL BE MANUFACTURED TO FIT THE OPENING OF THE EXISTING OR PROPOSED CATCH BASIN OR DROP INLET.

2. TO INSTALL THE SILTSACK IN THE CATCH BASIN, REMOVE THE GRATE AND PLACE THE SACK IN THE OPENING. HOLD OUT APPROXIMATELY SIX INCHES OF THE SACK OUTSIDE THE FRAME. THIS IS THE AREA OF THE LIFTING STRAPS. REPLACE THE GRATE TO HOLD THE SACK IN PLACE.

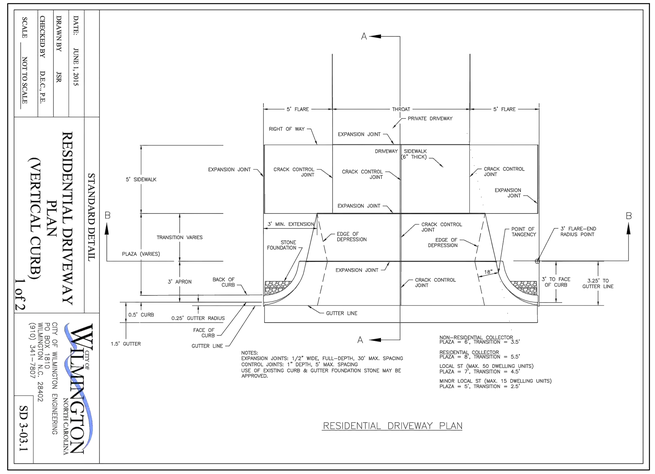
3. THE SILTSACK IS FULL AND SHOULD BE EMPTIED WHEN THE RESTRAINT CORD IS NO LONGER VISIBLE.

4. TO REMOVE THE SILTSACK, TAKE TWO PIECES OF 1" DIAMETER REBAR AND PLACE THROUGH THE LIFTING LOOPS ON EACH SIDE OF THE SACK TO FACILITATE THE LIFTING OF THE SILTSACK.

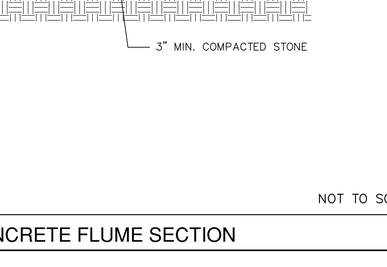
5. TO EMPTY THE SILTSACK, PLACE IT WHERE THE CONTENTS WILL BE COLLECTED. PLACE THE REBAR THROUGH THE LIFT STRAPS (CONNECTED TO THE BOTTOM OF THE SACK) AND LIFT. THIS WILL TURN THE SILTSACK INSIDE OUT AND EMPTY THE CONTENTS. CLEAN OUT AND RINSE. RETURN THE SILTSACK TO ITS ORIGINAL SHAPE AND PLACE BACK IN THE BASIN.

NOT TO SCALE

3 SILT SACK NOTES



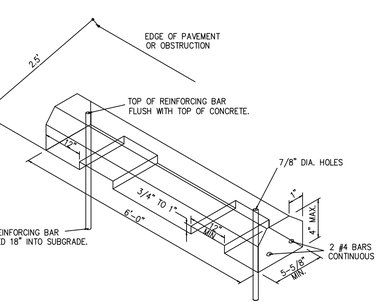
RESIDENTIAL DRIVEWAY PLAN



MUST COMPLY WITH CITY OF WILMINGTON STANDARDS
USE WITH 18" CURB AND GUTTER

NOT TO SCALE

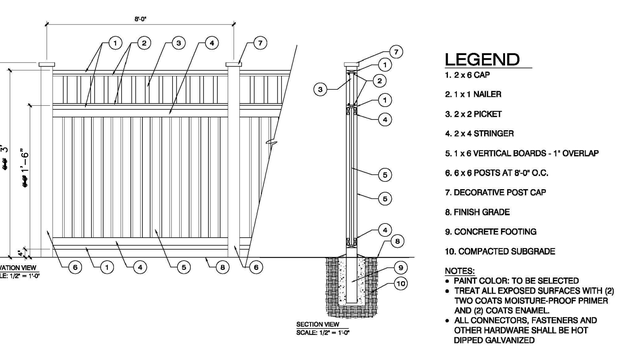
4 TYPICAL CATCH BASIN



MUST COMPLY WITH CITY OF WILMINGTON STANDARDS

NOT TO SCALE

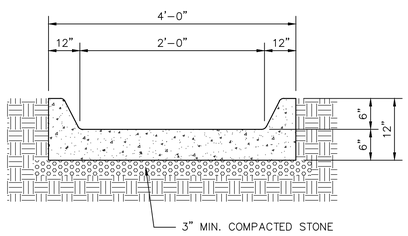
5 TYPICAL DROP INLET



MUST COMPLY WITH CITY OF WILMINGTON STANDARDS

NOT TO SCALE

6 TYPICAL JUNCTION BOX



NOT TO SCALE

7 CONCRETE FLUME SECTION

NOT TO SCALE

8 CONCRETE WHEEL STOPS

LEGEND

1. 2 x 6 CAP
2. 1 x 1 NAILER
3. 2 x 2 PICKET
4. 2 x 4 STRINGER
5. 1 x 6 VERTICAL BOARDS - 1" OVERLAP
6. 6 x 6 POSTS AT 8'-0" O.C.
7. DECORATIVE POST CAP
8. FINISH GRADE
9. CONCRETE FOOTING
10. COMPACTED SUBGRADE

NOTES:
- PAINT COLOR: TO BE SELECTED
- TREAT ALL EXPOSED SURFACES WITH (2) TWO COATS MOISTURE-PROOF PRIMER AND (2) COATS ENAMEL.
- ALL CONNECTORS, FASTENERS AND OTHER HARDWARE SHALL BE HOT DIPPED GALVANIZED

NOTE: DETAIL SHOWN FOR THE INTENTION OF COMPLIANCE WITH COW CODE. ACTUAL SCREENING USED MAY VARY.

9 TYPICAL DUMPSTER SCREENING DETAIL

SITE WORK NOTES:

1. THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIAR WITH FIELD CONSTRUCTION CONDITIONS.

2. CONTRACTOR SHALL COORDINATE WORK WITHIN NCDOT AND LOCAL RIGHT OF WAYS WITH PROPER AUTHORITIES AND SHALL MEET ANY REQUIREMENTS AS TO TRAFFIC CONTROL AND CONNECTION TO EXISTING STREETS.

3. CLEARING AND GRUBBING: REMOVE ALL TREES AS REQUIRED UNLESS OTHERWISE NOTED TO REMAIN, STUMPS, ROOTS, SHRUBBERY, ASPHALT, CONCRETE, STRUCTURES, BURIED UTILITIES, STORAGE TANKS, ETC. WITHIN LIMITS OF CONSTRUCTION.

4. STRIPPING: BEFORE EXCAVATING OR FILLING, REMOVE ALL TOPSOIL, WOOD, LEAVES, AND ANY OTHER UNSUITABLE MATERIAL.

5. MUCKING: REMOVE ANY SOFT, ORGANIC SILT MATERIALS AND EXISTING BURIED CONSTRUCTION DEBRIS AS REQUIRED AND FILL TO SUBGRADE ELEVATIONS WITH A CLEAN SELECT-FILL COMPACTED AS SPECIFIED.

6. DISPOSAL: CLEARED, GRUBBED, STRIPPED OR EXCAVATED SPOIL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES.

7. BORROW MATERIAL: THE CONTRACTOR SHALL FURNISH BORROW MATERIAL REQUIRED FROM OFF SITE AND OBTAIN ALL REQUIRED PERMITS ASSOCIATED WITH BORROW OPERATIONS.

8. FILL AND COMPACTION: AFTER STRIPPING THOSE AREAS DESIGNATED TO RECEIVE FILL SHOULD BE PROOFROLLED. THE TOP 8" OF SUBGRADE SHALL BE COMPACTED TO AT LEAST 98% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT. ANY AREA WHICH PUMPS OR RUTS EXCESSIVELY SHOULD BE UNDERCUT AND REPLACED WITH A CLEAN, SILTY OR CLAYEY SAND HAVING A UNIFIED SOIL CLASSIFICATION OF SP, SM, OR SC. FILL MATERIAL 5" OUTSIDE OF BUILDING AREAS SHALL THEN BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) WITH THE UPPER 12 INCHES OF SUBGRADE BEING COMPACTED TO 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. FILL MATERIALS WITHIN BUILDING AREAS TO A LINE OUTSIDE THE BUILDING AREAS SHALL BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) WITH THE UPPER 12 INCHES OF SUBGRADE BEING COMPACTED IN 6 INCH LAYERS TO 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. IN AREAS WHERE NO STRUCTURAL FILL IS TO BE PLACED THE UPPER 12 INCHES OF IN-PLACE SUBGRADE SHOULD BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. IF THE MATERIAL IS TOO DRY TO COMPACT TO THE REQUIRED DENSITY EACH LAYER SHALL BE WETTED IN ACCORDANCE WITH COMPACTION REQUIREMENTS. IF THE MATERIAL IS TOO WET TO SECURE PROPER COMPACTION, IT SHALL BE HARROWED REPEATEDLY OR OTHERWISE AERATED WITH SUITABLE EQUIPMENT UNTIL OPTIMUM MOISTURE CONTENT IS OBTAINED. FILL SHALL BE PLACED IN SUCH A MANNER THAT THE SURFACE WILL DRAIN READILY AT ALL TIMES. SEE STRUCTURAL NOTES AND SOILS REPORT FOR ADDITIONAL REQUIREMENTS.

9. LAYOUT: THE CONTRACTOR SHALL PROVIDE ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK.

10. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION.

11. EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION FROM SURVEY BY ARNOLD CARSON AND PROVIDED BY OWNER. tree survey by MICHAEL UNDERWOOD AND ASSOC. PA.

12. THE CONTRACTOR SHALL VERIFY DIMENSIONS AT JOBSITE.

13. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF RELOCATION OR DISCONNECTION OF ALL EXISTING UTILITIES WITH APPLICABLE AGENCIES AND AUTHORITIES.

14. ALL PAVEMENT AND BASE MATERIALS AND WORKMANSHIP SHALL CONFORM TO NCDOT STANDARDS.

15. WATER AND SEWER SERVICES SHALL BE INSTALLED TO MEET LOCAL AND STATE PLUMBING CODES. METER AND TAPS SHALL MEET ALL LOCAL REQUIREMENTS.

16. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE.

17. SEE SOILS REPORT FOR ADDITIONAL REQUIREMENTS.

18. CONTRACTOR SHALL NOTE THAT EARTHWORK QUANTITIES ARE HIS RESPONSIBILITY. PLANS DO NOT REPRESENT A BALANCED EARTHWORK CONDITION.

19. REINF. CONC. PIPE SHALL BE CLASS III W/RUBBER GASKETED JOINT OR "RAM NECK". INSTALL PER MANUFACTURER'S REQUIREMENTS.

20. USE WHITE LANE MARKING PAINT FOR ALL PAVEMENT MARKINGS. PAINT SHALL BE A CHLORINATED RUBBER ALKYD, FS TT-P-115, TYPE III, FACTORY MIXED, QUICK DRYING, NON-BLEEDING.

21. REFER TO THE PLUMBING DRAWINGS FOR LOCATION AND INVERTS OF NEW WASTE, WATER AND ROOF DRAIN LINES.

NOTES AND DETAILS
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21117

DES.	JST
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DATE	10/17/22

C5.3

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.

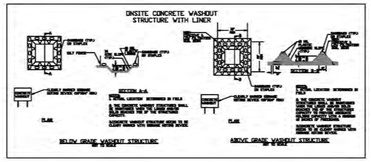
PORTABLE TOILETS

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 stalking 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 (and 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 (SDOs)	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 wetland 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, Soction C, Item (2)(a) of this permit of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and 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 documented in the manner described:

Item to Document	Documentation Requirements
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations 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 performed.	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

In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency 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 30 days. 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.

(c) All data used to complete the Notice of Intent and older 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).

(a) 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.

(b) Anticipated bypasses and unanticipated bypasses.

(c) 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 Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

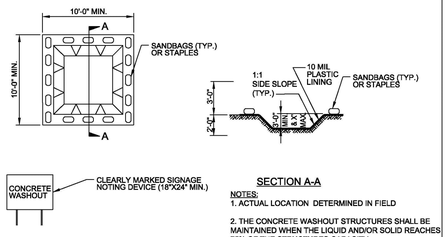
Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address 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 or 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.

NORTH CAROLINA Environmental Quality

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

WITH LINER, NO GRAVEL APPROACH

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



PLAN

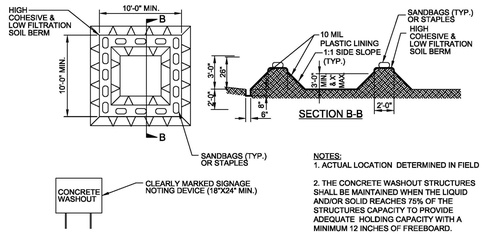
SECTION A-A

NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.

3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE



PLAN

SECTION B-B

NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

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