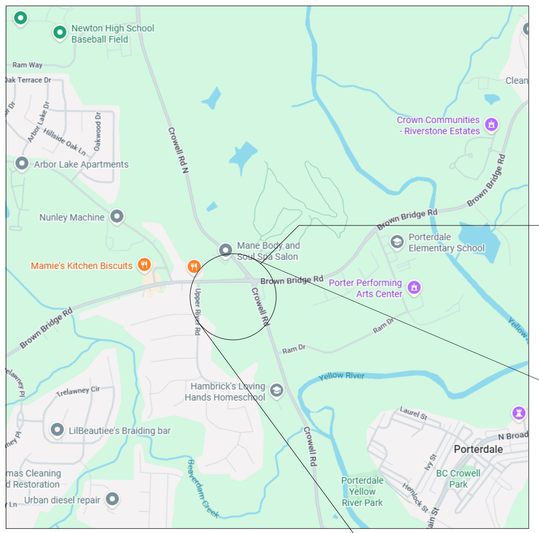
ALPHA SITE SET 08-20-2026

NEWTON COUNTY WATER AND SEWERAGE AUTHORITY
NCWSA OFFICE
11325 BROWN BRIDGE ROAD
COVINGTON, GEORGIA, 30016

NCWSA OFFICE ADDITION
CONSTRUCTION DOCUMENTS

NEWTON COUNTY WATER AND SEWERAGE AUTHORITY

NCWSA OFFICE
11325 BROWN BRIDGE ROAD COVINGTON, GEORGIA, 30016
NCWSA OFFICE ADDITION



SITE



PROJECT LOCATION

CONSTRUCTION DOCUMENTS
07/01/2026

wendel
1100 Abernathy Rd, Building 500, Suite 1050
Atlanta, GA 30328
www.wendelcompanies.com
p:678.222.0375 tf:877.293.6335

Brown AND Caldwell
BROWN AND CALDWELL
990 HAMMOND DRIVE, SUITE 500
ATLANTA, GA 30328

PES STRUCTURAL ENGINEERS
ADDRESS 1852 Century Place NE, Suite 201, Atlanta Georgia 30345
PHONE 770.457.5923 WEB www.pesengineers.com

Wendel Project No. 616202

GENERAL NOTES:

1. THE INFORMATION PROVIDED IN THESE DRAWINGS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF THE WORK. THE CONTRACTOR IS DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH BIDS WILL BE BASED.
2. DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD)88 & HORIZONTAL DATUM OF NAD83/2011.
3. REFER TO GEOTECHNICAL REPORT FOR SUBSURFACE INFORMATION.
4. ANY N.A.V.D BENCH MARK MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED AND PROPERLY REFERENCED BY A REGISTERED LAND SURVEYOR IN ACCORDANCE WITH THE MINIMUM TECHNICAL STANDARDS OF THE GEORGIA BOARD OF PROFESSIONAL LAND SURVEYORS PRIOR TO BEGINNING WORK AT THE SITE.
5. ALL PUBLIC LAND CORNERS AND MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED BY THE CONTRACTOR AS FOLLOWS: CORNERS AND MONUMENTS IN CONFLICT WITH THE WORK AND IN DANGER OF BEING DAMAGED, DESTROYED, OR COVERED SHALL BE PROPERLY REFERENCED BY A REGISTERED-LAND SURVEYOR IN ACCORDANCE WITH THE MINIMUM TECHNICAL STANDARDS OF THE GEORGIA BOARD OF PROFESSIONAL LAND SURVEYORS PRIOR TO BEGINNING WORK AT THE SITE. THE CONTRACTOR SHALL RETAIN LAND SURVEYOR TO REFERENCE AND RESTORE UPON COMPLETION OF THE WORK, ALL SUCH CORNERS AND MONUMENTS AND SHALL FURNISH TO DEKALB COUNTY A SIGNED AND SEALED COPY OF THE LAND SURVEYOR'S REFERENCE DRAWING.
6. ALL NORTHINGS AND EASTINGS REFER TO EDGE OF CONSTRUCTION, UNLESS OTHERWISE STATED.
7. ALL FINAL GRADES SHALL BE IMPLEMENTED BY THE CONTRACTOR WITH COORDINATION TO THE ENGINEER OF RECORD.
8. ANY CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE NEWTON COUNTY , STATE AND FEDERAL AGENCY WITH JURISDICTION. IT IS THE INTENT OF THESE DRAWINGS TO BE IN ACCORDANCE WITH APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND APPLICABLE CODES SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF NEWTON COUNTY.
9. EXISTING TOPOGRAPHIC INFORMATION WAS OBTAINED FROM A SURVEY PREPARED BY GASKINS+LECRAW INC., MARCH 19, 2025.
10. EXISTING INVERT ELEVATIONS WERE OBTAINED FROM THE SUBSURFACE SURVEY PROVIDED BY GASKINS+LECRAW INC., MARCH 19, 2025. THE RESULTS OF THIS SUBSURFACE SURVEY ARE PROVIDED IN THESE DRAWINGS.
11. THE CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND AREAS OF OVERHEAD AND UNDERGROUND UTILITIES.
12. NEWTON COUNTY REQUIRES THAT THE ACCESS TO ALL WATER AND SEWER VALVES, SANITARY MANHOLES, AND OTHER CONTROL MECHANISM BE MAINTAINED THROUGHOUT CONSTRUCTION IN THE EVENT OF AN EMERGENCY. COVERING VALVE BOXES OR MANHOLES CAN BE CONSIDERED OBSTRUCTION AND TAMPERING WITH DEPARTMENT UTILITIES. ALL REQUESTS FOR UTILITY ADJUSTMENTS MUST BE MADE IN WRITING AT LEAST TWO (2) WEEKS IN ADVANCE.
13. THERE ARE KNOWN UTILITIES WITHIN THE PROJECT SITE. THESE INCLUDE BUT NOT LIMITED TO ALL OF THE UTILITIES SHOWN ON THE SUE SURVEY BY GASKINS+LECRAW INC..
14. IF SHEETING, SHORING, OR DEWATERING ARE NECESSARY, THE CONTRACTOR MUST MONITOR AND CONTROL ALL WORK THAT MAY CAUSE CRACKING TO ANY ADJACENT BUILDING, STRUCTURE, OR PROPERTY AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES CAUSED BY THESE OPERATIONS, COST OF SHEETING, SHORING, OR DEWATERING SHALL BE INCLUDED IN THE RELATED BID ITEM FOR THE WORK BEING DONE.
15. ALL GRASS AREAS AFFECTED SHALL BE RE-SODDED. ANY GRASS AREA WITH 3:1 SLOPES AFFECTED SHALL BE SEEDED.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE DEWATERING PERMIT. COST OF THE PERMIT AND DEWATERING SHALL BE INCLUDED IN THE RELATED BID ITEM FOR THE WORK BEING DONE.
17. THE CONTRACTOR SHALL RESTRICT PERSONNEL, THE USE OF EQUIPMENT, AND THE STORAGE OF MATERIALS TO AREAS WITHIN THE LIMITS OF CONSTRUCTION AND DESIGNATED STAGING AREAS.
18. ALL DITCH EXCAVATIONS SHALL BE PERFORMED IN FULL COMPLIANCE WITH THE PROVISIONS OF THE TRENCH SAFETY ACT.
19. ALL EXCESS MATERIAL, AS DESIGNATED BY THE CONTRACTOR, IS TO BE DISPOSED BY THE CONTRACTOR WITHIN 72 HOURS OF BEING DEPOSITED IN THE CONSTRUCTION AREA AND AT THE CONTRACTOR'S EXPENSE.
20. ALL DISPOSAL OF MATERIALS, RUBBISH AND DEBRIS SHALL BE MADE AT A LEGAL DISPOSAL SITE OR BY OTHER PRIOR APPROVED MANNER. MATERIAL CLEARED FROM THE SITE AND DEPOSITED ON ADJACENT AREAS WILL NOT BE CONSIDERED AS HAVING BEEN DISPOSED PROPERLY. OWNERSHIP OF DEMOLISHED MATERIAL SHALL BE SPECIFIED AND A CHAIN OF CUSTODY PROVIDED TO NEWTON COUNTY.
21. ANY KNOWN OR SUSPECTED HAZARDOUS MATERIAL FOUND BY THE CONTRACTOR SHALL BE IMMEDIATELY REPORTED TO NEWTON COUNTY, WHO SHALL DIRECT THE CONTRACTOR TO PROTECT THE AREA OF KNOWN OR SUSPECTED CONTAMINATION FROM FURTHER ACCESS. THE NEWTON COUNTY WILL ARRANGE FOR INVESTIGATION, IDENTIFICATION, AND REMEDIATION OF THE HAZARDOUS MATERIAL. THE CONTRACTOR WILL NOT RETURN TO THE AREA OF CONTAMINATION UNTIL APPROVAL IS PROVIDED BY THE NEWTON COUNTY.
22. EXISTING ABOVE GROUND FEATURES ARE SHOWN ACCORDING TO THE BEST AVAILABLE DATA AND MAY NOT BE ACCURATELY REFLECT PRESENT CONDITIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF/HERSELF WITH CURRENT CONDITIONS, AND SHALL REPORT DISCREPANCIES TO THE ENGINEER OF RECORD PRIOR TO STARTING WORK.
23. CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING TREES, STRUCTURES, AND UTILITIES SHOWN AND NOT SHOWN ON THE DRAWINGS. ANY STRUCTURE, PAVEMENT, TREES OR OTHER EXISTING IMPROVEMENT NOT SPECIFIED FOR REMOVAL WHICH IS DAMAGED, EXPOSED OR ANY WAY DISTURBED SHALL BE REPAIRED, PATCHED, OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
24. CONTRACTOR SHALL AVOID THE REMOVAL AND ANY DAMAGE TO ANY EXISTING TREES UNLESS OTHERWISE DIRECTED BY THE CONTRACT DOCUMENTS.
25. NO LANDFILLS ARE LOCATED ON THE PROJECT SITE.
26. NO WETLANDS OR STATE WATERS ARE LOCATED ON THE PROJECT SITE.
27. NO OVERLAY DISTRICTS ARE LOCATED ON THE PROJECT SITE.
28. PARKING ANALYSIS: CODE REQUIRES 1 SPACE FOR EVERY 300 SQUARE FEET OF OFFICE SPACE.
    90 PARKING SPACES POST CONSTRUCTION (90 X 300 = 27,000 SF MAX)
    5,339 SF EXISTING + 10,326 SF NEW (5,163 PER FLOOR) = 15,665 SF POST CONSTRUCTION .

1

SOIL BORING NOTES:

1. GEOTECHNICAL REPORT WAS PREPARED BY MC SQUARED LLC, DATED JANUARY 9, 2025.

BURIED UTILITY NOTES:

1. EXISTING UTILITIES ARE CONSIDERED TO BE SHOWN IN THE HORIZONTAL DRAWING WITH REASONABLE ACCURACY. HOWEVER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE WHATEVER FURTHER INVESTIGATIONS ARE NECESSARY TO ESTABLISH THE EXACT LOCATION OF THE EXISTING UTILITY AND ADJUST ROUTING OF NEW UTILITY FACILITIES PRIOR TO LAYING THE NEW UTILITIES TO MEET THE INTENT OF THE DESIGN. ALL MODIFIED ROUTING SHALL BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO INSTALLATION.
2. EXPLORATORY OR PRE-TRENCHING IN THE ALIGNMENT AND GRADE OF THE PROPOSED, UTILITIES, STRUCTURES, FRENCH DRAINS AND CONDUITS, POLE FOUNDATIONS AND/OR SUB GRADE SHALL BE PERFORMED SEVEN DAYS IN ADVANCE OF ITS CONSTRUCTION AS DIRECTED BY THE COUNTY. THE CONTRACTOR SHALL PROVIDE NEWTON COUNTY AND UNDERGROUND UTILITY OWNERS WITH IMMEDIATE NOTIFICATION OF ANY CONFLICT WITH PROPOSED CONSTRUCTION. THIS NOTIFICATION SHALL PROVIDE SURVEY INFORMATION ABOUT EXISTING UTILITY ALIGNMENT, GRADE AND POSSIBLE CONFLICTS. PAYMENT FOR EXPLORATORY OR PRE-TRENCHING SURVEY AND BACKFILLING SHALL BE INCLUDED IN THE COST RELATED TO THE BID ITEM.
3. PROVIDE A CONSTANT SLOPE ON ALL REACHES OF PIPES BETWEEN VENTS AND DRAINS. SLOPE PIPE AS REQUIRED AND IN A MANNER THAT MINIMIZES THE NUMBER OF VENTS AND DRAINS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING EXISTING UTILITIES THAT INTERFERE WITH THE INSTALLATION OF NEW UTILITIES, AND TO OTHERWISE DEFINE A ROUTING FOR ALL NEW UTILITIES OVER, UNDER, OR AROUND THE REMAINING EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST ASSOCIATED WITH THE RELOCATION OF EXISTING UTILITIES. THE CONTRACTOR IS ADVISED THAT TRENCH EXCAVATION FOR EXISTING UTILITIES MAY BE AS DEEP AS ±10 FEET TO ALLOW FOR ACCEPTABLE ROUTING.
5. WHERE PIPE ELEVATIONS ARE NOT GIVEN, MINIMUM 2.5 FEET OF COVER IS REQUIRED.
6. THE ENGINEER OF RECORD AND NEWTON COUNTY DO NOT ASSUME RESPONSIBILITY THAT DURING CONSTRUCTION UNDERGROUND PIPING AND UTILITIES OTHER THAN THAT SHOWN MAY BE ENCOUNTERED. ANY DAMAGE TO EXISTING PIPING AND UTILITIES MUST BE REPAIRED IMMEDIATELY AT THE EXPENSE OF THE CONTRACTOR.
7. UNLESS OTHERWISE INDICATED IN THE DRAWINGS ALL NEW VERTICAL TRANSITIONS BELOW GRADE SHALL BE ACCOMPLISHED USING 45 DEGREE ELBOWS TO BE APPROVED BY NEWTON COUNTY ON A CASE BY CASE BASIS ONLY.
8. WATERLINE SHALL BE UPDATED TO TIE-IN TO EXISTING WATERMAIN. FIRELINE SHALL SPLIT FROM WATERLINE FOR FIRE PROTECTION ON THE BUILDING.

CIVIL SITE DESIGNATIONS

- SS — SS — SANITARY SEWER
- W — W — WATER
- GAS — GAS — GAS
- PIPE DIAMETERS 10" AND OVER
- TO BE DEMOLISHED
- FIRE HYDRANT
- WATER VALVE
- M — WATER METER

EARTHWORK SYMBOLS

- ASPHALT
- CONCRETE
- GRAVEL
- EL:xxxx.00 — SPOT ELEVATION
- STORM DRAINAGE PIPE FLOW
- YARD PIPE FLOW

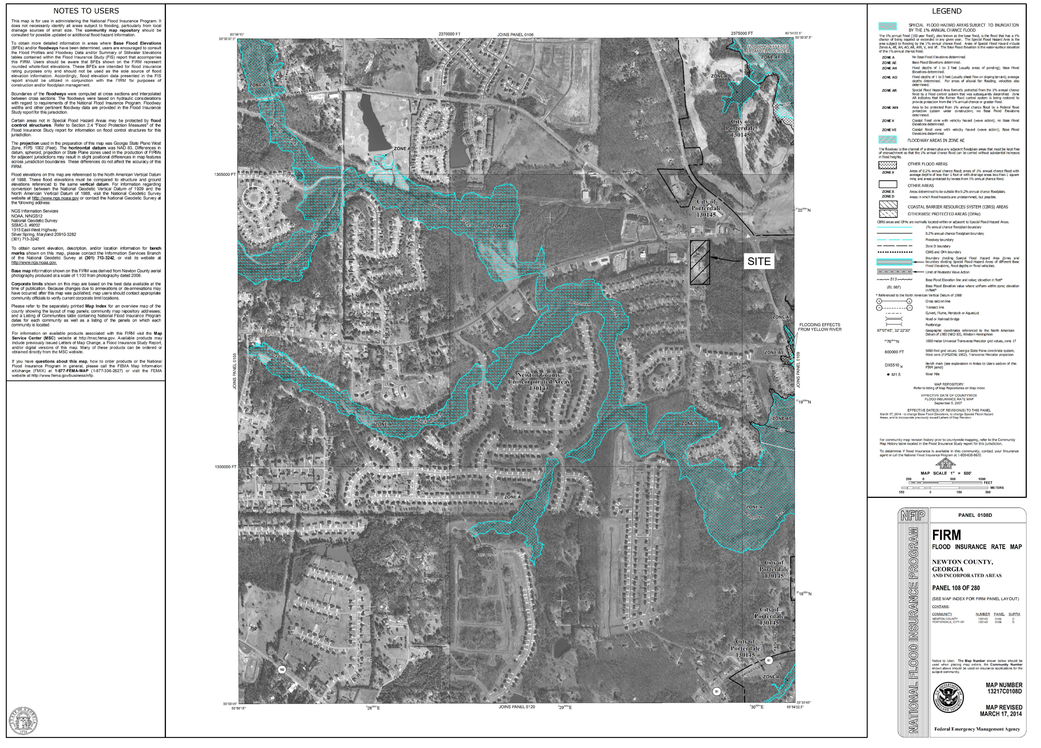
SURVEY UTILITY LINES

- FOC — FOC — FIBER OPTICS
- G — G — GAS
- W — W — WATER
- SS — SS — SANITARY SEWER
- ST — ST — STORM DRAINAGE
- UE — UE — UNDERGROUND ELECTRIC
- UTL — UTL — UTILITY
- P — P — POWER

ABBREVIATIONS

A	
ASPH	ASPHALT
AVE	AVENUE
C	
CLF	CHAIN LINK FENCE
CO	CLEAN OUT
E	
ESMT	EASEMENT
EOP	EDGE OF PAVEMENT
M	
MON	MONUMENT
R	
R/W	RIGHT OF WAY
S	
SOE	SUPPORT OF EXCAVATION
SSMH	SANITARY SEWER MAN HOLE
U	
UNK	UNKNOWN
V	
VLT	VAULT
W	
WV	WATER VALVE

ALPHA SITE SET 08-20-2026



1

Brown AND Caldwell
BROWN AND CALDWELL
900 HAMMOND DRIVE, SUITE 500
ATLANTA, GA 30328

wendel

THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

GEORGIA REGISTERED No. 029252 PROFESSIONAL ENGINEER KIMBERLY A. DEVENDORF
7/31/26

CONSTRUCTION DOCUMENTS
07/01/2026

NCWSA
NEWTON COUNTY WATER & SEWERAGE AUTHORITY

NCWSA OFFICE ADDITION

REVISIONS

REV	DATE	DESCRIPTION
1	7/30/26	AHJ COMMENTS

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B.FLIEG
DRAWN: B.FLIEG
CHECKED: K.DEVENDORF
CHECKED:
APPROVED:

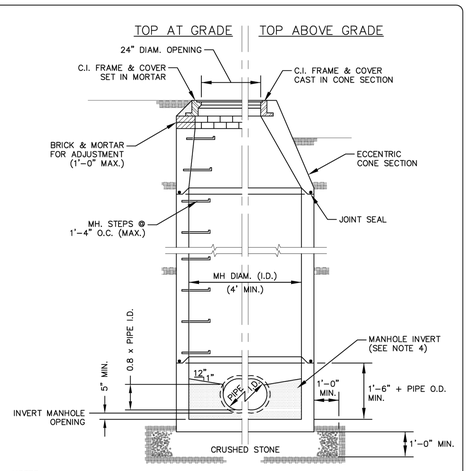
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BC PROJECT NUMBER

CLIENT PROJECT NUMBER

CIVIL

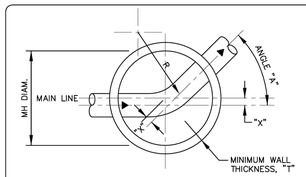
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DRAWING NUMBER
C-001

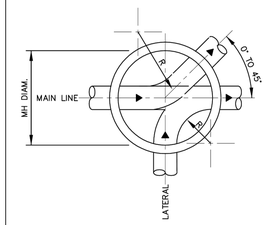


NOTES:
1. PRECAST CONCRETE SECTIONS SHALL MEET THE REQUIREMENTS OF ASTM C 478. MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE IN PRECAST SECTIONS SHALL BE 4000 PSI.
2. SEAL ALL JOINTS AND LIFT HOLES, BOTH INSIDE AND OUT, WITH GROUT. THIS IS IN ADDITION TO JOINT SEALANT BETWEEN SECTIONS.
3. PROVIDE UNIFORM BEDDING OF THE BOTTOM TO PREVENT UNEVEN LOADING.
4. SEE DETAIL B-7 FOR INVERT CONSTRUCTION REQUIREMENTS.

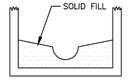
PRECAST CONCRETE MANHOLE
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. B-1



MAIN LINE ONLY



MAIN LINE WITH LATERAL

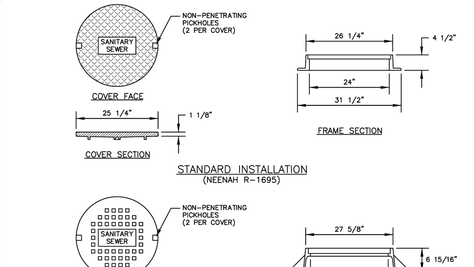


PRECAST OR FIELD-INSTALLED INVERT

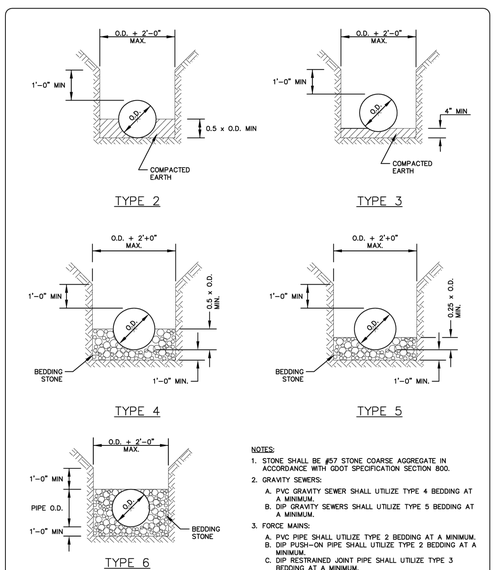
STANDARD MANHOLE SCHEDULE OF GOVERNING DIMENSIONS				
PIPE SIZE	ANGLE "A"	MH DIAM.	"T"	"X"
6" TO 16"	0° TO 90°	4'-0"	5"	0"
18" TO 24"	0° TO 60°	4'-0"	5"	0"
18" TO 24"	60° TO 90°	5'-0"	6"	6"

NOTES:
1. MINIMUM ℄ RADIUS OF M.H. INVERT R = 1.5 x PIPE DIAMETER.
2. ROUND AND TROWEL INVERTS SMOOTH.
3. PROVIDE 0.2 FOOT DROP ACROSS INVERT.
4. NO FIELD MODIFICATION OF PRECAST INVERTS SHALL BE ALLOWED.
5. MAXIMUM GROUT SPACING BETWEEN BRICK SHALL BE 3/8".

MANHOLE INVERTS
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. B-7

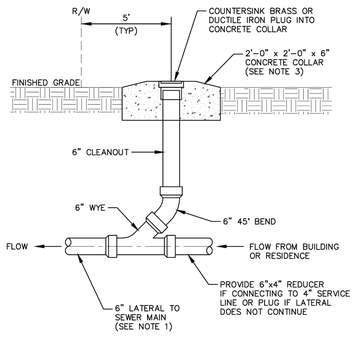


MANHOLE FRAME AND COVER
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. B-6



NOTES:
1. STONE SHALL BE #57 STONE COARSE AGGREGATE IN ACCORDANCE WITH ODOT SPECIFICATION SECTION 800.
2. GRAVITY SEWERS:
   A. PVC GRAVITY SEWER SHALL UTILIZE TYPE 4 BEDDING AT A MINIMUM.
   B. DIP GRAVITY SEWERS SHALL UTILIZE TYPE 5 BEDDING AT A MINIMUM.
3. FORCE MAINS:
   A. PVC PIPE SHALL UTILIZE TYPE 2 BEDDING AT A MINIMUM.
   B. DIP PUSH-ON PIPE SHALL UTILIZE TYPE 2 BEDDING AT A MINIMUM.
   C. DIP RESTRAINED JOINT PIPE SHALL UTILIZE TYPE 3 BEDDING AT A MINIMUM.
4. TYPE 6 BEDDING SHALL BE USED IN WET TRENCH CONDITIONS AND FOR ALL PVC PIPE CONSTRUCTED WITH COVER GREATER THAN 14 FEET.

SEWER PIPE BEDDING
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. B-8



NOTES:
1. SEE DETAIL B-11 FOR LATERAL CONNECTION TO NCWSA SEWER.
2. ALL SERVICE LINES AND CLEANOUT PIPING MATERIALS, EXCEPT PLUG, SHALL BE SOLVENT WELD PVC.
3. TYPE II CONCRETE IN ACCORDANCE WITH ASTM C 150 FOR ALL UNPAVED AREAS. CENTER WITH #4 REBAR EA. SIDE, EA. WAY.
4. CLEANOUTS SHALL NOT BE INSTALLED WITHIN DRIVEWAYS.

CLEANOUT
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. B-12

ALPHA SITE SET 08-20-2026

BROWN AND CALDWELL
900 HAMMOND DRIVE, SUITE 500
ATLANTA, GA 30328

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GEORGIA REGISTERED No. 029252 PROFESSIONAL ENGINEER KIMBERLY A. DEVENDORF
7/31/26

CONSTRUCTION DOCUMENTS
07/01/2026

NCWSA NEWTON COUNTY WATER & SEWERAGE AUTHORITY

NCWSA OFFICE ADDITION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B.FLIEG
DRAWN: B.FLIEG
CHECKED: K.DEVENDORF
CHECKED:
APPROVED:

FILENAME
203000-C-010.dwg

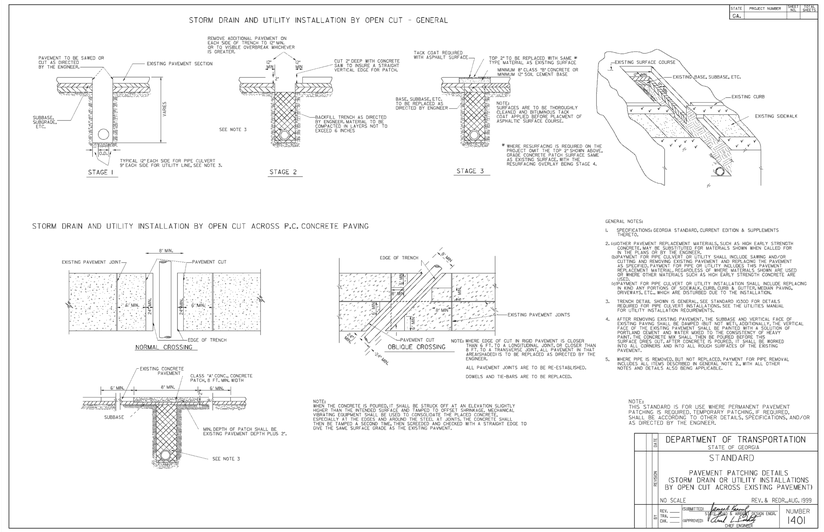
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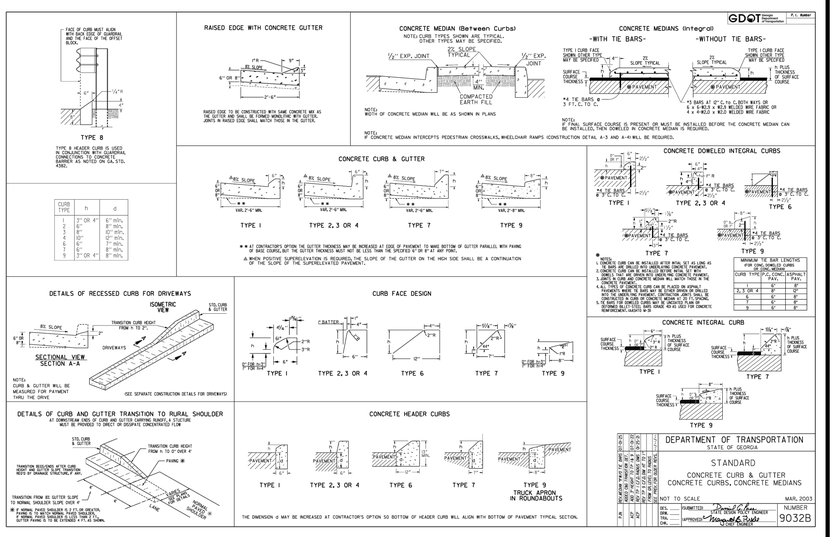
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CIVIL

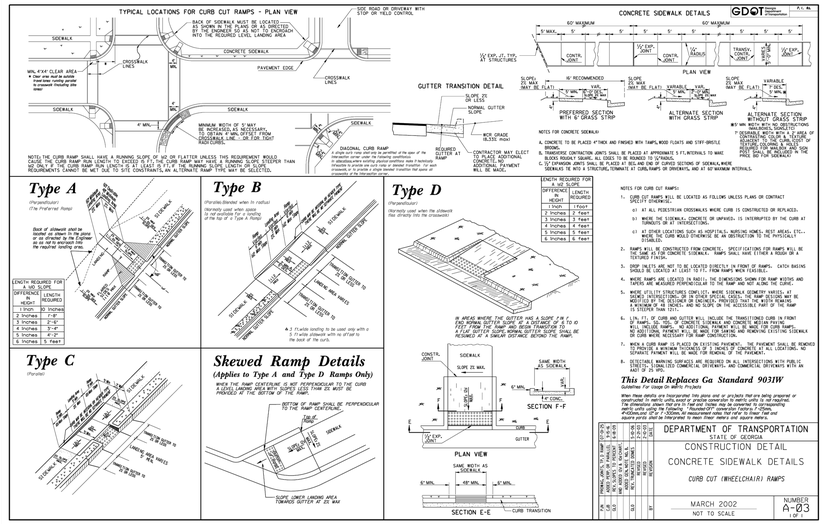
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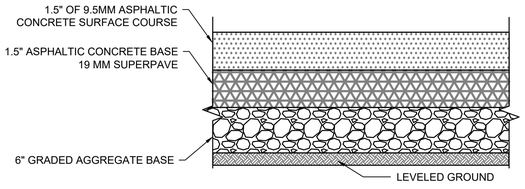
DRAWING NUMBER
C-010





ALPHA SITE SET 08-20-2026





A MEDIUM DUTY ASPHALT PAVEMENT
DETAIL:NTS

BROWN AND CALDWELL
900 HAMMOND DRIVE, SUITE 500
ATLANTA, GA 30328

wendel

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7/31/26

CONSTRUCTION DOCUMENTS
07/01/2026

NEWTON COUNTY WATER & SEWERAGE AUTHORITY

NCWSA OFFICE ADDITION

REVISIONS

REV	DATE	DESCRIPTION

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DESIGNED: B.FLIEG
DRAWN: B.FLIEG
CHECKED: K.DEVENDORF
CHECKED:
APPROVED:

FILENAME 203000-C-011.dwg
BC PROJECT NUMBER
CLIENT PROJECT NUMBER

CIVIL

SITE DETAILS 2

DRAWING NUMBER C-011

CLERK OF THE SUPERIOR COURT RECORDING INFORMATION

TOPOGRAPHIC DATA:

A. VERTICAL DATUM: NAVD 88 AND WAS OBTAINED BY PERFORMING REDUNDANT RTK GPS OBSERVATIONS ON PRIMARY SURVEY CONTROL POINTS UTILIZING STATIC OBSERVATIONS AND OPUS POST PROCESSING USING TRIMBLE R12 BASE AND ROVER.

B. CONTOURS SHOWN HEREON ARE BASED ON FIELD RUN SURVEY DATA AND COMPLETED ON 3/11/2025.

GENERAL NOTES:

A. PROPERTY ADDRESS: 11325 BROWN BRIDGE ROAD, COVINGTON, GA.

B. TAX PARCEL ID: 0044000000053000

C. THIS PARCEL OF LAND IS NOT IN THE 100 YEAR FLOODPLAIN AND IS IN ZONE X ACCORDING TO F.E.M.A. FLOOD INFORMATION RATE MAP. COMMUNITY NUMBER: 130143, MAP NUMBER: 13217C0108D, DATED: MARCH 17, 2014.

D. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON SUE LEVEL B PAINT MARKINGS BY GROUNDHAWK UTILITY LOCATION ON MARCH 13, 2025 AND WERE LOCATED AT TIME OF FIELD SURVEY. OTHER NON-METALLIC UTILITIES WITHOUT TRACER WIRE AND/OR OTHER BURIED STRUCTURES MAY EXIST ON THE PROPERTY.

E. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT TITLE; THEREFORE, THE UNDERSIGNED AND GASKINS + LECRAW MAKE NO GUARANTEES OR REPRESENTATIONS REGARDING INFORMATION SHOWN HEREON PERTAINING TO EASEMENTS, RIGHT-OF-WAY, SETBACK LINES, AGREEMENTS, RESERVATIONS, AND OTHER SIMILAR MATTERS.

F. IT IS THE RECOMMENDATION OF GASKINS + LECRAW TO HAVE EASEMENTS AND RIGHTS-OF-WAY MARKED AND VERIFIED BY THE APPROPRIATE UTILITY OWNER, ROAD JURISDICTION OR RAILROAD PRIOR TO ANY CONSTRUCTION NEAR SAID EASEMENT OR RIGHT-OF-WAY. SOURCE OF INFORMATION USED TO ESTABLISH EASEMENTS AND RIGHTS-OF-WAY REFERENCED HEREON, IF PROVIDED BY CLIENT. SURVEYED PROPERTY IS SUBJECT TO COVENANTS, EASEMENTS, AND RESTRICTIONS OF RECORD THAT MAY NOT BE SHOWN HEREON.

G. CURRENT ZONING: A-R (AGRICULTURAL RESIDENTIAL) AND M-1 (LIGHT INDUSTRIAL) ZONING CLASSIFICATION IS BASED ON NEWTON COUNTY ZONING MAP

H. A-R SETBACKS: FRONT - 60 FEET
BACK - 40 FEET
SIDE - 15 FEET

M-1 SETBACKS: FRONT - 60 FEET
BACK - 15 FEET
SIDE - 20 FEET

SOURCE OF SETBACK INFORMATION: NEWTON COUNTY UNIFIED DEVELOPMENT ORDINANCE.

GEORGIA SURVEY NOTES:

A. THE FIELD WORK FOR THIS SURVEY WAS PERFORMED ON MARCH 17, 2025. ANY CHANGES IN SITE CONDITIONS AFTER THIS DATE ARE NOT REFLECTED ON THE SURVEY.

B. THE FIELD DATA UPON WHICH THIS PLAT IS BASED WAS GATHERED BY USING RTK BASE AND ROVER OCCUPYING MULTIPLE BASE LOCATIONS AND DUPLICATE OBSERVATIONS ON CORNERS. THE PROCESSED DATA HAS A HORIZONTAL POSITIONAL ACCURACY OF LESS THAN 0.07 FEET.

C. HORIZONTAL DATUM IS BASED ON NAD 83, GEORGIA STATE PLANE COORDINATE SYSTEM, WEST ZONE, AS ESTABLISHED BY PERFORMING REDUNDANT RTK GPS OBSERVATIONS ON PRIMARY SURVEY CONTROL POINTS UTILIZING STATIC OBSERVATIONS AND OPUS POST PROCESSING USING TRIMBLE R12 GPS RECIEVER.

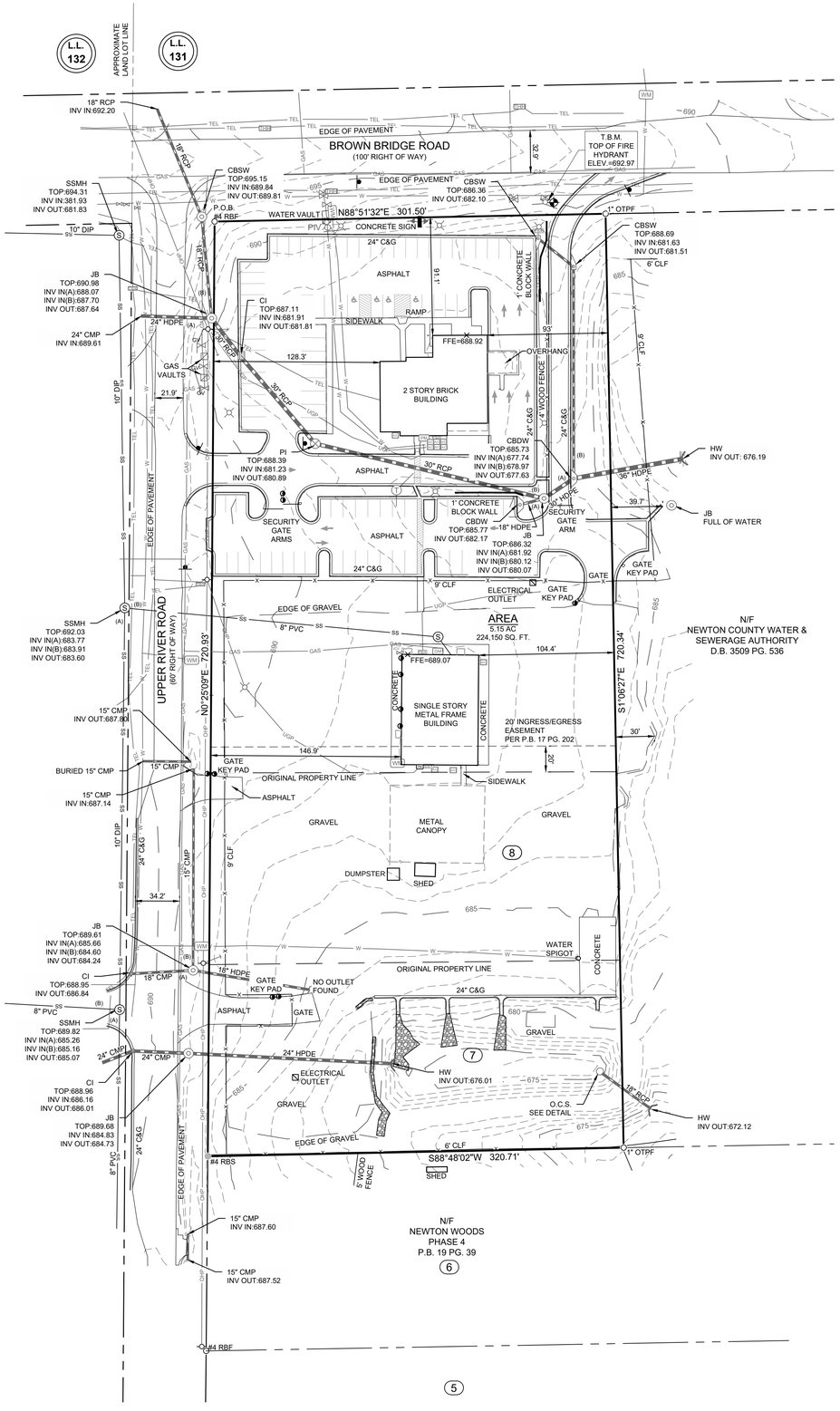
D. THIS MAP OR PLAT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE WITHIN 1 FOOT IN 464,335.

E. ALL DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES.

F. EQUIPMENT USED: TRIMBLE S5 & TRIMBLE R12 BASE AND ROVER

G. SOURCE OF TITLE: NEWTON COUNTY WATER & SEWAGE AUTHORITY, D.B. 564 PG. 175, P.B. 17, PG. 202 & P.B. 19. PG. 39.

H. PROPERTY CORNERS SET (#4RBS) ARE 1/2 INCH REBAR WITH PLASTIC CAP STAMPED "G+L LSF 1371", UNLESS OTHERWISE NOTED.

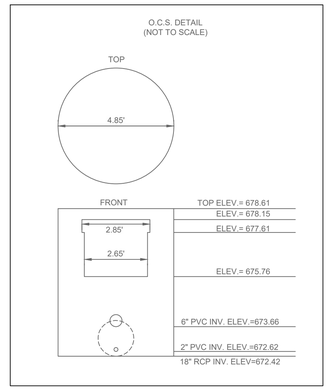


ALPHA SITE SET 08-20-2026

LINE LEGEND

	STORM SEWER
FO	FIBER OPTIC
OHP	OVERHEAD POWER
	MAJOR CONTOUR
X	FENCE
	PROPERTY LINE
	ADJOINING LOT LINE
SS	SANITARY SEWER
W	WATER MAIN
UGP	UNDERGROUND POWER
GAS	GAS
	MINOR CONTOUR
	LAND LOT LINE
	RIGHT OF WAY
	EASEMENT
TEL	TELECOMMUNICATIONS

O.C.S. DETAIL
(NOT TO SCALE)



SYMBOL LEGEND

AIR	AIR CONDITIONER UNIT
	BENCHMARK
	BOLLARD
	JUNCTION BOX
	HOOD AND GRATE INLET
	SANITARY SEWER CLEANOUT
EBX	ELECTRICAL BOX
EM	ELECTRIC METER
E	ELECTRIC MANHOLE
	FIRE HYDRANT
	SINGLE WING CATCH BASIN
	GUY WIRE
GV	GAS VALVE
	ADA PARKING
	HEADWALL
IRR	IRRIGATION CONTROL VALVE
	IRON PIN FOUND (TYPE NOTED)
	IRON PIN SET
	LIGHT POLE
	LANDSCAPE LIGHT
	OUTLET CONTROL STRUCTURE
PBX	UG POWER TRANSFORMER
PIV	POST INDICATOR VALVE
PM	POWER METER
S	SANITARY SEWER MANHOLE
	SINGLE WING CATCH BASIN
	STREET SIGN
	PAINTED TRAFFIC MARKING
TBX	TELEPHONE BOX
GM	GAS MARKER
	UTILITY POLE
WM	WATER METER
	VALVE
	DOUBLE WING CATCH BASIN
	FIRE DEPARTMENT CONNECTION
(B)	LOT NUMBER
	PEDESTAL INLET
T	TELEPHONE MANHOLE

ABBREVIATION LEGEND

P.O.C.	POINT OF COMMENCEMENT
RBF	REBAR FOUND
CTPF	CRIMP TOP PIPE FOUND
SSE	SANITARY SEWER EASEMENT
CMP	CORRUGATED METAL PIPE
RCP	REINFORCED CONCRETE PIPE
CI	CURB INLET
FFE	FINISHED FLOOR ELEVATION
N/F	NOW OR FORMERLY
CLF	CHAIN LINK FENCE
P.O.B.	POINT OF BEGINNING
R/W	RIGHT-OF-WAY
OTPF	OPEN TOP PIPE FOUND
DIP	DUCTILE IRON PIPE
PVC	POLYVINYL CHLORIDE PIPE
	END NOT LOCATED
DI	DROP INLET
×890.7	EXISTING SPOT ELEVATION
C&G	CURB AND GUTTER

SURVEYOR'S CERTIFICATION

(iii) THIS PLAT IS A RETRACEMENT OF AN EXISTING PARCEL OR PARCELS OF LAND AND DOES NOT SUBDIVIDE OR CREATE A NEW PARCEL OR MAKE ANY CHANGES TO ANY REAL PROPERTY BOUNDARIES. THE RECORDING INFORMATION OF THE DOCUMENTS, MAPS, PLATS, OR OTHER INSTRUMENTS WHICH CREATED THE PARCEL OR PARCELS ARE STATED HEREON. **RECORDATION OF THIS PLAT DOES NOT IMPLY APPROVAL OF ANY LOCAL JURISDICTION, AVAILABILITY OF PERMITS, COMPLIANCE WITH LOCAL REGULATIONS OR REQUIREMENTS, OR SUITABILITY FOR ANY USE OR PURPOSE OF THE LAND.** FURTHERMORE, THE UNDERSIGNED LAND SURVEYOR CERTIFIES THAT THIS PLAT COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN THE RULES AND REGULATIONS OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN O.C.G.A. SECTION 15-6-67.

GEORGIA PROFESSIONAL 2806 LAND SURVEYOR DEAN C. OLSON

AS SURVEYOR FOR GASKINS + LECRAW, INC.

DEAN C. OLSON — GEORGIA PLS No. 2806 — DATE: 3/19/2025

PREPARED IN THE OFFICE OF:

GASKINS +LECRAW

© 2025 GASKINS + LECRAW, INC.
1266 POWDER SPRINGS RD SW
MARIETTA, GA 30064
PHONE - 770.424.7168
www.gaskinslecraw.com

LSF001371

REVISIONS:

NO.#	DATE	DRAWN BY:	CHECKED BY:
1			

PREPARED FOR:
NEWTON COUNTY WATER & SEWERAGE AUTHORITY

PROJECT LOCATION
ADMINISTRATION BUILDING EXPANSION
11325 BROWN BRIDGE ROAD
NEWTON WOODS, PHASE 4, LOTS 7 & 8
DISTRICT 7, FIELD 1, GMD 1837
NEWTON COUNTY, GEORGIA

RETRACEMENT AND TOPOGRAPHIC SURVEY PREPARED FOR:

CALL BEFORE YOU DIG

811 Know what's below. Call before you dig.

SCALE & NORTH ARROW:

GRID NORTH, GEORGIA WEST ZONE
0' 25' 50' 100'
SCALE: 1" = 50'

SURVEY INFO:

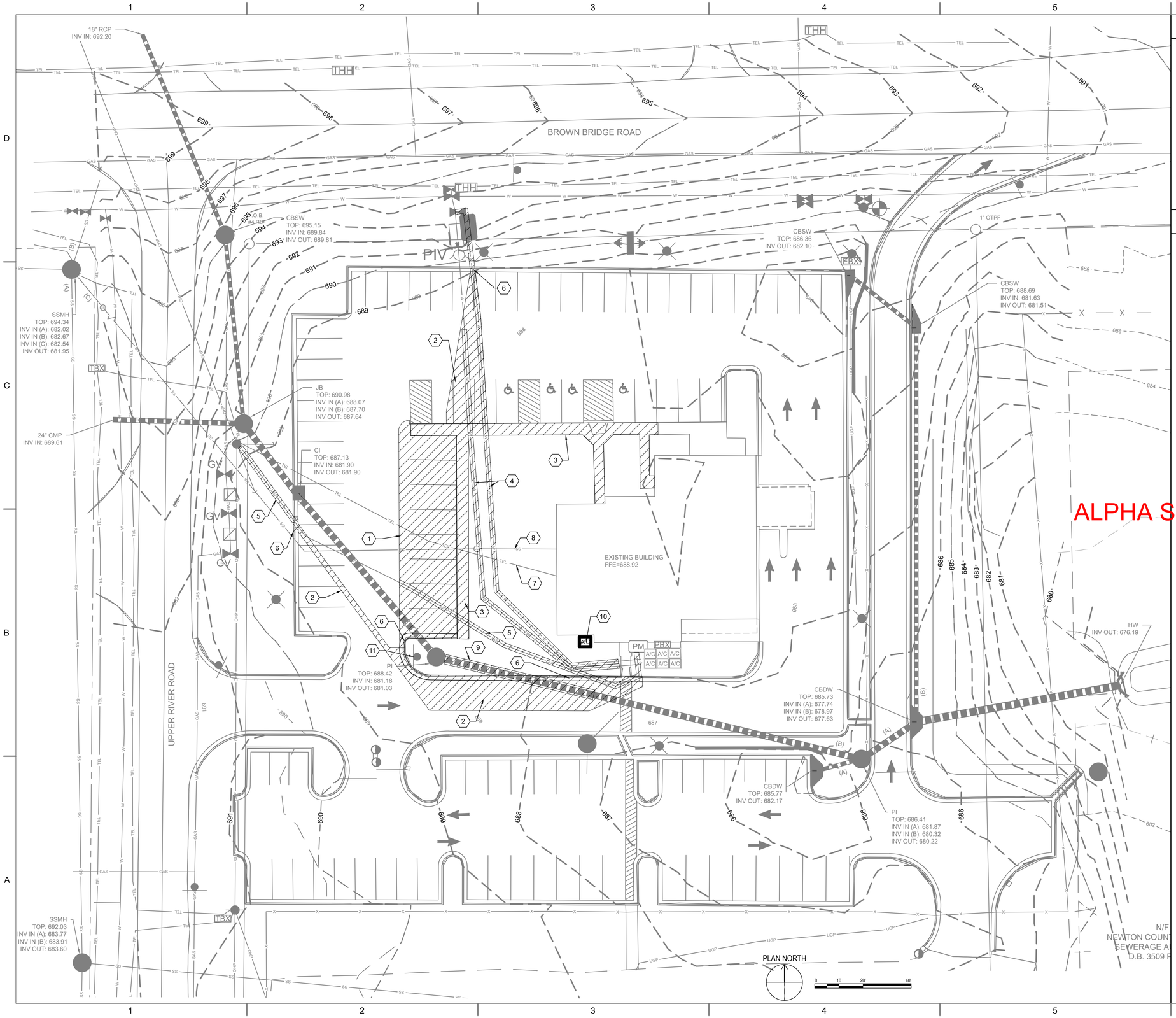
DRAWN BY:	CAM
REVIEWED BY:	DCO
JOB #:	1325001.000
DATE:	3/19/2025

SHEET NUMBER

1 OF 1

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Gaskins + LeCraw, Inc. shall be without liability to Gaskins + LeCraw, Inc. Copyright Gaskins + LeCraw, Inc., 2025

Drawing name: C:\Users\cmeier\Gaskins+LeCraw Dropbox\Shared Folders\Survey_Boundary\Newton\1010_013111\3250001.000 - Admin Building Expansion\BND\DWG\11325 BROWN BIDGE RD BND.dwg 24X36 Mar 19, 2025 12:34pm by: cmeier



GENERAL NOTES:

1. EXISTING TOPOGRAPHIC INFORMATION WAS OBTAINED FROM A SURVEY PREPARED BY GASKINS & LECRAW, INC. DATED 3-19-2025.

KEYNOTES:

1 REMOVE ASPHALT

2 REMOVE ASPHALT TO EXTENTS NEEDED FOR UTILITY INSTALLATION

3 REMOVE SIDEWALK

4 REMOVE WATERLINES

5 REMOVE UNDERGROUND ELECTRIC

6 REMOVE CURB TO EXTENTS NEEDED FOR UTILITY INSTALLATION

7 PROTECT BURIED TELECOM

8 PROTECT SEWER LATERAL

9 REMOVE STORM PIPE. GROUT PIPE PENETRATION IN MANHOLE.

10 REMOVE AIR CONDITIONING UNIT.

11 REMOVE AND SALVAGE SIGN. REINSTALL AFTER GRADING IS COMPLETE.

ALPHA SITE SET 08-20-2026

Brown AND Caldwell
BROWN AND CALDWELL
900 HAMMOND DRIVE, SUITE 500
ATLANTA, GA 30328

wendel

THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

GEORGIA REGISTERED No. 029252 PROFESSIONAL ENGINEER KIMBERLY A. DEVENDORF
7/31/26

CONSTRUCTION DOCUMENTS
07/01/2026

NCWSA NEWTON COUNTY WATER & SEWERAGE AUTHORITY

NCWSA OFFICE ADDITION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

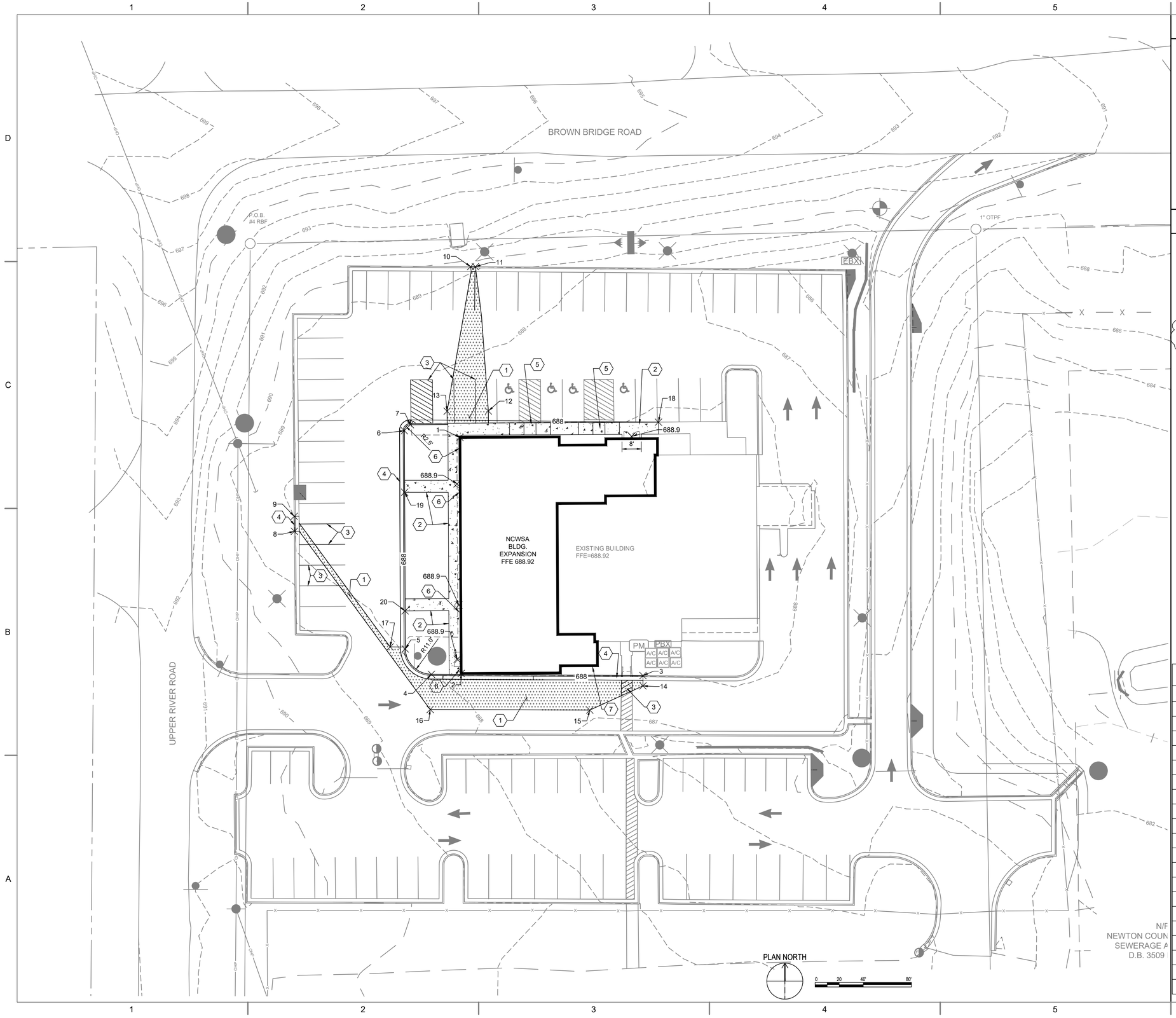
DESIGNED:	B. FLIEG
DRAWN:	B. FLIEG
CHECKED:	K.DEVENDORF
CHECKED:	
APPROVED:	

FILENAME
203000-CD-101.dwg
BC PROJECT NUMBER
CLIENT PROJECT NUMBER

CIVIL

EXISTING SITE CONDITIONS AND DEMOLITION PLAN

DRAWING NUMBER
CD-101



GENERAL NOTES:

1. EXISTING TOPOGRAPHIC INFORMATION WAS OBTAINED FROM A SURVEY PREPARED BY GASKINS & LECRAW, INC. DATED 3-19-2025.
2. EXISTING PORTION OF SITE LOCATED TO THE EAST OF THE ADMINISTRATION BUILDING, CONTAINING DRY EXTENDED DETENTION BASIN 'A' WAS OBTAINED FROM THE STORMWATER MANAGEMENT REPORT PREPARED BY PRECISION PLANNING INC. DATED OCTOBER 15, 2020.

KEYNOTES:

1. ASPHALT PAVEMENT REPLACEMENT, SEE DETAIL 1401/C-011.
2. 5' WIDE CONCRETE SIDEWALK, SEE DETAIL A-03/C-011.
3. PAVEMENT STRIPING. MATCH EXISTING.
4. CONCRETE CURB AND GUTTER, TYPE 2, SEE DETAIL 9032B/C-011
5. SIDEWALK RAMP, SEE DETAIL A-03, TYPE B/C-011
6. DOWNSPOUT
7. DOWNSPOUT AND SPLASH BLOCK

1

ALPHA SITE SET
08-20-2026

Point Table

Point #	Elevation	Northing	Easting	Description
1	688.60	1303751.86	2374221.32	CORNER OF BLDG
2	688.70	1303653.86	2374221.82	CORNER OF BLDG
3	688.80	1303652.99	2374297.31	BACK OF CURB
4	688.56	1303653.54	2374209.44	BACK OF CURB
5	688.50	1303664.06	2374198.58	BACK OF CURB
6	688.50	1303754.65	2374198.23	BACK OF CURB
7	688.50	1303757.16	2374200.72	BACK OF CURB
8	688.00	1303712.90	2374152.55	BACK OF CURB
9	688.00	1303719.12	2374152.47	BACK OF CURB
10	689.57	1303822.75	2374225.72	BACK OF CURB
11	689.34	1303822.74	2374227.71	BACK OF CURB
12	688.00	1303762.84	2374233.11	ASPHALT
13	688.00	1303762.74	2374215.97	ASPHALT
14	687.80	1303648.73	2374297.29	ASPHALT
15	687.20	1303638.67	2374275.22	ASPHALT
16	688.47	1303638.93	2374208.94	ASPHALT
17	688.13	1303664.92	2374192.32	ASPHALT
18	688.50	1303758.21	2374303.77	SIDEWALK
19	688.50	1303729.09	2374198.33	SIDEWALK
20	688.50	1303679.85	2374198.52	SIDEWALK

Brown AND Caldwell
BROWN AND CALDWELL
900 HAMMOND DRIVE, SUITE 500
ATLANTA, GA 30328

wendel

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GEORGIA REGISTERED No. 029252 PROFESSIONAL ENGINEER KIMBERLY A. DEVENDORF
7/31/26

CONSTRUCTION DOCUMENTS
07/01/2026

NCWSA NEWTON COUNTY WATER & SEWERAGE AUTHORITY

NCWSA OFFICE ADDITION

REVISIONS

REV	DATE	DESCRIPTION
1	7/30/26	AHJ COMMENTS

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B.FLIEG
DRAWN: B.FLIEG
CHECKED: K.DEVENDORF
CHECKED:
APPROVED:

FILENAME
203000-C-201.dwg
BC PROJECT NUMBER
CLIENT PROJECT NUMBER

CIVIL

PROPOSED SITE PLAN

DRAWING NUMBER
C-201

PROJECT: NCWSA BUILDING EXPANSION

FIRM MAP: 13217C0108D, DATED MARCH 17, 2014

CERTIFIED DESIGN PROFESSIONAL:
NAME: KIMBERLY DEVENDORF
LEVEL II CERTIFICATION NUMBER: 000018852
(SEE TITLEBLOCK FOR SIGNATURE AND SEAL)

24-HOUR LOCAL EMERGENCY CONTACT
NAME: NEWTON COUNTY PUBLIC WORKS
PHONE NUMBER: (678) 625-1300

PRIMARY PERMITTEE
NAME: NEWTON COUNTY WATER AND SEWERAGE AUTHORITY, NEWTON COUNTY
ADDRESS: 11325 BROWN BRIDGE RD., COVINGTON, GA 30016
EMAIL ADDRESS: (770) 787-1375
PHONE NUMBER: 787-1375

SITE INFORMATION (ACREAGE)
TOTAL SITE AREA: 5.15 ACRES
TOTAL DISTURBED AREA: 0.27 ACRES

GPS LOCATION OF CONSTRUCTION EXIT #1(IN DECIMAL DEGREES):
LATITUDE: 33.5836100989
LONGITUDE: -83.9120721817

INITIAL DATE OF THE PLANS:
SEE COVER SHEET AND/OR TITLE BLOCK FOR INFORMATION.

DESCRIPTION OF THE NATURE OF CONSTRUCTION ACTIVITY:

EXISTING SITE: EXISTING SITE IS LOCATED ON THE PROPERTY OF THE NCWSA ADMINISTRATION BUILDING. THE BUILDING IS IN USE BY THE NEWTON COUNTY WATER AND SEWERAGE AUTHORITY.

PROPOSED SITE: THE PROPOSED SCOPE OF WORK WILL BE AN EXPANSION OF THE EXISTING BUILDING +/- 5,140 SQFT. THERE WILL INCLUDE UPDATED ASSOCIATED UTILITIES.

VICINITY MAP:



VICINITY MAP
N.T.S.

RECEIVING WATERS (WARM WATER & FISHERIES STREAM)
NAME OF WATER(S) OR IF UNNAMED, NAME OF FIRST BLUE LINE STREAM: SOUTH RIVER
IF DISCHARGING TO A SEPARATE STORM SYSTEM: N/A
GOVERNMENT OPERATING SYSTEM: N/A
DESCRIPTION OF ADJACENT SENSITIVE AREAS THAT MAY BE AFFECTED: SOUTH RIVER TO THE SOUTH OF THE SITE AND WETLANDS ON THE EAST SIDE OF THE SITE.

EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES

THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMP'S WITHIN 7 DAYS AFTER INSTALLATION.

NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

BUFFER ENCROACHMENTS
DESCRIPTION: CONSTRUCTION ACTIVITIES DO NOT ENCROACH ANY STREAM BUFFER.

BUFFER VARIANCE REQUIRED? _____ YES, X NO

AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

EROSION AND SILTATION CONTROL DEVICES MUST BE INSTALLED PRIOR TO START OF OTHER CONSTRUCTION AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

ANY FAILURE OF ANY EROSION CONTROL DEVICE TO FUNCTION AS INTENDED FOR ANY REASON SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

ALL DISTURBED AREAS ARE TO BE GRASSED AS SOON AS CONSTRUCTION PHASE PERMITS. TEMPORARY MULCHING SHALL BE UTILIZED DURING THE PERIOD OF GERMINATION OF GRASS SEEDINGS USING STRAW OR HAY MULCH, JUTE MATTING OR SYNTHETIC FIBERS.

ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL CONFORM TO THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA AND ANY APPLICABLE LOCAL REGULATIONS.

EROSION CONTROL DEVICES WILL BE PROPERLY INSTALLED PRIOR TO SITE DISTURBANCE, MAINTAINED IN GOOD WORKING CONDITION UNTIL COMPLETION OF PROJECT, AND REPLACED WHEN EFFECTIVENESS IS REDUCED TO 50%.

ALL DISTURBED AREAS ARE TO BE STABILIZED WITH SUITABLE PERENNIAL VEGETATION, ACCORDING TO SOIL CONSERVATION SERVICE OR GEORGIA EXTENSION SERVICE SPECIFICATIONS, IMMEDIATELY FOLLOWING THE COMPLETION OF GRADING.

STRIPPING OF VEGETATION, GRADING OR OTHER DEVELOPMENT ACTIVITIES SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION.

WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED AND SUPPLEMENTED.

ALL SEDIMENT COLLECTED DURING MAINTENANCE OF EROSION AND SEDIMENT CONTROL DEVICES SHALL BE REMOVED FROM THE SITE OR SPREAD IN LANDSCAPED OR NATURALLY VEGETATED AREAS, SEEDED AND COVERED WITH STRAW.

DETENTION FACILITIES AND EROSION AND SILTATION CONTROL DEVICES MUST BE INSTALLED PRIOR TO START OF OTHER CONSTRUCTION AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. THE DEVICES SHALL BE MOVED AND ADJUSTED AS NEEDED TO KEEP A FUNCTIONING SYSTEM THROUGHOUT CONSTRUCTION. EROSION CONTROL MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO CONSTRUCTION EXITS, SILT FENCE, STORM INLET/OUTLET PROTECTION, DIVERSION DIKE OR DOWNDRAINS ON LONG STEEP SLOPES AND TEMPORARY GRASSING.

SEDIMENT STORAGE MAINTENANCE INDICATORS MUST BE INSTALLED IN SEDIMENT STORAGE STRUCTURES, INDICATING THE ½ FULL VOLUME.

MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE CONTRACTOR.

MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE CONTRACTOR.

SILT BARRIERS TO BE PLACED AT DOWNSTREAM TOE OF ALL CUT AND FILL SLOPES.

SILT FENCE SHALL MEET THE REQUIREMENTS OF SECTION 171 TEMPORARY SILT FENCE, OF THE GEORGIA STANDARD SPECIFICATIONS, 1993 EDITION AND BE WIRE REINFORCED.

THE PROPERTY OWNER AND CONTRACTOR ARE EQUALLY RESPONSIBLE FOR ALL EROSION CONTROL ACTIVITIES.

ALL TEMPORARY AND PERMANENT SEEDING MUST BE PREFORMED AT THE APPROPRIATE SEASON. IN SUCH INSTANCES WHERE THE ESTABLISHMENT OF VEGETATION IS INOPPORTUNE DUE TO SEASON OR DROUGHT, DISTURBED AREAS SHALL BE TEMPORARY STABILIZED USING 2"-4" OF MULCH (Ds1). ADDITIONAL PLANTINGS WILL BE NECESSARY IF A SUFFICIENT STAND OF GRASS FAILS TO GROW.

THE CITY'S DESIGNEE WILL VERIFY ADEQUATE COVER (100% COVER, 70% DENSITY) OF PERMANENT STABILIZATION (Ds3, Ds4).

SEDIMENT STORAGE VOLUME @ 67 CY/ACRE MUST BE INSTALLED PRIOR TO ANY OTHER LAND DISTURBANCE ACTIVITY AND IN PLACE UNTIL FINAL STABILIZATION OCCURS.

ALPHA SITE SET 08-20-2026

PRODUCT SPECIFIC PRACTICES

CONCRETE TRUCKS: CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASHOUT OR DISCHARGE SURPLUS CONCRETE DRUM WASH ON SITE. WASH AREAS, IF CONSTRUCTED, WILL CONSIST OF AN ENCLOSED WASTE COLLECTION AREA THAT WILL CONTAIN THE CONCRETE WASH UNTIL IT HARDENS. SEE ES&PC PLANS FOR LOCATION AND ES&PC DETAILS.

PAINTS: ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM OR SURFACE WATERS BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURE'S INSTRUCTIONS AND FEDERAL, STATE AND LOCAL REGULATIONS.

PETROLEUM PRODUCTS: ALL ON SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY PETROLEUM TO BE STORED IN TANKS WILL BE SURROUNDED BY AN EARTHEN BERM AS A SECONDARY PROTECTIVE MEASURE ALL CONTAINERS/TANKS WILL BE REGULARLY INSPECTED FOR CRACKS OR LEAKAGE. IF POSSIBLE, PETROLEUM PRODUCTS WILL BE STORED IN A COVERED AREA. ANY ASPHALT SUBSTANCES USED ON SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURE'S RECOMMENDATIONS.

DESCRIPTION OF THE MEASURES THAT WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED:
SEE SHEETS C-550 THROUGH C-554 FOR DETAILS

MULCH: MULCH STORAGE MUST COMPLY WITH THE FOLLOWING SECTION OF THE STANDARD FIRE PREVENTION CODE: SECTION 502.3.1 - NO PERSON SHALL STORE IN ANY BUILDING OR UPON ANY PREMISES IN EXCESS OF 2,500 CU.FT. GROSS VOLUME OF COMBUSTIBLE EMPTY PACKING CASES, BOXES, BARRELS OR SIMILAR CONTAINERS, OR RUBBER TIRES, OR RUBBER OR OTHER SIMILARLY COMBUSTIBLE MATERIALS WITHOUT A PERMIT.

POLLUTION AND SPILL PREVENTION MEASURES

1. GOOD HOUSEKEEPING PRACTICES: AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT TO DO THE JOB. ALL MATERIALS ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER ONE ROOF OR ENCLOSURE. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINER WITH ORIGINAL MANUFACTURE'S LABEL. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURE. WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
2. HAZARDOUS PRODUCTS:
   THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.
   A. PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
   B. ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT INFORMATION.
   C. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURERS' OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.
3. LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
4. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
5. SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
6. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE, AND FEDERAL REGULATIONS.
7. FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER) THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
8. FOR SPILLS OF UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
9. FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS OCCUR, THE GEORGIA E.P.D. WILL BE CONTACTED WITHIN 24 HOURS.
10. FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS OCCUR, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THE THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURERS PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

FERTILIZERS: FERTILIZER USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED SHED (WHENEVER POSSIBLE). THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO SEALABLE PLASTIC BINS TO AVOID SPILLS (WHENEVER POSSIBLE).

SANITARY/SEPTIC WASTES: ALL SANITARY WASTE FACILITIES WILL BE SERVICED BY A QUALIFIED DOMESTIC WASTE HAULER. FACILITIES WILL BE PLACED OUT OF HIGH FLOW AREAS, AND WILL BE KEPT AWAY FROM, AND NOT RINSED INTO, STORM DRAIN INLETS AND RECEIVING BODIES OF WATER.

SANDBLASTING GRITS: NO SANDBLASTING GRIT WILL BE DISPOSED OF ON SITE. ITS DISPOSAL WILL BE COORDINATED WITH A LICENSED WASTE MANAGEMENT OR TRANSPORT AND DISPOSAL FIRM.

CONSTRUCTION WASTES: ALL CONSTRUCTION WASTE, FOR EXAMPLE: RUBBLE, PACKAGING MATERIALS, SCRAP BUILDING SUPPLIES, AND TREES AND SHRUBS REMOVED DURING GRUBBING, WILL BE COLLECTED AT A DESIGNATED ON-SITE LOCATION. IF POSSIBLE THE WASTE ACCUMULATION AREA WILL BE LOCATED IN A COVERED AREA. ALL CONSTRUCTION WASTES WILL BE REMOVED REGULARLY ON A CONSISTENT SCHEDULE AND DISPOSED OF AT AUTHORIZED DISPOSAL SITES.

DETERGENTS: THE USE OF DETERGENTS WILL BE LIMITED ON SITE, AND NO WASH WATER CONTAINING DETERGENTS WILL BE DISCHARGED TO STORM DRAIN INLETS OR RECEIVING BODIES OF WATER.

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GEORGIA REGISTERED No. 029252 PROFESSIONAL ENGINEER KIMBERLY A. DEVENDORF
7/31/26

CONSTRUCTION DOCUMENTS
07/01/2026

NCWSA NEWTON COUNTY WATER & SEWERAGE AUTHORITY

NCWSA OFFICE ADDITION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

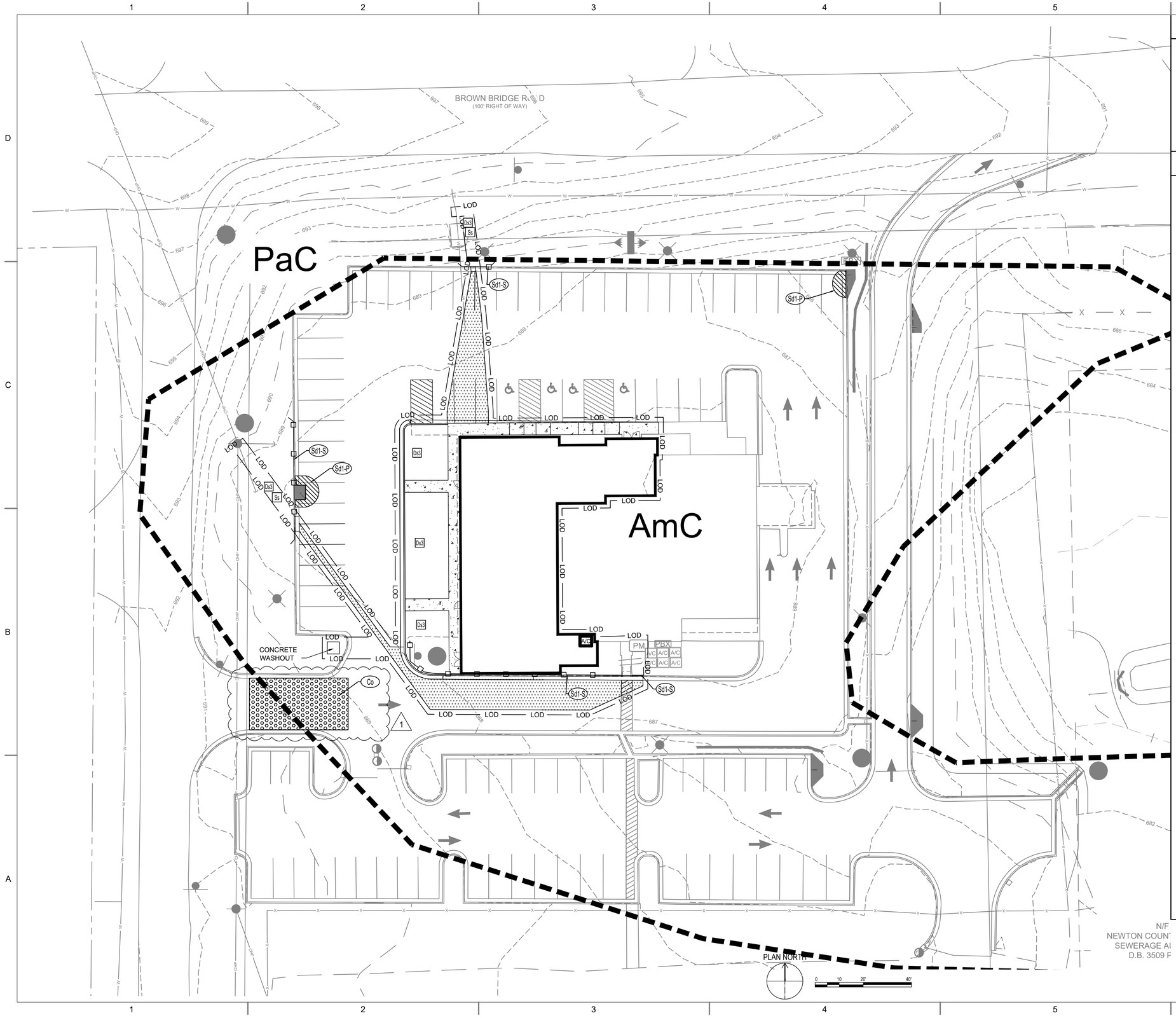
DESIGNED: B.FLIEG
DRAWN: B.FLIEG
CHECKED: K.DEVENDORF
CHECKED:
APPROVED:

FILENAME
203000-C-207.dwg
BC PROJECT NUMBER
CLIENT PROJECT NUMBER

CIVIL

SEDIMENT AND EROSION CONTROL NOTES 1

DRAWING NUMBER
C-207



GENERAL NOTES:

1. EXISTING TOPOGRAPHIC INFORMATION WAS OBTAINED FROM A SURVEY PREPARED BY GASKINS & LECRAW, INC. DATED 3-19-2025.
2. TEMPORARY SEDIMENT BASIN WILL BE COMPLETELY REMOVED DURING FINAL PHASE OF CONSTRUCTION

LEGEND:

LOD — LIMITS OF DISTURBANCE

SILT FENCE

ALPHA SITE SET
08-20-2026

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GEORGIA REGISTERED No. 029252 PROFESSIONAL ENGINEER KIMBERLY A. DEVENDORF
7/31/26

CONSTRUCTION DOCUMENTS
07/01/2026

NCWSA NEWTON COUNTY WATER & SEWERAGE AUTHORITY

NCWSA OFFICE ADDITION

REVISIONS

REV	DATE	DESCRIPTION
1	7/30/26	AHJ COMMENTS

LINE IS 2 INCHES AT FULL SIZE

DESIGNED:	B. FLIEG
DRAWN:	B. FLIEG
CHECKED:	K.DEVENDORF
CHECKED:	
APPROVED:	
FILENAME	203000-C-213.dwg
BC PROJECT NUMBER	
CLIENT PROJECT NUMBER	

CIVIL

SEDIMENT AND EROSION CONTROL PLAN

DRAWING NUMBER
C-213

Sediment Barrier Sd1



DEFINITION
Sediment Barriers are temporary structures made up of a porous material typically supported by steel or wood posts. Types of sediment barriers may include silt fence, brush piles, mulch berms, compost filter socks or other filtering material.

PURPOSE
To minimize and prevent sediment carried by sheet flow from leaving the site and entering natural drainage ways or storm drainage systems by slowing storm water runoff and causing the deposition and/or filtration of sediment at the structure. The barriers retain the soil on the disturbed land until the activities disturbing the land are completed and vegetation is established.

CONDITIONS
Barriers should be installed where runoff can be stored behind the barrier without damaging the submerged area behind the barrier or the structure itself. Sediment barriers shall not be installed across streams, ditches, waterways, or other concentrated flow areas.

DESIGN CRITERIA
Sediment barriers are designed to retain sediment transported by sheet flow from disturbed areas. It is important for the design professional to take into account the profile of the product for use on the site.

Sediment Barriers should also provide a riprap splash pad or other outlet protection device for any point where flow may overtop the sediment barrier. Ensure that the maximum height of the barrier at a protected, reinforced outlet does not exceed 1 foot and that the support spacing does not exceed 4 feet.

Where all runoff is to be stored behind the sediment barrier (where no storm water disposal system is present), maximum continuous slope length behind a sediment barrier shall not exceed those shown in Table 6-27.1. For longer slope lengths, slope interrupters must be used. The drainage area shall not exceed ¼ acre for every 100 feet of sediment barrier.

Table 6-27.1 Criteria for Sediment Barrier

Land Slope	Maximum Slope Length Above Fence
Percent	Feet
< 2	100
2 to 5	75
5 to 10	50
10 to 20	25
>20*	15

*In areas where the slope is greater than 20%, a flat area length of 10 feet between the toe of slope to the barrier should be provided.

Placement
The type of sediment barrier depends on whether the area is sensitive or nonsensitive. Sensitive areas can be defined as any area that needs additional protection, these areas include but are not limited to, state waters, wetlands, or any area the design professional designates as sensitive.

When using multiple types of sediment barriers on a site in a single run, the barriers must be overlapped 10 feet apart or as specified by design professional. See Figure 6-27.5

CONSTRUCTION SPECIFICATIONS

Non-sensitive Areas * Sd1-NS

Sediment barriers being used as Type NS shall have a support spacing of no greater than 6 feet on center, with each being driven into the ground a minimum of 18 inches.

GSWCC 2016 Edition

A brush barrier is a good tool to use in developing pasture in an agricultural situation to prolong sediment from leaving the site until the pasture is stabilized.

If greater filtering capacity is required, a commercially available sediment barrier may be placed on the side of the brush barrier receiving the sediment-laden runoff. The lower edge of the fabric must be buried in a 6-inch deep trench immediately uphill from the barrier. The upper edge must be stapled, tied or otherwise fastened to the brush barrier. Edges of adjacent fabric pieces must overlap each other. See Figure 6-27.5.

Installation
Sediment barriers should be installed along the contour.

Temporary sediment barriers shall be installed according to the following specifications as shown on the plans or as directed by the design professional.

For installation of the barriers, See Figures 6-27.1, 6-27.2, 6-27.3 and 6-27.4, respectively. It is important to remember that not all sediment barriers need to be trenched into the ground but most taller sediment barriers do.

Post installation shall start at the center of a low point (if applicable) with the remaining posts spaced no greater than 6 feet apart for Type NS sediment barriers and no greater than 4 feet apart for Type C sediment barriers. For post size requirements, see Table 6-27.2. Fasteners for wood posts are listed in Table 6-27.3.

Static Slicing Method
The static slicing machine pulls a narrow blade through the ground to create a slit 12" deep, and simultaneously inserts the silt fence fabric into this slit behind the blade. The blade is designed to slightly disrupt soil upward next to the slit and to minimize horizontal compaction, thereby creating an optimum condition for compacting the soil vertically on both sides of the fabric. Compaction is achieved by rolling a tractor wheel along both sides of the slit in the ground 2 to 4 times to achieve nearly the same or greater compaction as the original undisturbed soil. This vertical compaction reduces the air spaces between soil particles, which minimizes infiltration. Without this compaction infiltration can saturate the soil, and water may find a pathway under the fence. When a silt fence is holding back several tons of accumulated water and sediment, it needs to be supported by posts that are driven 18 inches into the soil. Driving in the posts and attaching the fabric to them completes the installation.

Trenching Method
Trenching machines have been used for over twenty-five years to dig a trench for burying part of the filter fabric underground. Usually the trench is about 2-"6" wide with a 6" excavation. Post setting and fabric installation often precede compaction, which make effective compaction more difficult to achieve. EPA supported an independent technology evaluation (ASCE 2001), which compared three progressively better variations of the trenching method with static slicing method. The static slicing method performed better than two lower performance levels of the trenching method, and was as good as or better than the trenching method's highest performance level. The best trenching method typically required nearly triple the time and effort to achieve results comparable to the static slicing method.

Along all state waters and other sensitive areas, two rows of Type S sediment barriers shall be used. The two rows of Type S should be placed a minimum of 36 inches apart.

MAINTENANCE
Sediment shall be removed once it has accumulated to one-half the original height of the barrier.

Sediment barriers shall be replaced whenever they have deteriorated to such an extent that the effectiveness of the product is reduced (approximately six months) or the height of the product is not maintaining 80% of its properly installed height.

Temporary sediment barriers shall remain in place until disturbed areas have been permanently stabilized. All sediment accumulated at the barrier shall be removed and properly disposed of before the barrier is removed.

Sensitive Areas* Sd1-S

Sediment barriers being used as Type S shall have a support spacing of no greater than 4 feet on center, with each being driven into the ground a minimum of 18 inches.

*As of January 1 2016, in the existing Georgia Department of Transportation Qualified Products list #36 (QPL- 36), Type A, B, or C will fall under sensitive and non-sensitive applications. **Type C will be classified as sensitive and Type A and B as non-sensitive.** Refer to Appendix A-2 and the Equivalent BMP List.

PRACTICE CLASSIFICATIONS

For silt fence Type A, B, or C, refer to Table 6-27.4.

Type A Silt Fence
This 36-inch wide filter fabric shall be used on developments where the life of the project is great than or equal to six months. **Type A is classified as non-sensitive application.**

Type B Silt Fence
Though only 22-inches wide, this filter fabric allows the same flow rate as Type A silt fence. Type B silt fence shall be limited to use on minor projects, such as residential home sites or small commercial developments where permanent stabilization will be achieved in less than six months. **Type B is classified as non-sensitive application.**

Type C Silt Fence
Type C fence is 36-inches wide with wire reinforcement or equivalent. The wire reinforcement is necessary because this fabric allows almost three times the flow rate as Type A silt fence. Type C silt fence shall be used where runoff flows or velocities are particularly high or where slopes exceed a vertical height of 10 feet. **Type C is classified as sensitive application.**

Filter Media Sock Specifications
Compost filter media used for sediment barrier filter material shall be weed free and derived from a well-decomposed source of organic matter. **Filter Media Sock is classified as a Type B, non-sensitive application.** The compost shall be produced using an aerobic composting process meeting CFR 503 regulations including time and temperature data. The compost shall be free of any refuse, contaminants or other materials toxic to plant growth. Non-composted products will not be accepted without applicable water quality test results. Test methods for the items below should follow US Compositing Council Test Methods for the Examination of Composting and Compost guidelines for laboratory procedures:

A. pH – 5.0-8.0 in accordance with TMECC 04.11-A, "Electrometric pH Determinations for Compost"

B. Particle size – 99% passing a 2 inch (50mm) sieve and a maximum of 40% passing a 3/8 inche (9.5mm) sieve, in accordance with TMECC 02.02-B, "Sample Sieving for Aggregate Size Classification". (Note: In the field, product commonly is between ½ in./12.5mm and 2 in./50 mm in particle size.)

C. Moisture content of less than 60% in accordance with standardized test methods for moisture determination.

D. Material shall be relatively free (<1% by dry weight) of inert or foreign manmade materials.

E. Sock containment system for compost filter media shall be a photodegradable or biodegradable knitted mesh material and should have 1/8 in. to 3/8 in., openings.

Brush Barrier Sd1-BB

(Only during timber clearing operations)

Brush obtained from clearing and grubbing operations may be piled in a row along the perimeter of disturbance at the time of clearing and grubbing. Brush barriers should not be used in developed areas or locations where aesthetics are a concern.

Brush should be wind-rowed on the contour as nearly as possible and may require compaction. Construction equipment may be utilized to satisfy this requirement.

The minimum base width of the brush barrier shall be 5 feet and should be no wider 10 feet. The height of the brush barrier should be between 3 and 5 feet tall.

Disturbed Area Stabilization (With Mulching Only) Ds1



DEFINITION
Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

PURPOSE
- To reduce runoff and erosion
- To conserve moisture
- To prevent surface compaction or crusting
- To control undesirable vegetation
- To modify soil temperature
- To increase biological activity in the soil

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored and have a continuous 90% cover or greater of the soil surface.

Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months.

If any area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed. Refer to **Ds2 -Disturbed Area Stabilization (With Temporary Seeding), Ds3 - Disturbed Area Stabilization (With Permanent Seeding), and Ds4 - Disturbed Area Stabilization (With Sodding)**.

SPECIFICATIONS
Mulching Without Seeding
This standard applies to graded or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation
1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials
Select one of the following materials and apply at the depth indicated:
1. Dry straw or hay shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
2. Wood waste (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. Polyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and re-used.

Applying Mulch
When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.
1. Dry straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical equipment.
2. If the area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.
3. Apply polyethylene film on exposed areas.

Anchoring Mulch
1. Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. Straw or hay mulch shall be anchored immediately after application.

   Straw or hay mulch spread with special blower-type equipment may be anchored. Tackifers, binders and hydraulic mulch with tackifier specifically designed for tacking straw can be substituted for emulsified asphalt. Please refer to specification **Tac-Tackifers.** Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.
2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

FOR TEMPORARY PROTECTION OF CRITICAL AREAS WITHOUT SEEDING. THIS STANDARD APPLIES TO GRADES OR CLEARED AREAS WHICH MAY BE SUBJECTED TO EROSION FOR 6 MONTHS OR LESS. WHERE SEEDINGS MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDANT COVER, BUT WHICH CAN BE STABILIZED WITH A MULCH COVER.

MATERIALS	RATE	APPLICATION
DRY STRAW OR HAY	2"-4" DEEP	APPLY UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT. ANCHOR HAY DISK HARROW OR PACKER DISK OR WITH EMULSIFIED ASPHALT (GRADE AE-S OR SS-1)AT A RATE OF 100 GAL. PER 100 GAL. OF WATER FOR EACH TON OF MULCH
WOOD WASTE, CHIPS, SAWDUST OR BARK	2" TO 3" THICK	ANCHOR WITH NETTING OF THE APPROPRIATE SIZE. OPENINGS IN THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS
EROSION CONTROL MATTING OR NETTING	APPLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS	APPLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
CUTBACK ASPHALT (SLOW CURING)	1200 GALLONS PER ACRE, OR ¼ GALLON PER SQUARE YARD	APPLY UNIFORMLY
POLYETHYLENE FILM	SECURED OVER BANKS OR STOCKPILED SOIL MATERIAL	ANCHOR TRENCH AT THE TOP OF SLOPE AS WELL AS INCREMENTALLY AS NECESSARY

MAINTENANCE REQUIREMENTS:
INSPECT ALL MULCHED AREAS ON A DAILY BASIS AND AFTER EACH RAINFALL EVENT, REGRADE ERODED AREAS AND REMULCH AREAS IN WHICH THE COVER IS NO LONGER GREATER THAN 90% CONTINUOUS.

Ds1 TEMPORARY MULCHING

REFER TO THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR FURTHER DETAILS AND SPECIFICATIONS.

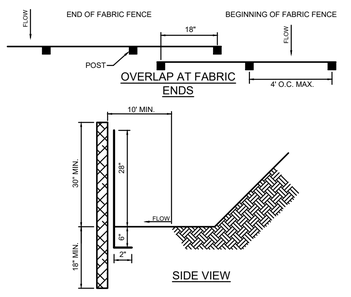
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT		(label)	A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION			A travelway constructed as part of a construction plan including access roads, sub- division roads, parking areas and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE		(label)	A flexible conduit of heavy-duty fabric or other ma- terial designed to safely conduct surface runoff down a slope. Temporary, and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE		(label)	A paved chute, sectional conduit, pipe or similar material designed to designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE		(label)	Permanent structures installed to protect natural or artificial channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of waters into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL		(label)	A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING		(label)	A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER		(indicate type)	A barrier to prevent sediment from leaving the construction site. It may be seedlings, bales of straw or hay, gravel or a sediment fence.
Sd2	SEDIMENT TRAP, TEMPORARY			An impounding area created by excavating around a storm drain inlet. The excavated area will be filled and stabilized on completion of construc- tion activities.
Sd3	SEDIMENT BASIN, TEMPORARY			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	SEDIMENT TRAP, TEMPORARY			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SKIMMER		(label)	A buoyant device that releases/ drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Spb	STEP BERM		(label)	A linear control device constructed as a diversion perpendicular to the direction of the runoff to enhance dissipation and infiltration of runoff, while creating multiple sedimentation chambers with the employment of intermediate dikes.
Sr	TEMPORARY STREAM CROSSING		(label)	A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN INLET/OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHING			A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tc	TURBIDITY CURTAIN			A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
Tp	TOPSOILING		(show stripping & stockpile areas)	The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION		(denote tree centers)	To protect desirable trees from injury during construction activity.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes, or similar structures.

VEGETATIVE MEASURES

Bf	BUFFER ZONE		Bf	An undisturbed natural "green belt" separating the land-disturbing site from surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. It is also at times a noise or vision pollution barrier.
Cs	COASTAL DUNE STABILIZATION		Cs	Planting vegetation on dunes that are denuded, artificially constructed, or re-nourished. retarding cover.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)		Ds1	Establishing temporary protection for disturbed areas where seedings may not have a suitable growing season to produce an erosion.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)		Ds3	Establishing permanent vegetative cover such as trees, shrubs, vines, sod, grasses or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (WITH SODDING)		Ds4	A permanent vegetative cover using sods on highly erodible or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.
Fl-Co	FLOCCULANTS AND COAGULANTS		Fl-Co	Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (WITH PERMANENT VEGETATION)		Sb	The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION		Ss	A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Tac	TACKIFIERS AND BINDERS		Tac	Substance used to anchor straw or hay mulch by causing the straw material to bind together.

GEORGIA UNIFORM CODING SYSTEM FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES



NOTES:
1. USE ONLY 36" FABRIC ON GEORGIA D.O.T. QUALIFIED PRODUCTS LIST #36
2. USE STEEL POSTS ONLY, 1.3 lbs/FT MIN., U, T, OR C SHAPED POST SECTION, 5' LENGTH MINIMUM.
3. ADD REBAR CAPS TO ALL POSTS.
4. ALONG STREAMS AND OTHER SENSITIVE AREAS, TWO ROWS OF TYPE C SILT FENCE OR ONE ROW OF TYPE S SILT FENCE BACKED WITH HAYBALES SHALL BE USED.
5. ALL SILT FENCE SHALL MEET THE MINIMUM STANDARD SET FORTH IN SECTION 171-TEMPORARY SILT FENCE OF THE GEORGIA D.O.T., STANDARD SPECIFICATIONS, CURRENT EDITION.
6. ALL SILT FENCE SHALL BE TYPE S, 36" WITH WOVEN WIRE REINFORCEMENT.
7. ATTACH FABRIC TO POSTS USING WIRE TIES. ALSO, ATTACH FABRIC TO WIRE BACKING MIDWAY BETWEEN POSTS AT THE TOP AND BOTTOM.

TYPE FENCE	S
TENSILE STRENGTH (lbs. MIN.) (ASTM D-4632)	WARP-260 FILL-180
ELONGATION (% MAX.) (ASTM D-4632)	40
AOS (APPARENT OPENING SIZE) (MAX. SIEVE SIZE) (ASTM D 4751)	#30
FLOW RATE (GAL./MIN./SQ.FT) (GDT-87)	70
ULTRAVIOLET STABILITY (ASTM D-4632 AFTER 300 HOURS WEATHERING IN ACCORDANCE WITH ASTM D-4355)	80
BURSTING STRENGTH (PSI MIN.) (ASTM D-3786 DIAPHRAGM BURSTING STRENGTH TESTER)	175
MINIMUM FABRIC WIDTH (INCHES)	36

MAINTENANCE REQUIREMENTS:
SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-THIRD THE ORIGINAL HEIGHT OF THE BARRIER. FILTER FABRIC SHALL BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE FABRIC IS REDUCED (APPROXIMATELY SIX MONTHS). TEMPORARY SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. AS SEDIMENT ACCUMULATED AT THE BARRIER SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE BARRIER IS REMOVED.

Sd1-S SILT FENCE - TYPE S
N.T.S.

PLANTS, PLANTING RATES, AND PLANTING DATES FOR TEMPORARY COVER OR COMPANION CROPS 1/

SPECIES	BROADCAST RATES 2/ - PLS 3/ PER ACRE	PER 1000 S.F.	RESOURCE AREA 4/	PLANTING DATES J F M A M J J A S O N D	REMARKS
BARLEY (Hordeum vulgare) ALONE	144 LBS.	3.3 LBS.	M-L P C		14,000 SEED PER POUND WINTERHARDY. USE ON PRODUCTIVE SOILS.
IN MIXTURES	24 LBS.	0.6 LBS.			
LESPEDEZA, ANNUAL (Lespedeza striata) ALONE	40 LBS.	0.9 LBS.	M-L P C		200,000 SEED PER POUND. MAY VOLUNTEER FOR SEVERAL YEARS. USE INOCULANT EL.
IN MIXTURES	10 LBS.	0.2 LBS.			
LOVEGRASS, WEEPING (Eragrostis curvula) ALONE	4 LBS.	0.1 LBS.	M-L P C		1,500,000 SEED PER POUND. MAY LAST FOR SEVERAL YEARS. MIX WITH SERICEA LESPEDEZA
IN MIXTURES	2 LBS.	0.05 LBS.			
MILLET, BROWNTOP (Panicum fasciculatum) ALONE	40 LBS.	0.9 LBS.	M-L P C		137,000 SEED PER POUND. QUICK DENSE COVER. WILL PROVIDE TOO MUCH COMPETITION IN MIXTURES IF SEEDED AT HIGH RATES.
IN MIXTURES	10 LBS.	0.2 LBS.			
MILLET, PEARL (Pennesetum glaucum) ALONE	50 LBS.	1.1 LBS.	M-L P C		88,000 SEED PER POUND. QUICK, DENSE COVER. MAY REACH 5 FEET IN HEIGHT. NOT RECOMMENDED FOR MIXTURES.
OATS (Avena sativa) ALONE	128 LBS.	2.9 LBS.	M-L P C		13,000 SEED PER POUND. USE ON PRODUCTIVE SOILS. NOT AS WINTERHARDY AS RYE OR BARLEY.
IN MIXTURES	32 LBS.	0.7 LBS.			
RYE (Secale cereale) ALONE	168 LBS.	3.9 LBS.	M-L P C		18,000 SEED PER POUND. QUICK COVER. DROUGHT TOLERANT AND WINTERHARDY.
IN MIXTURES	28 LBS.	0.6 LBS.			
RYEGRASS, ANNUAL (Lolium temulentum) ALONE	40 LBS.	0.9 LBS.	M-L P C		227,000 SEED PER POUND. DENSE COVER. VERY COMPETITIVE AND IS NOT TO BE USED IN MIXTURES.
SUDANGRASS (Sorghum sudanese) ALONE	60 LBS.	1.4 LBS.	M-L P C		55,000 SEED PER POUND. GOOD ON DROUGHTY SITES. NOT RECOMMENDED FOR MIXTURES.
TRITICALE (X-Triticosecale) ALONE	144 LBS.	3.3 LBS.	C		USE ON LOWER PART OF SOUTHERN COASTAL PLAIN AND IN ATLANTIC COASTAL FLATWOODS ONLY.
IN MIXTURES	24 LBS.	0.6 LBS.			
WHEAT (Triticum aestivum) ALONE	180 LBS.	4.1 LBS.	M-L P C		15,000 SEED PER POUND. WINTERHARDY.
IN MIXTURES	30 LBS.	0.7 LBS.			

1/ TEMPORARY COVER CROPS ARE VERY COMPETITIVE AND WILL CROWN OUT PERENNIALS IF SEEDED TOO HEAVILY.
2/ REDUCE SEEDING RATES BY 50% WHEN DRILLED.
3/ PLS IS AN ABBREVIATION FOR PURE LIVE SEED.
4/ M-L REPRESENTS THE MOUNTAIN, BLUE RIDGE; AND RIDGES AND VALLEYS MLRA'S
P REPRESENTS THE SOUTHERN PIEDMONT MLRA
C REPRESENTS THE SOUTHERN COASTAL PLAIN; SAND HILLS; BLACK LANDS; AND ATLANTIC COAST FLATWOODS MLRAs

NOTES:
1. APPLY TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE.
2. IF DISTURBED AREAS ARE TO BE LEFT UNDISTURBED FOR LESS THAN 6 MONTHS USE TEMPORARY GRASSING, OTHERWISE USE PERMANENT GRASSING.
3. SOIL TO RECEIVE GRASSING IS TO BE SCARIFIED TO PROVIDE A PLACE FOR THE SEED TO LODGE AND GERMINATE.
4. APPLY AGRICULTURAL LIME AT A RATE OF ONE TON PER ACRE.
5. FOR LOW FERTILITY SOILS, APPLY 500-700 LBS. OF 10-10-10 FERTILIZER PER ACRE. APPLY BEFORE LAND PREPARATION AND INCORPORATE WITH A DISK, RIPPER OR CHISEL.
6. APPLY SEED BY HAND, CYCLONE SEEDER, DRILL CULTIPACKER-SEEDER OR HYDRAULIC SEEDER. RAKE SOIL LIGHTLY TO COVER SEED WHEN APPLIED BY HAND.
7. PROVIDE WATER AS REQUIRED TO GERMINATE AND MAINTAIN A HEALTHY, THICK COVER OF GRASS.

MAINTENANCE REQUIREMENTS:
INSPECT ALL AREAS WHERE TEMPORARY GRASSING HAS BEEN APPLIED. WHERE COVER IS SPARSE; SCARIFY THE AREA, TEST SOIL FERTILITY, APPLY FERTILIZER AS NECESSARY AND RESEED. WHERE EROSION HAS OCCURRED, REGRADE PRIOR TO ABOVE STEPS.

Ds2 TEMPORARY GRASSING

REFER TO THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR FURTHER DETAILS AND SPECIFICATIONS.

ALPHA SITE SET 08-20-2026

Disturbed Area Stabilization (With Temporary Seeding) Ds2



DEFINITION
The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.

PURPOSE
- To reduce runoff and sediment damage of down stream resources
- To protect the soil surface from erosion
- To improve wildlife habitat
- To improve aesthetics
- To improve tilth, infiltration and aeration as well as organic matter for permanent plantings

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. If an area is expected to be undisturbed for longer than six months, permanent perennial vegetation shall be used. If optimum planting conditions for temporary grassing is lacking, mulch can be used as a singular erosion control device for up to six months but it shall be applied at the appropriate depth, anchored, and have a continuous 90% cover or greater of the soil surface. Refer to specification **Ds1-Disturbed Area Stabilization (With Temporary Seeding).**

CONDITIONS
Temporary vegetative measures should be coordinated with permanent measures to assure economical and effective stabilization. Most types of temporary vegetation are ideal to use as companion crops until the permanent vegetation is established. Note: Some species of temporary vegetation are not appropriate for companion crop plantings because of their potential to out-compete the desired species (e.g. annual ryegrass). Contact NRCS or the local SWCD for more information.

SPECIFICATIONS
Grading and Shaping
Excessive water run-off shall be reduced by properly designed and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others.

No shaping or grading is required if slopes can be stabilized by hand-seeded vegetation or if hydraulic seeding equipment is to be used.

Seedbed Preparation
When a hydraulic seeder is used, seedbed preparation is not required. When using conventional or hand-seeding, seedbed preparation is not required if the soil material is loose and not sealed by rainfall.

When soil has been sealed by rainfall or consists of smooth cut slopes, the soil shall be pitted, trenched or otherwise scarified to provide a place for seed to lodge and germinate.

Lime and Fertilizer
Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate determined by soil test for pH. Quick acting lime should be incorporated to modify pH during the germination period. Bio stimulants should also be considered when there is less than 3% organic matter in the soil. Graded areas require lime application. Soils must be tested to determine required amounts of fertilizer and amendments. Fertilizer should be applied before land preparation and incorporated with a disk, ripper, or chisel. On slopes too steep for, or inaccessible to equipment, fertilizer shall be hydraulically applied, preferably in the first pass with seed and some hydraulic mulch, then topped with the remaining required application rate.

Seeding
Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, culti-packer-seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders should normally place seed one-quarter to one-half inch deep. Appropriate depth of planting is ten times the seed diameter. Soil should be "raked" lightly to cover seed with soil if seeded by hand. See Table 6-4.1

Mulching
Temporary vegetation can, in most cases, be established without the use of mulch, provided there is little to no erosion potential. However, the use of mulch can often accelerate and enhance germination and vegetation establishment. Mulch without seeding should be considered for short term protection. Refer to **Ds1 - Disturbed Area Stabilization (With Mulching Only)**.

Irrigation
During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

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GEORGIA REGISTERED No. 029252 PROFESSIONAL ENGINEER KIMBERLY A. DEVENDORF
7/31/26

CONSTRUCTION DOCUMENTS
07/01/2026

NCWSA NEWTON COUNTY WATER & SEWERAGE AUTHORITY

NCWSA OFFICE ADDITION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B.FLIEG
DRAWN: B.FLIEG
CHECKED: K.DEVENDORF
CHECKED:
APPROVED:

FILENAME 203000-C-214.dwg
BC PROJECT NUMBER
CLIENT PROJECT NUMBER

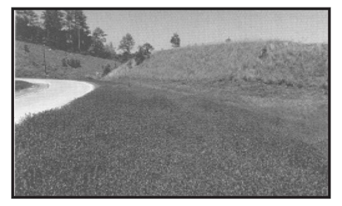
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SEDIMENT AND EROSION CONTROL DETAILS 1

DRAWING NUMBER
C-214

PG 1

Disturbed Area Stabilization (With Permanent Vegetation) Ds3



DEFINITION
The planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization. Permanent perennial vegetation shall be used to achieve final stabilization.

PURPOSE
•To protect the soil surface from erosion
•To reduce damage from sediment and runoff to down-stream areas
•To improve wildlife habitat and visual resources
•To improve aesthetics

REQUIREMENT FOR REGULATORY COMPLIANCE
This practice shall be applied immediately to rough graded areas that will be undisturbed for longer than six months. This practice or sodding shall be applied immediately to all areas at final grade. **Final Stabilization** means that all soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by the GA EPD for waste disposal, 100% of the soil surface is uniformlycovered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures.

Permanent vegetation shall consist of, planted trees, shrubs, perennial vines; or a crop of perennial vegetation appropriate for the region, such that within the growing season a 70% coverage by perennial vegetation shall be achieved. Final stabilization applies to each phase of construction. For linear construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use. Until this standard is satisfied and permanent control measures and facilities are operational, interim stabilization measures and temporary erosion and sedimentation control measures shall not be removed.

CONDITIONS
Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fills, dams, and other denuded areas.

PLANNING CONSIDERATIONS

1. Use conventional planting methods where possible.
2. When mixed plantings are done during marginal planting periods, companion crops shall be used.
3. No-till planting is effective when planting is done following a summer or winter annual cover crop. Sericea lespedeza planted no-till into stands of rye is an excellent procedure.
4. Block sod provides immediate cover. It is especially effective in controlling erosion adjacent to concrete flumes and other structures. Refer to Specification **Ds4-Disturbed Area Stabilization (With Sodding)**.
5. Irrigation should be used when the soil is dry or when summer plantings are done.
6. Low maintenance plants, as well as natives, should be used to ensure long-lasting erosion control.
7. Mowing should not be performed during the quail nesting season (May to September).
8. Wildlife plantings should be included in critical area plantings.

PG 2

Wildlife Plantings
Commercially available plants beneficial to wildlife species include the following:

Mast Bearing Trees

Beech, Black Cherry, Blackgum, Chestnut, Chinkapin, Hackberry, Hickory, Honey Locust, Native Oak, Persimmon, Sawtooth Oak and Sweetgum.

All trees that produce nuts or fruits are favored by many game species. Hickory provides nuts used mainly by squirrels and bear.

Shrubs and Small Trees

Bayberry, Bicolor Lespedeza, Crabapple, Dogwood, Huckleberry or Native Blueberry, Mountain Laurel, Native Holly, Red Cedar, Red Mulberry, Sumac, Wax Myrtle, Wild Plum and Blackberry.

Plant in patches without tall trees to develop stable shrub communities. All produce fruits used by many kinds of wildlife, except for lespedeza that produces seeds used by quail and songbirds.

Grasses, Legumes, Vines and Temporary Cover

Bahiagrass, Bermudagrass, Grass-Legume mixtures, Partridge Pea, Annual Lespedeza, Orchardgrass (for mountains), Browntop Millet (for temporary cover), and Native grapes.

Provides herbaceous cover in clearings for a game bird brood-rearing habitat. Appropriate legumes such as vetches, clovers, and lespedezas may be mixed with grass, but they may die out after a few years.

CONSTRUCTION SPECIFICATIONS
Grading and Shaping
Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching and maintenance of the vegetation.

Concentrations of water that will cause excessive soil erosion shall be diverted to a safe outlet. Diversions and other treatment practices shall conform with the appropriate standards and specifications.

Lime and Fertilizer Rates and Analysis
Agricultural lime is required at the rate of one to two tons per acre unless soil tests indicate otherwise. Graded areas require lime application. If lime is applied within six months of planting permanent perennial vegetation, additional lime is not required. Agricultural lime shall be within the specifications of the Georgia Department of Agriculture.

Lime spread by conventional equipment shall be "ground limestone." Ground limestone is calcitic or dolomitic limestone ground so that 90 percent of the material will pass through a 10-mesh sieve, not less than 50 percent will pass through a 50-mesh sieve and not less than 25 percent will pass through a 100-mesh sieve.

Fast-acting lime spread by hydraulic seeding equipment should be "finely ground limestone" spanning from the 180 micron size to the 5 micron size. Finely ground limestone is calcitic or dolomitic limestone ground so that 95 percent of the material will pass through a 100-mesh sieve.

It is desirable to use dolomitic limestone in the Sand Hills, Southern Coastal Plain and Atlantic Coast Flatwoods MLRAs. (See Figure 6-4.1)

Agricultural lime is generally not required where only trees are planted.

Initial fertilization, nitrogen, topdressing, and maintenance fertilizer requirements for each species or combination of species are listed in Table 6-5.1.

Lime and Fertilizer Application
When *hydraulic seeding* equipment is used, the initial fertilizer shall be mixed with seed, innoculant (if needed), and wood cellulose or wood pulp fiber mulch and applied in a slurry. The innoculant, if needed, shall be mixed with the seed prior to being placed into the hydraulic seeder. The slurry mixture will be agitated during application to keep the ingredients thoroughly mixed. The mixture will be spread uniformly over the area within one hour after being placed in the

PG 3

hydroseeder.

Finely ground limestone can be applied in the mulch slurry or in combination with the top dressing.

When *conventional planting* is to be done, lime and fertilizer shall be applied uniformly in one of the following ways:

1. Apply before land preparation so that it will be mixed with the soil during seedbed preparation.
2. Mix with the soil used to fill the holes, distribute in furrows.
3. Broadcast after steep surfaces are scarified, pitted or trenched.
4. A fertilizer pellet shall be placed at root depth in the closing hole beside each pine tree seedling.

Plant Selection
Refer to Tables 6-4.1, 6-5.2, 6-5.3 and 6-5.4 for approved species. Species not listed shall be approved by the State Resource Conservationist of the Natural Resources Conservation Service before they are used.

Plants shall be selected on the basis of species characteristics, site and soil conditions, planned use and maintenance of the area; time of year of planting, method of planting; and the needs and desires of the land user.

Some perennial species are easily established and can be planted alone. Examples of these are Common Bermuda, Tall Fescue, and Weeping Lovegrass.

Other perennials, such as Bahia Grass and Sericea Lespedeza, are slow to become established and should be planted with another perennial species. The additional species will provide quick cover and ample soil protection until the target perennial species become established. For example, Common seeding combinations are 1) Weeping Lovegrass with Sericea Lespedeza (scarified) and 2) Tall Fescue with Sericea Lespedeza (unscarified).

Plant selection may also include annual companion crops. Annual companion crops should be used only when the perennial species are not planted during their optimum planting period. A common mixture is Brown Top Millet with Common Bermuda in mid-summer. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

Ryegrass shall not be used in any seeding mixtures containing perennial species due to its ability to out-compete desired species chosen for permanent perennial cover.

Seed Quality
The term "pure live seed" is used to express the quality of seed and is not shown on the label. Pure live seed, PLS, is expressed as a percentage of the seeds that are pure and will germinate. Information on percent germination and purity can be found on seed tags. PLS is determined by multiplying the percent of pure seed with the percent of germination; i.e.,

(PLS = % germination x % purity)

EXAMPLE:

Common Bermuda seed
70% germination, 80% purity

PLS = 70% germination x 80% purity

PLS = 56%

The percent of PLS helps you determine the amount of seed you need. If the seeding rate is 10 pounds PLS and the bulk seed is 56 % PLS, the bulk seeding rate is:

$\frac{\text{10 lbs. PLS/acre}}{\text{56\% PLS}}$ = 17.9 lbs/acre

You would need to plant 17.9 lbs/acre to provide 10 lbs/acre of pure live seed.

Seedbed Preparation
Seedbed preparation may not be required where hydraulic seeding and fertilizing equipment is to be used (but is strongly recommended for any seeding process, when possible). When conventional seeding is to be used, seedbed preparation will be done as follows:

Broadcast plantings

1. Tillage, at a minimum, shall adequately

PG 4

loosen the soil to a depth of 4 to 6 inches; alleviate compaction; incorporate lime and fertilizer; smooth and firm the soil; allow for the proper placement of seed, sprigs, or plants; and allow for the anchoring of straw or hay mulch if a disk is to be used.

2. Tillage may be done with any suitable equipment.
3. Tillage should be done on the contour where feasible.
4. On slopes too steep for the safe operation of tillage equipment, the soil surface shall be pitted or trenched across the slope with appropriate hand tools to provide two places 6 to 8 inches apart in which seed may lodge and germinate. Hydraulic seeding may also be used.

Individual Plants

1. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.
2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
3. Where pine seedlings are to be planted, subsoil under the row 36 inches deep on the contour four to six months prior to planting. Subsoiling should be done when the soil is dry, preferably in August or September.

Inoculants
All legume seed shall be inoculated with appropriate nitrogen-fixing bacteria. The inoculant shall be a pure culture prepared specifically for the seed species and used within the dates on the container.

A mixing medium recommended by the manufacturer shall be used to bond the inoculant to the seed. For conventional seeding, use twice the amount of inoculant recommended by the manufacturer. For hydraulic seeding, four times the amount of inoculant recommended by the manufacturer shall be used.

All inoculated seed shall be protected from the sun and high temperatures and shall be planted the same day inoculated. No inoculated seed shall remain in the hydroseeder longer than one hour.

Planting
Hydraulic Seeding
Mix the seed (inoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply within one hour after the mixture is made.

Conventional Seeding
Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a culti-packer-seeder, drill, rotary seeder, other mechanical seeder, or hand seeding to distribute the seed uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil for small seed and 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment.

No-Till Seeding
No-till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No-till seeding shall be done with appropriate no-till seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

Individual Plants
Shrubs, vines and sprigs may be planted with appropriate planters or hand tools. Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots.

Nursery stock plants shall be planted at the same depth or slightly deeper than they grew at the nursery. The tips of vines and sprigs must be at or slightly above the ground surface.

Where individual holes are dug, fertilizer shall be placed in the bottom of the hole, two inches of soil shall be added and the plant shall be set in the hole.

Mulching
Mulch is required for all permanent vegetation applications. Mulch applied to seeded areas shall achieve 75% to 100% soil cover. When selecting a mulch, design professionals should consider the mulch's functional longevity, vegeta-

PG 5

tion establishment enhancement, and erosion control effectiveness. Select the mulching material from the following and apply as indicated:

1. *Dry straw* or *dry hay* of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre.
2. *Wood cellulose mulch* or *wood pulp fiber* shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry straw or dry hay shall be applied (at the rate indicated above) after hydraulic seeding.
3. One thousand pounds of *wood cellulose* or *wood pulp fiber*, which includes a tackifier, shall be used with hydraulic seeding on slopes 3/4:1 or steeper.
4. *Sericea Lespedeza* hay containing mature seed shall be applied at a rate of three tons per acre.
5. *Pine straw* or *pine bark* shall be applied at a thickness of 3 inches for bedding purposes. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted. This is not appropriate for seeded areas.
6. When using temporary erosion control blankets or block sod, mulch is not required.
7. *Bituminous treated roving* may be applied on planted areas, slopes, in ditches or dry waterways to prevent erosion. Bituminous treated roving shall be applied within 24 hours after an area has been planted. Application rates and materials must meet Georgia Department of Transportation specifications.

Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when agitated in water. The fibers shall contain a dye to allow visual metering and aid in uniform application during seeding.

Applying Mulch
Straw or hay mulch will be spread uniformly within 24 hours after seeding and/or planting. The mulch may be spread by blower-type spreading equipment, other spreading equipment or by hand. Mulch shall be applied to cover 75% of the soil surface.

Wood cellulose or wood fiber mulch shall be applied uniformly with hydraulic seeding equipment.

Anchoring Mulch
Anchor straw or hay mulch immediately after application by one of the following methods:

1. *Hay and straw* mulch shall be pressed into the soil immediately after the mulch is spread. A special "packer disk"' or disk harrow with the disks set straight may be used. The disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disks shall be dull enough to press the mulch into the ground without cutting it, leaving much of it in an erect position. Mulch shall not be plowed into the soil.
2. *Synthetic tackifiers, binders or hydraulic mulch specifically designed to tack straw,* shall be applied in conjunction with or immediately after the mulch is spread. Synthetic tackifiers shall be mixed and applied according to manufacturer's specifications. All tackifiers, binders or hydraulic mulch specifically designed to tack straw should be verified nontoxic through EPA 2021.0 testing. Refer to **Tackifiers-Tac**
3. *Rye or wheat* can be included with Fall and Winter plantings to stabilize the mulch. They shall be applied at a rate of one-quarter to one-half bushel per acre.
4. *Plastic mesh or netting* with mesh no larger than one inch by one inch may be needed to anchor straw or hay mulch on unstable soils and concentrated flow areas. These materials shall be installed and anchored according to manufacturer's specifications.

Bedding Material
Mulch is used as a bedding material to conserve moisture and control weeds in nurseries, ornamental beds, around shrubs, and on bare areas on lawns.

PG 6

Material	Depth
Grain straw	4" to 6"
Grass Hay	4" to 6"
Pine needles	3" to 5"
Wood waste	4" to 6"

Irrigation
Irrigation will be applied at a rate that will not cause runoff.

Topdressing
Topdressing will be applied on all temporary and permanent (perennial) species planted alone or in mixtures with other species. Recommended rates of application are listed in Table 6-5.1.

Second Year and Maintenance Fertilization
Second year fertilizer rates and maintenance fertilizer rates are listed in Table 6-5.1.

Lime Maintenance Application
Apply one ton of agricultural lime every 4 to 6 years or as indicated by soil tests. Soil tests can be conducted to determine more accurate requirements, if desired.

Use and Management
Mow Sericea Lespedeza only after frost to ensure that the seeds are mature. Mow between November and March.

Bermudagrass, Bahiagrass and Tall Fescue may be mowed as desired. Maintain at least 6 inches of top growth under any use and management. Moderate use of top growth is beneficial after establishment.

Exclude traffic until the plants are well established. Because of the quail nesting season, mowing should not take place between May and September.

Construction Exit Co



DEFINITION
A stone stabilized pad located at any point where traffic will be leaving a construction site to a public right-of-way, street, alley, sidewalk or parking area or any other area where there is a transition from bare soil to a paved area.

PURPOSE
To reduce or eliminate the transport of mud from the construction area onto public rights-of-way by motor vehicles or by runoff.

CONDITIONS
This practice is applied at appropriate points of construction egress. Geotextile underliners are required to stabilize and support the pad aggregates.

DESIGN CRITERIA
Formal design is not required. The following standards shall be used:

Aggregate Size
Stone will be in accordance with National Stone Association R-2 (1.5 to 3.5 inch stone).

Pad Thickness
The gravel pad shall have a minimum thickness of 6 inches.

Pad Width
At a minimum, the width should equal full width of all points of vehicular egress, but not less than 20 feet wide.

Pad Length
The gravel pad shall have a minimum length of 50 feet. When the construction is less than 50' from the paved access, the length shall be from the edge of existing pavement to the permitted building being constructed.

Washing
If the action of the vehicle traveling over the gravel pad does not sufficiently remove the mud, the tires should be washed prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with crushed stone and provisions that intercept the sediment-laden runoff and direct it into an approved sediment trap or sediment basin.

Location
The exit shall be located or protected to prevent sediment from leaving the site.

CONSTRUCTION SPECIFICATIONS
It is recommended that the egress area be excavated to a depth of 3 inches and be cleared of all vegetation and roots.

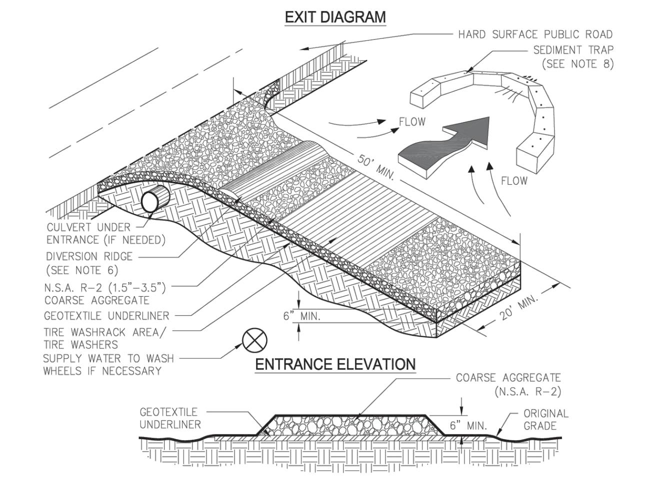
Diversion Ridge
On sites where the grade toward the paved area is greater than 2%, a diversion ridge 6 to 8 inches high with 3:1 side slopes shall be constructed across the foundation approximately 15 feet above the road.

Geotextile
The geotextile underliner must be placed the full length and width of the entrance. Geotextile selection shall be based on AASHTO M288-06 specification:

1. For subgrades with a CBR greater than or equal to 3 or shear strength greater than 90 kPa, geotextile must meet requirements of section AASHTO M288-06 Section 7.3, *Separation Requirements.*
2. For subgrades with a CBR between 1 and 3 or sheer strength between 30 and 90 kPa, geotextile must meet requirements of section AASHTO M288-06 Section 8, *Geotextile Property Requirements for Subsurface Drainage, Separation, Stabilization, and Permanent Erosion Control (Geotextile Property Requirements)..*

MAINTENANCE
The exit shall be maintained in a condition that will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with 1.5-3.5 inch stone, as conditions demand, and repair and/or cleanout of any structures to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles or site onto roadways or into storm drains must be removed immediately.

CRUSHED STONE CONSTRUCTION EXIT



NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

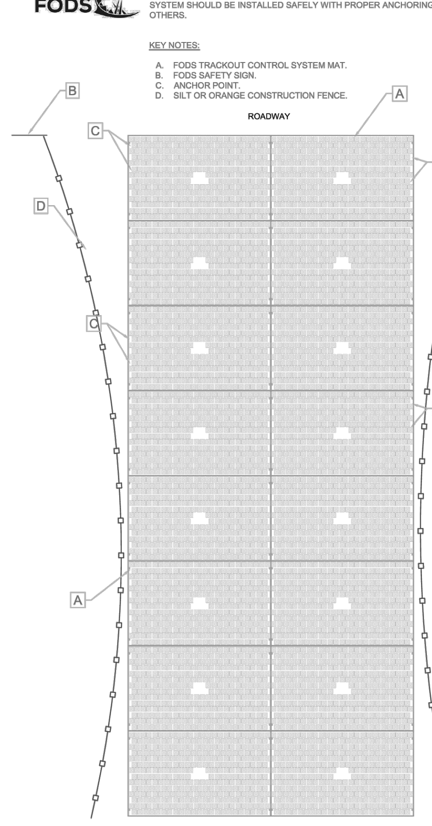
Figure 6-14.1

GENERAL NOTES:
1. CRUSHED STONE CONSTRUCTION ENTRANCE/EXIT WILL BE REPLACED WITH FOD CONSTRUCTION EXIT AT ALL PAVEMENT AREA ENTRANCE/EXIT.

FODS TRACKOUT CONTROL SYSTEM INSTALLATION

THE PURPOSE AND DESIGN OF THE FODS TRACKOUT CONTROL SYSTEM IS TO EFFECTIVELY REMOVE MOST SEDIMENT FROM VEHICLE TIRES AS THEY EXIT A DISTURBED LAND AREA ONTO A PAVED STREET. THIS MANUAL IS A PLATFORM FROM WHICH TO INSTALL A FODS TRACKOUT CONTROL SYSTEM. (NOTE: THIS IS NOT A ONE SIZE FITS ALL GUIDE.) THE INSTALLATION MAY NEED TO BE MODIFIED TO MEET THE EXISTING CONDITIONS, EXPECTATIONS, OR DEMANDS OF A PARTICULAR SITE. THIS IS A GUIDELINE. ULTIMATELY THE FODS TRACKOUT CONTROL SYSTEM SHOULD BE INSTALLED SAFELY WITH PROPER ANCHORING AND SIGNS PLACED AT THE ENTRANCE AND EXIT TO CAUTION USERS AND OTHERS.

KEY NOTES:
A. FODS TRACKOUT CONTROL SYSTEM MAT.
B. FODS SAFETY SIGN.
C. ANCHOR POINT.
D. SILT OR ORANGE CONSTRUCTION FENCE.



TYPICAL ENTRANCE LAYOUT

INSTALLATION:
1. THE SITE WHERE THE FODS TRACKOUT CONTROL SYSTEM IS TO BE PLACED SHOULD CORRESPOND TO BEST MANAGEMENT PRACTICES AS MUCH AS POSSIBLE. THE SITE WHERE FODS TRACKOUT CONTROL SYSTEM IS PLACED SHOULD ALSO MEET OR EXCEED THE LOCAL JURISDICTION OR STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS.
2. CALL FOR UTILITY LOCATES 3 BUSINESS DAYS IN ADVANCE OF THE OF FODS TRACKOUT CONTROL SYSTEM INSTALLATION FOR THE MARKING OF UNDERGROUND UTILITIES. CALL THE UTILITY NOTIFICATION CENTER AT 811.
3. ONCE THE SITE IS ESTABLISHED WHERE FODS TRACKOUT CONTROL SYSTEM IS TO BE PLACED, ANY EXCESSIVE UNEVEN TERRAIN SHOULD BE LEVELED OUT OR REMOVED SUCH AS LARGE ROCKS, LANDSCAPING MATERIALS, OR SUDDEN ABRUPT CHANGES IN ELEVATION.
4. THE INDIVIDUAL MATS CAN START TO BE PLACED INTO POSITION. THE FIRST MAT SHOULD BE PLACED NEXT TO THE CLOSEST POINT OF EGRESS. THIS WILL ENSURE THAT THE VEHICLE WILL EXIT STRAIGHT FROM THE SITE ONTO THE PAVED SURFACE.
8. AFTER THE FIRST MAT IS PLACED DOWN IN THE PROPER LOCATION, MATS SHOULD BE ANCHORED TO PREVENT THE POTENTIAL MOVEMENT WHILE THE ADJOINING MATS ARE INSTALLED. ANCHORS SHOULD BE PLACED AT EVERY ANCHOR POINT (IF FEASIBLE) TO HELP MAINTAIN THE MAT IN ITS CURRENT POSITION.
9. AFTER THE FIRST MAT IS ANCHORED IN ITS PROPER PLACE, AN H BRACKET SHOULD BE PLACED AT THE END OF THE FIRST MAT BEFORE ANOTHER MAT IS PLACED ADJACENT TO THE FIRST MAT.
10. ONCE THE SECOND MAT IS PLACED ADJACENT TO THE FIRST MAT, MAKE SURE THE H BRACKET IS CORRECTLY SITUATED BETWEEN THE TWO MATS, AND SLIDE MATS TOGETHER.
11. NEXT THE CONNECTOR STRAPS SHOULD BE INSTALLED TO CONNECT THE TWO MATS TOGETHER.
12. UPON PLACEMENT OF EACH NEW MAT IN THE SYSTEM, THAT MAT SHOULD BE ANCHORED AT EVERY ANCHOR POINT TO HELP STABILIZE THE MAT AND ENSURE THE SYSTEM IS CONTINUOUS WITH NO GAPS IN BETWEEN THE MATS.
13. SUCCESSIVE MATS CAN THEN BE PLACED TO CREATE THE FODS TRACKOUT CONTROL SYSTEM REPEATING THE ABOVE STEPS.

USE AND MAINTENANCE
1. VEHICLES SHOULD TRAVEL DOWN THE LENGTH OF THE TRACKOUT CONTROL SYSTEM AND NOT CUT ACROSS THE MATS.
2. DRIVERS SHOULD TURN THE WHEEL OF THEIR VEHICLES SUCH THAT THE VEHICLE WILL MAKE A SHALLOW S-TURN ROUTE DOWN THE LENGTH OF THE FODS TRACKOUT CONTROL SYSTEM.
3. MATS SHOULD BE CLEANED ONCE THE VOIDS BETWEEN THE PYRAMIDS BECOME FULL OF SEDIMENT. TYPICALLY THIS WILL NEED TO BE PERFORMED WITHIN TWO WEEKS AFTER A STORM EVENT. BRUSHING IS THE PREFERRED METHOD OF CLEANING, EITHER MANUALLY OR MECHANICALLY.
4. THE USE OF ICE MELT, ROCK SALT, SNOW MELT, DE-ICER, ETC. SHOULD BE UTILIZED AS NECESSARY DURING THE WINTER MONTHS AND AFTER A SNOW EVENT TO PREVENT ICE BUILDUP.

REMOVAL
1. REMOVAL OF FODS TRACKOUT CONTROL SYSTEM IS REVERSE ORDER OF INSTALLATION.
2. STARTING WITH THE LAST MAT, THE MAT THAT IS PLACED AT THE INNERMOST POINT OF THE SITE OR THE MAT FURTHEST FROM THE EXIT OR PAVED SURFACE SHOULD BE REMOVED FIRST.
3. THE ANCHORS SHOULD BE REMOVED.
4. THE CONNECTOR STRAPS SHOULD BE UNBOLTED AT ALL LOCATIONS IN THE FODS TRACKOUT CONTROL SYSTEM.
5. STARTING WITH THE LAST MAT IN THE SYSTEM, EACH SUCCESSIVE MAT SHOULD THEN BE MOVED AND STACKED FOR LOADING BY FORKLIFT OR EXCAVATOR ONTO A TRUCK FOR REMOVAL FROM THE SITE.

PLANTS, PLANTING RATES, AND PLANTING DATES FOR PERMANENT COVER

SPECIES	BROADCAST RATES 1/ - PLS 2/ PER ACRE	PER 1000 S.F.	RESOURCE AREA 3/	PLANTING DATES	REMARKS
BAHIA, PENSACOLA (Paspalum notatum) ALONE OR W/ TEMPORARY COVER / WITH OTHER PERENNIALS	60 LBS. / 30 LBS.	1.4 LBS. / 0.7 LBS.	P C	J F M A M J J A S O N D	166,000 SEED PER POUND. LOW GROWING. SOD FORMING. SLOW TO ESTABLISH. PLANT WITH A COMPANION CROP. WILL SPREAD INTO BERMUDA PASTURES AND LAWNS. MIX WITH SERICEA LESPEDEZA OR WEEPING LOVEGRASS.
BAHIA, WILMINGTON (Paspalum notatum) ALONE OR W/ TEMPORARY COVER / WITH OTHER PERENNIALS	60 LBS. / 30 LBS.	1.4 LBS. / 0.7 LBS.	M-L P	J F M A M J J A S O N D	166,000 SEED PER POUND. LOW GROWING. SOD FORMING. SLOW TO ESTABLISH. PLANT WITH A COMPANION CROP. WILL SPREAD INTO BERMUDA PASTURES AND LAWNS. MIX WITH SERICEA LESPEDEZA OR WEEPING LOVEGRASS.
BERMUDA, COMMON (Cynodon dactylon) HULLED SEED ALONE / WITH OTHER PERENNIALS	10 LBS. / 6 LBS.	0.2 LBS. / 0.1 LBS.	P C	J F M A M J J A S O N D	1,787,000 SEED PER POUND. QUICK COVER. LOW GROWING AND SOD FORMING. FULL SUN. GOOD FOR ATHLETIC FIELDS.
BERMUDA, COMMON (Cynodon dactylon) UNHULLED SEED W/ TEMP COVER / WITH OTHER PERENNIALS	10 LBS. / 6 LBS.	0.2 LBS. / 0.1 LBS.	P C	J F M A M J J A S O N D	PLANT WITH WINTER ANNUALS. PLANT WITH TALL FESCUE.
BERMUDA SPRIGS (Cynodon dactylon) COASTAL, COMMON, MIDLAND, OR TIFT 44 / COASTAL, COMMON, OR TIFT 44 / TIFT 78	40 C.F. OR SOD PLUGS 3' x 3'	0.9 C.F.	M-L / P C / C	J F M A M J J A S O N D	A CUBIC FOOT CONTAINS APPROXIMATELY 650 SPRIGS. A BUSHEL CONTAINS 1.25 CUBIC FEET OR APPROXIMATELY 800 SPRIGS. / SAME AS ABOVE. / SOUTHERN COASTAL PLAIN ONLY.
CENTIPEDE (Eremochloa ophiuroides)	BLOCK SOD ONLY		P C	J F M A M J J A S O N D	DROUGHT TOLERANT. FULL SUN OR PARTIAL SHADE. EFFECTIVE ADJACENT TO CONC. AND IN CONCENTRATED FLOW AREAS. IRRIGATION IS NEEDED UNTIL FULLY ESTABLISHED. DO NOT PLANT NEAR PASTURES. WINTERHARDY AS FAR NORTH AS ATHENS AND ATLANTA.
CROWNVETCH (Coronilla varia) WITH WINTER ANNUALS OR COOL SEASON GRASSES	15 LBS.	0.3 LBS.	M-L P	J F M A M J J A S O N D	100,000 SEED PER POUND. DENSE GROWTH. ATTRACTIVE ROSE, PINK, AND WHITE BLOSSOMS SPRING TO LATE FALL. MIX W/ 30 LBS. OF TALL FESCUE OR 15 LBS. OF RYE. INOCULATE SEED WITH M INOCULANT. USE FROM NORTH ATLANTA AND NORTHWARD.
FESCUE, TALL (Festuca arundinacea) ALONE / W/ OTHER PERENNIALS	50 LBS. / 30 LBS.	1.1 LBS. / 0.7 LBS.	M-L P	J F M A M J J A S O N D	227,000 SEED PER POUND. USE ALONE ONLY ON BETTER SITES. NOT FOR DROUGHTY SOILS. MIX WITH PERENNIAL LESPEDEZAS OR CROWNVETCH. APPLY TOPDRESSING IN SPRING FOLLOWING FALL PLANTING NOT FOR HEAVY USE AREAS OR ATHLETIC FIELDS.
LESPEDEZA Ambro virgata (Lespedeza virgata DC) or Appalow (Lespedeza cuneata [Dumont] G. Don) SCARIFIED / UNSCARIFIED	60 LBS. / 75 LBS.	1.4 LBS. / 1.7 LBS.	M-L P C / M-L P C	J F M A M J J A S O N D	300,000 SEED PER POUND. HEIGHT OF GROWTH IS 18 TO 24 INCHES. ADVANTAGES IN URBAN AREAS. SPREADING-TYPE GROWTH. NEW GROWTH HAS BRONZE COLORATION. MIX W/ WEEPING LOVEGRASS, COMMON BERMUDA BAHIA, TALL FESCUE, OR WINTER ANNUALS. DO NOT MIX W. SERICEA LESPEDEZA. SLOW TO DEVELOP SOLID STANDS. INOCULATE SEED W/ EL INOCULANT.

SPECIES	BROADCAST RATES 1/ - PLS 2/ PER ACRE	PER 1000 S.F.	RESOURCE AREA 3/	PLANTING DATES	REMARKS
LESPEDEZA, SERICEA (Lespedeza cuneata) SCARIFIED	60 LBS.	1.4 LBS.	M-L P C	J F M A M J J A S O N D	350,000 SEED PER POUND. WIDELY ADAPTED. LOW MAINTENANCE. MIX WITH WEEPING LOVEGRASS, COMMON BERMUDA, BAHIA, OR TALL FESCUE. TAKES 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED. EXCELLENT ON ROADBANKS. INOCULATE SEED W/ EL INOCULANT.
UNSCARIFIED	75 LBS.	1.7 LBS.	M-L P C		MIX WITH TALL FESCUE OR WINTER ANNUALS
SEED-BEARING HAY	3 TONS	138 LBS.	M-L P C	J F M A M J J A S O N D	CUT WHEN SEED IS MATURE, BUT BEFORE IT SHATTERS. ADD TALL FESCUE OR WINTER ANNUALS.
LESPEDEZA, SHRUB (Lespedeza bicolor) (Lespedeza thumbergii) PLANTS	3' x 3'		M-L P C	J F M A M J J A S O N D	PROVIDE WILDLIFE FOOD AND COVER.
LOVEGRASS, WEEPING (Eragrostis curvula) ALONE / W/ OTHER PERENNIALS	4 LBS. / 2 LBS.	0.1 LBS. / 0.05 LBS.	M-L P C	J F M A M J J A S O N D	1,500,000 SEED PER POUND. QUICK COVER. DROUGHT TOLERANT. GROWS WELL WITH SERICEA LESPEDEZA ON ROADBANKS.
MAIDENCANE (Panicum hemitomon) SPRIGS WITH OTHER PERENNIALS	2' x 3' SPACING		ALL	J F M A M J J A S O N D	FOR VERY WET SITES. MAY CLOG CHANNELS. DIG SPRIGS FROM LOCAL SOURCES. USE ALONG RIVER BANKS AND SHORELINES.
PANICGRASS, ATLANTIC COASTAL (Panicum amarum var. amarulum)	20 LBS.	0.5 LBS.	P C	J F M A M J J A S O N D	GROWS WELL ON COASTAL SAND DUNES, BORROW AREAS, AND GRAVEL PITS. PROVIDES WINTER COVER FOR WILDLIFE. MIX WITH SERICEA LESPEDEZA EXCEPT ON SAND DUNES.
REED CANARY GRASS (Phalaris arundinancea) ALONE / WITH OTHER PERENNIALS	50 LBS. / 30 LBS.	1.1 LBS. / 0.7 LBS.	M-L P	J F M A M J J A S O N D	GROWS SIMILAR TO TALL FESCUE.
SUNFLOWER, 'AZTEC' MAXIMILLIAN (Helianthus maximiliani)	10 LBS.	0.2 LBS.	M-L P C	J F M A M J J A S O N D	227,000 SEED PER POUND. MIX WITH WEEPING LOVEGRASS OR OTHER LOW-GROWING GRASSES OR LEGUMES.

SOLID LINES INDICATE OPTIMUM DATES, DOTTED LINES INDICATE PERMISSIBLE BUT MARGINAL DATES.

1/ REDUCE SEEDING RATES BY 50% WHEN DRILLED.
2/ PLS IS AN ABBREVIATION FOR PURE LIVE SEED. REFER TO SECTION V.E. OF THESE SPECIFICATIONS.
3/ M-L REPRESENTS THE MOUNTAIN; BLUE RIDGE; AND RIDGES AND VALLEYS MLRA'S
P REPRESENTS THE SOUTHERN PIEDMONT MLRA
C REPRESENTS THE SOUTHERN COASTAL PLAIN; SAND HILLS; BLACK LANDS; AND ATLANTIC COAST FLATWOODS MLRAs

SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
COOL SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50-100 lbs./ac. 1/ 2/ - 30
COOL SEASON GRASSES AND LEGUMES		6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	0-50 lbs./ac. 1/ - -
GROUND COVERS		10-10-10 10-10-10 10-10-10	1300 lbs./ac. 3/ 1300 lbs./ac. 3/ 1100 lbs./ac.	- - -
PINE SEEDLINGS	FIRST	20-10-5	ONE 21-GRAM PELLET PER SEEDLING PLACED IN THE CLOSING HOLE	-
SHRUB LESPEDEZA	FIRST MAINTENANCE	0-10-10 0-10-10	700 lbs./ac. 700 lbs./ac. 4/	-
TEMPORARY COVER CROPS SEEDED ALONE	FIRST	10-10-10	500 lbs./ac.	30 lbs./ac. 5/
WARM SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 800 lbs./ac. 400 lbs./ac.	50-100 lbs./ac. 2/ 6/ 50-100 lbs./ac. 2/ 30 lbs./ac.
WARM SEASON GRASSES AND LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50 lbs./ac. 6/

1/ Apply in spring following seeding.
2/ Apply in split applications when high rates are used.
3/ Apply in 3 split applications.
4/ Apply when plants are pruned.
5/ Apply to grass species only.
6/ Apply when plants grow to a height of 2 to 4 inches.

NOTES:
1. PERMANENT GRASSING SHALL BE APPLIED TO GRADED AREAS THAT WILL BE UNDISTURBED FOR MORE THAN 6 MONTHS.
2. APPLY TO ALL AREAS IMMEDIATELY AFTER THEY HAVE REACHED FINAL GRADE.
3. APPLY AGRICULTURAL LIME AT A RATE OF 1-2 TONS PER ACRE UNLESS SOIL TESTS INDICATE OTHERWISE.
4. RYE GRASS SHALL NOT BE USED IN ANY SEEDING MIXTURE CONTAINING PERENNIAL SPECIES DUE TO ITS ABILITY TO OUT-COMPETE DESIRED SPECIES CHOSEN FOR PERMANENT PERENNIAL COVER.
5. FOR HYDRAULIC SEEDING, MIX SEED, FERTILIZER AND WOOD CELLULOSE OR WOOD PULP FIBER WITH WATER AND APPLY IN SLURRY UNIFORMLY OVER THE TREATED AREA. APPLY WITHIN 1 HOUR OF MIXING. MULCH IS TO BE APPLIED AT A RATE OF 400 LBS. PER ACRE.
6. FOR CONVENTIONAL SEEDING USE A CULTIPACKER-SEEDER, DRILL, ROTARY SEEDER, OTHER MECHANICAL SEEDER OR HAND SEED UNIFORMLY OVER THE TREATED AREA. LIGHTLY COVER THE SEED WITH $\frac{1}{8}$" TO $\frac{1}{4}$" OF SOIL. PROVIDE TEMPORARY MULCHING WITHIN 24 HOURS OF SPREADING SEED. MULCH SHALL COVER 75% OF THE SOIL SURFACE.

MAINTENANCE REQUIREMENTS:

PROVIDE PERIODIC INSPECTIONS AND AFTER EACH RAINFALL EVENT AND REGRASS AREAS THAT ARE BARE OR HAVE ERODED. EXCLUDE TRAFFIC ON GRASSED AREAS UNTIL GRASS IS ESTABLISHED. MOW AS REQUIRED.

Ds3 PERMANENT GRASSING
REFER TO THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR FURTHER DETAILS AND SPECIFICATIONS.

ALPHA SITE SET
08-20-2026

Dust Control on Disturbed Areas Du



DEFINITION
Controlling surface and air movement of dust on construction sites, roads, and demolition sites.

PURPOSE
•To prevent surface and air movement of dust from exposed soil surfaces.
•To reduce the presence of airborne substances that may be harmful or injurious to human health, welfare, or safety, or to animals or plant life.

CONDITIONS
This practice is applicable to areas subject to surface and air movement of dust where on and off-site damage may occur without treatment.

METHOD AND MATERIALS

A. Temporary Methods

Mulches. See standard **Ds1 - Disturbed Area Stabilization (With Mulching Only)**. Synthetic resins may be used instead of asphalt to bind mulch material. Refer to specification **Tac - Tackifiers**. Resins should be used according to manufacturer's recommendations.

Vegetative Cover. See specification **Ds2 - Disturbed Area Stabilization (With Temporary Seeding)**.

Spray-on Adhesives. These are used on mineral soils (not effective on muck soils). Keep traffic off these areas. Refer to specification **Tac - Tackifiers**.

Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency measure that should be used before wind erosion starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.

Irrigation. This is generally done as an emergency treatment. Site is sprinkled with water until the surface is wet. Repeat as needed.

Barriers. Solid board fences, snowfences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 15 times their height are effective in controlling wind erosion.

Calcium Chloride. Apply at rate that will keep surface moist. May need retreatment.

B. Permanent Methods

Permanent Vegetation. See specification **Ds3 -Disturbed Area Stabilization (With Permanent Vegetation)**. Existing trees and large shrubs may afford valuable protection if left in place.

Topsoiling. This entails covering the surface with less erosive soil material. See specification **Tp - Topsoiling**.

Stone. Cover surface with crushed stone or coarse gravel. See specification **Cr-Construction Road Stabilization**.

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THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 029252 KIMBERLY A. DEVENDORF
7/31/26

CONSTRUCTION DOCUMENTS
07/01/2026

NCWSA NEWTON COUNTY WATER & SEWERAGE AUTHORITY

NCWSA OFFICE ADDITION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B.FLIEG
DRAWN: B.FLIEG
CHECKED: K.DEVENDORF
CHECKED:
APPROVED:

FILENAME
203000-C-215.dwg

BC PROJECT NUMBER

CLIENT PROJECT NUMBER

CIVIL

SEDIMENT AND EROSION CONTROL DETAILS 2

DRAWING NUMBER
C-215

EPA
United States Environmental Protection Agency

Stormwater Best Management Practice
Concrete Washout

NPDES

Minimum Measure
Construction Site Stormwater Runoff Control

Subcategory
Good Housekeeping/Materials Management

Description of Concrete Washout at Construction Sites

Concrete and its ingredients

Concrete is a mixture of cement, water, and aggregate material. Portland cement is made by heating a mixture of limestone and clay containing oxides of calcium, aluminum, silicon and other metals in a kiln and then pulverizing the resulting clinker. The fine aggregate particles are usually sand. Coarse aggregate is generally gravel or crushed stone. When cement is mixed with water, a chemical reaction called hydration occurs, which produces glue that binds the aggregates together to make concrete.

Concrete washout

After concrete is poured at a construction site, the chutes of ready mixed concrete trucks and hoppers of concrete pump trucks must be washed out to remove the remaining concrete before it hardens. Equipment such as wheelbarrows and hand tools also need to be washed down. At the end of each work day, the drums of concrete trucks must be washed out. This is customarily done at the ready mixed batch plants, which are usually off-site facilities, however large or rural construction projects may have on-site batch plants. Cementitious (having the properties of cement) washwater and solids also come from using such construction materials as mortar, plaster, stucco, and grout.

Environmental and Health Impacts

Concrete washout water (or washwater) is a slurry containing toxic metals. It's also caustic and corrosive, having a pH near 12. In comparison, Drano liquid drain cleaner has a pH of 13.5. Caustic washwater can harm fish gills and eyes and interfere with reproduction. The safe pH ranges for aquatic life habitats are 6.5 – 9 for freshwater and 6.5 – 8.5 for saltwater.

Construction workers should handle wet concrete and washout water with care because it may cause skin irritation and eye damage. If the washwater is dumped on the ground (Fig. 1), it can run off the construction site to adjoining roads and enter roadside storm drains, which discharge to surface waters such as rivers, lakes, or estuaries. The red arrow in Figure 2 points to a ready mixed truck chute that's being washed out into a roll-off bin, which isn't watertight. Leaking washwater, shown in the foreground, will likely follow similar



Figure 1. *Chute washwater being dumped on the ground*



Figure 2. *Chute washwater leaking from a roll-off bin being used as a washout container*

paths to nearby surface waters. Rainfall may cause concrete washout containers that are uncovered to overflow and also transport the washwater to surface waters. Rainwater polluted with concrete washwater can percolate down through the soil and alter the soil chemistry, inhibit plant growth, and contaminate the groundwater. Its high pH can increase the toxicity of other substances in the surface waters and groundwater. Figures 1 and 2 illustrate the need for better washout management practices.

Best Management Practice Objectives

The best management practice objectives for concrete washout are to (a) collect and retain all the concrete washout water and solids in leak proof containers, so that this caustic material does not reach the soil surface and then migrate to surface waters or into the ground water, and (b) recycle 100 percent of the collected concrete washout water and solids. Another

Office of Water, 4203M
www.epa.gov/npdes/pubs/concretewashout.pdf
www.epa.gov/npdes/stormwater/menuofbmps
EPA 833-F-11-006
February 2012

trucks can use hay bale washout pits, but concrete pump trucks have a low hanging hopper in the back that may prevent their being washed out into bale-lined pits.

Vinyl washout container



Figure 11. *Vinyl washout pit with filter bag*

The vinyl washout container (Fig. 11) is portable, reusable, and easier to install than a hay bale washout pit. The biodegradable filter bag (Fig. 12) assists in extracting the concrete solids and prolongs the life of the vinyl container. When the bag is lifted, the water is filtered out and the remaining concrete solids and the bag can be disposed of together in a landfill, or the hardened concrete can be delivered to a recycler. After the solids have been removed several times and the container is full of washwater, the washwater can be allowed to evaporate, so the container can be reused. The washwater can be removed more quickly by placing another filter bag in the container and spreading water gelling granules evenly across the water. In about five minutes, the water in the filter bag will turn into a gel that can be removed with the bag. Then the gel and filter bag can be disposed to together.



Figure 12. *Extracting the concrete solids or gelled washwater*

Metal washout container

The metal roll-off bin (Fig. 13) is designed to securely contain concrete washwater and solids and is portable and reusable. It also has a ramp that allows concrete pump trucks to wash out their hoppers (Fig. 14). Roll-off providers offer recycling services, such as, picking up the roll-off bins after the washwater has evaporated and the solids have hardened, replacing them with empty washout bins, and delivering the hardened concrete to a recycler (Fig. 15), rather than a landfill. Some providers will vacuum off the washwater, treat it to remove metals and reduce the pH, deliver it to a wastewater treatment plant for additional treatment and subsequent discharge to a surface water. Everything is recycled or treated sufficiently to be returned to a natural surface water.



Figure 13. *Mixer truck being washed out into a roll-off bin*



Figure 14. *Pump truck using the ramp to wash out into a roll-off bin*



Figure 15. *Delivering hardened Concrete to a recycler*

Another metal, portable, washout container, which has a rain cover to prevent overflowing, is shown in Figure 16. It is accompanied by an onsite washwater treatment unit, which reduces the pH and uses a forced weir tank system to remove the coarse aggregate, fine aggregate, and cement fines. The washwater can then be reused at the construction site to wash out other mixer truck chutes and equipment. The solids are allowed to harden together and can be taken to a concrete recycler (Fig. 17) to be crushed and used as road base or aggregate for making precast products, such as retaining wall blocks. All materials are recycled.



Figure 16. *Washout container with a rain cover and onsite washwater treatment*



Figure 17. *Delivering hardened concrete to a recycler*

Siting Washout Facilities

Concrete washout facilities, such as washout pits and vinyl or metal washout containers, should be placed in locations that provide convenient access to concrete trucks, preferably near the area where concrete is being poured. However they

objective is to support the diversion of recyclable materials from landfills. Table 1 shows how concrete washout materials can be recycled and reused.

Table 1 – Recycling concrete washout materials

Uses of Recycled Materials	Concrete Washout Materials					
	Washwater	Cement Fines	Fine Aggregate	Coarse Aggregate	Hardened Concrete	Cementitious Solids
Reused to washout additional mixer truck chutes or drums	x					
Reused as a ready mixed concrete ingredient	x	x[a]	x	x		
Reused as an ingredient of precast concrete products, e.g., highway barriers, retaining wall blocks, riprap	x	x	x	x	x	x
Reused as crushed concrete, products, e.g., road base or fill		x	x	x	x	
Reused to pave the yards of ready mixed concrete plants						x
Returned back to a surface water, e.g., river, lake, or estuary	x[c]					

a. Fine particles of cementitious material (e.g., Portland cement, slag cement, fly ash, silica fume)
b. Recyclable, if allowed by the concrete quality specifications
c. Treated to reduce the pH and remove metals, so it can be delivered to a municipal wastewater treatment plant, where it is treated further and then returned to a natural surface water

Washwater recycling, treatment, disposal

Washwater from concrete truck chutes, hand mixers, or other equipment can be passed through a system of weirs or filters to remove solids and then be reused to wash down more chutes and equipment at the construction site or as an ingredient for making additional concrete. A three chamber washout filter is shown in Figure 3. The first stage collects the coarse aggregate. The middle stage filters out the small grit and sand. The third stage has an array of tablets that filter out fines and reduces the pH. The filtered washwater is then discharged through a filter sock. An alternative is to pump the washout water out of the washout container (Fig 4) and treat the washwater off site to remove metals and reduce its pH, so it can be delivered to a publicly owned treatment works (POTW), also known as a municipal wastewater treatment plant, which provides additional treatment allowing the washwater to be discharged to a surface water. The POTW should be contacted to inquire about any pretreatment requirements, i.e., the National Pretreatment Standards for Prohibited Discharges (40CFR 403.5) before discharging the washwater to the POTW. The washwater can also be retained in the washout container and allowed to evaporate, leaving only the hardened cementitious solids to be recycled.



Figure 3. *Concrete washout filter*



Figure 4. *Vacuuming washwater out of a washout container for treatment and reuse*

Solids recycling

The course aggregate materials that are washed off concrete truck chutes into a washout container can be either separated by a screen and placed in aggregate bins to be reused at the construction site or returned to the ready mixed plant and washed into a reclaimer (Fig. 5). When washed out into a reclaimer, the fine and course aggregates are separated out and placed in different piles or bins to be reused in making fresh concrete. Reclaimers with settling tanks separate cement fines from the washwater, and these fines can also be used in new concrete unless prohibited by the user's concrete quality specifications.



Figure 5. *Ready mixed truck washing out into a reclaimer*

Hardened concrete recycling

When the washwater in a construction site concrete washout container has been removed or allowed to evaporate, the hardened concrete that remains can be crushed (Fig. 6) and reused as a construction material. It makes an excellent aggregate for road base and can be used as fill at the construction site or delivered to a recycler. Concrete recyclers can be found at municipal solid waste disposal facilities, private recycling plants, or large construction sites.



Figure 6. *Crushed concrete stockpile and crusher*

should not be placed within 50 feet of storm drains, open ditches, or waterbodies. Appropriate gravel or rock should cover approaches to concrete washout facilities when they are located on unimproved property. On large sites with extensive concrete work, washouts should be placed at multiple locations for ease of use by ready mixed truck drivers. If the washout facility is not within view from the pour location, signage will be needed to direct the truck drivers.

Operating and Inspecting Washout Facilities

Concrete washout facilities should be inspected daily and after heavy rains to check for leaks, identify any plastic linings and sidewalls have been damaged by construction activities, and determine whether they have been filled to over 75 percent capacity. When the washout container is filled to over 75 percent of its capacity, the washwater should be vacuumed off or allowed to evaporate to avoid overflows. Then when the remaining cementitious solids have hardened, they should be removed and recycled. Damages to the container should be repaired promptly. Before heavy rains, the washout container's liquid level should be lowered or the container should be covered to avoid an overflow during the rain storm.

Educating Concrete Subcontractors

The construction site superintendent should make ready mixed truck drivers aware of washout facility locations and be watchful for improper dumping of cementitious material. In addition, concrete washout requirements should be included in contracts with concrete delivery companies.

Reference

NRMCA 2009. Environmental Management in the Ready Mixed Concrete Industry, 2PERMIM, 1st edition. By Gary M. Mullins. Silver Springs, MD: National Ready Mixed Concrete Association.

Websites and Videos

Construction Materials Recycling Association
www.concreterecycling.org

National Ready Mixed Concrete Association
www.nrmca.org

National Ready Mixed Concrete Research and Education Foundation
www.rmc-foundation.org

Additional information and videos on concrete washout containers and systems can be found by a web search for "concrete washout."

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Wet concrete recycling

Builders often order a little more ready mixed concrete than they actually need, so it is common for concrete trucks to have wet concrete remaining in their drum after a delivery. This unused concrete can be returned to the ready mixed plant and either (1) used to pour precast concrete products (e.g., highway barriers, retaining wall blocks, riprap), (2) used to pave the ready mixed plant's yard, (3) washed into a reclaimer, or (4) dumped on an impervious surface and allowed to harden, so it can be crushed and recycled as aggregate. Unused wet concrete should not be dumped on bare ground to harden at construction sites because this can contribute to ground water and surface water contamination.

Washout Containers

Different types of washout containers are available for collecting, retaining, and recycling the washwater and solids from washing down mixed truck chutes and pump truck hoppers at construction sites.

Chute washout box

A chute washout box is mounted on the back of the ready mixed truck. If the truck has three chutes, the following procedure is used to perform the washout from the top down: (1) after the pour is completed, the driver attaches the extension chute to the washout box, (2) the driver then rotates the main chute over the extension chute (Fig. 7) and washes down the hopper first then the main chute, (3) finally the driver washes down the flop down chute and last the extension chute hanging on the box. All washwater and solids are captured in the box. After the wash down, washwater and solids are returned to the ready mixed plant for recycling. A filter basket near the top of the washout box separates out the coarse aggregates so they can be placed in a bin for reuse either at the construction site or back at the cement plant.

Figure 7. *Chute washout box*

Chute washout bucket and pump

After delivering ready mixed concrete and scraping the last of the customer's concrete down the chute, the driver hangs a washout bucket shown in Figure 8 (see red arrow) on the end of the truck's chute and secures the hose to insure no leaks. The driver then washes down the chute into the bucket to remove any cementitious material before it hardens. After washing out the chute, the driver pumps (yellow arrow points to the pump) the washwater, sand, and other fine solids from the bucket up into the truck's drum to be returned to the ready mixed plant, where it can be washed into a reclaimer. A removable screen at the bottom of the washout bucket prevents course aggregate from entering the pump. This course aggregate can also be returned to the plant and added to the coarse aggregate pile to be reused. All the materials are recycled.

Figure 8. *Chute washout bucket and pump*

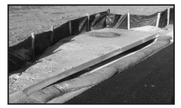
Hay bale and plastic washout pit

A washout pit made with hay bales and a plastic lining is shown in Figure 9. Such pits can be dug into the ground or built above grade. The plastic lining should be free of tears or holes that would allow the washwater to escape (Fig. 10). After the pit is used to wash down the chutes of multiple ready mixed trucks and the washwater has evaporated or has been vacuumed off, the remaining hardened solids can be broken up and removed from the pit. This process may damage the hay bales and plastic lining. If damage occurs, the pit will need to be repaired and relined with new plastic. When the hardened solids are removed, they may be bound up with the plastic lining and have to be sent to a landfill, rather than recycled. Recyclers usually accept only unmixed material. If the pit is going to be emptied and repaired more than a few times, the hay bales and plastic will be generating additional solid waste. Ready mixed concrete

Figure 9. *Hay bale and plastic washout pit*

Figure 10. *Leaking washout pit that has not been well maintained*

Inlet Sediment Trap Sd2



DEFINITION
A temporary protective device formed at or around an inlet to a storm drain to trap sediment.

PURPOSE
To prevent sediment from entering a storm drainage systems prior to permanent stabilization of the disturbed area draining to the inlet.

CONDITIONS
All storm drain drop inlets that receive runoff from disturbed areas.

DESIGN CRITERIA
Through testing there are two different categories (high retention and high flow) supported. In areas where BMPs are being used on paved surfaces, or safety is a concern, the potentially negative effects of ponding should be taken into account. In such cases, a high flow BMP is preferred.

On unpaved areas where ponding will not cause a safety hazard, high retention shall be taken into account. If high retention is not used in this situation a rationale shall be given on the plan and an unpaved application should apply.

Sediment traps must be self-draining unless they are otherwise protected in an approved fashion that will not present a safety hazard. The drainage area entering the inlet sediment trap shall be no greater than one acre.

If runoff may bypass the protected inlet, a temporary dike should be constructed on the down slope side of the structure. Also, a stone filter ring may be used on the up slope side of the inlet to slow runoff and filter larger soil particles. Refer to **Fr-Stone Filter Ring.**

CONSTRUCTION SPECIFICATIONS
Excavated Inlet Sediment Trap
An excavation may be created around the inlet sediment trap to provide additional sediment storage. The trap shall be sized to provide a minimum storage capacity calculated at the rate of 67 cubic yards per acre of drainage area. A minimum depth of 1.5 feet for sediment storage should be provided. Side slopes shall not be steeper than 2:1.

Sediment traps may be constructed on natural ground surface, on an excavated surface, or on machine compacted fill, provided they have a non-erodible outlet.

Filter Fabric with Supporting Frame Sd2 -F

This method of inlet protection is applicable where the inlet drains a relatively flat area (slope no greater than 5%) and shall not apply to inlets receiving concentrated flows, such as in street or highway medians. As shown in Figure 6-28.1, Type S silt fence supported by steel posts should be used. The stakes shall be spaced evenly around the perimeter of the inlet a maximum of 3 feet apart, and securely driven into the ground, approximately 18 inches deep. The fabric shall be 36 inches tall and entrenched 12 inches and backfilled with crushed stone or compacted soil. Fabric and wire shall be securely fastened to the posts, and fabric ends must be overlapped a minimum of 18 inches or wrapped together around a post to provide a continuous fabric barrier around the inlet.

Baffle Box Sd2 -B

For inlets receiving runoff with a higher volume or velocity, a baffle box inlet sediment trap should be used. As shown in Figure 6-28.2, the baffle box shall be constructed of 2" x 4" boards spaced a maximum of 1 inch apart or of plywood with weep holes 2 inches in diameter. The weep holes shall be placed approximately 6 inches on center vertically and horizontally. Gravel shall be placed outside the box, all around the inlet, to a depth of 2 to 4 inches. The entire box is wrapped

PG 1

in Type C filter fabric that shall be entrenched 12 inches and backfilled.

Block and Gravel Drop Inlet Protection Sd2 -Bg

This method of inlet protection is applicable where heavy flows are expected and where an overflow capacity is necessary to prevent excessive ponding around the structure. As shown in Figure 6-28.3, one block is placed on each side of the structure on its side in the bottom row to allow pool drainage. The foundation should be excavated at least 2 inches below the crest of the storm drain. The bottom row of blocks is placed against the edge of the storm drain for lateral support and to avoid washouts when overflow occurs. If needed, lateral support may be given to subsequent rows by placing 2" x 4" wood studs through block openings. Hardware cloth or comparable wire mesh with 1/2 inch openings shall be fitted over all block openings to hold gravel in place. Clean gravel should be placed 2 inches below the top of the block on a 2:1 slope or flatter and smoothed to an even grade. DOT #57 washed stone is recommended.

Gravel drop Inlet Protection Sd2-G

This method of inlet protection is applicable where heavy concentrated flows are expected. As shown in Figure 6-28.4, stone and gravel are used to trap sediment. The slope toward the inlet shall be no steeper than 3:1. A minimum 1 foot wide level stone area shall be left between the structure and around the inlet to prevent gravel from entering the inlet. On the slope toward the inlet, stone 3 inches in diameter and larger should be used. On the slope away from the inlet, 1/2 to 3/4 inch gravel (#57 washed stone) should be used at a minimum thickness of 1 foot.

Sod Inlet Protection Sd2-S

This method of inlet protection is applicable only at the time of permanent seeding, to protect the inlet from sediment and mulch material until permanent vegetation has become established. As shown in Figure 6-28.5, the sod shall be placed to form a turf mat covering the soil for a distance of 4 feet from each side of the inlet structure. Sod strips shall be staggered so that adjacent strip ends are not aligned.

Curb Inlet Protection Sd2-P

Once pavement has been installed, a curb inlet filter shall be installed on inlets receiving runoff from disturbed areas. This method of inlet protection shall be removed if a safety hazard is created.

One method of curb inlet protection uses "pigs-in-a-blanket"- 8-inch concrete blocks wrapped in filter fabric. See Figure 6-28.6. Another method uses gravel bags constructed by wrapping DOT #57 stone with filter fabric, wire, plastic mesh, or equivalent material.

A gap of approximately 4 inches shall be left between the inlet filter and the inlet to allow for overflow and prevent hazardous ponding in the roadway. Proper installation and maintenance are crucial due to possible ponding in the roadway, resulting in a hazardous condition. Several other methods are available to prevent the entry of sediment into storm drain inlets.

Figure 6-28.7 shows one of these alternative methods.

MAINTENANCE
The trap shall be inspected daily and after each rain, and repairs made as needed. Sediment shall be removed when the sediment has accumulated to one-half the height of the trap. Sediment shall be removed from curb inlet protection immediately. For excavated inlet sediment traps, sediment shall be removed when one-half of the sediment storage capacity has been lost to sediment accumulation. Sod inlet protection shall be maintained as specified in **Ds4 - Disturbed Area Stabilization (With Sodding).**

Sediment shall not be washed into the inlet. It shall be removed from the sediment trap, disposed of and stabilized so that it will not enter the inlet again.

When the contributing drainage area has been permanently stabilized, all materials and any sediment shall be removed, and either

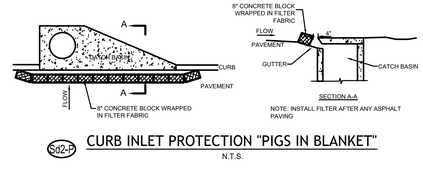
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PG 2

salvaged or disposed of properly. The disturbed area shall be brought to proper grade, then smoothed and compacted. Appropriately stabilize all disturbed areas around the inlet.

PG 3

NOTES :
1. INSTALL FILTER AFTER ANY ASPHALT PAVEMENT INSTALLATION.
2. WRAP 8" CONCRETE BLOCKS IN FILTER FABRIC AND SPAN ACROSS CATCH BASIN INLET.
3. FACE OPENING IN BLOCKS OUTWARD.
4. LEAVE A GAP OF APPROXIMATELY 4" BETWEEN THE CURB AND THE FILTERS TO ALLOW FOR OVERFLOW TO PREVENT HAZARDOUS PONDING.
5. INSTALL OUTLET PROTECTION BELOW STORM DRAIN OUTLETS.



NOTE: INSTALL FILTER AFTER ANY ASPHALT PAVING

Sd2-F5 CURB INLET PROTECTION "PIGS IN BLANKET"
N.T.S.

UTILITIES PROTECTION CENTER
CALL FREE
CALL : 811
800-282-7411
WEB: MY.GEORGIA811.COM
THREE WORKING DAYS BEFORE YOU DIG

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ATLANTA, GA 30328

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7/31/26

CONSTRUCTION DOCUMENTS
07/01/2026

NCWSA NEWTON COUNTY WATER & SEWERAGE AUTHORITY

NCWSA OFFICE ADDITION

REVISIONS

REV	DATE	DESCRIPTION

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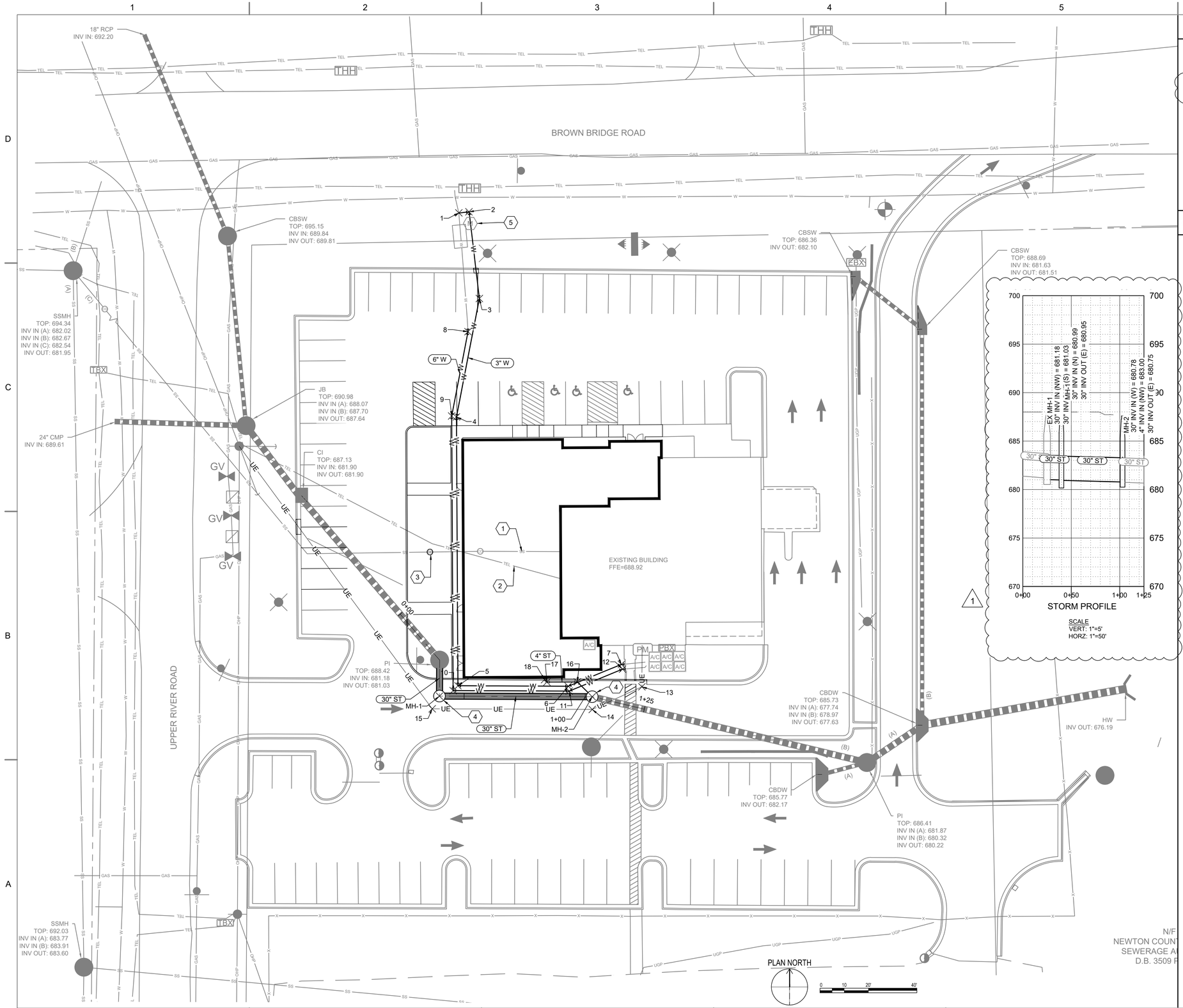
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DRAWN: B.FLIEG
CHECKED: K.DEVENDORF
CHECKED:
APPROVED:

FILENAME
203000-C-216.dwg
BC PROJECT NUMBER
CLIENT PROJECT NUMBER

CIVIL

SEDIMENT AND EROSION CONTROL DETAILS 3

DRAWING NUMBER
C-216



GENERAL NOTES:

1. PROPOSED WATER PIPE MATERIAL SHALL BE POLYETHYLENE AND CONFORMS TO NCWSA WATER & SEWER STANDARDS & SPECIFICATIONS - ARTICLE 3, SECTION 3.02.C.6.e.ii
2. PROPOSED STORM WATER PIPE MATERIAL SHALL BE CLASS 3 RCP.

1

ALPHA SITE SET
08-20-2026

KEYNOTES:

1 PROTECT SEWER LATERAL IN PLACE
2 PROTECT TELECOM IN PLACE
3 SEWER CLEAN OUT, SEE DETAIL B-12/C-010
4 MANHOLE, SEE DETAIL B-1/C-010
5 EXISTING 2" WATER METER AND BACKFLOW PREVENTER. UPSIZE EXISTING 2" PIPE TO 3" BEFORE AND AFTER EXISTING EQUIPMENT.

WATER			
Point #	Northing	Easting	Description
1	1303845.60	2374219.71	TIE-IN
2	1303846.03	2374223.88	90° BEND
3	1303810.28	2374228.20	22.5° BEND
4	1303761.39	2374218.73	11.25° BEND
5	1303650.43	2374219.34	90° BEND
6	1303650.25	2374264.90	22.5° BEND
7	1303659.26	2374286.82	22.5° BEND
8	1303796.57	2374223.50	11.25° BEND
9	1303761.77	2374216.77	11.25° BEND
10	1303648.44	2374217.35	90° BEND
11	1303648.25	2374265.29	22.5° BEND
12	1303657.30	2374287.30	22.5° BEND

UNDERGROUND ELECTRIC			
Point #	Northing	Easting	Description
13	1303650.02	2374295.30	UE
14	1303640.67	2374274.79	UE
15	1303640.93	2374208.71	UE

STORM			
Point #	Northing	Easting	Description
16	1303652.03	2374268.61	45° BEND
17	1303651.97	2374256.07	45° BEND
18	1303652.96	2374255.07	45° BEND

STRUCTURE TABLE			
MANHOLE:	DETAILS:	NORTHING	EASTING
MH-1	48" RIM = 688.18 INV IN = 680.99 INV OUT = 680.95	1303646.17	2374211.73
EX MH-1	72" RIM = 688.00 INV IN = 681.18 INV OUT = 681.03	1303661.01	2374211.79
	48"		

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CHECKED: K.DEVENDORF
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