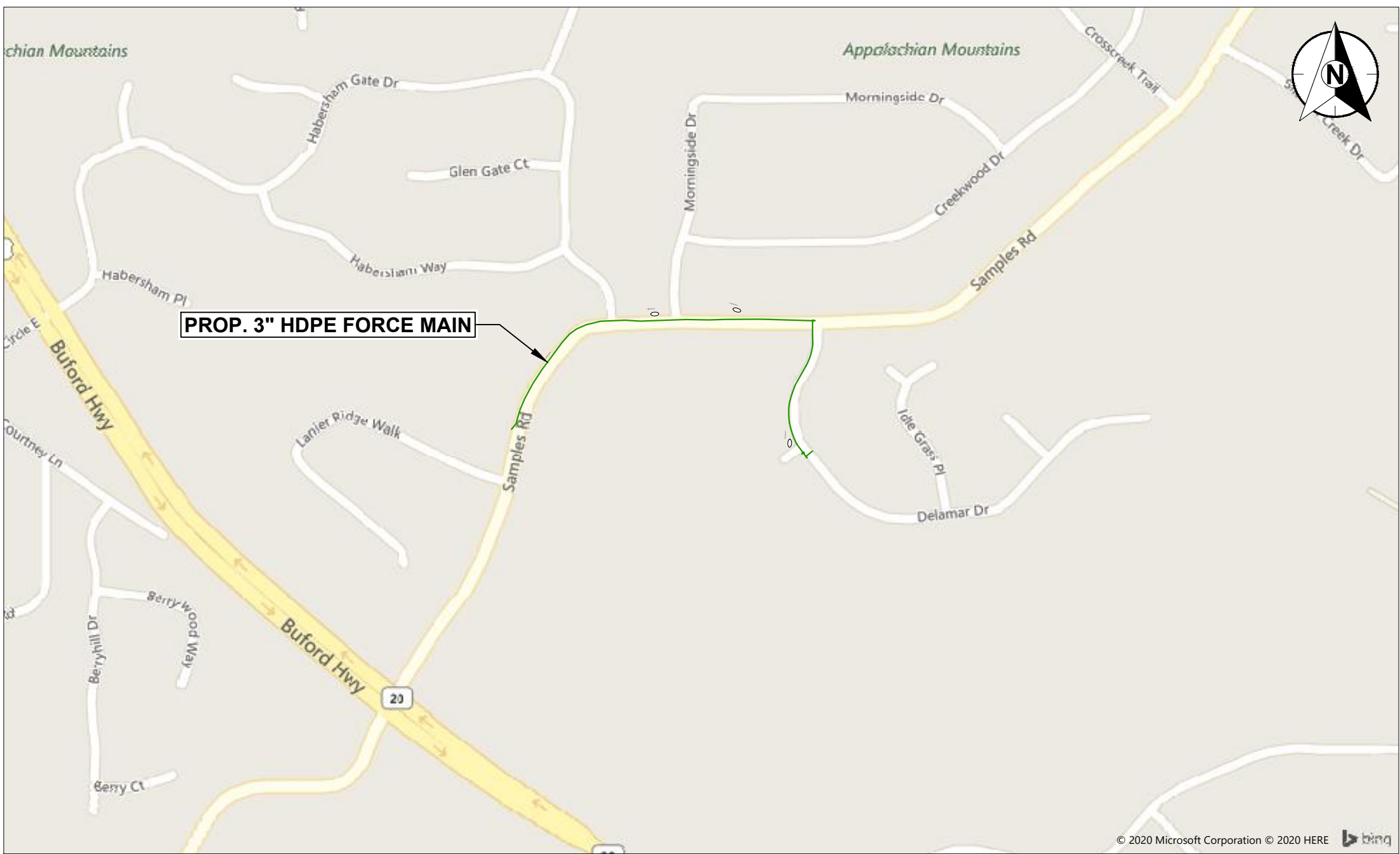


DELAMAR LOW PRESSURE FORCE MAIN

SITE DEVELOPMENT PLANS

CITY OF CUMMING, FORSYTH COUNTY, GA



LOCATION MAP
SCALE: N.T.S.

Sheet List Table	
Sheet Number	Sheet Title
1	COVER SHEET
2	OVERALL SITE PLAN
3	PLAN VIEWS PART 1
4	PLAN VIEWS PART 2
5	DETAILS
6	EROSION CONTROL DETAILS PART 1
7	EROSION CONTROL DETAILS PART 2

CONSTRUCTION SCHEDULE				
CONSTRUCTION ACTIVITY	2020			
	MAR	APR	MAY	
INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES				
INSTALLATION OF SITE IMPROVEMENTS				
MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES FOR ENTIRE PROJECT				
FINAL GRASSING				



ISSUE FOR CONSTRUCTION : 03/13/2020

1. OWNER / PRIMARY PERMITTEE: CITY OF CUMMING
100 MAIN STREET
CUMMING, GEORGIA
30040
(770) 781-2020

2. ENGINEER: CIVIL ENGINEERING CONSULTANTS, INC.
110 SAMARITAN DRIVE, SUITE 201
CUMMING, GEORGIA 30040
PHONE: (770) 977-5747

3. SURVEYOR: NEIL MCWHORTER
416 PIRKLE FERRY RD
CUMMING, GA 30040
PHONE: (770) 889-9340

ORIGIN OF SURVEY: FIELD RUN TOPOGRAPHY - 12/15/2020
4. SITE ADDRESS:
SAMPLES RD
CUMMING, GA 30041

5. DISTURBED AREA:
TOTAL LINEAR DISTURBED AREA: 0.55 AC.

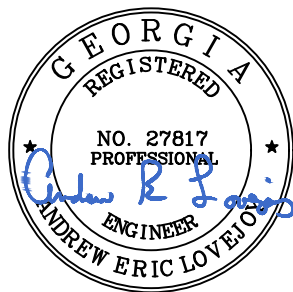
6. A PORTION OF THIS SITE LIES WITHIN A FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP PANEL 12117C0161G DATED MARCH 04, 2013

7. ZONING DISTRICTS: R2R, A1

8. LAND LOTS: 363, 364

9. PROJECT DESCRIPTION:
THE PROJECT SHALL INCLUDE FURNISHING ALL MATERIALS, LABOR, AND EQUIPMENT TO INSTALL APPROXIMATELY 2,400 LF OF 3" HDPE LOW PRESSURE FORCE MAIN AND ANY APPURTENANCES AS NECESSARY FOR COMPLETION OF THE WORK DESCRIBED WITHIN THESE PLANS AND SPECIFICATIONS.

10. PROJECT LOCATION:
THIS PROJECT BEGINS AT 34°09'58.5"N, 84°06'54.3"W, AND ENDS AT 34°09'57.2"N, 84°06'38.0"W



CEC
CIVIL ENGINEERING CONSULTANTS, INC.

Civil & Environmental Engineering

110 Samaritan Drive, Suite 201
Cumming, GA 30040
(770) 977-5747
www.cecincga.com

© Copyright 2020

Civil Engineering Consultants, Inc.

THESE DRAWINGS AND THEIR REPRODUCTIONS ARE THE PROPERTY OF THE ENGINEER AND MAY NOT BE REPRODUCED, PUBLISHED OR USED IN ANY WAY WITHOUT THE WRITTEN PERMISSION OF THIS ENGINEER.

FORSYTH COUNTY REQUIREMENTS:

- FORSYTH COUNTY UTILITY PERMIT REQUIRED. CALL 770-781-2165 FOR UTILITY PERMIT INFORMATION.
- CONTACT SCOTT GUNTER AT (770) 781-2165 24 HOURS PRIOR TO WORKING WITHIN 400' OF ANY TRAFFIC SIGNAL.
- NOTIFY FORSYTH COUNTY INSPECTOR 24 HOURS BEFORE THE BEGINNING PHASE OF CONSTRUCTION. (770) 781-2165
- IRRIGATION SYSTEMS ARE PROHIBITED ON ALL EXISTING AND PROPOSED COUNTY RIGHT-OF-WAY AND CONSIDERED TO BE A VIOLATION OF THE COUNTY'S ORDINANCE PROHIBITING UN-PERMITTED RIGHT-OF-WAY ENCROACHMENTS.
- FULL SERVICE DRIVES WILL REVERT TO RIGHT IN / RIGHT OUT DRIVES IF FORSYTH COUNTY DETERMINES THEY ARE CREATING TRAFFIC PROBLEMS AND/OR ACCIDENTS OR IF ROAD IS WIDENED TO A MULTI-LANE HIGHWAY WITH MEDIAN.
- NO STRUCTURES, FENCES OR OTHER OBSTRUCTIONS MAY BE LOCATED WITHIN A DRAINAGE OR ACCESS EASEMENT WITHOUT PRIOR APPROVAL BY THE FORSYTH COUNTY DEPARTMENT OF ENGINEERING.
- APPROVAL OF THESE PLANS DOES NOT CONSTITUTE APPROVAL BY FORSYTH COUNTY OF ANY LAND DISTURBING ACTIVITIES WITHIN WETLAND AREAS. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONTACT THE APPROPRIATE REGULATORY AGENCY FOR APPROVAL OF ANY WETLAND AREA DISTURBANCE.
- MAXIMUM CUT SLOPES SHALL BE 2 HORIZONTAL TO 1 VERTICAL. CONTINUOUS FILL SLOPES TEN (10) FEET IN HEIGHT OR LESS MAY BE 2 HORIZONTAL TO 1 VERTICAL. ALL CONTINUOUS FILL SLOPES THAT EXCEED TEN (10) FEET IN HEIGHT MUST BE 3 HORIZONTAL TO 1 VERTICAL UNLESS: a) A MECHANICALLY ENGINEERED STABILIZED SLOPE IS APPROVED BY THE FORSYTH COUNTY DIRECTOR OF ENGINEERING; OR b) THE DESIGNED AND CONSTRUCTED SLOPES ARE CERTIFIED BY A REGISTERED ENGINEER EXPERIENCED IN GEOTECHNICAL ENGINEERING AND LICENSED IN THE STATE OF GEORGIA.
- APPROVAL OF THESE PLANS BY FORSYTH COUNTY IS SUBJECT TO AND CONTINGENT UPON THE APPLICANT OR OWNER OBTAINING THE NECESSARY APPROVALS FROM OTHER JURISDICTION AGENCIES INCLUDING BUT NOT LIMITED TO, THE UNITED STATES ARMY CORPS OF ENGINEERS, OR UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, GEORGIA DEPARTMENT OF NATURAL RESOURCES, GEORGIA ENVIRONMENTAL PROTECTION DIVISION, AND THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION.
- THIS DEVELOPMENT IS EXCEPTED FROM THE GEORGIA STORMWATER MANAGEMENT MANUAL AND FORSYTH COUNTY ADDENDUM TO THE GEORGIA STORMWATER MANAGEMENT MANUAL AS THERE IS LESS THAN ONE (1) ACRE OF DISTURBANCE AT ANY ONE TIME AND THERE IS LESS THAN 5000 SF OF NEW IMPERVIOUS SURFACE BEING CREATED.

ESPCP CERTIFICATION:

- I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.
- I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL (ES&PC) PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA." (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES MEETS THE DESIGN REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100002.

Liang Wang

LIANG WANG, P.E.
GSWCC NO. 0000083427

GENERAL CONSTRUCTION NOTES:

- EXISTING SITE CONDITIONS: THE PROPOSED SITE IS LOCATED IN FORSYTH COUNTY. THE PROJECT SITE IS WITHIN THE PUBLIC RIGHT-OF-WAY AND OTHER AREAS CONSIST OF WOODED LAND, PRIMARILY UNDEVELOPED WITH SOME AREAS RESIDENTIAL AREAS. THE EXISTING PROJECT SITE CONSISTS OF GRADES FROM 0.00% TO 38%. SURROUNDING AREAS ARE UNDISTURBED WITH FEW EXCEPTIONS AND SURFACE RUNOFF IS MINIMAL.
- PROPOSED CONDITIONS: PROJECT AREA IS LESS THAN ONE (1) ACRE OF DISTURBANCE. ALL DISTURBED AREAS WILL BE RESTORED TO EXISTING GRADE AND STABILIZED WITHIN 3 DAYS AS SOON AS CONSTRUCTION PERMITS. THE PROJECT WILL ADD 0 SF AREA OF IMPERVIOUS SURFACE.
- ALL IMPROVEMENTS WILL CONFORM WITH THE CITY OF CUMMING AND/OR FORSYTH COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS, LATEST EDITION.
- ALL UNDISTURBED BUFFERS SHALL BE IDENTIFIED WITH ORANGE, FOUR-FOOT TREE-SAVE FENCING PRIOR TO ANY LAND DISTURBANCE (UDC SEC. 18-10.1)
- OUTSIDE CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE HOURS OF 7:00 A.M. TO 7:00 P.M. MONDAY THROUGH FRIDAY, 8:00 A.M. TO 6:00 P.M. SATURDAY, AND NO OUTSIDE CONSTRUCTION ON SUNDAY (UDC 10-1.13).
- THE PROJECT SITE IS NOT WITHIN 200 FEET OF STATE WATERS.
- CONSTRUCTION WASTE MAY NOT BE BURNED OR BURIED AND MUST BE HAULED TO A STATE APPROVED LANDFILL.
- ALL UTILITY LINES SHALL BE INSTALLED UNDERGROUND.
- ALL DISTURBED AREAS SHALL BE RETURNED TO EXISTING GRADE AS SOON AS CONSTRUCTION PERMITS.

EROSION CONTROL NOTES:

- THE PROJECT RECEIVING WATERS IS HAW CREEK LAKE LANIER. ADJACENT AREAS CONSIST OF RESIDENTIAL AND WOODED AREAS.
- NO LAKE IS WITHIN 500' OF THIS PROJECT.
- THIS SITE DOES NOT CONTAIN WETLANDS.
- WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
- EROSION CONTROL, ANY BUFFER DELINEATIONS AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, AND/OR CONCURRENT WITH ALL 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 AND/OR TREAT THE SEDIMENT SOURCE.
- ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
- NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

24-HOUR CONTACT PERSON: MR. JON HEARD
DIRECTOR OF UTILITIES
(770) 781-2020
jon.heard@cityofcumming.net

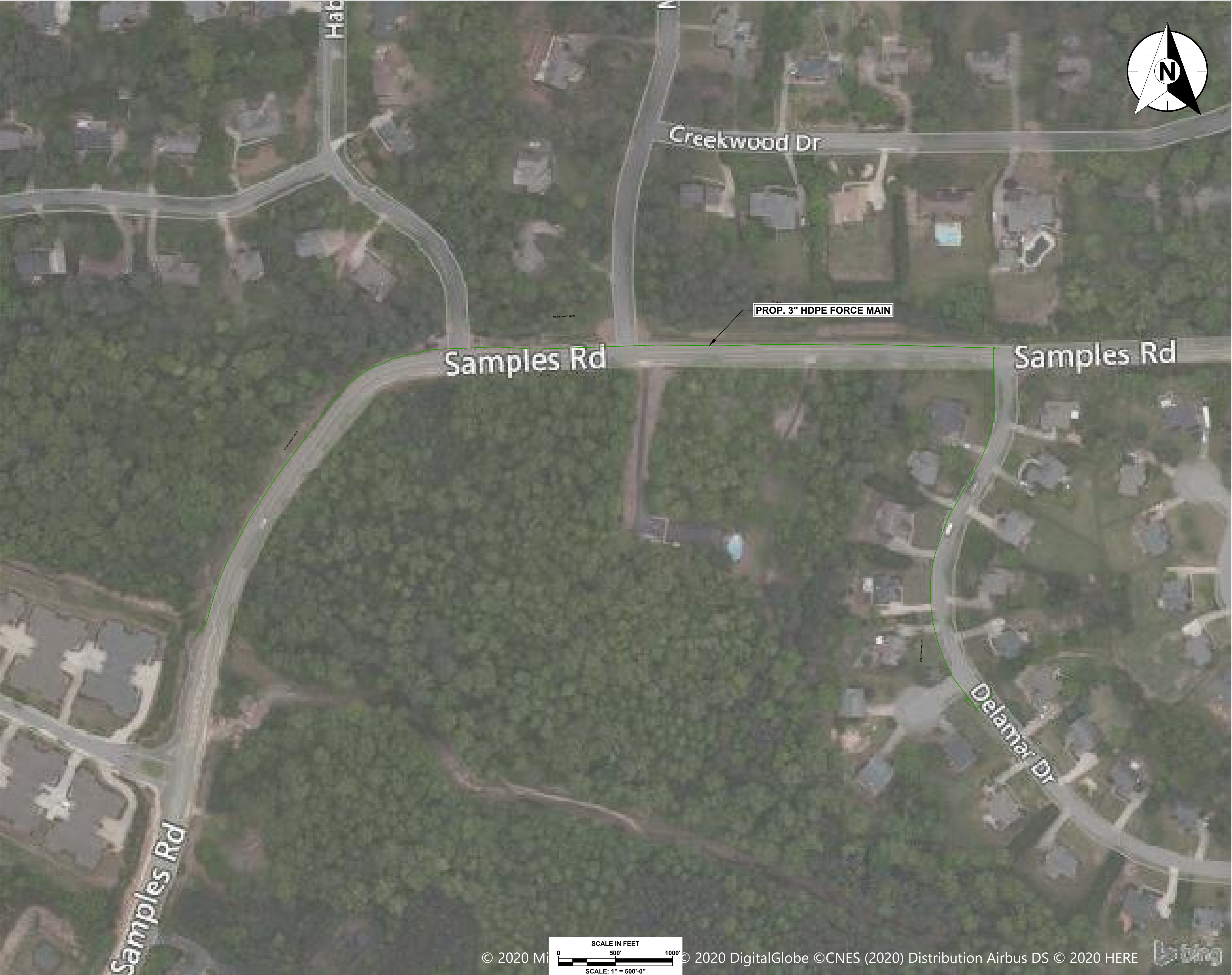
UTILITIES PROTECTION CENTER, INC.



Call FREE THROUGHOUT
GEORGIA 1-800-282-7411
IN ATLANTA: 325-5000

THREE WORKING DAYS BEFORE YOU DIG IT'S THE LAW

NOTIFY FORSYTH COUNTY INSPECTOR 24 HOURS BEFORE
BEGINNING PHASE OF CONSTRUCTION. (770) 781-2165



LEGEND OF SYMBOLS	
WATER VALVE	
WATER METER	
FIRE HYDRANT	
UTILITY POLE	
LIGHT POLE	
SINGLE WING CATCH BASIN (LEFT/RIGHT)	
DOUBLE WING CATCH BASIN	
JUNCTION BOX	
HEADWALL	
FLARED END SECTION	
SANITARY SEWER MANHOLE	
SIGN SINGLE	
BENCHMARK	
CONTROL POINT	
GUY-WIRE	

LINE LEGEND	
EXISTING (SCREENED)	
PROPOSED (DARKER AND/OR COLOR)	
PROPOSED WATER	
PROPOSED SANITARY SEWER	
PROPOSED STEEL CASING	
PROPOSED CONTOURS	
	1200

SURVEY LINE LEGEND	
EX. WATER LINE	
ABANDONED WATER LINE	
EX. SEWER LINE	
ABANDONED SEWER LINE	
EX. FORCE MAIN	
ABANDONED FORCE MAIN	
EX. OVERHEAD POWER LINE	
EX. UNDERGROUND POWER LINE	
EX. STORM DRAIN LINE	
EX. GUARD RAIL	
EX. GAS LINE	
EX. FIBER OPTIC CABLE	
EX. COMMUNICATION CABLE	
EX. UNDERGROUND TELEPHONE LINE	
EX. OVERHEAD TELEPHONE LINE	
CENTERLINE CREEK	
CENTERLINE ROAD	
EX. FENCE LINE	
EX. MAJOR CONTOUR	
EX. MINOR CONTOUR	
	1200

GENERAL PIPE LINE NOTES:

1. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATION & INSTRUCTIONS.

2. RESTRAINED FITTINGS SHALL HAVE FULL JOINT OF PIPE (NORMALLY 18 OR 20 FT.) ON EACH SIDE OF THE FITTING UNLESS STATED OTHERWISE ON THE DRAWING PLAN. WHERE ANOTHER FITTING IS LOCATED LESS THAN 20 FT. FROM THE FIRST FITTING, THE PIPE BETWEEN THE TWO SHALL BE A SINGLE PIECE OF PIPE.

3. FOR RESTRAINED JOINT PIPE INSTALLATION, JOINT PIPE ASSEMBLY EXTENSION "SLACK" MUST BE PERFORMED PER MANUFACTURE'S RECOMMENDATIONS AND INSTRUCTION.
4. CONTRACTOR SHALL COORDINATE ALL PIPE TIE-INS WITH THE ENGINEER AND THE CITY. CONTRACTOR SHALL PROVIDE A WRITTEN WORK PLAN AND SCHEDULE FOR APPROVAL PRIOR TO MAKING TIE-INS.

5. LOCATION OF HYDROSTATIC LEAK TESTS SHALL BE APPROVED BY THE ENGINEER. CONTRACTOR SHALL NOTIFY THE ENGINEER A WEEK IN ADVANCED PRIOR TO CONDUCTING THE HYDROSTATIC LEAK TEST.

UTILITY NOTES:

1. LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE, & SOME UTILITIES MAY EXIST THAT ARE NOT SHOWN. BEFORE BEGINNING BORING, CONTRACTOR SHALL FIELD LOCATE & POT HOLE ALL EXISTING UNDERGROUND UTILITIES TO DETERMINE THE EXACT LOCATIONS & ELEVATIONS, & CONFIRM THAT SPECIFIED ELEVATIONS OF CASINGS ARE NOT IN CONFLICT WITH EXISTING UNDERGROUND UTILITIES.

2. CARE SHALL BE TAKEN WHILE EXCAVATING AROUND ANY EXISTING UTILITIES. WATER AND GAS LINES MARKED ON THE PLAN AS ABANDONED AND TO BE REMOVED IF CONFLICTS WITH THE CONSTRUCTION OF THE PROPOSED WATER MAIN SHALL BE FIELD VERIFIED/CHECKED BY THE CONTRACTOR PRIOR TO COMMENCING WORK. NOTIFY THE ENGINEER FOR ANY DISCREPANCIES.

GENERAL NOTES:

1. INSTALL MARKER BALLS EVERY 200-FT, AT ALL FITTINGS & CASING ENDS.

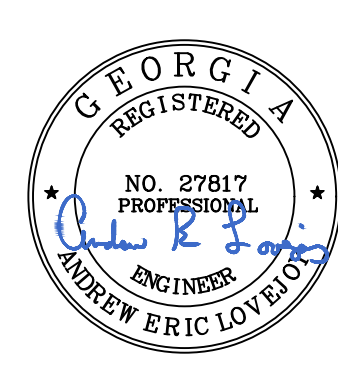
2. ALL PIPES SHALL BE INSTALLED W/ A MINIMUM COVER OF 4'-0" BELOW EXISTING GRADE OR AS SHOWN ON THE DRAWING.

© Copyright 2020
Civil Engineering Consultants, Inc.
THESE DRAWINGS AND THEIR REPRODUCTIONS ARE THE PROPERTY OF THE ENGINEER AND MAY NOT BE REPRODUCED, PUBLISHED OR USED IN ANY WAY WITHOUT THE WRITTEN PERMISSION OF THIS ENGINEER.



CEC
CIVIL ENGINEERING CONSULTANTS, INC.
Civil & Environmental Engineering

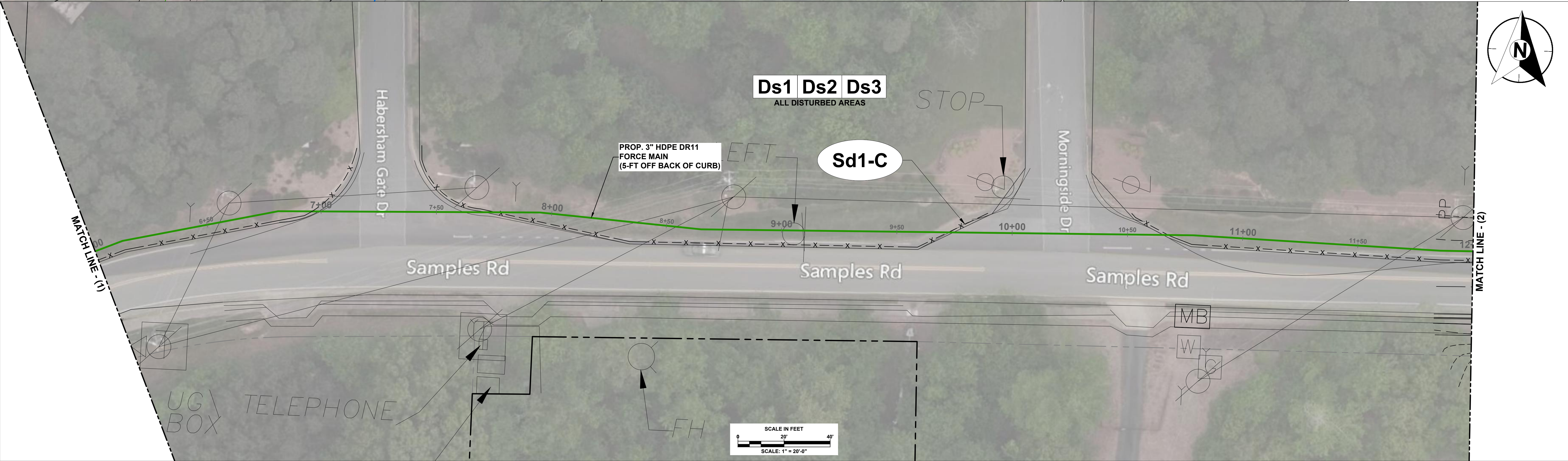
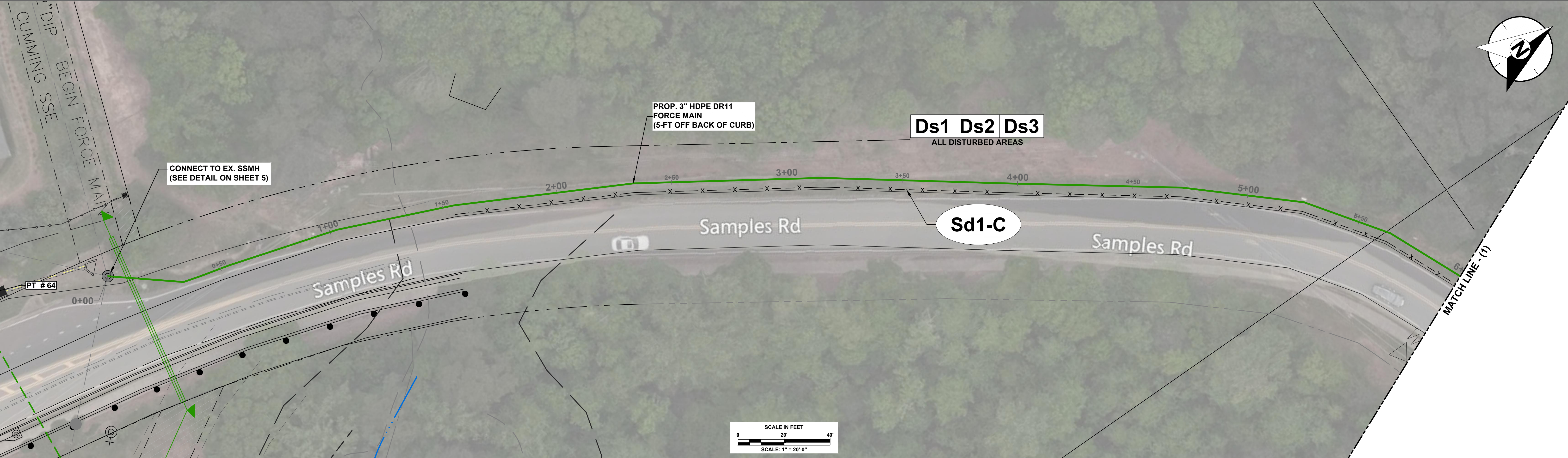
110 Samaritan Drive, Suite 201
Cumming, GA 30040
(770) 917-5747
www.ccecincga.com

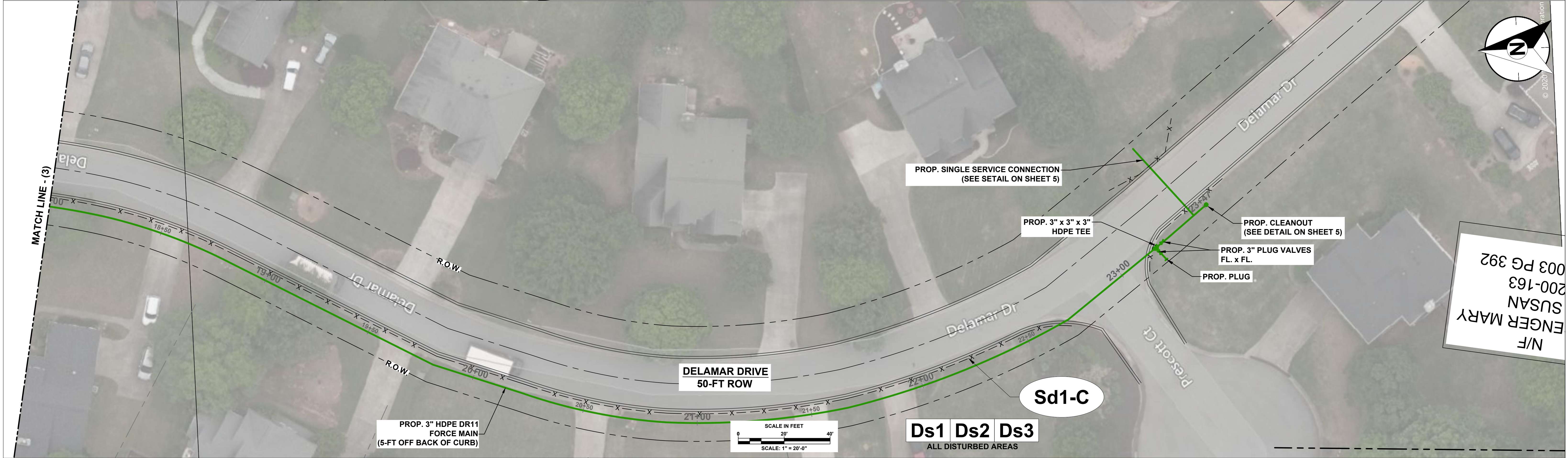
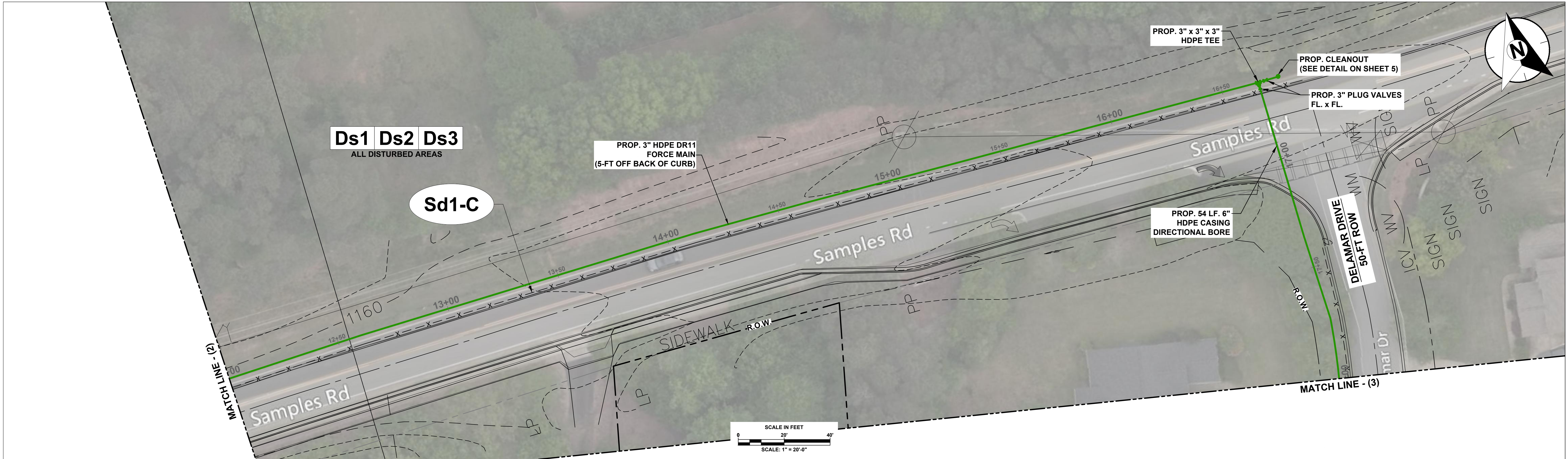


DESIGNED BY: AEL	DRAWN BY: JWN	CHECKED BY: AEL
DATE	REVISION	

ISSUE FOR CONSTRUCTION:03/13/2020

CITY OF CUMMING	
DELAMAR SEWER FORCE MAIN	
OVERALL SITE PLAN	
PROJECT INCEPTION DATE: 03/13/2020	SHEET 2 OF 8





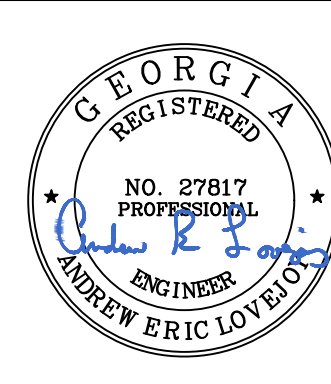
© Copyright 2020
Civil Engineering Consultants, Inc.
THESE DRAWINGS AND THEIR REPRODUCTIONS ARE THE PROPERTY OF
THE ENGINEER AND MAY NOT BE REPRODUCED, PUBLISHED OR USED IN
ANY WAY WITHOUT THE WRITTEN PERMISSION OF THIS ENGINEER.

Liang Wang
LIANG WANG, P.E.
GSWCC NO. 0000083427

NOTIFY FORSYTH COUNTY INSPECTOR 24 HOURS BEFORE
BEGINNING PHASE OF CONSTRUCTION. (770) 781-2165

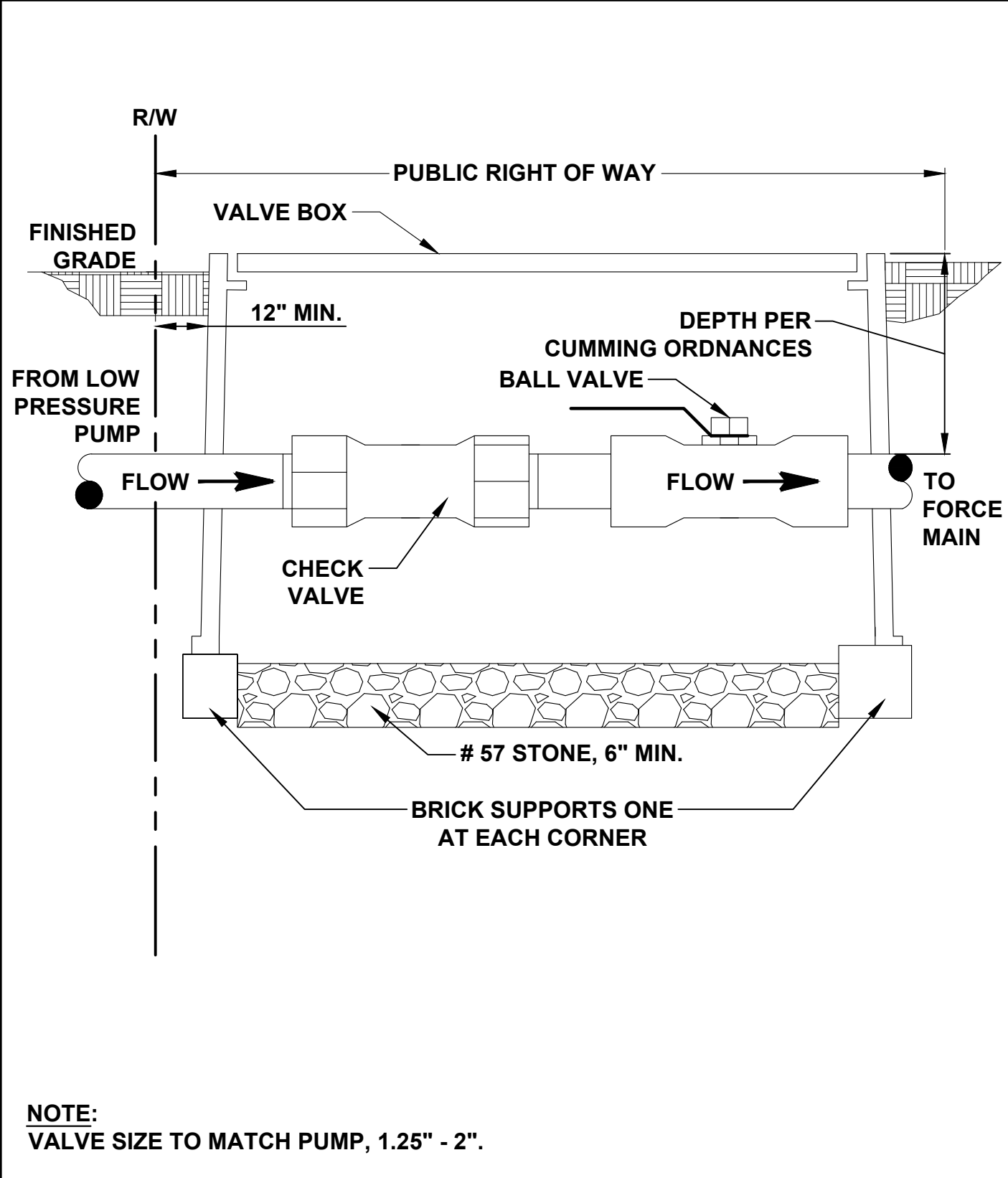


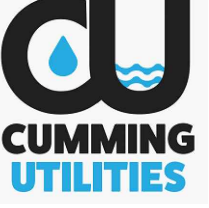
CEC
CIVIL ENGINEERING CONSULTANTS, INC.
Civil & Environmental Engineering
110 Samaritan Drive, Suite 201
Cumming, GA 30040
(770) 977-5747
www.cecincga.com



DESIGNED BY: AEL	DRAWN BY: JWN	CHECKED BY: AEL
DATE	REVISION	

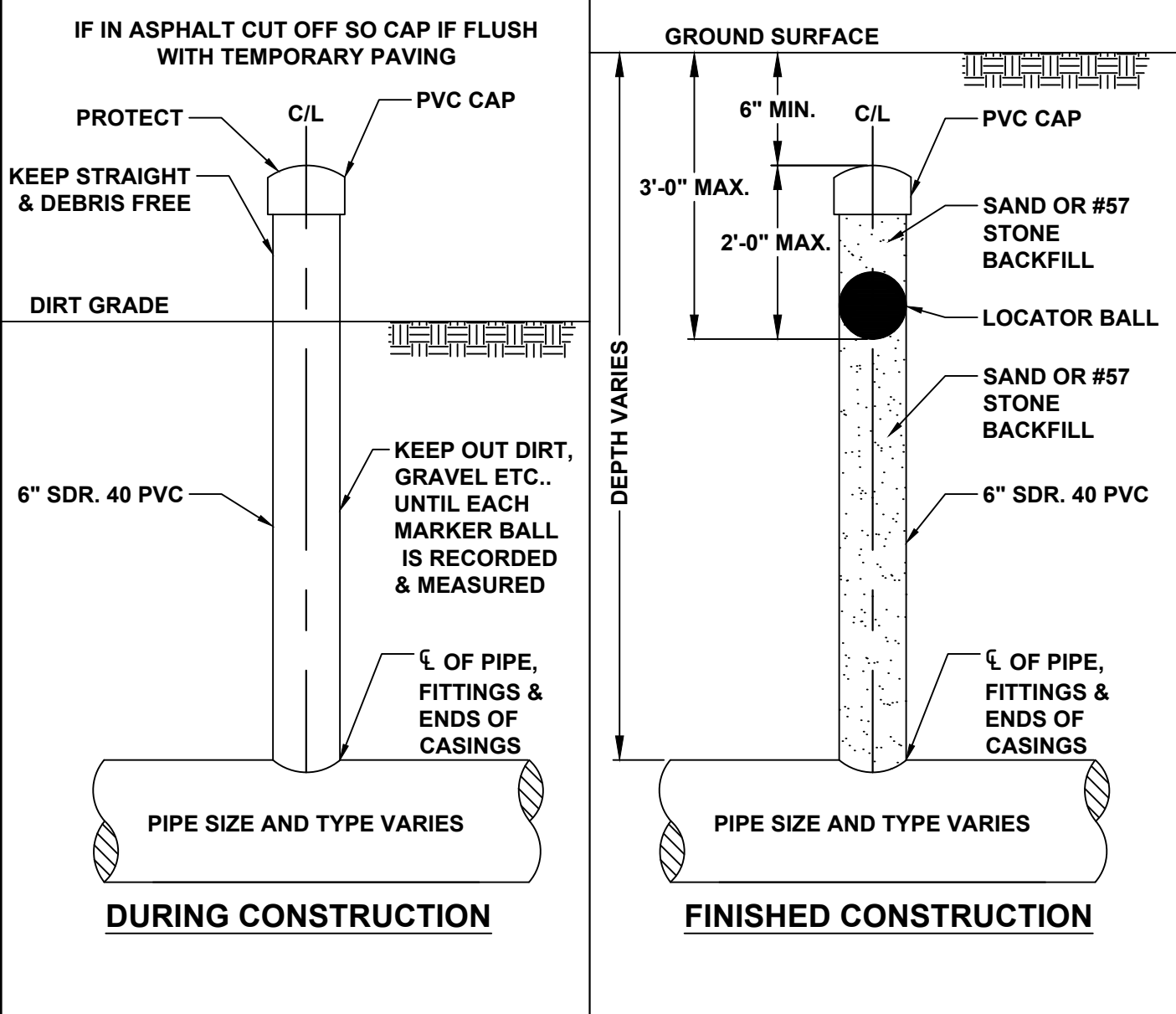
ISSUE FOR CONSTRUCTION: 03/13/2020	
CITY OF CUMMING	
DELAMAR SEWER FORCE MAIN	
PLAN VIEWS PART 2	
PROJECT INCEPTION DATE: 03/13/2020	SHEET 4 OF 8





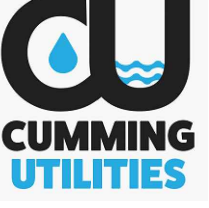
CITY OF CUMMING
DEPARTMENT OF UTILITIES
LOW PRESSURE CONNECTION

DETAIL NUMBER:
S-24
SCALE: NOT TO SCALE



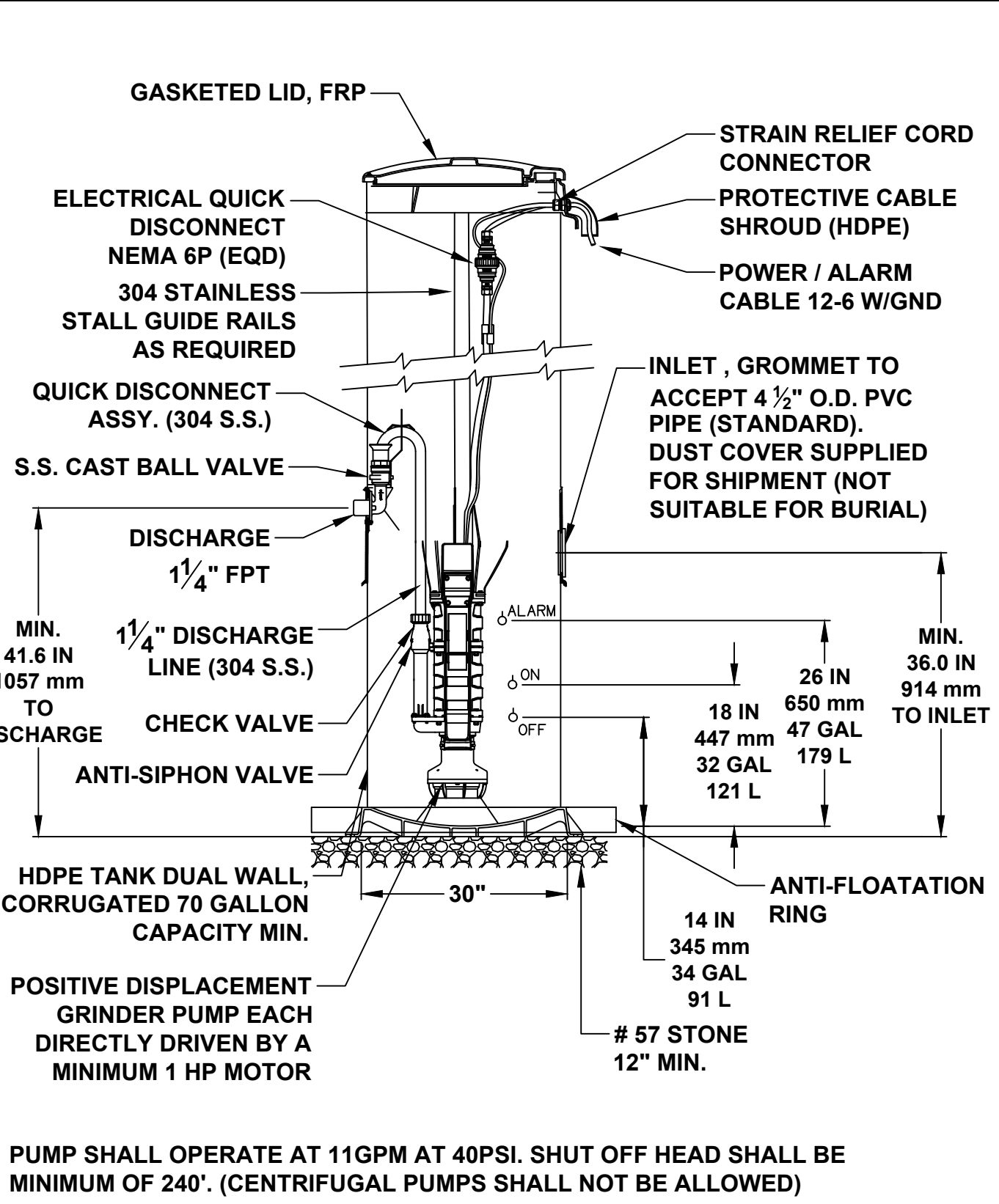
MARKER BALL REFERENCE		
TAG NO.	DESCRIPTION	DEPTH
XXX-XXX-XXX	SIZE, MATERIAL, FITTING	DEPTH OF MARKER BALL TO TOP OF PIPE


NOTES:
1. LOCATOR BALL TO BE CONSTRUCTED AT BENDS, AND AT 200-FOOT INTERVAL ON STRAIGHT PIPE.
2. MARKER BALLS SHALL BE 3M DYNATEL SERIES EMS ID BALL MARKERS MODEL NUMBER 1424-XR/ID FOR SEWER.
LOCATOR SHALL BE 3M DYNATEL 2250M-ID-UU-3W-RT.



CITY OF CUMMING
DEPARTMENT OF UTILITIES
MARKER BALL DETAIL

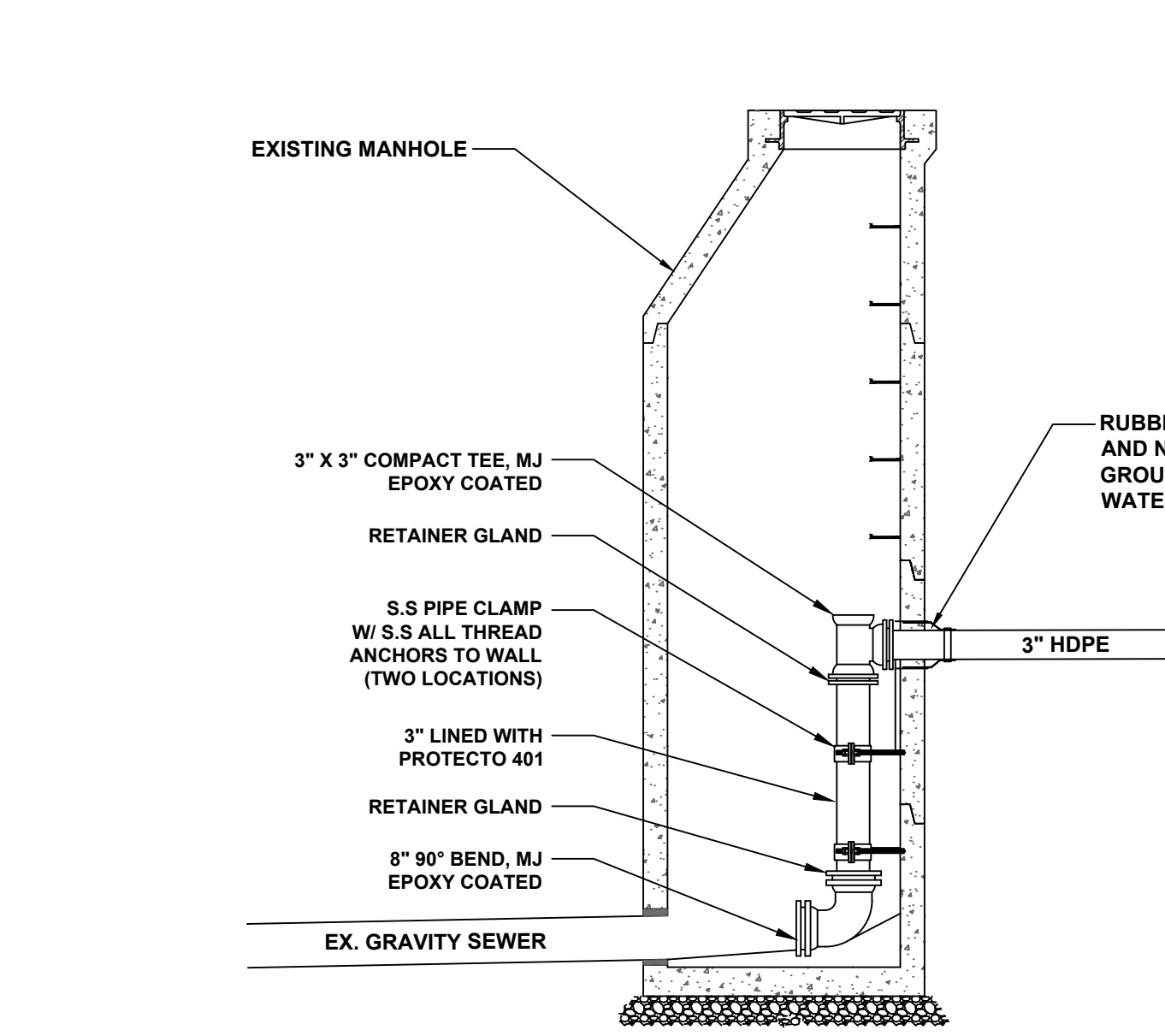
DETAIL NUMBER:
S-27
SCALE: NOT TO SCALE



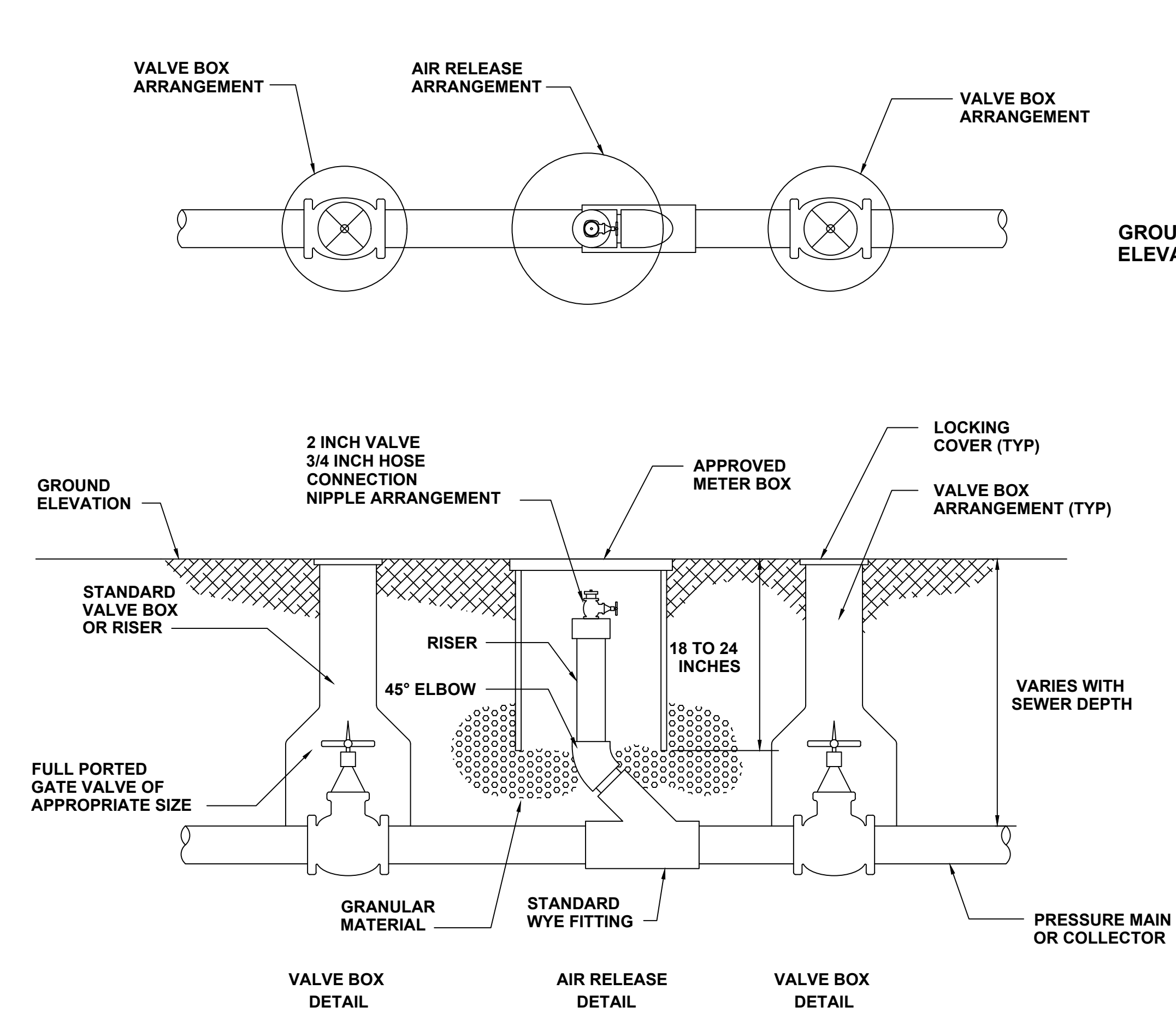


CITY OF CUMMING
DEPARTMENT OF UTILITIES
**GRINDER PUMP
SIMPLEX OPERATION**

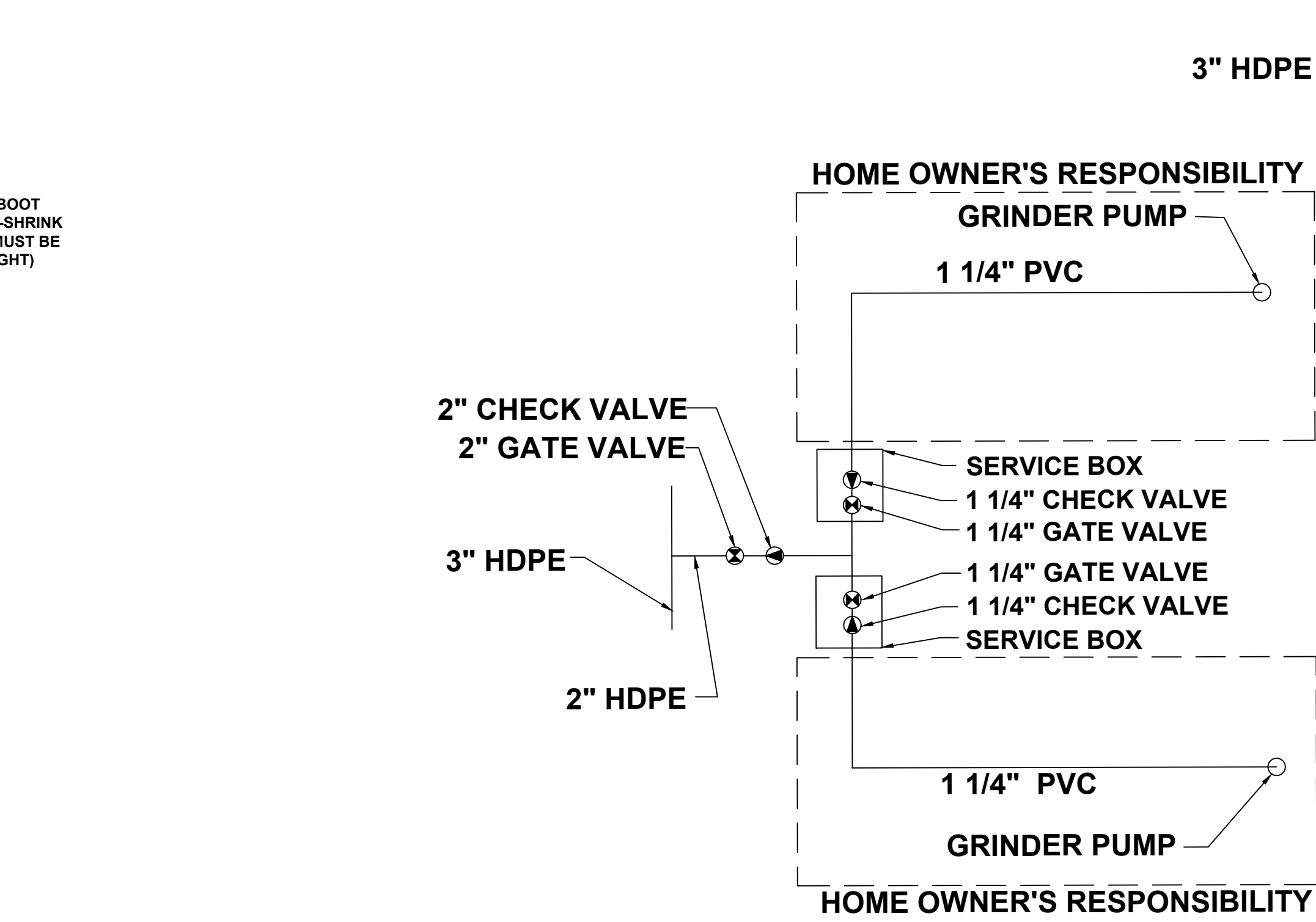
DETAIL NUMBER:
S-25
SCALE: NOT TO SCALE



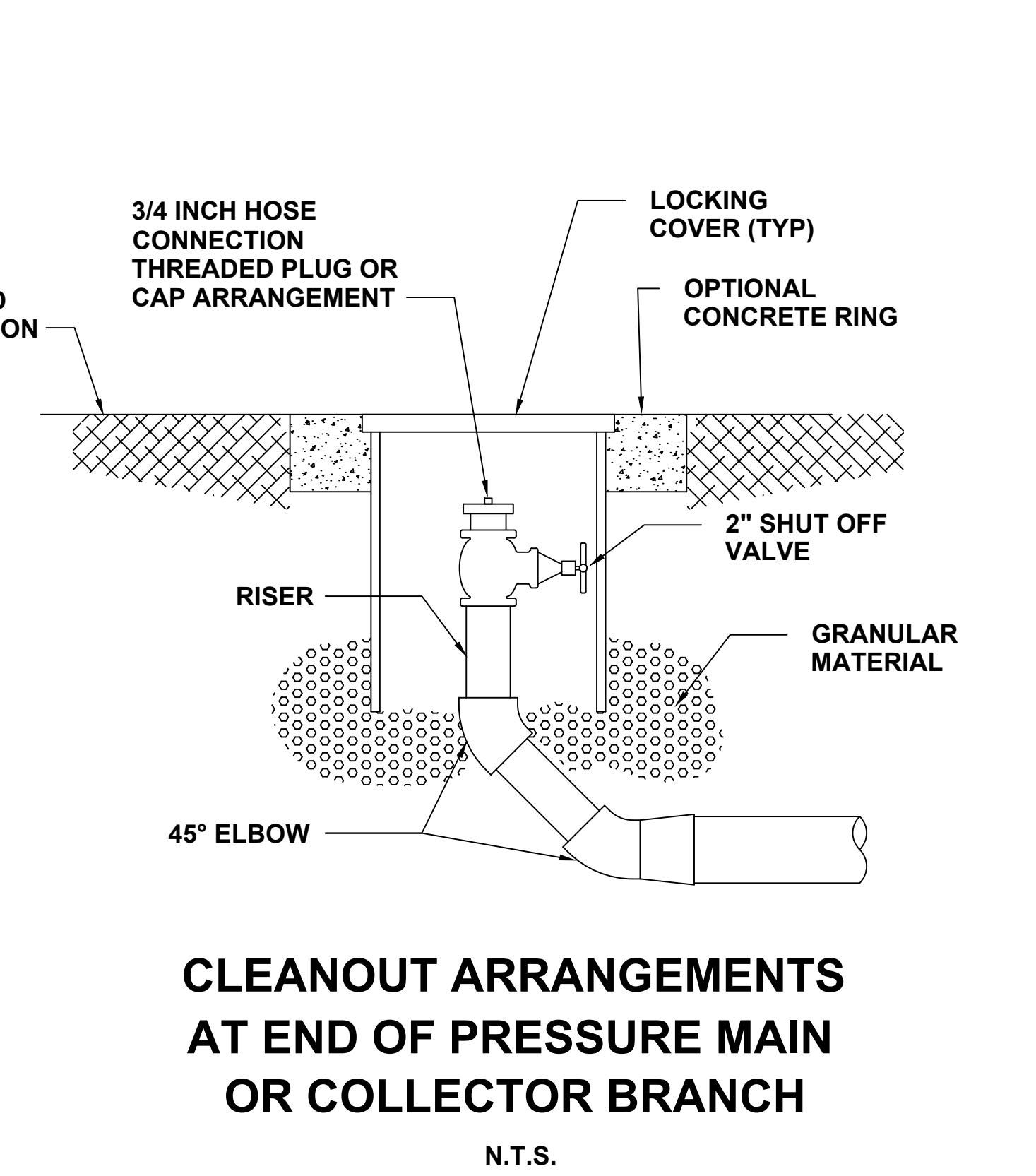
**MANHOLE CONNECTION
DETAIL**
N.T.S.



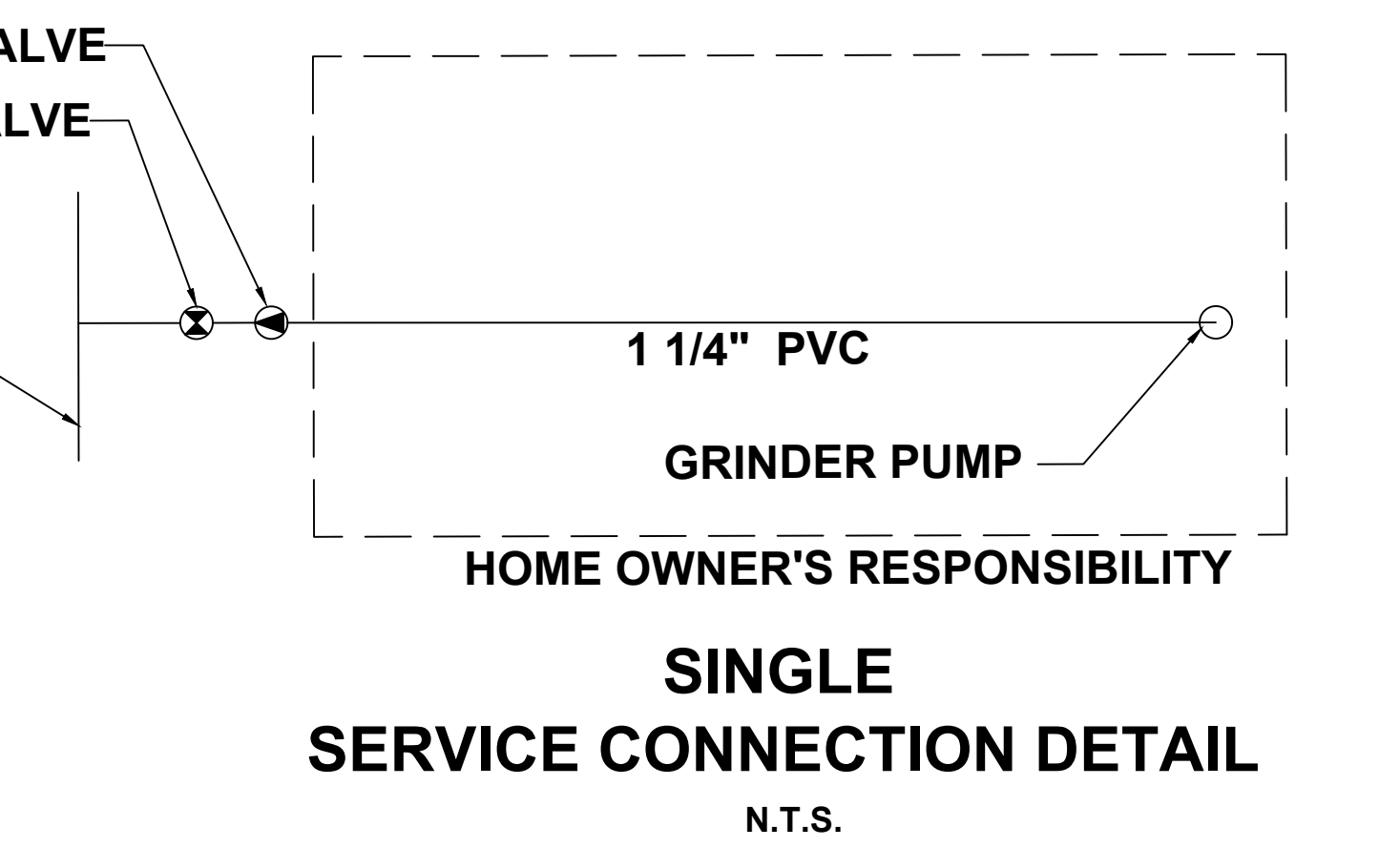
**AIR RELEASE ARRANGEMENT
MANUAL AIR RELEASE**
N.T.S.



**DOUBLE SERVICE
CONNECTION DETAIL**



**CLEANOUT ARRANGEMENTS
AT END OF PRESSURE MAIN
OR COLLECTOR BRANCH**
N.T.S.



**SINGLE
SERVICE CONNECTION DETAIL**
N.T.S.

THE LOCATIONS OF ALL UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE. THEREFORE, CIVIL ENGINEERING CONSULTANTS, INC. DOES NOT GUARANTEE THAT CONDITIONS AS SHOWN ARE EXACT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, OR HIS AGENT, TO DETERMINE THE EXACT LOCATIONS OF EXISTING UTILITIES BY NOTIFICATION OF THE OWNERS OF THE SAME BEFORE BEGINNING WORK.

1. EROSION CONTROL PRACTICES MUST COMPLY WITH THE MINIMUM BEST MANAGEMENT PRACTICES FOR EROSION CONTROL. AND SHALL COMPLY WITH THE STANDARDS/SPECIFICATIONS IN THE *MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA*.

- IN CONCENTRATED FLOW AREAS, ALL SLOPES STEEPER THAN 2.5:1 AND WITH A HEIGHT TEN FEET OR GREATER, AND CUTS AND FILLS WITHIN STREAM BUFFERS, SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKET.
3. MULCH TEMPORARY VEGETATION ON ALL EXPOSED AREAS WITHIN 7 DAYS AFTER DISTURBANCE
4. DISTURBED AREAS LEFT IDLE FOR 5 DAYS, AND NOT TO FINAL GRADE, WILL BE ESTABLISHED TO TEMPORARY VEGETATION (Ds2). ALL AREAS TO FINAL GRADE WILL BE ESTABLISHED TO PERMANENT VEGETATION (Ds3) IMMEDIATELY UPON COMPLETION.
5. WHEN PLANTING VEGETATION, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREA WITHIN 24 HOURS OF SEEDING.
6. FORSYTH COUNTY LAND DISTURBANCE PERMIT MUST BE DISPLAYED ON SITE AT ALL TIMES DURING CONSTRUCTION AND IN PLAIN VIEW FROM A COUNTY ROAD OR STREET.
7. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE. PLEASE CALL (770) 528-2134 WITH ENOUGH LEAD-TIME FOR AN INSPECTION TO MEET SCHEDULE.
8. SEDIMENT/EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.
9. THE USE OF POLYMERS (PAMS) IS ACCEPTED AS A BMP AS RECOMMENDED BY THE STATE SOIL & WATER CONSERVATION COMMISSION BMP "GREEN BOOK". THE POLYMERS USED TO STABILIZE CONSTRUCTION SITES MUST BE USED IN CONJUNCTION WITH MULCHING AND/OR HYDRO SEEDING.
10. IF STREAMS ARE ON THE SITE, THE STREAM BUFFERS SHALL BE LEFT UNDISTURBED AND A CONSERVATION EASEMENT OR A RESTRICTIVE COVENANT BE PLACED ON THAT PROPERTY.
11. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.
12. 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.
13. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
14. AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY A DESIGN PROFESSIONAL.
15. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION.

1) EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE QUALIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT: (a) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT (b) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING AND (c) MEASURE RAINFALL ONCE EACH TWENTY-FOUR HOUR PERIOD AT THE SITE. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

- 2) MEASURE RAINFALL ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY UNTIL A NOTICE OF TERMINATION IS SUBMITTED. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SIRE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.

- 3) QUALIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER THE FOLLOWING: (a) EROSION AND SEDIMENT CONTROL MEASURES (b) STABILIZATION OF EXPOSED SOILS (c) STRUCTURAL CONTROL MEASURES (d) PRECIPITATION THAT MAY BE CAUSING EROSION (e) MATERIALS THAT ARE EXPOSED TO PRECIPITATION (f) MATERIALS THAT ARE EXPOSED TO WIND (g) MATERIALS THAT ARE EXPOSED TO WIND AND PRECIPITATION (h) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT UNDERGONE FINAL STABILIZATION AND (i) STRUCTURAL CONTROL MEASURES, EROSION AND SEDIMENT CONTROL MEASURES THAT ARE IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THE OPERATIONS ARE BEING CONDUCTED AS PLANNED. THE LOCATION OF THE INSPECTIONS SHALL BE DETERMINED BY THE PERMITTEE AND THE INSPECTIONS SHALL BE CONDUCTED AT THE LOCATION OF THE INSPECTIONS. THE PERMITTEE SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS (S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION, THE PERMITTEE SHALL CONDUCT INSPECTIONS OF THE WATERSHED D.V.3.A.(3). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

- 4) QUALIFIED PERSONNEL (PRUNED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (E. UNTIL A NOTICE OF TERMINATION IS RECEIVED BY EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).

- 5) BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.

- 6) A REPORT SUMMARIZING THE SCOPE OF EACH INSPECTION AND THE NAME(S) OF PERSONNEL MAKING EACH INSPECTION THE DATE(S) OF EACH INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV D.3.A.(4) OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE DATED AS OF THE DATE OF THE INSPECTION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE, WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE, THE REPORT SHALL CONTAIN A CERTIFICATION THAT THE FOLLOWING IS TRUE: "I, THE DESIGNATED PERSONNEL, HAVE REVIEWED THE COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AND THIS PERMIT. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G. OF THIS PERMIT."

ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED A MINIMUM OF ONCE PER WEEK OR MORE OFTEN IF NECESSARY AND TRASH WILL BE HAULED AS REQUIRED BY LOCAL REGULATIONS. NO CONSTRUCTION WASTE WILL BE BURIED ON SITE.

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL, STATE AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. THE JOB SITE SUPERINTENDENT, WHO WILL ALSO BE RESPONSIBLE FOR SEEING THAT THE WASTE IS PROPERLY HANDLED, MUST HAVE ACCESS TO THE FOLLOWING PRACTICES, MATERIAL SAFETY DATA SHEETS (MSDS'S) FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE ACTIVITIES. THE MSDS'S FOR EACH PRODUCT TO BE USED ON THE JOB SITE MUST BE STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN THE EPCSP FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYER WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF THE MSDS'S AND THE PROPER HANDLING PROCEDURES FOR EACH PRODUCT. FOR THE PRODUCT OR PRODUCTS HE/SHE IS USING, PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.

A MINIMUM OF ONE PORTABLE SANITARY UNIT WILL BE PROVIDED FOR EVERY TEN (10) WORKERS ON THE SITE. ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILITY PROVIDER IN COMPLETE COMPLIANCE WITH LOCAL AND STATE REGULATIONS.

LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.

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, PROTECTIVE CLOTHING, GLOVES, MASKS, SHOVELS, PICKUPS, LITTER, SAND, SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.

SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.

ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS.

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. FOR SPILLS THAT DO NOT IMPACT SURFACE WATER, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.

FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

A STABILIZED CONSTRUCTION EXIT HAS BEEN PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENT. THE PAVED STREET ADJACENT TO THE SITE EXIT WILL BE INSPECTED DAILY FOR TRACKING OF MUD, DIRT OR ROCK.

IN ORDER TO CONTROL POLLUTANTS IN STORM WATER THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED THE FOLLOWING MEASURES SHALL BE INSTALLED:

PERMANENT GRASSING IN ALL DISTURBED AREAS SHALL BE ACCEPTABLE AS DETERMINED BY THE ENGINEER AND DEFINED AS COVERING 98% OF THE AREA TO BE GRASSED WITH NO BARE AREAS GREATER THAN ONE SQUARE FOOT AND THE ENTIRE AREA FULLY STABILIZED AGAINST EROSION.

1. CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL (E&SP) PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA", PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES IS EXPECTED TO MEET THE DESIGN REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NOS. GAR 1000001, GAR 1000002 AND GAR 1000003.

2. I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.
3. I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.
4. THE PROPOSED EROSION AND RUNOFF CONTROL MEASURES ARE IN COMPLIANCE WITH THE FORTHY COUNTY SEDIMENT CONTROL AND FLOOD PROTECTION REGULATIONS AND WILL NOT INCREASE THE RUNOFF RATE FROM THE SITE FOR RAINSTORMS WITH A RETURN PERIOD OF 2, 5, 10, 25, 50 AND/OR 100 YEARS.

- EACH PRIMARY PERMITEE SHALL RETAIN A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AT THE CONSTRUCTION SITE OR THE PLAN SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM THE DATE OF PROJECT INITIATION TO THE DATE OF FINAL STABILIZATION. PRIMARY PERMITEES SHOULD POST COPIES OF THE NOI, EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN, SAMPLING RESULTS, INSPECTION REPORTS, ETC. ON OR IN A PERMIT BOARD AT THE BEGINNING OF EACH PHASE TO FACILITATE INSPECTIONS BY EPD.

- COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, REPORTS, PLANS, MONITORING REPORTS, MONITORING INFORMATION, INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT AND ALL OTHER REQUIRED RECORDS SHALL BE RETAINED FOR THE PERIOD OF ONE YEAR AFTER THE PERMITTEE'S OBLIGATION TO COMPLY WITH THE REQUIREMENTS OF THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY THE REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORM WATER DRAINING INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAMINANT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REQUIREMENTS.

PAINTS/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

CONCRETE TRUCK WASHING - PROVIDE WASHDOWN CONTAINMENT FOR THE WASH-DOWN WATER FROM CONCRETE MIXER CHUTES, HOPPERS, AND OTHER TOOLS AND EQUIPMENT. PREVENT ANY WATER THAT CONTACTS UNCURED OR PARTLY CURED CONCRETE DURING ACTIVITIES LIKE EXPOSED AGGREGATE WASH-OFF, WET CURING, OR EQUIPMENT WASHING FROM DIRECTLY OR INDIRECTLY ENTERING ANY WATERCOURSE OR STORMWATER SYSTEM.

FERTILIZER/HERBICIDES - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.

BUILDING MATERIALS - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

STORM WATER SAMPLES SHALL BE TAKEN FOR THE FOLLOWING STORM EVENTS:

(a) FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM, THE FIRM SHALL SUBMIT A MONITORING PLAN THAT DESCRIBES THE MONITORING PROGRAM TO BE CONDUCTED DURING NORMAL BUSINESS HOURS (MONDAY THROUGH FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM) WHEN CONSTRUCTION ACTIVITY IS BEING CONDUCTED BY THE FIRM (THE PRIMARY PERMITTEE) THAT OCCURS AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION;

(d) IN ADDITION TO (a) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING DURING NORMAL BUSINESS HOURS (MONDAY THROUGH FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM WHEN CONSTRUCTION ACTIVITY IS BEING CONDUCTED BY THE PRIMARY PERMITTEE) THAT OCCURS EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION, WHICHEVER COMES FIRST;

(c) AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (a) AND (b) ABOVE, IF BMPs ARE FOUND TO BE PROPERLY DESIGNED, INSTALLED AND MAINTAINED, NO FURTHER ACTION IS REQUIRED. IF BMPs IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN 2 BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS (MONDAY THROUGH FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM WHEN CONSTRUCTION ACTIVITY IS BEING CONDUCTED BY THE PRIMARY PERMITTEE) UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPs ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED.

STORM WATER SAMPLES ARE TO BE ANALYZED IN ACCORDANCE WITH THE METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 AND THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-8-92-001."

STORM WATER IS TO BE SAMPLED FOR NEPHELOMETRIC TURBIDITY UNITS (NTU) AT THE OUTFALL LOCATION. A DISCHARGE OF STORM WATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH CONDITION RESULTS IN THE TURBIDITY OF THE DISCHARGE EXCEEDING 75, THE TURBIDITY THAT WAS SPECIFIED IN THE SUPPLEMENTAL SPECIFICATIONS TO THE STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAY, 2002, THAT IS BASED UPON THE DISTURBED ACREAGE OF 2.0 ACRES FOR THE PROJECT SITE. THE SURFACE WATER DRAINAGE AREA OF 0.3 SQUARE MILES, AND RECEIVING WATER WHICH SUPPORTS WARM WATER FISHERIES.

PROJECT INCEPTION DATE: 03/13/2020

SHEET
6 OF 8

SPECIFICATIONS

Grading and Shaping

A. Grading and shaping is not normally required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishments.

B. 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.

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

Seedbed Preparation

A. Seedbed preparation is not required where hydraulic seeding and fertilizing equipment is to be used.

B. When conventional seeding is to be used, seedbed preparation will be done as follows:

1. Broadcast plantings.
 - a. Tillage at a minimum, shall adequately 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.
 - b. Tillage may be done with any suitable equipment.
 - c. Tillage may be done on the contour where feasible.
 - d. On slopes too steep for the safe operation of tillage equipment, the soil surface will be pitted or trenched across the slope with appropriate hand tools to provide places 6 to 8 inches apart in which seed may lodge and germinate.

2. Individual plants.

- a. Where individual plants are to be set, the soil will be well prepared by excavating holes, opening furrows, or dibble planting.
- b. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
- c. Where pine seedlings are to be planted, subsoil under the row 36 inches deep on the con tour 4 to 6 months prior to planting. Subsoiling should be done when the soil is dry, preferably in August or September.

Lime and Fertilizer - Rates and Analysis

A. Where permanent vegetation is to be established, agricultural lime shall be applied as indicated by soil test or at the rate of 2 tons per acre. Agricultural lime shall be within the specifications of the Georgia Department of Agriculture.

Lime spread by conventional equipment will 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.

Agricultural lime spread by hydraulic seeding equipment will be "finely ground limestone." Finely ground limestone is calcitic or dolomitic limestone ground so that 98 percent of the material will pass through a 20-mesh sieve and not less than 70 percent 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.

B. No agricultural lime is required where only temporary seeding is to be done or where only trees are planted.

C. Initial fertilization requirements for each species or combination of species are listed in the adjacent Fertilization Table.

Lime Fertilizer - Application

A. When hydraulic seeding equipment is used:

1. The initial fertilizer will be mixed with seed, inoculant (if needed) and wood cellulose or wood pulp fiber mulch and applied in a slurry. 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 hydroseeder.
2. Finely ground limestone will be mixed with water and applied immediately after mulching is completed or in combination with the top dressing.

B. When conventional planting is to be done, lime and fertilizer will 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; or
2. Mix with the soil used to fill the holes, distribute in furrows, or
3. Broadcast after steep surfaces are scarified, pitted or trenched.
4. A fertilizer pellet will be placed at root depth beside each pine tree seedling.

Plant Selection

A. Refer to the adjacent Tables for approved species.

B. Species not listed shall be approved by the State Resource Conservationist of the Natural Resources Conservation Service before they are used.

C. 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.

D. Plant selections may include companion crops to provide quick cover. Care shall be taken in selecting companion crop species and seeding rates to limit competition so that the desired permanent vegetation may become established as soon as possible.

E. The term "pure live seed" is used to express the: quality of seed, even if it is not shown on the label. Pure live seed, PLS, is expressed as a percentage of the seeds that are pure and will germinate. PLS is determined by multiplying the percent of pure seed times the percent germination; i.e., PLS = % germination x % purity.

Inoculants

A. All legume seed shall be inoculated with appropriate nitrogen-fixing bacteria.

B. The inoculant shall be a pure culture prepared specifically for the seed species and used within the dates on the container.

C. A mixing medium recommended by the manufacturer shall be used to bond the inoculant to the seed.

D. For conventional seeding, two times the amount of inoculant recommended by the manufacturer shall be used.

E. For hydraulic seeding, four times the amount of inoculant recommended by the manufacturer shall be used.

F. 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

A. Hydraulic seeding - Mix the seed, inoculant, 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.

B. Conventional seeding - Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a cutpacker-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 a cutpacker or other suitable equipment.

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

D. Individual plants - Shrubs, vines and sprigs may be planted with appropriate planters or hand tools. Pine trees will be planted manually in the subsoil furrow. Each plant will 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, place fertilizer in the bottom of the hole, add two inches of soil and set the plant.

Ds3 DISTURBED AREA STABILIZATION (W/ PERM. SEEDING)

Mulching

Use mulch on all slopes steeper than 3 percent; when seedlings are made so late in the fall and winter that germination cannot be expected until spring; in the bottom of spillways; and on roadbanks.

Temporary vegetation seeded alone may be established on good sites without the use of mulch.

Mulching material will consist of:

A. Use dry straw or dry hay of good quality and free of weed seeds. Dry straw will be applied at the rate of 2 tones per acre. Dry hay will be used at a rate of 2 1/2 tons per acre; or,

B. For hydraulic seeding, use wood cellulose mulch or wood pulp fiber at the rate of 500 pounds per acre and dry straw or dry hay at the rate listed in A, above; or,

C. For hydraulic seeding on slopes 3/4:1 or steeper, 1,000 pounds of wood cellulose or wood pulp fiber which includes a tackifier may be substituted for the treatment in B, above; or,

D. Use three tons per acre of Sericea lespedeza hay containing mature seed; or,

E. Apply pine straw or pine bark at a thickness of 3 inches. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted; or,

F. Soil retention blankets, erosion control netting, other manufactured materials, or block sod may be required in addition to mulch on unstable soils and concentrated flow areas.

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

Applying Mulch

A. 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. About 75 percent of the soil surface will be covered.

B. Wood cellulose or wood fiber mulch will be applied with hydraulic seeding equipment.

Anchoring Mulch

A. Anchor straw or hay mulch immediately after application by one of the following methods:

1. By emulsified asphalt, (a) sprayed uniformly onto the mulch as it is ejected from the blower onto the mulch as it is ejected from the blower machine, or (b) sprayed on the mulch immediately following mulch application when straw or hay is spread by methods other than special blower equipment.

The combination of asphalt emulsion and water shall consist of a homogeneous mixture satisfactory for spraying. The mixture shall consist of 100 gallons of grade SS-1h or CSS-1h emulsified asphalt and 100 gallons of water per ton of mulch.

Care shall be taken at all times to protect the public, adjacent property, pavements, curbs, sidewalks, and all other structures from asphalt discoloration.

2. Press the mulch 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 dul enough to press the mulch into the ground without cutting it, leaving much of it in an erect position.

3. Apply synthetic tackifiers or binders applied immediately after the mulch is spread. Synthetic tackifiers will be mixed and applied according to manufacturer's specifications.

4. Fall and winter plantings may include 1/2 bushel of rye or wheat to stabilize the mulch.

5. Plastic mesh or netting with no larger than one inch by one inch mesh may be needed to anchor straw or hay mulch on unstable soils and concentrated flow areas.

B. Where wood cellulose or wood pulp fiber mulch is applied alone, a tackifier will be used.

Irrigation

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

Topdressing

Topdressing will be applied on all temporary grass species and permanent grasses planted alone or in mixtures with other species. Recommended rates of application are listed in Table 6-25.1, p. 6-144.

Second Year and Maintenance Fertilization

Second year fertilizer rates and maintenance fertilizer rates are listed in the adjacent Fertilization Table.

Lime and Maintenance Application

Apply two tons of agricultural lime every 4 to 6 years or as indicated by soil tests.

Use and Management

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 livestock until the plants are well established.

Ds1 DISTURBED AREA STABILIZATION (MULCHING ONLY)

Disturbed Area Stabilization (With Temporary Seeding)

SPECIFICATIONS

A. Grading and Shaping

1. Excessive water run-off must be controlled by planned and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment basins and others.

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

B. Seedbed Preparation

1. When a hydraulic seeder is used, seedbed preparation is not required.

2. When using conventional or hand-seeding, seedbed preparation is not required if the soil material is loose and not sealed by rainfall.

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

C. Lime and Fertilizer: Lime Rate 2 tons/acre

1. Agricultural lime is not required.

2. On reasonably fertile soils or soil material, fertilizer is not required.

3. On soils of very low fertility, use 500 to 700 pounds of 10-10-10 fertilizer or the equivalent per acre (12-16 lbs./1,000 sq. ft.). If the site will permit, apply before land preparation and disk, rip or chisel to incorporate.

D. Seeding

1. Select a grass or grass-legume mixture suitable to the area and season of the year (see Table above).

2. Apply seed uniformly by hand, cyclone seeder, drill, cutpacker-seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cutpacker seeders should normally place seed one-half to one inch deep.

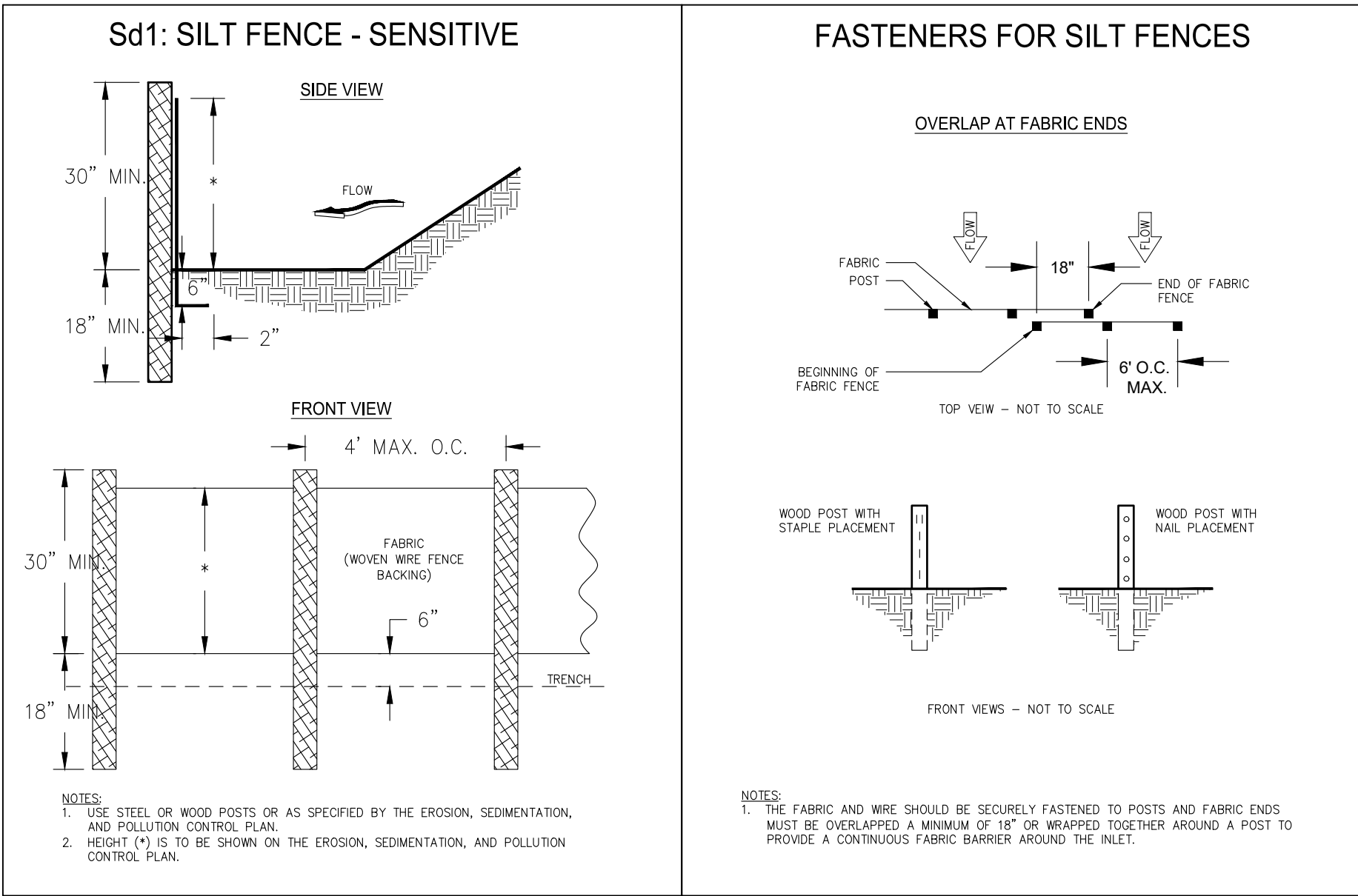
E. Mulching

Temporary vegetation can, in most cases, be established without the use of mulch. Mulch without seeding should be considered for short term protection. See Ds1 - Disturbed Area Stabilization, (With Mulching Only).

F. Irrigation

If water is applied, it must be at a rate not causing runoff and erosion. Thoroughly wet the soil to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

Ds2 DISTURBED AREA STABILIZATION (W/ TEMP. SEEDING)



CONSTRUCTION SPECIFICATIONS

Provide a riprap splash pad or other outlet protection device for any point such as natural depressions or swales where flow may top the sediment fence. Ensure that the maximum height of the fence at a protected, reinforced outlet does not exceed 1 ft. and that support post spacing does not exceed 4 ft.

Hay or Straw Bales (if approved by local issuing authority)

Bales will be placed in a single row, lengthwise, on the contour and embedded in the soil to a depth of 4 inches. Bales must be securely anchored in place by stakes or bars driven through the bales or by other acceptable means to prevent displacement. (See Straw Bale Figures).

Silt Fence

A silt fence is specifically designed to allow water to pass through while retaining sediment on site.

Silt Fence Specifications

Two widths of silt fence are available, Type A or C (36\"/>

All silt fence must meet the minimum standards set forth in Section 171 - Temporary Silt Fence, of the Department of Transportation, State of Georgia, Standard Specification, current edition. See Table 6-13.5 for current Georgia DOT silt fence specifications.

Silt Fence Installation

The contractor shall install the temporary silt fence according to this specification, as shown on the plans or as directed by the engineer. For installation of Type A or C and B fabric, see Figures 6-13.3 and 6-13.4 respectively.

Post installation shall start at the center of the low point (if applicable) with remaining posts spaced 6 feet apart. For post size requirements of type A or C and B fabric, see Table 6-13.3. Fasteners for wood posts are listed in Table 6-13.4.

Silt Fence Maintenance and Removal

The contractor shall maintain the silt fence until the project is vegetated or accepted. Filter fabric shall be replaced whenever it has deteriorated to such an extent that it reduces the effectiveness of the fabric.

Maintenance - Construction Exit

The exit shall be maintained in a condition which 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 cleanup of any structures used to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles or site onto roadways or into storm drains must be removed immediately.

GEORGIA
UNIFORM CODING SYSTEM
FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES
GEORGIA SOIL AND WATER CONSERVATION COMMISSION

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			A CRUSHED STONE PAD LOCATED AT THE CONSTRUCTION SITE EXIT TO PROVIDE A PLACE FOR REMOVING MUD FROM TIRES THEREBY PROTECTING PUBLIC STREETS.
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.
Sr	TEMPORARY STREAM CROSSING			A TEMPORARY BRIDGE OR CULVERT-TYPE STRUCTURE PROTECTING A STREAM OR WATERCOURSE FROM DAMAGE BY CROSSING CONSTRUCTION EQUIPMENT.
Rd	ROCK FILTER DAM			A PERMANENT OR TEMPORARY STONE FILTER DAM INSTALLED ACROSS SMALL STREAMS OR DRAINAGE WAYS.
Sd1	SEDIMENT BARRIER			A BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. IT MAY BE SANDBAGS, BALES OF STRAW OR HAY, BRUSH, LOGS AND POLES, GRAVEL, OR A SILT FENCE.

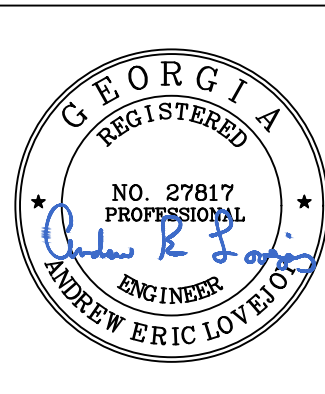
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			STRIP OF UNDISTURBED ORIGINAL VEGETATION, ENHANCED OR RESTORED EXISTING VEGETATION OR THE REESTABLISHMENT OF VEGETATION SURROUNDING AN AREA OF DISTURBANCE OR BORDERING STREAMS.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)			ESTABLISHING TEMPORARY PROTECTION FOR DISTURBED AREAS WHERE SEEDINGS MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDING COVER.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)			ESTABLISHING A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS ON DISTURBED AREAS.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)			ESTABLISHING A PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, OR LEGUMES ON DISTURBED AREAS.
Ds4	DISTURBED AREA STABILIZATION (SODDING)			A PERMANENT VEGETATIVE COVER USING SODS ON HIGHLY ERODABLE OR CRITICALLY ERODED LANDS.
Ss	SLOPE STABILIZATION			A PROTECTIVE COVERING USED TO PREVENT EROSION AND ESTABLISH TEMPORARY OR PERMANENT VEGETATION ON STEEP SLOPES, SHORE LINES, OR CHANNELS.

ISSUE FOR CONSTRUCTION:03/13/2020

CITY OF CUMMING	
DELAMAR SEWER FORCE MAIN	
EROSION CONTROL DETAILS PART 2	
PROJECT INCEPTION DATE: 03/13/2020	SHEET 7 OF

CEC
CIVIL ENGINEERING CONSULTANTS, INC.
Civil & Environmental Engineering

110 Samaritan Drive, Suite 501
Cumming, GA 30040
(770) 977-5747
www.cecnoga.com



DESIGNED BY:	AEL	DRAWN BY:	JWN	CHECKED BY:	AEL
DATE		REVISION			