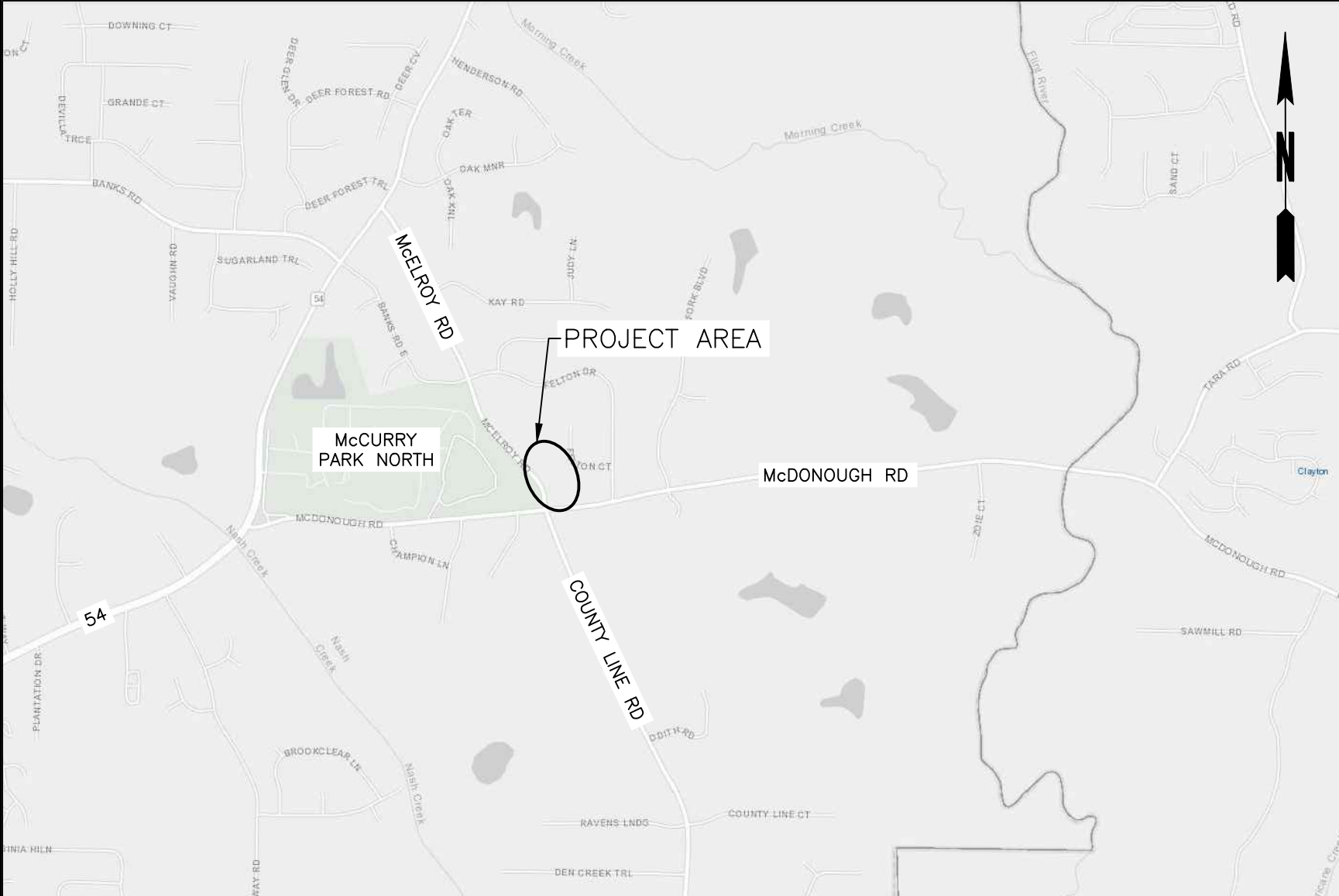


GENERAL NOTES

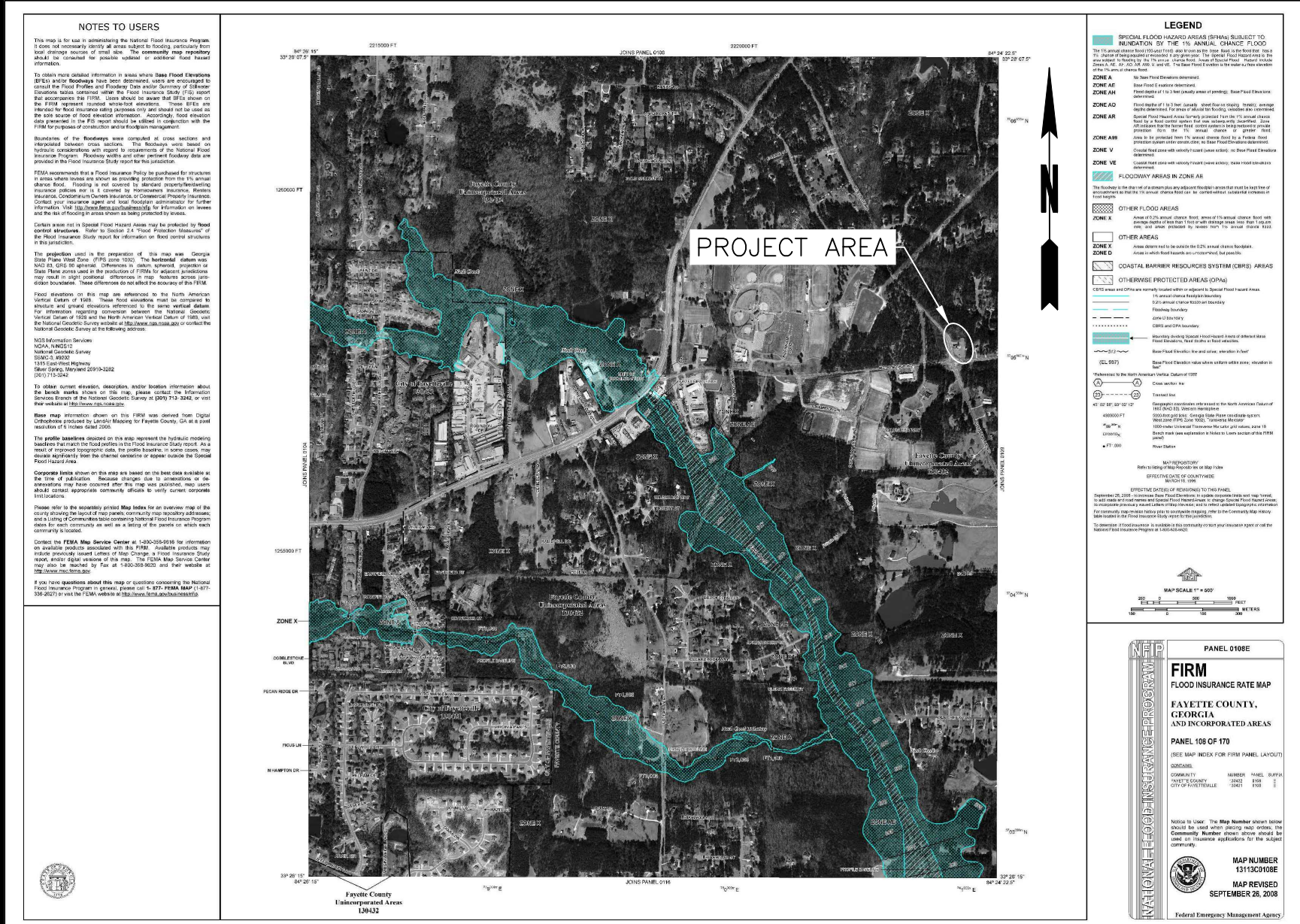
1. AS-BUILT REQUIRED PRIOR TO FINAL BUILDING INSPECTION
2. THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES SHALL OCCUR PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.
3. THE ONLY MATERIAL TO BE BURIED ON-SITE IS VEGETATIVE MATERIAL, PROVIDED IT IS NOT BURIED WITHIN 100' OF ANY PROPERTY LINE OR ENCLOSED STRUCTURE. CONSTRUCTION WASTE MAY NEITHER BE BURNED NOR BURIED AND MUST BE TAKEN TO A STATE APPROVED LANDFILL.
4. ALL WORK SHALL COMPLY WITH APPLICABLE STATE, FEDERAL AND LOCAL CODES.
5. ALL MATERIALS AND CONSTRUCTION METHODS TO BE IN ACCORDANCE WITH THE FAYETTE COUNTY STANDARDS AND THE GEORGIA DEPARTMENT OF TRANSPORTATION, AS APPLICABLE.
6. DEVIATION FROM THESE PLANS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN CONSENT OF THE ENGINEER MAY CAUSE THE WORK TO BE UNACCEPTABLE.
7. CONTRACTOR IS RESPONSIBLE FOR NOTIFICATIONS AND LIAISON WITH UTILITY COMPANIES IN THE PROCESS OF LOCATING, RELOCATION AND TIE-IN TO PUBLIC UTILITIES. ALSO, CONTRACTOR IS RESPONSIBLE FOR NOTIFYING ALL INSPECTORS, INCLUDING COUNTY AND CITY INSPECTORS PRIOR TO BEGINNING SITE CONSTRUCTION.
8. THERE MAY BE ADDITIONAL UTILITIES THAN THOSE SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR LOCATIONS SHOWN AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS AND NECESSARY INVERTS OF ALL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE DEPARTMENT OF THE UTILITY COMPANIES. THE CONTRACTOR IS RESPONSIBLE FOR THE NOTIFICATIONS AND LIAISON WITH UTILITY COMPANIES IN THE PROCESS OF LOCATING, RELOCATING AND TIE-IN TO THE PUBLIC UTILITIES.
9. IF CONTRACTOR DAMAGES ANY EXISTING UTILITIES DURING CONSTRUCTION, HE SHALL, AT HIS OWN EXPENSE, REPLACE OR REPAIR THE UTILITIES TO ORIGINAL CONDITION AND QUALITY, AS APPROVED BY THE ENGINEER AND REPRESENTATIVE OF THE APPROPRIATE UTILITY COMPANY.
10. LAND DISTURBANCE PERMIT TO BE DISPLAYED ON SITE AT ALL TIMES DURING CONSTRUCTION.
11. CONSTRUCTION EQUIPMENT SHALL NOT BE PARKED IN RIGHT-OF-WAY AND MUST BE STORED WITHIN SITE.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A MARKED-UP SET OF DESIGN DRAWINGS SHOWING ALL " AS-BUILT " CONDITIONS. THESE "RECORD DRAWINGS" SHALL BE MADE AVAILABLE TO THE DESIGNER AND/OR THE COUNTY INSPECTOR UPON REQUEST. THE MARK-UPS SHALL BE AT THE SITE AT ALL TIMES AND SHALL BE UTILIZED BY THE CONTRACTOR TO DEVELOP FINAL RECORD DRAWINGS.
13. STUMPS AND CONSTRUCTION DEBRIS SHALL BE DEPOSITED IN A PROPERLY PERMITTED LANDFILL.
14. THIS PROPERTY IS NOT LOCATED IN A 100 YEAR FLOOD HAZARD AREA BASED ON THE FLOOD INSURANCE RATE MAP FOR THIS AREA. THE MAP NUMBER FOR THIS AREA IS 13113C0108E, AND THE DATE OF SAID MAP IS SEPTEMBER 26, 2008. THIS DETERMINATION WAS MADE BY GRAPHICALLY DETERMINING THE POSITION OF THIS SITE ON SAID FIRM MAP UNLESS NOTED OTHERWISE.
15. THE CONTRACTOR SHALL TELEPHONE TOLL FREE 1-800-282-7411 A MINIMUM OF 48 HOURS PRIOR TO THE START OF ANY EXCAVATION AS SHOWN AND NOTED ON THE PLANS FOR A UTILITY LOCATION SERVICE.
16. ALL APPROPRIATE SITE WORK SHALL CONFORM TO ADA STANDARDS.

APPROVAL REVIEW STAMPS

LOCATION MAP



FEMA MAP



FEMA STATEMENT

THIS PROPERTY IS NOT LOCATED IN A 100 YEAR FLOOD HAZARD AREA BASED ON THE FLOOD INSURANCE RATE MAP FOR THIS AREA. THE MAP NUMBER FOR THIS AREA IS 13113C0108E AND THE DATE OF SAID MAP IS SEPTEMBER 26, 2008.

REQUIRED ENGINEER'S INSPECTION

AS PER THE GEORGIA DEPARTMENT OF NATURAL RESOURCES ENVIRONMENTAL PROTECTION DIVISION, NPDES GENERAL PERMITS FOR CONSTRUCTION ACTIVITY GAR100001, GAR100002, & GAR100003; PART IV, A., 7 REQUIRES THE EROSION CONTROL PLAN DESIGN PROFESSIONAL TO MAKE A SITE INSPECTION. FOR STAND ALONE PROJECTS THAT BEGIN CONSTRUCTION ACTIVITY AFTER THE EFFECTIVE DATE OF THIS PERMIT, THE PRIMARY PERMITEE MUST RETAIN THE DESIGN PROFESSIONAL WHO PREPARED THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN, EXCEPT WHEN THE PRIMARY PERMITEE HAS REQUESTED IN WRITING AND EPD HAS AGREED TO AN ALTERNATE DESIGN PROFESSIONAL, TO INSPECT THE INSTALLATION OF THE CONTROL MEASURES (BMP'S) WHICH THE DESIGN PROFESSIONAL DESIGNED WITHIN SEVEN (7) DAYS AFTER THE INITIAL CONSTRUCTION ACTIVITIES COMMENCE. FOR CONSTRUCTION ACTIVITIES WHERE CONSTRUCTION BEGAN ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THE INSPECTION IS TO OCCUR WITHIN SEVEN (7) DAYS AFTER THE PLAN HAS BEEN IMPLEMENTED. THE DESIGN PROFESSIONAL SHALL DETERMINE IF THESE BMP'S HAVE BEEN INSTALLED AND ARE BEING MAINTAINED AS DESIGNED. THE DESIGN PROFESSIONAL SHALL REPORT THE RESULTS OF THE INSPECTION TO THE PRIMARY PERMITEE WITHIN SEVEN (7) DAYS AND THE PERMITEE MUST CORRECT ALL DEFICIENCIES WITHIN TWO (2) BUSINESS DAYS OF RECEIPT OF THE INSPECTION REPORT FROM THE DESIGN PROFESSIONAL UNLESS WEATHER RELATED SITE CONDITIONS ARE SUCH THAT ADDITIONAL TIME IS REQUIRED.



24 HOUR CONTACT:  
DAVID SCARBROUGH  
TEL: 770-305-5414

PROJECT INFORMATION

FIRE STATION NO. 4

ADDRESS: 278 MCELROY RD  
FAYETTEVILLE, GA 30214  
LAND LOT 139 OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

ZONING: R-40  
TAX PARCEL NUMBER: 05333008  
TOTAL AREA: 3.13 ACRES  
DISTURBED AREA: 2.31 ACRES

OWNER:

NAME: FAYETTE COUNTY FIRE DEPARTMENT  
ADDRESS: 140 STONEWALL AVENUE FAYETTEVILLE, GEORGIA 30214  
CONTACT: DAVID SCARBROUGH  
PHONE: (770)-305-5414

CLIENT/ARCHITECT:

NAME: K. A. OLDHAM DESIGN, INC.  
ADDRESS: 75 JACKSON STREET, SUITE 401 NEWNAN, GA 30263  
CONTACT: KIP OLDHAM  
PHONE: (770)-683-9170

SHEET INDEX

SHEET	DRAWING NAME	SHEET NAME	PLAN DATE	LAST REVISED
1	C-000	COVER SHEET	04/30/2018	05/29/2018
2	C-100	EXISTING CONDITIONS	04/30/2018	05/29/2018
3	C-200	SITE PLAN	04/30/2018	05/29/2018
4	C-201	VEHICLE TRACKING	05/29/2018	
5	C-300	UTILITY PLAN	04/30/2018	05/29/2018
6	C-301	UTILITY PLAN	05/29/2018	
7	C-400	GRADING & DRAINAGE PLAN	04/30/2018	05/29/2018
8	C-500	DETENTION POND PLAN, PROFILE & DETAILS	04/30/2018	05/29/2018
9	C-600	PROFILES	04/30/2018	05/29/2018
10	C-700	CONCRETE JOINT LAYOUT	04/30/2018	05/29/2018
11	C-800	SEPTIC FIELD PLAN	04/30/2018	05/29/2018
12	C-900	PRE-DEVELOPED BASINS	04/30/2018	
13	C-901	EXISTING-DEVELOPED BASINS	04/30/2018	
14	C-902	POST-DEVELOPED BASINS	04/30/2018	
15	C-1000	CONSTRUCTION DETAILS	04/30/2018	05/29/2018
16	C-1001	CONSTRUCTION DETAILS	04/30/2018	05/29/2018
17	C-1002	CONSTRUCTION DETAILS	04/30/2018	05/29/2018
18	C-1003	CONSTRUCTION DETAILS	04/30/2018	05/29/2018
19	ER-000	EROSION CONTROL COVER	04/30/2018	05/29/2018
20	ER-100	EROSION CONTROL NOTES	04/30/2018	05/29/2018
21	ER-200	EROSION CONTROL PLAN - INITIAL PHASE	04/30/2018	05/29/2018
22	ER-300	EROSION CONTROL PLAN - INTERMEDIATE PHASE	04/30/2018	05/29/2018
23	ER-400	EROSION CONTROL PLAN - FINAL PHASE	04/30/2018	05/29/2018
24	ER-500	EROSION CONTROL DETAILS	04/30/2018	
25	ER-501	EROSION CONTROL DETAILS	04/30/2018	

Engineers  
Planners  
Surveyors

**CROY**  
ENGINEERING

200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
PHONE: (770) 971-5407 FAX: (770) 971-0620

Print Style: Design.ctb. Plotted By: Scott McElroy on 5/29/2018, 9:01 AM

FIRE STATION NO. 4

DESIGN PHASE

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

1	ADDENDUM 1	05/29/2018
NO.	REVISION REFERENCE	DATE



SHEET TITLE  
COVER SHEET

DRAWN BY  
SMM

CHECKED BY  
LCC

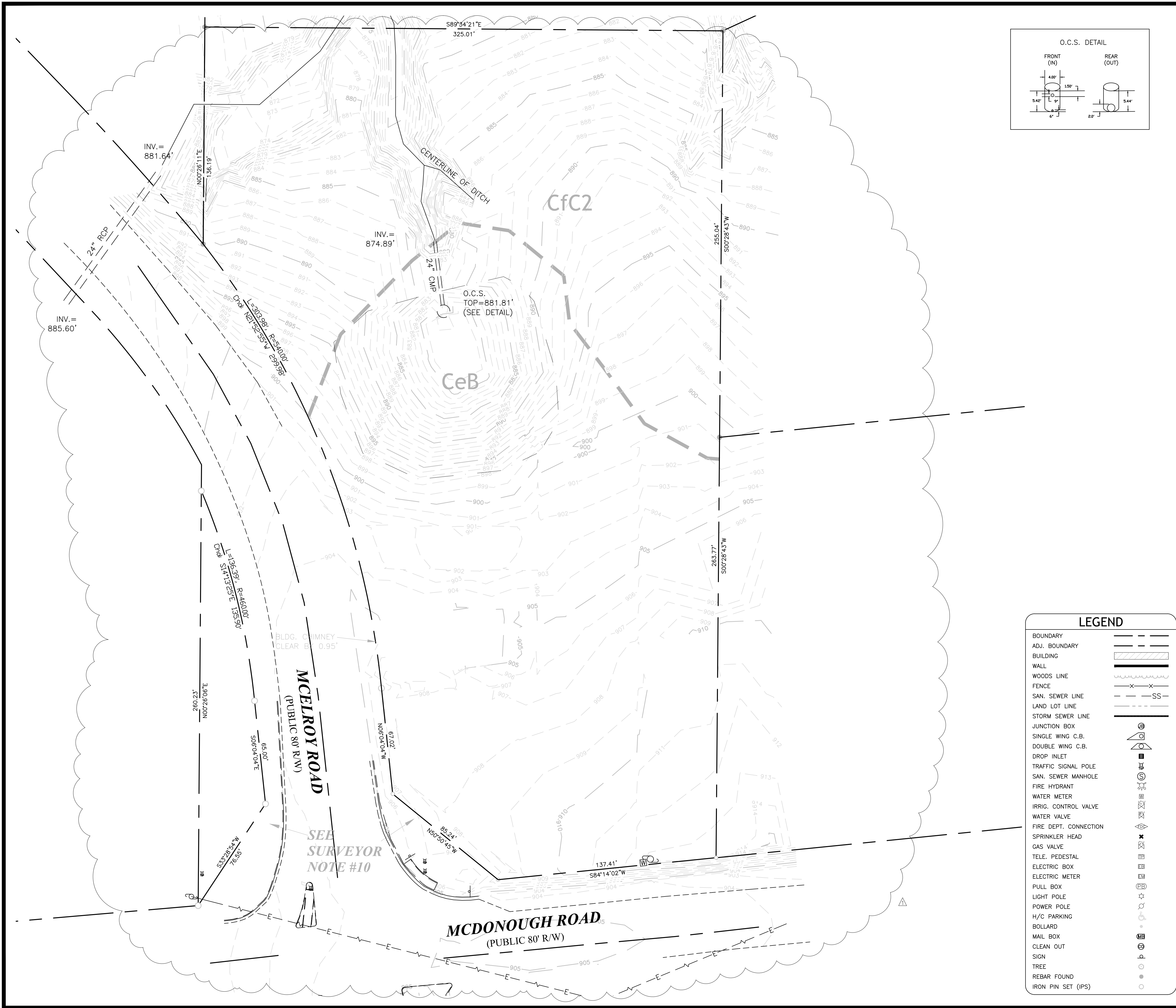
SCALE  
AS SHOWN

ISSUE DATE  
04/30/2018

PROJECT NUMBER  
1788.000

DRAWING NUMBER  
**C-000**  
SHEET 1 of 25





### SURVEYOR'S NOTES

- THIS PROPERTY MAY BE SUBJECT TO EASEMENTS, CLAIMS, PRESCRIPTIONS, SUBSURFACE CONDITIONS, OR OTHER MATTERS OF TITLE WHICH ARE NOT VISIBLE, NOT RECORDED, OR NOT DISCLOSED IN THE TITLE COMMITMENT PROVIDED BY THE OWNER, THE PURCHASER, OR ANY AGENTS THEREOF.
- THE UTILITIES SHOWN ARE FOR THE CLIENT'S CONVENIENCE ONLY - THERE MAY BE OTHER UNDERGROUND UTILITIES NOT SHOWN HEREON. THE SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE UNDERGROUND UTILITIES SHOWN OR NOT SHOWN. ALL DAMAGES MADE TO EXISTING UTILITIES BY THE OWNER OR THE OWNER'S AGENT, SHALL BE THE SOLE RESPONSIBILITY OF THE OWNER, OR THE OWNER'S AGENT; I.E. UNDERGROUND TANKS, GAS LINES, WATER LINES, SEWER LINES, ETC.
- THIS PLAN IS FOR THE EXCLUSIVE USE OF THE PARTIES STATED ON THE FACE OF THE SURVEY. ANY USE BY THIRD PARTIES IS AT THEIR OWN RISK.
- ACCORDING TO THE F.E.M.A. FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NUMBER 13113C0108E, EFFECTIVE DATE 09/26/2008, FOR FAYETTE COUNTY, GEORGIA, THIS PROPERTY DOES NOT LIE WITHIN A 100 YEAR FLOOD PLAIN AS DEFINED BY F.E.M.A.
- FIELD WORK FOR THIS PROJECT WAS COMPLETED ON 04/09/18. THIS PLAN IS PREPARED FROM A FIELD SURVEY USING A TRIMBLE S8 ROBOTIC TOTAL STATION, AND TRIMBLE TSC3 DATA COLLECTOR; LINEAR PRECISION OF TRAVERSE: 1/35,454; ANGULAR ERROR: 2.2" PER POINT. THE COMPASS RULE WAS APPLIED TO THIS PROJECT. LINEAR PRECISION OF THIS PLAN: 1/180,843 MATTERS OF TITLE EXCEPTED.
- THE BEARINGS SHOWN ON THIS PLAN WERE BASED ON A GRID NORTH GEORGIA STATE PLANE COORDINATE SYSTEM - WEST ZONE NAD83 AS ESTABLISHED BY CROY-ENGINEERING LLC. DISTANCES AND AREAS SHOWN REFLECT HORIZONTAL GROUND - SURFACE MEASUREMENTS.
- BOUNDARY AND RIGHT-OF-WAY INFORMATION SHOWN HEREON IS DERIVED FROM EXISTING MONUMENTS AND INFORMATION LOCATED IN THE PROCESS OF CONDUCTING THIS SURVEY. INFORMATION FOUND IN DEEDS AND PLATS AND TAKEN FROM OTHER SOURCES SUCH AS THE ROADS DEPARTMENT AND TAX ASSESSOR'S OFFICE.
- STREAM BUFFERS MAY EXIST WITHIN PROPERTY AND ARE DEPENDENT UPON CLASSIFICATION OF "WATERS OF THE STATE" WHICH IS BASED ON THE EROSION & SEDIMENTATION CONTROL ACT OF 1975 AS AMENDED (PER O.G.C.A. 12-7-1). ADDITIONAL BUFFERS MAY EXIST PER CITY/COUNTY REQUIREMENTS.
- THE INITIAL CONTROL POINTS FOR THIS SURVEY WERE LOCATED UTILIZING GPS. THE EQUIPMENT USED WAS A TRIMBLE R8 MODEL 3 DUAL FREQUENCY RECEIVER WITH A TRIMBLE TSC3 DATA COLLECTOR RUNNING TRIMBLE ACCESS SOFTWARE. NETWORK RTK CORRECTIONS WERE RECEIVED VIA CELLULAR MODEM. THE TYPE OF SURVEY WAS NETWORK RTK UTILIZING THE TRIMBLE VRS REAL TIME NETWORK OPERATED BY TRIMBLE VRS. THE RELATIVE POSITIONAL ACCURACY, AS CALCULATED ACCORDING TO THE FEDERAL GEOGRAPHIC DATA COMMITTEE PART 3: NATIONAL STANDARD FOR SPATIAL DATA ACCURACY, IS .04 FT. HORIZONTAL AND .07 FT. VERTICAL AT THE 95% CONFIDENCE LEVEL.
- NO RIGHT-OF-WAY PLANS FOR THE RELOCATED MCELROY ROAD WERE PROVIDED OR FOUND. THEREFORE, THE RIGHT-OF-WAY AND MITER SHOWN ARE COMPUTED USING THE CURRENT ALIGNMENT OF MCELROY ROAD AS A MONUMENT AND OFFSETTING THE EXISTING CENTERLINE. THIS DECISION WAS APPROVED BY FAYETTE COUNTY ENGINEERING DEPARTMENT (ANTHONY STANLEY), APRIL 2018.

### SOILS SERIES TABLE - HSG B

CeB	CECIL SANDY LOAM 2 TO 6 PERCENT SLOPES
CfC2	CECIL SANDY CLAY LOAM 6 TO 10 PERCENT SLOPES, ERODED

### FEMA STATEMENT

THIS PROPERTY IS NOT LOCATED IN A 100 YEAR FLOOD HAZARD AREA BASED ON THE FLOOD INSURANCE RATE MAP FOR THIS AREA. THE MAP NUMBER FOR THIS AREA IS 13113C0108E AND THE DATE OF SAID MAP IS SEPTEMBER 26, 2008.

IF ANY CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE DISCOVERED, EITHER ON THE CONSTRUCTION DOCUMENTS OR THE FIELD CONDITIONS, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY AND SHALL NOT COMMENCE OPERATION UNTIL THE CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE RESOLVED.

### GEORGIA811

Utilities Protection Center, Inc.

Know what's below.  
Call before you dig.

### 24 HOUR CONTACT:

DAVID SCARBROUGH  
TEL: 770-305-5414

### LEGEND

- BOUNDARY
- ADJ. BOUNDARY
- BUILDING
- WALL
- WOODS LINE
- FENCE
- SAN. SEWER LINE
- LAND LOT LINE
- STORM SEWER LINE
- JUNCTION BOX
- SINGLE WING C.B.
- DOUBLE WING C.B.
- DROP INLET
- TRAFFIC SIGNAL POLE
- SAN. SEWER MANHOLE
- FIRE HYDRANT
- WATER METER
- IRRIG. CONTROL VALVE
- WATER VALVE
- FIRE DEPT. CONNECTION
- SPRINKLER HEAD
- GAS VALVE
- TELE. PEDESTAL
- ELECTRIC BOX
- ELECTRIC METER
- PULL BOX
- LIGHT POLE
- POWER POLE
- H/C PARKING
- BOLLARD
- MAIL BOX
- CLEAN OUT
- SIGN
- TREE
- REBAR FOUND
- IRON PIN SET (IPS)

### ENGINEERS

PLANNERS  
SURVEYORS

### FIRE STATION NO. 4

DESIGN PHASE

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

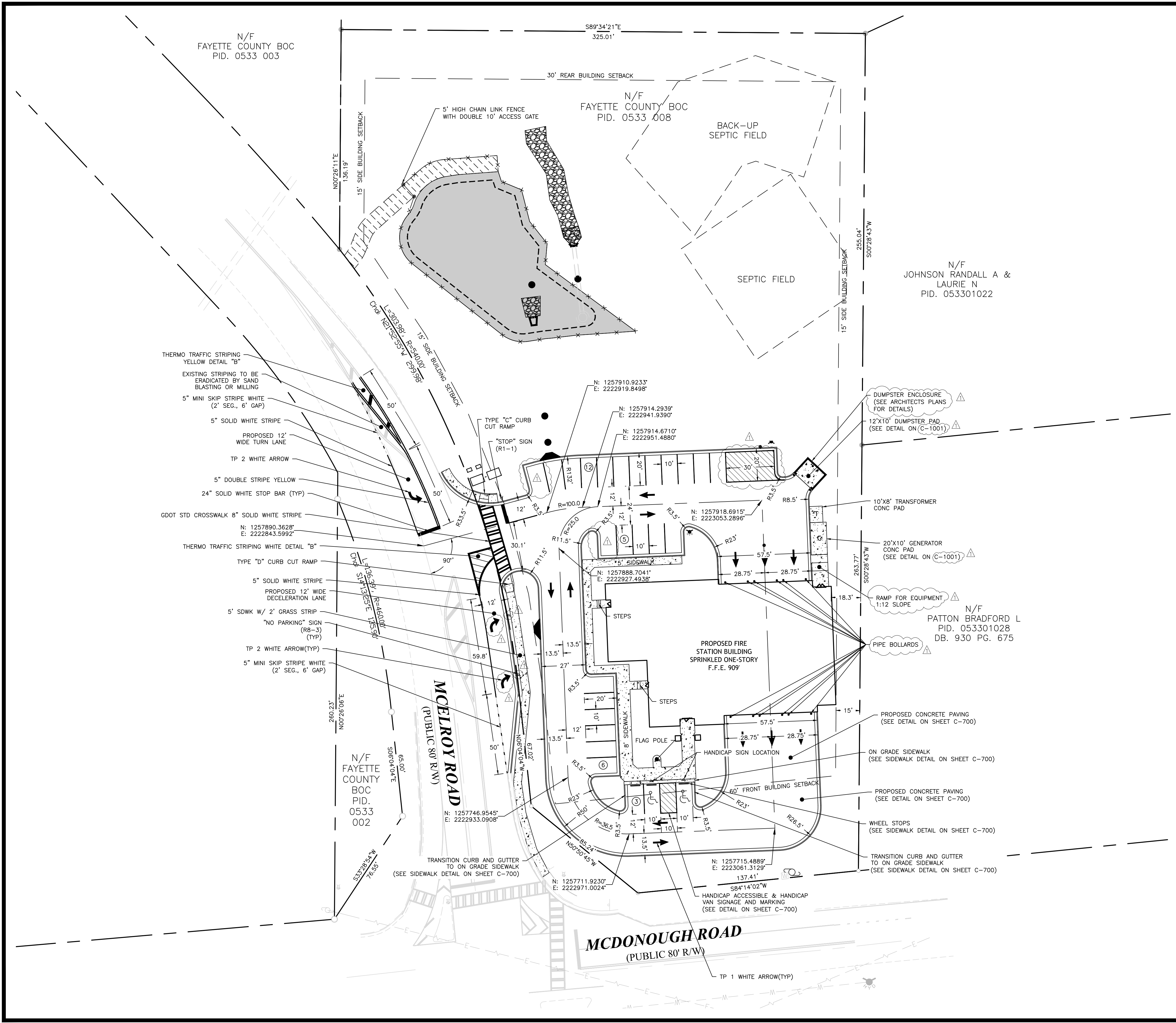
1	ADDENDUM 1	05/29/2018
NO.	REVISION REFERENCE	DATE

SHEET TITLE  
EXISTING CONDITIONS

DRAWN BY SMM	CHECKED BY LCC
SCALE 1"=30'	ISSUE DATE 04/30/2018
PROJECT NUMBER 1788.000	
DRAWING NUMBER C-100	
SHEET 2 of 25	

Drawing Location: P:\1788 K.A. Odham Design\1788.000 Fire Station No. 4\Engineering\Design\1788.000\_Plan.dwg      Plot Scale: 1"=30'      Plot Style: Design.ctb      Plotted By: Scott McElroy on 5/29/2018, 6:51 AM





SITE PLAN NOTES

1. THE SITE CONTRACTOR SHALL COORDINATE SERVICE ROUTING OF ALL GAS, TELEPHONE, AND ELECTRICAL LINES WITH THE APPROPRIATE UTILITY COMPANY. ALL CONSTRUCTION MUST COMPLY WITH EACH UTILITY'S STANDARDS AND SPECIFICATIONS AND NOT INTERFERE WITH TREE PLANTING SITES OR EXISTING TREES TO BE PRESERVED.

SITE DATA

1. OWNER:  
FAYETTE COUNTY FIRE DEPARTMENT  
140 STONEWALL AVENUE  
FAYETTEVILLE, GEORGIA 30214  
24 HOUR CONTACT: DAVID SCARBROUGH  
PHONE: 770-305-5414
2. TOTAL AREA = 3.13 ACRES  
DISTURBED AREA = 2.31 ACRES  
IMPERVIOUS AREA = 0.93 ACRES  
%IMPERVIOUS = 29.81%
3. ZONING: R-40  
BUILDING SETBACKS:  
FRONT: 60'  
REAR: 30'  
SIDE: 15'

PARKING DATA

STANDARD SPACES:	24
COMPACT SPACES:	0
HANDICAP SPACES:	2
PROVIDED SPACES:	26
VARIANCE REQUIRED:	NONE

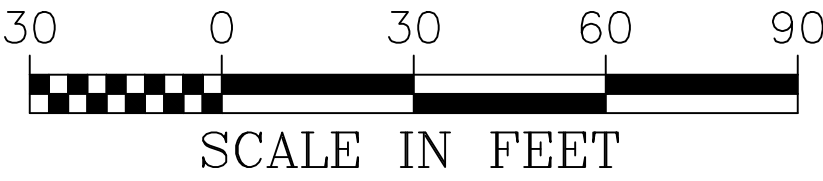
LEGEND

PROPERTY AND EXISTING R/W LINE	---
LAND LOT LINE	---
PARKING SPACE COUNT	①
BUILDING SETBACK LINE	---
FENCE	---
ACCESS EASEMENT	---
POND	---
CONCRETE	---

IF ANY CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE DISCOVERED, EITHER ON THE CONSTRUCTION DOCUMENTS OR THE FIELD CONDITIONS, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY AND SHALL NOT COMMENCE OPERATION UNTIL THE CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE RESOLVED.



24 HOUR CONTACT:  
DAVID SCARBROUGH  
TEL: 770-305-5414



Engineers  
Planners  
Surveyors

**CROY**  
ENGINEERING

200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
PHONE: (770) 971-5407 FAX: (770) 971-0620

FIRE STATION NO. 4

DESIGN PHASE

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

NO.	REVISION REFERENCE	DATE
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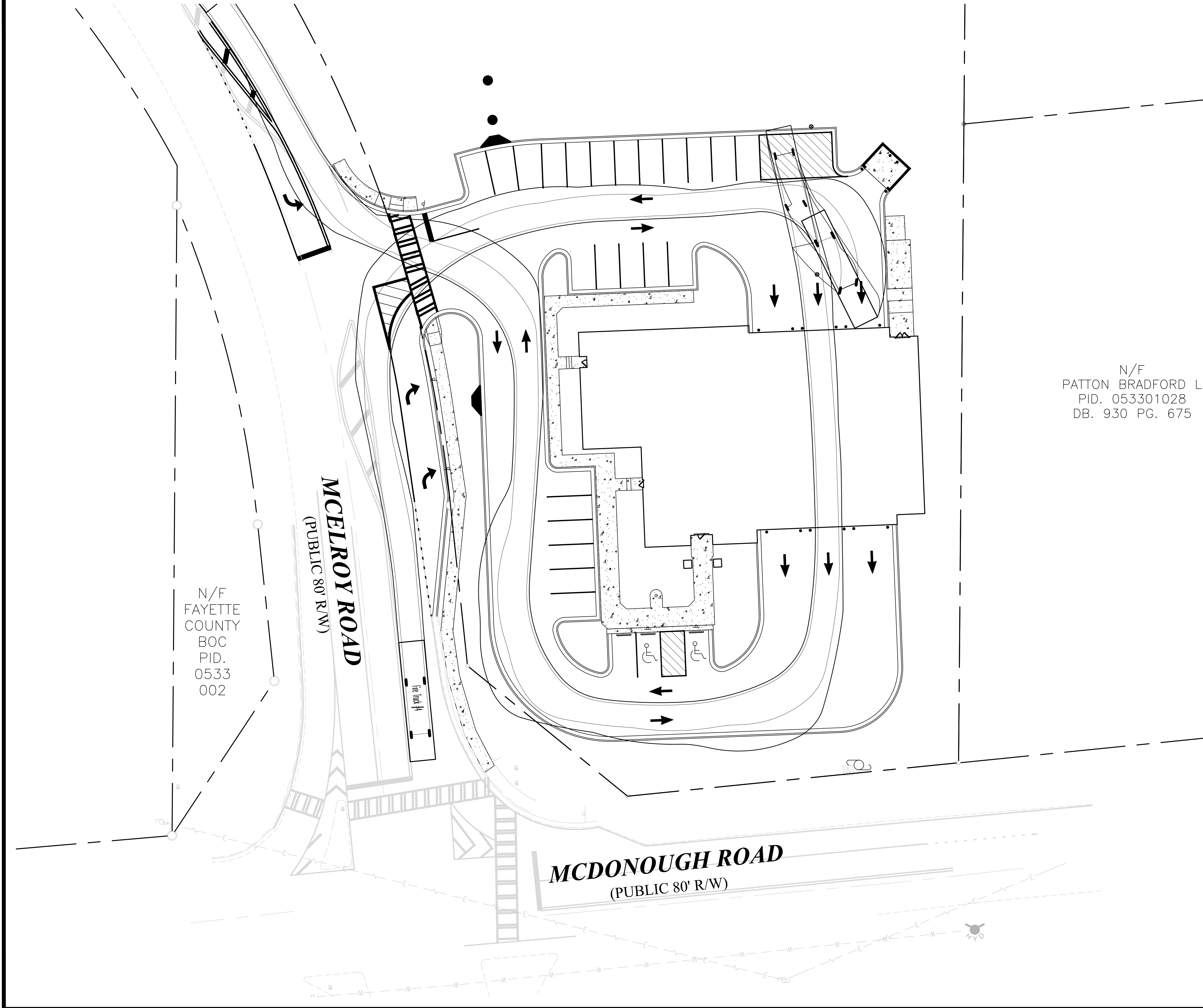
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SITE PLAN

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SCALE 1"=30'	ISSUE DATE 04/30/2018

PROJECT NUMBER  
1788.000

DRAWING NUMBER  
**C-200**  
SHEET 3 of 25





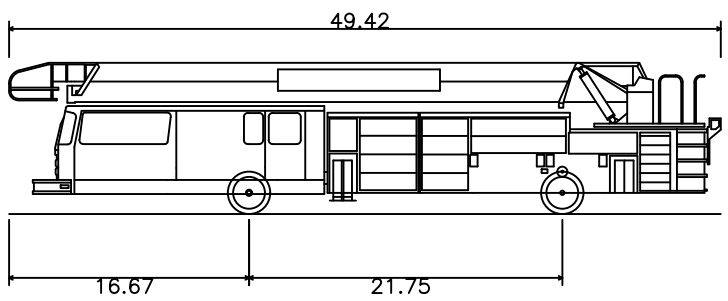
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PATTON BRADFORD L  
PID. 053301028  
DB. 930 PG. 675

N/F  
FAYETTE  
COUNTY  
BOC  
PID.  
0533  
002

MCELROY ROAD  
(PUBLIC 80' R/W)

MCDONOUGH ROAD  
(PUBLIC 80' R/W)

VEHICLE TRACKING



Fire Truck #4  
Overall Length 49.420ft  
Overall Width 16.670ft  
Overall Body Height 21.750ft  
Min Body Ground Clearance 0.932ft  
Track Width 8.400ft  
Lock-to-lock time 5.00s  
Curb to Curb Turning Radius 40.580ft

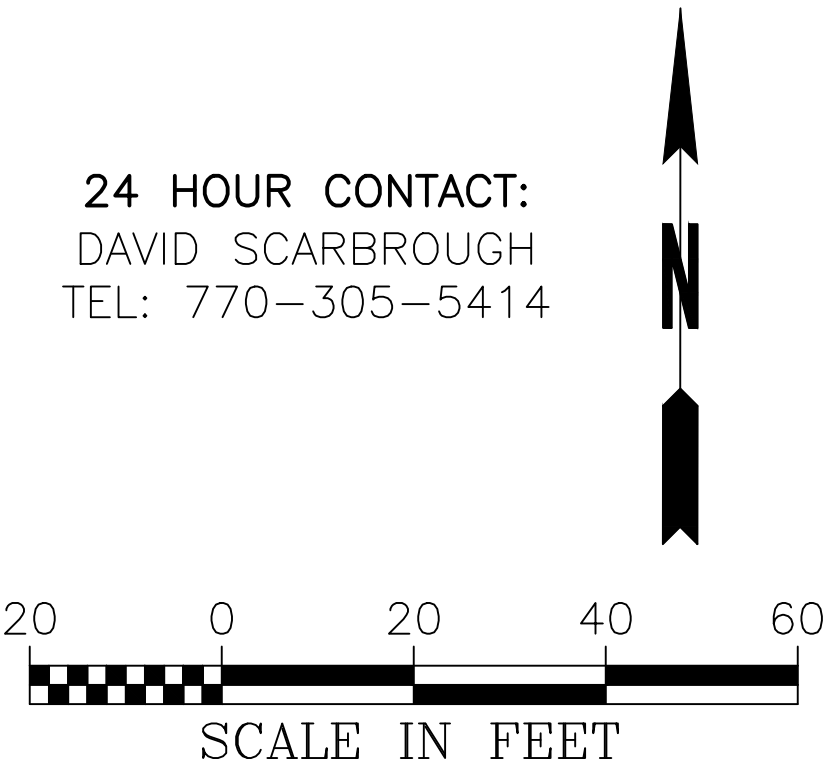
LEGEND

PROPERTY AND EXISTING R/W LINE  
TIRE LINE  
OVERHANG LINE  
CONCRETE

IF ANY CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE DISCOVERED, EITHER ON THE CONSTRUCTION DOCUMENTS OR THE FIELD CONDITIONS, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY AND SHALL NOT COMMENCE OPERATION UNTIL THE CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE RESOLVED.



24 HOUR CONTACT:  
DAVID SCARBROUGH  
TEL: 770-305-5414



Engineers  
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**CROY**  
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200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
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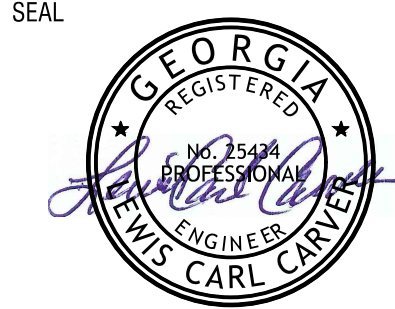
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FIRE STATION NO. 4

DESIGN PHASE

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

NO.	REVISION REFERENCE	DATE
1	ADDENDUM 1	05/29/2018



SHEET TITLE  
VEHICLE TRACKING

DRAWN BY  
SMM  
SCALE  
1"=20'

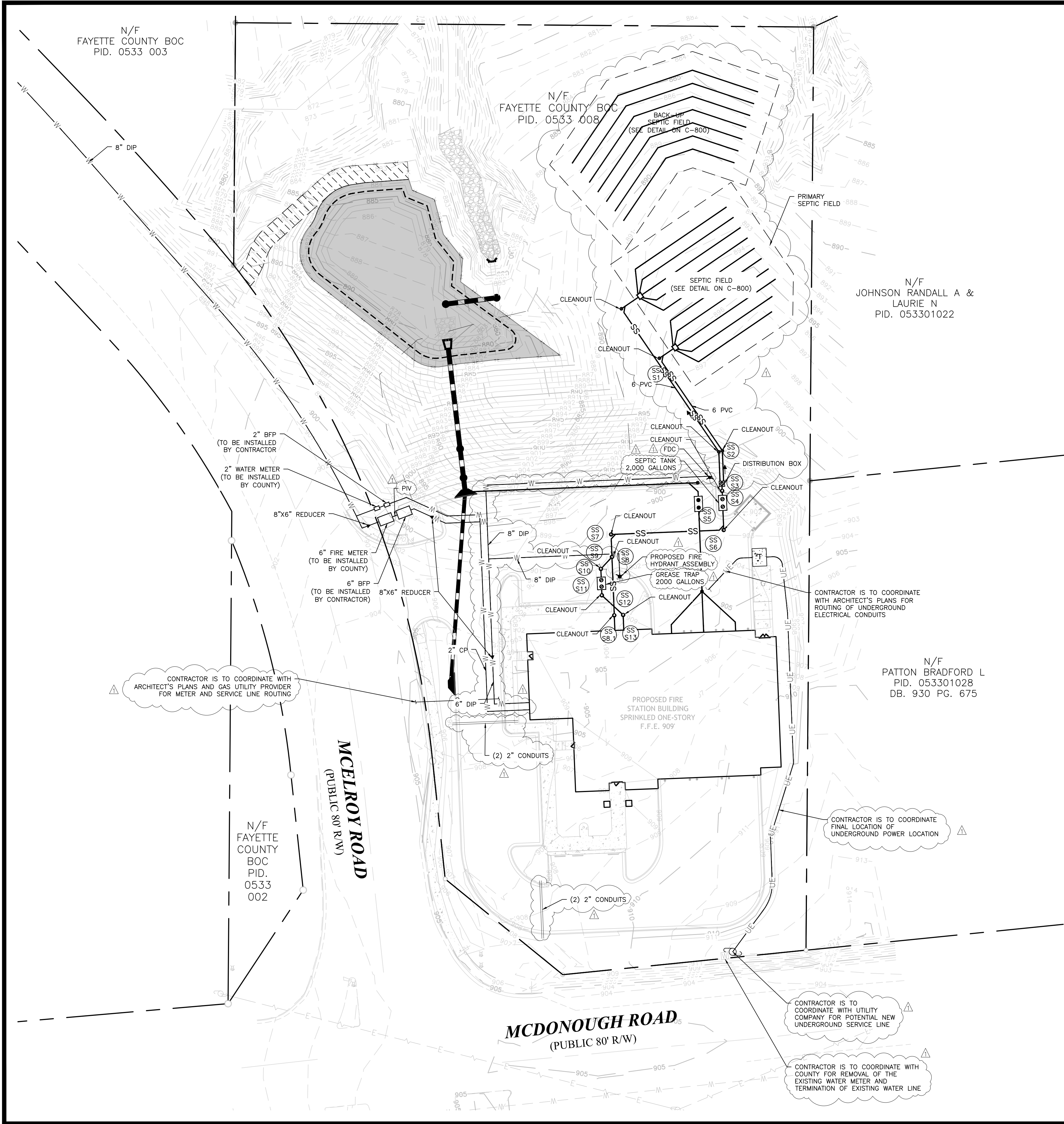
CHECKED BY  
LCC  
ISSUE DATE  
05/29/2018

PROJECT NUMBER  
1788.000

DRAWING NUMBER

**C-201**  
SHEET 4 of 25





- ### WATER SYSTEM NOTES
1. WATER AND SEWER SOURCE IS THE FAYETTE COUNTY DEPARTMENT OF WATER AND SEWER.
  2. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL FINAL INSPECTIONS ARE COMPLETED BY FAYETTE COUNTY WATER AND SEWER DEPARTMENT.
  3. THE DEVELOPER OR DEVELOPER'S CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE EXACT LOCATION, SIZE, AND MATERIAL OF ANY EXISTING WATER AND SEWER FACILITY PROPOSED FOR CONNECTION OR USE BY THIS PROJECT. THE RELOCATION OF ANY WATER/SEWER FACILITY REQUIRED TO AVOID ANY PART OF THIS DEVELOPMENT IS THE RESPONSIBILITY OF THE DEVELOPER.
  4. THE OWNER/DEVELOPER IS RESPONSIBLE FOR FEES RELATED TO IMPACT FEES, METER FEES, AND INSTALLATION FEES.
  5. A FAYETTE COUNTY INSPECTOR IS TO BE PRESENT WHEN CONNECTING TO ANY EXISTING MAINS.
  6. NOTIFY FAYETTE COUNTY WATER AND SEWER DEPARTMENT 24 HOURS PRIOR TO ANY SEWER CONSTRUCTION AT (770) 461-1146 OPTION 5.
  7. ALL WORK AND MATERIALS TO CONFORM TO CURRENT FAYETTE COUNTY STANDARDS.
  8. NO DEVIATIONS FROM APPROVED DRAWINGS ARE ALLOWED WITHOUT APPROVAL FROM FAYETTE COUNTY DEPARTMENT OF WATER AND SEWER.
  9. THE DEVELOPER/CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL INFRASTRUCTURE FOR A ONE YEAR PERIOD FOLLOWING FINAL PLAT.
  10. ALL WATER LINES SHALL BE DUCTILE IRON PIPE CLASS 50.
  11. WATER LINES SHALL HAVE 48" MINIMUM COVER.
  12. FIRE HYDRANTS ARE TO BE 3-WAY 5-1/4" TYPE.
  13. CONCRETE VALVE MARKERS ARE TO BE INSTALLED AT ALL VALVE TYPES EXCEPT AT FIRE HYDRANTS.
  14. CONCRETE BLOCKING SHALL BE PLACED AT ALL BENDS, TEES AND FITTINGS.
  15. 3000 PSI CURB STOPS, CORPS, AND WYES REQUIRED PER FORTSMYTH COUNTY STANDARDS.
  16. ALL VALVES SHALL BE GATE VALVES.
  17. GATE VALVES OVER 5' DEEP SHALL HAVE STEM EXTENSIONS.
  18. LINES ARE TO BE PRESSURE TESTED AND DISINFECTED PER COUNTY SPECIFICATIONS.
  19. ALL SITE DOMESTIC WATER SERVICE LESS THAN 4" DIAMETER SHALL BE TYPE "K" COPPER WITH SAND BED.
  20. THRUST BLOCKING SHALL BE USED AT ALL BENDS, PLUGS AND TEES FOR LINES 4" AND LARGER IN SIZE.

### BACKFLOW PREVENTOR NOTES

1. BACKFLOW DEVICES MUST BE INSTALLED AT EVERY WATER CONNECTION AND INSTALLATION MUST BE DONE PER CURRENT FAYETTE COUNTY STANDARDS.
2. EVERY METER MUST HAVE AN ADEQUATE DEVICE. THIS INFORMATION CAN BE FOUND IN THE PLUMBING CODE BOOK.
3. THE INSTALLATION MUST MEET THE REQUIREMENTS SET FORTH IN THE BACKFLOW PREVENTION POLICY AND PROCEDURE MANUAL WHICH CAN BE PURCHASED AT THE FAYETTE COUNTY WATER AND SEWER DEPARTMENT.

### LEGEND

- #### EXISTING UTILITIES
- W EX WATER LINE
  - EX FIRE HYDRANT
  - EX WATER METER
  - EX WATER VALVE
  - SS EX SANITARY SEWER
  - EX SS MANHOLE
  - EX WATER VALVE
  - EX UTIL POLE
- #### PROPOSED UTILITIES
- W PROP. WATER LINE
  - PROP. FIRE HYDRANT
  - PROP. WATER METER
  - PROP. TAPPING VALVE
  - PROP. FDC
  - SS PROP. SANITARY SEWER
  - PROP. SS MANHOLE
  - PROP. SS CLEANOUT
  - PROP. UTIL POLE
  - UE PROP. UG ELEC. LINE
  - G PROP. GAS SERVICE LINE

- ### SANITARY SEWER NOTES
1. WATER AND SEWER SOURCE IS THE FAYETTE COUNTY DEPARTMENT OF WATER AND SEWER.
  2. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL FINAL INSPECTIONS ARE COMPLETED BY FAYETTE COUNTY WATER AND SEWER DEPARTMENT.
  3. THE DEVELOPER OR DEVELOPER'S CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE EXACT LOCATION, SIZE, AND MATERIAL OF ANY EXISTING WATER AND SEWER FACILITY PROPOSED FOR CONNECTION OR USE BY THIS PROJECT. THE RELOCATION OF ANY WATER/SEWER FACILITY REQUIRED TO AVOID ANY PART OF THIS DEVELOPMENT IS THE RESPONSIBILITY OF THE DEVELOPER.
  4. THE OWNER/DEVELOPER IS RESPONSIBLE FOR FEES RELATED TO IMPACT FEES, METER FEES, AND INSTALLATION FEES.
  5. A FAYETTE COUNTY INSPECTOR IS TO BE PRESENT WHEN CONNECTING TO ANY EXISTING MAINS.
  6. ALL MANHOLES REQUIRE "KOR-N-SEAL" OR EQUAL RUBBER BOOT.
  7. NOTIFY FAYETTE COUNTY WATER AND SEWER DEPARTMENT 24 HOURS PRIOR TO ANY SEWER CONSTRUCTION AT (770) 461-1146 OPTION 5.
  8. ALL WORK AND MATERIALS TO CONFORM TO CURRENT FAYETTE COUNTY STANDARDS.
  9. NO DEVIATIONS FROM APPROVED DRAWINGS ARE ALLOWED WITHOUT APPROVAL FROM FAYETTE COUNTY DEPARTMENT OF WATER AND SEWER.
  10. ALL MANHOLES OUTSIDE OF PAVEMENT SHALL BE 2' ABOVE GRADE WITH BOLT-DOWN WATERTIGHT COVERS.
  11. SEWER LATERALS SHALL BE OF SAME MATERIAL AS SEWER MAIN.
  12. SEWER LATERALS SHALL BE INSTALLED WITH 6" CLEAN-OUT, STUBBED UP 5' ABOVE GRADE AND CAPPED UNLESS LOCATED IN PAVING OR SIDEWALK.
  13. NO FENCES, STRUCTURES, TREES OR OTHER OBSTRUCTIONS ARE ALLOWED ON SANITARY SEWER EASEMENTS.
  14. SEWER LINES ARE TO BE TESTED PER COUNTY SPECIFICATIONS PRIOR TO FINAL PLAT.
  15. THE DEVELOPER/CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL INFRASTRUCTURE FOR A ONE YEAR PERIOD FOLLOWING FINAL PLAT.
  16. 16' IS MAXIMUM DEPTH FOR PVC SEWER, ANY PIPE EXCEEDING 16', WHETHER OR NOT SHOWN ON PLANS, MUST BE INSTALLED AS D.I.P.

THERE MAY BE ADDITIONAL UTILITIES THAN THOSE SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR LOCATIONS SHOWN AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS AND NECESSARY INVERTS OF ALL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE DEPARTMENT OF THE UTILITY COMPANIES. THE CONTRACTOR IS RESPONSIBLE FOR THE NOTIFICATIONS AND LIAISON WITH UTILITY COMPANIES IN THE PROCESS OF LOCATING, RELOCATING AND TIE-IN TO THE PUBLIC UTILITIES.

NOTIFY FAYETTE COUNTY WATER AND SEWER DEPARTMENT 24 HOURS PRIOR TO ANY WATER OR SEWER CONSTRUCTION: (770)-461-1146)5.

IF ANY CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE DISCOVERED, EITHER ON THE CONSTRUCTION DOCUMENTS OR THE FIELD CONDITIONS, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY AND SHALL NOT COMMENCE OPERATION UNTIL THE CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE RESOLVED.

Know what's Below.  
Call before you dig.

24 HOUR CONTACT:  
DAVID SCARBROUGH  
TEL: 770-305-5414

N

30 0 30 60 90  
SCALE IN FEET

Engineers  
Planners  
Surveyors

# CROY

ENGINEERING

200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
PHONE: (770) 971-5407 FAX: (770) 971-0620

## FIRE STATION NO. 4

DESIGN PHASE

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

NO.	REVISION REFERENCE	DATE
1	ADDENDUM 1	05/29/2018

SEAL

SHEET TITLE  
UTILITY PLAN

DRAWN BY	CHECKED BY
SMM	LCC

SCALE	ISSUE DATE
1"=30'	04/30/2018

PROJECT NUMBER
1788.000

DRAWING NUMBER
C-300

SHEET 5 of 25





LEGEND

EXISTING UTILITIES

W

EX WATER LINE

EX FIRE HYDRANT

EX WATER METER

EX WATER VALVE

EX SANITARY SEWER

EX SS MANHOLE

EX WATER VALVE

EX UTIL POLE

PROPOSED UTILITIES

PROP. WATER LINE

PROP. FIRE HYDRANT

PROP. WATER METER

PROP. TAPPING VALVE

PROP. FDC

PROP. SANITARY SEWER

PROP. SS MANHOLE

PROP. SS CLEANOUT

PROP. UTIL POLE

PROP. UG ELEC. LINE

PROP. GAS SERVICE LINE

THERE MAY BE ADDITIONAL UTILITIES THAN THOSE SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR LOCATIONS SHOWN AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS AND NECESSARY INVERTS OF ALL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE DEPARTMENT OF THE UTILITY COMPANIES. THE CONTRACTOR IS RESPONSIBLE FOR THE NOTIFICATIONS AND LIAISON WITH UTILITY COMPANIES IN THE PROCESS OF LOCATING, RELOCATING AND TIE-IN TO THE PUBLIC UTILITIES.

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GEORGIA811

Utilities Protection Center, Inc.

Know what's Below.  
Call before you dig.

24 HOUR CONTACT:  
DAVID SCARBROUGH  
TEL: 770-305-5414

500

0

50

100

150

SCALE IN FEET

FIRE STATION NO. 4

DESIGN PHASE

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

1	ADDENDUM 1	05/29/2018
NO.	REVISION REFERENCE	DATE

SEAL

REGISTERED PROFESSIONAL ENGINEER  
No. 28514  
FAYETTE COUNTY  
CARL CARNEY

SHEET TITLE

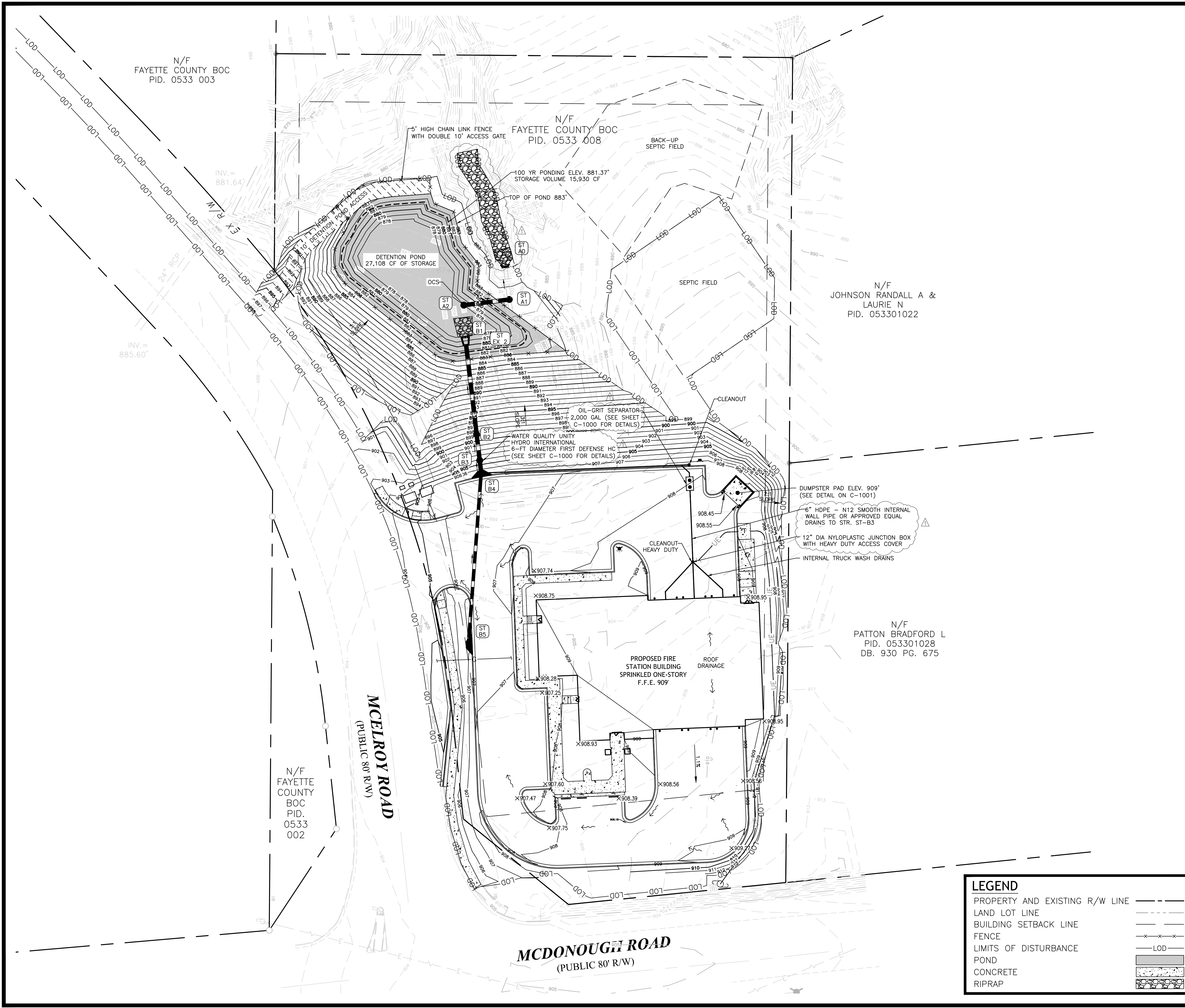
UTILITY PLAN

DRAWN BY	CHECKED BY
SMM	LCC
SCALE	ISSUE DATE
1"=50'	05/29/2018
PROJECT NUMBER	
1788.000	
DRAWING NUMBER	
C-301	

SHEET 6 of 25

Drawing Location: P:\1788 K.A. Odham Design\1788.000 Fire Station No. 4\Engineering\Design\1788.000\_Plan.dwg  
Drawing Scale: 1"=50'  
Plot Scale: 1"=50'  
Drawing Rotation: 0.0°  
Plot Style: Design.ctb  
Plotted By: Scott McElroy on 5/29/2018, 6:52 AM





### GRADING AND PAVING NOTES

- EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- AREAS TO BE GRADED ARE TO BE STRIPPED, CLEARED AND GRUBBED PRIOR TO COMMENCING GRADING OPERATIONS. TOPSOIL SHALL BE STOCKPILED IN SUCH A MANNER AS TO NOT CONTAMINATE STRUCTURAL FILL.
- NO SOIL FOUND ON THE SITE OR TRANSPORTED TO THE SITE WHICH IS CONTAMINATED SHALL BE USED FOR FILL, BACKFILL OR LANDSCAPING TOPSOIL.
- ONCE DESIGNATED AREAS ARE STRIPPED, AT GRADE AREAS AND AREAS THAT ARE TO RECEIVE FILL SHALL BE PROOFROLLED WITH A HEAVILY LOADED DUMP TRUCK OR OTHER RUBBER-TIRED CONSTRUCTION EQUIPMENT. ANY MATERIAL THAT DEFLECTS EXCESSIVELY, WHICH CANNOT BE DENSIFIED BY CONTINUED ROLLING SHOULD BE UNDERCUT TO A MORE STABLE SOIL BEFORE PLACING FILL MATERIAL.
- ALL FILL MATERIAL SHOULD BE PLACED IN THIN, HORIZONTAL LIFTS (MAXIMUM 8-INCH) AND COMPACTED TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698). THE UPPER 12 INCHES OF SOIL BENEATH PAVEMENTS AND SLABS-ON-GRADE SHOULD BE COMPACTED TO AT LEAST 98 PERCENT. IN CONFINED AREAS, SUCH AS UTILITY TRENCHES OR BEHIND RETAINING WALLS, PORTABLE EQUIPMENT AND THINNER FILL LIFTS (3 TO 4 INCHES) MAY BE NECESSARY. FILL MATERIAL USED IN STRUCTURAL AREAS SHOULD HAVE A TARGET MAXIMUM DRY DENSITY OF 95 pcf, OR GREATER. IF LIGHTER WEIGHT FILL MATERIALS ARE USED, A GEOTECHNICAL ENGINEER SHOULD BE CONSULTED.
- MAXIMUM PROPOSED CUT AND FILL SLOPES SHALL BE 2' HORIZONTAL: 1' VERTICAL.
- ALL CATCH BASINS, DROP INLETS OR OTHER DRAINAGE STRUCTURES SHALL COMPLY WITH THE LATEST STANDARDS APPROVED AND PROMULGATED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION IN STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES, LATEST EDITION.
- CONCRETE PIPE: FLAT BOTTOM AND CIRCULAR PIPE SECTIONS SHALL BE LAID IN A PREPARED TRENCH WITH SOCKET ENDS POINTING UPSTREAM. SECTIONS MAY BE JOINED BY BITUMINOUS PLASTIC CEMENT JOINTS, RUBBER TYPE GASKET JOINTS, "O" RING GASKET JOINTS, OR PRE-FORMED PLASTIC GASKET JOINTS. IN BITUMINOUS PLASTIC CEMENT JOINTS, THE ANNULAR SPACE SHALL BE FILLED WITH JOINT MATERIAL, AND THE INSIDE OF EACH JOINT WIPED SMOOTH. RUBBER-TYPE, "O" RING, AND PRE-FORMED PLASTIC GASKET JOINTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- TRENCH CONSTRUCTION FOR STORM DRAINAGE PIPE SHALL BE IN ACCORDANCE WITH STATE HIGHWAY STANDARD 1030D (OR MOST CURRENT).
- THE DEPARTMENT OF TRANSPORTATION, STATE OF GEORGIA STANDARD PIPE CULVERTS NUMBER 1030D, LATEST EDITION SHALL BE USED IN DETERMINING THE CLASS OF REINFORCED CONCRETE PIPE OR GAUGE OF CORRUGATED STEEL PIPE OR TYPE 2 CORRUGATED ALUMINUM PIPE UNDER FILL AND THE METHOD OF BACKFILLING.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING.
- ALL SIDEWALK CROSS SLOPES ARE 2.00% AWAY FROM THE BUILDING.

### EARTHWORK DATA

THE FOLLOWING EARTHWORK QUANTITY IS FOR PERMITTING PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY HIS OWN QUANTITIES. EARTHWORK QUANTITIES DO NOT TAKE INTO CONSIDERATION TOP SOIL, PAVING, AND UNSUITABLE MATERIAL.

CUT: 3,333 CUBIC YARDS  
FILL: 10,318 CUBIC YARDS  
NET: 6,985 CUBIC YARDS OF FILL

### FEMA STATEMENT

THIS PROPERTY IS NOT LOCATED IN A 100 YEAR FLOOD HAZARD AREA BASED ON THE FLOOD INSURANCE RATE MAP FOR THIS AREA. THE MAP NUMBER FOR THIS AREA IS 13113C0108E AND THE DATE OF SAID MAP IS SEPTEMBER 26, 2008.

IF ANY CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE DISCOVERED, EITHER ON THE CONSTRUCTION DOCUMENTS OR THE FIELD CONDITIONS, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY AND SHALL NOT COMMENCE OPERATION UNTIL THE CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE RESOLVED.

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Call before you dig.

24 HOUR CONTACT:  
DAVID SCARBROUGH  
TEL: 770-305-5414

### LEGEND

PROPERTY AND EXISTING R/W LINE ---  
LAND LOT LINE - - - - -  
BUILDING SETBACK LINE - - - - -  
FENCE - x - x - x  
LIMITS OF DISTURBANCE - LOD  
POND  
CONCRETE  
RIPRAP

30 0 30 60 90

SCALE IN FEET

Engineers  
Planners  
Surveyors

# CROY

ENGINEERING

200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
PHONE: (770) 971-5407 FAX: (770) 971-0620

FIRE STATION NO. 4

DESIGN PHASE

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

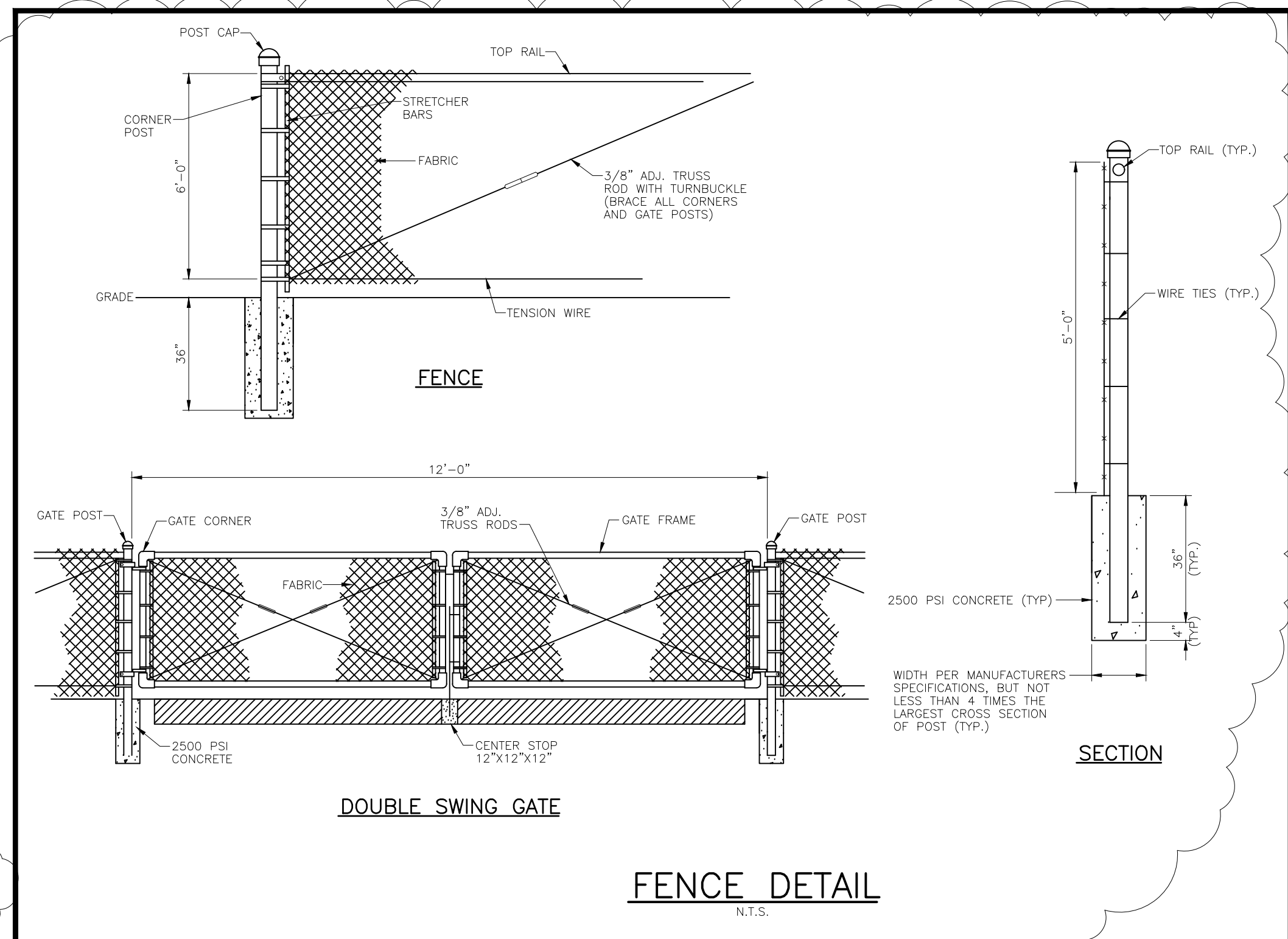
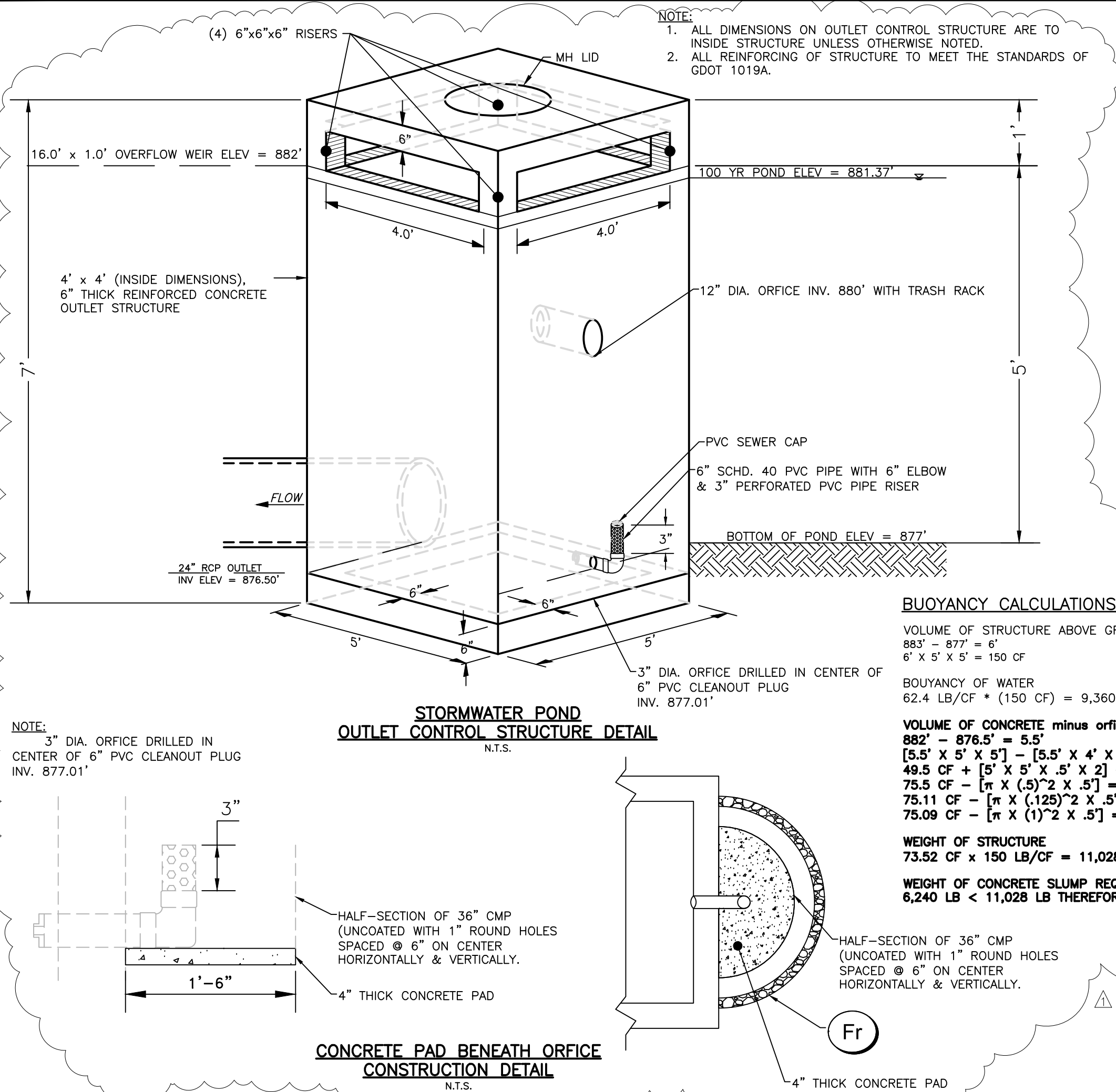
1	ADDENDUM 1	05/29/2018
NO.	REVISION REFERENCE	DATE

SEAL

SHEET TITLE  
GRADING AND DRAINAGE PLAN

DRAWN BY SMM	CHECKED BY LCC
SCALE 1"=30'	ISSUE DATE 04/30/2018
PROJECT NUMBER 1788.000	
DRAWING NUMBER C-400	
SHEET 7 of 25	





## GRADING AND PAVING NOTES

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## LEGEND

PROPERTY AND EXISTING R/W LINE	---
LAND LOT LINE	----
BUILDING SETBACK LINE	----
FENCE	xxxxx
LIMITS OF DISTURBANCE	LOD
POND	■■■■■
RIPRAP	■■■■■

## FEMA STATEMENT

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**GEORGIA811**  
Utilities Protection Center, Inc.

Know what's below.  
Call before you dig.

24 HOUR CONTACT:  
DAVID SCARBROUGH  
TEL: 770-305-5414



Engineers  
Planners  
Surveyors

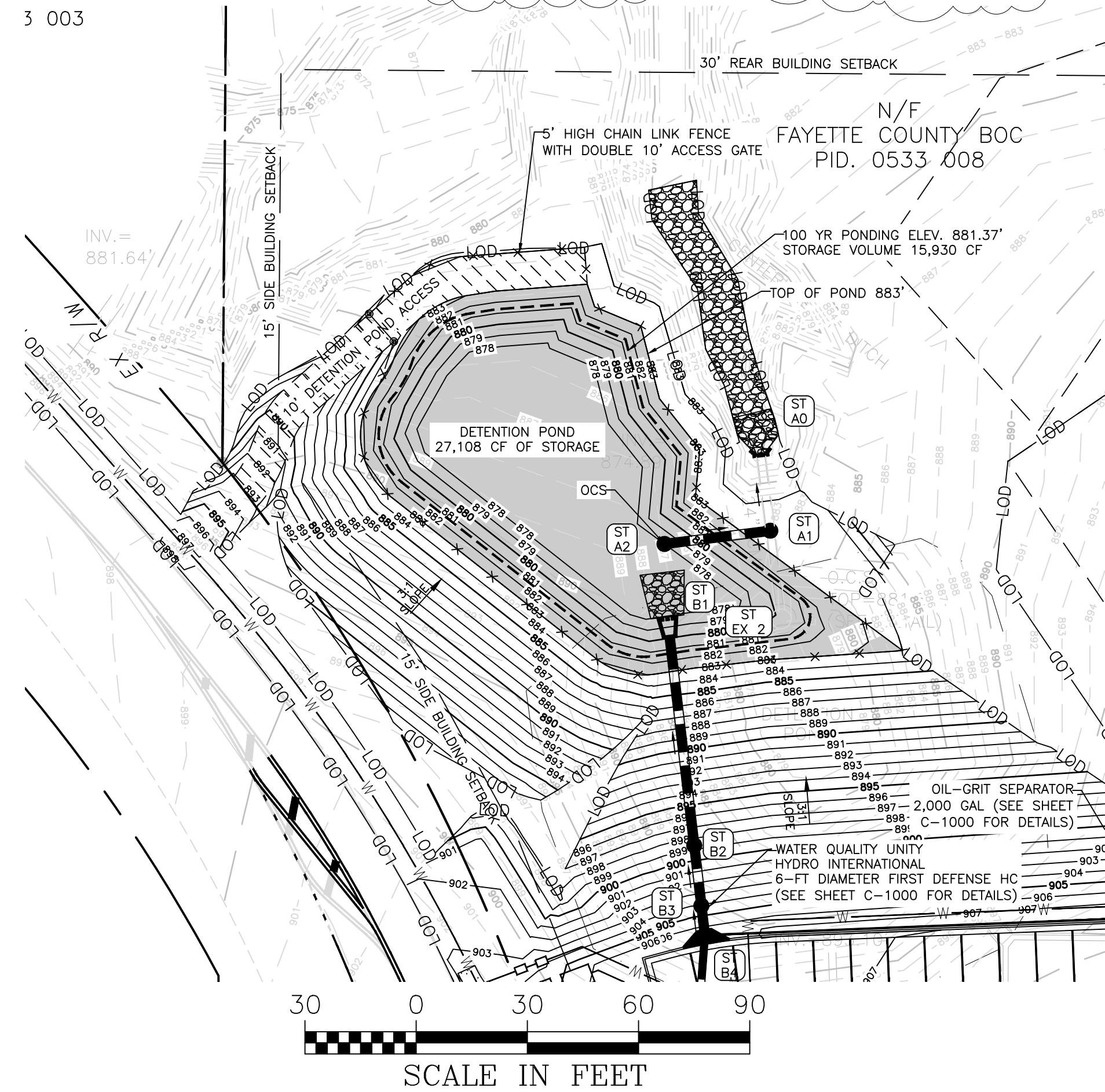
**CROY**  
ENGINEERING

200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
PHONE: (770) 971-5407  
FAX: (770) 971-0620

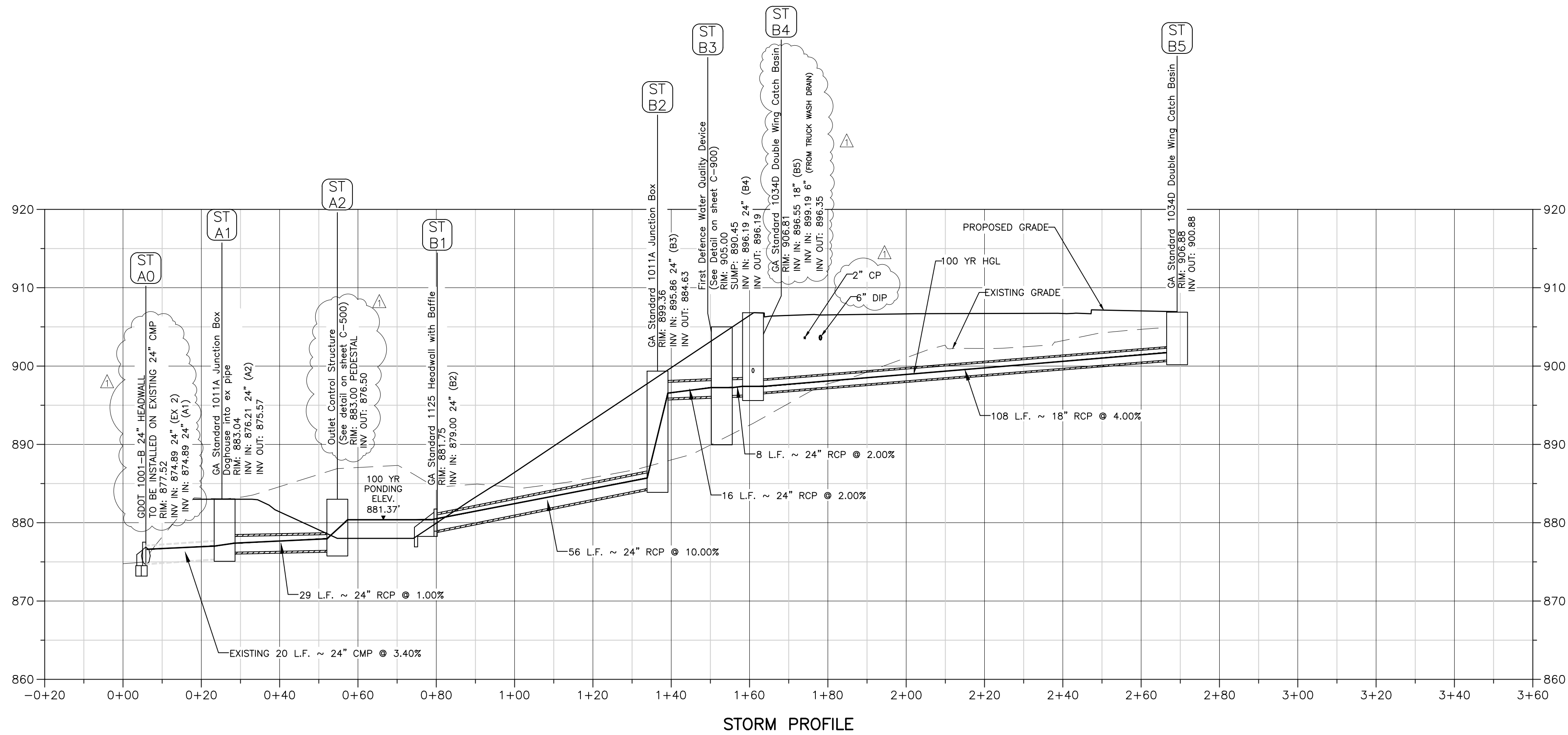
## FIRE STATION NO. 4

DESIGN PHASE

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

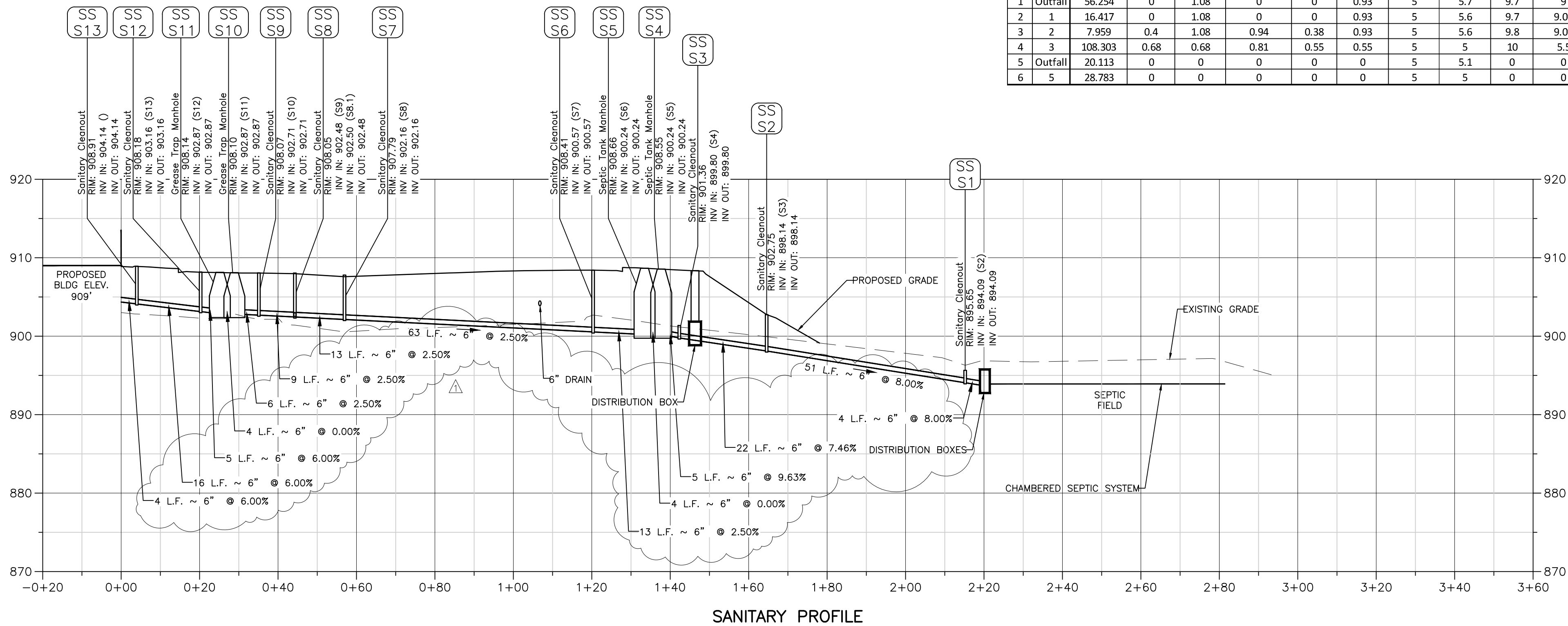






STORM PROFILE

100 YEAR PIPE CHART																			
Line	ToLine	LineLength (ft)	Incr.Area (ac)	TotalArea (ac)	RunoffCoeff. (C)	IncrC x A	TotalC x A	InletTime (min)	TimeConc (min)	RfFallInt (in/hr)	TotalRunoff (cfs)	AdnlFlow (cfs)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)	Inv ElevUp (ft)
1	Outfall	56.254	0	1.08	0	0	0.93	5	5.7	9.7	9	0	9	77.52	4.37	24	10.01	879	884.63
2	1	16.417	0	1.08	0	0	0.93	5	5.6	9.7	9.03	0	9.03	34.74	7.28	24	2.01	895.86	896.19
3	2	7.959	0.4	1.08	0.94	0.38	0.93	5	5.6	9.8	9.05	0	9.05	34.74	5.27	24	2.01	896.19	896.35
4	3	108.303	0.68	0.68	0.81	0.55	0.55	5	5	10	5.5	0	5.5	22.75	5.05	18	4	896.55	900.88
5	Outfall	20.113	0	0	0	0	0	5	5.1	0	0	0	16	45.05	6.08	24	3.38	874.89	875.57
6	5	28.783	0	0	0	0	0	5	5	0	0	16	16	24.59	7.47	24	1.01	876.21	876.5
																		877.39	877.94
																		883.04	883.36



SANITARY PROFILE

LEGEND

EXISTING GRADE

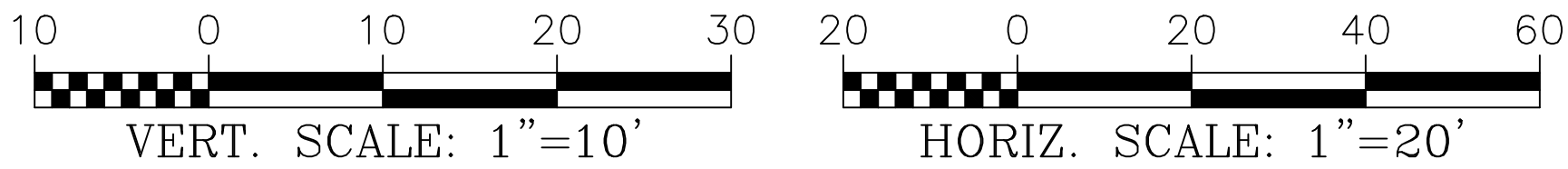
PROPOSED GRADE

100 YEAR HGL

---

---

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24 HOUR CONTACT:  
DAVID SCARBROUGH  
TEL: 770-305-5414

FIRE STATION NO. 4

DESIGN PHASE  
LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

CROY  
ENGINEERING

Engineers  
Planners  
Surveyors

200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
PHONE: (770) 971-5407 FAX: (770) 971-0620

SHEET TITLE  
PROFILES

DRAWN BY  
SMM

CHECKED BY  
LCC

SCALE  
SEE SHEET

ISSUE DATE  
04/30/2018

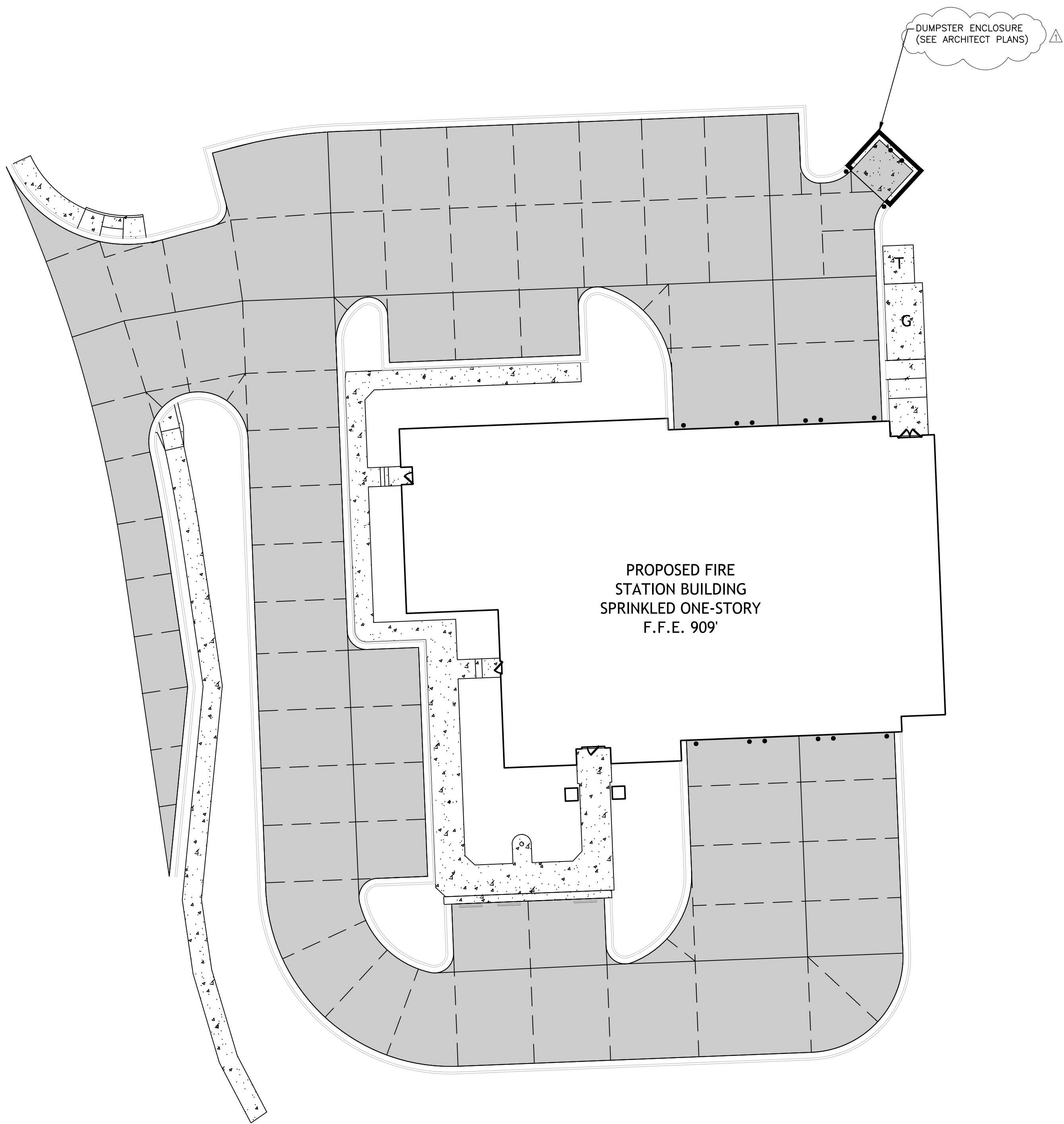
PROJECT NUMBER  
1788.000

DRAWING NUMBER

C-600

SHEET 9 of 25





CONCRETE PAVING NOTES

1. SEE SHEET C-1001 FOR DETAILS.
2. CONTRACTOR IS TO SUBMIT MIX DESIGN FOR APPROVAL.
3. CONTRACTOR IS TO PREPARE AND SUBMIT FOR APPROVAL ALL MATERIAL FOR CONCRETE JOINTS.

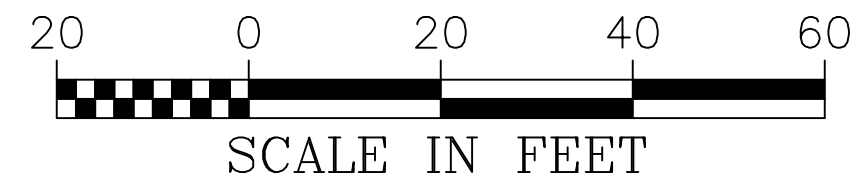
LEGEND

CONCRETE  
CONCRETE PAVING  
CONTRACTION JOINT  
EXPANSION JOINT

IF ANY CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE DISCOVERED, EITHER ON THE CONSTRUCTION DOCUMENTS OR THE FIELD CONDITIONS, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY AND SHALL NOT COMMENCE OPERATION UNTIL THE CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE RESOLVED.



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TEL: 770-305-5414



Engineers  
Planners  
Surveyors

**CROY**  
ENGINEERING

200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
PHONE: (770) 971-5407 FAX: (770) 971-0620

FIRE STATION NO. 4

DESIGN PHASE  
LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

NO.	REVISION REFERENCE	DATE
1	ADDENDUM 1	05/29/2018

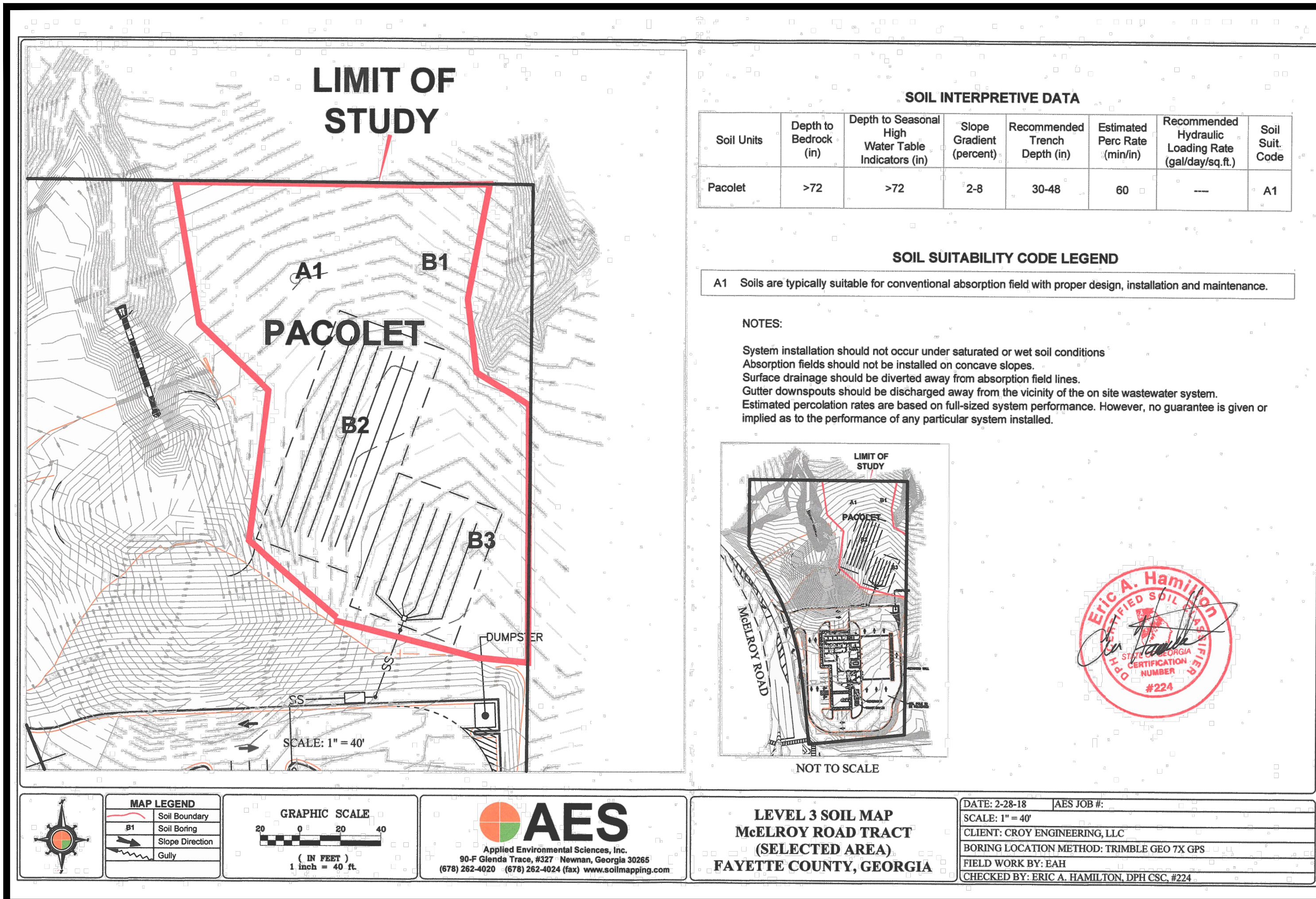


SHEET TITLE  
CONCRETE JOINT  
LAYOUT

DRAWN BY SMM	CHECKED BY LCC
SCALE 1"=20'	ISSUE DATE 04/30/2018

PROJECT NUMBER  
1788.000  
DRAWING NUMBER  
**C-700**  
SHEET 10 of 25



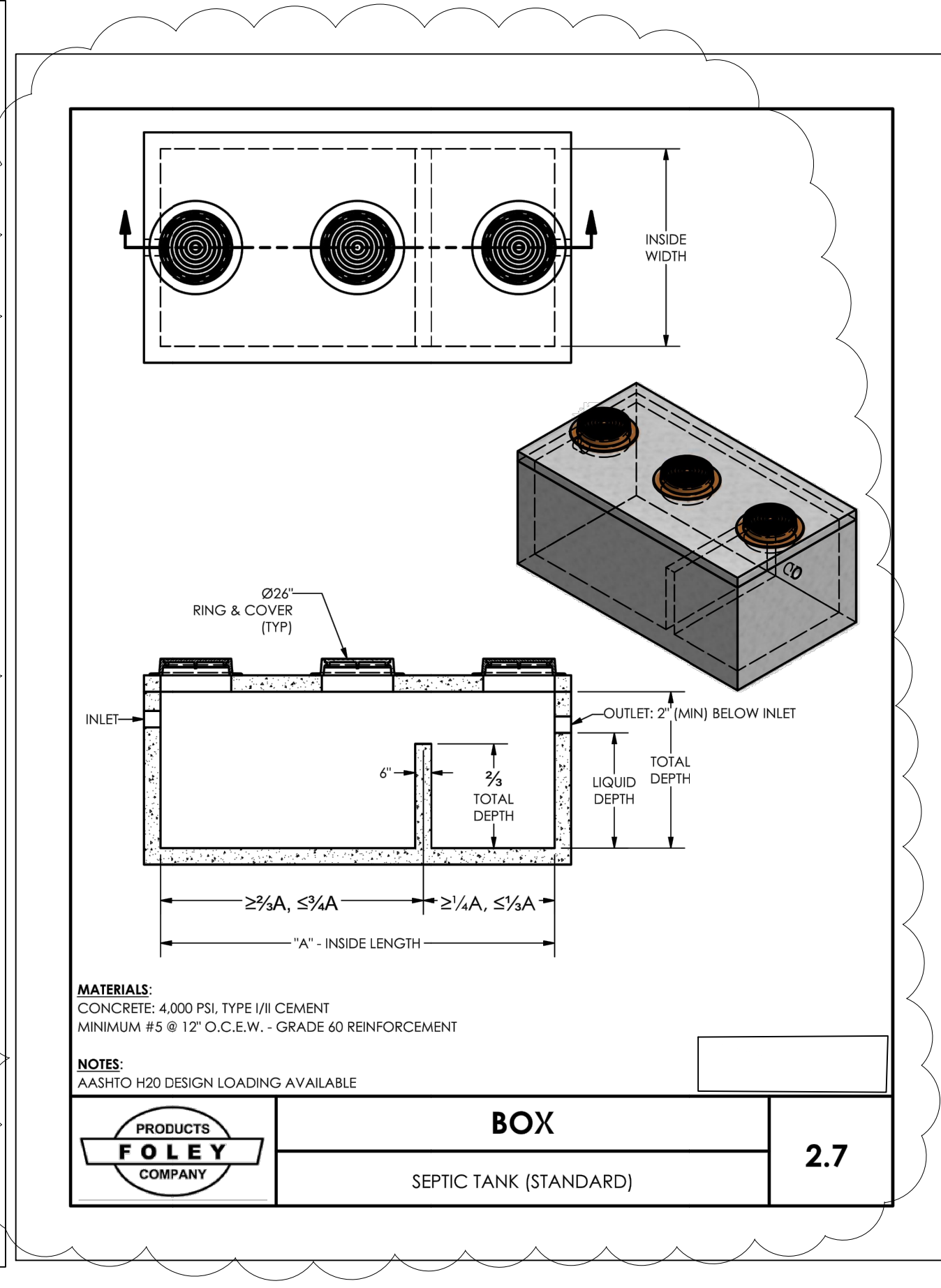
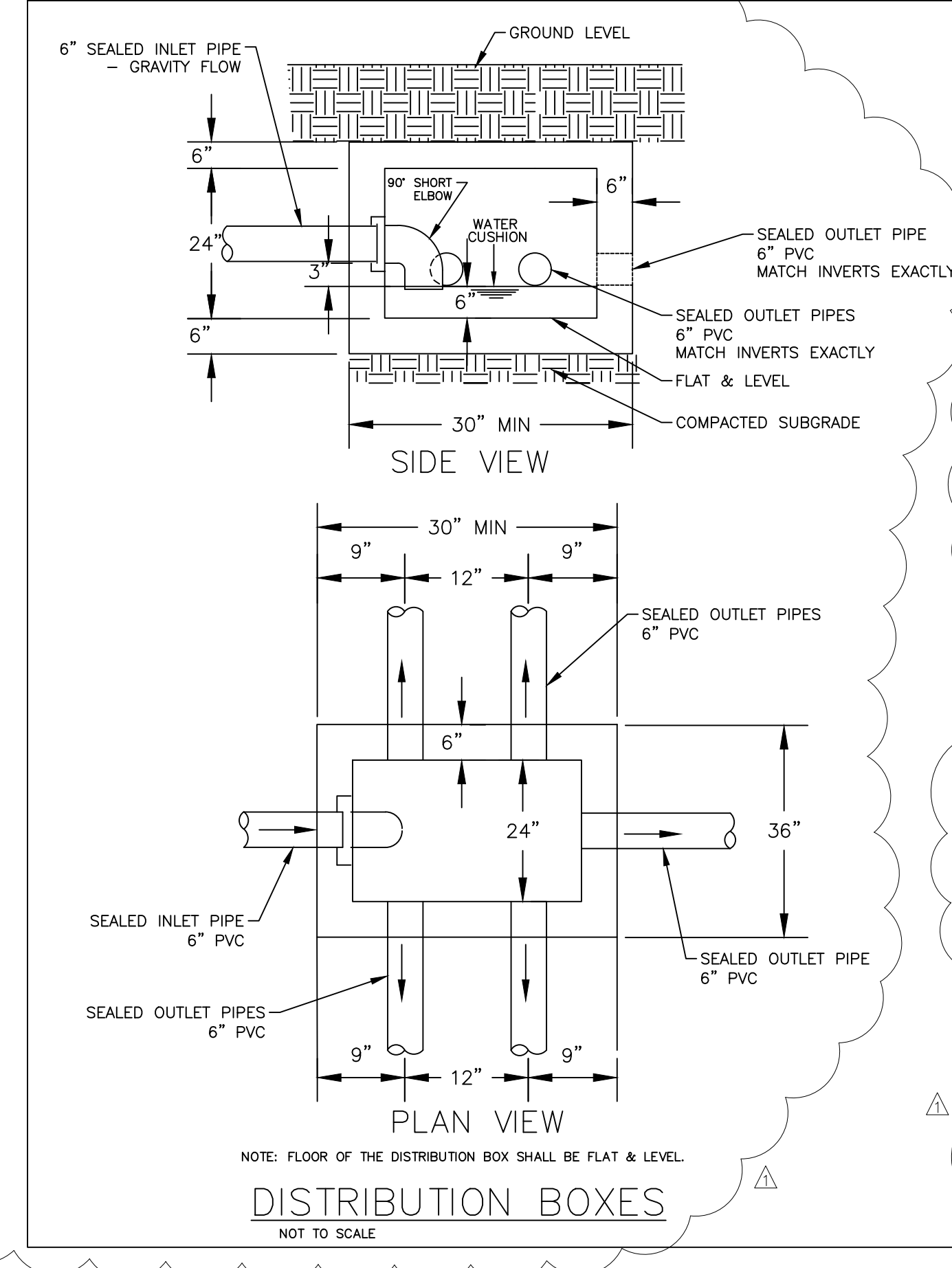
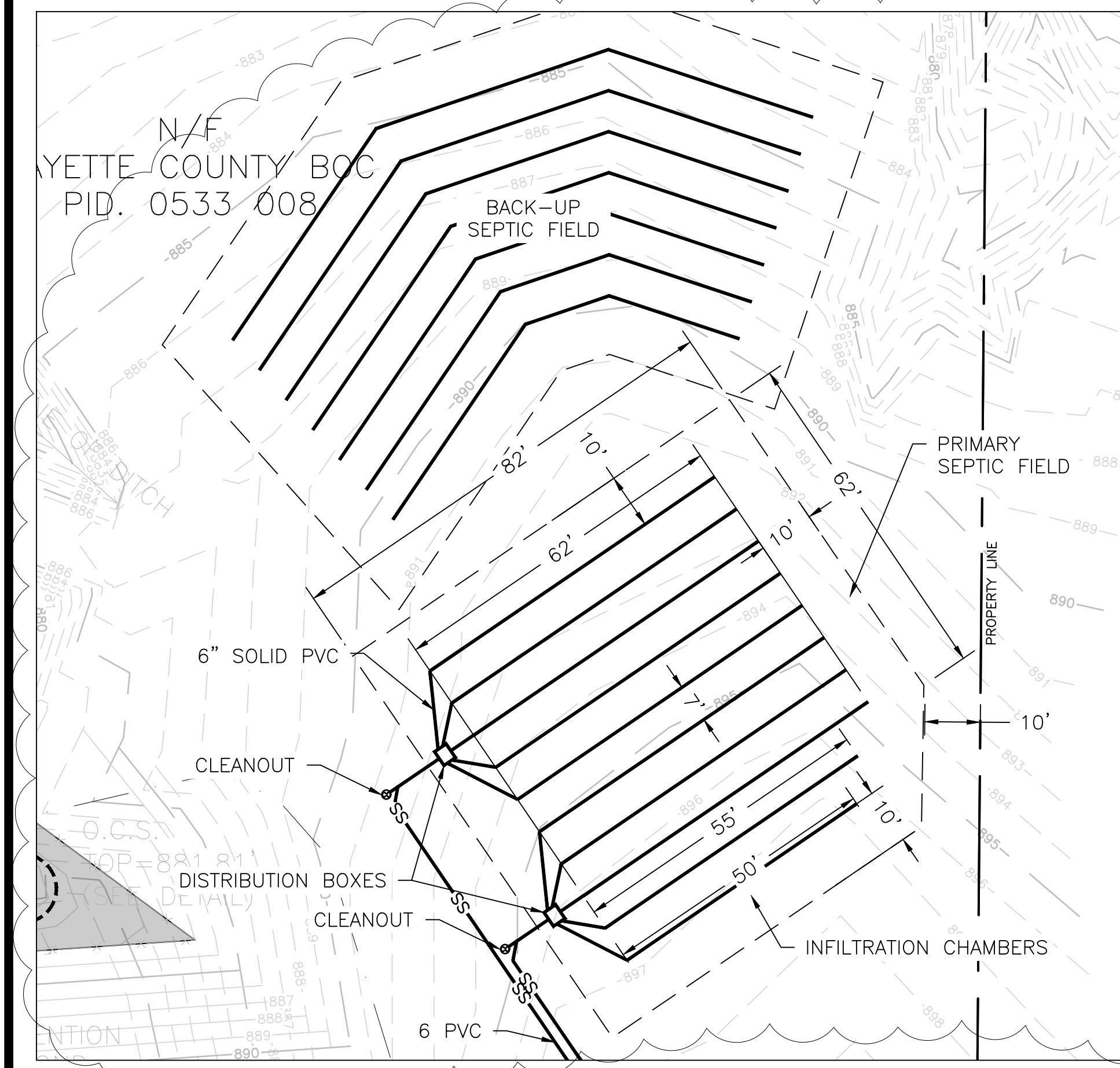


### CALCULATIONS

This project is located at the Northeast corner of McDonough Rd and McElroy Rd, in Land Lot 139 of the 5th District

#### Fire Station No. 4

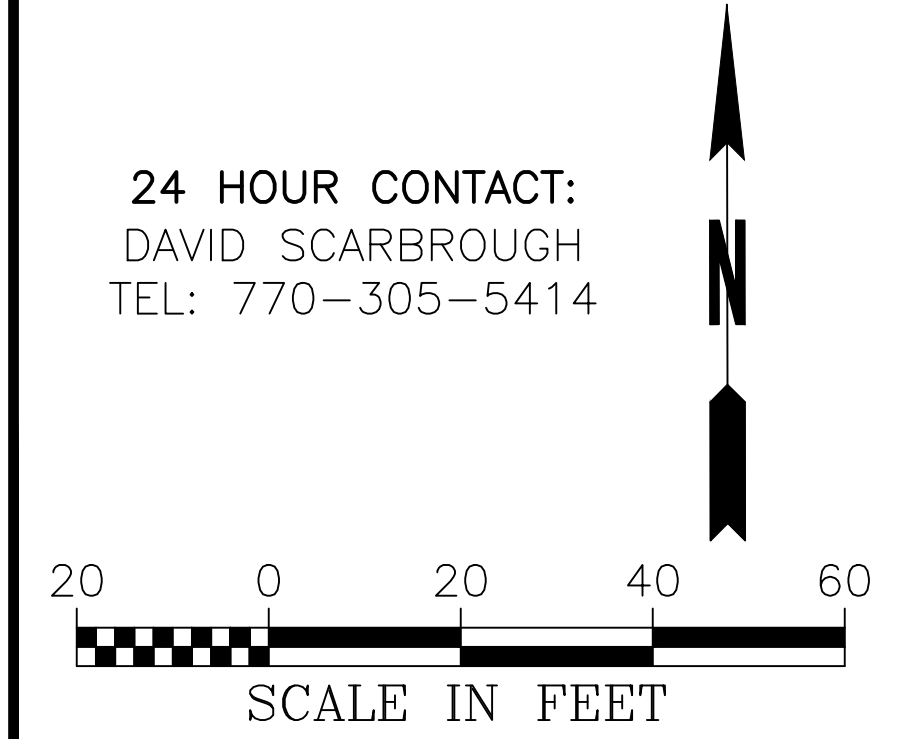
- Flow and Absorption Field
  - Sewerage Flow Rate:  
(Table JT-1: Workers Including Factory, Office, School, Commercial and Construction with showers and no Industrial Waste)  
With Kitchen Add  
2 Washing Machines  
35 gpd/person  
+5 gpd/person  
+1000 gpd/daily
  - Use approximately:  
10 people daily
  - Sewage Flow:  
(40)(10) + (1000) = 1,400 gpd
  - Length of Line  
Using Fayetteville County Minimum Percolation Rate of 60 minutes per inch from table DT-1 the factor is 1.549 sq.ft./gal assuming a trench width of three (3) feet. The total length of line is L = (1.549)(Flow gpd)/3
  - L = (1.549)(1,400)/3  
L = 722.867 L.F.  
Use L = 730 L.F. for conventional System
  - According to the Department of Public Health's Manual for On-Site Sewage Management System a 35% reduction in the absorption trench length for Non-Conventional On-Site Sewage Management Systems. Therefore, use the L = 480 L.F. for the chambered system. Use L = 730 L.F. for the conventional back up septic field system.
  - Per request of Fayette County Fire Department, Use 600' of Chambered system.
- Septic Tank  
The design of the septic tank shall be based on a capacity equal to a 24 hour retention, but not less than 750 gallon minimum.  
  
Based on a daily flow rate of 1,400 gpd, we recommend using a 2,000 gallon septic tank.
- Infiltration Chambered system shall be installed per manufacturer's standards.



THERE MAY BE ADDITIONAL UTILITIES THAN THOSE SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR LOCATIONS SHOWN AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS AND NECESSARY INVERTS OF ALL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE DEPARTMENT OF THE UTILITY COMPANIES. THE CONTRACTOR IS RESPONSIBLE FOR THE NOTIFICATIONS AND LIAISON WITH UTILITY COMPANIES IN THE PROCESS OF LOCATING, RELOCATING AND TIE-IN TO THE PUBLIC UTILITIES.

NOTIFY FAYETTE COUNTY WATER AND SEWER DEPARTMENT 24 HOURS PRIOR TO ANY WATER OR SEWER CONSTRUCTION: (770-461-1146)5.

IF ANY CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE DISCOVERED, EITHER ON THE CONSTRUCTION DOCUMENTS OR THE FIELD CONDITIONS, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY AND SHALL NOT COMMENCE OPERATION UNTIL THE CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE RESOLVED.



**Engineers  
Planners  
Surveyors**

**CROY  
ENGINEERING**

200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
PHONE: (770) 971-5407 FAX: (770) 971-0620

**FIRE STATION NO. 4**

**DESIGN PHASE**

**LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA**

**1** ADDENDUM 1 05/29/2018

NO. REVISION REFERENCE DATE

SEAL

**GEORGIA**  
REGISTERED  
ENGINEER  
CARL CARL

**SHEET TITLE**  
SEPTIC FIELD PLAN

**DRAWN BY**  
SMM

**CHECKED BY**  
LCC

**SCALE**  
1"=20'

**ISSUE DATE**  
04/30/2018

**PROJECT NUMBER**  
1788.000

**DRAWING NUMBER**  
C-800

**SHEET 11 of 25**

Drawing Location: P:\1788 K.A. Odham Design\1788.000 Fire Station No. 4\Engineering\Design\1788.000\_Plan.dwg



Drawing Location: P:\1788 K. A. Urban Design\1788-000 Fire Station No. 4\Engineering\Design\1788-000\_Basis.dwg  
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 Drawing Title: Fire Station No. 4  
 Drawing Date: 5/29/2018  
 Drawing Scale: 1"=40'  
 Drawing Rotation: 359.9°  
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 Plotted By: Scott McHally on 5/29/2018, 8:52 AM  
 Plot Scale: 1"=40'

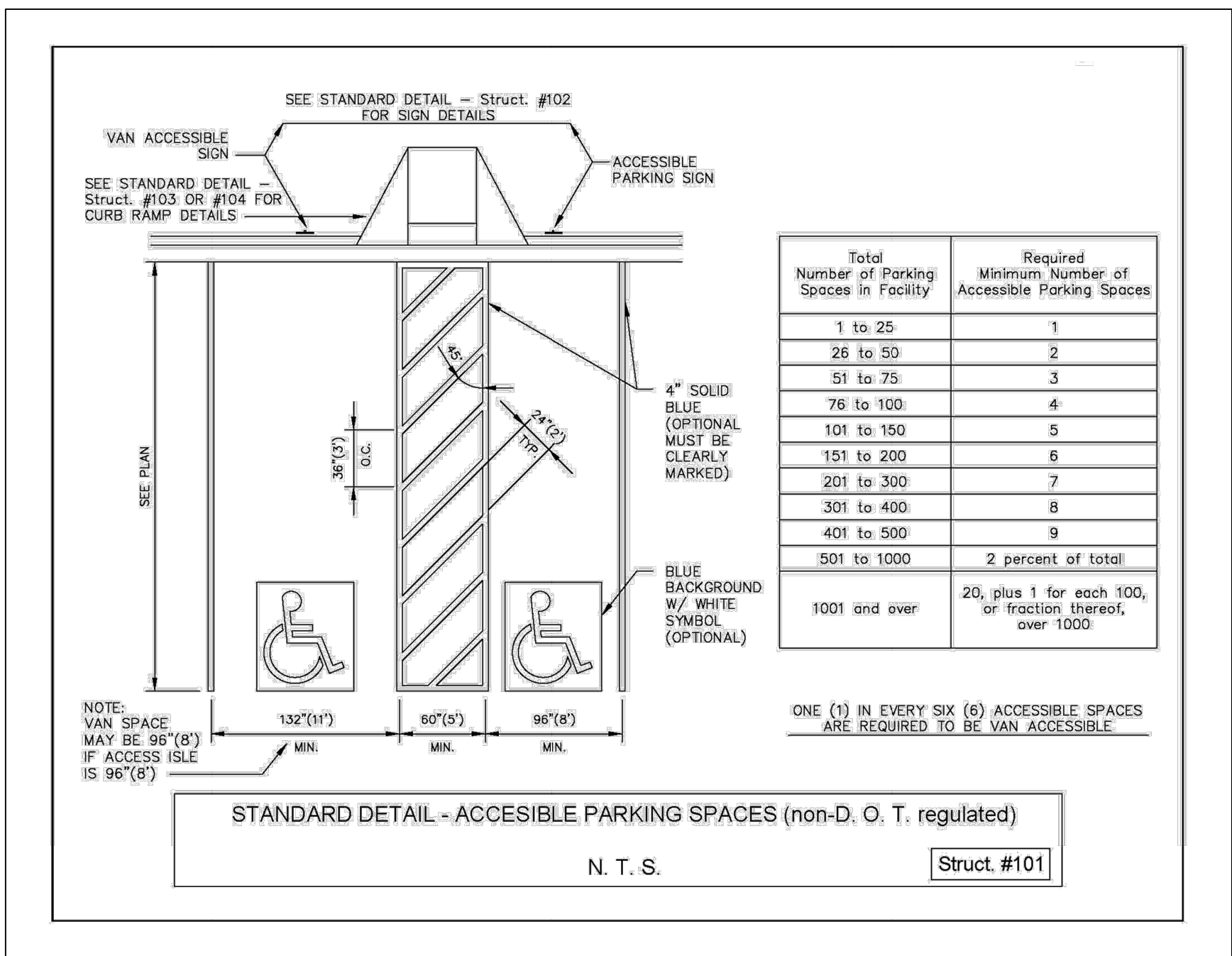
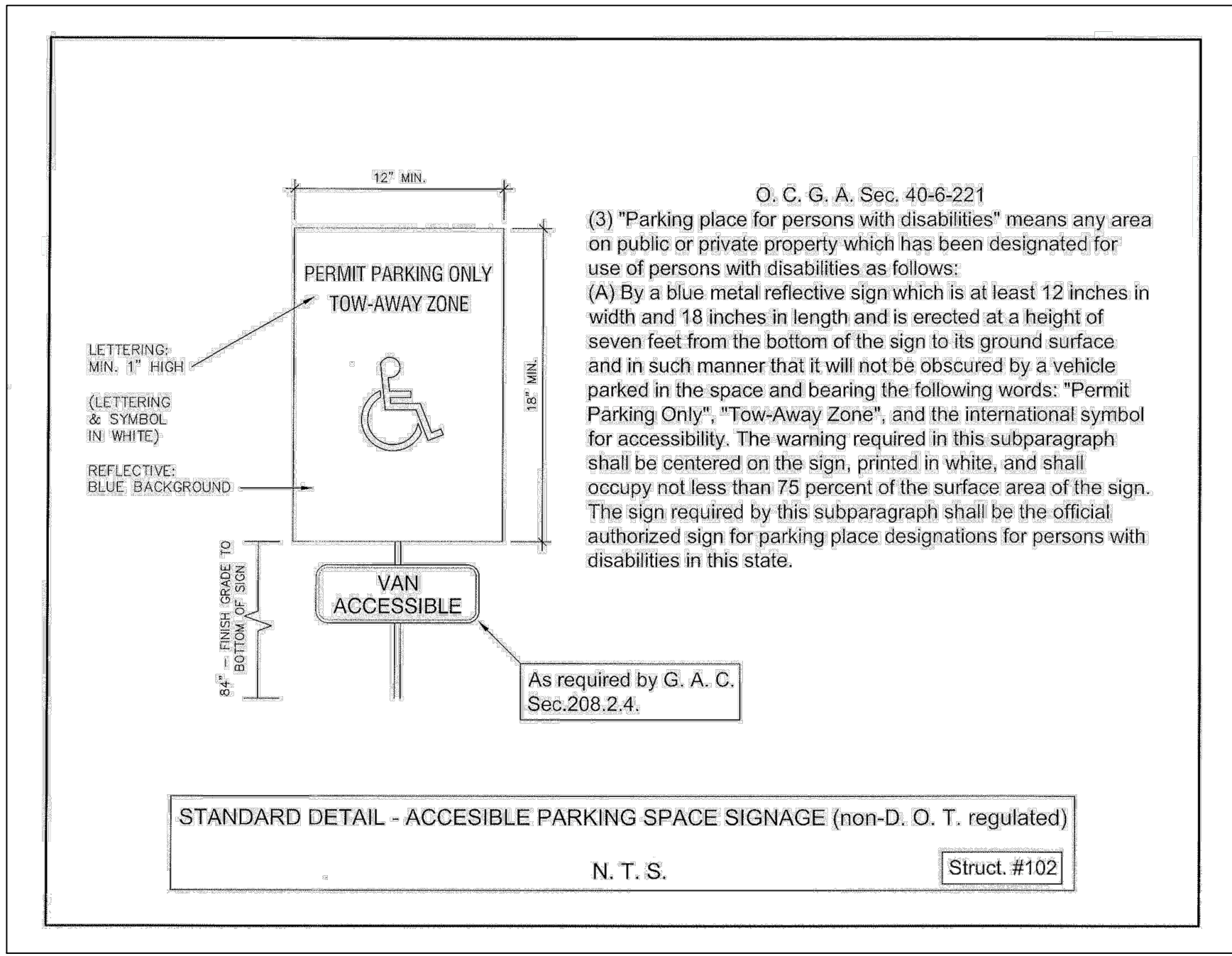
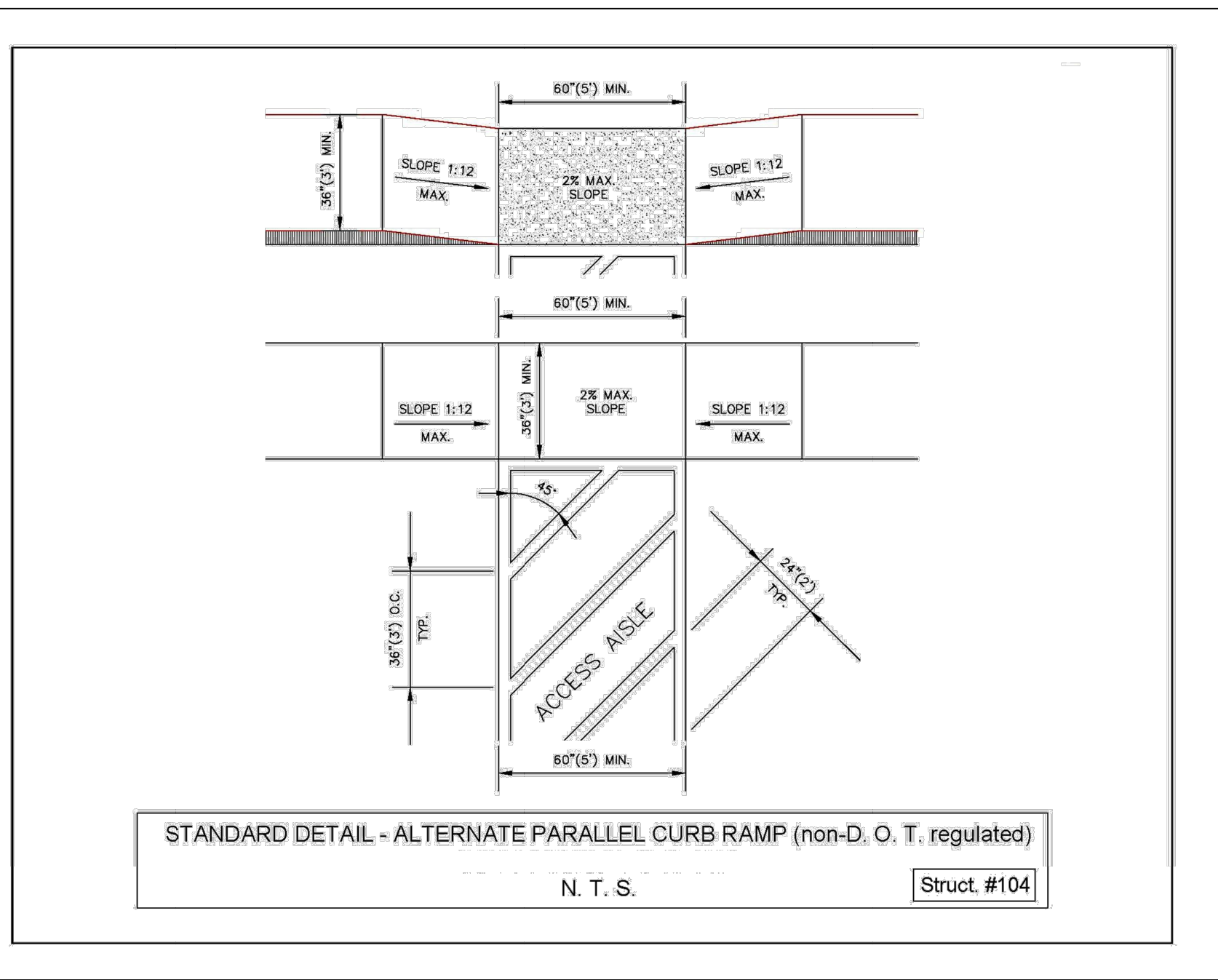
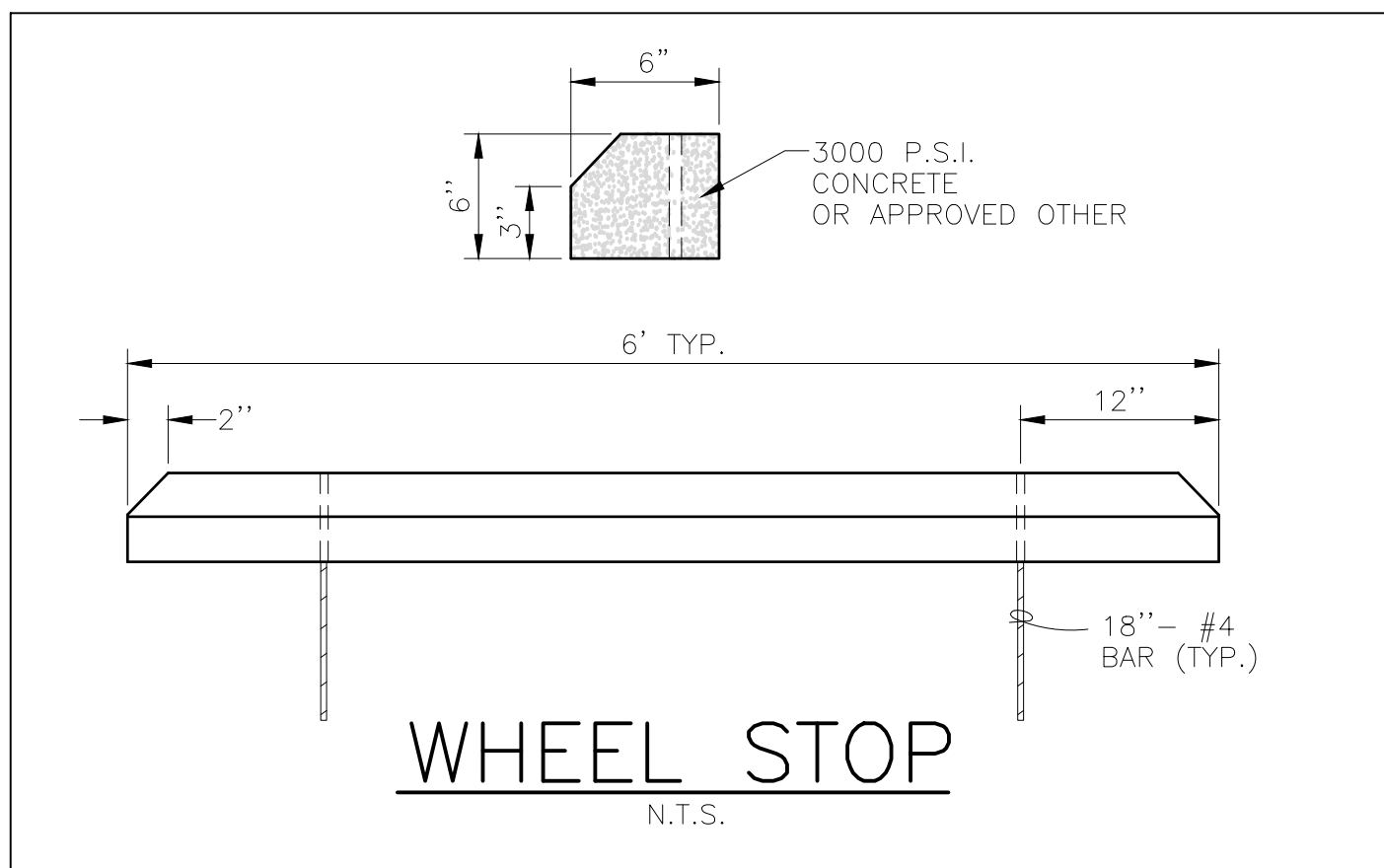
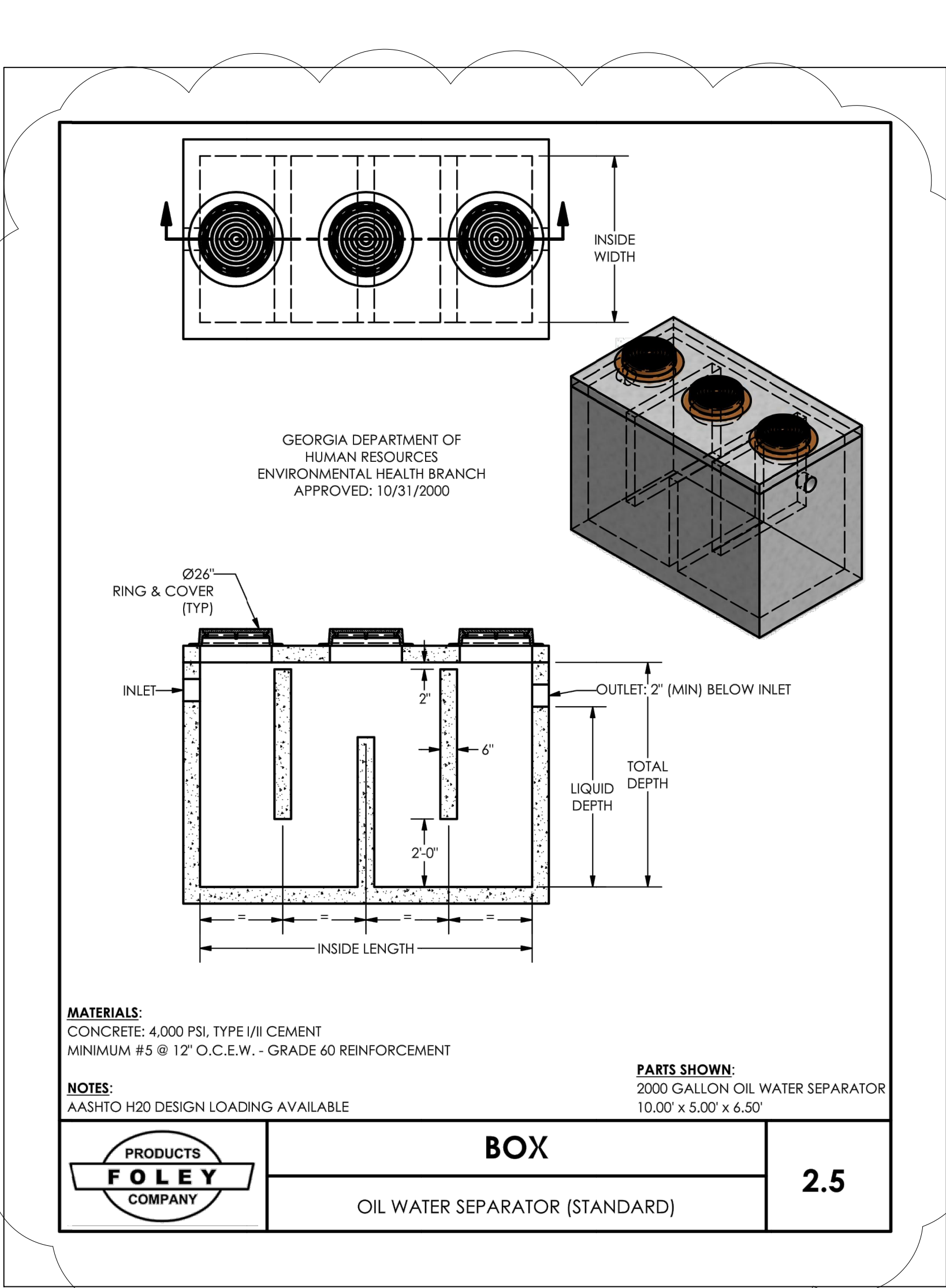
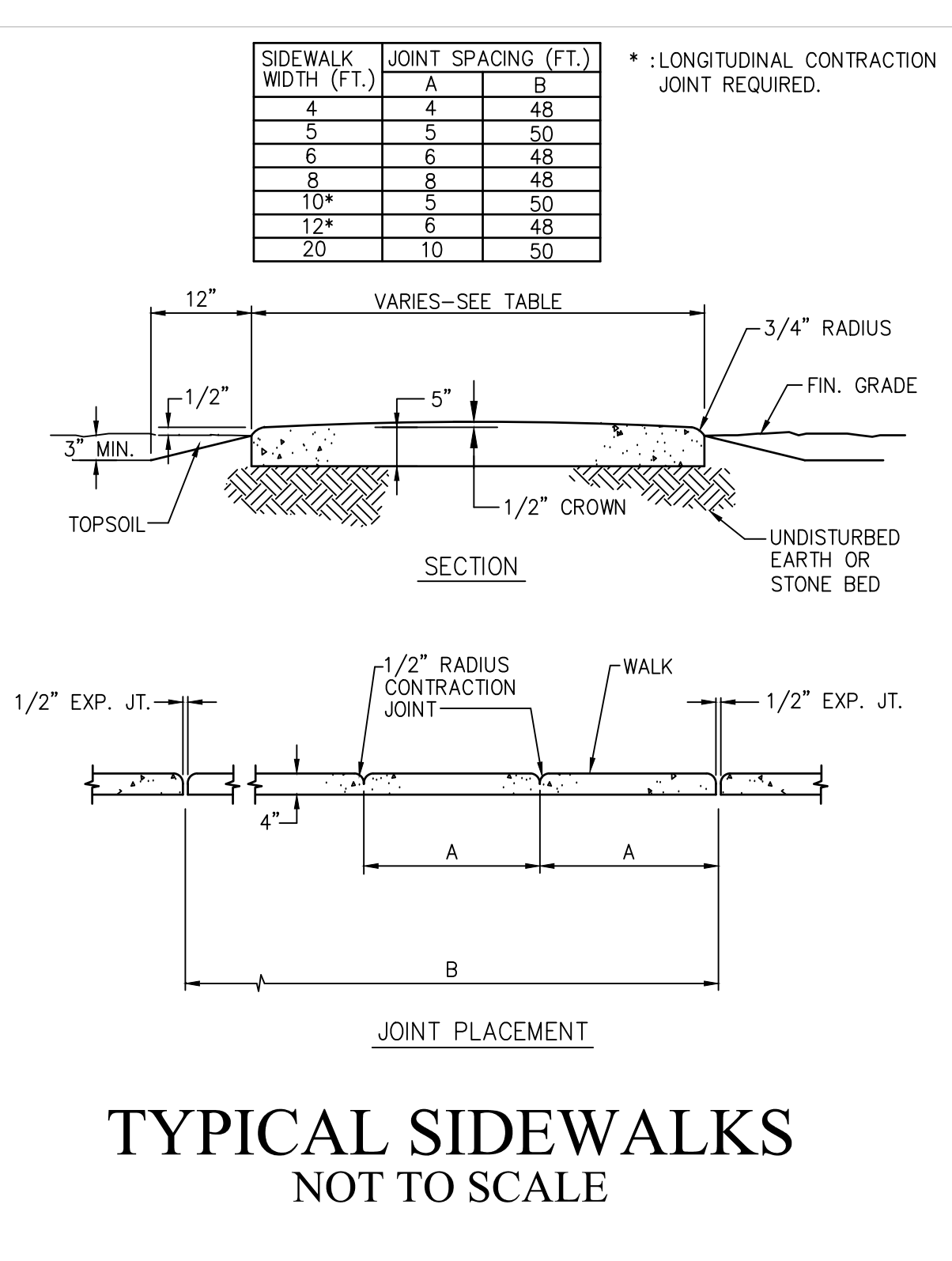
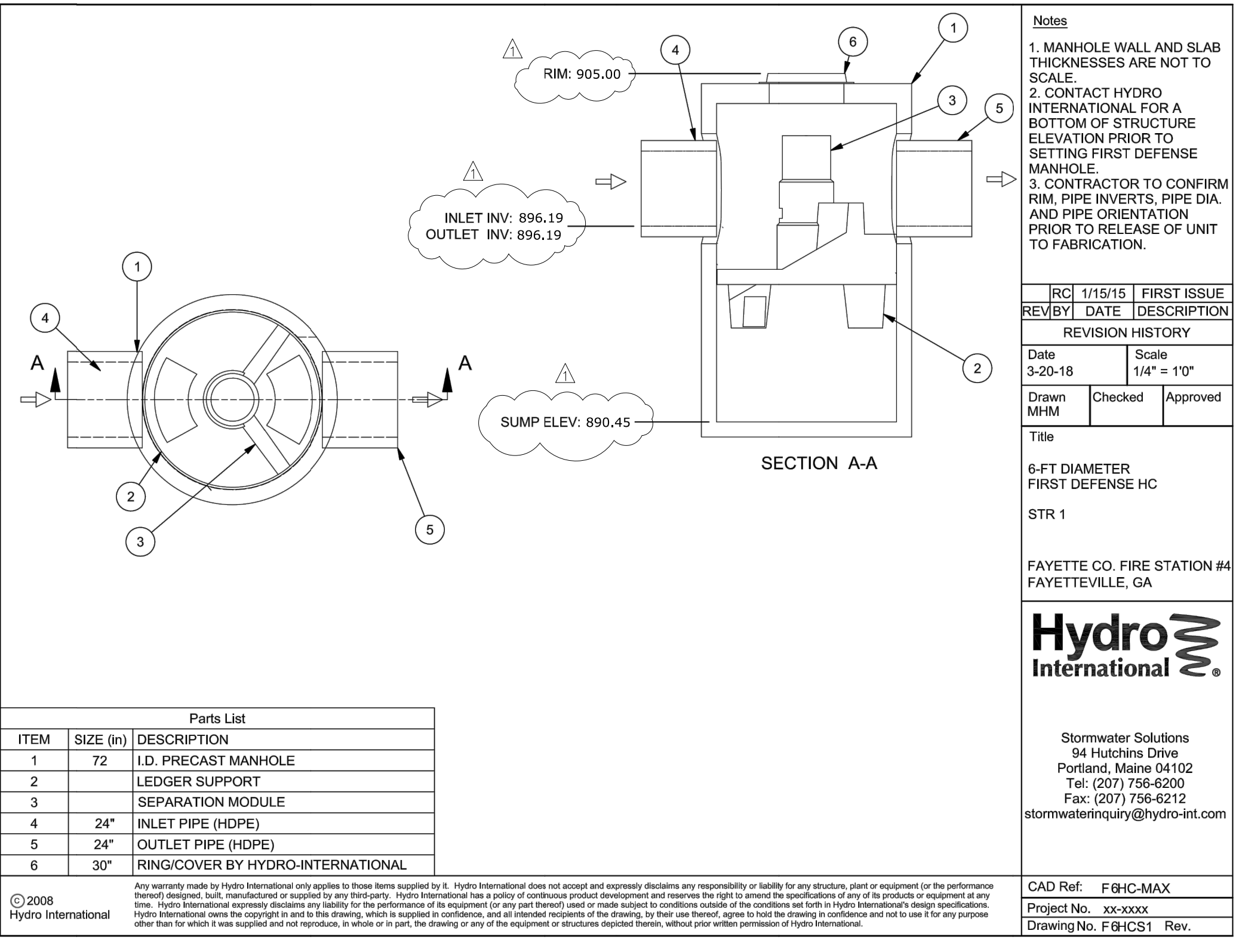












Engineers  
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**CROY**  
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200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
PHONE: (770) 971-5407 FAX: (770) 971-0620

FIRE STATION NO. 4

DESIGN PHASE

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

1 ADDENDUM 1 05/29/2018

NO. REVISION REFERENCE DATE

SEAL

REGISTERED PROFESSIONAL ENGINEER  
No. 19434  
CARL CARNEY

SHEET TITLE  
CONSTRUCTION  
DETAILS

DRAWN BY SMM CHECKED BY LCC

SCALE N.T.S. ISSUE DATE 04/30/2018

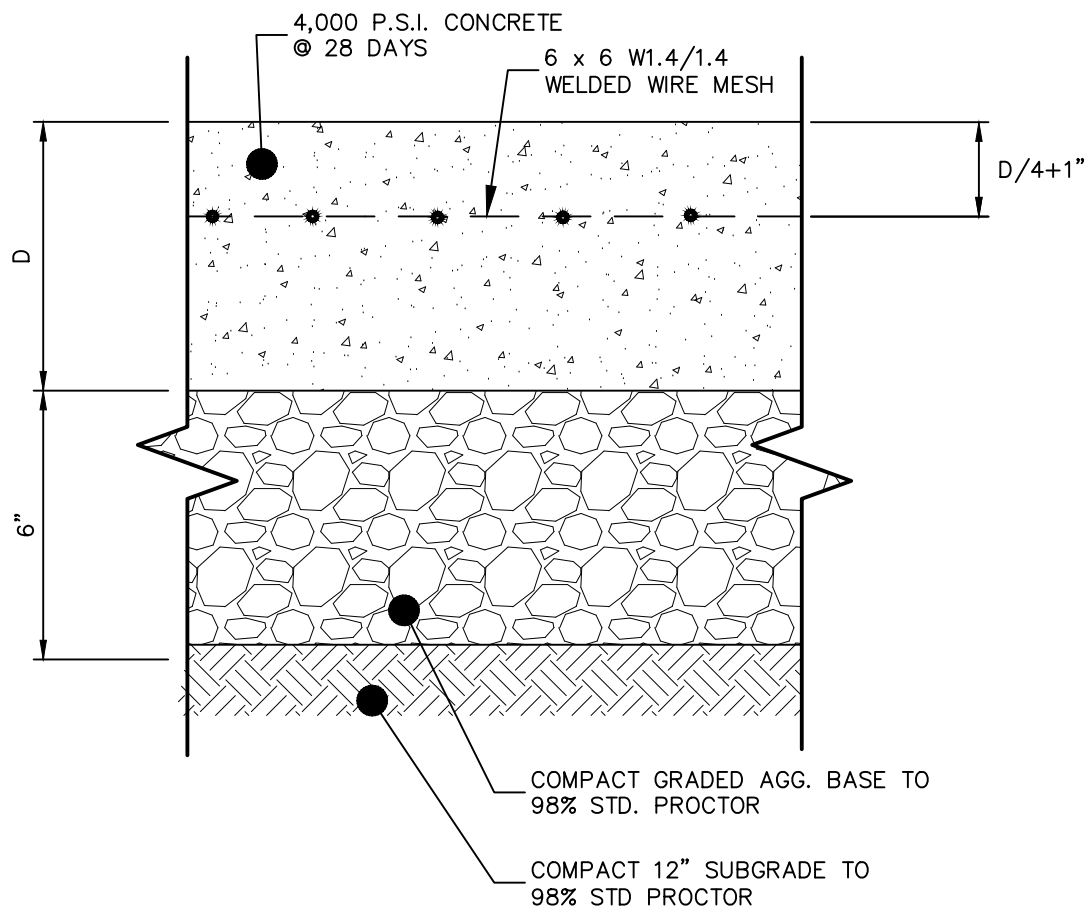
PROJECT NUMBER 1788.000

DRAWING NUMBER C-1000

SHEET 15 of 25

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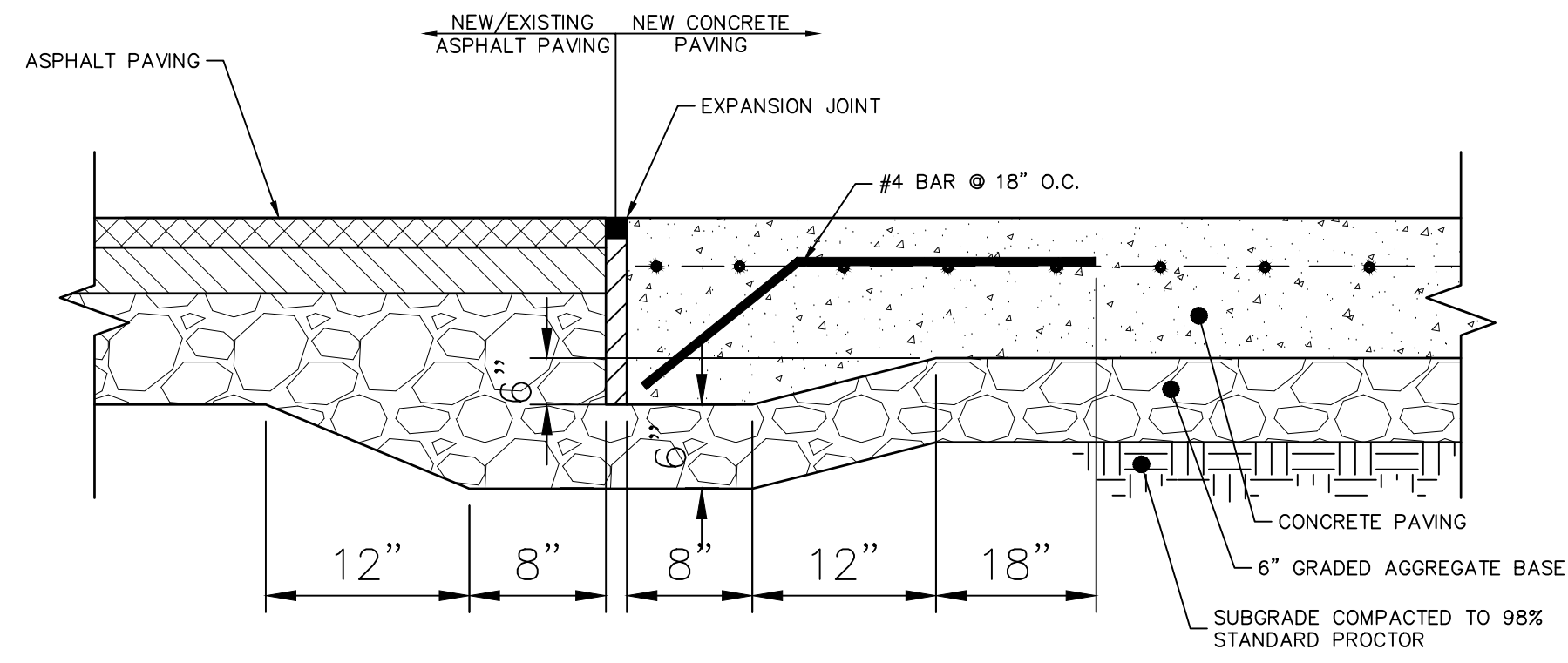


D	REINFORCEMENT	T (INCHES) (INITIAL SAW CUT)	DOWEL BARS
8"	6x6 W1.4/1.4	2.0"	1"x16" @ 12" O.C.

- NOTES
1. CONCRETE TO BE 4,000 PSI AT 28 DAYS
  2. WELDED WIRE MESH SHALL MEET THE REQUIREMENTS OF ASTM F2453, CURRENT EDITION
  3. DOWEL BARS
  4. REINFORCEMENT BARS SHALL BE GRADE 60 MEETING THE REQUIREMENTS OF ASTM A615-81.
  5. JOINT SEALANT
  6. CONTRACTOR TO SUBMIT THE FOLLOWING FOR APPROVAL:
    - 6.1. CONCRETE MIX DESIGN
    - 6.2. ALL REINFORCEMENT MATERIAL
    - 6.3. ALL JOINT MATERIAL
    - 6.4. JOINT LAYOUT
  7. DOWELS TO BE PLACED AT D/2
  8. CONTRACTOR IS TO SUBMIT CONCRETE MIX DESIGN FOR APPROVAL
  9. CONTRACTOR IS TO PREPARE AND SUBMIT FOR APPROVAL ALL MATERIAL FOR CONCRETE JOINTS.

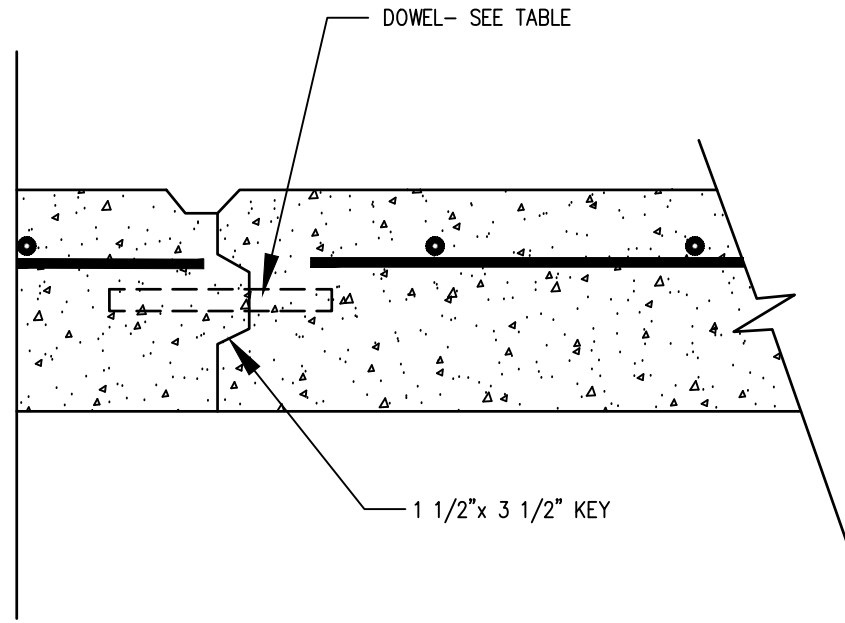
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SCALE: N.T.S.



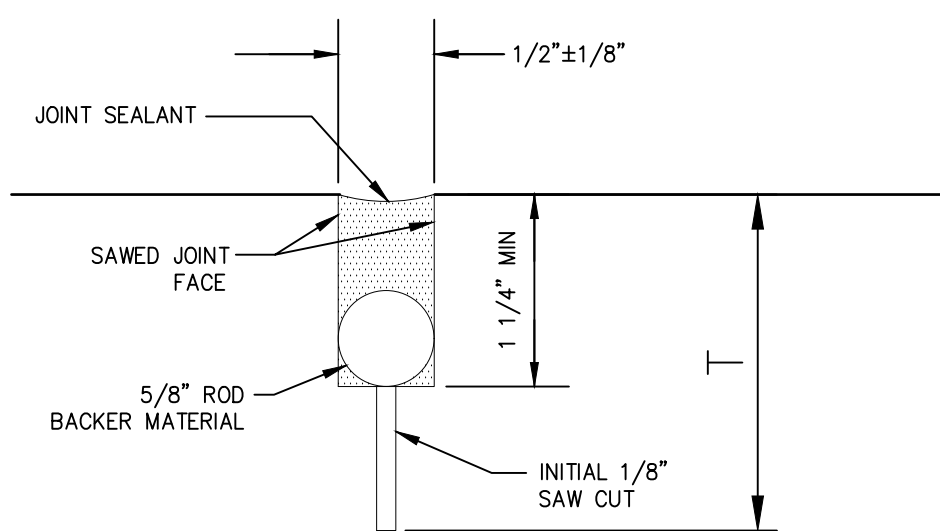
CONCRETE/ASPHALT TRANSITION DETAIL

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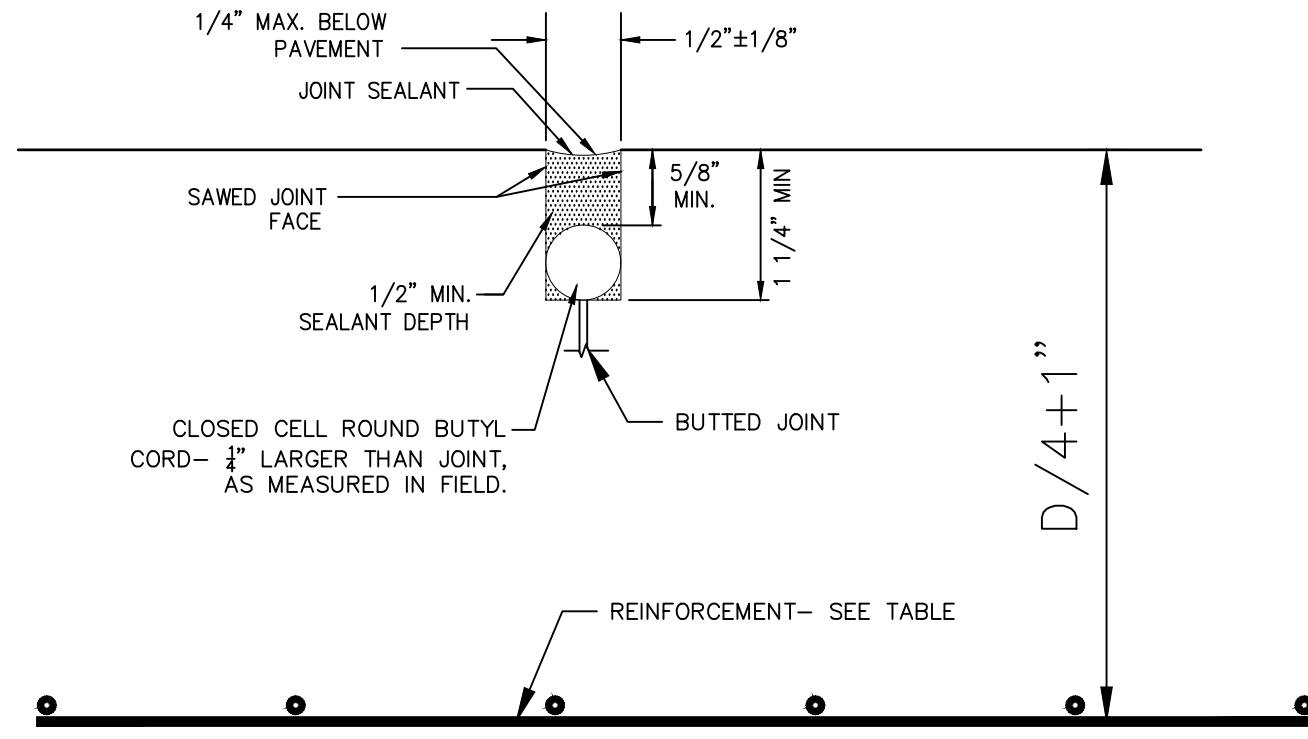
KEYED CONSTRUCTION JOINT

SCALE: N.T.S.



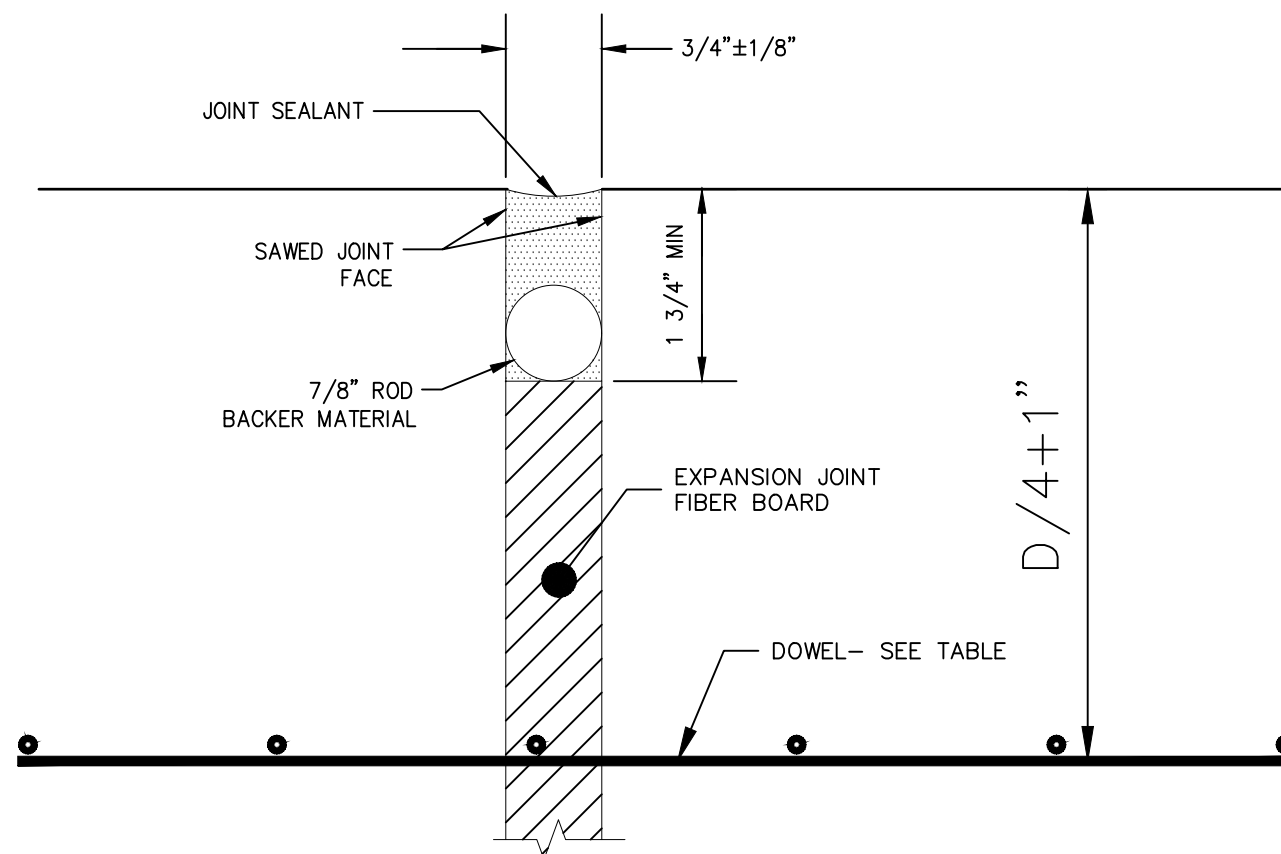
CONTRACTION JOINT (CJ)

SCALE: N.T.S.



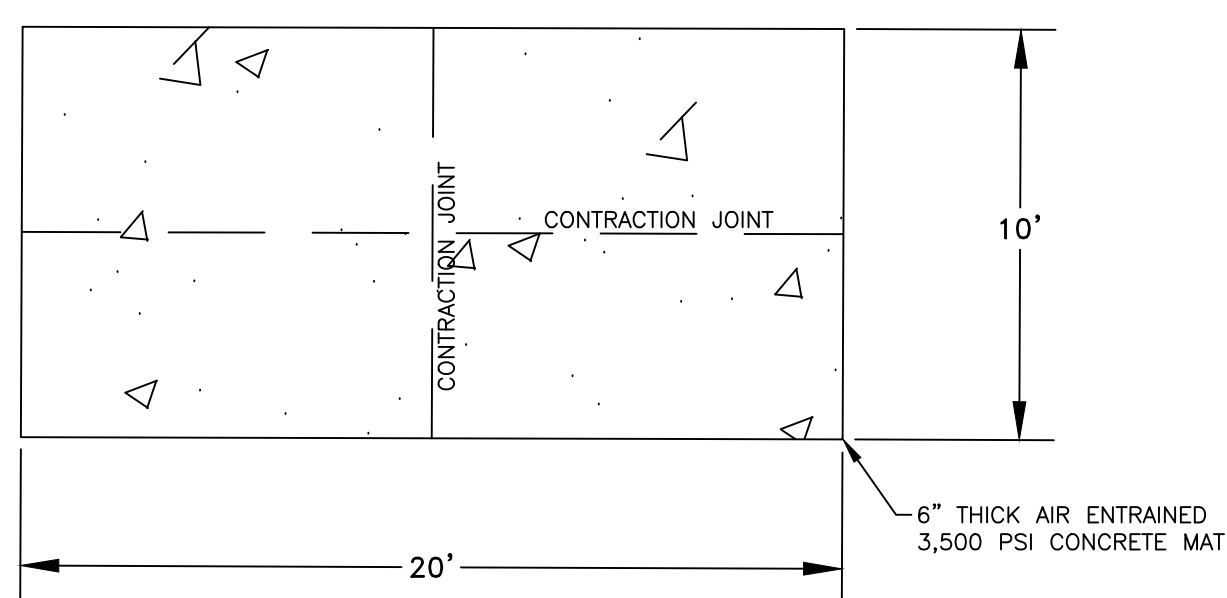
CONSTRUCTION JOINT (CRJ)

SCALE: N.T.S.



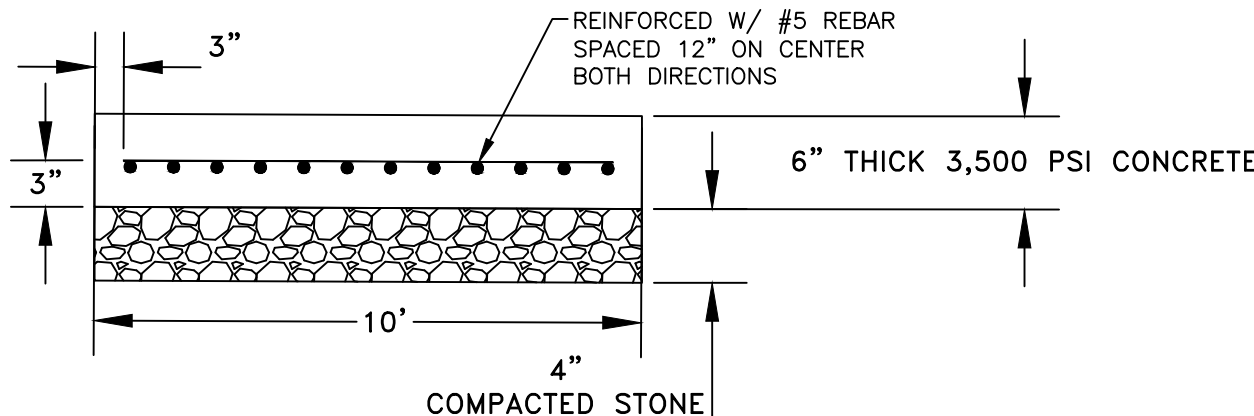
EXPANSION JOINT (EJ)

SCALE: N.T.S.



PLAN VIEW  
GENERATOR PAD DETAIL

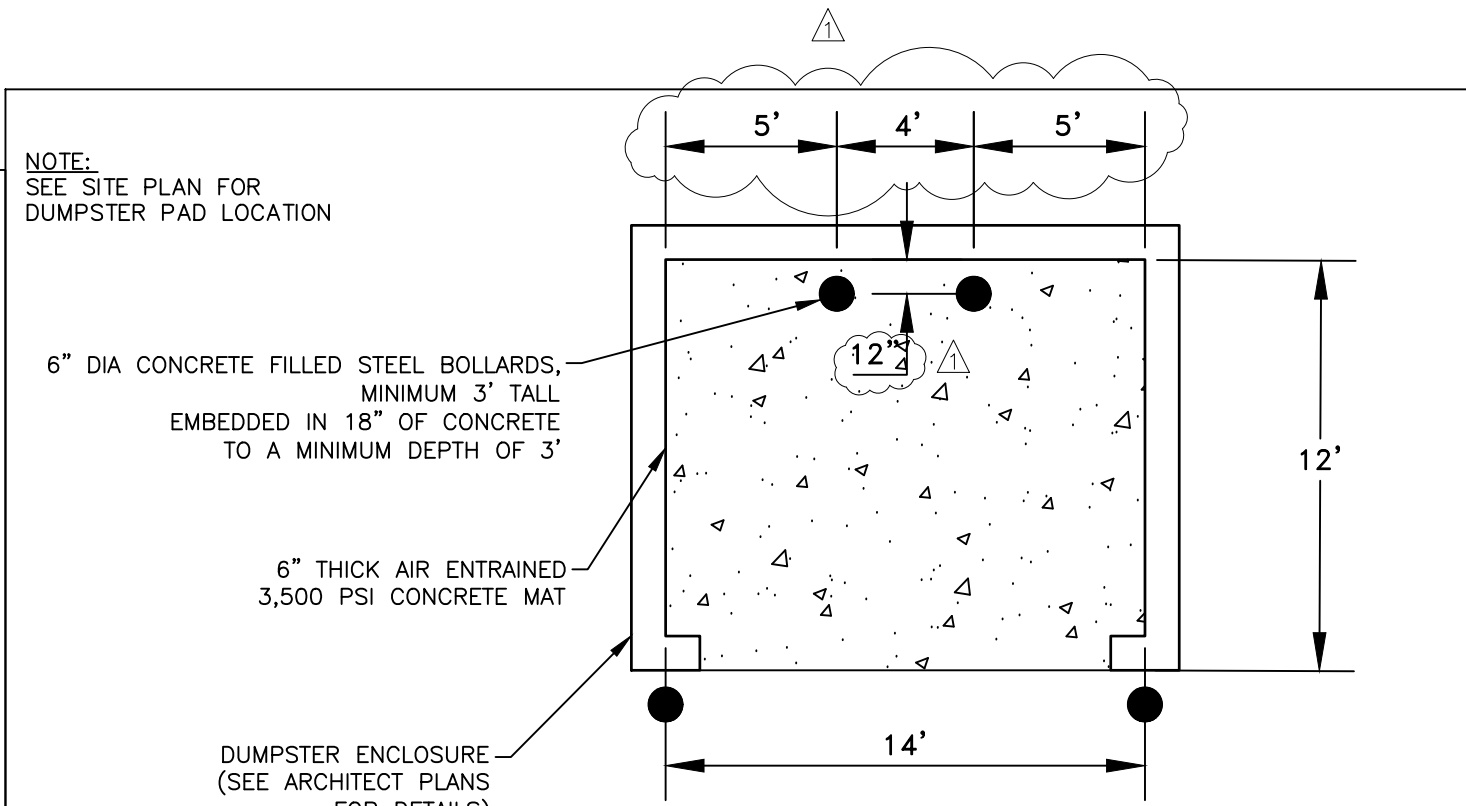
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CROSS-SECTION VIEW  
GENERATOR PAD DETAIL

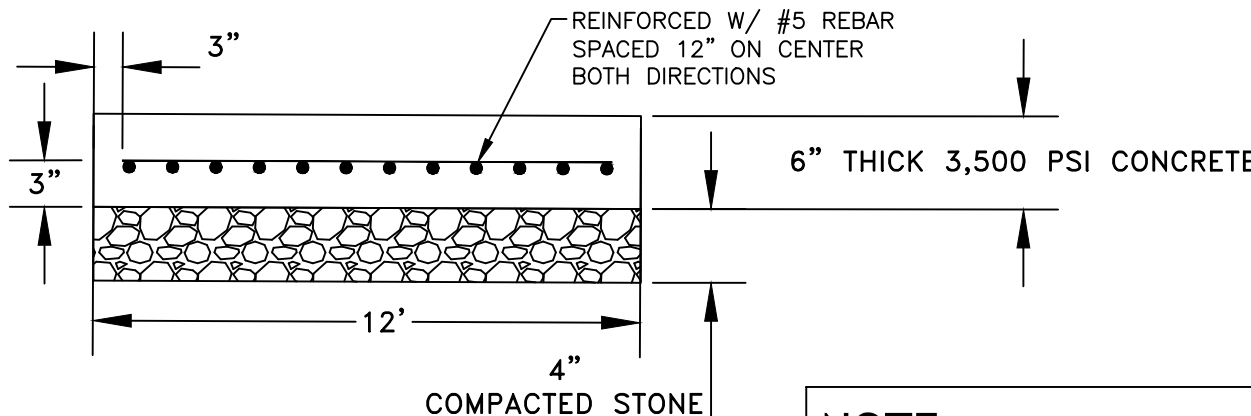
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NOTE:  
SEE SITE PLAN FOR  
GENERATOR PAD LOCATION



PLAN VIEW  
DUMPSTER PAD ENCLOSURE DETAIL

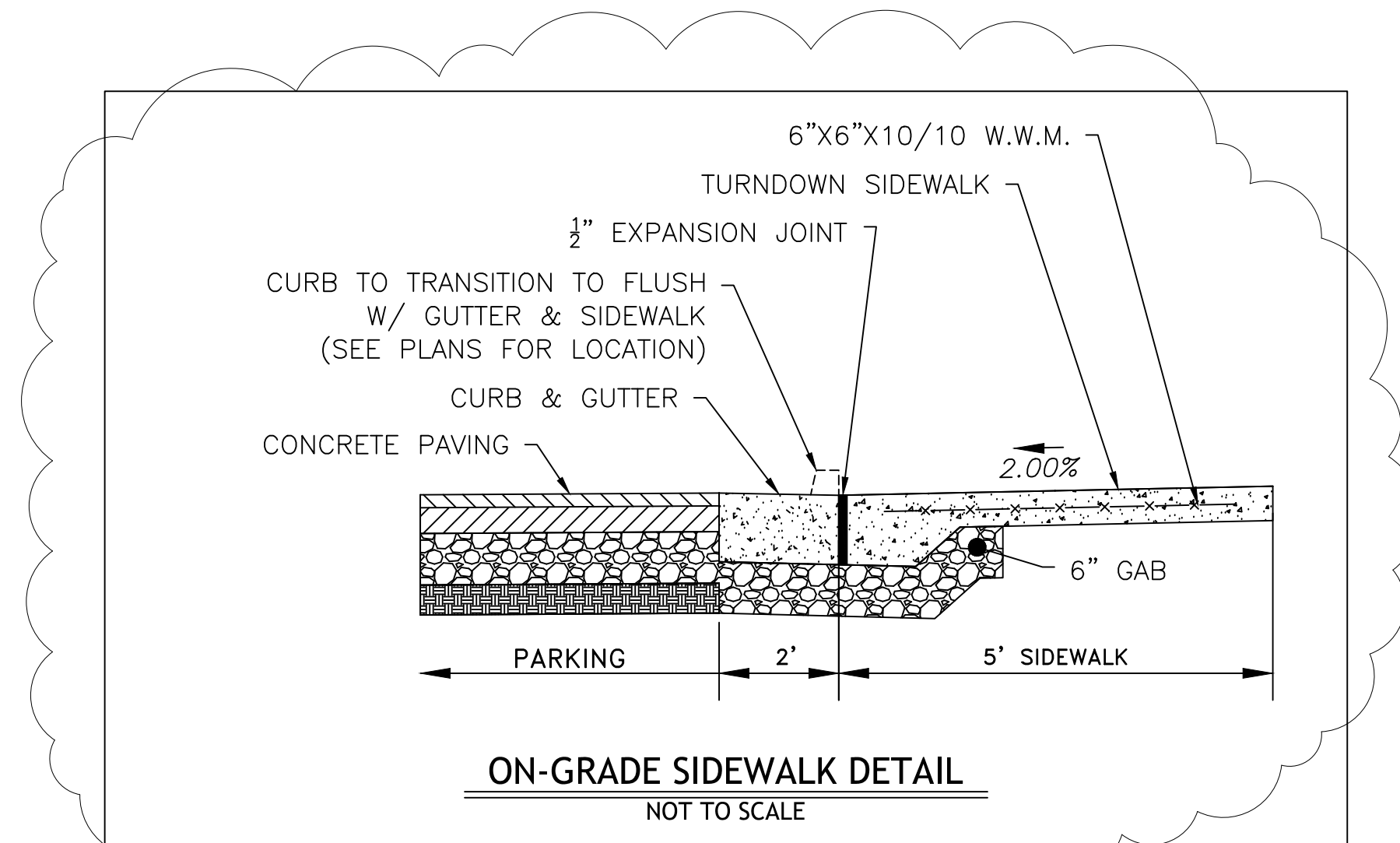
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CROSS-SECTION VIEW  
DUMPSTER PAD DETAIL

N.T.S.

NOTE:  
CONTRACTOR TO SUBMIT SHOP  
DRAWINGS OF FINAL DUMPSTER DESIGN  
TO PAULDING COUNTY PARK &  
RECREATION DEPARTMENT AND  
PROJECT ENGINEER, FOR APPROVAL  
PRIOR TO ANY CONSTRUCTION.



ON-GRADE SIDEWALK DETAIL

NOT TO SCALE

24 HOUR CONTACT:  
DAVID SCARBROUGH  
TEL: 770-305-5414

Engineers  
Planners  
Surveyors

**CROY**  
ENGINEERING

200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
PHONE: (770) 971-5407 FAX: (770) 971-0620

Plot Style: Design.ctb. Plotted By: Scott McElroy on 5/29/2018, 6:52 AM

FIRE STATION NO. 4

DESIGN PHASE

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

1	ADDENDUM 1	05/29/2018
NO.	REVISION REFERENCE	DATE



SHEET TITLE  
CONSTRUCTION  
DETAILS

DRAWN BY SMM	CHECKED BY LCC
SCALE N.T.S.	ISSUE DATE 04/30/2018

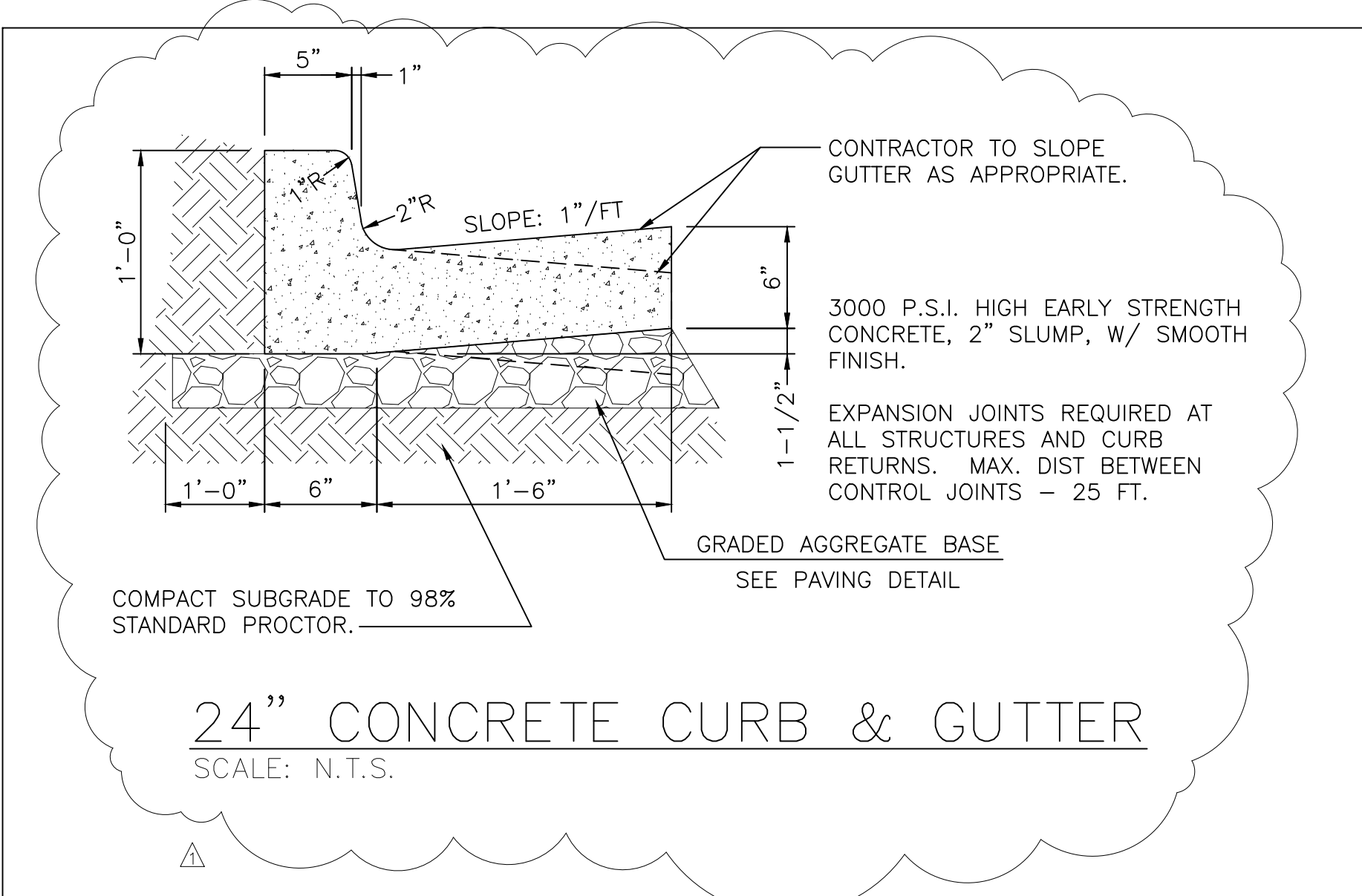
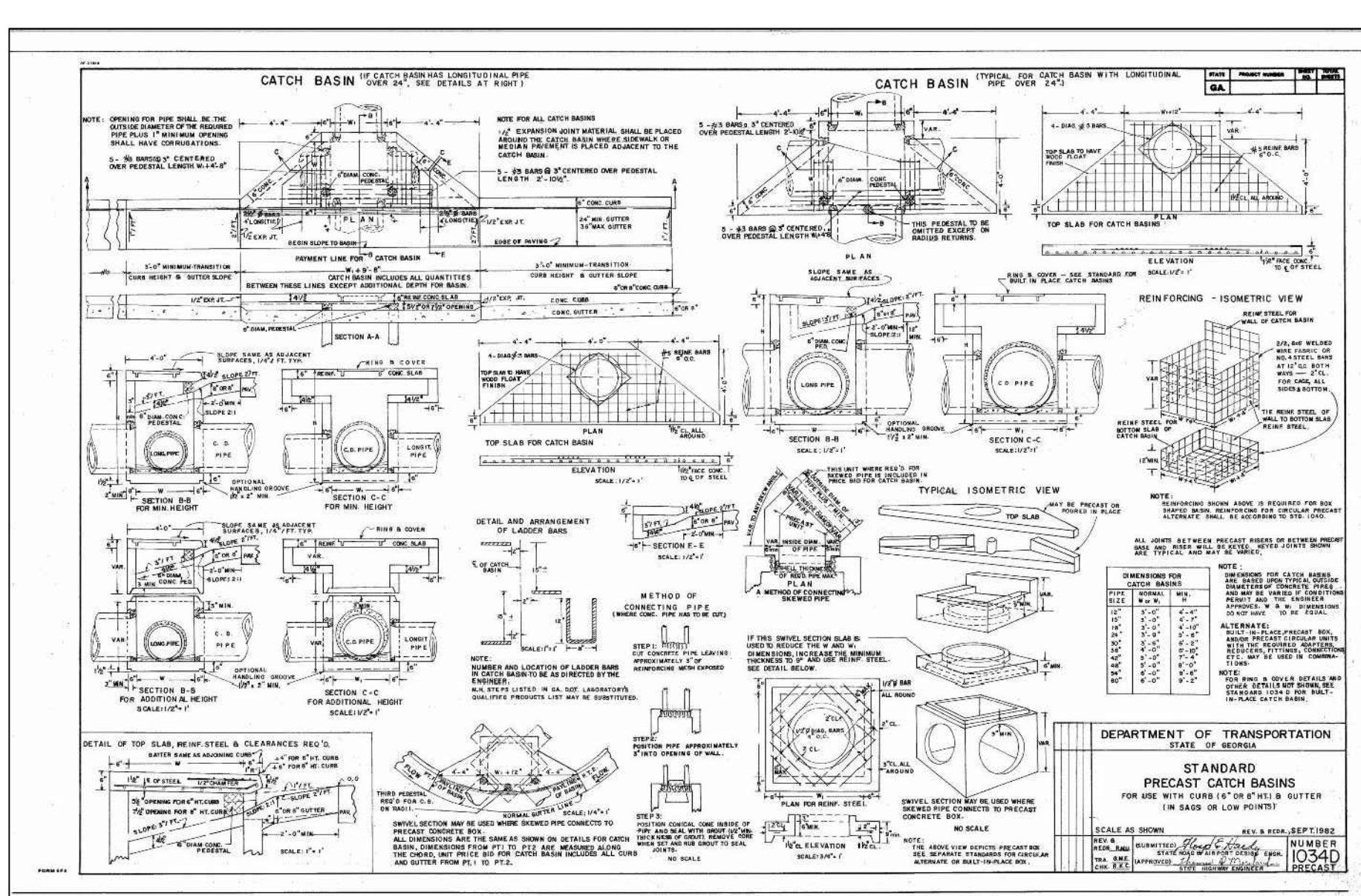
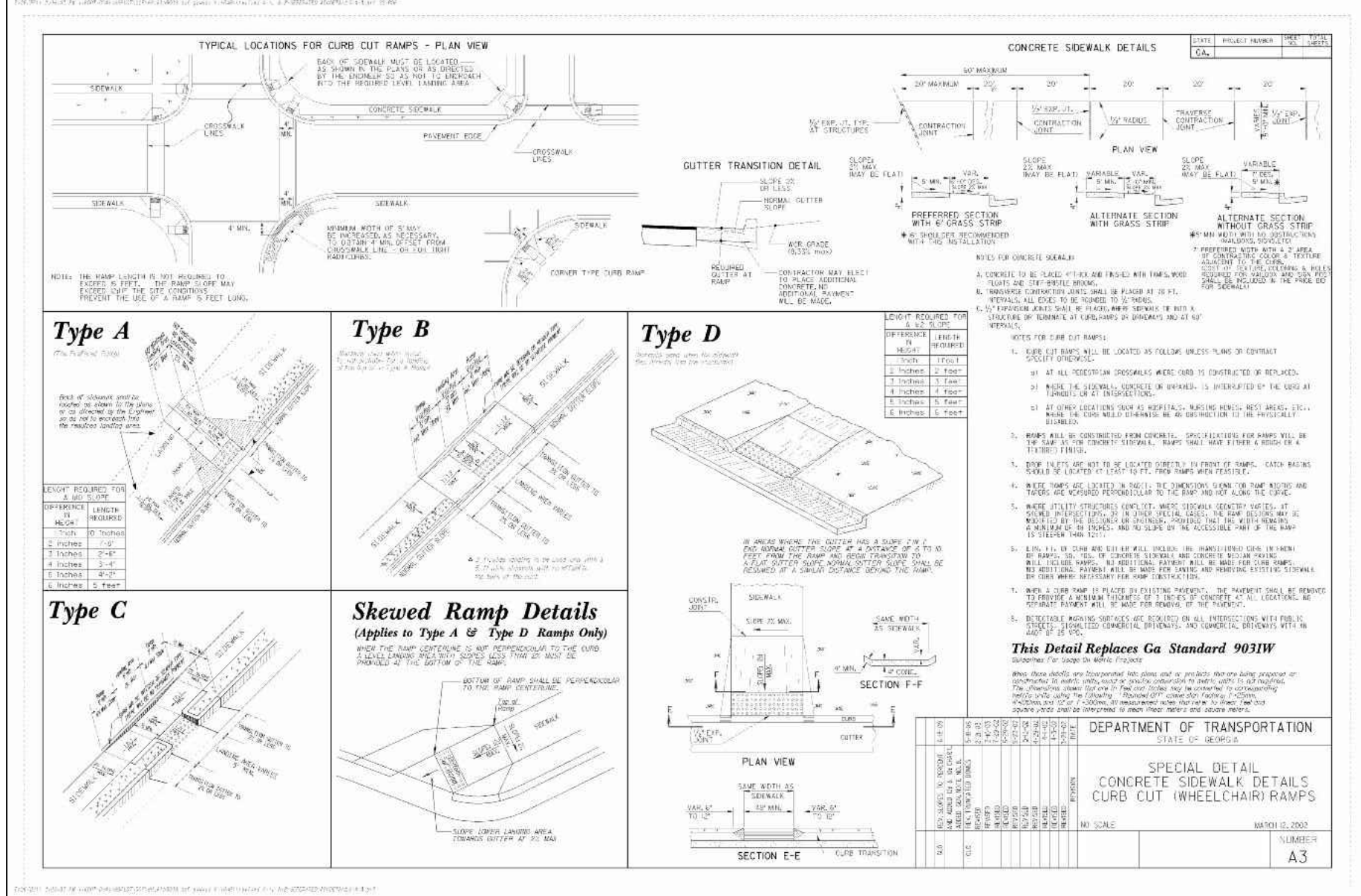
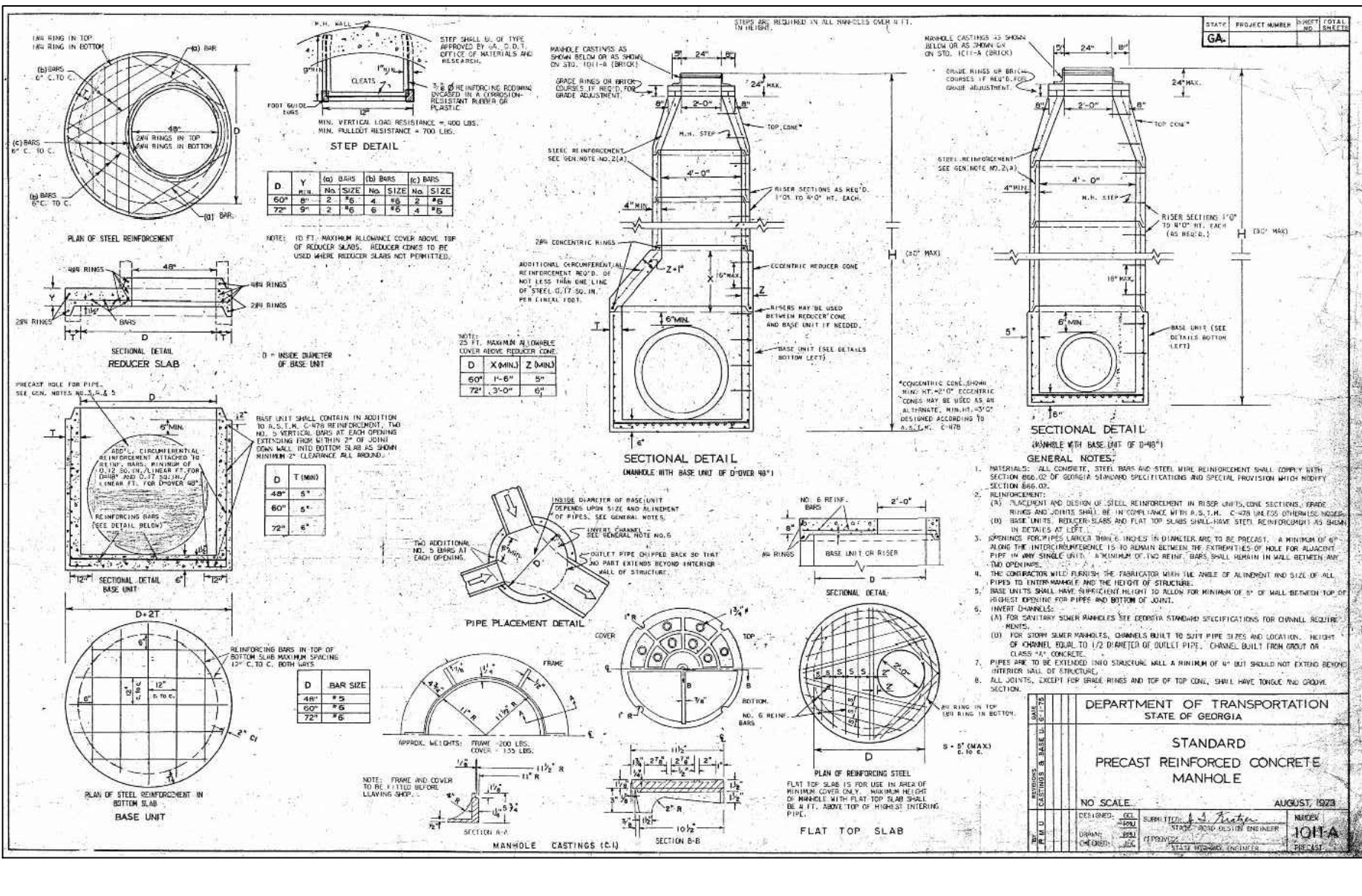
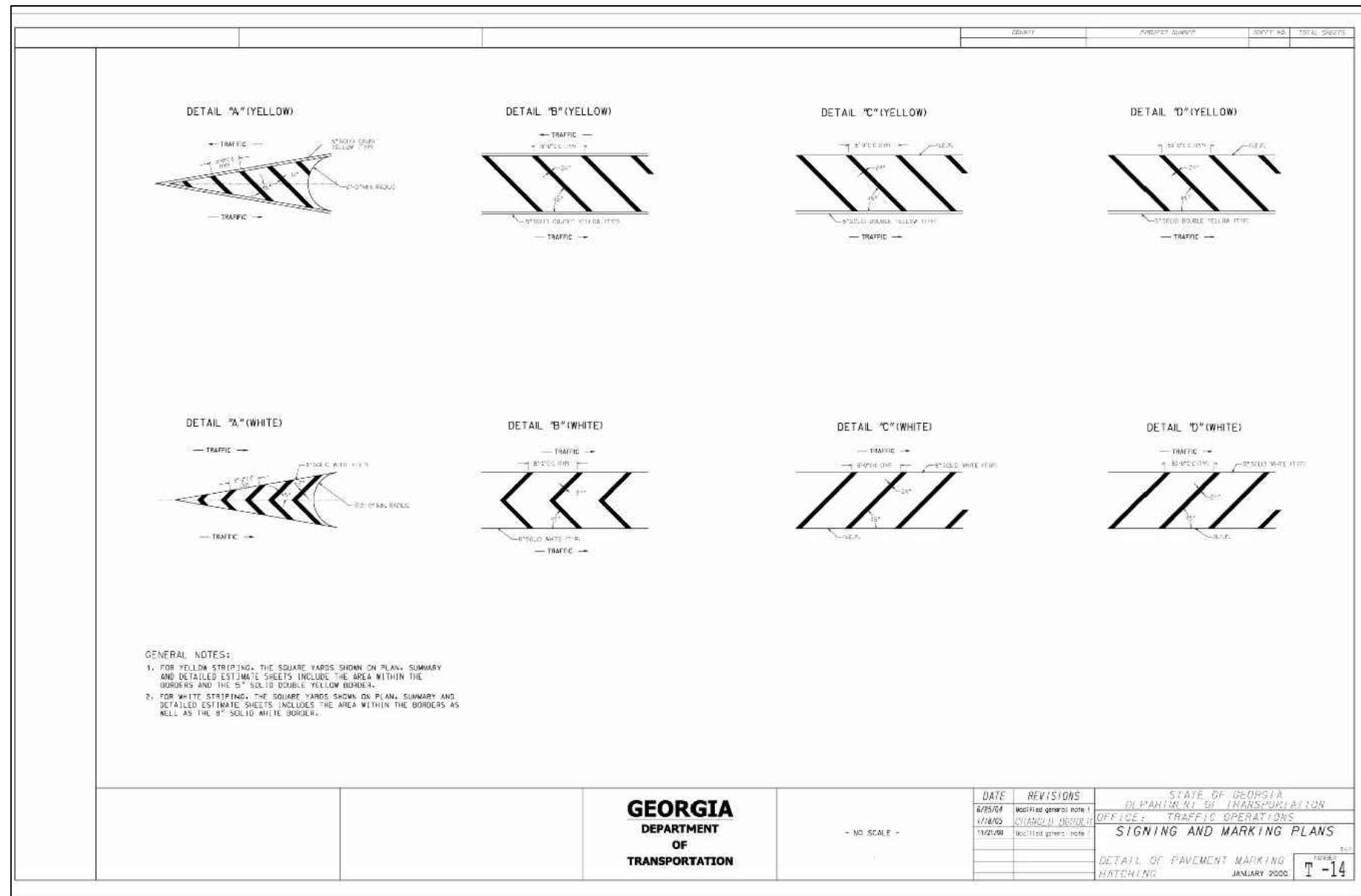
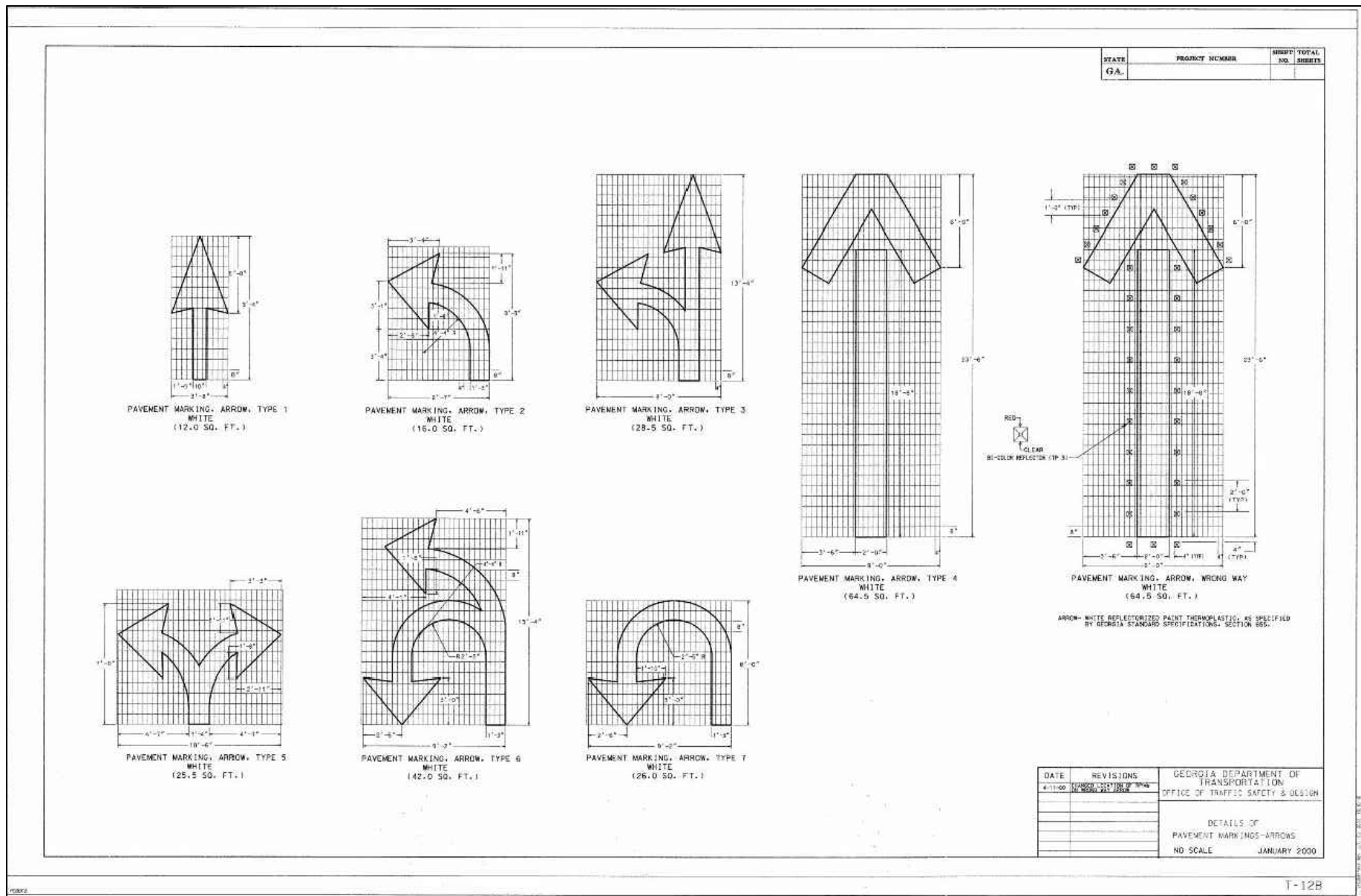
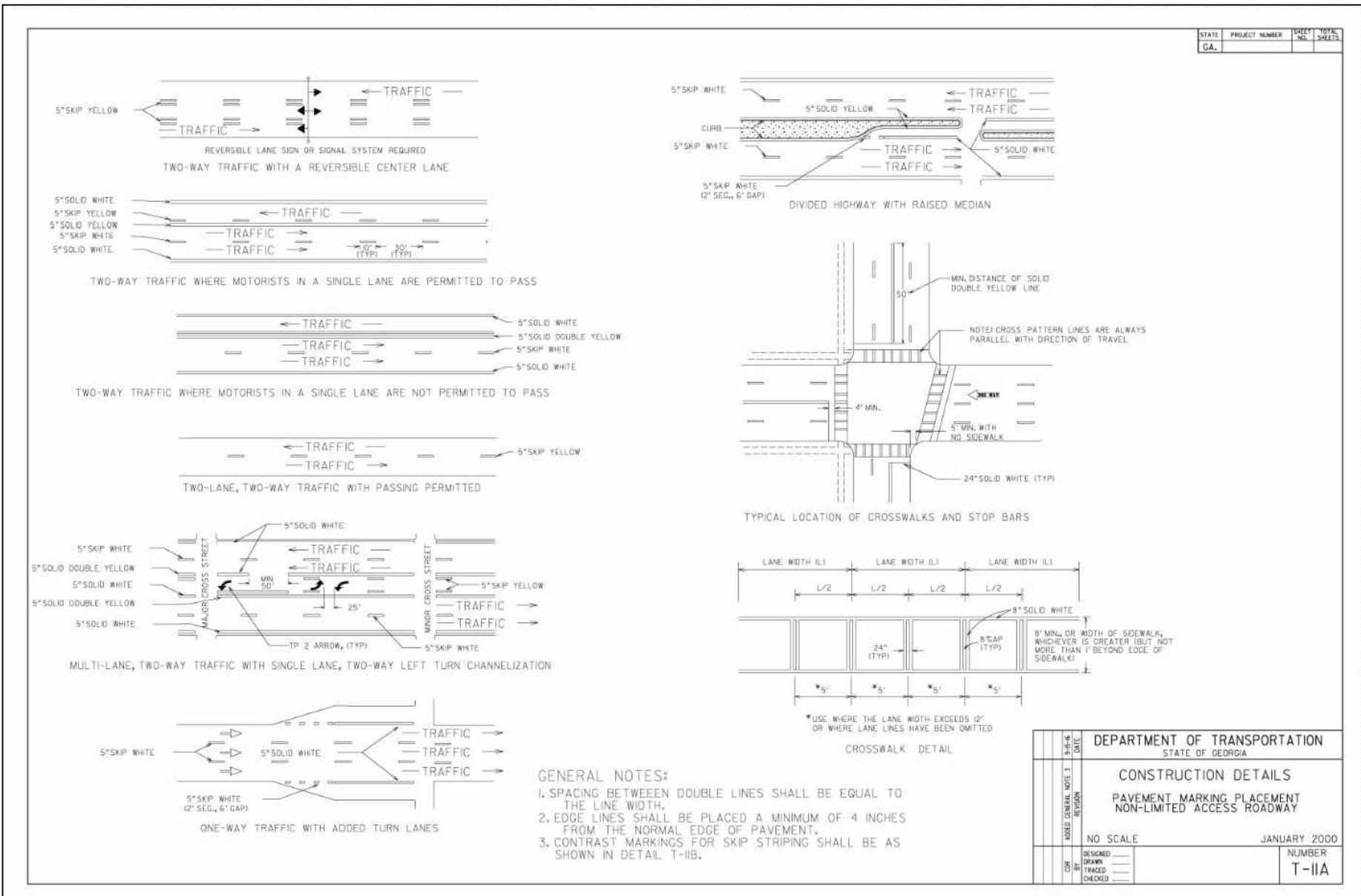
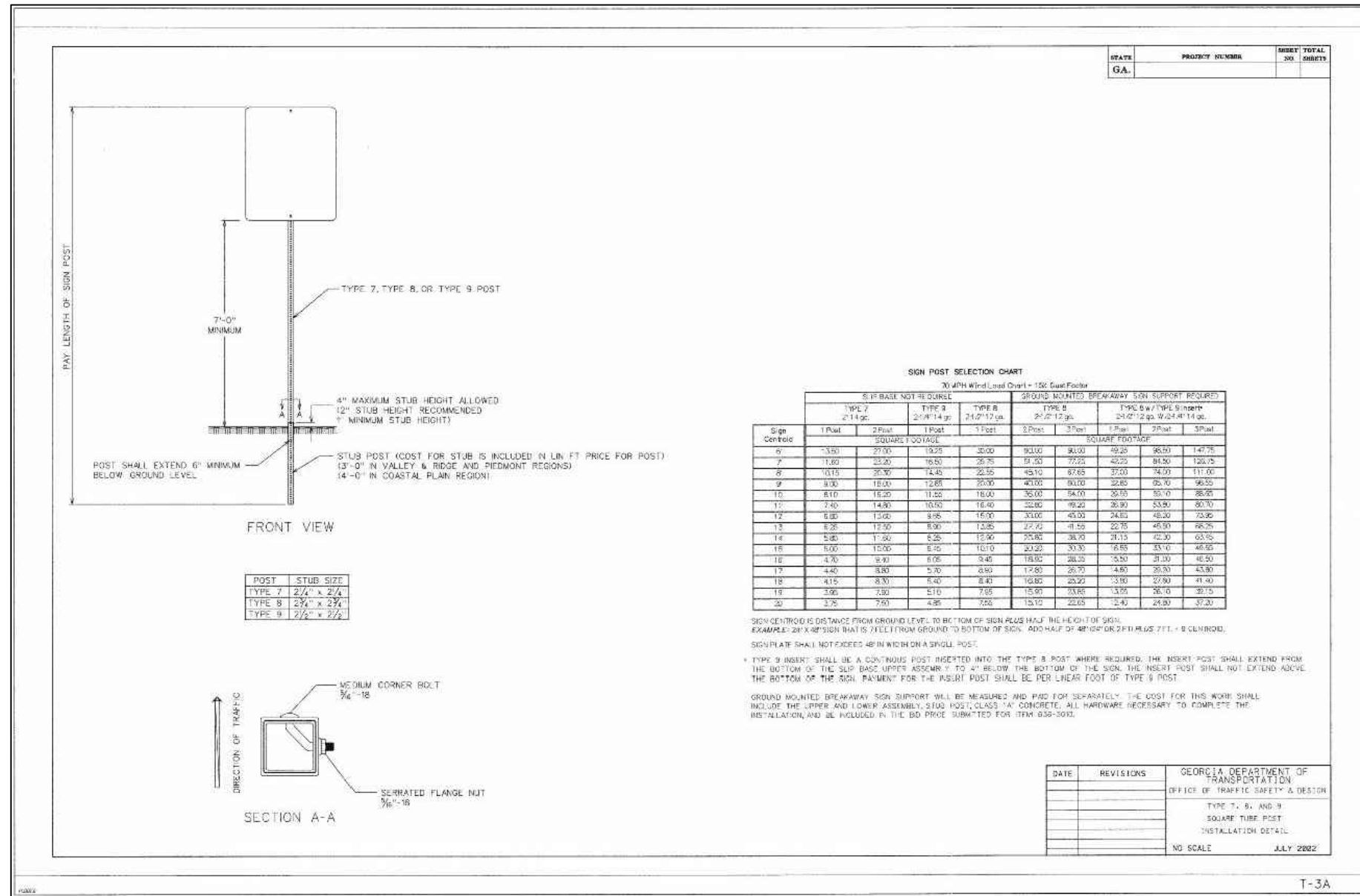
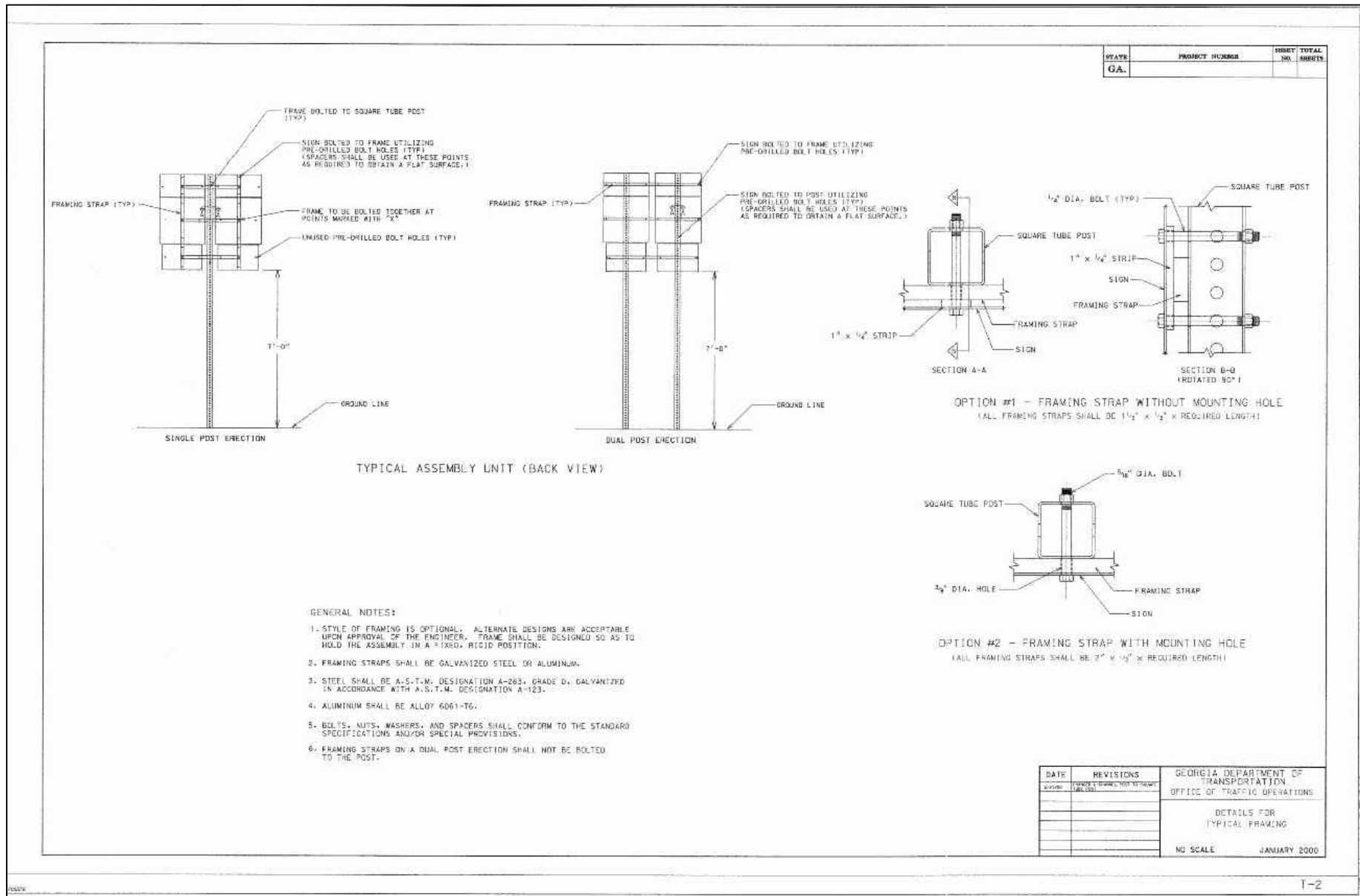
PROJECT NUMBER  
1788.000

DRAWING NUMBER

**C-1001**

SHEET 16 of 25





24 HOUR CONTACT:  
DAVID SCARBROUGH  
TEL: 770-305-5414

**CROY ENGINEERING**

200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
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FAX: (770) 971-0620

Engineers  
Planners  
Surveyors

**FIRE STATION NO. 4**

DESIGN PHASE

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

1 ADDENDUM 1 05/29/2018

NO. REVISION REFERENCE DATE

SEAL

REGISTERED PROFESSIONAL ENGINEER  
CARL CARNEY

SHEET TITLE  
CONSTRUCTION  
DETAILS

DRAWN BY  
SMM

CHECKED BY  
LCC

SCALE  
N.T.S.

ISSUE DATE  
04/30/2018

PROJECT NUMBER  
1788.000

DRAWING NUMBER  
C-1002

SHEET 17 of 25







JUNE 2018

A map of the area around McCurry Park North. The park is highlighted in green and labeled "McCurry PARK NORTH". It is situated at the intersection of McCortlandt Rd and County Line Rd. To the north is Melroy Rd, and to the east is McDonough Rd. Other nearby roads include Downing Ct, Grande Ct, Burke Rd, Valentin Rd, Ridgeland Trl, Seven Forest Pl, Oak Mnr, Maple Dr, Jay Rd, Birch Ln, Nelson Dr, and Bayview Lnd. A black oval on County Line Rd points to the "PROJECT AREA". Water features like Mill Creek and Mud Run are also shown. Highway 54 is visible on the left side of the map.

LOCATION MAP N.T.S.

TOTAL SITE AREA: 3.13 AC  
TOTAL DISTURBED AREA: 2.31 AC

**24 HOUR CONTACT:**  
DAVID SCARBROUGH  
TEL: 770-305-5414

**GEORGIA811**  
Utilities Protection Center, Inc. 

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

AS PER THE GEORGIA DEPARTMENT OF NATURAL RESOURCES ENVIRONMENTAL PROTECTION DIVISION, MPDES GENERAL PERMITS FOR CONSTRUCTION ACTIVITY GAR100001, GAR100002, & GAR100003; PART IV, A., 7. REQUIRE THE EROSION CONTROL PLAN DESIGN PROFESSIONAL TO MAKE A SITE INSPECTION, FOR STAND ALONE PROJECTS THAT BEGIN CONSTRUCTION ACTIVITY AFTER THE EFFECTIVE DATE OF THIS PERMIT, THE PRIMARY PERMITTEE MUST RETURN THE INSPECTION REPORTS TO THE EROSION CONTROL SPECIALIST WHO PREPARED THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN, EXCEPT WHEN THE PRIMARY PERMITTEE HAS REQUESTED IN WRITING AND EPA HAS AGREED TO AN ALTERNATE DESIGN PROFESSIONAL, TO INSPECT THE INSTALLATION OF THE CONTROL MEASURES (BMPs) WHICH THE DESIGN PROFESSIONAL DESIGNED WITHIN SEVEN (7) DAYS AFTER THE INITIAL CONSTRUCTION ACTIVITIES COMMENCE. FOR CONSTRUCTION ACTIVITIES WHERE CONSTRUCTION BEGAN ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THE INSPECTION IS TO BE COMPLETED WITHIN SEVEN (7) DAYS AFTER THE INITIAL CONSTRUCTION ACTIVITIES COMMENCE. THE DESIGN PROFESSIONAL SHALL DETERMINE IF THESE BMPs HAVE BEEN INSTALLED AND ARE BEING MAINTAINED AS DESIGNED. THE DESIGN PROFESSIONAL SHALL REPORT THE RESULTS OF THE INSPECTION AND THE CORRECTIVE ACTION PLAN TO THE EROSION CONTROL SPECIALIST WITHIN SEVEN (7) DAYS AND THE PERMITTEE MUST CORRECT ALL DEFICIENCIES WITHIN TWO (2) BUSINESS DAYS OF RECEIPT OF THE INSPECTION REPORT. FROM THE DESIGN PROFESSIONAL, UNLESS WEATHER RELATED SITE CONDITIONS ARE SUCH THAT ADDITIONAL TIME IS REQUIRED.

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST															
STAND ALONE CONSTRUCTION PROJECTS															
SWDC - Townaliga - Region 4															
Project Name: _____ Site No: _____		Date: _____ Plans: _____													
City/County: _____ Fayette County, Georgia		Project Location: _____													
Name & email of person filling out checklist: <u>Scott McNally</u>															
Plan Page #	Included	TO BE SHOWN ON ES&PC PLAN													
ER-000	Y/N														
ALL	Y	1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which this checklist was first promulgated. (The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)													
N/A	N/A	2 Level II certification number issued by the Commission, signature and use of the certified design professional (Signature, seal and Level II number must be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed)													
ALL	Y	3 Limits of disturbance shall not be greater than 50 feet at any one time without prior written authorization from the EPC District Office. If EPCO requires the requested disturbance 50 feet or more at any one time, the plan must include a notice of the BMPs listed in Appendix 1 of this checklist. (A copy of the written approval by EPCO and BMPs and sampling to meet permit requirements is stated on page 15 of the permit.)													
ER-000	Y	4 The name and phone number of the 24 hour local contact responsible for erosion, sedimentation and pollution controls.													
ER-100	Y	5 Provide the name, address and phone number of primary permittee.													
ER-200	Y	6 Note limit and disturbed acreage of the project or phase under construction													
ALL	Y	7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.													
ER-100	Y	8 Detail date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.													
ER-000	Y	9 Inclusion of the nature of construction activities.													
ER-100	Y	10 Provide vicinity map showing the site's relation to surrounding areas. Include designation of specific features, if necessary.													
ER-100	Y	11 Identify the project receiving waters and discharge all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc., which may be affected.													
ER-000	Y	12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 15 of the permit.													
ER-000	Y	13 Design professional's certification statement and signature that the permitted ES&PC Plan provides for an appropriate and comprehensive EPCO and BMPs and sampling to meet permit requirements as stated on page 15 of the permit."													
ER-100	Y	14 Clearly state the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment" storage requirements and perimeter control BMPs within 7 days after installation."													
ER-100	Y	15 Clearly state the statement that "Non-erect activities shall not be conducted within the 25 to 50-foot undisturbed stream buffers as measured from the point of watershed 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."													
ER-100	Y	16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.													
ER-100	Y	17 Clearly state the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydrologic consequence by EPCO and BMPs and sampling to meet permit requirements."													
ER-100	Y	18 Clearly state the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a section 401 permit."													
ER-100	Y	19 Clearly state statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbance activities."													
ER-100	Y	20 Clearly state statement that "Erosion control measures will be maintained at all times. Full implementation of the approved plan does not constitute for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment sources."													
ER-100	Y	21 Clearly state the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."													
N/A	N/A	22 Any construction activity that discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of said stream, shall be subject to the same erosion and sedimentation control requirements as required by Part II.C. of the Permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment."													
N/A	N/A	23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan."													
ER-100	Y	24 BMPs for concrete washout of both, concrete mixer trucks, choppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited."													
ER-100	Y	25 Provide BMPs for the remediation of all petroleum spills and leaks.													
ER-100	Y	26 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."													
ER-100	Y	27 Description of the practices that will be used to reduce the pollutants in storm water discharges."													
ER-100	Y	28 Description of character and timeline of the intended sequence of erosion control activities which disturb soils for the major portions of the site, including the erosion and sedimentation BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization."													
ER-100	Y	29 Provide complete requirements of inspections and record keeping by the primary permittee."													
ER-100	Y	30 Provide complete details of sampling frequency and reporting of sampling results."													
ER-100	Y	31 Provide complete details for retention of records as per Part IV.F. of the permit."													
ER-100	Y	32 Description of analytical methods to be used to collect and analyze the samples from each location."													
ER-200	Y	33 Appendix A provides for ITU values to be used to collect and/or submit sampling points where applicable."													
ER-100	Y	34 Define all sampling locations, personnel and instrument streams and other water bodies into which stormwater is discharged."													
ER-100	Y	35 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs; (2) intermediate grading and drainage BMPs; and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the plan may combine all of the BMPs into a single phase."													
ALL	Y	36 Graphic scale and North arrow.													
ER-200-400	Y	37 Erioting and proposed contour lines with contour lines drawn at an interval in accordance with the following: <table border="1"> <thead> <tr> <th>Map Scale</th> <th>Ground Slope</th> <th>Contour Interval, ft</th> </tr> </thead> <tbody> <tr> <td>1 inch = 100 feet</td> <td>Flatter &lt; 2%</td> <td>0.5 or 1</td> </tr> <tr> <td>larger scale</td> <td>Rolling 2 - 8%</td> <td>1 or 2</td> </tr> <tr> <td></td> <td>Steep 8% +</td> <td>2.5 or 10</td> </tr> </tbody> </table>		Map Scale	Ground Slope	Contour Interval, ft	1 inch = 100 feet	Flatter < 2%	0.5 or 1	larger scale	Rolling 2 - 8%	1 or 2		Steep 8% +	2.5 or 10
Map Scale	Ground Slope	Contour Interval, ft													
1 inch = 100 feet	Flatter < 2%	0.5 or 1													
larger scale	Rolling 2 - 8%	1 or 2													
	Steep 8% +	2.5 or 10													
N/A	N/A	38 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPCO or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at <a href="http://www.gsepc.org">www.gsepc.org</a> .													
N/A	N/A	39 Use of Alternative BMP Plan application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition."													
N/A	N/A	40 Definition of the applicable 25-foot or 50-foot undisturbed buffer adjacent to state waters and any additional buffers required by the local taxing authority. Clearly note and delineate all areas of impact.													
N/A	N/A	41 Definition of on-site wetlands and of state waters located on or within 200 feet of the project site.													
ER-900-902	Y	42 Definition and acreage of contributing drainage basins on the project site.													
C-900-902	Y	43 Provide hydrology study and plans of drainage basins for both pre- and post-developed conditions."													
ER-100	Y	44 An estimate of the runoff coefficient and peak discharge flow of the site prior to and after construction activities are completed.													
ER-300	Y	45 Storm-drain pipe and well velocities with appropriate outfall protection to accommodate discharges without erosion. Identify/delineate all storm water discharge points.													
ER-100-200	Y	46 Soil series for the project and their definition.													
ER-200-400	Y	47 The limits of disturbance for each phase of construction.													
ER-300	Y	48 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, reforested detention pond, or/and excavated inlet sediment traps for common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. "Within a justification explaining the decision to use equivalent controls when a sediment basin is not attainable, include details of the plan for each common drainage location in which a sediment basin is not provided. A written justification for why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the design engineer professional to obtain the required sediment storage using equivalent controls. When discharging from sediment basins and impoundments, permits are required to utilize outlet structures that will diffuse water from the surface, unless infeasible. "Outlet structures that will diffuse water from the surface are not feasible, a written justification explaining this decision must be included in the plan."													
ER-200-400	Y	49 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.													
ER-500	Y	50 Provide detailed drawings of all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.													
ER-501	Y	51 Provide vegetative plan, listing all temporary and permanent vegetative practices. Include species, planting dates and seeding, till													

THESE PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION AND CONSENT OF CJOY ENGINEERING, LLC. NOR ARE THEY TO BE ASSIGNED TO ANY PARTY WITHOUT WRITTEN PERMISSION AND CONSENT.

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

1	ADDENDUM 1	05/29/2018
NO.	REVISION REFERENCE	DATE

SEA



GSWCC CERT #2973

SHEET TITLE  
EROSION CONTROL  
COVER

DRAWN BY SMM	CHECKED BY LCC
SCALE AS SHOWN	ISSUE DATE 04/30/2018

PROJECT NUMBER  
1500 000

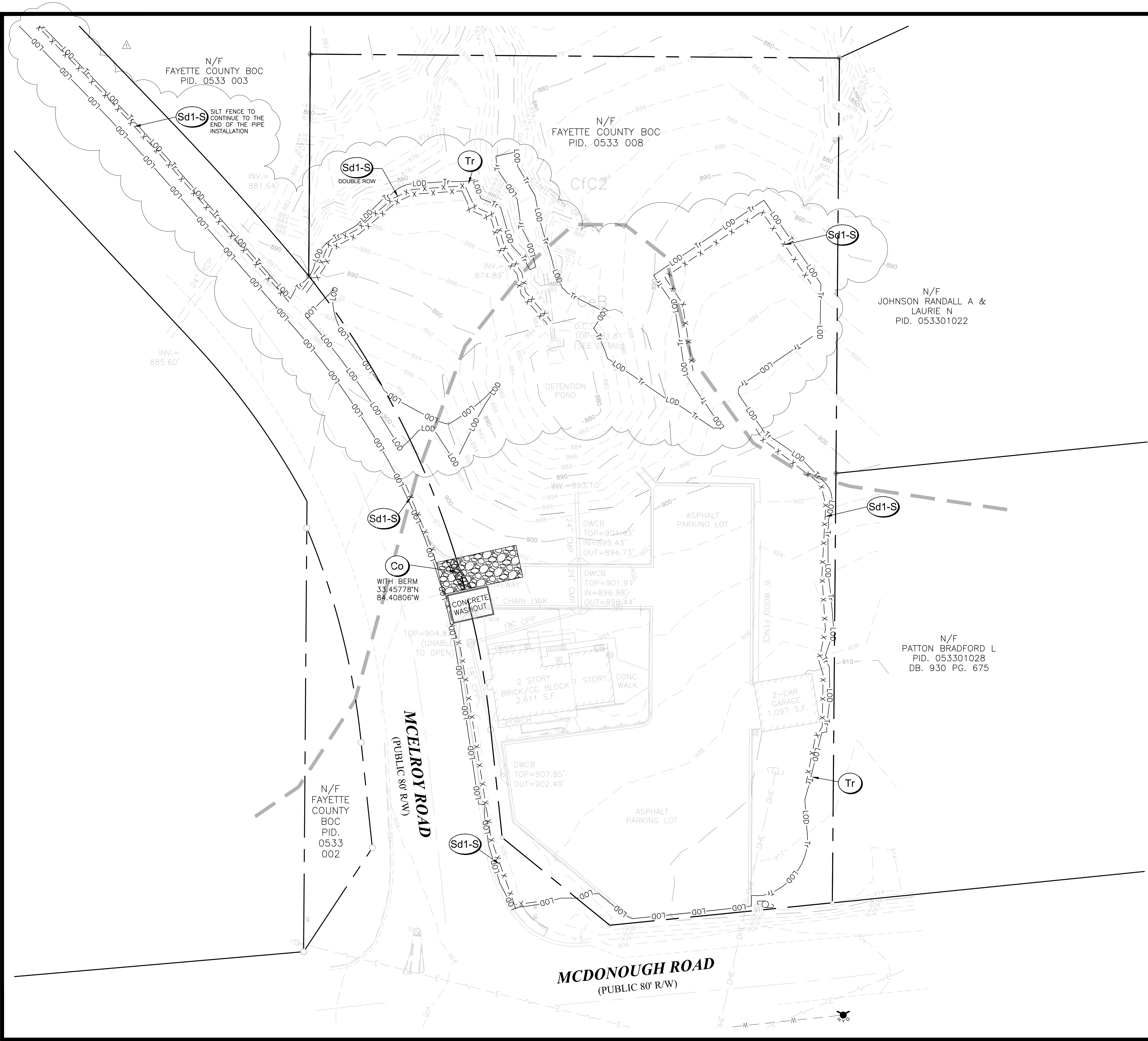
DRAWING NUMBER  
**FR-000**

SHEET 19 of 25









EROSION CONTROL NOTES

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

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

NO LAND DISTURBANCE, CONSTRUCTION PROCESSES, OR STORAGE OF EQUIPMENT OR MATERIALS SHALL TAKE PLACE WITHIN A DESIGNATED TREE PROTECTION AREA IN ORDER TO PREVENT DIRECT PHYSICAL ROOT DAMAGE THAT OCCURS DURING SITE CLEARING AND GRADING AND CAN CAUSE TRANSPORT OR FEEDER ROOTS TO BE CUT, TORN, OR REMOVED; INDIRECT ROOT DAMAGE CAUSED FROM GRADE CHANGES; AND TRUNK AND CROWN DAMAGE CAUSED BY DIRECT CONTACT WITH LAND CLEARING MACHINERY OR GALLING OF ADJACENT TREES.

USE OF ALTERNATIVE BMPs WHOSE PERFORMANCE HAS BEEN DOCUMENTED TO BE EQUIVALENT TO OR SUPERIOR TO CONVENTIONAL BMPs AS CERTIFIED BY A DESIGN PROFESSIONAL (UNLESS DISAPPROVED BY EPD OR THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION). PLEASE REFER TO THE ALTERNATIVE BMP GUIDANCE FOUND AT [www.gaswcc.georgia.gov](http://www.gaswcc.georgia.gov).

USE OF ALTERNATIVE BMP FOR APPLICATION TO THE EQUIVALENT BMP LIST. PLEASE REFER TO APPENDIX A-2 OF THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA 2016 EDITION.

INITIAL PHASE NARRATIVE:

THE INITIAL PHASE EROSION, SEDIMENT AND POLLUTION CONTROL PLAN IMPLEMENTS THE INSTALLATION OF ORANGE BARRIER FENCE AROUND THE PERIMETER OF THE LIMITS OF DISTURBANCE AND SILT FENCE AROUND THE PERIMETER AS SHOWN IN THE PLANS PRIOR TO CLEARING AND GRUBBING AND PRIOR TO DEMOLITION OPERATIONS. NO GRADING OPERATIONS SHALL BE ALLOWED IN THIS PHASE. IMPLEMENTATION AND MAINTENANCE OF ALL BMPs SHALL BE ACCORDING TO THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. DETAILS FOR THE BMPs PROPOSED ARE INCLUDED ON SHEETS ER-500-501.

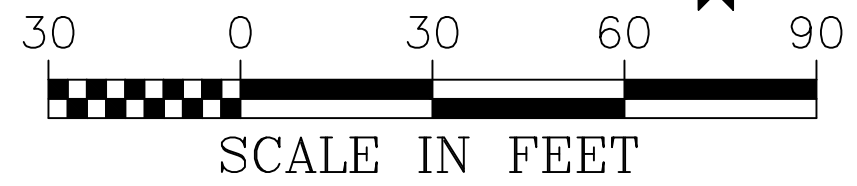
STRUCTURAL BMP LEGEND

- Co** CONSTRUCTION EXIT
- Sd1-S** SILT FENCE-TYPE SENSITIVE
- Sd1-S** SILT FENCE-TYPE SENSITIVE (DOUBLE ROW)
- Tr** TREE PROTECTION

IF ANY CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE DISCOVERED, EITHER ON THE CONSTRUCTION DOCUMENTS OR THE FIELD CONDITIONS, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY AND SHALL NOT COMMENCE OPERATION UNTIL THE CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE RESOLVED.



24 HOUR CONTACT:  
DAVID SCARBROUGH  
TEL: 770-305-5414



**CROY ENGINEERING**  
Engineers  
Planners  
Surveyors

200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
PHONE: (770) 971-5407 FAX: (770) 971-0620

FIRE STATION NO. 4  
DESIGN PHASE  
LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

NO.	REVISION REFERENCE	DATE
1	ADDENDUM 1	05/29/2018



GSWCC CERT #2973

SHEET TITLE  
EROSION CONTROL  
PLAN - INITIAL PHASE

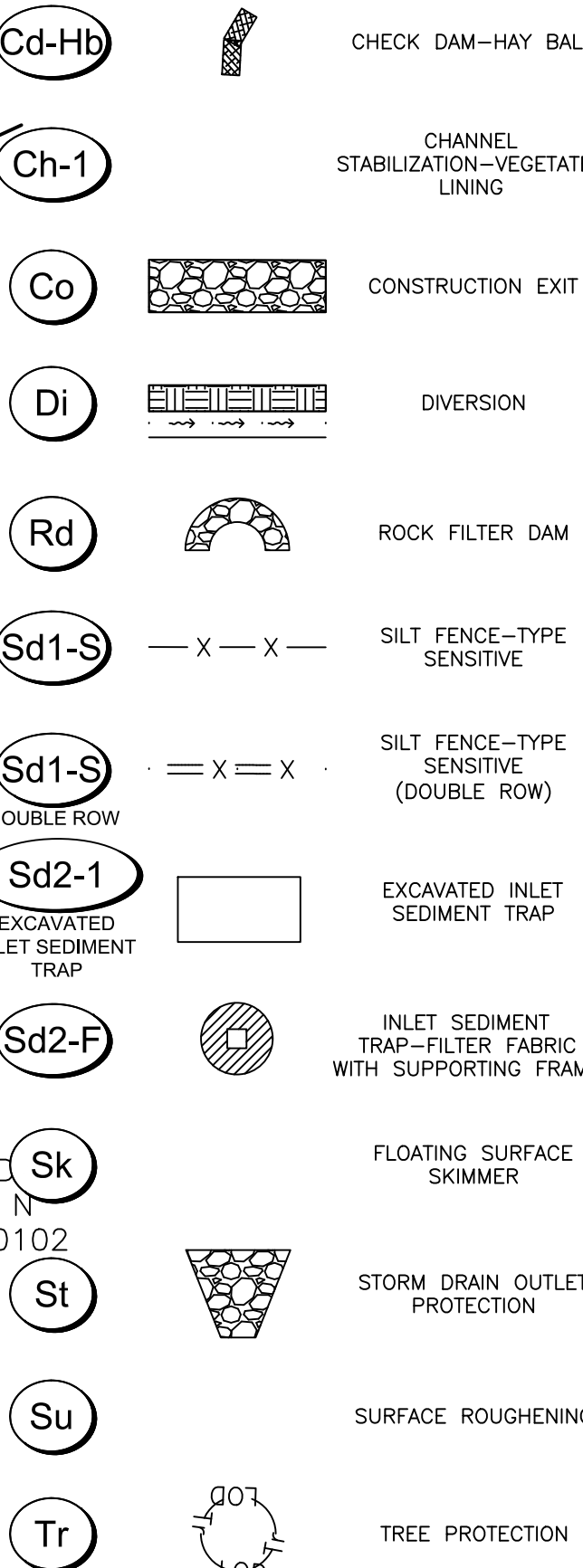
DRAWN BY SMM	CHECKED BY LCC
SCALE 1"=30'	ISSUE DATE 04/30/2018
PROJECT NUMBER 1788.000	
DRAWING NUMBER <b>ER-200</b>	
SHEET 21 of 25	



Sd2	Drainage Area	Dimensions			Required Sediment Storage		Provided Sediment Storage
	Acre	Depth (ft)	Length (ft)	Width (ft)	yd³	ft³	ft³
A	0.29	2	24	12	19.43	524.61	576
B	0.71	2	36	18	47.57	1284.39	1296
				<b>Totals</b>	67	1809	1872

<b>Calculate Skimmer Size</b>			
Basin Volume in Cubic Feet	26,870	Cu.Ft	Skimmer Size
Days to Drain*	3	Days	3.0 Inch
			Orifice Radius
			1.4 Inch[es]
			Orifice Diameter
			2.9 Inch[es]

TO BE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN			
Retrofit Storage Calculations			
1. Required stormwater storage (as determined by local ordinance)		590.2	CY
2. Required sediment storage (Supplemental BMP b)(67 cy/ac * <u>2.0</u> ac disturbed area)		134.0	CY
3. Total required storage		724.2	CY
4. Available storage		995.2	CY
5. Is the available storage (4) greater than the total required storage (3)? X yes      no		YES	
6. If "no", the sediment storage capacity of the pond must be increased. Choose the method to be used:			
<u>        </u> Raise the invert of the outlet structure <u>        </u> inches			
<u>        </u> Undercut the pond <u>        </u> feet			
<u>        </u> Other <u>                                </u>			
7. Clean-out elevation (Elevation corresponding to 22 cy/ac * <u>2.0</u> ac disturbed area)		878.5	FT
8. Is the length-width ratio 2:1 or greater? X yes      no		44	CY
9. If "no", the length of flow must be increased. Choose the method to be used: <u>        </u> Baffles (Type of baffle : <u>                </u> )		YES	
<u>        </u> Other <u>                                </u>		N/A	

[illegible]

**Ds1** DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

**Ds2** DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

**Ds3** DISTURBED AREA STABILIZATION (WITH PERMANENT SEEDING)

**Ss** SLOPE STABILIZATION HYDROSEED & MULCH

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURES AND ACTIVITIES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.

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

NO LAND DISTURBANCE, CONSTRUCTION PROCESSES, OR STORAGE OF EQUIPMENT OR MATERIALS SHALL TAKE PLACE WITHIN A DESIGNATED TREE PROTECTION AREA IN ORDER TO PREVENT DIRECT PHYSICAL ROOT DAMAGE TO TREES. EXCESSIVE CLEARING, GRUBBING, AND LOGGING CAN CAUSE TRANSPORT OR FEEDER ROOTS TO BE CUT, TORN, OR OTHERWISE INJURED. IN ADDITION, LOGS, LIMBS, AND BRANCHES, LIMBS, AND TRUNK AND CROWN DAMAGE CAUSED BY DIRECT CONTACT WITH LAND CLEARING MACHINERY OR GALLING OF ADJACENT TREES.

USE OF ALTERNATIVE BMPs WHOSE PERFORMANCE HAS BEEN DOCUMENTED TO BE EQUIVALENT TO OR SUPERIOR TO CONVENTIONAL BMPs IS ENCOURAGED. IF AN ALTERNATIVE BMP IS USED, IT MUST BE DISAPPROVED BY EPD OR THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION). PLEASE REFERENCE TO THE ALTERNATIVE BMP GUIDANCE FOUND AT [www.gswsc.org/georgia.gov](http://www.gswsc.org/georgia.gov).

USE OF ALTERNATIVE BMP FOR APPLICATION TO THE EQUIVALENT BMP IS REQUIRED FOR ALL PROJECTS THAT MAY BE SUBJECT TO EROSION AND SEDIMENT CONTROL IN GEORGIA 2016 EDITION.

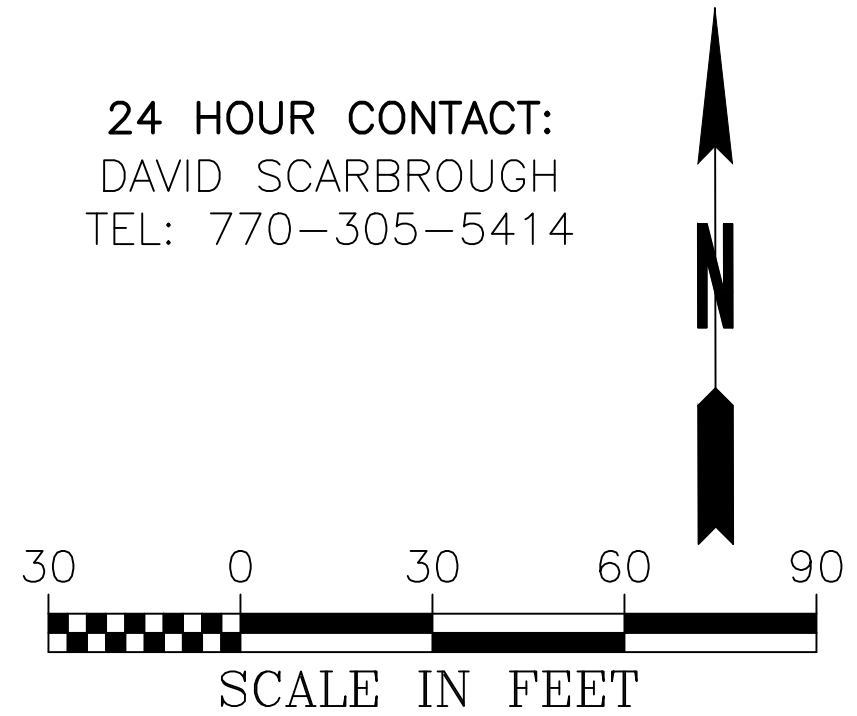
AFTER THE PERIMETER CONTROL BMPs IN THE INITIAL PHASE ARE INSTALLED AND FUNCTIONING PROPERLY, GRADING OPERATIONS CAN COMMENCE. FOR EACH GRADING OPERATION, A SEDIMENT STORAGE BASIN SHALL BE INSTALLED AND FUNCTIONING BEFORE GRADING FOR THE REST OF SITE CAN COMMENCE. AS EACH GRADING OPERATION PROGRESSES, THE SEDIMENT STORAGE AND STORM DRAINAGE IS BEING INSTALLED, S&2 EXCAVATED INLET SEDIMENT TRAPS ARE PROPOSED AROUND THE INLETS AS SHOWN. THE ROCK FILTER DAM (Rf) PROVIDES SEDIMENT STORAGE TO MINIMIZE EROSION FROM THE INLET. THE SEDIMENT STORAGE BASIN WITH STABILIZATION SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE MANUAL. S&2 HYDROSEED AND MULCH SHALL BE PLACED ON FINAL POOL SLOPES AS APPROVED ON ALTERNATIVE BMP LIST.

INITIAL PHASE BMPs SHALL BE MAINTAINED AS SHOWN THROUGHOUT THE CONSTRUCTION PERIOD. THE SEDIMENT STORAGE BASIN SHALL BE STORED IN BMPs. IMPLEMENTATION AND MAINTENANCE OF ALL BMPs SHALL BE ACCORDING TO THE MANUAL FOR EROSION AND SEDIMENT CONTROL. THE GRADING AND THE PROPOSED BMPs ARE INCLUDED ON SHEETS ER-500-S01.

IF ANY CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE DISCOVERED, EITHER ON THE CONSTRUCTION DOCUMENTS OR THE FIELD CONDITIONS, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY AND SHALL NOT COMMENCE OPERATION UNTIL THE CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE RESOLVED.



**24 HOUR CONTACT:**  
DAVID SCARBROUGH  
TEL: 770-305-5414



# CROY ENGINEERING

## DESIGN PHASE

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA



GSWCC CERT #2973

SHEET TITLE  
EROSION CONTROL  
PLAN - INTERMEDIATE  
PHASE

DRAWN BY <b>SMM</b>	CHECKED BY <b>LCC</b>
SCALE <b>1"=30'</b>	ISSUE DATE <b>04/30/2018</b>

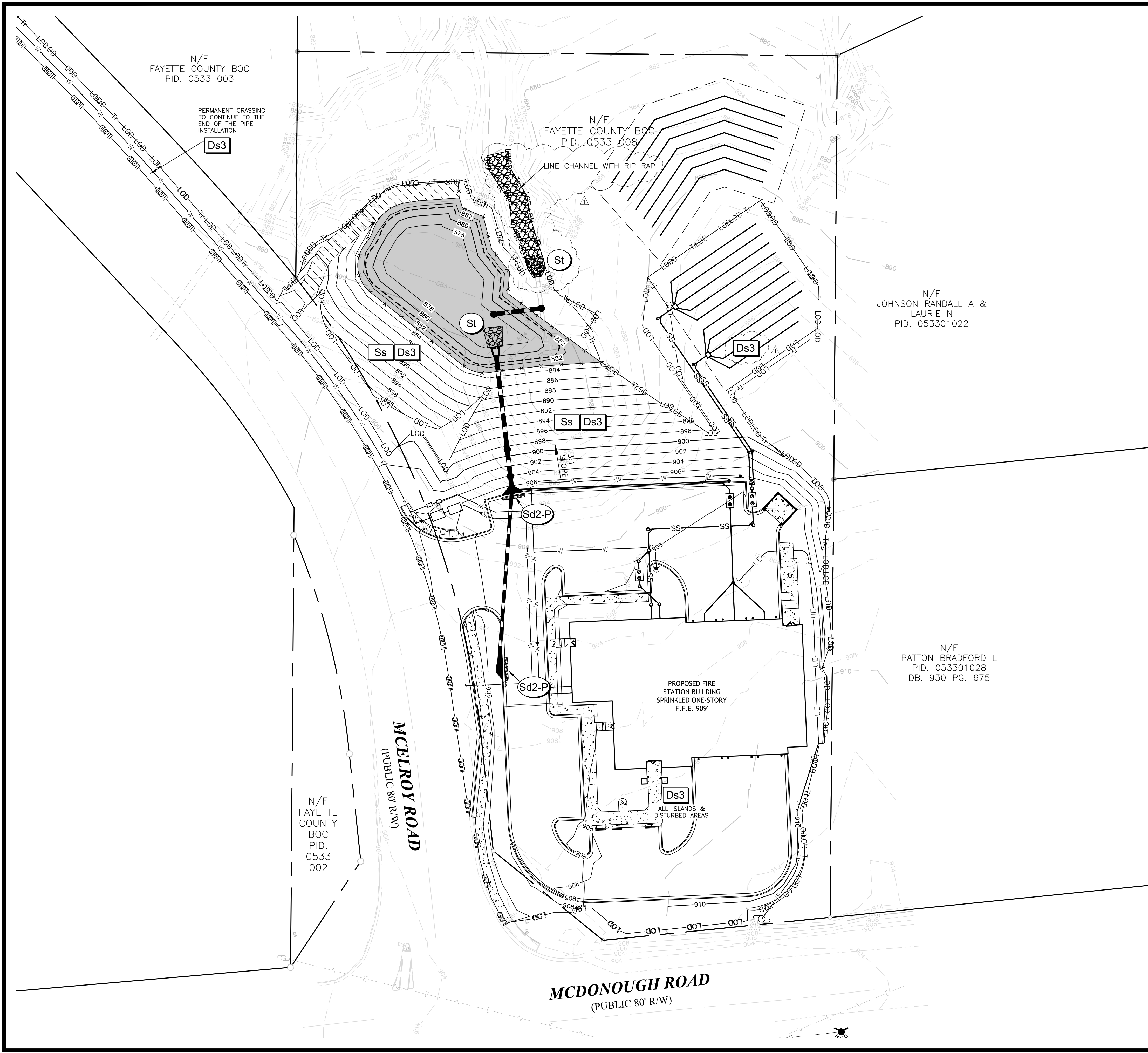
PROJECT NUMBER  
1788.000

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DRAWING NUMBER  
**ER-300**

SHEET 22 of 25





### EROSION CONTROL NOTES

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

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USE OF ALTERNATIVE BMPs WHOSE PERFORMANCE HAS BEEN DOCUMENTED TO BE EQUIVALENT TO OR SUPERIOR TO CONVENTIONAL BMPs AS CERTIFIED BY A DESIGN PROFESSIONAL (UNLESS DISAPPROVED BY EPD OR THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION). PLEASE REFER TO THE ALTERNATIVE BMP GUIDANCE FOUND AT [www.goswcc.georgia.gov](http://www.goswcc.georgia.gov).

USE OF ALTERNATIVE BMP FOR APPLICATION TO THE EQUIVALENT BMP LIST. PLEASE REFER TO APPENDIX A-2 OF THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA 2016 EDITION.

### FINAL PHASE NARRATIVE:

ONCE THE GRADING IS COMPLETE ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY. IN PREPARATION OF FINAL CONSTRUCTION, PERMANENT GRASSING WILL BE INSTALLED AND MAINTAINED AS SHOWN. ONCE AREAS OF DISTURBANCE IN THIS PHASE ARE COMPLETELY STABILIZED AND ALL PERMANENT BMPs ARE IN PLACE AND FUNCTIONING PROPERLY, ALL TEMPORARY BMPs SHALL BE REMOVED.

### STRUCTURAL BMP LEGEND

	CURB INLET PROTECTION "PIGS IN A BLANKET"
	STORM DRAIN OUTLET PROTECTION

### VEGETATIVE BMP LEGEND

	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)
	SLOPE STABILIZATION HYDROSEED & MULCH

IF ANY CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE DISCOVERED, EITHER ON THE CONSTRUCTION DOCUMENTS OR THE FIELD CONDITIONS, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY AND SHALL NOT COMMENCE OPERATION UNTIL THE CONFLICTS, DISCREPANCIES OR OTHER UNSATISFACTORY CONDITIONS ARE RESOLVED.

Know what's Below.  
Call before you dig.

24 HOUR CONTACT:  
DAVID SCARBROUGH  
TEL: 770-305-5414

N

30 0 30 60 90  
SCALE IN FEET

1 ADDENDUM 1 05/29/2018	
NO.	REVISION REFERENCE DATE

SEAL

GSWCC CERT #2973

SHEET TITLE  
EROSION CONTROL  
PLAN - FINAL PHASE

DRAWN BY SMM	CHECKED BY LCC
SCALE 1"=30'	ISSUE DATE 04/30/2018
PROJECT NUMBER 1788.000	
DRAWING NUMBER ER-400	
SHEET 23 of 25	

Engineers  
Planners  
Surveyors

# CROY

ENGINEERING

200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413  
MARIETTA, GA 30062  
PHONE: (770) 971-5407  
FAX: (770) 971-0620

## FIRE STATION NO. 4

DESIGN PHASE

LAND LOT(S) 139  
OF THE 2ND DISTRICT, 5TH SECTION  
FAYETTE COUNTY, GEORGIA

Drawing Location: P:\1788 K.A. Odham Design\1788.000 Fire Station No. 4\Engineering\Design\1788.000\_Erosion.dwg  
Plot Scale: 1"=30'  
Drawing Rotation: 0.0°  
Plot Style: Design.ctb  
Plotted By: Scott McElroy on 5/29/2018, 8:52 AM







**Ds1** **DISTURBED AREA STABILIZATION**  
**(WITH MULCHING ONLY)**

**SPECIFICATIONS**

N.T.S.

**Mulching Without Seeding**

This standard applied to grades or cleared areas where seedlings 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 reused.

**Applying Mulch**

When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.

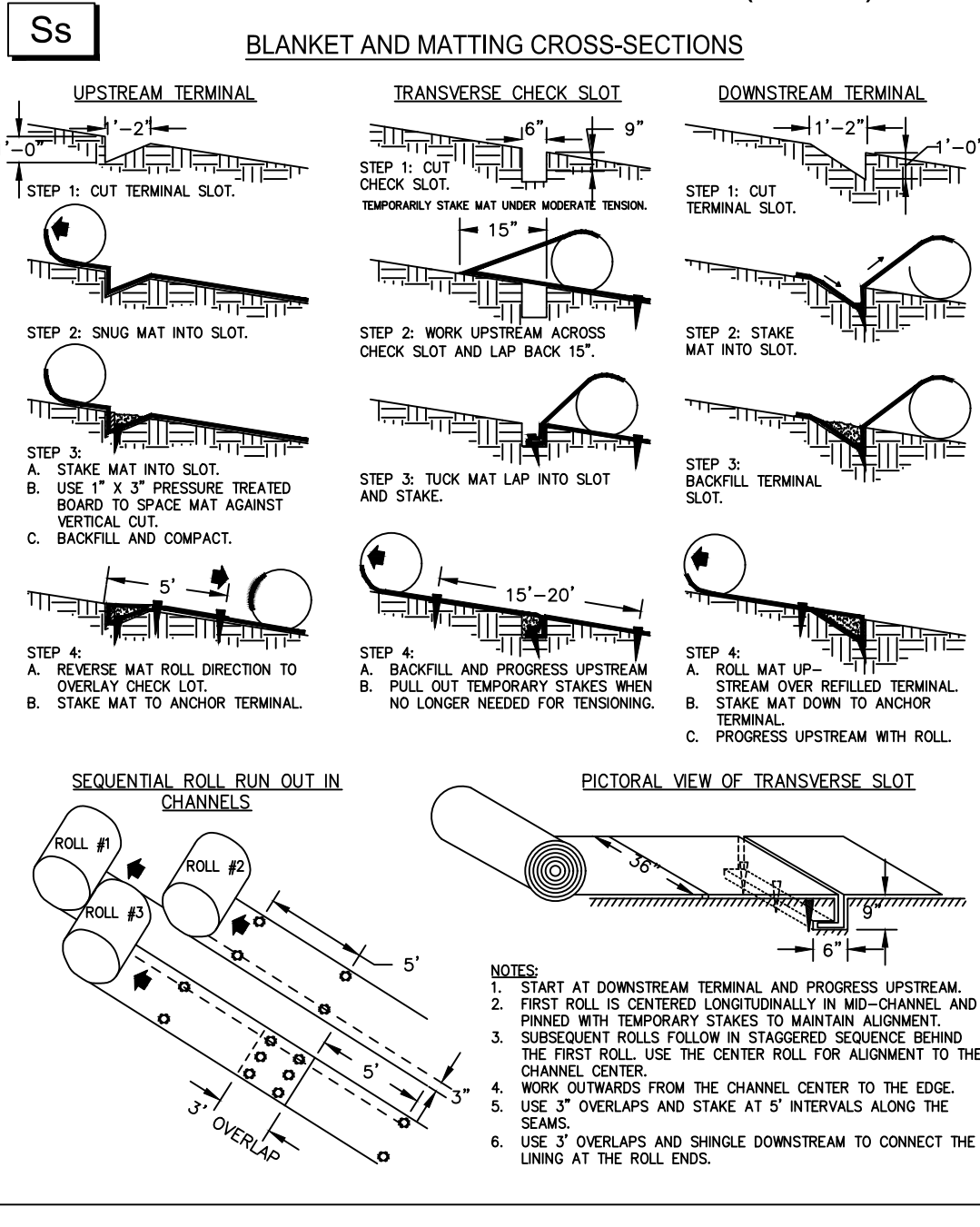
1. *Dry straw or hay mulch and wood chips* shall be applied uniformly by hand or by mechanical equipment.
2. If the area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by 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 "pucker 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 blow-type equipment may be anchored. Tackifiers, binders and hydraulic mulch with tackifier specifically designed for taking straw can be substituted for emulsified asphalt. Please refer to specification **Tackifiers and binders**. 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.

**TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)**



**Ds2** **DISTURBED AREA STABILIZATION**  
**(WITH TEMPORARY SEEDING)**

N.T.S.

**SPECIFICATIONS**

**Grading and Shaping**

Excessive water run-off shall be reduced by properly designed and installed erosion control practices such as closed drains, ditches, 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 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 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, cultipacker-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 below.

**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.

**PLANT, PLANTING RATES, AND PLANTING DATES FOR TEMPORARY COVER OR COMPANION CROPS**

SPECIES	BROADCAST RATES		PLANTING DATES FOR SOUTHERN PIEDMONT REGION												REMARKS
	PER ACRE	PER 1000 SQ. FT.	J	F	M	A	M	J	J	A	S	O	N	D	
BARLEY (Hordeum vulgare) alone in mixture	144 lbs. 24 lbs.	3.3 lbs. 0.6 lb.	J	F	M	A	M	J	J	A	S	O	N	D	14,000 seed per pound. Winterhardy. Use on productive soils.
LESPEDEZA, ANNUAL (Lespedeza striata) alone in mixture	40 lbs. 10 lbs.	0.9 lb. 0.2 lb.	J	F	M	A	M	J	J	A	S	O	N	D	200,000 seed per pound. May volunteer for several years. Use inoculant EL.
LOVEGRASS, WEEPING (Hordeum vulgare) alone in mixture	4 lbs. 2 lbs.	0.1 lb. 0.05 lb.	J	F	M	A	M	J	J	A	S	O	N	D	1,500,000 seed per pound. May last for several years. Mix with Sericea lespedeza.
MILLET, BROWN TOP (Panicum fasciculatum) alone in mixture	40 lbs. 10 lbs.	0.9 lb. 0.2 lb.	J	F	M	A	M	J	J	A	S	O	N	D	137,000 seed per pound. Quick dense cover. Will provide too much competition in mixtures if seeded in high rates.
MILLET, PEARL (Pennisetum glaucum) alone	50 lbs.	1.1 lb.	J	F	M	A	M	J	J	A	S	O	N	D	88,000 seed per pound. Quick dense cover. May reach 5 feet in height. Not recommended for mixtures.
OATS (Avena sativa) alone in mixture	128 lbs. 32 lbs.	2.9 lbs. 0.7 lb.	J	F	M	A	M	J	J	A	S	O	N	D	13,000 seed per pound. Use on productive soils. Not as winterhardy as rye or barley.
RYE (Secale cereale) alone in mixture	168 lbs. 28 lbs.	3.9 lbs. 0.6 lb.	J	F	M	A	M	J	J	A	S	O	N	D	18,000 seed per pound. Quick cover. Drought tolerant and winterhardy.
RYEGRASS, ANNUAL (Lolium temulentum) alone	40 lbs.	0.9 lb.	J	F	M	A	M	J	J	A	S	O	N	D	227,000 seed per pound. Dense cover. Very competitive and is not to be used in mixtures.
SUDANGRASS (Sorghum sudanense) alone	60 lbs.	1.4 lb.	J	F	M	A	M	J	J	A	S	O	N	D	55,000 seed per pound. Good on droughty sites. Not recommended for mixtures.
WHEAT (Triticum aestivum) alone in mixture	180 lbs. 30 lbs.	4.1 lbs. 0.7 lb.	J	F	M	A	M	J	J	A	S	O	N	D	15,000 seed per pound.

**Ds3** **DISTURBED AREA STABILIZATION**  
**(WITH PERMANENT VEGETATION)**

N.T.S.

**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:

1. 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.
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.
5. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.
6. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
7. 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 hold the inoculant to the seed for conventional seeding, or 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 cultipacker-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 furrows. 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 top 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, vegetation 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 and applied 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 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 black soil, mulch is not required.
7. Biominous treated roving may be applied on planted areas, slopes, in ditches or dry waterways to prevent erosion. Biominous 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 applied in water. The fibers should be given a dry to allow visual screening 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 blow-type spreading equipment, other spreading equipment or by hand. Mulch shall be applied to cover 75% of the soil surface.

Wood cellulose or wood pulp 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 "pucker 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 20210 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.

Material	Depth
Grass Straw	4" TO 6"
Grass Hay	4" TO 7"
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 rate 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 first to ensure that the seeds are mature. Mow between November and March.

Reynoldsgrass, Bahia grass 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.

**FERTILIZER REQUIREMENTS**

TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	NITROGEN TOP DRESSING RATE
1. Cool season grasses	First	6-12-12	1500 lbs./ac.	50-100 lbs./ac.
	Second	6-12-12	1000 lbs./ac.	----
	Maintenance	10-10-10	400 lbs./ac.	30 lbs./ac.
2. Cool season grasses and legumes	First	6-12-12	1500 lbs./ac.	0-50 lbs./ac.
	Second	6-12-12	1000 lbs./ac.	----
	Maintenance	10-10-10	400 lbs./ac.	----
3. Ground covers	First	10-10-10	1300 lbs./ac.	----
	Second	10-10-10	1300 lbs./ac.	----
	Maintenance	10-10-10	1100 lbs./ac.	----
4. Pine seedlings	First	20-10-5	one 21-gram pellet per seedling placed in the closing hole	----
5. Shrub Lespedeza	First	0-10-10	700 lbs./ac.	----
	Maintenance	0-10-10	700 lbs./ac.	----
6. Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	30 lbs./ac.
7. Warm season grasses	First	6-12-12	1500 lbs./ac.	50-100 lbs./ac.
	Second	6-12-12	800 lbs./ac.	50-100 lbs./ac.
	Maintenance	10-10-10	400 lbs./ac.	30 lbs./ac.
8. Warm season grasses and legumes	First	6-12-12	1500 lbs./ac.	50 lbs./ac.
	Second	0-10-10	1000 lbs./ac.	----
	Maintenance	0-10-10	400 lbs./ac.	----

**PLANT, PLANTING RATES, AND PLANTING DATES FOR PERMANENT COVER**

SPECIES	BROADCAST RATES		PLANTING DATES FOR SOUTHERN PIEDMONT REGION												REMARKS
	PER ACRE	PER 1000 SQ. FT.	J	F	M	A	M	J	J	A	S	O	N	D	
BAHIA, PENSACOLA (Paspalum notatum) alone or w/ temp. cover with other perennials	60 lbs. 30 lbs.	1.4 lb. 0.7 lb.	J	F	M	A	M	J	J	A	S	O	N	D	166,000 seed per pound. Low growing. Seed dormant. 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/ temp. cover with other perennials	60 lbs. 30 lbs.	1.4 lb. 0.7 lb.	J	F	M	A	M	J	J	A	S	O	N	D	1,787,000 seed per pound. Quick cover. Low growing and seed dormant. Full sun. Good for athletic fields.
BERMUDA, COMMON (Cynodon dactylon) alone with other perennials	10 lbs. 6 lbs.	0.2 lb. 0.1 lb.	J	F	M	A	M	J	J	A	S	O	N	D	Plant with winter annuals.
BERMUDA, COMMON (Cynodon dactylon) with temporary cover with other perennials	10 lbs. 6 lbs.	0.2 lb. 0.1 lb.	J	F	M	A	M	J	J	A	S	O	N	D	Plant with tall fescue.
BERMUDA SPRIGS (Cynodon dactylon) Coastal, Common, or Tift 44	40 cu. ft. 0.9 cu. ft.		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.
CENTPEDEE (Fremontochloa ophiuroides)	Block seed only		J	F	M	A	M	J	J	A	S	O	N	D	Shrubby, stems to 6 feet. Leaves alternate and concentrated toward ends of stems. Flowers small and white. Established. Do not plant near pastures or lawns. Mix with Sericea lespedeza or weeping lovegrass.
CROWN VETCH (Coronilla varia)	15 lbs. 0.3 lb.		J	F	M	A	M	J	J	A	S	O	N	D	10,000 seed per pound. Dense growth. Attractive coral, red, and white flowers. Mix with Sericea lespedeza or weeping lovegrass. Take 2 to 3 years to become fully established. Excellent on roadbanks, broadcast seed with EL inoculant.
FESCUE, TALL (Festuca arundinacea) alone with other perennials	50 lbs. 30 lbs.	1.1 lb. 0.7 lb.	J	F	M	A	M	J	J	A	S	O	N	D	227,000 seed per pound. Use alone or with other perennials. Attractive coral, red, and white flowers. Mix with Sericea lespedeza or weeping lovegrass. Take 2 to 3 years to become fully established. Excellent on roadbanks, broadcast seed with EL inoculant.
LESPEDEZA, SERICA (Lespedeza cuneata) scarified unscarified seed-bearing hay	60 lbs. 75 lbs. 3 tons	1.4 lbs. 1.7 lbs. 138 lbs.	J	F	M	A	M	J	J	A	S	O	N	D	150,000 seed per pound. Widely adapted. Low maintenance. Mix with weeping lovegrass, common bermuda, or tall fescue. Take 2 to 3 years to become fully established. Excellent on roadbanks, broadcast seed with EL inoculant.
LESPEDEZA (Lespedeza virgata DC) or (Lespedeza cuneata G. Don) scarified unscarified	60 lbs. 75 lbs.	1.4 lbs. 1.7 lbs.	J	F	M	A	M	J	J	A	S	O	N	D	160,000 seed per pound. Rapid growth. Mix with Sericea lespedeza or weeping lovegrass. Take 2 to 3 years to become fully established. Excellent on roadbanks, broadcast seed with EL inoculant.
LESPEDEZA, SHRUB (Lespedeza bicolor) (Lespedeza thumbergii) plants	3' x 3'		J	F	M	A	M	J	J	A	S	O	N	D	Provide wildlife food and cover.
LOVEGRASS, WEEPING (Eragrostis curvula) alone with other perennials	4 lbs. 2 lbs.	0.1 lb. 0.05 lb.	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.
PANICGRASS, ATLANTIC COASTAL (Panicum amarum var. amarulum)	20 lbs. 0.5 lb.		J	F	M	A	M	J	J	A	S	O	N	D	Grows well on coastal and dunes. Berries are red and green. Mix with Sericea lespedeza or weeping lovegrass. Take 2 to 3 years to become fully established. Excellent on roadbanks, broadcast seed with EL inoculant.
REED CANARY GRASS (Phalaris arundinacea) alone with other perennials	50 lbs. 30 lbs.	1.1 lbs. 0.7 lb.	J	F	M	A	M	J	J	A	S	O	N	D	Grows similar to tall fescue.
SUNFLOWER, 'AZTEC' MAXIMILLIAM (Helianthus maximiliani)	10 lbs. 0.2 lb.		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.

**DURABLE SHRUBS AND GROUND COVERS FOR PERMANENT COVER**

Common Name	Scientific Name	Mature Height	Plant Spacing	Comments
Albela	Abelia grandiflora	3-4 ft.	5 ft.	Also a prostrate form 2 feet high. Sun, semi-shade. Semi-evergreen.
Carolina Yellow Jessamine	Gelsemium sempervirens	low	3 ft.	Vine. Yellow, trumpet-like flowers. Hardy, one of best vines. Evergreen. Native to Georgia.
Carpet Blue	Ajuga reptans	2-4 in.	3 ft.	Needs good drainage, partial shade. Blue or white flowers. Evergreen.
Barberry Cotoneaster	Cotoneaster dammeri	2-4 ft.	5 ft.	White flowers, red fruit. Sun. Evergreen.
Ground Cover Cotoneaster	Cotoneaster salicifolius 'Repens'	1-2 ft.	5 ft.	White flowers, red fruit. Sun. Evergreen.
Rock Cotoneaster	Cotoneaster horizontalis	1-2 ft.	5 ft.	Semi-evergreen. Sun.
Virginia Creeper	Parthenocissus quinquefolia	low	3 ft.	Red in fall. Vine. Deciduous. Native to Georgia.
Daylily	Hemerocallis spp.	2-3 ft.	2 ft.	Many flower colors. Full sun. Very Hardy.
English Ivy	Hedera helix	low	3 ft.	Shade only. Climbs.
Compact Holly	Ilex cornuta 'Compacta'	3-4 ft.	5 ft.	Very durable. Sun, semi-shade.
Chinese Holly	Ilex cornuta 'Rotunda'	3-4 ft.	5 ft.	Very durable. Sun, semi-shade.
Dwarf Barford Holly	Ilex barfordii 'Nana'	5-8 ft.	8 ft.	
Dwarf Yaupon Holly	Ilex vomitoria 'Nana'	3-4 ft.	5 ft.	Very durable, sun, semi-shade.
Rebrenders Holly	Ilex cornuta 'Repandens'	2-3 ft.	5 ft.	Sun, semi-shade.
Andorra Juniper	Juniperus horizontalis 'Plumosa'	2-3 ft.	5 ft.	Excellent for slopes. Sun.
Andorra Compacta Juniper	Juniperus horizontalis 'Plumosa compacta'	1-2 ft.	5 ft.	More compact than andorra.
Blue Chip Juniper	Juniperus horizontalis 'Blue Chip'	8-10 in.	4 ft.	
Blue Rug Juniper	Juniperus horizontalis 'Wiltoni'	4-6 in.	3 ft.	Very low. Sun.
Parsons Juniper	Juniperus dravica 'Expansa' (Squamata Parsons)	18-24 in.	5 ft.	One of the best, good winter cover.
Prince of Wales Juniper	Juniperus chinensis 'Wittiana'	6-8 ft.	6 ft.	Needs room.
Prince of Wales Juniper	Juniperus chinensis 'Prince of Wales'	8-10 in.	4 ft.	Feathery appearance.
Sargent Juniper	Juniperus chinensis 'Sargentii'	1-2 ft.	5 ft.	Full sun. Needs good drainage. Good winter color.
Shore Juniper	Juniperus conferta	2-3 ft.	5 ft.	Emerald Sea or Blue Pacific cultivars are rare.
Liriope	Liriope muscari	8-10 in.	3 ft.	
Creeeping Liriope	Liriope spicata	10-12 in.	1 ft.	Spreads by runners.
Big Leaf Periwinkle	Vinca major	12-15 in.	4 ft.	Light blue flowers in spring. Semi-shade.
Common Periwinkle	Vinca minor	5-6 in.	4 ft.	Lavender-blue flowers in spring. Semi-shade.
Cherokee Rose	Rosa laevigata	2 ft.	5 ft.	Rampant grower. Not for restricted spaces.
Memoria Rose	Rosa wichuriana	2 ft.	5 ft.	Rampant grower.
St. Johnswort	Hypericum calycemum	8-12 in.	3 ft.	Semi-shade.
Anthony Waterer Spirea	Spiraea bumalda	3-4 ft.	5 ft.	Sun.
Thunberg Spirea	Spiraea thibergii	3-4 ft.	5 ft.	Sun.