ADDRESS: 5404-5400 WINTERS CHAPEL ROAD DUNWOODY, GA 30360 LAND LOTS 311 OF THE 4thTH DISTRICT

DEKALB COUNTY, GEORGIA

DISTURBED AREA: 2.75 ACRES

OWNER:

NAME: CITY OF DUNWOODY ADDRESS: 4800 ASHFORD DUNWOODY RD ATLANTA, GA 30338 PHONE: 678-382-6700

PLANS COMPLETED ON: 09/03/2020

WINTERS CHAPEL SPEED DESIGN: 40 MPH

-- 10 ×201

COMMENT MAY BE SHOULD SEE STORY

REVISION REFERENCE

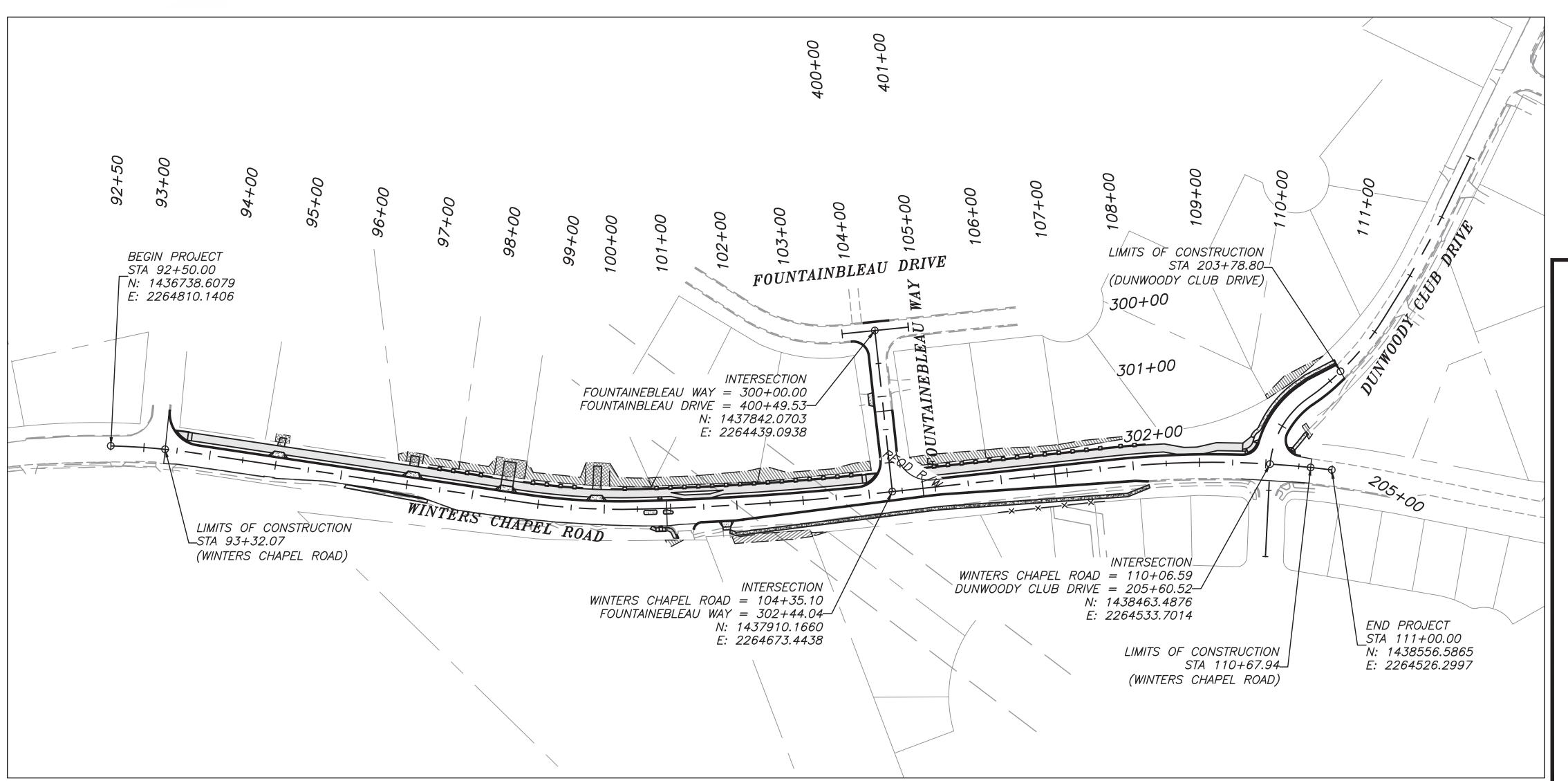
GSWCC CERT #78081

COVER SHEET

DRAWN BY CHECKED BY KAK ISSUE DATE AS SHOWN | 09/03/2020 PROJECT NUMBER

1588.03 DRAWING NUMBER

PROJECT AREA: 7.5 ACRES



FEMA STATEMENT

24 HOUR CONTACT:

ISHRI SANKAR

TEL: 678-382-6700

0 1000 2,000 -000 0 200 200 1000

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 13089C0010K AND THE DATE OF SAID MAP IS AUGUST 15, 2019.

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 PERMITTEE 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



Know what's below. Call before you dig.

TO MEAN THE DEPARTMENT OF TRANSPORTATION. THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS, OR IN ANY WAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THE CITY OF DUNWOODY IN ANY WAY.

ALONG THE PROPOSED PROJECT LIMITS ARE DESIGNED TO PROVIDE ADEQUATE SIGHT DISTANCE

ALL REFERENCES IN THIS DOCUMENT, WHICH INCLUDES ALL PAPERS, WRITINGS, DOCUMENTS

DRAWINGS, OF PHOTOGRAPHS USED, OR TO BE USED IN CONNECTION WITH THIS DOCUMENT,

STATE HIGHWAY DEPARTMENT", "HIGHWAY DEPARTMENT", OR "DEPARTMENT" WHEN THE CONTEXT

THEREOF MEANS THE STATE HIGHWAY DEPARTMENT OF GEORGIA MEAN, AND SHALL BE DEEMED

TO "STATE HIGHWAY DEPARTMENT OF GEORGIA", "STATE HIGHWAY DEPARTMENT", "GEORGIA"

HEREBY CERTIFY THAT THE PROPOSED ROADWAYS AND DRIVEWAYS

ALL WORK TO BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS OF THE DEPARTMENT OF TRANSPORTATION OF GEORGIA, CURRENT EDITION. AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION. - AND, AS MODIFIED BY CONTRACT DOCUMENTS.

SIGHT DISTANCE GERTIFICATION:

Dunwoody

LENGTH OF PROJECT NET LENGTH OF ROADWAY 0.35 NET LENGTH OF BRIDGES 0.00 0.35 NET LENGTH OF PROJECT NET LENGTH OF EXCEPTIONS 0.00 GROSS LENGTH OF PROJECT 0.35

THIS PROJECT IS LOCATED 100% IN CITY OF DUNWOODY, DEKALB COUNTY THIS PROJECT IS LOCATED 100% IN THE 4TH DISTRICT FUNCTIONAL CLASSIFICATION: LOCAL FEDERAL ROUTE NO. N/A

STATE ROUTE NO.

DWG NO.	DESCRIPTION
(0, 000)	COVER
(C-000)	INDEX
(C-001) (C-002)	REVISION SUMMARY SHEET
(C-002)	GENERAL NOTES
(C-004)	CONSTRUCTION LAYOUT
(C-005)	PLAN LEGEND
(C-100 TO C-101)	TYPICAL SECTIONS
(C-300 TO C-303)	MAINLINE PLANS
(C-304)	SPECIAL CONSTRUCTION DETAIL—ISLAND DETAIL
(C-400 TO C-403)	GRADING AND DRAINAGE PLAN
(C-404)	MAINLINE PROFILES
(C-405)	DRIVEWAY PROFILES
(C-406 TO C-407)	DRAINAGE PROFILES
(C-500 TO C-502)	MAINLINE CROSS-SECTIONS
(C-600 TO C-603)	SIGNING AND MARKING PLANS
(C-700 TO C-703)	RIGHT OF WAY PLANS
(C-704)	RIGHT OF WAY TABLES
(C-800)	CONSTRUCTION DETAILS
(ER-000)	ES&PCP COVER SHEET
(ER-001)	ES&PCP NOTES
(ER-002)	ES&PCP BASIN MAP
(ER-100 TO ER-103)	ES&PCP INITIAL PHASE
(ER-200 TO ER-203	ES&PCP INTERMEDIATE PHASE
(ER-300 TO ER-303)	ES&PCP FINAL PHASE
(ER-400 TO ER-401)	ES&PCP DETAILS
	

	CONSTR DETAILS - (A1) DRIVEWAYS WITH TAPERED ENTRANCES CONC VALLEY GUTTERS
	CONSTR DETAILS - (A2) CONC V GUTTER AT STREET INTERSECTION
	CONSTR DETAILS - (A3) CONC SIDEWALK DETAILS, CURB CUT RAMPS
	CONSTR DETAILS - (P-7) PAVEMENT EDGE TREATMENT ASPHALT AND CONCRETE PAVEMENT
	CONSTR DETAILS - (T-2) DETAILS FOR TYPICAL FRAMING
	CONSTR DETAILS - (T-3A) TYPE 7, 8 & 9 SQUARE TUBE POST INSTALLATION DETAIL
	CONSTR DETAILS - (T-11A) DETAILS OF PVM'T MARKING PLACEMENT ON NON-LIMITED ACCESS ROADWAY
	CONSTR DETAILS - (T-12A) DETAILS OF PVM'T MARKING - ARROW LOCATION
	CONSTR DETAILS - (T-12B) DETAILS OF PVM'T MARKING - ARROWS
	CONSTR DETAILS - (T-3A) DETAILS OF PVM'T MARKING - WORDS
	CONSTR DETAILS - (T-14) DET OF PAVEMENT MARKING HATCHING
	GEORGIA STANDARD 1001-B - PIPE CULVERT CONCRETE HEADWALL
	GEORGIA STANDARD 1011-A - PRECAST REINFORCED CONCRETE MANHOLE
	GEORGIA STANDARD 1030D - CONCRETE & METAL PIPE CULVERTS SHEET 1 THROUGH 3 OF 3
	GEORGIA STANDARD 1033D - CATCH BASIN FOR USE WITH CURB & GUTTER
	GEORGIA STANDARD 1034D - CATCH BASINS FOR USE WITH CURB & GUTTER (IN SAGS OR LOW POINTS)
	GEORGIA STANDARD 9031L - RETAINING WALL TYPICAL SECTIONS, RAISING HEADWALL, & TYPICAL PIPE PLUG
	GEORGIA STANDARD 9031S - MEDIAN DROP INLET (PRECAST OR BUILT-IN-PLACE) & CONCRETE APRON
	GEORGIA STANDARD 9031R - PLACING ROOF DRAIN PIPE UNDER SIDEWALK
	RAMP TYPE BARRICADE
	PIPE HANDRAIL FOR RETAINING WALL
	PIPE HANDRAIL FOR CONCRETE STEPS
	GEORGIA STANDARD 9032B — CONC CURB & GUTTER CONC CURBS, CONC MEDIANS
	GEORGIA STANDARD 9100 - TRAFFIC CONTROL GEN. NOTES. STD. LEGEND, MISC. DETAILS
	GEORGIA STANDARD 9121 - TAPERS, SIGNS, & MARKINGS FOR PASSING LANES
	CONSTR STANDARDS — PAVEMENT PATCHING DETAILS
RGIA STAN	DARDS AND CONSTRUCTION DETAILS REQUIRED FOR THIS PROJECT ARE LISTED IN THE INDEX WITH
LATEST RI	EVISION DATES BUT ARE NOT INCLUDED AS PART OF THE PLANS. THE CONTRACTOR SHALL BE
	FOR OBTAINING THE STANDARDS AND CONSTRUCTION DETAILS SHOWN IN THE INDEX AND

24 HOUR CONTACT:
ISHRI SANKAR
TEL: 678-382-6700





SHEET TITLE INDEX

CHECKED BY **KAK** ISSUE DATE 09/03/2020 SCALE **N/A** PROJECT NUMBER 1588.03

DRAWING NUMBER

DATE	SHEET	DESCRIPTION

DATE	SHEET	DESCRIPTION

24 HOUR CONTACT: ISHRI SANKAR TEL: 678-382-6700



INTERS CHAPEL ROAD

MULTI-USE TRAIL

ANT PLACE TO DUNWOODY CLUB DRIVE

LAND LOT(S) 311

OF THE 4th DISTRICT, # SECTION

OF THE 4th DISTRICT # SECTION

OF

SHEET TITLE
REVISION SUMMARY
SHEET

NO. REVISION REFERENCE

CHECKED BY KAK ISSUE DATE 09/03/2020 SCALE **N/A** PROJECT NUMBER 1588.03

DRAWING NUMBER

1.ALL WORK TO BE DONE IN ACCORDANCE WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF TRANSPORTATION SYSTEMS, CURRENT EDITION, AND SUPPLEMENTS THERETO, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.

2.ALL KNOWN UTILITY FACILITIES ARE SHOWN SCHEMATICALLY ON PLANS AND ARE NOT NECESSARILY ACCURATE IN LOCATION AS TO PLAN OR ELEVATION. UTILITY FACILITIES SUCH AS SERVICE LINES OR UNKNOWN FACILITIES NOT SHOWN ON PLANS WILL NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITY UNDER THIS REQUIREMENT, EXCEPT AS NOTED BELOW. "EXISTING UTILITY FACILITIES" MEANS ANY UTILITY THAT EXISTS ON THE PROJECT IN ITS ORIGINAL, RELOCATED, OR REPAIRS TO DAMAGED UTILITY FACILITIES OTHER THAN SERVICE FROM STREET MAINS TO ABUTTING PROPERTY, WHEN SUCH FACILITIES ARE NOT SHOWN ON THE PLANS AND THEIR EXISTENCE IS UNKNOWN TO THE CONTRACTOR PRIOR TO THE DAMAGES OCCURRING, PROVIDING THAT THE ENGINEER DETERMINES THE CONTRACTOR HAS OTHERWISE FULLY COMPLIED WITH THE SPECIFICATIONS. ALL UTILITY FACILITIES WHICH ARE IN CONFLICT WITH CONSTRUCTION AND ARE NOT COVERED AS SPECIFIC ITEMS IN THE DETAILED ESTIMATE ARE TO BE REMOVED OR RELOCATED TO CLEAR CONSTRUCTION IN ADVANCE OF THE WORK.

3.UTILITY WORK COORDINATION WILL BE REQUIRED AS PART OF THIS CONTRACT. THE CONTRACTOR WILL BE REQUIRED TO USE THE ONE-CALL CENTER TELEPHONE NUMBER, 811, FOR THE PURPOSE OF COORDINATING THE MARKING OF UNDERGROUND UTILITIES. THE CONTRACTOR'S ATTENTION IS CALLED TO SUBSECTION 105.06 OF THE GDOT STANDARD SPECIFICATIONS "COOPERATION WITH UTILITIES".

4. THE FOLLOWING UTILITIES HAVE FACILITIES IN THE PROJECT AREA:

ATLANTA GAS & LIGHT CO. 10 PEACHTREE PLACE NE, SUITE 1000 ATLANTA, GA 30309 TITO CINTRON 470-218-5996

DEKALB COUNTY WATER AND SEWER 1580 ROADHAVEN DRIVE STONE MOUNTAIN, GA 30083 BARON SAUSSY 404-731-3562

DEKALB COUNTY TRAFFIC AND SAFETY

2300 NORTHLAKE CENTER DRIVE TUCKER, GA 30309 ANGELO HINES

678-758-7794

770-784-3972

ZAYO FILBER SOLUTIONS TELECOM 1175 PEACHTREE STREET NE 100 COLONY SQUARE, SUITE 1920 DEWAYNE BEGLEY 470-249-5124

GEORGIA POWER ELECTRIC 829 JEFFERSON STREET BIN 39066 ATLANTA, GA 30318 NO CONTACT NAME 404-506-6502

LEVEL 3 TELECOM 345 COURTLAND STREET ATLANTA, GA 30308 NO CONTACT NAME 8773668344 EXT. 3

5.THE GRADING COMPLETE QUANTITY IS A LUMP SUM THAT INCLUDES CUT, FILL, SAW CUTTING, SELECTIVE DEMOLITION, AND ALL CLEARING AND GRUBBING REQUIRED FOR THE PROJECT. SEE GDOT SPECIFICATION SECTION 210 FOR COMPLETE DETAILS.

6.THE CONTRACTOR SHALL STRICTLY ADHERE TO DUST CONTROL REGULATIONS. ALL AREAS SUBJECTED TO DUST FORMATION MUST BE PERIODICALLY WATERED SUFFICIENT TO RETARD DUST. NO SEPARATE PAYMENT WILL BE MADE FOR ANY COST INCURRED TO COMPLY WITH THIS REQUIREMENT. 7.THE TOTAL AREA SHOWN ON THE PLANS FOR GRASSING IS FOR INFORMATION ONLY. THE CITY OF DUNWOODY ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY. THE CONTRACTOR SHALL DETERMINE THE ACTUAL AREA TO BE GRASSED. NO CLAIMS WILL BE CONSIDERED FOR COMPENSATION IF THE

CONTRACTOR RELIES ON THE AREA SHOWN ON THE PLANS. 8.TYPE OF GRASS OR SOD USED ON THIS PROJECT WILL BE REQUIRED TO MATCH ANY TYPE OF GRASS OR SOD WHICH MAY BE PLANTED AND GROWING ON THE ADJACENT LAWN. (I.E. BERMUDA SOD FOR BERMUDA SOD, ZOYSIA FOR ZOYSIA, ETC.). NO SEPARATE PAYMENT SHALL BE MADE FOR ANY COST INCURRED TO COMPLY WITH THIS REQUIREMENT.

9.INGRESS AND EGRESS SHALL BE MAINTAINED AT ALL TIMES TO ADJACENT PROPERTIES. REFER TO SUB-SECTION 107.07 OF THE GDOT STANDARD SPECIFICATIONS.

10.IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FURNISH SUITABLE BORROW MATERIAL FOR THE PROJECT AND DISPOSE OF ANY UNSUITABLE OR WASTE MATERIAL.

11. HORIZONTAL CONTROL IS BASED UPON GEORGIA STATE PLANE COORDINATE SYSTEM.

12. SHOULD A DRIVEWAY BE DAMAGED DUE TO CONSTRUCTION, THE DRIVEWAY SHALL BE REPLACED, IN KIND, (I.E. ASPHALT FOR ASPHALT AND CONCRETE FOR CONCRETE; EXCEPT EARTH AND GRAVEL DRIVEWAYS SHALL BE REPLACED WITH ASPHALT TO THE CONSTRUCTION LIMITS). THE DRIVEWAY LOCATIONS INDICATED ON THE PLANS ARE FROM THE BEST AVAILABLE DATA. THE CONTRACTOR SHALL OBTAIN THE APPROVAL OF THE ENGINEER PRIOR TO MAKING ANY REVISIONS SUCH AS TO LOCATION, WIDTH, AND/OR NUMBER OF DRIVES TO BE CONSTRUCTED. WHERE REQUIRED, THE DRIVES SHALL BE PAVED AS FOLLOWS:

ASPHALTIC DRIVES

RESIDENTIAL - 1-1/2" RECYCLED ASPHALTIC CONCRETE, 9.5MM SUPERPAVE, GP 2 ONLY,

INCL. BITUM. MAT'L & H. LIME 6" GRADED AGGREGATE BASE

COMMERCIAL - 1-1/2" RECYCLED ASPHALTIC CONC. 19MM SUPERPAVE, GP 1 OR 2

> INCL. BITUM. MAT'L & H. LIME 8" GRADED AGGREGATE BASE

CONCRETE DRIVES

RESIDENTIAL – 6" CONCRETE VALLEY GUTTER

6" CONCRETE DRIVEWAY

COMMERCIAL - 8" CONCRETE VALLEY GUTTER 8" CONCRETE DRIVEWAY

ALL DRIVEWAYS SHALL BE PAVED TO THE LIMITS OF CONSTRUCTION.

13. WHERE WET SUBGRADE IS ENCOUNTERED AND IDENTIFIED BY THE ENGINEER, UNDERDRAIN PIPE WITH DRAINAGE AGGREGATE SHALL BE PLACED AS DIRECTED BY THE ENGINEER TO AID IN DEWATERING THE SUBGRADE. THE CONTRACTOR SHALL OBSERVE ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS REGARDING PIPE INSTALLATION IN TRENCHES. NO SEPARATE PAYMENT WILL BE MADE FOR ANY COST INCURRED TO COMPLY WITH THIS REQUIREMENT

14. ALL EXISTING PIPE NO LONGER IN USE SHALL BE REMOVED, UNLESS OTHERWISE NOTED ON PLANS, OR AS DIRECTED BY THE ENGINEER. ALL COST FOR REMOVAL SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR GRADING COMPLETE. 15.NO SEPARATE PAYMENT SHALL BE MADE FOR THE REMOVAL OF ANY REQUIRED TEMPORARY PIPE OR DRAINAGE STRUCTURES. ALL COSTS

ASSOCIATED WITH SUCH REMOVALS SHALL BE INCLUDED IN THE BID PRICE FOR GRADING COMPLETE. 16.IN AREAS WHERE TYPE 2 CURB IS USED, DRAINAGE STRUCTURES 1033D AND 1034D WILL BE REQUIRED. IN AREAS WHERE CURB TYPE 7 IS USED, DRAINAGE STRUCTURES 1033G AND 1034G WILL BE REQUIRED.

17. AT LOCATIONS WHERE NEW PAVEMENT IS TO BE PLACED ADJACENT TO EXISTING PAVEMENT WITHOUT AN OVERLAY OR WHERE CURBING IS TO BE PLACED ACROSS A PAVED AREA, A JOINT SHALL BE SAWED ON A LINE ESTABLISHED BY THE ENGINEER TO ENSURE PAVEMENT REMOVAL TO A NEAT LINE. THE COST FOR SAWED JOINTS, WHEN REQUIRED, SHALL BE INCLUDED IN THE GRADING COMPLETE QUANTITY.

18. WHERE EXISTING PAVEMENT MARKINGS AND LINES ARE IN CONFLICT WITH THE TRAFFIC PATTERN BEING USED ON CONSTRUCTION. THE CONTRACTOR SHALL REMOVE OR OVERLAY LINES TO THE SATISFACTION OF THE ENGINEER SUCH THAT LINES DO NOT CONFUSE THE TRAVELING PUBLIC. ALL REMAINING LINES OR MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", OR AS DIRECTED BY THE ENGINEER. TRAFFIC SHALL NOT BE ALLOWED ON ANY PAVEMENT NOT PROPERLY STRIPED.

19. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 104.5 AND 107.07 OF THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS FOR TRAFFIC CONTROL AND SEQUENCE OF OPERATIONS IN REGARDS TO MAINTENANCE OF TRAFFIC DURING CONSTRUCTION.

20.THE BID PRICE FOR TRAFFIC CONTROL SHALL INCLUDE, BUT IS NOT LIMITED TO: CONSTRUCTION, MAINTENANCE, AND REMOVAL OF TEMPORARY SIGNING AND PAVEMENT MARKINGS, BARRICADES, CHANNELIZING DEVICES, ETC. REQUIRED FOR MAINTENANCE OF TRAFFIC DURING CONSTRUCTION. ALL TEMPORARY SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", CURRENT EDITION AND/OR AS DIRECTED BY THE ENGINEER. NO SEPARATE PAYMENT WILL BE MADE FOR ADDITIONAL DETOUR SIGNAGE NOT SHOWN ON DETOUR

21.ALL CUT AND FILL SLOPES SHALL BE GRASSED. AS DIRECTED BY THE ENGINEER, IMMEDIATELY AFTER THE SLOPES ARE ESTABLISHED IN ORDER TO REDUCE EROSION. IF THE SEASON DOES NOT PERMIT GRASSING, TEMPORARY MULCH SHALL BE USED AS DIRECTED BY THE ENGINEER.

22. THE CONTRACTOR SHALL ENSURE THAT POSITIVE AND ADEQUATE DRAINAGE IS MAINTAINED AT ALL TIMES WITHIN THE PROJECT LIMITS. THIS MAY INCLUDE, BUT NOT BE LIMITED TO, REPLACEMENT OR RECONSTRUCTION OF EXISTING DRAINAGE STRUCTURES THAT HAVE BEEN DAMAGED, REMOVED, OR REGRADED AS REQUIRED BY THE ENGINEER, EXCEPT DRAINAGE ITEMS SHOWN AT SPECIFIC LOCATIONS IN THE PLANS. NO SEPARATE PAYMENT SHALL BE MADE FOR ANY COSTS INCURRED TO COMPLY WITH THIS REQUIREMENT.

23.EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO OR CONCURRENT WITH LAND DISTURBANCE ACTIVITIES AND SHALL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION OR AS DIRECTED BY THE ENGINEER.

24.ALL SILT FENCES MUST BE PLACED AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL BE DONE UNTIL SILT FENCE INSTALLATION IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL SILT FENCES AND TO REPAIR OR REPLACE ANY SILT FENCE THAT IS NOT SATISFACTORY. EROSION CONTROL GATES SHALL BE PLACED IMMEDIATELY AFTER DRAINAGE STRUCTURES ARE IN PLACE. ALL EROSION CONTROL 2.ALL TRAFFIC CONTROL DEVICES AND METHODS SHALL BE IN ACCORDANCE WITH THE MANUAL OF TRAFFIC CONTROL DEVICES. DEVICES SHALL BE PLACED ACCORDING TO PLANS AND AS DIRECTED BY THE ENGINEER. SEE THE GEORGIA STANDARD SPECIFICATIONS AND 3.TRAFFIC CONTROL PLANS: THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA", CURRENT EDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEP WETLAND AREAS FREE FROM SILTATION. THE CONTRACTOR SHALL OBTAIN AND ABIDE BY ALL CORPS OF ENGINEERS RULES AND REGULATIONS CONCERNING CONSTRUCTION ADJACENT TO WATERWAYS AND MAINTAIN WATER QUALITY.

25.THIS PROJECT HAS A TOTAL AREA OF 7.5-ACRES AND THE EXPECTED DISTURBED AREA IS 2.75 ACRES. THE TOTAL AREA IS THE TOTAL AREA OF RIGHT-OF-WAY AND EASEMENTS, AND THE DISTURBED AREA IS ASSOCIATED WITH CLEARING, GRADING, EXCAVATING, FILLING OF LAND, OR OTHER SIMILAR ACTIVITIES THAT MAY RESULT IN SOIL EROSION, AS DEFINED UNDER "CONSTRUCTION ACTIVITIES" IN THE STATE OF GEORGIA NATURAL POLLUTANT DISCHARGE SYSTEM (NPDES) GENERAL PERMIT NO. GAR100002.

26.AGGREGATE SURFACE COURSE FOR TEMPORARY DRIVEWAYS, INCLUDING MATERIAL, HAUL, AND PLACEMENT SHALL BE USED AT THE ENGINEER'S DIRECTION TO FACILITATE THE MOVEMENT OF LOCAL TRAFFIC THROUGH THE CONSTRUCTION AREA DURING INCLEMENT WEATHER. WHEN USED FOR THIS PURPOSE, SECTION 318 OF THE GEORGIA DOT STANDARD SPECIFICATIONS IS MODIFIED TO PERMIT TRUCK DUMPING ON UNPREPARED WET, MUDDY SUBGRADE. SECTION 318 IS FURTHER MODIFIED TO PERMIT THE USE OF CRUSHER STONE AS DESCRIBED IN SECTION 318.02. THE CONTRACTOR WILL HAVE THE USE OF THE FOLLOWING MATERIALS:

A.GRADED AGGREGATE, ARTICLE 815.2.01 B.COURSE AGGREGATE, SIZE 467, ARTICLE 800.2.01

C.STABILIZED AGGREGATE, TYPE I OR TYPE II, SECTION 803.2 OR SECTION 803.2.02.

D.CRUSHED STONE, ARTICLE 806.2.01

27. CONSTRUCTION LAYOUT WILL BE REQUIRED BY THE CONTRACTOR. ALL COST FOR THIS ITEM WILL BE INCLUDED IN THE BID PRICE FOR GRADING 28.CITY OF DUNWOODY PUBLIC WORKS DIVISION SHALL BE NOTIFIED A MINIMUM OF 72-HOURS IN ADVANCE OF ALL CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL COORDINATE THIS ACTION WITH THE PROJECT ENGINEER.

29.THE GEORGIA DOT STANDARDS AND CONSTRUCTION DETAILS REQUIRED FOR THIS PROJECT ARE LISTED ON 2-01 WITH THE LATEST KNOWN REVISION DATE, BUT ARE NOT INCLUDED AS PART OF THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND MAINTAINING ON THE PROJECT SITE, THE GEORGIA DOT STANDARD DRAWINGS AND THE CONSTRUCTION DETAIL DRAWINGS LISTED IN THE PLAN SET. FULL SIZED SHEETS MAY BE PURCHASED BY THE CONTRACTOR AT HIS EXPENSE FROM THE GEORGIA DOT.

30. COORDINATE WITH THE CITY OF DUNWOODY FOR INSPECTIONS DURING CONSTRUCTION.

31.THE 24-HOUR EMERGENCY CONTACT NUMBER FOR THE CITY OF DUNWOODY IS 647-382-6700.

32.A NOTICE OF INTENT (NOI) FOR STORM WATER DISCHARGE IS REQUIRED FOR THIS PROJECT.

33.THE CONTRACTOR SHALL PROVIDE AN ENVIRONMENTALLY APPROVED SITE TO DISPOSE OF THE EXISTING CONSTRUCTION DEBRIS. THIS COST SHOULD BE INCLUDED IN GRADING COMPLETE.

34.THE CONTRACTOR IS RESPONSIBLE FOR ONSITE DETOURS TO CONSTRUCT ROADWAY.

35.THE CONTRACTOR SHALL OBSERVE ALL APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS REGARDING PIPE INSTALLATIONS IN TRENCHES. NO SEPARATE PAYMENT WILL BE MADE FOR ANY COST INCURRED TO COMPLY WITH THIS REQUIREMENT. 36.HANDICAP RAMPS SHALL BE CONSTRUCTED AT ALL POINTS WHERE SIDEWALK TERMINATES AT CURB OR IS BISECTED BY DRIVEWAYS, IF NECESSARY.

THE TYPE OF RAMP MAY BE MODIFIED BY THE ENGINEER. 37.ALL COMMON FILL OR EXCESS MATERIAL DISPOSED OUTSIDE THE PROJECT RIGHT-OF-WAY SHALL BE PLACED IN EITHER A PERMITTED SOLID WASTE

FACILITY, A PERMITTED INERT LANDFILL OR IN ALL ENGINEERED FILL 38.CONTRACTOR IS TO POTHOLE EXISTING UTILITIES, INCLUDING ANY ASSUMPTIONS NOTED IN THESE PLANS, AND PROVIDE ANY DISCREPANCIES IN

UNTIL AFTER CONSTRUCTION COMMENCES 39.ALL PROPOSED STORM PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP). INSTALLATION OF THE PROPOSED PIPE SHALL CONFORM TO THE LATEST MATERIAL AND INSTALLATION SPECIFICATIONS PUBLISHED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION.

WRITING TO THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION, OR PROVIDE NOTICE OF AREAS THAT ARE NOT ABLE TO BE CONFIRMED

40.FOR PIPES UNDER EXISTING PAVEMENT, THE PAVEMENT CUT, BEDDING, BACKFILL, LABOR, AND ROADWAY WORK SHALL BE INCLUDED IN THE UNIT BID PRICE OF THE PIPE. 41.MAILBOXES TO BE RESET WITHIN LANDSCAPE STRIP ADJACENT TO SIDEWALK SO AS NOT TO INTRUDE INTO THE STREET OR SIDEWALK. CONTRACTOR

RESPONSIBLE FOR DAMAGES TO MAILBOXES. 42.CONTRACTOR SHALL REPAIR OR REPLACE ALL EXISTING SPRINKLER HEADS WITHIN THE CONSTRUCTION LIMITS. SPRINKLER HEAD REPAIR OR REPLACEMENT SHALL BE INCLUDED IN THE BID PRICE FOR GRADING COMPLETE. ANY SPRINKLERS MUST BE RESET SUCH THAT THEY ARE 12-INCHES BEHIND THE SIDEWALK AND WILL NOT SPRAY ACROSS THE SIDEWALK. ANY TREES CALLED TO BE TRANSPLANTED SHALL BE INCLUDED IN THE BID PRICE FOR GRADING COMPLETE.

43.CONTRACTOR SHALL PROVIDE 48-HOURS ADVANCED NOTICE TO PROPERTY OWNERS BEFORE INITIAL WORK IS DONE AT THESE MILESTONES:

43.1. IN FRONT OF PROPERTY

43.2. REMOVAL OF DRIVEWAY 43.3. POURING OF DRIVEWAY

43.4. IRRIGATION LINES

43.5. UTILITY OUTAGES

CITY OF DUNWOODY GENERAL SIGNING AND MARKING NOTES:

1.ALL STANDARD HIGHWAY SIGNS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS. THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITIONS, AND THE GEORGIA STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND/OR

2.SIGN ERECTION STATIONS ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS WHERE NECESSARY, BUT SHALL BE WITHIN THE LIMITATIONS SET FORTH IN THE IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, NO SIGN LOCATION SHALL BE CHANGED BY THE CONTRACTOR OR BY THE PROJECT ENGINEER WITHOUT PRIOR APPROVAL FROM THE CITY OF DUNWOODY.

3.ALL STANDARD HIGHWAY SIGNS SHALL BE ERECTED AT A HEIGHT OF 7-FEET ABOVE THE NORMAL EDGE OF PAVEMENT, TO THE BOTTOM OF THE SIGN 4.HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON ALL OTHER ROADWAYS SHALL BE 6-FEET FROM THE EDGE OF THE PAVED SHOULDER

OR 12-FEET FROM THE NORMAL EDGE OF PAVEMENT, TO THE NEARER EDGE OF THE SIGN(S), WHICHEVER IS GREATER. THE HORIZONTAL CLEARANCE IN NON-MOUNTABLE CURB SECTIONS SHALL BE AT LEAST 2-FEET FROM THE CURB FACE TO THE NEARER EDGE OF THE SIGN(S). 5.ALL STRIPING, DIRECTIONAL ARROWS, ETC. SHALL BE THERMOPLASTIC, UNLESS OTHERWISE NOTED. ALL STRIPING SHOULD BE INSTALLED PER GDOT

6.SINGLE PLATE. HORIZONTAL RECTANGULAR SIGNS OVER 48-INCHES IN WIDTH SHALL BE MOUNTED ON TWO POSTS WITH 2 EACH 2-INCH X (WIDTH OF SIGN) ALUMINUM OR GALVANIZED STEEL STRAPS. THE STRAPS SHALL BE FLUSH WITH THE BACK OF THE SIGN WITH ONE EACH ACROSS THE TOP AND BOTTOM OF THE SIGN. THE CENTERLINE OF EACH POST SHALL BE INSET 1/6TH OF THE SIGN WIDTH FROM THE EDGE OF THE SIGN. SIGN

PLATE BOLT HOLES SHALL BE 3/8-INCH DIAMETER, DRILLED OR PUNCHED AS SHOWN ON THE SIGN PLATE DETAILS. 7.EACH 42 OR 48-INCH-WIDE X 18 OR 24-INCH-HIGH SIGN REQUIRES ONE 2-INCH X 1/2 INCH X (WIDTH OF SIGN) ALUMINUM OR GALVANIZED SIGN

STEEL STRAP LOCATED IN THE CENTER OF THE SIGN AND FLUSH WITH THE BACK OF THE SIGN. 8.SIGN ASSEMBLIES SHALL BE MOUNTED ON ALUMINUM OR GALVANIZED STEEL STRAP FRAMES. FOR DETAILS AND STRAP SPECIFICATIONS, REFER TO

SIGN ASSEMBLY-TYPICAL FRAMING DETAILS. 9.TYPE 3 (HIGH INTENSITY) REFLECTING SHEET SHALL BE USED FOR ALL STANDARD HIGHWAY SIGNS REQUIRING REFLECTORIZED BACKGROUNDS, EXCEPT AS SPECIFIED BELOW OR SPECIFIED OTHERWISE IN THE PLANS. EITHER CLASS 1 OR CLASS 2 ADHESIVE BACKING IS PERMISSIBLE.

10. TYPE 11 (VERY HIGH INTENSITY) REFLECTIVE SHEETING SHALL BE USED FOR ALL RED SERIES SIGNS (R1-1, R1-2, R1-3A, R1-4A, R5-1, R5-1). 11. TYPE 11 (VERY HIGH INTENSITY) FLUORESCENT YELLOW-GREEN REFLECTIVE SHEETING SHALL BE USED FOR SCHOOL ZONE (W11-1) SIGNS AND PEDESTRIAN CROSSINGS (W11-2 AND W11A-2) SIGNS, BICYCLE CROSSING (W11-1) SIGNS, AND PEDESTRIAN CROSSING (W11-2 AND W11A-2) SIGNS. SIGNS WITHIN THE SAME ASSEMBLY AS THE SCHOOL ZONE SIGNS SPECIFICALLY LISTED ABOVE AND ALL REGULATORY REFLECTIVE SHEETING BACKGROUNDS OF THE APPROPRIATE COLOR.

12. TYPE 9 (VERY HIGH INTENSITY) YELLOW REFLECTIVE SHEETING SHALL BE USED FOR ALL OTHER WARNING SIGNS.

13.A 1/2-INCH MINIMUM AIR SPACE SHALL BE REQUIRED BETWEEN ALL SIGN PLATES WITHIN AN ASSEMBLY. WHERE SIGNS WITHIN AN ASSEMBLY EXTEND BELOW THE STANDARD MOUNTING HOLES ON THE POST(S), ADDITIONAL 3/8-INCH DIAMETER HOLE(S), DRILLED OR PUNCHED.

14. WHERE SIGNS WITHIN AN ASSEMBLY EXTEND BELOW THE STANDARD MOUNTING HOLES ON THE POST(S), ADDITIONAL 3/8-INCH DIAMETER HOLE(S) DRILLED OR PUNCHED SHALL BE REQUIRED FOR THE ASSEMBLY.

15. FOR DETAILS OF SPECIFIC DESIGN HIGHWAY SIGNS, SEE DETAILS OF MISCELLANEOUS SIGNS. 16. CONTRACTOR WILL, AS REQUESTED BY THE CITY, BE REQUIRED TO REMOVE ANY EXISTING SIGNS THAT ARE DUPLICATED OR CONTRARY TO THESE

CITY OF DUNWOODY GENERAL TRAFFIC CONTROL NOTES:

1.COSTS TO ADHERE TO THESE GENERAL NOTES IS INCLUDED IN THE PRICE FOR THE TRAFFIC CONTROL.

a.THE OWNER AND ENGINEER RESERVE THE RIGHT TO MODIFY THE TRAFFIC CONTROLS NECESSARY IN THE INTEREST OF PUBLIC SAFETY OR TRAFFIC EFFICIENCY.

b.PRIOR TO BEGINNING WORK, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL TRAFFIC CONTROL DEVICES AND MEASURES COMPLY WITH THE APPROVED TRAFFIC CONTROL PLANS. 4.THE CONTRACTOR SHALL CHECK ALL TRAFFIC CONTROL DEVICES AND WORK ZONES AFTER EACH WORK DAY TO ENSURE PROPER OPERATION. ON

WEEKENDS, HOLIDAYS, OR ANY NON-WORKING DAYS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING MAINTENANCE AND CONTROL DEVICES

DAILY FOR PROPER OPERATION. 5.TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION, UNLESS OTHERWISE APPROVED BY THE CITY OF DUNWOODY. RESIDENT, MAIL AND PARCEL DELIVERY SERVICE, TRASH PICKUP, AND EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED AT ALL TIMES, REGARDLESS OF THE

STREET CLOSURES IN EFFECT. 6.DURING NON-WORKING HOURS OR DAYS, ALL EXCAVATED AREAS ARE TO BE BACKFILLED AND PROTECTED USING APPROVED SAFETY DEVICES AND

7.WHEN THE USE OF TYPE III BARRICADES IS REQUIRED (DAY OR NIGHT), ALL BARRICADES SHALL BE EQUIPPED WITH TYPE B HIGH INTENSITY

FLASHING WARNING LIGHTS. 8.ALL CONTRACTOR EMPLOYEES EXPOSED TO VEHICULAR TRAFFIC SHALL BE PROVIDED WITH AND REQUIRED TO WEAR WARNING VESTS MARKED WITH OR MADE OF REFLECTORIZED OR HIGH VISIBILITY MATERIALS.

9.FOR CONSTRUCTION OPERATIONS LASTING LONGER THAN 14 CALENDAR DAYS, THE CONTRACTOR SHALL INSTALL "ROAD WORK AHEAD" SIGNS (W21-4, 48" X 48") AND "END ROAD WORK" (G20-2A, 48" X 24") WARNING SIGNS ON 6" X 6" WOODEN GROUND MOUNTED POSTS. THESE SIGNS MUST BE INSTALLED PRIOR TO THE BEGINNING OF WORK AND SHALL BE REMOVED AFTER COMPLETION OF ALL CONSTRUCTION AND RESTORATION ACTIVITIES.

10. ANY TRAFFIC CONTROL DEVICES, INCLUDING BUT NOT LIMITED TO, PAVEMENT MARKINGS, SIGNS, AND TRAFFIC CONTROL SIGNAL EQUIPMENT AND LOOPS THAT IS DAMAGED OR DESTROYED BY THE CONTRACTOR MUST BE REPLACED AT THE CONTRACTOR'S EXPENSE, UNLESS THEIR REMOVAL OR DESTRUCTION IS CALLED FOR BY THE CONTRACTOR DOCUMENTS.

11. WHERE EXISTING PAVEMENT MARKINGS AND LINES ARE IN CONFLICT WITH THE TRAFFIC PATTERNS USED ON CONSTRUCTION, THE CONTRACTOR SHALL REMOVE OR OVERLAY LINES TO THE SATISFACTION OF THE ENGINEER SUCH THAT THE LINES DO NOT CONFUSE THE TRAVELING PUBLIC. ALL REMAINING LINES OR MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" OR AS DIRECTED BY THE ENGINEER. TRAFFIC SHALL NOT BE ALLOWED ON ANY PAVEMENT NOT PROPERLY STRIPED. ALL TEMPORARY SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", OR AS DIRECTED BY THE ENGINEER. TRAFFIC SHALL NOT BE ALLOWED ON ANY PAVEMENT NOT PROPERLY STRIPED. ALL TEMPORARY SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", CURRENT EDITION AND/OR AS DIRECTED BY THE ENGINEER. ADDITIONAL DETOUR SIGNAGE

12. PEDESTRIAN AND LOCAL VEHICULAR TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. SAFETY DEVICES AND FLAG-MEN SHALL BE PROVIDED BY THE CONTRACTOR AT HIS EXPENSE. WRITTEN PERMISSION TO CLOSE THE CONSTRUCTION AREA TO TRAFFIC MUST BE OBTAINED FROM THE CITY OF DUNWOODY PRIOR TO THE CLOSING. ALL LOCAL EMERGENCY SERVICES SHALL BE IN WRITING A MINIMUM OF 72 HOURS PRIOR

13.DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY TRAFFIC CONTROL MEASURES TO ENSURE SAFETY AT ALL TIMES FOR EMPLOYEES, RESIDENTS, AND MOTORISTS IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", ANSI D6.1, LATEST REVISION.

14. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY OF DUNWOODY FOR APPROVAL BY THE CITY

REVISION REFERENCE

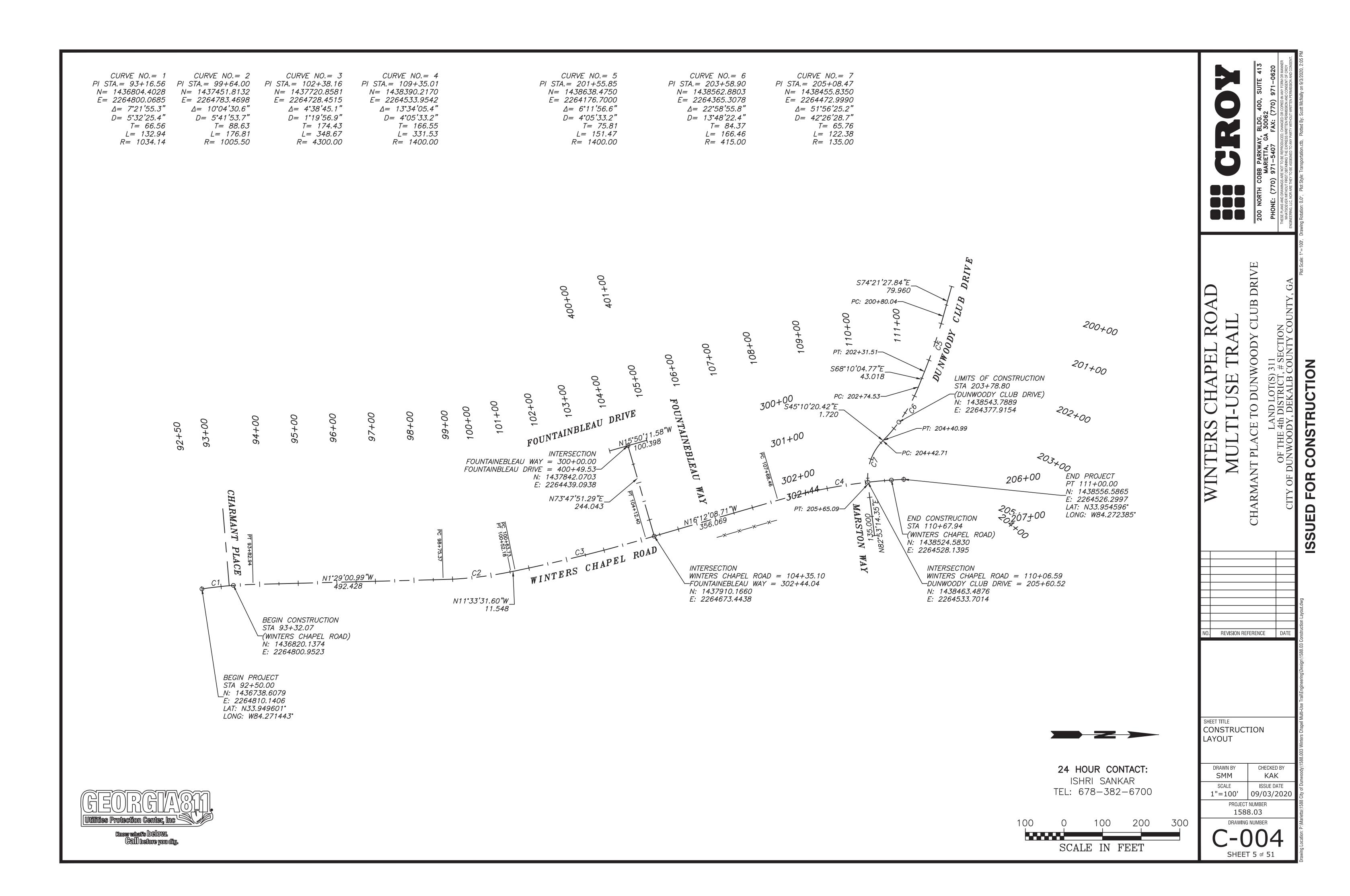
GENERAL NOTES

CHECKED BY DRAWN BY KAK ISSUE DATE N/A 09/03/2020 PROJECT NUMBER 1588.03

DRAWING NUMBER

24 HOUR CONTACT: ISHRI SANKAR TEL: 678-382-6700

Know what's below.



PROP. FLARED END SECTION

PROP. WALL

CHAPEL VTERS

NO. REVISION REFERENCE

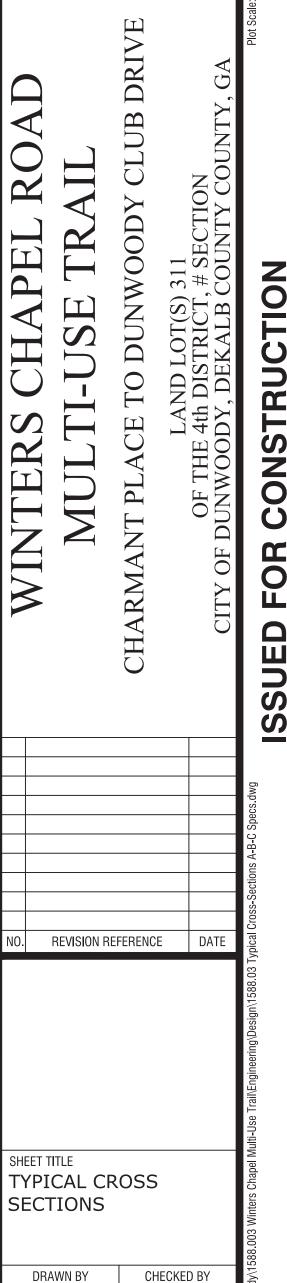
PLAN LEGEND

CHECKED BY DRAWN BY KAK **ISSUE DATE** 09/03/2020 N/A PROJECT NUMBER 1588.03

DRAWING NUMBER SHEET 6 of 51

24 HOUR CONTACT: ISHRI SANKAR TEL: 678-382-6700





CHAPEL

VTERS

MIM

SECTIONS

DRAWN BY

1"=10'

KAK

ISSUE DATE

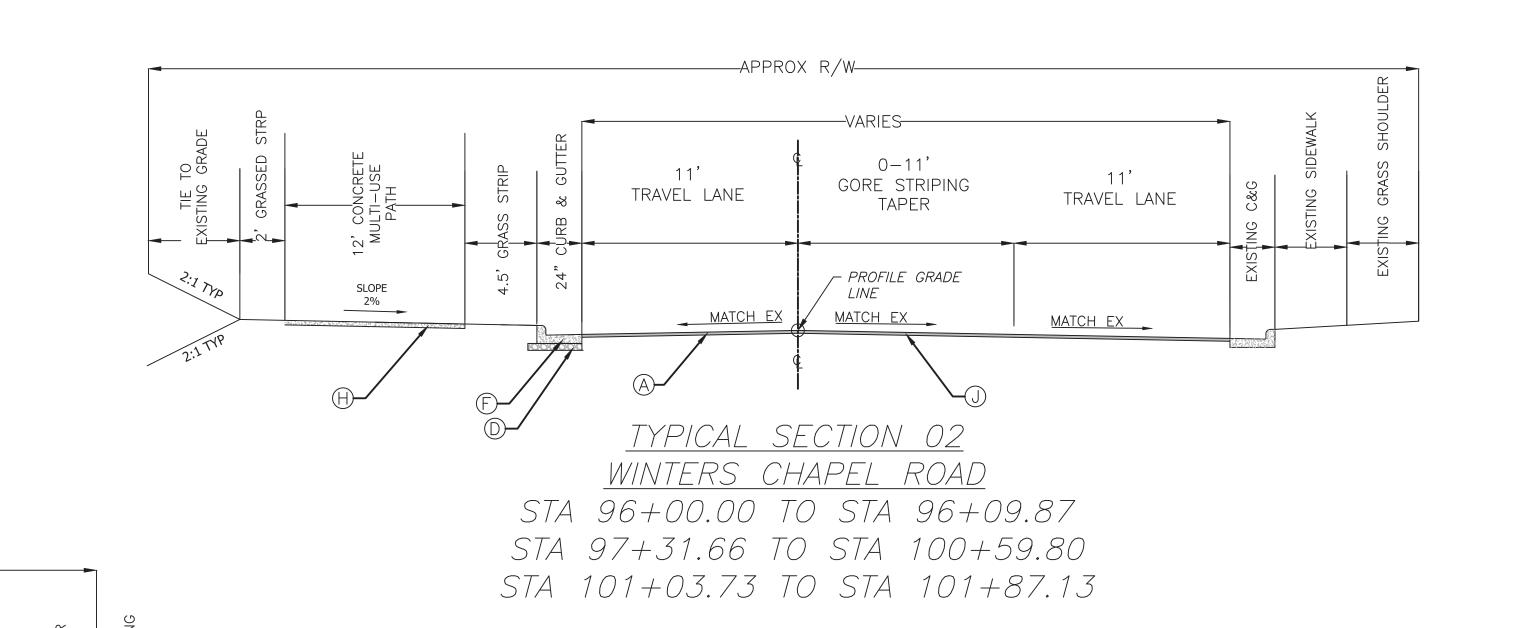
09/03/2020

PROJECT NUMBER

1588.03

DRAWING NUMBER

SHEET 7 of 51

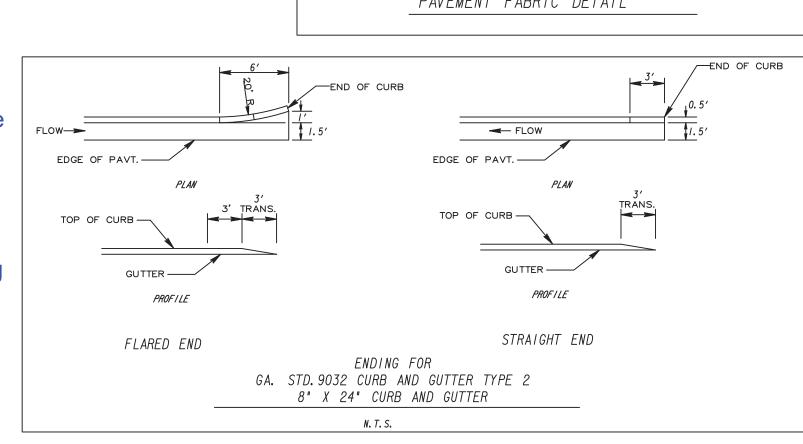




- 1. Concrete to be placed 6" thick and finished with tamps, wood floats and stiff bristled
- 2. Transverse contraction joints shall be placed at 12 ft. intervals. 3. All edges to be rounded to $\frac{1}{4}$ " radius.
- 4. $\frac{1}{2}$ " expansion joints shall be placed where trail/sidewalk ties into a structure or
- terminate at curb, ramps or driveways and at 60 ft. intervals Concrete shall be 4,000 psi. Compact subgrade to min. 95% standard
- 7. Concrete trail section shall not exceed the 2% maximum cross—slope criteria (ADA requirement)

8. See GDOT detail A3 for further details.

This project will require Three Point Levels for the Leveling course. Before beginning construction take three-point levels of the pavement throughout the length to be retained, using 50 ft. intervals. The City reserves the right to adjust these intervals according to existing field conditions. From the three-point levels, prepare a graphic grade plot that "best fits" the existing pavement to minimize the leveling requirements of the existing roadway. Cross slopes may be varied within the ranges shown on the plans or adjusted by the City to produce the "best fit." Furnish data to the City for approval before beginning widening and reconstruction. After approval of proposed markups, ensure that three-point point markups are in place before beginning any leveling activities. The cost for all construction layout is considered incidental to the overall cost for the



STAGGER VERTICAL JOINT ONE FOOT THIS LAYER ...

ASPHALTIC CONCRETE ->

(A) 1.5" RECYCLED ASPHALTIC CONCRETE 12.5mm SUPERPAVE, INCL BITUM MATL & H LIME (165 LB/SY)

(B) 2" RECYCLED ASPHALTIC CONCRETE 19 mm SUPERPAVE, INCL BITUM MATL & H LIME (220 LB/SY) 4" RECYCLED ASPHALTIC CONCRETE 25 mm SUPERPAVE, INCL BITUM MATL & H LIME (440 LB/SY)

(D) GRADED AGGREGATE BASE 10" (E) GRADED AGGREGATE BASE 6"

(F) CONCRETE CURB & GUTTER, 8 IN X 24 IN, TP 2

G 4" CONCRETE SIDEWALK

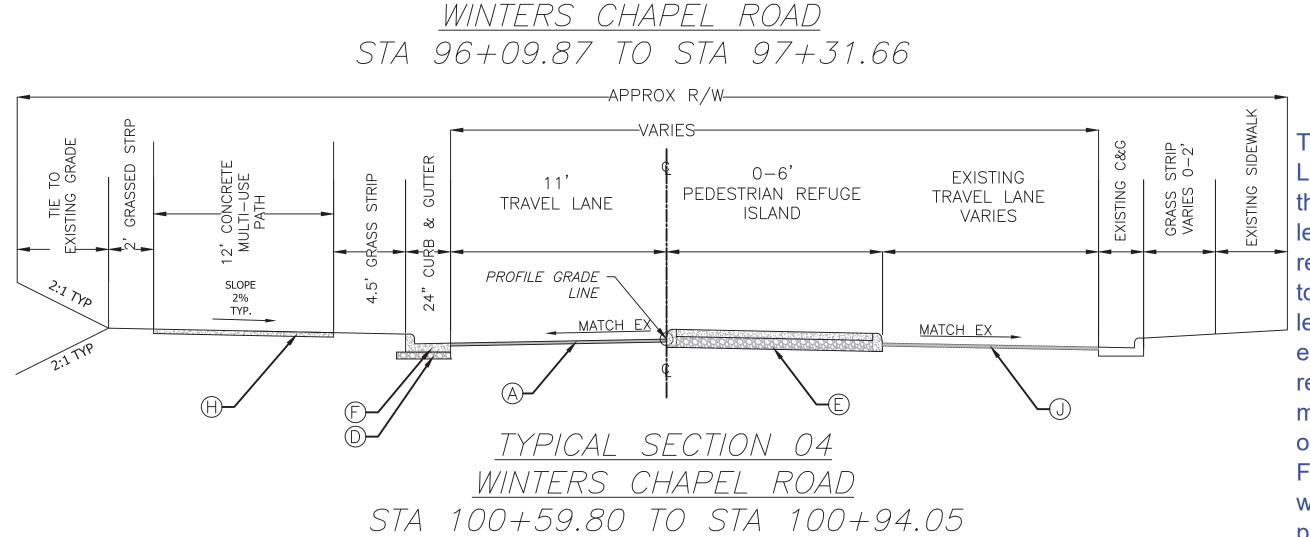
(H) 6" CONCRETE MULTI-USE PATH

*NOTE: 8" CONCRETE MULTI-USE PATH TO BE USED ALONG RADII

RECYCLED ASPHALTIC CONCRETE LEVELING, INCL BITUM MATL & H LIME (AS REQ'D)

J VARIABLE DEPTH MILLING

(K) CLASS B CONCRETE WIDENING (AS REQ'D)



TYPICAL SECTION 03

EXISTING TRAVEL LANE

VARIES

- PROFILE GRADE

0 - 11'GORE STRIPING

TAPER/ TURN LANE

- PROFILE GRADE

MATCH EX

TRAVEL LANE

MATCH EX

MATCH EX

TYPICAL SECTION 01

WINTERS CHAPEL ROAD

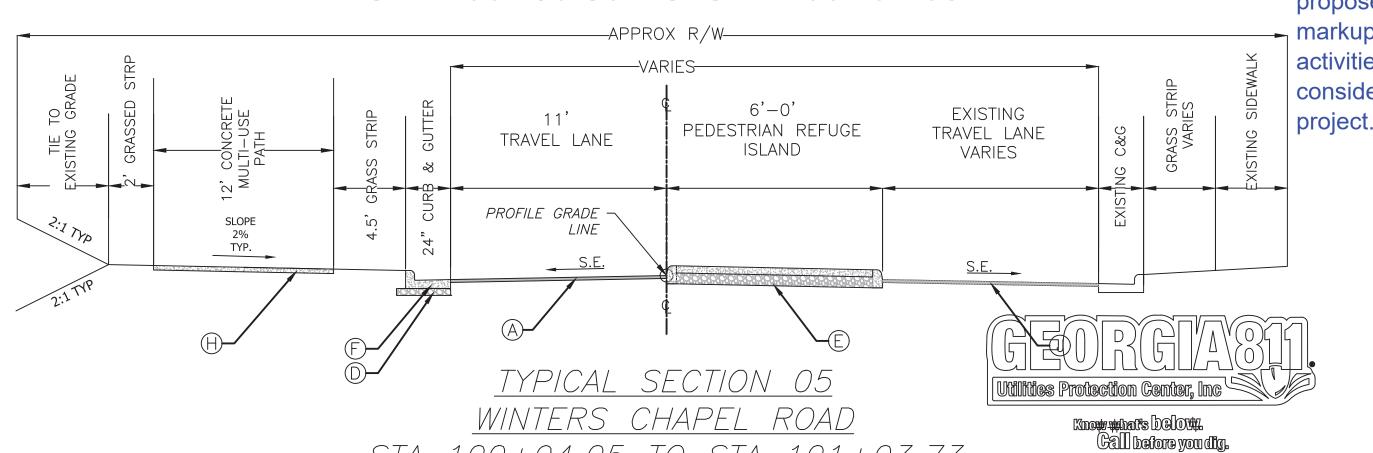
STA 93+32.07 TO STA 96+00.00

TRAVEL LANE

MATCH EX

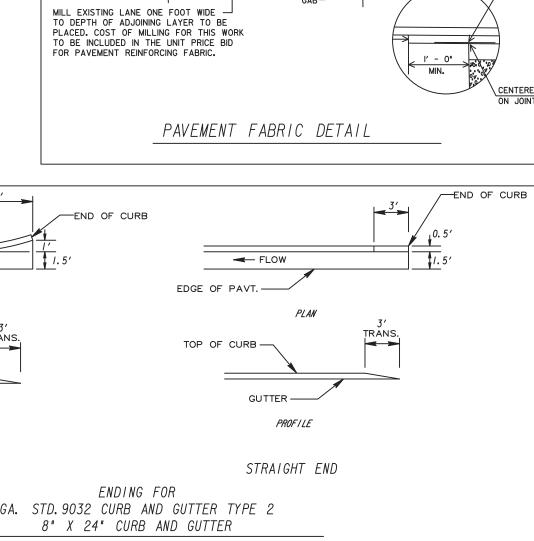
TRAVEL LANE

SLOPE



STA 100+94.05 TO STA 101+03.73

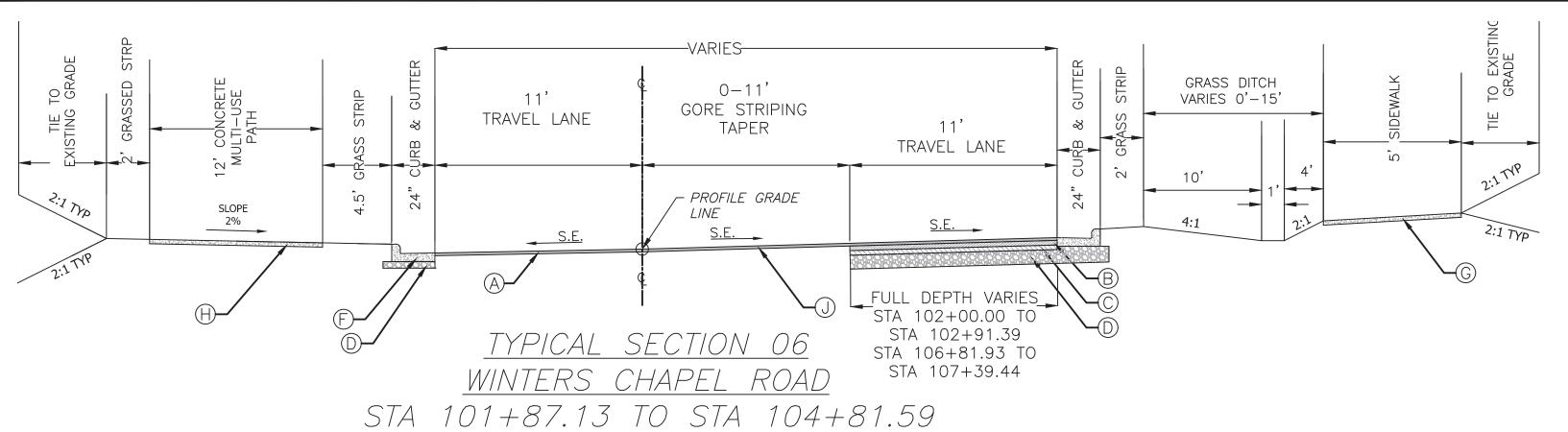
24 HOUR CONTACT: ISHRI SANKAR TEL: 678-382-6700



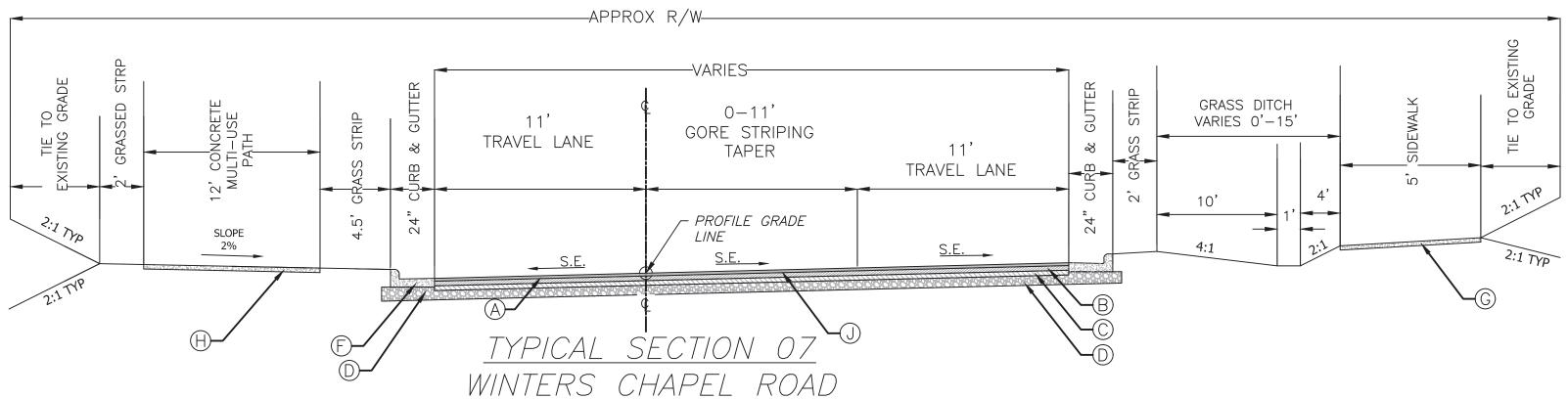
TYPICAL SECTION DETAIL TO BE USED WHEN EXISTING PAVEMENT IS TO BE RESURFACED WITH TWO INCHES OR MORE OF ASPHALTIC CONCRETE

- ASPHALTIC CONCRETE 25 mm SUPERPAVE

PAVEMENT REINFORCEMENT FABRIC 18" WIDE

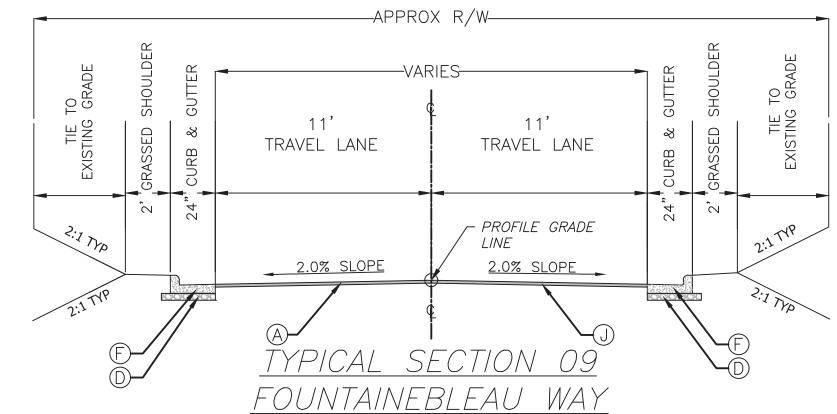


STA 106+81.39 TO STA 108+21.72

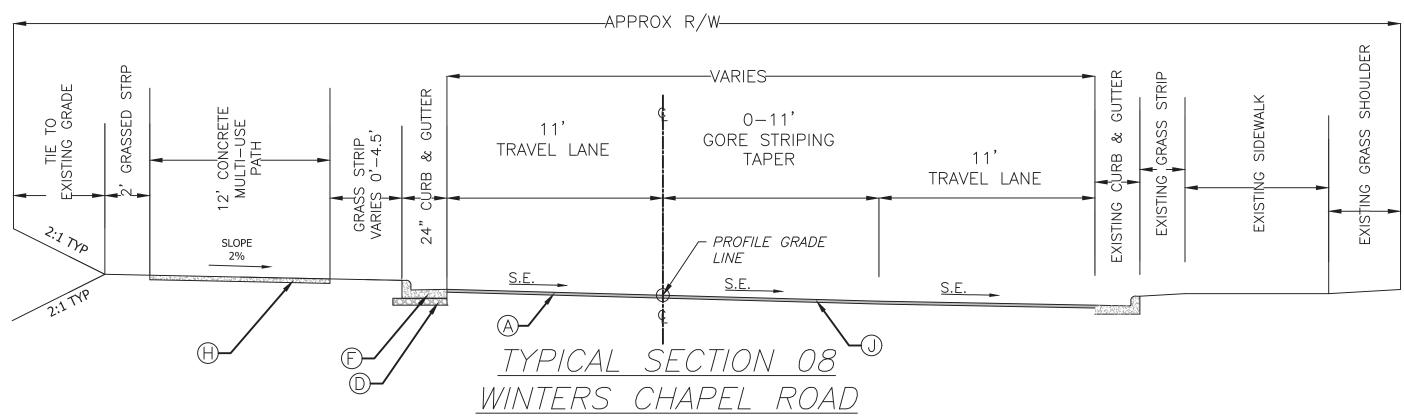


104+81.59 TO STA 106+81.39

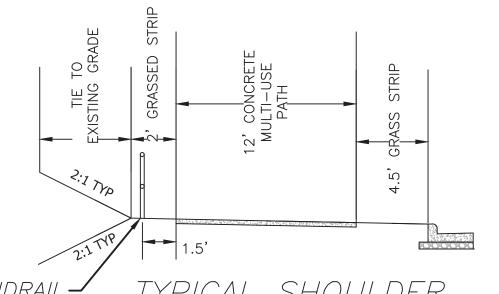
This project will require Three Point Levels for the Leveling course. Before beginning construction take three-point levels of the pavement throughout the length to be retained, using 50 ft. intervals. The City reserves the right to adjust these intervals according to existing field conditions. From the three-point levels, prepare a graphic grade plot that "best fits" the existing pavement to minimize the leveling requirements of the existing roadway. Cross slopes may be varied within the ranges shown on the plans or adjusted by the City to produce the "best fit." Furnish data to the City for approval before beginning widening and reconstruction. After approval of proposed markups, ensure that three-point point markups are in place before beginning any leveling activities. The cost for all construction layout is considered incidental to the overall cost for the project.



STA 301+22.15 TO STA 301+82.45



STA 108+21.72 TO STA 110+50.60



CONTRACTOR TO SUBMIT HANDRAIL DESIGN SHOP DRAWINGS TO CITY OF DUNWOODY FOR APPROVAL.

<u>HANDRAIL</u>

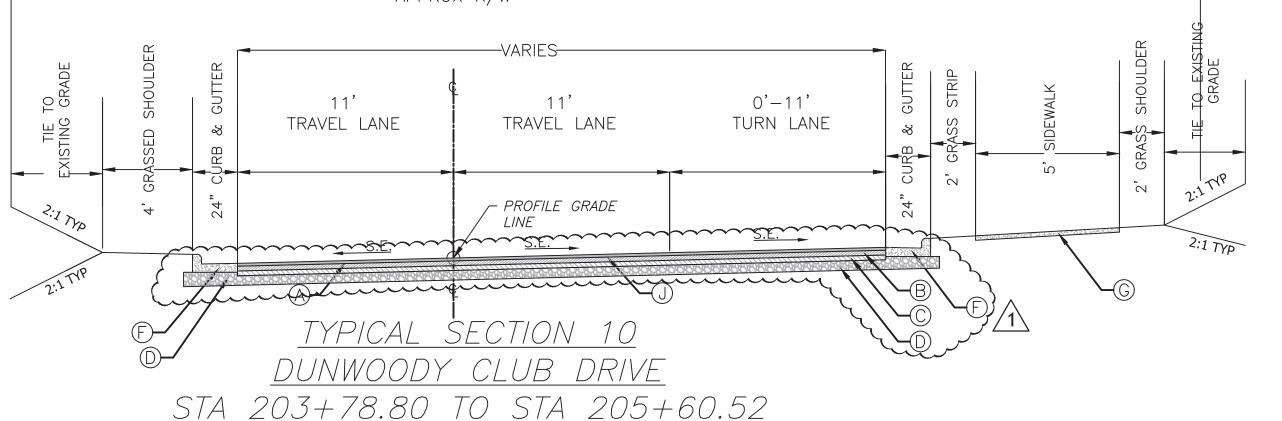
TYPICAL SHOULDER WINTERS CHAPEL ROAD — HANDRAIL SECTIONS

STA 97+28.05 TO STA 98+25.37 STA 100+10.02 TO STA 103+91.98

STA 104+86.87 TO STA 108+20.22



Know what's below. Call before you dig.



(A) 1.5" RECYCLED ASPHALTIC CONCRETE 12.5mm SUPERPAVE, INCL BITUM MATL & H LIME (165 LB/SY)

(B) 2" RECYCLED ASPHALTIC CONCRETE 19 mm SUPERPAVE, INCL BITUM MATL & H LIME (220 LB/SY) (C) 4" RECYCLED ASPHALTIC CONCRETE 25 mm SUPERPAVE, INCL BITUM MATL & H LIME (440 LB/SY)

(D) GRADED AGGREGATE BASE 10"

(E) GRADED AGGREGATE BASE 6"

(F) CONCRETE CURB & GUTTER, 8 IN X 24 IN, TP 2

(G) 4" CONCRETE SIDEWALK

(H) 6" CONCRETE MULTI-USE PATH *NOTE: 8" CONCRETE MULTI-USE PATH TO BE USED ALONG RADII

(I) RECYCLED ASPHALTIC CONCRETE LEVELING, INCL BITUM MATL & H LIME (AS REQ'D)

(J) VARIABLE DEPTH MILLING

24 HOUR CONTACT:

ISHRI SANKAR

TEL: 678-382-6700

(K) CLASS B CONCRETE WIDENING (AS REQ'D)

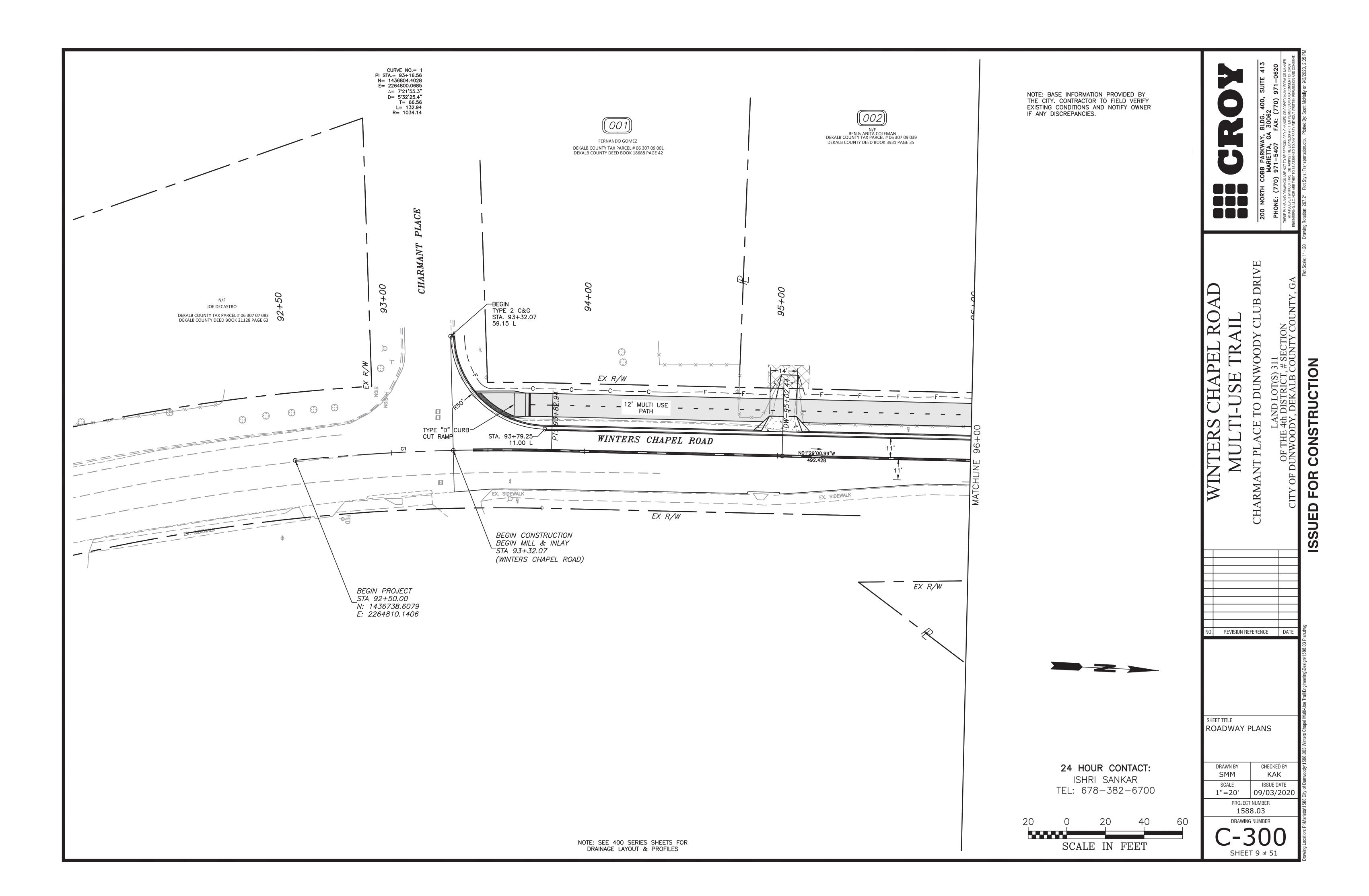
CHAPEL

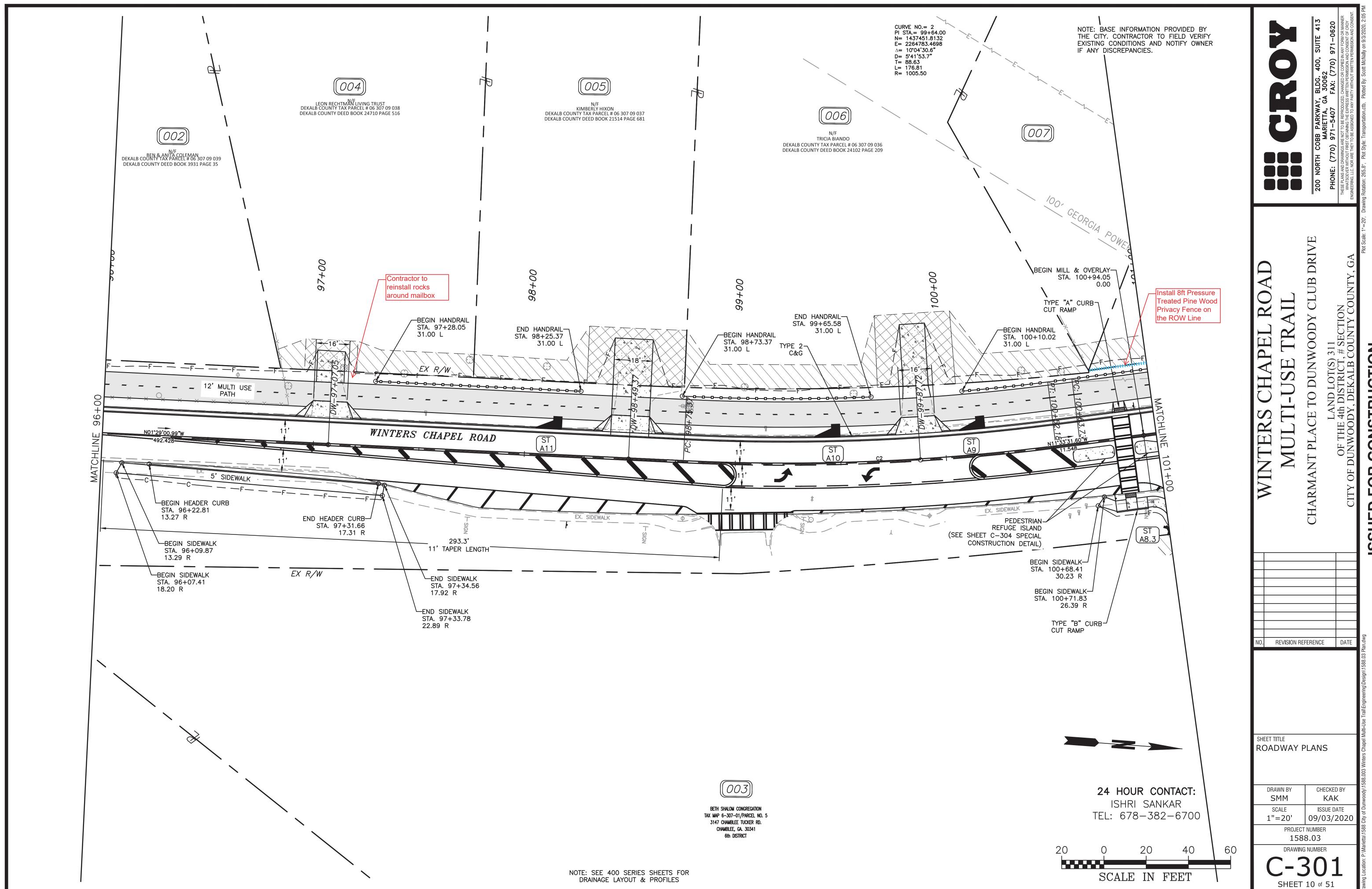
TYPICAL SECTION REVISION REVISION REFERENCE

TYPICAL CROSS SECTIONS

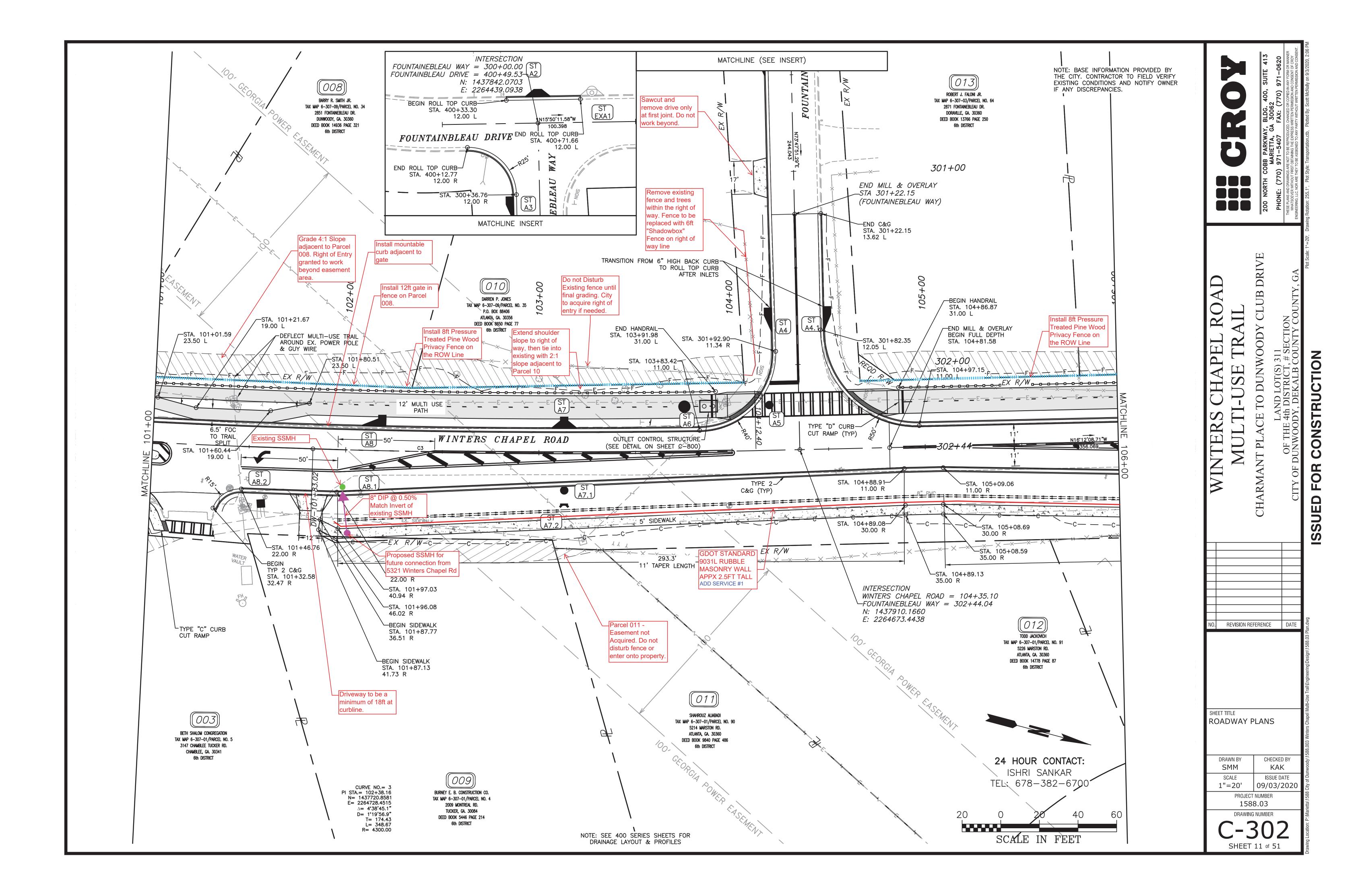
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SMM	KAK									
SCALE	ISSUE DATE									
1"=10'	09/03/2020									
PROJECT	NUMBER									
1588.03										

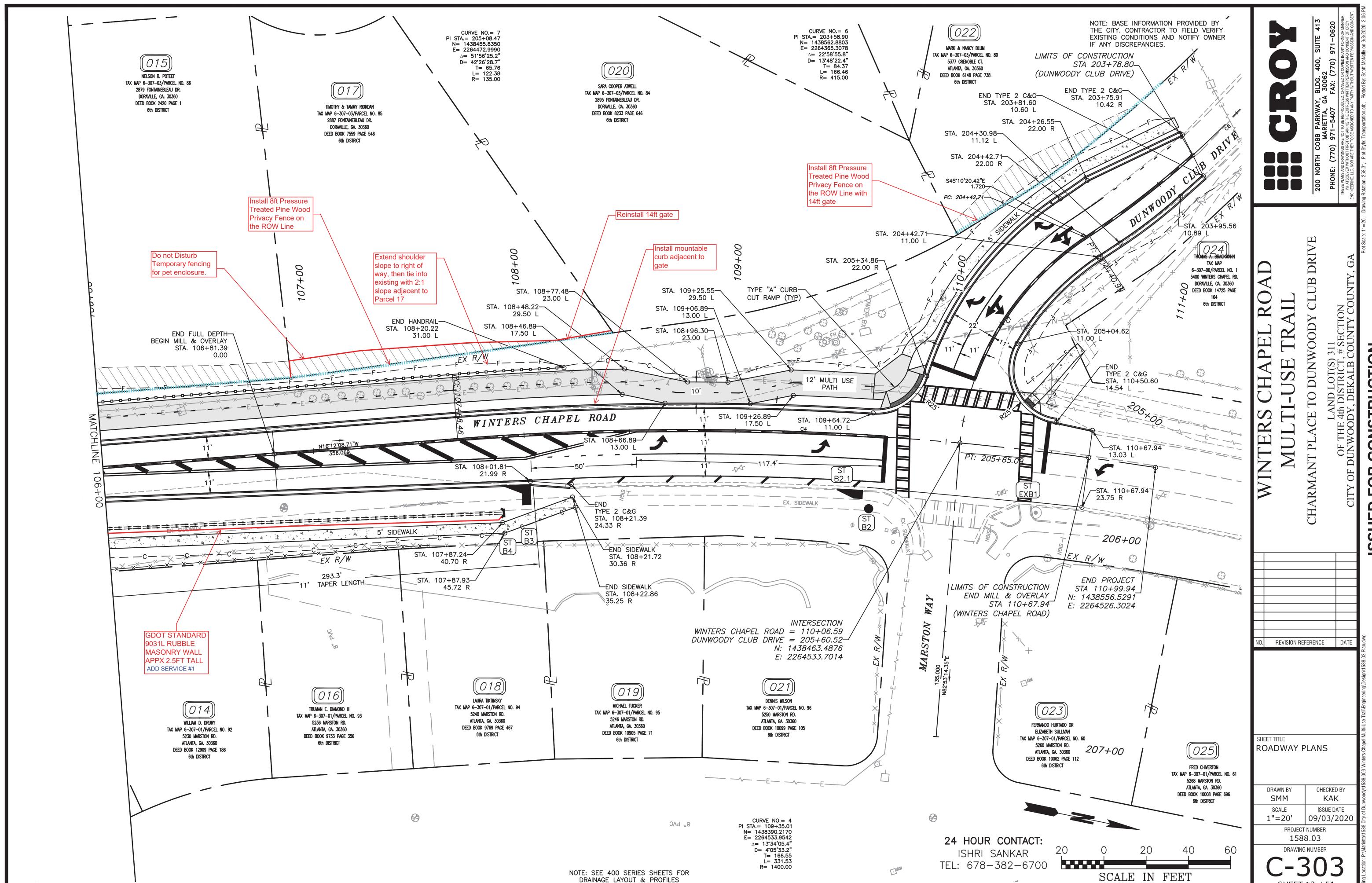
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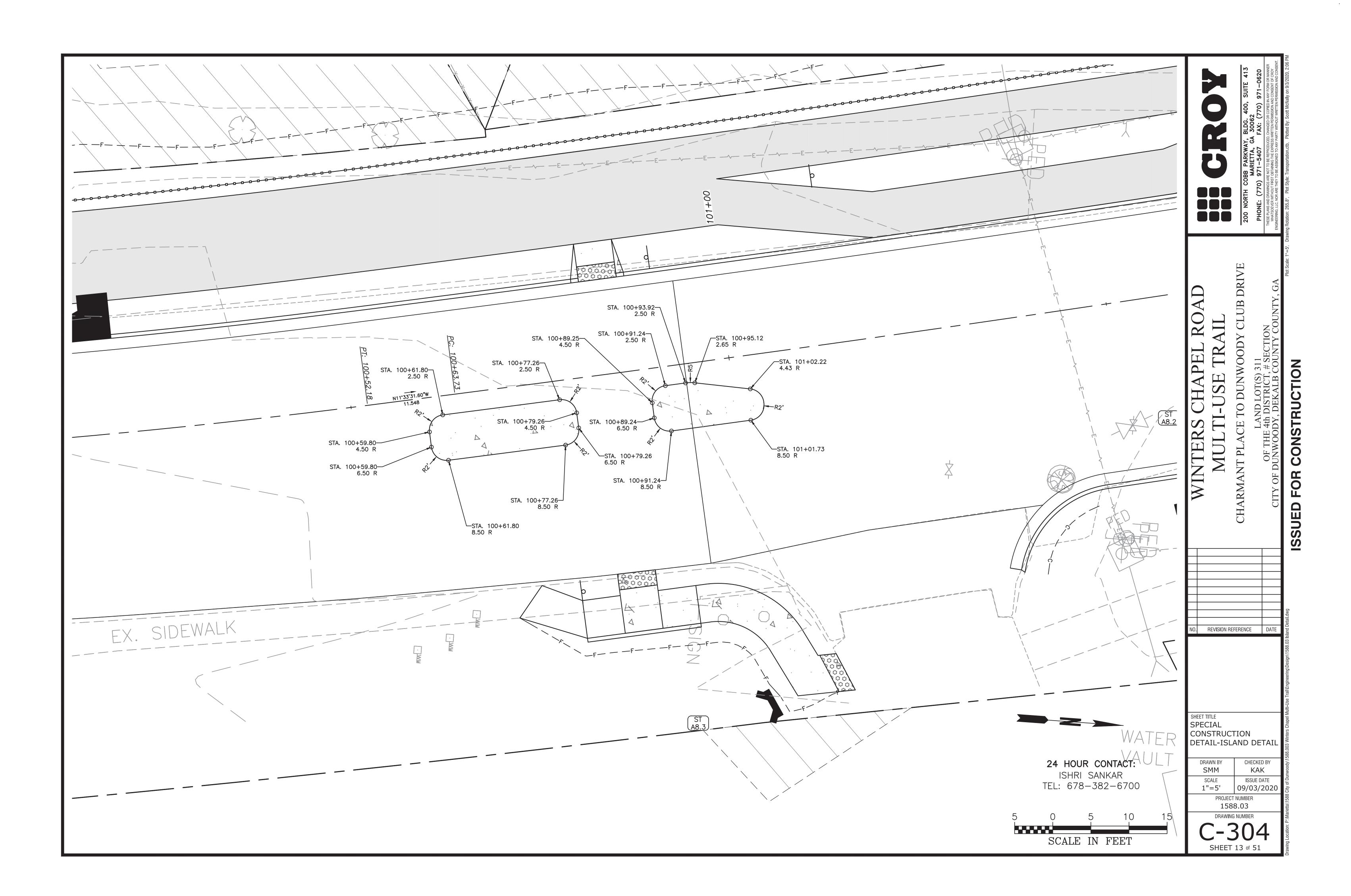


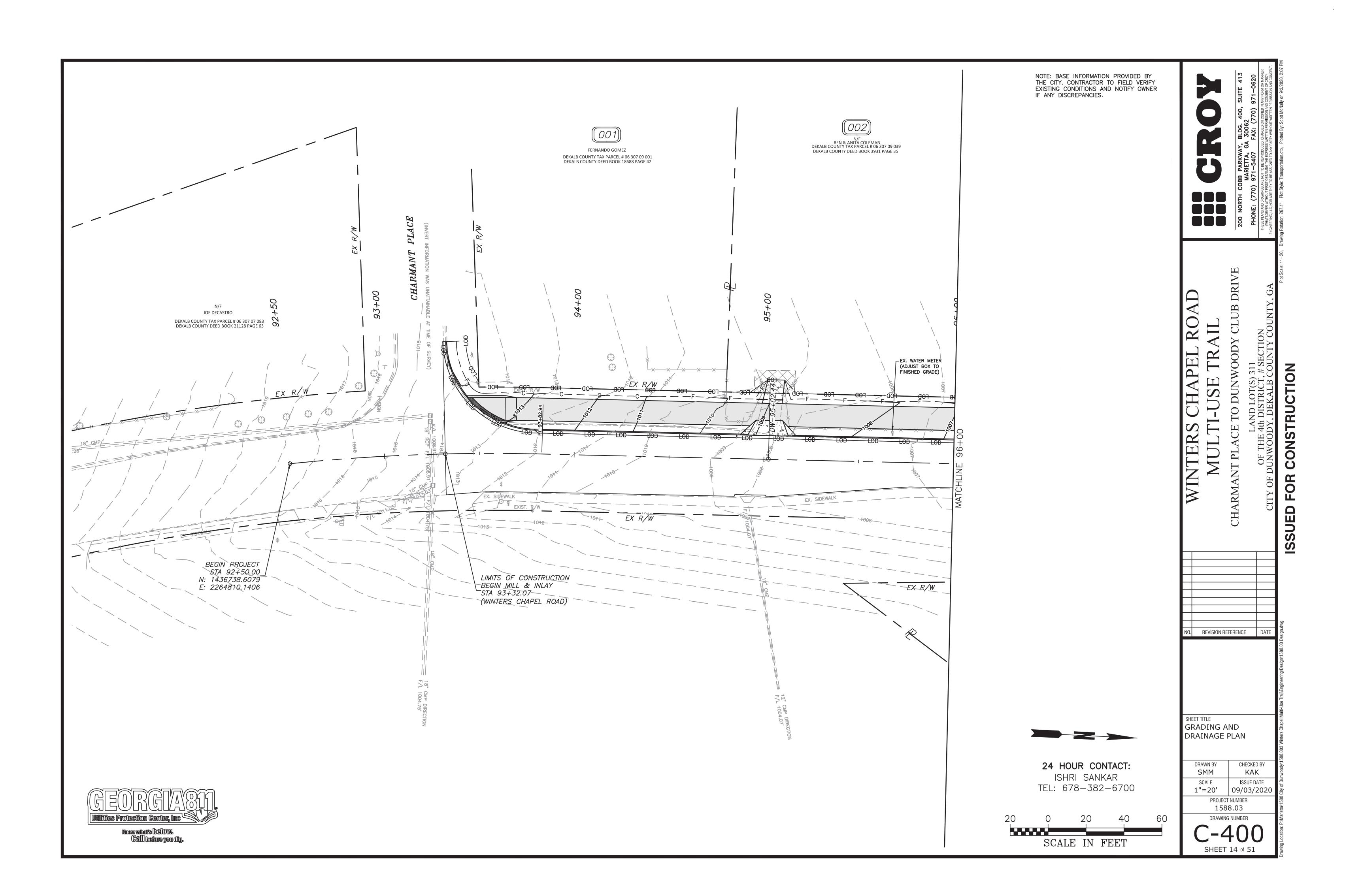


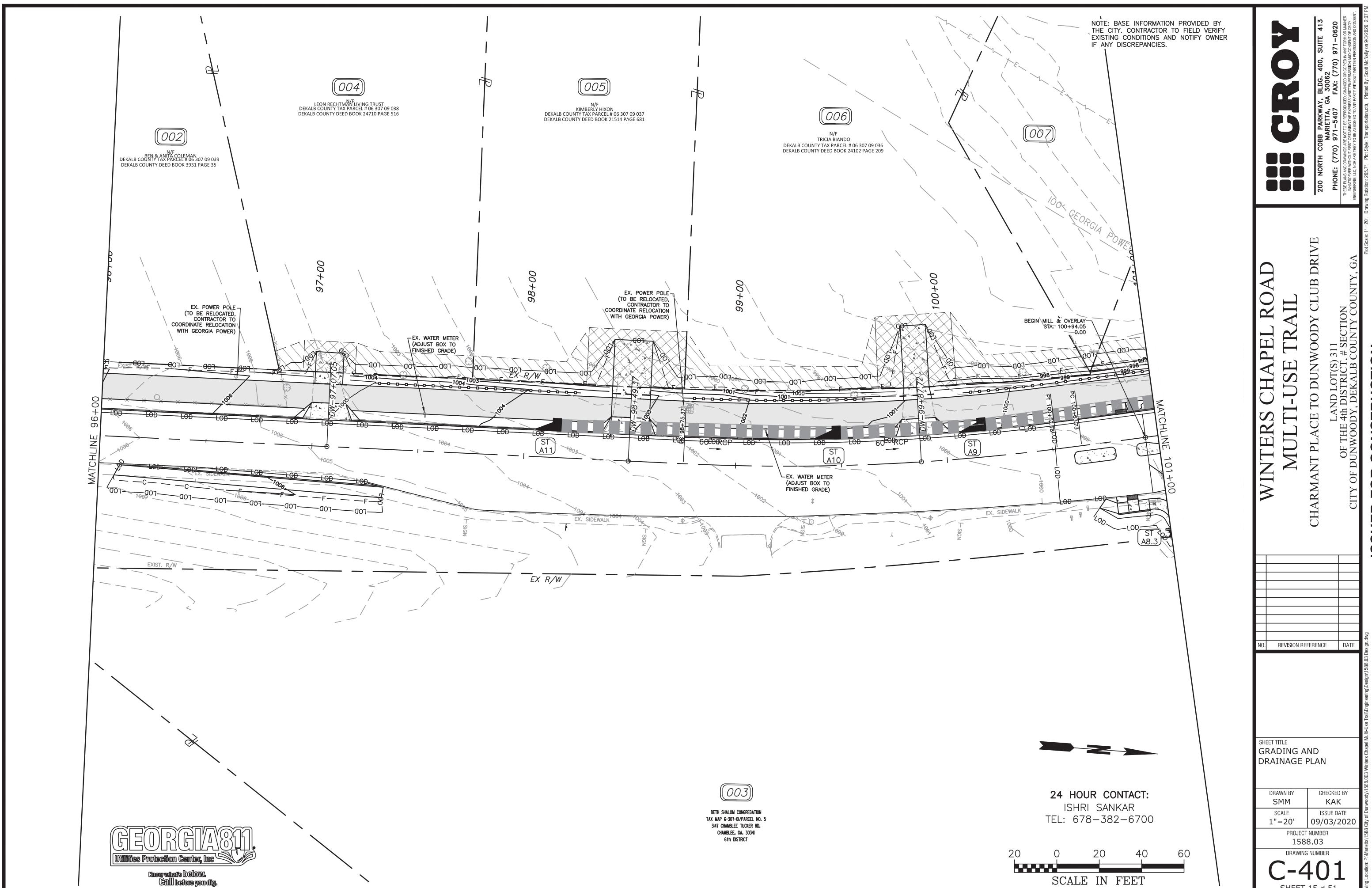
ISSUED

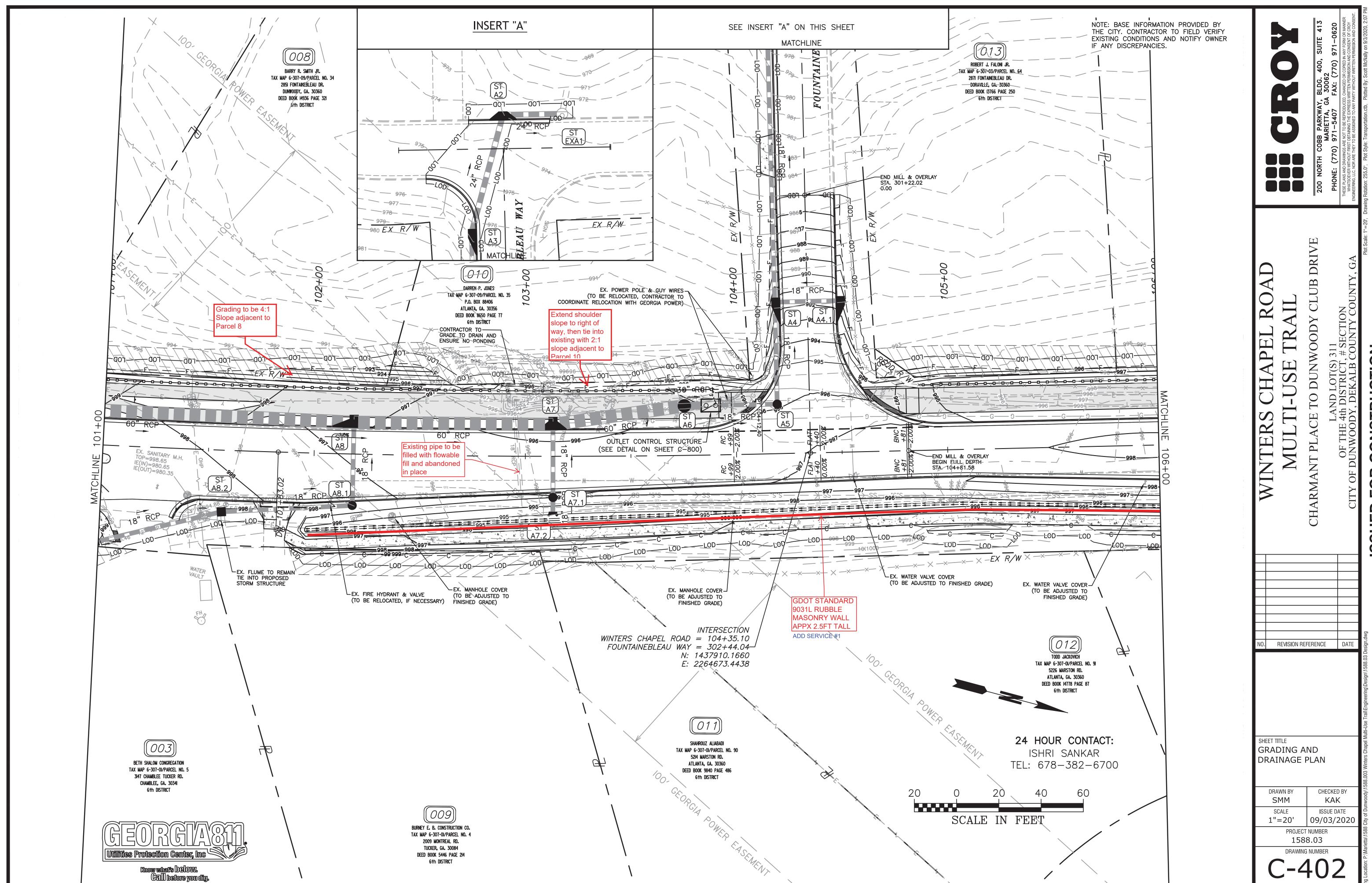


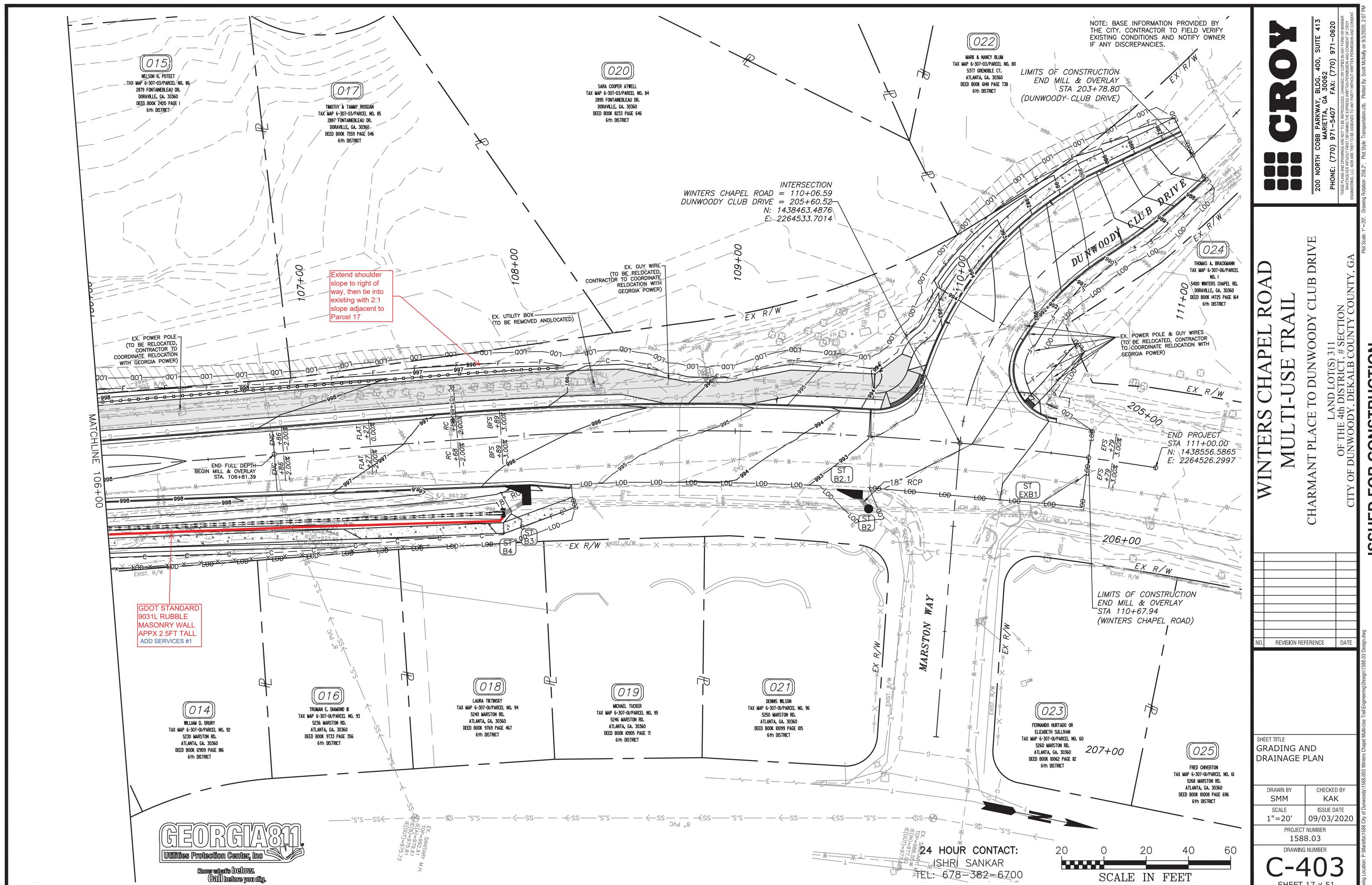


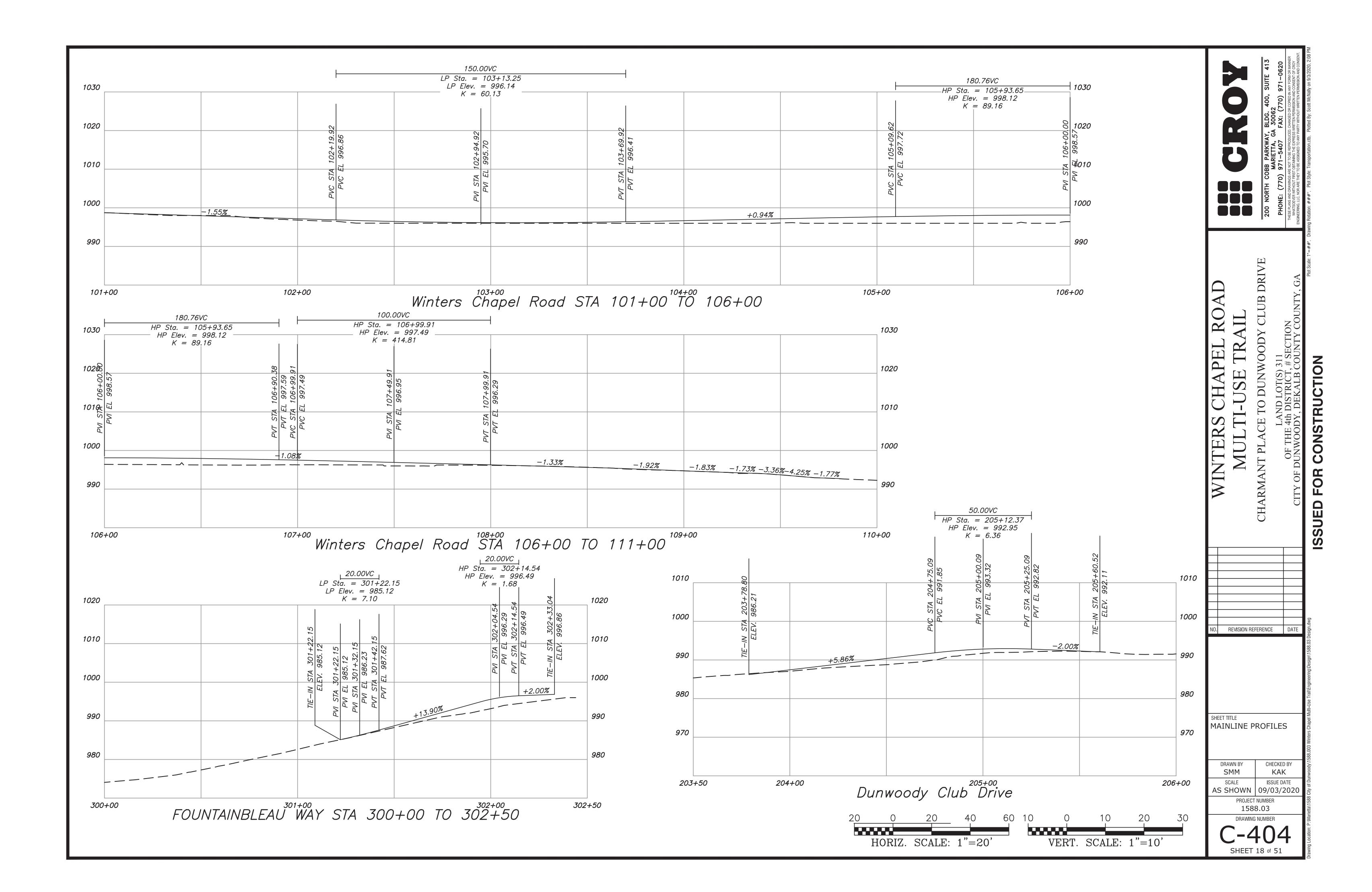


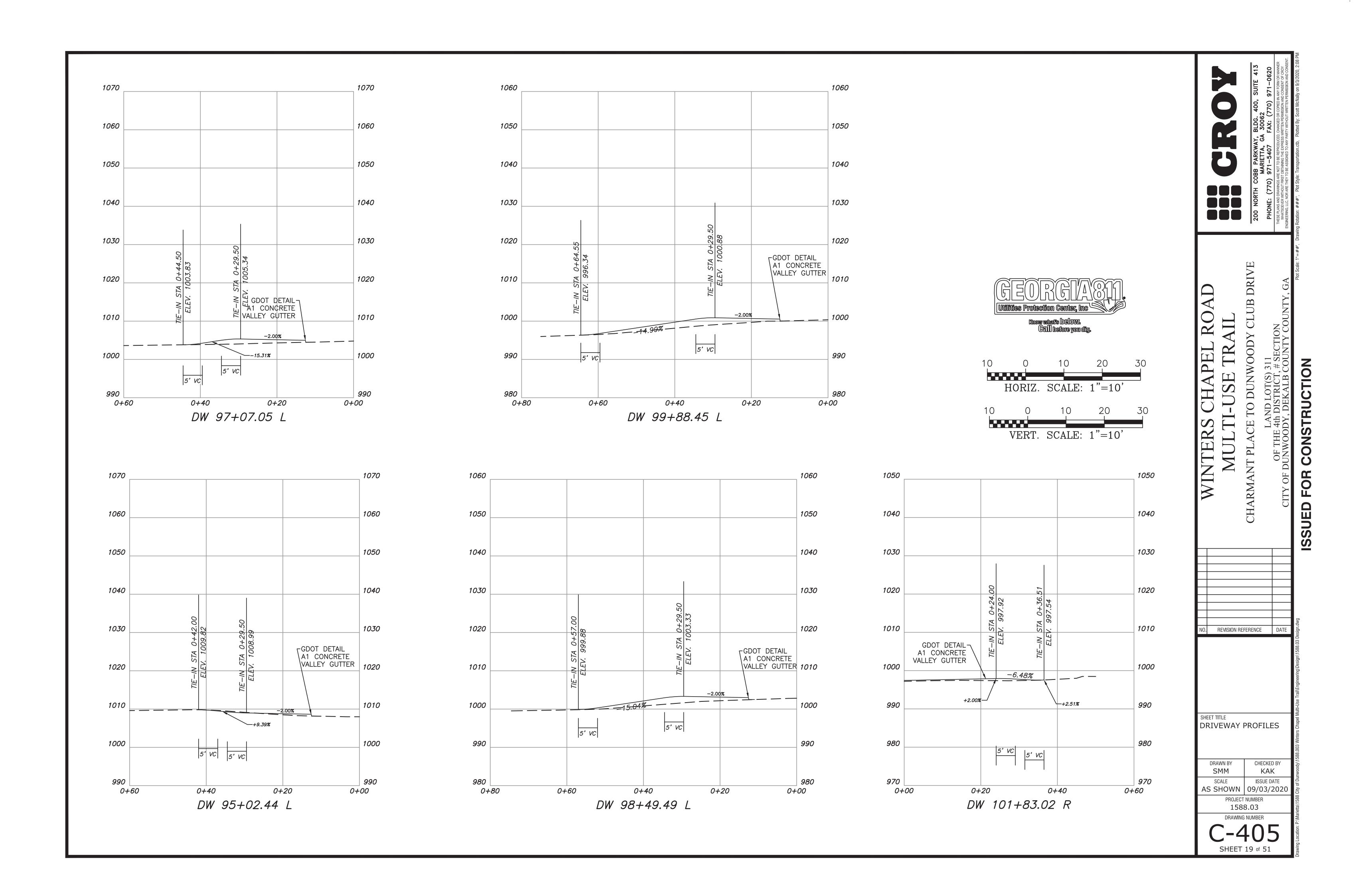


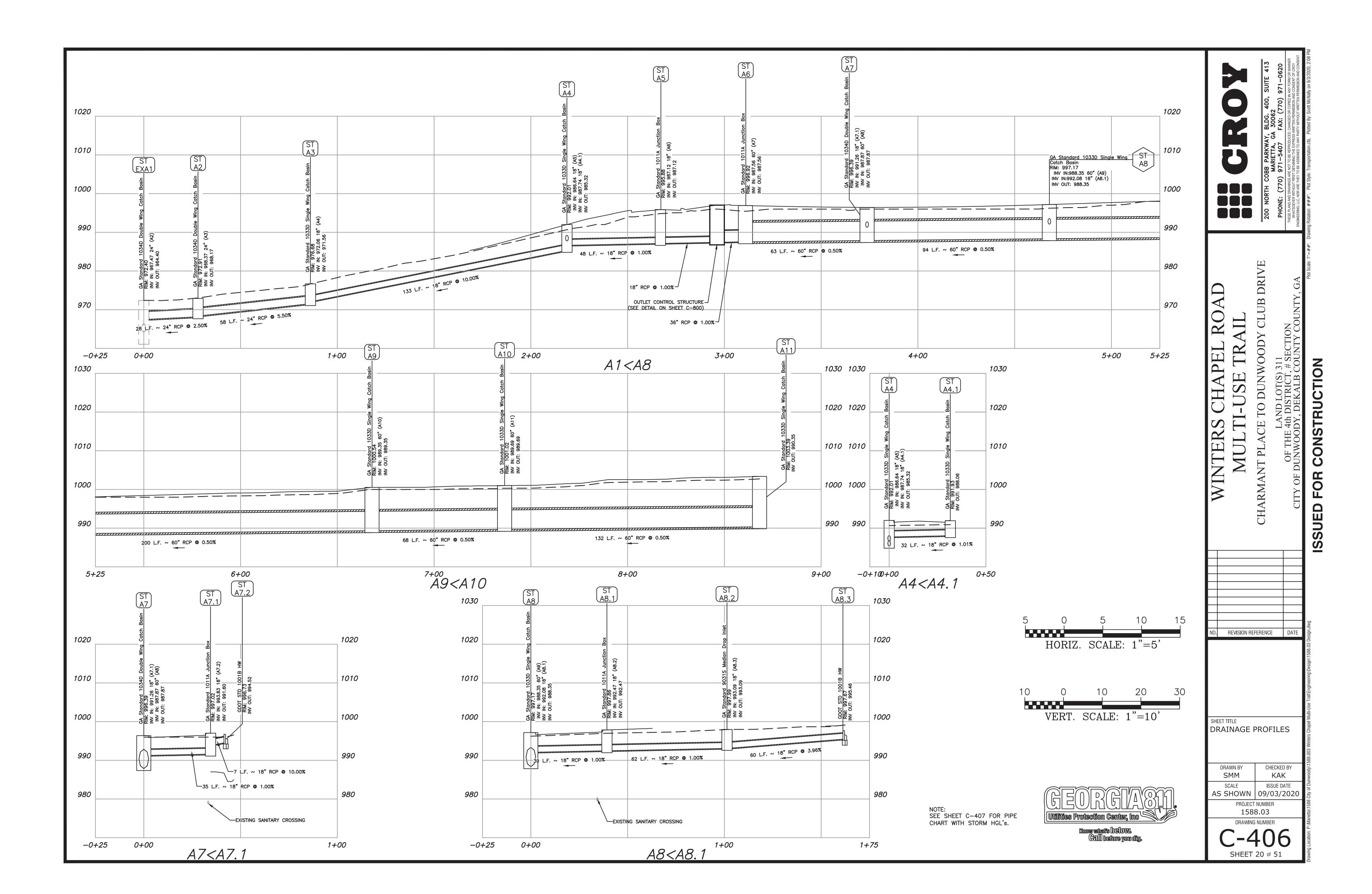


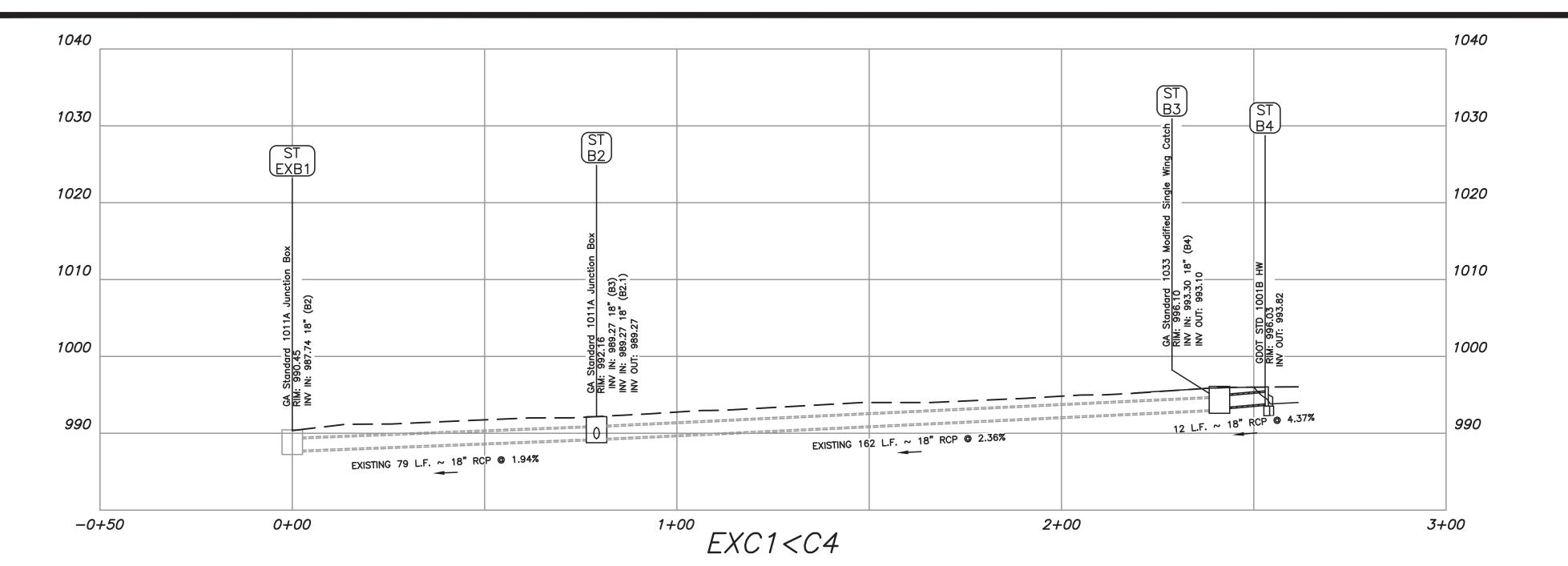












1030	ST B2 ST B2.1	1030
1020	Basin	1020
1010	Standard 1011A Junction Box : 992.16	1010
1000	GA Standard 101 RIM: 992.16 INV IN: 989.27 18 INV OUT: 989.27 INV OUT: 989.35 INV OUT: 989.35	1000
990	8 L.F. ~ 18" RCP ◎ 1.00%	990
980	8 L.F. ~ 18 RCP @ 1.00%	980
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12 B3	0.		5 7.		0.84	1.49	0	1.29	0.19 Curb	-	5.5	12.17	0	1.03	1.5	0.08	0.02	0	0.19	0.1	1.2		0.19	5.06	14
13 B4	0.		5 7.		0.84	1.49	0	1.49	0 Hdwall	ļ				<u> </u>	****		4444								
14 B2.1	[O.	12	5 7.1	37	0.51	0.45	0.19	0.65	0 Curb		5.5	12.17	0	1.03	1.5	0.08	0.02	이	0.15	0		l	0.15	2.92 C)ffsite

											25	YEAR STORM	1 EVENT										
Line	ToLine	LineLength	Incr.Area	TotalArea Rund	offCoeff.	IncrC x A TotalC x	A [InletTime	e TimeConc	Rnfalint	Total Runoff A	dniFlow	TotalFlow	CapacFull \	/eloc	PipeSize	PipeSlope	Inv ElevDn	Inv ElevUp	HGLDn	HGLUp	Grnd/RimDn	Grnd/RimUp	Line ID
		(ft)	(ac)	(ac) (C)		•	(min)	(min)	(in/hr)	(cfs) (c	fs)	(cfs)	(cfs) (ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
	1 Outfa	11.199	2.05	6.39	0.54	1.11	3.22	5 9.	1 7.2	23.21	0	34.35	24.29	11.02	2	24 0.98	964.29	964.4	966.2	966.47	0	972.4	4 OUT <exa1< td=""></exa1<>
	2	1 28.024	3.8	4.34	0.46	1.75	2.11	9	9 7.2	15.26	0	26.4	38.73	9.02	2	24 2.5	967.47	968.17	969.2	969.96	972.4	972.91	1 A1 <a2< td=""></a2<>
	3	2 58.072	0. 2 6	0.54	0.49	0.13	0.37	5 6.	2 8	3 2.92	D	14.06	57.43	5.74	i	24 5.49	968.37	97 1 .56	969.96	972.91	972.91	976.68	8 A2 <a3< td=""></a3<>
	4	3 132.568	0.15	0.28	0.81	0.12	0.24	5 5.	9 8.1	1.92	0	13.06	35.98	10.23	3	18 10	972.06	985.32	972.91	986.67	976.68	992.01	1 A3 <a4< td=""></a4<>
	5	4 48.274	0	0	0	0	0	0	0	0	11.14	11.14	11.34	7.14	ì	18 0.99	986.64	987.12	987.85	988.4	992.01	995.88	8 A4 <a5< td=""></a5<>
	6	4 31.586	0.13	0.13	0.9	0.12	0.12	5	5 8.4	0.98	0	0.98	11.45	3.43	3	18 1.01	987.74	988.06	988.04	988.43	992.01	. 991.93	3 A4 <a4.1< td=""></a4.1<>
	1 Outfa	62.845	0.21	2.31	0.82	0.17	1.5	5 4	3.€	5.38	0	5.38	198.18	2.11	L	60 0.49	987.56	987.87	990.34	988.5	996.92	996.39	9 A6 <a7< td=""></a7<>
	2	1 34.502	0	0.8	0	0_	0.31	0 5.	1 8.4	2.61	D	2.61	11.29	4.52	2	18 0.99	991.26	991.6	991.75	992.21	996.39	997.02	2 A7 <a7.1< td=""></a7.1<>
	3	2 6.922	0.8	0.8	0.39	0.31	0.31	5	5 8.4	2.62	0	2.62	35.92	7.84	1	18 9.97	993.83	994.52	994.1	995.13	997.02	996.73	3 A7.1 <a7.2< td=""></a7.2<>
	4	1 94.185	0.37	1.3	0.8	0.3	1.01	5 39.	1 3.8	3.85	0	3.85	201.44	3.05	5	60 0.53	987.87	988.35	988.5	988.88	996.39	997.17	7 A7 <a8< td=""></a8<>
	5	4 39.32	0	0.21	0	0	0.1	0 13.	7 6.3	0.63	D	0.63	11.33	3.01	l]	18 0.99	992.08	992.47	992.32	992.76	997.17	997.86	6 A8 <a8.1< td=""></a8.1<>
	6	5 62.036	0.09	0.21	0.76	0.07	0.1	5 11.	5 6.7	0.67	0	0.67	11.37	2.68	3	18 1	992.47	993.09	992.76	993.39	997.86	997.99	9 A8.1 <a8.2< td=""></a8.2<>
	7	6 59.896	0.12	0.12	0.27	0.03	0.03	5	5 8.4	0.27	0	0.27	22.63	1 .56	ò	18 3.96	993.09	995.46	993.39	995.65	997.99	997.67	7 A8.2 <a8.3< td=""></a8.3<>
	8	4 200.009	0.15	0.72	0.86	0.13	0.62	5 25	8 4.7	7 2.91	0	2.91	199.52	2.89	}	60 0.5	988.35	989.35	988.88	989.81	997.17	1000.54	4 A8 <a9< td=""></a9<>
	9	8 68.499	0.18	0.57	0.82	0.15	0.49	5 20.	2 5.3	2.59	D	2.59	198.81	2.96	5	60 0.5	989.35	989.69	989.81	990.13	1000.54	1001.02	2 A9 <a10< td=""></a10<>
1	.0	9 131.713	0.39	0.39	0.87	0.34	0.34	5	5 8.4	2.84	0	2.84	199.74	3.28	3	60 0.5	989.69	990.35	990.13	990.81	1001.02	1003.39	9 A10 <a11< td=""></a11<>
1	.1 Outfa	79.113	0	0.6	0	0,	0.46	0 6.	7.9	3.65	0	3.65	15.82	3.47	7	18 1.93	987.74	989.27	988.83	990	990.45	992.16	6 EXB1 <b2< td=""></b2<>
1	.2 :	161.951	0.24	0.48	0.84	0.2	0.4	5 5.	2 8.3	3.35	0	3.35	17.49	4.05	5	18 2.36	989.27	993.1	990	993.8	992.16	996.1	1 B2 <b3< td=""></b3<>
1	.3 :	11.891	0.24	0.24	0.84	0.2	0.2	5	5 8.4	1.69	0	1.69	23.79	3.34	i	18 4.37	993.3	993.82	993.8	994.31	996.1	996.03	3 B3 <b4< td=""></b4<>
_ 1	.4] :	11 8.067	0.12	0.12	0.51	0.06	0.06	5	5 8.4	0.51	0	0.51	11.33	1.52	2	18 0.99	989.27	989.35	990	989.61	992.16	992.19	9 B2 <b2.1< td=""></b2.1<>

		,	,								,		OD YEAR STORI	VIEVENI											
	ToLine	LineLength	Incr.Area	TotalArea Run	offCoeff.	IncrC x A To	talC x A	InletTime	TimeConc	Rnfallnt	Total Runoff	AdniFlow	TotalFlow	CapacFull	Veloc	PipeSize	PipeS	lope I	nv ElevDn	Inv ElevUp	HGLDn H	lGLUp Grn	d/RimDn	Grnd/RimUp	Line ID
		(ft)	(ac)	(ac) (C)				(min)	(min)	(in/hr)	(cfs)	(cfs)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	{ft}	ft) (ft)		(ft)	
1	Outfall	11.199	2.05	6.39	0.54	1.11	3.22	5	9	8.6	27.81		0 41.74	24.29)	13.32	24	0.98	964.29	964.4	966.25	966.58	0	97	72.4 OUT<
2	1	28.024	3.8	4.34	0.46	1.75	2.11	9	9	8.6	18.28		0 32.21	. 38.73	,	10.25	24	2.5	967.47	968.17	970.62	971.1	972.4	972	2.91 A1 <a< td=""></a<>
3	2	58.072	0.26	0.54	0.49	0.13	0.37	5	6	9.6	3.5		0 17.43	57.43	,	5.55	24	5.49	968.37	971.56	973.47	973.77	972.91	976	6.68 A2<
4	3	132.568	0.15	0.28	0.81	0.12	0.24	5	5.8	9.7	2.3		0 16.23	35.98	:	9.27	18	10	972.06	985.32	974.01	986.75	976.68	992	2.01 A3 </td
5	4	48.274	0	0	0	0	0	C	0	0	0	13.9	3 13.93	11.34		7.88	18	0.99	986.64	987.12	988.14	988.86	992.01	995	5.88 A4<
6	4	31.586	0.13	0.13	0.9	0.12	0.12	5	5	9.9	1.16		0 1.16	11.45	,	3.6	18	1.01	987.74	988.06	988.06	988.46	992.01	991	1.93 A4<
1	Outfall	62.845	0.21	2.31	0.82	0.17	1.5	5	37	4.8	7.2		0 7.2	198.18	;	2.34	60	0.49	987.56	987.87	990.34	988.6	996.92	996	5.39 A6<
2	1	34.502	C	0.8	0	0	0.31		5.1	9.9	3.1		0 3.1	. 11.29	1	4.75	18	0.99	991.26	991.6	991.8	992.27	996.39	997	7.02 A7<
3	2	6.922	0.8	0.8	0.39	0.31	0.31	5	5	9.9	3.1		0 3.1	. 35.92		8.25	18	9.97	993.83	994.52	994.13	995.19	997.02	996	6.73 A7.1
4	1	94.185	0.37		0.8	0.3	1.01	5	33.7	5.1			0 5.12	201.44		3.28	60	0.51	987.87	988.35	988.6	988.97	996.39	997	7.17 A7<
5	4	39.32	0	0.21	0	0	0.1	C	12.3	7.8	0.79		0.79	11.33		3.21	18	0.99	992.08	992.47	992.35	992.8	997.17	997	7.86 A8<
6	5	62.036	0.09	0.21	0.76	0.07	0.1	5	10.5	8.3	0.83		0.83	11.37	'	2.83	18	1	992.47	993.09	992.8	993.43	997.86	997	7.99 A8.1
7	6	59.896	0.12		0.27	0.03	0.03	5	5	9.9	0.32		0.32	22.63		1.61	18	3.96	993.09	995.46	993.43	995.67	997.99	997	7.67 A8.2
8	4	200.009	0.15	0.72	0.86	0.13	0.62	5	22.5	6.1		 	0 3.79	199.52		3.07	60	0.5	988.35	989.35	 	989.88	997.17	1000	0.54 A8<
9	8	68.499	0.18		0.82	0.15	0.49	5	17.8	6.8	3.32		0 3.32	198.81		3.14	60	0.5	989.35	989.69		990.18	1000.54	1001	1.02 A9 </td
10	9	131.713	0.39	0.39	0.87	0.34	0.34	5	5	9.9	<u> </u>		0 3.38	199.74		3.33	60	0.5	989.69	990.35	1	990.85	1001.02	1003	3.39 A 10
11	Outfall	79.113	0	0.6	0	0_	0.46	C	6.4	9.5	+		0 4.39	15.82		3.88	18	1.93	987.74	989.27	988.83	990.07	990.45	992	2.16 EXB:
12	11	161.951	0.24		0.84	0.2	0.4	5	5.2				0 3.98	17.49	1	4.27	18	2.36	989.27	993.1	 	993.86	992.16		96.1 B2 <i< td=""></i<>
13	12	11.891	0.24	0.24	0.84	0.2	0.2	5	5	9.9	2.01		0 2.01	23.79	1	3.43	18	4.37	993.3	993.82	993.86	994.35	996.1	996	5.03 B3<e< b=""></e<>
14	11	8.067	0.12	0.12	0.51	0.06	0.06	5	5	9.9	0.61		0.61	11.33	.	1.59	18	0.99	989.27	989.35	990.07	989.64	992.16	992	2.19 B2 <b< td=""></b<>



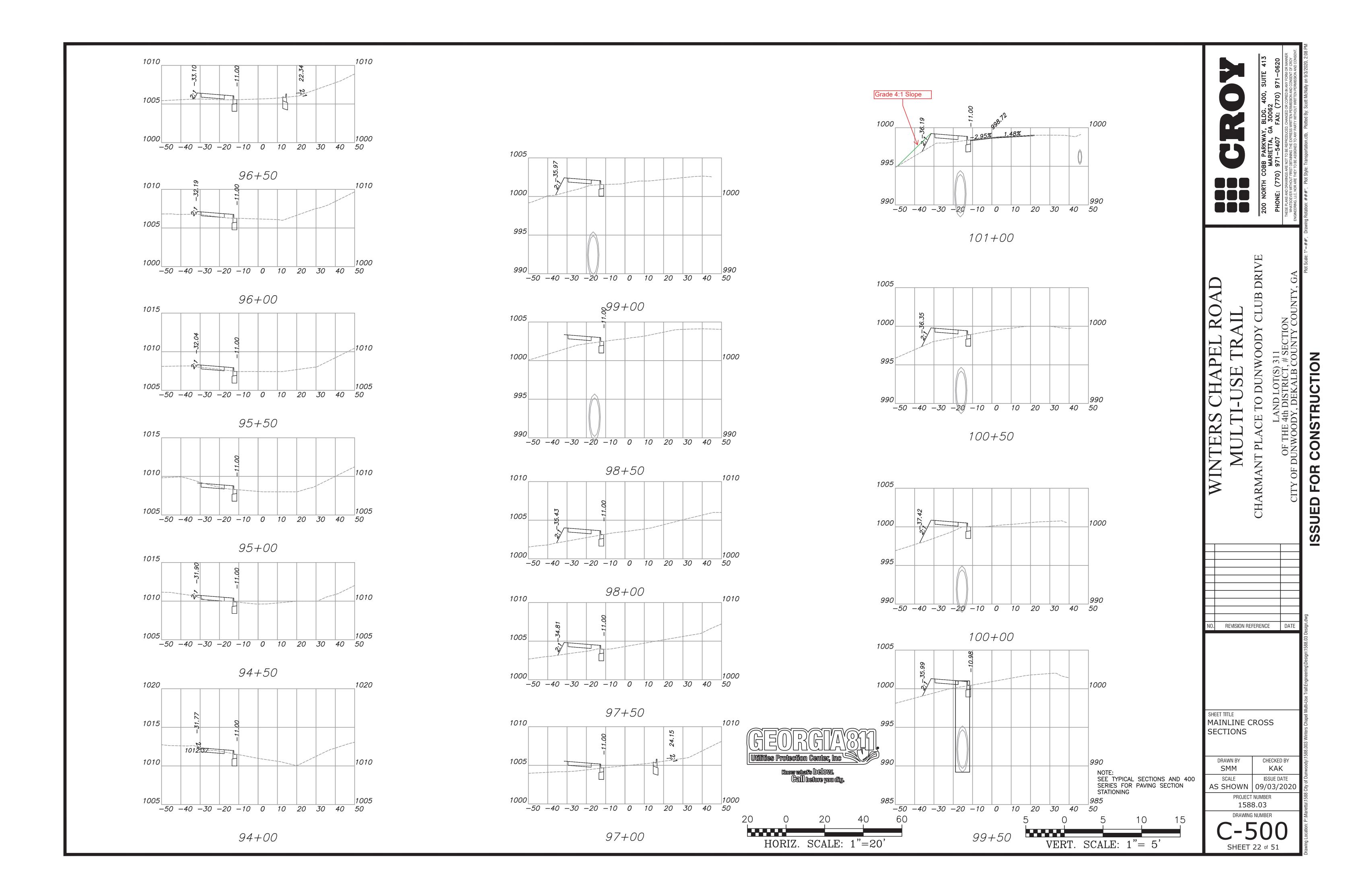
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DRAINAGE PROFILES

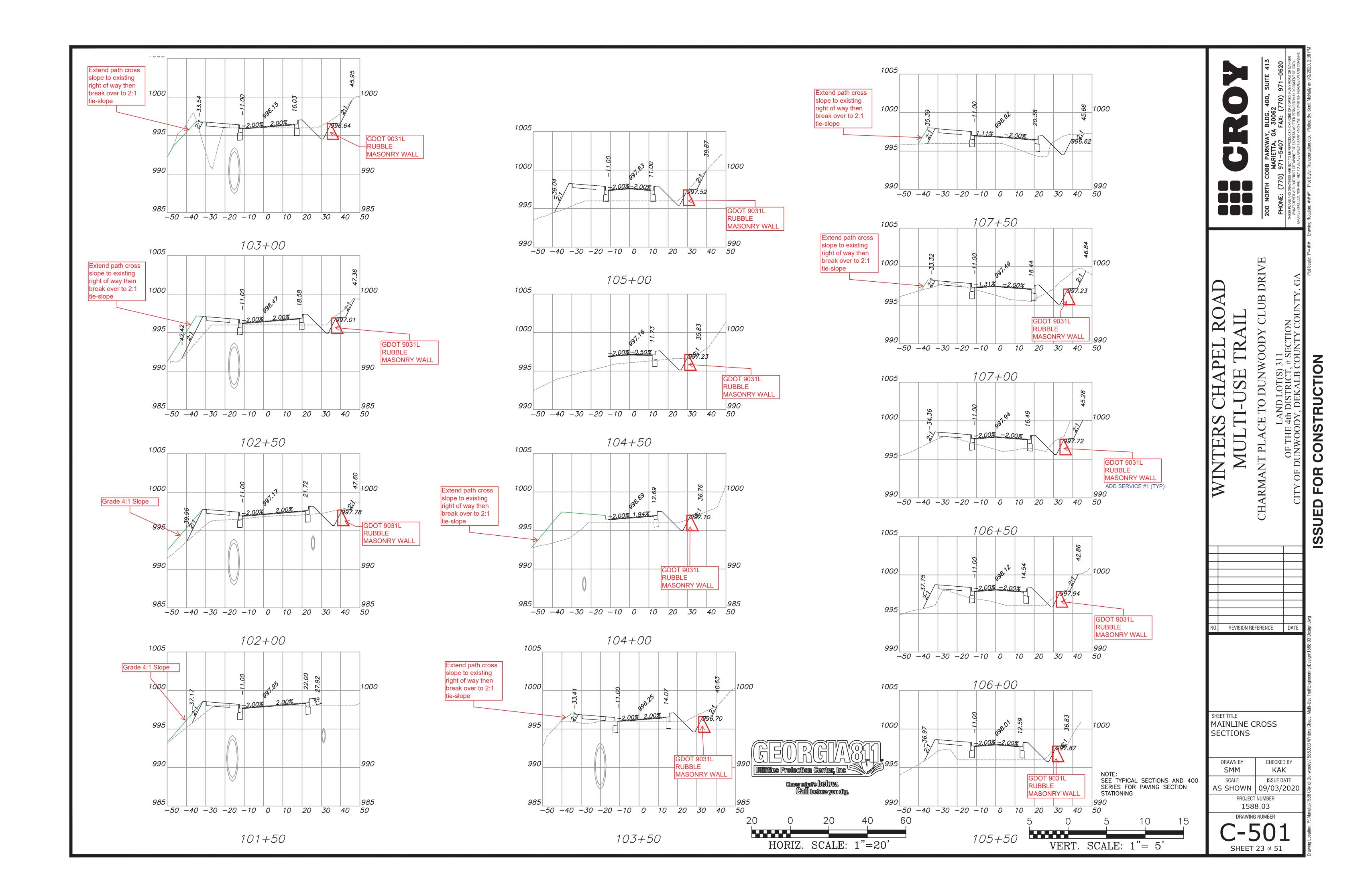
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09/03/2020

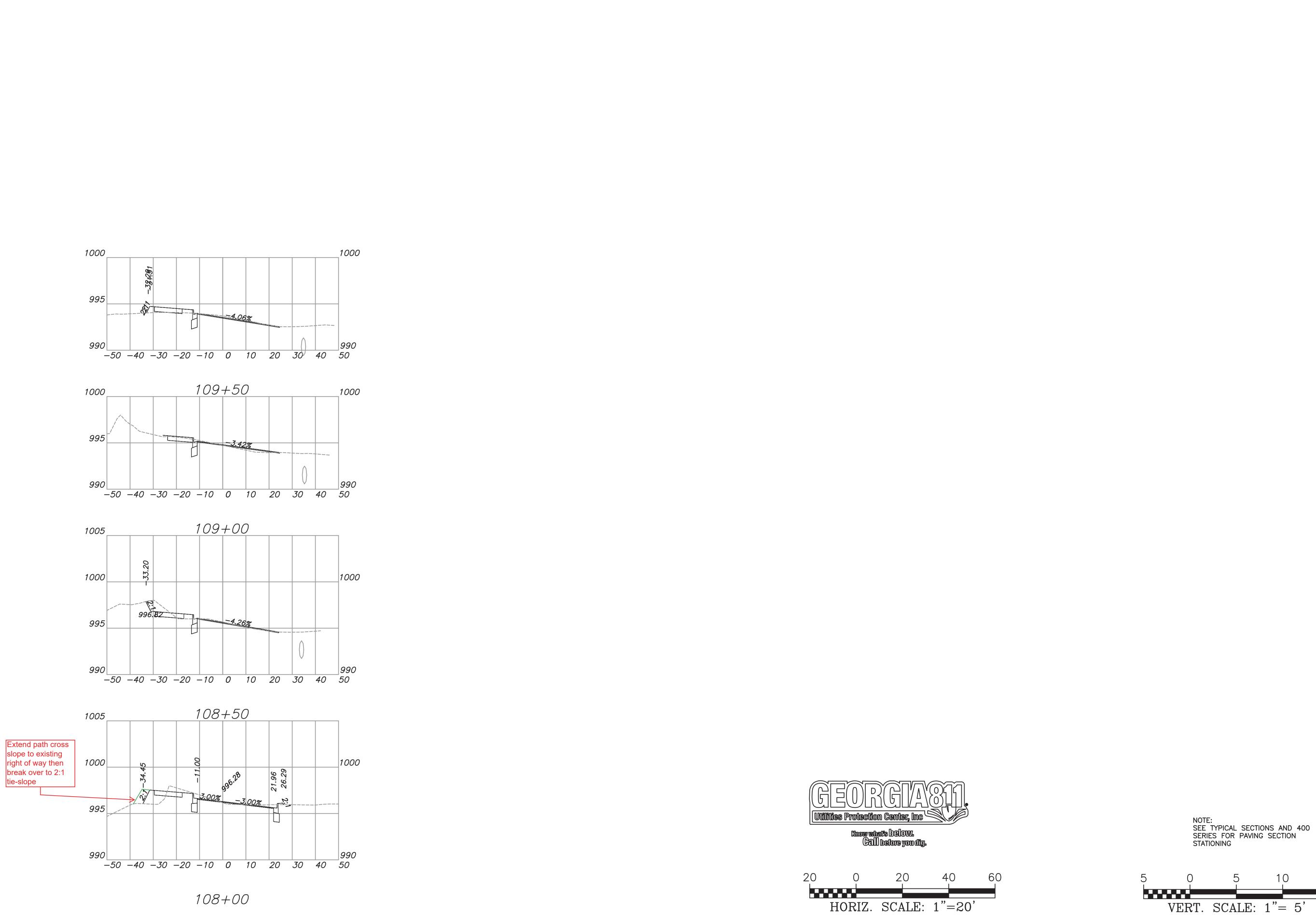
PROJECT NUMBER
1588.03

DRAWING NUMBER











DRAWN BY CHECKED BY KAK ISSUE DATE AS SHOWN 09/03/2020 PROJECT NUMBER

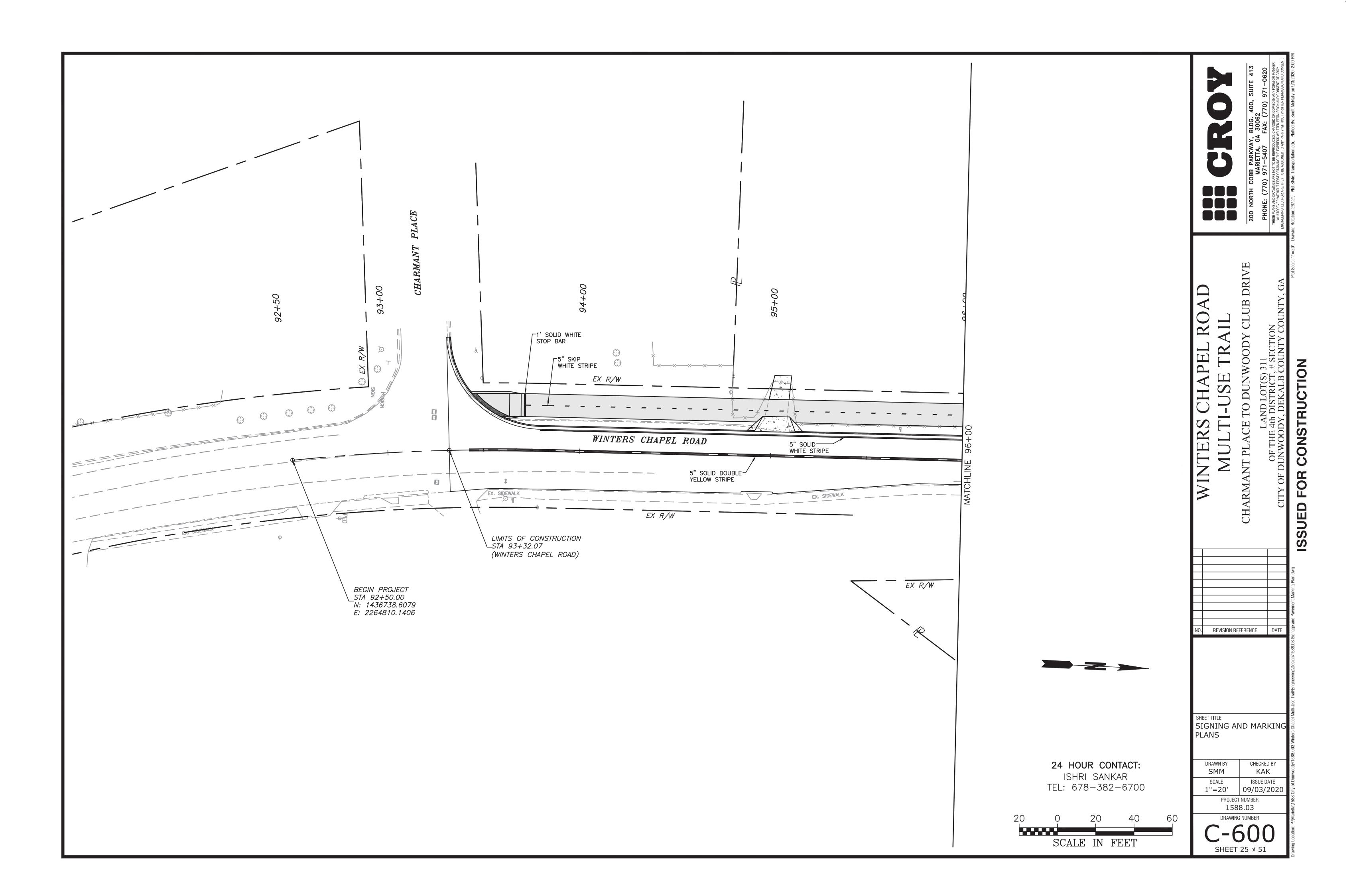
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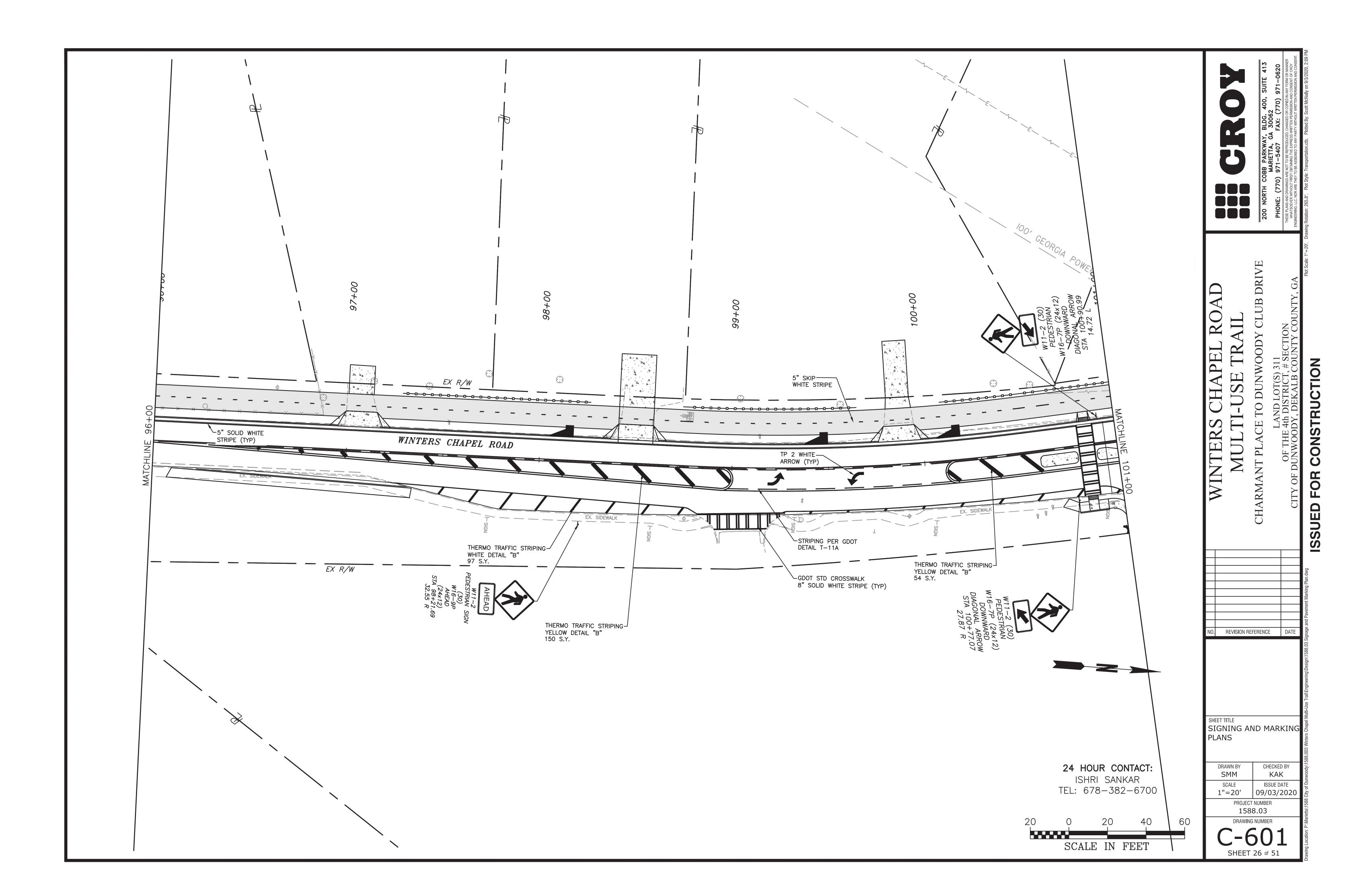
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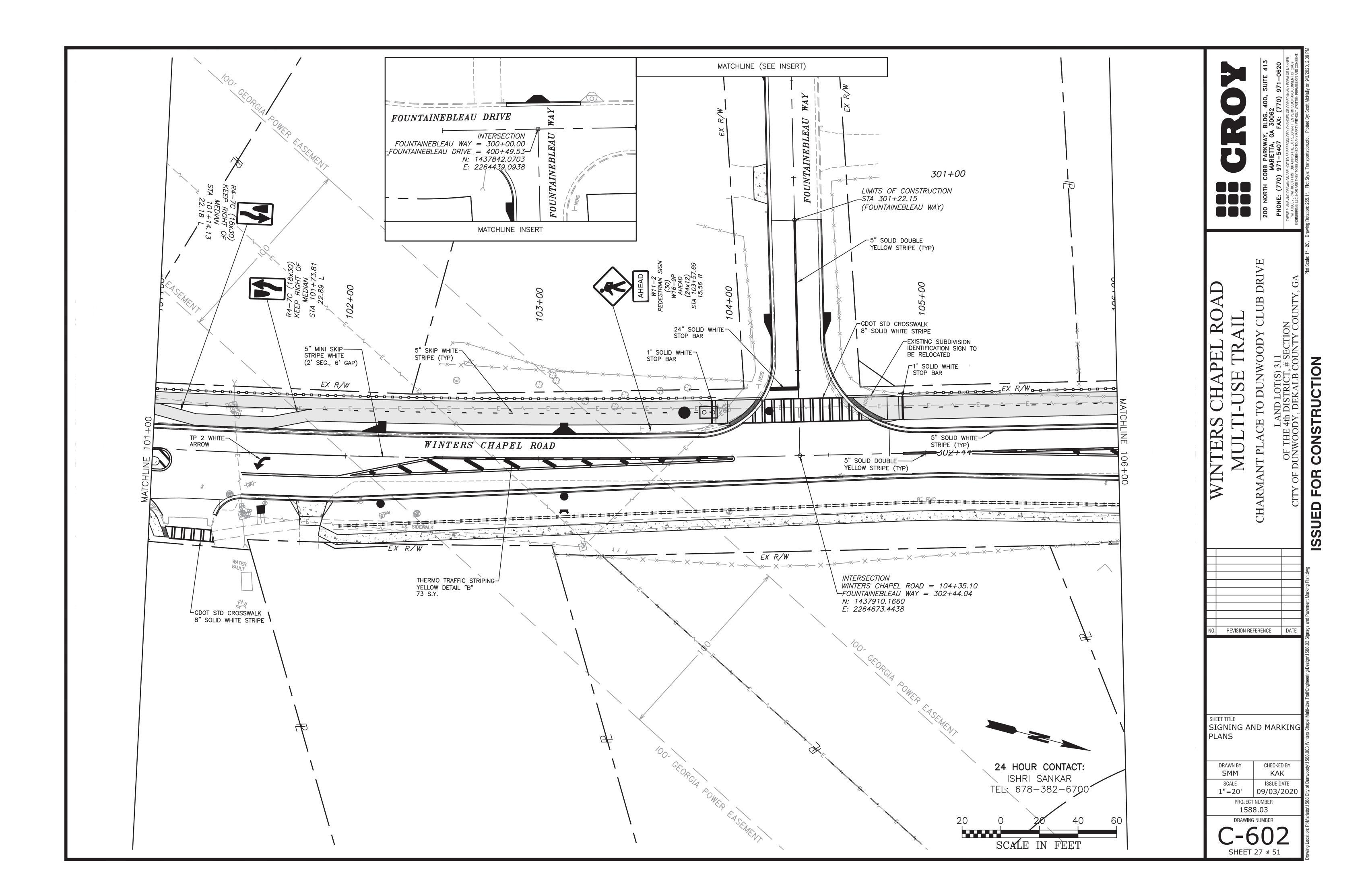
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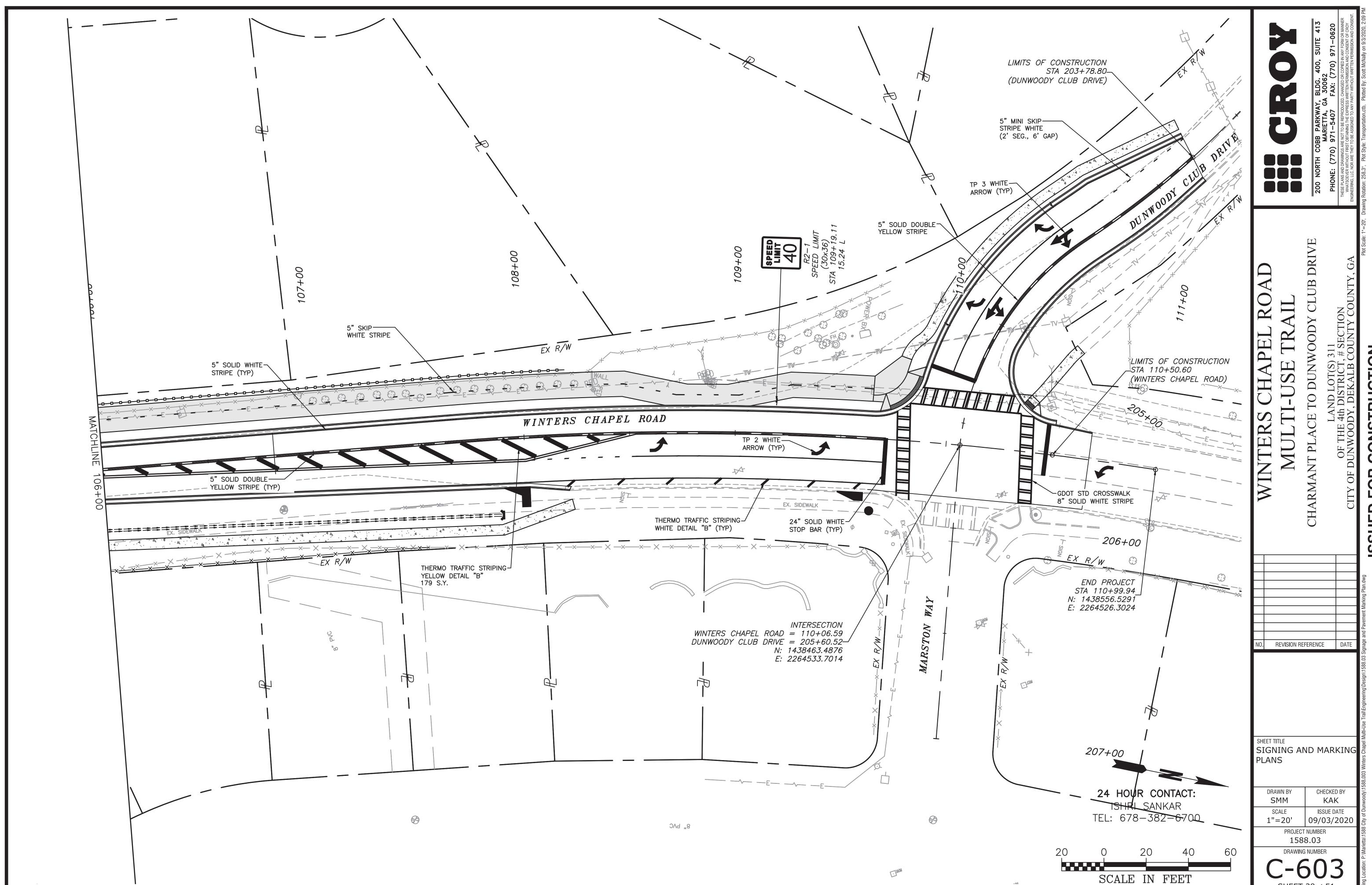
1588.03 DRAWING NUMBER SHEET 24 of 51

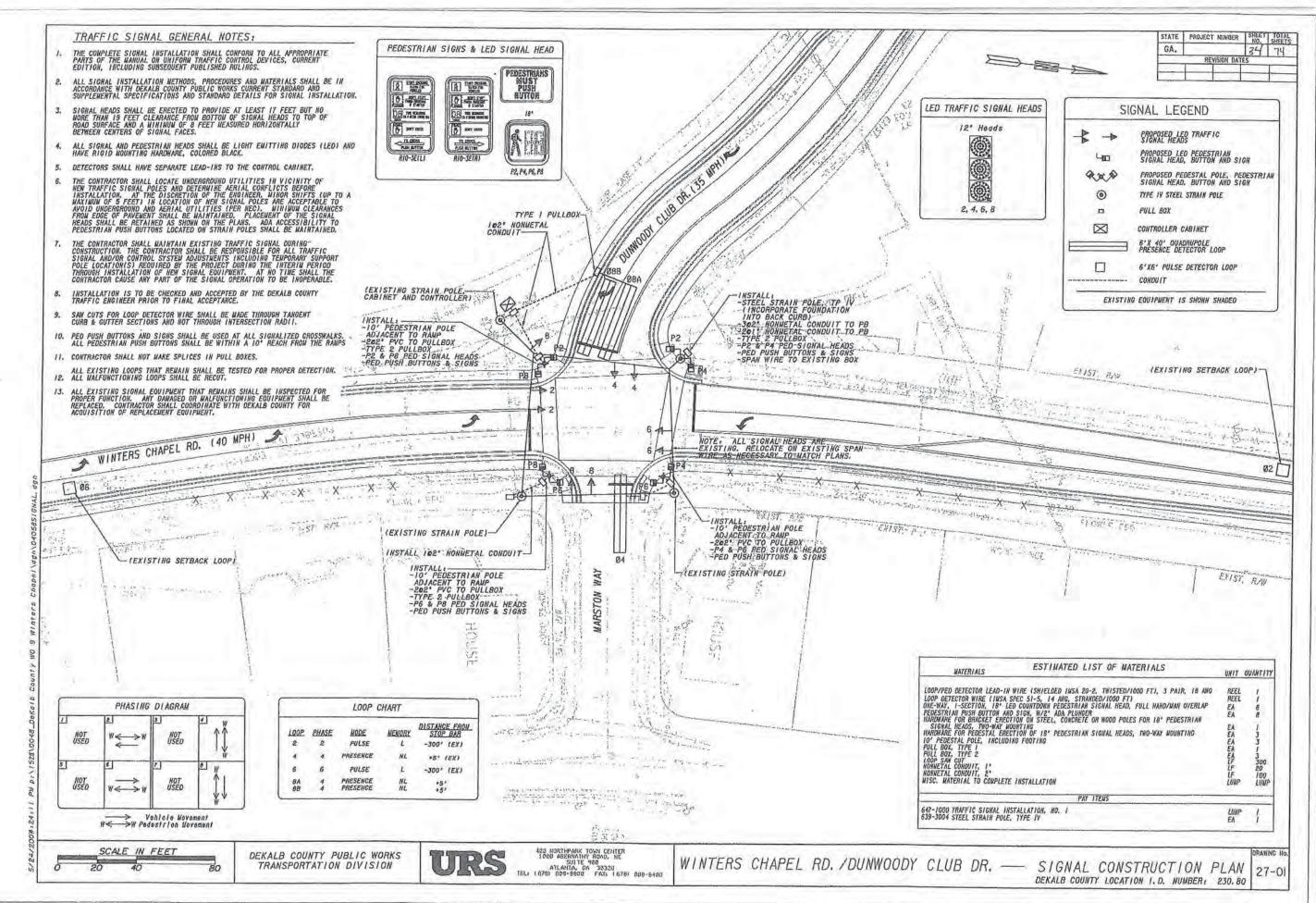
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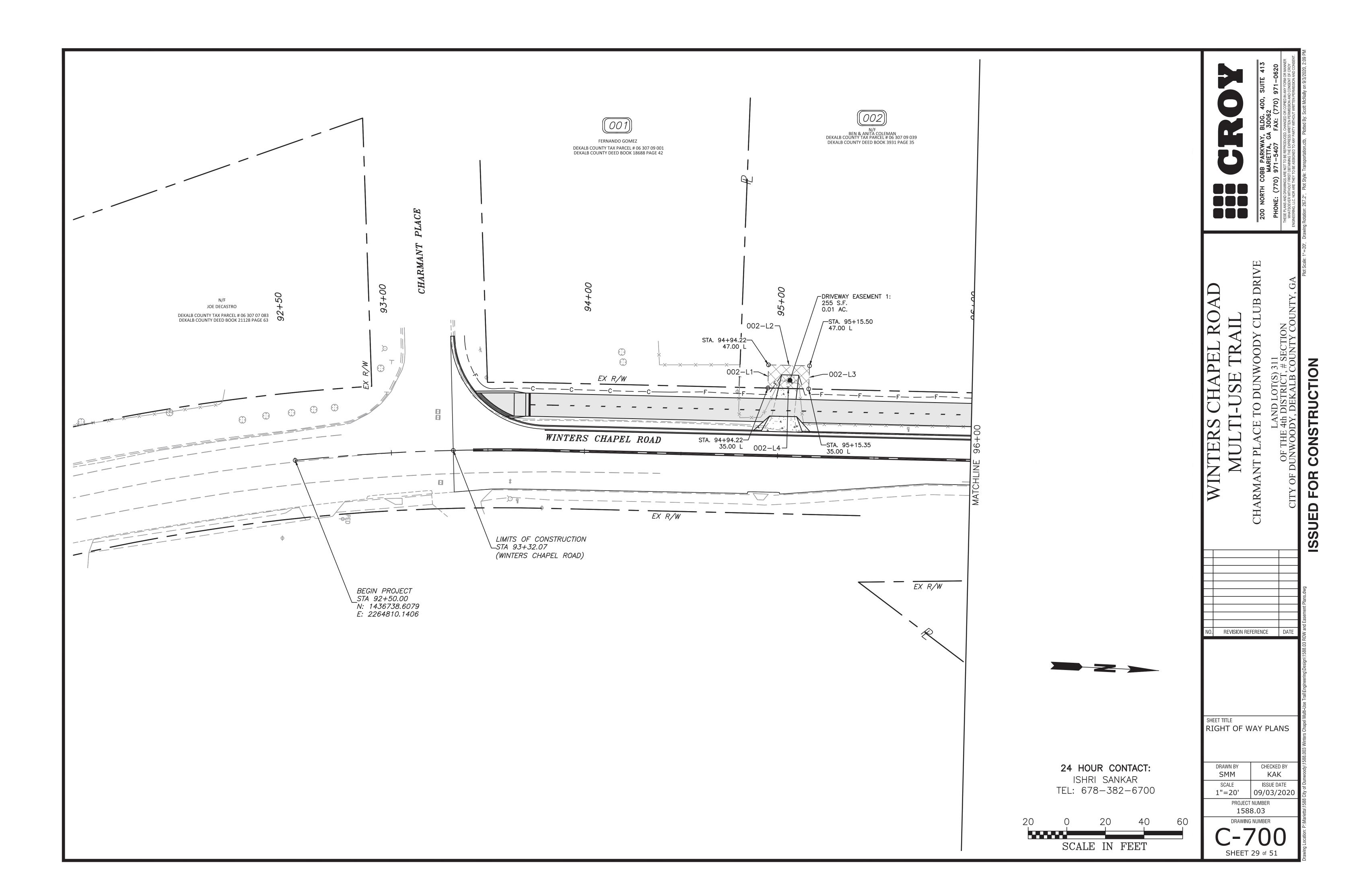


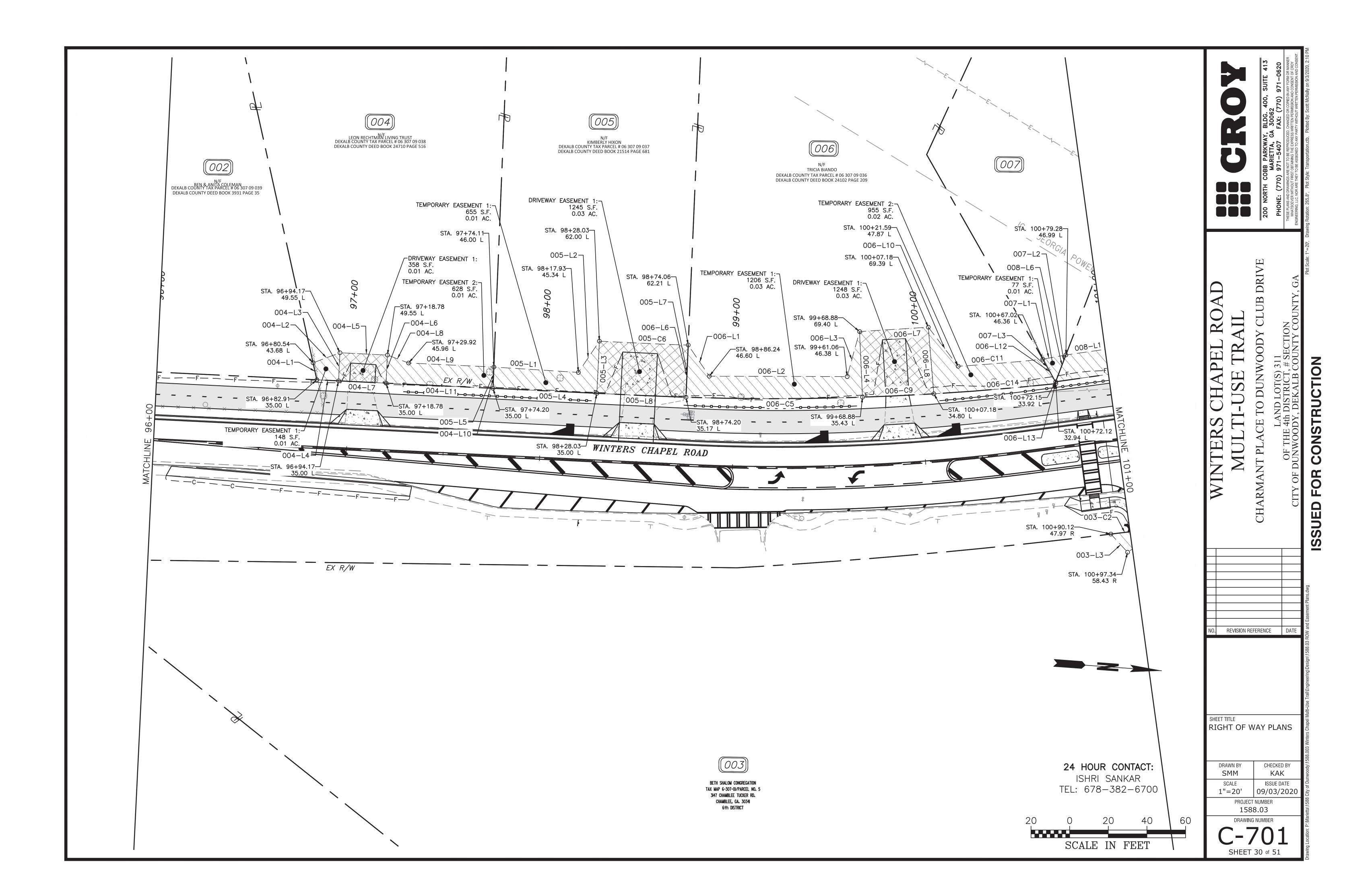


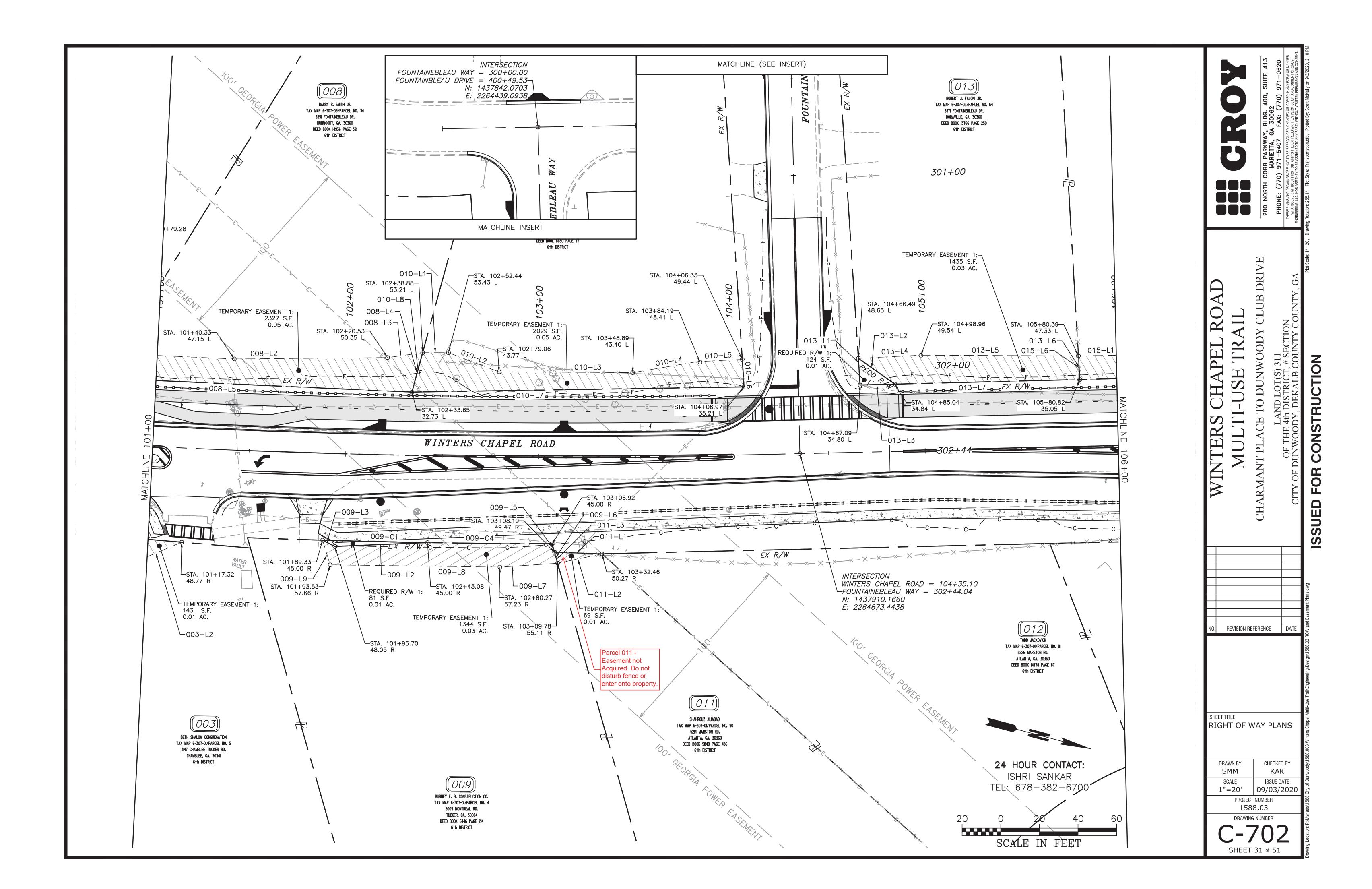


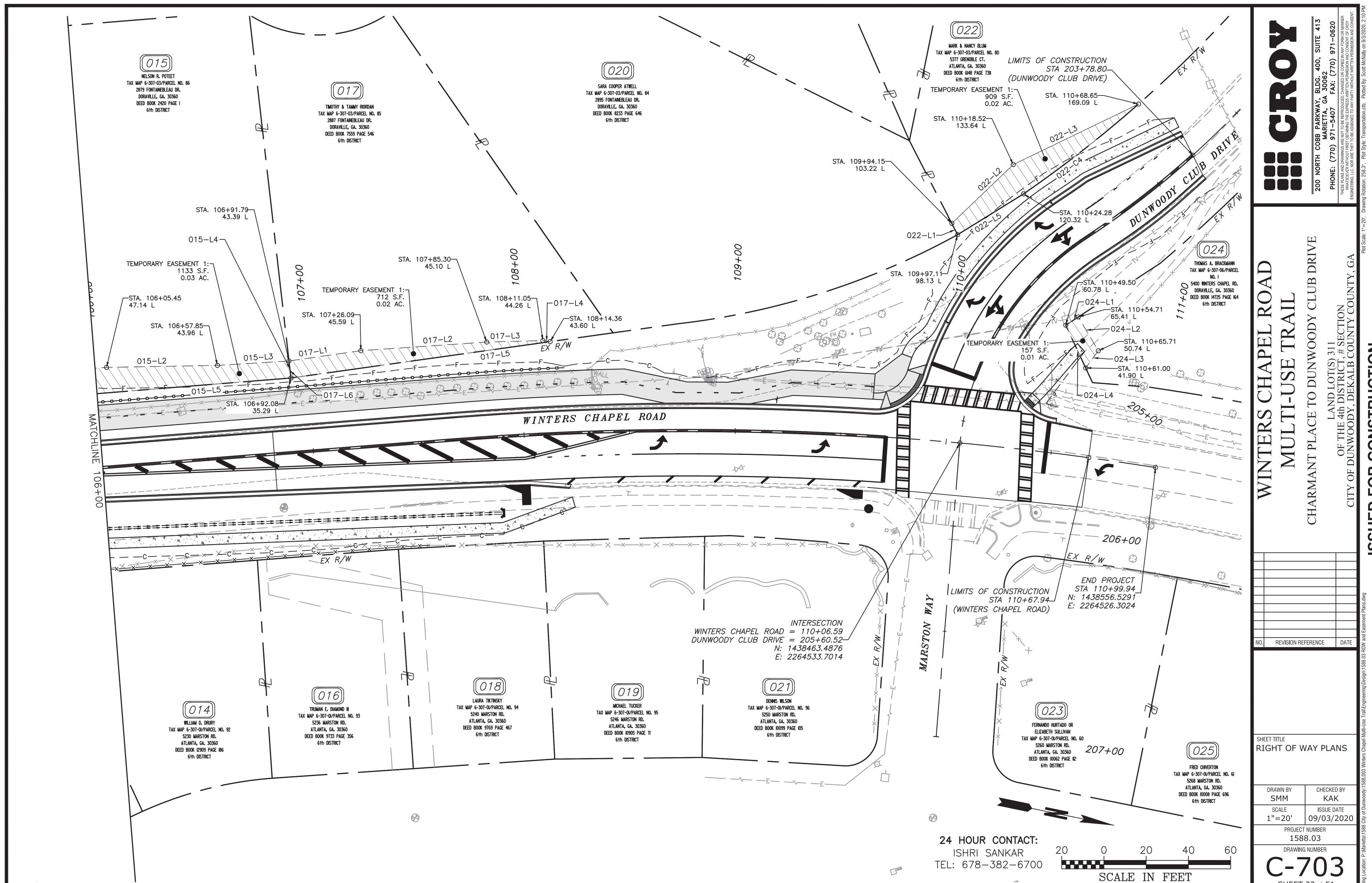












	METER & DOUBLE			METER & DOUBLE	1		METER & DOUBLE			METER & BOUNDS	
(002)	METES & BOUNDS		006	METES & BOUNDS		009	METES & BOUNDS		017	METES & BOUNDS	
002-L1	S88°30'59"W	12.00'	006-L1	N51°37'40"E	19.45'		CHORD BEARING:		017-L1	N19°53'01"W	34.37'
002-L2	N01°29'01"W	21.28'	006-L2	NO4°03'25"W	71.35'	009-C4	CHORD LENGTH: ARC LENGTH:	64.51' 64.51'	017-L2	N15°37'58"W	59.76'
002-L3	N89°15'00"E	12.00'	006-L3	N78°51'11"W	24.18'		RADIUS:	4345.01	017–L3	N13°10'17"W	26.59
002-L4	S01°29'01"E	21.13'	006-L4	N83°11'16"E	33.98'	009-L5	N59*07'25"E	4.65'	017-L4	N03°28'52"W	3.48'
003	METES & BOUNDS			CHORD BEARING:	S04°16′26″E	009-L6	N59°17'02"E	5.87'	017–L5	S19°41′13″E	123.94
	0//000 05/0//0	A14 4 • 4 E • 7 7 7 14/	006–C5	CHORD LENGTH: ARC LENGTH:	91.36' 91.38'	009-L7	S18°41'18"E	29.97'	017-L6	S71°45'24"W	8.10'
003-C2	CHORD BEARING: CHORD LENGTH:	N11°15'33"W 8.15'		RADIUS:	1383.84'	009-L8	S14°08'39"E	<i>87.90</i> ′	(022)	METES & BOUNDS	
	ARC LENGTH: RADIUS:	8.15' 3116.11'	006-L6	S88°12'18"W	27.04'	009-L9	S58°11'25"W	13.35'		CE 1 • 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	c 00'
003-L2	S37°40'07"E	22.41'	006	METES & BOUNDS		009–L3	S12°05'00"W	7.12'	022-L1	S51°11'11"W	6.00'
003-L3	S43°04'44"W	12.77'	006-L4	N83°11'16"E	<i>33.98</i> '	009-L2	S17°16'24"E	47.99'	022-L2	N55°28'47"W	40.30'
(004)	METES & BOUNDS		006-L7	S07°53'06"E	<i>35.66</i> '	010	METES & BOUNDS		022–L3	N37°29'12"W	65.89'
			006–L8	S81°00'19"W	<i>34.60</i> '	010-L1	N14°57'12"W	13.39'	022-C4	CHORD BEARING: CHORD LENGTH:	S49°42'43"E 69.10'
004-L1	S73°13'40"W	9.00'		CHORD BEARING:	N06°55'51"W	010-L2	N05°54'09"E	28.04'	022 07	ARC LENGTH: RADIUS:	69.14' 591.65'
004-L2	N24°46'50"W	14.84'	006–C9	CHORD LENGTH: ARC LENGTH:	36.97' 36.97'	010-L3		69.12'	022–L5	S43°26'19"E	36.75'
004-L3	N88°30'59"E	14.55'		RADIUS:	1383.84	010-L4		<i>33.75</i> '	024	METES & BOUNDS	
004-L4	S01°29'01"E	11.26'	006	METES & BOUNDS		010-L5		23.49'			
(004)	METES & BOUNDS		006-110	N48°22'26"E	25.44'	010-L6	N71°20'34"E	14.24'	024-L1	N44*57'54"W	7.14'
004-L5	N01°29'01"W	24.61	000-270		N09°01'10"W	010-L7	S15°48'11"E	171.96'	024-L2	N47°44'00"E	18.61'
004-L6	N88°30'59"E	14.55'	006-C11	CHORD BEARING: CHORD LENGTH:	43.98'	010–L8	N89*39'31"W	21.12'	024–L3	S65°16'35"E	10.09'
004-L7	S01°29'01"E	24.61'		ARC LENGTH: RADIUS:	43.99' 1049.02'	011	METES & BOUNDS		024-L4	S53°16'16"W	22.33'
004-L3	N88°30'59"E	14.55	006-L12	N56°10'02"E	13.44'						
004	METES & BOUNDS		006-L13	N79°40'47"E	0.97'		N13°06'51"W	24.57'			
				CHORD BEARING:	S09°00'30"E	011-L2	S26°54'38"E	23.47'			
004-L6	N88°30'59"E	14.55°	006-C14	CHORD LENGTH: ARC LENGTH:	63.37' 63.38'	011-L3	S59°17'02"W	5.87'			
004-L8	N16°22'28"E	11.71'		RADIUS:	1383.84'	(013)	METES & BOUNDS				
004-L9	NO1°31'54"W	44.19'	007	METES & BOUNDS		013-L1	S71°20'35"W	13.87'			
	N88°05'48"E	11.00'	007-L1	N14°39'30"W	12.15'	013-L2	N20°29'14"E	23.12'			
	S01°29'01"E METES & BOUNDS	55.42'	007-L2	S73°19'04"E	14.86'	013–L3	S16°19'37"E	17.95'			
(005)			007-L3	S56°10'02"W	13.44'	013	METES & BOUNDS				
005-L1	N00°37'27"W	43.82'	008	METES & BOUNDS	·		N117°45'40"W	30 AP'			
005-L2	N60°15'45"W	19.48'					N17°45'40"W	32.48'			
005-L3	N88°30'59"E	27.00'		N12°19'11"W	60.38'	013-L5 013-L6	N14°38′56″W	81.46'			
005-L4	S01°29'01"E	53.83'		N15°25'22"W	79.36'			12.29'			
005-L5	S88°05'48"W	11.00'	008–L3	N22°43'17"W	18.35'		S16°19'37"E	95.79'			
005	METES & BOUNDS		008–L4	S89°39'31"E	21.12'		S16*19'37"E METES & BOUNDS	17.95'			
	CHORD BEARING:	NO1°59'11"W		S12°19'11"E	160.25'	(015)					
005-C6	CHORD LENGTH:	24.28'	008-L6	N73°19'04"W	14.86'	015-L1	N15°46'10"W	25.06'			
	ARC LENGTH: RADIUS:	24.28' 1383.84'	009	METES & BOUNDS		015-L2	N12°43'26"W	52.50'			
005-L7	N88°12'18"E	27.04'		CHORD BEARING:	N13°35'18"W	015–L3	N15°14'34"W	33.95'			
005-L8	S01°29'01"E	24.47'	009-C1	CHORD LENGTH: ARC LENGTH:	54.31' 54.31'	015-L4	N71°45'24"E	8.10'			
005-L3	N88°30'59"E	27.00'		RADIUS:	4345.00°	015–L5	S16*19'46"E	111.26'			
L			009-L2	S17°16'24"E	47.99'	015–L6	S71°45'24"W	12.29'			
			009-L3	S12°05'00"W	7.12'						

WINTERS CHAPEL ROAD
MULTI-USE TRAIL
CHARMANT PLACE TO DUNWOODY CLUB DRIVE

LAND LOT(S) 311
OF THE 4th DISTRICT, # SECTION
CITY OF DUNWOODY, DEKALB COUNTY, GA

NO. REVISION REFERENCE DATE

SHEET TITLE
RIGHT OF WAY TABLES

PROJECT NUMBER 1588.03

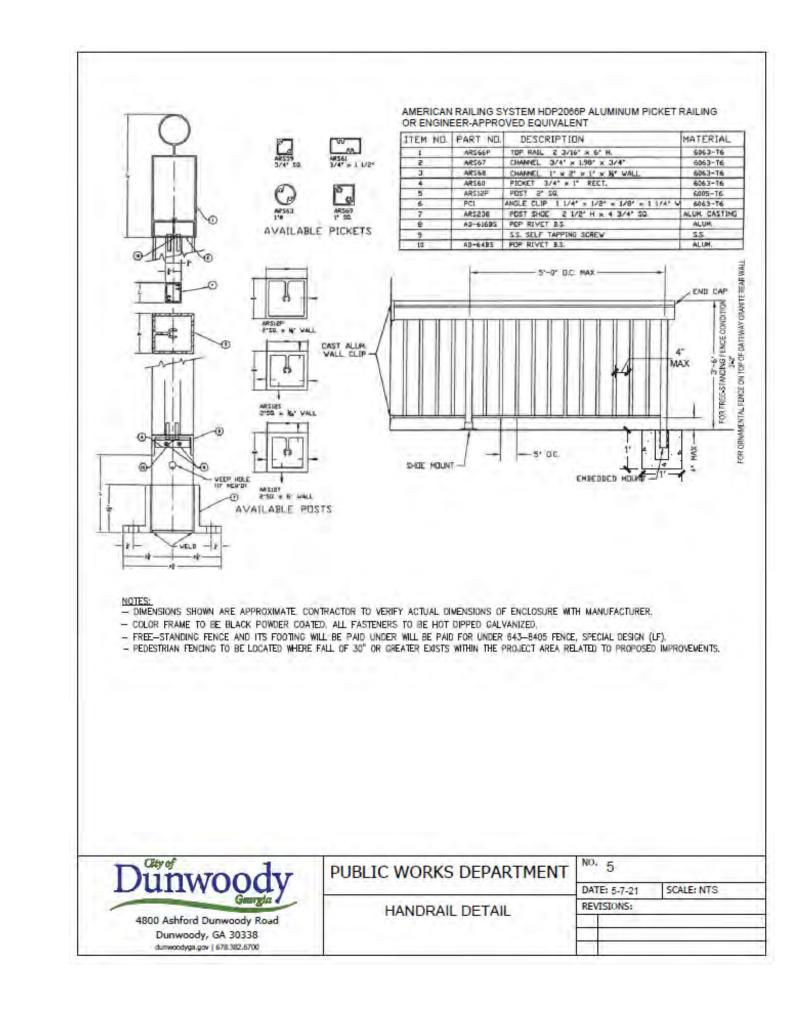
DRAWING NUMBER

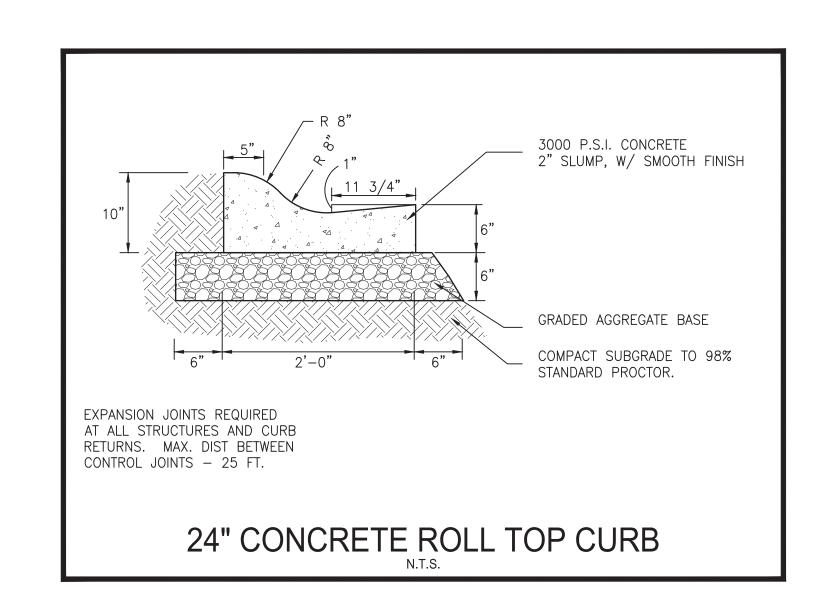
CHECKED BY **KAK**

ISSUE DATE 09/03/2020

OR CONSTRUCTION

24 HOUR CONTACT:
ISHRI SANKAR
TEL: 678-382-6700







WINTERS CHAPEL ROAD MULTI-USE TRAIL

DRAWN BY
SMM
SCALE
NTS

PROJECT NUMBER
1588.03

DRAWING NUMBER

REVISION REFERENCE

C-800
SHEET 34 of 51

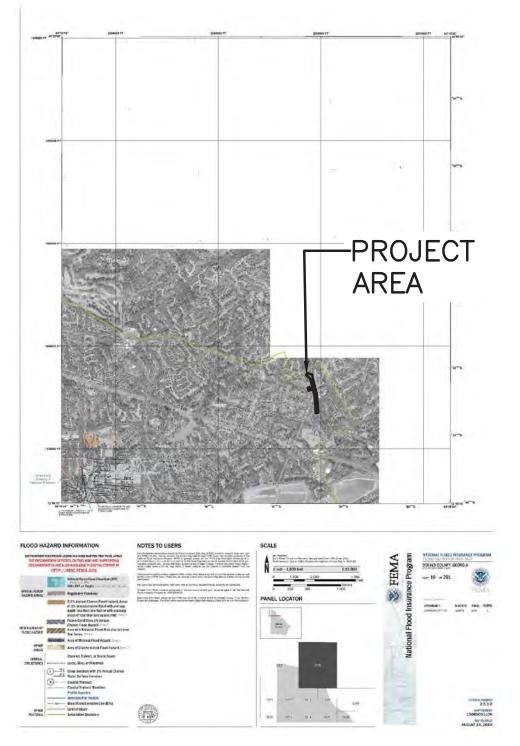
CHARMANT PLACE TO DUNWOODY CLUB DRIVE

CITY OF DUNWOODY, GA

CROY ENGINEERING PROJECT NO. 1588.03 OCTOBER, 2020



USGS MAP NTS



FEMA MAP

FEMA STATEMENT

A PORTION OF THIS PROPERTY DOES NOT LIE WITHIN THE 100 YEAR FLOOD HAZARD AREA BASED ON THE FLOOD INSURANCE RATE MAP FOR THIS AREA. THE MAP NUMBER FOR THIS AREA IS 13067C0038H AND THE DATE OF SAID MAP IS

OWNER/DEVELOPER: CITY OF DUNWOODY

EMAIL: mailto:lshri.Sankar@dunwoodyga.gov

24 HOUR CONTACT:

ISHRI SANKAR TEL: 678-382-6700



SITE INFORMATION PROJECT AREA: 7.5 AC DISTURBED AREA: 2.75 AC



Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on Part IV page 21 of the permit Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on Part IV page 20 of the permit Design professional certification statement and signature that the permittee's ES&PC Plan provides for representative sampling as stated on Part IV.D.6.c.(3) page 37 of the permit as applicable. * Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements, perimeter control BMPs, and sediment basins within 7 days after installation." 15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits." 16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required. 7 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemen of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III. 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 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or 24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum 25 Provide BMPs for the remediation of all petroleum spills and leaks. 26 Description of the measures that will be installed during the construction process to control pollutants in storm water that γ 27 Description of practices to provide cover for building materials and building products on site. * Y 29 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility 30 Provide complete requirements of inspections and record keeping by the primary permittee. * 31 Provide complete requirements of sampling frequency and reporting of sampling results. * Provide complete details for retention of records as per Part IV.F. of the permit. * 3 Description of analytical methods to be used to collect and analyze the samples from each location. Appendix Brationale for NTU values at alloutfall sampling points where applicable. * 36 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 control BMPs. intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single Y 37 Graphic scale and North arrow. ER-100-303 Y 38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following: Existing Contours USGS 1": 2000' Topographical Sheets Proposed Contours 1": 400' Centerline Profile ER-100-303 Y 39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMP 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 Document found at www.gaswcc.org. ER- 100-303 Y 40 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for REVISION REFERENCE Erosion & Sediment Control in Georgia 2016 Edition. * 41 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact 42 Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site. 43 Delineation and acreage of contributing drainage basins on the project site. 44 Delineate on-site drainage and off-site watersheds using USGS 1":2000' topographical sheets. 45 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are ER-002 46 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points. GSWCC CERT #78081 47 Soil series for the project site and their delineation. 48 The limits of disturbance for each phase of construction. 49 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, **ES&PCP COVER SHEET** retrofitted detention pond, and/or excavated inlet sediment traps for each 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 must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to

utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from

50 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and

51 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in

52 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and

seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding

Effective January 1, 2020

the surface are not feasible, a written justification explaining this decision must be included in the Plan.

Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.

* If using this checklist for a project that is less than 1 acre and not part of a common development

the Manual for Erosion and Sediment Control in Georgia.

will take place and for the appropriate geographic region of Georgia.

but within 200 ft of a perennial stream, the * checklist items would be N/A.

INFRASTRUCTURE CONSTRUCTION PROJECTS

of the year in which the land-disturbing activity was permitted

The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of Januar

WINTERS CHAPEL ROAD

CHECKED BY

KAK

AS SHOWN | 09/03/2020

1588.03

DRAWING NUMBER

SOIL MAP

Custom Soil Resource Report

4800 ASHFORD DUNWOODY RD ATLANTA, GA 30338 TEL: 678-382-6700





- THE APPLICABLE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN CHECKLIST IS LOCATED
- LEVEL II CERTIFICATION NUMBER ISSUED BY THE COMMISSION, SIGNATURE, AND SEAL OF THE CERTIFIED DESIGN PROFESSIONAL IS LOCATED ON ER-000.
- 24 HOUR LOCAL CONTACT INFORMATION (TO BE DETERMINED AT AWARD OF CONTRACT):
- PRIMARY PERMITTEE CONTACT INFORMATION: CITY OF DUNWOODY name:ISHRI Sankar ADDRESS: 4800 ASHFORD DUNWOODY RD ATLANTA, GA 30338 PHONE:678-382-6700

PHONE: 678-382-6700

TOTAL DISTURBED AREA = 2.75 AC.

- 6. THE GPS LOCATION OF THE BEGINNING AND END OF THE INFRASTRUCTURE PROJECT IS LOCATED ON THE PLAN SHEETS.
- SEE REVISION REFERENCE LOCATED ON ER-000 FOR DATES OF ANY REVISIONS MADE TO THE PLAN INCLUDING THE

ENTITY WHO REQUESTED THE REVISIONS.

THE NATURE OF CONSTRUCTION ACTIVITY IS TO CONSTRUCT A PROPOSED CONCRETE MUTI-PURPOSE TRAIL ADJACENT TO WINTERS CHAPEL ROAD.

- VICINITY MAP SHOWING SITE'S RELATION TO SURROUNDING AREAS IS LOCATED ON ER-000.
- 10. THE RECEIVING WATERS FROM THIS CONSTRUCTION PLAN IS AN UNNAMED CREEK DRAINING DIRECTLY INTO THE CHATTAHOOCHEE RIVER. SENSITIVE ADJACENT AREAS INCLUDE STREAMS AND RESIDENTIAL AREAS.
- "I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION." 09/04/2020
- "I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER quality control act and the document "manual for erosion and sediment control in georgia" (manual) Published by the georgia soil and water conservation commission as of January 1 of the year in WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORMWATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT practices and sampling methods is expected to meet the requirements contained in the general npdes PERMIT NO. GAR100002," 09/04/2020

13. THIS PLAN DOES NOT PROVIDE FOR REPRESENTATIVE SAMPLING

- 14. THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMP'S WITHIN 7 DAYS AFTER INSTALLATION. IN ACCORDANCE WITH PART IV.A.5 PAGE 26 OF THIS PERMIT.
- NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.
- 16. THE PROJECT DOES NOT ENCROACH ON ANY BUFFERS. THEREFORE A BUFFER VARIANCE IS NOT
- 17. AMENDMENTS/REVISIONS TO THE ES&PC PLAN, WHICH HAVE A SIGNIFICANT EFFECT ON BMPS WITH
- 18. WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS

A HYDRAULIC COMPONENT MUST BE CERTIFIED BY A DESIGN PROFESSIONAL.

- AUTHORIZED BY A SECTION 404 PERMIT. 19. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF
- EROSION AND SEDIMENT CONTROLS MEASURES AND PRACTICES PRIOR TO LAND DISTURBING 20. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION and sediment control measures shall be implemented to control or treat the
- 21. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
- 22. THIS PROJECT HAS NO CONSTRUCTION ACTIVITY WHICH DISCHARGES STORM WATER INTO AN IMPAIRED STREAM SEGMENT, OR WITHIN 1 LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF AN BIOTA IMPAIRED STREAM SEGMENT.
- 23. A TMDL PLAN FOR SEDIMENT DOES NOT APPLY TO THE RECEIVING WATERS.

24. READY MIX CHUTE WASH-DOWN

SEDIMENT SOURCE.

the washing of ready—mix concrete drums and dump truck bodies used in the delivery of portland cement CONCRETE IS PROHIBITED ON THIS SITE. IN ACCORDANCE WITH STANDARD SPECIFICATION 107 - LEGAL REGULATIONS AND RESPONSIBILITY TO THE PUBLIC, ONLY THE DISCHARGE "CHUTE" UTILIZED IN PORTLAND CEMENT CONCRETE DELIVERY MAY BE RINSED FREE OF FRESH CONCRETE REMAINS. THE CONTRACTOR SHALL EXCAVATE A PIT OUTSIDE OF STATE WATER BUFFERS, AT LEAST 25 FEET FROM ANY STORM DRAIN AND OUTSIDE OF THE TRAVEL WAY, INCLUDING SHOULDERS, FOR $^{\prime}$ WASH/PIT AREA. THE PIT SHALL BE LARGE ENOUGH TO STORE ALL WASH-DOWN WATER WITHOUT OVERTOPPING THE PIT. IMMEDIATELY AFTER THE WASH-DOWN OPERATIONS ARE COMPLETED AND AFTER THE WASH-DOWN WATER HAS SOAKED INTO THE GROUND, THE PIT SHALL BE FILLED IN, AND THE GROUND ABOVE SHALL BE GRADED TO MATCH THE ELEVATION OF THE SURROUNDING AREAS SMOOTHED OUT. ALTERNATE WASH DOWN PLANS MUST BE APPROVED BY THE PROJECT WASH-DOWN PLANS DESCRIBE PROCEDURES THAT PREVENT WASH DOWN WATER FROM ENTERING STREAMS AND RIVERS.

NEVER DISPOSE OF WASH-DOWN WATER DOWN A STORM DRAIN, ESTABLISH A WASH-DOWN WATER PIT LOCATION THAT INCLUDES THE FOLLOWING: (1) THE PIT IS LOCATED AWAY FROM A STORM DRAIN. STREAM OR RIVER. (2) THE PIT IS ACCESSIBLE TO THE VEHICLE BEING USED FOR WASH-DOWN. (3) THE PIT HAS ENOUGH VOLUME FOR WASH-DOWN WATER AND (4) MAKE SURE YOU HAVE PERMISSION TO USE THE AREA FOR WASH-DOWN. ON SOME SITES, YOU MAY NOT HAVE PERMISSION OR ACCESS TO A LOCATION WHICH ALLOWS FOR A WASH—DOWN PIT. IN THOSE CASES, THE CONTRACTOR MAY have to wash—down into a wheelbarrow or other container and carry the container for transport to a PROPER DISPOSAL SITE. FOR ADDITIONAL INFORMATION, REFER TO THE GEORGIA SMALL BUSINESS ENVIRONMENTAL

assistance program's "A guide for ready mix chute/hopper wash—down"

SILT FENCE INSTALLATIONS WITH J-HOOKS AND SPURS SILT FENCE SHOULD NEVER RUN CONTINUOUS WITHOUT J-HOOKS OR SPURS. THE SILT FENCE SHOULD TURN BACK INTO THE FILL OR SLOPE TO CREATE SMALL POCKETS THAT TRAP SILT AND FORCE STORMWATER TO FLOW THROUGH THE SILT fence. This technique or configuration is commonly referred to as J—Hooks or spurs. The J—Hooks or SPURS SHALL BE INSTALLED ON ALL SILT FENCES THAT ARE LOCATED AROUND THE PERIMETER OF THE PROJECT AND along the toe of embankments or slopes. The J—Hooks and spurs shall be spaced in accordance with th TYPICAL LOCATION DETAILS FOR SILT FENCES / BALED STRAW. SPACING FOR J- HOOKS OR SPURS SHALL NOT BE LESS than 50 feet except as noted, silt fences that are near the outlet of culverts, cross drains, and storm DRAINS SHALL HAVE A MINIMUM OF 3 J-HOOKS OR SPURS ON BOTH SIDES OF THE STRUCTURE AT SPACING NOT TO EXCEED 30 FEET. J-HOOKS OR SPURS SHALL BE PAID FOR AS SILT FENCE ITEMS PER FOOT. ALL COSTS AND OTHER INCIDENTAL ITEMS ARE INCLUDED IN COST OF INSTALLING AND MAINTAINING THE SILT FENCE.

25. SPILL CLEANUP AND CONTROL PRACTICES

AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

- LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE AVAILABLE TO SITE PERSONNEL.
- MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES. BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
- SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY
- LOCAL, STATE AND FEDERAL REGULATIONS. FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE
- CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
- FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER WILL BE CONTACTED WITHIN 24 HOURS
- AT 1-800-426-2675. FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS OCCUR, THE GEORGIA EPD WILL BE
- FOR SPILLS LESS THAT 25 GALLONS AND NO SURFACE WATER IMPACTS OCCUR, THE SPILL WILL BE CLEANED UP

HE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS THE CAPACITY OF GREATER THAN 650 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

26. POST—CONSTRUCTION BMPS ALL PERMANENT, POST-CONSTRUCTION BMPS ARE SHOWN IN THE CONSTRUCTION PLANS AND IN THE ESPCP PLAN. THE POST-CONSTRUCTION BMPS FOR THIS PROJECT CONSISTS OF DISTURBED AREA STABILIZATION WITH PERMANENT VEGETATION AND RIP WRAP FOR UNDERGROUND DETENTION OUTFALL. THE POST—CONSTRUCTION BMPS WILL PROVIDE PERMANENT STABILIZATION OF THE SITE AND PREVENT ACCELERATED TRANSPORTATION OF SEDIMENT AND POLLUTANTS INTO

THE ES&PC PLAN SHALL BE IN COMPLIANCE WITH WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC TANK REGULATIONS DURING AND AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.

THE CONTRACTOR SHALL CONTROL DUST FROM THE SITE IN ACCORDANCE WITH CURRENT EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

FOR BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS PESTICIDES. HERBICIDES. DETERGENTS. SANITARY WASTE AND OTHER MATERIALS PRESENT ON THE SITE. PROVIDE COVER (E.G. PLASTIC SHEETING, TEMPORARY ROOFS) TO MINIMIZE THE EXPOSURE OF THESE PRODUCTS TO PRECIPITATION AND O STORMWATER, OR A SIMILARLY EFFECTIVE MEANS TO DESIGNED TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THESE AREAS. MINIMIZATION OF EXPOSURE IS NOT REQUIRED IN CASES WHERE EXPOSURE TO PRECIPITATION AND TO STORMWATER WILL NOT RESULT IN A DISCHARGE OF POLLUTANTS, OR WHERE EXPOSURE OF A SPECIFIC MATERIAL OR PRODUCT POSES LITTLE RISK TO STORMWATER CONTAMINATION (SUCH AS FINAL PRODUCTS AND MATERIALS INTENDED FOR

PRODUCT SPECIFIC PRACTICES

- PETROLEUM BASED PRODUCTS CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, AND TARS WILL BE ECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ONSITE VEHICLES AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE located away from state waters,, natural drains, and storm water drainage inlets. In addition, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE Contamination. Discharge of Oils, fuels, and lubricants is prohibited. Proper disposal methods wil include collection in a suitable container and disposal is required by local and state regulations PAINT/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED INTO THE STORM WATER COLLECTION SYSTEM. EXCESS
- MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. CONCRETE TRUCK WASHING - NO CONCRETE TRUCKS WILL BE ALLOWED TO WASHOUT OR DISCHARGE SURPLUS CONCRETE OR DRIM WASH WATER ONSITE

PRODUCT, MATERIALS USED WITH THESE PRODUCTS, AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO

- FERTILIZER/HERBICIDES THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED MANUFACTURER'S PECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR ON THE GSWCC MANUAL FOR EROSION AND SEDIMENTATION CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER
- <u>BUILDING MATERIALS</u> NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

WASTE DISPOSAL LOCATE WASTE COLLECTION AREAS AWAY FROM STREETS, GUTTERS, WATERCOURSES AND STORM DRAINS. WASTE COLLECTION AREAS, SUCH AS DUMPSTERS, ARE OFTEN BEST LOCATED NEAR CONSTRUCTION SITE ENTRANCES TO MINIMIZE TRAFFIC ON DISTURBED SOILS. THE PLAN SHOULD INCLUDE SECONDARY CONTAINMENT AROUND LIQUID WASTE COLLECTION AREAS TO FURTHER MINIMIZE THE LIKELIHOOD OF CONTAINMENT DISCHARGES. SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL NOT BE DISCHARGED TO WASTERS OF THE STATE, EXCEPT AS AUTHORIZED BY SECTION 404 PERMIT.

THIS ES&PC PLAN EMPLOYS SEVERAL PRACTICES THAT ARE USED TO REDUCE THE POLLUTANTS IN STORM WATER DISCHARGES. SEVERAL EROSION CONTROL BMP'S ARE USED TO REDUCE THE AMOUNT OF SEDIMENT RUNNING OFF SITE, ncluding he construction plans and in the ESPCP plan. The post—construction BMPs for this project CONSISTS OF DISTURBED AREA STABILIZATION WITH SEEDING AND PERMANENT VEGETATION, AND ENERGY DISSIPATION AT

SEQUENCE OF LAND DISTURBANCE ACTIVITIES

STOP FEBURARY, 2021 ANTICIPATED CONSTRUCTION ACTIVITY SCHEDULE

VILLE CONSTITUTION		OIN .	7011	VII I	30	יטבוו	ULL						
CONSTRUCTION ACTIVITY	SEPTEMBER		ост	DBER	NOVE	MBER	DECE	MBER	JAN	JARY	FEBURARY		
INSTALL CONSTRUCTION EXIT	*****												
INSTALL SEDIMENT CONTROLS		—			-	—							
MAINTAIN EROSION CONTROL DEVICES													
GRADING AND PIPE INSTALLATION		***											
MOTHER & MARKEN TRACORDY	_	-	_	\vdash	_	<u> </u>	 		\vdash		\vdash		
Install & Maintain Temporary Vegetation & Mulch		_											
PERM. LANDSCAPING & STABILIZE De3													
CLEANUP SITE & REMOVE TEMPORARY	\vdash			\vdash	\vdash	\vdash	\vdash						

- EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT: (a) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT AND (b) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
- MEASURE AND RECORD RAINFALL WITHIN DISTURBED AREAS OF THE SITE THAT HAVE NOT MET FINAL STABILIZATION ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY, THE DATA COLLECTED FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF HE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A
- EEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST): (a) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE; (b) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND (c) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEFDING OF TARGET PERFUNIALS APPROPRIATE FOR THE REGION. THE PERMITTEE MUST COMPLY WITH PART
- IV.D.4.a(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED. CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THE PERMIT (i.e., UNTIL AT NOTICE OF TERMINATION HAS BEEN SUBMITTED) THE AREAS OF the the site that have undergone final stabilization or established a crop of annual vegetation and A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURI THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE. THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT
- IMPACTS TO RECEIVING WATER(S). BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.
- 6. A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (i.e., INITIAL, INTERMEDIATE OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.a.(5), OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION SITE THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY THE ENI OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMEN PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN, WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS. THE INSPECTION REPORT SHALL CONTAIN A CERTIFICATION THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION. SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

31. SAMPLING FREQUENCY

- THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITTEE SHALL SAMPLE AT THE BEGINNING OF ANY STORMWATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.
- HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORM WATER DISCHARGE. SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS:
- A. FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORMWATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT. AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE REPRESENTATIVE SAMPLING LOCATION;
- IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL. THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORMWATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT EITHER 90 DAYS

FTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETE! BUT PRIOR TO THE SUBMITTAL OF A NOT, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE REPRESENTATIVE SAMPLING LOCATION, WHICHEVER COMES FIRST;

- AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMPS IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED. OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPS ARE PROPERLY DESIGNED, INSTALLED AND MAINTAIN
- WHERE SAMPLING PURSUANT TO (A), (B) OR (C) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.A.(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE; AND
- EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (A) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C)

*NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT

1. THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORMWATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS Submitted in accordance with part VI.

ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION: A. THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS;

THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS; THE DATE(S) ANALYSES WERE PERFORMED;

THE TIME(S) ANALYSES WERE INITIATED;

- THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES; REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS
- THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER
- DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS; RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU;" AND
- CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN 3. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE

CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION

FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART 32. RETENTION OF RECORDS

- THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT SUBMITTED IN ACCORDANCE WITH PART VI:
- A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD; A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT; THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
- A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT; A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT: A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE
- WITH PART III.D.2. OF THIS PERMIT; AND G. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2) OF THIS PERMIT. 2. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR Continuous monitoring instrumentation), or other reports requested by the EPD. Erosion. SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF intent to be covered by this permit and all other records required by this permit shall be retained by the permittee who either produced or used it for a period of at least three years FROM THE DATE THAT THE THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY

. Sampling shall be collected by "grab samples" and the analysis of these samples must be conducted IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED): THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.

BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

- SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES. SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.
- LARGE MOUTH, CLEAN AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION. RE ANALYZED IMMEDIATELY. BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION, HOWEVER, SAMPLES
- MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE LITHLIFED. SAMPLES REQUIRED BY THIS PERMIT SHOULD FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION, UNI ESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. IF AUTOMATIC SAMPLING IS UTILIZED AND THE AUTOMATIC SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT, THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RISING STAGE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF SAMPLES IS not required. Samples may be analyzed directly with a properly calibrated turbidmeter. Samples are
- SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E.

- 1. FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE MUST SAMPLE ALL RECEIVING WATER(S). OR ALL OUTFALL(S) OR A COMBINATION OF RECEIVING WATER(S) AND OUTFALL(S) SAMPLES TAKEN FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY AND REPRESENTATIVE OF THE WATER QUALITY OF THE RECEIVING WATER(S) AND/OR THE STORM WATER OUTFALLS USING THE FOLLOWING MINIMUM GUIDELINES:
- A. THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORMWATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE
- THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORMWATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE DOWNSTREAM TURBIDITY VALUE.
- IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORM OUTFALL CHANNEL(S).
- he outfall stormwater channei THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.
- THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS. PERMITTEES DO NOT HAVE TO SAMPLE SHEETFLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES, AND AREAS LOCATED OUTSIDE THE WASTE DISPOSAL LIMITS OF A LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPD FOR WASTE DISPOSAL, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR LANDSCAPED ACCORDING TO THE PLAN (UNIFORMLY COVERED WITH LANDSCAPING MATERIALS IN PLANNED LANDSCAPED AREAS), OR EQUIVALENT PERMANENT STABILIZATION
- MEASURES AS DEFINED IN THE MANUAL (EXCLUDING A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION). ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY (INCLUDING GENERALLY ACCEPTED SAMPLING METHODS. LOCATIONS. TIMING. AND FREQUENCY) AS TO ACCURATELY REFLECT WHETHER STORM WATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE STANDARD
- SET FORTH IN PARTS III.D.3. OR III.D.4., WHICHEVER IS APPLICABLE FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, THE PERMITTEE IS NOT REQUIRED TO SAMPLE A PERENNIAL OR INTERMITTENT STREAM OR OTHER WATER BODIES (OR THE ASSOCIATED OUTFALL, IF APPLICABLE) IF THE DESIGN PROFESSIONAL PREPARING THE PLAN CERTIFIES THAT AN INCREASE IN THE TURBIDITY OF A SPÉCIFIC IDENTIFIED 48. LIMITS OF DISTURBANCE RECEIVING WATER TO BE SAMPLED WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER. A WRITTEN JUSTIFICATION AND DETAILED ANALYSIS SHALL BE PREPARED BY THE DESIGN PROFESSIONAL JUSTIFYING SUCH PROPOSED SAMPLING. A SUMMARY CHART OF the justification and analysis for the representative sampling must be included on the plan. Th JUSTIFICATION AND ANALYSIS SHALL INCLUDE THE LOCATION AND DESCRIPTION OF THE SPECIFIED SAMPLED AND 49. A SEDIMENT BASIN IS NOT ATTAINABLE DUE TO LIMITED R/W WITHIN A NEIGHBORHOOD. 67 CY/AC IS NOT ATTAINABLE AS UN-SAMPLED RECEIVING WATER AND SHALL CONTAIN A DETAILED COMPARISON AND DISCUSSION OF EACH SUCH RECEIVING WATER IN THE FOLLOWING AREAS:
- SITE LAND DISTURBANCES AND CHARACTERISTICS;
- RECEIVING WATER WATERSHED SIZES AND CHARACTERISTICS; AND SITE AND WATERSHED RUNOFF CHARACTERISTICS UTILIZING THE METHODS IN APPENDIX A-1 (UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICES'S TR-55, URBAN HYDROLOGY FOR SMALL WATERSHEDS) OF THE MOST RECENT VERSION OF THE "MANUAL FOR EROSION AND sedimentation control in georgia" for the various precipitation events and any other such CONSIDERATIONS NECESSARY TO SHOW THAT THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED

SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASES IN THE TURBIDITY OF A

- SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATERS. FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, WHEN THE PERMITTEE DETERMINES THAT SOME RECEIVING WATER(S) WILL NOT BE SAMPLED DUE TO REPRESENTATIVE SAMPLING, THE DESIGN PROFESSIONAL MAKING THIS
- DETERMINATION AND PREPARING THE PLAN MUST INCLUDE AND SIGN THE FOLLOWING CERTIFICATION IN THE PLAN: SEE CERTIFICATION STATEMENT ON EROSION CONTROL COVER SHEET. FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, IF AT ANY TIME DURING THE LIFE OF THE PROJECT A SELECTED RECEIVING WATER NO LONGER REPRESENTS ANOTHER RECEIVING WATER, THEN THE PERMITTEE SHALL SAMPLE THE
- LATTER RECEIVING WATER UNTIL SELECTION OF AN ALTERNATIVE REPRESENTATIVE RECEIVING WATER. FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, IF AT ANY TIME DURING THE LIFE OF THE PROJECT A RECEIVING
- WATER IS DETERMINED NOT TO BE REPRESENTED AS CERTIFIED IN THE PLAN, THE PERMITTEE SHALL SAMPLE THAT RECEIVING WATER UNTIL A NOTICE OF TERMINATION IS SUBMITTED OR UNTIL THE APPLICABLE PHASE IS STABILIZED IN ACCORDANCE WITH THIS PERMIT.
- FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, MONITORING OBLIGATIONS SHALL CEASE FOR ANY PHASE OF THE PROJECT THAT HAS BEEN STABILIZED IN ACCORDANCE WITH PART IV.D.6.C.(1).(G).
- OUTFALL SAMPLING MANUAL SAMPLING — GRAB SAMPLES WILL BE TAKEN AT THE APPROPRIATE TIME AS STATED IN PART IV.D.5.D. OF THE PERMIT. SAMPLING WILL OCCUR AT THE DESIGNATED REPRESENTATIVE OUTFALL. THE SAMPLE WILL BE taken in the center of the outfall channel. A large mouth, clean, glass or plastic jar/bottle, LABELED WITH PROJECT NUMBER AND LOCATION WILL BE USED TO COLLECT THE SAMPLE. THE SAMPLE CONTAINER WILL BE HELD SUCH THAT THE OPENING FACES UPSTREAM. ONCE THE SAMPLE JAR/BOTTLE IS FULL AND CAPPED, IT WILL BE TRANSPORTED TO THE LOCATION WHERE THE TURBIDITY TESTING WILL BE CONDUCTED. SAMPLES MAY BE ANALYZED AT THE SITE WITH PROPERLY CALIBRATED PORTABLE TURBIDIMETERS ALL TURBIDITY TESTS WILL BE CONDUCTED IMMEDIATELY BUT IN NO CASE, LATER THAN 48 HOURS AFTER THE
- <u>AUTOMATIC SAMPLING</u> GRAB SAMPLES WILL BE TAKEN AT THE APPROPRIATE TIMES AS SPECIFIED IN PART IV.D.5.D. OF THE PERMIT. AUTOMATIC SAMPLING CAN BE ACCOMPLISHED BY USING A SAMPLING DEVICE SIMILAR TO THE ISCO MODEL 3700 OR 6700. THE PROBE FOR THE AUTOMATIC SAMPLER WILL BE PLACED IN THE CENTER OF THE CHANNEL. SAMPLES WILL REMAIN IN THE AUTOMATIC SAMPLER UNTIL THE NEXT BUSINESS
- TESTING ALL TURBIDITY TESTS SHALL BE DONE IN ACCORDANCE WITH 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT. EPA 833-B-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD. TURBIDITY RESULTS WILL BE RECORDED AND REPORTED TO EPD AND THE LIA, IF APPLICABLE, IN ACCORDANCE WITH PART IV.E OF THE PERMIT.

RECEIVING WATER SAMPLING

time the sample was obtained.

DAY, WHEN THEY WILL BE COLLECTED AND TESTED.

- MANUAL SAMPLING SAMPLES WILL BE TAKEN AT THE APPROPRIATE TIME AS STATED IN PART IV.D. 5. D. OF THE PERMIT. SAMPLING WILL BEGIN AT THE DESIGNATED REPRESENTATIVE RECEIVING WATER AT THE DOWNSTREAM LOCATION FIRST. THE SAMPLE WILL BE TAKEN AS FAR DOWNSTREAM (WITHIN THE PROJECT LIMITS ONSITE) OF THE CONFLUENCE OF THE LAST STORM WATER DISCHARGE POINT, AND UPSTREAM OF ANY ADDITIONAL DISCHARGES NOT ASSOCIATED WITH THE PROJECT. THE SAMPLE WILL BE TAKEN IN THE CENTER OF THE RECEIVING WATER AT A POINT WHERE MIXING OF THE RECEIVING WATERS AND THE PROJECT OUTFALL IAS OCCURRED AND PRODUCED A HOMOGENOUS SAMPLE. ON RECEIVING WATERS WHERE ACCESS TO THE CENTER OF THE RECEIVING WATERS IS NOT PRACTICAL, SEVERAL SAMPLES FROM ACROSS THE RECEIVING WATERS WILL BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES WILL BE USED FOR THE UPSTREAM VALUE. A LARGE MOUTH, CLEAN, GLASS OR PLASTIC JAR/BOTTLE, LABELED WITH PROJECT NUMBER AND LOCATION WILL BE USED TO COLLECT THE SAMPLE. THE SAMPLE CONTAINER WILL BE HELD SUCH THAT THE OPENING FACES UPSTREAM. ONCE THE SAMPLE JAR/BOTTLE IS FULL AND CAPPED, IT WILL IE TRANSPORTED TO THE LOCATION WHERE THE TURBIDITY TESTING WILL BE CONDUCTED, SAMPLES MAY BE VALYZED AT THE SITE WITH PROPERLY CALIBRATED PORTABLE TURBIDIMETERS. ALL TURBIDITY TESTS WILL BE CONDUCTED IMMEDIATELY BUT IN NO CASE, LATER THAN 48 HOURS AFTER THE TIME THE SAMPLE WAS
- UPSTREAM SAMPLES WILL BE TAKEN AFTER DOWNSTREAM SAMPLES HAVE BEEN ACQUIRED. THE SAMPLE WI BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORM WATER DISCHARGE FROM THE PROJECT (WITHIN THE PROJECT LIMITS ONSITE). THE SAMPLE WILL BE TAKEN IN THE CENTER OF THE RECEIVING WATER. ON RECEIVING WATERS WHERE ACCESS TO THE CENTER OF THE RECEIVING WATERS IS NOT PRACTICAL, SEVERAL SAMPLES FROM ACROSS THE RECEIVING WATERS WILL BE TAKEN AND THE ARITHMETIC average of the turbidity of these samples will be used for the upstream value, a large mouth, CLEAN, GLASS OR PLASTIC JAR, LABELED WITH PROJECT NUMBER AND LOCATION WILL BE USED TO COLLECT THE SAMPLE. THE SAMPLE CONTAINER WILL BE HELD SUCH THAT THE OPENING FACES UPSTREAM. ONCE THE SAMPLE JAR/BOTTLE IS FULL AND CAPPED, IT WILL BE TRANSPORTED TO THE LOCATION WHERE THE TURBIDITY TESTING WILL BE CONDUCTED. ALL TURBIDITY TESTS WILL BE CONDUCTED IMMEDIATELY BUT IN NO
- case, later than 48 hours after the time the sample was obtained AUTOMATIC SAMPLING - SAMPLES WILL BE TAKEN AT THE APPROPRIATE TIMES AS SPECIFIED IN PART IV.D.5.D. OF THE PERMIT. AUTOMATIC SAMPLING CAN BE ACCOMPLISHED AT BOTH UPSTREAM AND DOWNSTREAM SIMULTANEOUSLY BY USING A SAMPLING DEVICE SIMILAR TO THE ISCO MODEL 3700 OR 6700. THESE DEVICES CAN BE TRIGGERED BY FLOW METERS OR RAIN GAGES TO OBTAIN THE REQUIRED SAMPLES. THIS DETERMINATION WILL BE MADE ON A PROJECT BY PROJECT BASIS. THE PROBE FOR THE AUTOMATIC sampler will be placed in the center of the receiving water at a point as far downstream of HE CONFLUENCE OF THE LAST STORM WATER DISCHARGE POINT AND UPSTREAM OF ANY ADDITIONA ISCHARGES NOT ASSOCIATED WITH THE PROJECT. SAMPLES WILL REMAIN IN THE AUTOMATIC SAMPLER UNTIL HE NEXT BUSINESS DAY, WHEN THEY WILL BE COLLECTED AND TESTED.

THE PROBE FOR UPSTREAM SAMPLING WILL BE POSITIONED IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF

THE FIRST STORM WATER DISCHARGE POINT FROM THE PROJECT. THE PROBE WILL BE PLACED IN THE

CENTER OF THE RECEIVING WATER. SAMPLES WILL REMAIN IN THE AUTOMATIC SAMPLER UNTIL THE NEXT BUSINESS DAY, WHEN THEY WILL BE COLLECTED AND TESTED.

DOSINESS	bosiness bar, with their wife be confered and lestes.									
SAMPLING S	SITE DATA FOR	R OUTFALLS								
SAMPLING OUFALL ID	TOTAL SITE AREA (AC)	DRAINAGE AREA (AC)	DRAINAGE AREA (SQ MI)	STREAM TYPE (WARM/COLD)	NTU Limit					
1	0.13	8.17	0.01	WARM	75*					
2	0.77	0.94	0.00	WARM	75*					
3	0.13	0.28	0.00	WARM	75*					

SEE PLAN SHEETS FOR DELINEATION OF ALL SAMPLING LOCATIONS, PERENNIAL AND INTERMITTENT STREAMS AND

* SEE "APPENDIX B" RATIONALE FOR OUTFALL SAMPLING POINTS IN NPDES PERMIT NO. GAR100002.

- OTHER WATER BODIES INTO WHICH STORM WATER IS DISCHARGED. 36. A DESCRIPTION OF APPROPRIATE CONTROLS AND MEASURES THAT WILL BE IMPLEMENTED AT THE CONSTRUCTION SITE
- INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS SILT FENCE, CURB INLET FILTER INTERMEDIATE GRADING AND DRAINAGE BMPS - SILT FENCE, CURB INLET FILTER, FILTER RING, SLOPE
- STABILIZATION MATTING, CHECK DAM WITH SILT FENCE, MULCHING AND SEEDING. FINAL BMPS — PERMANENT VEGETATION.
- 37. THE GRAPHIC SCALE AND NORTH ARROW ARE SHOWN ON ALL PLAN SHEETS. 38. EXISTING AND PROPOSED CONTOUR LINES ARE DRAWN ON THE PLAN SHEETS.
- 39. 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 DOCUMENT FOUND
- 40. USE OF ALTERNATIVE BMP FOR APPLICATION TO THE EQUIVALENT BMP LIST. PLEASE REFER TO APPENDIX A-2 OF THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA 2016 EDITION.
- 41. SEE PLAN SHEETS FOR DELINEATION OF THE APPLICABLE 25-FOOT OR 50-FOOT UNDISTURBED BUFFERS ADJACENT TO STATE WATERS AND ANY ADDITIONAL BUFFERS REQUIRED BY THE LOCAL ISSUING AUTHORITY. CLEARLY NOTE AND DELINEATE ALL AREAS OF IMPACT.
- 42. SEE PLAN SHEETS FOR DELINEATION OF ON-SITE WETLANDS AND ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE.
- 43. SEE PLAN SHEETS FOR DELINEATION AND ACREAGE OF CONTRIBUTING DRAINAGE BASINS ON THE PROJECT SITE. CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN 44. SEE PLAN SHEETS FOR DELINEATION OF ON-SITE DRAINAGE AND OFF-SITE WATERSHEDS USING USGS 1":200"
 - TOPOGRAPHICAL SHEETS. 45. THE PRE-CONSTRUCTION SITE SCS CURVE NUMBER = 75 AND THE POST-CONSTRUCTION SITE SCS CURVE NUMBER =
 - 46. SEE ST CHART ON PLAN SHEETS FOR STORM DRAIN OUTLET PROTECTION.

47. SOIL SERIES INFORMATION

FOR A SUMMARY OF THE SOILS THAT ARE EXPECTED TO BE FOUND ON THE PROJECT SITE BASED ON NRCS SOILS MAPS: SEE SHEET ER-000 FOR SOIL SERIES DELINEATION AND THE TABLE BELOW FOR SOIL DESCRIPTIONS.

SOILS SERIES TABLE CECIL-URBAN LAND COMPLEX
MADISON SANDY CLAY LOAM
MADISON SANDY CLAY LOAM MfC2 2 TO 10 PERCENT SLOPES

MfE2 15 TO 25 PERCENT SLOPES

PfC 2 TO 10 PERCENT SLOPES PACOLET-URBAN LAND COMPLEX

- INITIAL PHASE ER-100-103 INTERMEDIATE PHASE - ER-200-203
- FINAL PHASE ER-300-303
- RUNOFF WILL BE DIRECTED TOWARD THE ROAD AND INFRASTRUCTURE. 50. 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

SEE SHEET ER-400-401

PROVIDE DETAILED DRAWINGS FOR ALL STRUCTURAL PRACTICES. SPECIFICATIONS MUST, AT A MINIMUM, MEET TH GUIDELINES SET FORTH IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.

PROVIDE VEGETATIVE PLAN, NOTING ALL TEMPORARY AND PERMANENT VEGETATIVE PRACTICES. INCLUDE SPECIES, PLANTING DATES AND SEEDING. FERTILIZER, LIME AND MULCHING RATES, VEGETATIVE PLAN SHALL BE SITE SPECIFIC FOR APPROPRIATE TIME OF THE YEAR THAT SEEDING WILL TAKE PLACE AND FOR THE APPROPRIATE GEOGRAPHIC REGION OF GEORGIA.

SEE SHEET ER-400-401

H

REVISION REFERENCE

ES&PCP NOTES

24 HOUR CONTACT:

ISHRI SANKAR

TEL: 678-382-6700

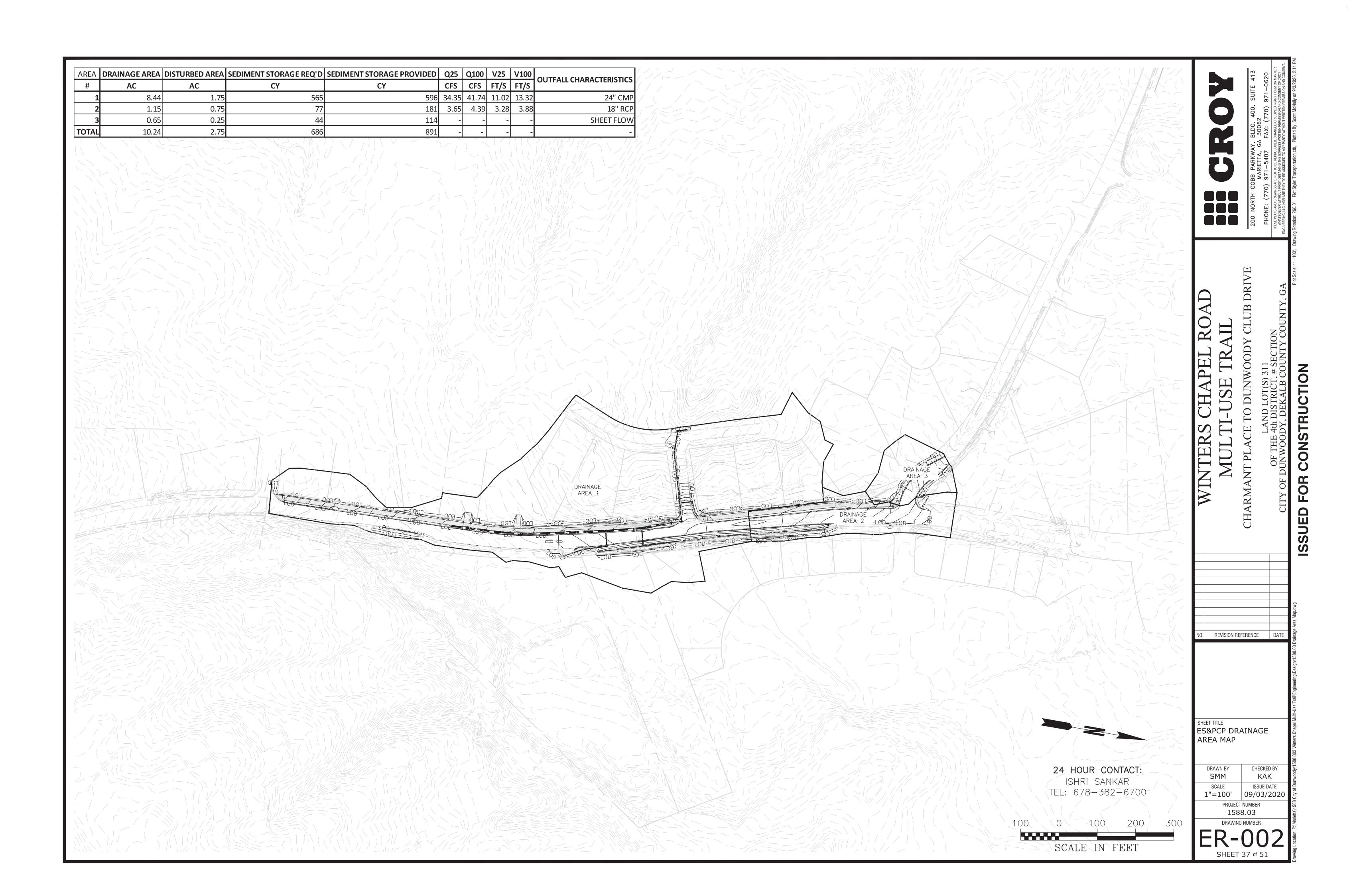
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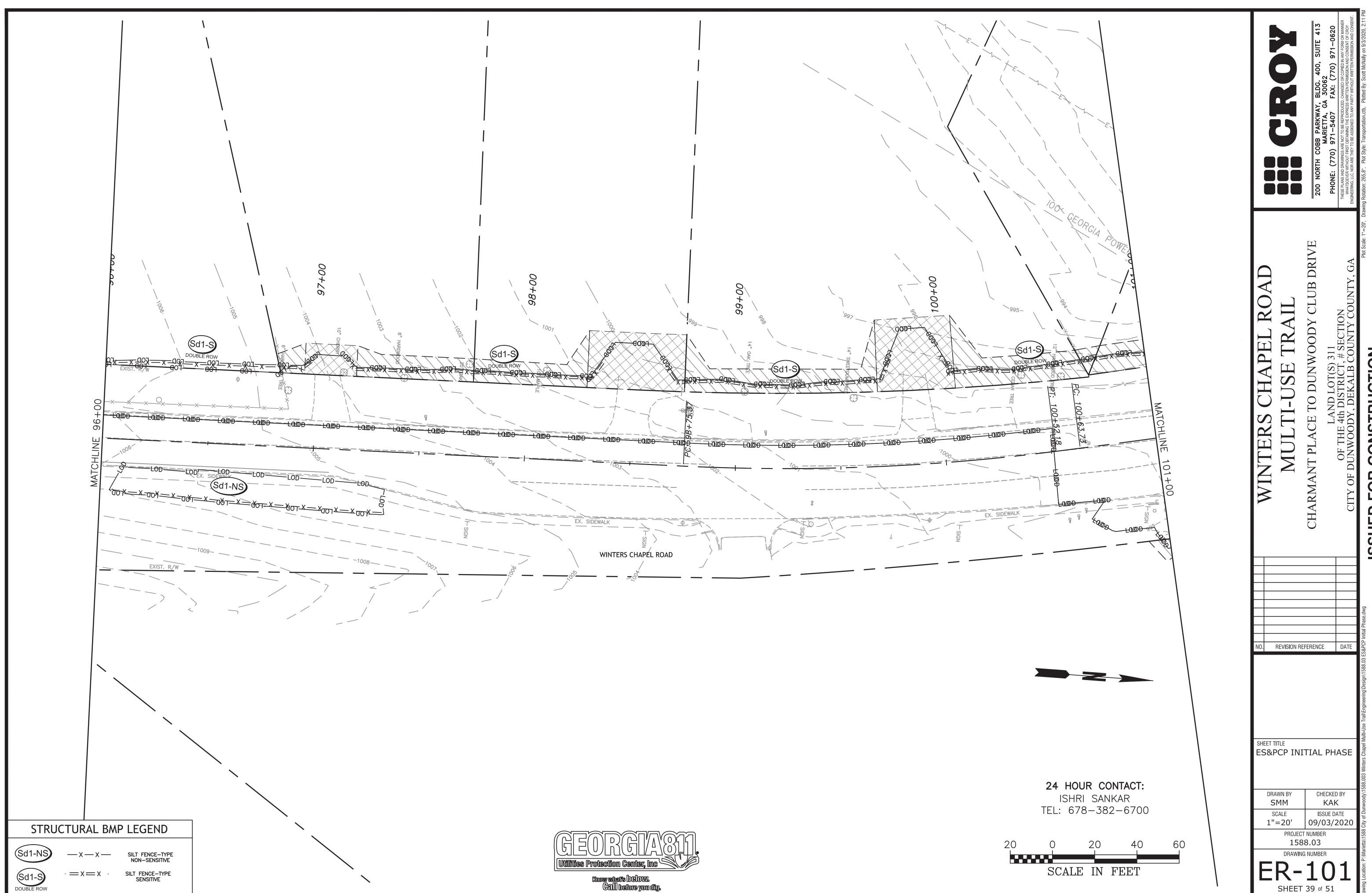
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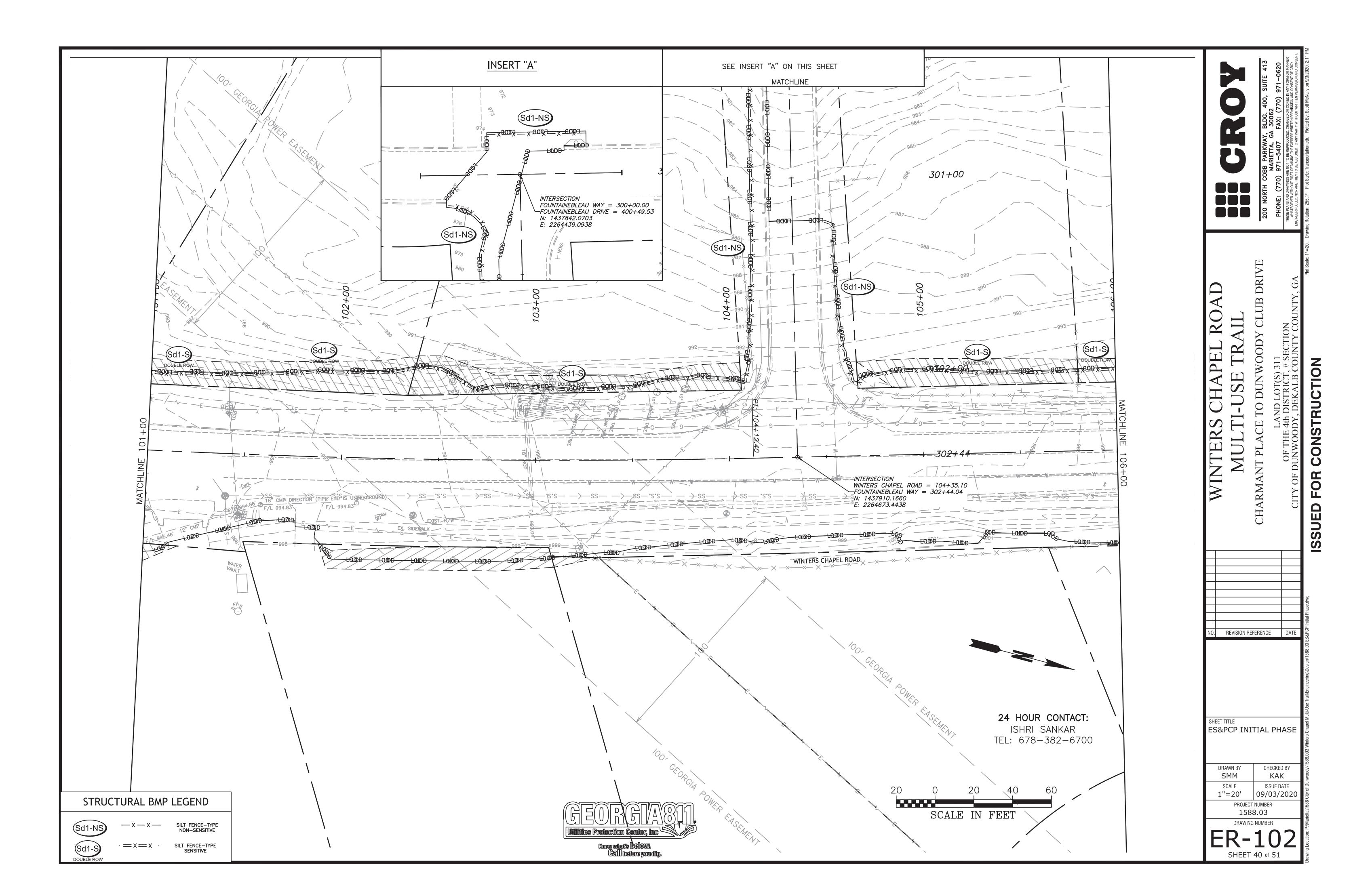
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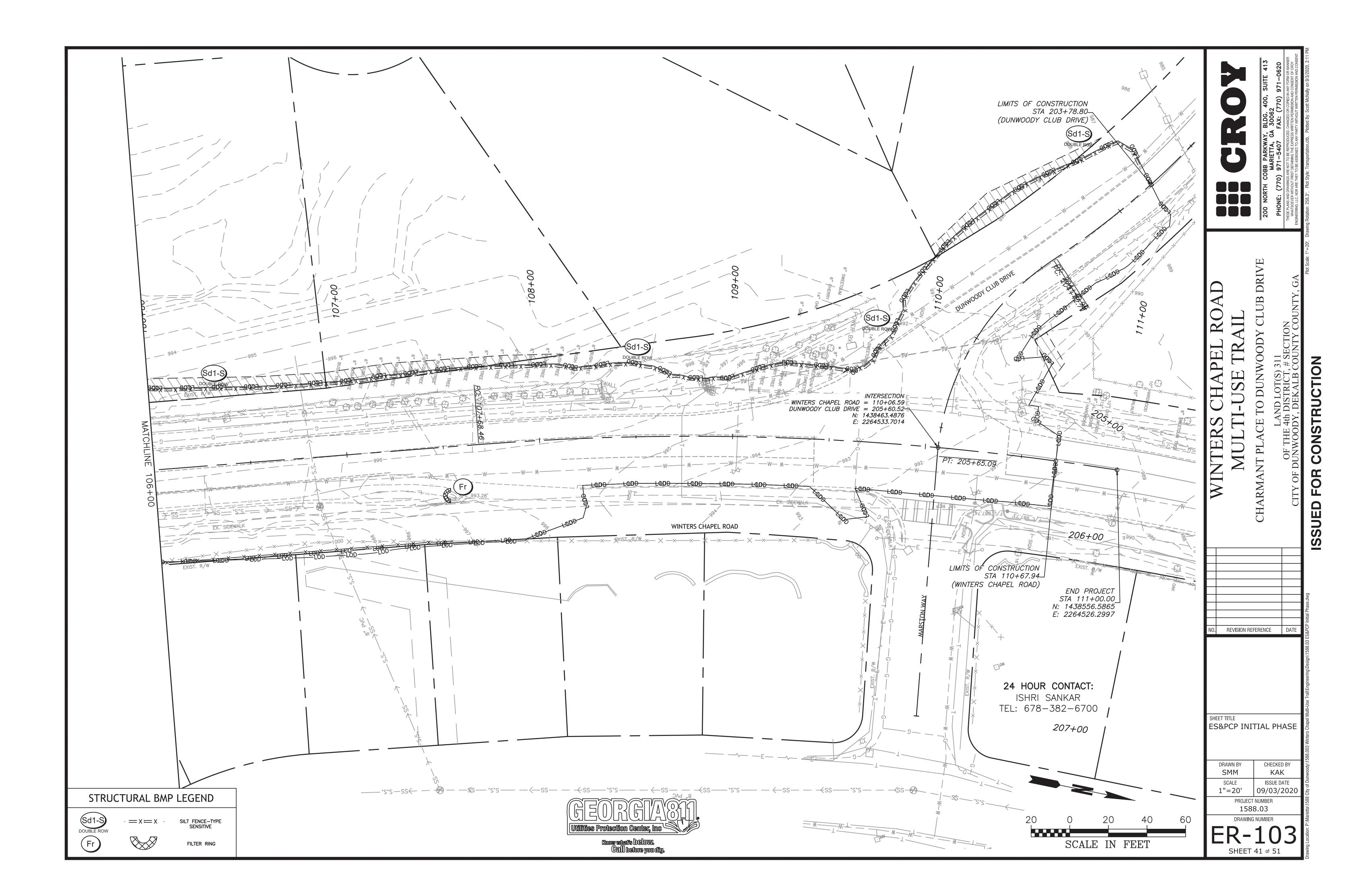


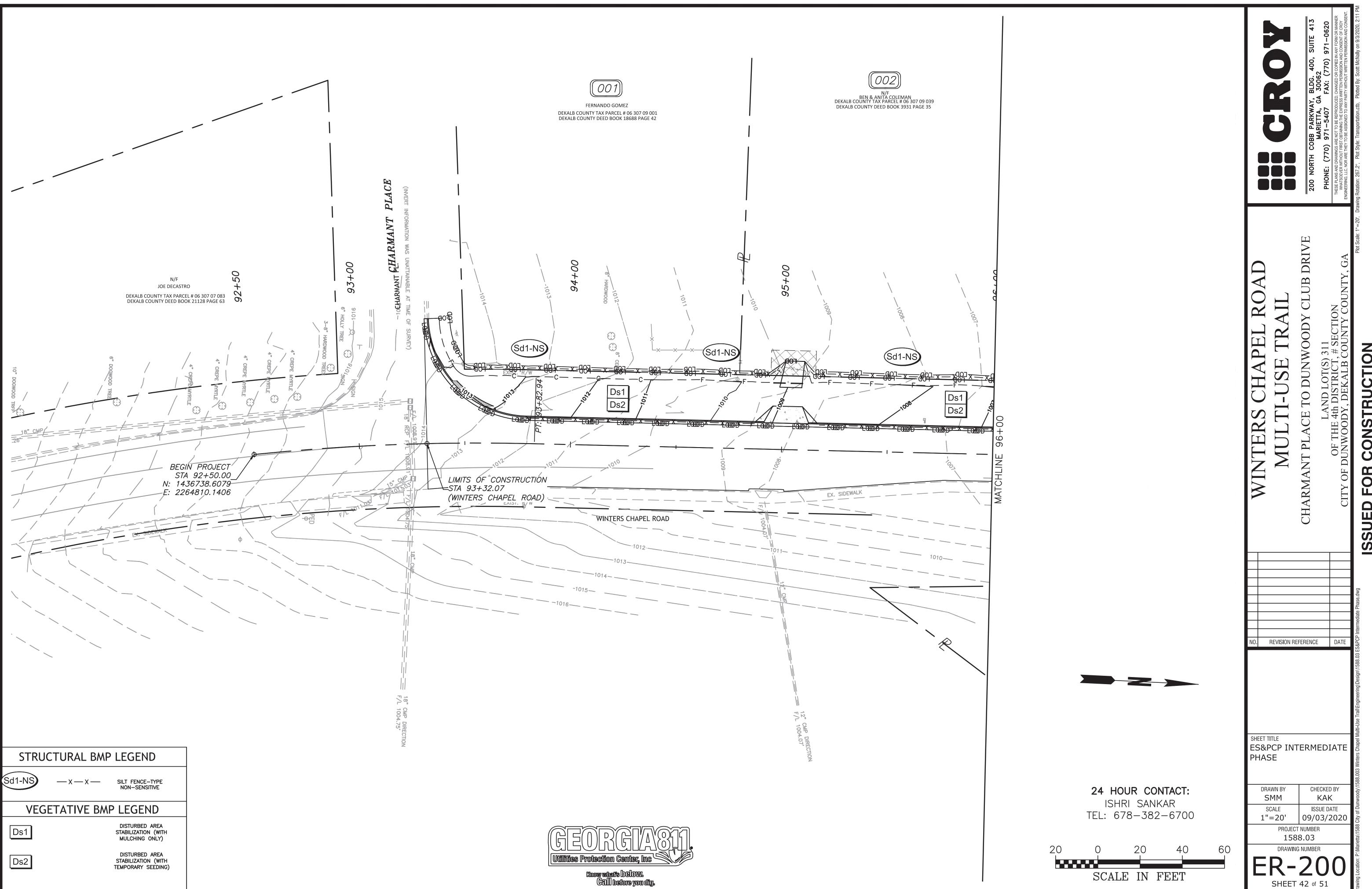


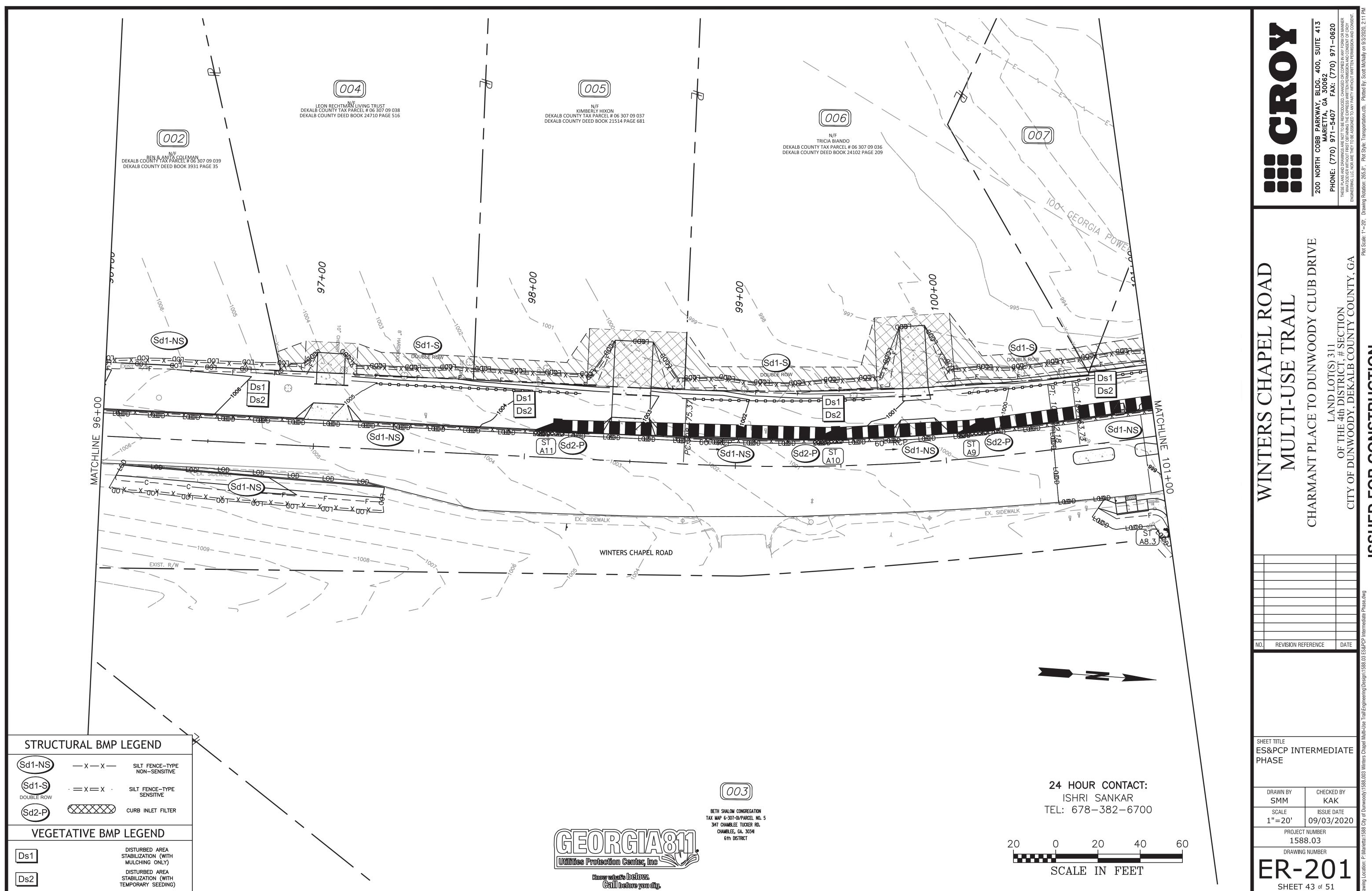
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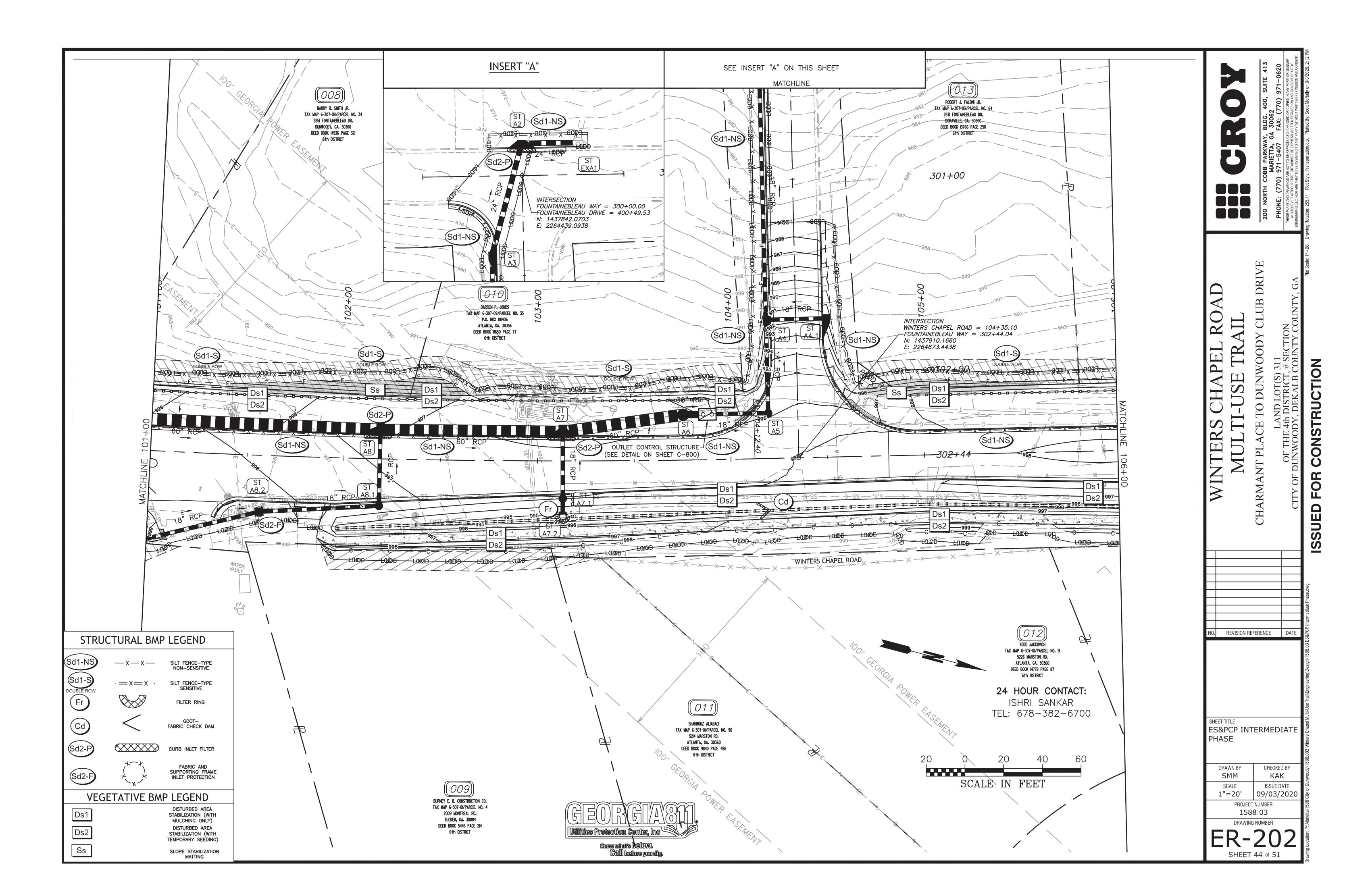


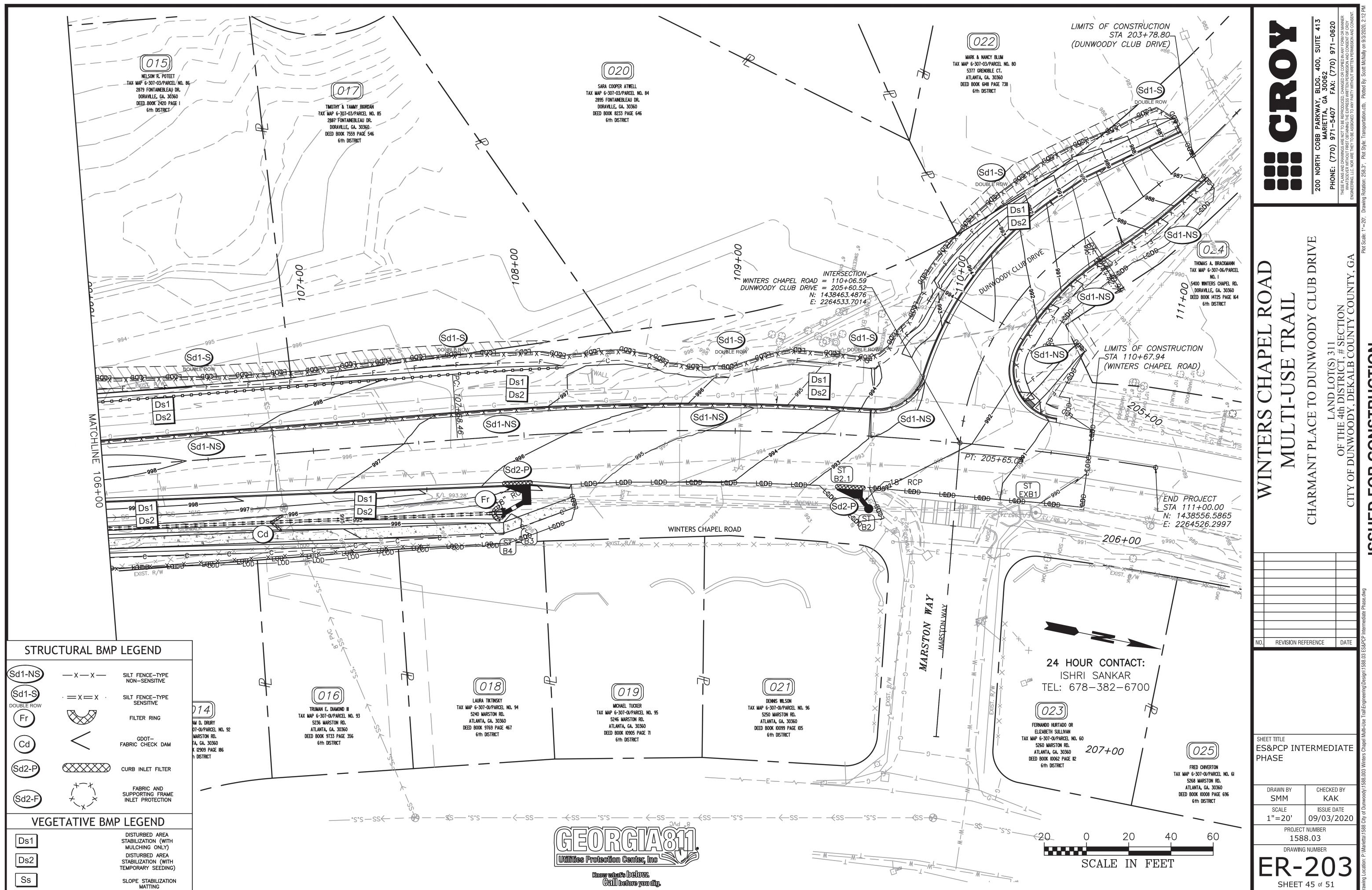


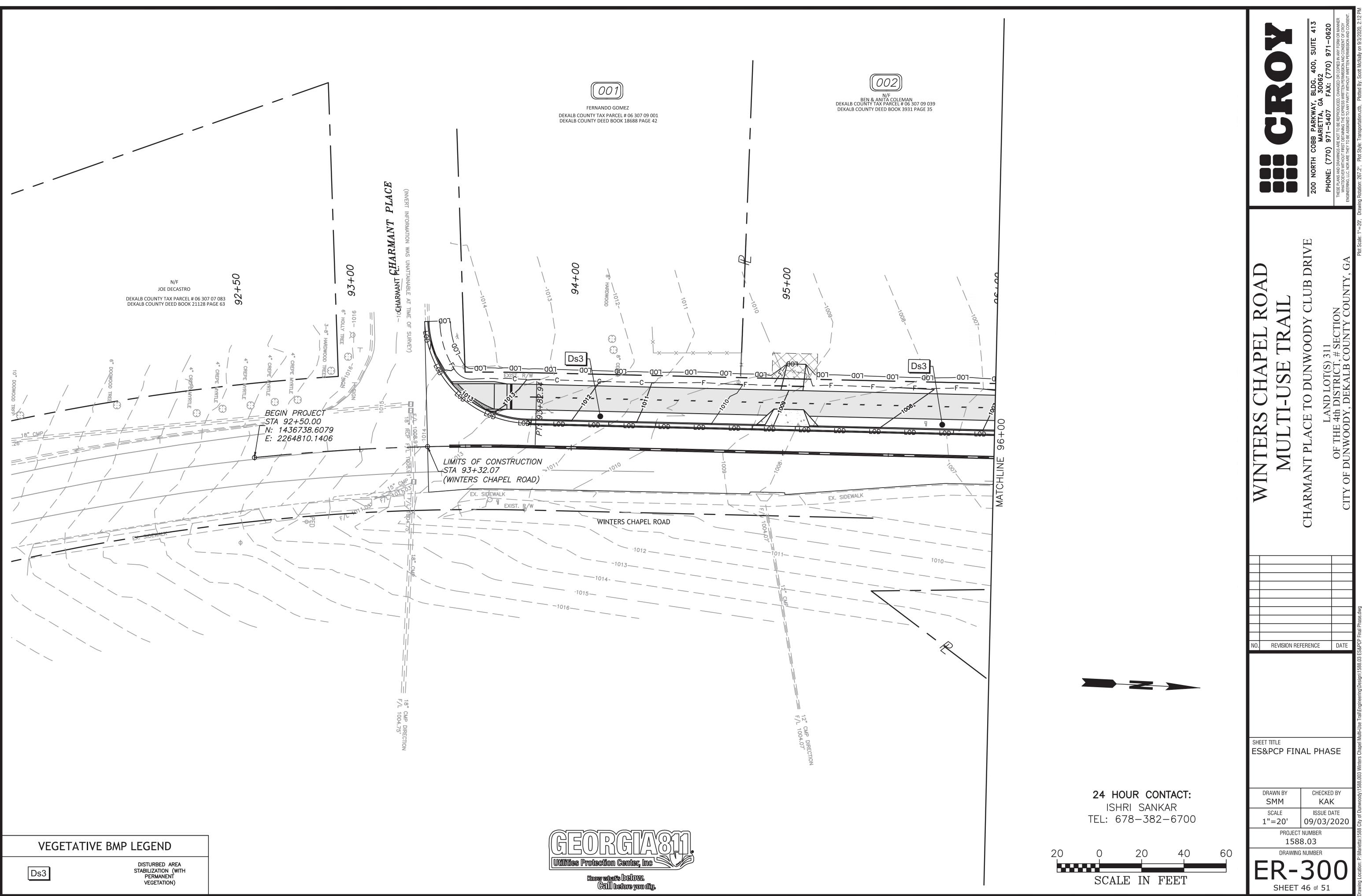




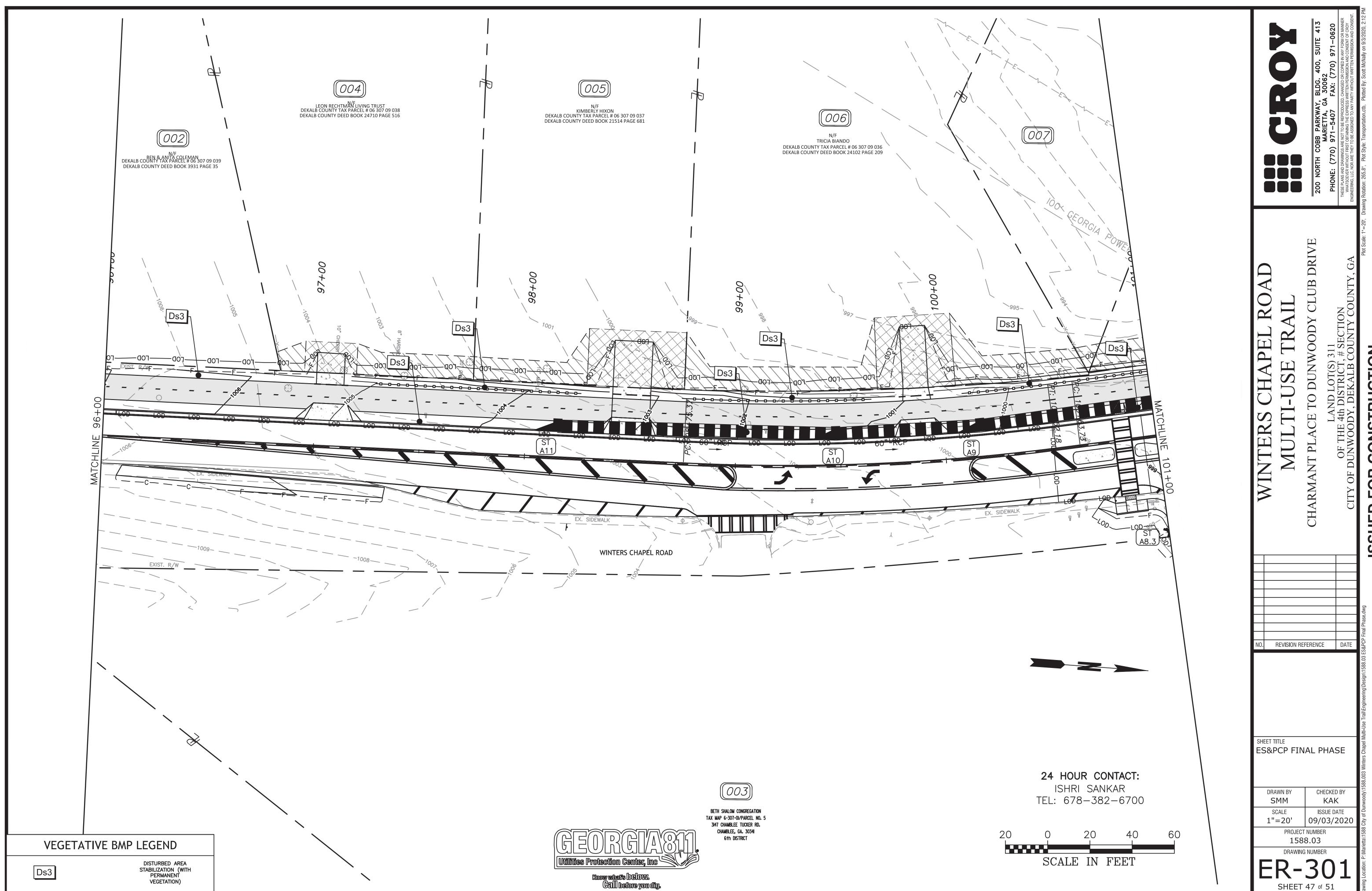


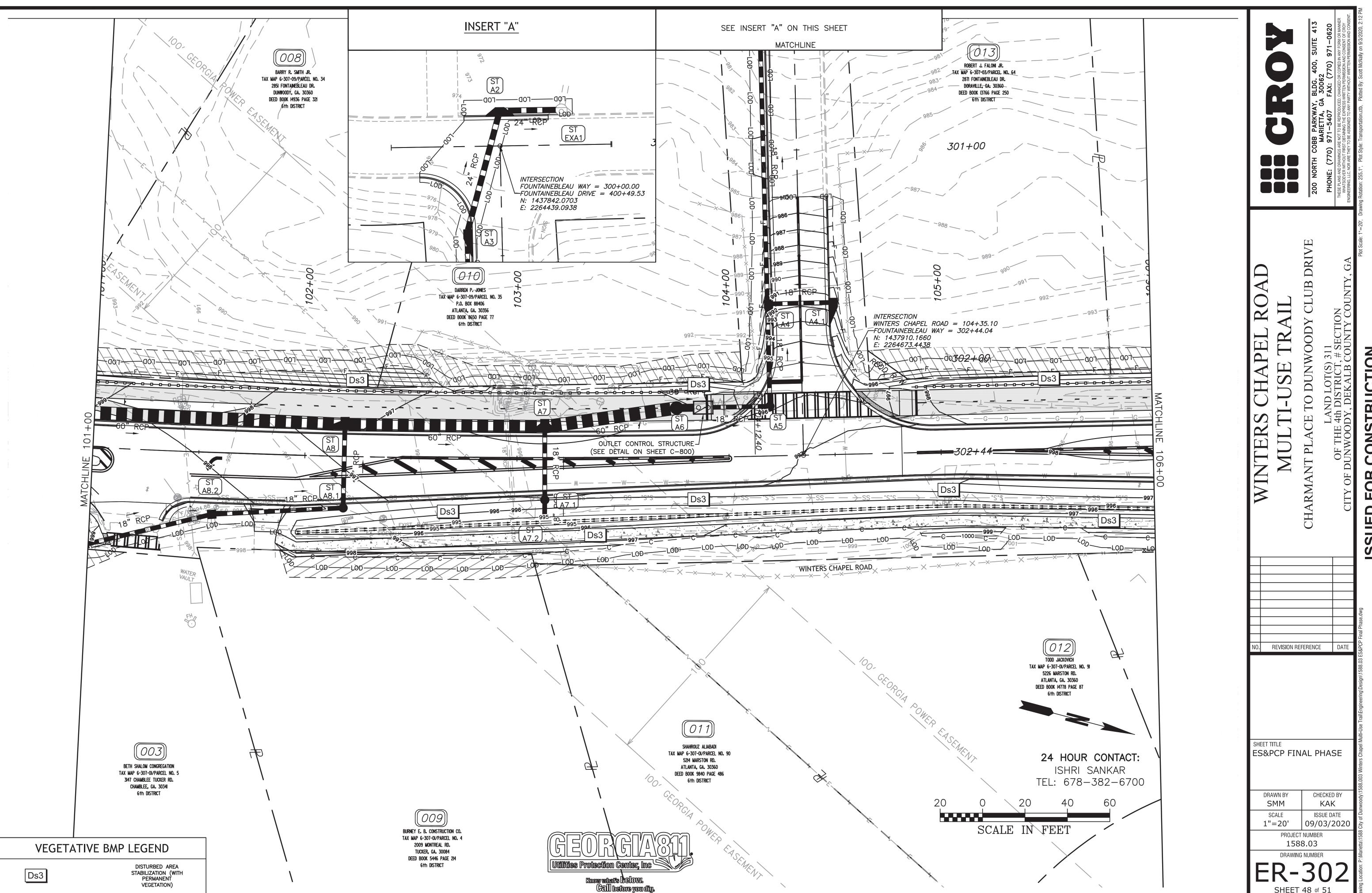


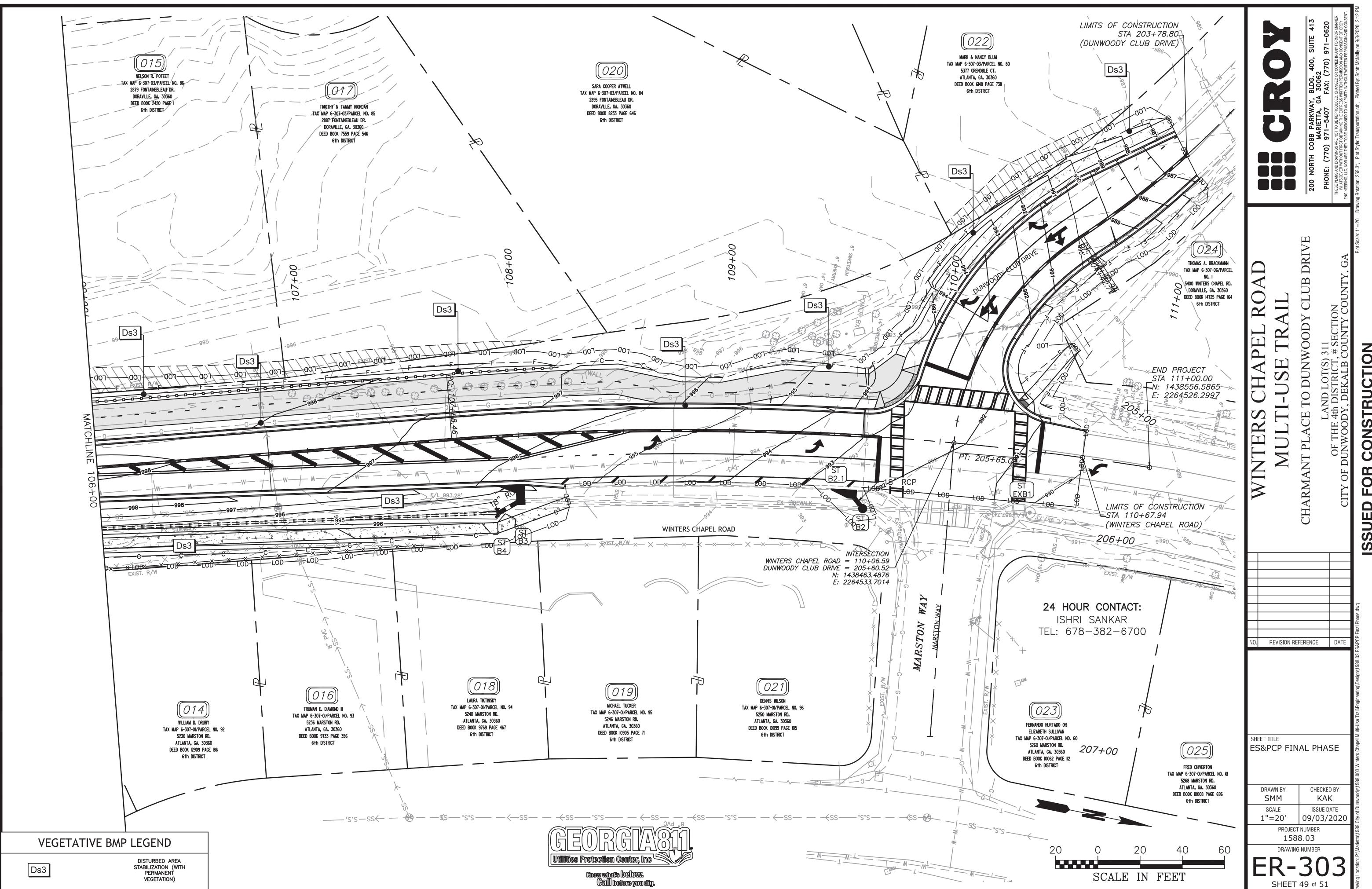


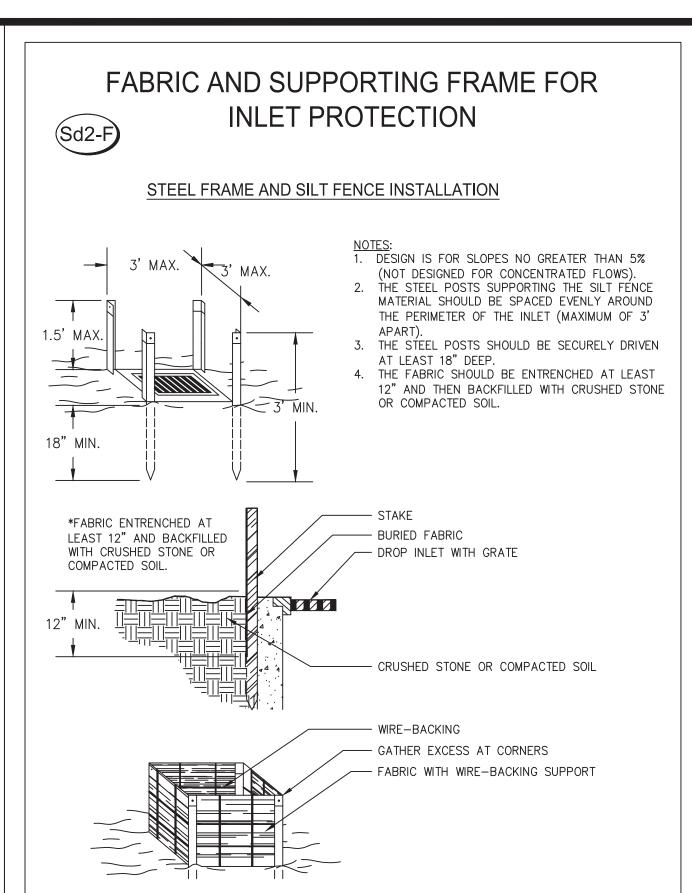


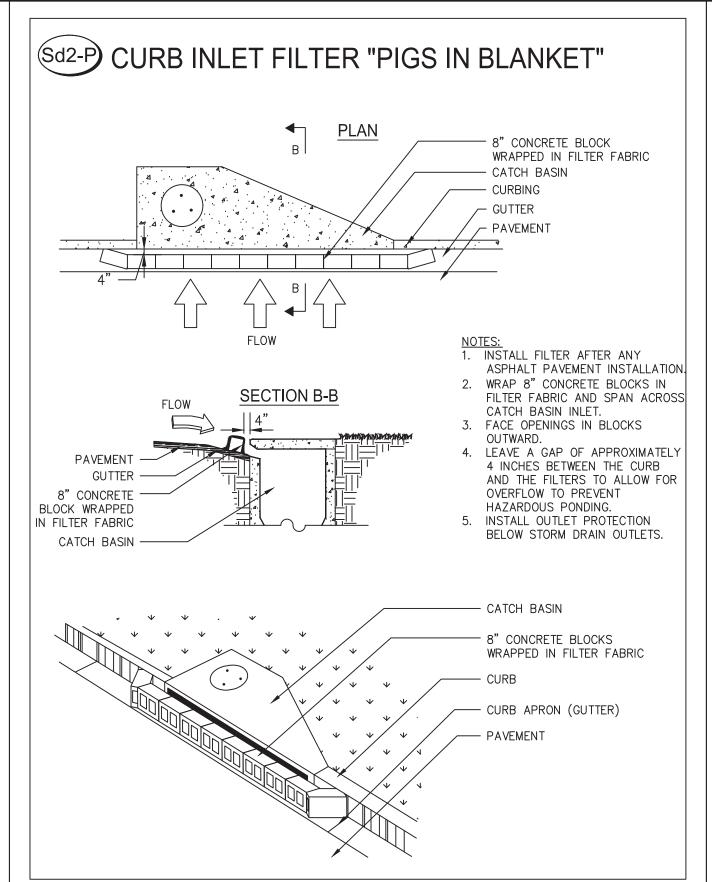
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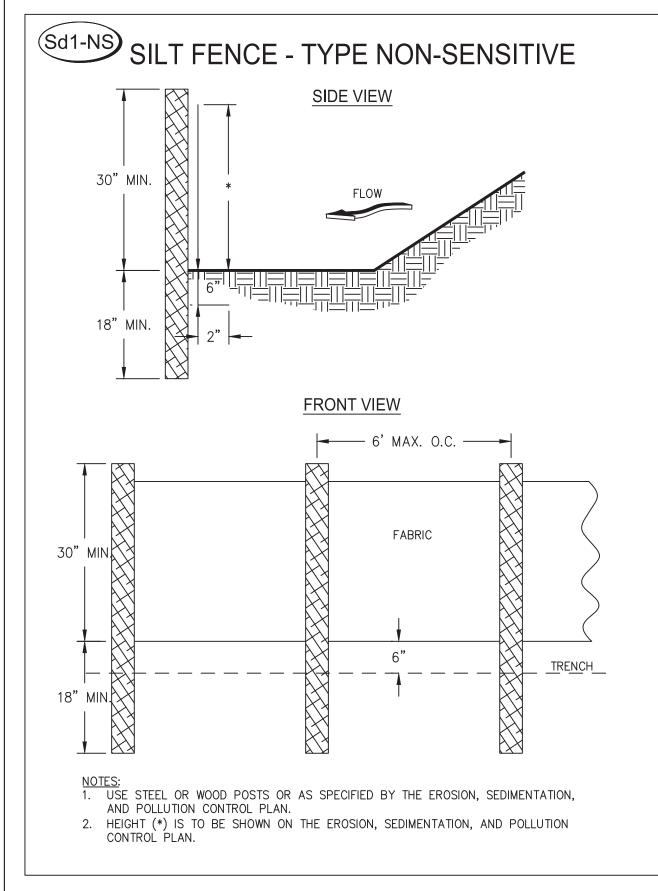


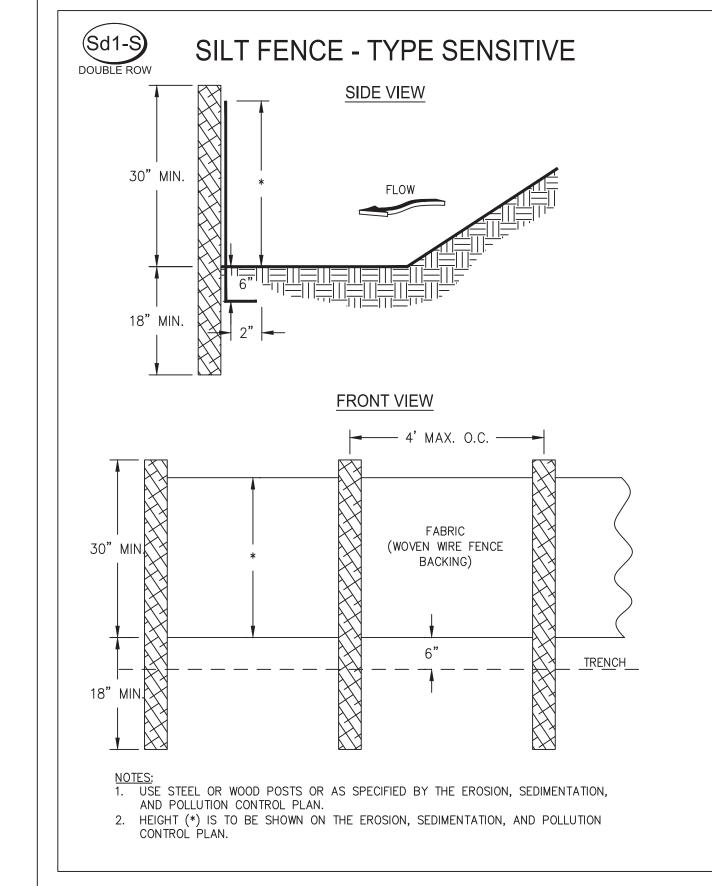


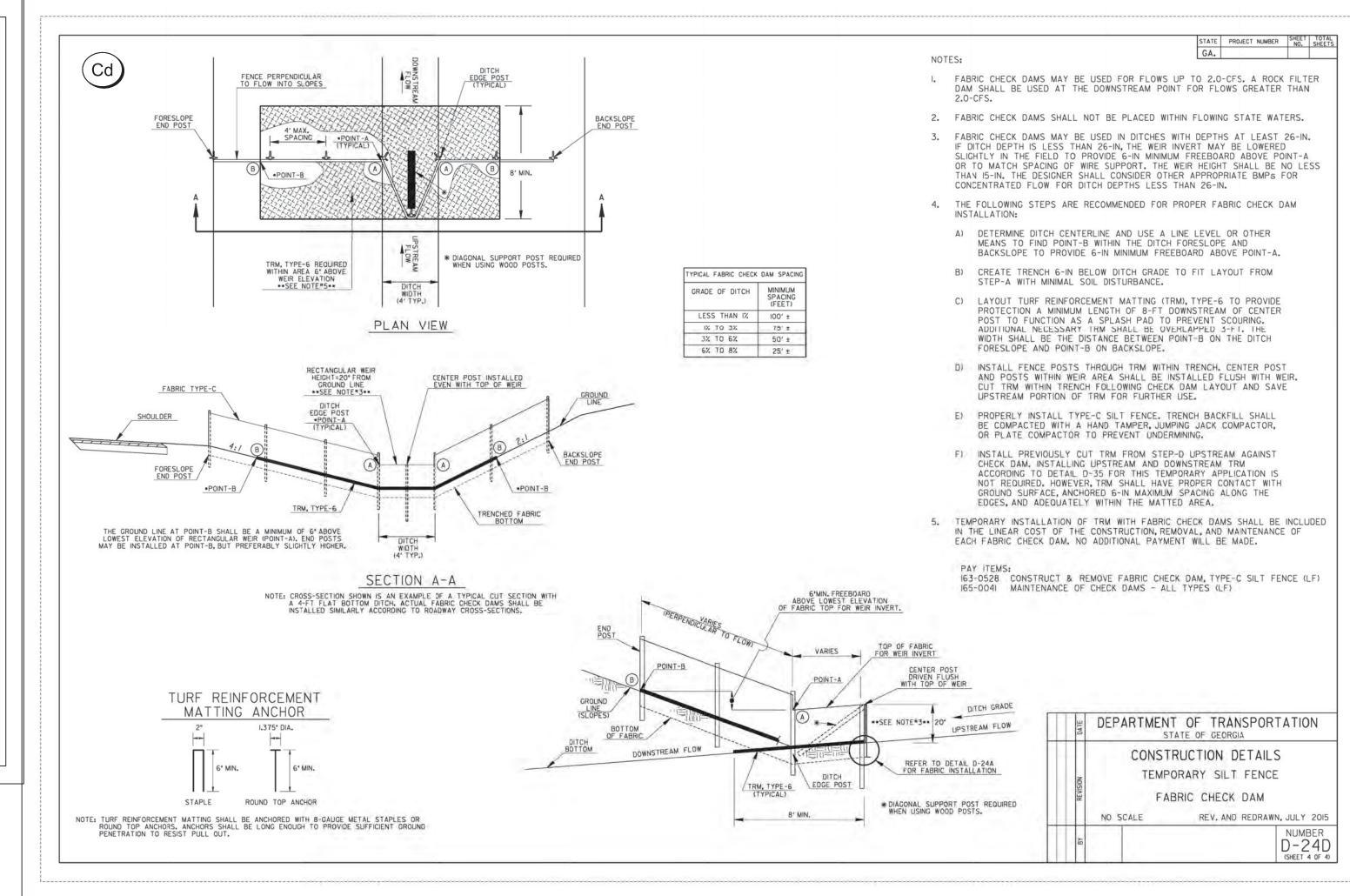


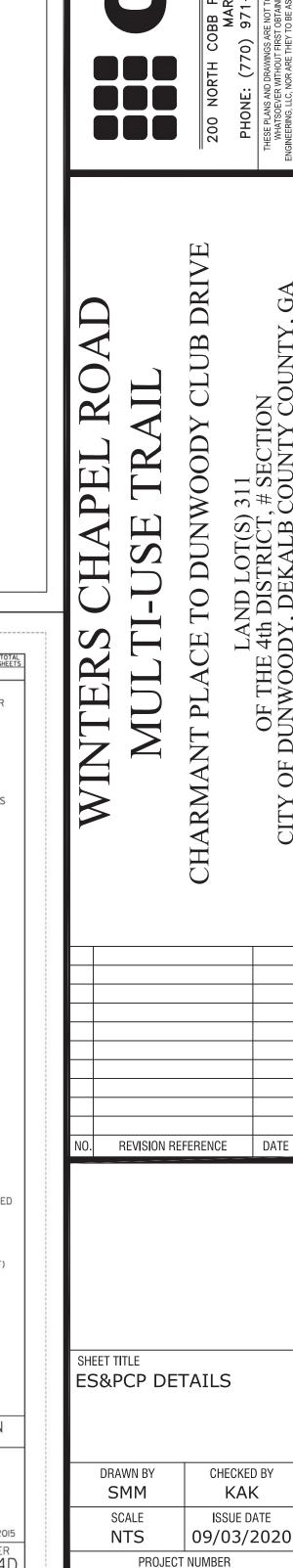












1588.03

DRAWING NUMBER

SHEET 50 of 51

CEORGIA OFFICE CONTROL CONTROL

SPECIFICATIONS

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

Site Preparation

1. Grade to permit the use of equipment for applying and anchoring mulch. 2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces

and sediment barriers. 3. Loosen compact soil to a minimum depth of 3 inches.

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.

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

1. Dry straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical 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

UPSTREAM TERMINAL

STEP 2: SNUG MAT INTO SLOT.

A. STAKE MAT INTO SLOT.

BACKFILL AND COMPACT

OVERLAY CHECK LOT.

B. STAKE MAT TO ANCHOR TERMINAL.

SEQUENTIAL ROLL RUN OUT IN

B. USE 1" X 3" PRESSURE TREATED

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

Straw or hay mulch spread with special blower-type equipment may be anchored. 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

BLANKET AND MATTING CROSS-SECTIONS

STEP 2: WORK UPSTREAM ACROSS CHECK SLOT AND LAP BACK 15".

STEP 3: TUCK MAT LAP INTO SLOT

. BACKFILL AND PROGRESS UPSTREAM

B. PULL OUT TEMPORARY STAKES WHEN

BACKFILL TERMINAL

PICTORAL VIEW OF TRANSVERSE SLOT

START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
FIRST ROLL IS CENTERED LONGITUDINALLY IN MID-CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND THE FIRST ROLL. USE THE CENTER ROLL FOR ALIGNMENT TO THE WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE. USE 3" OVERLAPS AND STAKE AT 5' INTERVALS ALONG THE USE 3' OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE

C. PROGRESS UPSTREAM WITH ROLL.

NO LONGER NEEDED FOR TENSIONING.

NO LONGER NEEDED FOR TENSIONING.

B. STAKE MAT DOWN TO ANCHOR

Ss EROSION CONTROL PRODUCTS (RECP)

Ds2 DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

SPECIFICATIONS

Grading and Shaping

Excessive water run-off shall be reduced by properly designed and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others. No shaping or grading is required if slopes can be stabilized by hand-seeded vegetation or if hydraulic seeding equipment is to be used.

Seedbed Preparation

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

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

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 there is less than 3% organic matter in the soil. Graded areas require lime application. Soils must be tested to determine required amounts of fertilizer and amendments. Fertilizer should be applied before land preparation and incorporated with a disk, ripper, or chisel. On slopes too steep for, or inaccessible to equipment, fertilizer shall be hydraulically applied, preferably in the first pass with seed and some hydraulic mulch, then topped with the remaining required application rate.

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.

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).

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 PER PER			ATES FOR SOUTHERN PIEDMONT REGION											REMARKS	
	ACRE	SQ. FT.	JF				M J J		A S		О	N	D	_		
BARLEY (Horduem vulgare) alone in mixture	144 lbs. 24 lbs.	3.3 lbs. 0.6 lb.	J	F	М	A	М	J	J	A	s	О	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 poun May volunteer for several years. Use inoculant EL.	
LOVEGRASS, WEEPING (Horduem vulgare) alone in mixture	4 lbs. 2 lbs.	0.1 lb. 0.05 lb.	J	F	M	A	М	J	J	A	s	o	N	D	1,500,000 seed per pound. May last for several years. Mix wit Sericea lespedeza.	
MILLET, BROWNTOP (Panicum fascicalatum) alone in mixture	40 lbs. 10 lbs.	0.9 lb. 0.2 lb.	J	F	М	A	М	J	J	A	s	О	N	D	137,000 seed per pound. Quick dense cover. Will provide too much competition in mixtures i seeded at high rates.	
MILLET, PEARL (Pennesetum 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. No recommended for mixture	
OATS (Avena sativa) alone in mixture	128 lbs. 32 lbs.	2.9 lbs. 0.7 lb.	J	F	М	A	M	J	J	A	S	О	N	D	13,000 seed per pound Use on productive soil 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	М	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	М	J	J	A	S	О	N	D	227,000 seed per poun Dense cover. Very competitive and is <u>not</u> be used in mixtures.	
SUDANGRASS (Sorghum Sudanese) alone	60 lbs.	1.4 lb.	J		М			J	J	A			N	D	55,000 seed per pound Good on droughty site 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	0	N	D	15,000 seed per pound	

DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)

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

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

 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. 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.
- All legume seed shall be inoculated with appropriate nitrogen-fixing bacteria, the innoculant shall be a pure culture prepared specifically for the seed species and used within the dates on the container A mixing medium recommended by the manufacturer shall be used to bond the innoculant to the seed. for conventional seeding, use twice the amount of innoculant recommended by the manufacturer. For hydraulic seeding, four times the amount of innoculant 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.

Mix the seed (innoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply within one hour after the mixture is made. Conventional Seeding Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a culti-packer-seeder, drill,

No-till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the not-in securing is permission morantian cover crops when planting is done following maturity or in 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. Shrubs, vines and sprigs may be planted with appropriate planters or hand tools, pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots.

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

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

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

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 . 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.

 Wood cellulose mulch or wood pulp fiber shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry straw or dry hay shall be applied (at the rate indicated above) after hydraulic seeding.

 One thousand pounds of wood cellulose or wood pulp fiber, which includes a tackifier, shall be used with hydraulic seeding on slopes 3/4:1 or steeper.
- Sericea Lespedeza hay containing mature seed shall be applied at a rate of three tons per acre.
 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 <u>NOT</u> appropriate for
- When using temporary erosion control blankets or block sod, mulch is not required.
 Bituminous treated roving may be applied on planted areas, slopes, in ditches or dry water- ways to prevent erosion.
 Bituminous treated roving shall be applied within 24 hours after an area has been planted. Application rates and Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when agitated in water. The fibers shall contain a dye to allow visual metering and aid in uniform application
- Straw or hay mulch will be spread uniformly within 24 hours after seeding and/or planting the mulch may be spread by blower-type spreading equipment, other spreading equipment or by hand. Mulch shall be applied to cover 75% of the soi

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

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

- 1. Hay and straw mulch shall be pressed into the soil immediately after the mulch is spread. A special "packer disk" or disk harrow with the disks set straight may be used. The disks may be smooth or serrated and should be 20 inches or more in diameter and
 2. 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.
- reaving much of it in an erect position. Mulch shall not be plowed into the soil.

 3. Synthetic tackifiers, binders or hydraulic mulch specifically designed to tack straw, shall be applied in conjunction with or immediately after the mulch is spread. Synthetic tackifiers shall be mixed and applied according to manufacturer's specifications. All tackifiers, binders or hydraulic mulch specifically designed to tack straw should be verified nontoxic through EPA 2021.0 testing. Refer to Tackifiers-Tac 4. 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.
 5. 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

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

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

Tongressing will be applied on all temporary and permanent (perennial) species planted alone or in mixtures with other

Second Year and Maintenance Fertilization

- 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.
- Mow Sericea Lespedeza only after frost to ensure that the seeds are mature, mow between November and march. Bermudagrass, 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 establishmen Exclude traffic until the plants are well established. Because of the quail nesting season, mowing should not take place between may and September.

TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	NITROGEN TO DRESSING RATE
1. Cool season grasses	First Second	6-12-12 6-12-12	1500 lbs./ac. 1000 lbs./ac.	50-100 lbs./ac.
	Maintenance	10-10-10	400 lbs./ac.	30 lbs./ac.
2. Cool season grasses	First	6-12-12	1500 lbs./ac.	0-50 lbs./ac.
and legumes	Second	0-10-10	1000 lbs./ac.	
	Maintenance	0-10-10	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	First	6-12-12	1500 lbs./ac.	50-100 lbs./ac.
grasses	Second	6-12-12	800 lbs./ac.	50-100 lbs./ac.
	Maintenance	10-10-10	400 lbs./ac.	30 lbs./ac.
8. Warm season	First	6-12-12	1500 lbs./ac.	50 lbs./ac.
grasses and legumes	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 PER PER 1000				1	FO	NT R S M(REMARKS						
	ACRE	SQ. FT.	J	F	М	A	M	J	J	A	s	О	N	D	1
BAHIA, PENSACOLA (Paspalum notatum) alone or w/ temp. cover with other perennials	60 lbs. 30 lbs.	1.4 lb. 0.7 lb.	J	F	м	A	М	J	J	A	s	О	N	D	166,000 seed per pou Low growing. Sod fort Slow to establish. Play with a companion cr
BAHIA, WILMINGTON (Paspalum notatum) alone or w/ temp. cover with other perennials	60 lbs. 30 lbs.	1.4 lb. 0.7 lb.	J	F	М		М		J	A	s	О	N	D	Will spread into berm pastures and lawns. M with Sericea lespedez weeping lovegrass
BERMUDA, COMMON (Cynodon daetylon) alone with other perennials	10 lbs. 6 lbs.	0.2 lb. 0.1 lb.	J	F	М	A	М	J	J	A	s	О	N	D	1,787,000 seed per por Quick cover. Low grov and sod forming. Full Good for athletic fiel
BERMUDA, COMMON (Cynodon dactylon) with temporary cover with other perennials	10 lbs. 6 lbs.	0.2 lb. 0.1 lb.	J	F	М	A	М	J	J	A	s	0	N	D	Plant with winte annuals. Plant with tall fesc
BERMUDA SPRIGS (Cynodon dactylon) Coastal, Common, or Tift 44	40 cu. ft.	0.9 cu. ft.	J	F	M	A	М	J	J	A	s	o		D	A cubic foot contain approximately 650 spri bushel contains 1.25 c feet or approximately sprigs.
CENTIPEDE (Eremochloa ophiuroides)	Blocks	sod only	J	F	М	A	М	J	J	A	s	o	N	D	Drought tolerant. Full sun or p shade. Effective adjacent to cor and in concentrated flow are Irrigation is needed until ful established. Do not plant near pa Winterhardy as far north as Athe Atlanta.
CROWNVETECH (Coronilla varia) with winter annuals or cool season grasses	15 lbs.	0.3 lb.	J	F	М	A	М	J	J	A	s	0	N	D	100,000 seed per pound. Dense g Drought tolerant and fire resis Attractive rose, pink, and wh blossoms spring to late fall. Mir 30 pounds of Tall fescue or 15 p or rye. Inoculate seed with M inc
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	0	N	D	227,000 seed per pound. Use a only on better sites. Not for dro soils. Mix with perennial lesped crownvetch. Apply topdressin spring following fall plantings. No heavy use areas or athletic fie
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	М	J	J	A	s	0	N	D	350,000 seed per pound. W adapted. Low maintenance with weeping lovegrass, co bermuda, bahia, or tall fes Takes 2 to 3 years to becc fully established. Excellen roadbanks. Inoculate seed EL inoculant.
LESPEDEZA (Lespedeza virgata DC) or (Lespedeza cuneata G. Don scarified unscarified	60 lbs. 75 lbs.	1.4 lbs. 1.7 lbs.													300,000 seed per pound. Heigl growth is 18 to 24 inches. Advantageous in urban area Spreading-type growth has br coloration. Mix with Weepi lovegrass, Common bermuda, t tall fescue or winter annuals. D mix with Sericea tespedeza. Sli develop solid stands. Inoculate
LESPEDEZA, SHRUB (Lespedeza bicolor) (Lespedeza thumbergii) plants	3':	x 3'	J	F			M		J	A	S		N	D	with EL inoculate. Provide wildlife fo and cover.
LOVEGRASS, WEEPING (Eragrostis curvula) alone with other perennials		0.1 lb. 0.05 lb.	J	F		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	M		J	A	s	0		D	1,500,000 seed per por Quick cover. Drougl tolerant. Grows well v Sericea lespedeza o roadbanks.
PANICGRASS, ATLANTIC COASTAL (Panicum amarum var. amarulum)	20 lbs.	0.5 lb.	J	F	М	A	М	J	J	A	s	О	N	D	Grows well on coastal sa dunes, borrow areas, and g pits. Provides winter cove wildlife. Mix with Seric lespedeza except on sand d
REED CANARY GRASS (Phalaris arundinacea) alone with other perennials	50 lbs. 30 lbs.	1.1 lbs. 0.7 lb.	J	F	М	A	M	J	J	A	s	0	N	D	Grows similar to t fescue.
SUNFLOWER, 'AZTEC' MAXIMILLIAM (Helianthus maximiliani)	10 lbs.	0.2 lb.													227,000 seed per pou Mix with weeping love or other low-growin

DURABLE SHRUBS AND GROUND COVERS FOR PERMANENT COVER

Common Name	Scientific Name	Mature Height	Plant Spacing	Comments
Albelia	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.
Bearberry Cotoneaster	Cotoneaster dammeri	2-4 in.	5 ft.	White flowers, red fruit. Sun. Evergreen.
Ground Cover Cotoneaster	Cotoneaster salicifoluis '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	Parthenocissue quinquefolia	low	3 ft.	Red in fall. Vine. Deciduous. Native to Georgia.
Daylilly	Hemerocallis spp.	2-3 ft.	2 ft.	Many flower colors. Full sun. Very Hardy
English Ivy	Hedera helix	low	3 ft.	Shade only. Climbs.
Compacta Holly	Ilex crenata 'Compacta'	3-4 ft.	5 ft.	Sun, semi-shade.
Chinese Holly	Ilex cornuta 'Rotunda'	3-4 ft.	5 ft.	Very durable. Sun, semi-shade.
Dwarf Burford Holly	Ilex burfordii 'Nana'	5-8 ft.	8 ft.	
Dwarf Yaupon Holly	Ilex vomitoria 'Nana'	3-4 ft.	5 ft.	Very durable, sun, semi-shade.
Repandens Holly	Ilex crenata '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 andora.
Blue Chip Juniper	Juniperus horizontalis 'Blue Chip'	8-10 in.	4 ft.	
Blue Rug Juniper	Juniperus horizontalis 'Wiltonii'	4-6 in.	3 ft.	Very low. Sun.
Parsons Juniper	Juniperus davurica 'Expansa' (Squamata Parsoni)	18-24 in.	5 ft.	One of the best, good winter cover.
Pfitzer Juniper	Juniperus chinensis 'Pfitzerana'	6-8 ft.	6 ft.	Needs room.
Prince of Wales Juniper	Juniperus horizontalis '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 good.
Liriope	Liriope muscari	8-10 in.	3 ft.	
Creeping Liriope	Liriope spicata	10-12 in.	1 ft.	Spreads by runners.
Big Leaf Periwinkle	Vinca major	12-15 in.	4 ft.	Lilac 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 weuchuriana	2 ft.	5 ft.	Rampant grower.
St. Johnswort	Hypericum calycenum	8-12 in.	3 ft.	Semi-shade.
Anthony Waterer Spirea	Spirea bumalda	3-4 ft.	5 ft.	Sun.

REVISION REFERENCE

ES&PCP DETAILS

DRAWN BY	CHECKED BY							
SMM	KAK							
SCALE	ISSUE DATE							
NTS	09/03/202							
PROJECT NUMBER								
1588.03								

DRAWING NUMBER

Itilities Protection Center. Inc Know what's DOIOW.

Call before you dig.