



**Capital Projects & Purchasing Department  
113 Mable T. Willis Blvd.  
Walterboro, SC 29488  
843.539.1968**

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**Addendum #1**

This addendum is dated 6-4-2015

**RFP: CPST-02**

**Water & Wastewater Improvements at Lowcountry Regional  
Airport Industrial Park**

**MANDATORY PRE-BID CONFERENCE:**

**Wednesday, June 10, 2015 @ 10:00am**

**Located at 113 Mable T. Willis Blvd. Walterboro, SC 29488**

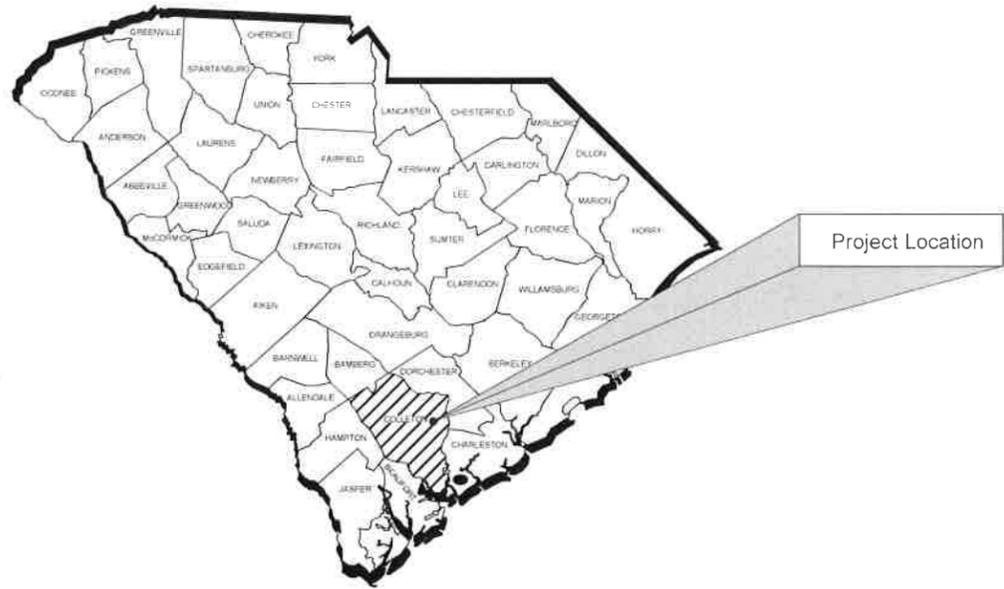
**BIDS DUE: Thursday, June 18, 2015 @ 12:00pm**

**MAIL RFP RESPONSE TO:**

Capital Projects & Purchasing Department  
Attn: Kaye B Syfrett  
113 Mable T. Willis Blvd.  
Walterboro, SC 29488

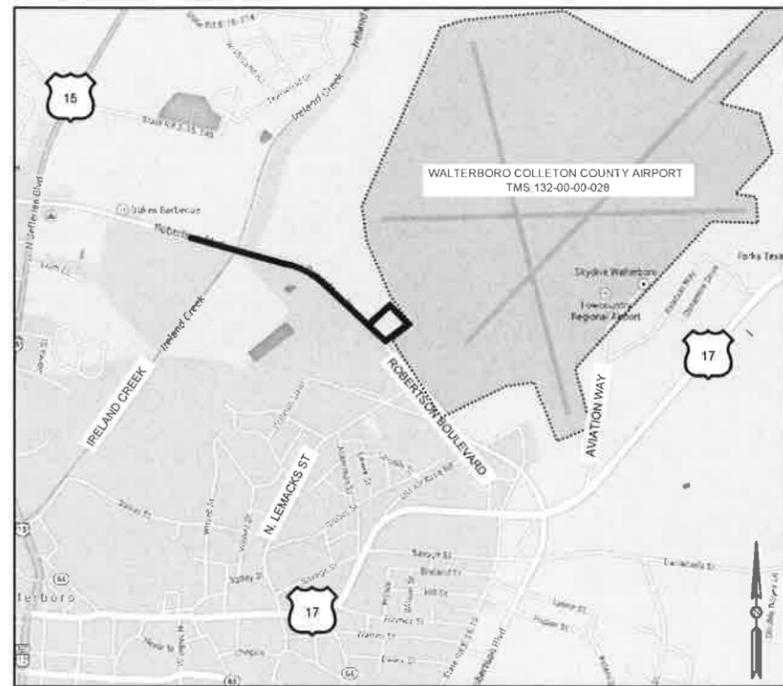
**HAND DELIVER RFP RESPONSE TO:**

Capital Projects & Purchasing Department  
Attn: Kaye B Syfrett  
113 Mable T. Willis Blvd.  
Walterboro, SC 29488



LOCATION MAP  
(NOT TO SCALE)

# WATER AND WASTEWATER IMPROVEMENTS TO THE PROJECT DENT SITE AT THE LOWCOUNTRY REGIONAL AIRPORT FOR COLLETON COUNTY, SOUTH CAROLINA



SITE LOCATION MAP  
(NOT TO SCALE)



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C18	WATER DETAILS

UTILITY CONTACTS		
NATURAL GAS	SCE&G	T. (843) 549-8600
TELEPHONE	PALMETTO RURAL TELEPHONE	T. (843) 538-2020
ELECTRIC	COASTAL ELECTRIC COOPERATIVE, INC / SCE&G	T. (843) 538-5700 / (843) 549-8600
WATER	THE CITY OF WALTERBORO	T. (843) 782-1065
WASTEWATER	THE CITY OF WALTERBORO	T. (843) 782-1023
STREETS	SCDOT - COLLETON COUNTY OFFICE	T. (843) 539-1964



Know what's below.  
Call before you dig.

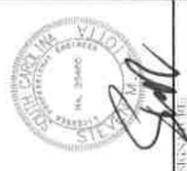
CAUTION-NOTE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. SC LAW REQUIRES THE CONTRACTOR TO CALL THE UTILITY PROTECTION CENTER AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE RELOCATION OF ALL THE UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

OWNER CONTACT	
COLLETON COUNTY	CONTACT: MR. JARED FRALIX, P.E. COUNTY ENGINEER
113 MARKET, WALLIS BOULEVARD	WALTERBORO, SC 29439
TELEPHONE (843) 782-3101	E-MAIL: JFRALIX@COLLETONCOUNTY.SC.GOV

ENGINEER CONTACT	
ALLIANCE CONSULTING ENGINEERS, INC	CONTACT: MR. STEVE LIOTTA, P.E.
23 PLANTATION PARK DRIVE, SUITE 204	BLUFFTON, SC 29910
TELEPHONE (843) 757-5959	E-MAIL: SLIOTTA@ALLIANCECE.COM

REVISION	DATE



ALLIANCE CONSULTING ENGINEERS, INC.  
23 PLANTATION PARK DRIVE, SUITE 204  
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WATER AND WASTEWATER IMPROVEMENTS TO THE PROJECT DENT SITE AT THE LOWCOUNTRY REGIONAL AIRPORT FOR COLLETON COUNTY, SOUTH CAROLINA

**GENERAL NOTES:**

- THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION IN ACCORDANCE WITH THE LINES AND GRADES SHOWN ON THE PLANS AND TO TOLERANCES STATED HEREIN OR IN THE SPECIFICATIONS.
- LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE DRAWINGS AND DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, ETC. AFFECTING HIS WORK PRIOR TO CONSTRUCTION.
- IF UTILITY FIELD LOCATIONS ARE REQUIRED, THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION SCHEDULE WITH ALL UTILITY COMPANIES AS WELL AS ANY AFFECTED CITY AND COUNTY DEPARTMENTS BY PROVIDING A MINIMUM OF 48 HOURS NOTICE OF WHEN CONSTRUCTION WILL COMMENCE IN AN AREA IN ORDER TO PERMIT FIELD LOCATION OF UTILITY LINES PRIOR TO CONSTRUCTION. A TOLL-FREE NUMBER, 1-888-721-7287 IS AVAILABLE TO ASSIST IN SUCH COORDINATION EFFORTS BUT DOES NOT NECESSARILY REPRESENT ALL UTILITY COMPANIES IN THE AREA.
- THE CONTRACTOR SHALL REPLACE ALL PAVING, STABILIZED EARTH, DRIVEWAYS, SIDEWALKS, RETAINING WALLS, ETC. REMOVED OR DAMAGED DURING CONSTRUCTION WITH THE SAME MATERIAL REMOVED OR DAMAGED OR AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO PROCEEDING WITH ANY SITE WORK WITH WHICH A CONFLICT HAS ARISEN DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THESE DRAWINGS.
- CONSTRUCTION SHALL BE CARRIED OUT "IN THE DRY". THE CONTRACTOR SHALL REVIEW SITE CONDITIONS AND DETERMINE METHODS AND EXTENT OF DEWATERING NECESSARY AND SHALL INCLUDE COSTS OF DEWATERING IN THE BID. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR CONTROL OF GROUND OR SURFACE WATER OR FOR ADDITIONAL MATERIALS OR REWORK REQUIRED AS A RESULT OF INADEQUATE OR INSUFFICIENT DEWATERING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING RECORD DRAWING INFORMATION INCLUDING, BUT NOT LIMITED TO, FINISHED GRADE ELEVATIONS, TIES TO WATER LINES, VALVES, BENDS, SERVICE CONNECTIONS AND ELEVATIONS OF PIPES WHERE DEPTH OF COVER VARIES FROM DESIGN, TIES TO SANITARY SEWER LINES, MANHOLE RIM AND INVERT ELEVATIONS, CLEANOUTS AND SERVICE CONNECTIONS, TIES TO STORM SEWER LINES, STRUCTURE TOP AND INVERT ELEVATIONS, PLUS LOCATIONS, DIMENSIONS AND ELEVATIONS OF ALL OTHER CONSTRUCTION COMPONENTS WHICH VARY FROM THE DESIGN.
- ALL WORK TO BE PERFORMED FOR THE COMPLETION OF THIS PROJECT SHALL BE CONSTRUCTED ACCORDING TO THE BEST PRACTICES OF THE INDUSTRY AND IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, COUNTY AND/OR CITY CODES, ORDINANCES, STANDARDS AND PERMIT CONDITIONS.
- ALL UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATED BASED ON DRAWINGS AND LOCATIONS SUPPLIED BY VARIOUS UTILITY COMPANIES.
- CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL EXCAVATED MATERIAL, REGARDLESS OF CONTENT.
- THE CONTRACTORS SHALL CAREFULLY STUDY AND COMPARE THE CONSTRUCTION DOCUMENTS AND SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY DISCREPANCIES OR OMISSIONS DISCOVERED ON THE PLANS OR AT THE SITE. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS TO VERIFY THAT ALL LOCATIONS ARE CORRECT PRIOR TO COMMENCING CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE THE ENGINEER WITH AS-BUILT CONSTRUCTION DRAWINGS PER THE TECHNICAL SPECIFICATIONS AND CONTRACT DOCUMENTS.
- ALL PROPERTIES DISTURBED DURING OR AS A RESULT OF CONSTRUCTION SHALL BE RESTORED TO THEIR PRE-EXISTING CONDITION OR BETTER.
- THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS IN WRITING AT LEAST TWO (2) BUSINESS DAYS PRIOR TO ANY INCONVENIENCE OR DISRUPTION OF SERVICES AS A RESULT OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY PAVEMENT, DRIVEWAYS, SIDEWALKS, CURBS, AND ANY OTHER EXISTING STRUCTURE THAT MUST BE CUT OR DAMAGED DURING OR AS A RESULT OF CONSTRUCTION. ALL OPEN CUT DRIVEWAYS AND/OR CURBING SHALL BE REMOVED AND REPLACED TO MATCH EXISTING THICKNESS, GRADE, AND MATERIAL OR AS SPECIFIED BY THE ENGINEER. ALL ROAD REPAIRS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF SCDOT SPECIFICATIONS.
- THE CONTRACTOR SHALL FULLY COMPLY WITH SCDOT ENCROACHMENT PERMIT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANY OR OWNER AS APPLICABLE TO STABILIZE UTILITY POLES AND REMOVE AND REPLACE EXISTING GUY WIRE AS NECESSARY FOR CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST ASSOCIATED WITH THIS WORK.
- ALL UTILITIES SHALL BE KEPT IN OPERATION EXCEPT WITH THE EXPRESS WRITTEN CONSENT OF THE UTILITY OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE EXISTING UTILITIES AND ANY AND ALL DAMAGE TO EXISTING UTILITIES AS A RESULT OF THE CONTRACTOR'S ACTIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- COORDINATES ARE BASED ON SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM: NAVD 83 VERTICAL CONTROL AND NAD 83 HORIZONTAL CONTROL.

**EROSION AND SEDIMENTATION CONTROL NOTES**

- ALL FUGITIVE DUST SHALL BE CONTROLLED ON SITE. ONLY AREAS SCHEDULED FOR IMMEDIATE CONSTRUCTION SHALL BE CLEARED OR STRIPPED OF VEGETATION. WATERING, APPLICATION OF CALCIUM CHLORIDE OR OTHER PRIOR APPROVED MEANS OF DUST CONTROL SHALL BE EMPLOYED TO PREVENT THE EMANATION OF DUST FROM THE SITE. PERMANENT GRASSING, LANDSCAPING AND OTHER SITE WORK SHALL BE INCORPORATED AS SOON AS POSSIBLE.
- CONTRACTOR IS RESPONSIBLE FOR CONTROLLING SITE EROSION AND SHALL PROVIDE ADDITIONAL SOIL OR SEED & MULCH AS NECESSARY TO ACHIEVE A FULLY STABILIZED SITE FREE FROM RUTTING, ETC. TO THE LINES & GRADES SHOWN HEREIN UPON FINAL ACCEPTANCE.
- ALL DISTURBED AREAS SHALL BE SEED NO MORE THAN 14 DAYS AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED.
- THE CONTRACTOR SHALL FULLY COMPLY WITH THE CITY OF WALTERBORO SEDIMENT AND EROSION CONTROL ORDINANCE AND COLLETON COUNTY STANDARDS AND TECHNICAL SPECIFICATIONS.
- CONTRACTOR SHALL REMOVE ALL DIRT AND DEBRIS FROM THE JOB SITE DAILY. ROADS AND SIDEWALKS SHALL BE SWEEP AS PART OF DAILY CLEANUP.

**WATER NOTES**

- WATER INSTALLATION SHALL BE IN ACCORDANCE WITH "TEN STATES STANDARDS," S.C.D.H.E.C. AND THE CITY OF WALTERBORO WATER AND SEWER REGULATIONS.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE CITY OF WALTERBORO WATER AND SEWER AT LEAST 72 HOURS PRIOR TO BEGINNING WORK.
- CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOUND IN THE FIELD OR ON THESE DRAWINGS PRIOR TO BEGINNING OR CONTINUING WORK. ANY DEVIATIONS FROM THE CONSTRUCTION PLANS SHALL NEED TO BE APPROVED IN WRITING BY THE CITY OF WALTERBORO WATER AND SEWER CONNECTION TO EXISTING WATER SYSTEM SHALL BE MADE IN THE PRESENCE OF THE CITY OF WALTERBORO WATER AND SEWER INSPECTOR WITH AT LEAST 72 HOURS ADVANCED NOTICE.
- ALL WATER LINES SHALL HAVE A MINIMUM COVER OF 36" D.I.P. SHALL BE INSTALLED AT ALL ROAD CROSSINGS UNDER PAVEMENT.
- WHEN CROSSING UNDER AN OPEN DITCH WITH LESS THAN 3' OF CLEARANCE.
- WHEN CROSSING UNDER PIPED STORM DRAINAGE WITH LESS THAN 2' OF CLEARANCE.
- FIRE HYDRANTS, WATER VALVES AND OTHER WATER SYMBOLS MAY BE SHOWN IN LARGE SCALE FOR CLARITY. WATER VALVES, VALVE BOXES AND COVERS SHALL NOT BE LOCATED WITHIN PAVED AREAS. FIRE HYDRANTS SHALL BE PLACED AS CLOSE AS POSSIBLE TO THE WATER MAIN IN ORDER TO REMAIN WITHIN THE RIGHT-OF-WAY. HYDRANTS SHALL BE INSTALLED BASED ON THE BURY DEPTH OF THE WATER MAIN UNLESS OTHERWISE NOTED. HYDRANT EXTENSION ARE NOT ALLOWED UNLESS THE DEPTH OF THE WATER MAIN EXCEEDS 6'.
- WATER SERVICE AND SEWER SERVICE FOR EACH LOT SHALL MAINTAIN A MINIMUM 5' OF SEPARATION.
- THE DEFLECTION OF WATER LINES IN LIEU OF FITTINGS SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURER'S SPECIFICATIONS.
- ALL FITTINGS, VALVES AND HYDRANTS SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS PER THE CITY OF WALTERBORO WATER AND SEWER REQUIREMENTS.
- WATER SERVICE STUB-OUTS SHALL BE INSTALLED WITHIN THE RIGHT-OF-WAY AND NO MORE THAN 18" FROM THE COMMON PROPERTY CORNER UNLESS OTHERWISE NOTED ON THE CONSTRUCTION PLANS.
- CONTRACTOR SHALL SCHEDULE ALL REQUIRED TESTS AND INSPECTIONS WITH THE CITY OF WALTERBORO WATER AND SEWER AT LEAST 72 HOURS IN ADVANCE. A SET OF RECORD DRAWINGS SHALL BE PROVIDED TO CITY OF WALTERBORO INSPECTOR FOR FINAL INSPECTION.
- CONTRACTOR SHALL KEEP A RED-LINED SET OF THE CONSTRUCTION DRAWINGS ON SITE AT ALL TIMES.

**RIGHT-OF-WAY CONSTRUCTION NOTES:**

- WHEN ROADS ARE RESURFACED, SHOULDERS SHALL BE REGRADED TO THE EDGE OF PAVEMENT TO CONFORM TO SCDOT SPECIFICATIONS.
- SCDOT SHALL BE NOTIFIED WHEN WORK STARTS AS WELL AS WHEN THE WORK IS COMPLETED. SCDOT NOTIFICATION SHALL REFERENCE THE SCDOT PERMIT NUMBER.
- SCDOT SHALL BE GIVEN THE OPPORTUNITY OF ATTENDING ANY PRE-CONSTRUCTION MEETING PRIOR TO THE BEGINNING OF WORK.
- BORE PITS SHALL BE CLOSED IMMEDIATELY AFTER INSTALLATION.
- ALL VALVES AND MANHOLES SHALL CONFORM TO THE EXISTING ELEVATION OF THE ROADWAY OR SHOULDER AND CONFORM TO THE ACCEPTED STANDARD. WHEN THE VALVES AND MANHOLES WILL BE LOCATED OUT OF THE PAVEMENT, THEY SHALL NOT BE PLACED IN A DITCH FLOWLINE.
- ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE SIDE OF THE TRENCH AWAY FROM THE TRAVELED ROADWAY, AND SHALL BE NO CLOSER THAN FIFTEEN (15) FEET TO THE EDGE OF PAVEMENT.
- MANHOLES SHALL CONFORM TO THE ELEVATION OF THE EXISTING ROADWAY OR SHOULDER AND BE CONSTRUCTED IN ACCORDANCE WITH ACCEPTED PRACTICES.
- TRENCH TO BE PROPERLY BACK-FILLED AND THOROUGHLY TAMPED. THE ENTIRE DISTURBED AREA SHALL BE RE-SHAPED AND DRESSED OUT IN A WORKMANSHIP LIKE MANNER.
- RESTORATION OF PAVEMENT, SHOULDERS, DITCHES, ETC., TO BE PERFORMED AS SOON AS POSSIBLE AFTER CONSTRUCTION, OR SCHEDULED SO THAT THE CONSTRUCTION IS NO FURTHER THAN 2,000 LF. AHEAD OF COMPLETE RESTORATION.
- ALL CROSS-LINE PIPES ARE TO BE LOCATED AND FLAGGED PRIOR TO BEGINNING OPERATION.
- THE DITCHES AND/OR SHOULDERS DISTURBED DURING THE INSTALLATION SHALL BE RE-ESTABLISHED TO PROPER GRADE, ORIGINAL CROSS SECTION, STABILIZED, AND ALL DRAIN PIPES CLEARED.
- WHEN IN SCDOT RIGHT OF WAY, THE ENTIRE DISTURBED AREA SHALL BE TOP-SOILED USING 3 INCHES OF SELECTED MATERIAL AND RE-GRADED TO SCDOT SPECIFICATIONS.
- FLASHING ARROW BOARDS SHALL BE USED FOR ALL LANE CLOSURES ON PRIMARY ROUTES AND/OR ROADS WITH HIGH TRAFFIC VOLUMES.
- TRAFFIC CONTROL LIGHTS, SIGNS AND FLAG-MEN WILL BE FURNISHED BY CONTRACTOR AND WILL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATE REMOVAL OF SUCH TRAFFIC HAZARDS AS MUD, DEBRIS, LOOSE STONE, AND TRASH AS MAY BE WASHED OR SPILLED ON THE TRAVELED ROADWAY AS A RESULT OF THE PROPOSED WORK.
- TRAFFIC CONTROL SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR PER SCDOT SPECIFICATIONS AND STANDARD DRAWING SERIES 601 AND 610, AS APPLICABLE, AND PER MUTCD SPECIFICATION SECTION 6H.01 (LATEST EDITION).

**WASTEWATER GENERAL CONSTRUCTION NOTES:**

- ALL WASTEWATER SYSTEM MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE PROJECT SPECIFICATIONS, THE CITY OF WALTERBORO SPECIFICATIONS, AND THE SCDOT STANDARDS AND TECHNICAL SPECIFICATIONS.
- CONSTRUCTION SHALL NOT COMMENCE UNTIL CONSTRUCTION PERMITS ARE RECEIVED FROM THE CITY OF WALTERBORO SCDOT AND THE SCDOT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING WASTEWATER LATERALS AND CONNECTING THEM INCIDENTALLY TO WASTEWATER LINE CONSTRUCTION.
- CONTRACTOR SHALL NOTIFY THE CITY OF WALTERBORO, SCDOT, AND SCDOT 72 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- RIM ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL ADJUST FINAL RIM ELEVATIONS SUCH THAT THE RIM ELEVATION IS A MINIMUM OF 3 INCHES ABOVE FINISHED GRADE IN GRASS AREAS. IN PAVED AREAS, THE RIM SHALL BE FLUSH WITH THE PAVEMENT. IN FLOOD AREAS, THE RIM ELEVATION SHALL BE AS SHOWN ON PLANS.
- WASTEWATER LINES AND MAINS SHALL CONFORM TO SCDOT REGULATION R 51-57.
- CLEAR AND GRUB AS NECESSARY FOR INSTALLATION OF WASTEWATER LINES. ALL COSTS ASSOCIATED WITH CLEARING AND GRUBBING SHALL BE INCLUDED IN THE COST.
- ALL WASTEWATER LINES SHALL BE TESTED PER THE TECHNICAL SPECIFICATIONS AND CONTRACT DOCUMENTS.
- ALL EXISTING WASTEWATER SERVICE LATERALS SHALL REMAIN IN SERVICE DURING CONSTRUCTION USING BY-PASS LINES AT NO ADDITIONAL COST.
- ALL WASTEWATER LINES DESIGNATED TO BE ABANDONED WILL BE DONE ONLY AFTER WASTEWATER MAIN AND SERVICE CONNECTIONS ARE INSTALLED AND APPROVED FOR USE. ABANDON EXISTING WASTEWATER LINES BY CUTTING, CAPPING, AND FILLING WITH FLOWABLE FILL PER TECHNICAL SPECIFICATIONS.
- ALL PIPE LENGTHS ARE PLUS OR MINUS AND ARE MEASURED TO CENTER OF STRUCTURES.

**ENVIRONMENTAL PROTECTION NOTES**

- STAKED OR FLOATING SILT SCREENS, AS APPROPRIATE, SHALL BE UTILIZED AS SILT BARRIERS AND PLACED AROUND THE ENTIRE SITE AT THE LIMITS OF CONSTRUCTION AND AT OTHER LOCATIONS AS REQUIRED TO KEEP SEDIMENT FROM LEAVING THE PROPERTY. THESE BARRIERS SHALL BE INSTALLED PRIOR TO COMMENCING WITH ANY CONSTRUCTION. THE CONTRACTOR SHALL MONITOR AND MAINTAIN ALL SILT BARRIERS INCLUDING DAILY INSPECTIONS TO CHECK THEIR INTEGRITY. ANY LOOSE OR DAMAGED SILT BARRIERS SHALL BE IMMEDIATELY REPAIRED OR REPLACED, AS NECESSARY. ONCE CONSTRUCTION IS COMPLETED AND FINISHED GRADING AND STABILIZATION HAS BEEN ACHIEVED, SILT BARRIERS SHALL BE COMPLETELY REMOVED TO THE SATISFACTION OF THE ENGINEER AND PRIOR TO FINAL ACCEPTANCE.
- ALL WATER COLLECTED AND PUMPED DURING DEWATERING ACTIVITIES SHALL BE DISPOSED OF IN UNDISTURBED LAND AREAS INTO DOUBLE STAKED HAY BALES. DISCHARGE LOCATIONS SHALL BE OVER UNDISTURBED SOIL, A MINIMUM OF 75 FEET FROM THE NEAREST WATER BODY, WETLAND AREA, OR INLET TO ALLOW FOR MAXIMUM OVERLAND FILTRATION OF SOIL PARTICLES.
- THE CONTRACTOR SHALL NOT REMOVE ANY TREES OTHER THAN THOSE SPECIFICALLY SHOWN TO BE REMOVED.
- THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT ALL TREES NOT SPECIFICALLY SHOWN TO BE REMOVED. NO ACTIVITIES (EQUIPMENT, FILL PLACEMENT, ETC.) SHALL TAKE PLACE WITHIN THE DRIPLINE OF THE TREES TO REMAIN. IF NECESSARY, THE CONTRACTOR SHALL PROTECT TREES WITH SUITABLE BARRICADES.

**TRAFFIC CONTROL NOTES**

- TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITIONS OF THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION CONSTRUCTION MANUAL, DIVISION 600 AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PART 5.
- PRIOR TO MOBILIZATION ON EACH ALIGNMENT CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC CONTROL PLAN TO THE ENGINEER FOR APPROVAL BY THE SCDOT.

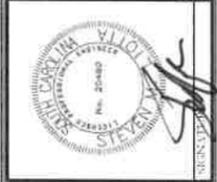
**GENERAL LEGEND**

DESCRIPTION	EXISTING	PROPOSED
TOPO		
RIGHT-OF-WAY		
PROPERTY BOUNDARY		
EASEMENT		
SITE BOUNDARY		
CENTERLINE OF PAVEMENT		
EDGE OF PAVEMENT		
GRAVITY WASTEWATER		
WATER MAIN		
STORM DRAINAGE		
GAS LINE		
OVERHEAD POWER		
LIMITS OF DISTURBANCE		
FENCE		
TREE LINE		
SANITARY SEWER MANHOLE		
CLEANOUT		
STORM DRAIN INLET		
STORM DRAIN GRATE INLET		
STORM DRAIN MANHOLE		
WATER METER		
WATER VALVE		
END CAP		
JACK AND BORE		
POWER POLE		
TELEPHONE POLE		
TREE		
FIRE HYDRANT		
TEMP BENCHMARK		
REMOVE AND REPLACE ASPHALT ROADWAY		
CLEAR AND GRUB		
INLET PROTECTION		
PERMANENT SEEDING		
SILT FENCE		
SEDIMENT TUBES		
RIP RAP		

**OWNER CONTACT**  
 COLLETON COUNTY  
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 113 HABLETT WILKS BOULEVARD  
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**ENGINEER CONTACT**  
 ALLIANCE CONSULTING ENGINEERS, INC.  
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 23 PLANTATION PARK DRIVE, SUITE 204  
 BLUFFTON, SC 29910  
 TELEPHONE: (843) 757-9553  
 E-MAIL: SLUYTA@ALLIANCEENGINEERS.COM

REVISION	DATE



**ALLIANCE CONSULTING ENGINEERS**  
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 23 Plantation Park Dr., Suite 204, Bluffton, South Carolina 29910  
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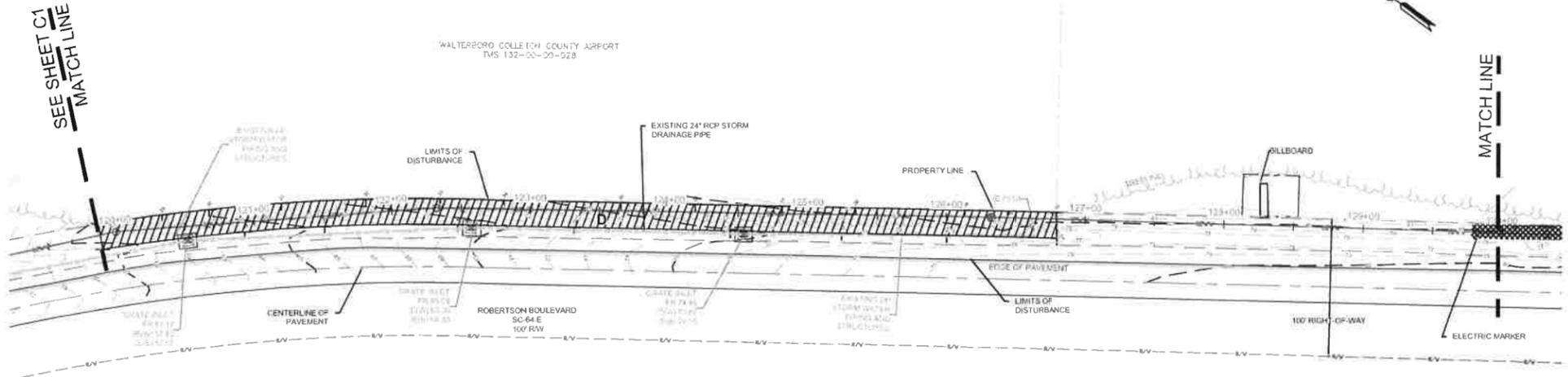
GENERAL NOTES AND LEGEND

WATER AND WASTEWATER IMPROVEMENTS TO THE PROJECT SITE AT THE LOWCOUNTRY REGIONAL AIRPORT FOR COLLETON COUNTY, SOUTH CAROLINA

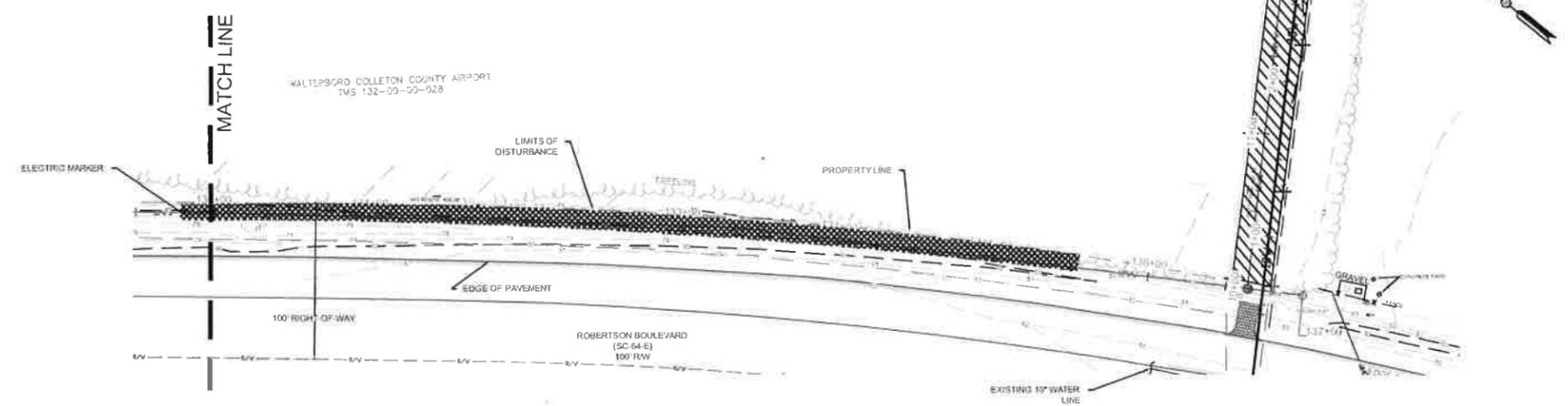
FILE NAME:	G1.dwg	SHEET	G1
DATE/SCALE:	04/24/2018	OF	20
PROJECT NO.:	1418-0015		
DWG NO.:	01.01-017		







**ROBERTSON BOULEVARD  
EXISTING CONDITIONS AND DEMOLITION**  
(STATION 120+00 TO 130+00)  
SCALE: HORIZONTAL 1" = 50'



**ROBERTSON BOULEVARD  
EXISTING CONDITIONS AND DEMOLITION**  
(STATION 130+00 TO 137+00)  
SCALE: HORIZONTAL 1" = 50'

CLEARING AND GRUBBING STAKING POINTS																								
Point #	Northing	Easting	Point #	Northing	Easting																			
1	395600.8763	2104723.2601	11	395476.3718	2105208.2389	21	395246.1295	2106100.3402	31	394928.6391	2106727.1708	41	394515.4476	2107105.3612	51	395113.7023	2106416.9045	61	395445.9186	2105248.1716				
2	395590.2677	2104770.6060	12	395464.7514	2105252.8468	22	395214.8414	2106209.1908	32	394887.3238	2106772.5720	42	394572.8352	2107050.3602	52	395150.7968	2106325.1903	62	395481.2820	2105111.9435				
3	395579.6591	2104811.9519	13	395427.0507	2105398.9305	23	395189.7245	2106280.7344	33	394849.8242	2106810.7058	43	394627.6720	2106397.8013	53	395190.1927	2106220.1073	63	395503.9901	2105024.9689				
4	395567.3251	2104859.2503	14	395403.0026	2105493.5107	24	395151.6328	2106350.4682	34	394816.0966	2106942.8317	44	394585.4319	2106942.4420	54	395222.6490	2106112.5122	64	395524.8070	2104945.0817				
5	395554.9910	2104906.5487	15	395385.2564	2105562.7385	25	395142.0649	2106397.3991	35	394755.4217	2106900.9855	45	394767.0533	2106864.2120	55	395256.2082	2105985.6530	65	395540.8082	2104880.6583				
6	395538.9244	2104968.2215	16	395369.2466	2105625.0107	26	395122.4781	2106444.3285	36	394716.5256	2106938.2655	46	394827.7196	2106806.3683	56	395280.0915	2105893.4289	66	395565.1030	2104790.2215				
7	395522.8577	2105029.8944	17	395352.0895	2105691.7480	27	395100.1875	2106485.3662	37	394671.5074	2106981.4131	47	394984.7210	2106737.3373	57	395311.4397	2105771.5492	67	395591.9146	2104724.7003				
8	395511.5057	2105073.3772	18	395322.6955	2105806.0836	28	395011.2794	2106623.4168	38	394633.3176	2107018.0161	48	394932.7556	2106893.7813	58	395338.0471	2105668.0529							
9	395500.1533	2105116.8500	19	395300.3562	2105892.8935	29	394983.6177	2106680.3125	39	394576.2432	2107072.7190	49	394996.2160	2106812.4862	59	395367.4765	2105553.5792							
10	395488.2627	2105162.5494	20	395271.7520	2106003.3297	30	394962.3127	2106687.1756	40	394528.8157	2107118.1567	50	395093.9937	2106476.1685	60	395408.1793	2105394.0167							

**OWNER CONTACT**  
COLLETON COUNTY  
CONTACT: I/R JARED FRALIX, P.E., COUNTY ENGINEER  
113 MAPLE T. WILLIS BOULEVARD  
WALTONVILLE, SC 29488  
TELEPHONE: (843) 782.3104  
E-MAIL: JFRALIX@COLLETONCOUNTY.ORG

**REFERENCES**  
1. REFERENCE IS MADE TO TOPOGRAPHIC SURVEY BY ATLAS SURVEYING, INC. MARCH 23, 2015

- GENERAL DEMOLITION NOTES:**
- CONTRACTOR SHALL CONSTRUCT ALL TEMPORARY EROSION CONTROL SYSTEMS AS SHOWN ON DETAILS DIRECTED BY THE ENGINEER OR THE S.C.D.H.E.C. INSPECTOR TO PROTECT ADJACENT PROPERTIES AND WATER RESOURCES FROM EROSION AND SEDIMENTATION.
  - VARIATIONS TO CONDITIONS OR DISCREPANCY IN ACTUAL CONDITIONS AS THEY APPLY TO THE DEMOLITION OR SITE DEVELOPMENT WORK ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER OR OWNER'S REPRESENTATIVE AND ENGINEER PRIOR TO THE COMMENCEMENT OF LAND DISTURBANCE.
  - CONTRACTOR SHALL LOCATE AND IDENTIFY ALL EXISTING UTILITIES THAT ARE TO REMAIN AND PROTECT THEM FROM DAMAGE.
  - CONTRACTOR TO CONDUCT ALL DEMOLITION OPERATIONS WITH MINIMUM INTERFERENCE TO PUBLIC OR PRIVATE ACCESSES AND FACILITIES.
  - PROTECT BENCH MARKS, PROPERTY CORNERS AND ALL OTHER SURVEY MONUMENTS FROM DAMAGE OR DISPLACEMENT. IF A MARKER NEEDS TO BE REMOVED, IT SHALL BE REFERENCED BY A LICENSED LAND SURVEYOR AND REPLACED.
  - DEPRESSIONS AND VOID AREAS CAUSED BY DEMOLITION WORK ARE TO BE FILLED TO SUBGRADE ELEVATION TO AVOID WATER PONDING.
  - ANY REMAINING TREE STUMPS AS A RESULT OF THE PROPOSED DEMOLITION SHALL BE REMOVED AND THE HOLES FILLED. FILLING STUMPS/HOLES SHALL BE INCIDENTAL TO DEMOLITION.
  - ALL CONSTRUCTION DEMOLITION DEBRIS SHALL BE DISPOSED OF OFFSITE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
  - LOCATIONS OF ALL EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS PRIOR TO BEGINNING DISTURBANCE.
  - CONTRACTOR IS ADVISED TO VISIT THE SITE AND MAKE HIMSELF FAMILIAR WITH THE EXISTING SITE CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.

**CLEARING AND GRUBBING**

AREA	STATION	APPROXIMATE ACERAGE
A	100+00 TO 105+50	± 0.24
B	107+03 TO 110+00	± 0.13
C	110+00 TO 118+38	± 0.38
D	120+00 TO 127+00	± 0.46
E	10+00 TO 17+72	± 0.30
TOTAL		± 1.51

**WARNING:**  
UNDERGROUND GAS UTILITIES LOCATIONS HAVE NOT BEEN VERIFIED. CONTRACTOR SHALL VERIFY LOCATIONS PRIOR TO CONSTRUCTION. COORDINATE WITH LOCAL GAS PROVIDER AND PAY ALL FEES.

**811**

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

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50 25 0 25 50  
(IN FEET)

REVISION DATE

NO. 1	DATE	BY	APPROVED

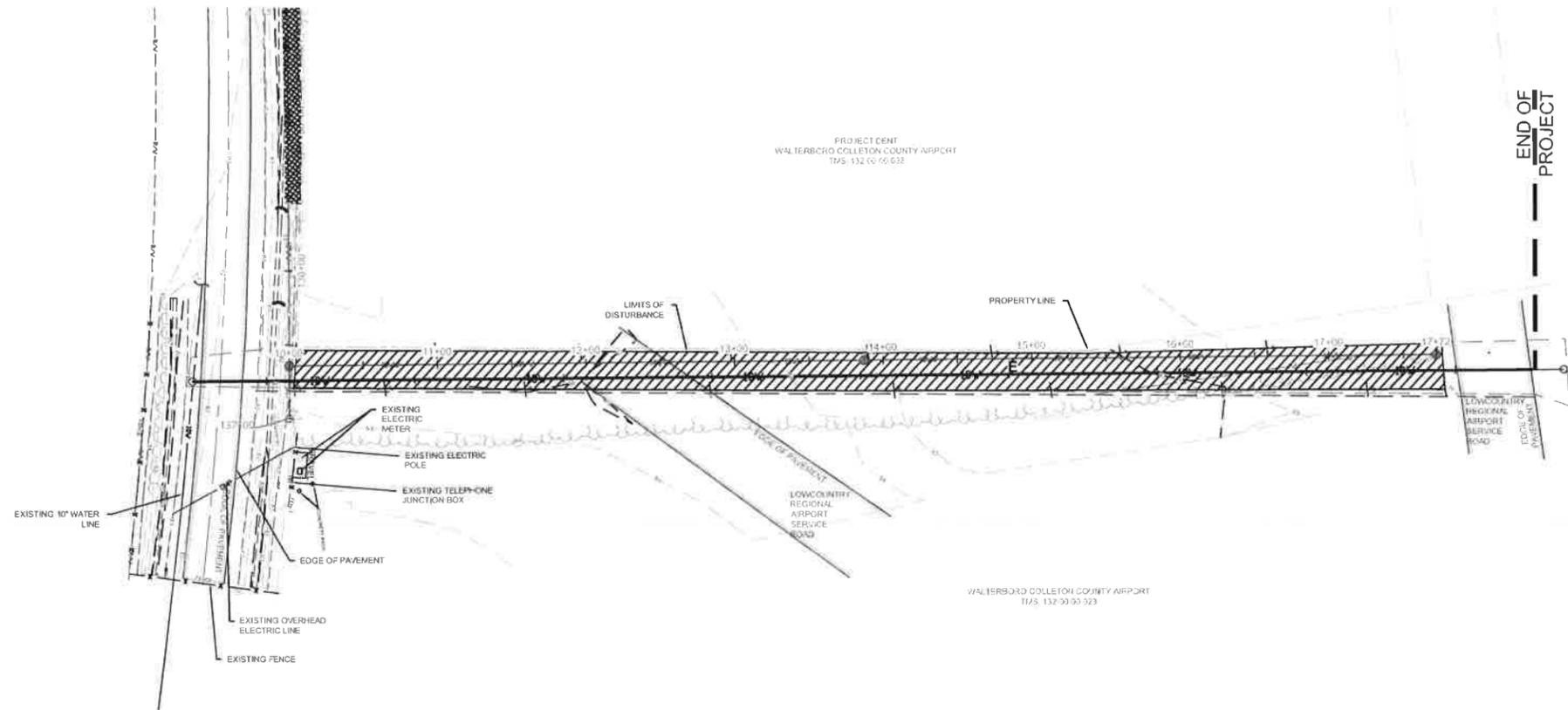
DATE: MAY 2015

**ALLIANCE CONSULTING ENGINEERS**  
Alliance Consulting Engineers, Inc.  
23 Hampton Park Dr., Suite 204, Bluffton, South Carolina 29910  
Phone: (843) 757-9959 • Fax: (843) 757-6659

ROBERTSON BOULEVARD  
EXISTING CONDITIONS AND  
DEMOLITION  
STA: 120+00 TO 137+00

WATER AND WASTEWATER  
IMPROVEMENTS TO THE  
PROJECT SITE AT THE  
LOWCOUNTRY  
REGIONAL AIRPORT  
FOR  
COLLETON COUNTY,  
SOUTH CAROLINA.

FILE NAME: C2-J.dwg  
SHEET 02 OF 26  
PROJECT NO. 14168.0015  
DWG NO. 01913-017



**PROJECT DENT  
EXISTING CONDITIONS AND DEMOLITION  
(STATION 10+00 TO 17+72)  
SCALE: HORIZONTAL 1" = 50'**

CLEARING AND GRUBBING STAKING POINTS			CLEARING AND GRUBBING STAKING POINTS		
Point #	Northing	Easting	Point #	Northing	Easting
68	393797.9216	2107761.9027	78	394214.5302	2108349.9812
69	393854.5349	2107835.5210	79	394155.2562	2108272.8974
70	393913.2529	2107913.9134	80	394084.8526	2108181.0399
71	393974.4327	2107994.5506	81	394020.6116	2108097.7966
72	394030.2693	2108068.1448	82	393945.8570	2107999.3801
73	394080.7247	2108134.6472	83	393870.6823	2107900.1378
74	394133.4711	2108203.1624	84	393813.4688	2107824.6071
75	394195.5228	2108279.7532	85	393776.4357	2107775.7176
76	394269.5950	2108371.1738			
77	394246.5633	2108391.6391			

CLEARING AND GRUBBING		
AREA	STATION	APPROXIMATE ACERAGE
A	100+00 TO 105+50	± 0.24
B	107+03 TO 110+00	± 0.13
C	110+00 TO 118+38	± 0.38
D	120+00 TO 127+00	± 0.46
E	10+00 TO 17+72	± 0.30
TOTAL		± 1.51

**OWNER CONTACT:**  
COLLETON COUNTY  
CONTACT: MR. JARED HALL, P.E., COUNTY ENGINEER  
113 MARBLE 1, WALLIS SCULLEY AVENUE  
WALTERBORO, SC 29989  
TELEPHONE: (843) 757-1104  
E-MAIL: JHALL@COLLETONCOUNTY.ORG

**REFERENCES:**  
1. REFERENCE IS MADE TO TOPOGRAPHIC SURVEY BY ATLAS SURVEYING, INC. MARCH 23, 2015

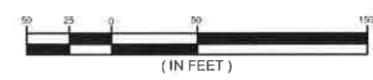
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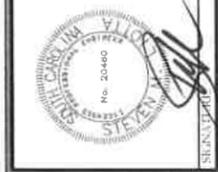


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Call before you dig.**  
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REVISION	DATE



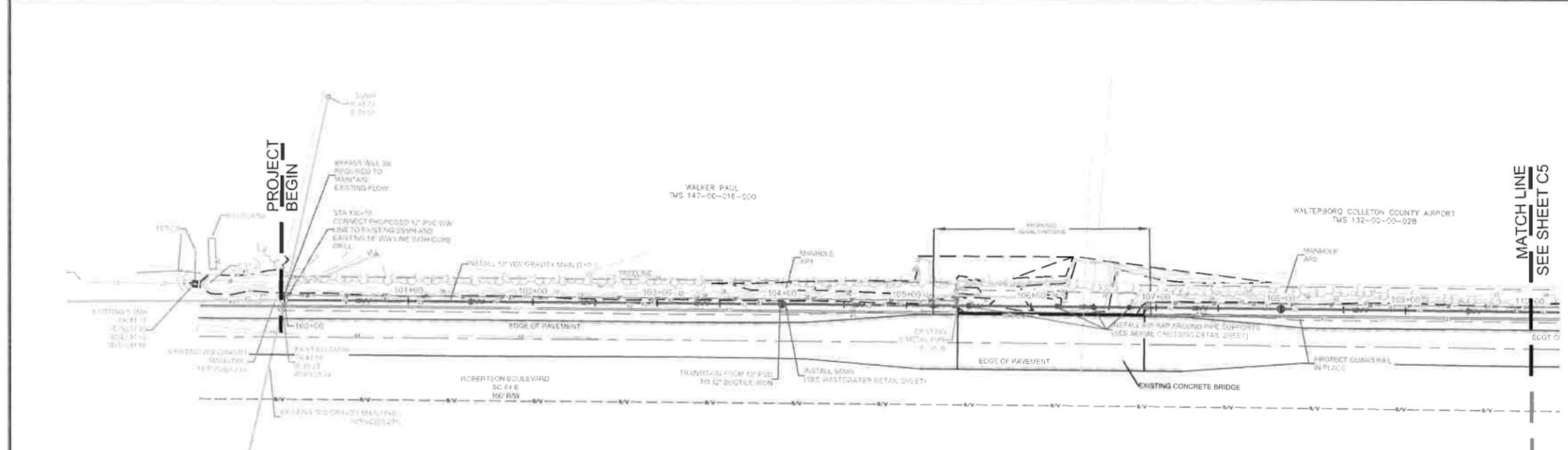
**ALLIANCE CONSULTING ENGINEERS**  
Alliance Consulting Engineers, Inc.  
23 Plantation Park Dr., Suite 204, Bluffton, South Carolina 29910  
Phone: 843-757-5959 • Fax: 843-757-6639

PROJECT DENT  
EXISTING CONDITIONS AND  
DEMOLITION  
STATION 10+00 TO 17+72

WATER AND WASTEWATER  
IMPROVEMENTS TO THE  
PROJECT DENT SITE AT THE  
LOWCOUNTRY  
REGIONAL AIRPORT  
FOR  
COLLETON COUNTY,  
SOUTH CAROLINA

FILE NAME: C3.dwg	SHEET 3
REFERENCE FILE: BASE.dwg	OF 20
PROJECT NO. 14168-0015	
DWG NO. 0015-D17	

ALLIANCE CONSULTING ENGINEERS, INC. IS AN EQUAL OPPORTUNITY EMPLOYER. MINORITY AND FEMALE OWNED AND CONTROLLED BUSINESS ENTERPRISE. ALLIANCE CONSULTING ENGINEERS, INC. IS AN EQUAL OPPORTUNITY EMPLOYER. MINORITY AND FEMALE OWNED AND CONTROLLED BUSINESS ENTERPRISE.



**ROBERTSON BOULEVARD  
 PROPOSED 12" WASTEWATER GRAVITY LINE PLAN**  
 (STATION 100+00 TO 110+00)  
 SCALE: HORIZONTAL 1" = 50'

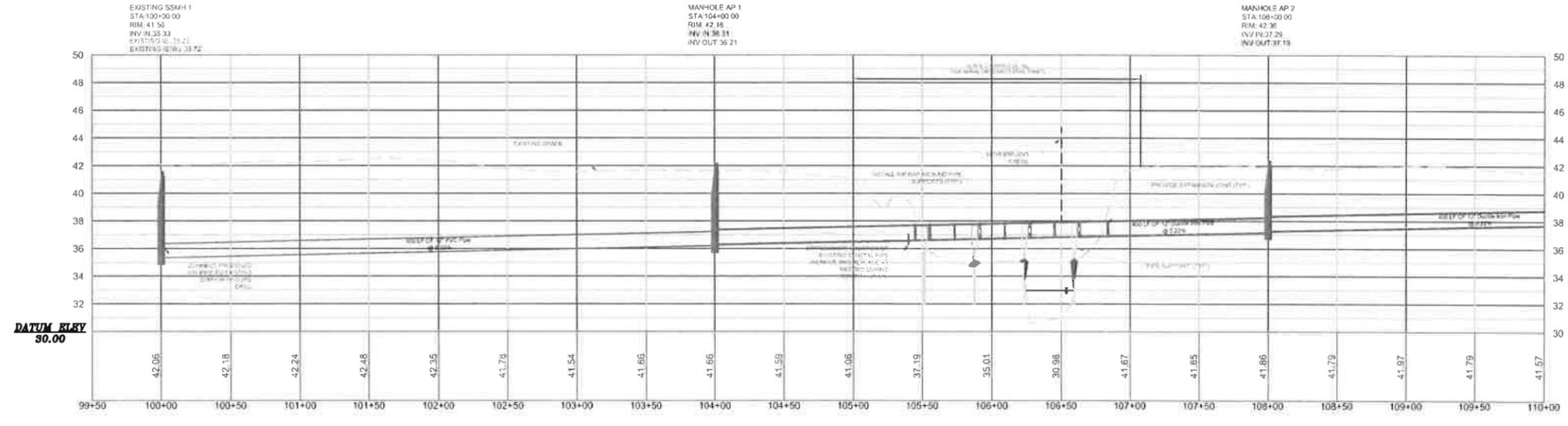
MH #	Northing	Easting
AP1	395485.6689	2105112.9638
AP2	395385.8465	2105500.4221
AP3	395285.9432	2105887.7510
AP4	395207.2084	2105177.2348
AP5	395106.3053	2106459.5845
AP6	394998.5357	2106628.0851
AP7	394946.8399	2105803.9399
AP8	394559.5188	2107082.2320
AP9	394259.0560	2107357.2438
AP10	394049.0966	2107561.0090
AP11	393783.5022	2107766.1992
AP12	394021.7442	2108071.3960
AP13	394258.7851	2108374.9989

**OWNER CONTACT**  
 COLLETON COUNTY  
 CONTACT: IFA JARED FRALK, P.E. COUNTY ENGINEER  
 113 MAPLE T. WALKER BOULEVARD  
 WALTERBORO, SC 29488  
 TELEPHONE: (843) 752-3174  
 E-MAIL: JFRALK@COLLETONCOUNTY.ORG

**REFERENCES:**  
 1. REFERENCE IS MADE TO TOPOGRAPHIC SURVEY BY ATLAS SURVEYING, INC. MARCH 23, 2015

**NOTES:**  
 1. ALL SANITARY SEWER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE 19 STATE STANDARDS, SCDHEC, AND THE TECHNICAL SPECIFICATIONS.  
 2. PRIOR TO SUBMITTING MANHOLE SHOP DRAWINGS, CONTRACTOR SHALL FIELD VERIFY SIZE, DEPTH AND DIRECTION OF ALL WASTEWATER LINES CONNECTED TO THE EXISTING MANHOLES TO BE REPLACED.  
 3. LOCATION OF ALL EXISTING UTILITIES IS APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION.  
 4. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.  
 5. ACCURATE TRENCH SHEETING AND/OR SHORING SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED BY OSHA.  
 6. REQUIREMENTS FOR PROPER TRENCH AND BACKFILL OPERATIONS MUST MEET OR EXCEED 10 STATE STANDARDS, SCDHEC, AND OSHA STANDARDS.  
 7. EXCAVATION SUPPORT AND PROTECTION OF EXISTING UTILITIES SHALL BE AS DESCRIBED IN TECHNICAL SPECIFICATION 31.06.00.  
 8. AFTER COMPLETING EACH SECTION OF THE SEWER, ALL DEBRIS AND CONSTRUCTION MATERIALS SHALL BE REMOVED FROM THE WORK SITE AS WELL AS SMOOTHLY GRADING THE DISTURBED GROUND SURFACE ON THE PROJECT SITE.

**GRAVITY SEWER NOTES:**  
 1. EXISTING WASTEWATER LINES, MANHOLES, PAVING, AND APPURTENANCES NOTED TO BE REMOVED AND REPLACED SHALL BE REMOVED AND DISPOSED OF IN A LEGAL MANNER AS DESCRIBED IN THE TECHNICAL SPECIFICATIONS.  
 2. LASERS SHALL BE USED TO INSTALL ALL WASTEWATER LINES.  
 3. GRAVITY SEWERS WITH 5 TO 14 FOOT OF COVER SHALL BE PVC ASTM D 3034 SDR 35. GRAVITY SEWER MAINS WITH LESS THAN 5 FEET OF COVER SHALL BE DUCTILE IRON PIPE CLASS 52. GRAVITY SEWER MAINS WITH GREATER THAN 14 FEET OF COVER SHALL BE DUCTILE IRON PIPE CLASS 52 OR SDR 26 PVC. IF DUCTILE IRON PIPE IS USED FOR SEWER, THE PIPE INTERIOR SHALL BE EPDM COATED (NOT CEMENT LINED).  
 4. ALL REQUIREMENTS FOR INSTALLATION OF GRAVITY SEWER (TECHNICAL SPECIFICATION 31.06.11) ARE TO BE UNDERSTOOD BY THE CONTRACTOR AND FULLY IMPLEMENTED IN THE ENTIRE WASTEWATER PROJECT.  
 5. ALL REQUIREMENTS FOR TESTING OF GRAVITY SEWERS (TECHNICAL SPECIFICATION 31.06.13) ARE TO BE UNDERSTOOD BY THE CONTRACTOR AND FULLY IMPLEMENTED IN THE ENTIRE WASTEWATER PROJECT.  
 6. ALL SEWER LATERALS SHALL INCLUDE 3" HIGH WIPES OF THE SAME SIZE AND MATERIAL AS THE SEWER MAINS.  
 7. TWO WAY DIRECTIONAL CLEANOUT TEES WILL BE REQUIRED ON ALL LATERALS. CLEANOUTS SHOULD BE LOCATED AT THE PROPERTY LINE OR EASEMENT LINE IN MOST CASES AND SHALL BE SDR 35.  
 8. ALL SEWER APPURTENANCES ARE REQUIRED TO HAVE WATER-TIGHT FITTINGS.  
 9. ALL REQUIREMENTS WITH FLEXIBLE COUPLINGS AND SADDLE TEES (PARTS 2.01 AND 2.03 IN TECHNICAL SPECIFICATION 31.06.11) ARE TO BE FULLY UNDERSTOOD AND IMPLEMENTED.  
 10. PRECAST MANHOLES SHALL MEET THE REQUIREMENTS OF ASTM C 478. JOINTS SHALL BE RUBBER GASKETED AND GROUTED BOTH INSIDE AND OUTSIDE OF THE MANHOLE. ALL LIFT HOLES CUT THROUGH THE WALLS OF THE MANHOLE SHALL BE GROUTED FROM THE INSIDE AND OUTSIDE OF THE MANHOLE TO BE WATER-TIGHT. ADDITIONAL WATERPROOFING MAY BE REQUIRED (TECHNICAL SPECIFICATION 03.4E.10).  
 11. ALL SEWER PIPE SHALL BE INSTALLED WITH A TRACER WIRE (TECHNICAL SPECIFICATION 31.05.27).  
 12. ALL PRECAST MANHOLES SHALL BE CORDED AS NEEDED TO RECONNECT EXISTING SEWER LATERALS.



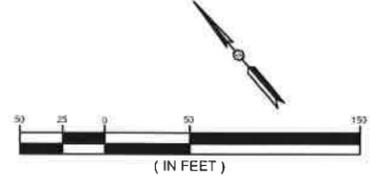
**ROBERTSON BOULEVARD  
 PROPOSED 12" WASTEWATER GRAVITY LINE PROFILE**  
 (STATION 100+00 TO 110+00)  
 SCALE: HORIZONTAL 1" = 50'; VERTICAL 1" = 5'

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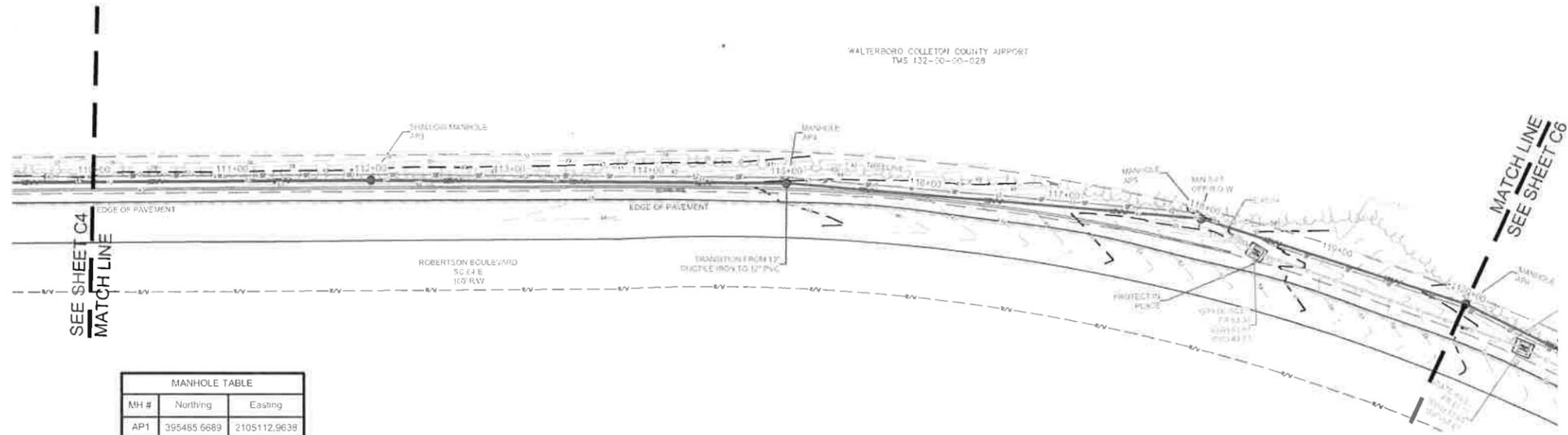
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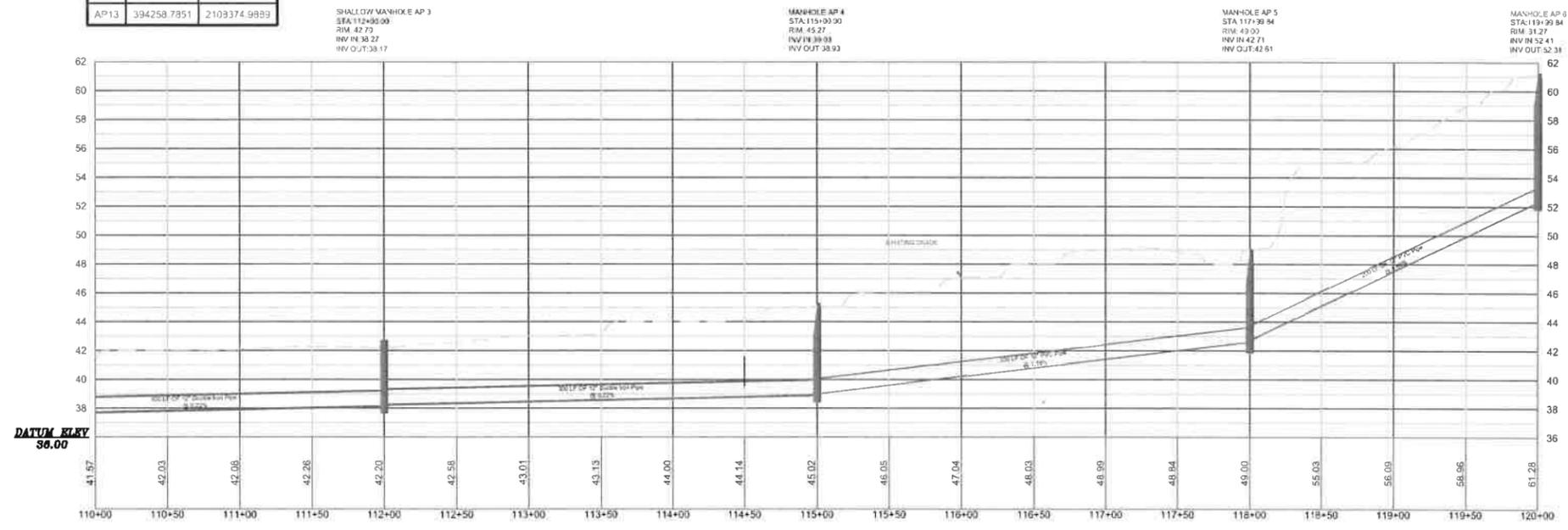
<b>REVISION</b> DATE
APPROVAL:
CONTRACTOR:
DESIGNER:
CHECKER:
DATE:
ALLIANCE CONSULTING ENGINEERS, INC. 23 Plantation Park Dr., Suite 200, Bluffton, South Carolina 29910 Phone: (843) 757-5099 • Fax: (843) 757-6659
PROJECT: ROBERTSON BOULEVARD WASTEWATER PLAN AND PROFILE FOR STA: 100+00 TO 110+00
SHEET: 20 OF 20
DWG NO. 01.013-017

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MANHOLE TABLE		
MH #	Northing	Easting
AP1	395485.6689	2105112.9639
AP2	395385.8465	2105500.4221
AP3	395285.9432	2105887.7510
AP4	395207.2084	2106177.2348
AP5	395108.3053	2108459.5845
AP6	394998.5357	2106628.0551
AP7	394948.3399	2105903.9399
AP8	394559.5186	2107082.2320
AP9	394259.0560	2107357.2434
AP10	394049.0966	2107561.0060
AP11	393783.5022	2107766.1992
AP12	394021.7442	2109071.3960
AP13	394258.7851	2109374.9889

**ROBERTSON BOULEVARD**  
**PROPOSED 12" WASTEWATER GRAVITY LINE PLAN**  
 (STATION 110+00 TO 120+00)  
 SCALE: HORIZONTAL 1" = 50'



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**PROPOSED 12" WASTEWATER GRAVITY LINE PROFILE**  
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**OWNER CONTACT**  
 COLLETON COUNTY  
 CONTACT: FR. JAMES FRALIX, P.E., COUNTY ENGINEER  
 113 WELLS F. WALLS BOULEVARD  
 WALTERSBORO, SC 29466  
 TELEPHONE: (843) 723-3104  
 E-MAIL: JFRALIX@COLLETONCOUNTY.ORG

**REFERENCES:**  
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- NOTES**
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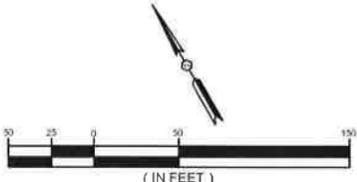
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- EXISTING WASTEWATER LINE, MANHOLES, PAVING AND APPURTENANCES NOTED TO BE REMOVED AND REPLACED SHALL BE REMOVED AND DISPOSED OF IN A LEGAL MANNER AS DESCRIBED IN THE TECHNICAL SPECIFICATIONS.
  - LASERS SHALL BE USED TO INSTALL ALL WASTEWATER LINES.
  - GRAVITY SEWERS WITH 5 TO 14 FOOT OF COVER SHALL BE PVC ASTM D 3034 SDR 25. GRAVITY SEWER MAINS WITH LESS THAN 5 FEET OF COVER SHALL BE DUCTILE IRON PIPE CLASS 52. GRAVITY SEWER MAINS WITH GREATER THAN 14 FEET OF COVER SHALL BE DUCTILE IRON PIPE CLASS 52 OR SDR 26 PVC IF DUCTILE IRON PIPE IS USED FOR SEWER, THE PIPE INTERIOR SHALL BE EPOXY COATED (NOT CEMENT LINED).
  - ALL REQUIREMENTS FOR INSTALLATION OF GRAVITY SEWER (TECHNICAL SPECIFICATION 33.31.00.11) ARE TO BE UNDERSTOOD BY THE CONTRACTOR AND FULLY IMPLEMENTED IN THE ENTIRE WASTEWATER PROJECT.
  - ALL REQUIREMENTS FOR SEWER LATERALS (TECHNICAL SPECIFICATION 33.31.00.15) ARE TO BE UNDERSTOOD BY THE CONTRACTOR AND FULLY IMPLEMENTED IN THE ENTIRE WASTEWATER PROJECT.
  - ALL REQUIREMENTS FOR TESTING OF GRAVITY SEWERS (TECHNICAL SPECIFICATION 33.31.00.13) ARE TO BE UNDERSTOOD BY THE CONTRACTOR AND FULLY IMPLEMENTED IN THE ENTIRE WASTEWATER PROJECT.
  - ALL SEWER LATERALS SHALL INCLUDE 5 INCH WYES OF THE SAME SIZE AND MATERIAL AS THE SEWER MAINS.
  - TWO-WAY DIRECTIONAL CLEANOUT TEES WILL BE REQUIRED ON ALL LATERALS. CLEANOUTS SHOULD BE LOCATED AT THE PROPERTY LINE OR EASEMENT LINE IN MOST CASES AND SHALL BE 30" x 30".
  - ALL SEWER APPURTENANCES ARE REQUIRED TO HAVE WATER-TIGHT FITTINGS.
  - ALL REQUIREMENTS WITH FLEXIBLE COUPLINGS AND SPOOLE TEES (PARTS 2.02 AND 2.03 IN TECHNICAL SPECIFICATION 33.31.00.15) ARE TO BE FULLY UNDERSTOOD AND IMPLEMENTED.
  - PIPE CAST MANHOLES SHALL MEET THE REQUIREMENTS OF ASTM C 475. JOINTS SHALL BE RUBBER GASKETED AND GROUTED BOTH INSIDE AND OUTSIDE OF THE MANHOLE. ALL LIGHT HOLES CUT THROUGH THE WALLS OF THE MANHOLE SHALL BE GROUTED FROM THE INSIDE AND OUTSIDE OF THE MANHOLE TO BE WATER-TIGHT. ADDITIONAL WATERPROOFING MAY BE REQUIRED (TECHNICAL SPECIFICATION 43.48.10).
  - ALL SEWER PIPE SHALL BE INSTALLED WITH A TRACER WIRE (TECHNICAL SPECIFICATION 33.31.00.27).
  - ALL PRECAST MANHOLES SHALL BE CURED AS NEEDED TO RECONNECT EXISTING SEWER LATERALS.

**WARNING:**  
 UNDERGROUND GAS UTILITIES LOCATIONS HAVE NOT BEEN VERIFIED. CONTRACTOR SHALL VERIFY LOCATIONS PRIOR TO CONSTRUCTION. COORDINATE WITH LOCAL GAS PROVIDER AND PAY ALL FEES.



**Know what's below.**  
**Call before you dig.**  
 CAUTION-NOTE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. SC LAW REQUIRES THE CONTRACTOR TO CALL THE UTILITY PROTECTION CENTER AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE LOCATION OF ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



<b>REVISIONS</b> DATE	
APPROVALS DESIGNED: [Signature] DRAWN: [Signature] CHECKED: [Signature] IN CHARGE: [Signature]	DATE 12/15/2015
<b>ROBERTSON BOULEVARD</b> <b>WASTEWATER</b> <b>PLAN AND PROFILE</b> FOR <b>STA: 110+00 TO 120+00</b>	
SCALE: 1" = 50' DATE: 12/15/2015	
<b>WATER AND WASTEWATER</b> <b>IMPROVEMENTS TO THE</b> <b>PROJECT SITE AT THE</b> <b>LOWCOUNTRY</b> <b>REGIONAL AIRPORT</b> <b>FOR</b> <b>COLLETON COUNTY,</b> <b>SOUTH CAROLINA</b>	
FILE NAME: CS.dwg	SHEET 01
PROJECT NO: 1118-0015	OF 20
DWG NO. 01.013-017	

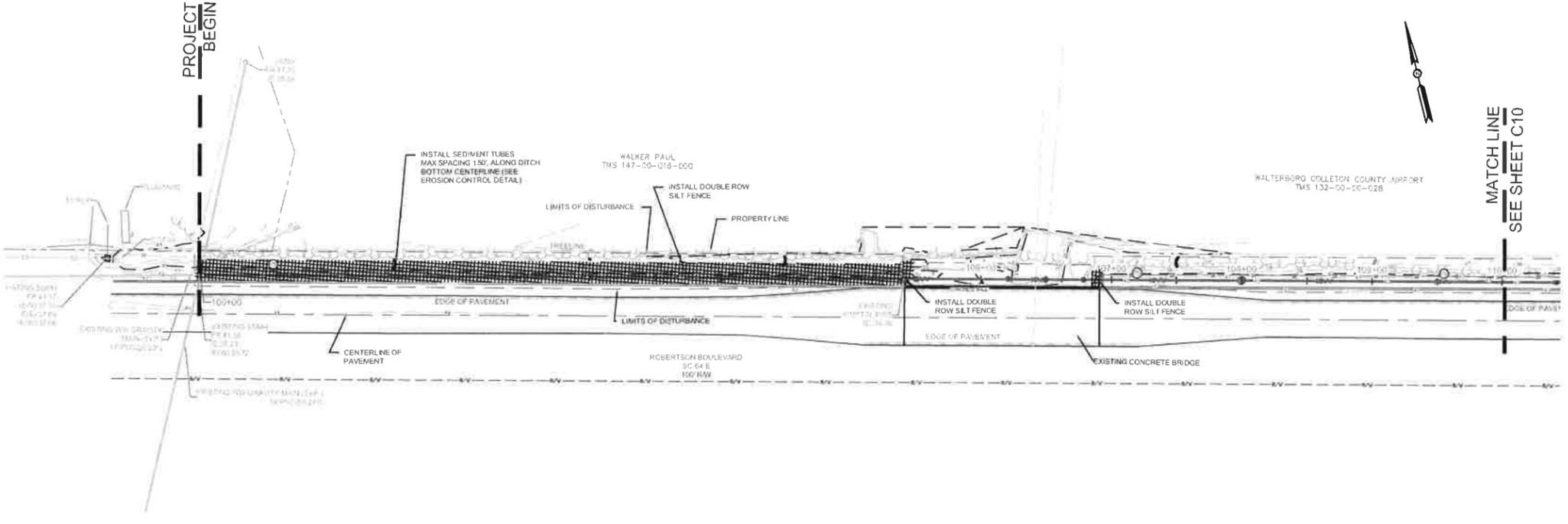




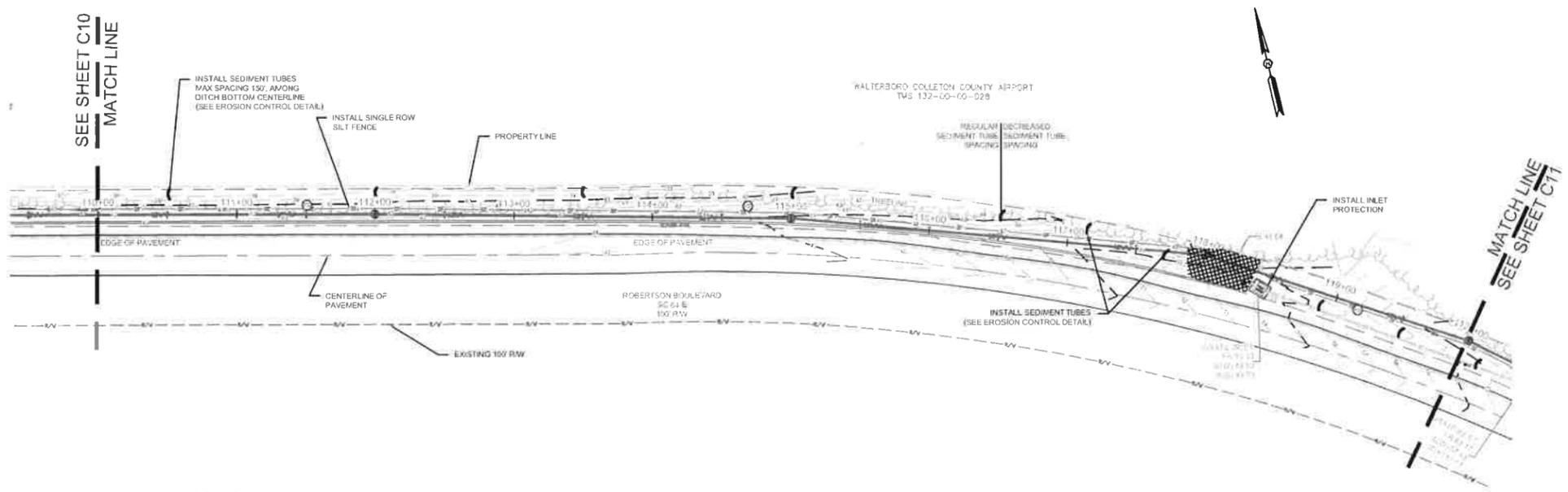




May 28, 2015 11:34:42 AM: Project: Robertson Boulevard - Erosion Control Construction Plan (C10) - EROSION CONTROL PLAN  
 May 28, 2015 11:34:42 AM: Project: Robertson Boulevard - Erosion Control Construction Plan (C10) - EROSION CONTROL PLAN



**ROBERTSON BOULEVARD  
 EROSION CONTROL PLAN**  
 (STATION 100+00 TO 110+00)  
 SCALE: HORIZONTAL 1" = 50'



**ROBERTSON BOULEVARD  
 EROSION CONTROL PLAN**  
 (STATION 110+00 TO 120+00)  
 SCALE: HORIZONTAL 1" = 50'

EROSION AND SEDIMENT CONTROL LEGEND	
	PROPOSED CONSTRUCTION ENTRANCE
	PROPOSED INLET PROTECTION
	PROPOSED SILT FENCE
	PROPOSED SEDIMENT TUBE
	PERMANENT SEEDING
	PROPOSED TURF MATTING

<b>OWNER CONTACT</b>	
COLLETON COUNTY	
CONTACT: MR. JAROLD FRALIX, P.E., COUNTY ENGINEER	
113 MABLE T. WILLIS BOULEVARD	
WALTERSBORO, SC 29482	
TELEPHONE: (843) 782-3104	
E-MAIL: JFRALIX@COLLETONCOUNTY.ORG	

<b>REFERENCES</b>	
1. REFERENCE IS MADE TO TOPOGRAPHIC SURVEY BY ATLAS SURVEYING, INC. MARCH 23, 2015.	

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND ADJACENT PROPERTY OWNERS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND ADJACENT PROPERTY OWNERS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND ADJACENT PROPERTY OWNERS PRIOR TO THE START OF CONSTRUCTION.

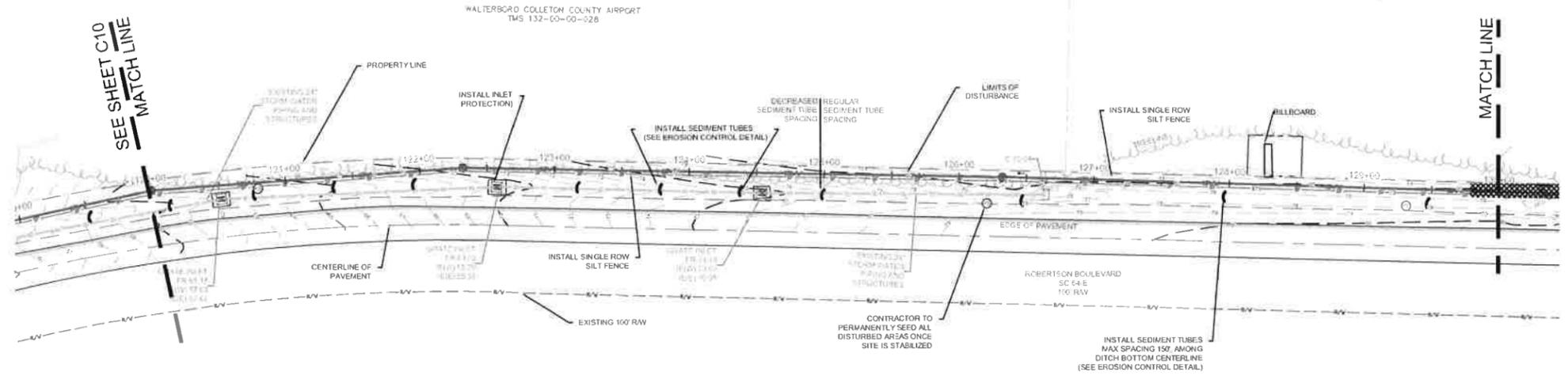
2. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND ADJACENT PROPERTY OWNERS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND ADJACENT PROPERTY OWNERS PRIOR TO THE START OF CONSTRUCTION.

FILE NAME:	C10.dwg
REVISION:	1
PROJECT NO.:	14163-005
DWG NO.:	01913-017

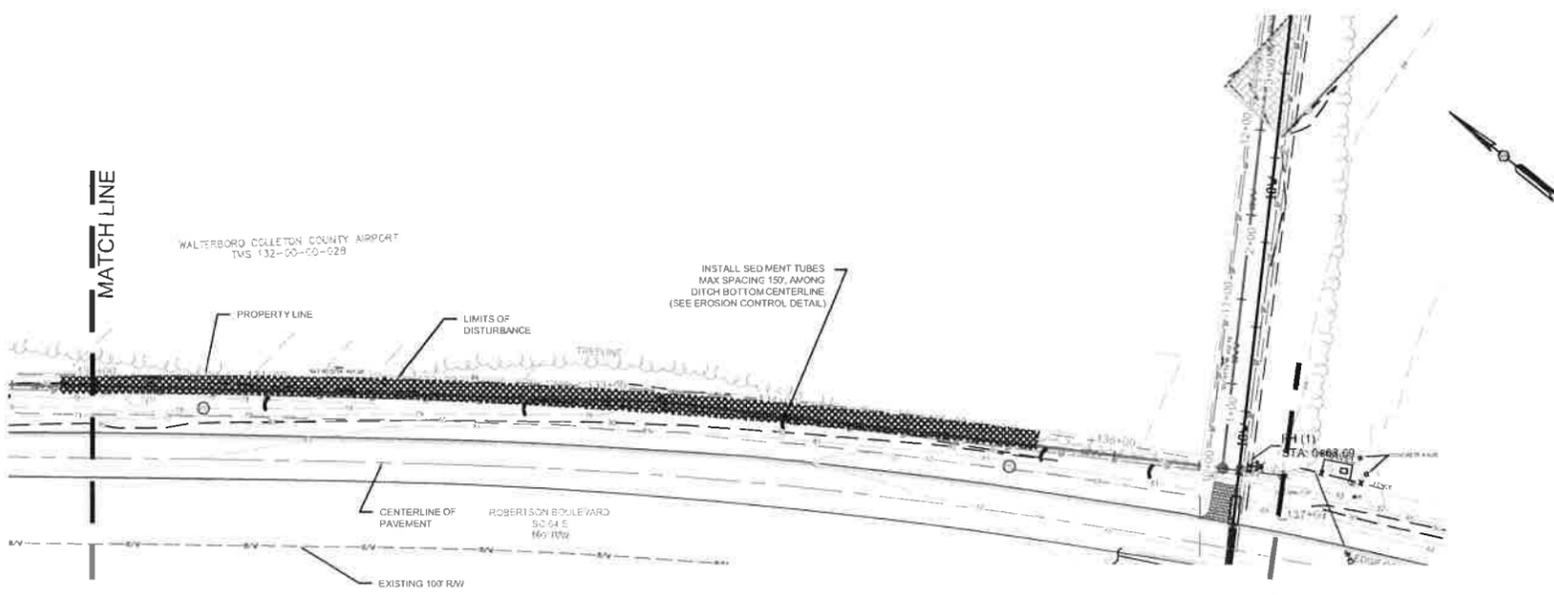
<b>ALLIANCE CONSULTING ENGINEERS</b> Alliance Consulting Engineers, Inc. 23 Plantation Park Dr., Suite 204, Burlington, South Carolina 29910 Phone: (843) 757-9059 • Fax: (843) 757-0659	
ROBERTSON BOULEVARD EROSION CONTROL PLAN STA: 100+00 TO 120+00	
WATER AND WASTEWATER IMPROVEMENTS TO THE PROJECT DENT SITE AT THE LOWCOUNTRY REGIONAL AIRPORT FOR COLLETON COUNTY, SOUTH CAROLINA	
PROJECT: WATER AND WASTEWATER IMPROVEMENTS TO THE PROJECT DENT SITE AT THE LOWCOUNTRY REGIONAL AIRPORT FOR COLLETON COUNTY, SOUTH CAROLINA	SHEET: C10 OF 20
DATE: MAY 2015	SCALE: 1" = 50'



File: 26\_14111112.dwg, Plot: 26\_14111112.dwg, Date: 11/11/2015 11:11:11 AM, Plotter: HP DesignJet 2450, Plot Style: 26\_14111112.ctb, Scale: 1:1, Sheet: 01 of 01, Project: 1411680015, User: Administrator

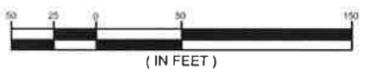


**ROBERTSON BOULEVARD  
 EROSION CONTROL PLAN**  
 (STATION 120+00 TO 130+00)  
 SCALE: HORIZONTAL 1" = 50'



**ROBERTSON BOULEVARD  
 EROSION CONTROL PLAN**  
 (STATION 130+00 TO 137+00)  
 SCALE: HORIZONTAL 1" = 50'

EROSION AND SEDIMENT CONTROL LEGEND	
	PROPOSED CONSTRUCTION ENTRANCE
	PROPOSED INLET PROTECTION
	PROPOSED SILT FENCE
	PROPOSED SEDIMENT TUBE
	PERMANENT SEEDING
	PROPOSED TURF MATTING



**OWNER CONTACT**  
 COLLETON COUNTY  
 CONTACT: MR. JARED FRALIX, PE, COUNTY ENGINEER  
 113 MAPLE T. WILLS BOULEVARD  
 WALTERSBORO, SC 29188  
 TELEPHONE: (803) 763-3104  
 E-MAIL: JFRALIX@COLLETONCOUNTY.ORG

**REFERENCES:**  
 1. REFERENCE IS MADE TO TOPOGRAPHIC SURVEY BY ATLAS SURVEYING, INC. MARCH 23, 2015

<b>ALLIANCE CONSULTING ENGINEERS, INC.</b> 23 Pleasanton Blvd., Suite 101A, Raleigh, NC 27609 Phone: (919) 577-9959 • Fax: (919) 577-4659	
ROBERTSON BOULEVARD EROSION CONTROL PLAN STA: 120+00 TO 137+00	
WATER AND WASTEWATER IMPROVEMENTS TO THE PROJECT DENT SITE AT THE LOWCOUNTRY REGIONAL AIRPORT FOR COLLETON COUNTY, SOUTH CAROLINA	
FILE NAME: C11.dwg	SHEET 01
PROJECT NO: 141680015	OF 01
DWG NO. 01.913-D17	





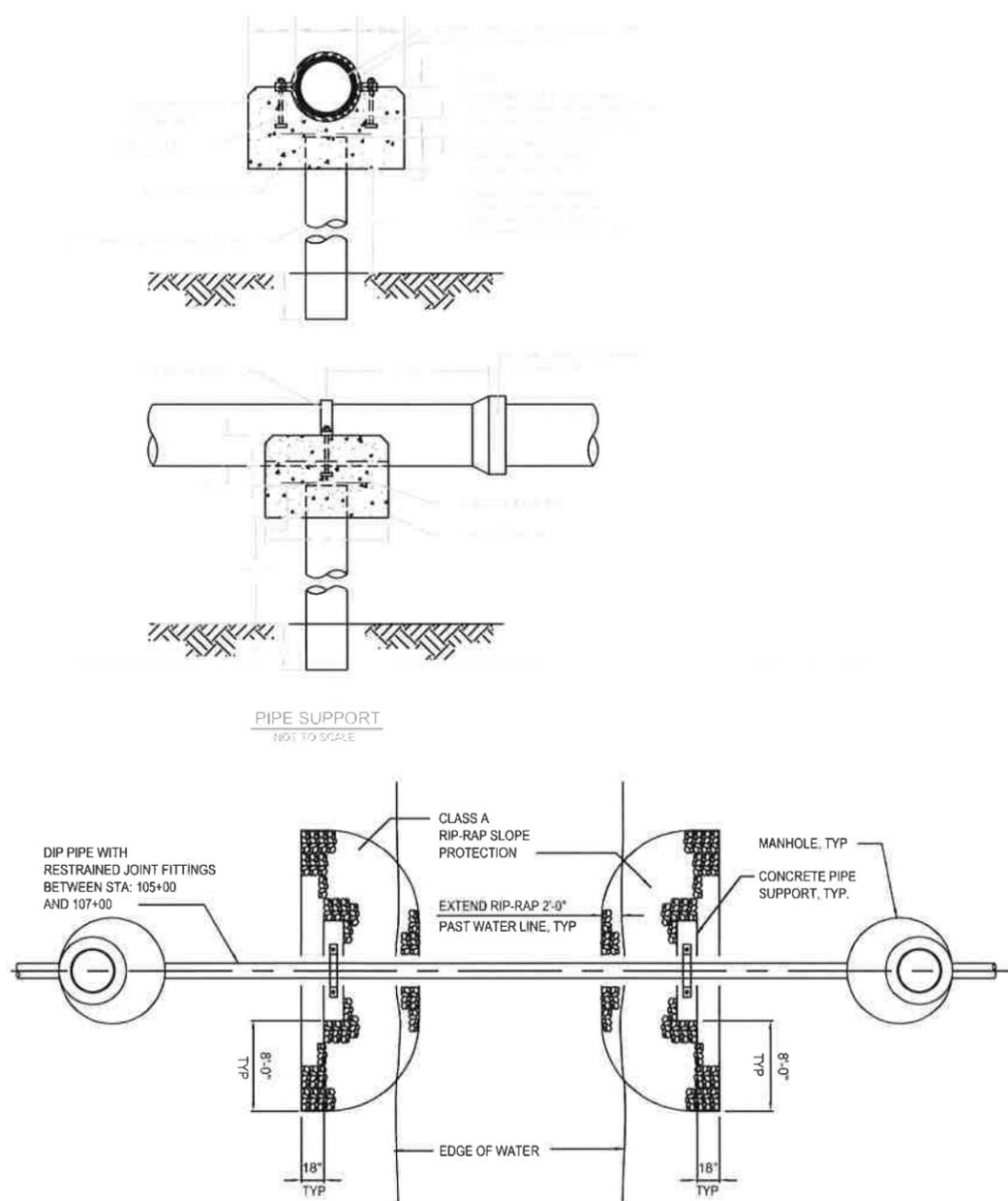






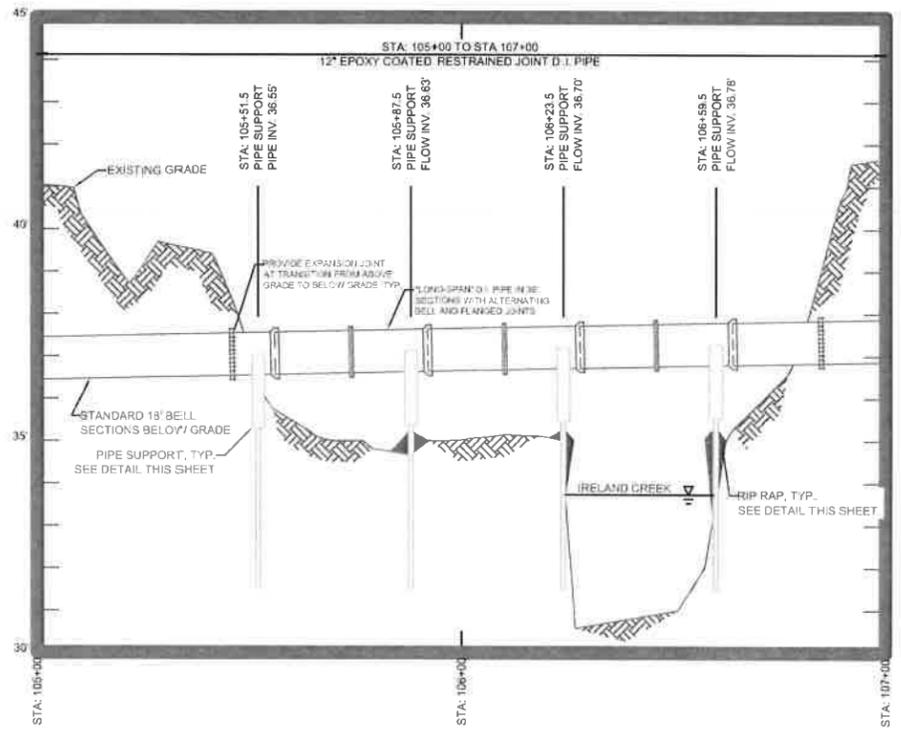
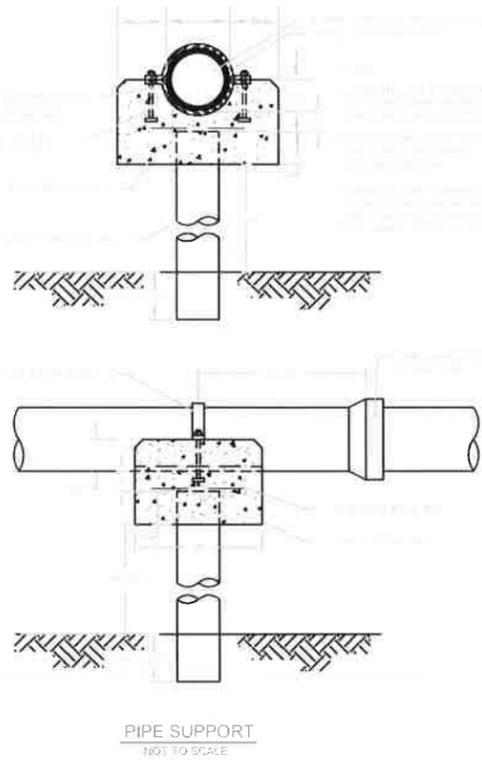
THE DEVELOPER, THE STATE OF SOUTH CAROLINA, HAS REVIEWED THIS DRAWING FOR CONFORMANCE WITH THE REQUIREMENTS OF THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION AND HAS APPROVED IT FOR CONSTRUCTION. THIS DRAWING IS THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS, INC. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF ALLIANCE CONSULTING ENGINEERS, INC.

ALLIANCE CONSULTING ENGINEERS, INC. PROJECT NO. 14168-0015, CIVIL DIVISION, 1111 BROADWAY, SUITE 2000, COLUMBIA, SOUTH CAROLINA 29201. DATE: 05/15/2018.



- NOTES:
1. RIP RAP FOR SLOPE PROTECTION SHALL BE CLASS A RIP RAP IN ACCORDANCE WITH SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
  2. RIP RAP SHALL BE PLACED IN GENERAL ACCORDANCE WITH DRAWING 804-105-00 OF THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION'S "STANDARD DRAWINGS".
  3. SUPPORT DEPTH FOR PIPE SUPPORTS SHALL BE DETERMINED BY GEOTECHNICAL ENGINEER BASED ON SUBGRADE CONDITIONS AT SITE.

AERIAL PIPE CROSSING - TYPICAL PLAN  
NOT TO SCALE

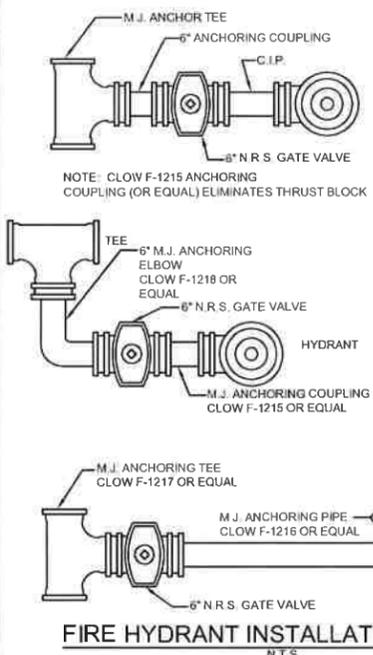


AERIAL PIPE CROSSING - PROFILE  
SCALE: HORIZONTAL 1" = 20', VERTICAL 1" = 2'

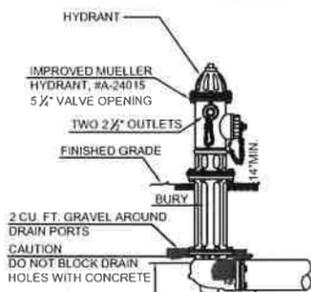
- NOTES:
1. RESTRAINED JOINT PIPE AND FITTINGS SHALL CONSIST OF BOLTED RETAINER RINGS AND WELDED RETAINER BARS OR BOLTED TYPE WHICH INCLUDE DUCTILE IRON LOCKING SEGMENTS AND RUBBER RETAINERS. BOLTS FOR RESTRAINED JOINTS (IF APPLICABLE) SHALL CONFORM TO ANSI B18.2. RESTRAINED PIPE AND FITTINGS SHALL BE FLEX-RING OR LOK-RING TYPE JOINTS AS MANUFACTURED BY AMERICAN CAST IRON PIPE CO., TR FLEX AS MANUFACTURED BY US PIPE, SUPER-LOCK AS MANUFACTURED BY CLOW, BOLT-LOK OR SNAP-LOK AS MANUFACTURED BY GRIFFEN PIPE PRODUCTS, OR EQUAL.
  2. LIMIT THE AREA OF DISTURBANCE TO THE MINIMUM NEEDED TO ACCESS AND COMPLETE THE CONSTRUCTION OF THE AERIAL CROSSING AND RETAIN THE VEGETATION OUTSIDE OF THE PIPE SUPPORTS AND ASSOCIATED RIP-RAP PROTECTION.

<b>AERIAL CROSSING DETAILS</b>	
SCALE: 1/8" = 1'-0"	
DATE: MAY 2018	
PROJECT: WATER AND WASTEWATER IMPROVEMENTS TO THE PROJECT SITE AT THE LOWCOUNTRY REGIONAL AIRPORT FOR COLLETON COUNTY, SOUTH CAROLINA	
FILE NAME: C-detail.dwg SHEET: 07 PROJECT NO.: 14168-0015	SHEET: 07 OF: 20 DWG NO. 01.013-D17

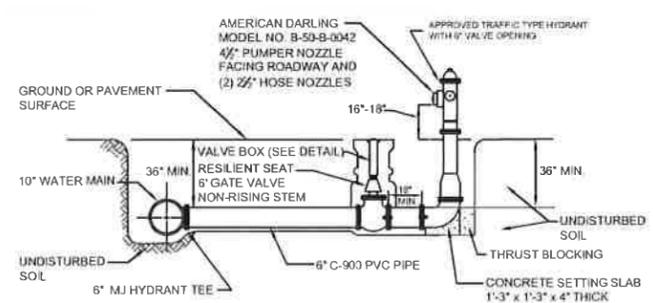
ALLIANCE CONSULTING ENGINEERS, INC. 23 PLANTING PARK DRIVE, SUITE 200, CHARLOTTE, NORTH CAROLINA 28209  
 PROJECT: WATER AND WASTEWATER IMPROVEMENTS TO THE PROJECT DEW SITE AT THE REGIONAL AIRPORT, COLLETON COUNTY, SOUTH CAROLINA  
 SHEET: DWG NO. 01.013-017  
 DATE: 05/13/2015  
 SCALE: AS SHOWN  
 DRAWN BY: J. B. BARNETT  
 CHECKED BY: J. B. BARNETT  
 APPROVED BY: J. B. BARNETT



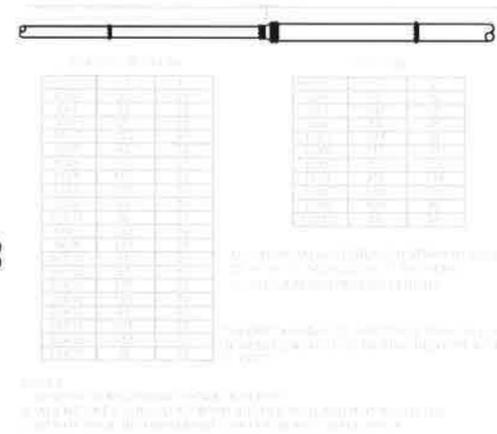
**FIRE HYDRANT INSTALLATION DETAIL**  
N.T.S.



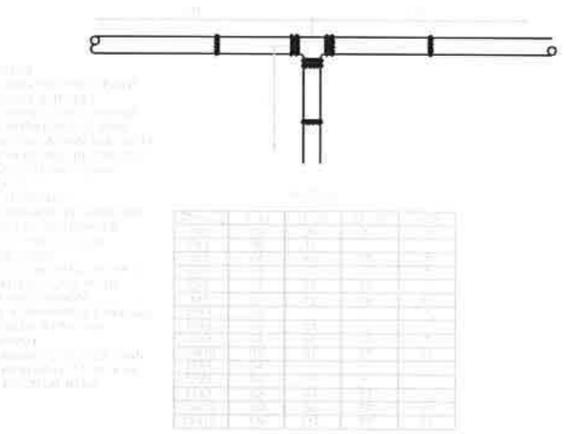
**FIRE HYDRANT DETAIL**  
N.T.S.



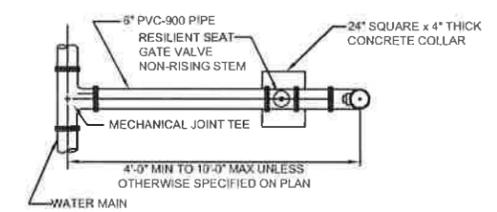
**TYPICAL DETAIL VALVE AND VALVE BOX INSTALLATION**  
NOT TO SCALE



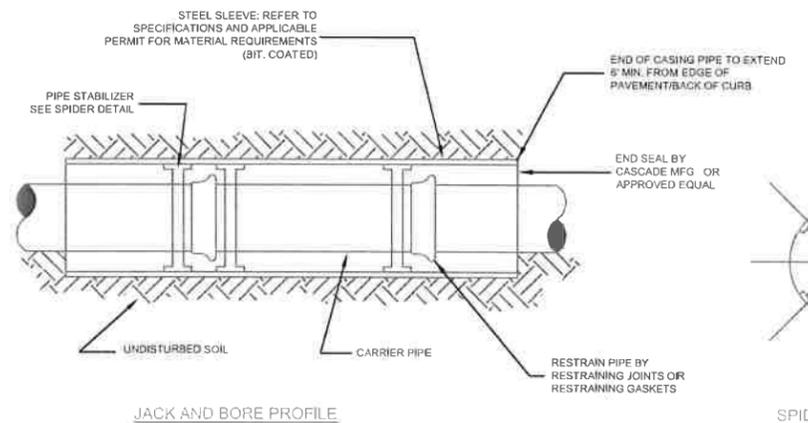
**REDUCER FITTING MECHANICAL JOINT RESTRAINT DETAIL**  
(NOT TO SCALE)



**POLYVINYL CHLORIDE (P.V.C.) PIPE TEE FITTING MECHANICAL JOINT RESTRAINT DETAIL**  
(NOT TO SCALE)



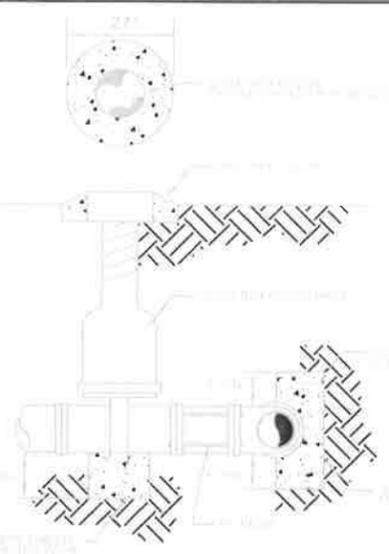
**JACK AND BORE PROFILE**



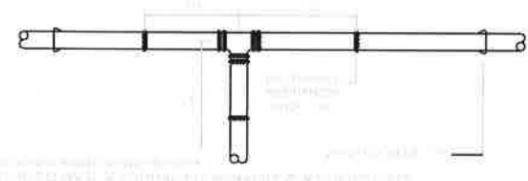
**PIPE AND CASING JACK AND BORE DETAIL**

WALL THICKNESS FOR STEEL CASING PIPE	
UNDER 14"	0.251"
14" & 16"	0.232"
18"	0.313"
20"	0.344"
22"	0.375"
24"	0.407"
26"	0.438"
28" & 30"	0.469"
32"	0.501"
34" & 36"	0.532"
38" & 44"	0.563"
46" & 50"	0.638"
52" & 54"	0.813"
60"	0.876"
66"	1.000"

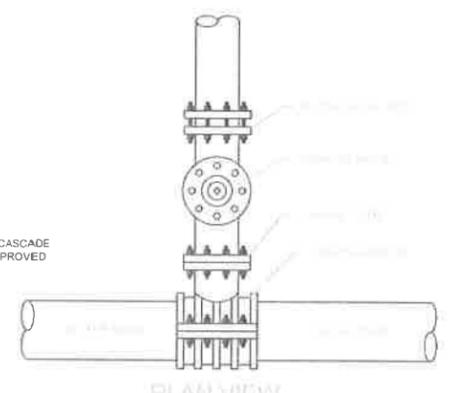
- NOTES:**
- REFER TO APPLICABLE PERMIT FOR MINIMUM REQUIREMENTS GOVERNING HIGHWAY OR RAILROAD UNDERCROSSINGS.
  - 2" MINIMUM BELL CLEARANCE FOR SLEEVES LESS THAN 60' LONG.
  - 4" MINIMUM BELL CLEARANCE FOR 60' AND LONGER SLEEVES.
  - THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 2" LARGER THAN THE LARGEST OUTSIDE DIAMETER OF THE CARRIER PIPE (JOINTS OR COUPLINGS) IF THE CARRIER PIPE IS LESS THAN 6" IN DIAMETER. IF THE DIAMETER OF THE CARRIER PIPE IS 6" OR LARGER, THE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 4" LARGER THAN THE LARGEST OUTSIDE DIAMETER OF CARRIER PIPE.
  - THE END OF THE CASING PIPE SHALL EXTEND A MINIMUM OF 25' FROM THE CENTERLINE OF RAIL.
  - THE TOP OF THE CASING PIPE SHALL BE A MINIMUM OF 5.6' BELOW THE BASE OF RAIL.
  - THE TOP OF THE CASING PIPE SHALL BE A MINIMUM OF 3' BELOW THE INVERT OF ROADSIDE DRAINAGE DITCHES.
  - USE SPIDER SUPPORTS (SEE DETAIL) TO MOVE CARRIER PIPE INTO CASING PIPE. SPACING OF SPIDERS WILL BE DICTATED BY THE LENGTH OF CASING PIPE AND NUMBER OF JOINTS OF CARRIER PIPE.
  - MINIMUM OF 2 SPACERS PER JOINT OF PIPE.
  - THERE SHALL BE NO WELDING OF CASING UNDER PAVEMENT.



**TYPICAL TAPPING SLEEVE AND VALVE**



**DUCTILE IRON PIPE (D.I.P.) TEE FITTING MECHANICAL JOINT RESTRAINT DETAIL**  
(NOT TO SCALE)



**PLAN VIEW**

REVISION DATE	
APPROVED	SMI
DESIGNED	SMI
CHECKED	SMI
DATE	05/13/2015
<b>ALLIANCE CONSULTING ENGINEERS</b> Consulting Engineers, Inc. 23 Planting Park Drive, Suite 200, Charlotte, North Carolina 28209 Phone: (919) 735-8500 • Fax: (919) 737-6689	
PROJECT	WATER AND WASTEWATER IMPROVEMENTS TO THE PROJECT DEW SITE AT THE REGIONAL AIRPORT, COLLETON COUNTY, SOUTH CAROLINA
FILE NAME	C-dewatn.dwg
REFLECTED FILE	RAN.dwg
PROJECT NO.	14168-0015
DWG NO.	01.013-017
SHEET	C13
OF	30