

Civil Construction Plans RIVERLAND PARK

VARDON'S VIEW PUD ORDINANCE # 2008-04
(A TWENTY-SEVEN LOT SINGLE-FAMILY SUBDIVISION)
CHARLESTON, SOUTH CAROLINA

Approval for Right-of-Way
and
Easement Encroachments

The Engineering Division of the City of Charleston has reviewed these plans and
attest that they meet the stated engineering standards of principles and practice and
are in accordance with the City of Charleston Basic Code, adopted 1976 and any subsequent
amendments thereto. The City Engineer's Office does not warrant the accuracy of the
information shown on these plans. The City Engineer's Office is not responsible for the
accuracy of the information shown on these plans. The City Engineer's Office is not
responsible for the accuracy of the information shown on these plans. The City Engineer's
Office is not responsible for the accuracy of the information shown on these plans.
11/22/11
Date

City of Charleston
Engineering Division

City of Charleston-Engineering Division
EXPIRATION NOTICE
THIS APPROVAL EXPIRES WITHIN TWO YEARS ON 11/22/13
(Expiration Date)

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Robert D. Hanner
10-1-2011

LEGEND:

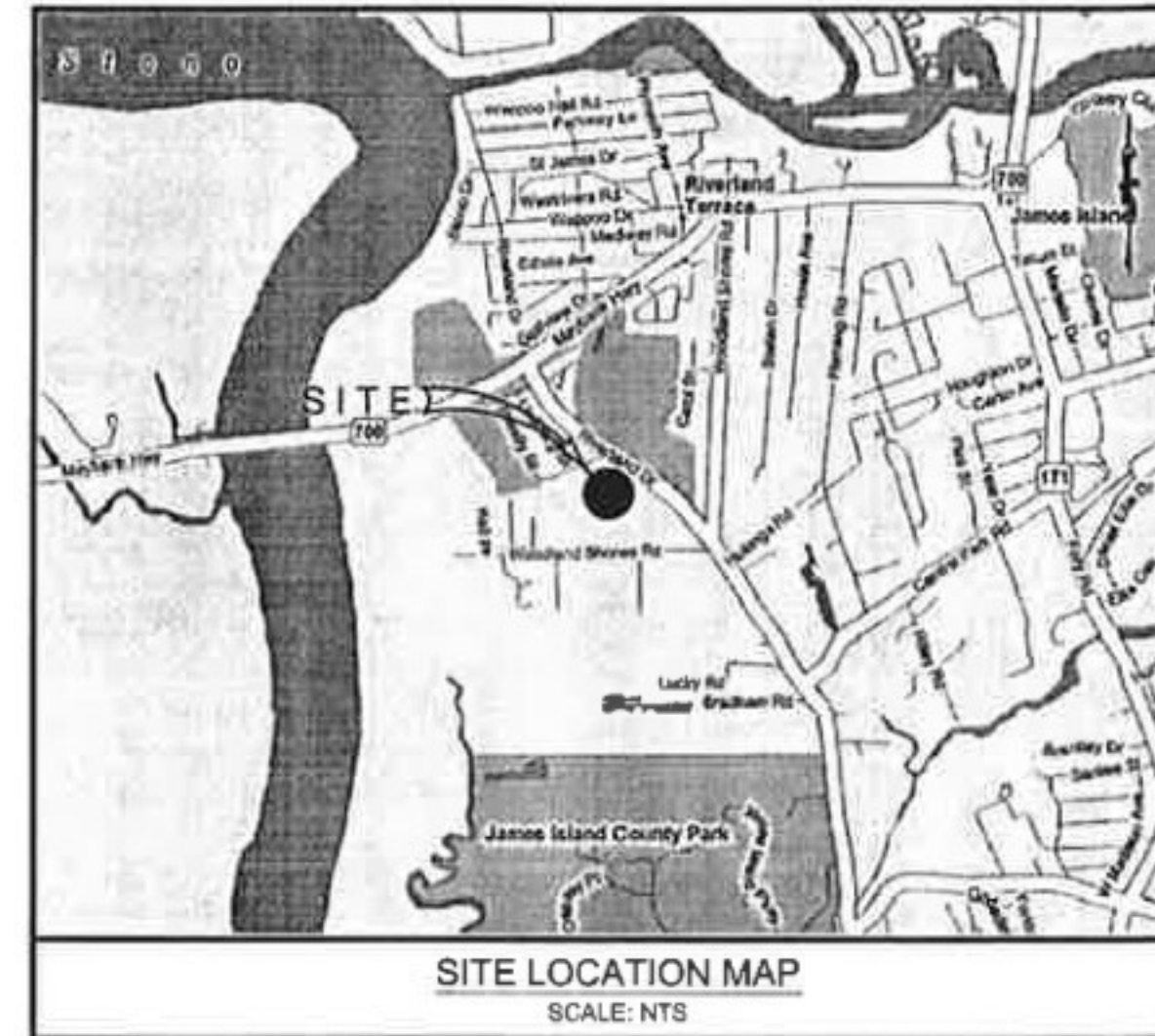
EXISTING CONDITIONS	PROPOSED CONDITIONS
--- PROPERTY LINE W/ CORNER FOUND	--- PROPERTY LINE W/ CORNER SET
--- RIGHT OF WAY	--- RIGHT OF WAY
--- CENTER LINE	--- CENTER LINE
--- GAS LINE	--- PROPERTY SETBACK
--- WATER LINE	--- STORM DRAIN LINE W/ STRUCTURE
--- SEWER LINE	--- SANITARY SEWER LINE W/ MANHOLE
--- OVERHEAD POWER LINE	--- SANITARY SEWER SERVICE
--- TREE SPECIES W/ DIA.	--- WATER LINE WITH FITTING
--- GRAND TREE SPECIES W/ DIA.	--- WATER SERVICE
--- WETLAND LINE	--- FIRE HYDRANT ASSEMBLY
--- WETLANDS	--- BLOW OFF ASSEMBLY
--- CONTOUR LINE	--- TREE PROTECTION
--- EASEMENT LINE	--- TREE BEING REMOVED
--- CITY OF CHARLESTON LIMITS	--- RIP-RAP
	--- CURB INLET PROTECTION
	--- SILT FENCE
	--- CONTOUR LINE

ZONING INFORMATION:

- THE CURRENT ZONING IS PUD, TMS# 343-10-00-075
- ZONING REQUIREMENTS FOR THE CURRENT PROPERTY & PROPOSED SITE:
 - THE MINIMUM SETBACKS FROM THE PROPERTY LINES SHALL BE:
 - SETBACK FROM THE FRONT YARD 10'
 - SETBACK FROM THE REAR YARD 10'
 - SETBACK FROM THE SIDE YARD 5'
 - VARIABLE WIDTH SETBACK FOR LOTS FRONTING RIVERLAND DRIVE.
 - THE CURRENT CONDITION OF THE PROPERTY IS AS SHOWN ON EXISTING CONDITIONS SHEET C-003.
- SPECIAL EXCEPTION APPROVAL (APP. NO 097-1-B1) TO REMOVE 24" WATER OAK LOCATED AT PROPOSED PENTLAND DRIVE ENTRANCE.
- VARIANCE APPROVAL (APP. NO 097-1-B1) FOR THE ENCROACHMENT WITHIN 10' OF THE 51" RED MAPLE TREE ACCORDING TO DETAIL ON SHEET C015 AND WITH THE FOLLOWING CONDITIONS: **WORKER EDUCATION:** PRE-CONSTRUCTION MEETINGS SHOULD BE HELD TO ADVISE CONSTRUCTION CREWS OF TREE PRESERVATION AREAS AND PROCEDURES TO AVOID DAMAGE TO REMAINING VEGETATION. **HEAVY EQUIPMENT:** SHOULD NOT ENCROACH ON THE ROOT SYSTEMS OF HIGH VALUE PLANTS. **HEAVY EQUIPMENT NEEDED TO DIG FOOTERS/TRENCHES SHOULD BE KEPT OFF THE TREE PROTECTION ROOT-ZONE. THIS WILL KEEP ANY HEAVY EQUIPMENT FROM CAUSING COMPACTION TO THE SOIL AS WELL AS KEEP THE EQUIPMENT FURTHER FROM THE STEM OF THE TREE TO AVOID ACCIDENTAL CONTACT AND INJURY. THE USE OF TREE PROTECTION FENCING, AS LONG AS IT IS CONSTANTLY MAINTAINED, IS ABSOLUTELY NECESSARY ON SITES WITH TREES; EXCAVATIONS:** WHERE EXCAVATIONS ARE PERFORMED WITHIN 20 FEET OF THIS TREE, ROOTS SHOULD BE CUT CLEANLY USING PRUNERS OR A SAW. BACKHOES RIP ROOTS CONSIDERABLY, SO AFTER DIGGING THE HOLE ALL RIPPED ROOTS 1/2" AND GREATER IN DIAMETER SHOULD BE CUT CLEANLY WITH A SAW OR PRUNER; **PRE AND POST CONSTRUCTION TREE MAINTENANCE:** PRUNING GOALS FOR MATURE TREES FOCUS ON REDUCING HAZARDOUS CONDITIONS AND MAINTAINING OR IMPROVING PLANT HEALTH AND APPEARANCE. CROWN CLEAN TREES BY REMOVING 1" AND GREATER DEAD WOOD AS WELL AS ANY VINES THAT ARE PRESENT. SAFETY CONSIDERATIONS INCLUDE REMOVAL OF DEAD BRANCHES. STRUCTURALLY UNSOUND LIMBS AND OTHER LIMBS PRONE TO BREAKAGE. IN ADDITION, REMOVING LOWER LIMBS MAY BE NECESSARY FOR CLEARANCE. TREES DAMAGED BY CONSTRUCTION AS WELL AS NEW TRANSPLANTS GENERALLY REQUIRE A HIGH LEVEL OF MAINTENANCE DUE TO ROOT LOSS. DEMANDS FOR WATER AND MINERAL NUTRIENTS ARE CRITICAL DUE TO ROOT LOSS. DUE TO ROOT LOSS DURING CONSTRUCTION, NUTRIENT ABSORPTION IS REDUCED. MAINTAINING A HIGH SOIL FERTILITY LEVEL IS KEY IN PREVENTING NUTRIENT DEFICIENCIES. RESEARCH HAS SHOWN THAT NITROGEN FERTILIZATION STIMULATES FINE ROOT GROWTH. WHERE EXCESS ROOTS ARE LOST, FERTILIZATION IS A MUST.

PROJECT NOTES:

- IT IS THE INTENT OF THESE PLANS TO ADHERE TO CITY OF CHARLESTON PLANNING AND ZONING ORDINANCES AND ROAD CODES. ALSO THE REQUIREMENTS FOR WATER AND WASTEWATER UTILITIES CONSTRUCTION AS MANDATED BY SCDHEC, CWS AND JIPSD.
- THE GENERAL INTENT OF THE PROJECT IS TO CONSTRUCT A RESIDENTIAL DEVELOPMENT AND THE APPURTENANT ROADS, DRAINAGE & UTILITIES TO SUPPORT THE DEVELOPMENT.
- THE PROJECT WILL HAVE TWO ENTRANCES AND WILL CONTAIN ITS OWN DETENTION SYSTEM (1 DETENTION PONDS).
- UTILITY LOCATIONS WERE FIELD SURVEYED, TAKEN FROM RECORD DOCUMENTS. ACTUAL LOCATIONS TO BE FIELD VERIFIED BEFORE PRIOR TO CONSTRUCTION.
- ALL PROJECT SIGNAGE SHALL MEET THE REQUIREMENTS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION.
- THE BURNING OF VEGETATIVE CLEARING DEBRIS IS PROHIBITED IN THE CITY OF CHARLESTON.
- ALL AMENITIES MUST BE ACCESSIBLE MEETING ALL ADA REQUIREMENTS.



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APPROVED BY HEG FOR CONSTRUCTION
DATE XX, XXXX

MUNICIPALITY APPROVAL DATES:
JAMES ISLAND PUBLIC SERVICE DISTRICT (JIPSD): _____
CITY OF CHARLESTON (110915-RIVERLANDDR-1): _____
OCEAN & COASTAL RESOURCE MANAGEMENT (OCRM): _____
CHARLESTON WATER SYSTEM: _____
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION (SCDOT): _____



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PROJECT TITLE
RIVERLAND PARK

PROJECT TITLE SHEET	
SCALE: NTS	DATE: MARCH 2011
HEG PROJECT NO: 2110125	SHEET NO: C-001

DEVELOPER (C)

GENERAL NOTES:

- IT IS THE INTENT OF THESE PLANS TO ADHERE TO CITY OF CHARLESTON PLANNING AND ZONING ORDINANCES AND ROAD CODES. ALSO THE REQUIREMENTS FOR WATER AND WASTEWATER UTILITIES CONSTRUCTION AS MANDATED BY SCDEC, CWS AND JPSD.
- THE GENERAL INTENT OF THE PROJECT IS TO CONSTRUCT A RESIDENTIAL DEVELOPMENT AND THE APPURTENANT ROADS, DRAINAGE & UTILITIES TO SUPPORT THE DEVELOPMENT.
- THE PROJECT WILL HAVE TWO ENTRANCES AND WILL CONTAIN ITS OWN DETENTION SYSTEM (1 DETENTION POND).
- UTILITY LOCATIONS WERE FIELD SURVEYED, TAKEN FROM RECORD DOCUMENTS. ACTUAL LOCATIONS TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
- ALL PROJECT SIGNAGE SHALL MEET THE REQUIREMENTS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION.
- ALL AMENITIES MUST BE ACCESSIBLE MEETING ALL ADA REQUIREMENTS.

SPECIFICATIONS FOR SEQUENCE OF CONSTRUCTION OPERATIONS:

- CLEARING AND GRUBBING THOSE AREAS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS;
- INSTALLATION OF SEDIMENT BASINS AND TRAPS;
- CONSTRUCTION OF PERIMETER CONTROLS;
- DEWATERING AND FILLING OF EXISTING POND;
- REMAINING CLEARING AND GRUBBING;
- ROAD GRADING;
- GRADING FOR THE REMAINDER OF THE SITE;
- UTILITY INSTALLATION AND WHETHER STORMDRAINS WILL BE USED OR BLOCKED UNTIL AFTER COMPLETION OF CONSTRUCTION;
- FINAL GRADING, LANDSCAPING, OR STABILIZATION; AND
- REMOVAL OF SEDIMENT CONTROLS.

IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS. IN ADDITION TO HYDROSEEDING, IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION.

ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.

CHANGES TO THE SEQUENCE OF CONSTRUCTION OPERATIONS MAY BE MODIFIED BY THE PERSON CONDUCTING THE LAND DISTURBING ACTIVITY OR THEIR REPRESENTATIVE AND DO NOT CONSTITUTE A VIOLATION UNLESS MEASURES TO CONTROL STORMWATER RUNOFF AND SEDIMENT ARE NOT UTILIZED.

DRAINAGE SWALE & DETENTION POND MAINTENANCE AND EROSION CONTROL CERTIFICATION

MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITY AND APPURTENANCE DRAINAGE STRUCTURES SHALL BE THE RESPONSIBILITY OF RIVERLAND PARK PROPERTY OWNERS ASSOCIATION (HOA). THE HOA SHALL KEEP A REGULAR SCHEDULE OF MAINTENANCE FOR THE DETENTION POND AND CONTROL EROSION BY:

- REMOVE SEDIMENTS OUT OF DRAINAGE SWALE AT LEAST ONCE A YEAR.
- DRAINAGE SWALE, SIDE SLOPES AND DETENTION POND ARE TO BE NEATLY MAINTAINED ON A REGULAR BASIS TO ASSURE NO VEGETATIVE AND DRAINAGE IMPEDIMENT.
- DRAINAGE SWALE, SIDE SLOPES, DETENTION POND AND RIP RAP TO BE MONITORED TO ASSURE PROPER STABILIZATION.
- AREAS WHERE EROSION IS EVIDENT ARE TO BE REPAIRED AT THE COST OF THE COMPANY.
- DRAINAGE SWALE AND DETENTION POND TO BE SOODED TO ASSURE PROPER STABILIZATION.
- THE HOA FURTHER DOES RELEASE AND HOLD HARMLESS THE CITY OF CHARLESTON FROM ANY AND ALL LIABILITY, CLAIMS, DEMANDS, ATTORNEY'S FEES, AND COSTS OR JUDGMENTS ARISING FROM SAID DRAINAGE SWALE, SIDE SLOPES AND DETENTION POND.
- PERMANENT COVENANT FOR STORMWATER MAINTENANCE, AS-BUILT DRAWINGS AND WOOD PIPE INSPECTION WILL BE DUE AT PROJECT CLOSEOUT IN ACCORDANCE WITH SECTION 2.8 OF STORMWATER DESIGN STANDARDS MANUAL.

SITE GRADING:

- THE DATUM FOR THIS SURVEY IS NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
- ALL FILL SHALL BE COMPACTED TO 95% DRY DENSITY, MODIFIED PROCTOR. ALL WORK TO BE COMPLETED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR STATE AND CITY PERMITS, INCLUDING BUT NOT LIMITED TO BUILDING, EROSION CONTROL, AND ENCROACHMENT PERMITS. NO WORK IS TO BE INITIATED UNTIL PERMITS ARE RECEIVED.
- CONTRACTOR TO SLOPE ALL SITE WORK FOR POSITIVE DRAINAGE. CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE CONSTRUCTION DOCUMENTS AND SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD ANY DISCREPANCIES, OMISSIONS, OR INCONSISTENCIES BE DISCOVERED THAT WOULD PRECLUDE POSITIVE DRAINAGE PRIOR TO COMMENCING ANY CONSTRUCTION.
- CONTRACTOR SHALL TAKE FIELD MEASUREMENTS TO VERIFY THAT LOCATIONS ARE CORRECT PRIOR TO COMMENCING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY THE LOCATION AND INVERT ELEVATIONS OF ALL UNDERGROUND UTILITIES AND VERIFY PROPERTY CORNERS AND TOPO BEFORE ANY CONSTRUCTION IS BEGUN. CALL UTILITY COMPANIES BEFORE ANY EXCAVATION TO LOCATE ALL BURIED AND UNDERGROUND UTILITIES.
- THE GRADING CONTRACTOR SHALL PROOF-ROLL THE CONSTRUCTION AREA WITH HEAVY-PNEUMATIC EQUIPMENT. ALL SOFT SPOTS SHALL BE UNDERCUT AND RE COMPACTED WITH SUITABLE MATERIAL TO PRESCRIBED GRADES.
- TOP SOIL SHALL BE STRIPPED TO A DEPTH AS REQUIRED AND USED AS FILL MATERIAL AT THE REAR OF THE LOT (OUTSIDE BLDG. FOOTPRINT) TO PRODUCE POSITIVE DRAINAGE.
- ALL FILL MATERIAL SHALL BE FROM A SOURCE APPROVED BY THE TESTING COMPANY AND SHALL BE FREE OF ROOTS, ORGANICS AND BOULDERS. FILL SHALL BE PLACED IN 6" LIFTS AND COMPACTED AS SPECIFIED.
- THE GRADING CONTRACTOR SHALL CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN WITHIN A TOLERANCE OF PLUS OR MINUS 0.10 FEET.
- ALL REINFORCED CONCRETE PIPE (RCP) SHALL BE CLASS III, UNLESS NOTED OTHERWISE ON DRAWINGS AND SHALL CONFORM TO STATE SPECIFICATIONS. JOINTS SHALL BE O-RING WITH MASTIC JOINT MATERIAL.
- ALL UTILITY TRENCHES ARE TO BE THOROUGHLY COMPACTED TO PREVENT SETTLEMENT AND DAMAGE TO FURTHER CONCRETE/ASPHALTIC PAVEMENT AND STRUCTURES.
- CONTOURS SHOWN ARE BASED ON A 50 FOOT GRID SYSTEM.

EROSION CONTROL NOTES:

- IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS. IN ADDITION TO HYDROSEEDING, IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
- STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER. IF SITE INSPECTIONS IDENTIFY BMPs THAT ARE DAMAGED OR ARE NOT OPERATING EFFECTIVELY, MAINTENANCE MUST BE PERFORMED AS SOON AS PRACTICAL OR AS REASONABLY POSSIBLE AND BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE.
- PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION, FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE ANY SEDIMENTS BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO THE PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
- RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C. REG. 72-300 ET SEQ. AND SCRI00000.
- TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
- ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.

SEWER UTILITY NOTES:

- WASTEWATER INSTALLATION SHALL BE IN ACCORDANCE WITH "TEN STATES STANDARDS", S.C.D.H.E.C. REGULATIONS AND JAMES ISLANDS PSD'S "SANITARY SEWER SYSTEM DESIGN & CONSTRUCTION GUIDELINES".
- CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE IN THE PRESENCE OF A JPSD REPRESENTATIVE. CONTRACTOR SHALL NOTIFY JPSD AT LEAST 48 HOURS BEFORE CONNECTION BEGINS.
- ROUGH GRADING SHALL BE DONE PRIOR TO INSTALLATION OF SEWER MAIN.
- NO MANHOLE COVERS ARE ALLOWED IN CURBING. MANHOLES SHALL BE LOCATED OUTSIDE CONCRETE AND ASPHALT PAVING.
- CONNECTIONS TO GRAVITY LINES AND MANHOLES SHALL NOT BE EQUAL TO OR GREATER THAN THE DIAMETER OF THE DOWNSTREAM LINE.
- CONTRACTOR SHALL INSTALL WATERTIGHT RINGS AND COVERS ON ALL MANHOLES AFFECTED BY STREET RUNOFF OR BELOW THE 50-YEAR FLOOD ELEVATION.
- ALL SANITARY SEWER SERVICES SHALL BE SDR 26 PVC AND LAID ON A MINIMUM SLOPE OF 0.50% UNLESS OTHERWISE STATED. THE SERVICES SHALL BE CONNECTED TO THE MAIN WHERE REASONABLY POSSIBLE.
- GRAVITY MAINS SHALL BE SDR-26 PVC FOR DEPTHS OF COVER FROM 3-15 FEET, DIP SHALL BE USED FOR DEPTHS FROM 15-18 FEET AND DIP SHALL BE USED PER NOTE 9 BELOW.
- DIP FOR WASTEWATER SHALL BE USED:
- WITH LESS THAN THREE (3) FEET OF COVER OR GREATER THAN 15 FEET OF COVER;
- CROSSING BENEATH STORM DRAINAGE PIPE WITH LESS THAN 18" OF CLEARANCE;
- CROSSING ABOVE STORM DRAINAGE PIPE WITH LESS THAN TWO (2) FEET OF CLEARANCE;
- CROSSING WATER MAINS WITHIN 18".
- ALL COMPONENTS OF THE PIPING SYSTEM THAT ARE DIP SHALL BE ENCLOSED WITH LINEAR LOW-DENSITY 8 MILS GREEN POLYETHYLENE ENCASEMENT.
- LINING FOR DIP FOR WASTEWATER SHALL BE EPOXY (POLYBOND OR EQUAL).
- SLEEVES SHALL BE USED TO TRANSITION BETWEEN PVC AND DIP. FERNCO OR SIMILAR COUPLINGS ARE NOT ALLOWED.
- WHERE WATER AND SANITARY SEWER LINES CROSS WITHIN 18", THE LINE LAID LAST SHALL HAVE A FULL LENGTH OF PIPE INSTALLED WITH ITS MIDPOINT VERTICALLY IN LINE WITH THE OTHER LINE. THE CROSSING SHALL BE AT NOT LESS THAN A 45 DEGREE ANGLE.
- THE FOLLOWING APPROVAL PROCEDURES MUST BE FOLLOWED UPON COMPLETION OF CONSTRUCTION:
A) THE JPSD REPRESENTATIVE WILL CONDUCT A PRELIMINARY INSPECTION. PRIOR TO THE INSPECTION THE SYSTEM SHALL BE FLUSHED AND CLEANED OF DEBRIS.
B) PRESSURE AND MANDREL TESTS SHALL BE SCHEDULED BY THE CONTRACTOR AND WILL BE WITNESSED BY THE JPSD REPRESENTATIVE. TESTING WILL BE CONDUCTED IN ACCORDANCE WITH JPSD REGULATIONS.
C) THE CONTRACTOR SHALL SUPPLY TO THE OWNER'S ENGINEER AN AS-BUILT SURVEY, INCLUDING THE SERVICE LATERAL INFORMATION, THE LOCATIONS OF WHICH SHALL HAVE BEEN STAKED IN THE FIELD.
D) THE ENGINEER SHALL SUBMIT THE AS-BUILT IN AN ACCEPTABLE FORM TO JPSD, ALONG WITH THE NECESSARY LEGAL DOCUMENTS PREPARED BY THE OWNER.
- ALL MATERIAL SHALL CONFORM TO JPSD SPECIFICATIONS AS TO TYPE AND DESIGN.

NOTES FOR WATER SYSTEM:

- WATER INSTALLATION SHALL BE IN ACCORDANCE WITH "TEN STATES STANDARDS", S.C.D.H.E.C. REGULATIONS, AND CHARLESTON WATER SYSTEM'S "MINIMUM STANDARDS FOR THE DESIGN & CONSTRUCTION OF WATER AND SANITARY SEWER SYSTEMS" AS FOUND AT [www.charlestonwater.com](http://www.charlestonwater.com/backflow_prevention_requirements). BACKFLOW PREVENTION REQUIREMENTS CAN BE FOUND AT www.charlestonwater.com/cross_connection.htm.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL TAPS. TAPS REQUIRING A SLEEVE SHALL BE NO CLOSER TO A JOINT THAN 4 FEET.
- THRUST BLOCKING SHALL BE USED ONLY ON WET TAPS. CONTRACTOR SHALL NOTIFY CWS INSPECTOR 72 HOURS (THREE FULL WORKING DAYS) PRIOR TO MAKING ANY WET TAP.
- ROUGH GRADING SHALL BE DONE PRIOR TO INSTALLATION OF WATER MAINS.
- CONTRACTOR SHALL MAINTAIN BETWEEN 36" - 48" COVER OVER TOP OF PIPE.
- ALL COMPONENTS OF THE PIPING SYSTEM SHALL BE NEW DUCTILE IRON AND ENCLOSED WITH LINEAR LOW-DENSITY 8 MILS BLUE POLYETHYLENE ENCASEMENT.
- ALL VALVES AND HYDRANTS SHALL OPEN CLOCKWISE, EXCEPT ON THE FORMER NAVAL BASE, WHERE THE VALVES SHALL OPEN COUNTERCLOCKWISE.
- MEGALUG OR FORD SERIES 1400 RETAINER GLANDS SHALL BE USED FOR ALL FITTINGS, VALVES, AND HYDRANTS.
- RESTRAINED LENGTHS SHALL BE IN MULTIPLES OF A FULL LENGTH OF PIPE.
- USE 45° OR FLATTER BENDS WHEN GOING UNDER RCP AND DO NOT INSTALL VALVES, HYDRANTS, OR SERVICES ON DEEP PIPE SECTIONS.
- WHERE POSSIBLE, HORIZONTAL WATERLINES SHALL BE DEFLECTED IN LIEU OF USING BENDS. DEFLECTIONS SHALL NOT EXCEED 75% OF MANUFACTURER'S SPECIFICATIONS.
- WHERE WATER AND SANITARY SEWER LINES CROSS WITHIN 18", THE LINE LAID LAST SHALL HAVE A FULL LENGTH OF PIPE INSTALLED WITH ITS MIDPOINT VERTICALLY IN LINE WITH THE OTHER LINE. THE CROSSING SHALL BE AT NOT LESS THAN A 45° ANGLE.
- ALL MATERIAL SHALL CONFORM TO CWS SPECIFICATIONS AS TO MANUFACTURER, TYPE, AND DESIGN.
- DEVELOPER'S ENGINEER SHALL INSPECT PROJECT WEEKLY TO PROVIDE WRITTEN WEEKLY UPDATES TO CWS INSPECTOR AND TO CERTIFY THE CORRECTNESS OF THE WATER PORTION OF CONTRACTOR'S RECORD DRAWINGS.
- CONTRACTOR INSTALLING THE WATER SYSTEM SHALL BE ON CWS'S "APPROVED CONTRACTORS LIST".
- COORDINATE INSPECTION AND TESTING OF THE BACKFLOW DEVICES WITH CWS CROSS CONNECTION DEPARTMENT. WATER SERVICE SHALL NOT BE TURNED ON UNTIL ALL BACKFLOW DEVICES HAVE PASSED INSPECTION AND TESTING.
- DEVELOPER SHALL TAKE NECESSARY MEASURES TO PROTECT CWS WATER SYSTEM DURING THE TIME BETWEEN THE COMMISSIONING INSPECTION AND THE 2-YEAR MAINTENANCE BOND INSPECTION.
- CHARLESTON WATER SYSTEM RESERVES THE RIGHT NOT TO INSTALL WATER METERS IF METER BOXES ARE NOT LOCATED AND ON GRADE IN COMPLIANCE WITH ITS MINIMUM STANDARDS.
- ALL METER VAULTS AND ASSOCIATED PIPING 3" AND LARGER SHALL BE INSTALLED BY CWS UNLESS APPROVED IN WRITING BY THE WATER DISTRIBUTION ENGINEER.

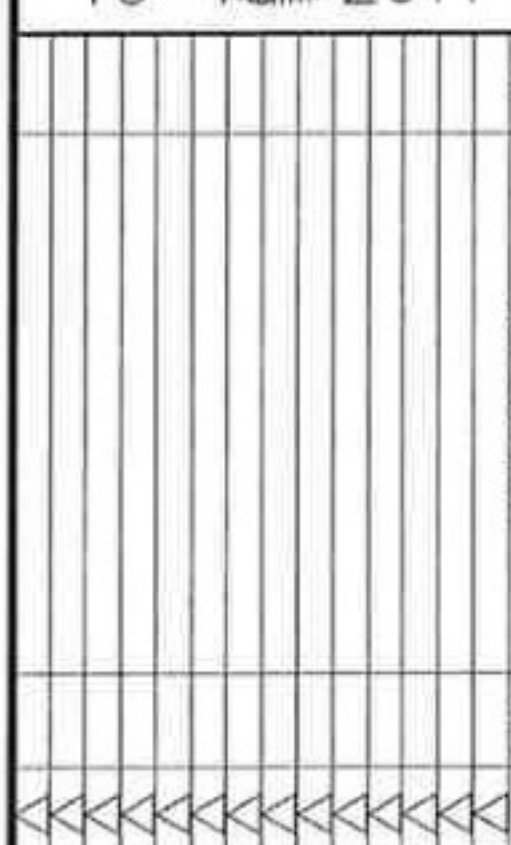
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PROJECT TITLE

RIVERLAND PARK

SHEET TITLE

GENERAL CONSTRUCTION NOTES

SCALE	DESIGNED BY	CHECKED BY	DATE
NTS	REH	REH	MARCH 2011
DATE	HEQ PROJECT NO.	SHEET NO.	TOTAL SHEETS
MARCH 2011	2110125	C002	

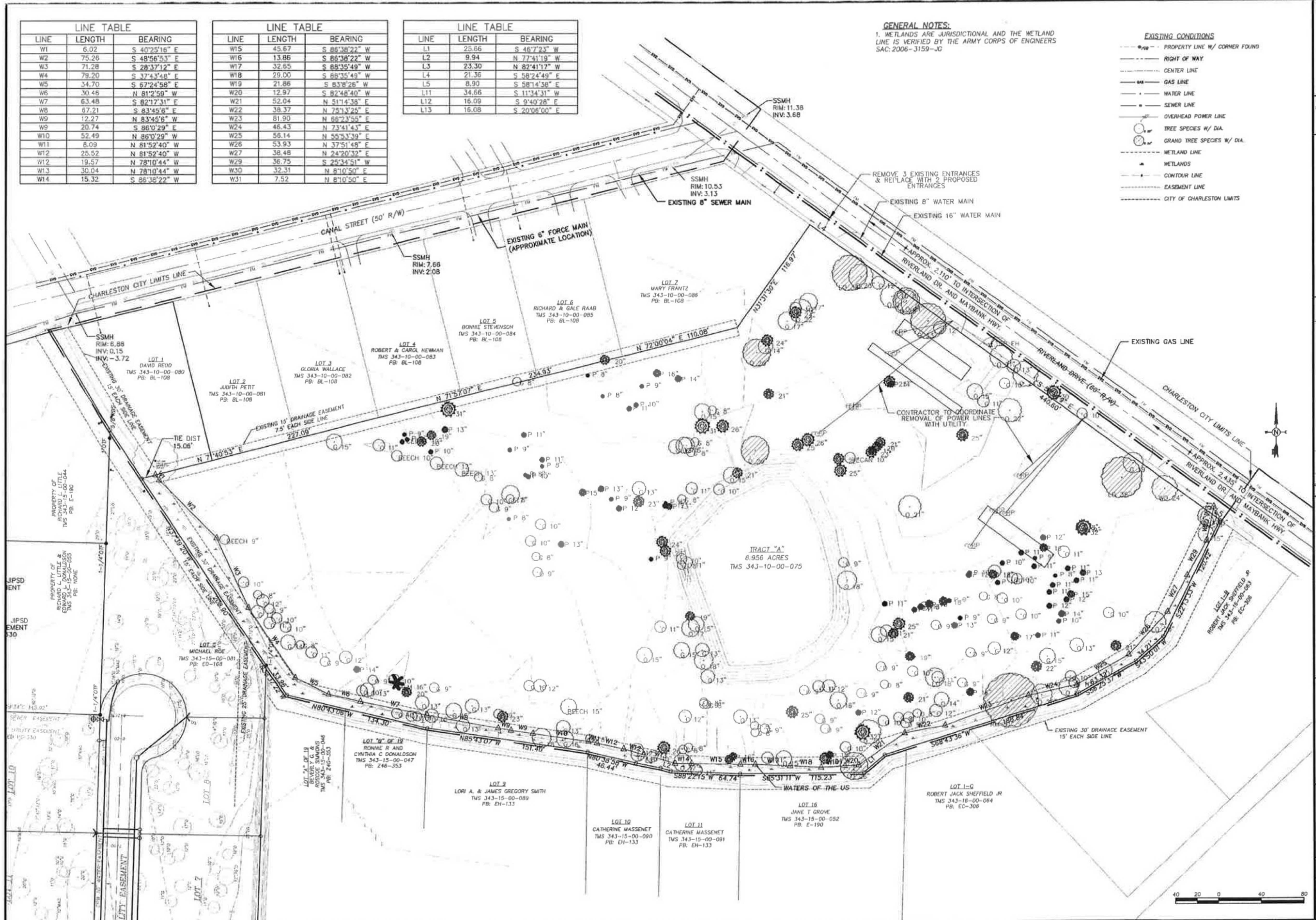
LINE	LENGTH	BEARING
W1	6.02	S 40°25'16" E
W2	75.26	S 48°56'53" E
W3	71.28	S 28°37'12" E
W4	79.20	S 37°43'48" E
W5	34.70	S 67°24'58" E
W6	30.46	N 81°2'59" W
W7	63.48	S 82°17'31" E
W8	67.21	S 83°45'8" E
W9	12.27	N 83°45'6" W
W10	20.74	S 86°0'29" E
W11	52.49	N 86°0'29" W
W12	8.09	N 81°52'40" W
W13	25.52	N 81°52'40" W
W14	19.57	N 78°10'44" W
W15	30.04	N 78°10'44" W
W16	15.32	S 86°35'22" W

LINE	LENGTH	BEARING
W15	45.67	S 86°38'22" W
W16	13.86	S 86°38'22" W
W17	32.65	S 88°35'49" W
W18	29.00	S 88°35'49" W
W19	21.86	S 83°8'26" W
W20	12.97	S 82°48'40" W
W21	52.04	N 51°14'38" E
W22	38.37	N 25°13'25" E
W23	81.90	N 68°23'55" E
W24	46.43	N 73°41'43" E
W25	56.14	N 55°53'39" E
W26	53.93	N 37°51'48" E
W27	38.48	N 24°20'32" E
W28	36.75	S 25°34'51" W
W29	32.31	N 81°0'50" E
W30	7.52	N 81°0'50" E

LINE	LENGTH	BEARING
L1	25.66	S 46°7'23" W
L2	9.94	N 77°41'19" W
L3	23.30	N 82°41'17" W
L4	21.36	S 58°24'49" E
L5	8.90	S 58°14'38" E
L11	34.66	S 11°34'31" W
L12	16.09	S 9°40'28" E
L13	16.08	S 20°06'00" E

GENERAL NOTES:
 1. WETLANDS ARE JURISDICTIONAL AND THE WETLAND LINE IS VERIFIED BY THE ARMY CORPS OF ENGINEERS SAC: 2006-3159-JG

- EXISTING CONDITIONS**
- PROPERTY LINE W/ CORNER FOUND
 - RIGHT OF WAY
 - CENTER LINE
 - GAS LINE
 - WATER LINE
 - SEWER LINE
 - OVERHEAD POWER LINE
 - TREE SPECIES W/ DIA.
 - GRAND TREE SPECIES W/ DIA.
 - WETLAND LINE
 - WETLANDS
 - CONTOUR LINE
 - EASEMENT LINE
 - CITY OF CHARLESTON LIMITS



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Robert D. Hanner
 10 FEBRUARY 2011

PROJECT OWNER	RIVERLAND PARK LLC
PROJECT TITLE	RIVERLAND PARK
SCALE	1"=40'
DATE	MARCH 2011
SHEET NO.	2110125
PROJECT NO.	C003

RIVERLAND PARK LLC
 572 SAVANNAH HIGHWAY
 CHARLESTON, SC 29412
 PH: 843-573-9635
 FAX: 843-402-0135

RIVERLAND PARK

SCALE	1"=40'
DATE	MARCH 2011
SHEET NO.	2110125
PROJECT NO.	C003

GENERAL NOTES:

- IT IS THE PURPOSE OF THIS PLAT TO SUBDIVIDE THE EXISTING PARCEL INTO 27 SINGLE FAMILY LOTS TO FORM THE VARDON'S VIEW SUBDIVISION.
- THIS PLAT SHOWS ONLY EASEMENTS WHICH ARE OBVIOUS OR APPARENT TO THE SURVEYOR.
- PROPERTY IS LOCATED IN FLOOD ZONE "AE" BASE FLOOD ELEVATION 12' NGVD29 FLOOD INSURANCE RATE MAP #45019C0513J MAP REVISED: NOV. 17, 2004.
- THE TOTAL NUMBER OF LOTS IS 27
SMALLEST LOT IS LOT 20 (0.11 AC., 4,673 S.F.)
LARGEST LOT IS LOT 13 (0.20 AC., 8,503 S.F.)
- THE TOTAL ACREAGE OF SUBDIVISION IS 6,956 AC.
- WATER & SEWER SERVICE PROVIDED BY C.W.S. & J.I.P.S.D., RESPECTIVELY
- THIS PROPERTY IS CURRENTLY ZONED PUD SINGLE FAMILY SETBACKS ARE:
FRONT: 10'
REAR: 10'
SIDE: 3' PUD REQUIREMENT & 5' BUILDING CODE REQUIREMENT
- THIS PROPERTY IS SHOWN ON CHARLESTON COUNTY TAX MAP 343-10-00-075

- WETLANDS ARE JURISDICTIONAL AND THE WETLAND LINE IS VERIFIED BY THE ARMY CORPS OF ENGINEERS SAC: 81-2008-3159-2JG
- ALL PROPOSED STREETS ARE TO BE PUBLIC & DEDICATED TO THE CITY OF CHARLESTON
- ALL COMMON AREAS ARE TO BE MAINTAINED BY THE HOME OWNERS ASSOCIATION
- EXISTING SITE ADDRESS IS 515 RIVERLAND DRIVE
- EXISTING LAND USE DATA:
HIGH AREA: 6.654
WET AREA: 0.302
GROSS AREA: 6.956
- LOTS 1 THROUGH 7 WILL FRONT ON RIVERLAND DRIVE
- GALLOWAY LANE IS 20' UNOBSTRUCTABLE TO INCLUDE MOUNTABLE CURB, "NO PARKING FIRE LANE" MUST BE POSTED ON BOTH SIDES OF STREET
- ALL USABLE OPEN SPACE AREA MUST BE IMPROVED PRIOR TO FINAL PLAT APPROVAL
- HOA AREA 3 DOES NOT COUNT TOWARDS OPEN SPACE CALCULATIONS
- PENTLAND DRIVE LENGTH: 924.95'
GALLOWAY LANE LENGTH: 510.15'

REFERENCE PLAT BY:

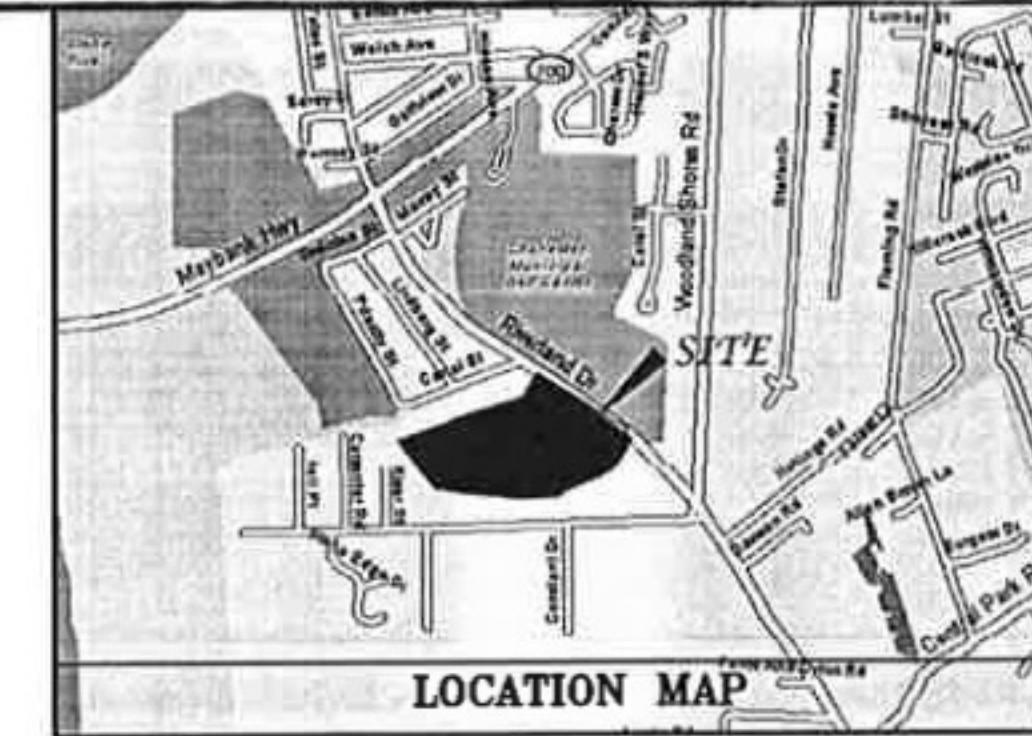
1. KEITH K. RUDDY - JULY 12, 1999 "ED" - 330

OWNER CONTACT INFORMATION

RIVERLAND PARK, LLC
CONTACT: TED TERRY
572 SAVANNAH HIGHWAY
CHARLESTON, SC 29407
(PH) 843-573-9635
(F) 843-402-0135

RECORDED IN THE CHAR. COUNTY RMC OFFICE

AREA TABLE	
LOTS:	3,148 ACRES
R/W:	1,297 ACRES
OPEN SPACE:	1,512 ACRES
EASE & DRAIN:	1,019 ACRES
TOTAL AREA OF SUBDIVISION	6,956 ACRES
NET DENSITY:	27 LOTS/3,148 AC. = 8.577 UNITS/AC.
GROSS DENSITY:	27 LOTS/6,956 AC. = 3.89 UNITS/AC.



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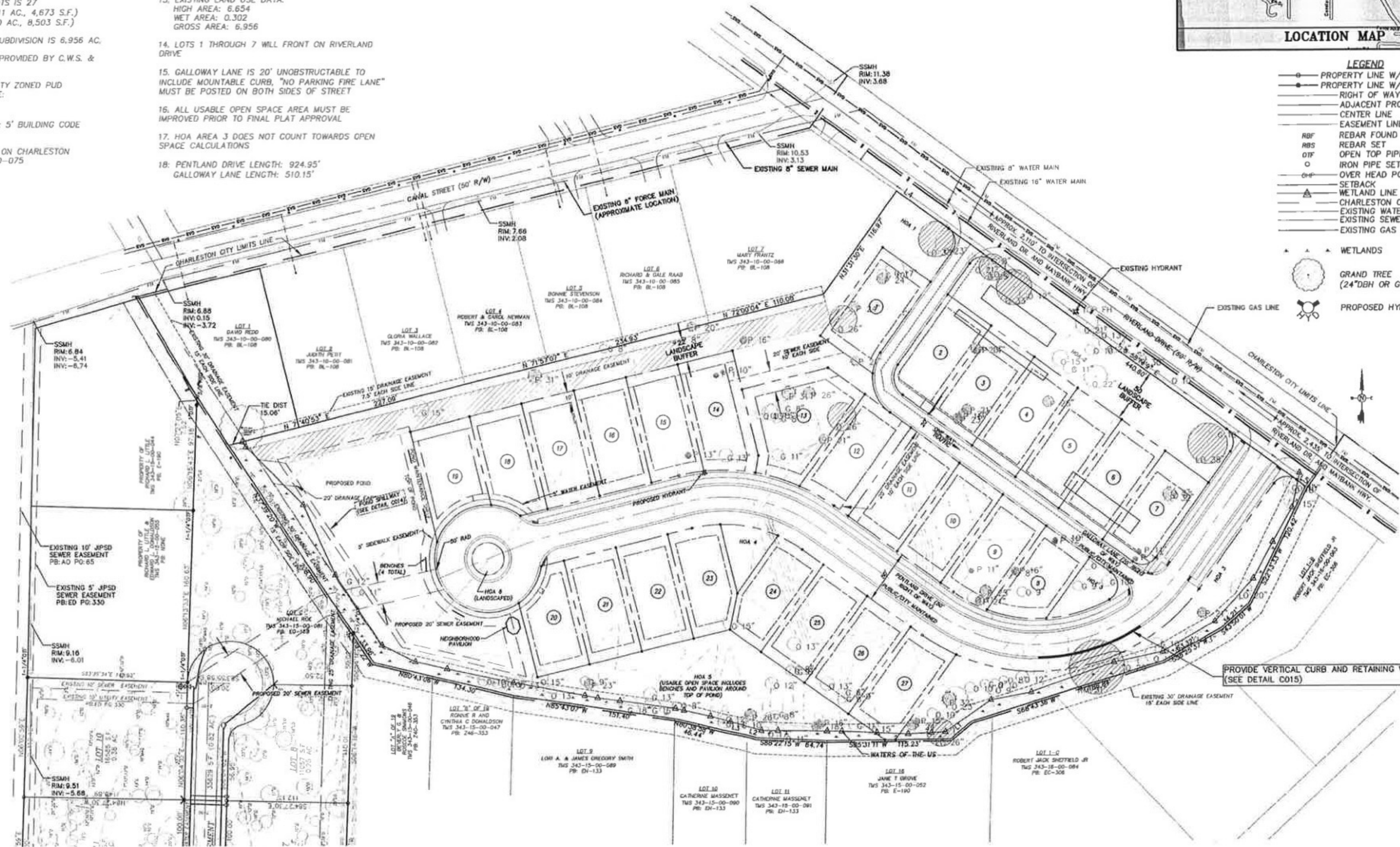
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Robert D. Hanner
10 APR 2011

LEGEND

- PROPERTY LINE W/ 5/8" REBAR SET
- PROPERTY LINE W/ CORNER FD
- RIGHT OF WAY
- ADJACENT PROPERTY LINE
- CENTER LINE
- EASEMENT LINE
- RFB REBAR FOUND
- RBS REBAR SET
- OTF OPEN TOP PIPE FOUND
- IPF IRON PIPE SET
- OHF OVER HEAD POWER
- △ SETBACK
- △ WETLAND LINE
- CHARLESTON CITY LIMIT LINE
- EXISTING WATER MAIN
- EXISTING SEWER MAIN
- EXISTING GAS LINE
- △ WETLANDS
- GRAND TREE (24" DBH OR GREATER)
- PROPOSED HYDRANT ASSEMBLY



FOR DETAILED TREE INFORMATION
PLEASE REFER TO SHEET C005



PROJECT OWNER
RIVERLAND PARK LLC
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PH: 843-573-9635
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PROJECT TITLE
RIVERLAND PARK

SHEET TITLE
PROPOSED SITE PLAN

SCALE
1"=50'

DATE
MARCH 2011

HES PROJECT NO.
2110125

DESIGNED BY
TJM

DRAWN BY
LM

CHECKED BY
RLH

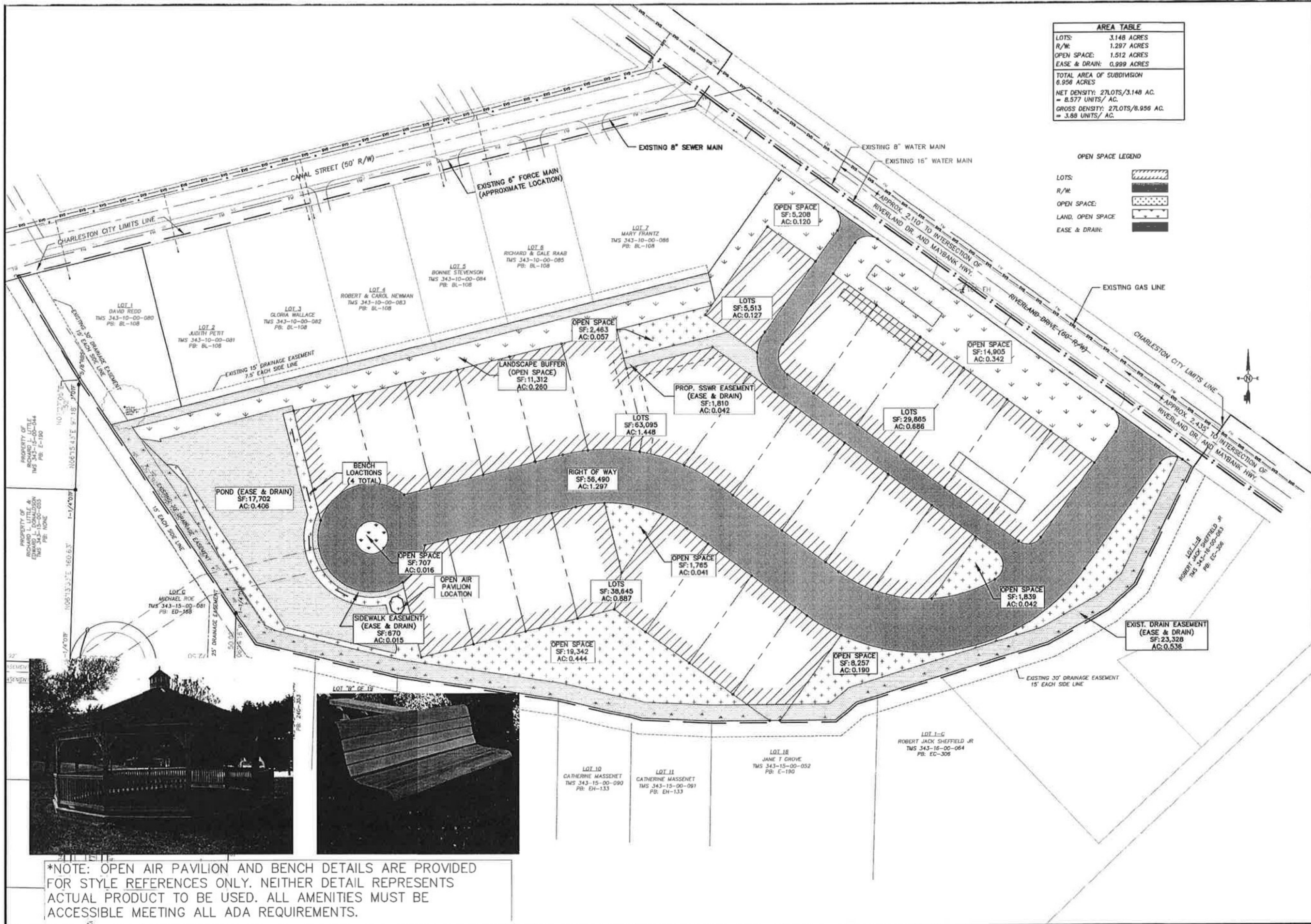
DATE
3/1/11

SCALE
1"=50'

DATE
MARCH 2011

HES PROJECT NO.
2110125

PROJECT NO.
C-004



AREA TABLE	
LOTS:	3,148 ACRES
R/W:	1,297 ACRES
OPEN SPACE:	1,512 ACRES
EASE & DRAIN:	0,999 ACRES
TOTAL AREA OF SUBDIVISION 6,956 ACRES	
NET DENSITY: 27 LOTS/3,148 AC. = 8.577 UNITS/AC.	
GROSS DENSITY: 27 LOTS/6,956 AC. = 3.88 UNITS/AC.	

OPEN SPACE LEGEND	
LOTS:	
R/W:	
OPEN SPACE:	
LAND. OPEN SPACE:	
EASE & DRAIN:	

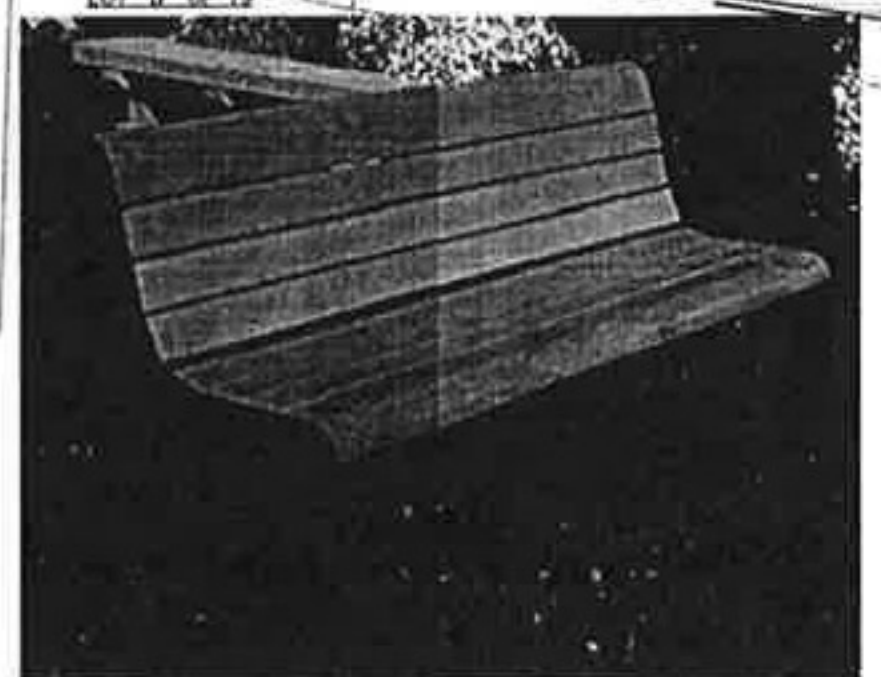
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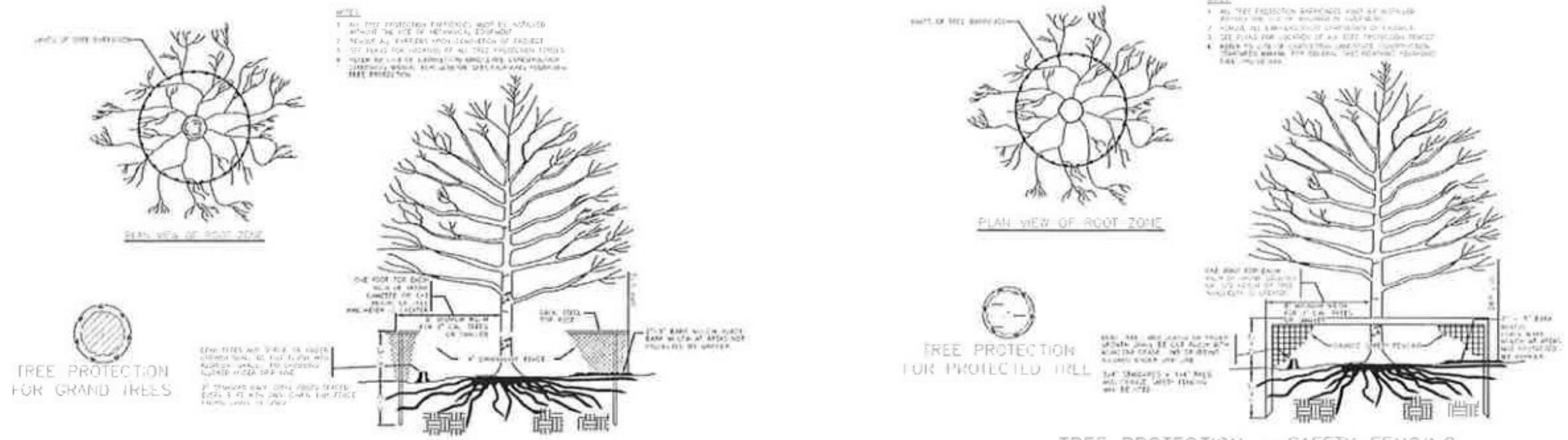
Robert D. Hanner
 10 FEBRUARY 2011

PROJECT OWNER	RIVERLAND PARK LLC
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PROJECT TITLE	RIVERLAND PARK
SHEET TITLE	OPEN SPACE EXHIBIT



*NOTE: OPEN AIR PAVILION AND BENCH DETAILS ARE PROVIDED FOR STYLE REFERENCES ONLY. NEITHER DETAIL REPRESENTS ACTUAL PRODUCT TO BE USED. ALL AMENITIES MUST BE ACCESSIBLE MEETING ALL ADA REQUIREMENTS.

SCALE	NTS	DATE	MARCH 2011	REG. PROJECT NO.	2110125
DATE	MARCH 2011	SHEET NO.	C004A		



GRAND TREE PROTECTION - 4' CHAIN-LINK FENCE
NOTE: NO MECHANICAL EQUIPMENT IS TO BE USED WHEN INSTALLING TREE BARRICADES

TREE PROTECTION - SAFETY FENCING
NOTE: NO MECHANICAL EQUIPMENT IS TO BE USED WHEN INSTALLING TREE BARRICADES

EXISTING	
TOTAL NUMBER OF EXISTING TREES ONSITE:	272 TREES
NUMBER OF EXISTING GRAND TREES:	9 TREES
NUMBER OF EXISTING PROTECTED TREES:	263 TREES
ACREAGE:	6.95 ACRES
TOTAL NUMBER OF TREES PER ACRE ONSITE:	39.14 TREES/ACRE
PROPOSED	
TREE REMOVAL	
TOTAL NUMBER OF TREES TO BE REMOVED:	170 TREES
NUMBER OF GRAND TREES TO BE REMOVED:	1 TREE
NUMBER OF PROTECTED TREES TO BE REMOVED:	169 TREES
REMAINING TREES	
TOTAL NUMBER OF TREES TO REMAIN:	102 TREES
NUMBER OF GRAND TREES REMAINING:	8 TREES
NUMBER OF PROTECTED TREES REMAINING:	94 TREES
TOTAL NUMBER OF TREES PER ACRE REMAINING:	13.53 TREES/ACRE
LANDSCAPED TREES	
NUMBER OF TREES:	55 TREES
NUMBER OF UNDERSTORY TREES:	61 TREES
NUMBER OF SHRUBS:	246 SHRUBS
TOTAL NUMBER OF TREES PER ACRE:	31.37 TREES/ACRE
*(SHRUBS NOT INCLUDED)	



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10-17-2011

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RIVERLAND PARK
TREE PROTECTION & REMOVAL PLAN

SCALE: 1"=40'
DATE: MARCH 2011
PROJECT NO: 2110125
SHEET NO: C005

EROSION CONTROL NOTES:

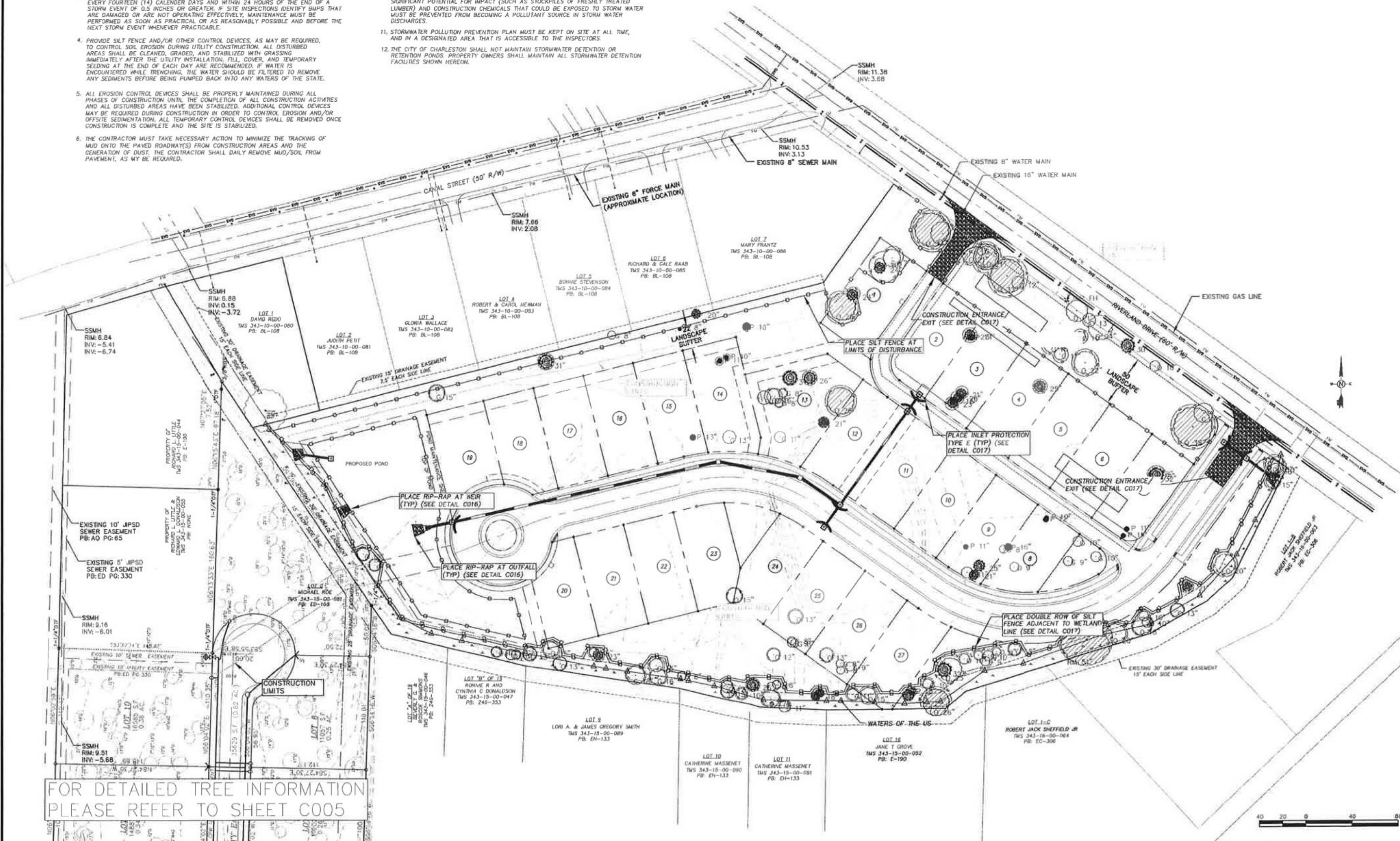
- IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
- STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER. IF SITE INSPECTIONS IDENTIFY BUMPS THAT ARE DAMAGED OR ARE NOT OPERATING EFFECTIVELY, MAINTENANCE MUST BE PERFORMED AS SOON AS PRACTICAL OR AS REASONABLY POSSIBLE AND BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE.
- PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION, FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE ANY SEDIMENTS BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO THE PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
- RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C. REG. 72-300 ET SEQ. AND SCRT00000.
- TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
- ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
- UTTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
- STORMWATER POLLUTION PREVENTION PLAN MUST BE KEPT ON SITE AT ALL TIME, AND IN A DESIGNATED AREA THAT IS ACCESSIBLE TO THE INSPECTORS.
- THE CITY OF CHARLESTON SHALL NOT MAINTAIN STORMWATER DETENTION OR RETENTION POND. PROPERTY OWNERS SHALL MAINTAIN ALL STORMWATER DETENTION FACILITIES SHOWN HEREON.

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Robert J. Hanner
 10 MARCH 2011



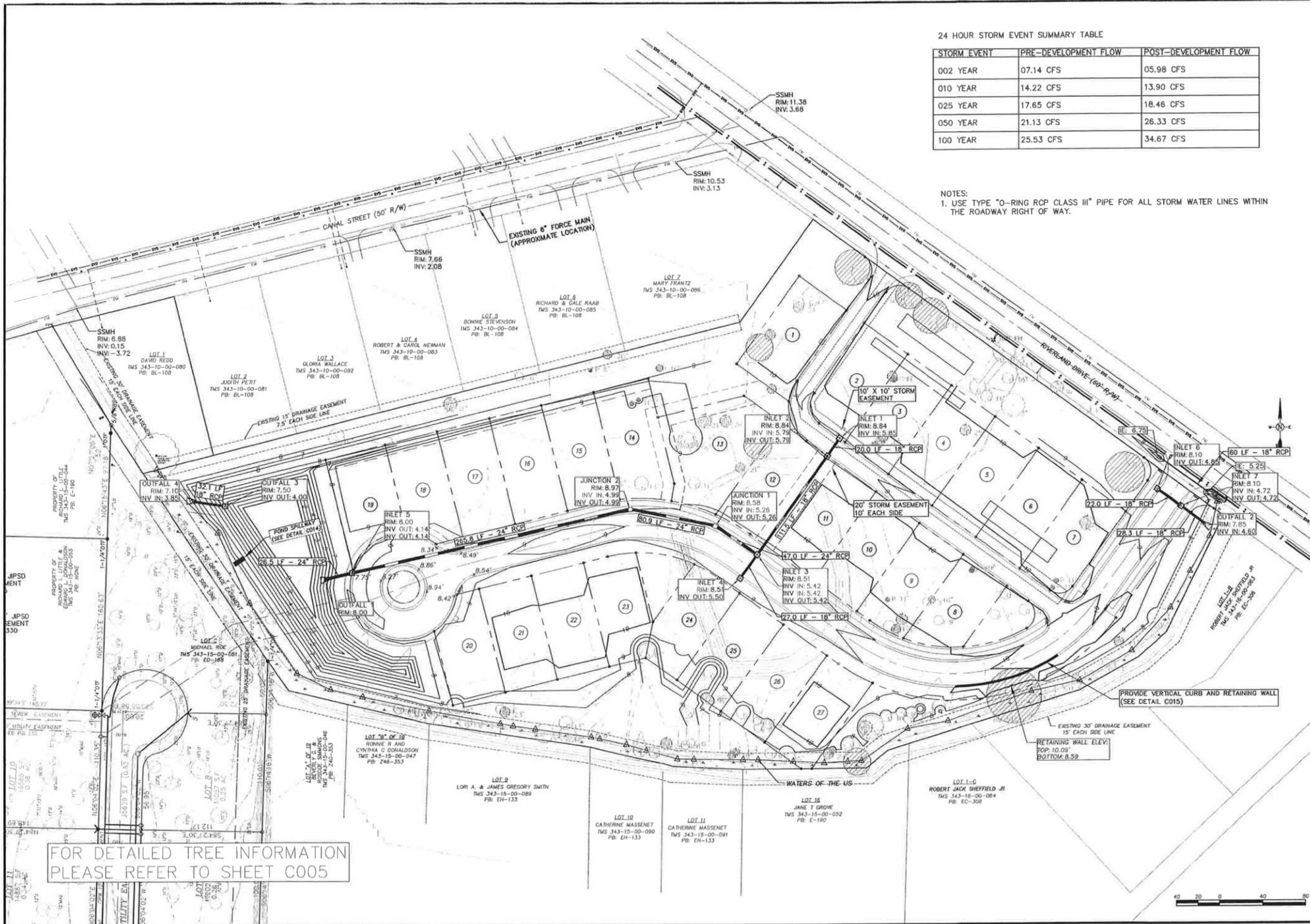
FOR DETAILED TREE INFORMATION
 PLEASE REFER TO SHEET C005



PROJECT OWNER	RIVERLAND PARK LLC
PROJECT TITLE	RIVERLAND PARK
SCALE	1"=40'
DATE	MARCH 2011
SHEET NUMBER	C006
REVISION	
DATE	

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2110125



24 HOUR STORM EVENT SUMMARY TABLE

STORM EVENT	PRE-DEVELOPMENT FLOW	POST-DEVELOPMENT FLOW
002 YEAR	07.14 CFS	05.98 CFS
010 YEAR	14.22 CFS	13.90 CFS
025 YEAR	17.65 CFS	18.46 CFS
050 YEAR	21.13 CFS	26.33 CFS
100 YEAR	25.53 CFS	34.67 CFS

NOTES:
 1. USE TYPE "O-RING RCP CLASS III" PIPE FOR ALL STORM WATER LINES WITHIN THE ROADWAY RIGHT OF WAY.

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Robert D. Hanner
 10/1/2011

PROJECT OWNER

RIVERLAND PARK LLC

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 PH: 843-573-9635
 FAX: 843-402-0135

PROJECT TITLE
RIVERLAND PARK

SHEET TITLE
OVERALL GRADING & DRAINAGE PLAN

SCALE: 1"=40'
 DATE: MARCH 2011
 SHEET NO.: C007
 HED PROJECT NO.: 2110125

FOR DETAILED TREE INFORMATION PLEASE REFER TO SHEET C005

PENTLAND DRIVE TO HAVE ROLLED CURB AND GUTTER EXCEPT FOR VERTICAL CURB AND GUTTER FROM STATION 2+26.50 TO 3+50.00 ON THE SOUTHERN SIDE ONLY

VERTICAL CURB WITH RETAINING WALL (SEE DETAIL SHEET 15)

FOR DETAILED TREE INFORMATION PLEASE REFER TO SHEET C005

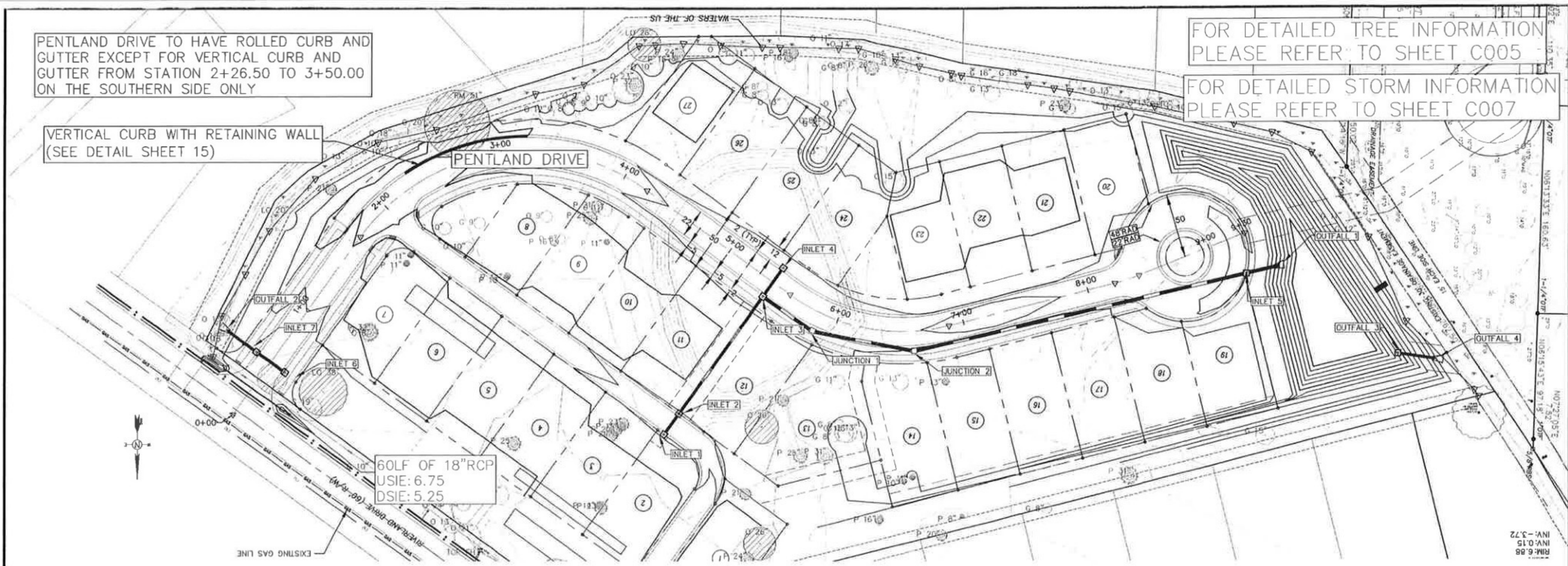
FOR DETAILED STORM INFORMATION PLEASE REFER TO SHEET C007

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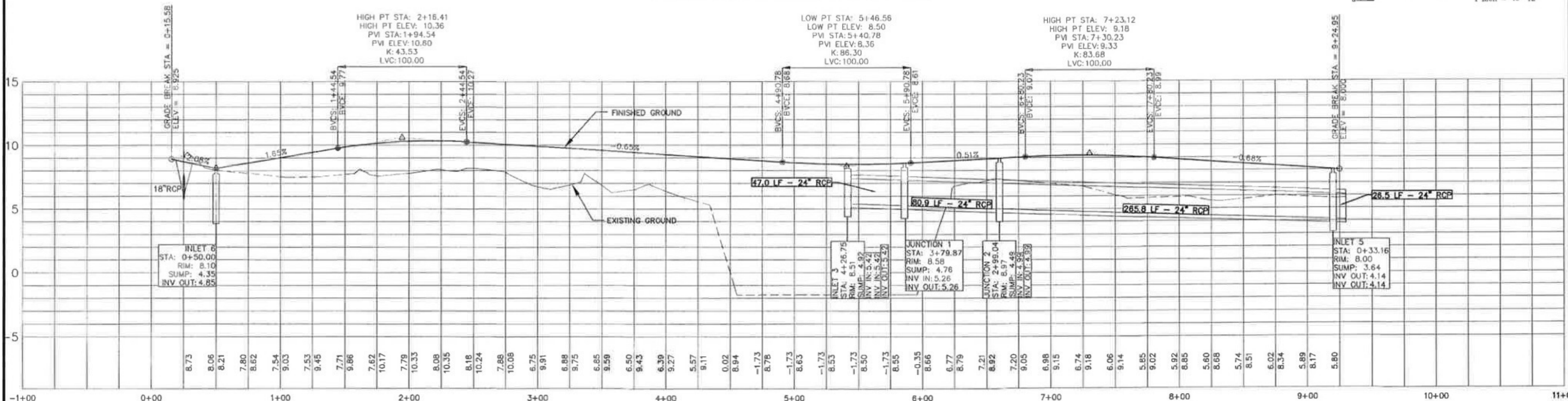
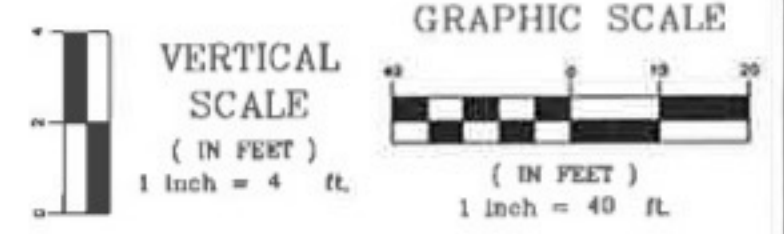


Robert H. Hanner
10-13-2011



60LF OF 18" RCP
USIE: 6.75
DSIE: 5.25

PENTLAND DRIVE PROFILE



PROJECT OWNER
RIVERLAND PARK LLC
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CHARLESTON, SC 29412
PH: 843-573-9635
FAX: 843-402-0135

PROJECT TITLE
RIVERLAND PARK

SHEET TITLE
PENTLAND DRIVE ROAD PROFILE

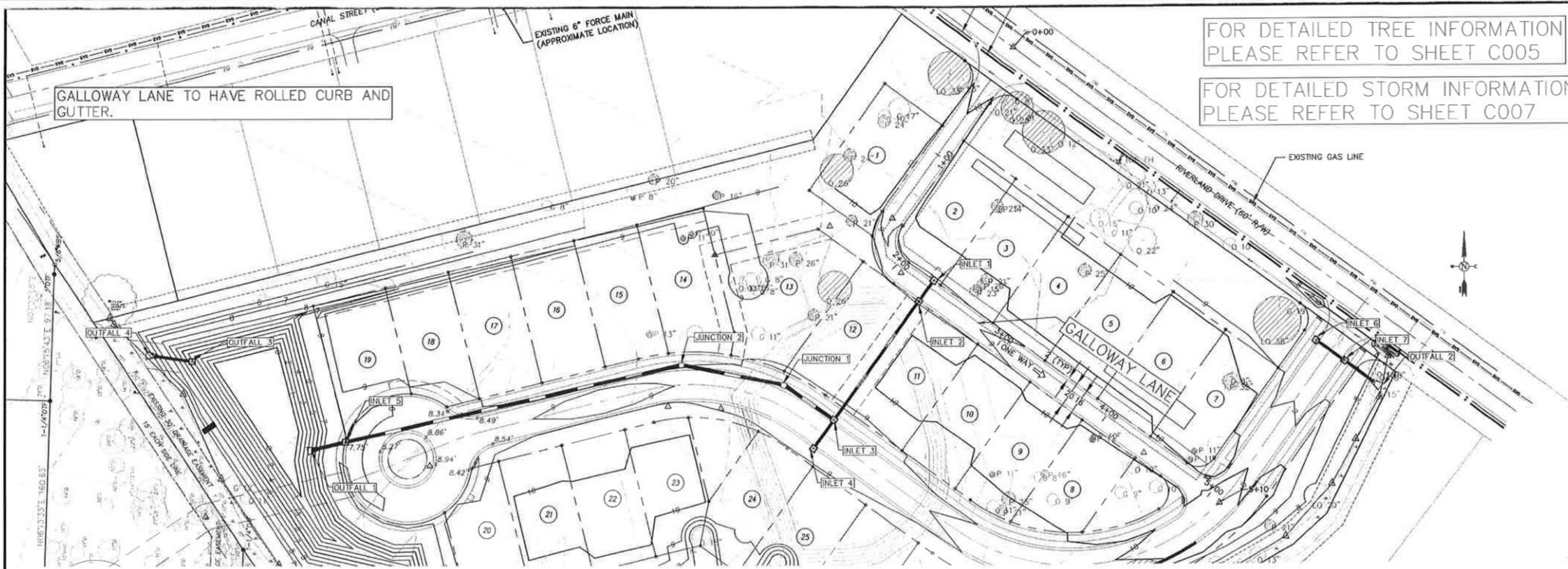
SCALE
AS SHOWN

DATE
MARCH 2011

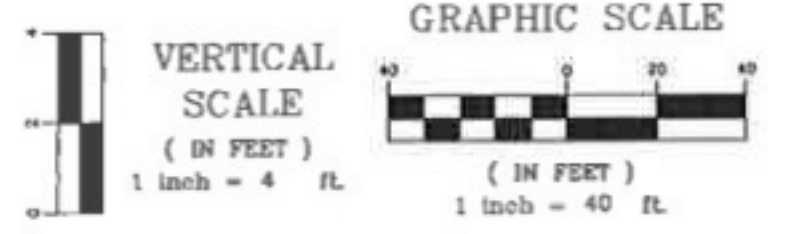
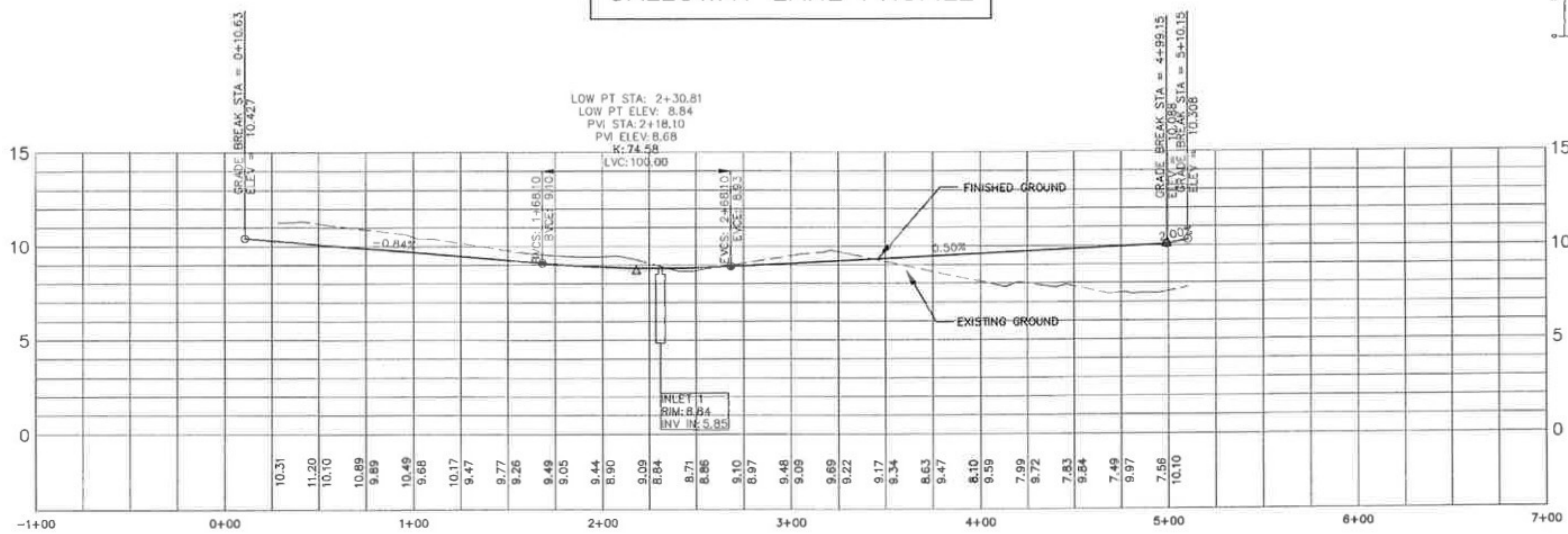
HQS PROJECT NO.
2110125

NO. OF SHEETS
1

SHEET NO.
C008



GALLOWAY LANE PROFILE



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Robert D. Haner
10 FEBRUARY 2011

NO.	DATE	DESCRIPTION

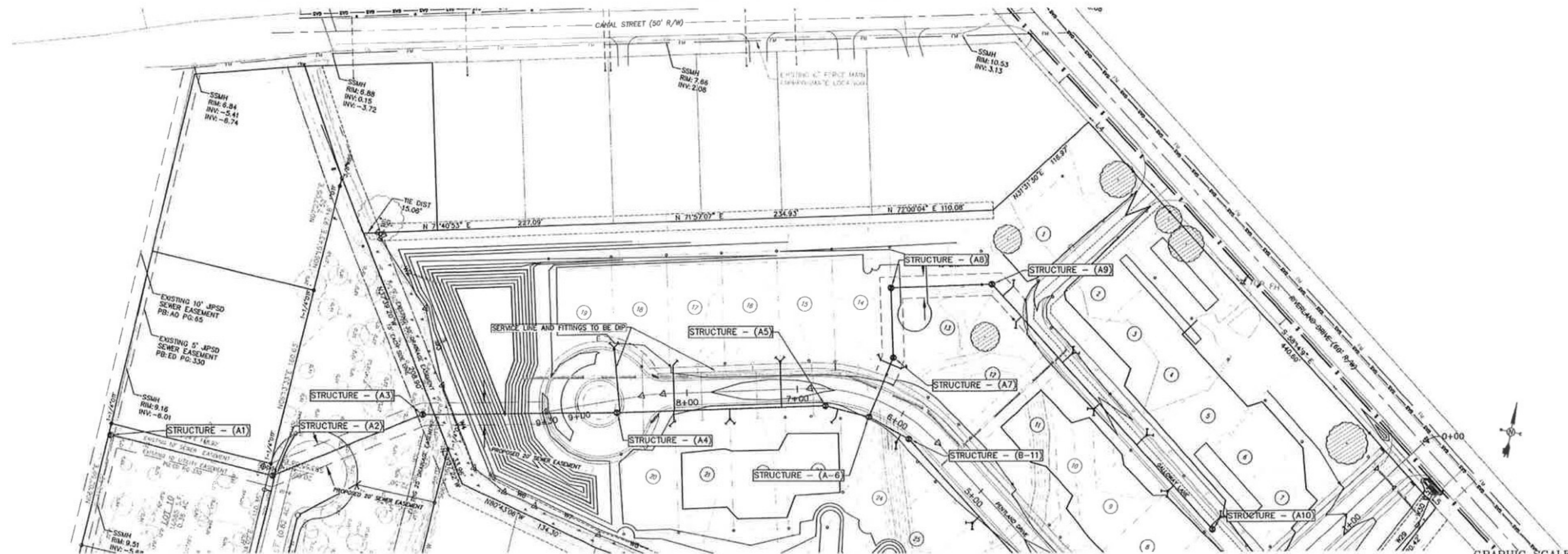
PROJECT OWNER
RIVERLAND PARK LLC
572 SAVANNAH HIGHWAY
CHARLESTON, SC 29412
PH: 843-573-9635
FAX: 843-462-0135

PROJECT TITLE
RIVERLAND PARK

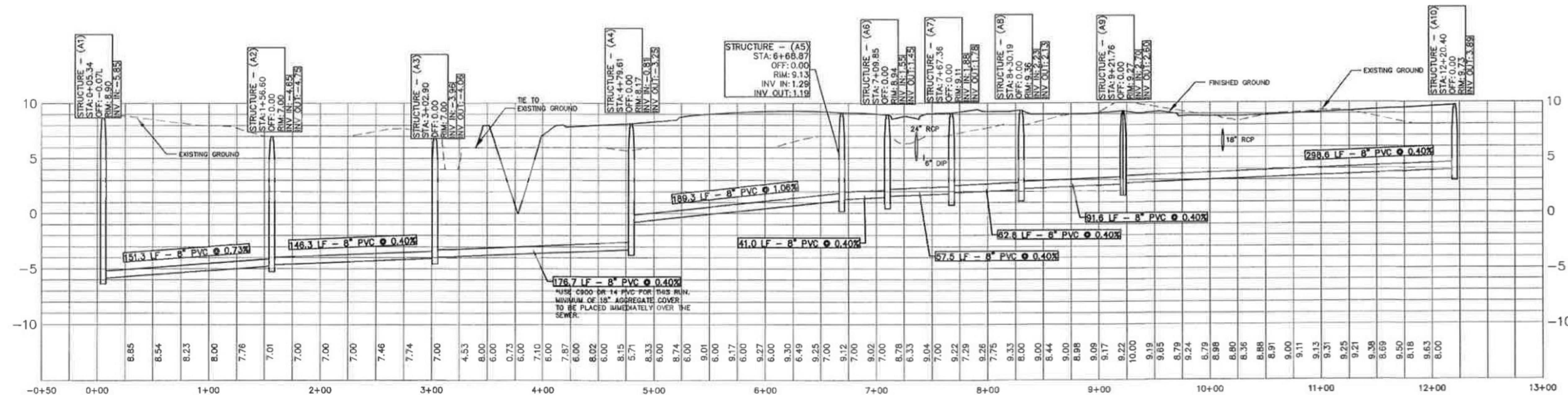
SCALE		DESIGNED BY	DRAWN BY
AS SHOWN		RJM	RJM
DATE	REVISED	DESIGNED BY	DRAWN BY
MARCH 2011		RJM	RJM
SHEET PROJECT NO.		SHEET NO.	
2110125		C009	

FOR DETAILED TREE INFORMATION
PLEASE REFER TO SHEET C005

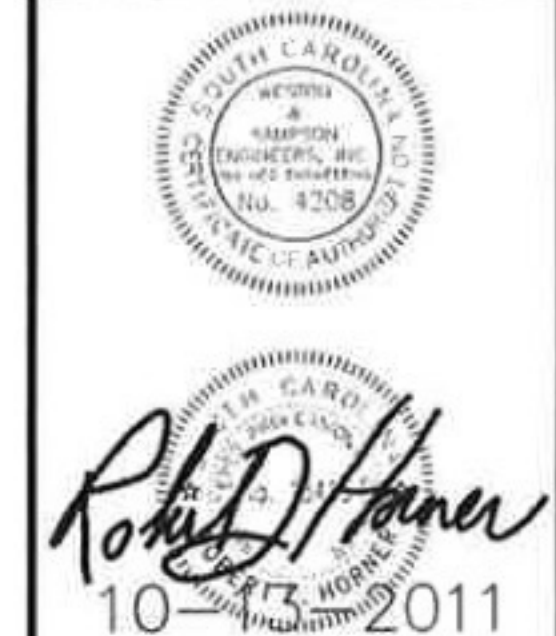
SEWER A PLAN VIEW



SEWER A PROFILE VIEW



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NO.	DATE	DESCRIPTION

RIVERLAND PARK LLC

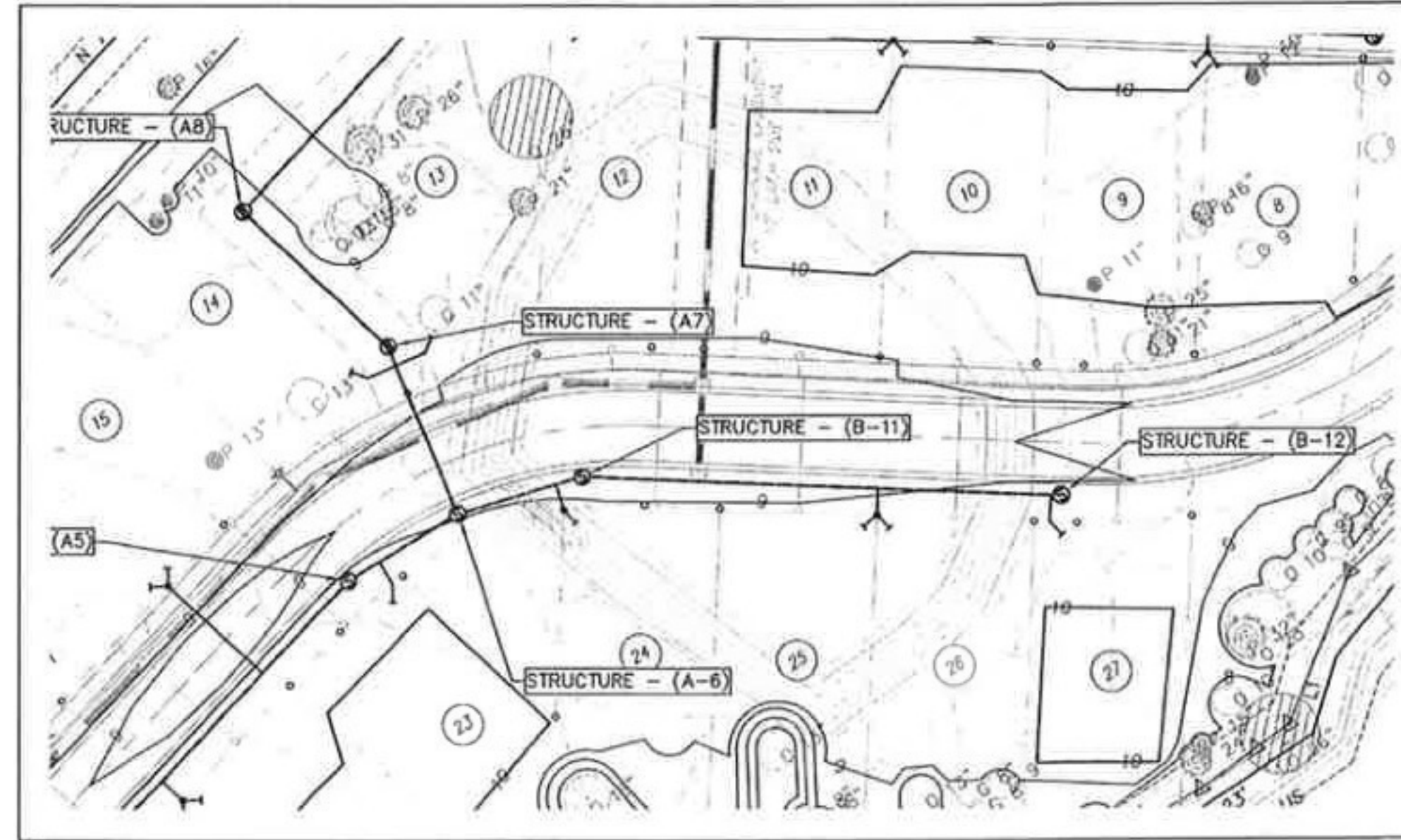
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PH: 843-573-9635
FAX: 843-402-0135

RIVERLAND PARK

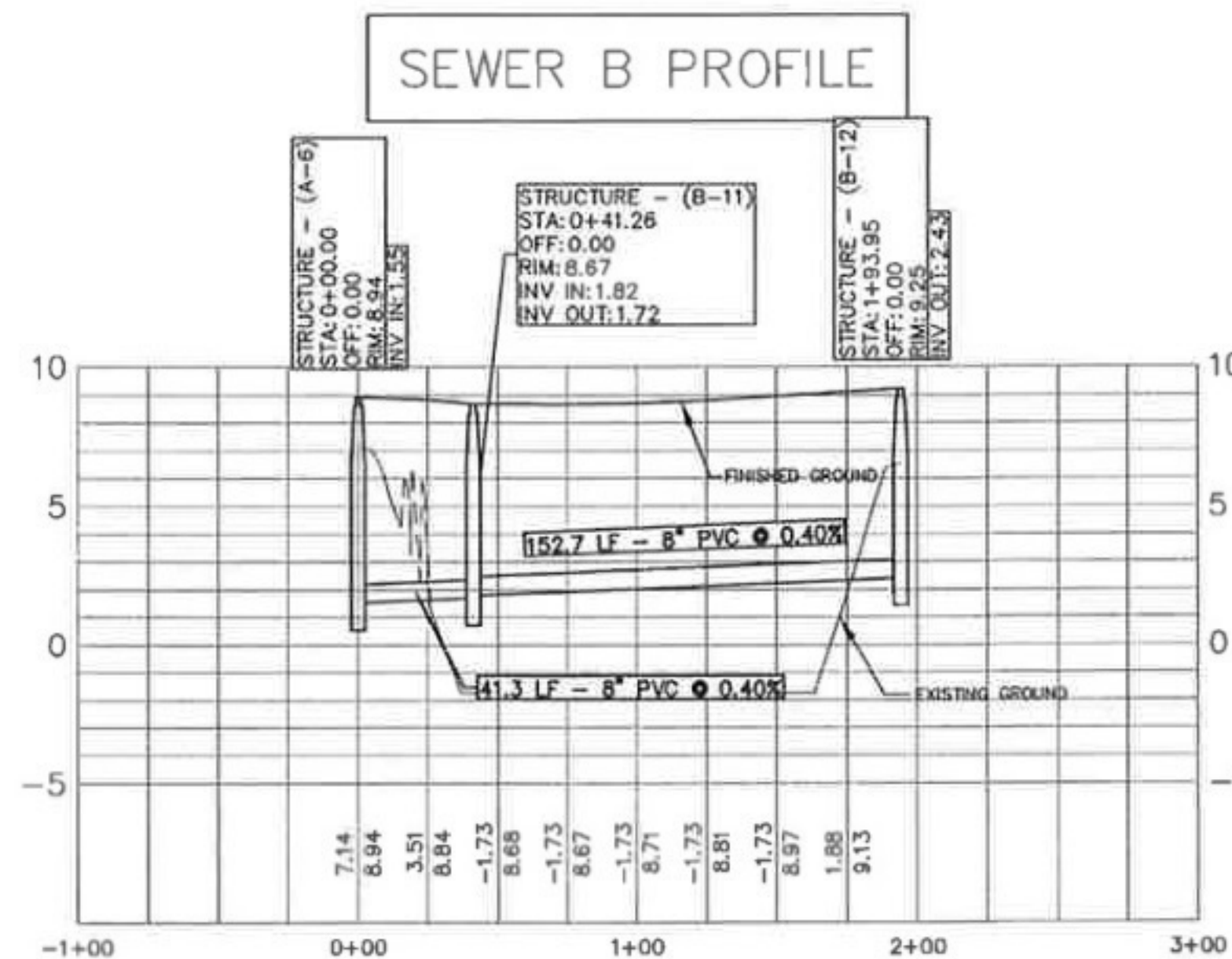
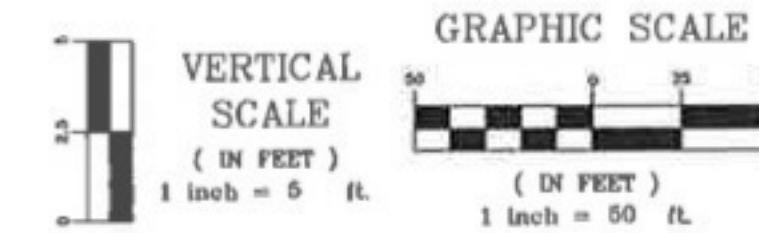
SANITARY SEWER PROFILE

FOR DETAILED TREE INFORMATION
PLEASE REFER TO SHEET C005

SEWER B PLAN VIEW



NOTES:
ALL PROPOSED SEWERS, SERVICE LINES AND MANHOLES TO BE CONSTRUCTED WITHIN THE EXISTING POND TO BE FILLED SHOULD BE MONITORED DURING CONSTRUCTION FOR PROPER COMPACTION OF THE SUBGRADE PER JIPSD SPECIFICATIONS.



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Robert D. Hanner
10-MAR-2011

RIVERLAND PARK LLC

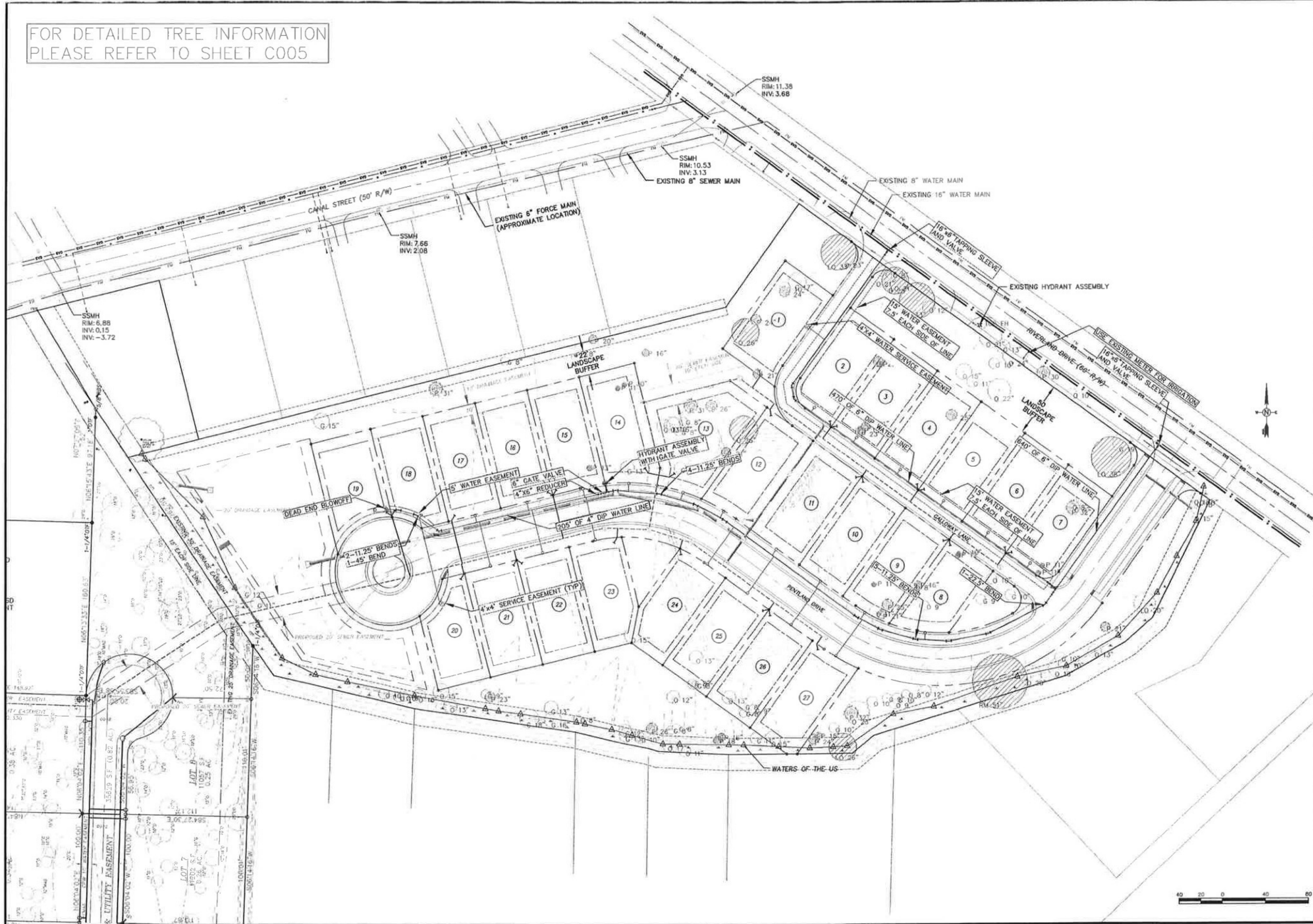
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RIVERLAND PARK

SANITARY SEWER PROFILE

SCALE 1"=50'	DATE MARCH 2011	PROJECT NO. 2110125	SHEET NO. C011
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FOR DETAILED TREE INFORMATION
PLEASE REFER TO SHEET C005



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Robert D. Hanner
Professional Engineer
10-1-2011

REV. NO.	DATE	DESCRIPTION

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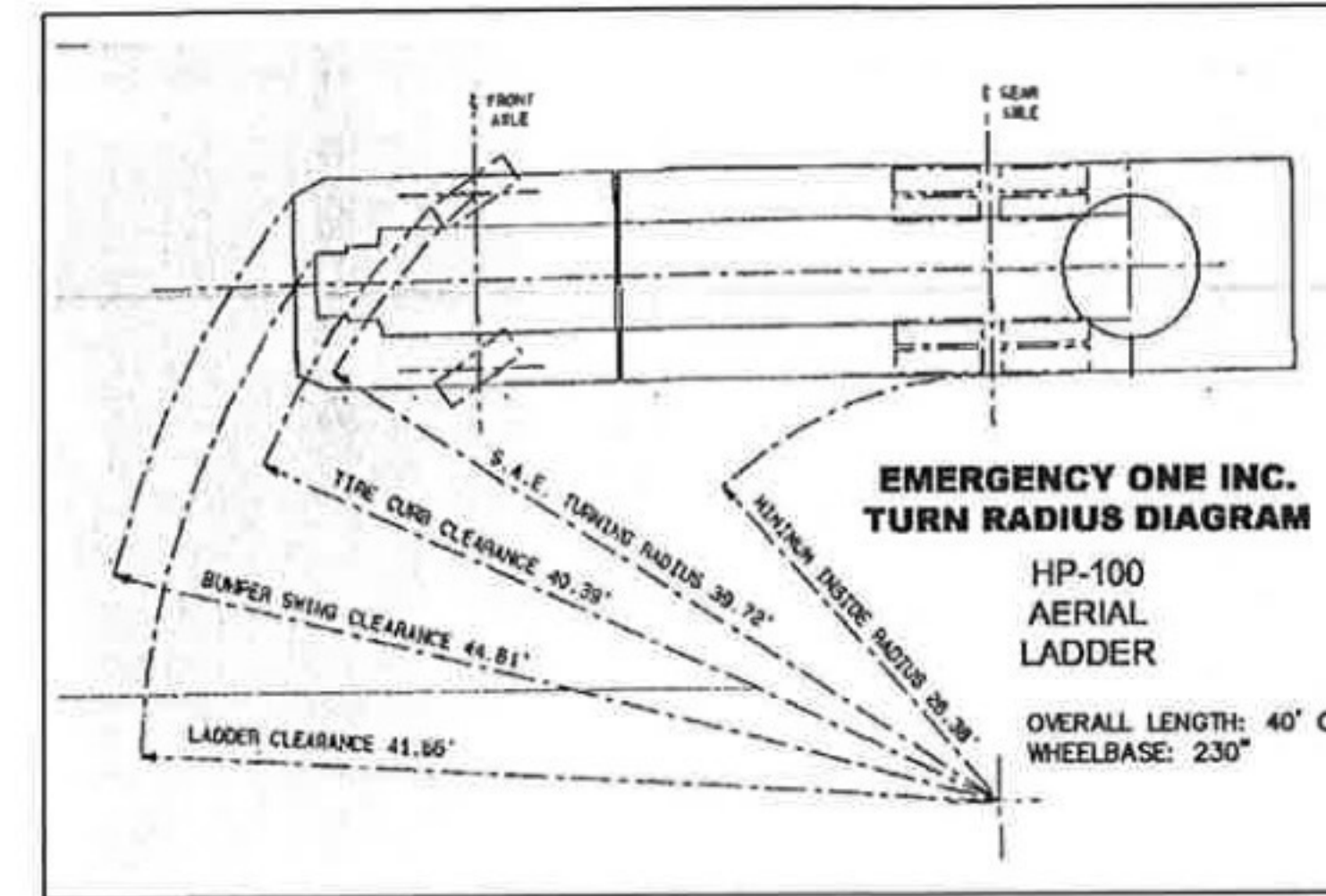
WATER PLAN

SCALE: 1"=40'
DATE: MARCH 2011
SHEET NUMBER: C012
PROJECT NO.: 2110125

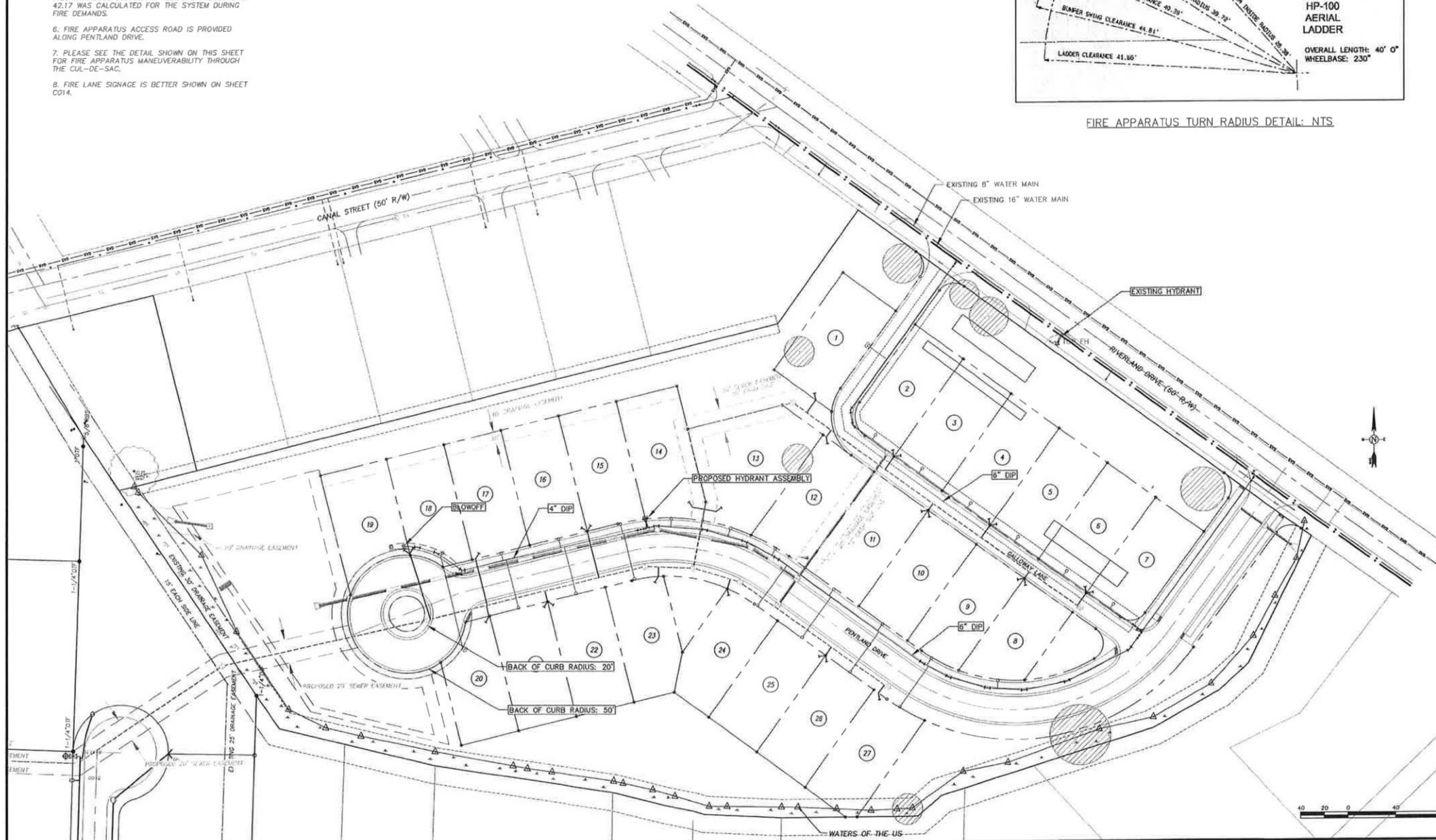


GENERAL NOTES:

1. PROPOSED CONSTRUCTION TYPE IS SINGLE FAMILY RESIDENTIAL. MAXIMUM HEIGHT IS 35' (2.5 STORIES).
2. THERE IS NOT A FIRE SPRINKLER SYSTEM PROPOSED FOR THIS DEVELOPMENT.
3. ALL EXISTING AND PROPOSED HYDRANTS ARE SHOWN IN THE PLAN BELOW.
4. HYDRANTS TO BE INSTALLED PER DETAIL SHOWN ON C020.
5. FIRE FLOW DEMAND BASED ON CALCULATIONS DATED MAY 21, 2009 IS 1,025.32 GPM. FIRE FLOW DEMAND IS BASED ON 1,000 GPM + $\frac{1}{2}$ OF THE INSTANTANEOUS DEMAND. A RESIDUAL PRESSURE OF 42.17 WAS CALCULATED FOR THE SYSTEM DURING FIRE DEMANDS.
6. FIRE APPARATUS ACCESS ROAD IS PROVIDED ALONG PENTLAND DRIVE.
7. PLEASE SEE THE DETAIL SHOWN ON THIS SHEET FOR FIRE APPARATUS MANEUVERABILITY THROUGH THE CUL-DE-SAC.
8. FIRE LANE SIGNAGE IS BETTER SHOWN ON SHEET C014.



FIRE APPARATUS TURN RADIUS DETAIL: NTS



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Robert D. Haner
 10-1-2011

PROJECT OWNER	
RIVERLAND PARK LLC	
372 SAVANNAH HIGHWAY CHARLESTON, SC 29412 PH: 843-573-9635 FAX: 843-402-0135	
PROJECT TITLE	
RIVERLAND PARK	

RIVERLAND PARK LLC

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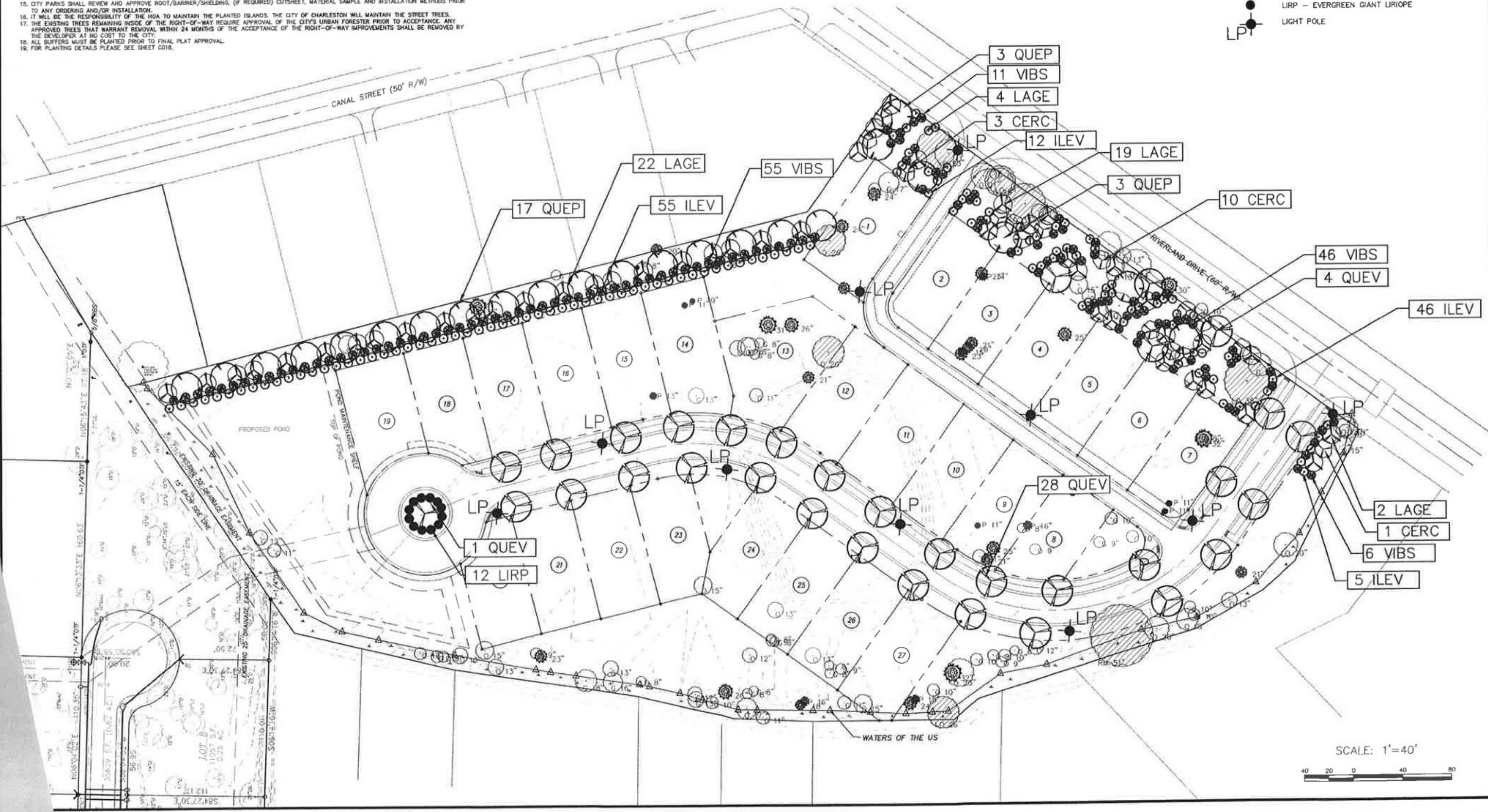
RIVERLAND PARK

SHEET TITLE	
FIRE PROTECTION PLAN	
SCALE	1"=40'
DATE	MARCH 2011
HIG. PROJECT NO.	2110125
DESIGNED BY	FAH
CHECKED BY	RJH
DATE	
DESIGNER	FAH
APPROVED BY	RJH
DATE	
REVISION NUMBER	
	C012A

- NOTES:
- THE FOLLOWING PLANT PALETTE IS PREPARED AS A SELECTION OF PLANTING MATERIALS.
 - WHERE AN ABBREVIATION IS SHOWN THE FOLLOWING NOTES APPLY:
 QUAN. - QUANTITY OF PLANT MATERIALS REQUIRED FOR THE PROJECT
 ABBRV. - BOTANICAL ABBREVIATION
 BOTANICAL/Common - NAME OF PLANT MATERIAL
 HEIGHT - HEIGHT OF PLANT MATERIAL
 SPREAD - DIAMETER OF PLANT MATERIAL
 CONT. - CONTAINER TYPE WHICH PLANT MATERIAL IS ENCASED UPON SITE DELIVERY (SIZE SHALL TAKE PRECEDENCE OVER CONTAINER)
 CAL. - CALIPER/DIAMETER OF TRUNK (CALIPER SHOULD TAKE PRECEDENCE OVER HEIGHT & SPREAD)
 SPACING - DISTANCE FROM CENTER OF EACH PLANT (PLAN SHALL TAKE PRECEDENCE OVER SCHEDULE)
 CAL. - CALIPER/DIAMETER OF TRUNK (CALIPER SHOULD TAKE PRECEDENCE OVER HEIGHT & SPREAD)
 NOTES - SPECIFIC NOTES FURTHER SPECIFYING OR DESCRIBING PLANT MATERIAL
 - THE CONTRACTOR SHALL LOCATE ALL PROPOSED & EXISTING UTILITIES PRIOR TO THE BEGINNING OF WORK. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO UTILITIES THAT ARE DISTURBED AS A RESULT OF THE WORK.
 - THE CONTRACTOR SHALL MAINTAIN ALL GRASSED AREAS, INCLUDING THE REPAIR OF EROSION AREAS, UNTIL GRASS HAS REACHED THE LEVEL OF FINAL ACCEPTANCE & THROUGHOUT MAINTENANCE CONTRACT PERIOD IF APPLICABLE.
 - ALL AREAS THAT ARE DISTURBED BY CONSTRUCTION INSIDE OR OUTSIDE THE LIMIT OF WORK SHALL BE REPAIRED, GRADED & GRASSED.
 - ALL PLANT BEDS SHALL RECEIVE (1) SHAL OF FINE MIDDLE SILT ON PER 30 SF TO A DEPTH OF 4".
 - ALL EXISTING TREES TO BE SAVED WILL HAVE TREE BARRICADES INSTALLED AROUND THEM PRIOR TO BEGINNING OF DEMOLITION. ALL WORK IN THOSE AREAS IS TO BE DONE BY HAND. FENCES SHALL BE MAINTAINED & KEPT IN PLACE AT ALL TIMES. SEE CIVIL DRAWINGS FOR DETAILS AND INSTRUCTIONS.
 - PROVIDE EROSION CONTROL WHERE SLOPES ARE GREATER THAN 3:1 & WHERE EROSION KEEPS RE-OCCURRING.
 - ALL TREE, SHRUB & GROUND COVER MATERIALS SHALL BE PLANTED WITHIN 24 HOURS AFTER DELIVERY.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH CIVIL ENGINEER, SITE AND BUILDING CONTRACTORS AND ANY ADDITIONAL CONSULTANTS.
 - PLANT MATERIAL LIST WAS PREPARED FOR ESTIMATING AND PERMITTING PURPOSES ONLY. ALL CONTRACTORS TO MAKE THEIR OWN QUANTITY TAKEOFFS USING DRAWINGS TO DETERMINE QUANTITIES TO THEIR SATISFACTION REPORTING PROMPTLY ANY DISCREPANCIES WHICH MAY AFFECT BIDDING.
 - ALL TREES PLANTED IN THE RIGHT-OF-WAY MUST BE CONTAINER GROWN OR FROM AN APPROVED B&B SOURCE (CONTACT R. DANIEL BURGBAGE 843-724-7410 FOR APPROVAL) TREES PLANTED IN THE RIGHT-OF-WAY MUST MEET ANLA NURSERY STOCK STANDARDS, AND SPECIES SELECTION MUST BE APPROVED BY DEPT. OF PARKS. THE CITY RESERVES THE RIGHT TO REJECT ANY STREET TREES DEEMED UNACCEPTABLE.
 - THE LANDSCAPE CONTRACTOR SHALL PROVIDE AND INSTALL TREE GATOR BAGS ON ALL STREET TREES. WATERING OF THE STREET TREES SHALL BE INCLUDED IN THE LANDSCAPE BID AS A SEPARATE LINE ITEM. THE CONTRACTOR SHALL MAINTAIN THE WATER SCHEDULE INDICATED BELOW FOR 1 YEAR (AT ANY TIME THE CITY MAY REQUEST A WATERING LOG FROM THE CONTRACTOR)
 - THE WATER APPLICATION RATES SHALL BE 5 GAL PER WEEK FOR THE FIRST 3 WEEKS, AND 15 GAL TWICE A WEEK UNTIL ONE YEAR AFTER INSTALLATION.
 - CITY PARKS SHALL REVIEW AND APPROVE ROOT/BARRIER/SHELDING, (IF REQUIRED) CUTSHEET, MATERIAL SAMPLE AND INSTALLATION METHODS PRIOR TO ANY ORDERING AND/OR INSTALLATION.
 - IT WILL BE THE RESPONSIBILITY OF THE HSA TO MAINTAIN THE PLANTED ISLANDS. THE CITY OF CHARLESTON WILL MAINTAIN THE STREET TREES.
 - THE EXISTING TREES REMAINING INSIDE OF THE RIGHT-OF-WAY REQUIRE APPROVAL OF THE CITY'S URBAN FORESTER PRIOR TO ACCEPTANCE. ANY APPROVED TREES THAT WARRANT REMOVAL WITHIN 24 MONTHS OF THE ACCEPTANCE OF THE RIGHT-OF-WAY IMPROVEMENTS SHALL BE REMOVED BY THE DEVELOPER AT NO COST TO THE CITY.
 - ALL DIFFERS MUST BE PLANTED PRIOR TO FINAL PLAT APPROVAL.
 - FOR PLANTING DETAILS PLEASE SEE SHEET C018.

QUAN	ABBRV	BOTANICAL/Common	HEIGHT	SPREAD	CONT	CAL./SPACING	NOTES
TREES							
33	QUEV	QUERCUS VIRGINIANA/ LIVE OAK	14-18'	7-8'	CONTAINER OR APPROVED B&B SOURCE	2.5-3" CAL MIN	FULL, WELL FORMED FIELD GROWN
23	QUEP	QUERCUS PHellos/ WILLOW OAK	12-14'	7-9'	CONTAINER OR APPROVED B&B SOURCE	2.5-3" CAL MIN	FULL, WELL FORMED
UNDERSTORY TREES							
14	CERC	CERCIS CANADENSIS/ "FOREST PANSY" REDBUD	6-8'	3-4'	45 GAL	AS SHOWN	FULLY BRANCHED, HEALTHY
47	LAGE	LAGERSTROEMIA INDICA HATCHEZ/ HATCHEZ CREPE MYRTLE (WHITE)	8-9'	3-4'	30 GAL	AS SHOWN	3 CAN MIN, FULLY BRANCHED, HEALTHY
SHRUBS							
118	ILEV	ILEX VOMITARIA/ YAUPON HOLLY	3-5'	2-3'	7 GAL	AS SHOWN	FULL, HEALTHY
118	VIBS	VIBURNUM SUSPENSUM/ SANDANKWA VIBURNUM	3-5'	2-3'	7 GAL	AS SHOWN	FULLY BRANCHED, HEALTHY
12	LIRP	LIRIOPE MISCARRI/ EVERGREEN GIANT LIRIOPE	1-2'	1-2'	1 GAL	AS SHOWN	FULL, HEALTHY

- LANDSCAPE & LIGHTING LEGEND
- QUEV - LIVE OAK
 - QUEP - WILLOW OAK
 - LAGE - CREEP MYRTLE
 - CERC - REDBUD
 - ILEV - YAUPON HOLLY
 - VIBS - SANDANKWA VIBURNUM
 - LIRP - EVERGREEN GIANT LIRIOPE
 - LIGHT POLE



SCALE: 1"=40'

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Robert D. Hanner
 10-11-2011

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RIVERLAND PARK

LANDSCAPE AND LIGHTING PLAN

SCALE: 1"=40'

DATE: MARCH 2011

HES PROJECT NO.: 2110125

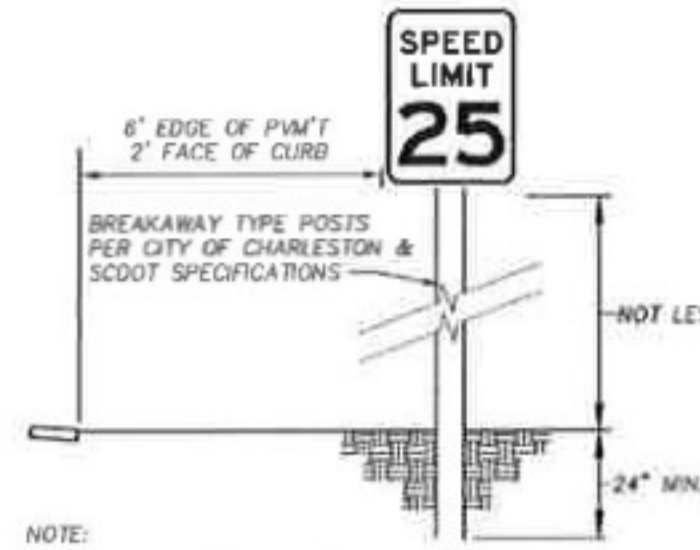
C013

CITY OF CHARLSTON TRAFFIC AND STREET NAME SIGN STANDARDS:

1. ALL REGULATORY, WARNING, AND GUIDE SIGNS SHALL BE FABRICATED WITH ASTM INTERNATIONAL, FORMERLY AMERICAN SOCIETY FOR TESTING AND MATERIALS TYPE II (HIGH INTENSITY) OR GREATER RETROREFLECTIVE SHEETING, UPON APPROVAL BY THE DEPARTMENT OF TRAFFIC AND TRANSPORTATION. PARKING SIGNS AND NON-TRAFFIC RELATED SIGNS MAY BE FABRICATED FROM ASTM TYPE I (ENGINEER GRADE) OR GREATER MATERIAL. ALL SIGNS ARE TO CONFORM TO THE LATEST REVISION OF THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD).
2. ALL STREET NAME SIGNS SHALL BE FABRICATED USING EXTRUDED ALUMINUM BLADES 9" IN HEIGHT. THE MINIMUM LENGTH IS 24" WITH 48" AS THE MAXIMUM. THE ACTUAL LENGTH OF THE BLADE WILL BE DICTATED BY THE NUMBER OF LETTERS IN THE NAME.
3. THE STREET NAME COLOR SCHEME SHOULD BE A BACKGROUND OF GREEN WITH WHITE ASTM TYPE II LETTERING.
4. THE STREET NAME LETTER FONT (OR TYPE) SHOULD BE HIGHWAY GOTHIC "O".
5. ALL STREET NAMES ARE TO CONSIST OF 6" UPPER-CASE LETTERS WITH 4.5" LOWER-CASE LETTERS. THE STREET DESIGNATIONS, E.G., ST, RD, DR, CIR, PKWY, AVE, BLVD ARE TO BE 5/8" SUPERSCRIPT.
6. THE STREET NAME, INCLUDING THE STREET DESIGNATION, SHALL BE CENTERED VERTICALLY AND HORIZONTALLY ON THE BLADE.
7. THE SPACING FROM THE BLADE EDGE TO THE BEGINNING AND END OF THE STREET NAME, INCLUDING THE SUPERSCRIPT DESIGNATION, SHOULD BE A MINIMUM OF 2".
8. STREET NAME SIGNS SHOULD BE MOUNTED WITH A VERTICAL CLEARANCE OF AT LEAST 6' MEASURED FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVEMENT. ALL OTHER SIGNS SHALL BE MOUNTED AT LEAST 7' FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVEMENT, EXCEPT WHEN SUPPLEMENTARY OR SECONDARY SIGN IS PERMITTED.
9. IF A SUPPLEMENTARY OR SECONDARY SIGN IS PERMITTED TO BE MOUNTED ON THE SAME ASSEMBLY AS ANOTHER SIGN THE MAJOR, MOST IMPORTANT, SIGN SHALL BE INSTALLED ABOVE THE SUPPLEMENTARY OR SECONDARY SIGN. THE MINIMUM HEIGHT FROM THE BOTTOM OF THE SUPPLEMENTARY OR SECONDARY SIGN TO THE NEAR EDGE OF THE PAVEMENT SHALL BE 6'.
10. THE MINIMUM LATERAL OFFSET FOR INSTALLED SIGNS SHOULD BE 2' MEASURED FROM THE NEAREST SIGN EDGE TO THE PAVEMENT EDGE (OR THE FACE OF CURB). A MINIMUM OFFSET OF 1' FROM THE FACE OF THE CURB MAY BE USED IN AREAS WHERE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB.
11. ALL TRAFFIC SIGN POSTS SHOULD BE SECURELY INSTALLED AT LEAST 2" IN THE GROUND. TRAFFIC SIGN POSTS SHOULD BE GREEN, 3 LBS./FT STEEL U-CHANNEL POSTS AND 12" IN LENGTH EXCEPT FOR STREET NAME SIGN POSTS.
12. ALL STREET NAME POSTS SHOULD BE ROUND, BREAKAWAY, ALUMINUM OR STEEL, 2 1/4" OD, AND AT LEAST 10' IN LENGTH.
13. ALL OTHER SIGNS SHOULD BE DESIGNED IN ACCORDANCE WITH THE LATEST REVISION OF THE 2009 MUTCD AND/OR APPROVED BY THE DEPARTMENT OF TRAFFIC AND TRANSPORTATION.

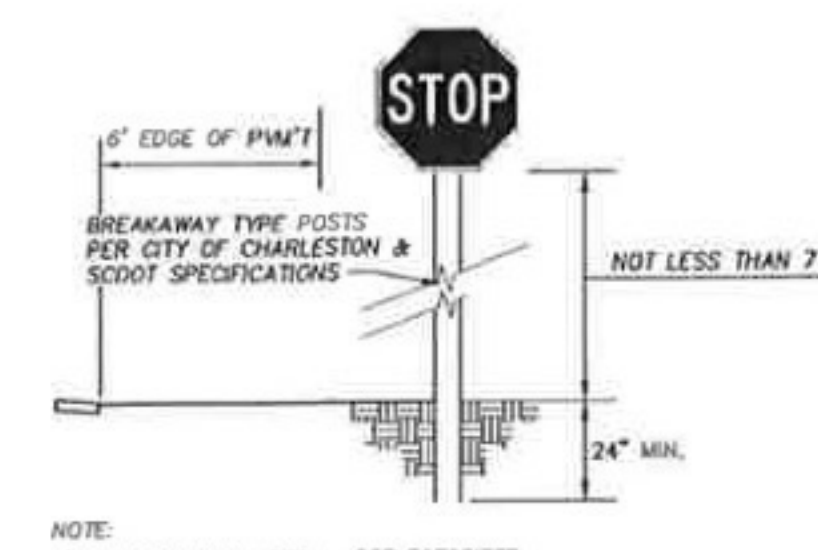


STANDARD MUTCD SIGN DETAILS WITH SIGN CODES



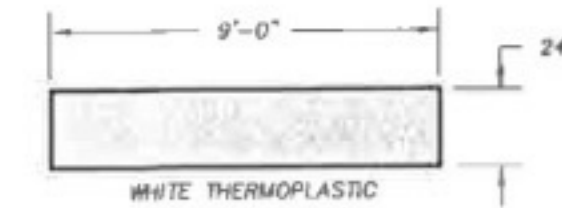
- NOTE:
- 1) BACKGROUND: WHITE - REFLECTORIZED; LEGEND AND BORDER: BLACK - REFLECTORIZED
 - 2) USE TYPE R2-1 24"x24" SIGN MOUNTED ON GALVANIZED U-CHANNEL POSTS.

TYPICAL SPEED LIMIT SIGN DETAIL
N.T.S.

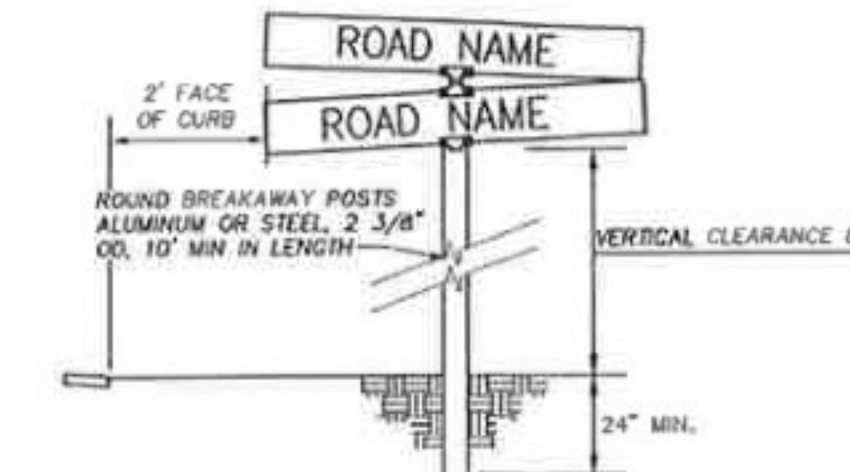


- NOTE:
- 1) BACKGROUND: RED - REFLECTORIZED; LEGEND AND BORDER: WHITE - REFLECTORIZED
 - 2) USE TYPE R1-1-30 30"x30" SIGN MOUNTED ON GREEN GALVANIZED U-CHANNEL POSTS.

TYPICAL STOP SIGN DETAIL
N.T.S.



STOP BAR
N.T.S.



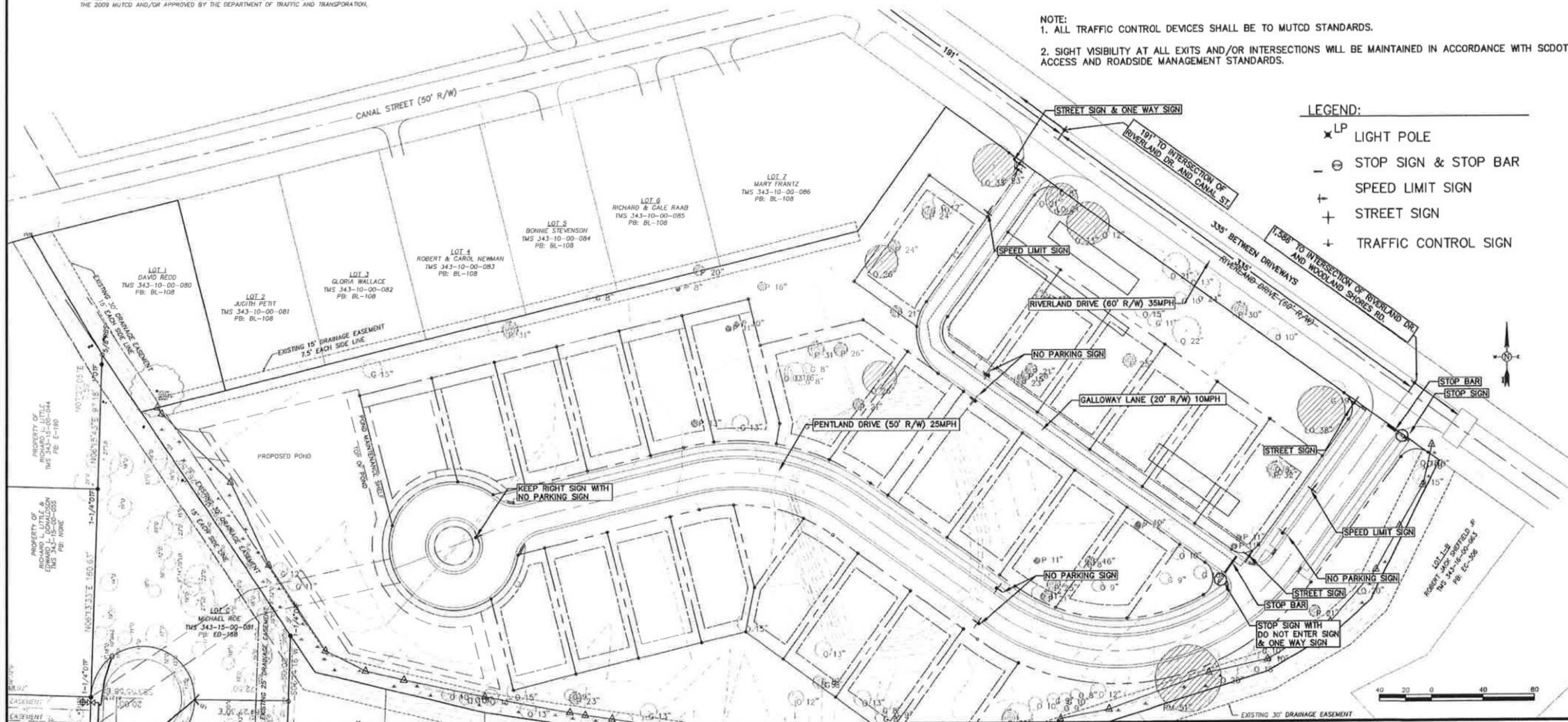
- NOTE:
- 1) BACKGROUND: GREEN - REFLECTORIZED; LETTERS: WHITE - REFLECTORIZED

TYPICAL STREET SIGN DETAIL
N.T.S.

- NOTE:
1. ALL TRAFFIC CONTROL DEVICES SHALL BE TO MUTCD STANDARDS.
 2. SIGHT VISIBILITY AT ALL EXITS AND/OR INTERSECTIONS WILL BE MAINTAINED IN ACCORDANCE WITH SCODT'S ACCESS AND ROADSIDE MANAGEMENT STANDARDS.

LEGEND:

- ✕ LP LIGHT POLE
- ⊖ STOP SIGN & STOP BAR
- ⊕ SPEED LIMIT SIGN
- ⊕ STREET SIGN
- ⊕ TRAFFIC CONTROL SIGN



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Robert D. Hanner
10-MARCH-2011

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RIVERLAND PARK

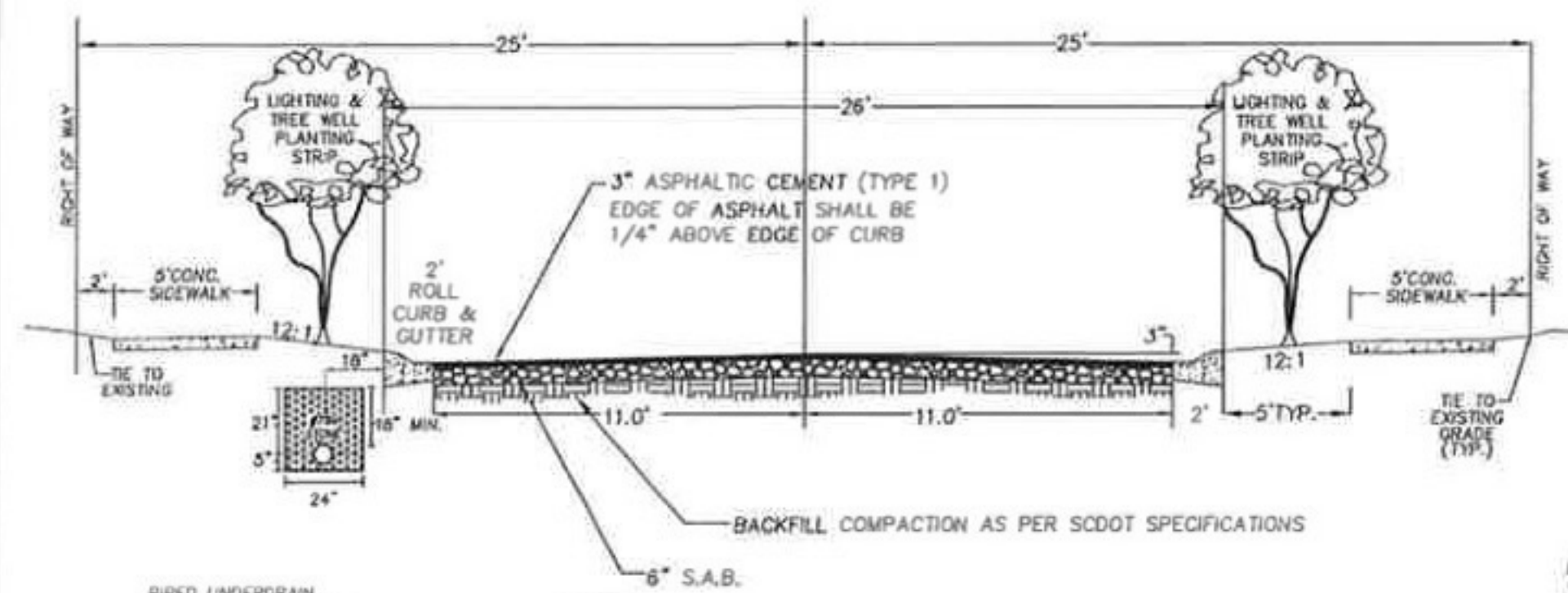
TRAFFIC CONTROL PLAN

SCALE	1"=40'	DATE	MARCH 2011
PROJECT NO.	2110125	SHEET NO.	C014

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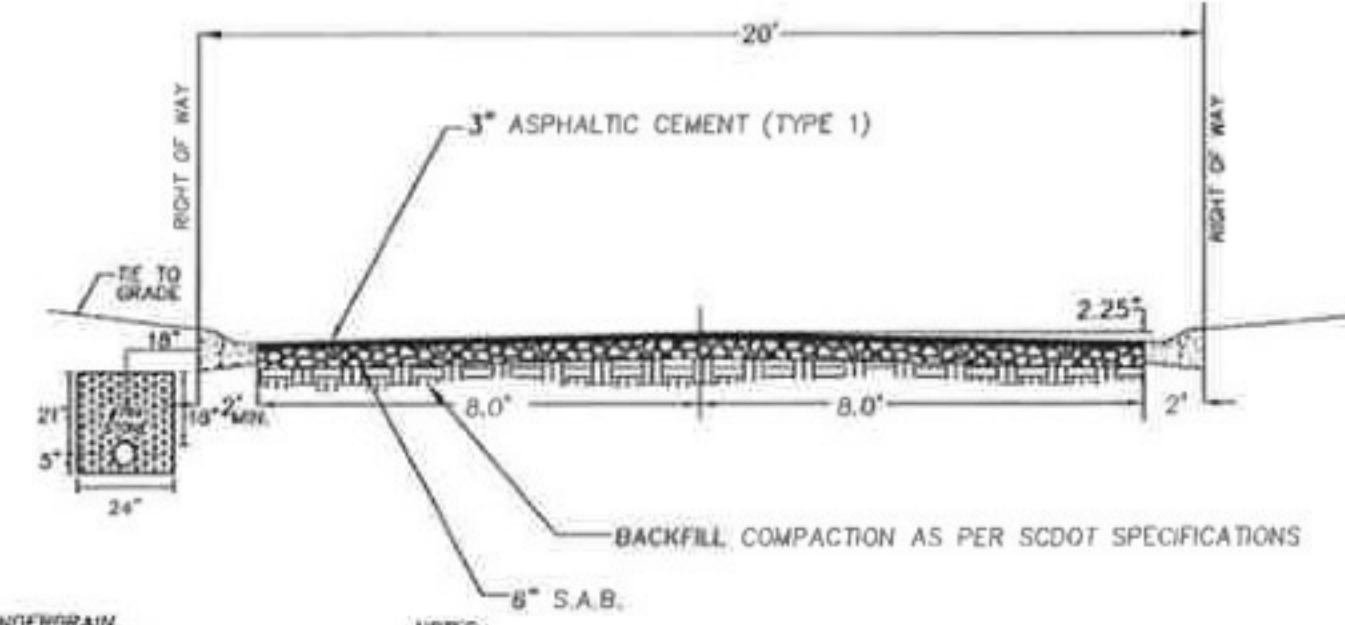


Rodney D. Hanner
 10-1-2011



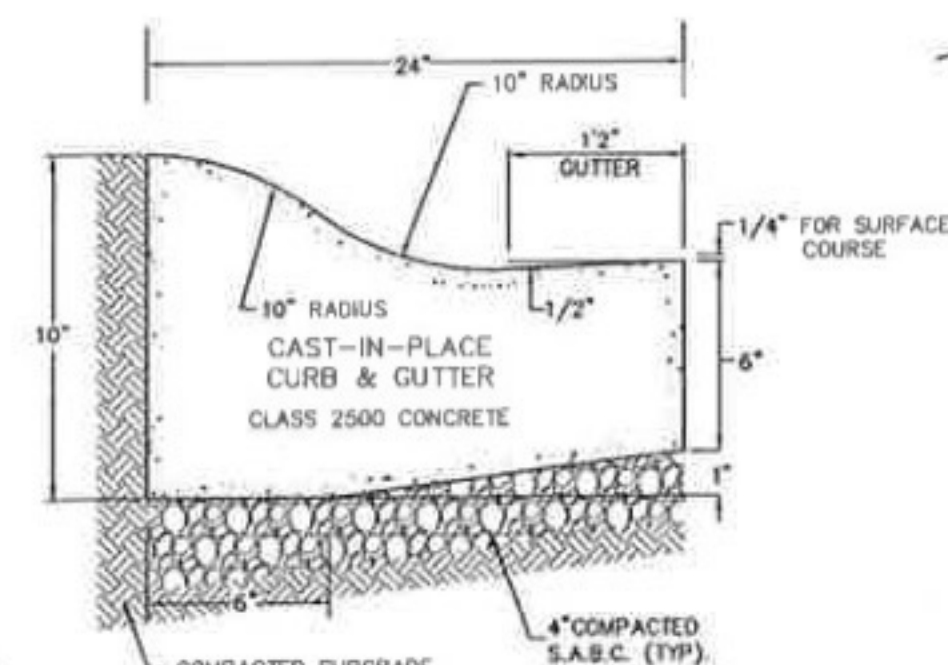
- NOTES:**
1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF THE CITY OF CHARLESTON AND CURRENT SCDOT ROAD CONSTRUCTION STANDARDS.
 2. MUCKING SHALL BE PERFORMED AS NECESSARY. CONTRACTOR SHALL PROVIDE UNIT PRICE FOR MUCKING OR AS DIRECTED BY THE ENGINEER.
 3. STREET LIGHT TYPE, TREE SPECIES, SPACING, ETC. TO BE COORDINATED AND APPROVED BY CITY PARKS DEPARTMENT.
 4. SIDEWALK, LIGHTING AND PLANTING STRIP TO BE ON BOTH SIDES OF ROAD ONLY WHERE SITE PLAN DESIGNATES.

TYPICAL 50' ROW ROADWAY SECTION
 N.T.S.



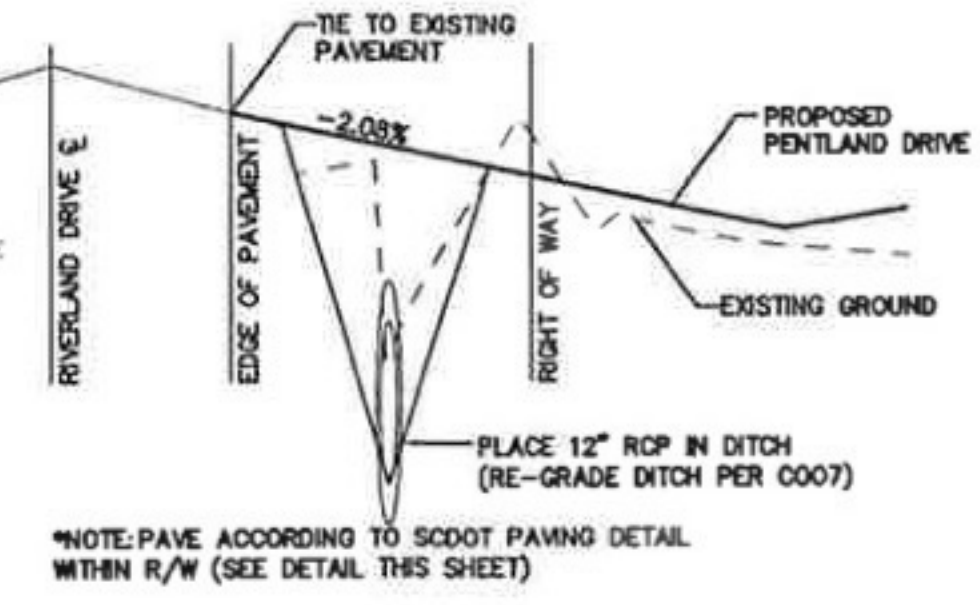
- NOTES:**
1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF THE CITY OF CHARLESTON AND CURRENT SCDOT ROAD CONSTRUCTION STANDARDS.
 2. MUCKING SHALL BE PERFORMED AS NECESSARY. CONTRACTOR SHALL PROVIDE UNIT PRICE FOR MUCKING OR AS DIRECTED BY THE ENGINEER.

TYPICAL 20' ROW ROADWAY SECTION
 N.T.S.



- NOTES:**
1. CONTRACTION JOINTS SPACED EVERY 5.0' CUT A MIN. OF 4" DEEP.
 2. EXPANSION JOINTS SPACED EVERY 25.0'.

24\"/>

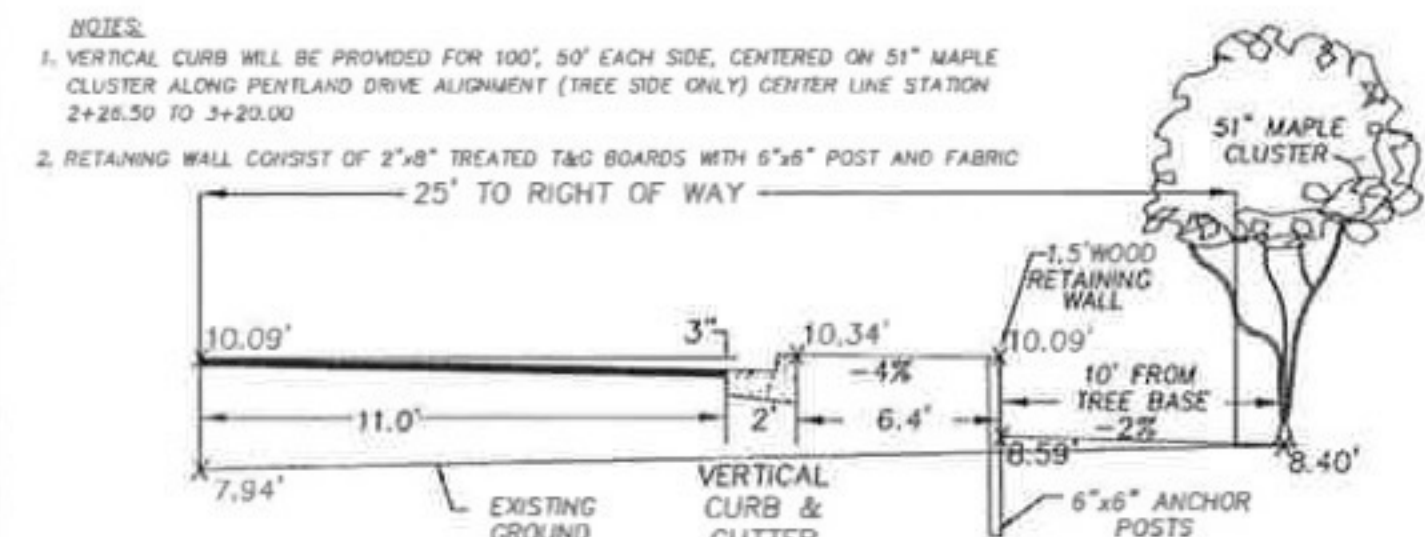


NOTE: PAVE ACCORDING TO SCDOT PAVING DETAIL WITHIN R/W (SEE DETAIL THIS SHEET)

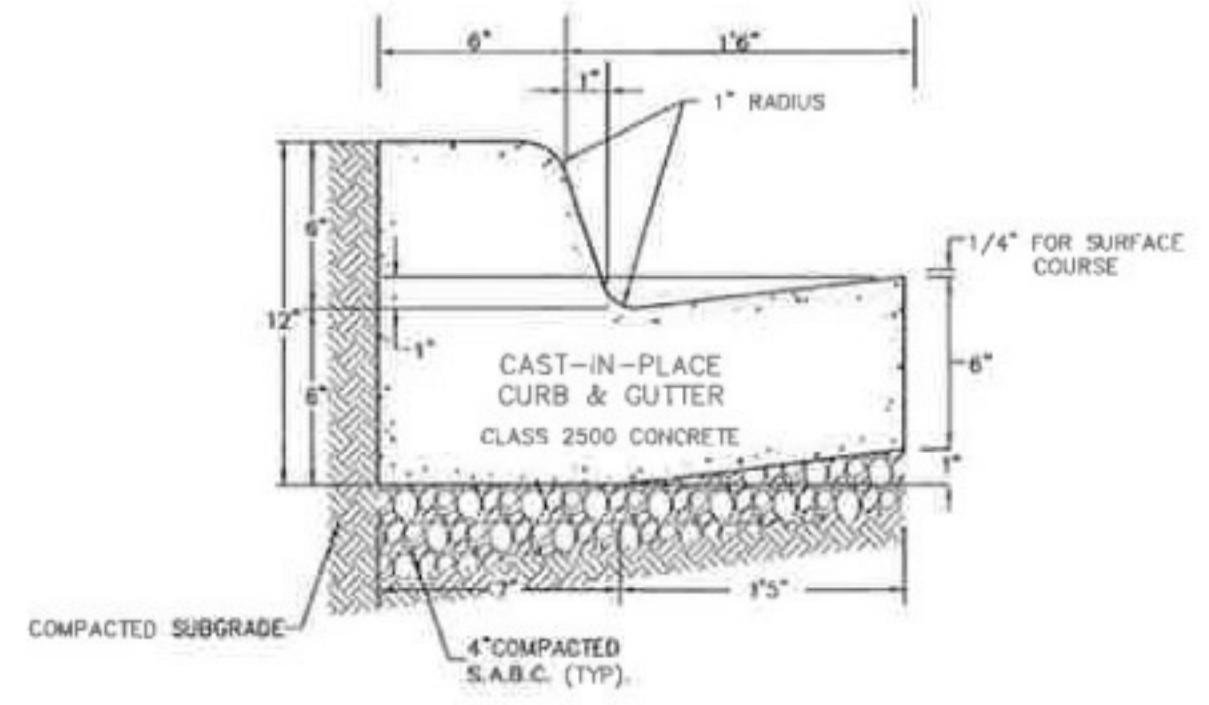
PAVEMENT TIE-IN DETAIL
 N.T.S.

PIPED UNDERDRAIN
 ONE LAYER APPROVED ENGINEERING GEOTEXTILE FABRIC #789 STONE FILL PER SCDOT 6\"/>

PIPED UNDERDRAIN
 ONE LAYER APPROVED ENGINEERING GEOTEXTILE FABRIC #789 STONE FILL PER SCDOT 6\"/>

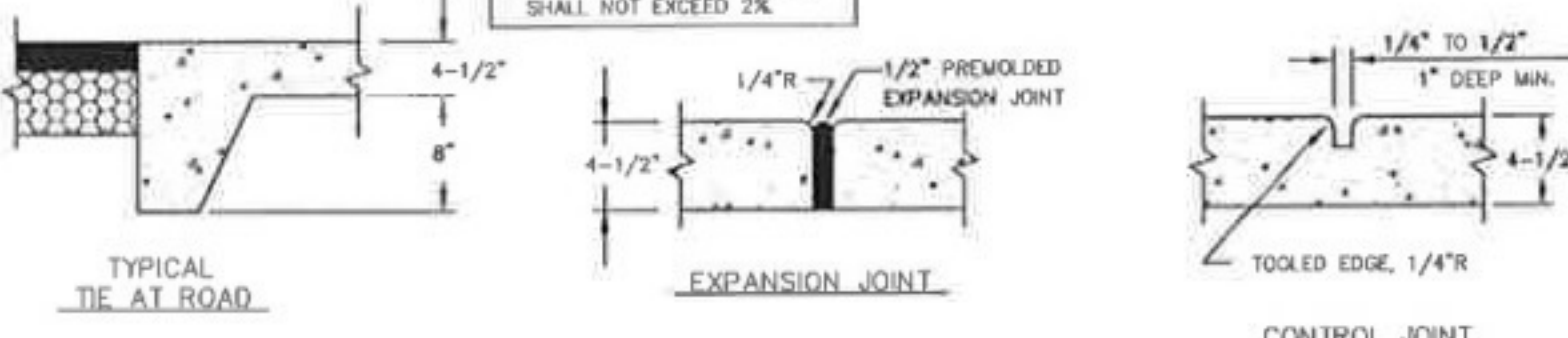
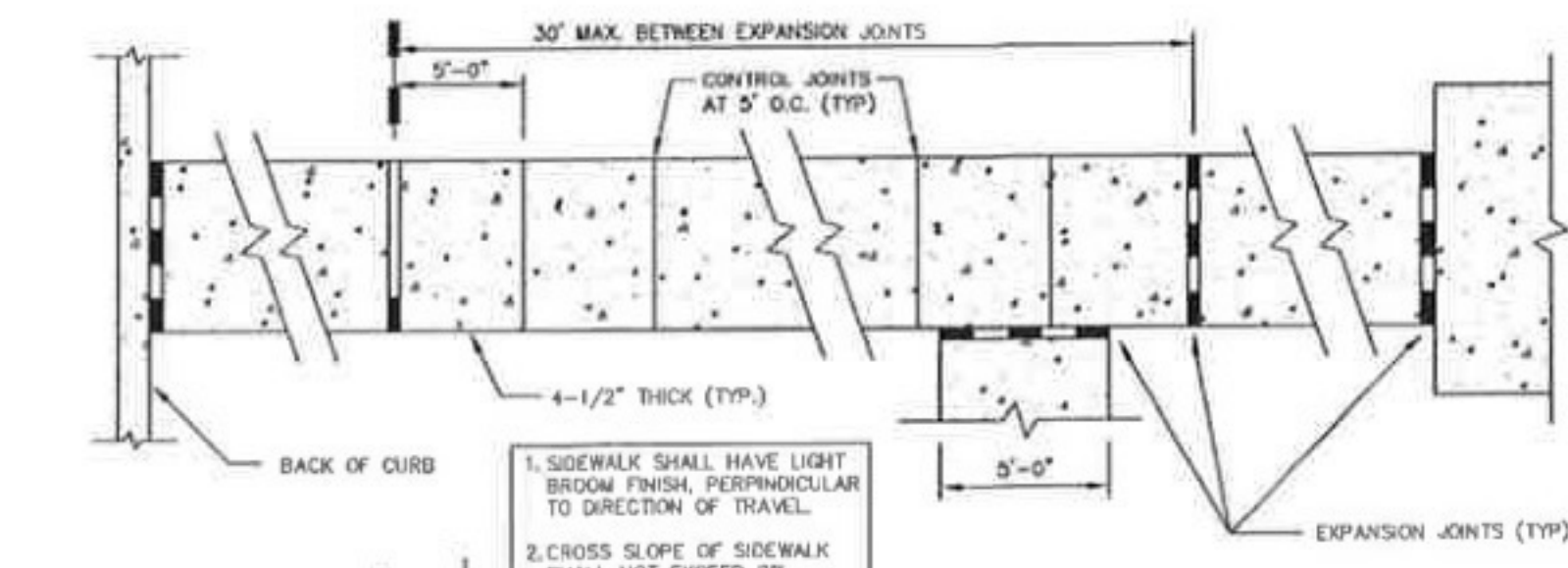


CROSS SECTION THROUGH MAPLE TREE
 N.T.S.



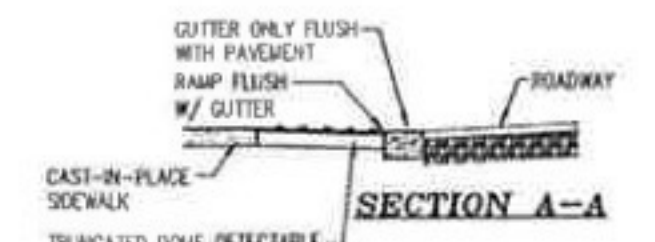
- NOTES:**
1. CONTRACTION JOINTS SPACED EVERY 5.0' CUT A MIN. OF 4" DEEP.
 2. EXPANSION JOINTS SPACED EVERY 25.0'.

24\"/>

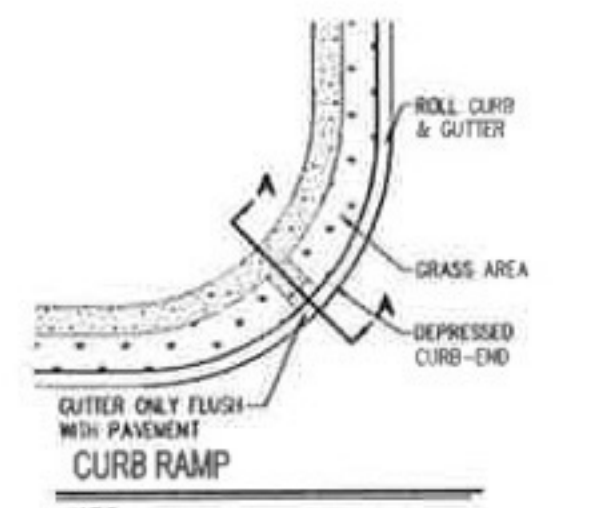


TYPICAL TIE AT ROAD
 N.T.S.

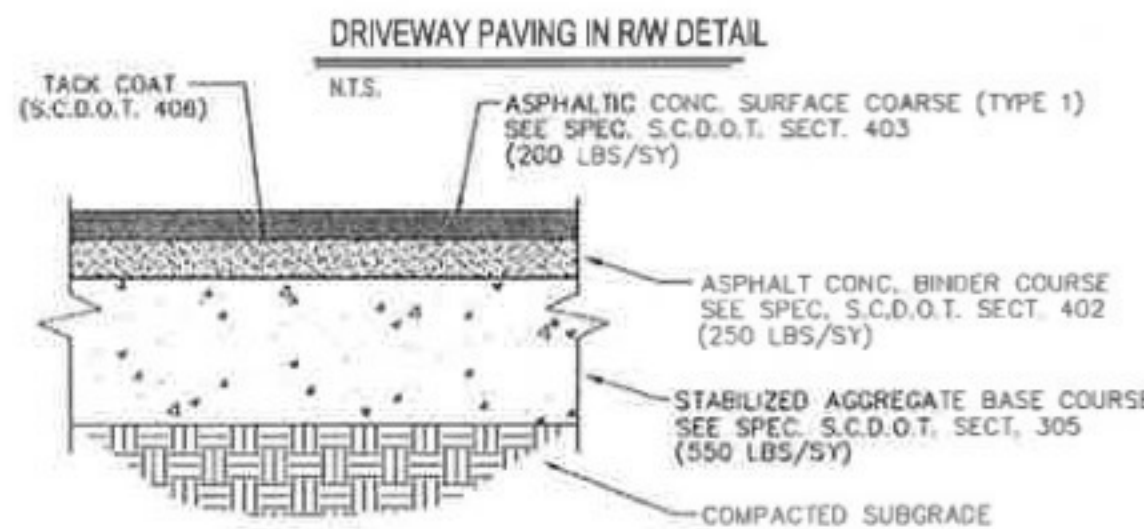
5\"/>



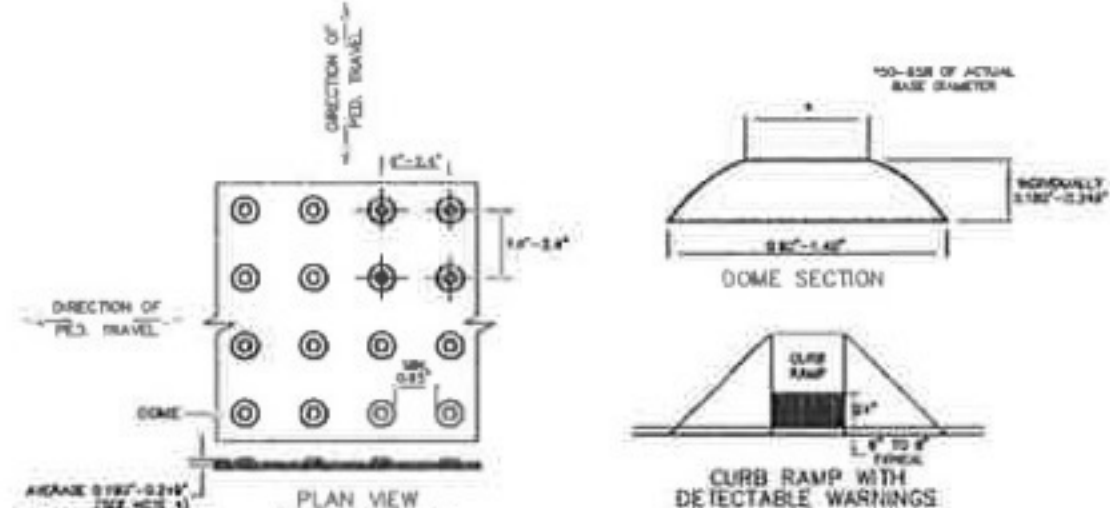
SECTION A-A
 N.T.S.



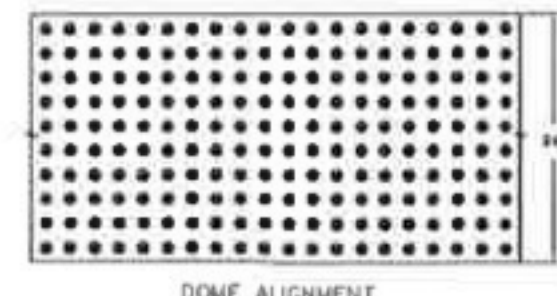
CURB RAMP
 N.T.S.



- PAVEMENT SECTION**
1. STABILIZED AGGREGATE BASE COURSE (S.A.B.C.) SHALL MEET SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION (S.C.D.O.T.) STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION, SEC. 306.
 2. THE SURFACE COURSE SHALL BE APPLIED NO LESS THAN 4 DAYS AND NO MORE THAN 7 DAYS AFTER THE APPLICATION OF PRIME COAT EXCEPT AS APPROVED BY THE ENGINEER.
 3. THE SURFACE COURSE SHALL MEET THE REQUIREMENTS OF (S.C.D.O.T.) STANDARD SPECIFICATIONS, SECTION 401 & 403 TYPE II.
 4. THE SUBGRADE SHALL BE COMPACTED TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY AND SHALL BE PREPARED ACCORDING TO SECTION 208 FOR THE (S.C.D.O.T.) STANDARD SPECIFICATIONS.
 5. THE BASE COURSE SHALL BE COMPACTED TO 98% MODIFIED PROCTOR MAXIMUM DRY DENSITY.

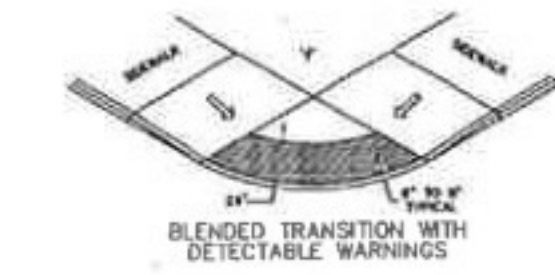


NOTE: TRUNCATED DOMES ARE TO BE GRAY.

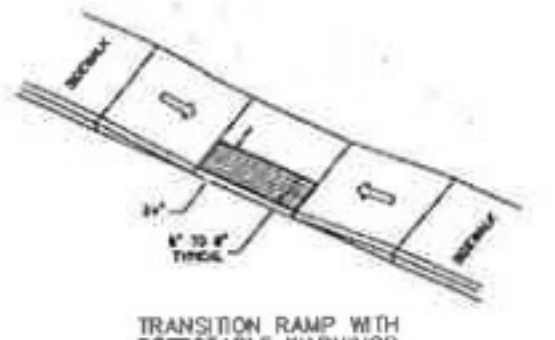


NOTE: TRUNCATED DOMES ARE TO BE GRAY.

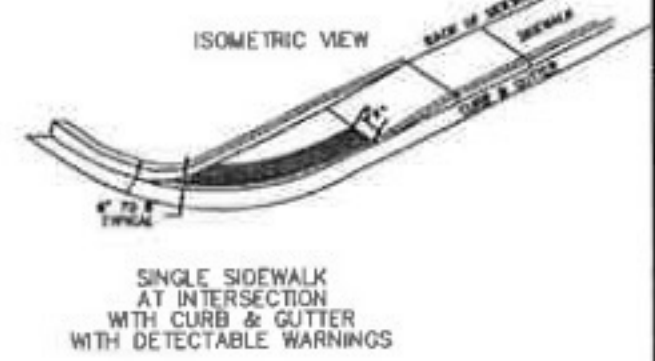
- NOTES:**
1. DETECTABLE WARNING SURFACES SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS: (A) WHERE A SIDEWALK CROSSES A VEHICULAR WAY, EXCLUDING UN-SIGNALIZED DRIVEWAY CROSSINGS. (B) WHERE A RAIL SYSTEM CROSSES A PEDESTRIAN FACILITY THAT IS NOT SHARED WITH VEHICLES. (C) AT ISLANDS AND MEDIANS THAT ARE CUT THROUGH LEVEL WITH THE ROADWAY.
 2. AT CURB RAMPS AND BLENDED TRANSITIONS, DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THE EDGE NEAREST THE CURB LINE IS 6\"/>



BLENDED TRANSITION WITH DETECTABLE WARNINGS
 N.T.S.



TRANSITION RAMP WITH DETECTABLE WARNINGS
 N.T.S.



SINGLE SIDEWALK AT INTERSECTION WITH CURB & GUTTER WITH DETECTABLE WARNINGS
 N.T.S.

RIVERLAND PARK LLC

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RIVERLAND PARK

CONSTRUCTION DETAILS

SCALE	NTS	DATE	MARCH 2011
PROJECT NO.	2110125	SHEET NO.	C015

Weston & Sampson

672 Marina Drive, Suite 204
Charleston, SC 29492
(843) 881-9804 Office
(843) 881-9807 Fax

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Robert D. Hanner
10-17-2011

PROJECT OWNER
RIVERLAND PARK LLC
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CHARLESTON, SC 29412
PH: 843-573-9635
FAX: 843-402-0135

PROJECT TITLE
RIVERLAND PARK
SHEET TITLE
CONSTRUCTION DETAILS

SCALE: NTS
DATE: MARCH 2011
SHEET NUMBER: 2110125
PROJECT NO.: C015A

REFERENCES
SOUTH CAROLINA PROFESSIONAL ENGINEERING BOARD, NO. 8858
SCDOT DESIGN STANDARDS OFFICE, 955 PARK STREET, COLUMBIA, SC 29201

TABLE 719-016A

ITEM	DESCRIPTION	AMOUNT	UNIT
A	3" x 12" x 8"	1	EA
B	3" x 12" x 8"	1	EA
C	3" x 12" x 8"	1	EA
D	3" x 12" x 8"	1	EA
E	3" x 12" x 8"	1	EA

SECTION A, B, C

NOTES:
1. INLETS AND CATCH BASINS INSTALLED WITHIN PUBLIC RIGHT OF WAY SHOULD BE PROVIDED WITH A 1" SUMP FOR DEBRIS AND SEDIMENT COLLECTION.
2. RUBBER GASKETS AND RESILIENT FLEXIBLE CONNECTIONS CONFORMING TO ASTM C203 SHALL BE USED FOR ALL PIPE TO BOX CONNECTIONS, INCLUDING UNDERDRAINS.

REFERENCES
SOUTH CAROLINA PROFESSIONAL ENGINEERING BOARD, NO. 8858
SCDOT DESIGN STANDARDS OFFICE, 955 PARK STREET, COLUMBIA, SC 29201

TABLE 719-016A

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D	3" x 12" x 8"	1	EA
E	3" x 12" x 8"	1	EA

SECTION A, B, C

NOTES:
1. INLETS AND CATCH BASINS INSTALLED WITHIN PUBLIC RIGHT OF WAY SHOULD BE PROVIDED WITH A 1" SUMP FOR DEBRIS AND SEDIMENT COLLECTION.
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REFERENCES
SOUTH CAROLINA PROFESSIONAL ENGINEERING BOARD, NO. 8858
SCDOT DESIGN STANDARDS OFFICE, 955 PARK STREET, COLUMBIA, SC 29201

TABLE 719-305A

ITEM	DESCRIPTION	AMOUNT	UNIT
A	3" x 12" x 8"	1	EA
B	3" x 12" x 8"	1	EA
C	3" x 12" x 8"	1	EA
D	3" x 12" x 8"	1	EA
E	3" x 12" x 8"	1	EA

SECTION A, B, C

ACCEPTABLE SPLICE OPTIONS

NOTES:
1. INLETS AND CATCH BASINS INSTALLED WITHIN PUBLIC RIGHT OF WAY SHOULD BE PROVIDED WITH A 1" SUMP FOR DEBRIS AND SEDIMENT COLLECTION.
2. RUBBER GASKETS AND RESILIENT FLEXIBLE CONNECTIONS CONFORMING TO ASTM C203 SHALL BE USED FOR ALL PIPE TO BOX CONNECTIONS, INCLUDING UNDERDRAINS.

REFERENCES
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SCDOT DESIGN STANDARDS OFFICE, 955 PARK STREET, COLUMBIA, SC 29201

TABLE 719-305A

ITEM	DESCRIPTION	AMOUNT	UNIT
A	3" x 12" x 8"	1	EA
B	3" x 12" x 8"	1	EA
C	3" x 12" x 8"	1	EA
D	3" x 12" x 8"	1	EA
E	3" x 12" x 8"	1	EA

SECTION A, B, C

DESIGN DATA
ASPHALT STANDARD SPECIFICATION FOR HIGHWAY BITUMENS, FLATSLIP COURSE

HS 20 LIVE LOAD
MIN. 2" FILL / MAX. 10" FILL

UNIL STRIPES: 1 SERV. LOAD DES. 1 -
fo = 24,000 psi
fo = 1400 psi N - 6

INSTEAD OF NOT LEFT DISCONNECTED

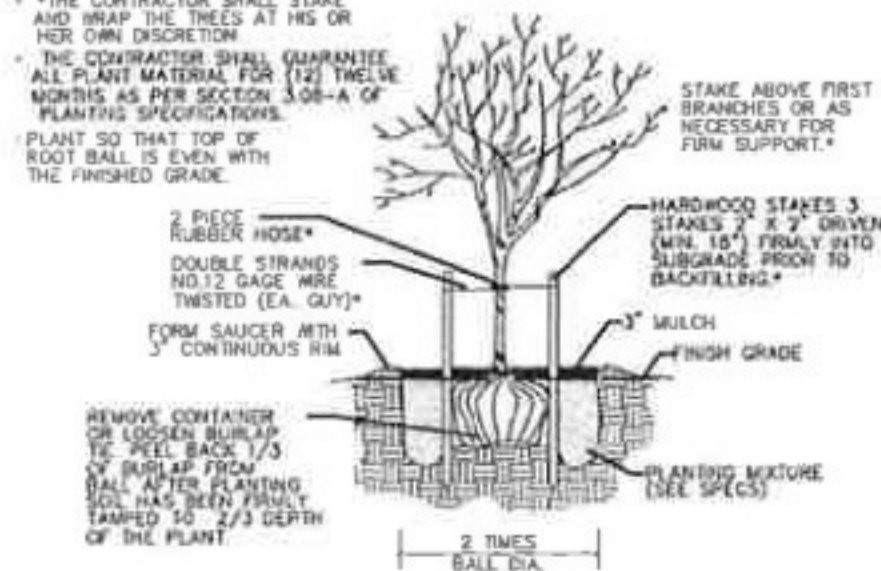
DETAIL LEFT END LOGS

DETAIL RIGHT END LOGS

DETAIL RECOMMENDED STACKING METHOD

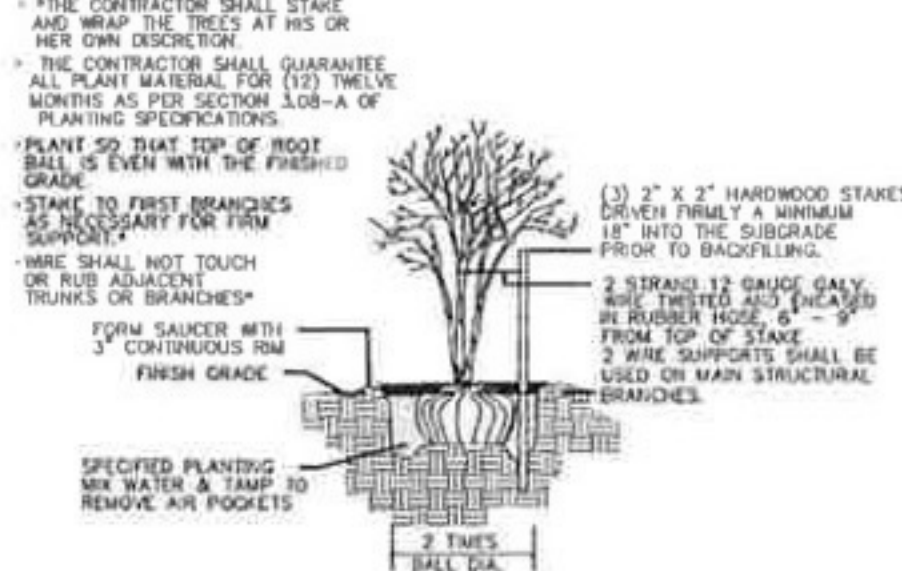
NOTES:
1. INLETS AND CATCH BASINS INSTALLED WITHIN PUBLIC RIGHT OF WAY SHOULD BE PROVIDED WITH A 1" SUMP FOR DEBRIS AND SEDIMENT COLLECTION.
2. RUBBER GASKETS AND RESILIENT FLEXIBLE CONNECTIONS CONFORMING TO ASTM C203 SHALL BE USED FOR ALL PIPE TO BOX CONNECTIONS, INCLUDING UNDERDRAINS.

NOTE:
 *THE CONTRACTOR SHALL STAKE AND WRAP THE TREES AT HIS OR HER OWN DISCRETION.
 *THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR (12) TWELVE MONTHS AS PER SECTION 3.08-A OF PLANTING SPECIFICATIONS.
 *PLANT SO THAT TOP OF ROOT BALL IS EVEN WITH THE FINISHED GRADE.



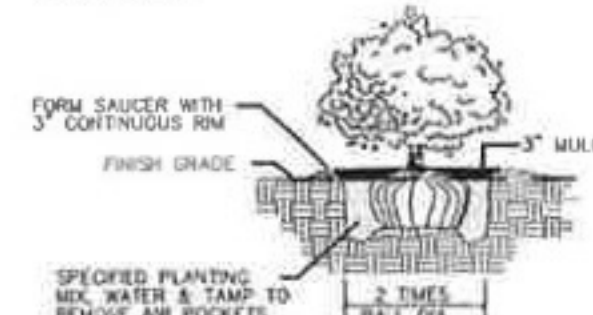
LARGE TREE PLANTING AND STAKING DETAIL
 not to scale

NOTE:
 *THE CONTRACTOR SHALL STAKE AND WRAP THE TREES AT HIS OR HER OWN DISCRETION.
 *THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR (12) TWELVE MONTHS AS PER SECTION 3.08-A OF PLANTING SPECIFICATIONS.
 *PLANT SO THAT TOP OF ROOT BALL IS EVEN WITH THE FINISHED GRADE.

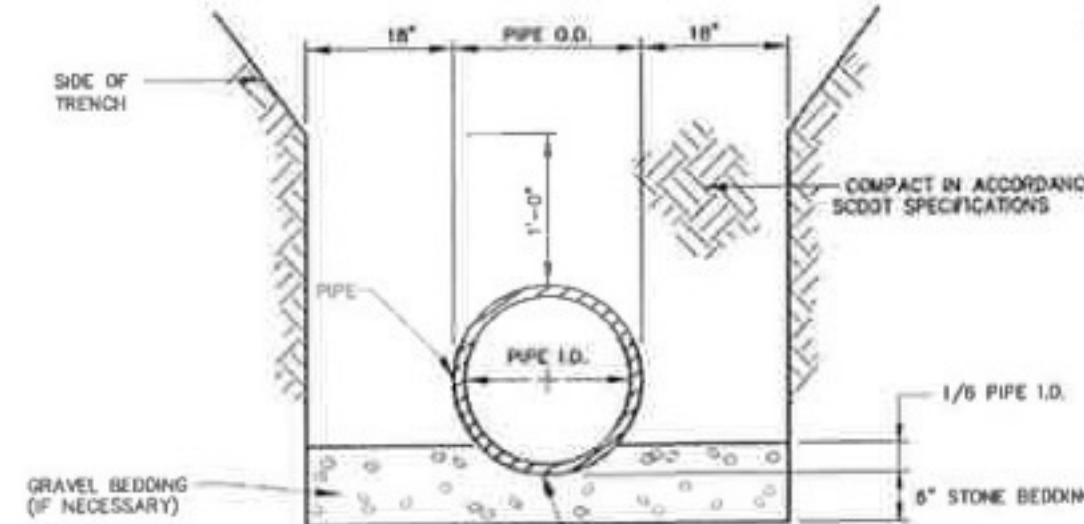


SMALL & MULTI-TRUNK TREE PLANTING & STAKING DETAIL
 not to scale

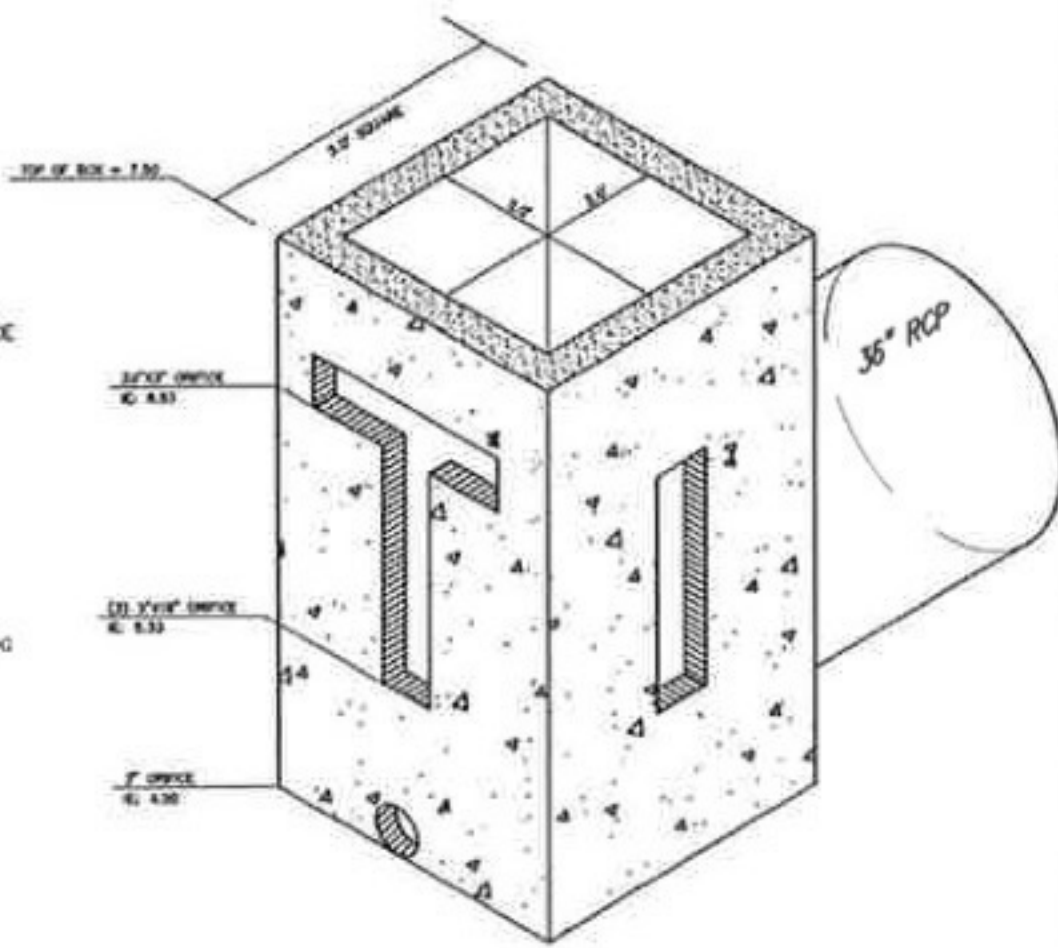
NOTE:
 *PLANT SO THAT TOP OF ROOT BALL IS EVEN WITH THE FINISHED GRADE.



SHRUB PLANTING DETAIL
 not to scale

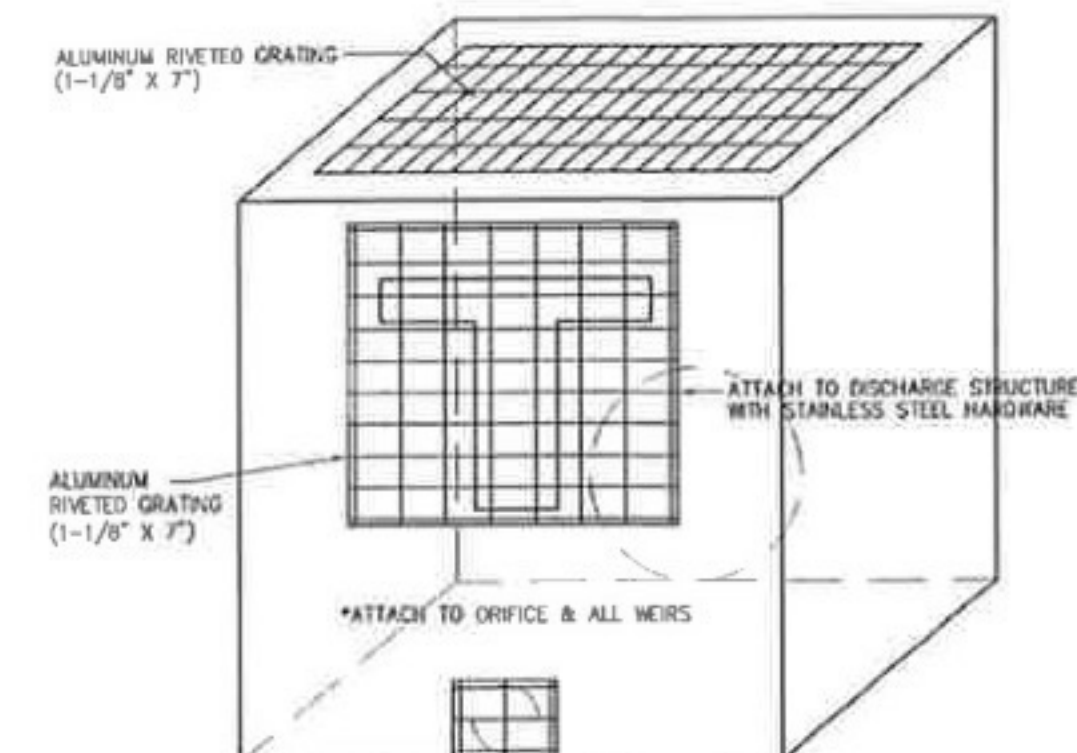


STORM DRAIN BEDDING DETAIL

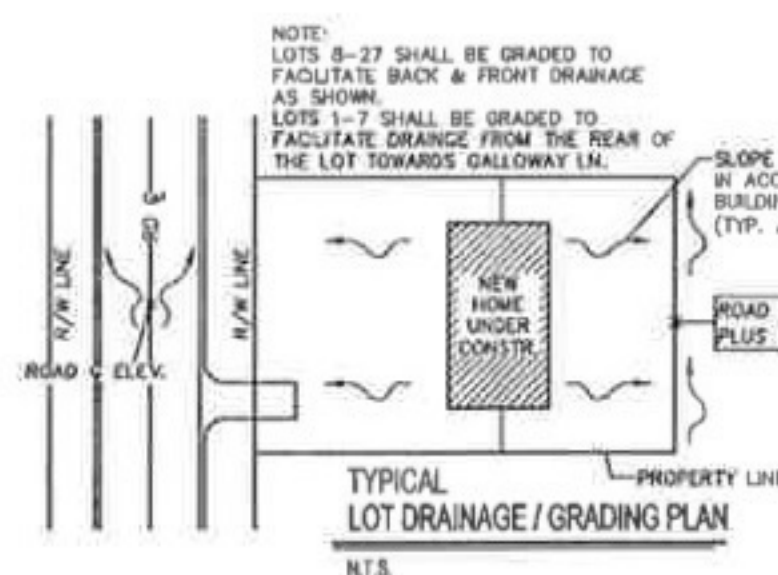


OUTFALL STRUCTURE
 N.T.S.

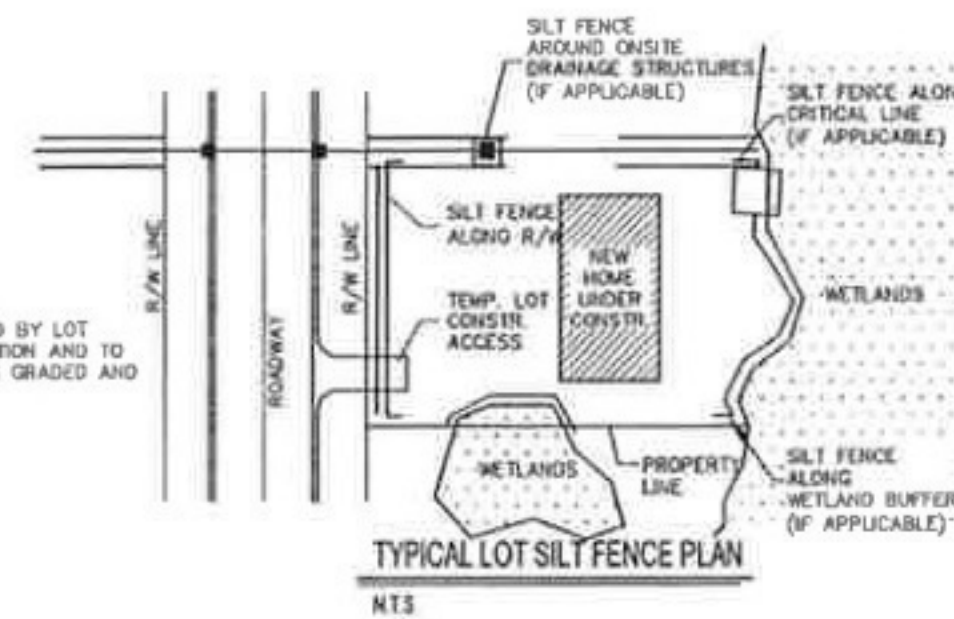
*PROVIDE TRASH SCREENING AS PER OUTFALL STRUCTURE TRASH SCREEN DETAIL SHOWN BELOW.



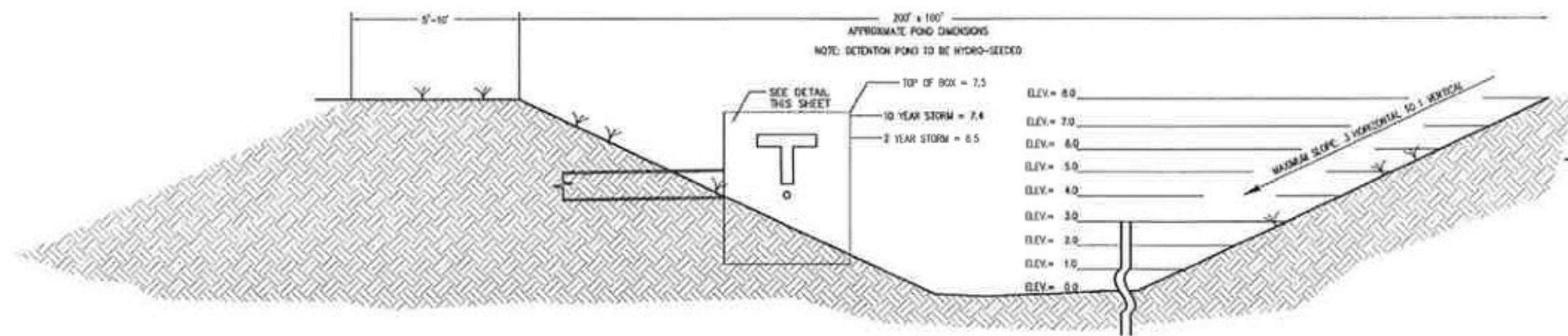
OUTFALL STRUCTURE TRASH SCREEN DETAIL
 NOT TO SCALE



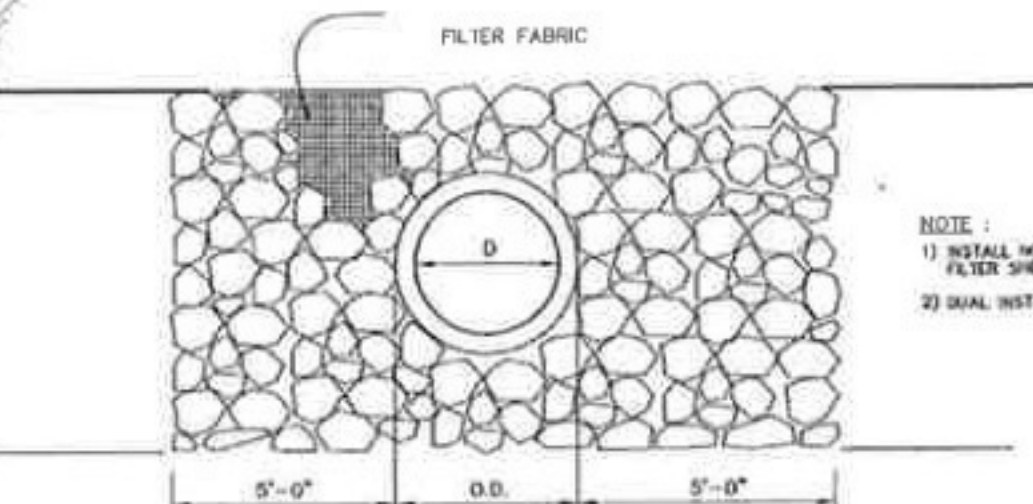
TYPICAL LOT DRAINAGE / GRADING PLAN
 N.T.S.



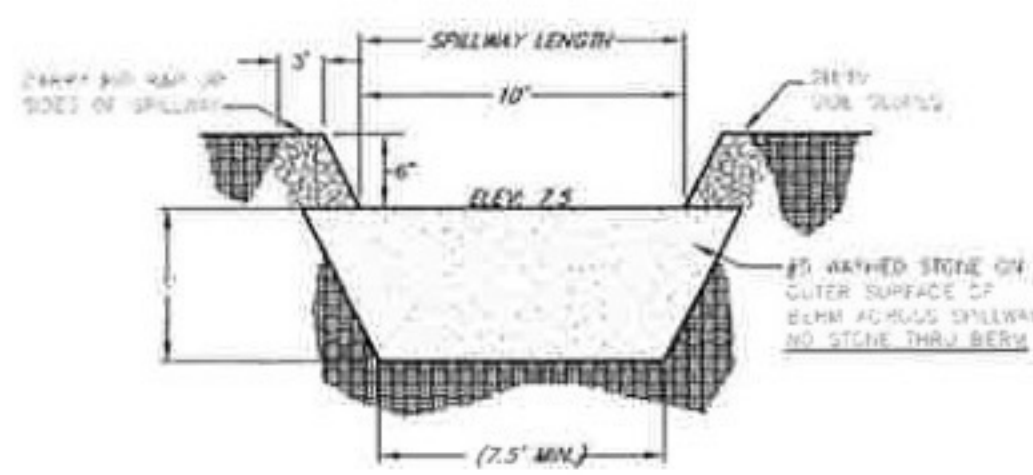
TYPICAL LOT SILT FENCE PLAN
 N.T.S.



DETENTION POND SECTION
 NOT TO SCALE



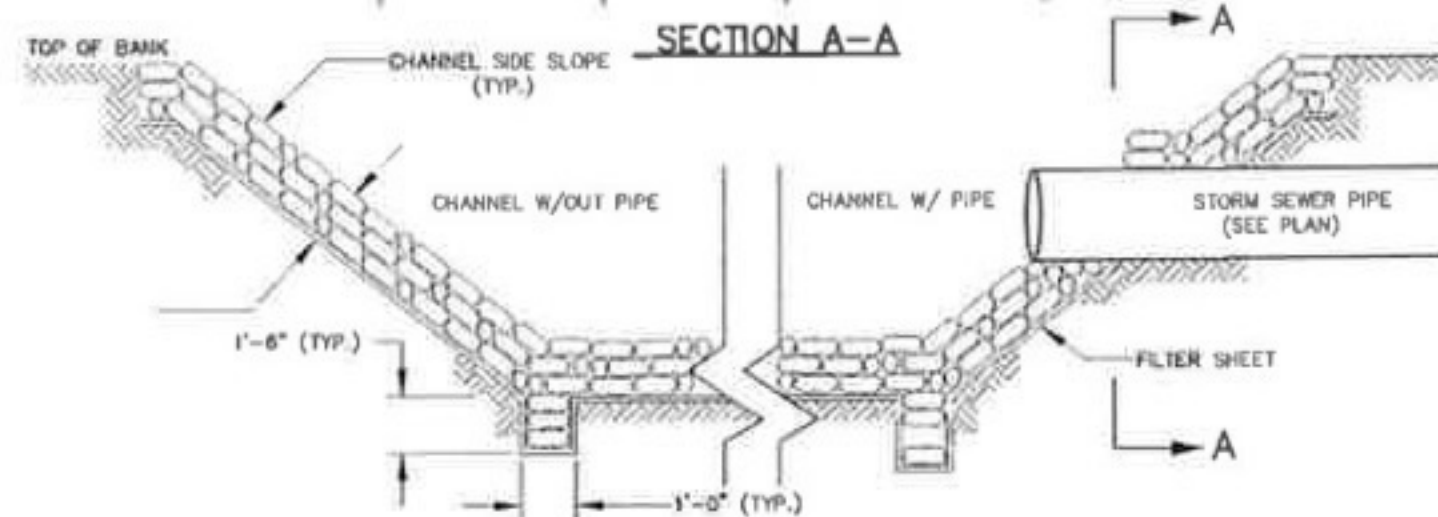
TYPICAL GRATE FASTENER DETAIL
 NOT TO SCALE



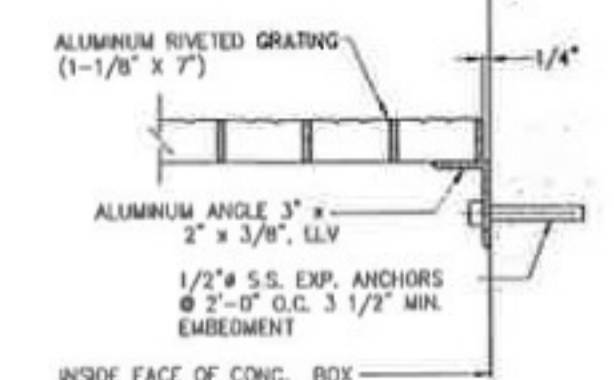
EMERGENCY SPILLWAY DETAIL
 N.T.S.



SWALE SECTION
 N.T.S.



TYPICAL RIP/RAP DETAIL



GRATE DETAIL
 NOT TO SCALE

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R. D. Hanner
 10-11-2011

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RIVERLAND PARK

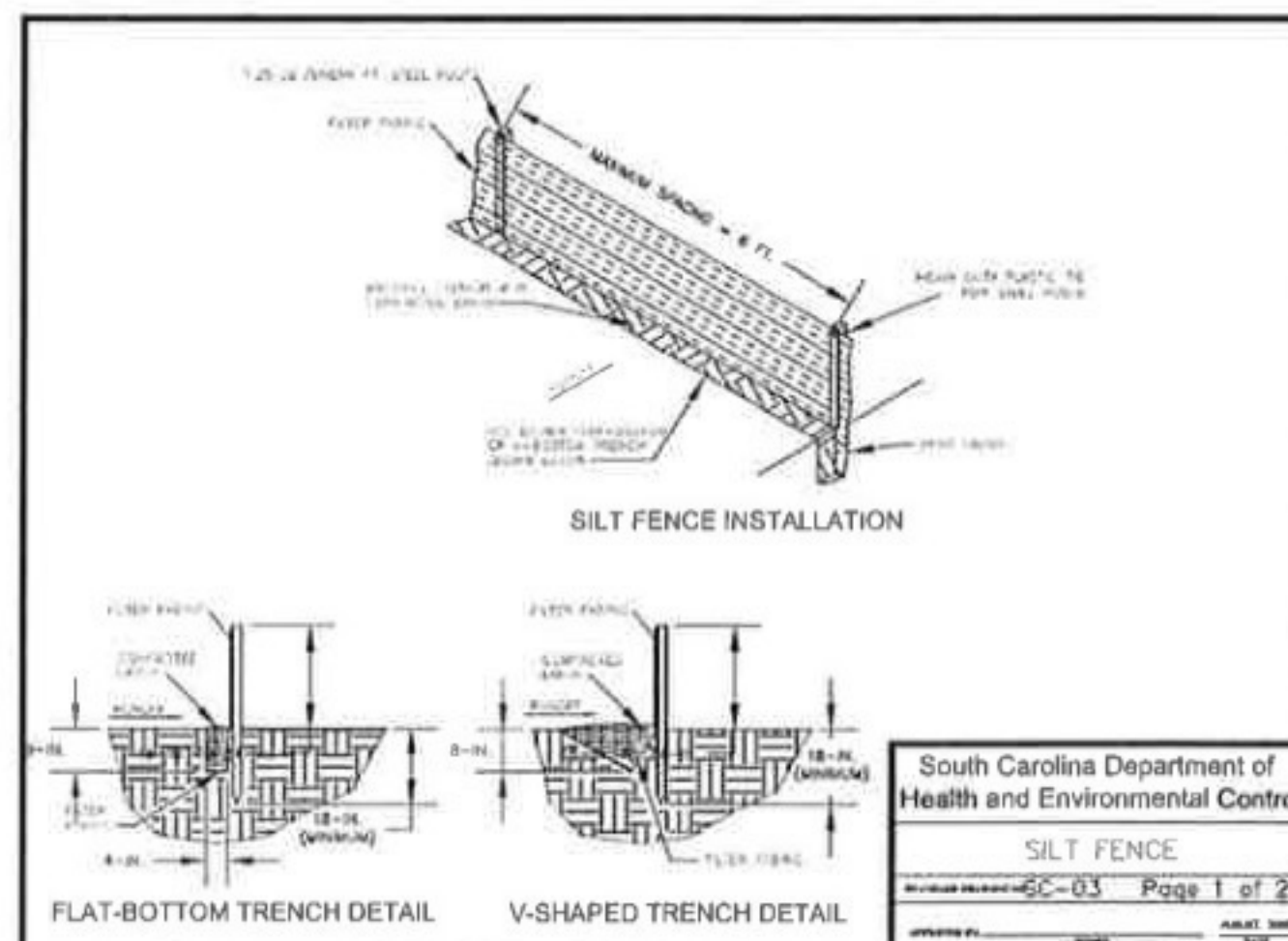
CONSTRUCTION DETAILS

SCALE: NTS	DESIGNED BY: J.M.	DRAWN BY: J.M.
DATE: MARCH 2011	CHECKED BY: R.H.	APPROVED BY: R.H.
DATE: MARCH 2011	SHEET NO.: 1	TOTAL SHEETS: 1
HES PROJECT NO.: 2110125	C016	

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Robt. Hanner
 10-11-2011



SILT FENCE DETAILS
 Area and Where to Use It
 Silt fence is applicable in areas:
 Where the maximum steel or overlaid foot path length to the fence is 100-feet.
 Where the maximum slope steepness (normal [perpendicular] to fence line) is 20:1.
 That do not receive concentrated flows greater than 0.5 cfs.
 Do not place silt fence across channels or use it as a velocity control barrier.

Materials
Steel Posts
 Use 48-inch long steel posts that meet the following minimum physical requirements:
 Composed of high strength steel with minimum yield strength of 50,000 psi.
 Have a standard "T" section with a nominal face width of 1.38-inches and nominal "T" length of 1.48-inches.
 Weigh 1.25 pounds per foot (± 0.25).
 Have a soil stabilization plate with a minimum cross section area of 17-square inches attached to the steel posts.
 Painted with a water based baked enamel paint.

Use steel posts with a minimum length of 4-feet, weighing 1.25 pounds per linear foot (± 0.25) with projections to aid in fastening the fabric. Except when heavy clay soils are present on site, steel posts will have a metal soil stabilization plate welded near the bottom such that when the post is driven to the proper depth, the plate will be below the ground level for added stability.
 The soil plates should have the following characteristics:
 Be composed of minimum 10 gauge steel.
 Have a minimum cross section area of 17-square inches.

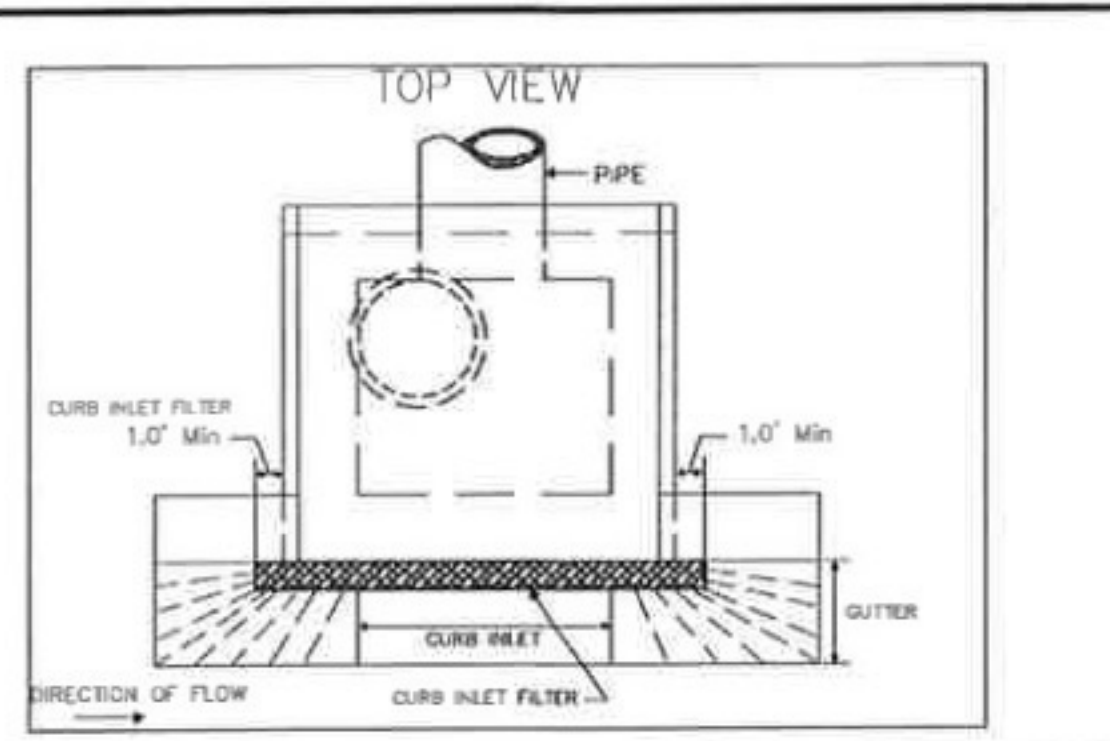
Geotextile Filter Fabric
 Filter fabric is:
 Composed of fibers consisting of long chain synthetic polymers composed of at least 85% by weight of polyesters, polyesters, or polyamides.
 Formed into a network such that the filaments or yarns retain dimensional stability relative to each other. Free of any treatment or coating which might adversely affect its physical properties after installation. Free of defects or flaws that significantly affect its filtering properties. Cut to a minimum width of 36 inches.

Use only fabric appearing on SCDOT Approval Sheet #34 meeting the requirements of the most current edition of the SCDOT Standard Specifications for Highway Construction.

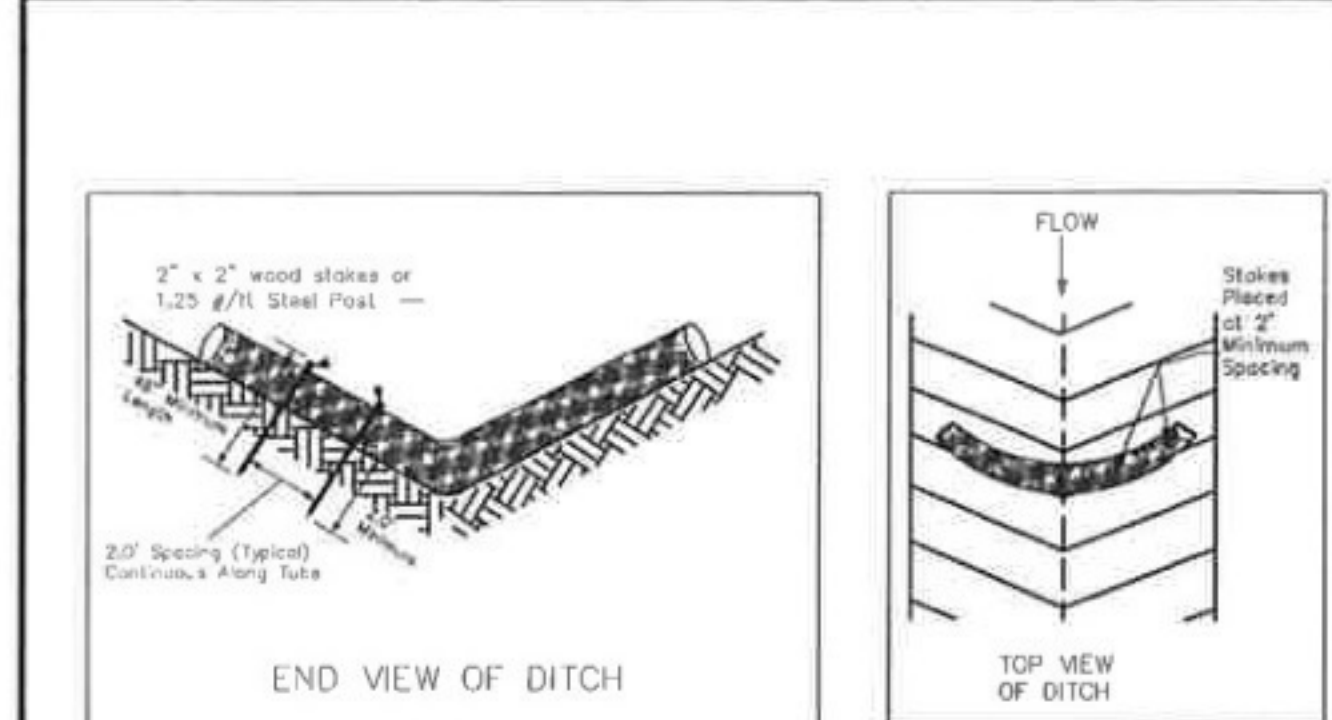
South Carolina Department of Health and Environmental Control
SILT FENCE
 SHEET NUMBER: SC-03 Page 1 of 2
 PROJECT NO.: _____ DATE: _____

South Carolina Department of Health and Environmental Control
SILT FENCE
 SHEET NUMBER: SC-03 Page 2 of 3
 PROJECT NO.: _____ DATE: _____

South Carolina Department of Health and Environmental Control
SILT FENCE
 SHEET NUMBER: SC-03 Page 3 of 3
 PROJECT NO.: _____ DATE: _____



TYPE E - SURFACE COURSE CURB INLET FILTERS
 SHEET NUMBER: SC-10 Page 1 of 2
 PROJECT NO.: _____ DATE: _____



SEDIMENT TUBE
 Sediment tubes are elongated tubes of compacted geotextile, curled coconut fiber, natural coconut fiber or hardwood mulch. They are made and used much like sediment tubes are not permitted under this specification.

Installation
 Install sediment tubes along contours, in drainage conveyance swales, and around sites to help reduce the effects of soil erosion by eroding, depositing and retarding sediment.

Materials
 Sediment tubes for ditch checks and Type A Inlet Structures filters should have the following properties:
 Produced by a manufacturer experienced in sediment tube manufacturing.
 Composed of compacted geotextile, natural coconut fiber, natural coconut fiber, hardwood mulch or a mix of these materials enclosed by a flexible retaining material.
 Have a flow flow rate tubes, pipe manholes and lead must not be placed under the specification.
 Utilize outer casing that consists of sections, high-density polyethylene, polypropylene, or polyethylene treated with ultraviolet stabilizers or a similar, high-density polyethylene non-degradable material. Diameter ranging from 18-inches to 24-inches.
 Curled coconut fiber, or natural coconut fiber (NCF) that are rolled up to create a sediment tube are allowed under this specification.

Installation
 Install near base soil, washed areas or erosion control details.
 Be composed of geotextile, curled coconut fiber, natural coconut fiber or hardwood mulch enclosed by a flexible retaining material. Have flow flow rate tubes, pipe manholes and lead must not be placed under the specification.

The minimum diameter should be 18 inches.
 Sediment tubes should be spaced using wooden stakes (2-inch x 2-inch) or steel posts (standard "T" or "T" section) with a maximum weight of 1.25 pounds per foot) a minimum of 18-inches in length spaced on 2-foot centers.

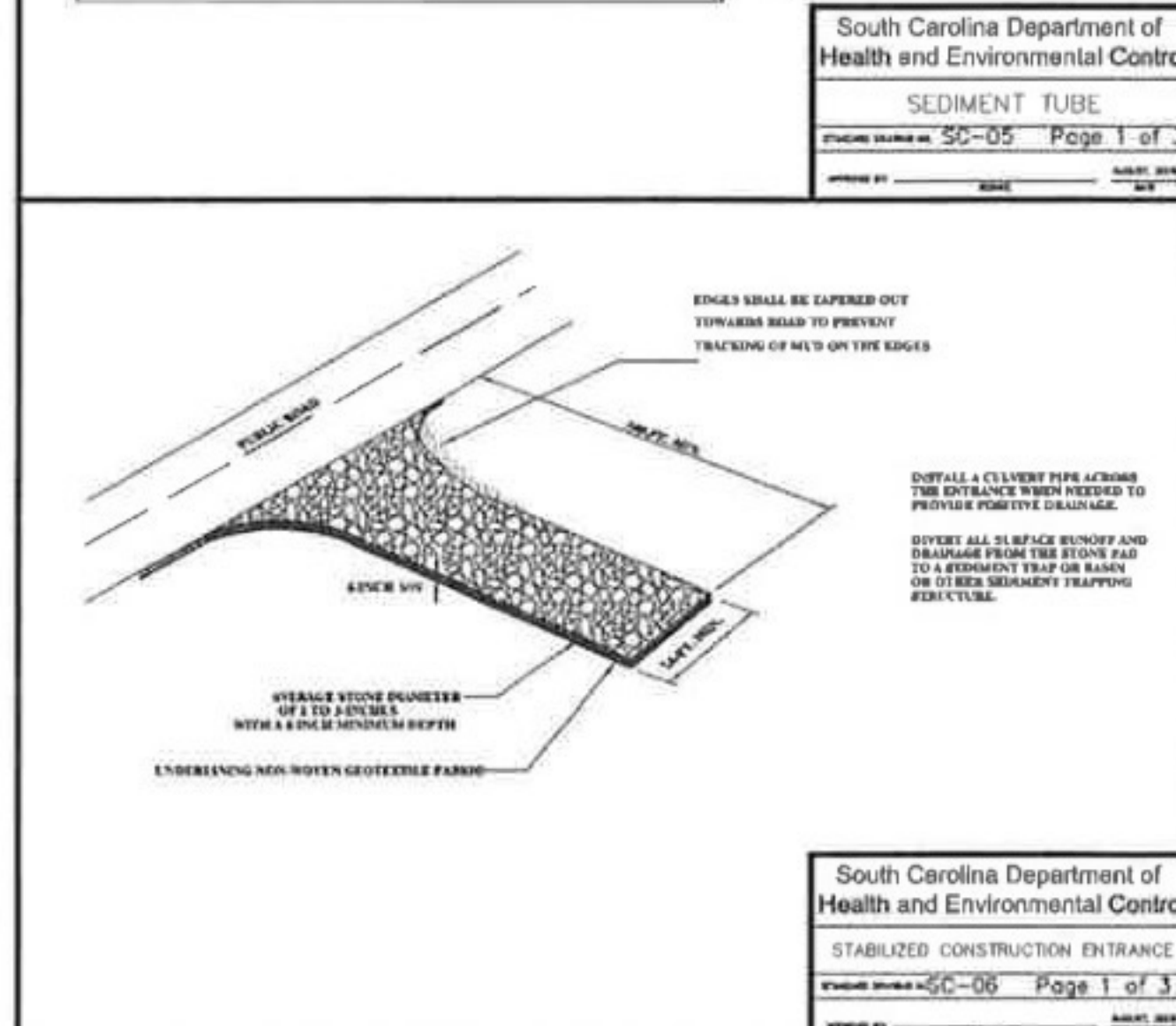
Stakes should be installed with the outer mesh on the down-slope side and driven in the ground to a minimum depth of 1.5 feet using less than 1 foot of white washed stone the sediment tube. Refer to the manufacturer's recommendations for the staking detail.
 Install sediment tubes leaving that, no gaps exist between the soil and the bottom of the sediment tube. The ends of sediment tubes should be topped 8-inches to prevent flow and sediment from passing through the field portion. The structures should be checked on top of one another.

Construct a trench that is 20% of the tube diameter to hold the tube in.
 Avoid damage to sediment tubes while installing them. If the sediment tube becomes damaged during installation, a stake should be placed on both sides of the damaged area to temporarily hold the tube against and a new tube segment should be installed. This should be installed in water or drainage ditches perpendicular to the flow of water. Sediment tubes should extend up the side slope a minimum of 1 foot above the design flow depth. Sediment tubes should be spaced according to the following table:

South Carolina Department of Health and Environmental Control
SEDIMENT TUBE
 SHEET NUMBER: SC-05 Page 1 of 3
 PROJECT NO.: _____ DATE: _____

South Carolina Department of Health and Environmental Control
SEDIMENT TUBE
 SHEET NUMBER: SC-05 Page 2 of 3
 PROJECT NO.: _____ DATE: _____

South Carolina Department of Health and Environmental Control
SEDIMENT TUBE
 SHEET NUMBER: SC-05 Page 3 of 3
 PROJECT NO.: _____ DATE: _____



STABILIZED CONSTRUCTION ENTRANCE
 When and Where to Use It
 Stabilized construction entrances should be used at all points where traffic will be leaving a construction site and moving directly onto a public road.

Important Considerations
 If washing is used, procedures must be made to intercept the wash water prior to the sediment before it is carried off-site. Retention facilities shall be required as directed by SCDEC or local authority.
 Stone or gravel must be distributed with mechanical gravel spreader. Do not use a manual tray or sediment bag.
 Construction entrances should be used in conjunction with the stabilization of construction sites to reduce the amount of mud picked up by vehicles.

Installation
 Prepare all vegetation and any objectionable material from the foundation area.
 Evert all surface runoff and drainage from above to a sediment trap or basin.
 Install a non-woven geotextile fabric prior to placing any stone.
 Water at curb edge should be maintained when needed to provide positive drainage.
 The entrance shall consist of 1-inch to 3-inch size stone placed at a minimum depth of 6-inches.
 Minimum dimensions of the entrance shall be 24-feet wide by 10-feet high, and may be modified as necessary to accommodate site constraints.
 The ends of the entrance shall be tapered out towards the road to prevent tracking of mud or soil onto the road.

South Carolina Department of Health and Environmental Control
STABILIZED CONSTRUCTION ENTRANCE
 SHEET NUMBER: SC-06 Page 1 of 3
 PROJECT NO.: _____ DATE: _____

South Carolina Department of Health and Environmental Control
STABILIZED CONSTRUCTION ENTRANCE
 SHEET NUMBER: SC-06 Page 2 of 3
 PROJECT NO.: _____ DATE: _____

South Carolina Department of Health and Environmental Control
STABILIZED CONSTRUCTION ENTRANCE
 SHEET NUMBER: SC-06 Page 3 of 3
 PROJECT NO.: _____ DATE: _____

TYPE E - Surface Course Curb Inlet Filters
 Materials
 Only use surface course inlet filters that have a minimum height or diameter of 9-inches and have a minimum length that is 2-feet larger than the length of the curb opening. Surface course inlet filters are not designed to completely block the inlet opening.

Surface course inlet filters are constructed with a synthetic material that will allow storm water to freely flow through while trapping sediment and debris. The geotextile is non-degradable and resistant to degradation by ultraviolet exposure and resistant to contaminants commonly encountered in storm water. Stone, straw fiber, straw bales, pine needles and leaf mulch are not permitted filter materials.

Surface course inlet filters have aggregate compartments for stone, sand or other weighted materials or mechanisms to hold the unit in place.

Use filter fabric that is capable of reducing effluent sediment concentrations by no less than 80% under typical sediment erosion conditions.

Applicable Type E inlet filters may be selected from the SCDEC approved products list.

Installation
 Surface course inlet filters are applicable for road ditches (both after the road surface course is placed). Place surface course inlet filters where sediment may spill over sidewalks and curbs.

Install surface course inlet filters in front of curb inlet openings. The filter shall have a minimum height or diameter of 9-inches and have a minimum length that is 2-feet larger than the length of the curb opening. This shall allow sufficient length to cover the inlet with at least 1-foot of clearance beyond the inlet on both ends.

Do not completely block the inlet opening with surface course inlet filters. Install surface course inlet filters in a manner to allow overflow to enter the catch basin.

Fill the aggregate compartment to a level (at least 1/4) that will keep the surface course inlet filter in place and create a seal between the surface course inlet filter and the curb surface.

Inspection and Maintenance
 Inspect in lieu of sediment is not removed regularly.
 Inspect surface course curb inlet filters on a regular basis and immediately after major rain events.
 Clean the surface course curb inlet filter if a visual inspection shows that the inlet is blocked build up around the filter.

South Carolina Department of Health and Environmental Control
TYPE E - SURFACE COURSE CURB INLET FILTERS
 SHEET NUMBER: SC-10 Page 2 of 2
 PROJECT NO.: _____ DATE: _____

PLANTING & SEEDING SCHEDULE:

SEEDING SCHEDULES FOR TEMPORARY VEGETATION
 UPPER & LOWER STATE

SCHEDULE NO.	COMMON NAME OF SEED	LBS. PER ACRE RATE	PLANTING DATES
1	ANNUAL SUDAN GRASS (SWEET OR TIFT)	40	APRIL 1 - AUGUST 15
2	BROWN TOP MILLET	50	AUGUST 15 - APRIL 1
3	RYE GRASS	55	AUGUST 16 - MARCH 31
	ANNUAL RYE GRASS	15	

SEEDING SCHEDULES FOR PERMANENT VEGETATION
 LOWER STATE

SCHEDULE NO.	COMMON NAME OF SEED	RURAL RATE	URBAN RATE	PLANTING DATES
3	COMMON BERMUDA (HULLED)	0	60	MARCH 1 - AUG. 14
	PENSACOLA BAHIA	50	0	
	SERICALES LESPEDEZA (SCARIFIED)	50	50	
4	COMMON BERMUDA (UNHULLED)	0	90	AUG. 15 - FEB. 28
	PENSACOLA BAHIA	50	0	
	SERICALES LESPEDEZA (UNHULLED, UNSCARIFIED)	80	80	
	RESEEDING CRIMSON CLOVER	20	0	
	ANNUAL RYEGRASS	5	15	
	RYE GRASS	20	0	

SCALE: NTS
 DATE: MARCH 2011
 SHEET NUMBER: 2110125
 DRAWN BY: TAJ
 CHECKED BY: TAJ
 APPROVED BY: TAJ
C017

RIVERLAND PARK LLC

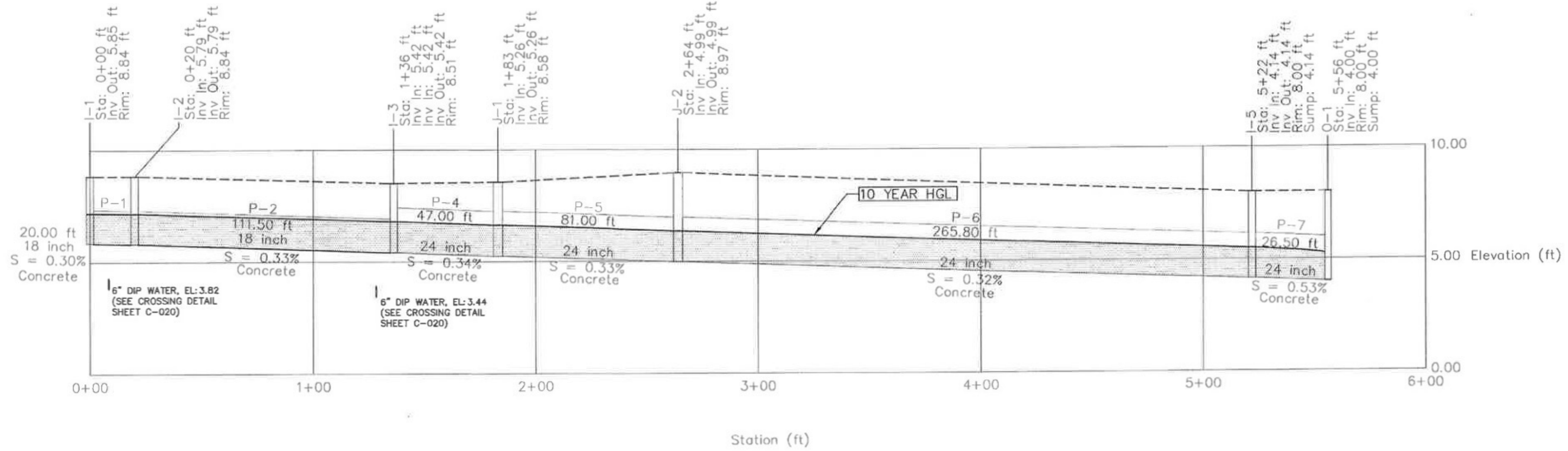
572 SAVANNAH HIGHWAY
 CHARLESTON, SC 29412
 PH: 843-573-9635
 FAX: 843-402-0135

RIVERLAND PARK

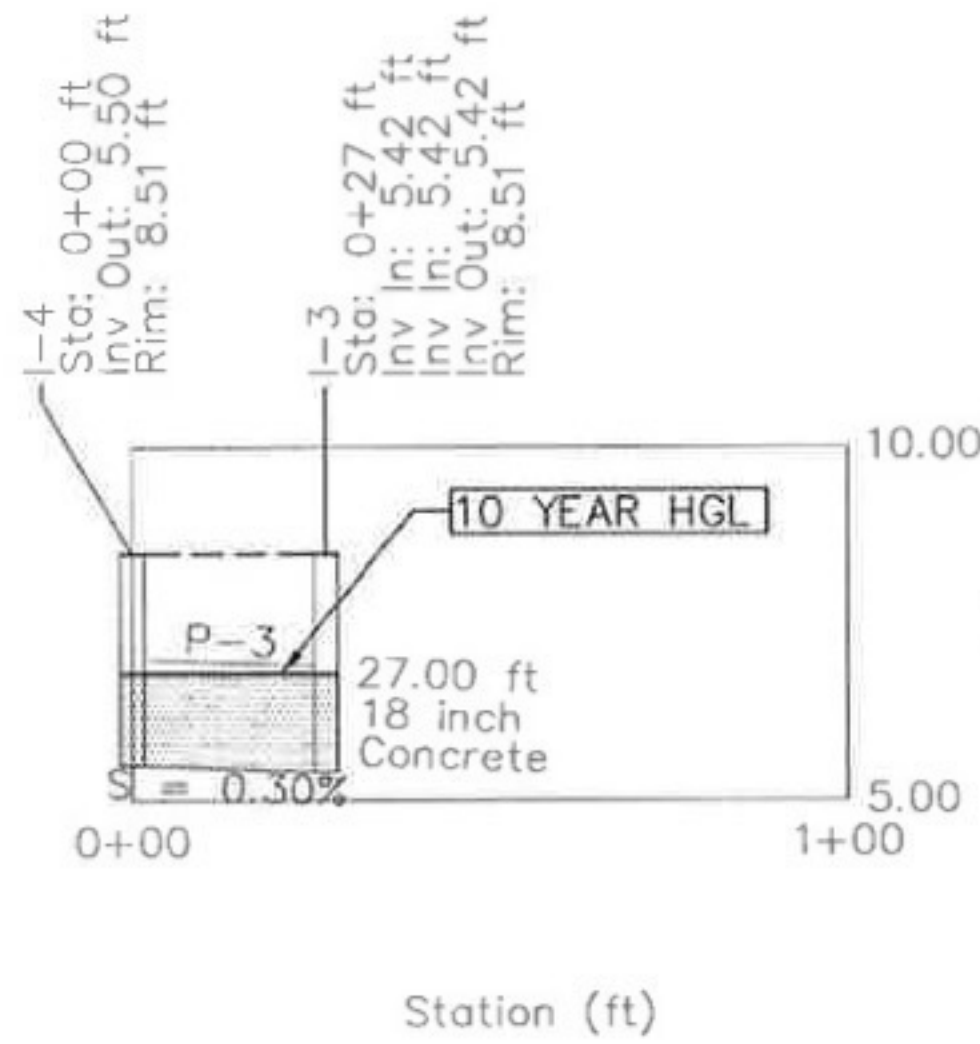
CONSTRUCTION DETAILS

SCALE: NTS
 DATE: MARCH 2011
 SHEET NUMBER: 2110125
 DRAWN BY: TAJ
 CHECKED BY: TAJ
 APPROVED BY: TAJ
C017

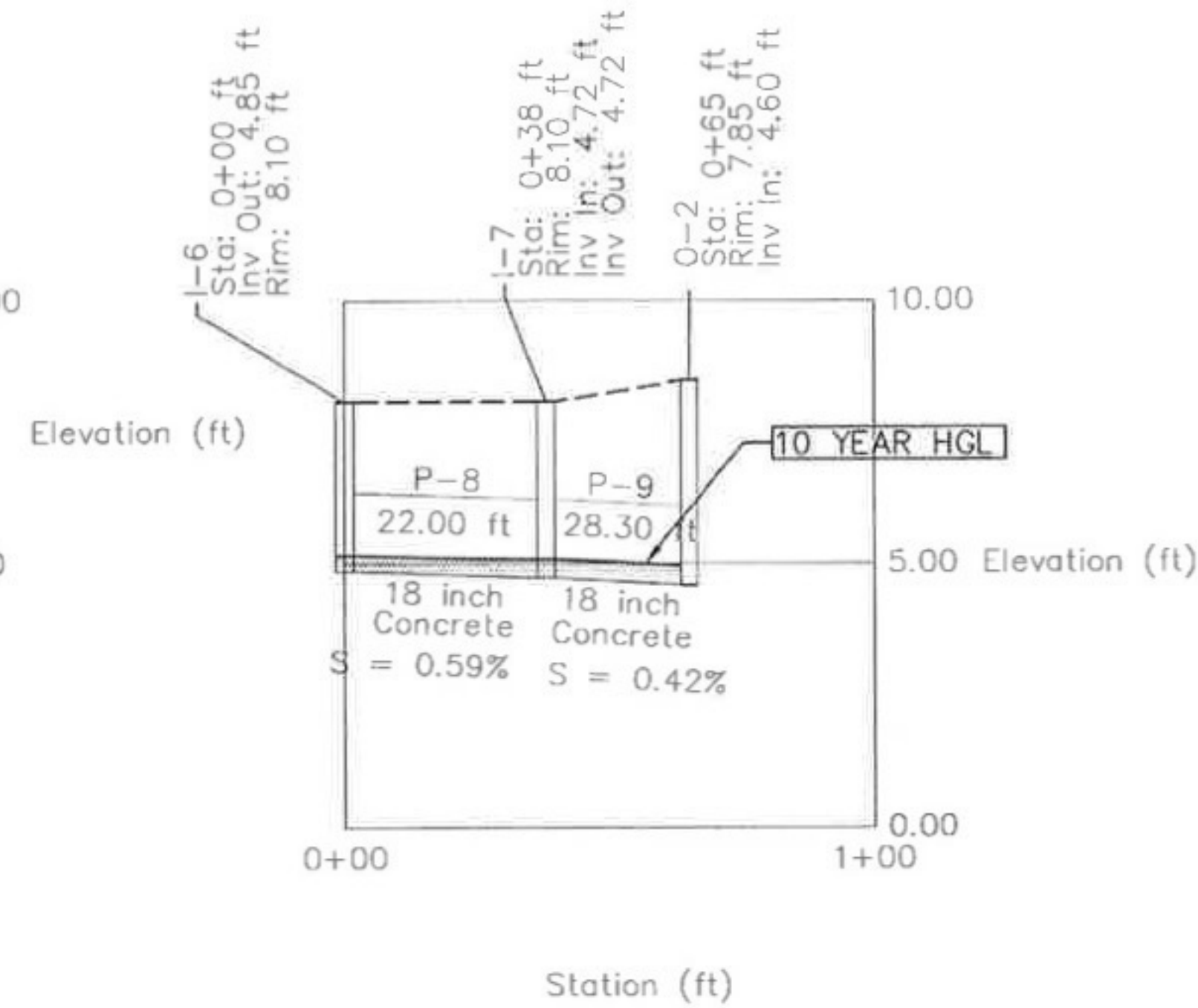
Profile: Profile - 1



Profile: Profile - 2



Profile: Profile - 3



24 HOUR STORM EVENT SUMMARY TABLE

STORM EVENT	PRE-DEVELOPMENT FLOW	POST-DEVELOPMENT FLOW
002 YEAR	07.14 CFS	05.98 CFS
010 YEAR	14.22 CFS	13.90 CFS
025 YEAR	17.65 CFS	18.46 CFS
050 YEAR	21.13 CFS	26.33 CFS
100 YEAR	25.53 CFS	34.67 CFS

NOTES:
1. USE TYPE "O-RING RCP CLASS III" PIPE FOR ALL STORM WATER LINES WITHIN THE ROADWAY RIGHT OF WAY.

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Robert D. Hanner
10 FEBRUARY 2011

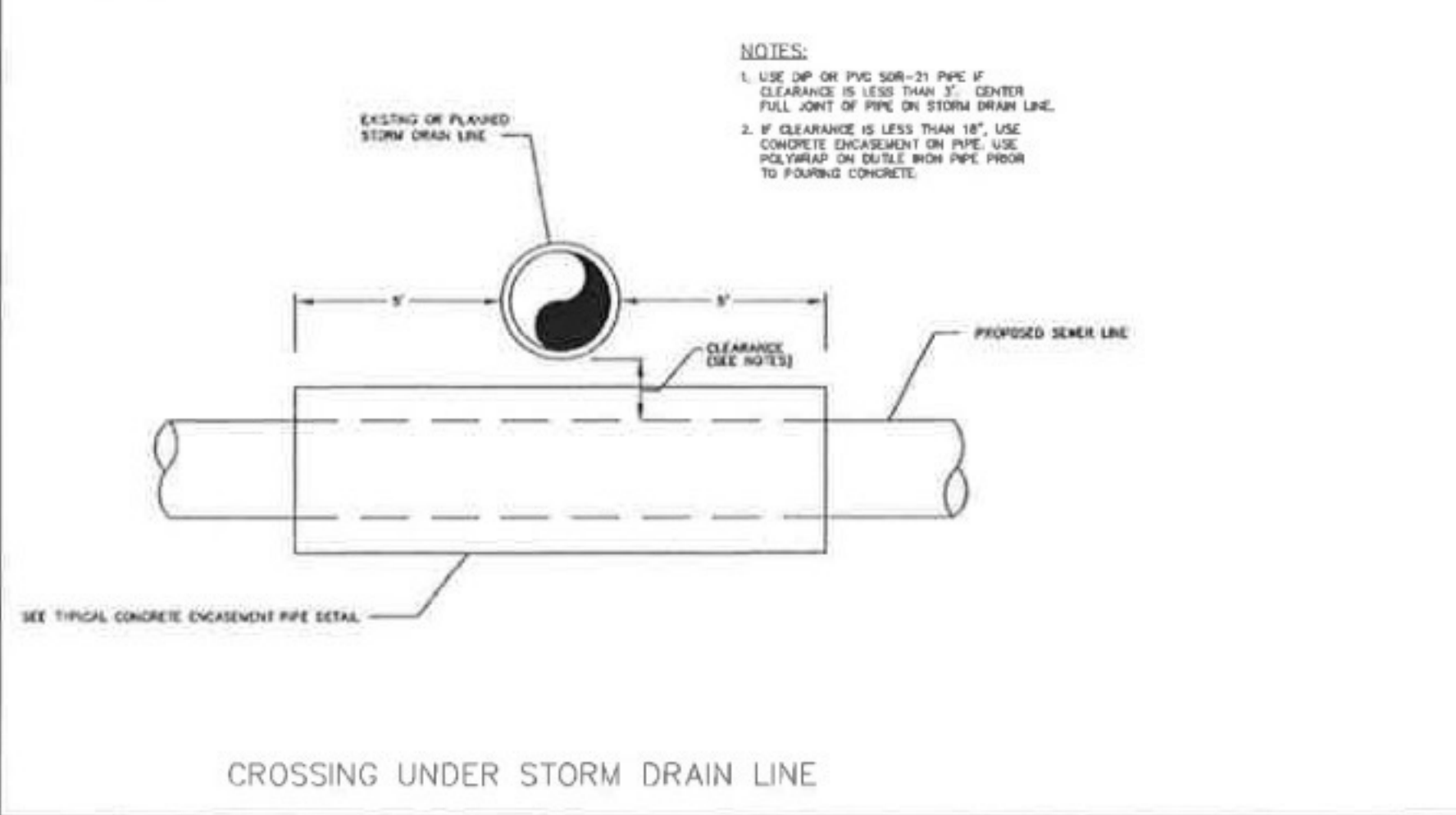
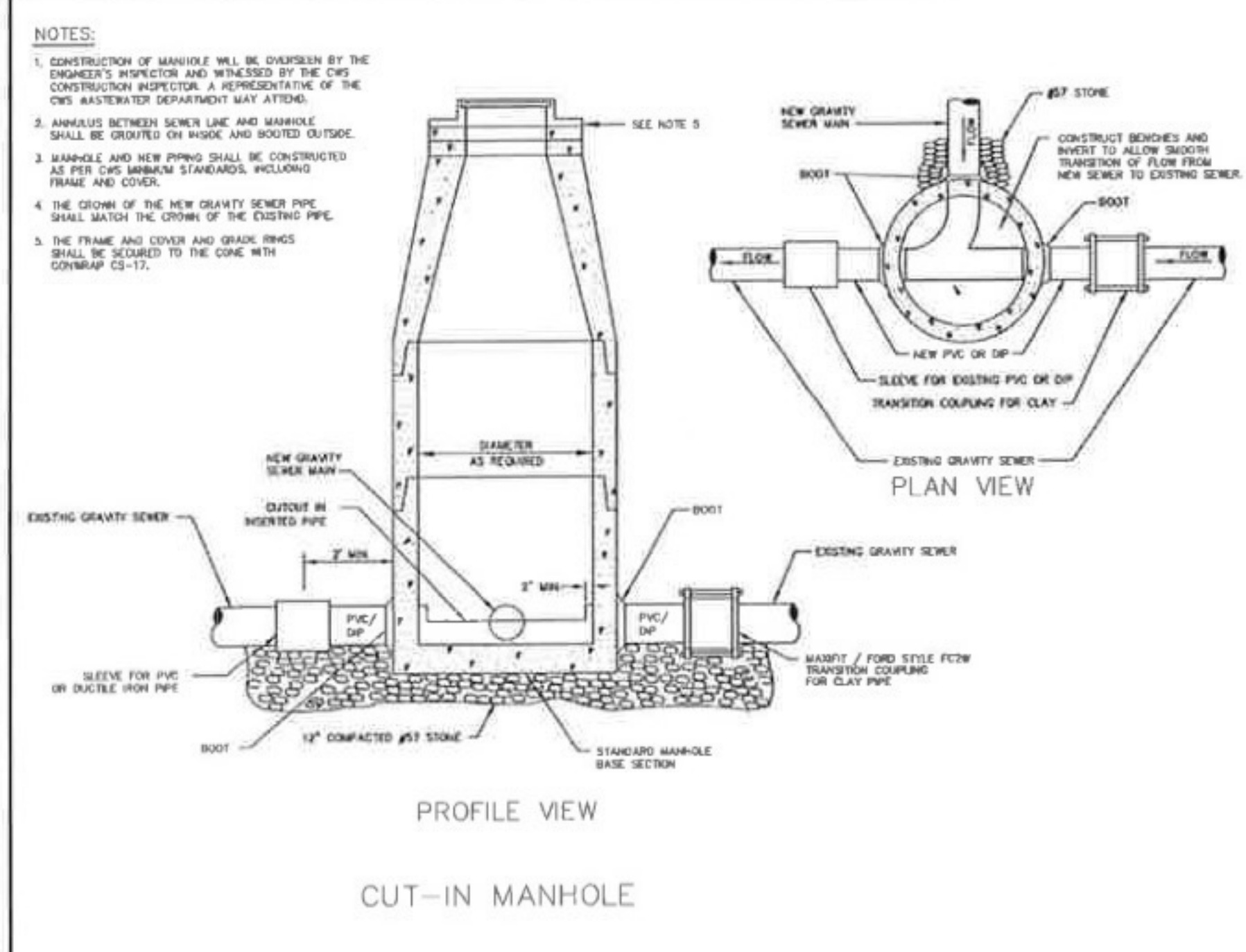
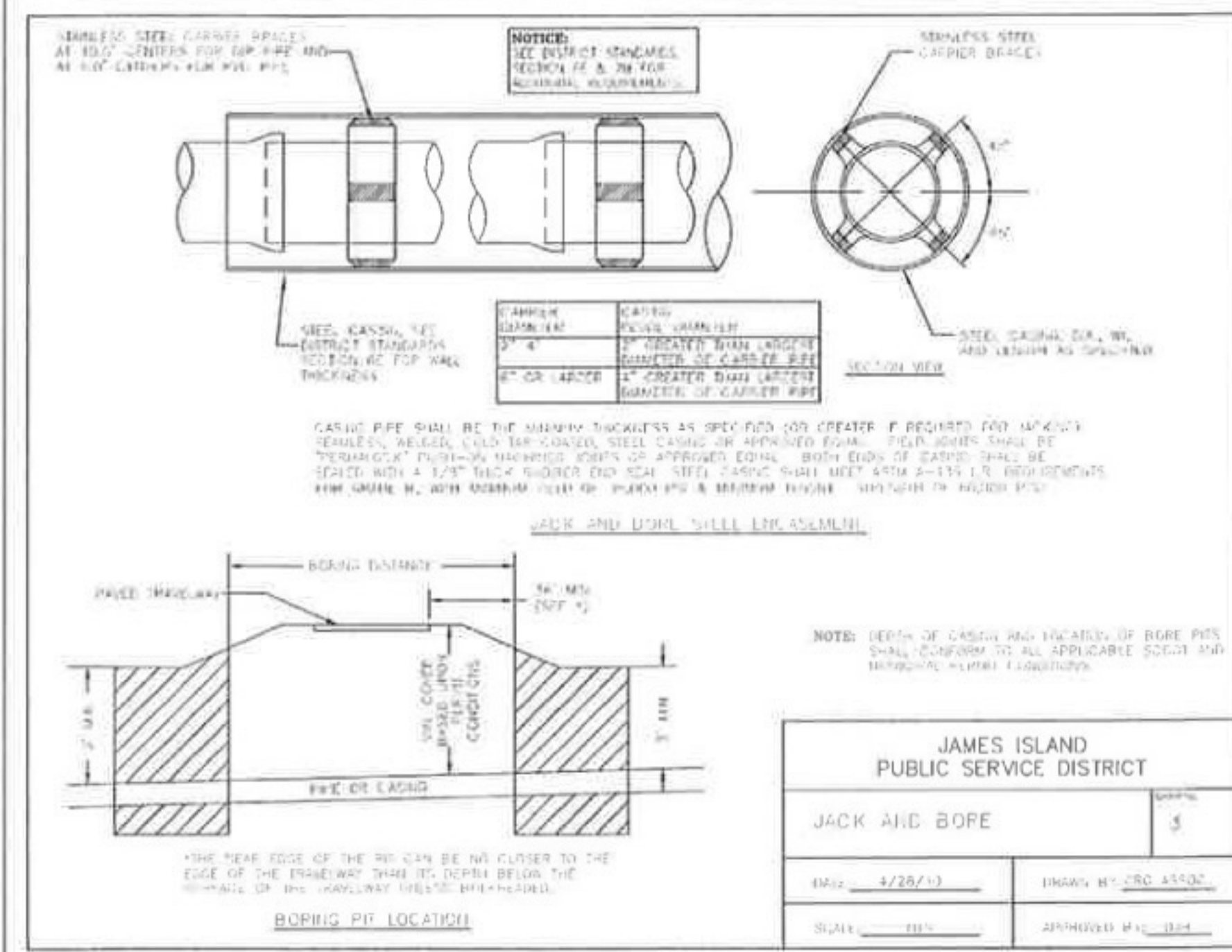
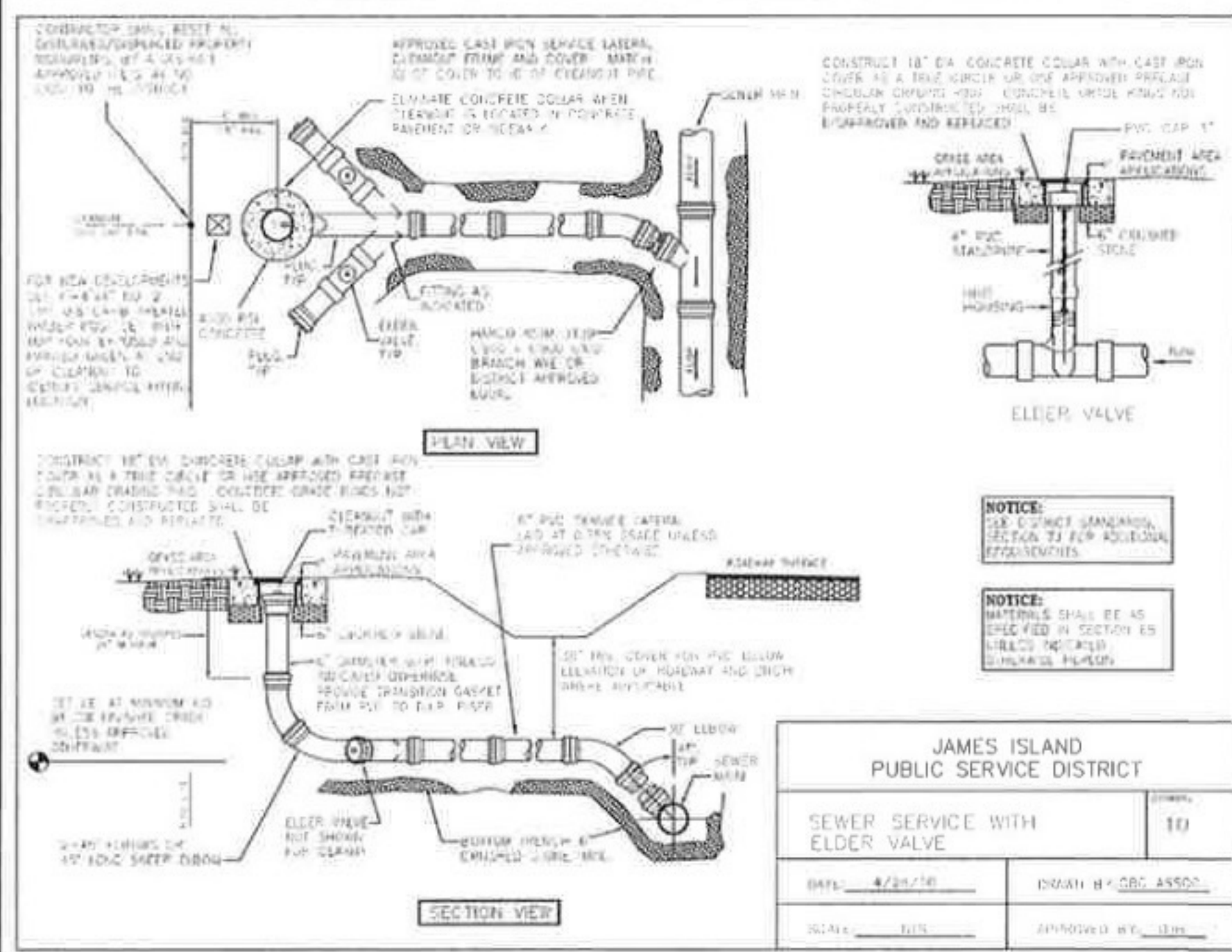
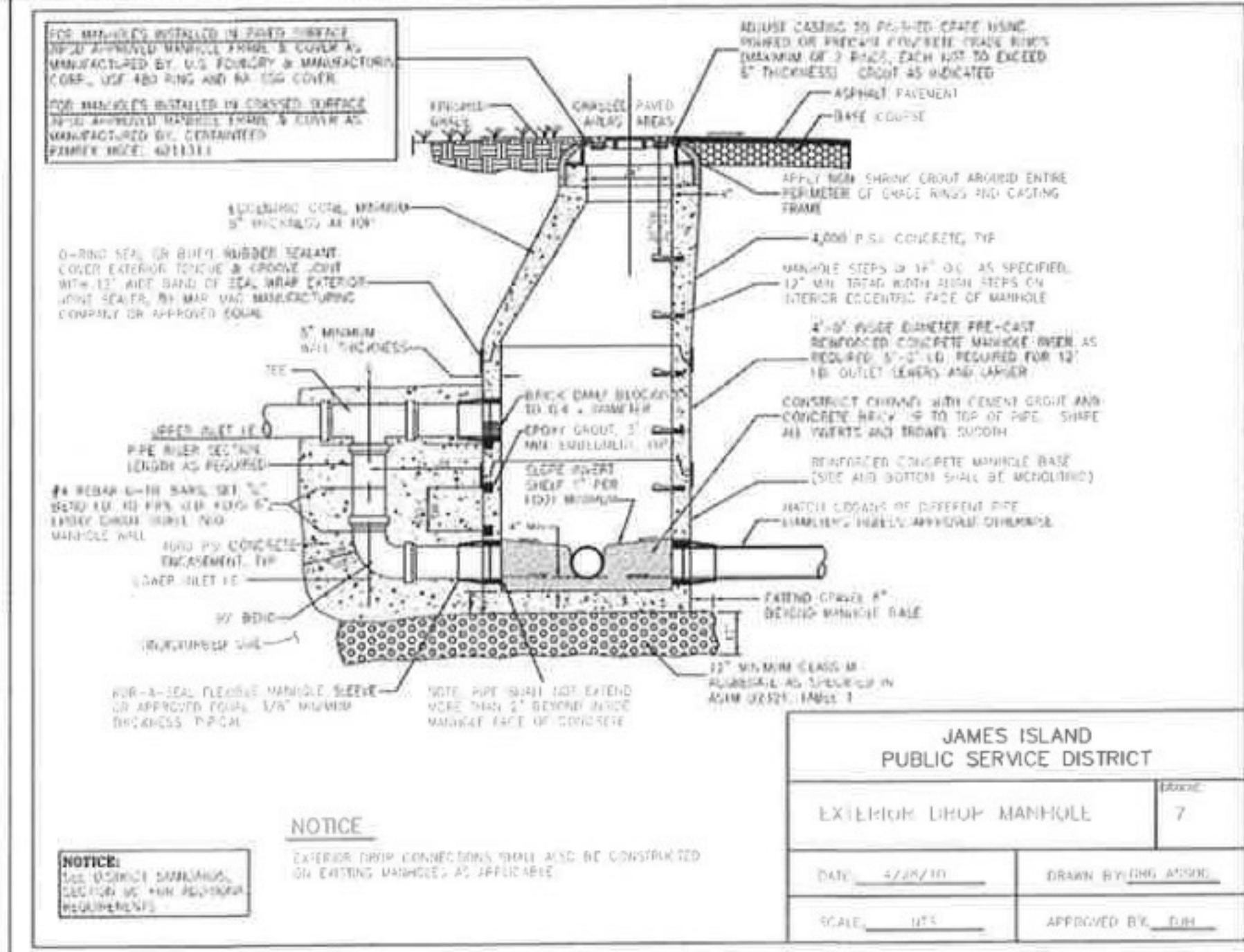
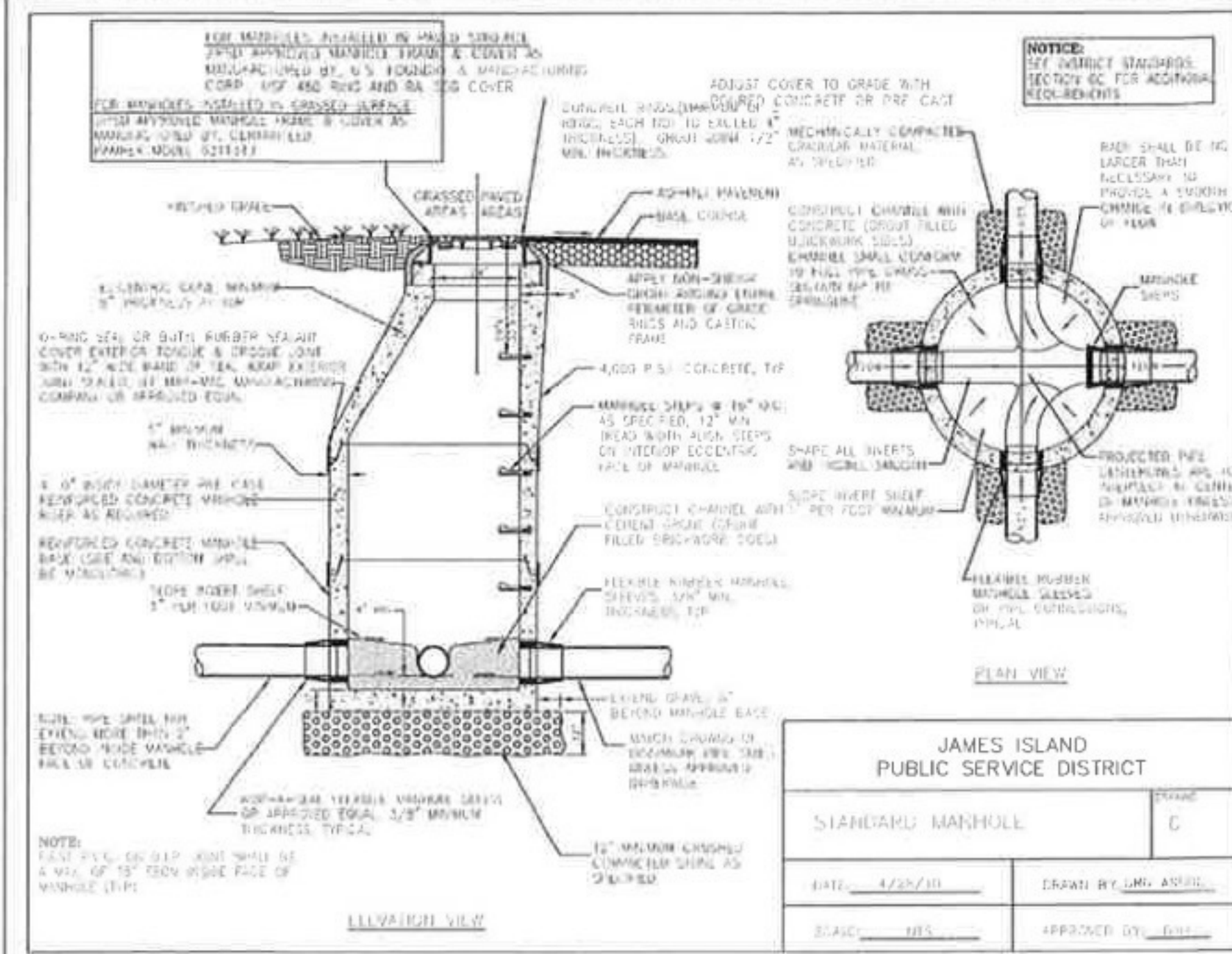
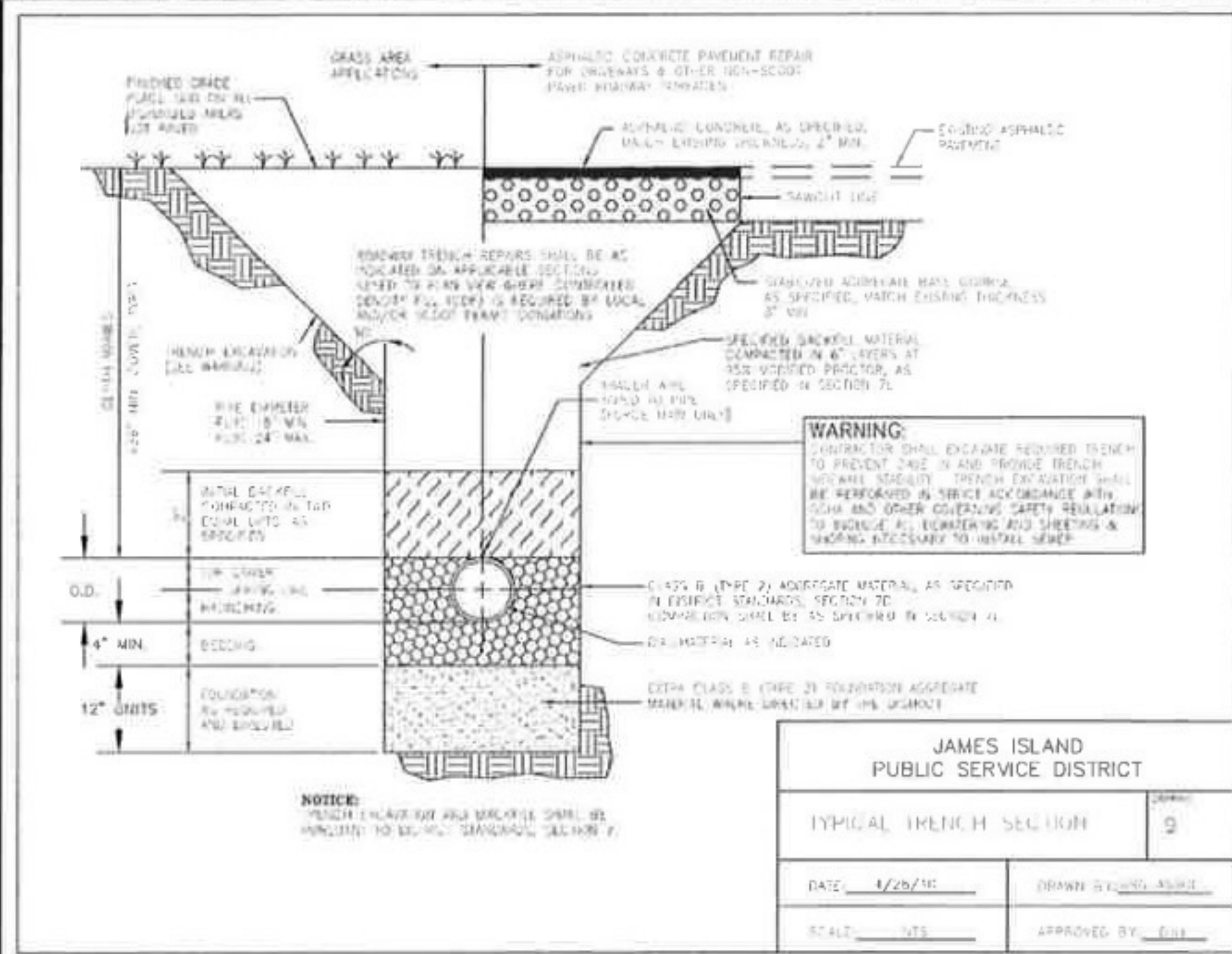
REV. NO.	DATE	DESCRIPTION

PROJECT OWNER
RIVERLAND PARK LLC
572 SAVANNAH HIGHWAY
CHARLESTON, SC 29412
PH: 843-573-9635
FAX: 843-402-0135

PROJECT TITLE
RIVERLAND PARK

SHEET TITLE
CONSTRUCTION DETAILS

SCALE: NTS	DESIGNED BY: TAM	CHECKED BY: TAM
DATE: MARCH 2011	DRAWN BY: BLH	APPROVED BY: BLH
HQS PROJECT NO.: 2110125	SHEET NUMBER: C018	



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Professional Engineer
 RICHARD J. HANER
 10-10-2011

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PROJECT TITLE:
 RIVERLAND PARK

SHEET TITLE:
 CONSTRUCTION DETAILS

SCALE: NTS

DATE: MARCH 2011
 HED PROJECT NO.: 2110125

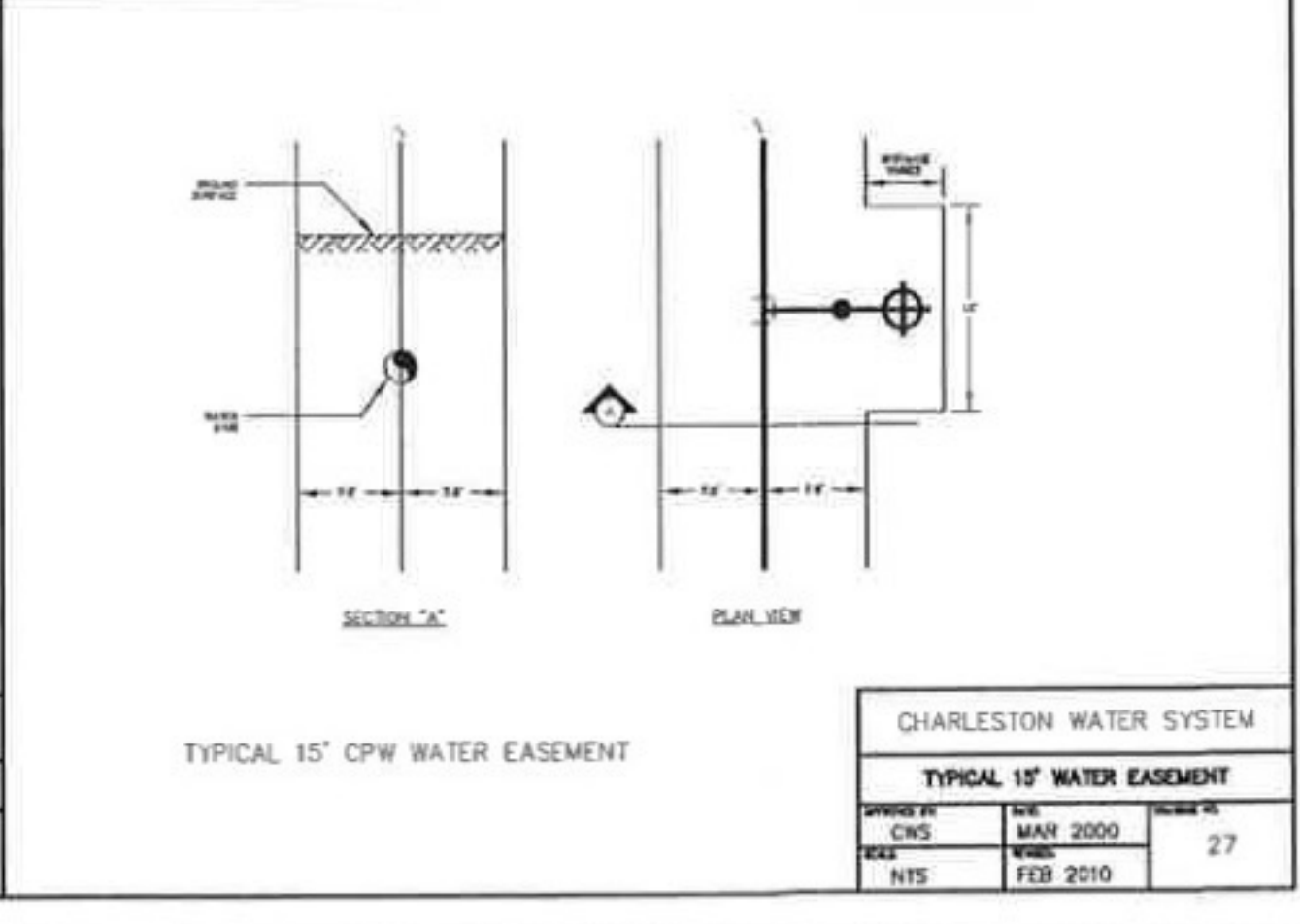
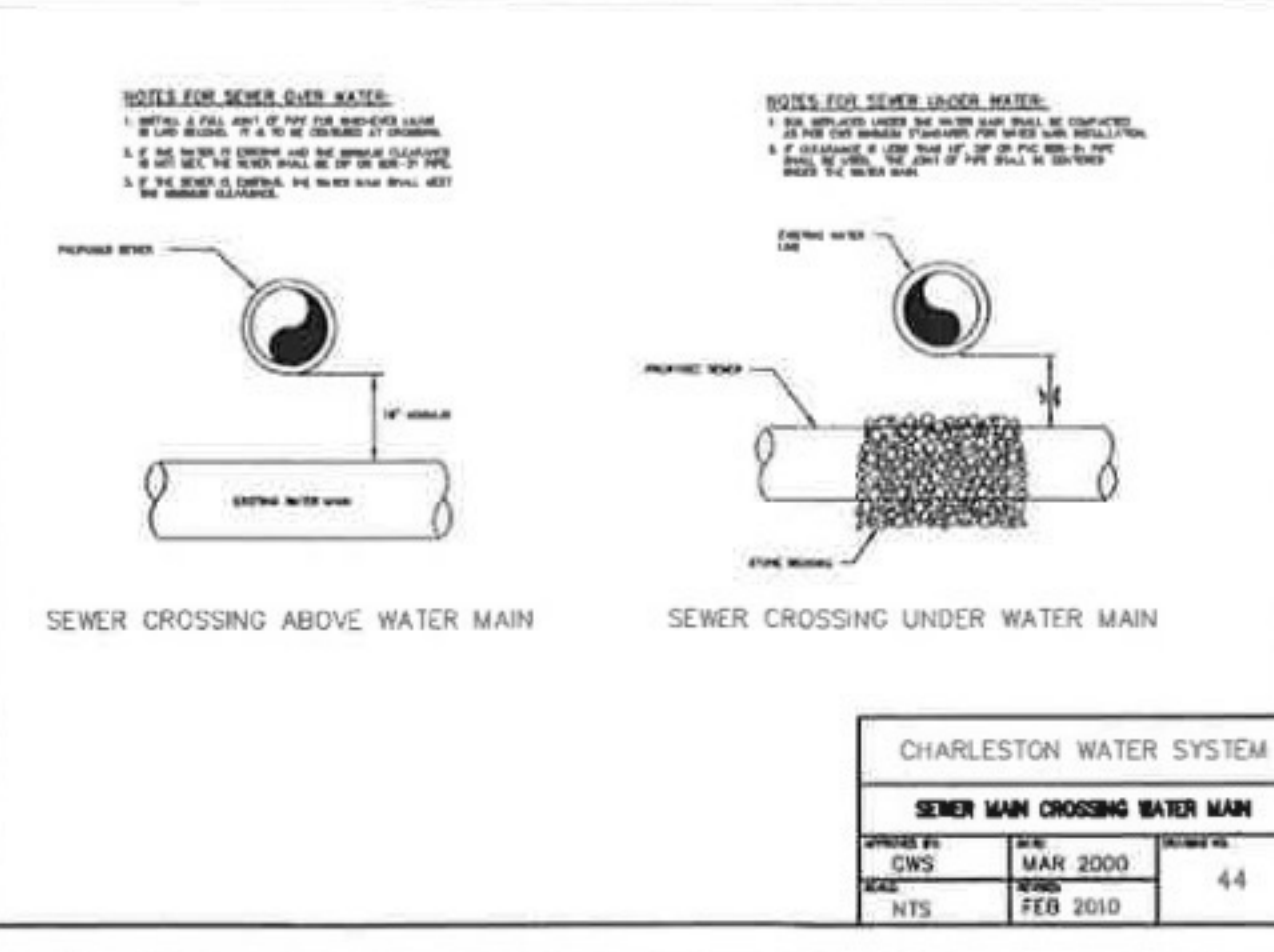
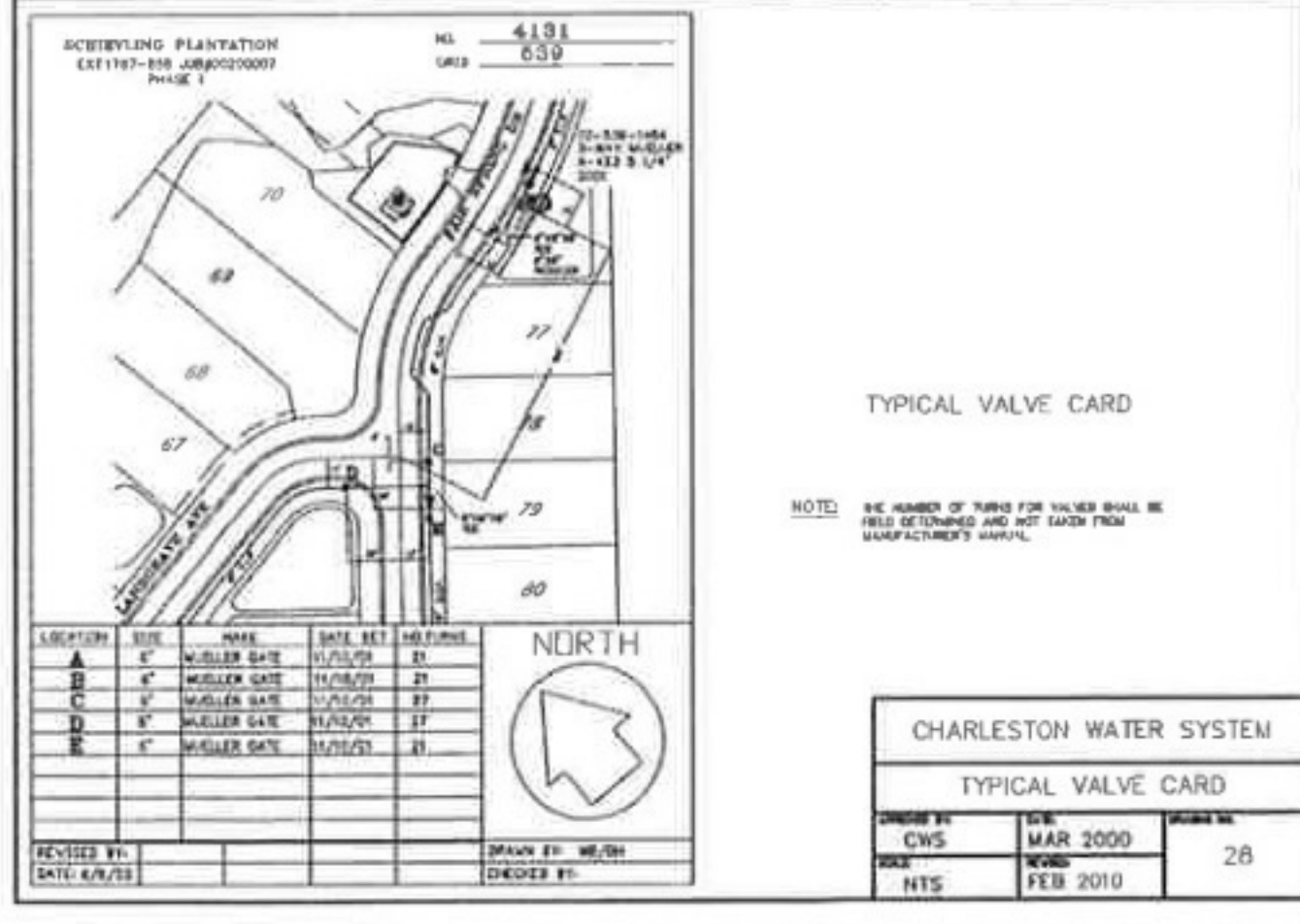
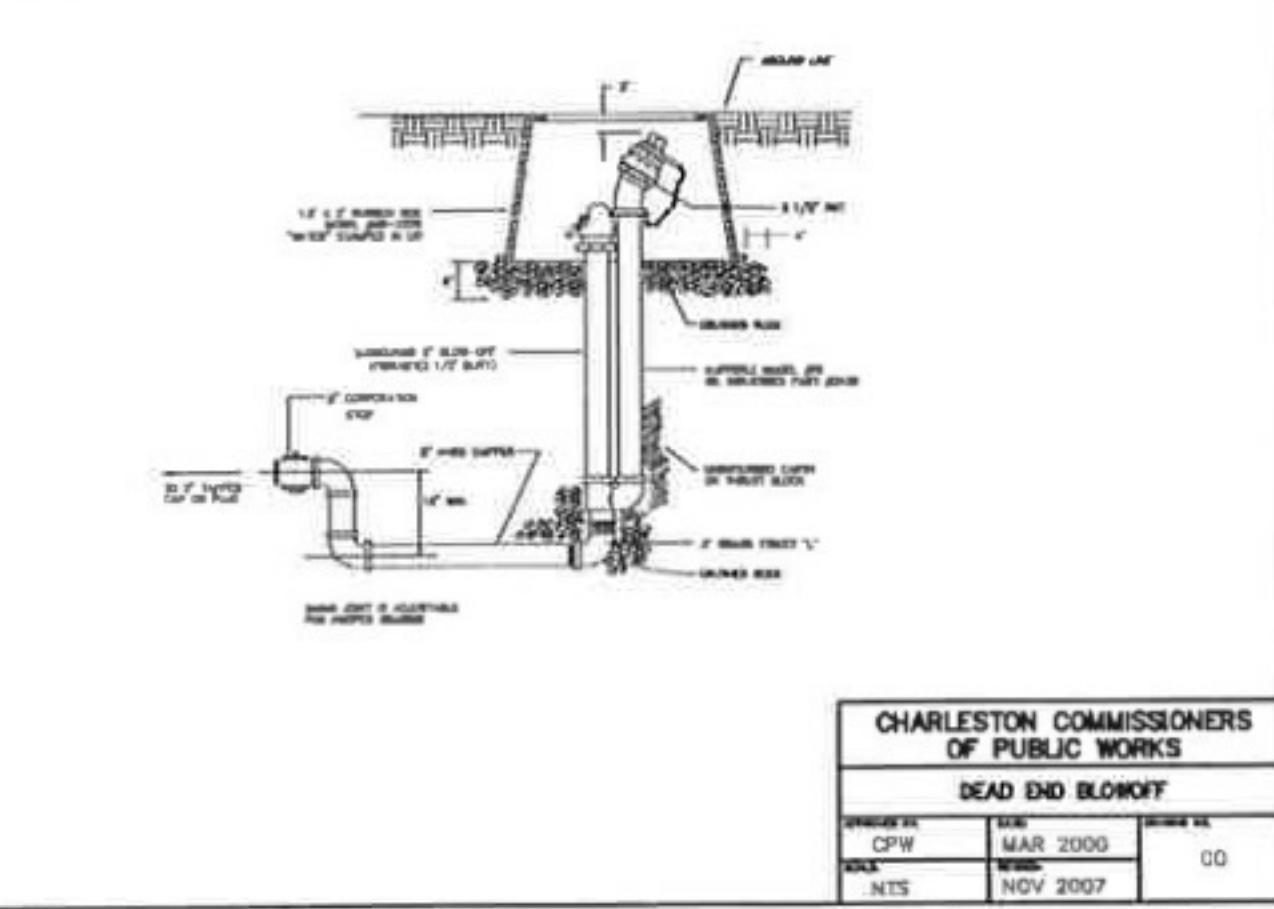
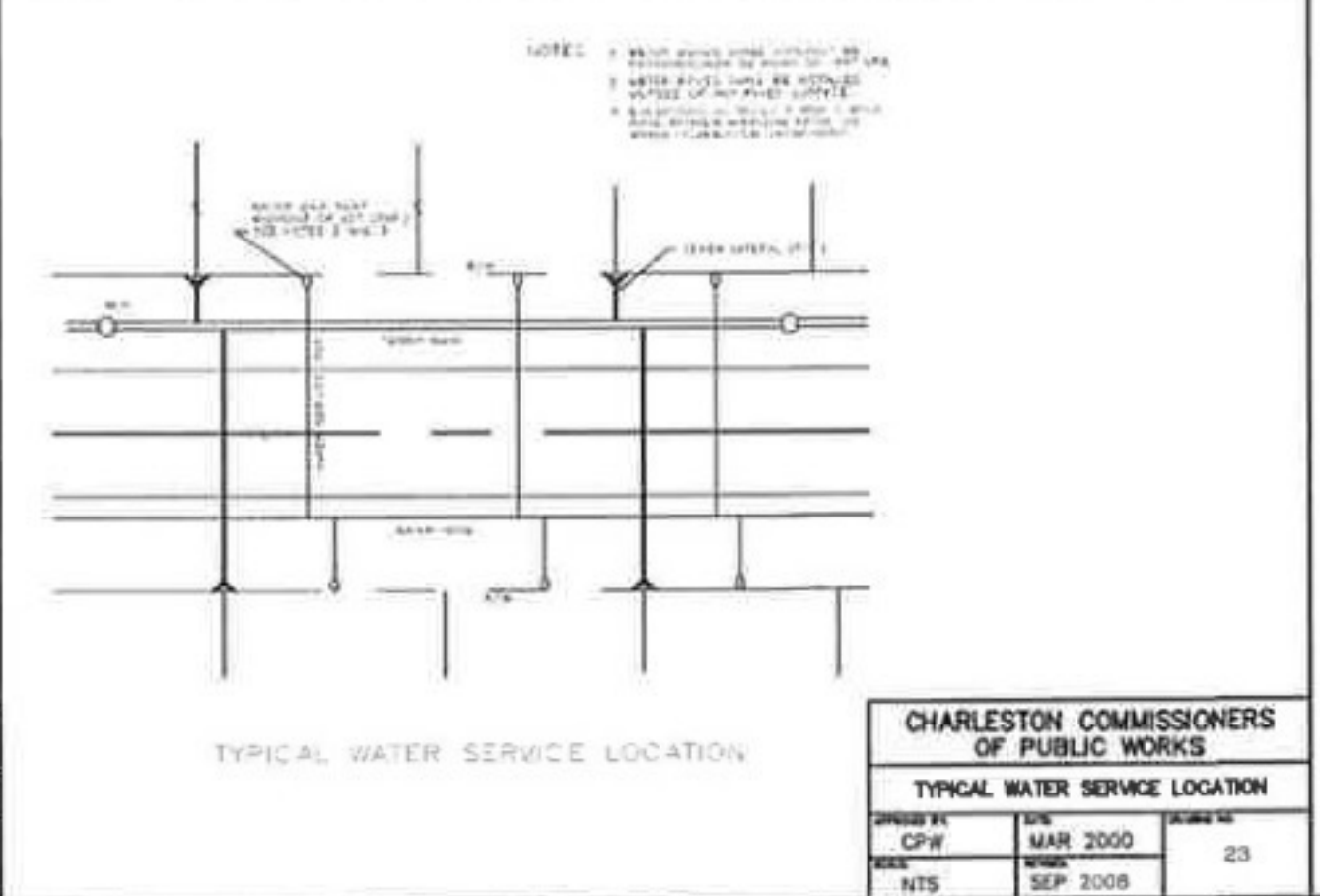
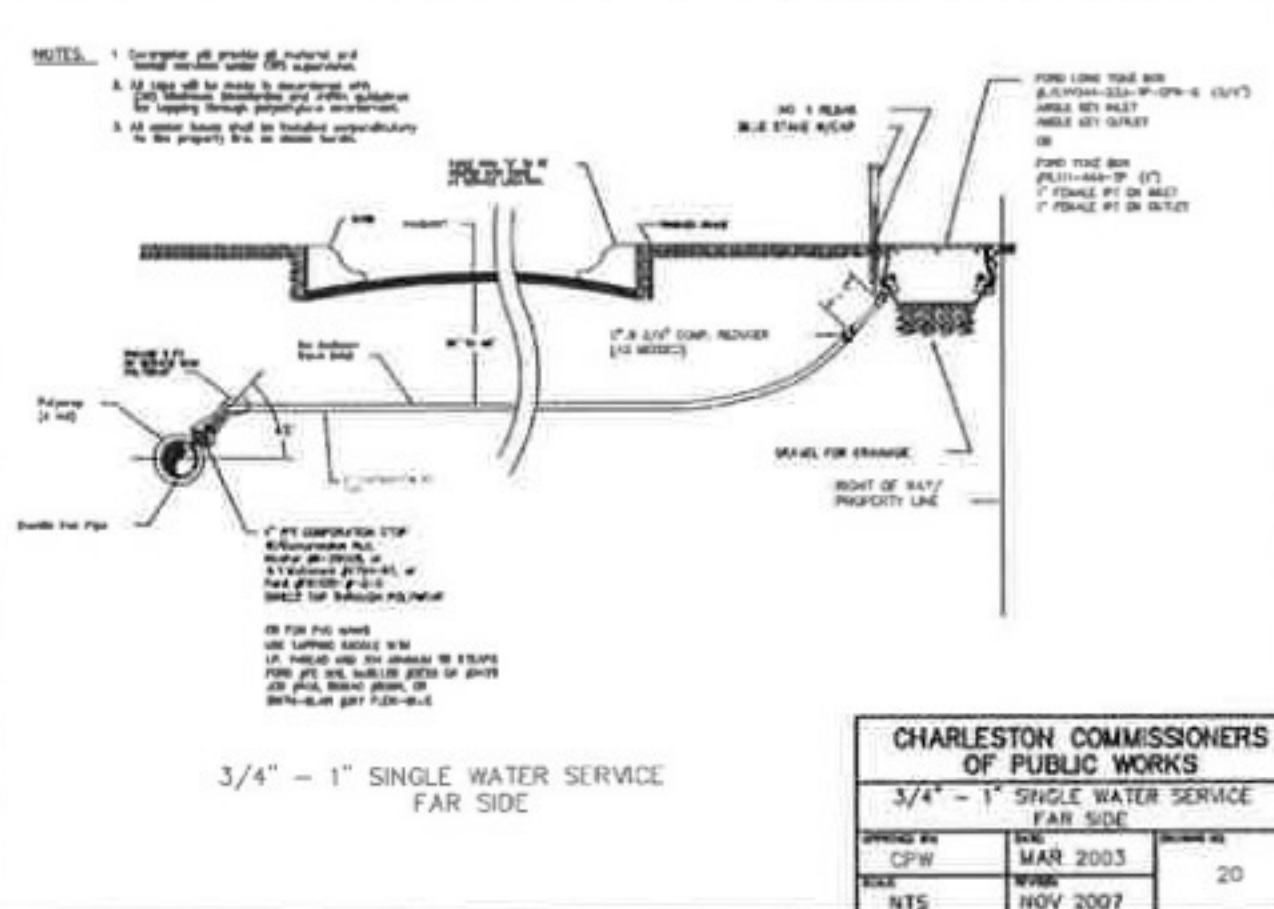
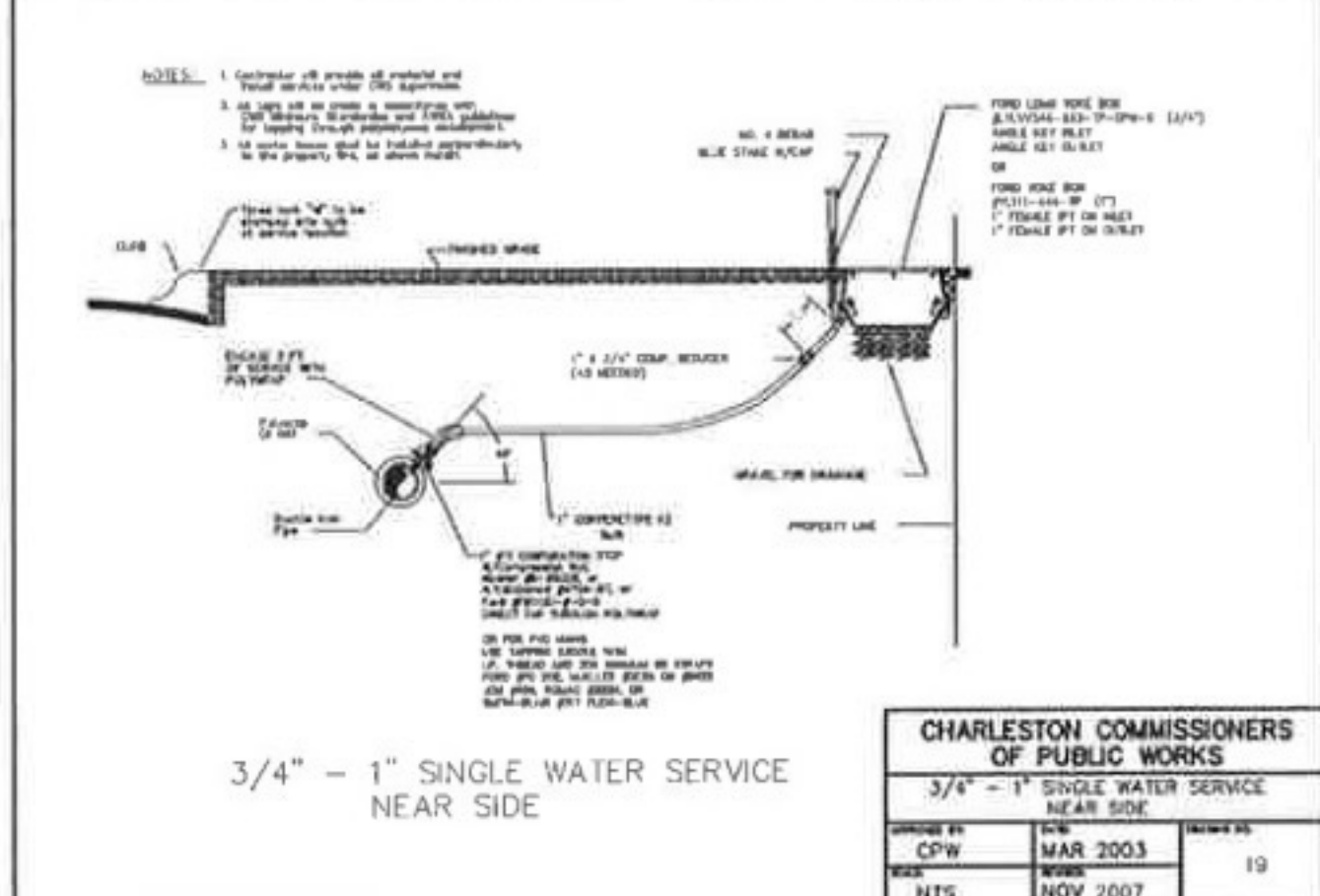
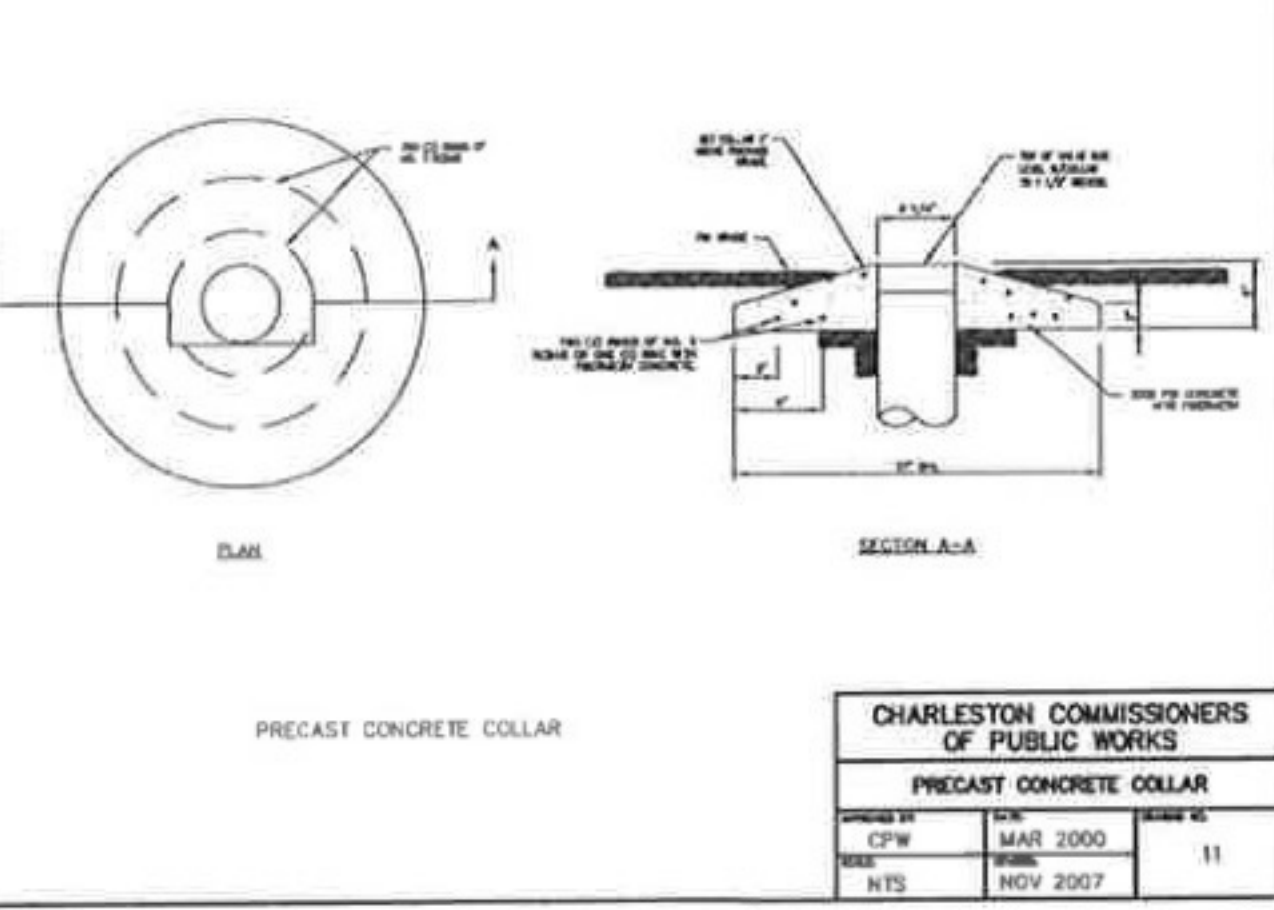
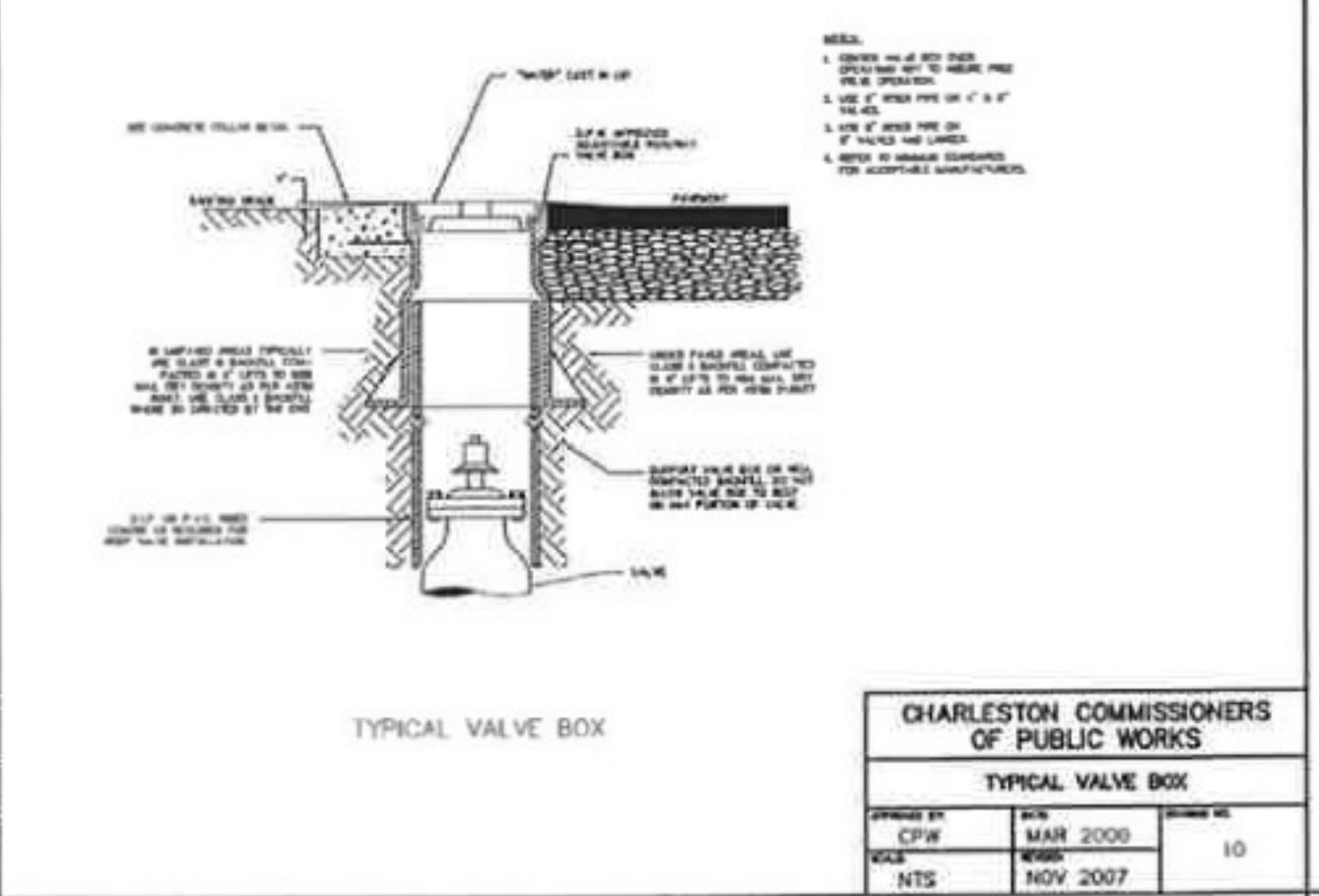
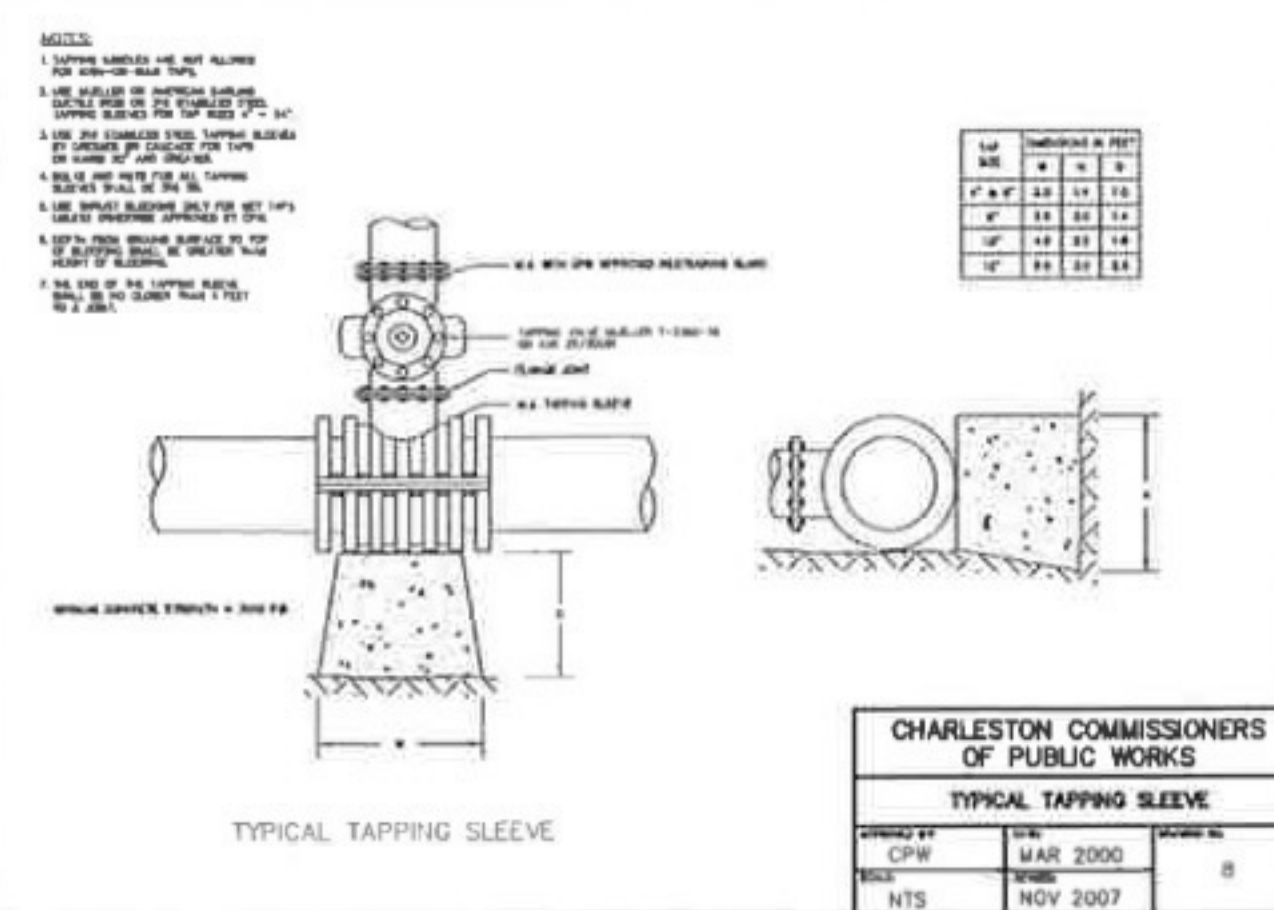
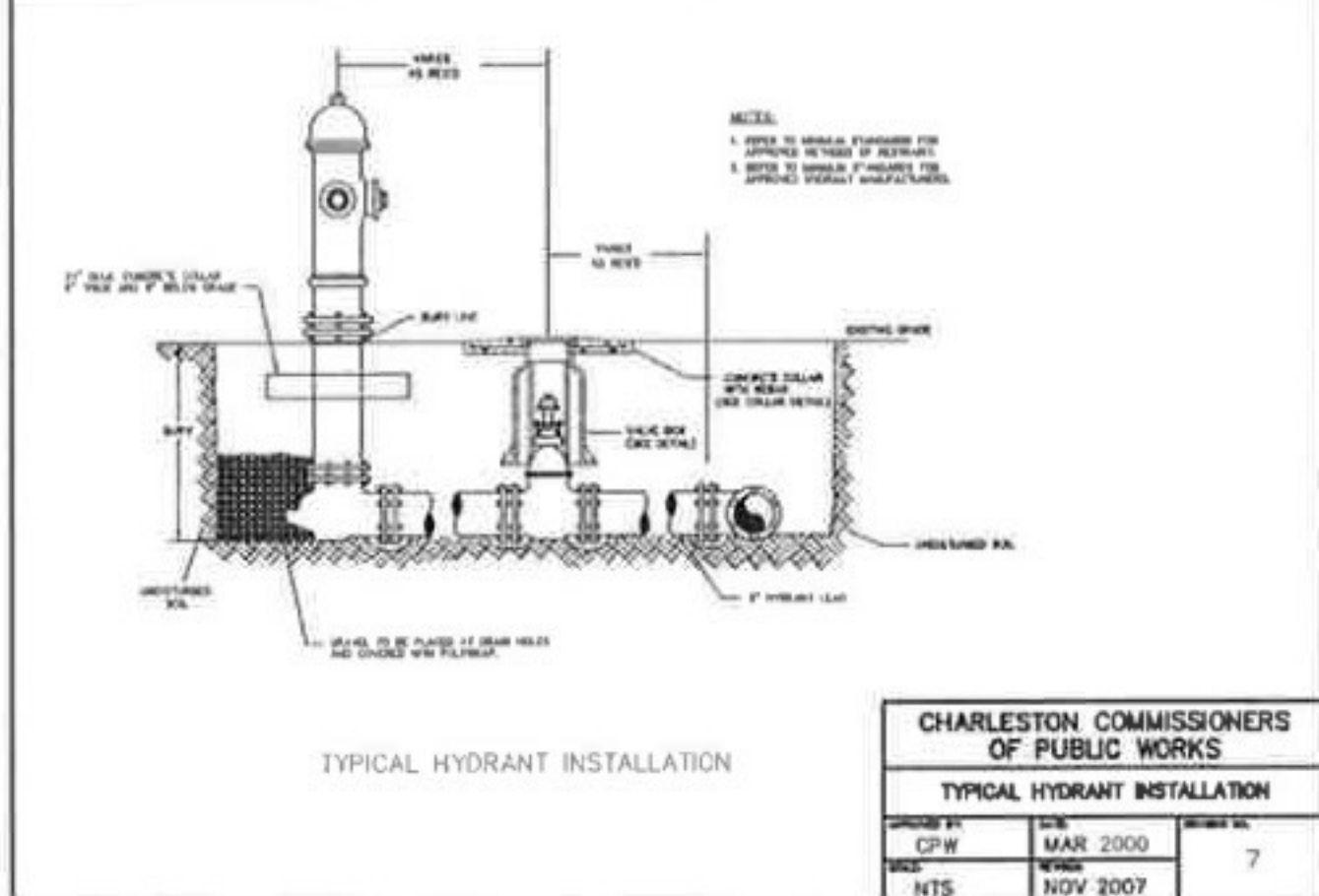
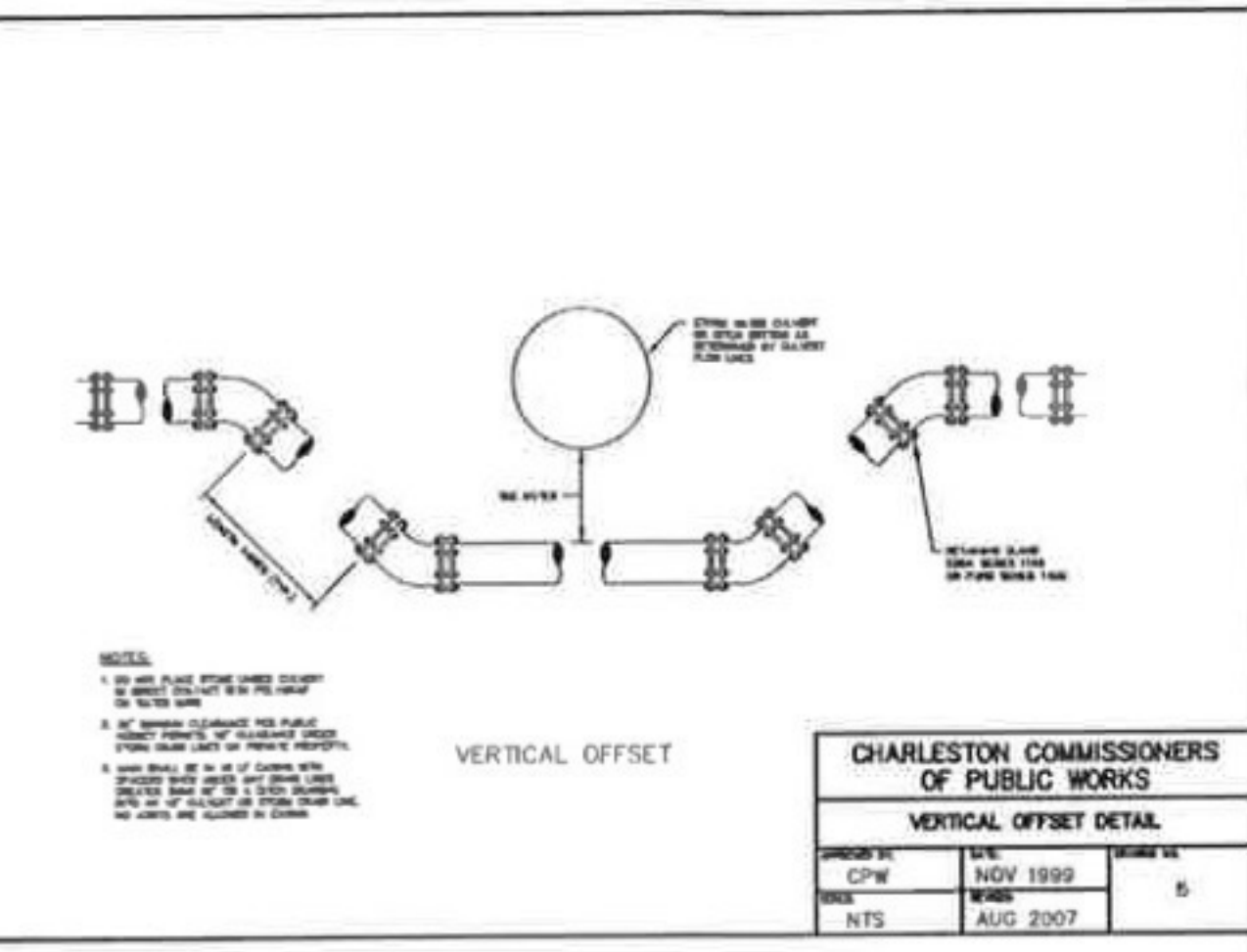
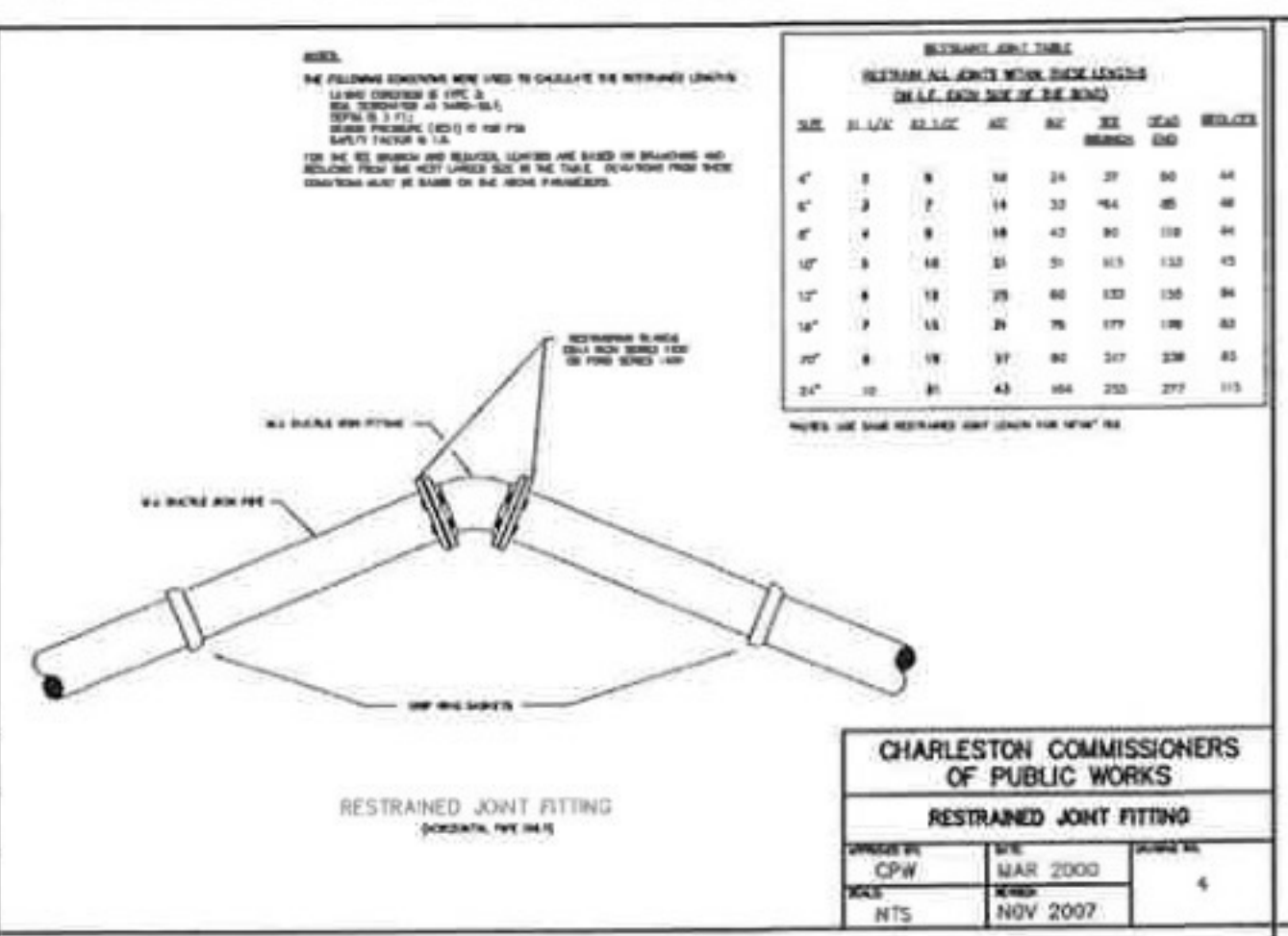
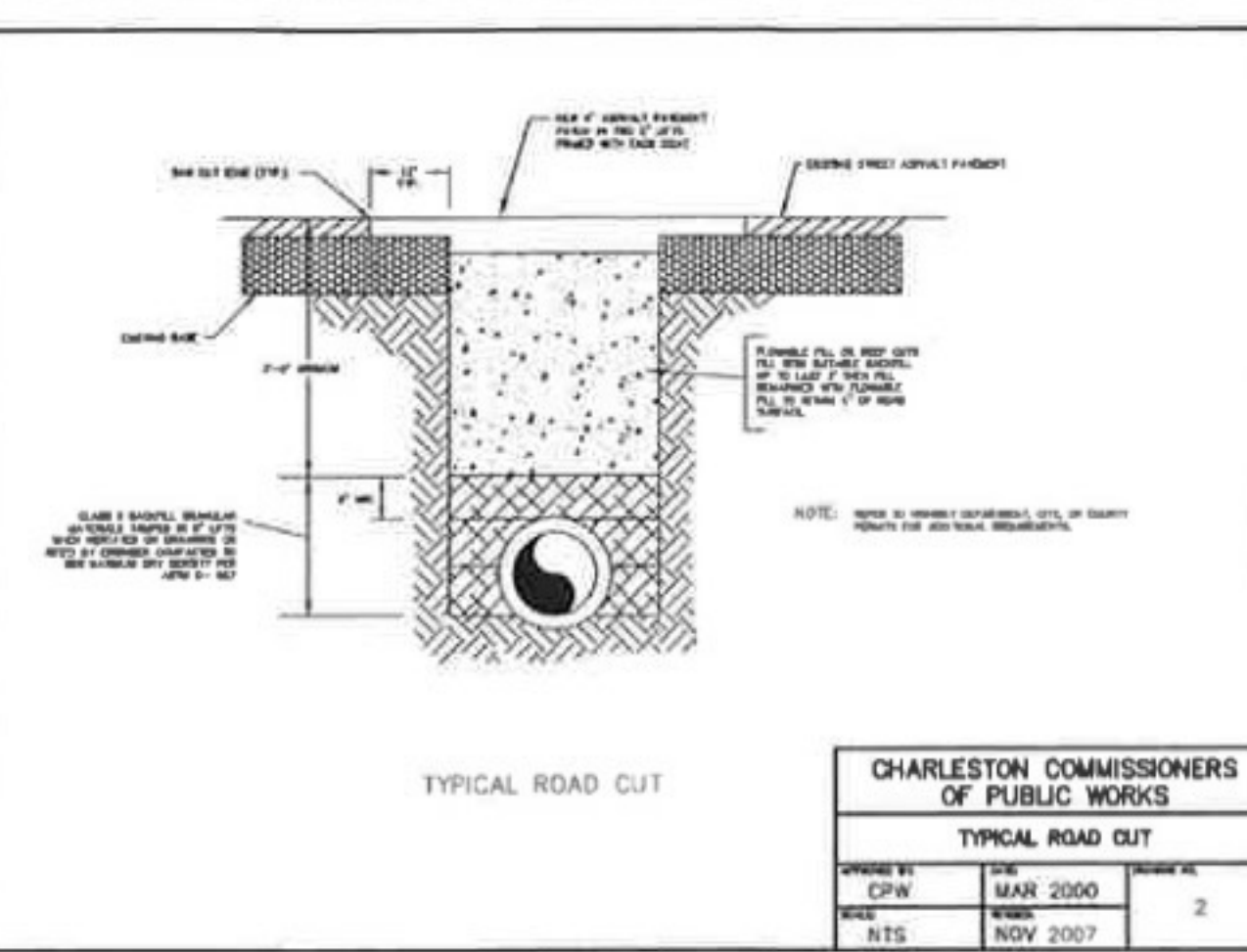
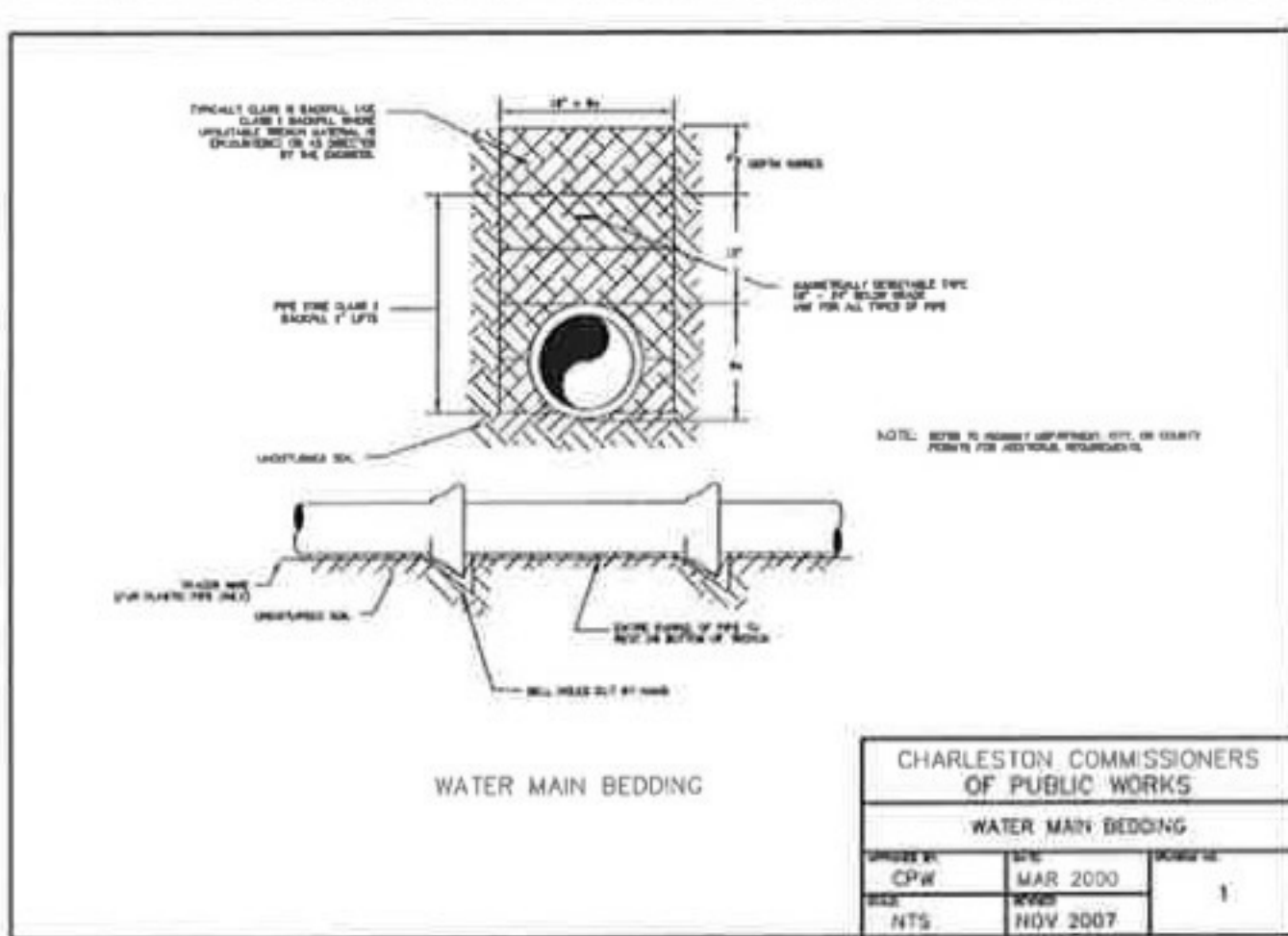
REVISION NUMBER: C019

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Robert D. Hanner
 10-17-2011

NO. 1	DATE	BY	REVISION
1	NOV 1999	NTS	5
2	MAR 2000	CPW	6
3	NOV 2007	NTS	7



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PROJECT TITLE
RIVERLAND PARK

SHEET TITLE
CONSTRUCTION DETAILS

SCALE: NTS
 DATE: MARCH 2011
 HED PROJECT NO.: 2110125
 SHEET NO.: C020