

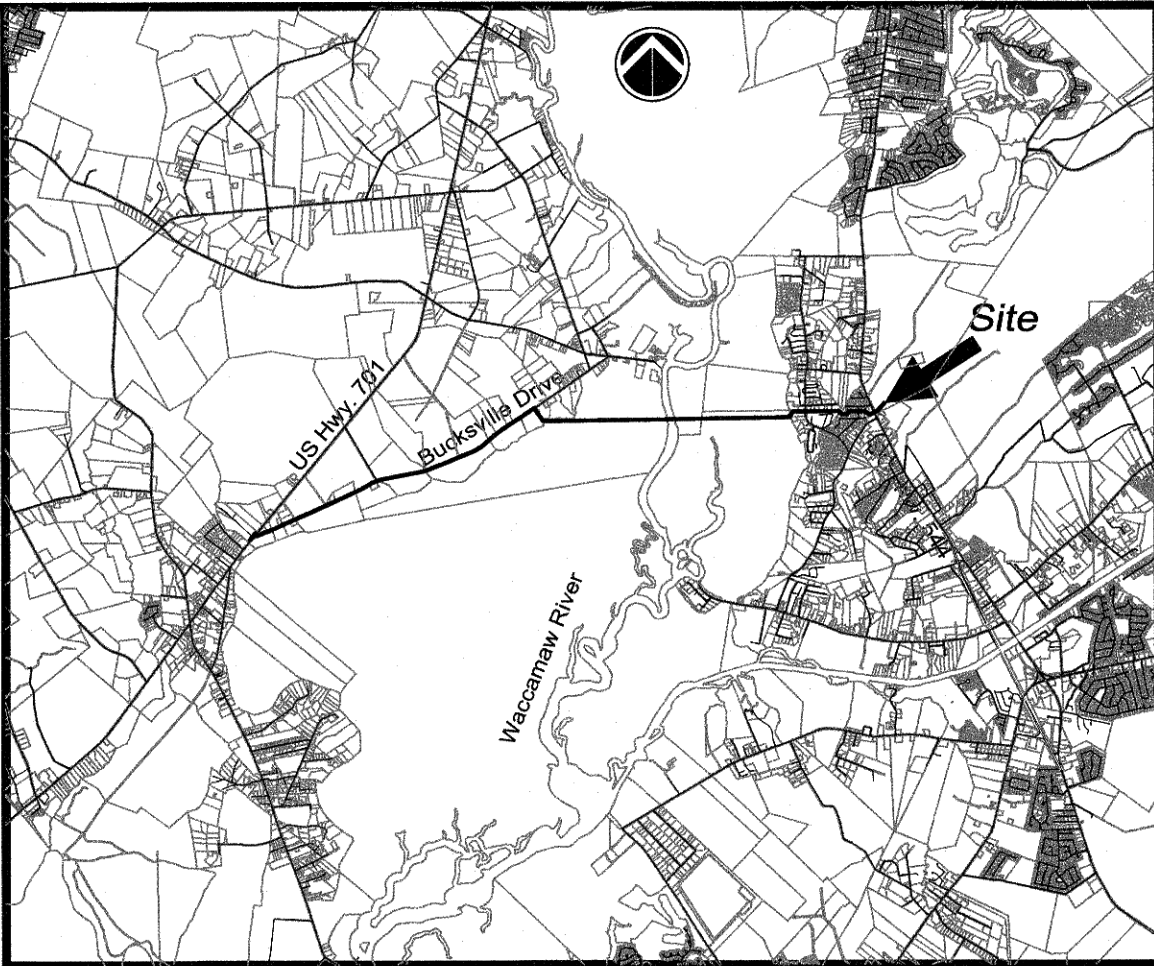
CONSTRUCTION PHASING		
PHASE	START DATE	COMPLETION DATE
1	SEPTEMBER 2019	SEPTEMBER 2020

Construction Plans

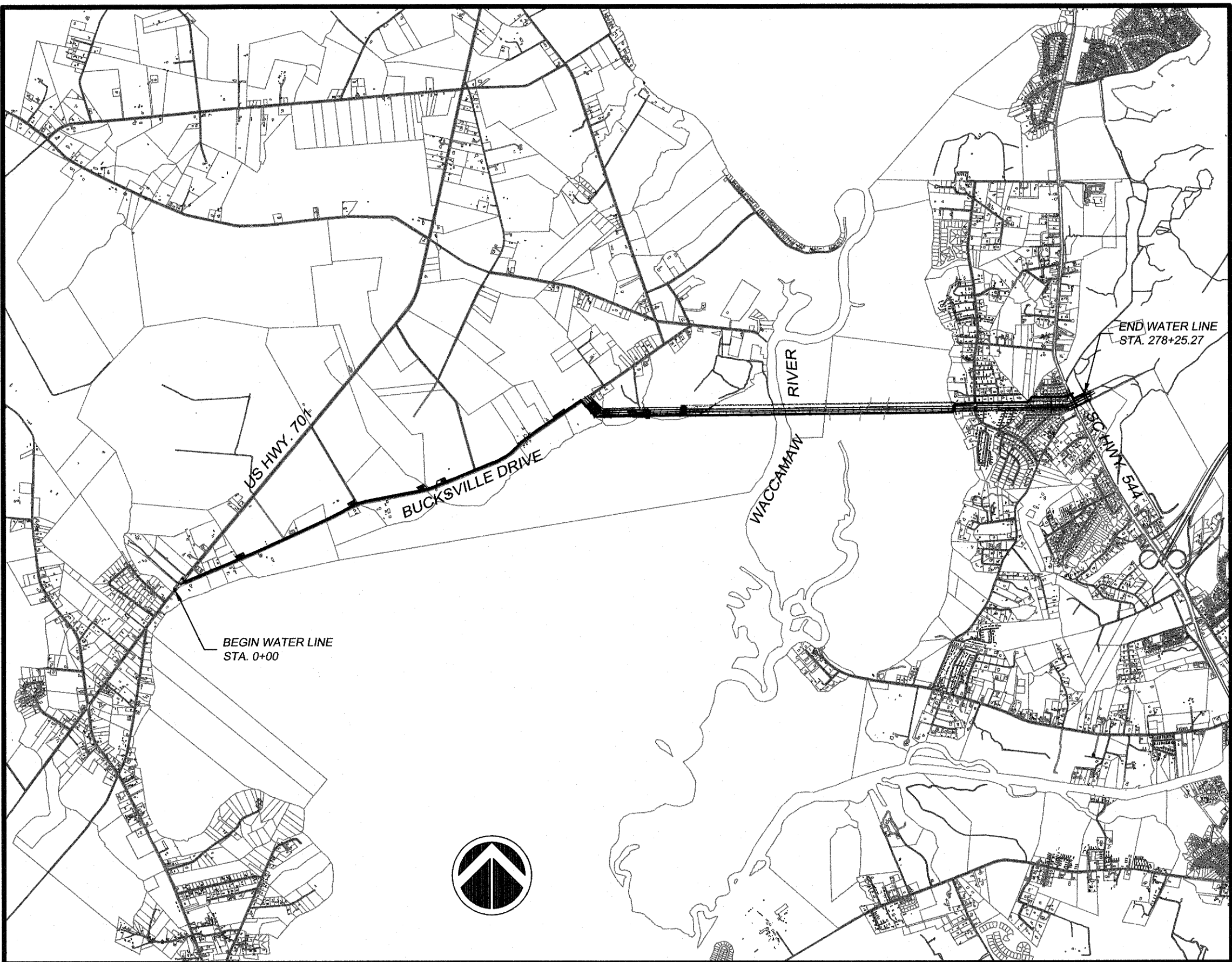
for

US HWY. 701 TO SC HWY. 544

48" WATER TRANSMISSION LINE IMPROVEMENT PROJECT



VICINITY MAP
N.T.S.



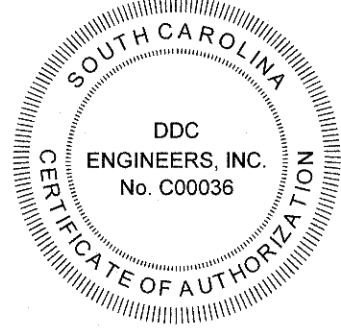
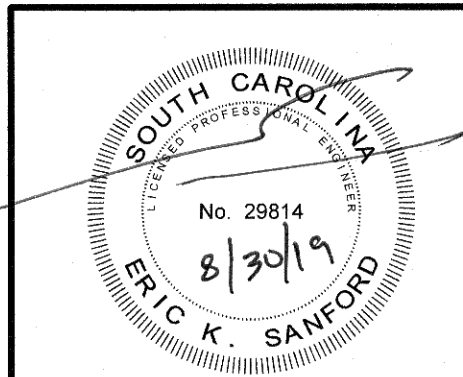
SITE LAYOUT

SCALE: 1" = 3000'

REVISION OCCURRENCE LIST			
8	8/30/19	REVISED PER GSW&SA COMMENTS	K/JG
7	7/1/19	REVISED PER IN HOUSE REVIEW	K/JG
6	5/17/19	REVISED PER IN HOUSE REVIEW	K/JG
5	4/3/19	REVISED PER IN HOUSE COMMENTS.	PES
4	3/6/19	REVISED PER GSWA COMMENTS.	K/JG
3	9-19-18	ADDED KEY PLAN	K/JG
2	10-27-17	REVISIONS PER IN HOUSE REVIEW.	PES
1	8-14-17	REVISIONS PER GSWA COMMENTS.	PES
REVISION NO.	DATE	REVISION DESCRIPTION	BY

Owner:
GRAND STRAND WATER AND
SEWER AUTHORITY
P.O. BOX 2368
CONWAY, SC 29528

3 DAYS BEFORE DIGGING IN
SOUTH CAROLINA
CALL 811
www.sc811.org
PALMETTO UTILITY LOCATION SERVICE



Consulting Engineers, Surveyors, Planners,
Landscape Architects & Environmentalists
1298 Professional Dr., Myrtle Beach, SC 29577
Phone: (843) 692-3200 Fax: (843) 692-3210

GENERAL NOTES:

- ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING 24-HOUR NOTICE TO ALL RESPECTIVE UTILITY COMPANIES FOR FIELD VERIFICATION OF EXISTING UTILITIES. ANY DAMAGES TO EXISTING UTILITIES DUE TO THIS CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- WATER AND SEWER LINES SHALL BE INSTALLED WITH A MINIMUM OF 10 FEET HORIZONTAL SEPARATION. WHEN WATER AND SEWER LINES CROSS, THE SEWER LINE SHALL BE PLACED UNDER THE WATER MAIN WITH A MINIMUM OF 18" VERTICAL SEPARATION. SEWER MAINS IN RELATION TO WATER MAINS MUST CONFORM TO SOUTH CAROLINA STATE PRIMARY DRINKING WATER REGULATIONS (R. 61-58).
- PROVISIONS SHALL BE MADE TO ENSURE POSITIVE DRAINAGE ON THE SITE AT ALL TIMES. NATURAL DRAINAGE FEATURES DISTURBED BY CONSTRUCTION MUST BE RE-ESTABLISHED. NO PONDING DUE TO SPOILS STOCKPILING OR OTHER ACTIVITIES SHALL BE PERMITTED.
- WORK WITHIN PUBLIC RIGHT-OF-WAYS OR PRIVATE EASEMENTS SHALL BE ACCOMPLISHED BY THE CONTRACTOR ACCORDING TO THE REQUIREMENTS OR CONDITIONS OF THE ENCROACHMENT PERMIT OR OTHER LEGAL DOCUMENTS AS THOUGH DOCUMENTS WERE ISSUED IN THE CONTRACTOR'S NAME. THE CONTRACTOR SHALL MAINTAIN COPIES OF THESE DOCUMENTS ON THE SITE AT ALL TIMES.
- WHEN THE CONTRACTOR IS UNABLE TO COMPLETE HIS WORK AS SHOWN ON THE PLANS BECAUSE OF AN EXISTING UTILITY, CONTRACTOR SHALL STAKE THE LOCATION OF THE UTILITY PRIOR TO PROCEEDING AND CONTACT THE ENGINEER.
- THE CONTRACTOR SHALL NOTIFY ALL PUBLIC AGENCIES, THE OWNER, THE ENGINEER AND ALL OTHER CONCERNED PARTIES WHEN CONSTRUCTION IS TO COMMENCE. PRIOR TO ANY CONSTRUCTION A PRE CONSTRUCTION MEETING SHALL BE HELD WITH THE MUNICIPALITY/AUTHORITY, THE CONTRACTOR, THE ENGINEER AND ANY OTHER INTERESTED PARTY.
- DATA REQUIRED FOR PREPARATION OF AS-BUILT DRAWINGS SHALL BE OBTAINED BY THE CONTRACTOR AT THE TIME OF INSTALLATION. THIS DATA SHALL BE ACCUMULATED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD AND BE SUBMITTED TO THE ENGINEER IN A NEAT AND LEGIBLE MANNER AFTER COMPLETION OF THE PROJECT. RIM AND INVERT ELEVATIONS WILL BE VERIFIED BY THE ENGINEER'S SURVEYOR.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE FEDERAL, SOUTH CAROLINA AND LOCAL ORDINANCES, REGULATIONS, SPECIFICATIONS AND PERMITS. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL LICENSES AND PERMITS AS REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ENGINEER, AND GRAND STRAND WATER AND SEWER AUTHORITY PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL LICENSES AND PERMITS AS REQUIRED BY HORRY COUNTY ORDINANCES.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO GRADING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SILT BARRIERS AND SEDIMENT CONTROL INSTALLATIONS DURING CONSTRUCTION UNTIL COMPLETION OF THE SITE DEVELOPMENT.
- FINAL GRADING SHALL CONSIST OF SPREADING TOP SOIL (FOUR INCHES MINIMUM TO GRADES INDICATED) ON ALL DISTURBED AREAS.
- ALL DISTURBED AREAS SHALL BE GRASSED AND STABILIZED IMMEDIATELY AFTER FINAL GRADING, AS PER THE GRASSING SPECIFICATIONS.
- ALL SLOPES EXCEEDING 4:1 SHALL BE HYDROSEEDDED, AS PER THE GRASSING REQUIREMENTS AND SCDOT SPECIFICATIONS.
- ALL SILT BARRIERS MUST BE PLACED IMMEDIATELY AS ACCESS IS OBTAINED DURING CLEARING, REGARDLESS OF PLAN REQUIREMENTS. NO GRADING SHALL BE DONE UNTIL SILT BARRIER INSTALLATION HAS BEEN COMPLETED.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN SILT BARRIERS AROUND ALL DRAINAGE STRUCTURES UNTIL ALL CONSTRUCTION HAS BEEN COMPLETED.
- ADDITIONAL EROSION CONTROL MEASURES WILL BE EMPLOYED WHERE DETERMINED NECESSARY BY ACTUAL SITE CONDITIONS.
- PROVISIONS TO PREVENT EROSION OF SOIL FROM THE SITE SHALL BE, AS MINIMUM, IN CONFORMANCE WITH THE REQUIREMENTS OF HORRY COUNTY AND SCDHEC-OCRM DEALING WITH EROSION AND SEDIMENTATION.
- SITE CONSTRUCTION WILL COMMENCE WITH THE INSTALLATION OF ALL EROSION CONTROL MEASURES NECESSARY TO CONTROL SEDIMENT DEPOSITS AND EROSION. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL DISTURBED AREAS ARE STABILIZED WITH PERMANENT VEGETATION.
- EROSION CONTROL DEVICES MUST BE INSTALLED IMMEDIATELY AFTER LAND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE CONTROL DEVICES MAY BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS, IF DRAINAGE PATTERNS DURING CONSTRUCTION VARY FROM THE FINAL DRAINAGE PATTERNS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SOIL EROSION CONTROL FOR ALL DRAINAGE PATTERNS DURING ALL STAGES OF CONSTRUCTION. ALL INADEQUACIES IN SOIL EROSION CONTROL DURING ANY PHASE OF CONSTRUCTION MUST BE REPORTED IMMEDIATELY TO THE ENGINEER.
- THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. THE CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE PROPER FUNCTIONING OF ALL DEVICES.
- THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT AND DEBRIS FROM SILT BARRIERS WHEN SILT IS WITHIN TWELVE (12) INCHES OF THE TOP OF THE SILT FENCE.
- FAILURE TO INSTALL, OPERATE AND MAINTAIN ALL EROSION CONTROL MEASURES, AS SHOWN ON THE APPROVED PLANS OR AS DIRECTED BY THE ENGINEER AND/OR HORRY COUNTY WILL RESULT IN ALL WORK ON THE CONSTRUCTION SITE BEING STOPPED UNTIL PROPER CORRECTIVE MEASURES HAVE BEEN MET, AS REQUIRED AND/OR DIRECTED.
- SILT BARRIERS MUST BE PLACED AT THE DOWNSTREAM TOE OF ALL FILL SLOPES.
- ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN FOURTEEN (14) DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING. STABILIZATION MEASURES SHALL BE INITIATED BY THE 14TH DAY, OR AS SOON AS POSSIBLE, AFTER THE TEMPORARY OR PERMANENT CEASE OF CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING UTILITIES AND FOR REPAIRING ANY DAMAGE TO SAME. UTILITY LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES THAT MAY HAVE SERVICE IN THE AREA FOR AN ACCURATE LOCATION PRIOR TO BEGINNING WORK.
- RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURES AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING LOT CONSTRUCTION OR PROVIDE AN INDIVIDUAL PLAN MEETING SECTION R 72-307 OF THE STORMWATER AND SEDIMENT REDUCTION ACT REQUIREMENTS.
- THE CONTRACTOR MUST EXCAVATE THE PONDS AS INDICATED ON THE PLANS. THE CONTRACTOR MUST PERIODICALLY REMOVE SILT AND DEBRIS FROM THE PONDS AS MAY BE DIRECTED BY THE OWNER OR ENGINEER. IMMEDIATELY AFTER ALL EXCAVATION HAS BEEN COMPLETED, THE CONTRACTOR SHALL STABILIZE THE POND SLOPES AS PER THE GRASSING SPECIFICATIONS.
- ALL SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24 HOUR PERIOD. ALL SEDIMENT CONTROL FEATURES SHALL BE MAINTAINED UNTIL FINAL STABILIZATION HAS BEEN OBTAINED. ON SITE INSPECTOR: DDC ENGINEERS, INC. PHONE # 843-692-3200.
- 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 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN 21 DAYS.
- DATA REQUIRED FOR PREPARATION OF RECORD DRAWINGS SHALL BE OBTAINED AND RECORDED BY THE CONTRACTOR AT THE TIME OF INSTALLATION. THIS DATA SHALL BE ACCUMULATED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD AND EVIDENCE PROVIDED TO THE ENGINEER AS PART OF THE MONTHLY PAY REQUEST. PAY REQUESTS WILL NOT BE APPROVED BY THE ENGINEER IF THIS DATA IS NOT SUBMITTED WITH THE PAY REQUEST. CONTRACTOR IS TO PROVIDE NEAT AND LEGIBLE COMPLETED RECORD DRAWINGS TO THE ENGINEER AT THE COMPLETION OF THE PROJECT.
- CONTRACTOR IS TO COMPLY WITH ALL PROVISIONS OF THE "SOUTH CAROLINA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" SECTION V, WHEN WORKING IN OR ADJACENT TO AN EXISTING PUBLIC HIGHWAY RIGHT OF WAY. THIS SECTION COVERS CONSTRUCTION SIGNAGE, FLAGGING, AND OTHER TRAFFIC CONTROL DEVICES.

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		RIGHT-OF-WAY
		CENTERLINE
		EASEMENT
		SWALE / DITCH
		TREES
		TREE LINE
		PAVEMENT
		EX. ROAD
		CONTOUR
		SPOT ELEVATION
		MAILBOX
		POWER POLE
		GUY WIRE
		TELEPHONE PEDESTAL
		OVERHEAD ELECTRIC
		UNDERGROUND ELECTRIC
		GAS
		SIGN
		WATER
		WATER VALVE
		WATER METER
		FIRE HYDRANT
		SANITARY SEWER
		SANITARY SEWER MANHOLE
		FORCE MAIN
		STORM DRAIN
		STORM DRAIN STRUCTURE

SHEET SCHEDULE

SHEET TITLE	SHEET NUMBER	ORIGINAL DATE	REVISION DATE
COVER SHEET	1	APRIL 28, 2017	JULY 1, 2019
GENERAL NOTES, LEGEND AND SHEET SCHEDULE	2	APRIL 28, 2017	JULY 1, 2019
KEY PLAN	KEY	SEPT. 19, 2018	MARCH 6, 2019
48" WATER LINE PLAN AND PROFILE	3	APRIL 28, 2017	AUGUST 30, 2019
48" WATER LINE PLAN AND PROFILE	4	APRIL 28, 2017	JULY 1, 2019
48" WATER LINE PLAN AND PROFILE	5	APRIL 28, 2017	OCTOBER 27, 2017
48" WATER LINE PLAN AND PROFILE	6	APRIL 28, 2017	JULY 1, 2019
48" WATER LINE PLAN AND PROFILE	7	APRIL 28, 2017	JULY 1, 2017
48" WATER LINE PLAN AND PROFILE	8	APRIL 28, 2017	JULY 1, 2019
48" WATER LINE PLAN AND PROFILE	9	APRIL 28, 2017	JULY 1, 2017
48" WATER LINE PLAN AND PROFILE	10	APRIL 28, 2017	JULY 1, 2019
48" WATER LINE PLAN AND PROFILE	11	APRIL 28, 2017	JULY 1, 2019
48" WATER LINE PLAN AND PROFILE	12	APRIL 28, 2017	JULY 1, 2019
48" WATER LINE PLAN AND PROFILE	13	APRIL 28, 2017	MAY 17, 2019
48" WATER LINE PLAN AND PROFILE	14	APRIL 28, 2017	MAY 17, 2019
48" WATER LINE PLAN AND PROFILE	15	APRIL 28, 2017	AUGUST 30, 2019
48" WATER LINE PLAN AND PROFILE	16	APRIL 28, 2017	AUGUST 30, 2019
48" WATER LINE PLAN AND PROFILE	17	APRIL 28, 2017	AUGUST 30, 2019
48" WATER LINE PLAN AND PROFILE	18	APRIL 28, 2017	MAY 17, 2019
48" WATER LINE PLAN AND PROFILE	19	APRIL 28, 2017	AUGUST 30, 2019
48" WATER LINE PLAN AND PROFILE	20	APRIL 28, 2017	AUGUST 30, 2019
48" WATER LINE PLAN AND PROFILE	21	APRIL 28, 2017	AUGUST 30, 2019
30" FORCEMAIN PLAN AND PROFILES	22	APRIL 28, 2017	OCTOBER 27, 2017
SEDIMENT AND EROSION CONTROL DETAILS	23	APRIL 28, 2017	OCTOBER 27, 2017
GENERAL DETAILS	24	APRIL 28, 2017	AUGUST 30, 2019
GENERAL DETAILS	25	APRIL 28, 2017	APRIL 3, 2019
GENERAL DETAILS	26	APRIL 28, 2017	MAY 17, 2019
GENERAL DETAILS	27	APRIL 28, 2017	AUGUST 30, 2019

This set is current through sheet dated AUGUST 30, 2019

EROSION CONTROL LEGEND

SYMBOL	PRACTICE	DESCRIPTION
	INLET PROTECTION	A TEMPORARY SEDIMENT BARRIER LAID AROUND A STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM.
	OUTLET PROTECTION	RIP RAP CHANNEL / BANK PLACED BELOW DRAINAGE OUTLETS TO REDUCE THE VELOCITY OF FLOW, EROSION, AND STABILIZE GRADES DOWNSTREAM OF OUTLET STRUCTURES.
	TEMPORARY CHECK DAM	RIP RAP BANK PLACED BELOW DRAINAGE OUTLETS TO REDUCE THE VELOCITY OF FLOW, EROSION, AND STABILIZE GRADES DOWN STREAM OF DRAINAGE OUTLETS.
	SILT FENCE	A TEMPORARY STRUCTURE USED TO SLOW THE VELOCITY OF RUN-OFF, CAUSE SEDIMENT DEPOSITION AT THE STRUCTURE, AND FILTER SEDIMENT FROM RUN-OFF.
	DOUBLE ROW SILT FENCE	A TEMPORARY STRUCTURE USED TO SLOW THE VELOCITY OF RUN-OFF, CAUSE SEDIMENT DEPOSITION AT THE STRUCTURE, AND FILTER SEDIMENT FROM RUN-OFF.
	CONSTRUCTION LIMITS	A DEFINED AREA THAT ALL LAND DISTURBANCE WILL OCCUR DURING CONSTRUCTION.
	PERMANENT EROSION CONTROL MATTING (HIGH PERFORMANCE TBM PYRAMAT BY SI GEOSOLUTIONS OR EQUAL)	A PERMANENT REINFORCEMENT MAT TO PREVENT SOIL EROSION AND MAINTAIN PERMANENT GROUND COVER.
	DISTURBED AREA STABILIZATION (WITH TEMPORARY VEGETATION)	ESTABLISHING PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, SOD, OR LEGUMES ON DISTURBED AREAS.
	SEDIMENT TUBE	SEDIMENT TUBE PLACED IN EXISTING OR PROPOSED DITCH SECTIONS TO REDUCE THE VELOCITY OF FLOW, EROSION AND STABILIZE GRADES DOWN STREAM OR DRAINAGE OUTLETS.

SEEDING NOTES:

- INCLUDES RURAL AREAS ADJACENT TO WELL-DEVELOPED LAWNS.
- NOT REQUIRED ON SHOULDERS, MEDIANS, ETC., AND SLOPES UNDER 5 FEET IN HEIGHT.
- GIANT BERMUDA SEED, INCLUDING NK-37, SHALL NOT BE USED.
- RESEEDING CRIMSON CLOVER SHALL BE INOCULATED IN ACCORDANCE WITH SUBSECTION 810.05. DO NOT PLANT CLOVER IN MEDIANS OR IN RURAL AREAS ADJACENT TO WELL-DEVELOPED LAWNS.
- PENSACOLA BAHIA SHALL BE ALLOWED ONLY AS SHOWN IN SEEDING SCHEDULES 3 AND 4 AT THE RATE OF 50 POUNDS PER ACRE ONLY WHEN SEEDING PIT AREAS THAT ARE GOVERNED BY THE SOUTH CAROLINA MINING ACT. OTHERWISE, DO NOT INCLUDE BAHIA SEED IN THE MIX.
- THE CONTRACTOR SHALL OBTAIN A SATISFACTORY STAND OF PERENNIAL VEGETATION WHOSE ROOT SYSTEM SHALL BE DEVELOPED SUFFICIENTLY TO SURVIVE DRY PERIODS AND WINTER WEATHER, AND BE CAPABLE OF RE-ESTABLISHMENT IN THE SPRING. THE PERENNIAL VEGETATIVE COVER SHALL HAVE A MINIMUM COVERAGE DENSITY OF 70% FOR THE SEEDED AREAS. CONTRACTOR SHALL DETERMINE ALL RATES OF APPLICATION NECESSARY TO PRODUCE THE REQUIRED STAND OF GRASS, AND SHALL FOLLOW THE APPLICATION PROCEDURES AS SPECIFIED HEREIN.
- GIANT BERMUDA SEED, INCLUDING NK-37, SHALL NOT BE USED.

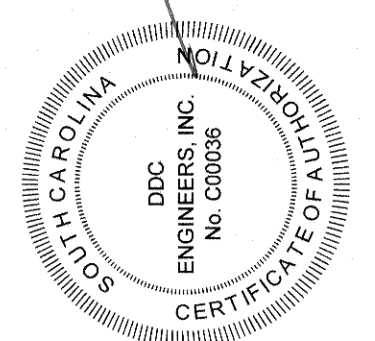
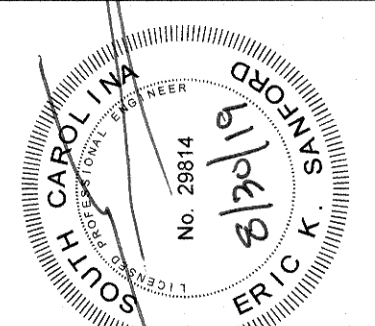
SEEDING SCHEDULE FOR TEMPORARY VEGETATION			
SCHEDULE NO.	COMMON NAME OF SEED	RATE PER ACRE (LBS.)	PLANTING DATES
1	COMMON BERMUDA (PRALLEO)	210	MARCH 16 TO AUG. 31
	TALL FESCUE	140	
2	COMMON BERMUDA (UNROLLED)	175	SEPT. 1 TO MARCH 15
	ANNUAL RYEGRASS	175	

NOTES:

THE CONTRACTOR SHALL OBTAIN A SATISFACTORY STAND OF PERENNIAL VEGETATION WHOSE ROOT SYSTEM SHALL BE DEVELOPED SUFFICIENTLY TO SURVIVE DRY PERIODS AND WINTER WEATHER, AND BE CAPABLE OF RE-ESTABLISHMENT IN THE SPRING. THE PERENNIAL VEGETATIVE COVER SHALL HAVE A MINIMUM COVERAGE DENSITY OF 70% FOR THE SEEDED AREAS. CONTRACTOR SHALL DETERMINE ALL RATES OF APPLICATION NECESSARY TO PRODUCE THE REQUIRED STAND OF GRASS, AND SHALL FOLLOW THE APPLICATION PROCEDURES AS SPECIFIED HEREIN.



DDC ENGINEERS®
Consulting Engineers, Surveyors, Planners,
Landscape Architects & Environmentalists
1298 Professional Dr., Myrtle Beach, SC 29577
Phone: (843) 692-3200 Fax: (843) 692-3210



NO.	DATE	REVISION DESCRIPTION	BY
7	8/20/19	REVISED PER GSWSA	
6	7/11/19	REVISED PER IN HOUSE REVIEW	
5	6/17/19	REVISED PER IN HOUSE REVIEW	
4	4/3/19	REVISED PER IN HOUSE REVIEW	
3	8/19/18	ADDED KEY PLAN	
2	10/27/17	REVISED PER IN HOUSE REVIEW	
1	8/14/17	REVISED PER GSWSA COMMENTS	

GENERAL NOTES, LEGEND AND SHEET SCHEDULE
GSWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
HORRY COUNTY, SOUTH CAROLINA
PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

SCALE:	NO SCALE
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	17010E
2	
FILE NO.:	17010E



DDC

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Phone: (843) 692-3200 Fax: (843) 692-3210

CERTIFICATE OF A PROFESSIONAL ENGINEER

ERIC K. STANLEY

3-1-19

No. 28614

REGISTERED PROFESSIONAL ENGINEER

SOUTH CAROLINA

CERTIFICATE OF A PROFESSIONAL ENGINEER

DDC, INC.

ENGINEER

No. 000098

REGISTERED PROFESSIONAL ENGINEER

SOUTH CAROLINA

NO.	DATE	REVISION DESCRIPTION	BY
1	3/6/19	REVISED PER GSWSA COMMENTS	KJG

48" WATER LINE - KAY PLAN

GWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
MYRTLE BEACH, SOUTH CAROLINA

PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

SCALE: 1"=100'

DATE: 9/19/18

DESIGNED BY: EKS

DRAWN BY: PES / KJG

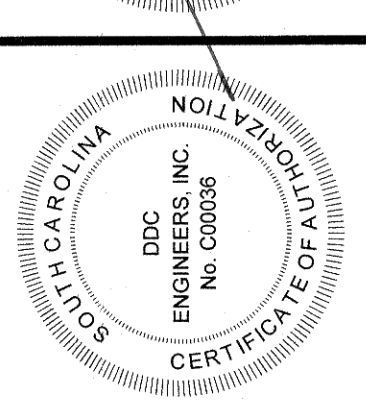
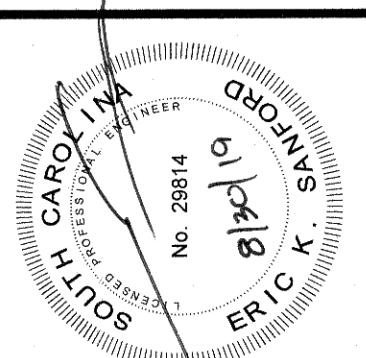
APPROV. BY: EKS

PROJECT NO.: 17010E

KEY

FILE NO.:

J:\plans\17010E - 48 INCH WATERLINE\17010E-KEY.dwg KEY, 3/6/2019 12:06:07 PM, Auct D (landscape), 1:1



NO.	DATE	REVISION DESCRIPTION	BY
1	8-14-17	REVISIONS PER GSWSA COMMENTS	PES
2	10-27-17	REVISIONS PER IN HOUSE REVIEW	PES
3	4-3-19	REVISED PER IN HOUSE REVIEW	KUG
4	7/1/19	REVISED PER GSWSA COMMENTS	KUG
5	8/30/19	REVISED PER GSWSA COMMENTS	KUG

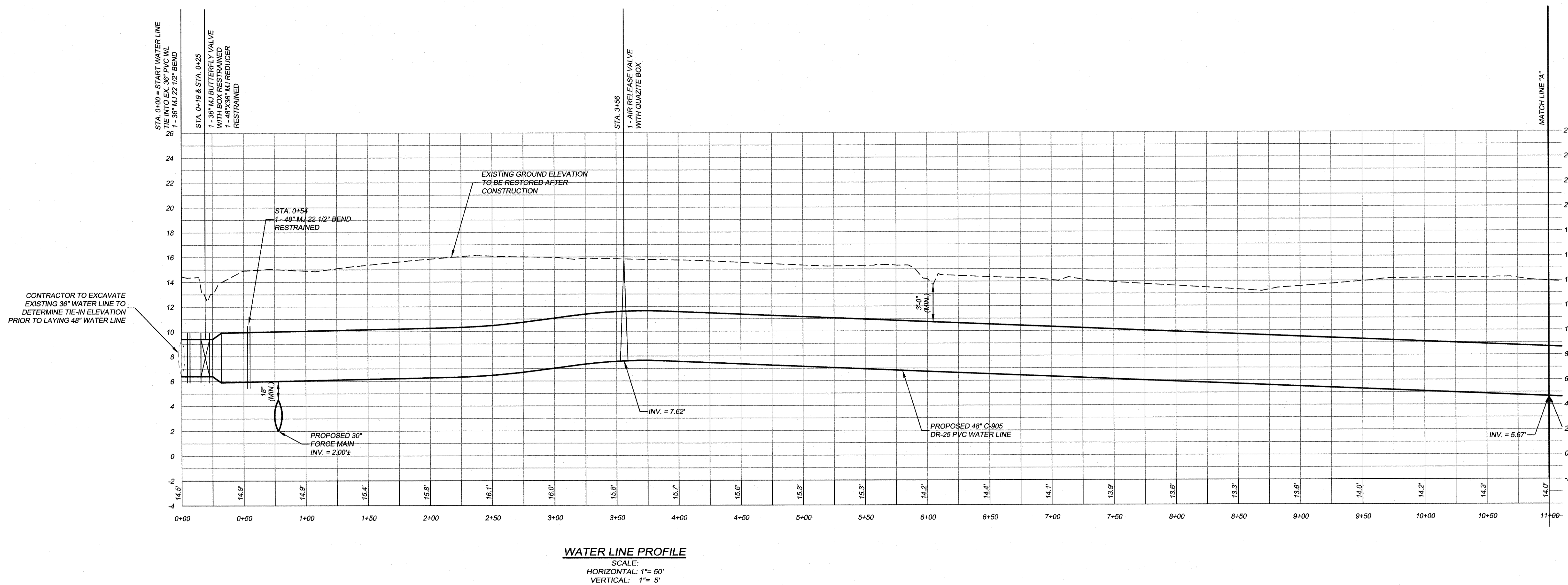
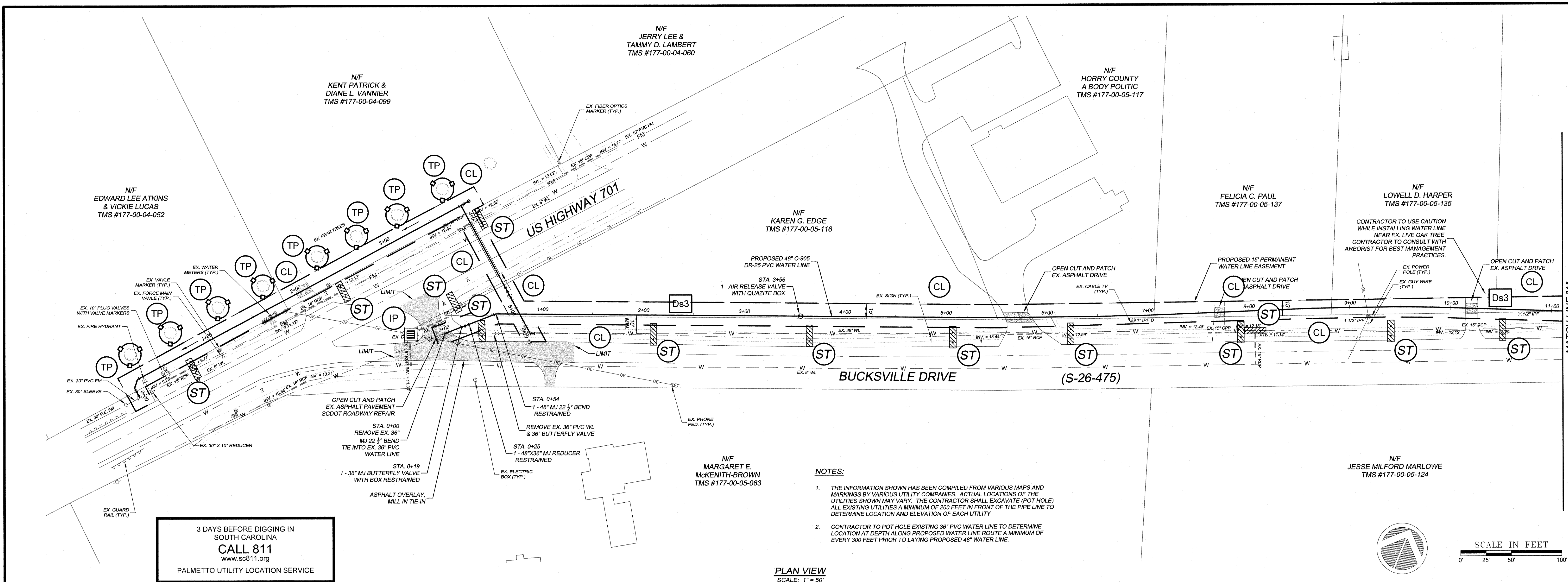
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**48" WATER LINE
PLAN AND PROFILE**

GSWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
MYRTLE BEACH, SOUTH CAROLINA

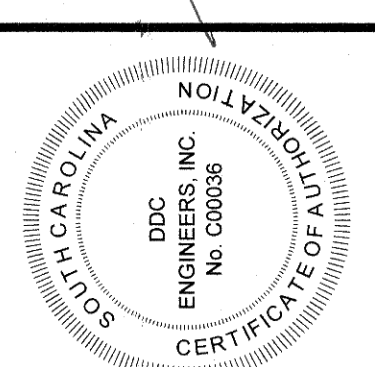
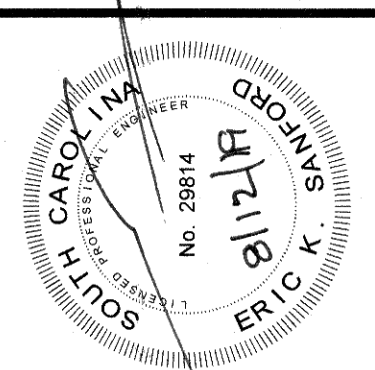
PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

SCALE:	H = 1"=50' V = 1"=5'
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	17010E
FILE NO.:	17010E





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Phone: (843) 492-3200 Fax: (843) 692-3210



NO.	DATE	REVISION DESCRIPTION	BY
4	7/1/19	REVISED PER IN HOUSE REVIEW	K/G
3	5/17/19	ADDED WETLANDS PER IN HOUSE REVIEW	K/G
2	10/27/17	REVISIONS PER IN HOUSE COMMENTS	PES
1	8-14-17	REVISIONS PER GSWA COMMENTS	PES
NO.	DATE	REVISION DESCRIPTION	BY

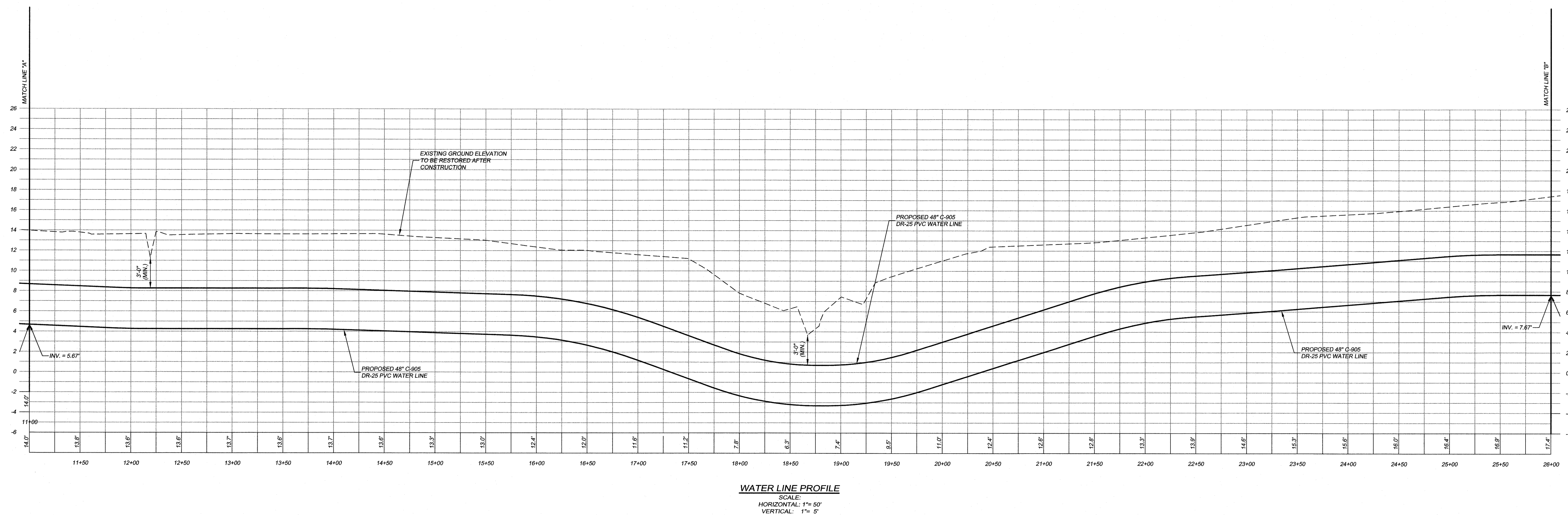
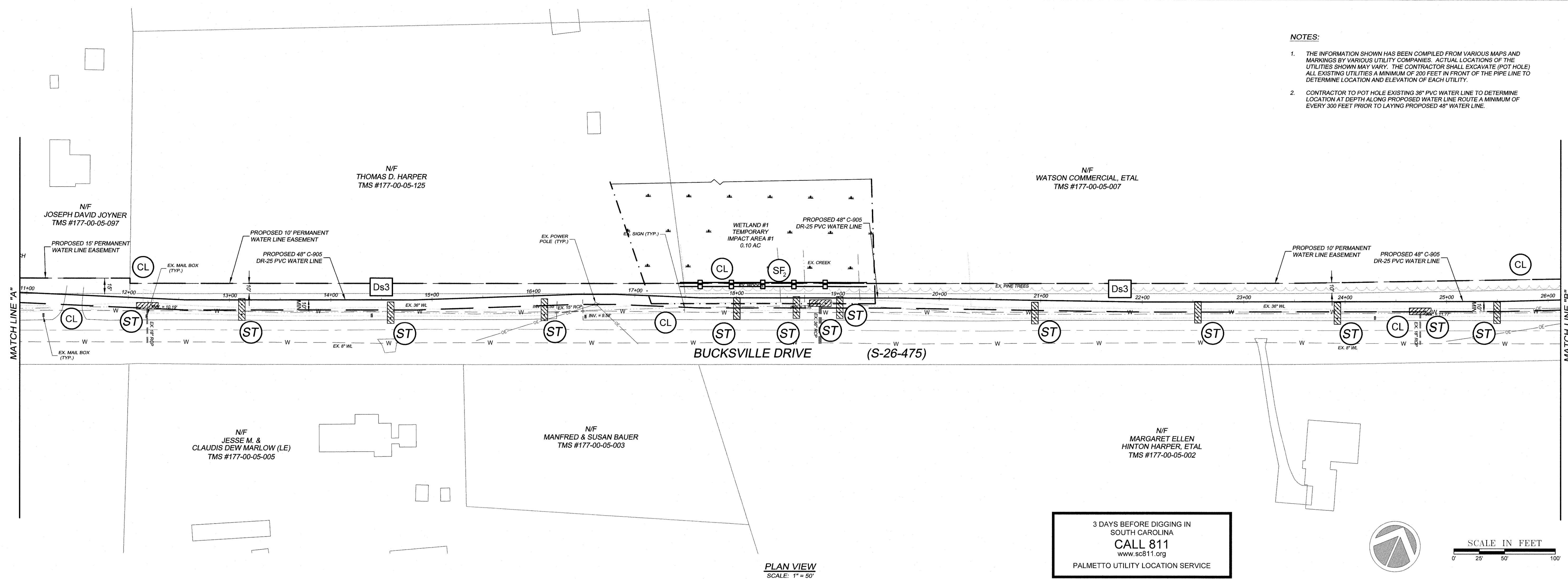
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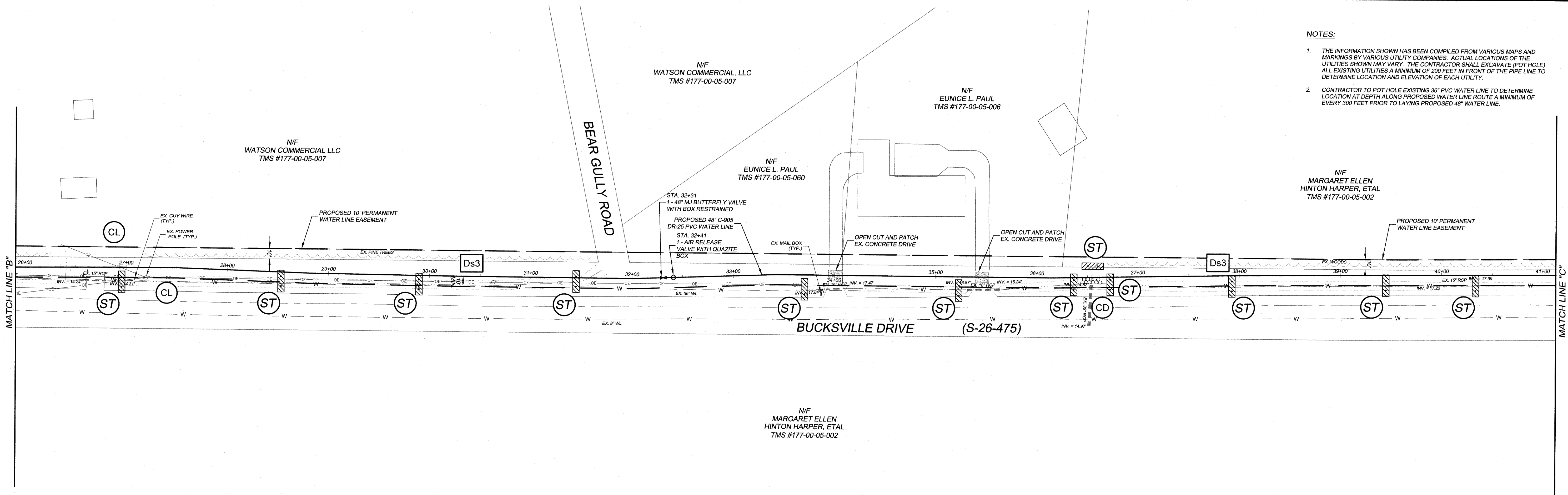
**48" WATER LINE
PLAN AND PROFILE**
GSWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
MYRTLE BEACH, SOUTH CAROLINA
PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

SCALE:	H = 1"=50'
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV BY:	EKS
PROJECT NO.:	17010E
FILE NO.:	17010E

NOTES:

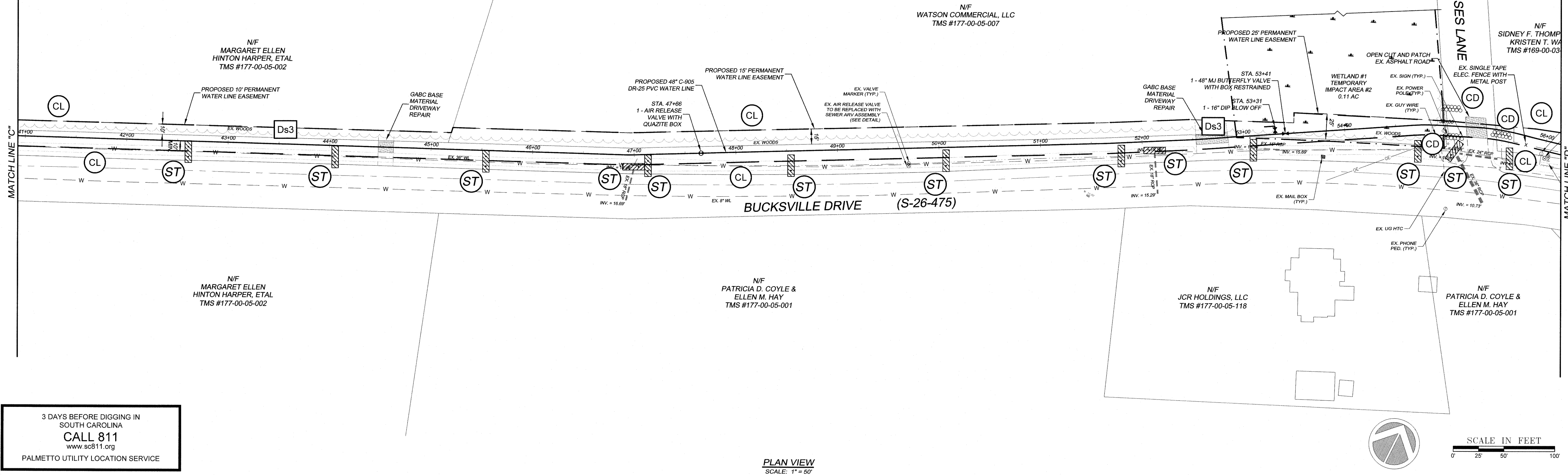
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- CONTRACTOR TO POT HOLE EXISTING 36" PVC WATER LINE TO DETERMINE LOCATION AT DEPTH ALONG PROPOSED WATER LINE ROUTE A MINIMUM OF EVERY 300 FEET PRIOR TO LAYING PROPOSED 48" WATER LINE.





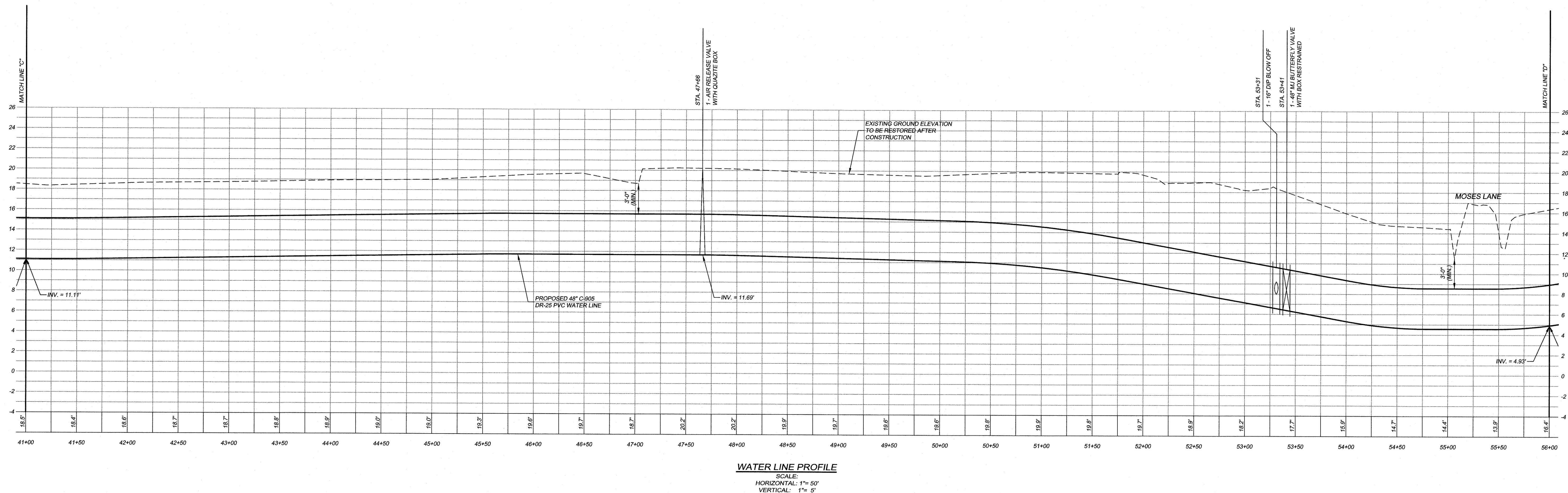
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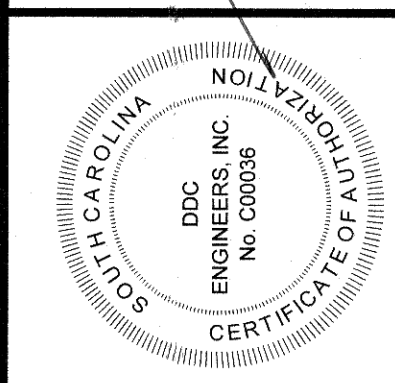
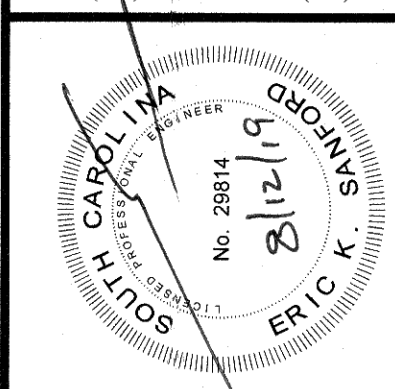
3 DAYS BEFORE DIGGING IN
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CALL 811
www.sc811.org
PALMETTO UTILITY LOCATION SERVICE

PLAN VIEW
SCALE: 1" = 50'



WATER LINE PROFILE
SCALE:
HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'

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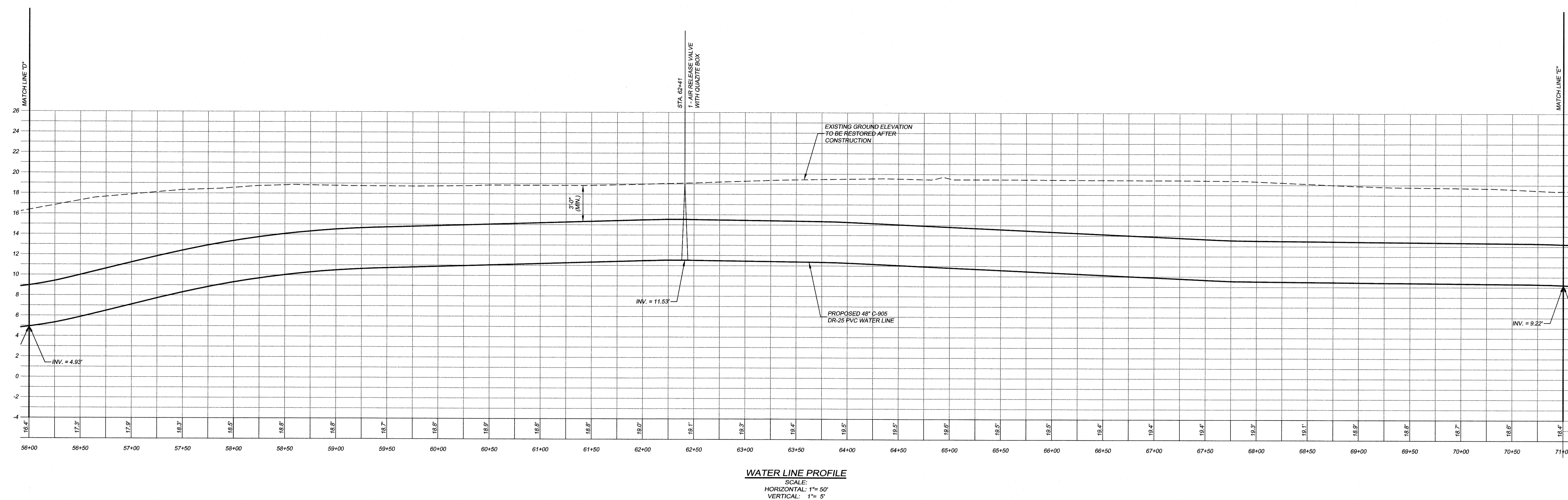
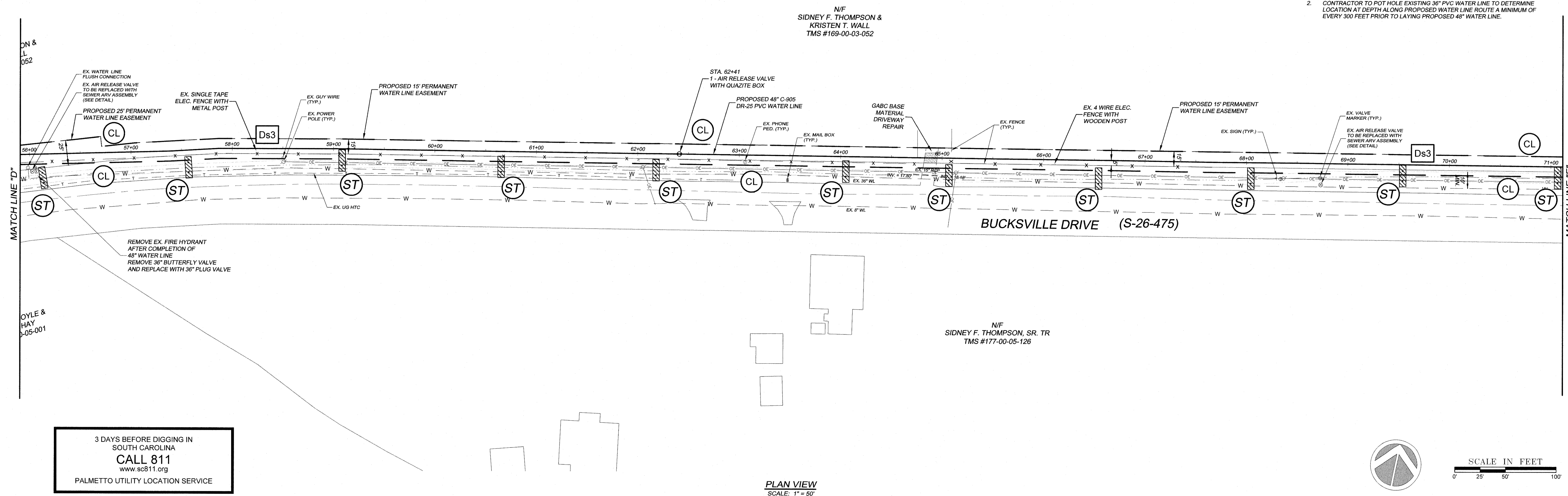


NO.	DATE	REVISION DESCRIPTION	BY
4	7/1/19	REVISED PER IN HOUSE REVIEW	K/J
3	5/17/19	ADDED WETLANDS PER IN HOUSE REVIEW	K/J
2	10-27-17	REVISIONS PER IN HOUSE REVIEW.	PES
1	8-14-17	REVISIONS PER GSWSA COMMENTS.	PES

48" WATER LINE
PLAN AND PROFILE
GWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
MYRTLE BEACH, SOUTH CAROLINA
PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

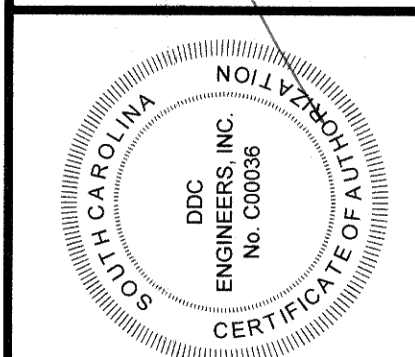
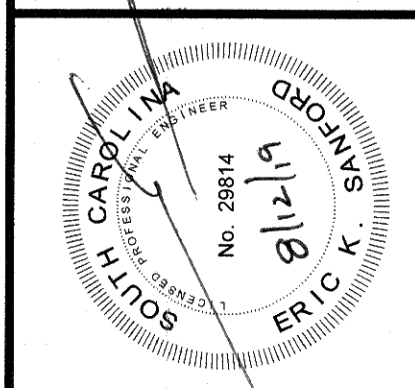
SCALE:	H = 1"=50'
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	17010E
6	
FILE NO.:	17010E

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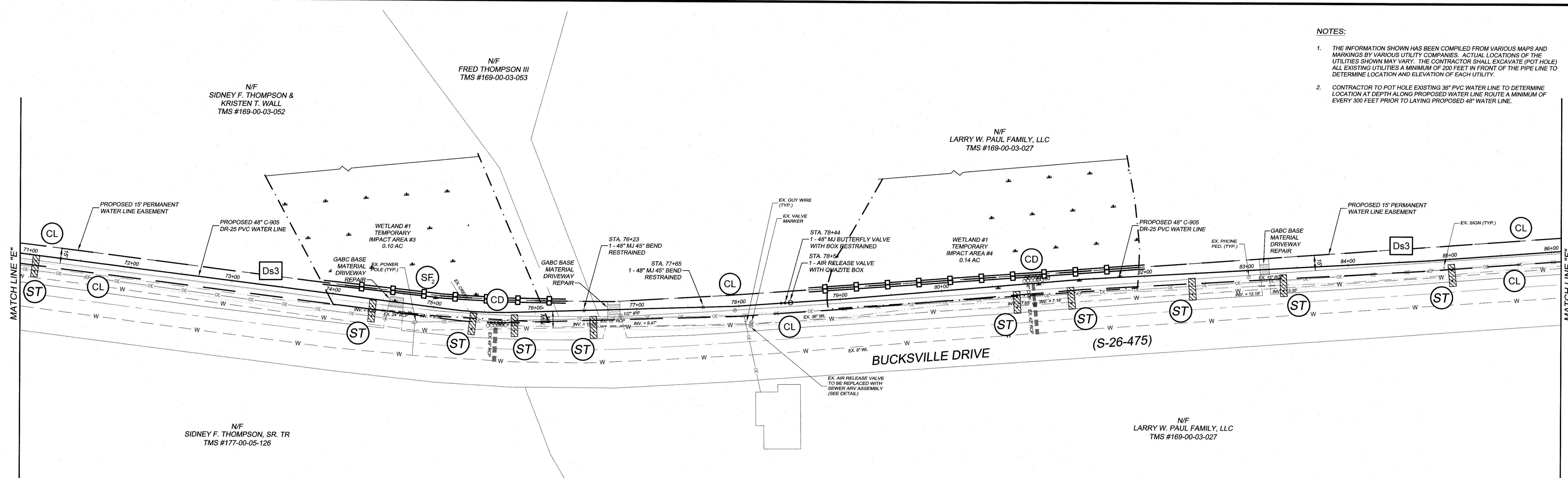
NO.	DATE	REVISION DESCRIPTION	BY
4	7/1/19	REVISED PER IN HOUSE REVIEW	K/JG
3	5/17/19	ADDED WETLANDS PER IN HOUSE REVIEW	K/JG
2	10-27-17	REVISIONS PER IN HOUSE COMMENTS.	PES
1	8-14-17	REVISIONS PER GSWA COMMENTS.	PES

**48" WATER LINE
PLAN AND PROFILE**
GWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
MYRTLE BEACH, SOUTH CAROLINA
PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

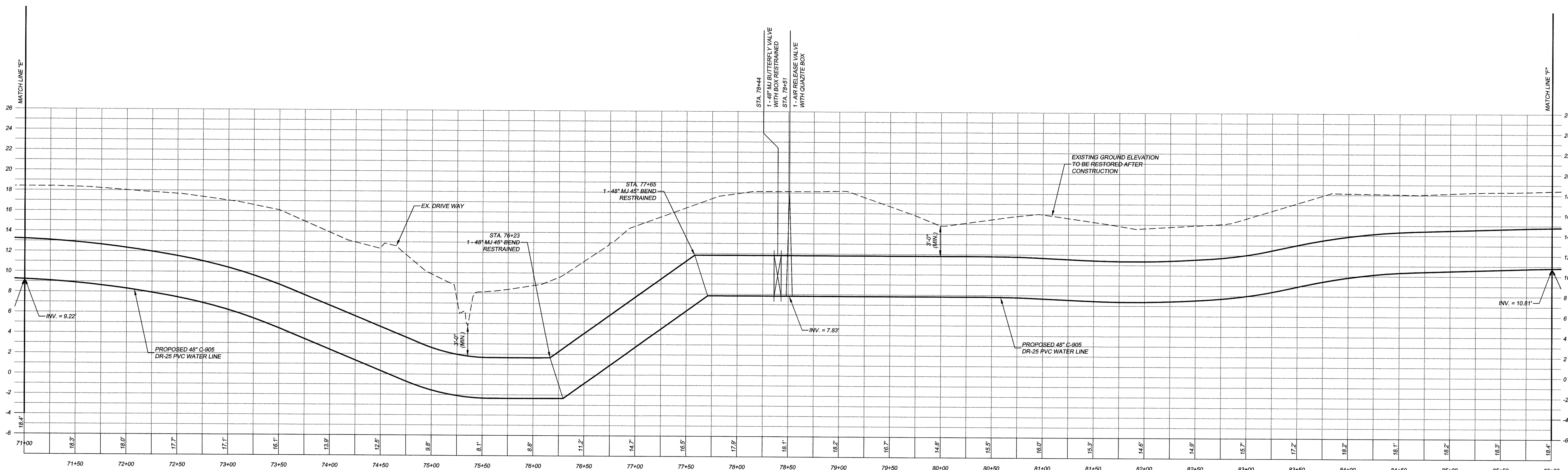
SCALE: H = 1"=50'
V = 1"=5'
DATE: 4-28-17
DESIGNED BY: EKS
DRAWN BY: PES
APPROV. BY: EKS
PROJECT NO.: 17010E
8
FILE NO.: 17010E

NOTES:

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PLAN VIEW
SCALE: 1" = 50'

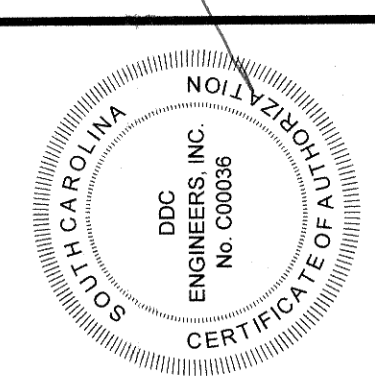
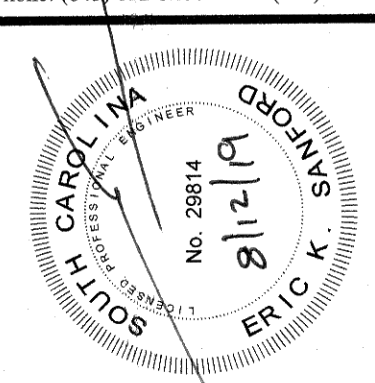


WATER LINE PROFILE
SCALE:
HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'

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NO.	DATE	REVISION DESCRIPTION	BY
3	7/1/19	REVISED PER IN HOUSE REVIEW	K.J.G.
2	10-27-17	REVISIONS PER IN HOUSE REVIEW	PES
1	8-14-17	REVISIONS PER GSWSA COMMENTS	PES
1			

**48" WATER LINE
PLAN AND PROFILE**

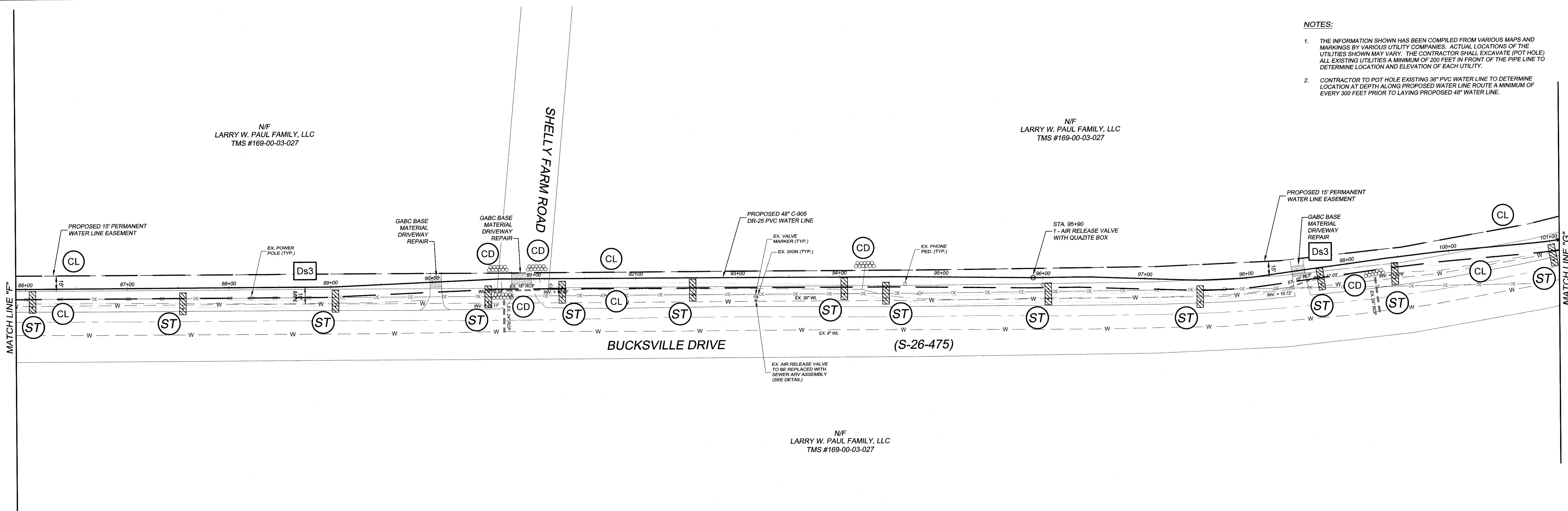
GSWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
MYRTLE BEACH, SOUTH CAROLINA

PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

SCALE:	H = 1"=50'
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	17010E
9	
FILE NO.:	17010E

NOTES:

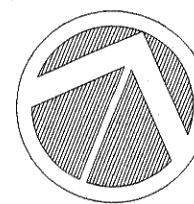
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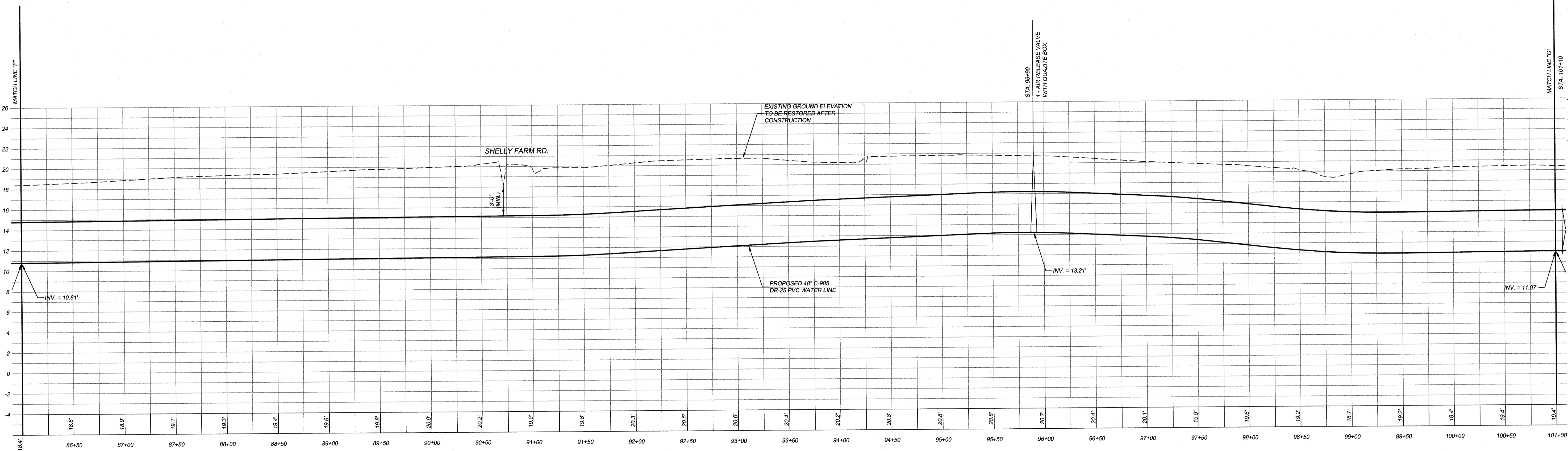
N/F
LARRY W. PAUL FAMILY, LLC
TMS #169-00-03-027

PLAN VIEW
SCALE: 1" = 50'

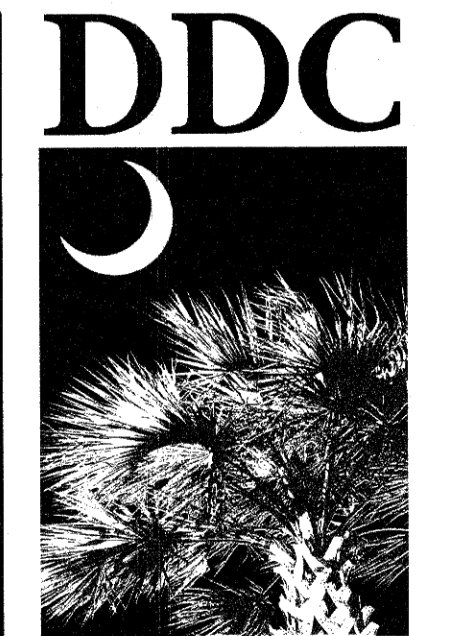
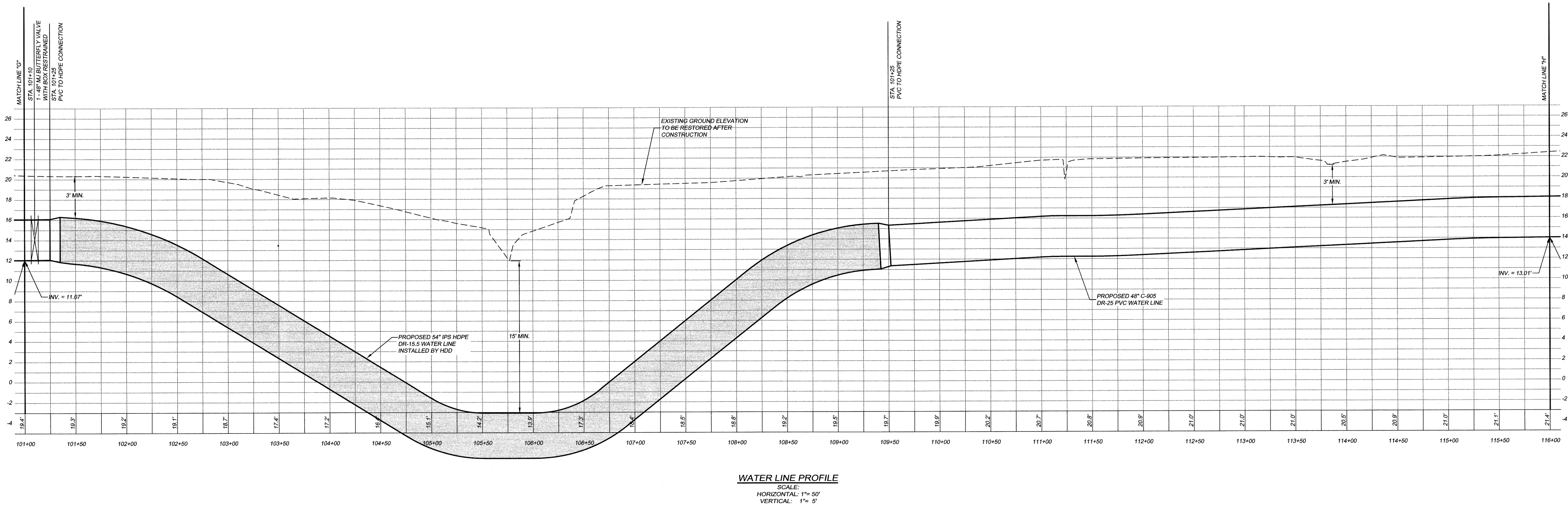
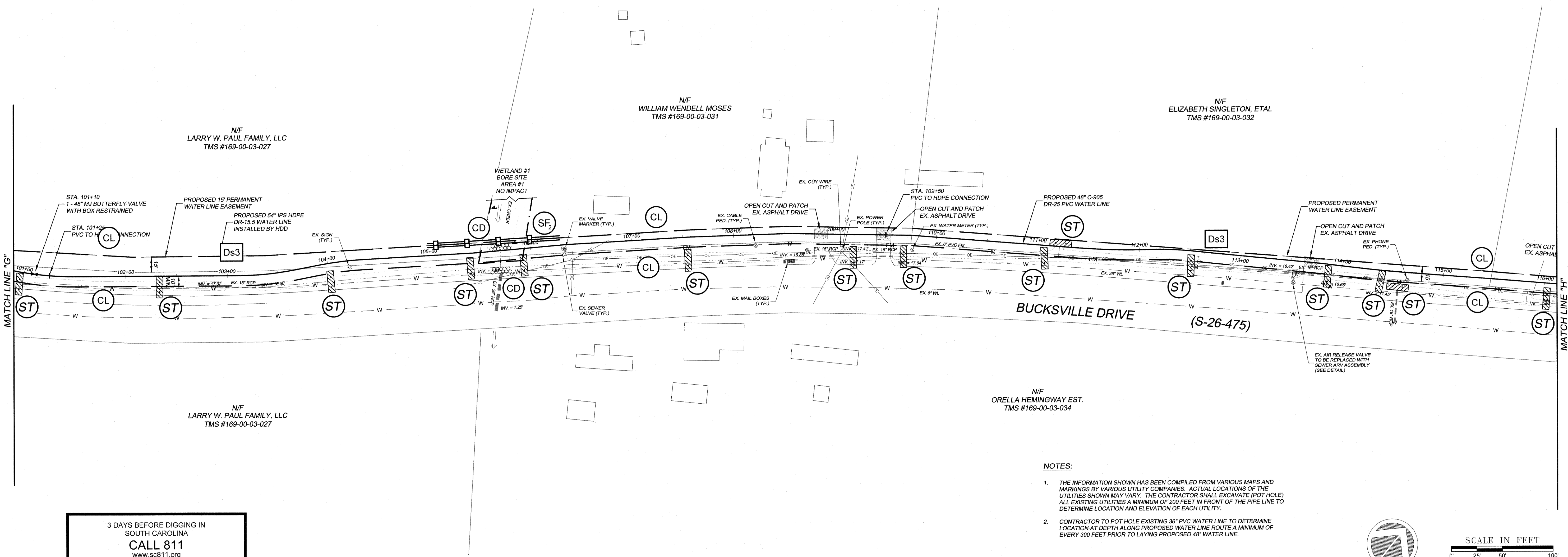
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CALL 811
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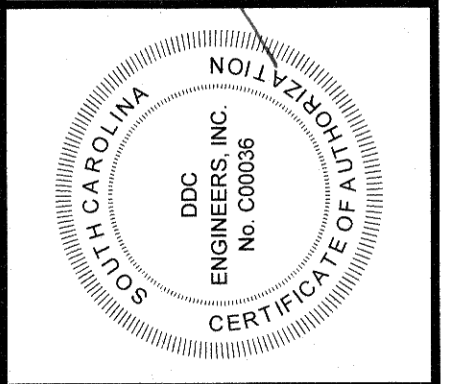
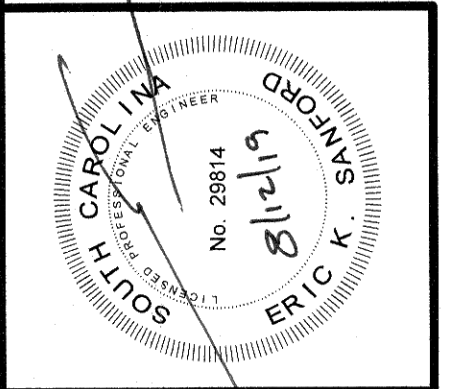
SCALE IN FEET
0 25 50 100



WATER LINE PROFILE
SCALE:
HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'



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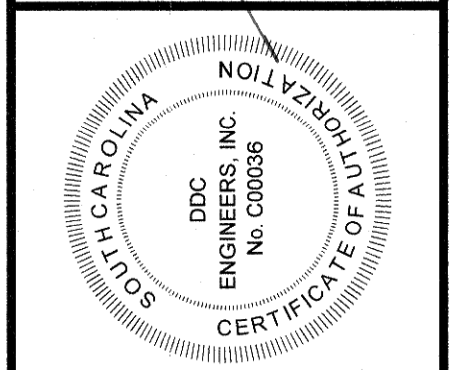
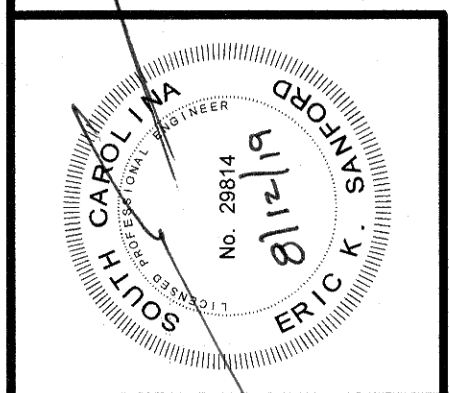


NO.	DATE	REVISION DESCRIPTION	BY
4	7/1/19	REVISED PER IN HOUSE REVIEW	K/JG
3	5/17/19	REVISED PER IN HOUSE REVIEW	K/JG
2	10-27-17	REVISIONS PER IN HOUSE REVIEW	PES
1	8-14-17	REVISIONS PER GSWSA COMMENTS	PES
NO.	DATE	REVISION DESCRIPTION	BY

48" WATER LINE PLAN AND PROFILE	GSWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544 MYRTLE BEACH, SOUTH CAROLINA PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY
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NO.	DATE	REVISION DESCRIPTION	BY
5	7/1/19	REVISED PER IN HOUSE REVIEW	KAG
4	5/17/19	REVISED PER IN HOUSE REVIEW	KAG
5	4-3-19	REVISED PER IN HOUSE REVIEW	PES
2	10-27-17	REVISIONS PER IN HOUSE REVIEW	PES
1	8-14-17	REVISIONS PER GSWSA COMMENTS	PES

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**48" WATER LINE
PLAN AND PROFILE**

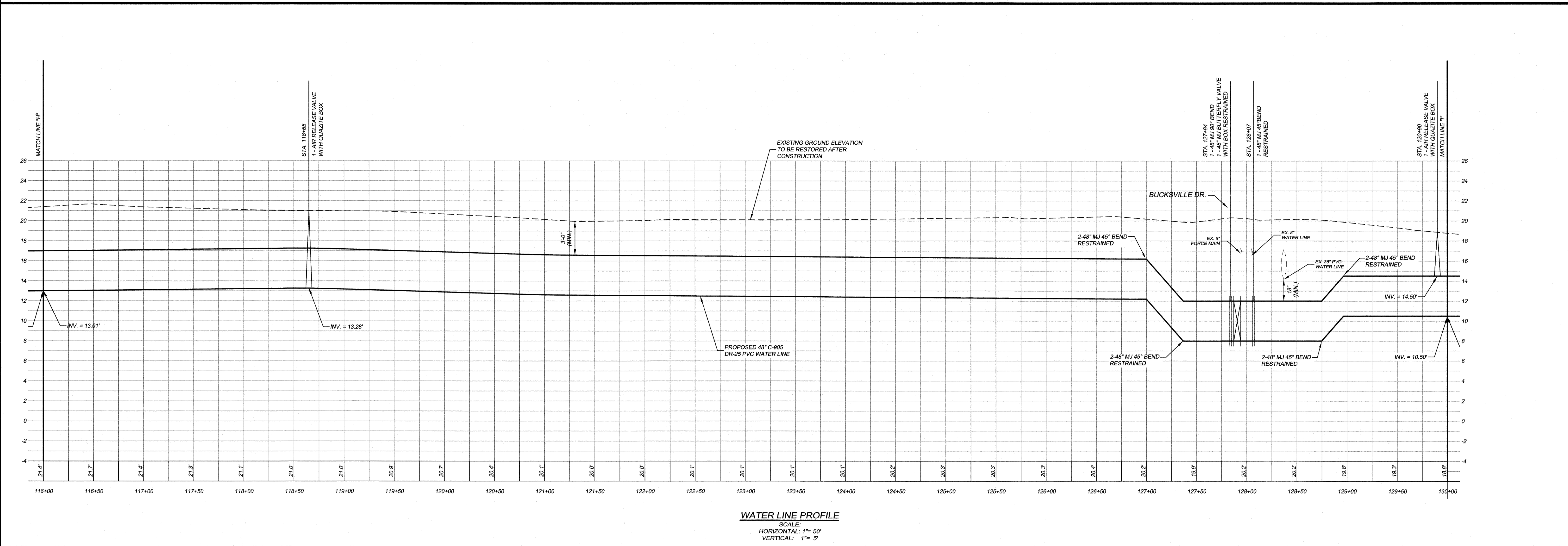
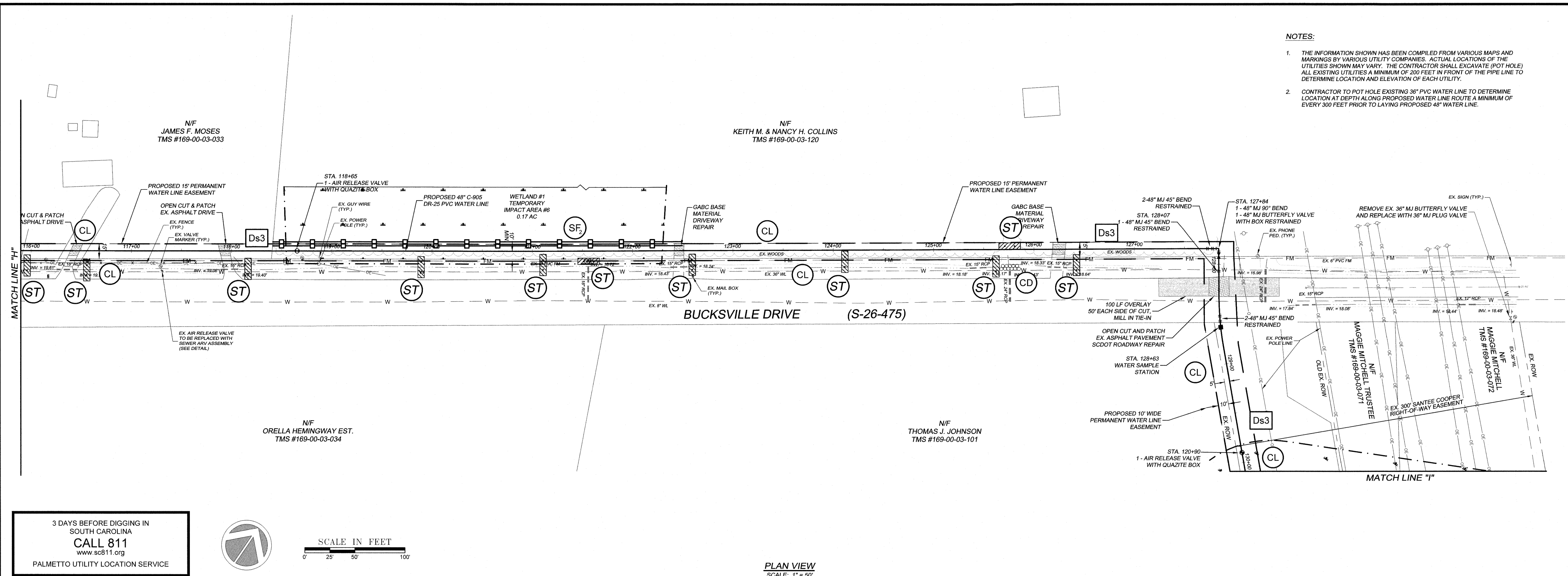
GSWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
MYRTLE BEACH, SOUTH CAROLINA

PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

SCALE:	H = 1"=50' V = 1"=5'
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	17010E
11	
FILE NO.:	17010E

NOTES:

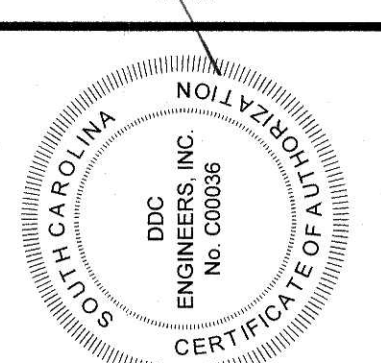
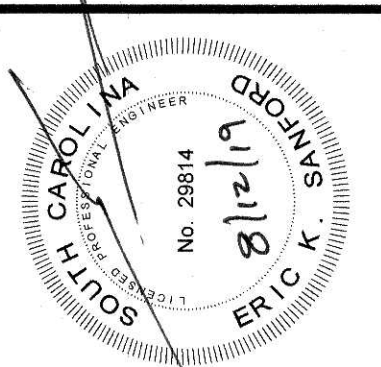
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20250415 1701010E - 48 INCH WATERLINE 17010E.dwg, SHT-11, 7/20/2019 2:03:46 PM, Arch D (landscape), 1:1



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NO.	DATE	REVISION DESCRIPTION	BY
1	8-14-17	REVISIONS PER GSWSA COMMENTS	PES
2	10-27-17	ADDED WETLANDS PER IN HOUSE REVIEW	KJG
3	5/17/19	REVISED PER IN HOUSE REVIEW	KJG
4	7/11/19	REVISED PER IN HOUSE REVIEW	KJG

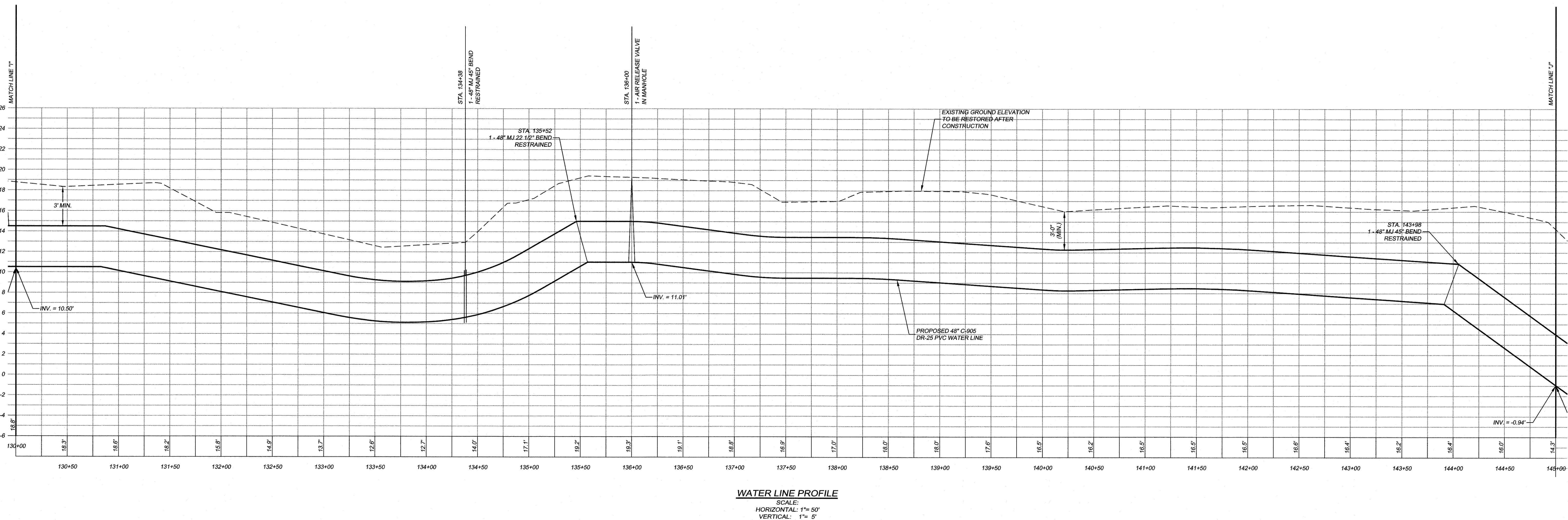
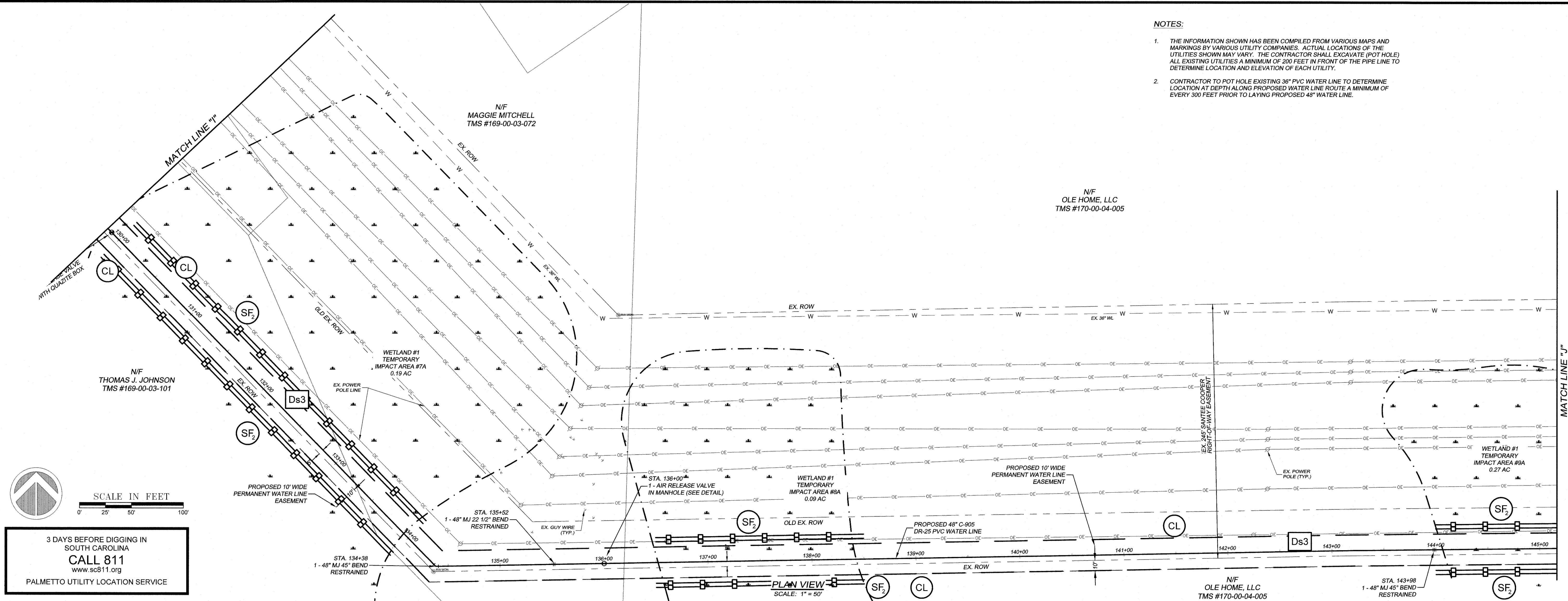
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**48" WATER LINE
PLAN AND PROFILE**
GWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
MYRTLE BEACH, SOUTH CAROLINA
PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

SCALE:	H = 1"=50' V = 1"=5'
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	17010E
FILE NO.:	17010E

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WATER LINE PROFILE

SCALE:
HORIZONTAL: 1"= 50'
VERTICAL: 1"= 5'

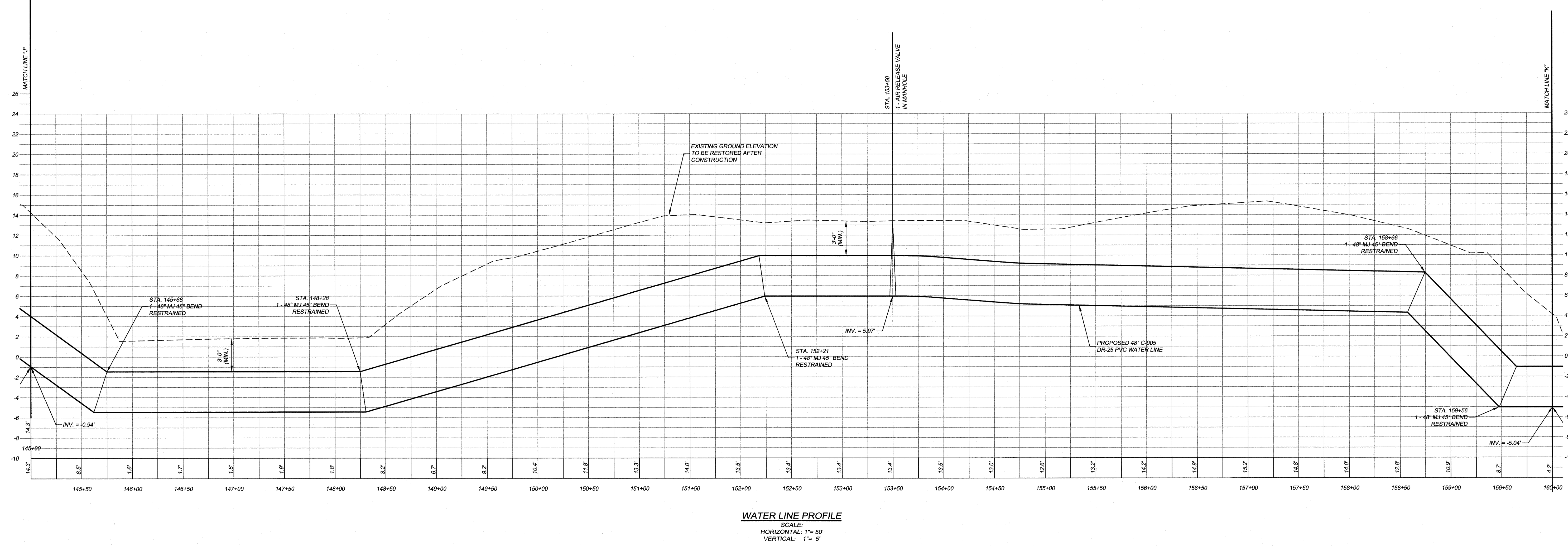
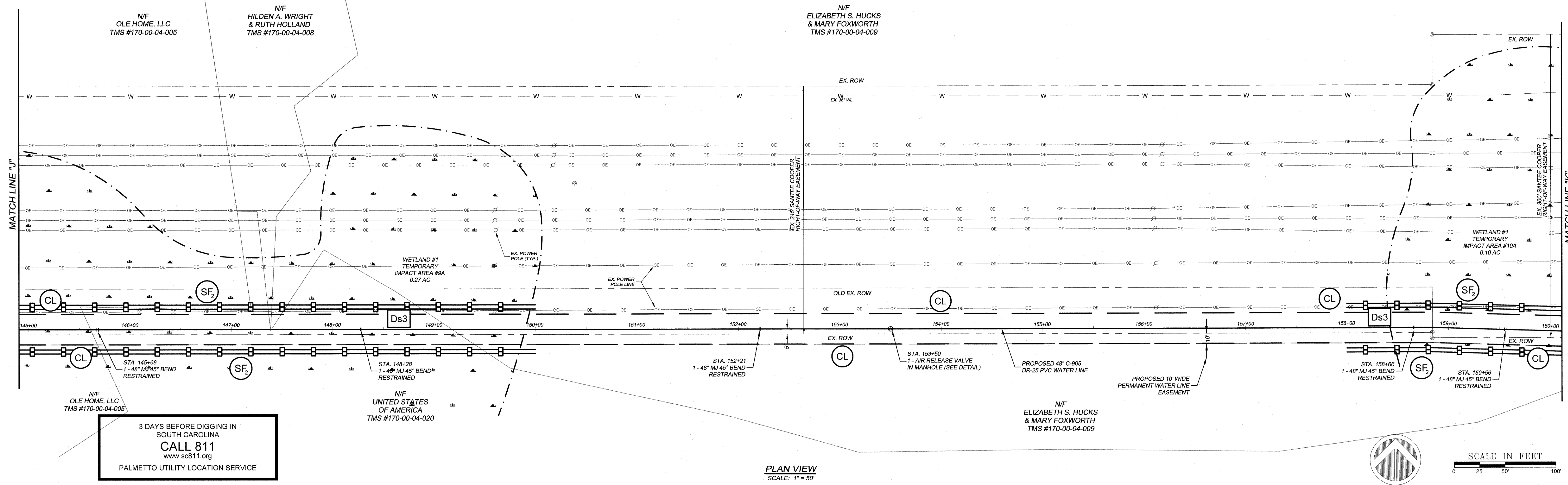
NO.	DATE	REVISION DESCRIPTION	BY	K/G RES PER
3	5-17-19	ADDED METLANDS PER IN HOUSE REVIEW		
2	10-21-17	REVISIONS PER IN HOUSE REVIEW		
	9-21-17	REVISIONS PER GSWA COMMENTS		

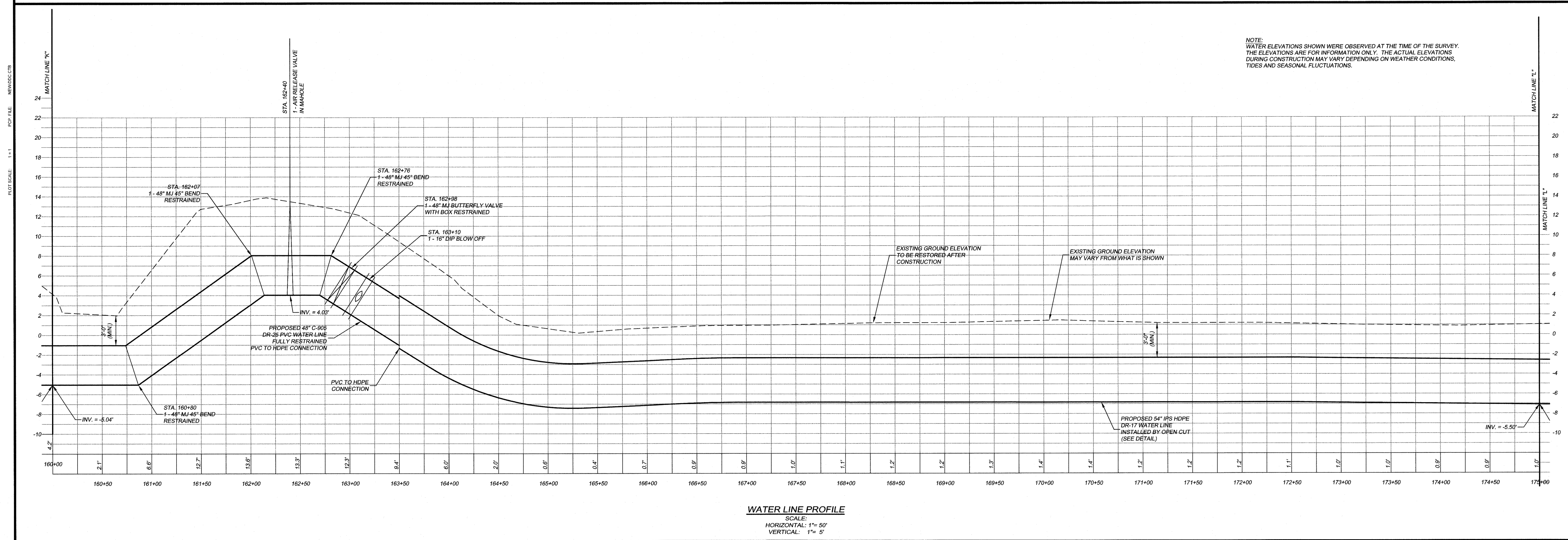
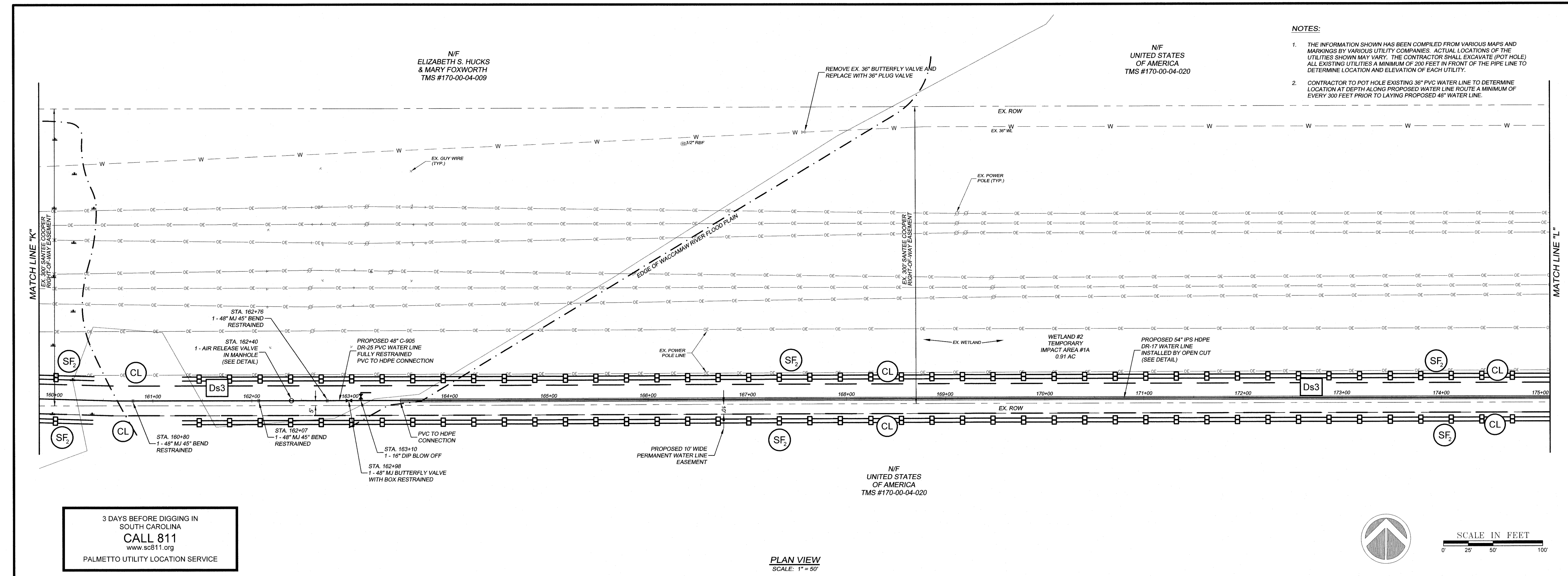
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<p>40 WATER LINE</p> <p>PLAN AND PROFILE</p>
<p>GSWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544 MYRTLE BEACH, SOUTH CAROLINA</p>
<p>PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY</p>

SCALE:	H = 1"=50' V = 1"=5'
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
PROV. BY:	EKS
PROJECT NO.:	17010E
13	
FILE NO.:	17010E

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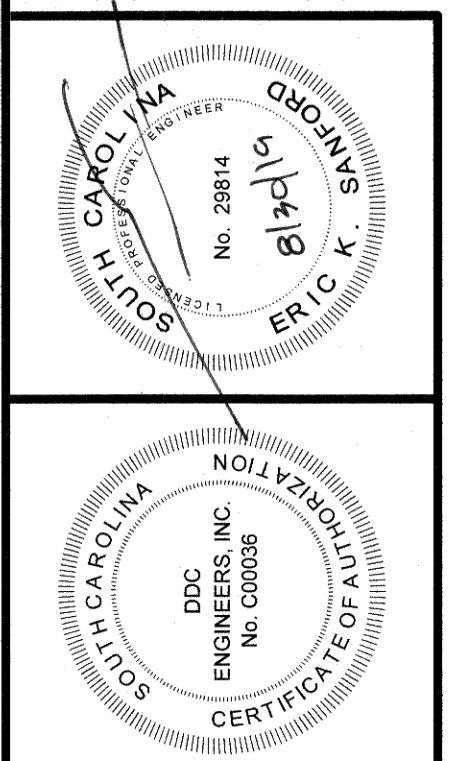
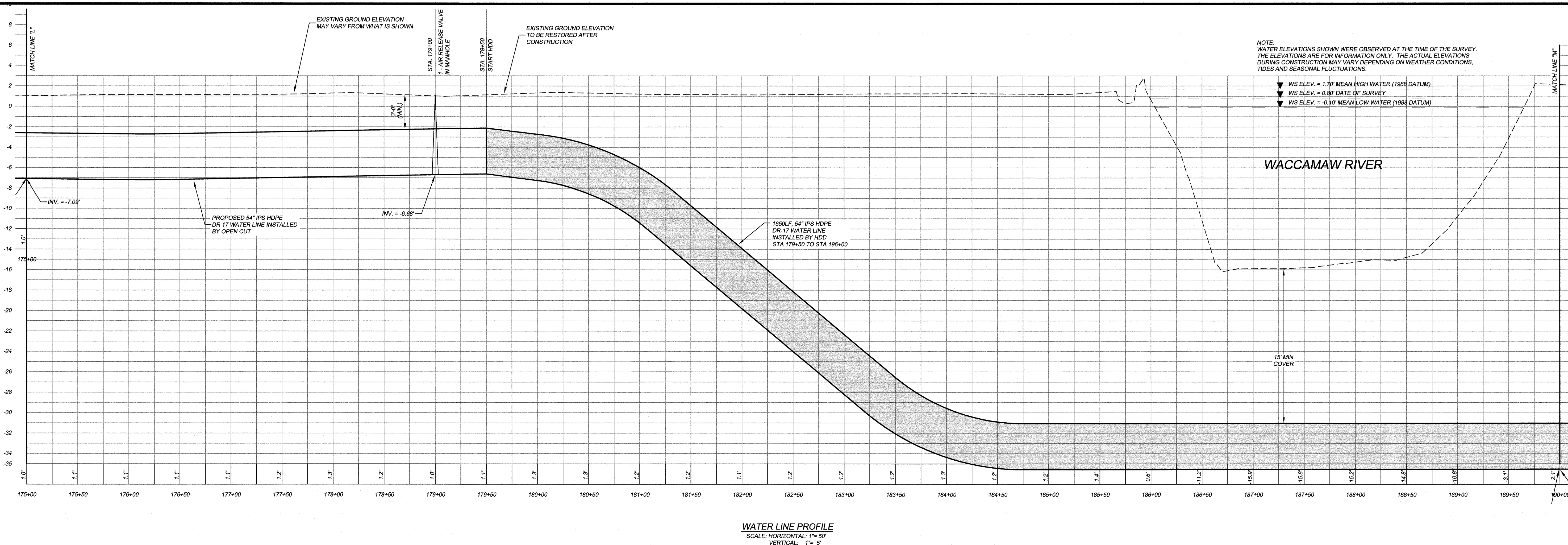
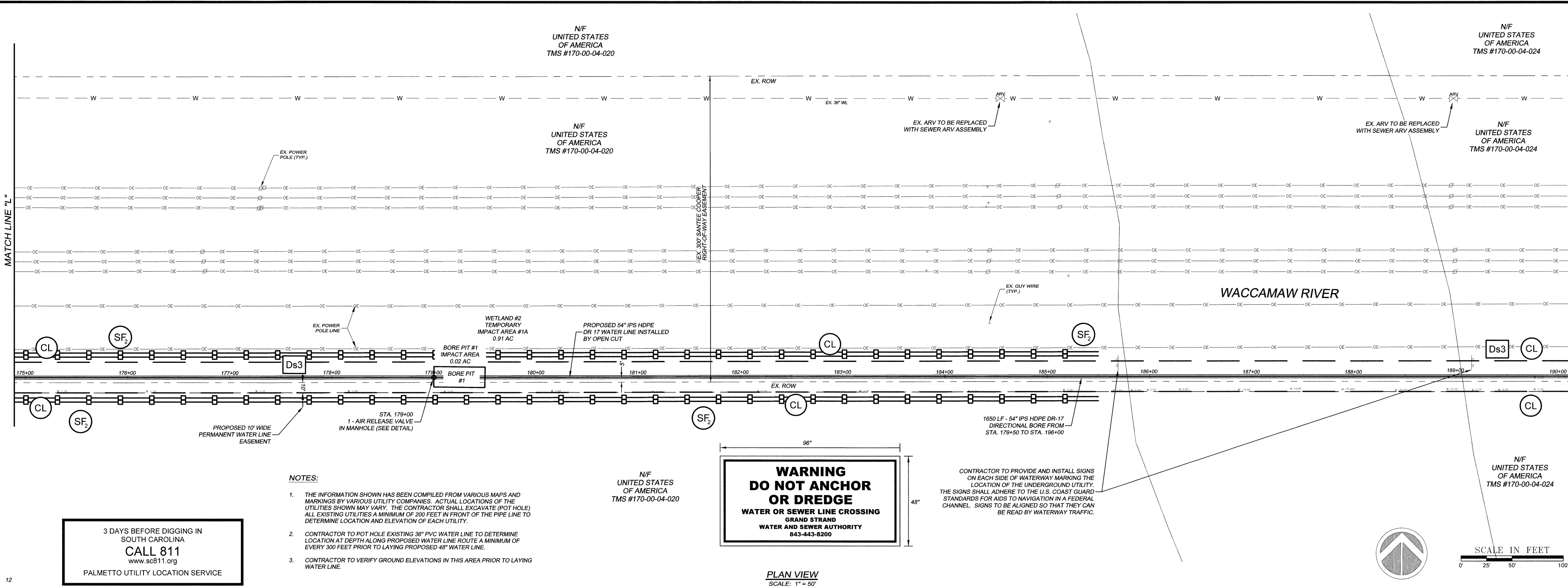
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NO.	DATE	REVISION DESCRIPTION	BY
1	8-14-17	REVISIONS PER GSWA COMMENTS	PES
2	10-27-17	REVISIONS PER IN HOUSE REVIEW	PES
3	5/17/19	ADDED WETLANDS PER IN HOUSE REVIEW	KUG

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48" WATER LINE PLAN AND PROFILE
GWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
MYRTLE BEACH, SOUTH CAROLINA
PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

SCALE: 1" = 1'-0"
4'-28-17
DATE: 4-28-17
DESIGNED BY: EKS
DRAWN BY: PES
APPROV. BY: EKS
PROJECT NO.: 17010E
14
FILE NO.: 17010E



NO.	DATE	REVISION DESCRIPTION	BY
5	8/30/19	REVISED PER GSWA COMMENTS	KJG
4	7/1/19	REVISED PER IN HOUSE REVIEW	KJG
3	5/17/19	REVISED PER IN HOUSE REVIEW	KJG
2	10/27/17	REVISIONS PER IN HOUSE REVIEW	PES
1	8-14-17	REVISIONS PER GSWA COMMENTS.	PES
NO			

48" WATER LINE PLAN AND PROFILE	
GWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544 MYRTLE BEACH, SOUTH CAROLINA	
PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY	
SCALE:	H = 1"=50' V = 1"=5'
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	17010E
15	
FILE NO.:	17010E

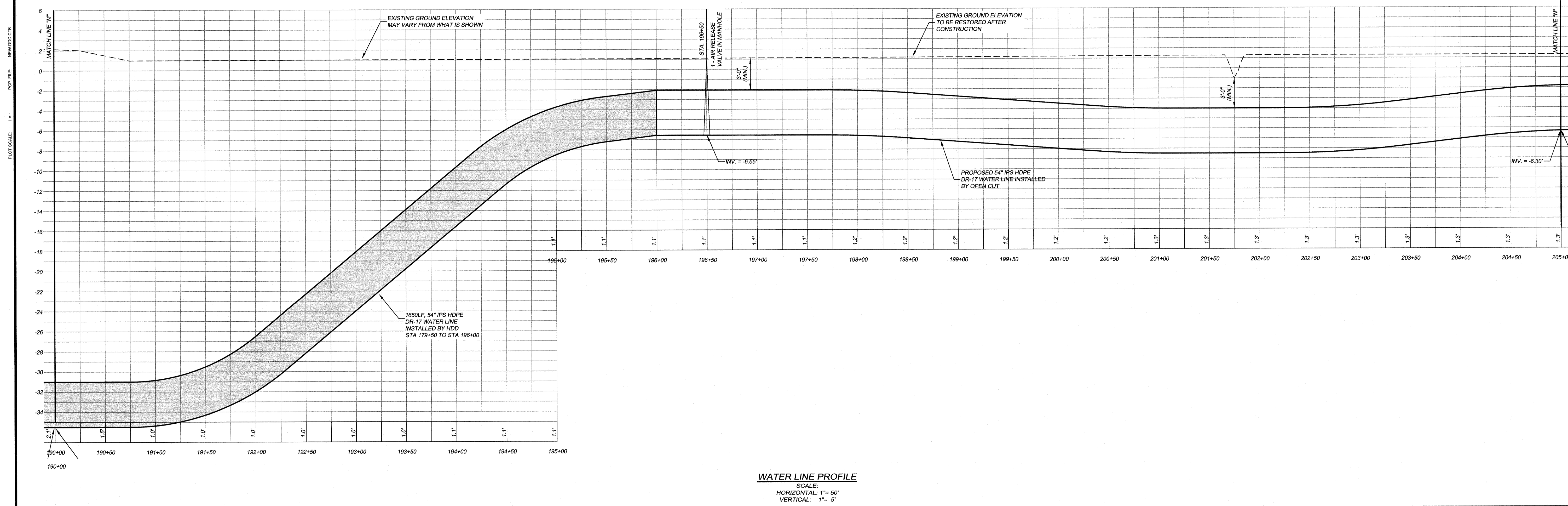
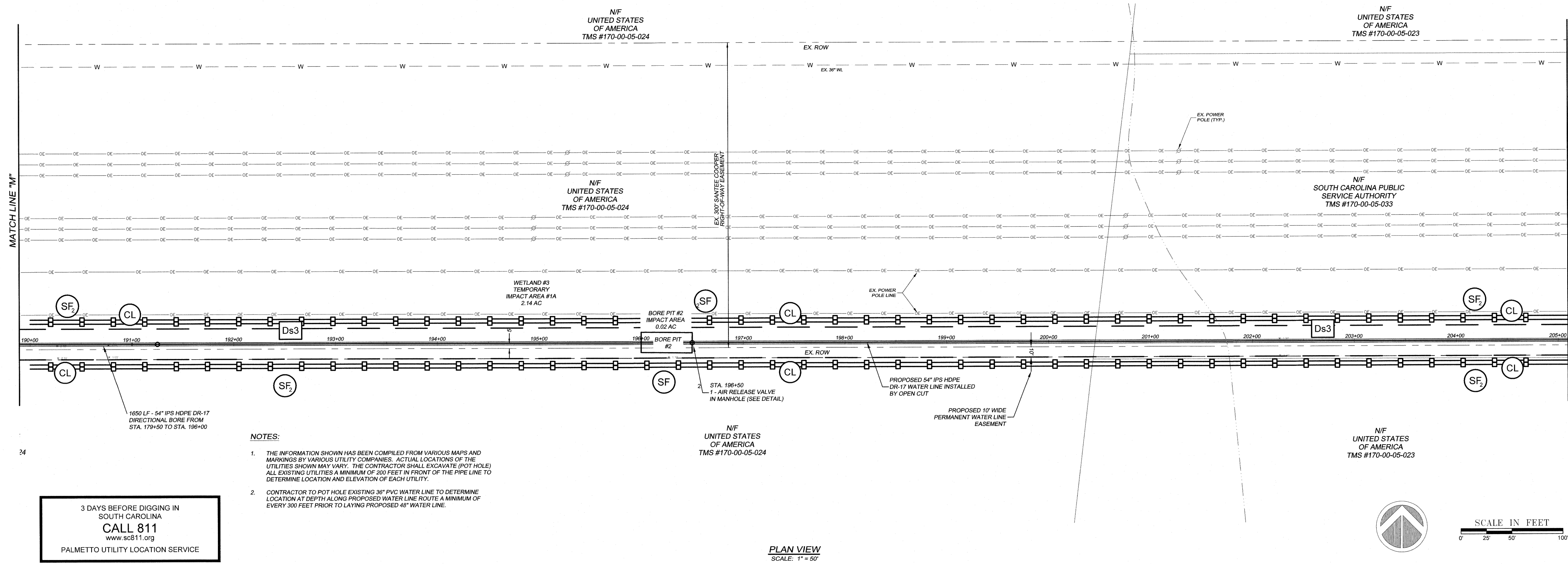
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4	7/11/18	REVISED PER IN HOUSE REVIEW	KJG
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NO. 100 AND ALL PERTAINING TO THE SUBMITTAL OF THE PROJECT TO THE CITY OF LOS ANGELES. NO. 100 AND ALL PERTAINING TO THE SUBMITTAL OF THE PROJECT TO THE CITY OF LOS ANGELES. NO. 100 AND ALL PERTAINING TO THE SUBMITTAL OF THE PROJECT TO THE CITY OF LOS ANGELES.

	Y. 544	
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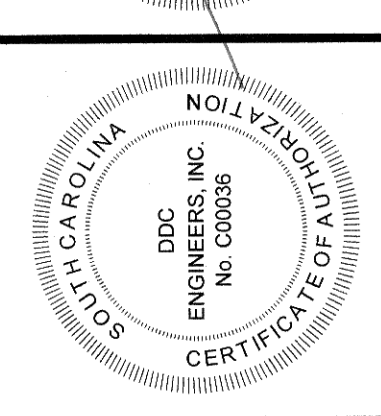
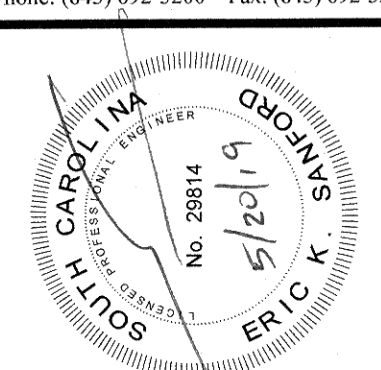
**48" WATER LINE
PLAN AND PROFILE**

SCALE:	H = 1"=50' V = 1"=5'
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	17010E
16	
FILE NO.:	17010E





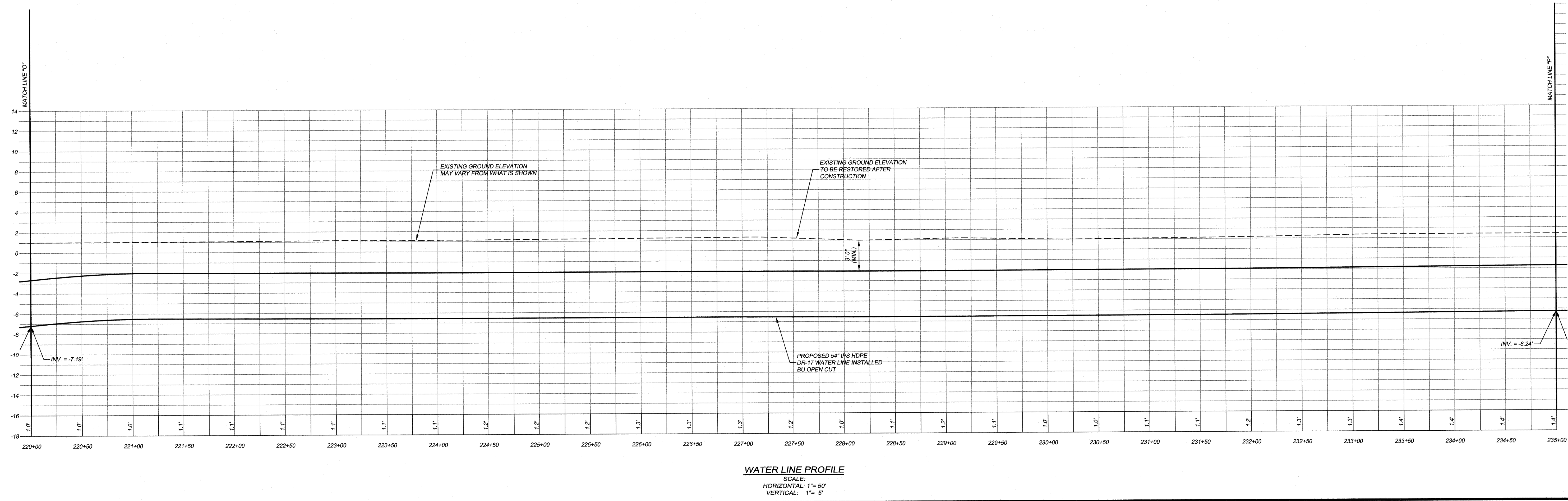
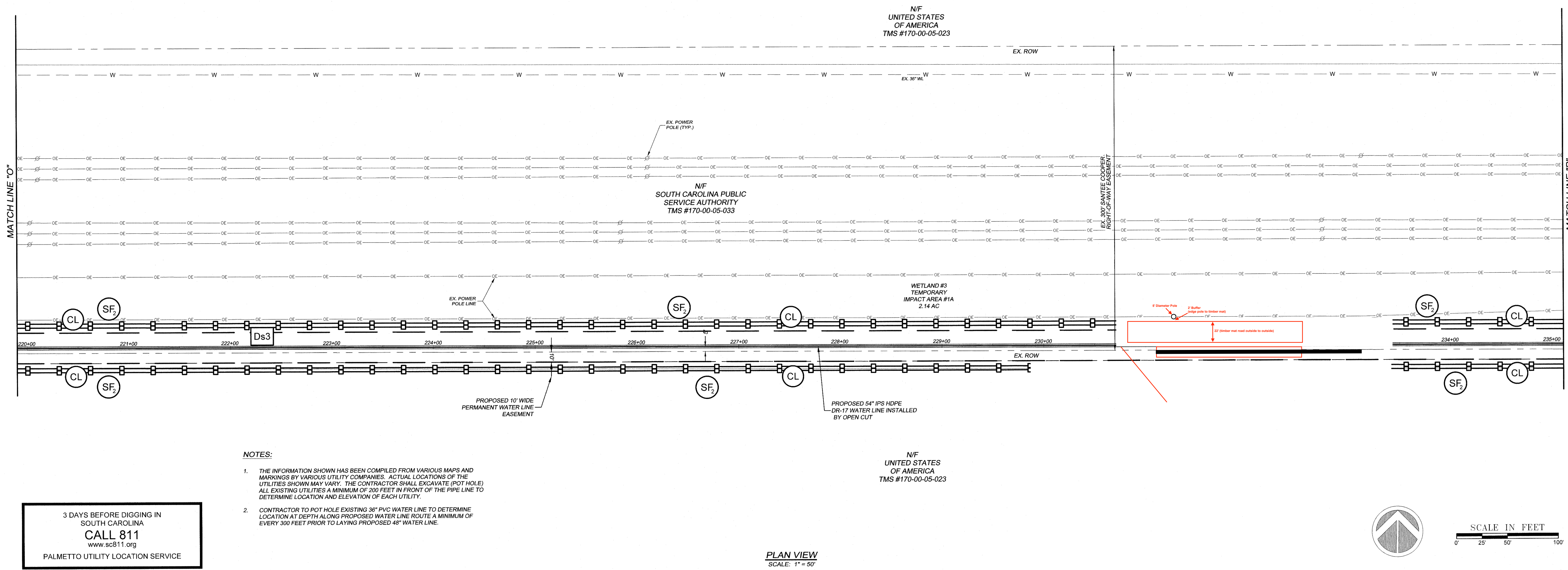
ENGINEERS
Consulting Engineers, Surveyors, Planners,
Landscape Architects & Environmentalists
1208 Professional Dr., Myrtle Beach, SC 29577
Phone: (843) 692-3200 Fax: (843) 692-3210

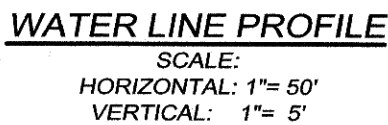
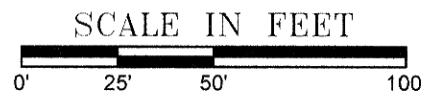


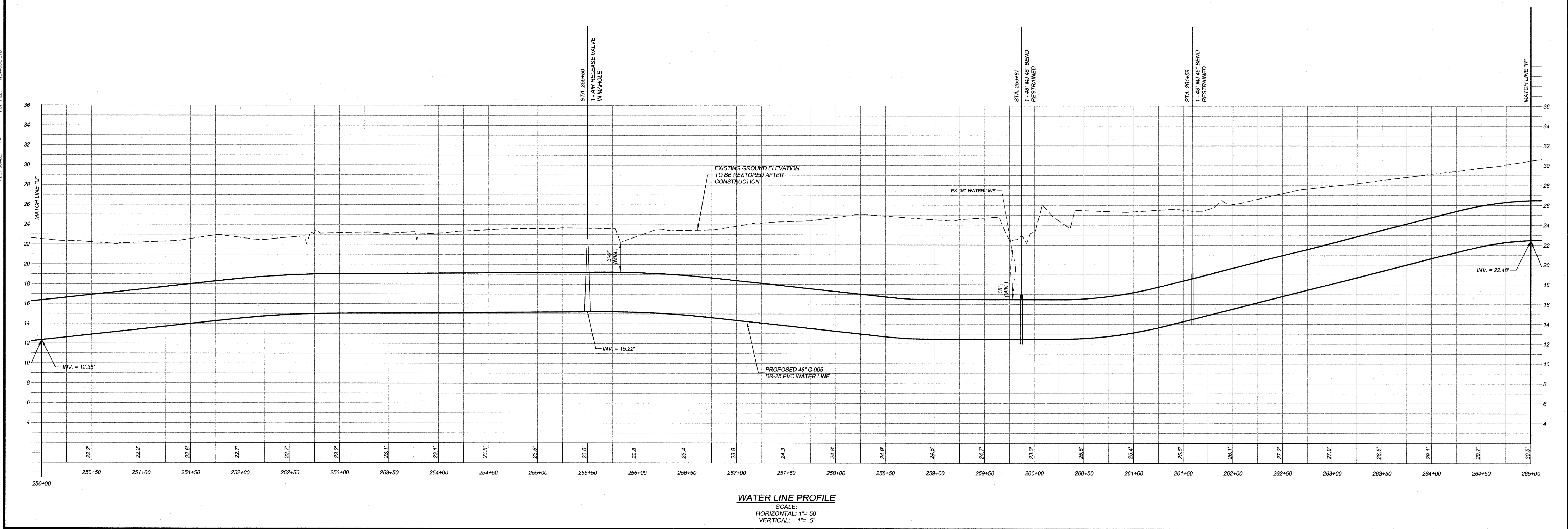
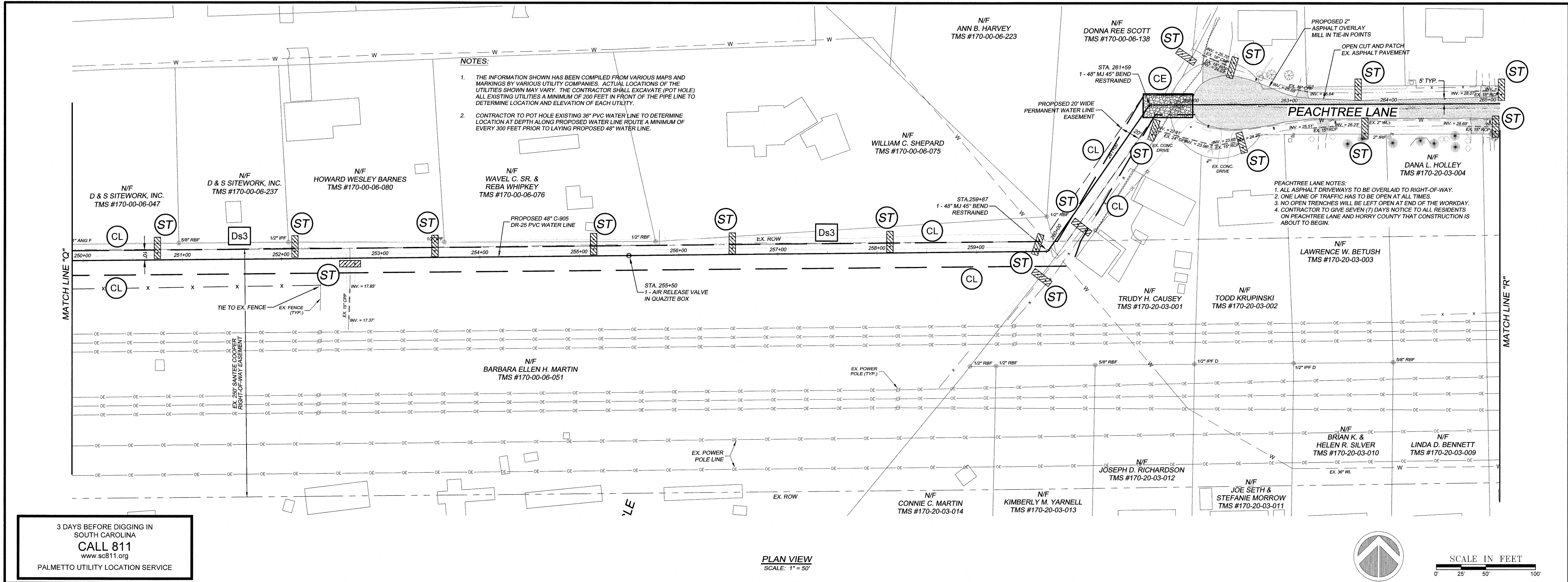
NO.	DATE	REVISION DESCRIPTION	BY
3	5/17/19	REVISED PER IN HOUSE REVIEW	KJD
2	10/27/17	REVISIONS PER IN HOUSE REVIEW	PES
1	8-14-17	REVISIONS PER CIVILS COMMENTS	PES
NO.	DATE	REVISION DESCRIPTION	BY

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48" WATER LINE PLAN AND PROFILE	
GWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544 MYRTLE BEACH, SOUTH CAROLINA	
PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY	
SCALE: H = 1"=50' V = 1"=5'	DATE: 4-28-17
DESIGNED BY: EKS	DRAWN BY: PES
APPROV. BY: EKS	PROJECT NO.: 17010E
18	
FILE NO.: 17010E	







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CERTIFICATE OF ADOPTION
DDC ENGINEERS, INC.
No. 000036
SOUTH CAROLINA

NO.	DATE	REVISION DESCRIPTION	BY
1	8-14-17	REVISIONS PER GSWSA COMMENTS	PES
2	10-27-17	REVISIONS PER IN HOUSE REVIEW	PES
3	4-3-19	REVISED PER IN HOUSE REVIEW	PES
4	7/1/19	REVISED PER IN HOUSE REVIEW	KUG
5	8/30/19	REVISED PER GSWSA COMMENTS	KUG

48" WATER LINE
PLAN AND PROFILE

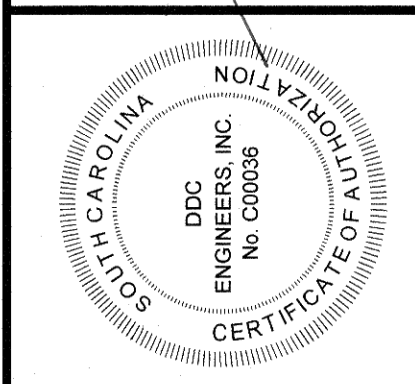
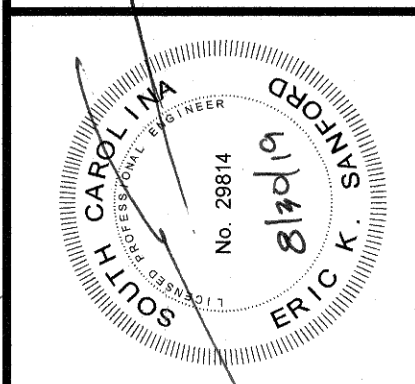
GSWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
MYRTLE BEACH, SOUTH CAROLINA

PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

SCALE:	H = 1"=50'
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	17010E
FILE NO.:	17010E



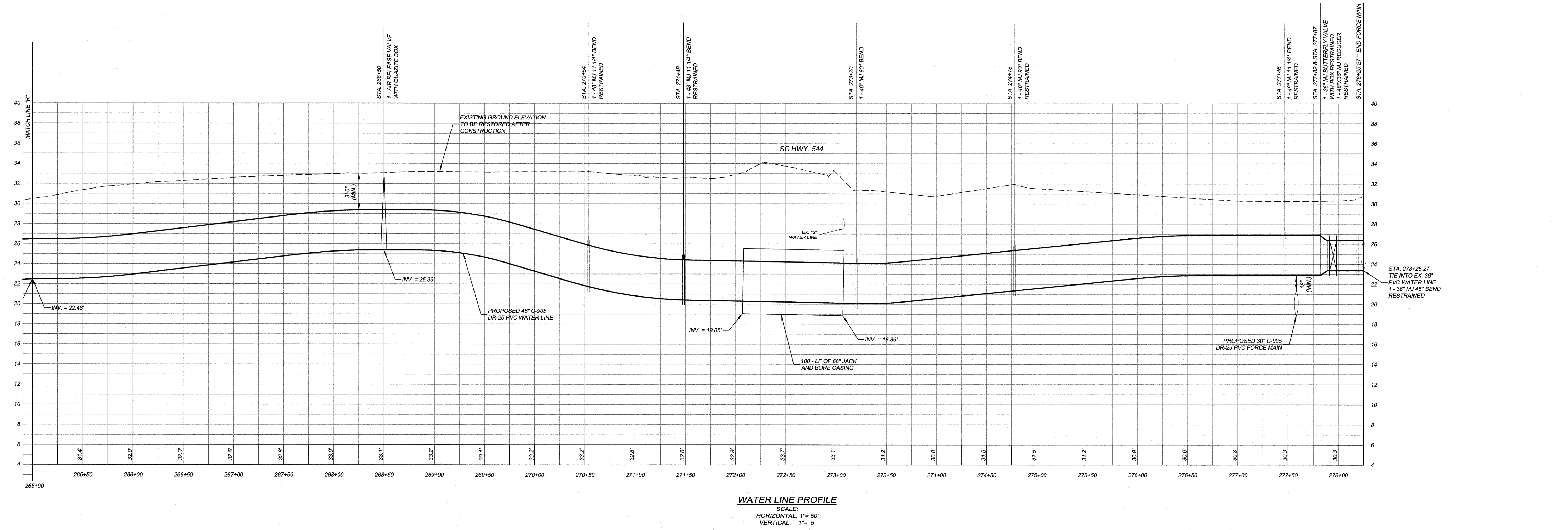
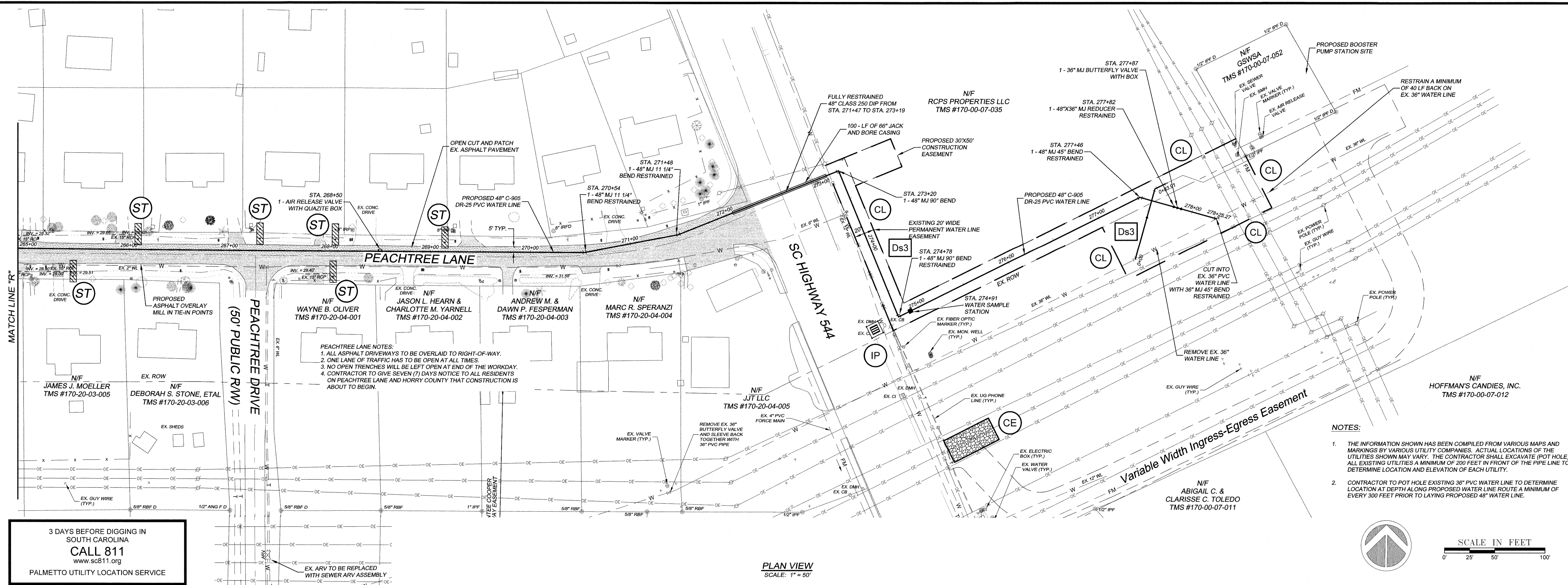
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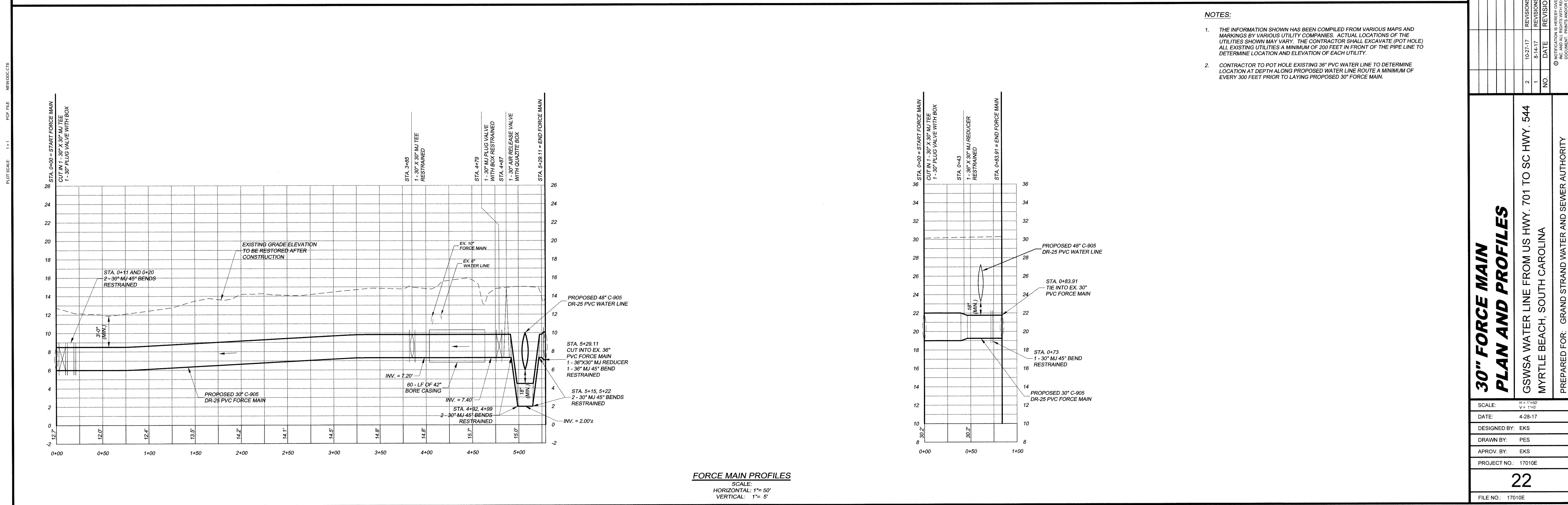
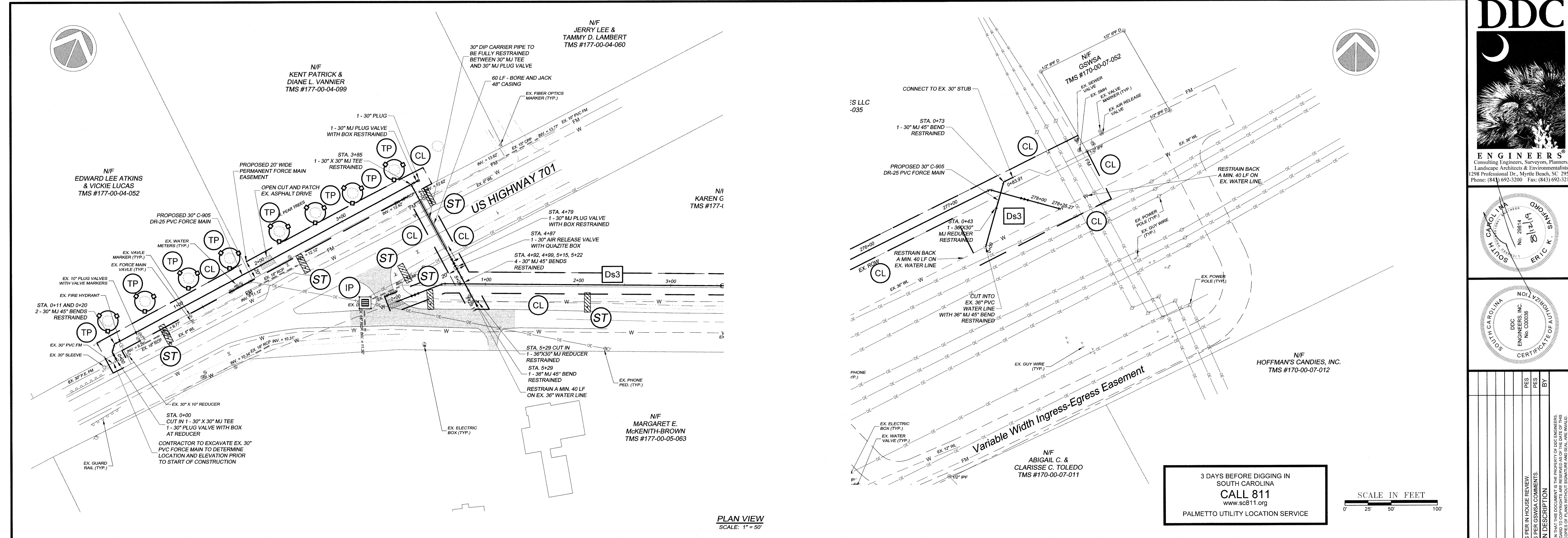
NO.	DATE	REVISION DESCRIPTION	BY
5	8/30/19	REVISED PER GSWA COMMENTS	KJG
4	7/1/19	REVISED PER IN HOUSE REVIEW	KJG
3	4-3-19	REVISED PER IN HOUSE REVIEW	PES
2	10-27-17	REVISIONS PER IN HOUSE REVIEW	PES
1	8-14-17	REVISIONS PER GSWA COMMENTS	PES

48" WATER LINE
PLAN AND PROFILE
GSWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
MYRTLE BEACH, SOUTH CAROLINA
PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

SCALE:	H = 1"=50'
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	17010E
21	
FILE NO.:	17010E



POP FILE NEW48DC.DWG
PLOT SCALE 1"=1'



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Phone: (843) 692-3200 Fax: (843) 692-3210

NO.	DATE	REVISION DESCRIPTION	BY
1	8-14-17	REVISIONS PER GSWA COMMENTS	PES
2	10-21-17	REVISIONS PER IN HOUSE REVIEW	PES

3 DAYS BEFORE DIGGING IN
SOUTH CAROLINA
CALL 811
www.sc811.org
PALMETTO UTILITY LOCATION SERVICE

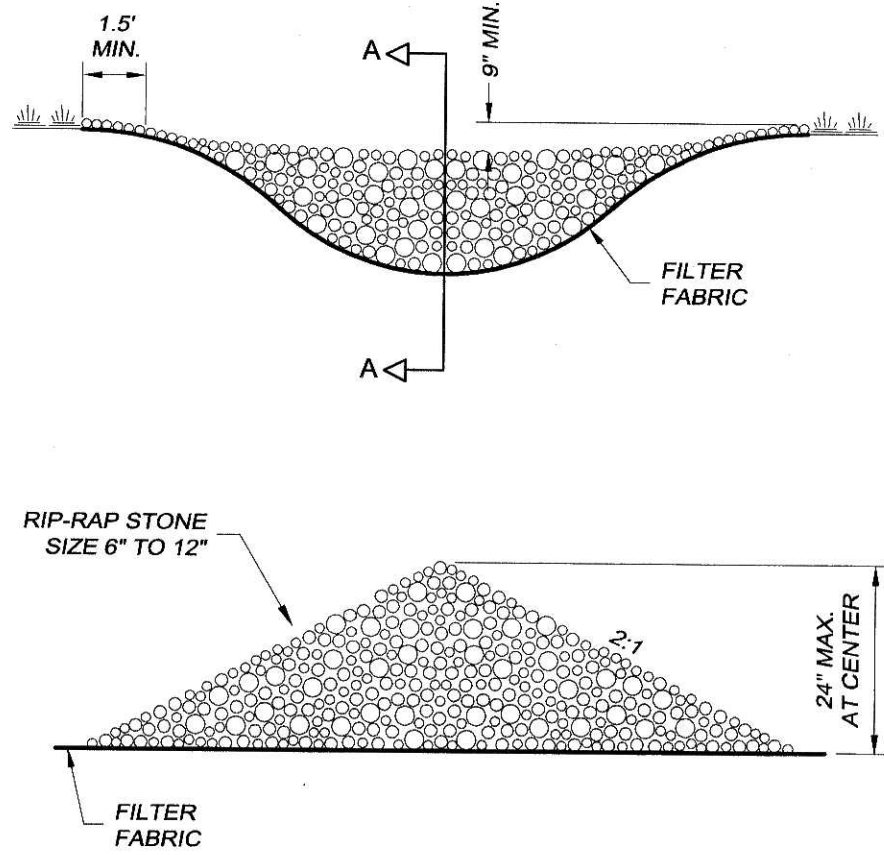
SCALE IN FEET
0' 25' 50' 100'

NOTES:

- THE INFORMATION SHOWN HAS BEEN COMPILED FROM VARIOUS MAPS AND MARKINGS BY VARIOUS UTILITY COMPANIES. ACTUAL LOCATIONS OF THE UTILITIES SHOWN MAY VARY. THE CONTRACTOR SHALL EXCAVATE (POT HOLE) ALL EXISTING UTILITIES A MINIMUM OF 200 FEET IN FRONT OF THE PIPE LINE TO DETERMINE LOCATION AND ELEVATION OF EACH UTILITY.
- CONTRACTOR TO POT HOLE EXISTING 36" PVC WATER LINE TO DETERMINE LOCATION AT DEPTH ALONG PROPOSED WATER LINE ROUTE A MINIMUM OF EVERY 300 FEET PRIOR TO LAYING PROPOSED 30" FORCE MAIN.

30" FORCE MAIN PLAN AND PROFILES
GSWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
MYRTLE BEACH, SOUTH CAROLINA
PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

SCALE:	1" = 10'
DATE:	4-28-17
DESIGNED BY:	EKS
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APPROV. BY:	EKS
PROJECT NO.:	17010E
22	
FILE NO.:	17010E



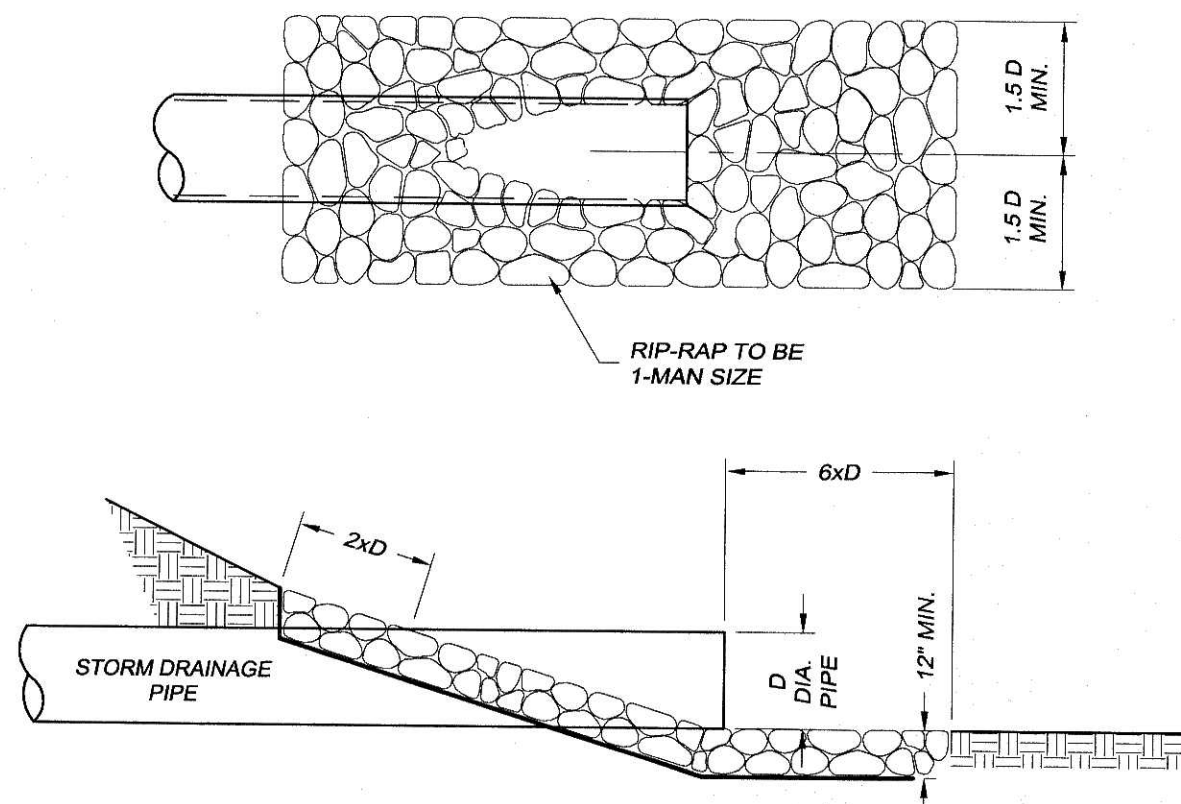
SECTION A-A

STONE CHECK DAM

SCALE: N.T.S.

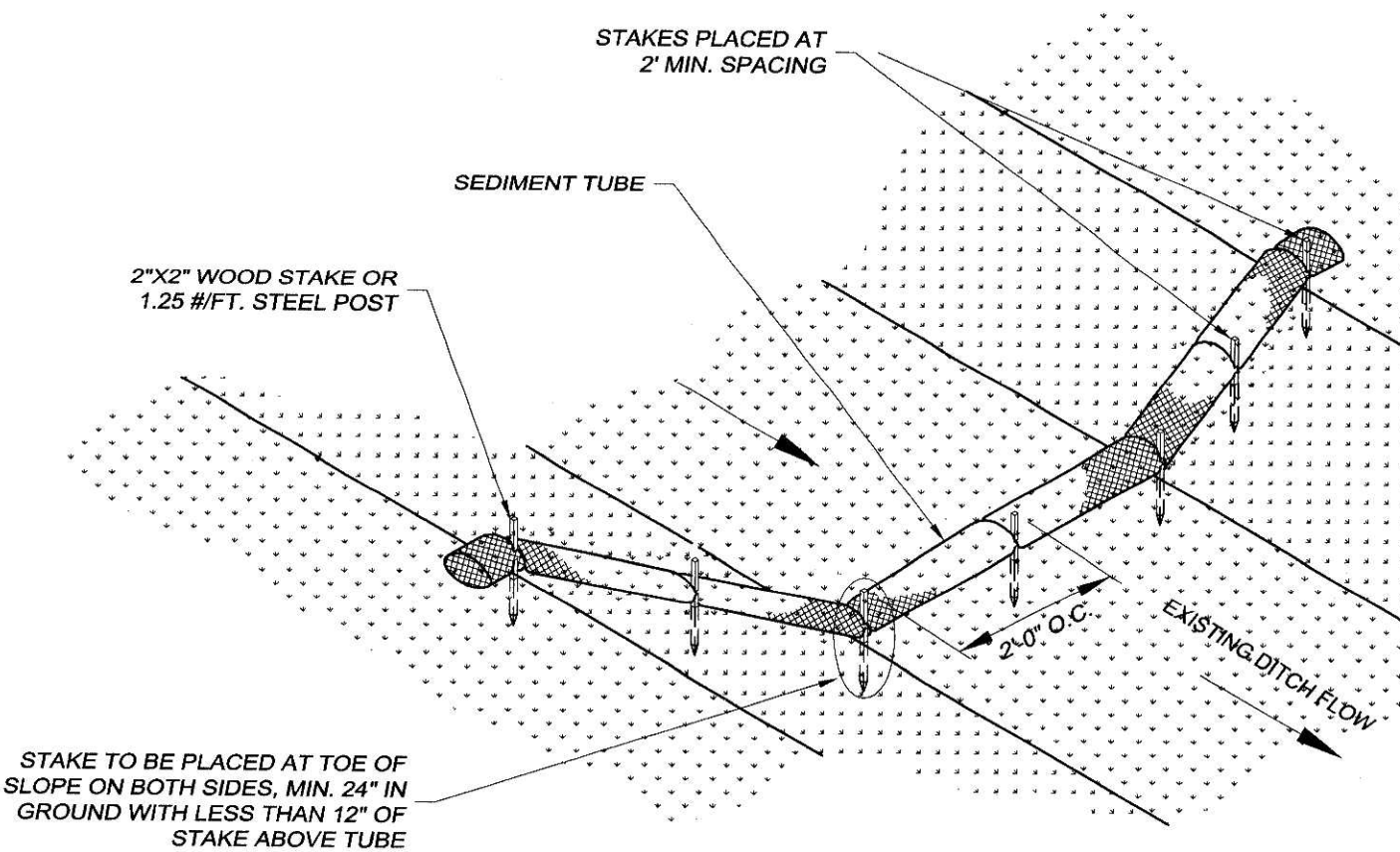
NOTES:

1. FILTER FABRIC TO BE INSTALLED BENEATH STONE RIP-RAP.
2. WHEN PIPE EMPTIES INTO A DITCH OR SWALE, THE RIP-RAP WILL TAKE THE SHAPE OF THE DITCH OR SWALE

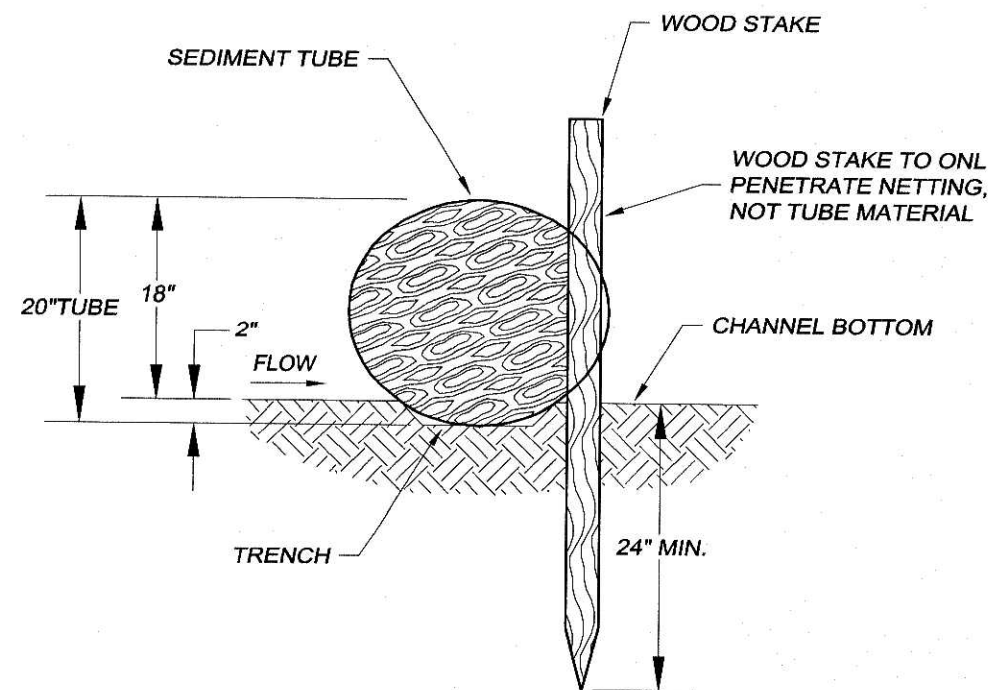


RIP-RAP PIPE OUTLET

SCALE: N.T.S.



SEDIMENT TUBE CHECK DAM DETAIL (NO BLANKET)



STAKE DETAIL (WITH TRENCH)

SEDIMENT TUBES - GENERAL NOTES

1. SEDIMENT TUBES MAY BE INSTALLED ALONG CONTOURS, IN DRAINAGE CONVEYANCE CHANNELS, AND AROUND INLETS TO HELP PREVENT OFF SITE DISCHARGE OF SEDIMENT LADEN STORM WATER RUNOFF.
2. SEDIMENT TUBES ARE ELONGATED TUBES OF COMPACTED GEOTEXTILES, CURLED EXCELSIOR WOOD, NATURAL COCONUT FIBER, OR HARDWOOD MULCH. STRAW, PINE NEEDLE AND LEAF MULCH FILLED SEDIMENT TUBES ARE NOT PERMITTED.
3. THE OUTER NETTING OF THE SEDIMENT TUBE SHOULD CONSIST OF SEAMLESS, HIGH DENSITY POLYETHYLENE PHOTODEGRADABLE MATERIALS TREATED WITH ULTRAVIOLET STABILIZERS OR A SEAMLESS, HIGH DENSITY POLYETHYLENE NON DEGRADABLE MATERIAL.
4. SEDIMENT TUBES, WHEN USED AS CHECKS WITHIN CHANNELS, SHOULD RANGE BETWEEN 18 INCHES AND 24 INCHES DEPENDING ON CHANNEL DIMENSIONS. DIAMETERS OUTSIDE THIS RANGE MAY BE ALLOWED WHERE NECESSARY WHEN APPROVED.
5. CURLED EXCELSIOR WOOD, OR NATURAL COCONUT PRODUCTS THAT ARE ROLLED UP TO CREATE A SEDIMENT TUBE ARE NOT ALLOWED.
6. SEDIMENT TUBES SHOULD BE STAKED USING WOODEN STAKES (2" X 2") OR STEEL POSTS (STANDARD 1" OR 1 1/2" SECTIONS WITH A MINIMUM WEIGHT OF 1.25 POUNDS PER FOOT) AT A MINIMUM OF 48 INCHES IN LENGTH PLACED ON 2 FOOT CENTERS.
7. INSTALL ALL SEDIMENT TUBES TO ENSURE THAT NO GAPS EXIST BETWEEN THE SOIL AND THE BOTTOM OF THE TUBE. MANUFACTURER'S RECOMMENDATIONS SHOULD ALWAYS BE CONSULTED BEFORE INSTALLATION.
8. THE ENDS OF ADJACENT SEDIMENT TUBES SHOULD BE OVERLAPPED 6 INCHES TO PREVENT FLOW AND SEDIMENT FROM PASSING THROUGH THE FIELD JOINT.
9. SEDIMENT TUBES SHOULD NOT BE STACKED ON TOP OF ONE ANOTHER, UNLESS RECOMMENDED BY MANUFACTURER.
10. EACH SEDIMENT TUBE SHOULD BE INSTALLED IN A TRENCH WITH A DEPTH EQUAL TO 1/5 THE DIAMETER OF THE SEDIMENT TUBE.
11. SEDIMENT TUBES SHOULD CONTINUE UP THE SIDE SLOPES A MINIMUM OF 1 FOOT ABOVE THE DESIGN FLOW DEPTH OF THE CHANNEL.
12. INSTALL STAKES AT A DIAGONAL FACING INCOMING RUNOFF.

SEDIMENT TUBE DETAIL

SCALE: N.T.S.

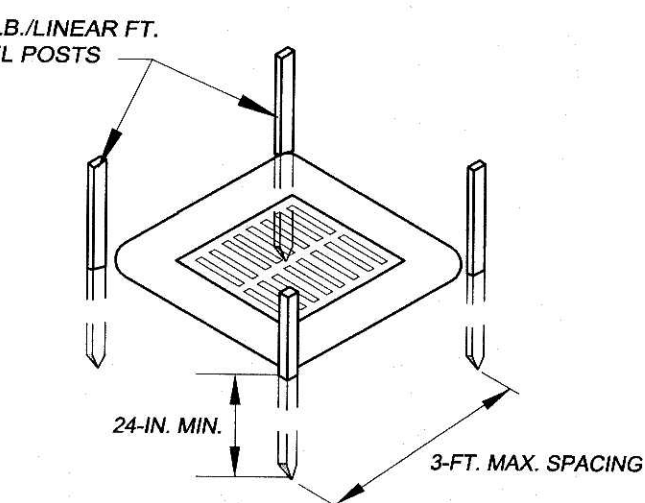


SEDIMENT TUBE SPACING

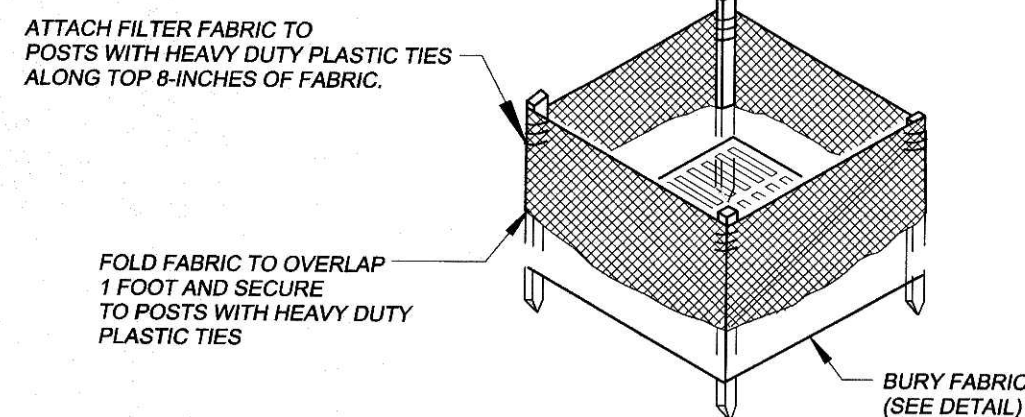
SLOPE	MAX. SEDIMENT TUBE SPACING
LESS THAN 2%	150-FEET
2%	100-FEET
3%	75-FEET
4%	50-FEET
5%	40-FEET
6%	30-FEET
GREATER THAN 6%	25-FEET

SEDIMENT TUBES - INSPECTION & MAINTENANCE

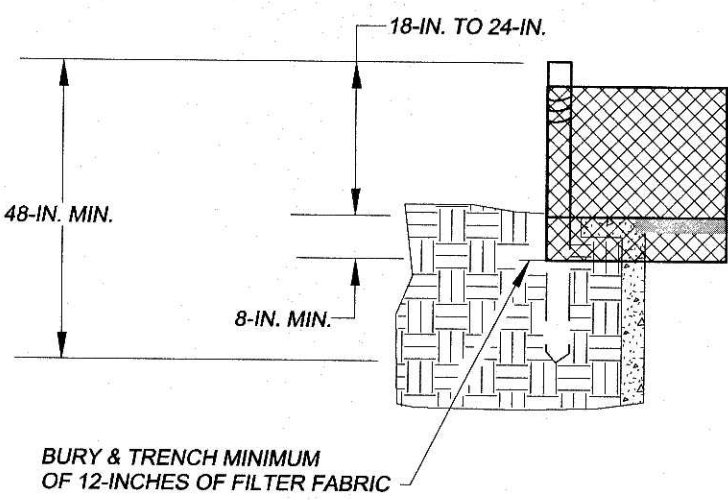
1. THE KEY TO FUNCTIONAL SEDIMENT TUBES IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE AND REGULAR SEDIMENT REMOVAL.
2. REGULAR INSPECTIONS OF SEDIMENT TUBES SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24 HOURS AFTER EACH RAINFALL EVEN THAT PRODUCES 1/2 INCH OR MORE OF PRECIPITATION.
3. ATTENTION TO SEDIMENT ACCUMULATIONS IN FRONT OF THE SEDIMENT TUBE IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
4. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SEDIMENT TUBE.
5. REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
6. LARGE DEBRIS, TRASH AND LEAVES SHOULD BE REMOVED FROM IN FRONT OF TUBES WHEN FOUND.
7. IF EROSION CAUSES THE EDGES TO FALL TO A HEIGHT EQUAL TO OR BELOW THE HEIGHT OF THE SEDIMENT TUBE, REPAIRS SHOULD BE MADE IMMEDIATELY TO PREVENT RUNOFF FROM BYPASSING TUBE.
8. SEDIMENT TUBES SHOULD BE REMOVED AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN COMPLETELY STABILIZED. PERMANENT VEGETATION SHOULD REPLACE AREAS FROM WHICH SEDIMENT TUBES HAVE BEEN REMOVED.



POST INSTALLATION DETAIL



FILTER FABRIC INSTALLATION DETAIL



FILTER FABRIC BURIAL DETAIL

TYPE A - POST REQUIREMENTS

1. SILT FENCE POSTS MUST BE 48 INCH LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS.
 - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
 - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38 INCHES AND A NOMINAL "T" LENGTH OF 1.48 INCHES.
 - WEIGH 1.25 POUNDS PER FOOT (±8%).
2. POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF FILTER FABRIC.
3. INSTALL POSTS TO A MINIMUM OF 24 INCHES. A MINIMUM HEIGHT OF 1 TO 2 INCHES ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3 FEET SHALL BE MAINTAINED ABOVE THE GROUND.
4. POST SPACING SHALL BE AT A MAXIMUM OF 3 FEET ON CENTER.

TYPE A - FILTER FABRIC REQUIREMENTS

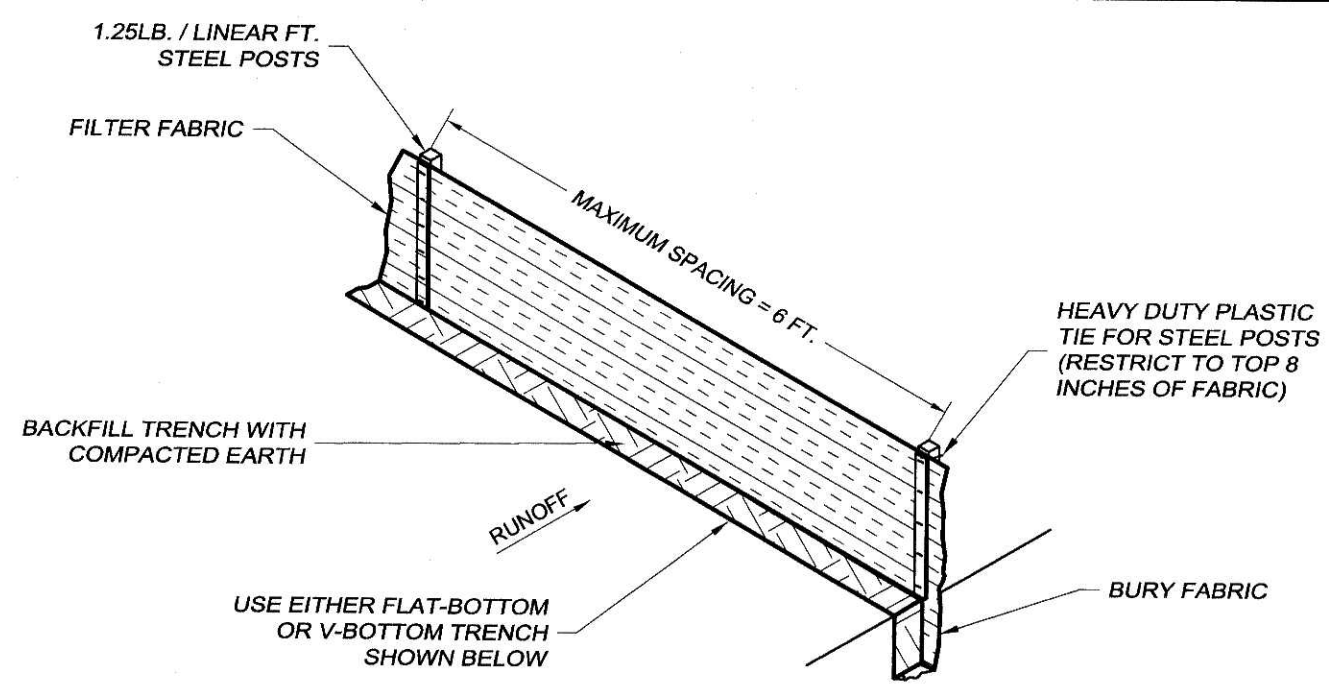
1. SILT FENCE MUST BE COMPOSED OF WOVEN GEOTEXTILE FILTER FABRIC THAT CONSISTS OF THE FOLLOWING REQUIREMENTS.
 - COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS OR POLYAMIDES THAT ARE FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER.
 - FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION.
 - FREE OF ANY DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES; AND,
 - HAVE A MINIMUM WIDTH OF 36 INCHES.
2. USE ONLY FABRIC APPEARING ON SC DOT'S QUALIFIED PRODUCTS LISTING (QPL), APPROVAL SHEET #34 MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SC DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
3. 12 INCHES OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND TOED IN WHEN THE TRENCH IS BACKFILLED.
4. FILTER FABRIC SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS.
5. FILTER FABRIC SHALL BE INSTALLED AT A MINIMUM OF 24 INCHES ABOVE THE GROUND.

TYPE A - INSPECTION & MAINTENANCE

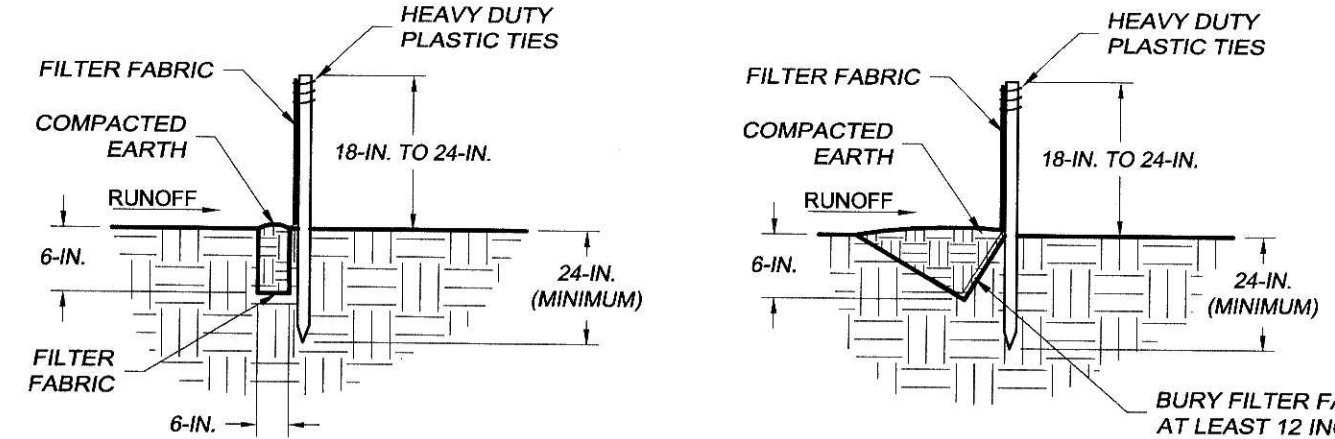
1. THE KEY TO FUNCTIONAL INLET PROTECTION IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE AND REGULAR SEDIMENT REMOVAL.
2. REGULAR INSPECTIONS OF INLET PROTECTION SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24 HOURS AFTER EACH RAINFALL EVEN THAT PRODUCES 1/2 INCH OR MORE OF PRECIPITATION.
3. ATTENTION TO SEDIMENT ACCUMULATIONS ALONG THE FILTER FABRIC IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
4. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE FILTER FABRIC. WHEN A SUMP IS INSTALLED IN FRONT OF THE FABRIC, SEDIMENT SHOULD BE REMOVED WHEN IT FILLS APPROXIMATELY 1/3 THE DEPTH OF THE SUMP.
5. REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
6. CHECK FOR AREAS WHERE STORM WATER RUNOFF HAS ERODED A CHANNEL BENEATH THE FILTER FABRIC, BENEATH THE FILTER FABRIC, OR WHERE THE FABRIC HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE INLET PROTECTION.
7. CHECK FOR TEARS WITHIN THE FILTER FABRIC, AREAS WHERE FABRIC HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE INLET PROTECTION INEFFECTIVE. REMOVE DAMAGED FABRIC AND REINSTALL NEW FILTER FABRIC IMMEDIATELY.
8. INLET PROTECTION STRUCTURES SHOULD BE REMOVED AFTER ALL THE DISTURBED AREAS ARE PERMANENTLY STABILIZED. REMOVE ALL CONSTRUCTION MATERIAL AND SEDIMENT, AND DISPOSE OF THEM PROPERLY. GRADE THE DISTURBED AREA TO THE ELEVATION OF THE DROP INLET STRUCTURE CREST. STABILIZE ALL BARE AREAS IMMEDIATELY.

INLET PROTECTION

SCALE: N.T.S.



SILT FENCE INSTALLATION



FLAT-BOTTOM TRENCH DETAIL

V-SHAPED TRENCH DETAIL

SILT FENCE - GENERAL NOTES:

1. DO NOT PLACE SILT FENCE ACROSS CHANNELS OR IN OTHER AREAS SUBJECT TO CONCENTRATED FLOWS. SILT FENCE SHOULD NOT BE USED AS A VELOCITY CONTROL BMP. CONCENTRATED FLOWS ARE ANY FLOWS GREATER THAN 0.5 CFS.
2. MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE SILT FENCE SHALL BE 100 FEET.
3. MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO THE FENCE LINE) SHALL BE 2:1.
4. SILT FENCE JOINTS, WHEN NECESSARY SHALL BE COMPLETED BY ONE OF THE FOLLOWING OPTIONS:
 - WRAP EACH FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 1 FOOT MINIMUM OVERLAP.
 - OVERLAP SILT FENCE BY INSTALLING 3 FEET PAST THE SUPPORT POST TO WHICH THE NEW SILT FENCE ROLL IS ATTACHED. ATTACH OLD ROLL TO NEW ROLL WITH HEAVY DUTY PLASTIC TIES, OR
 - OVERLAP ENTIRE WIDTH OF EACH SILT FENCE ROLL FROM ONE SUPPORT POST TO THE NEXT SUPPORT POST.
5. ATTACH FILTER FABRIC TO THE STEEL POSTS USING HEAVY DUTY PLASTIC TIES THAT ARE EVENLY SPACED WITHIN THE TOP 8 INCHES OF THE FABRIC.
6. INSTALL THE SILT FENCE PERPENDICULAR TO THE DIRECTION OF THE STORM WATER FLOW AND PLACE THE SILT FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEAN OUT.
7. INSTALL SILT FENCE CHECKS (TIE-BACKS) EVERY 50-100 FEET, DEPENDENT ON SLOPE, ALONG SILT FENCE THAT IS INSTALLED WITH SLOPE AND WHERE CONCENTRATED FLOWS ARE EXPECTED OR ARE DOCUMENTED ALONG THE PROPOSED / INSTALLED SILT FENCE.

SILT FENCE - POST REQUIREMENTS

1. SILT FENCE POSTS MUST BE 48 INCH LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS.
 - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
 - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38 INCHES AND A NOMINAL "T" LENGTH OF 1.48 INCHES.
 - WEIGH 1.25 POUNDS PER FOOT (±8%).
2. POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF FILTER FABRIC.
3. STEEL POSTS MAY NEED TO HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM WHEN INSTALLED ALONG STEEP SLOPES OR INSTALLED IN LOOSE SOILS. THE PLATE SHOULD HAVE A MINIMUM CROSS SECTION OF 17 SQUARE INCHES AND BE COMPOSED OF 16 GAUGE STEEL, AT A MINIMUM. THE METAL SOIL STABILIZATION PLATE SHOULD BE COMPLETELY BURIED.
4. INSTALL POSTS A MINIMUM OF 24 INCHES. A MINIMUM HEIGHT OF 1 TO 2 INCHES ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3 FEET SHALL BE MAINTAINED ABOVE THE GROUND.
5. POST SPACING SHALL BE AT A MAXIMUM OF 6 FEET ON CENTER.

SILT FENCE - FABRIC REQUIREMENTS

1. SILT FENCE MUST BE COMPOSED OF WOVEN GEOTEXTILE FILTER FABRIC THAT CONSISTS OF THE FOLLOWING REQUIREMENTS.
 - COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS OR POLYAMIDES THAT ARE 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 ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION.
 - FREE OF ANY DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES; AND,
 - HAVE A MINIMUM WIDTH OF 36 INCHES.
2. USE ONLY FABRIC APPEARING ON SC DOT'S QUALIFIED PRODUCTS LISTING (QPL), APPROVAL SHEET #34 MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SC DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
3. 12 INCHES OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND TOED IN WHEN THE TRENCH IS BACKFILLED.
4. FILTER FABRIC SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS.
5. FILTER FABRIC SHALL BE INSTALLED AT A MINIMUM OF 24 INCHES ABOVE THE GROUND.

SILT FENCE - INSPECTION & MAINTENANCE

1. THE KEY TO FUNCTIONAL SILT FENCE IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE AND REGULAR SEDIMENT REMOVAL.
2. REGULAR INSPECTIONS OF SILT FENCE SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24 HOURS AFTER EACH RAINFALL EVEN THAT PRODUCES 1/2 INCH OR MORE OF PRECIPITATION.
3. ATTENTION TO SEDIMENT ACCUMULATIONS ALONG THE SILT FENCE IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
4. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SILT FENCE.
5. REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
6. CHECK FOR AREAS WHERE STORM WATER RUNOFF HAS ERODED A CHANNEL BENEATH THE SILT FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE SILT FENCE. INSTALL CHECKS/TIE-BACKS AND/OR REINSTALL SILT FENCE, AS NECESSARY.
7. CHECK FOR TEARS WITHIN THE SILT FENCE, AREAS WHERE SILT FENCE HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE SILT FENCE INEFFECTIVE. REMOVE DAMAGED SILT FENCE AND REINSTALL NEW SILT FENCE IMMEDIATELY.
8. SILT FENCE SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED AND ONCE IT IS REMOVED, THE RESULTING DISTURBED AREA SHALL BE PERMANENTLY STABILIZED.

CONSTRUCTION OF A SILT FENCE

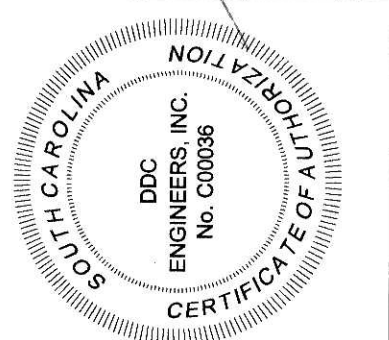
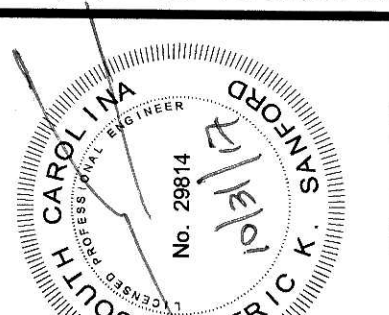
SCALE: N.T.S.



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NO.	DATE	REVISION DESCRIPTION	BY
2	10-27-17	REVISIONS PER IN HOUSE REVIEW.	PES
1	8-14-17	REVISIONS PER GSWA COMMENTS.	PES

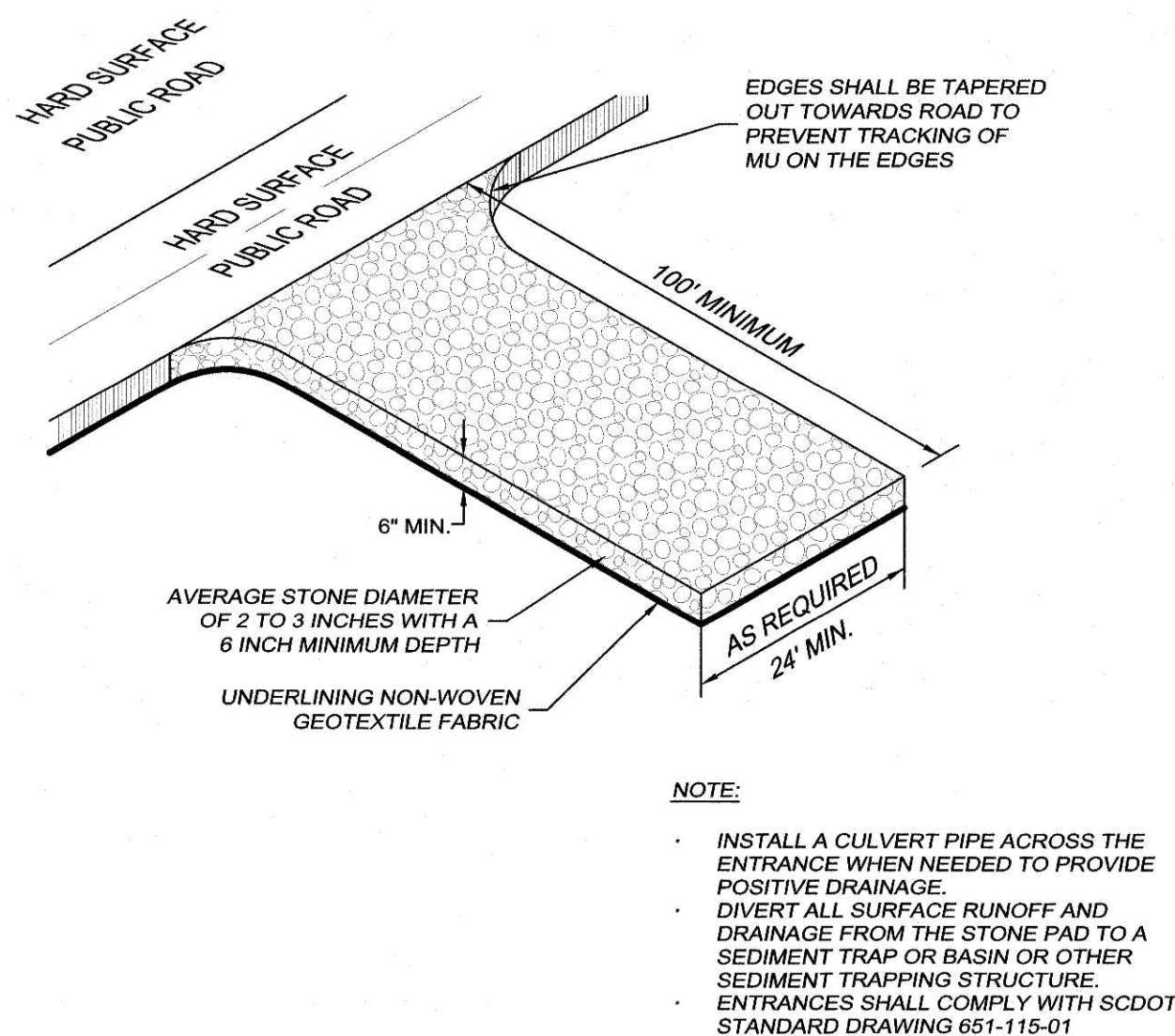
GSWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544 HORRY COUNTY, SOUTH CAROLINA	PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY
--	--

SCALE:	NO SCALE
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	17010E
FILE NO.:	17010E

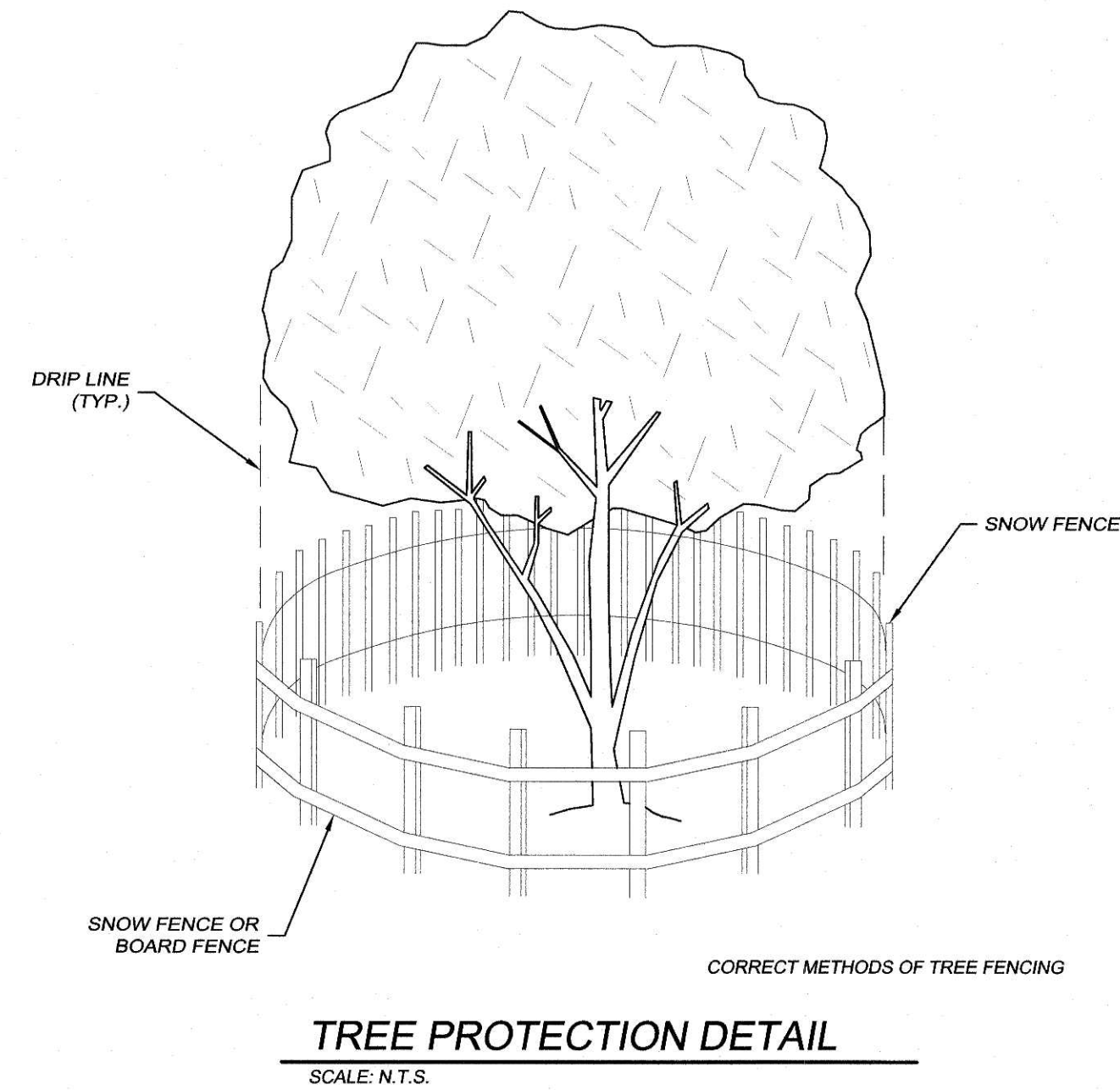
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EROSION CONTROL NOTES:

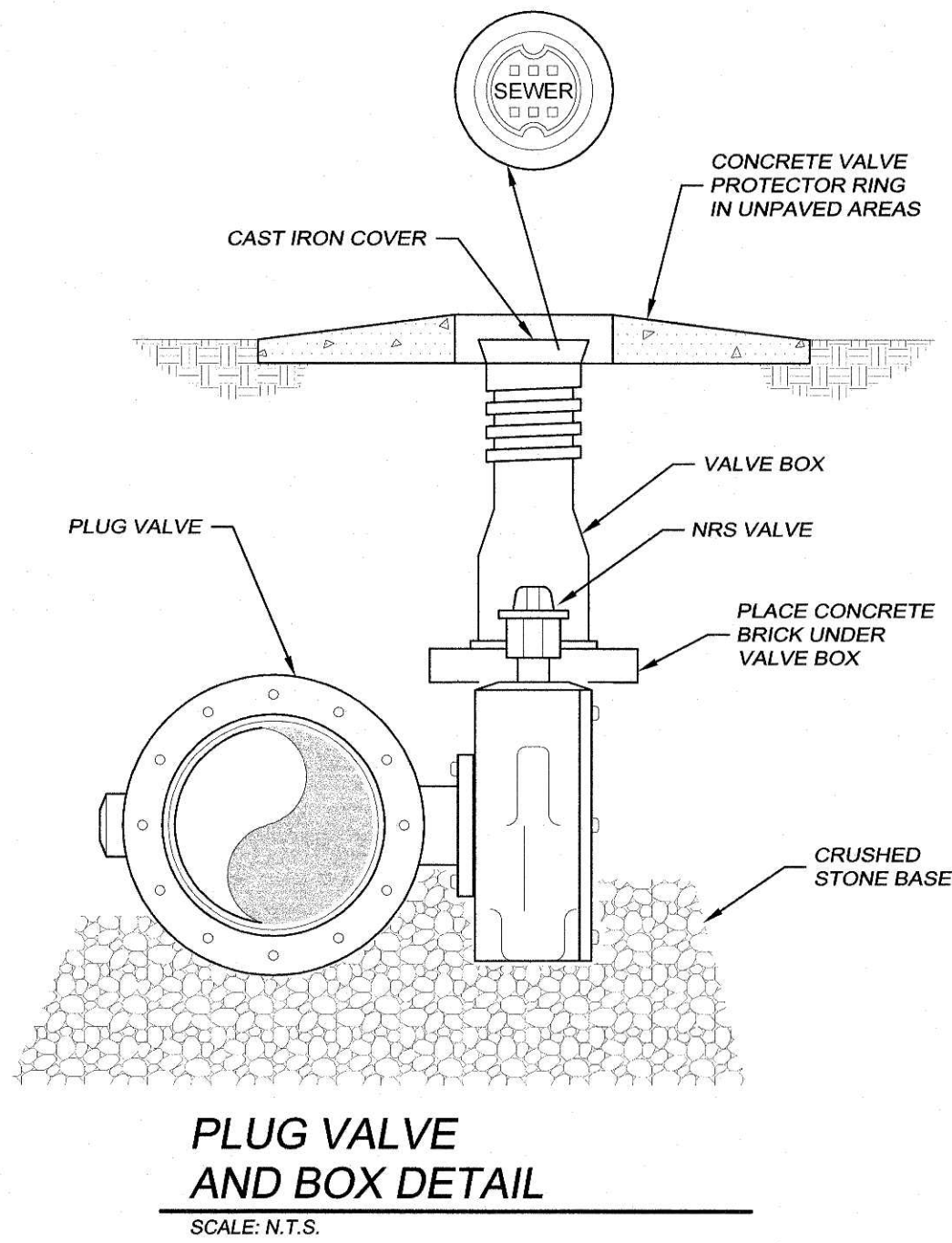
- TOTAL DEVELOPMENT AREA : 13.1 ± ACRES
- DISTURBED AREA THIS PHASE: 13.1 ± ACRES
- IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. 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 EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY OR INCORRECTLY INSTALLED, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
- 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 OFF SITE 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 PAVED ROADWAYS 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 SCR 100000.
- 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 CANNOT 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.
- LITTER, 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.
- A COPY OF THE SWPPP, INSPECTION RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
- INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
- MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPs (SEDIMENT BASIN, FILTER BAG, ETC.).
- THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
 - WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
 - WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS
 - CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
 - FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
 - SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
- AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- IF EXISTING BMPs NEED TO BE MODIFIED OR IF ADDITIONAL BMPs ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPs MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
- A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SILT BARRIERS AND SEDIMENT CONTROL INSTALLATIONS DURING CONSTRUCTION UNTIL THE COMPLETION OF THE SITE DEVELOPMENT.
- EROSION CONTROL DEVICES MUST BE INSTALLED IMMEDIATELY AFTER LAND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE CONTROL DEVICES MAY BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS, IF DRAINAGE PATTERNS DURING CONSTRUCTION VARY FROM THE FINAL DRAINAGE PATTERNS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE SOIL EROSION CONTROL FOR ALL DRAINAGE PATTERNS DURING ALL STAGES OF CONSTRUCTION. ALL INADEQUACIES IN SOIL EROSION CONTROL DURING ANY PHASE OF CONSTRUCTION MUST BE REPORTED IMMEDIATELY TO THE ENGINEER.
- THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. THE CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE PROPER FUNCTIONING OF ALL DEVICES.
- FAILURE TO INSTALL, OPERATE AND MAINTAIN ALL EROSION CONTROL MEASURES, AS SHOWN ON THE APPROVED PLANS OR AS DIRECTED BY THE ENGINEER AND/OR OCRM WILL RESULT IN ALL WORK ON THE CONSTRUCTION SITE BEING STOPPED UNTIL PROPER CORRECTIVE MEASURES HAVE BEEN MET, AS REQUIRED AND/OR DIRECTED.
- ALL LAND DISTURBING ACTIVITIES REQUIRES COMPLIANCE UNDER THE NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM THE CONSTRUCTION ACTIVITIES (PERMIT NO. SCR100000). ANY NONCOMPLIANCE WITH THESE REGULATIONS IS A VIOLATION OF THE FEDERAL CLEAN WATER ACT AND MAY REQUIRE ENFORCEMENT ACTION BY HORRY COUNTY OR SCDHEC.
- CONTRACTOR SHALL PROVIDE A WATER TIGHT ENCLOSURE FOR STORAGE OF THE OCRM CERTIFIED PLANS AND INSPECTION REPORTS. ENCLOSURE SHALL BE LOCATED IN AN AREA ACCESSIBLE TO REGULATORY PERSONNEL.
- ALL STOCKPILE TO BE PROTECTED WITH SILT FENCE.
- ALL CONCRETE TO BE WASHED OUT IN AN APPROVED AREA.



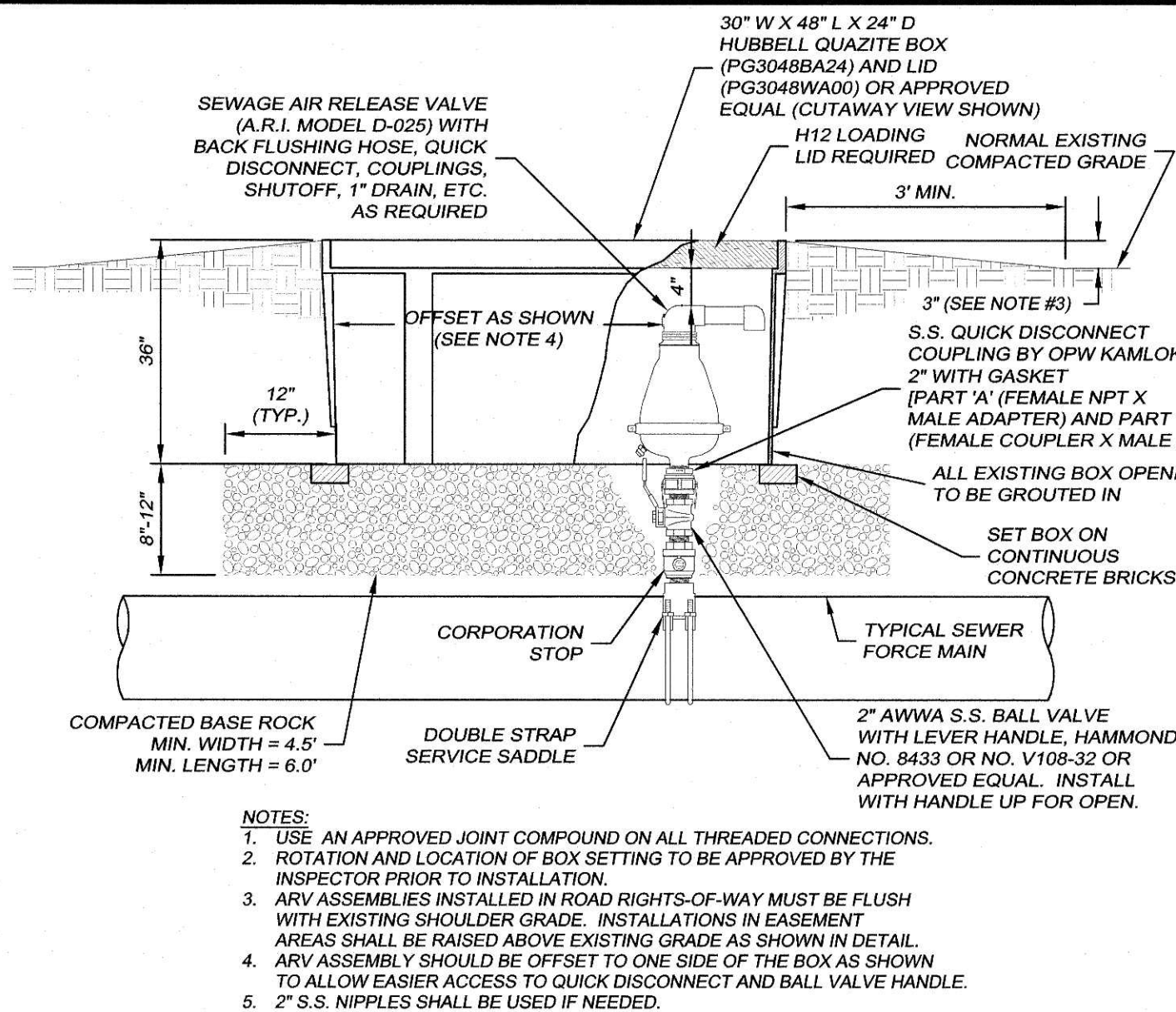
CE
STABILIZED CONSTRUCTION ENTRANCE
SCALE: N.T.S.



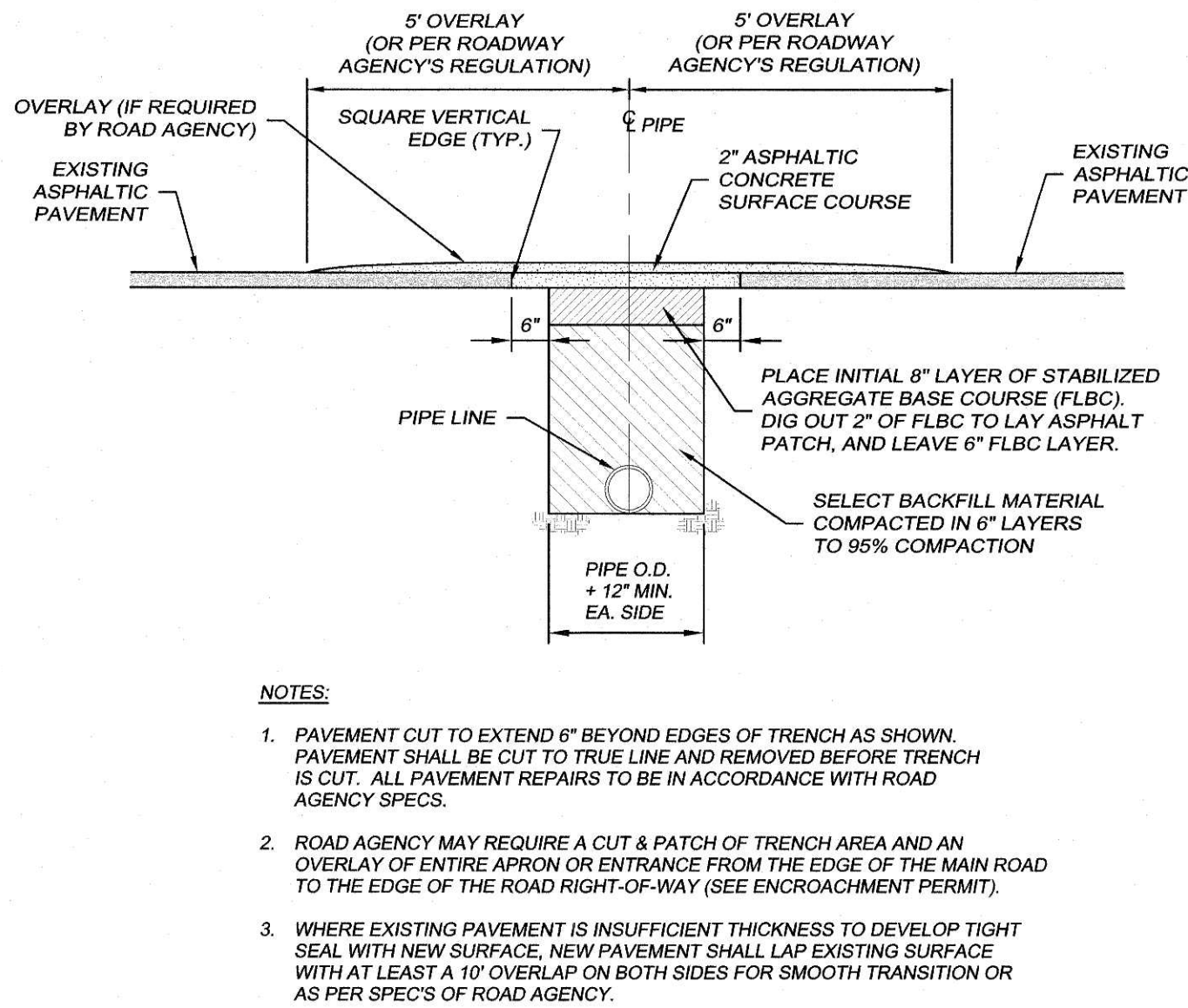
TREE PROTECTION DETAIL
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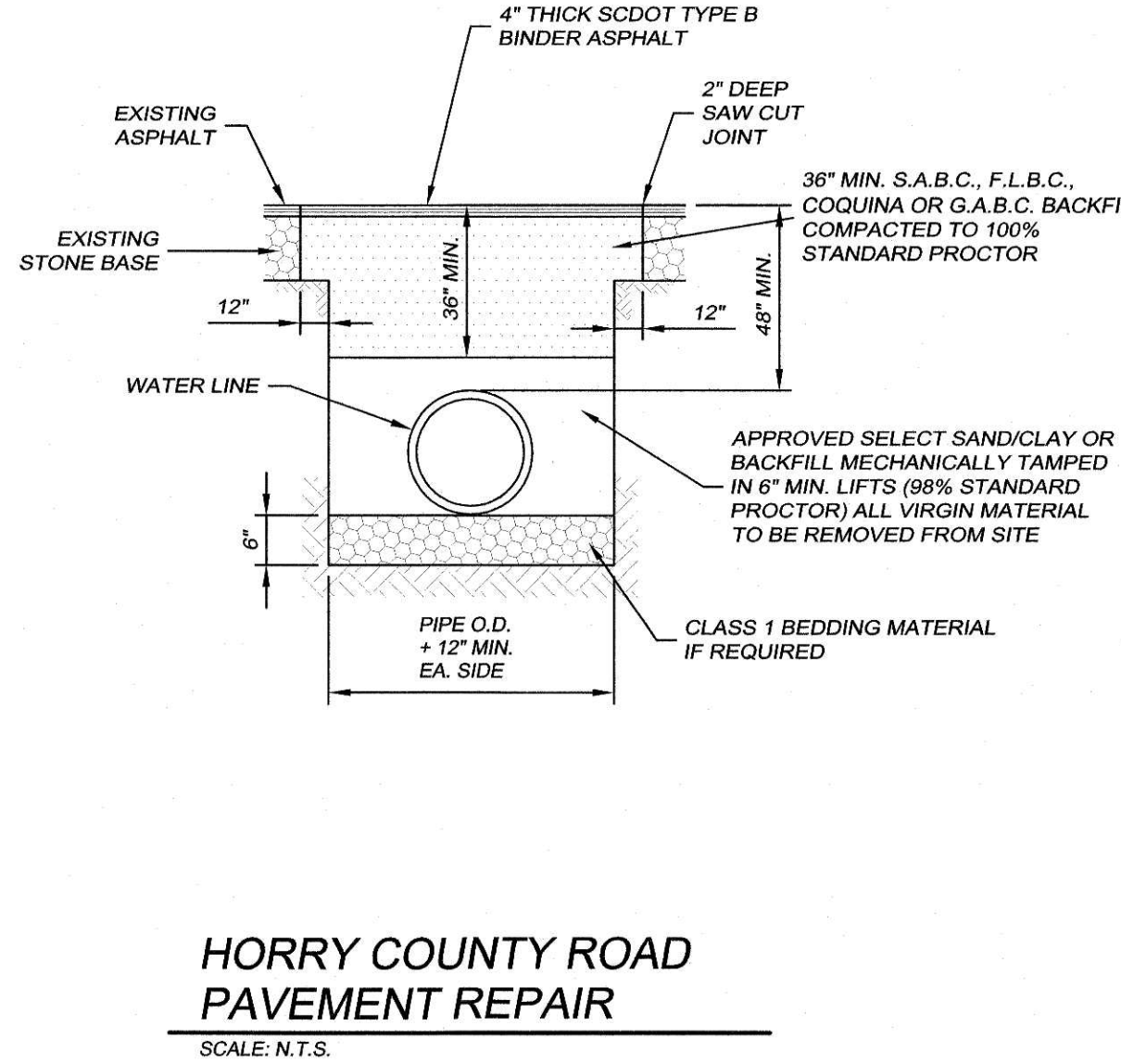
PLUG VALVE AND BOX DETAIL
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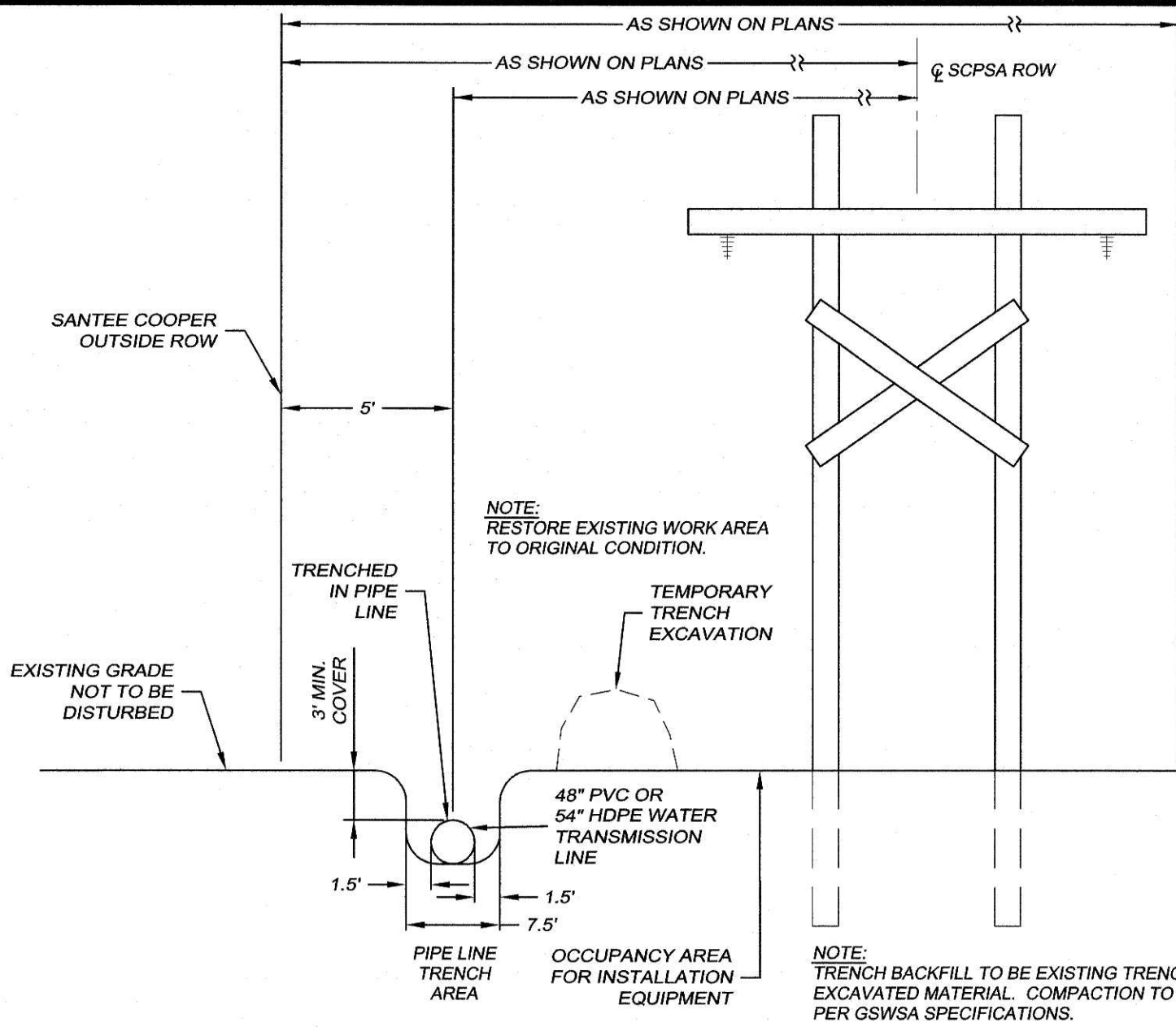
TYPICAL SEWER FORCEMAIN AIR RELEASE VALVE ASSEMBLY
SCALE: N.T.S.



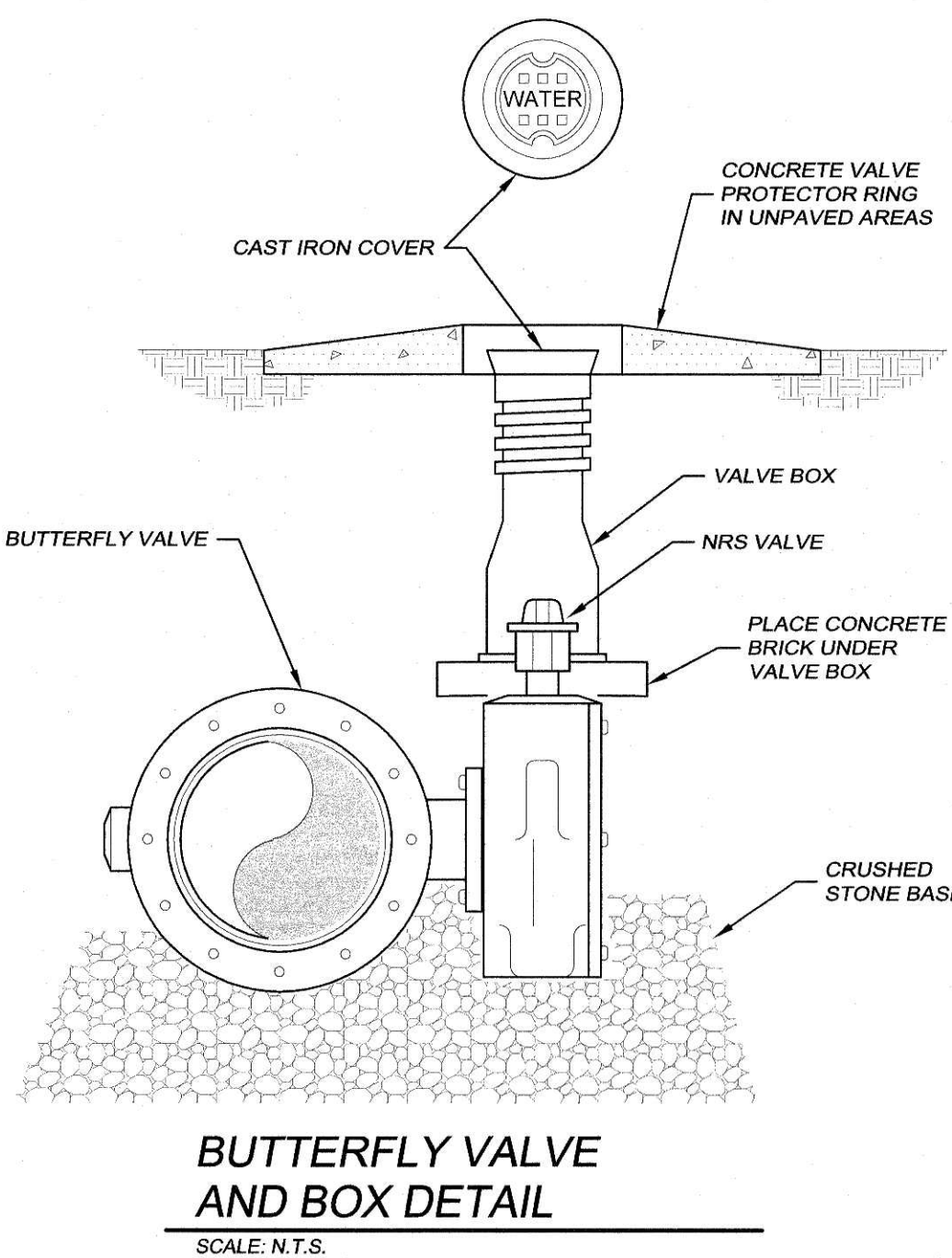
OPEN CUT REPAIR FOR LOW VOLUME ASPHALT PAVEMENT
SCALE: N.T.S.



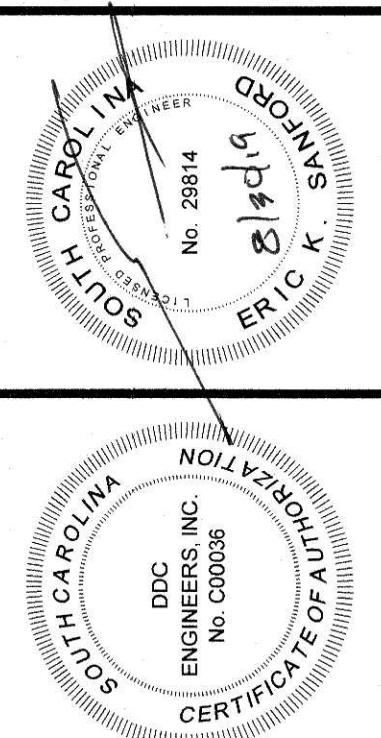
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SCALE: N.T.S.



TYPICAL TRENCH DETAIL
SCALE: N.T.S.



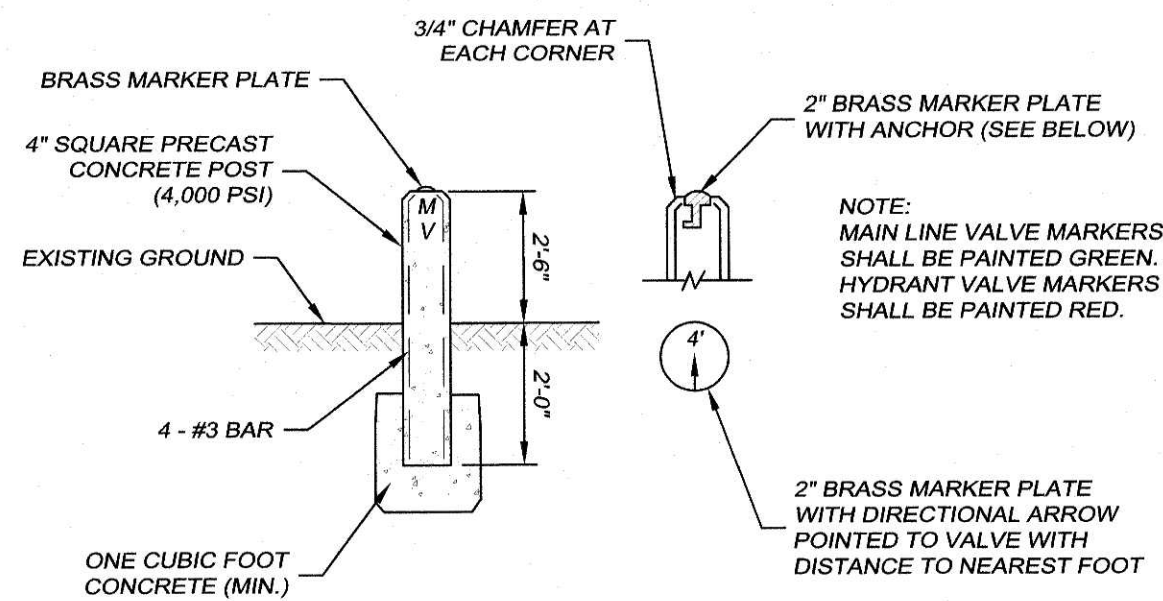
BUTTERFLY VALVE AND BOX DETAIL
SCALE: N.T.S.



NO.	DATE	REVISION DESCRIPTION	BY
1	8-14-17	REVISIONS PER GSWSA COMMENTS	PES
2	10-27-17	REVISIONS PER IN HOUSE REVIEW	PES
3	4-3-19	REVISION PER IN HOUSE REVIEW	PES
4	8/30/19	REVISED PER GSWSA COMMENTS	KJG

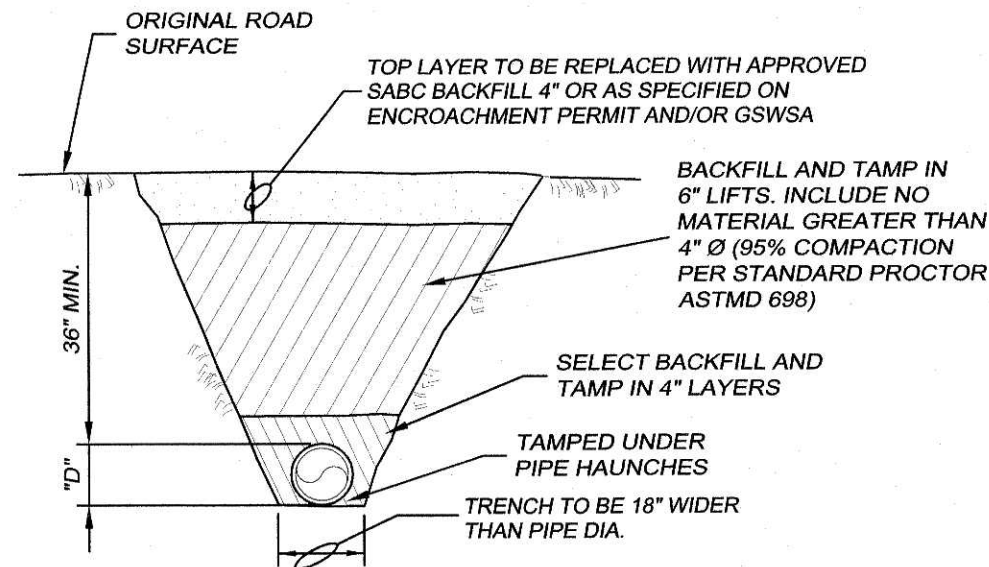
GSWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
HORRY COUNTY, SOUTH CAROLINA
PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

SCALE:	NO SCALE
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APROV. BY:	EKS
PROJECT NO.:	17010E
24	
FILE NO.:	17010E



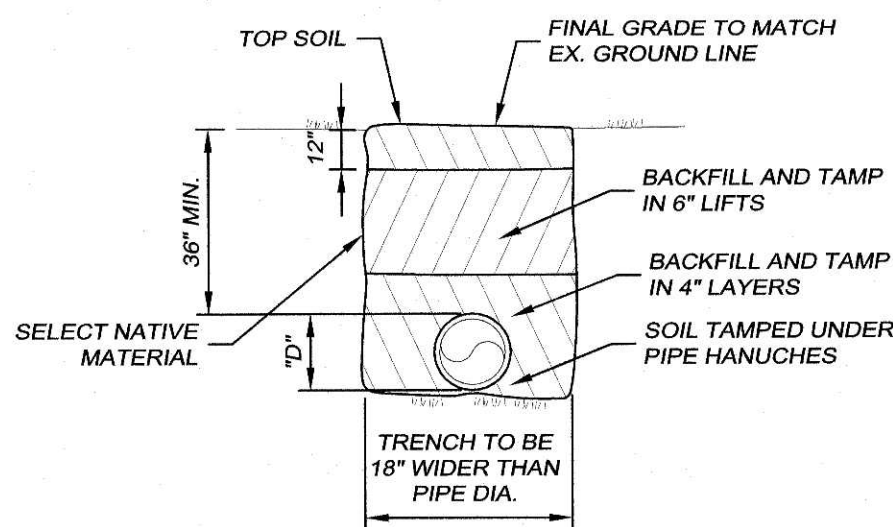
TYPICAL CONCRETE VALVE MARKER

SCALE: N.T.S.



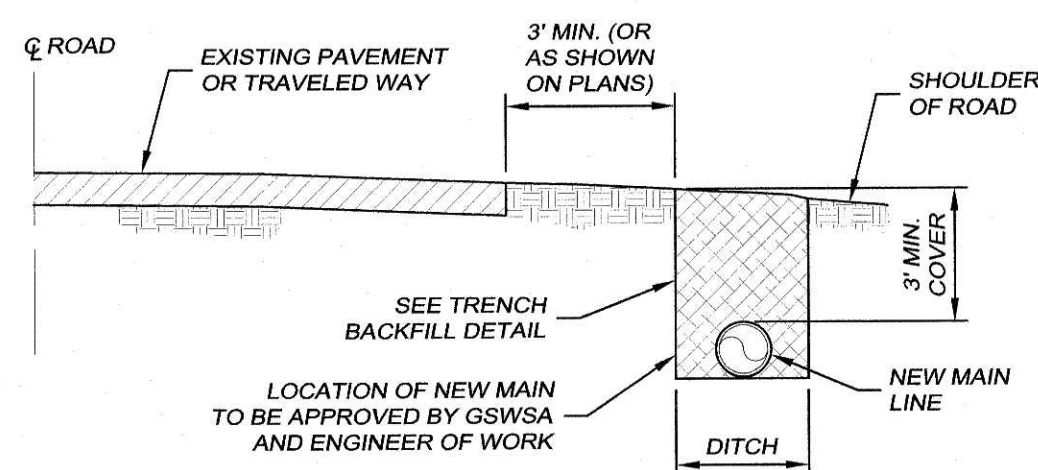
UNPAVED ROADWAY BEDDING DETAIL

SCALE: N.T.S.



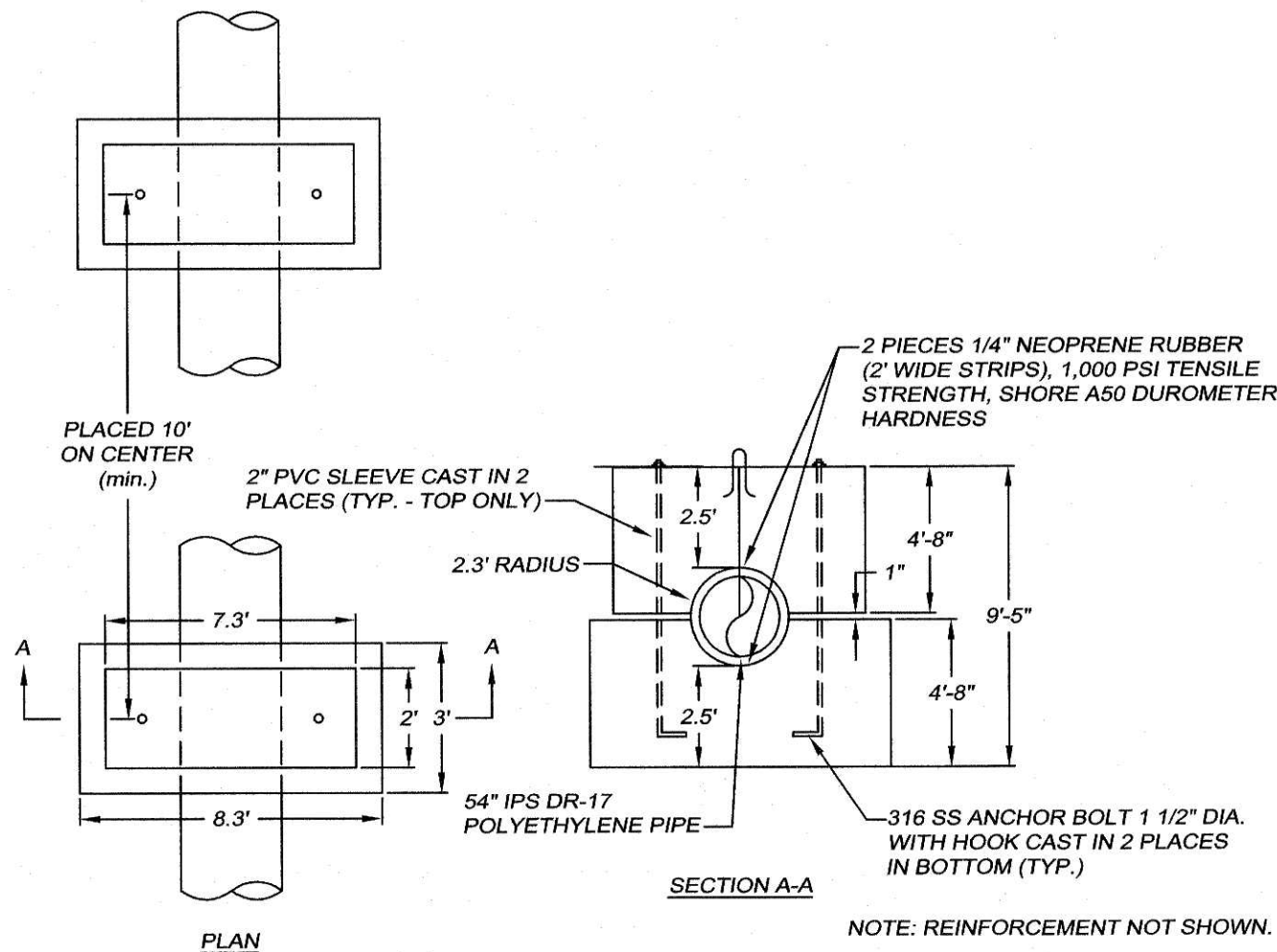
TYPICAL PIPE BEDDING DETAIL

SCALE: N.T.S.

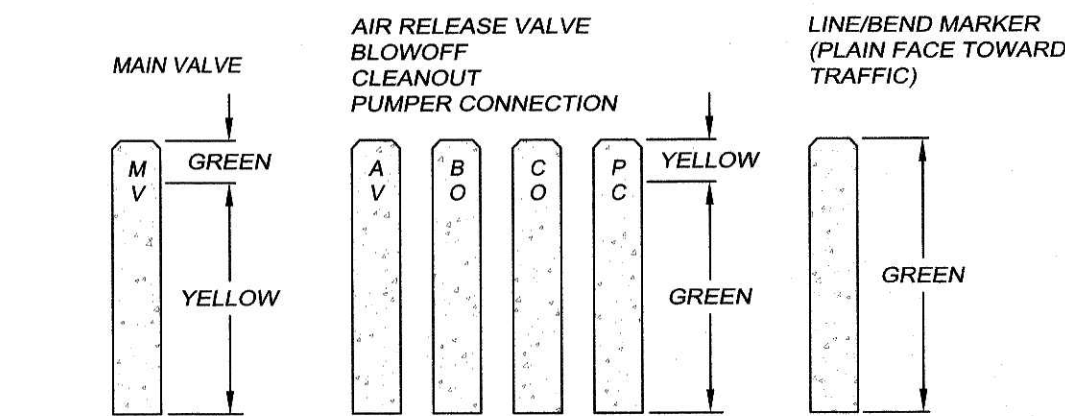


TYPICAL MAIN LINE LOCATION IN EDGE OF TRAVEL WAY

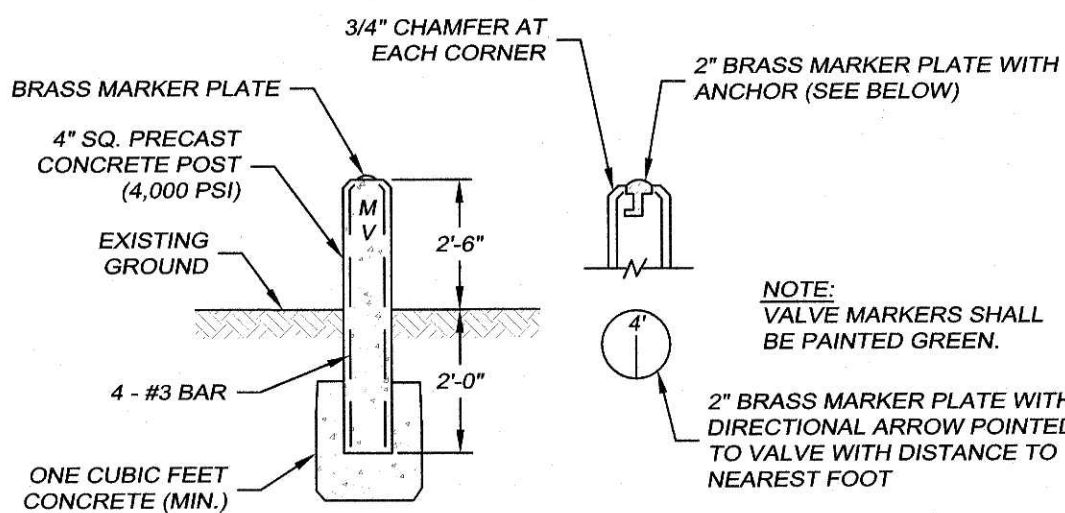
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PRECAST CONCRETE GRAVITY ANCHORS FOR POLYETHYLENE PIPE

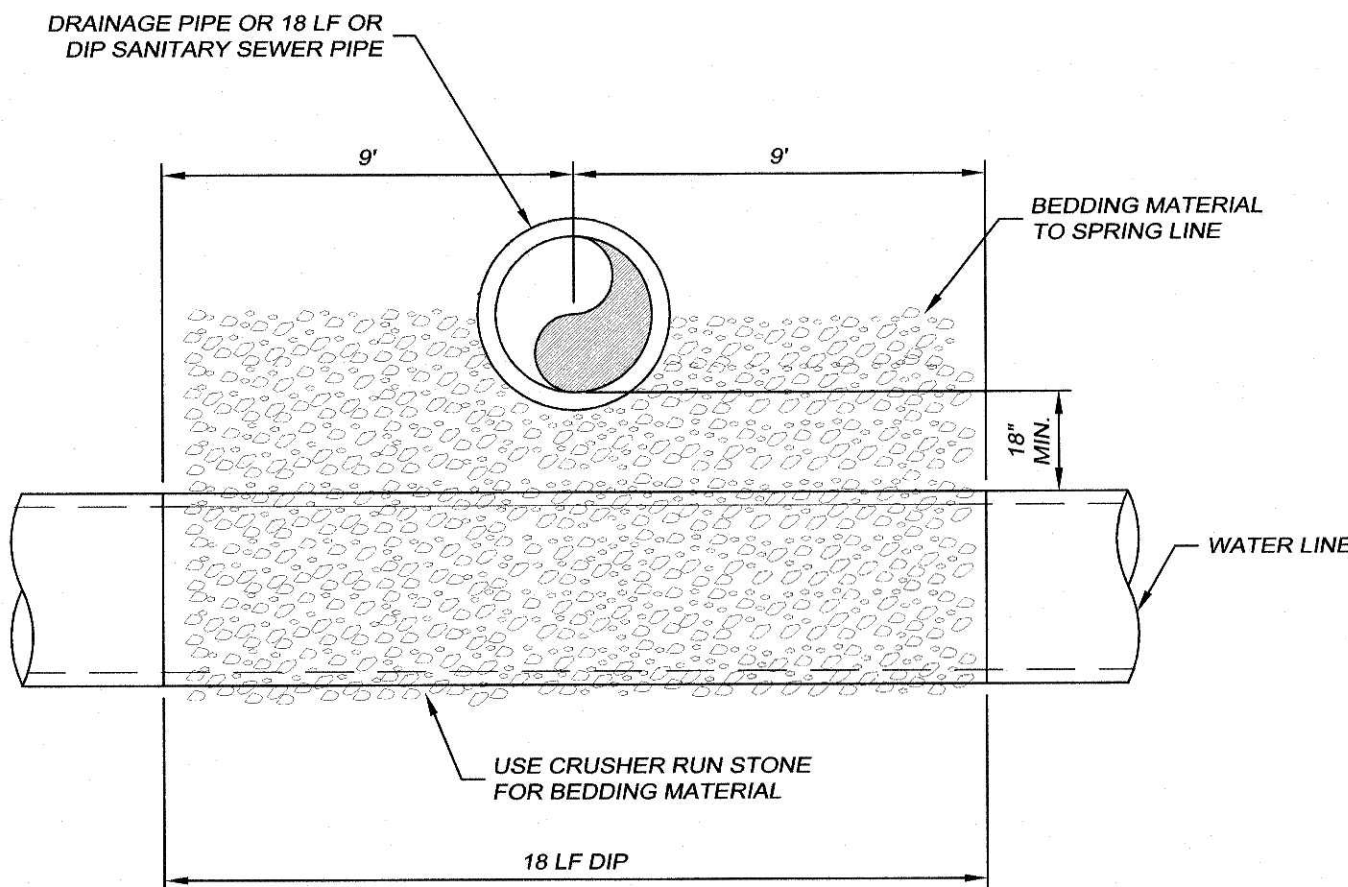


CONCRETE MARKER PAINT CODES



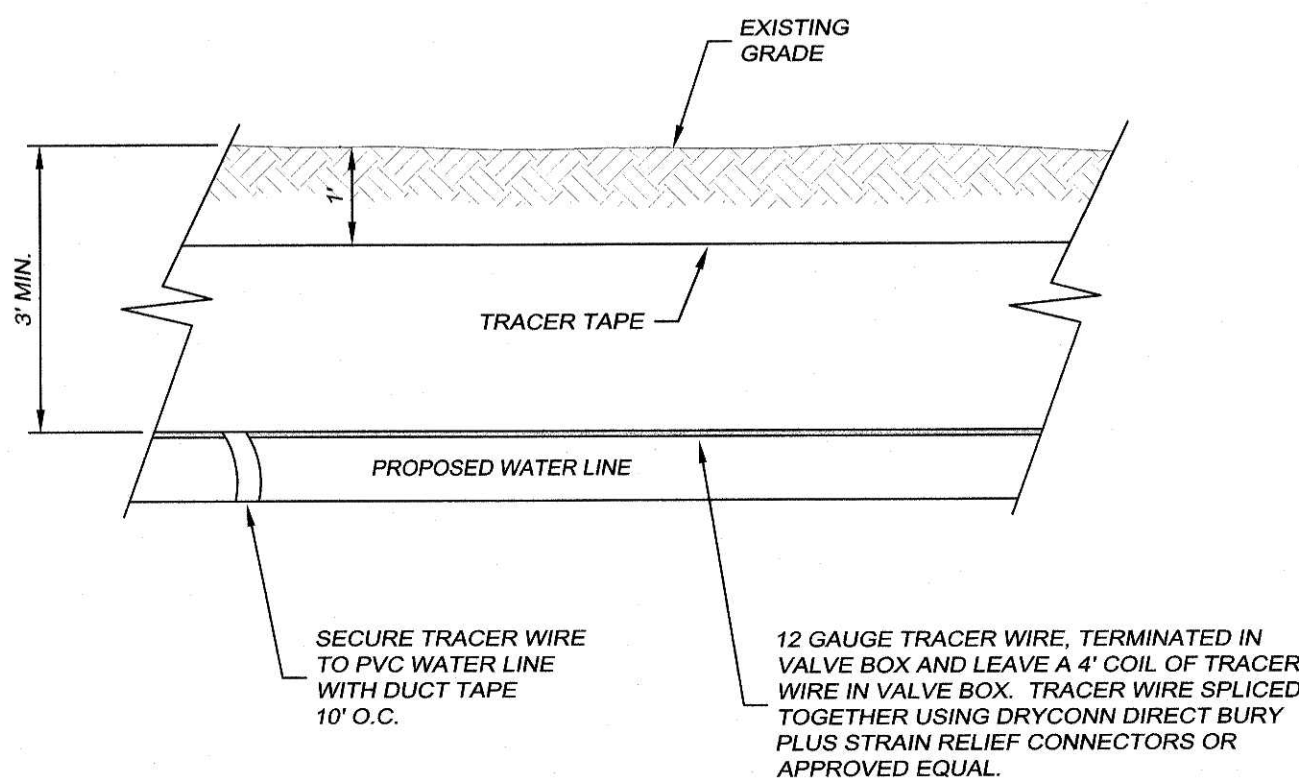
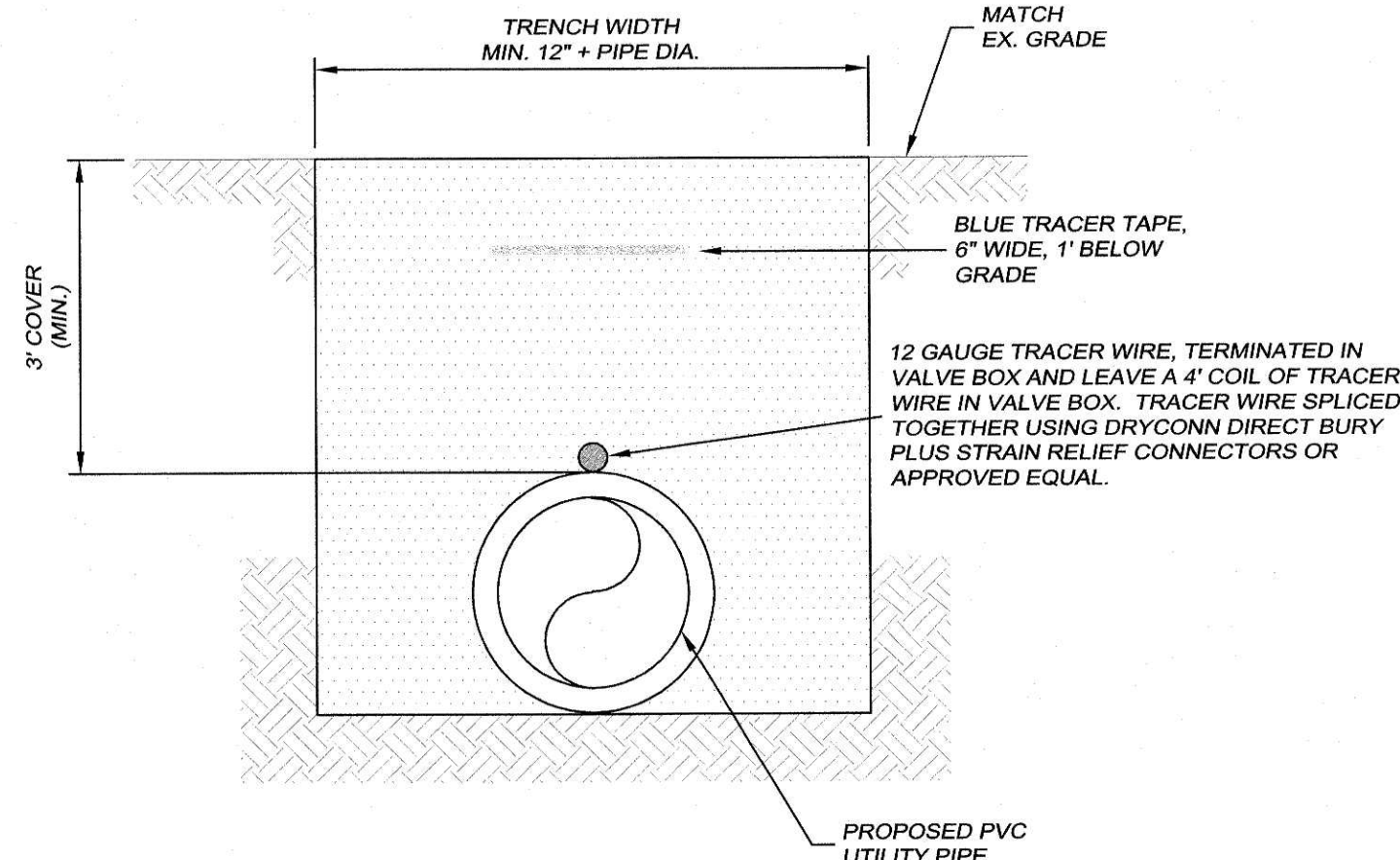
TYPICAL CONCRETE MARKERS (VALVE, ARV, BLOWOFF, CLEANOUT, PUMPER CONNECTION, LINE/BEND)

SCALE: N.T.S.



STORM DRAINAGE PIPE OR SANITARY SEWER PIPE CROSSING WATER MAIN

SCALE: N.T.S.

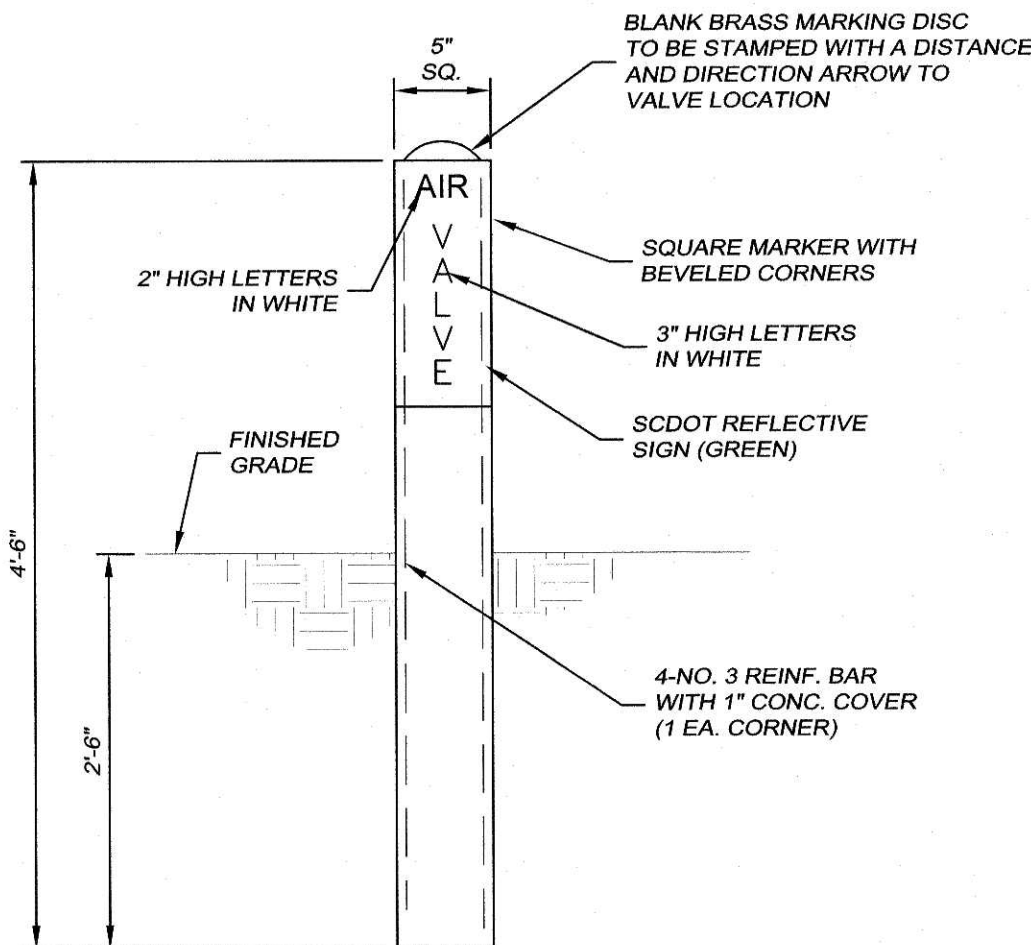


TRACER WIRE DETAIL FOR PVC PIPE

SCALE: N.T.S.

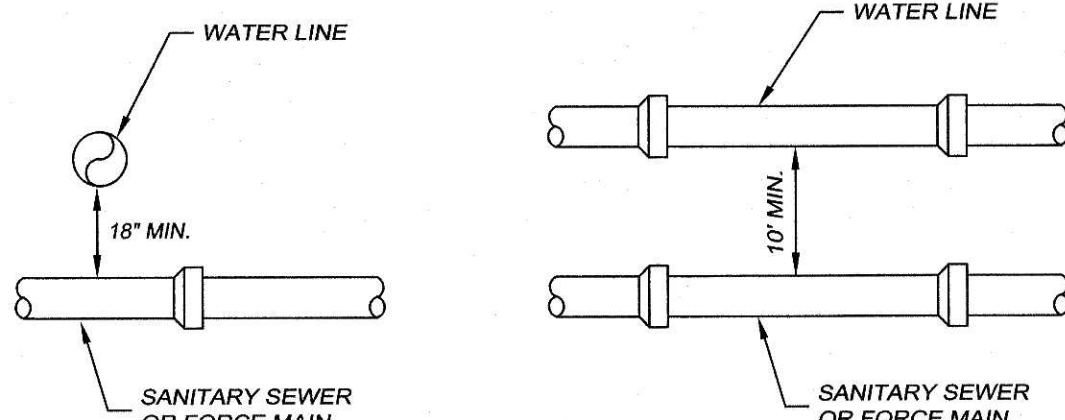
BACKFILL FOR WELDED STEEL PIPE

SCALE: N.T.S.



TYPICAL AIR RELEASE VALVE MARKER

SCALE: N.T.S.

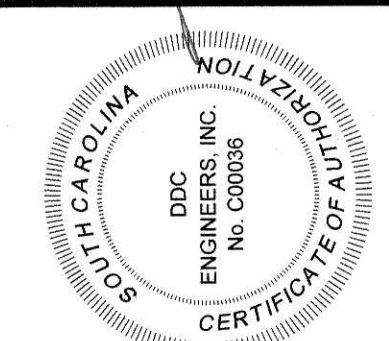
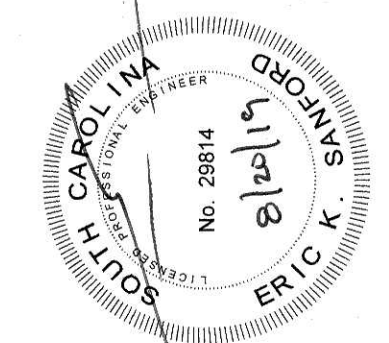


HORIZONTAL AND VERTICAL PIPE SEPARATION

SCALE: N.T.S.



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NO.	DATE	REVISION DESCRIPTION	BY
1	5/17/19	ADDED ANCHOR DETAIL	KAG
2	10-27-17	REVISIONS PER IN HOUSE REVIEW	PES
3	10-27-17	REVISIONS PER IN HOUSE REVIEW	PES

GENERAL DETAILS
GSWSA WATER LINE FROM US HWY. 701 TO SC HWY. 544
HORRY COUNTY, SOUTH CAROLINA
PREPARED FOR: GRAND STRAND WATER AND SEWER AUTHORITY

SCALE:	NO SCALE
DATE:	4-28-17
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	17010E
	26
FILE NO.:	17010E

SCALE: N.T.S.

SCALE: N.T.S.

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SCALE: N.T.S

NO	DATE	REVISION DESCRIPTION	BY
4	8/20/19	REVISED PER GSWASH COMMENTS	KJG
3	7/11/19	REVISE PIPE CONNECTION DETAIL	KJG
5	4-3-19	REVISED PER IN HOUSE REVIEW	PES
1	8-14-17	REVISED PER GSWASH COMMENTS	PES

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