Military Enhancement Fund
Grant Award Letter

SC DEPARTMENT OF VETERANS' AFFAIRS

October 7, 2025

Michael Moore
100 Ribaut Road
Post Office Drawer 1228
Beaufort, SC 29901-1228
michael.moore@bcgov.net

Re: Award of Military Enhancement Plan Grant

Dear Mr. Moore,

The South Carolina Department of Veterans' Affairs (SCDVA) is pleased to inform you that a Military Enhancement Fund Grant has been approved in the amount of $2,000,000 for the Parris Island waterline replacement.

This letter and the attached Agreement contain the terms and conditions of accepting our Grant. Please read the Agreement carefully, sign, and return no later than October 31, 2025. After we receive your signed Agreement, SCDVA will disburse your Grant funds via SCEIS. Please contact SCDVA if you require assistance in registering as a vendor in SCEIS.

The Grant funds must be used specifically for the Parris Island waterline replacement. You may submit a written request to change the scope of the Grant as described in the Agreement. Unexpended funds must be returned to the Military Enhancement Fund. You must file the attached Quarterly Accounting Report with SCDVA until all Grant funds are exhausted. If you delegate any requirements to a subawardee, you remain responsible for assuring they are completed.

If you have any questions, please do not hesitate to contact Sandy Claypoole at sandy.claypoole@scdva.sc.gov.

Sincerely,

Todd B. McCaffrey
Major General, U.S. Army (Ret)
Secretary, South Carolina Department of Veterans' Affairs

Military Enhancement Fund
Grant Award Agreement

SC DEPARTMENT OF VETERANS' AFFAIRS

This Grant Award Agreement (Agreement) is made and entered into as of **October 7, 2025**, by and between the South Carolina Department of Veterans' Affairs (SCDVA) and **Beaufort** (County).

1. Grant Amount
SCDVA agrees to grant to the County and the County agrees to accept from SCDVA a grant in the amount of **$2,000,000** from the Military Enhancement Fund.

2. Purpose of Grant
The purpose of this Grant is for the **Parris Island waterline replacement**.

3. Disbursement of Grant Funds
SCDVA will disburse the total funds of **$2,000,000** to County via SCEIS following the signing of this agreement.

4. Use of Grant Funds
The County shall use the Grant funds solely for the purpose **of the Parris Island waterline replacement**. The County shall not use the Grant funds for any other purpose. If the funds are disbursed to a subawardee, the County remains responsible for ensuring the funds are used for the **Parris Island waterline replacement**. Failure to do so may result in recoupment of the grant amount, disqualification from future Grant applications, or both.

5. Reporting Requirements
The County shall submit to SCDVA quarterly progress reports on the designated Quarterly Accounting Form. The County shall submit the Quarterly Accounting Form until such time as the Grant funds are exhausted. If the funds are disbursed to a subawardee, the County remains responsible for ensuring the Quarterly Accounting Form is submitted. Failure to do so may result in disqualification from future Grant applications.

6. Audit and Inspection Requirements
The County shall allow SCDVA, the State Auditor's Office, or any designee to audit the use of the Grant funds at any time until the Grant funds are exhausted and for a period of three years thereafter. If the funds are disbursed to a subawardee, the County remains responsible for ensuring the records are maintained. The County shall also allow SCDVA or its designee to conduct inspections of the project.

7. Grant Amendment
Awards may be amended in Scope. The County must return unexpended funds resulting from any amendment to SCDVA. SCDVA will not approve increases to the Grant amount.

8. Unexpended Funds
Any unexpended Grant funds remaining after completion of the **Parris Island waterline replacement** shall be returned to the Military Enhancement Fund. If the funds are disbursed to a subawardee, the County remains responsible for the return of unexpended funds.

9. Delegation
If Grant funds are passed through to a subawardee, you remain responsible for assuring requirements in this Agreement are met.

10. Termination
SCDVA may terminate this Grant and request the return of unspent funds if the County fails to comply with any of the terms of this Agreement, or funds are not used in the timely manner stated in the proposal.

11. Publicity
The County may publicize the Grant in recognition of Military Enhancement Fund support. SCDVA and the County may each disclose the other party's name and the amount of the Grant in internal and external communications. Neither party may use any other public communications related to the Grant without the prior written consent of the other party.

12. Governing Law
This Agreement shall be governed by and construed in accordance with the laws of the State of South Carolina.

13. Scope of Agreement
This agreement governs only the award of the Grant under the Military Enhancement Fund. This agreement does not govern any other relationships between SCDVA and the County.

14. Entire Agreement
This Agreement constitutes the entire agreement between the parties and supersedes all prior agreements, representations, and understandings between the parties, whether written or oral.

15. Severability
If any provision of this Agreement is held to be invalid or unenforceable, such provision shall be struck from this Agreement and the remaining provisions shall remain in full force and effect.

16. Waiver
No waiver of any provision of this Agreement shall be effective unless in writing and signed by both parties.

17. Notices
All notices and other communications under this Agreement shall be in writing and shall be delivered via email.
If to SCDVA: Sandy Claypoole sandy.claypoole@scdva.sc.gov

If to the County: [Name] Charlie Stone
[Email Address] charlie.stone@bjwsa.org
or to such other email address as either party may designate in writing from time to time.

18. Headings
The headings in this Agreement are for convenience only and shall not affect its interpretation.

19. Counterparts
This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date.

For SCDVA:

Signature _____

Printed Name: Todd B. McCaffrey

Title: Secretary, South Carolina Department of Veterans' Affairs

For the County:

Signature _____

Printed Name Michael R. Moore

Title County Administrator

$2,000,000

COUNTY COUNCIL OF BEAUFORT COUNTY
OFFICE OF THE COUNTY ADMINISTRATOR
ADMINISTRATION BUILDING
BEAUFORT COUNTY GOVERNMENT ROBERT SMALLS COMPLEX
100 RIBAUT ROAD
POST OFFICE DRAWER 1228
BEAUFORT, SOUTH CAROLINA 29901-1228
TELEPHONE: (843) 255-2023
FAX: (843) 255-9403
www.beaufortcountysc.gov

CHERYL H. HARRIS
EXECUTIVE ASSISTANT

MICHAEL R. MOORE
COUNTY ADMINISTRATOR

August 28, 2025

Ms. Sandy Claypoole
Military Enhancement Fund Grant Proposal
SC Department of Veteran's Affairs
1800 St. Julian Place, Ste 305
Columbia, SC 29204

RE: Military Enhancement Fund Grant Proposal: Beaufort County, $2.0 Million Request, Parris Island Waterline

Dear Ms. Claypoole:

Beaufort County requests $2.0 million towards the total of a $14.5 million project to enhance infrastructure serving Marine Corps Recruit Depot Parris Island (MCRDPI), the Eastern Recruiting Region, and other commands that make up the Tri-Command military establishment (MCAS Beaufort and Beaufort Naval Hospital). The remaining project costs will be funded locally through Beaufort-Jasper Water and Sewer Authority's capital improvement budget.

The funding will be used to replace the dual 16-inch steel water transmission mains that provide water service to Marine Corps Recruit Depot Parris Island. Additionally, the project will remove the existing pipe from the Archers Creek Bridge and bore the pipe under the creek through the horizontal directional drilling process. From July 2024 to April 2025 (10 months) the Marine Corps Recruit Depot Parris Island consumed over 175,025,000 gallons of water that traveled through these water mains. Presently, the 16" steel water main is approximately 60 to 70 years old and is reaching the end of its service life. The current state of the water line presents a risk to potable water service to Parris Island.

This rehabilitation and replacement project will result in increased military resiliency by the replacement of aged infrastructure, ensure redundancy through dual lines, and mitigate risk associated with the line exposure on the bridge. This proposal is submitted in coordination with Marine Corps Air Station (MCAS), Marine Corps Recruit Depot Parris Island (MCRDPI), Beaufort Naval Hospital (NMRTC) and Beaufort-Jasper Water & Sewer Authority.

Beaufort County appreciates the opportunity to partner with the Marine Corps Recruit Depot Parris Island (MCRDPI) for the consideration of SC Veterans' Affairs military enhancement funding. Please contact me at (843) 255-2023 or by email at michael.moore@bcgov.net should you have any questions or require additional information to satisfy your requirements.

Sincerely,

Michael R. Moore

Michael R. Moore
County Administrator

Military Enhancement Fund Grant Proposals
Effective 1 Jul 25
For fiscal year 1 Jul 25 – 30 Jun 26

The South Carolina Department of Veterans' Affairs (SCDVA) administers the Military Enhancement Plan as directed in Budget Provisos which state, "Funds appropriated to the department for the Military Enhancement Plan may be allocated to items including, but not limited to, land acquisition, recreational purposes, educational purposes, and facilities for military personnel. **Eligible recipients are counties and municipalities with federal military installations."**

Federal military installations, as defined in South Carolina Code 6-29-1625 (A), include Fort Jackson, Shaw Air Force Base, McEntire Joint National Guard Base, Joint Base Charleston, Marine Corps Air Station Beaufort, Beaufort Naval Hospital, Marine Corps Recruit Depot Parris Island, Charleston Naval Weapons Station, and Fort Gordon, GA. For the purposes of this program, US Coast Guard installations in South Carolina are also considered federal military installations, as are any subordinate federal installations of those named above.

Section One - Eligibility Criteria

The grant applicant must be one of the following counties or municipal government agencies with a federal military installation, as defined above, within or adjacent to your jurisdictional boundaries:
Richland, Sumter, Charleston, Berkeley, Dorchester, Georgetown, Beaufort, Orangeburg, Aiken, or Edgefield.

The maximum grant amount is $2,000,000.

Deadlines for proposals to be accepted for review are 1 March and 1 September.

Section Two – Application Requirements

To be considered for a grant under this program, your proposal must include the following documents and information <u>in the order it is listed below</u>. A proposal which does not meet any of the requirements below will not be considered.

A. Cover letter on the letterhead of your county or municipality with a reference line including the project name and amount requested. The letter should give a brief description of the scope of the proposal, the military installation(s) it will benefit, and whether there will be a financial match from the applicant.
B. Signed letter of support by the local installation commander(s) stating how the military installation will benefit from the proposal.
C. Detailed explanation of the proposal, and how it will enhance military value, installation resilience, or military family quality of life at the supported military installation(s) or community.
D. Detailed budget for the proposal, to include a spending timeline.
E. List of specific project objectives and how they will be achieved.
F. Timeline for completing the project to include start dates, milestones, and completion dates.
G. Independent, third-party estimate of the cost of the proposal, prepared by a qualified entity. If property is being purchased, a fair market appraisal must be included in the proposal.
H. Detailed account of any other funding source you intend to apply for in conjunction with this grant, to include source and dollar amount (if, for example, your grant proposal covers only a sub-project as part of a larger project).
I. Copy of the anti-discrimination policy of the applying county or municipality.
J. Most recent operating financial statement of the applying county or municipality.

List the **name, email and phone** contact information for the primary and alternate personnel overseeing the project.

Charlie Stone, Beaufort Jasper Water and Sewer Authority, charlie.stone@bjwsa.org, 8432265829

Primary point of contact

Jared Fralix, Beaufort County, jared.fralix@bcgov.net

Alternate point of contact

Section Three - Evaluation Criteria

Eligible grant proposals will be evaluated based on 1) its effect on mission readiness; 2) its effect on military quality of life, 3) its effect on the surrounding community; 4) its timeliness; and 5) the degree to which the costs of the project(s) are shared with other funding sources. The score sheet used for evaluating proposals, as well as this document can be found on our website at https://scdva.sc.gov/military-enhancement-fund-grants-proposals.

The Department makes every effort to fund grants at the amount requested. However, the Secretary may adjust award amounts based on the availability of funds and other considerations. **Final decision authority for awarding grants under this program rests with the Secretary of Veterans' Affairs.**

Section Four - Agreement Statement

If awarded a grant, I agree to provide to the South Carolina Department of Veterans' Affairs quarterly reports, detailing how all grant funds were spent to date and the progress on achieving the objectives defined in the grant proposal. I am aware the information provided in my report will be reviewed by the Senate Finance Committee and the House Ways and Means Committee and is subject to audit by the State Auditor. Additionally, I agree to provide the South Carolina Department of Veterans' Affairs additional reports and supporting documents as may be required, and to allow the South Carolina Department of Veterans' Affairs or its designee to conduct inspections of the project.

Michael R. Moore

Signature of Applicant

8/28/25

Date

Michael R. Moore

Name of Applicant

$2,000,000

Amount of Proposal Request

County Administrator

Title of Applicant

michael.moore@bcgov.net

Email Address

Section Five - Administrative Instructions

Send completed proposals to MEF@scdva.sc.gov no later than the application closing date. If you have not received a confirmation of receipt of your application within 3 business days, contact Sandy Claypoole at 803-683-1361 or Jason Fowler at 803-683-0242.

UNITED STATES MARINE CORPS
MARINE CORPS RECRUIT DEPOT/EASTERN RECRUITING REGION
PO BOX 19001
PARRIS ISLAND, SOUTH CAROLINA 29905-9001

11000
G-4

From: Commanding General
To: Ms. Sandy Claypool, Military Enhancement Fund Grant Approval, South Carolina Department of Veterans Affairs

Subj: BEAUFORT JASPER WATER/SEWER AUTHORITY - MARINE CORPS RECRUIT DEPOT PARRIS ISLAND WATER LINE REPLACMENT

1. I am writing to extend our Installation's enthusiastic endorsement of the Beaufort Jasper Water Sewer Authority (BJWSA) initiative to replace the two (2), 16-inch water lines that service the Marine Corps Recruit Depot Parris Island, SC (MCRDPI). The proposed improvements are vital to the daily mission of the MCRDPI as well as the associated Eastern Recruiting Region, other commands in the Tri-Command area, and numerous joint-service commands within the Southeastern United States. This project is case exemplar for the South Carolina Veteran's Affairs Military Enhancement Funding and will mitigate the risk associated with aging critical infrastructure, ensure redundancy, improve reliability and the quality of water service to the Depot.

2. Based on the opinion of assembled experts, to include Beaufort County and BJWSA, the water line, which is critical to providing potable water to MCRDPI, is nearing end-of-life. Indications of age-related challenges are evident. From July 2024 to April 2025 (10 months) the MCRDPI consumed over 175,025,000 gallons of water that traveled through these water lines. Should this infrastructure operate less efficiently or fail, it would result in a severe mission degradation and imperil the Installation's ability to support numerous other commands placing lives, readiness, and mission effectiveness at risk.

3. As the Marine Corps', Strategic Platform for Force Generation, MCRDPI is responsible for producing roughly 50% of the entire United States Marine Corps (USMC) enlisted, entry-level throughput at approximately 18,000 basically trained Marines, annually. The impacts of water interruption, capacity, and capability would severely challenge Parris Island's ability to carry out the Recruiting and Recruit Training missions of "making Marines". A degradation in water availability would jeopardize nearly every integral step within the 13 weeks of training Recruits and Permanent Party Personnel experience at the Depot. Further, MCRDPI would not be capable of hosting over 160,000 visitors who participate across 40+, weekly graduation events throughout a given year. Additionally, MCRDPI would be challenged in supporting approximately 350 other groups that visit the Depot to understand the recruiting or training aspect of the USMC enlisted, entry-level experience. While not aggressively advertised, the Depot supports the Joint Force, leveraging its expansive training areas often on short notice, and this too would be negatively impacted. Finally, the Depot possesses taxpayer appropriated and non-appropriated facilities that support the area's nearly 30,000 United States Department of Veterans Administration beneficiaries, and any degradation in either water or sewer services would severely impact this cohort and place them at significant imposition.

Subj: BEAUFORT JASPER WATER/SEWER AUTHORITY - MARINE CORPS RECRUIT DEPOT PARRIS ISLAND WATER LINE REPLACMENT

4. My point of contact for this matter is our Public Works Officer, CDR Heather Hess, at either heather.m.hess.mil@usmc.mil or 843-228-3371.

M. F. ARNONE
Chief of Staff

Copy to:
Files
AC/S G-1
AC/S G-4

UNITED STATES MARINE CORPS
MARINE CORPS AIR STATION
BEAUFORT, SOUTH CAROLINA 29904-5001

IN REPLY REFER TO:
11000
CO
15 Aug 25

From: Commanding Officer, Marine Corps Air Station Beaufort
To: Secretary, South Carolina Department of Veterans Affairs (Attn: Ms. Sandy Claypool)

Subj: MARINE CORPS AIR STATION BEAUFORT SUPPORT LETTER FOR BEAUFORT-JASPER WATER SEWER AUTHORITY MILITARY ENHANCEMENT FUND GRANT PROPOSAL (PARRIS ISLAND WATERLINE PROJECT)

1. Marine Corps Air Station (MCAS) Beaufort extends its strongest support for Beaufort-Jasper Water and Sewer Authority's (BJWSA) proposed project to replace the water line serving the Marine Corps Recruit Depot Parris Island (MCRDPI). Any project that benefits the personnel that work and serve aboard MCRDPI directly benefits MCAS Beaufort personnel. Specifically, MCAS Beaufort provides all law enforcement and Marine Corps Community Services functions aboard MCRD Parris Island. Additionally, MCAS leverages dental, housing, Marine Corps Community Service, childcare, Commissary and training supported by MCRD Parris Island. In short, the success and reliability of functions at MCRD Parris Island is directly linked to the success of MCAS Beaufort. MCAS Beaufort believes this vital project is a premier example of critical infrastructure that directly supports the Tri-Command's military operational readiness and must be prioritized.

2. Based on the opinion of assembled experts to include Beaufort County and BJWSA, the Parris Island waterline, which is critical infrastructure to providing potable water to MCRDPI, is nearing end-of-life. Indications of age-related challenges are evident. From July 2024 to April 2025 (10 months) MCRDPI consumed over 175,025,000 gallons of water that traveled through these water lines. Should this infrastructure operate less efficiently or fail, it would result in a severe mission degradation and MCRDPI's ability to support numerous other commands would be imperiled. Obviously, this would place lives, readiness, and mission effectiveness at risk.

3. MCAS Beaufort is fully supportive of NJWSA and its South Carolina Vetarans Affairs Military Enhancement Grant application. Please do not hesitate to reach out if you have any questions or if we can provide additional information on the significant impact of this project.

4. My point of contact for this matter is the Director, Government and External Relations, Mr. David J. Trail at (843) 228-7119 or david.j.trail@usmc.mil.

C. E. LYON
Acting

Copy to:
BJWSA
File
S-7

DEPARTMENT OF THE NAVY
NAVY MEDICINE READINESS AND TRAINING COMMAND
NAVAL SUPPORT FACILITY
1 PINCKNEY BOULEVARD
BEAUFORT, SOUTH CAROLINA 29902-6148

IN REPLY REFER TO:
11330
Ser 00CO/25277a
Ser 00CO/25078a

JUL 3 1 2025

Sandy Claypool
Military Enhancement Fund Grant Proposal
South Carolina Department of Veterans Affairs
1800 St. Julian Place, Ste 305
Columbia, SC 29204

Dear Ms. Claypool:

Subj: MARINE CORPS RECRUIT DEPOT PARRIS ISLAND WATERLINE PROJECT

Naval Support Facility (NSF) and Navy Medicine Readiness and Training Command (NMRTC) Beaufort fully endorses the Beaufort-Jasper Water and Sewer Authority's (BJWSA) subject project. NSF and NMRTC Beaufort understand the existing facilities are aged and at risk of meaningful degradation or failure. For this reason, the existing water supply lines require replacement. The existing water supply lines are affixed to the underside of the Berkeley Bridge. The proposed replacement will place the water lines underground below Archer's Creek. These new water lines will use contemporary piping which ensures reliability regardless of environmental conditions.

Fully functioning operations at the Marine Corps Recruit Depot Parris Island (MCRD PI) is vital to the mission of the NMRTC Beaufort. Specifically, NMRTC Beaufort provides all medical support to MCRD PI which includes 17,000 recruits and an additional 5,000 permanent personnel. Further, MCRD PI is the location that supports housing, medical, dental, Marine Corps Community Services, childcare, commissary, and training for those assigned to NMRTC Beaufort. Anything less than full functionality of MCRD PI places NMRTC's mission and support for its personnel at risk.

Given the importance of this matter, I have assigned LT Dallas A. Dunbar III as my point of contact. Please feel free to reach out to him at (843) 228-5280 or email dallas.a.dunbar.mil@health.mil.

Sincerely,

B. J. LIMTIACO
Captain, Nurse Corps
U.S. Navy
Acting

Copy to:
Central Files
NSF Files

Grant: SC Department of Veteran Affairs Military Enhancement Plan

A detailed written explanation of the proposal, to include the following:

C. *A detailed explanation of how the proposal will enhance military value, military installation resilience, or military family quality of life at the supported military installations or military community.*

The mission of Marine Corps Recruit Depot Parris Island is to 'make Marines by recruiting quality young men and women and transforming them through the foundations of rigorous basic training, our shared legacy, and a commitment to our core values, preparing them to win our nation's battles in service to the country.' MCRD Parris Island is responsible for producing roughly 50% of the entire US Marine Corps enlisted entry level throughput at approximately 18,000 annually. The training and readiness of these Marines is dependent upon reliable water to the base, training classrooms, athletic facilities, combat training facilities and support services. ***Presently, the only water provider to Parris Island is Beaufort-Jasper Water and Sewer Authority (BJWSA). Parris Island is served by redundant parallel 16-inch waterlines that are the subject of the proposed project.*** BJWSA and Parris Island have identified CIP-2305 Parris Island 16-inch Steel Water Transmission Main Replacement as a high priority project. The 16" steel water main was installed sometime in the late 1950's to early 1960's. The pipe is approximately 60 to 70 years old, and is reaching the end of its service life. On average, BJWSA's Field Operations has to respond to small leaks twice a year due to the deterioration of the pipe. The coating on the pipe is missing and failing in multiple locations, which has caused further deterioration of the pipe. The scope of the project includes replacing the existing 16" steel water main that provides water service to Parris Island. The length is approximately 14,150 linear feet and is routed along existing earthen fill causeways accessing the facility. A Horizontal Directional Drill (HDD) crossing of Archers Creek is also included for this project. The HDD will be approximately 1,000 feet along the up and downstream sides of the bridge (2,000 feet total) to allow for the redundant 16" water mains to be removed from service that are currently attached to Archers Creek Bridge. The subject existing water main is one of two parallel 16" mains that provide service to Parris Island. Two mains are provided for redundancy in supply as it is critical that water supply to the facility is not interrupted.

Without the proper water infrastructure, the MCRD Parris Island can not function effectively and accomplish the core mission of training our Nation's recruits. The Parris Island waterline project will ensure the necessary infrastructure and enhance current/future mission capabilities as well as operational readiness of DODs total force. Additionally, during extreme weather events, such as Hurricane Helene in September of 2024, the exposed waterlines on the bridge were at an increased level of risk. Boring the waterline under Archer's Creek through the HDD process will assist in risk mitigation. The absence of the proposed community infrastructure project degrades military value at three military installations by allowing a potential for line failure and the unavailability of drinking water to Parris Island. Should the waterlines fail, potable water and fire protection flows to the installation would be in dire jeopardy, placing lives, readiness, daily operations and national security at risk. The impacts of water interruption, capacity, and capability would severely diminish Parris Island's ability to carry out the recruiting mission and graduate marines. A lack of water would jeopardize nearly every integral step within the 13 weeks of training that Marines experience at Parris Island. Training facilities where new Marines learn history, customs, first aid, and other valuable skills are reliant upon the Parris Island waterlines. The swimming pools where recruits face their first graduation requirement is dependent on water from the Parris Island waterlines. The water

E. List of specific project objectives and how they will be achieved.

The objectives and goals of the grant project are:

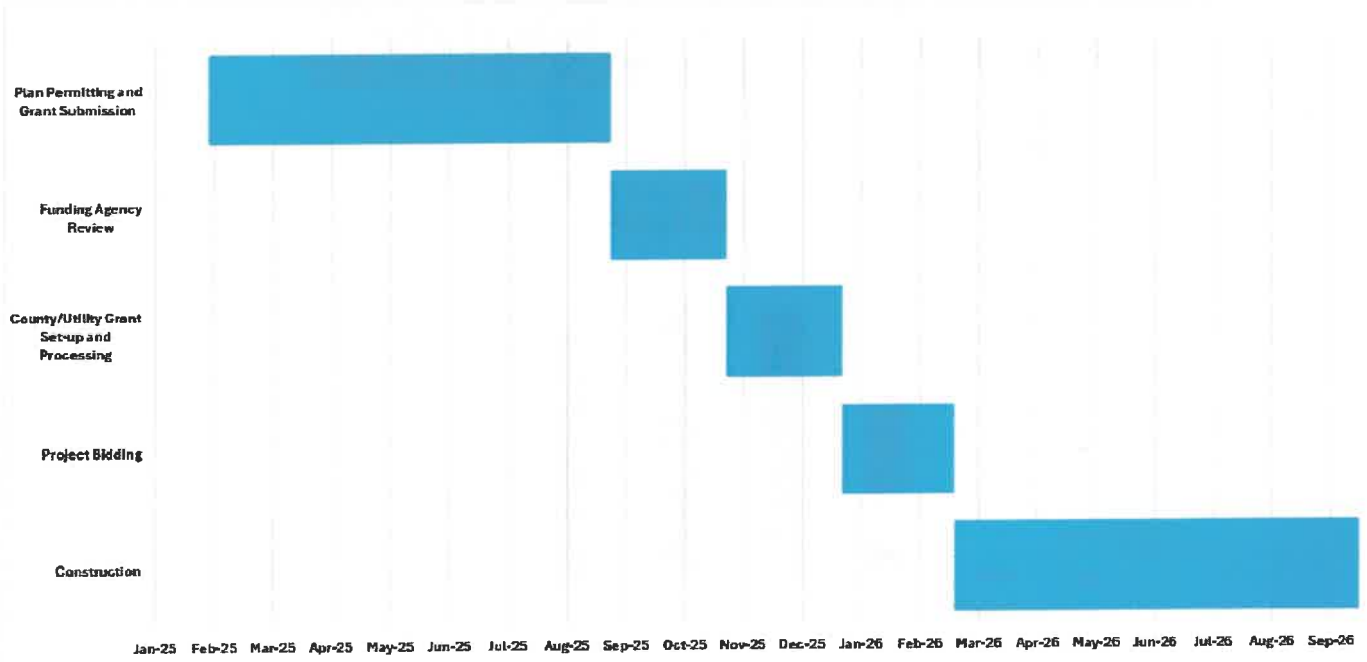
1. Replace 14,150 linear feet of the existing 16" steel water main.
2. Decommission the existing watermain on the Archers Creek Bridge.
3. Complete 1,000 foot horizontal directional drill crossing at Archer Creek on up and downstream sides of bridge.

The objectives will be achieved through the completion of the capital project. The end result will be a new 16" steel water main that provides water service to Parris Island and the 16'' waterline removed from the Archers Creek bridge with boring completion under Archers Creek.

F. A timeline for completing the project(s) associated with the proposal, to include start dates, milestones, and completion dates.

BJWSA has retained KCI to design the replacement of the existing 16" steel water main that provides water service to Parris Island. The length is approximately 14,150 linear feet and is routed along existing earthen fill causeways accessing the facility. A Horizontal Directional Drill (HDD) crossing of Archers Creek is also included for this project. The HDD will be approximately 1,000 feet along the up and downstream sides of the bridge (2,000 feet total) to allow for the redundant 16" water mains to be removed from service that are currently attached to Archers Creek Bridge. **Currently, the project is in the final stages of permitting at 60%. All permits will be secured by September 2025. Dependent upon funding agency review, construction completion is projected by October 2026.**

The anticipated project timeline is as follows:



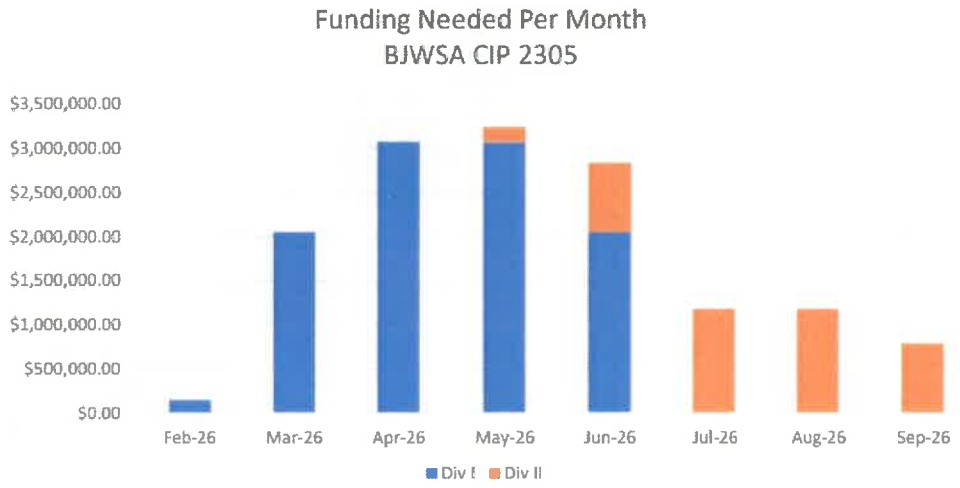
that Marines drink after completing the final step and becoming a U.S. Marine – 'the Crucible' – comes from the Parris Island waterlines. If the waterline improvements do not occur, then these are in jeopardy. In addition, the waterline improvements enhance military quality of life by supporting mission enablers such as schools, local governmental agencies, gyms, movie theatres and other recreational activities that are found on base at Parris Island. These mission enablers are absolutely essential to Marine Corps Air Station Beaufort, Beaufort Naval Hospital, and the 30,000 US Department of Veterans Administration beneficiaries. Likewise, MCRD Parris Island maintains a public-facing imperative and hosts nearly 160,000 visitors, annually, from across the country and distant points throughout the world. Additionally, MCRD Parris Island is also the home of the ERR and is responsible for about 50% of all Enlisted and Officer accessions. MCRD Parris Island also supports over 29,000 Beaufort County Veterans and their beneficiaries through support services. In short, impacts from any interruption in water capacity and capability would be significant and immediate.

D. Detailed budget for proposal, to include a spending timeline.

Beaufort Jasper Water and Sewer Authority
CIP 2305 - Parris Island 16-Inch Waterline Replacement
KCI No. 00030337
Spending Per Month Based on 60% Plans Opinion of Cost
Date: 07/11/25

KCI TECHNOLOGIES
ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS

Invoice Month	Payment Month	Div I	Div II	Total
Jan-26	Feb-26	$145,741.79	$0.00	$145,741.79
Feb-26	Mar-26	$2,051,201.64	$0.00	$2,051,201.64
Mar-26	Apr-26	$3,076,802.46	$0.00	$3,076,802.46
Apr-26	May-26	$3,076,802.46	$168,216.40	$3,245,018.87
May-26	Jun-26	$2,051,201.64	$786,006.72	$2,837,208.36
Jun-26	Jul-26	$0.00	$1,179,010.08	$1,179,010.08
Jul-26	Aug-26	$0.00	$1,179,010.08	$1,179,010.08
Aug-26	Sep-26	$0.00	$786,006.72	$786,006.72
		$10,401,750.00	$4,098,250.00	$14,500,000.00



G. Independent, third party estimate of the cost of the proposal, prepared by a qualified entity.

Beaufort Jasper Water and Sewer Authority
CIP 2305 - Parris Island 16-Inch Waterline Replacement
KCI No. 00030337
60% CIPP Opinion of Probable Cost
Date: 07/11/25

KCI TECHNOLOGIES
ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS

	Division 1				
1	Mobilization	1	LS	$65,000.00	$ 65,000.00
2	Bonds / Insurance	1	LS	$50,000.00	$ 50,000.00
3	Sediment and Erosion Control	1	LS	$8,000.00	$ 8,000.00
4	16" Cured-In-Place Pipe (CIPP)	12,200	LF	$650.00	$ 7,930,000.00
5	Existing Water line Connection	4	EA	$5,000.00	$ 20,000.00
6	Asphalt Road Patch	85	SY	$55.00	$ 4,675.00
7	Non-Construction Cost	1	LS	$130,000.00	$ 130,000.00
8	Contingency	1	LS	$2,194,075.00	$ 2,194,075.00
	Division 1 Total Estimated Cost				**$ 10,401,750.00**
	Division 2				
1	Mobilization	1	LS	$100,000.00	$ 100,000.00
2	Bonds / Insurance	1	LS	$35,000.00	$ 35,000.00
3	Sediment and Erosion Control	1	LS	$12,000.00	$ 12,000.00
4	16" HDD (C-900 Fusible PVC)	2,000	LF	$1,500.00	$ 3,000,000.00
5	16" PVC	150	LF	$200.00	$ 30,000.00
6	16" Butterfly Valve	4	SY	$15,000.00	$ 60,000.00
7	Non-Construction Cost	1	LS	$52,000.00	$ 52,000.00
8	Contingency	1	LS	$809,250.00	$ 809,250.00
	Division 2 Total Estimated Cost				**$ 4,098,250.00**
	Total Estimated Cost:				**$ 14,500,000.00**

H. Detailed account of any other funding source you intend to apply for in conjunction with this grant, to include source and dollar amount.

$2.0 M request is being made of South Carolina Veteran's Affairs. No other grants are being applied for in addition to this. The remaining project costs of $12.5 M will be funded entirely through Beaufort Jasper Water and Sewer Authority's board approved capital improvement program.

SECTION 1 - INTRODUCTION

1.1 Equal Employment Opportunity

Beaufort County is an Equal Opportunity Employer that does not discriminate on the basis of actual or perceived race, color, creed, religion, national origin, ancestry, citizenship status, age, sex or gender (including pregnancy, childbirth, pregnancy-related conditions and lactation), gender identity or expression (including transgender status), sexual orientation, marital status, military service and veteran status, physical or mental disability, genetic information, or any other characteristic protected by applicable federal, state or local laws and ordinances. Beaufort County's management team is dedicated to this policy with respect to recruitment, hiring, placement, promotion, transfer, training, compensation, benefits, employee activities, access to facilities and programs and general treatment during employment.

Beaufort County will endeavor to make a reasonable accommodation of an otherwise qualified applicant or employee related to an individual's physical or mental disability, sincerely held religious beliefs and practices, and/or any other reason required by applicable law, unless doing so would impose an undue hardship upon Beaufort County's business operations.

Any applicant or employee who needs an accommodation in order to perform the essential functions of the job should contact Human Resources to request such an accommodation. The individual should specify what accommodation is needed to perform the job and submit supporting documentation explaining the basis for the requested accommodation, to the extent permitted and in accordance with applicable law. Beaufort County then will review and analyze the request, including engaging in an interactive process with the employee or applicant, to identify if such an accommodation can be made. Beaufort County will evaluate requested accommodations, and as appropriate, identify other possible accommodations, if any. The individual will be notified of Beaufort County's decision regarding the request within a reasonable period. Beaufort County treats all medical information submitted as part of the accommodation process in a confidential manner.

Any employees with questions or concerns about equal employment opportunities in the workplace are encouraged to bring these issues to the attention of the Human Resources Department. Beaufort County will not allow any form of retaliation against individuals who raise issues of equal employment opportunity. If employees feel they have been subjected to any such retaliation, they should contact the Human Resources Director immediately. To ensure our workplace is free of artificial barriers, violation of this policy including any improper retaliatory conduct will lead to discipline, up to and including discharge. All employees must cooperate with all investigations conducted pursuant to this policy.

1.2 Employment At-Will

Employees may leave employment at any time with or without a reason. Likewise, the County reserves the right to terminate any employee at any time with or without reason.

1.3 Anti-Harassment Policy

It is Beaufort County's policy to prohibit intentional and unintentional harassment against job applicants, contractors, interns, volunteers or employees by another employee, supervisor, vendor, customer or any third party on the basis of actual or perceived race, color, creed, religion, national origin, ancestry, citizenship status,

age, sex or gender (including pregnancy, childbirth and pregnancy-related conditions), gender identity or expression (including transgender status), sexual orientation, marital status, military service and veteran status, physical or mental disability, genetic information or any other characteristic protected by applicable federal, state or local laws (referred to as "protected characteristics"). Such conduct will not be tolerated by Beaufort County.

The purpose of this policy to ensure that no one harasses another individual in the workplace, including while on Beaufort County premises, while on Beaufort County business (whether or not on Beaufort County premises) or while representing Beaufort County. In addition to being a violation of this policy, harassment or retaliation based on any protected characteristic as defined by applicable federal, state, or local laws is also unlawful. For example, sexual harassment and retaliation against an individual because the individual filed a complaint of sexual harassment or because an individual aided, assisted or testified in an investigation or proceeding involving a complaint of sexual harassment as defined by applicable federal, state, or local laws are unlawful.

Harassment Defined

Harassment generally is defined in this policy as unwelcome verbal, visual or physical conduct that denigrates or shows hostility or aversion towards an individual because of any actual or perceived protected characteristic or has the purpose or effect of unreasonably interfering with an individual's work performance or creating an intimidating, hostile or offensive working environment. Harassment can be verbal (including slurs, jokes, insults, epithets, gestures or teasing), visual (including offensive posters, symbols, cartoons, drawings, computer displays, text messages, social media posts or e-mails) or physical conduct (including physically threatening another, blocking someone's way, etc.). Such conduct violates this policy, even if it does not rise to the level of a violation of applicable federal, state or local laws. Because it is difficult to define unlawful harassment, employees are expected to behave at all times in a manner consistent with the intended purpose of this policy.

1.4 Sexual Harassment Policy

Sexual harassment can include all of the actions previously defined in Section 1.3, as well as other unwelcome conduct, such as unwelcome or unsolicited sexual advances, requests for sexual favors, conversations regarding sexual activities and other verbal, visual or physical conduct of a sexual nature when:

- submission to that conduct or those advances or requests is made either explicitly or implicitly as a term or condition of an individual's employment; or
- submission to or rejection of conduct or advances or requests by an individual is used as the basis for employment decisions affecting the individual; or
- the conduct or advances or requests have the purpose or effect of unreasonably interfering with an individual's work performance or creating an intimidating, hostile or offensive working environment.

Examples of conduct that violate this policy include:

1. Unwelcome flirtations, leering, whistling, touching, pinching, assault, blocking normal movement;
2. Requests for sexual favors or demands for sexual favors in exchange for favorable treatment;
3. Obscene or vulgar gestures, posters or comments;
4. Sexual jokes or comments about a person's body, sexual prowess or sexual deficiencies;
5. Propositions or suggestive or insulting comments of a sexual nature;
6. Derogatory cartoons, posters and drawings;
7. Sexually-explicit e-mails, text messages or voicemails;
8. Uninvited touching of a sexual nature;

9. Unwelcome sexually-related comments;
10. Conversation about one's own or someone else's sex life;
11. Conduct or comments consistently targeted at only one gender, even if the content is not sexual; and
12. Teasing or other conduct directed toward a person because of the person's gender.

1.5 Harassment Complaint Procedure

Every report of perceived harassment will be fully investigated, and corrective action will be taken where appropriate. Investigatory procedures may vary from case to case, depending upon the circumstances. All complaints will be kept confidential to the extent possible, but confidentiality cannot be guaranteed. All employees must cooperate with all investigations conducted pursuant to this policy. In appropriate situations, employees may be asked to submit to a polygraph (lie detector) examination.

The proper procedure is as follows:

1. Report the incident(s) to your supervisor or to a higher level member in your "chain of command." Complaints against the County Administrator should be made to the Chairman of County Council.
2. Report the incident(s) to the Human Resources Director.

In order to avoid misunderstandings, complaints made to members of management or to the Human Resources Director involve the completion of a written complaint report, either by the employee or by the person to whom the complaint is made, which summarizes the allegations and lists any witnesses to the alleged harassment. Supervisors and managers who receive complaints of or become aware of harassment have a duty to notify and coordinate with the Human Resources Director immediately.

Corrective Action

If, after proper investigation, management concludes that a complaint of harassment has merit, appropriate action will be taken. Employees may be disciplined. Non-employees may be reported to the appropriate law enforcement agency and/or barred from the premises. These procedures have been established to provide relief to employees who feel they have been the victim of harassment. The U.S. Supreme Court has said that, as a general rule, employees may not sue their employer for a violation of rights unless the employee first gives notice to the employer and provides them with the opportunity to end the harassment. These procedures are intended to establish a clear record of what has been reported.

Retaliation Prohibited

In addition, Beaufort County will not allow any form of retaliation against individuals who report unwelcome conduct to management or who cooperate in the investigations of such reports in accordance with this policy. If the employee has been subjected to any such retaliation, the employee should report it in the same manner in which the employee would report a claim of perceived harassment under this policy.

Violation of this policy including any improper retaliatory conduct will result in disciplinary action, up to and including termination of employment.

1.6 Whistleblower Policy

Beaufort County is committed to complying with all laws, regulations and ethical requirements applicable to the services we provide to our citizens. Therefore, Beaufort County calls on and values the assistance from its employees to uphold this commitment. Any employee of Beaufort County who believes that:

(1) some policy, practice or activity of Beaufort County violates a law, or
(2) an employee, officer or official is violating the law, Beaufort County policies or misusing Beaufort County resources,

should bring this belief to the attention of the individuals described below in the "Reporting" section of this Policy.

The support of all employees is necessary to achieve compliance with laws and policies. Beaufort County appreciates employees reporting issues of this nature and helping Beaufort County comply with the law and the County's policies, and to protect its resources so they may be used for the purposes they were intended.

Reporting. If any employee reasonably believes that a violation of the law or Beaufort County's policies and procedures has occurred, that employee may report the alleged policy, practice, or activity to the Director of Human Resources, the County Attorney, or the County Administrator. An employee making such a report shall hereinafter be referred to in this Whistleblower Policy as a "Reporting Employee". If the Reporting Employee is uncomfortable making a report to any of the foregoing individuals, or if the Reporting Employee is not satisfied with the response of the foregoing individuals after a reasonable period of time following the report of misconduct has occurred, the Reporting Employee may provide the report to the Beaufort County Council Chairman or Vice-Chairman. Reports of violations or suspected violations will be kept confidential to the extent reasonably possible, consistent with the parameters of an adequate investigation and applicable law.

Retaliation. No Beaufort County official, officer or employee, or any person acting on behalf of Beaufort County, shall influence, restrain, or prevent any Reporting Employee from disclosing information that the Reporting Employee has reasonable cause to believe relates to or is evidence of misconduct. Any Reporting Employee acting in good faith and upon a reasonable belief as a whistleblower that misconduct has occurred will be protected from threats or retaliation, including but not limited to, discharge, demotion, suspension, harassment, reduced compensation, changes in the terms and conditions of employment, or other forms of discrimination. Any County employee who threatens or retaliates against a Reporting Employee who has reported a violation in good faith is subject to discipline up to and including termination.

Acting in Good Faith. Falsely or maliciously reporting a whistleblowing allegation under this policy will be viewed as a serious disciplinary offense.

1.7 Drug-Free and Alcohol-Free Workplace

Beaufort County has instituted a Drug-Free Workplace Policy and complies with the Drug-Free Workplace Act of 1988. Employees are required to comply with the policy and notify the County of any conviction for a drug-related offense within five (5) calendar days of the conviction.

The policy also prohibits being in possession or under the influence of any illegal drug or unauthorized controlled substance while working and/or on County premises or in County vehicles.

The County reserves the right to test employees it reasonably suspects to be in violation of this policy.

Alcohol presents a similar problem and is subject to the same prohibitions and testing as listed above. An employee is deemed to be "under the influence" if any detectable amount of alcohol is in his/her system.

For a list of reasons deemed appropriate to initiate reasonable suspicion testing and for a complete copy of the Beaufort County Drug and Alcohol policy, refer to **Appendix A-2.**

1.8 Workplace Violence

The County takes seriously the issue of workplace violence. Violence in the workplace will not be tolerated under any circumstances. This includes, but is not limited to, actual physical violence, threats of violence, fights or arguments between employees and others, use of abusive language or bringing unauthorized weapons of any type into the workplace. Any employee who sees a threatening or uncomfortable situation or feels threatened should not try to handle the situation by themselves. Instead, they should immediately remove themselves from possible danger and contact a Supervisor, Human Resources, or the Police Department (911). Any incident will be investigated, and the employee(s) involved will be subject to the appropriate disciplinary action up to and including termination.

1.9 Pregnancy Accommodations

In compliance with South Carolina law (S.C. Code Ann. §1-13-80), Beaufort County will not discriminate against an individual because of pregnancy, childbirth, or related medical conditions, including, but not limited to, lactation. Beaufort County will endeavor to make reasonable accommodations for the employee's medical needs arising from pregnancy, childbirth, or related medical conditions, unless doing so would impose an undue hardship on the operation of the business.

Reasonable Accommodations

Reasonable accommodations may include, but are not limited to:

1. Making existing facilities readily accessible to, and usable by, such employees, including acquiring or modifying equipment or devices necessary for performing essential job functions;
2. Providing more frequent or longer break periods;
3. Providing more frequent bathroom breaks;
4. Providing a private place, other than a bathroom stall for the purpose of expressing milk;
5. Modifying work schedules;
6. Providing seating or allowing the employee to sit more frequently;
7. Providing assistance with manual labor and limits on lifting;
8. Temporarily transferring the employee to a less strenuous or hazardous vacant position, if qualified; or
9. Providing job restructuring or light duty, if available.

Beaufort County will not:

- Deny employment opportunities to the employee based on the need to make such reasonable accommodations;
- Require the employee to accept an accommodation that the employee chooses not to accept, if the employee does not have a known limitation related to pregnancy, or if the accommodation is unnecessary for the employee to perform the essential duties of their job;
- Require the employee to take leave under any leave law or Beaufort County policy if another reasonable accommodation can be provided to the employee; or

- Take any adverse action against the employee in the terms, conditions, or privileges of employment for requesting or using a reasonable accommodation.

If employees have any questions concerning this policy or if they wish to request an accommodation, they should contact Human Resources.

1.10 Lactation Accommodations

Pursuant to the South Carolina Lactation Support Act, Beaufort County supports the legal right and necessity of employees who choose to express milk in the workplace. This policy is to establish guidelines for promoting a breastfeeding-friendly work environment and supporting lactating employees at Beaufort County.

Beaufort County will make reasonable efforts to provide a reasonable amount of unpaid break time to accommodate employees desiring to express breast milk for their child. If possible, the lactation break time must run concurrently with break time already provided to employees. Lactation break time that cannot run concurrently with paid break time already provided will be unpaid, subject to applicable law.

Beaufort County will make reasonable efforts to provide employees with use of a room or location in close proximity to their work area, other than a toilet stall, in order to express milk in private.

Employees will not be discriminated against or retaliated against for choosing to express breast milk in the workplace in compliance with this policy and the law. Employees may contact Human Resources with questions regarding this policy.

1.11 Reasonable Accommodations and Interactive Dialogue

Beaufort County is committed to complying with applicable federal, state, and local laws governing reasonable accommodations of individuals, including, but not limited to, the Americans with Disabilities Act (ADA). To that end, we will endeavor to make a reasonable accommodation to applicants and employees who have requested an accommodation or for whom Beaufort County has noticed may require such an accommodation, without regard to any protected classifications, related to an individual's:

- Disability, meaning any physical, medical, mental, or psychological impairment, or a history record of such impairment;
- Sincerely held religious beliefs and practices;
- Needs as a victim of domestic violence, sex offenses, or stalking;
- Needs related to pregnancy, childbirth, or related medical conditions; and/or
- Any other reason required by applicable law unless the accommodation would impose an undue hardship on the operation of Beaufort County business.

Any individual who would like to request an accommodation based on any of the reasons set forth above should contact Human Resources. Accommodation requests should be made in writing. If an individual who has requested an accommodation has not received an initial response within five (5) business days, the employee should contact Human Resources.

After receiving a request for an accommodation or learning indirectly that the employee may require such an accommodation, Beaufort County will engage in an interactive dialogue with the employee.

Even if the employee has not formally requested an accommodation, Beaufort County may initiate an interactive dialogue under certain circumstances, such as when Beaufort County has knowledge that employee's performance at work has been negatively affected and a reasonable basis to believe that the issue is related to any of the protected classifications set forth above, in compliance with applicable law. In the event Beaufort County initiates an interactive dialogue with an employee, it should not be construed as Beaufort County's belief an individual requires an accommodation but will serve as an invitation for the employee to share with Beaufort County any information the employee desires to share, or to request an accommodation.

The interactive dialogue may take place in person, by telephone, or by electronic means. As part of the interactive dialogue, Beaufort County will communicate openly and in good faith with the employee in a timely manner in order to determine whether and how Beaufort County may be able to provide a reasonable accommodation. To the extent necessary and appropriate based on the request, Beaufort County will attempt to explore the existence and feasibility of alternative accommodations as well as alternative positions for the employee. Beaufort County is not required to provide the specific accommodation sought by the employee, provided the alternatives are reasonable and either meet the specific needs of the employee or specifically address the employee's limitations.

As part of the interactive dialogue, Beaufort County reserves the right to request supporting documentation, to the maximum extent permitted by applicable law.

Beaufort County will endeavor to keep confidential all communications regarding requests for reasonable accommodations and all circumstances surrounding the employee's underlying reason for needing an accommodation.

Beaufort County will not allow any form of retaliation against employees who have requested an accommodation, for whom Beaufort County has notice may require such an accommodation, or who otherwise engage in the interactive dialogue process.

Employees with questions regarding this policy should contact Human Resources.

SECTION 2 – YOUR EMPLOYMENT

2.1 Personnel Records

The County maintains a personnel file for each employee. Employee files are the property of Beaufort County, and do not belong to the employee. An employee's personnel record begins with the completed employment application, resume and any other information submitted at the time of application. From time to time, information may be added to this personnel record.

Personnel records are the property of Beaufort County.

Contents of Personnel Files

Employee personnel records may include the following (but may be filed separately):

BEAUFORT COUNTY, SOUTH CAROLINA

STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
FOR THE FISCAL YEAR ENDED JUNE 30, 2024

	General	ARPA Fund	County Wide General Obligation Bonds	Sales Tax Project	Nonmajor Governmental Funds	Total Governmental Funds
Revenues						
Property taxes	$ 128,983,790	$ -	$ 9,417,756	$ -	$ 12,136,499	$ 150,538,045
Licenses and permits	5,422,715	-	-	-	13,314,337	18,737,052
Intergovernmental	11,277,009	7,703,300	-	68,994,916	24,728,455	112,703,680
Charges for services	15,514,789	-	-	-	14,292,085	29,806,874
Fines and forfeitures	804,609	-	37,988	-	646,053	1,488,650
Interest	5,417,552	1,304,960	419,923	5,015,749	2,572,084	14,730,268
Miscellaneous	16,414,004	-	-	-	2,639,567	19,053,571
Total revenues	183,834,468	9,008,260	9,875,667	74,010,665	70,329,080	347,058,140
Expenditures						
General government services	68,500,838	5,993,506	-	-	13,197,529	87,691,873
Public safety services	53,365,636	-	-	-	9,239,681	62,605,317
Public works services	11,131,427	-	-	-	5,767,700	16,899,127
Public health services	3,779,721	175,806	-	-	9,739,972	13,695,499
Public welfare services	679,585	-	-	-	1,202,096	1,881,681
Cultural and recreation services	16,116,100	-	-	-	428,597	16,544,697
Debt service - principal	1,514,507	-	7,400,851	-	11,849,149	20,764,507
Debt service - interest and fees	119,370	-	2,496,021	-	3,116,247	5,731,638
Capital projects	12,499,352	-	-	18,945,889	27,927,450	59,372,691
Total expenditures	167,706,536	6,169,312	9,896,872	18,945,889	82,468,421	285,187,030
Excess (deficiency) of revenues over (under) expenditures	16,127,932	2,838,948	(21,205)	55,064,776	(12,139,341)	61,871,110
Other Financing Sources (Uses)						
Transfers in	5,877,605	-	-	-	14,234,780	20,112,385
Transfers out	(9,339,380)	(2,837,511)	-	-	(11,842,778)	(24,019,669)
Total other financing sources (uses)	(3,461,775)	(2,837,511)	-	-	2,392,002	(3,907,284)
Net change in fund balance	12,666,157	1,437	(21,205)	55,064,776	(9,747,339)	57,963,826
Fund balance (deficit) - beginning	82,582,246	(1,437)	18,945,255	143,106,461	143,591,530	388,224,055
Fund balance - ending	$ 95,248,403	$ -	$ 18,924,050	$ 198,171,237	$ 133,844,191	$ 446,187,881

The accompanying notes are an integral part of these financial statements.

PARRIS ISLAND
WATERLINE REPLACEMENT - DIVISION I

FOR

BEAUFORT-JASPER WATER & SEWER AUTHORITY

OKATIE, SOUTH CAROLINA

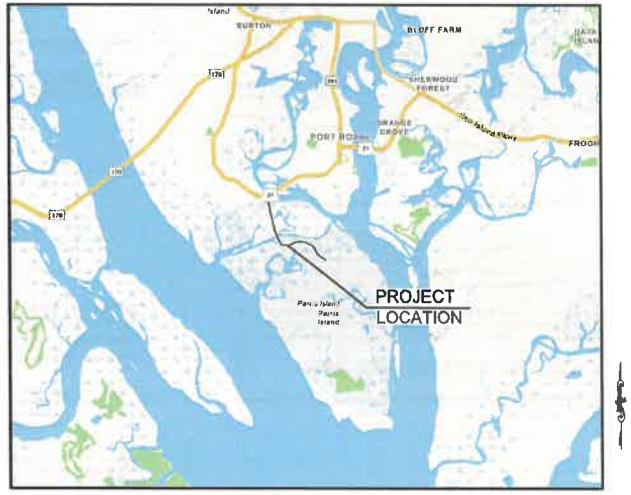
JUNE 2025

OWNER:
BEAUFORT - JASPER WATER & SEWER AUTHORITY
6 SNAKE ROAD
OKATIE, SOUTH CAROLINA 29909

OWNER CONTACT:
ERIC VEACH
PROJECT MANAGER
6 SNAKE ROAD
OKATIE, SOUTH CAROLINA 29909
PHONE: (843) 987-8066

ENGINEER:
KCI TECHNOLOGIES, INC.
MATTHEW BRODERICK, P.E.
106 CLAIR DRIVE
PIEDMONT, S.C. 29673
PHONE: (864) 269-0890
FAX: (864) 269-9030

TOPOGRAPHIC SURVEY:
ATLAS SURVEYING, INC.
168 BOARDWALK DRIVE, SUITE A
RIDGELAND, SC 29936
PROJECT NO: BFT-24384
PLAT DATE 04-24-2025, FILE: BFT-24384 AT1.DWG



BJWSA CIP-2305

PROJECT DESCRIPTION:

THIS PROJECT IS LOCATED IN BEAUFORT COUNTY, SOUTH CAROLINA AND GENERALLY CONSISTS OF WATERLINE REHABILITATION.

DIVISION I:
THIS DIVISION OF WORK INCLUDES INSTALLATION OF APPROXIMATELY 12,300 LINEAR FEET OF 16" POLYETHYLENE LINER INSIDE OF AN EXISTING 16" STEEL WATERLINE AND OTHER RELATED WORK REQUIRED FOR A COMPLETE INSTALLATION.

DIVISION II (UNDER SEPARATE COVER):
THIS DIVISION OF WORK INCLUDES INSTALLATION OF APPROXIMATELY 1,900 LINEAR FEET OF 16" FUSIBLE PVC INSTALLED BY HORIZONTAL DIRECTIONAL DRILL (HDD) ON BOTH SIDES OF ARCHER CREEK BRIDGE TO REPLACE AN EXISTING 16" WATERLINES SUSPENDED FROM THE BRIDGE AND 380 LINEAR FEET OF 16" DIP INSTALLED BY OPEN CUT.

Sheet List Table

Sheet Number	Sheet Title
TS	TITLE SHEET
G-1	GENERAL NOTES
G-2	KEY SHEET
C-1	PLAN VIEW STA. 0+00 TO STA. 16+00 DIVISION I - LINE A
C-2	PLAN VIEW STA. 16+00 TO STA. 32+00 DIVISION I - LINE A
C-3	PLAN VIEW STA. 32+00 TO STA. 42+65 DIVISION I - LINE A
C-4	PLAN VIEW STA. 0+00 TO STA. 16+00 DIVISION I - LINE B
C-5	PLAN VIEW STA. 16+00 TO STA. 32+00 DIVISION I - LINE B
C-6	PLAN VIEW STA. 32+00 TO STA. 48+00 DIVISION I - LINE B
C-7	PLAN VIEW STA. 48+00 TO STA. 64+00 DIVISION I - LINE B
C-8	PLAN VIEW STA. 64+00 TO STA. 80+16 DIVISION I - LINE B
C-9	DETAILS
C-10	DETAILS
C-11	ALTERNATE CIPP DETAILS
EC-1	EROSION CONTROL DETAILS
EC-2	EROSION CONTROL DETAILS

811 Know what's below Call before you

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 29673 6-27-25 MATTHEW R. BRODERICK

SOUTH CAROLINA KCI TECHNOLOGIES INC. No. C0651 CERTIFICATE OF AUTHORIZATION

ISSUE SEQUENCE		
NO.	DATE	DESCRIPTION
A	5/16/25	60% CLIENT REVIEW
B	6/27/25	RESPONSE TO 60% COMMENTS
C	6/27/25	ISSUED FOR PERMITTING

KCI TECHNOLOGIES
KCI ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
106 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax (713) 237-9801

TITLE SHEET
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED	KJW
APPROVED:	MRB

TS

KCI Technologies, Inc. 2025

GENERAL PROJECT NOTES:

1. ALL WORK SHALL BE PERFORMED WITHIN ROAD RIGHTS-OF-WAY. WORK ON PRIVATE PROPERTY SHALL ONLY BE PERFORMED WITHIN THE LIMITS OF OBTAINED EASEMENTS.
2. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS BEFORE SUBMITTING HIS BID.
3. ALL DISTANCES, DIMENSIONS AND ELEVATIONS SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. IN CASE OF CONFLICT THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY SO THAT CLARIFICATIONS MAY BE MADE PRIOR TO THE START OF WORK.
4. THE PROPOSED GRADES AS SHOWN ARE THE FINISHED GRADES UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL SUPPLY AND ESTABLISH SURVEY CONTROL, INCLUDING THE HORIZONTAL AND VERTICAL CONTROL POINTS. THE CONTRACTOR SHALL MAINTAIN THIS CONTROL AND PROVIDE ALL BENCHMARKS, STAKES, GRADES, LEVELS, AND LINES NECESSARY FOR CONSTRUCTION. CONTRACTOR(S) SHALL PROVIDE ADEQUATE SUPERVISION TO PREVENT DAMAGE AND MOVEMENT FROM EQUIPMENT WORKING AROUND CONSTRUCTION STAKES. THESE CONSTRUCTION STAKES SHALL REMAIN IN PLACE & BE PROTECTED UNTIL OWNER APPROVES THEIR REMOVAL. ANY STAKES THAT HAVE BEEN DISPLACED AS A RESULT OF CONSTRUCTION ACTIVITY ARE TO BE REPLACED BY A LICENSED LAND SURVEYOR ENGAGED BY THE CONTRACTOR AT NO COST TO THE OWNER.
6. ALL EXISTING FACILITIES DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER.
7. ALL EXISTING PAVEMENT AND CONCRETE TO BE JOINED SHALL BE SAWCUT IN RECTANGULAR SHAPES.
10. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL CLEAN THE ENTIRE SITE OF ALL CONSTRUCTION RELATED MATERIAL AND DEBRIS.
11. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ON ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFFSITE GRADING, WRITTEN PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNER(S).
11. INSTALL ALL TEMPORARY EROSION CONTROL MEASURES PRIOR
12. THE CONTRACTOR SHALL MAINTAIN EACH STREAM OR CREEK IN AN UNOBSTRUCTED STATE. CONTRACTOR SHALL INSTALL SILT FENCE IN A MANNER AS TO NOT ALLOW TRENCHING OPERATION TO SPILL EXCESS SOIL INTO WATERS OF THE STATE.
13. THE ENGINEER HAS NOT REVIEWED THE STRUCTURAL STABILITY OF ANY IMPOUNDMENTS ON THE SITE AND DOES NOT ASSUME RESPONSIBILITY FOR THEM.
14. THE ENGINEER WILL NOT BE CONTINUOUSLY PRESENT IN THE FIELD. IT IS SPECIFICALLY UNDERSTOOD THAT HE DOES NOT UNDERTAKE NOR ASSUME ANY OBLIGATION FOR SUPERVISION OF CONSTRUCTION, SAFETY MEASURES TAKEN DURING THE COURSE OF CONSTRUCTION, RESPONSIBILITY FOR SCHEDULING THE WORK FOR INSURING COMPLETE COMPLIANCE WITH THE CONTRACT DOCUMENTS AND/OR ALL CODE REQUIREMENTS, RULES AND REGULATIONS OF ANY PUBLIC OR PRIVATE AUTHORITY HAVING JURISDICTION OVER THE WHOLE OR ANY PART OF THE WORK. IN ADDITION, THE ENGINEER NEITHER UNDERTAKES, ASSUMES, NOR GUARANTEES THE WORK AND/OR PERFORMANCE OF THE CONTRACTOR.

WATERLINE REHABILITATION NOTES:

1. CONTRACTOR TO COORDINATE AND VERIFY WITH BJWSA AND MCB PARRIS ISLAND ON STATUS OF EXISTING WATERLINES PRIOR TO CONSTRUCTION. CERTAIN EXISTING WATERLINES ARE PROPOSED TO BE ABANDONED. HOWEVER, CONTRACTOR SHALL CONFIRM WITH BJWSA AND MCB PARRIS ISLAND HOW AND WHEN THESE LINES WILL BE TAKEN OUT OF SERVICE WITH WATERLINE REHABILITATION.
2. MAXIMUM AREA OF GROUND DISTURBANCE IS 10 FT X 10FT FOR EACH TRENCHLESS REHABILITATION ACCESS PIT.
3. PAVEMENT CUTS SHALL BE TEMPORARILY FILLED WITH CRUSHED STONE FLUSH TO TOP OF PAVEMENT UNTIL PERMANENT PAVEMENT PATCH IS INSTALLED. ALL ROADS.
4. THE TWO TRENCHLESS PIPE REHABILITATION ALTERNATIVES ARE EITHER SINGLE LAYER KEVLAR LINER OR CIPP LINER AT A MAXIMUM 1,600 LF BETWEEN INSTALLATION PITS.
5. ACCESS PITS SHOWN ON DRAWINGS ARE FOR SINGLE LAYER KEVLAR LINER INSTALLATION, AS SPECIFIED IN THE BID DOCUMENTS. IF CIPP IS UTILIZED, ADDITIONAL PITS MAY BE NECESSARY. PRIOR TO COMMENCING CONSTRUCTION, CONTRACTOR SHALL SUBMIT WORK PLAN SHOWING LOCATION AND QUANTITY OF ACCESS PITS DEPENDING ON INSTALLATION TYPE.

GENERAL RECOMMENDED SEQUENCE OF CONSTRUCTION:

1. CONDUCT KICKOFF MEETING WITH BJWSA AND MCB PARRIS ISLAND.
2. VERIFY ALL PERMITS HAVE BEEN OBTAINED.
3. INSTALL ANY EROSION CONTROL MEASURES IDENTIFIED ON APPROVED SEDIMENT AND EROSION CONTROL PLANS.
4. COORDINATE WITH BJWSA AND MCB PARRIS ISLAND TO CONFIRM SOUTH 16" WL IS IN SERVICE AND NORTH LINE (LINE TO BE REHABILITATED) IS OUT OF SERVICE.
5. SETUP TEMPORARY TRAFFIC CONTROL MEASURES.
6. BEGIN TRENCHLESS REHABILITATION OF 16" WATERLINE ON NORTH SIDE OF MALECON DRIVE.
7. ONCE INSTALLATION IS COMPLETE, PERFORM PRESSURE AND BACTERIOLOGICAL TESTING.
8. ONCE APPROVAL IS OBTAINED FROM ENGINEER, BJWSA, AND MCB PARRIS ISLAND, PLACE REHABILITATED 16" WATERLINE INTO PERMANENT SERVICE.
9. CLEANUP SITE AND INSTALL PERMANENT PAVEMENT REPAIR.
10. REMOVE TEMPORARY EROSION CONTROL MEASURES.

TRAFFIC CONTROL PLAN:

1. A SUGGESTED TRAFFIC CONTROL PLAN (TCP) IS PROVIDED TO ESTABLISH MINIMUM, ACCEPTABLE REQUIREMENTS FOR TRAFFIC CONTROL ASSOCIATED WITH THE SUGGESTED SEQUENCE OF CONSTRUCTION (SEE SHEET G-1) AND TO AID IN THE INCLUSION OF THE ASSOCIATED COSTS IN THE PREPARATION OF THE BID. THIS PLAN AND THE USE THEREOF DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES OF THE PROTECTION OF THE WORK AND PUBLIC SAFETY.
2. THE CONTRACTOR SHALL SUBMIT HIS OWN TRAFFIC CONTROL PLANS TO SCDOT FOR REVIEW AND APPROVAL A MINIMUM OF 30 DAYS PRIOR TO BEGINNING CONSTRUCTION. ANY AND ALL DEVIATIONS FROM THE TRAFFIC CONTROL PLANS SHALL BE APPROVED BY SCDOT.
3. ALL RESIDENCES AND BUSINESS SHALL BE NOTIFIED BY THE CONTRACTOR 21 DAYS IN ADVANCE OF CONSTRUCTION.
4. NO SATURDAY AND HOLIDAY WORK HOURS ARE PERMITTED WITHOUT ADVANCE NOTICE AND APPROVAL BY SCDOT AND BEAUFORT COUNTY.
5. THE CONTRACTOR SHALL NOTIFY RESIDENT ENGINEER AT LEAST 48 HOURS PRIOR TO ANY ROAD CLOSURE, LANE CLOSURE, OR FLAGGING OPERATION.
6. AT A MINIMUM, ALL TRAFFIC CONTROL METHODS AND MEASURES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION AND THE SCDOT UTILITY ACCOMMODATION MANUAL
7. IF UNSAFE CONDITIONS ARE OBSERVED DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADDITIONAL TRAFFIC CONTROL MEASURES AS DIRECTED BY SCDOT AND/OR BEAUFORT COUNTY.
8. ACCESS FOR PUBLIC, MILITARY, AND EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.
9. TRAVEL LANES SHALL BE A MINIMUM OF 10 FEET WIDE.
10. NO MATERIALS OF CONSTRUCTION SHALL BE STOCKPILED WITHIN THE "CLEAR ZONE" AS DEFINED BY THE AASHTO "ROADSIDE DESIGN GUIDE," WHILE WORK IS NOT BEING PERFORMED.
11. NO EQUIPMENT OR MACHINERY SHALL BE LEFT PARKED, UNATTENDED OR WITHIN THE CLEAR ZONE AS DEFINED BY THE AASHTO "ROADSIDE DESIGN GUIDE," WHILE WORK IS NOT BEING PERFORMED.
12. ANY AND ALL DAMAGED OR REMOVED TRAFFIC SIGNAL APPURTENANCES, TRAFFIC CONTROL DEVICES, AND/OR PAVEMENT MARKINGS SHALL BE RESTORED BY THE CONTRACTOR.
13. THE CONTRACTOR SHALL CHECK ALL SIGNS, DRUMS, AND BARRICADES WITHIN THE PROJECT AREA EVERY MORNING BEFORE WORK AND EVERY EVENING WHEN WORK IS STOPPED FOR THE DAY TO ENSURE THAT THEY ARE SERVICEABLE AND IN PROPER WORKING ORDER, ON WEEKENDS, HOLIDAYS, AND WHEN THE PROJECT IS SHUTDOWN, THE CONTRACTOR SHALL HAVE THESE TRAFFIC CONTROL DEVICES CHECKED DAILY.
14. PERMANENT TRAFFIC CONTROL AND INFORMATION SIGNS SUCH AS, NOT LIMITED TO ,EXISTING SPEED LIMIT, STOP SIGNS, AND STREET NAME SIGNS SHALL BE MAINTAINED AT ALL TIMES. THIS IS CONSIDERED INCIDENTAL TO THE WORK.
15. THE SCDOT TRAFFIC ENGINEER RESERVES THE RIGHT TO MAKE CHANGES TO THE TRAFFIC CONTROL PLAN AS DEEMED NECESSARY.
16. ALL SIDE STREETS WITHIN THE WORK ZONE OR SIGN SEQUENCE SHALL ALSO BE SIGNED.
17. ALL OPEN HOLES OR TRENCHES SHALL BE BACKFILLED AND THE SHOULDER MADE READY TO HANDLE EMERGENCY TRAFFIC BY THE END OF EACH WORKDAY, OTHERWISE OPEN HOLES OR TRENCHES SHALL BE COVERED WITH APPROPRIATE STEEL PLATING TO PROTECT AGAINST PEDESTRIAN AND/OR ERRANT VEHICLE INTRUSION. AT NO TIME SHALL STEEL PLATING BE USED IN TRAVEL LANES OPEN TO VEHICULAR TRAFFIC.
18. OPEN HOLES OR TRENCHES SHALL NOT BE LEFT UNATTENDED OR UNPROTECTED WHENEVER WORK IS NOT BEING PERFORMED.

SURVEY NOTES:

1. ATLAS SURVEYING, INC.
188 BOARDWALK DRIVE, SUITE A
RIDGELAND, SC 29936
PROJECT NO: BFT-24384
PLAT DATE 04-24-2025, FILE: BFT-24384 AT1.DWG
2. SURVEY AS DATED: 4-30-2025
3. ALL DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS UNLESS NOTED.
4. ANY UNDERGROUND IMPROVEMENTS ARE SHOWN BASED ON SURFACE EVIDENCE ONLY. THE SURVEYOR CAN NOT CERTIFY TO NOR ACCEPT LIABILITY FOR THE PRESENCE AND/OR LOCATION OF BURIED OR OTHERWISE NON-VISIBLE IMPROVEMENTS TO THIS SITE.
5. COORDINATE SYSTEM: HARN/SC SOUTH CAROLINA STATE PLANES (INTNL FOOT)
6. DATUM: NAD83 2011 (HORIZONTAL), NAVD88 (VERTICAL)

HIGH PRESSURE GAS LINE NOTIFICATION

AN EXISTING HIGH PRESSURE GAS LIN RUNS PARALLEL TO THE PROPOSED WATER LINE ALIGNMENT, PARTICULAR CARE SHALL BE MADE TO MAINTAIN ADEQUATE SEPARATION TO AVOID ANY DAMAGE TO THE PIPELINE. THE EXACT LOCATION OF THE GAS LINE HAS NOT BEEN VERIFIED. CONTRACTOR SHALL CLEARLY MARK THE EXACT LOCATION AND MAKE ADJUSTMENTS TO THE WATERLINE ALIGNMENT TO PROVIDE A MINIMUM OF 2 FEET OF SEPARATION BETWEEN LINES. ANY DEPRAVATIONS FROM THE ALIGNMENT SHOWN ON THESE DRAWINGS SHALL BE APPROVED BY THE OWNER/ENGINEER FIELD REPRESENTATIVE.

LEGEND

Symbol	Description
▲	CALC POINT – CORNER NOT SET
ARV	AIR RELEASE VALVE
	CONTROL PANEL
	DRAINAGE INLET
	ELECTRIC JUNCTION BOX
	ELECTRIC METER
	ELECTRIC MANHOLE
	ELECTRIC STUBOUT
	FIRE HYDRANT
	FIBER OPTIC BOX
	GAS VALVE
	GUY WIRE
	LIGHT POLE
	PIPELINE MARKER
	POWER POLE
	STORM DRAIN MANHOLE
X12.9	SPOT ELEVATION
	SIGN
	SANITARY SEWER VALVE MARKER
	UNDERGROUND TELEPHONE MARKER
	TRAFFIC SIGNAL POLE
CTBL	TELEPHONE JUNCTION BOX
OPED	TELEPHONE PEDESTAL
	TRANSFORMER–ELECTRIC
	UNDERGROUND FIBER OPTICS MARKER
	UNDERGROUND GAS MARKER
	WATER BLOW OFF VALVE
	FRESHWATER WETLANDS
	WATER METER
	WATER VALVE
	WATER VALVE MARKER
	WOOD POST
	GENERATOR
	MARSHGRASS
BOC	BACK OF CURB
BCM	BUREAU OF COASTAL MANAGEMENT
DES	DEPARTMENT OF ENVIRONMENTAL SERVICES
CNA	COULD NOT ACCESS
DYL	DOUBLE YELLOW LINE
FFE	FINISHED FLOOR ELEVATION

LEGEND

Symbol	Description
FFE	FINISHED FLOOR ELEVATION
IE	INVERT ELEVATION
HDPE	HIGH DENSITY POLYETHYLENE
LF	LINEAR FEET
MCP	METAL CORRUGATED PIPE
PD	PIPE DIRECTION
PIN	PARCEL IDENTIFICATION NUMBER
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
SDWL	SINGLE DASHED WHITE LINE
SWL	SINGLE WHITE LINE
SYL	SINGLE YELLOW LINE
CED	CEDAR
CM	CRAPE MYRTLE
LA	LAUREL OAK
LO	LIVE OAK
PA	PALMETTO
PEC	PECAN
P	PINE
SB	SUGAR BERRY
—BB—	BOTTOM OF BANK
—8—	CONTOUR LINE
—FM—	FORCEMAIN
	GUARD RAIL
—BCM-SCM—	SCDES–BCM CRITICAL LINE
—OHP—	OVERHEAD POWER LINE
—TB—	TOP OF BANK
	ADJACENT PROPERTY LINE
—SD—	UNDERGROUND DRAINAGE LINE
—UE—	UNDERGROUND ELECTRIC LINE
—UFO—	UNDERGROUND FIBER OPTIC LINE
—UG—	UNDERGROUND GAS LINE
—UT—	UNDERGROUND TELEPHONE
—W—	UNTRACEABLE UNDERGROUND WATER LINE
—W—	UNDERGROUND WATER LINE
	CONCRETE
	EDGE OF PAVEMENT
	GRAVEL
	RIP–RAP
—FFL—	FEMA FLOOD LINE

A. CONNECTIONS TO EXISTING WATER DISTRIBUTION MAINS:

1. CONNECTIONS TO EXISTING WATER DISTRIBUTION MAINS SHALL NOT BE MADE WITHOUT PRIOR COORDINATION WITH OWNER PERSONNEL AND THE ENGINEER.
2. AT LEAST FIVE (5) WORKING DAYS PRIOR TO SCHEDULING CONNECTION WITH OWNER, THE CONTRACTOR SHALL PERFORM SUCH FIELD VERIFICATION WORK AS REQUIRED TO CONFIRM EXISTING SITE CONDITIONS IN THE AREA OF THE PROPOSED CONNECTION, INCLUDING, BUT NOT NECESSARILY LIMITED TO:
   - LOCATION, DEPTH, SIZE, AND MATERIAL OF EXISTING WATER DISTRIBUTION MAIN
   - LOCATION, DEPTH, SIZE, ETC. OF EXISTING UTILITIES ADJACENT TO THE PROPOSED CONNECTION
   - OTHER EXISTING CONDITIONS WHICH MIGHT AFFECT THE PERFORMANCE OF THE PROPOSED CONNECTION
3. CONTRACTOR TO PREPARE WITH THE ENGINEER AND OWNER A PLAN OF ACTION TO BE FOLLOWED IN PERFORMING THE PROPOSED CONNECTION. SUCH PLAN SHALL INCLUDE THE PROPOSED DATE AND TIME THE WORK IS TO BEGIN, IDENTIFICATION OF EXISTING DISTRIBUTION SYSTEM AREAS WHICH WILL BE AFFECTED BY THE CONNECTION, ACTIONS WHICH ARE REQUIRED OF THE ENGINEER AND OWNER, APPROXIMATE DOWNTIME OF EXISTING WATER DISTRIBUTION SYSTEM, AND OTHER ITEMS DEEMED APPROPRIATE.
4. UNLESS OTHERWISE APPROVED OR REQUIRED, CONNECTIONS TO EXISTING WATER DISTRIBUTION MAINS SHALL BE MADE ON TUESDAYS, WEDNESDAYS, OR THURSDAYS.
5. SHOULD WATER SYSTEM DEMANDS REQUIRE POSTPONEMENT OR RESCHEDULING OF A PROPOSED CONNECTION, THE CONTRACTOR SHALL DO SUCH WORK AT NO ADDITIONAL COST TO THE OWNER.
6. CONNECTIONS TO THE EXISTING SYSTEM SHALL NOT BE MADE WITHOUT THE PRESENCE OF THE ENGINEER OR OWNER.
7. PRIOR TO CUTTING OF THE EXISTING WATER DISTRIBUTION MAIN, THE CONTRACTOR PERSONNEL SHALL HAVE AS MUCH OF THE PIPING, FITTINGS, VALVES, ETC. PROPOSED AT THE CONNECTION PIPED-UP AND READY TO BE LOWERED INTO THE EXCAVATION.
8. PRIOR TO CUTTING OF THE EXISTING WATER DISTRIBUTION MAIN, THE CONTRACTOR SHALL PLACE A 12-INCH DEPTH OF #57 WASHED STONE IN THE EXCAVATION.
9. ALL EXISTING VALVES LOCATED NEAR THE PROPOSED CONNECTION POINT SHALL BE OPERATED TO ENSURE THAT THE WATER LINE CAN BE PROPERLY ISOLATED DURING THE CONNECTION OPERATION.

B. LOCATION OF VALVES, HYDRANTS, BLOW-OFFS, ETC:

1. NO VALVE, HYDRANT, BLOW-OFF, ETC. SHALL BE PLACED IN A DITCH LINE UNLESS SPECIFICALLY APPROVED BY THE OWNER. SHOULD THE CONTRACTOR LOCATE SUCH ITEMS IN A DITCH LINE WITHOUT APPROVAL OF THE OWNER, THE APPURTENANCES SHALL BE REMOVED AND RELOCATED TO A SUITABLE LOCATION AT NO ADDITIONAL COST TO THE OWNER.
2. ALL HYDRANTS, BLOW-OFFS, AIR RELEASE VALVES, ETC. SHALL BE LOCATED ADJACENT TO THE ROAD RIGHT-OF-WAY, APPROXIMATELY TWO (2) FEET FROM THE RIGHT-OF-WAY LINE.
3. HYDRANTS, BLOW-OFFS, ETC. PROPOSED UNDER THIS PROJECT SHALL BE LOCATED SUCH THAT OPERATION OF SAID HYDRANTS, BLOW-OFFS, ETC. WILL NOT DAMAGE ADJACENT PROPERTIES. OBTAIN THE APPROVAL OF THE ENGINEER AND THE OWNER FOR EACH LOCATION. FAILURE BY THE CONTRACTOR TO OBTAIN APPROVAL MAY REQUIRE THE CONTRACTOR TO RELOCATE SUCH APPURTENANCES AT HIS OWN EXPENSE.
4. UNLESS OTHERWISE APPROVED BY THE OWNER, DO NOT LOCATE HYDRANTS, BLOW-OFFS, ETC. IN FRONT OF EXISTING RESIDENCES OR BUSINESSES.

C. FLUSHING ACTIVITIES:

1. FLUSHING OF NEWLY INSTALLED WATER LINES SHALL ONLY OCCUR WHEN CONTRACTOR PERSONNEL ARE ON SITE, NO FLUSHING ACTIVITY SHALL BE LEFT UNATTENDED.
2. THE CONTRACTOR SHALL PROVIDE APPROPRIATE LENGTHS OF FIRE HOSE, PIPE, ETC. TO ENSURE THAT THE FLUSHING DISCHARGE DOES NOT DAMAGE ADJACENT PROPERTY, ROADSIDE DITCHES, ETC.
3. THE CONTRACTOR SHALL PERFORM FLUSHING EVENTS ONLY DURING TIMES AUTHORIZED BY THE OWNER. SHOULD WATER SYSTEM DEMANDS REQUIRE RESCHEDULING OR DISCONTINUING FLUSHING ACTIVITIES, THE CONTRACTOR SHALL DO SUCH AT NO ADDITIONAL COSTS TO THE OWNER.
4. THE CONTRACTOR WILL NOT BE CHARGED FOR WATER USED DURING AN AUTHORIZED FLUSHING EVENT. THE CONTRACTOR MAY BE CHARGED FOR WATER IF THE FLUSHING EVENT IS UNAUTHORIZED BY THE OWNER. THE COST OF WATER SHALL BE BASED ON THE CURRENT RATE SCHEDULE. THE ENGINEER WILL DETERMINE THE AMOUNT OF WATER USED DURING THE UNAUTHORIZED EVENT. THE ENGINEER'S DECISION WILL BE FINAL IN THIS MATTER.
5. ALL WATER DISCHARGED FROM FLUSHING EVENTS SHALL NOT BE DIRECTLY DISCHARGED INTO A CREEK, RIVER, LAKE, OR OTHER BODY OF WATER WITHOUT FIRST BEING DE-CHLORINATED.

NATURAL GAS:
DOMINION ENERGY SOUTH CAROLINA GAS
SOUTHERN DIVISION
601 OLD TAYLOR ROAD
CAYCE, SOUTH CAROLINA 29033
CONTACT: UTILIQUEST PR
PHONE: (803) 960-3310

POWER:
DOMINION ENERGY

TELECOMMUNICATIONS:
BRIGHTSPEED
CONTACT: DEWAYNE BEGLEY
PHONE: (540)938-9590

TELECOMMUNICATIONS:
HARGRAY INC.
CONTACT: USIC PR
PHONE: (800) 778-9140

MCRD PARRIS ISLAND:
PARRIS ISLAND, SOUTH CAROLINA
CONTACT : ANDY MATTIE
EMAIL ANDY.MATTIE@BJWSA.ORG

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION KCI TECHNOLOGIES INC. No. C0651

ISSUE SEQUENCE

NO	DATE	DESCRIPTION
	5/16/25	60% CLIENT REVIEW
	6/27/25	RESPONSE TO 60% COMMENTS
	6/27/25	ISSUED FOR PERMITTING

BJWSA BEAUFORT - JASPER WATER & SEWER AUTHORITY

KCI TECHNOLOGIES
ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
106 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

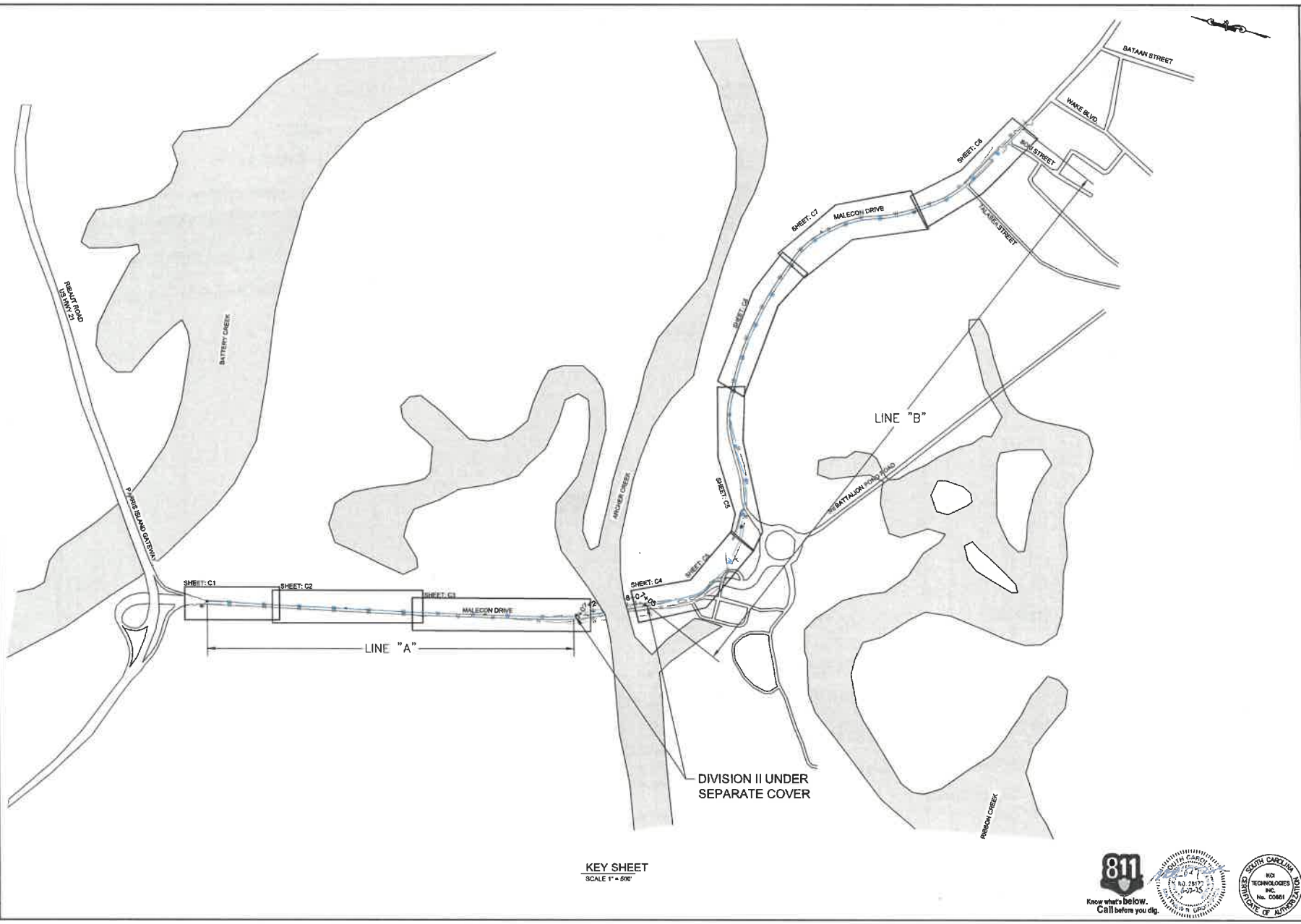
GENERAL NOTES

PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED	KJW
APPROVED:	MRB

G-1

KCI Technologies, Inc. 2025



KEY SHEET
SCALE 1" = 500'

Know what's below. Call before you dig.

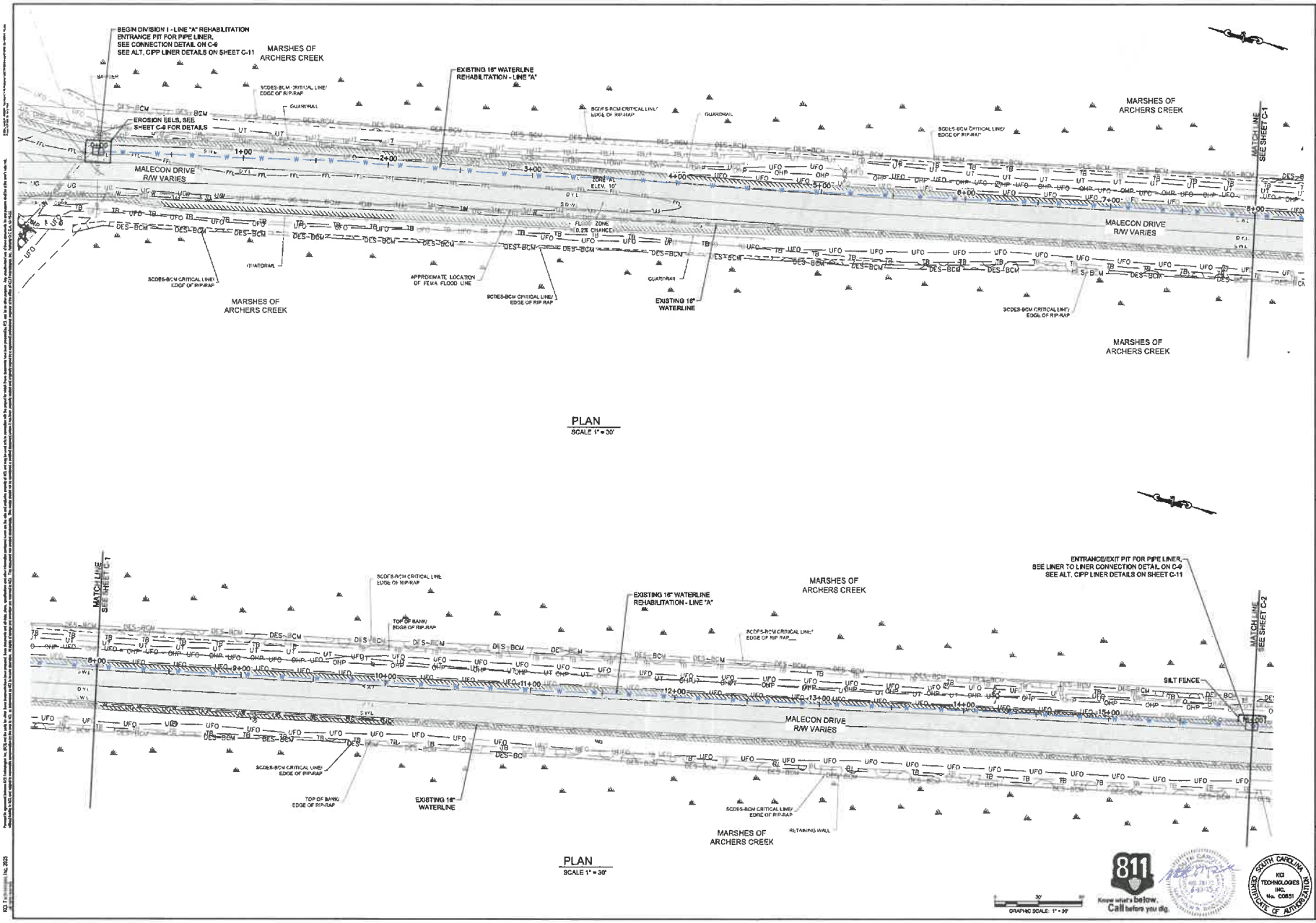
NO.	DATE	DESCRIPTION
A	5/16/25	60% CLIENT REVIEW
B	6/27/25	RESPONSE TO 60% COMMENTS
C	6/27/25	ISSUED FOR PERMITTING

KCI TECHNOLOGIES
KCI ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
106 Clair Drive, Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

KEY SHEET
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

G-2



ISSUE SEQUENCE		
NO.	DATE	DESCRIPTION
1	5/14/25	ISSUED FOR REVIEW
2	6/27/25	RESPONSE TO RFI & COMMENTS
3	6/27/25	ISSUED FOR PERMITTING

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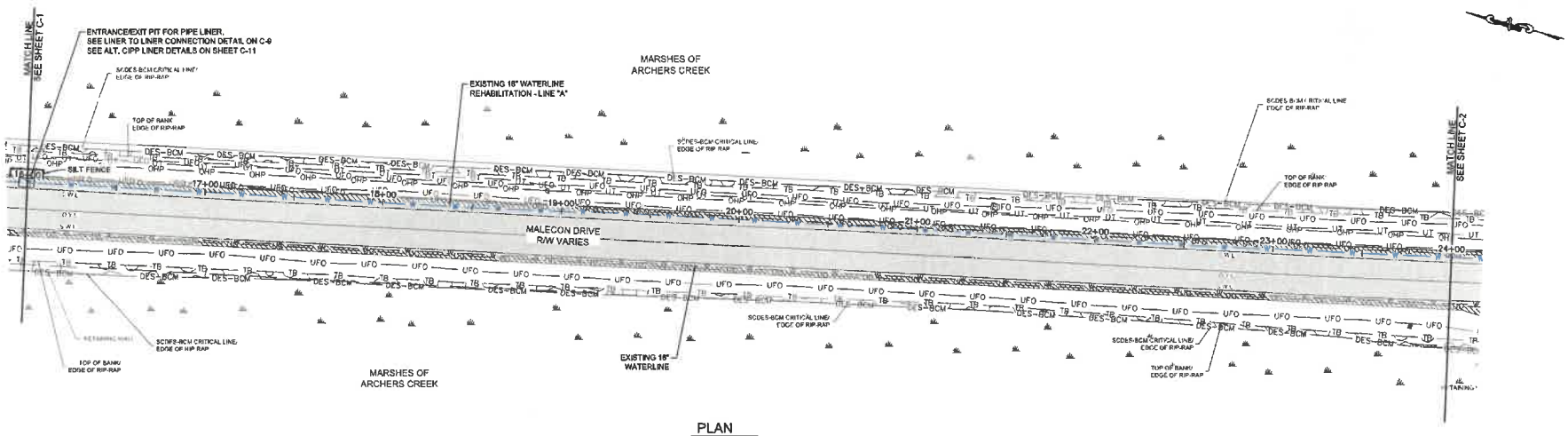
Phone: (864) 269-0890 Fax: (713) 237-9801

PLAN VIEW STA. 0+00 TO STA. 16+00
DIVISION I - LINE A
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

C-1



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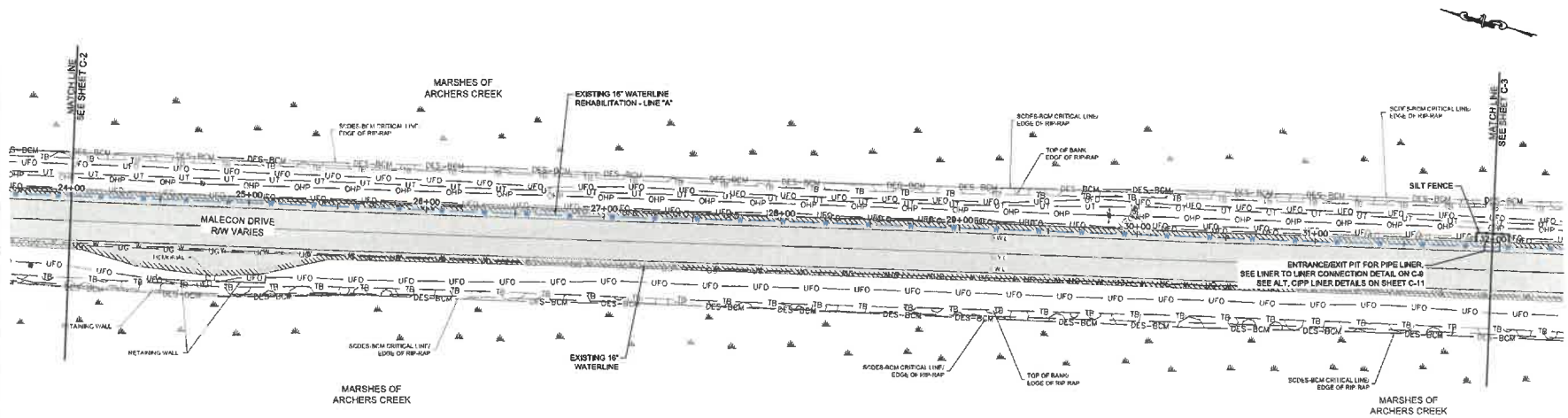

PLAN
SCALE 1" = 30'

GRAPHIC SCALE: 1" = 30'

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SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 28673 — 6-27-25 — KCI TECHNOLOGIES INC.

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — KCI TECHNOLOGIES INC. No. CO651

NO.	DATE	DESCRIPTION
A	5/16/25	60% CLIENT REVIEW
B	6/27/25	RESPONSE TO 60% COMMENTS
C	6/27/25	ISSUED FOR PERMITTING

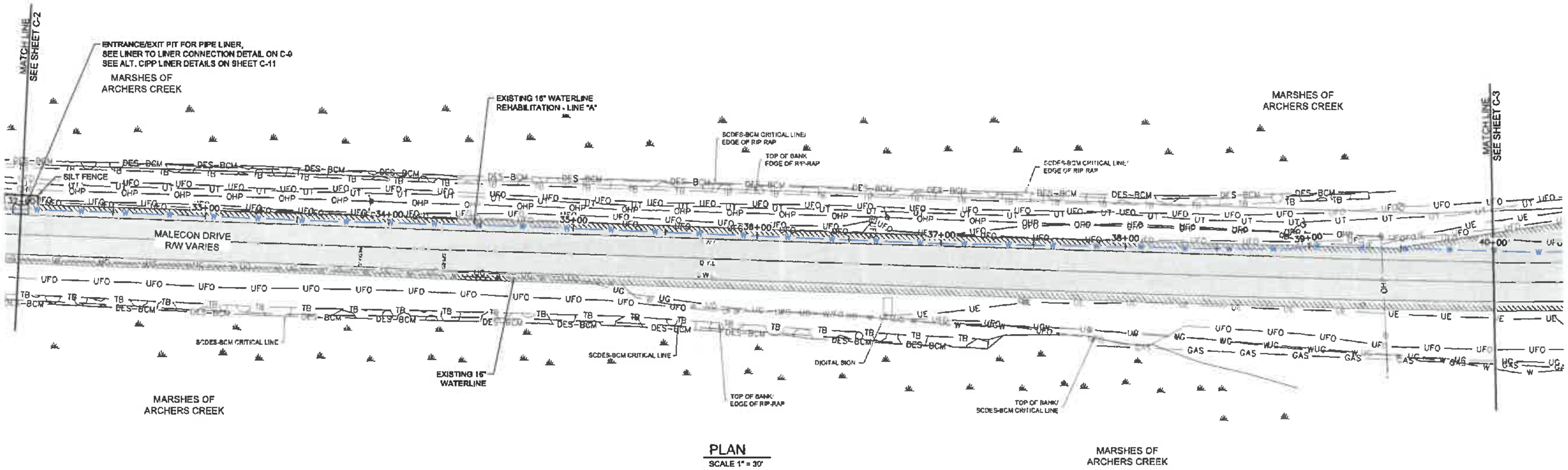
WSA

KCI TECHNOLOGIES
KCI ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
108 Clair Drive, Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

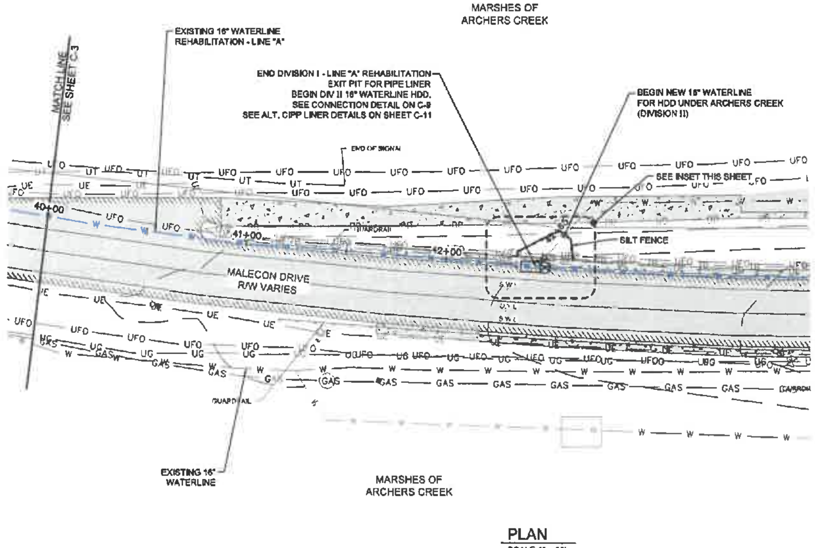
PLAN VIEW STA. 16+00 TO STA. 32+00
DIVISION I - LINE A
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

C-2



PLAN
SCALE 1" = 30'



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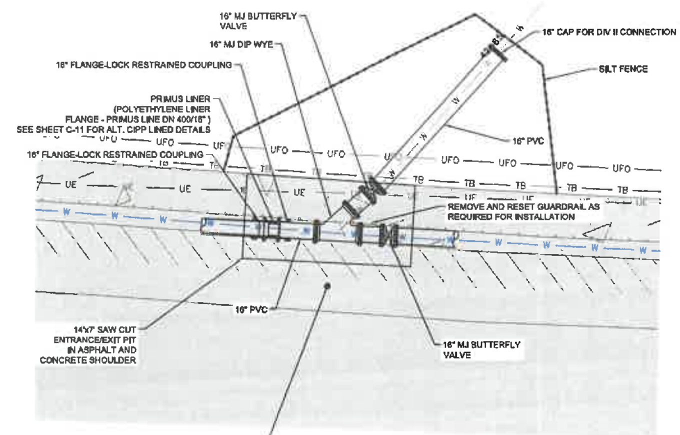

INSET
SCALE 1" = 8'

GRAPHIC SCALE: 1" = 30'

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NO.	DATE	DESCRIPTION
		ISSUE SEQUENCE
1	5/1/25	90% CLIENT REVIEW
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WSA BEAUFORT - JASPER WATER & SEWER AUTHORITY

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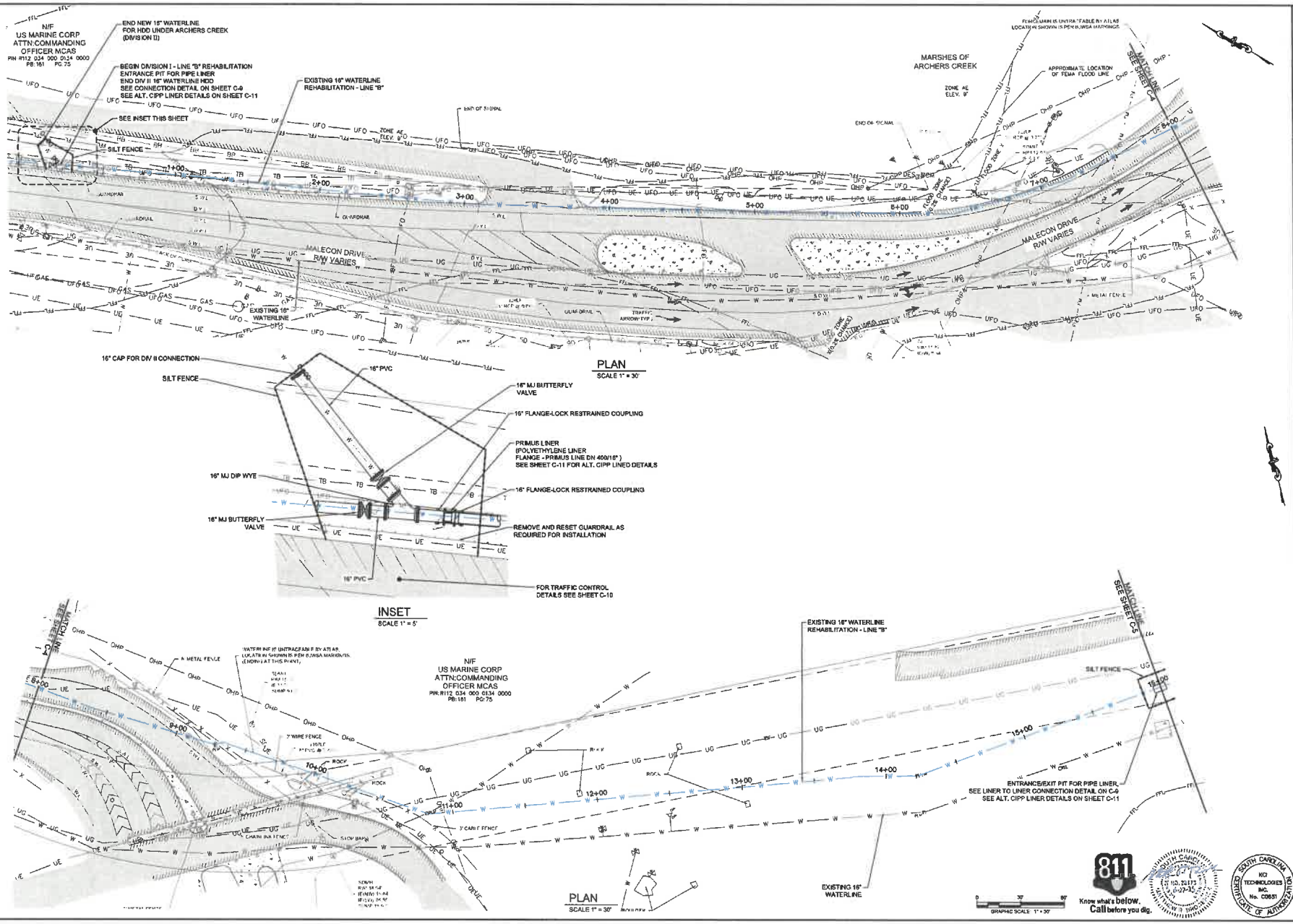
106 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

PLAN VIEW STA. 32+00 TO STA. 42+65
DIVISION I - LINE A
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00039337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

C-3

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION KCI TECHNOLOGIES INC. No. C0651



ISSUE SEQUENCE		
NO.	DATE	DESCRIPTION
1	5/15/25	60% CLIENT REVIEW
2	6/27/25	RESPONSE TO 60% COMMENTS
3	6/27/25	ISSUED FOR PERMITTING

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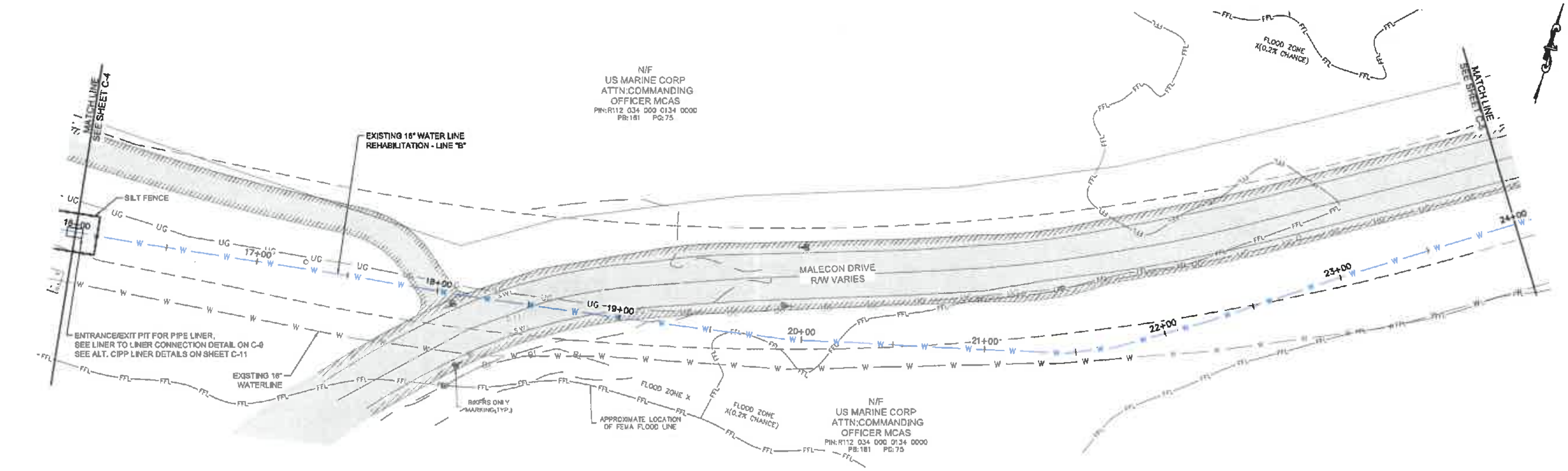
KCI ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
106 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

BEAUFORT-JASPER WATER & SEWER AUTHORITY

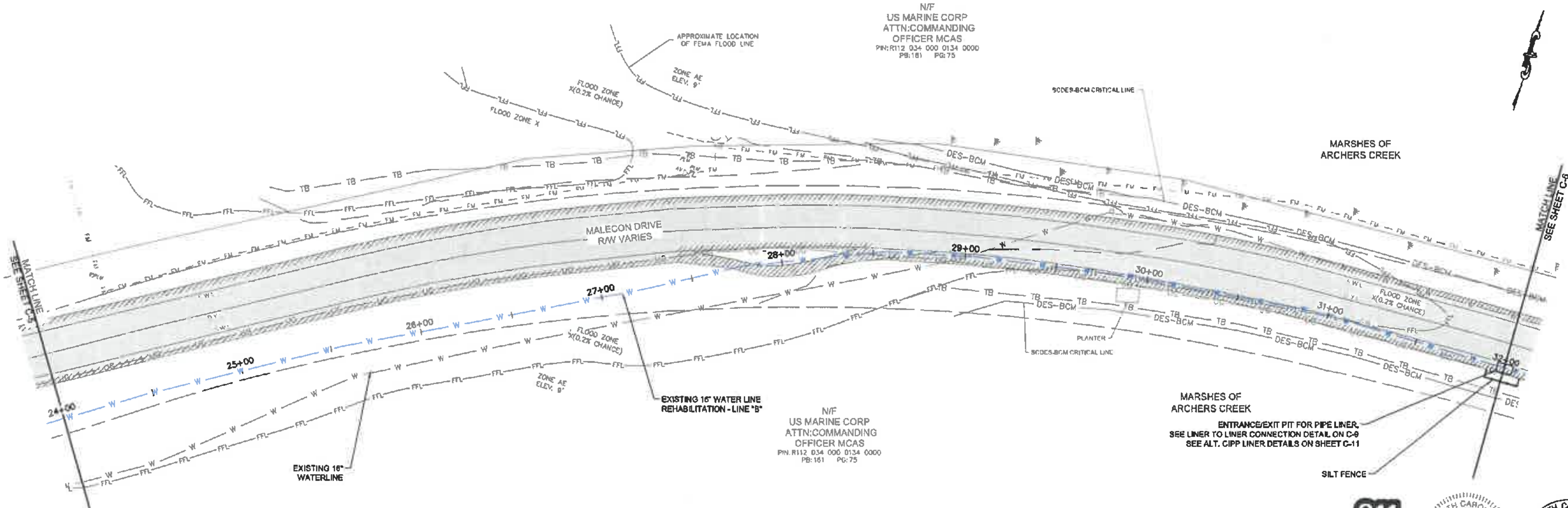
PLAN VIEW STA. 0+00 TO STA. 16+00
DIVISION I - LINE B
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

C-4



PLAN
SCALE 1" = 30'



PLAN
SCALE 1" = 30'

GRAPHIC SCALE: 1" = 30'

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ISSUE SEQUENCE		
NO.	DATE	DESCRIPTION
	5/16/25	60% CLIENT REVIEW
	6/27/25	RESPONSE TO 60% COMMENTS
	6/27/25	ISSUED FOR PERMITTING

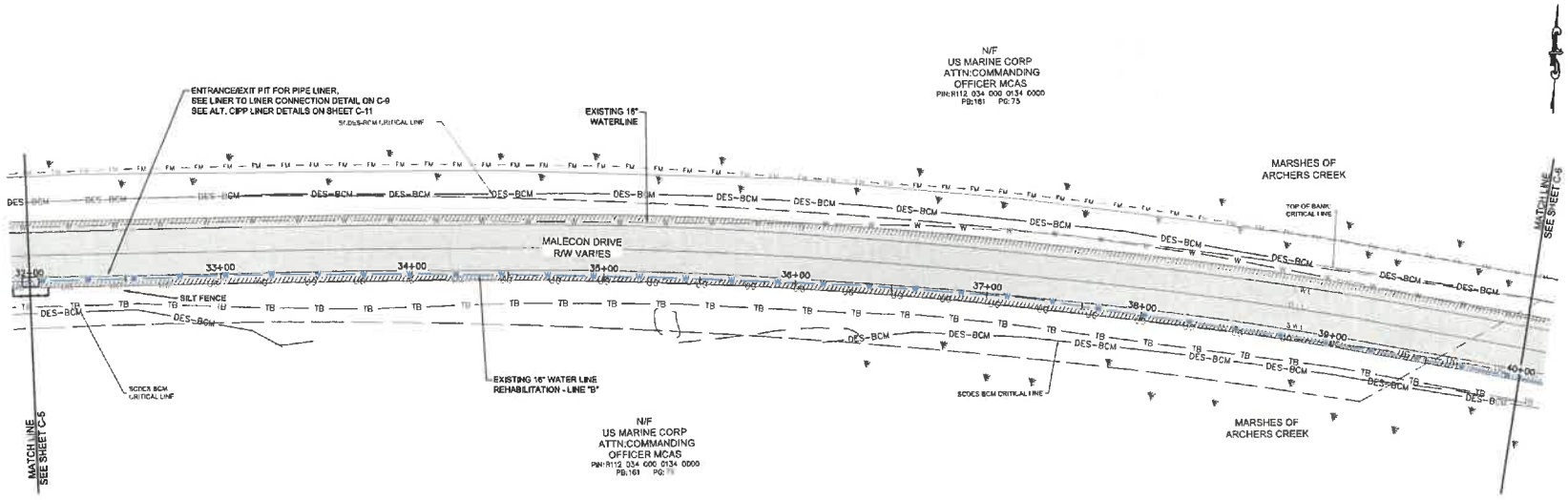
BJWSA

KCI TECHNOLOGIES
KCI ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
106 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

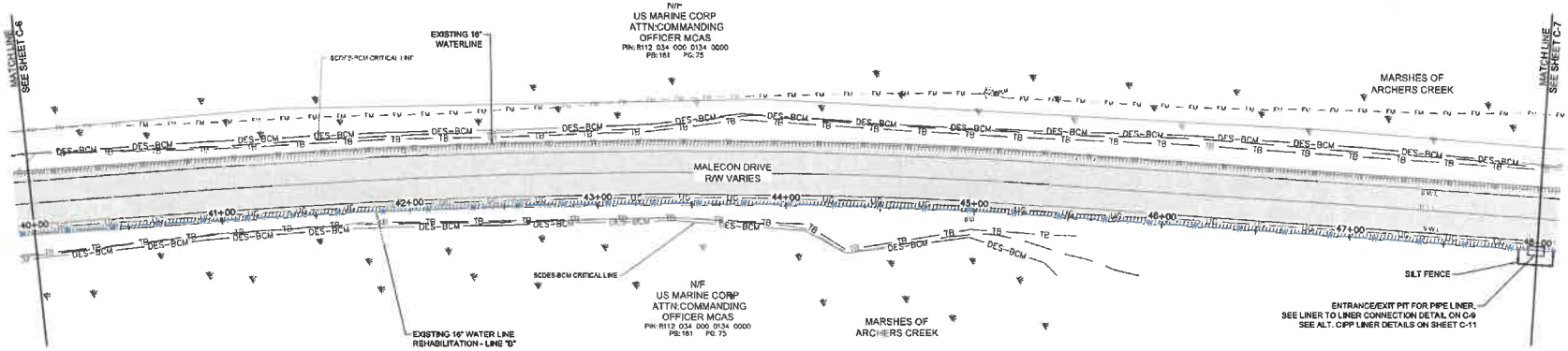
PLAN VIEW STA. 16+00 TO STA. 32+00
DIVISION I - LINE B
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

C-5



PLAN
SCALE 1" = 30'



PLAN
SCALE 1" = 30'

GRAPHIC SCALE 1" = 30'

Know what's below. Call before you dig.

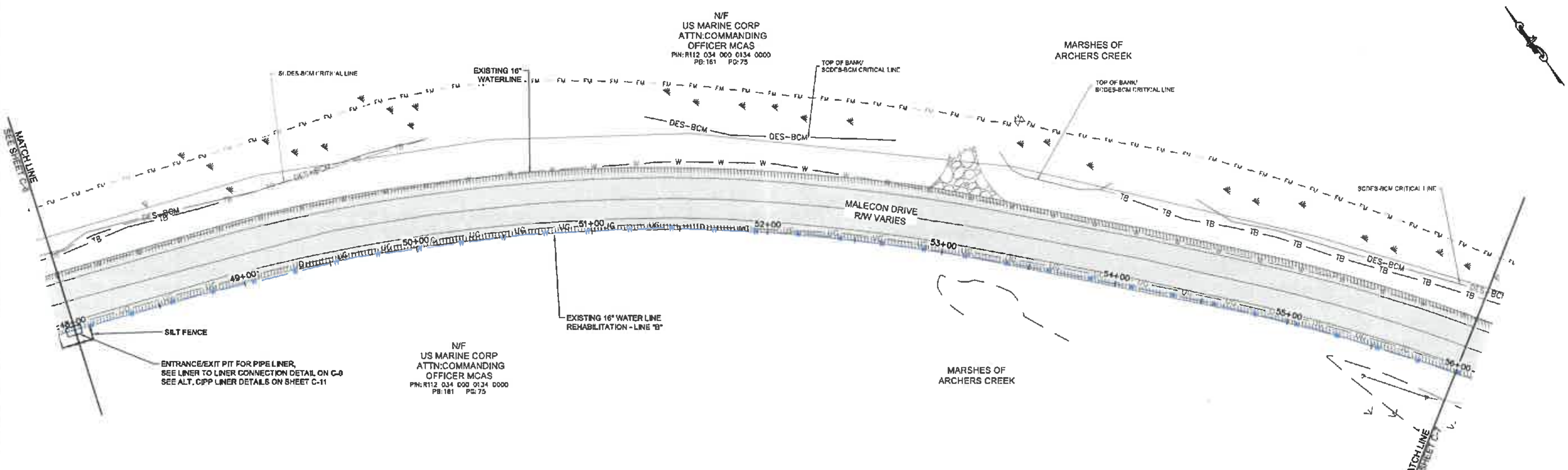
ISSUE SEQUENCE		
NO.	DATE	DESCRIPTION
A	5/16/25	60% CLIENT REVIEW
B	6/27/25	RESPONSE TO 60% COMMENTS
C	6/27/25	ISSUED FOR PERMITTING

KCI TECHNOLOGIES
KCI ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
106 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

PLAN VIEW STA. 32+00 TO STA. 48+00
DIVISION I - LINE B
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

C-6



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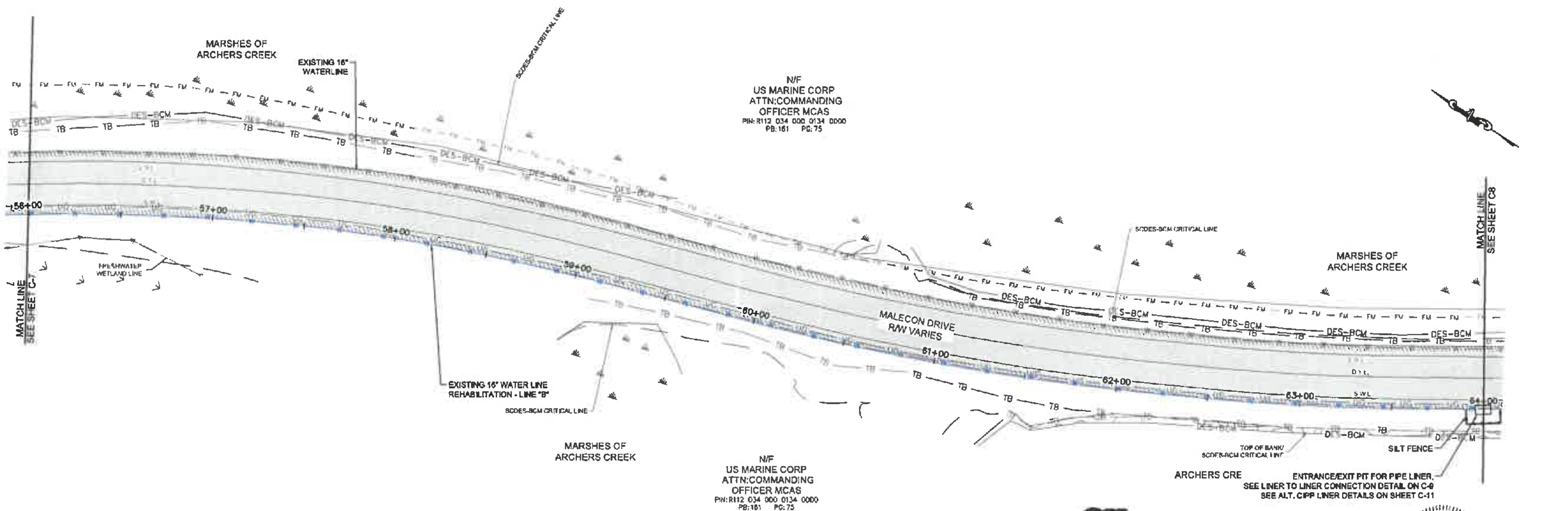

PLAN
SCALE 1" = 30'

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

GRAPHIC SCALE 1" = 30'

NO.	DATE	DESCRIPTION
		ISSUE SEQUENCE
A	5/16/25	60% CLIENT REVIEW
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BJWSA

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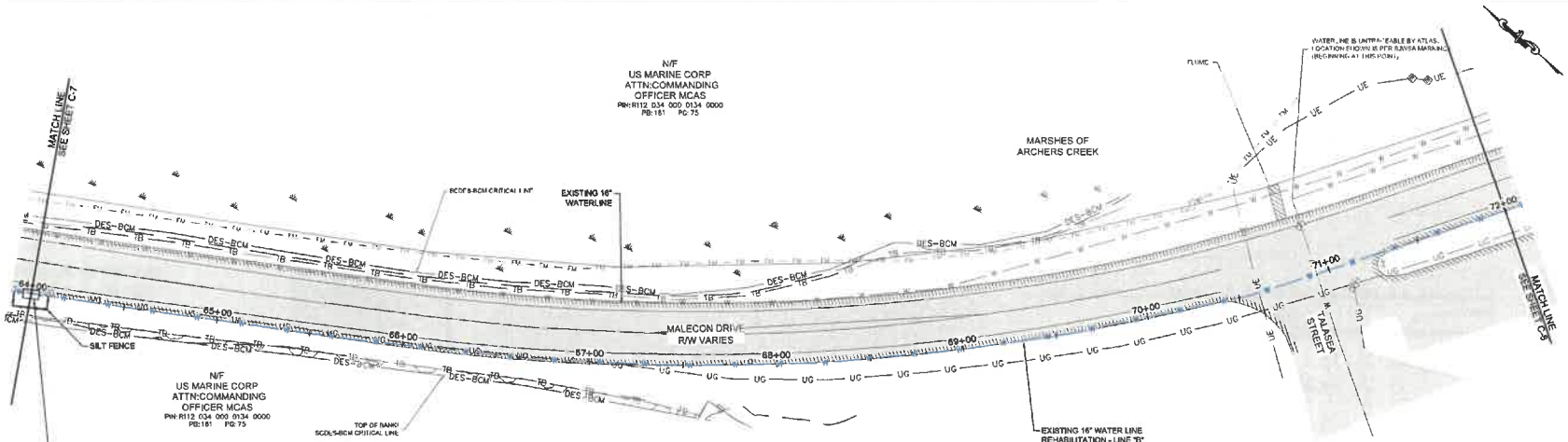
PLAN VIEW STA. 48+00 TO STA. 64+00
DIVISION I - LINE B
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

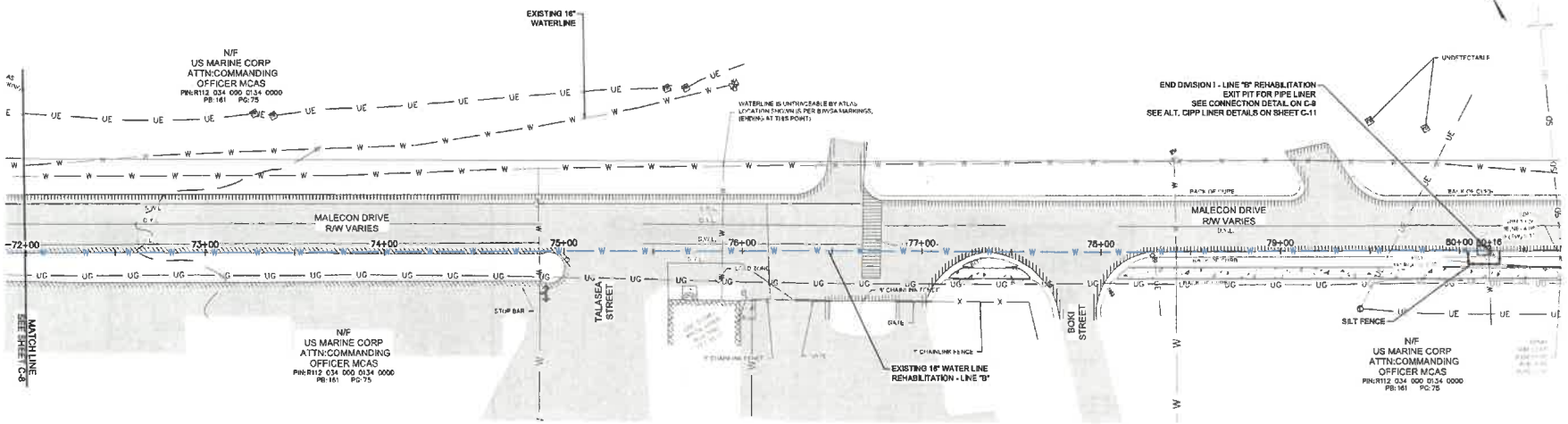
PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION KCI TECHNOLOGIES INC. No. C0651

C-7



PLAN
SCALE 1" = 30'



PLAN
SCALE 1" = 30'

GRAPHIC SCALE 1" = 30'

Know what's below. Call before you dig.

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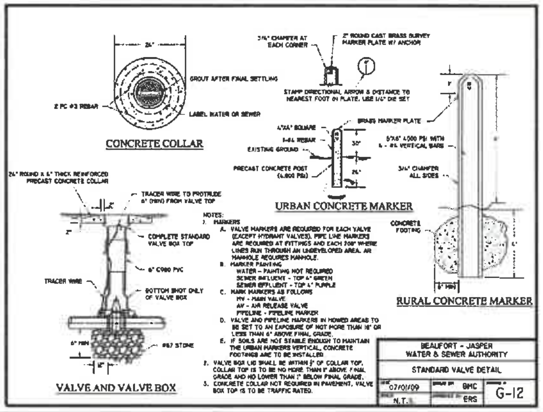
Phone: (864) 269-0890 Fax: (713) 237-9801

PLAN VIEW STA. 64+00 TO STA. 80+16
DIVISION I - LINE B
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

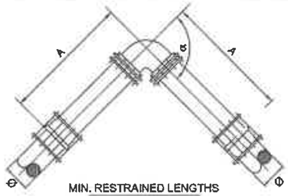
PROJECT NO.:	00030337
DESIGNED	WRT
CHECKED	KJW
APPROVED:	MRB

C-8



NOTES:
1. MARKERS
A. VALVE MARKERS ARE REQUIRED FOR EACH VALVE (EXCEPT HYDRANT VALVES). PIPE LINE MARKERS ARE REQUIRED AT FITTINGS AND EACH 200' WHERE LINES RUN THROUGH AN UNDEVELOPED AREA. AN MANHOLE REQUIRES MANHOLE.
B. MARKER PAINTING
WATER – PAINTING NOT REQUIRED
SEWER INFLUENT – TOP 4" GREEN
SEWER EFFLUENT – TOP 4" PURPLE
C. MARK MARKERS AS FOLLOWS
PV – MAIN VALVE
AV – AIR RELEASE VALVE
PIPELINE – PIPELINE MARKER
D. VALVE AND PIPELINE MARKERS IN MOWED AREAS TO BE SET TO AN EXPOSURE OF NOT MORE THAN 18" OR LESS THAN 6" ABOVE FINAL GRADE.
E. IF SOILS ARE NOT STABLE ENOUGH TO MAINTAIN THE URBAN MARKERS VERTICAL, CONCRETE FOOTINGS ARE TO BE INSTALLED.
2. VALVE BOX LID SHALL BE WITHIN 3" OF COLLAR TOP. COLLAR TOP IS TO BE NO MORE THAN 1" ABOVE FINAL GRADE AND NO LOWER THAN 3" BELOW FINAL GRADE.
3. CONCRETE COLLAR NOT REQUIRED IN PAVEMENT. VALVE BOX TOP IS TO BE TRAFFIC RATED.

BEAUFORT - JASPER WATER & SEWER AUTHORITY		
STANDARD VALVE DETAIL		
07/01/09	BHC	G-12
N.T.S.	ERS	



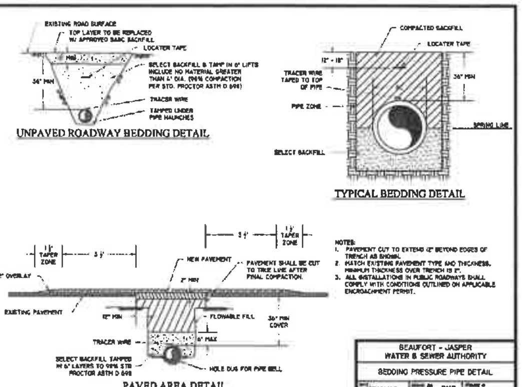
MIN. RESTRAINED LENGTHS

HORIZ. BENDS		
Ø	α	A
16"	90°	152'
16"	45°	63'
16"	22.5°	31'
16"	11.25°	15'
16"	END	349'
16"	VALVES	349'

NOTE:
1. DESIGN ASSUMPTIONS (PER EBBA IRON RESTRAINED LENGTH CALCULATOR, v7.1.2.): PIPE MATERIAL, PVC; SOIL TYPE, SM (SILTY SANDS); SAFETY FACTOR, 2.0 TO 1; TRENCH TYPE, 3; DEPTH OF BURY, 3 FT; TEST PRESSURE, 300 PSI.
2. PROVIDE MINIMUM RESTRAINED LENGTH FOR ALL FITTINGS INSTALLED IN ACCORDANCE WITH THE ABOVE TABLE. WHERE RESTRAINED LENGTHS OVERLAP BETWEEN FITTINGS, PROVIDE CONTINUOUS JOINT RESTRAINT ACROSS THE ENTIRE REQUIRED RESTRAINED LENGTH.
3. VALUES LISTED IN THE TABLE ABOVE ARE MINIMUM LENGTHS. WHERE RESTRAINED LENGTH FALLS BETWEEN PIPE JOINTS, THE NEXT FURTHEST JOINT SHALL ALSO BE RESTRAINED.

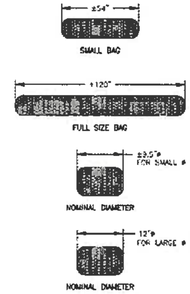
JOINT RESTRAINT

NOT TO SCALE



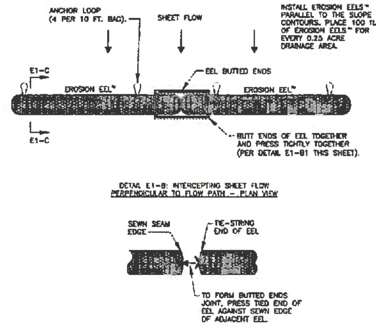
NOTES:
1. PAVEMENT CUT TO EXTEND 12" BEYOND EDGES OF TRENCH AS SHOWN.
2. MATCH EXISTING PAVEMENT TYPE AND THICKNESS. MINIMUM THICKNESS OVER TRENCH IS 2".
3. ALL INSTALLATIONS IN PUBLIC ROADWAYS SHALL COMPLY WITH CONDITIONS OUTLINED ON APPLICABLE ENCROACHMENT PERMIT.

BEAUFORT - JASPER WATER & SEWER AUTHORITY		
BEDDING PRESSURE PIPE DETAIL		
07/01/09	BHC	G-02
N.T.S.	ERS	



EROSION EEL DETAIL

SCALE NTS

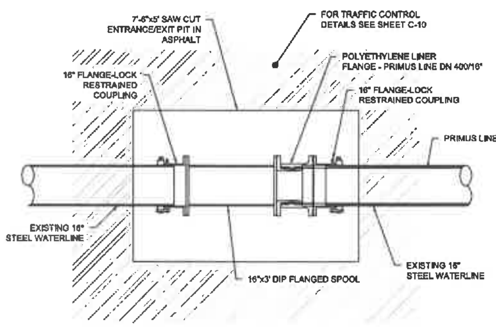


EROSION EEL JOINT DETAIL

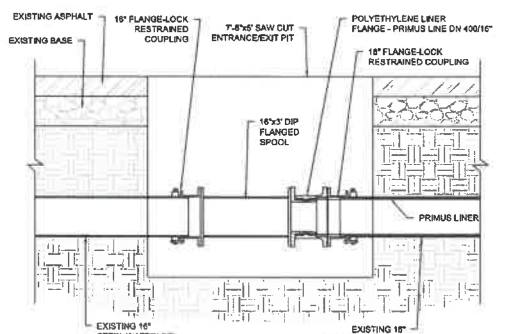
SCALE NTS

GENERAL NOTES

1. EROSION EELS™ SHALL BE MANUFACTURED FROM A WOVEN GEOTEXTILE COVERING WITH INTERIOR FILTER MATERIALS.
2. LENGTHS OF EROSION EELS™ SHALL BE NOMINAL +/- 10 FT. NOMINAL DIAMETER SHALL BE +/-9.5 INCHES OR +/- 12 INCHES.
3. EROSION EELS™ CAN BE PLACED AT THE TOP, ON THE FACE, OR AT THE TOE OF SLOPES TO INTERCEPT RUNOFF, REDUCE FLOW VELOCITY, RELEASE THE RUNOFF AS SHEET FLOW AND PROVIDE REMOVAL OF SEDIMENT FROM THE RUNOFF.
4. EROSION EELS™ SHALL BE INSTALLED ALONG THE GROUND CONTOUR, AT THE TOE OF SLOPES, AT AN ANGLE TO THE CONTOUR TO DIRECT FLOW AS A DIVERSION BERM, AROUND INLET STRUCTURES, IN A DITCH AS A CHECK DAM TO HELP REDUCE SUSPENDED SOLIDS LOADING AND RETAIN SEDIMENT, OR AS A GENERAL FILTER FOR ANY DISTURBED SOIL AREA.
5. NO TRENCHING IS REQUIRED FOR INSTALLATION OF EROSION EELS™.
6. PREPARE BED FOR EEL INSTALLATION BY REMOVING ANY LARGE DEBRIS INCLUDING ROCKS, SOIL CLODS, AND WOODY VEGETATION. EROSION EELS™ CAN ALSO BE PLACED OVER PAVED SURFACES INCLUDING CONCRETE AND ASPHALT WITH NO SURFACE PREPARATION REQUIRED.
7. RAKE BED AREA WITH A HAND RAKE OR BY DRAG HARROW.
8. DO NOT PLACE EEL DIRECTLY OVER RILL AND GULLIES UNTIL AREA HAS BEEN HAND-EXCAVATED AND RAKED TO PROVIDE A LEVEL BEDDING SURFACE. ALL SURFACES SHALL BE UNIFORMLY COMPACTED FOR MAXIMUM SEATING OF EELS IN PLACE.
9. FOR LOCATIONS WHERE EELS WILL BE PLACED IN CONCENTRATED FLOWS (SUCH AS CHECK DAMS, INLET PROTECTION) AND FOR PERIMETER CONTROLS AT PRIMARY DISCHARGE LOCATIONS, BED THE EELS IN A JUTE MESH CRADLE PER THE DETAILED DRAWINGS.
10. IF MORE THAN ONE EROSION EEL™ IS PLACED IN A ROW, THE EELS SHALL BE JOINED PER DETAIL E1-B1.
11. FOR CHECK DAM APPLICATIONS, EROSION EELS™ SHALL BE PLACED PERPENDICULAR TO THE FLOW OF THE WATER. EROSION EELS™ SHALL CONTINUE UP THE SIDES SLOPES A MINIMUM OF 3 FEET ABOVE THE DESIGN FLOW DEPTH.
12. EROSION EELS™ SHALL REMAIN IN PLACE UNTIL FULLY ESTABLISHED VEGETATION HAS COMPLETELY DEVELOPED OR UNTIL THE STORAGE CAPACITY/FUNCTIONAL LIFE OF THE EEL HAS BEEN EXHAUSTED (REQUIRING REPLACEMENT WITH NEW EELS).
13. ANCHORING POSTS FOR CHECK DAM APPLICATIONS SHALL HAVE A MINIMUM WEIGHT OF 1.25 LBS/FT STEEL T-POSTS (5 TO 7 FT. LENGTHS) ROLLED FROM HIGH CARBON STEEL. POSTS SHOULD BE HOT-DIP GALVANIZED OR COATED WITH A WEATHER-RESISTANT PAINT FOR STEEL APPLICATION. POSTS SHOULD BE EQUIPPED WITH A METAL ANCHOR PLATE. INSTALL PER DETAILS ON THIS SHEET.
14. PLACE T-POSTS BEHIND EELS. DO NOT DRIVE POSTS THROUGH EROSION EELS™. T-POSTS ARE TO BE EMBEDDED A MINIMUM OF 2 FT. TO 3 FT. INTO GROUND.



PLAN
SCALE: NTS



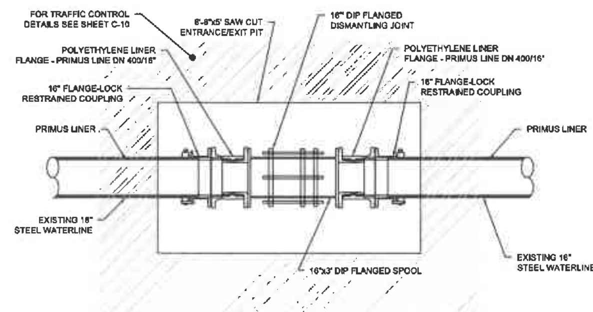
ELEVATION
SCALE: NTS

DETAIL NOTES:

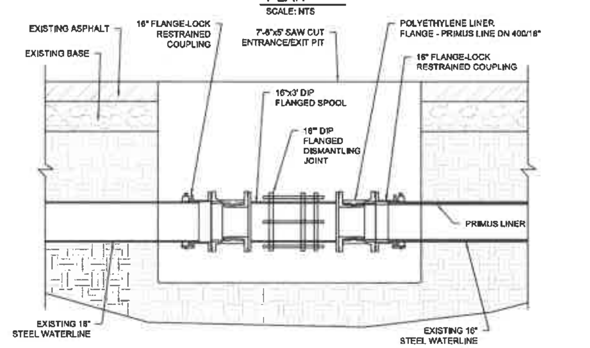
1. FOR NON-PAVED AREAS, PROVIDE SILT FENCE ON ALL DOWNHILL SIDES OF PIT. EXTEND SILT FENCE AT LEAST 5' BEYOND EDGE OF GROUND DISTURBANCE.
2. FOR WORK IN ROADWAY SHOULDER, PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH APPROVED TRAFFIC CONTROL PLAN.
3. ANY OPEN EXCAVATIONS BEYOND WORKING HOURS SHALL BE COVERED WITH A TRAFFIC RATED STEEL PLATE. FOR PITS OPEN MORE THAN 24 HOURS, PROVIDE TEMPORARY GRAVEL BACKFILL UP TO ROAD SURFACE ELEVATION.
4. NEW LINED PIPE SHALL BE PRESSURE TESTED, CHLORINATED, AND APPROVED TO PLACE INTO SERVICE BY SCDES, BJWSA, AND ENGINEER PRIOR TO PLACING INTO SERVICE.

LINER TO EXISTING CONNECTION DETAIL

SCALE 1" = 2'



PLAN
SCALE: NTS



PLAN
ELEVATION

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LINER TO LINER CONNECTION DETAIL

SCALE 1" = 2'

ISSUE SEQUENCE		
NO.	DATE	DESCRIPTION
	5/16/25	90% CLIENT REVIEW
	6/27/25	RESPONSE TO 60% COMMENTS

KCI TECHNOLOGIES
ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
106 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

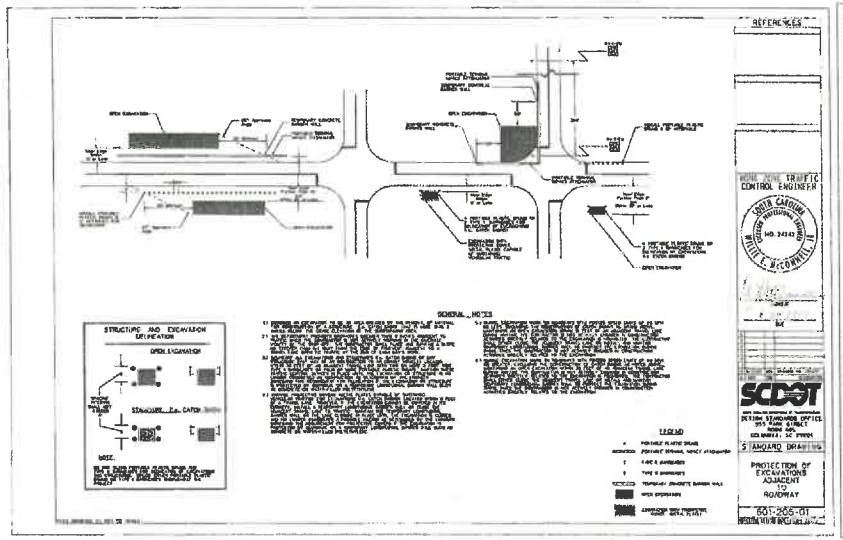
DETAILS

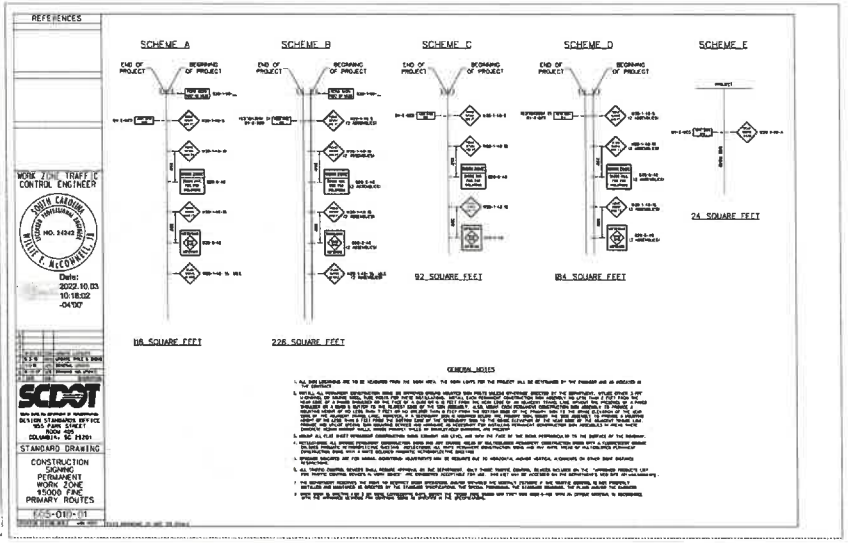
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

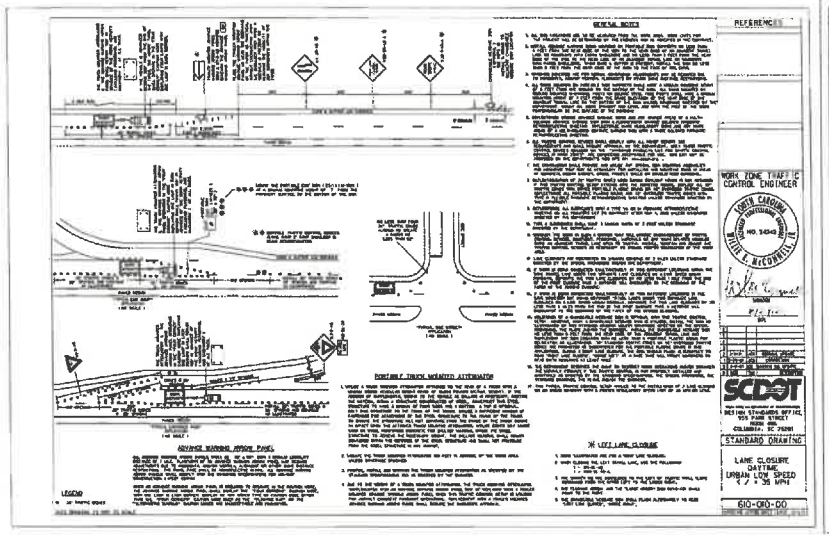
PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

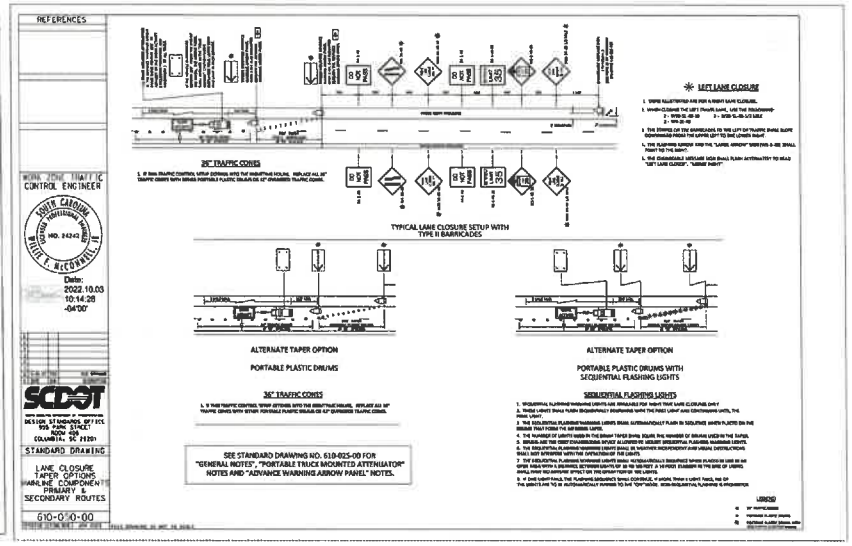
C-9

SOUTH CAROLINA KCI TECHNOLOGIES INC. No. C0651 CERTIFICATE OF AUTHORIZATION









ISSUE SEQUENCE		
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1	5/1/25	60% CLIENT REVIEW
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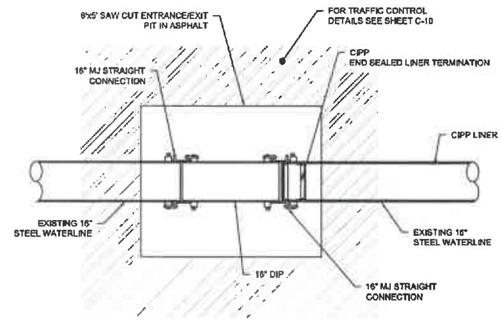
DETAILS

PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

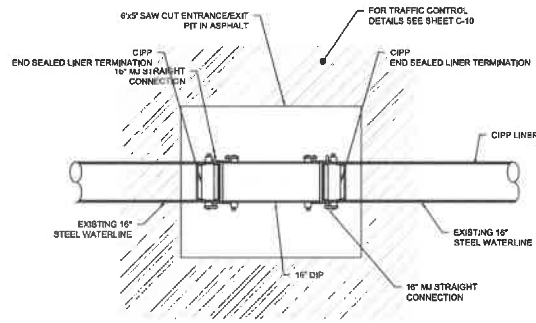
PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED	KJW
APPROVED	MRB

C-10

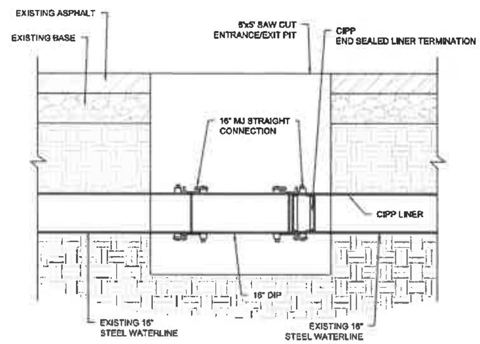
KCI Technologies, Inc. 2025



CIPP LINER CONNECTION PLAN
SCALE 1" = 2'



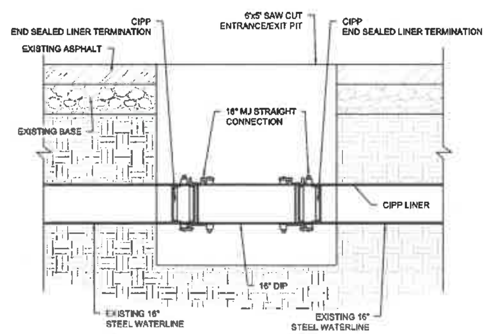
CIPP LINER TO CIPP LINER CONNECTION PLAN
SCALE 1" = 2'



DETAIL NOTES:

1. FOR NON-PAVED AREAS, PROVIDE SILT FENCE ON ALL DOWNHILL SIDES OF PIT. EXTEND SILT FENCE AT LEAST 5' BEYOND EDGE OF GROUND DISTURBANCE.
2. FOR WORK IN ROADWAY SHOULDER, PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH APPROVED TRAFFIC CONTROL PLAN.
3. ANY OPEN EXCAVATIONS BEYOND WORKING HOURS SHALL BE COVERED WITH A TRAFFIC RATED STEEL PLATE. FOR PITS OPEN MORE THAN 24 HOURS, PROVIDE TEMPORARY GRAVEL BACKFILL UP TO ROAD SURFACE ELEVATION.
4. NEW LINED PIPE SHALL BE PRESSURE TESTED, CHLORINATED, AND APPROVED TO PLACE INTO SERVICE BY SCDES, BJWSA, AND ENGINEER PRIOR TO PLACING INTO SERVICE.

CIPP LINER TO EXISTING CONNECTION DETAIL
SCALE 1" = 2'



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CIPP LINER TO CIPP LINER CONNECTION DETAIL
SCALE 1" = 2'

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ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
106 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

ALTERNATE CIPP DETAILS

PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.: 00030337
DESIGNED: WRT
CHECKED: KJW
APPROVED: MRB

C-11

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION KCI TECHNOLOGIES INC. No. C0651

KCI Technologies, Inc. 2025

CONSTRUCTION SEQUENCE:

ITEMS MUST OCCUR IN THE ORDER LISTED. ITEMS CANNOT OCCUR CONCURRENTLY UNLESS SPECIFICALLY NOTED.

1. RECEIVE NPDES COVERAGE FROM SCDHEC.
2. ATTEND PRE-CONSTRUCTION MEETING (ON-SITE), IF REQUIRED.
3. SURVEY AND LAYOUT PROPOSED LINE WORK, THE CONSTRUCTION EASEMENTS, LIMITS OF DISTURBANCE, BUFFER ZONE, AND CLEARING LIMITS.
4. NOTIFY SCDHEC AT LEAST 3 DAYS PRIOR TO BEGINNING LAND DISTURBANCE.
5. CLEAR & GRUB ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS.
6. INSTALL PERIMETER CONTROLS (E.G. SILT FENCE, CONSTRUCTION ENTRANCES, ETC.).
7. INSTALLATION OF INLET PROTECTION ON EXISTING STORM CULVERTS AND STORM INLETS.
8. INSTALLATION OF SEDIMENT TUBE CHECK DAMS IN CHANNELS TRIBUTARY TO THE WORK AREA.
9. CLEARING AND GRUBBING OF BALANCE OF SITE (SEDIMENT AND EROSION CONTROL MEASURES FOR THESE AREAS MUST ALREADY BE INSTALLED). CLEAR ALL PUBLIC RIGHT-OF-WAY IN THE PROJECT WORK AREA AND ALL EASEMENTS TO THE CLEARING LIMITS.
10. INSTALLATION OF LINE WORK. COMMENCE TRENCHING OPERATION WITHIN THE RIGHT-OF-WAYS AND EASEMENTS. IMMEDIATELY BACKFILL AND COMPACT THE TRENCH AND RESTORE THE ORIGINAL SURFACE. ESTABLISH STRAW OR MULCH COVER AND TEMPORARY GRASSING COVER IMMEDIATELY AFTER GRADING AND RESTORATION. FILL, COVER AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. MAINTAIN MULCH COVER AND TEMPORARY GRASSING UNTIL THE PERMANENT GRASSING IS COMPLETED AND ALL OTHER DISTURBED SURFACES ARE RESTORED. FOR DISTURBED PAVEMENT AREAS, PROVIDE TEMPORARY COMPACTED CRUSHED STONE SURFACE UNTIL PAVEMENT IS REPLACED.
11. INSTALLATION OF SEDIMENT TUBE CHECK DAMS AND OTHER SEDIMENT AND EROSION CONTROL MEASURES AFTER ROUGH GRADING OF DISTURBED AREAS FOLLOWING SEWER LINE INSTALLATION.
12. PERFORM INFILTRATION AND PRESSURE TESTS ON ALL GRAVITY SEWER AND FORCEMAIN LINES AND APPURTENANCES AND REPAIR ALL LEAKS.
13. RESTORE ALL AREAS DISTURBED BY THE INSTALLATION OF THE NEW SEWER LINES.
14. RESTORE ALL AREAS DISTURBED BY ABANDONMENT OF THE EXISTING SEWER LINES.
15. INSTALLATION OF FINE GRADING, PERMANENT/FINAL STABILIZATION, PAVING, ETC. ESTABLISH PERMANENT COVER WITHIN FIVE (5) DAYS AFTER ACCEPTANCE OF THE NEW SEWER LINES.
16. REMOVE TEMPORARY SEDIMENT & EROSION CONTROL MEASURES AFTER ENTIRE AREA DRAINING TO THE BASIN REACHES FINAL STABILIZATION (NOTIFY THE PROJECT OWNER/OPERATOR TO HAVE THE SWPPP PREPARER OR REGISTRATION EQUIVALENT APPROVE THE REMOVAL OF TEMPORARY STRUCTURES.)
17. SUBMIT NOTICE OF TERMINATION (NOT) TO SCDHEC AS APPROPRIATE.

• NOTE MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES MUST CONTINUE UNTIL THE SITE IS PERMANENTLY STABILIZED UNTIL THE CONTROLS ARE REMOVED.

EROSION CONTROL NOTES

1. NO WORK SHALL COMMENCE ON SITE UNTIL A LAND DISTURBING PERMIT IS ISSUED BY SCDHEC. THE LAND DISTURBANCE PERMIT MUST BE KEPT ON SITE AT ALL TIMES AND SHOWN ON DEMAND.
2. LAND DISTURBING ACTIVITIES (GRADING, EXCAVATING, AND CONSTRUCTION) ON THE PROJECT SHALL NOT COMMENCE UNTIL THE APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AS SPECIFIED ON THE PLAN.
3. EROSION CONTROL SYMBOLS SHOWN ON PLAN MAY NOT ACCURATELY SHOW EXACT DIMENSIONS AND CONFIGURATIONS OF EROSION CONTROL MEASURES (I.E. NUMBER OF CHECK DAMS AND SPACING, OUTLET PROTECTION SIZE, ETC.). REFER TO EROSION CONTROL STANDARD DETAILS FOR EXACT DIMENSIONS AND CONFIGURATIONS.
4. CHECK DAMS IN SCDOT RIGHT OF WAY DITCHES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS BEEN COMPLETED. DITCHES SHALL BE MAINTAINED ACCORDING TO SCDOT MAINTENANCE SCHEDULES.
5. ALL SEDIMENT AND EROSION CONTROLS ARE TO BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND AFTER ANY STORM EVENT OF 0.5 INCHES OR GREATER OF PRECIPITATION DURING ANY 24-HOUR PERIOD. ANY NEEDED REPAIR WILL BE MADE IMMEDIATELY TO MAINTAIN ALL EROSION AND SEDIMENTATION CONTROLS AS DESIGNED.
6. SILT/SEDIMENT FENCES WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. SEDIMENT WILL BE REMOVED FROM BEHIND THE FENCE WHEN IT BECOMES ABOUT 0.5 FEET DEEP. REMOVED SEDIMENT SHALL BE DISPOSED OF IN A SUITABLE AREA AND STABILIZED TO PREVENT EROSION AND SEDIMENTATION.
7. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
8. 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 COMPLETED AND THE SITE IS STABILIZED.
9. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE ANY SEDIMENTS BEFORE BEING PUMPED BACK TO THE CREEK.
10. WHERE PRACTICABLE, TRENCHES SHOULD BE FILLED, COVERED, AND TEMPORARY SEEDING APPLIED AT THE END OF EACH DAY.
11. CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO THE PAVED ROADWAY FROM CONSTRUCTION AREAS. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
12. DURING CONSTRUCTION, TEMPORARY SLOPES GREATER THAN 2:1 THAT WILL REMAIN EXPOSED FOR LONGER THAN FOURTEEN (14) DAYS SHALL BE STABILIZED WITH TEMPORARY SOIL STABILIZATION MATS. PERMANENT SOIL STABILIZATION MATS SHALL BE INSTALLED ON PERMANENT SLOPES GREATER THAN 2:1 OR WHERE OTHERWISE INDICATED ON PLAN.
13. SEE SHEETS EC-4 and EC-5 FOR ADDITIONAL NOTES AND DETAILS.

GRASSING NOTES:

1. USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK OF THIS SEASON.
2. SEED: CONFORM TO ALL STATE LAWS AND TO ALL REQUIREMENTS AND REGULATIONS OF THE SOUTH CAROLINA DEPARTMENT OF AGRICULTURE. DELIVER TO SITE EACH VARIETY OF SEED INDIVIDUALLY PACKAGED AND TAGGED TO SHOW NAME, NET WEIGHT, ORIGIN AND LOT NUMBER.
3. FERTILIZER: CONFORM TO STATE FERTILIZER LAW.
4. AT TIME OF DELIVERY, FURNISH THE ENGINEER INVOICES OF ALL MATERIALS RECEIVED IN ORDER THAT APPLICATION RATES MAY BE DETERMINED. IMMEDIATELY REMOVE FROM THE SITE MATERIALS THAT DO NOT COMPLY WITH THE SPECIFIED REQUIREMENTS, AND PROMPTLY REPLACE WITH MATERIALS MEETING THE SPECIFIED REQUIREMENTS.
5. PROVIDE A MIXED FERTILIZER WITH DESIGNATION SUCH AS 15-10-10, WHERE THE FIRST NUMBER REPRESENTS MINIMUM PERCENT OF NITROGEN REQUIRED, THE SECOND NUMBER REPRESENTS THE MINIMUM PERCENT OF AVAILABLE PHOSPHORIC ACID REQUIRED, AND THE THIRD NUMBER REPRESENTS THE MINIMUM PERCENT OF WATER SOLUBLE POTASH REQUIRED IN THE FERTILIZER. FOR CENTIPEDE GRASS, USE ONLY 15-0-15 OR 16-4-8 FERTILIZER. FERTILIZER SHALL BE DELIVERED TO THE SITE IN BAGS LABELED WITH THE MANUFACTURER'S GUARANTEED ANALYSIS.
6. PROVIDE GRASS SEED WHICH IS: FREE FROM NOXIOUS WEED SEEDS, AND RECLEANED, GRADE A RECENT CROP SEED. TREATED WITH APPROPRIATE FUNGICIDE AT THE TIME OF MIXING. DELIVERED TO THE SITE IN SEALED CONTAINERS WITH DEALER'S GUARANTEED ANALYSIS.
7. LIME: PROVIDE AGRICULTURAL GRADE, STANDARD GROUND LIMESTONE CONFORMING TO CURRENT "RULES, REGULATIONS AND STANDARDS OF THE FERTILIZER BOARD OF CONTROL" ISSUED AT CLEMSON UNIVERSITY. BAG TAGS OR DELIVERY SLIP FOR BULK LOADS SHALL INDICATE BRAND OR TRADE NAME, CALCIUM CARBONATE EQUIVALENT, AND OTHER PERTINENT DATA TO IDENTIFY THE LIME.
8. WOOD CELLULOSE FIBER: PROVIDE WOOD CHIP PARTICLES MANUFACTURED PARTICULARLY FOR DISCHARGING UNIFORMLY ON THE GROUND SURFACE WHEN DISPERSED BY A HYDRAULIC WATER SPRAYER. MATERIAL TO BE HEAT PROCESSED SO AS TO CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS. IT SHALL BE DYED (NON-TOXIC) AN APPROPRIATE COLOR TO FACILITATE METERING.
9. STRAW MULCH: PROVIDE STRAW OR HAY MATERIAL. STRAW TO BE STALKS OF WHEAT, RYE, BARELY OR OATS. HAY TO BE TIMOTHY, PRAIRIE, ALFALFA, OR COASTAL BERMUDA. MATERIAL TO BE REASONABLY DRY AND REASONABLY FREE FROM MATURE SEED BEARING STALKS, ROOTS OR BULBETS OF JOHNSON GRASS, NUTGRASS, WILD ONION, BANDBURG, WILD GARLIC, WILD MUSTARD, CROTOLARIA, PIGWEED, WITCHWEED, AND COCKLEBUR AND OTHER NOXIOUS WEEDS.
10. EXCELSIOR FIBER MULCH: TO CONSIST OF 4" TO 6", AVERAGE LENGTH, WOOD FIBERS CUT FROM SOUND, GREEN TIMBER. MAKE CUT IN SUCH A MANNER AS TO PROVIDE MAXIMUM STRENGTH OF FIBER, BUT AT A SLIGHT ANGLE TO NATURAL GRAIN OF THE WOOD.
11. EROSION CONTROL BLANKET: PROVIDE ON AREAS AS SHOWN ON THE PLANS. PROVIDE EROSION CONTROL BLANKET S150, FROM NORTH AMERICAN GREEN, OR APPROVED EQUAL.
12. SEED AREAS IMMEDIATELY UPON COMPLETION OF GRADING OR CONSTRUCTION AND CLEAN-UP OPERATIONS. SLOPES GREATER THAN FOUR HORIZONTAL TO ONE VERTICAL, UTILITY RIGHTS-OF-WAY ADJACENT TO STREAM BANKS.
13. SEEDING SCHEDULES: UNLESS OTHERWISE PROVIDED, SELECT THE TYPE OF SEEDING FROM THE TABLES SHOWN BELOW FOR THE UPPER STATE AND THE LOWER STATE REGIONS AS APPLICABLE TO THE PROJECT. THE TOTAL SEED RATE IN POUNDS PER ACRE IS THE SUM TOTAL SHOWN FOR ALL THE VARIETIES OF SEED OPPOSITE THE SCHEDULE NUMBER IN THE SEEDING SCHEDULES INCLUDED HEREIN. THE UPPER STATE REGION CONSISTS OF ALL THE COUNTIES WEST OF THE COUNTIES AIKEN, LEXINGTON, RICHLAND, KERSHAW, AND CHESTERFIELD, THE LOWER STATE REGION CONSISTS OF THE ABOVE-CITED COUNTIES AND ALL COUNTIES EAST.

1	COMMON BERMUDA(UNHULLED) 3 BERICEA LESPEDEZA(SCARIFIED) 2 KENTUCKY 31 FESCUE WEEPING LOVEGRASS 2	23 50 50 10	23 50 50 10	MARCH 15 TO AUGUST 14
2	KENTUCKY 31 FESCUE BERICEA LESPEDEZA(UNHULLED, UNSCARIFIED) COMMON BERMUDA(UNHULLED) 3 WEEPING LOVEGRASS 2 REBEEDING CRIMSON CLOVER 4 ANNUAL RYE GRASS 5 RYE GRAIN	60 60 30 10 20 5 30	60 60 30 10 6 15 6	AUGUST 15 TO MARCH 14

NOTES
1. INCLUDES RURAL AREAS ADJACENT TO WELL-DEVELOPED LAWNS
2. NOT REQUIRED ON SHOULDERS, MEDIANS, ETC. AND ON SLOPES UNDER 5 FEET IN HEIGHT
3. DO NOT USE GIANT BERMUDA SEED INCLUDING NK-37.
4. PROVIDE AN INOCULANT FOR TREATING RESEEDING CRIMSON CLOVER SEED OF A PURE CULTURE OF NITROGEN-FIXING BACTERIA SELECTED FOR A MAXIMUM VITALITY AND ABILITY TO TRANSFORM NITROGEN FROM THE AIR INTO SOLUBLE NITRATES AND DEPOSIT THEM INTO THE SOIL. ENSURE THAT INOCULANTS CONSIST OF PURGERED CULTURES AND ARE NOT MORE THAN ONE YEAR OLD. DO NOT PLANT CLOVER IN MEDIANS OR IN RURAL AREAS ADJACENT TO WELL-DEVELOPED LAWNS
5. THE USE OF ITALIAN RYE GRASS IS PROHIBITED ON ALL PROJECTS.

3a	COMMON BERMUDA(UNHULLED) 3 WEEPING LOVEGRASS 2 BERICEA LESPEDEZA(SCARIFIED) 2	30 10 50 10	30 10 50 10	MARCH 1 TO AUGUST 14
4a	COMMON BERMUDA(UNHULLED) 3 WEEPING LOVEGRASS 2 BERICEA LESPEDEZA(UNHULLED, UNSCARIFIED) REBEEDING CRIMSON CLOVER 4 ANNUAL RYE GRASS 5 RYE GRAIN	40 10 60 20 5 30	40 10 60 6 15 6	AUGUST 15 TO FEBRUARY 28
3b	CENTIPEDE	10	10	MARCH 1 TO APRIL 15

NOTES:
1. INCLUDES RURAL AREAS ADJACENT TO WELL-DEVELOPED LAWNS.
2. NOT REQUIRED ON SHOULDERS, MEDIANS, ETC. AND ON SLOPES UNDER 5 FEET IN HEIGHT.
3. DO NOT USE GIANT BERMUDA SEED INCLUDING NK-37.
4. PROVIDE AN INOCULANT FOR TREATING RESEEDING CRIMSON CLOVER SEED OF A PURE CULTURE OF NITROGEN-FIXING BACTERIA SELECTED FOR A MAXIMUM VITALITY AND ABILITY TO TRANSFORM NITROGEN FROM THE AIR INTO SOLUBLE NITRATES AND DEPOSIT THEM INTO THE SOIL. ENSURE THAT INOCULANTS CONSIST OF PURGERED CULTURES AND ARE NOT MORE THAN ONE YEAR OLD. DO NOT PLANT CLOVER IN MEDIANS OR IN RURAL AREAS ADJACENT TO WELL-DEVELOPED LAWNS
5. PENSACOLA BAHIA IS 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
6. APPLY ONE-HALF OF LIME RATES AND ONE-HALF OF MAINTENANCE FERTILIZER RATES. FERTILIZE CENTIPEDE AT THE APPLICATION RATE OF 30 POUNDS PER ACRE OF 16-4-8 OR 15-0-15 FERTILIZERS IN MAY AND REPEAT IN AUGUST.
7. THE USE OF ITALIAN RYE GRASS IS PROHIBITED

THE CONTRACTOR MAY INCLUDE QUANTITIES OF RYE GRAIN AND MILLET IN SCHEDULE NOS. 1 AND 3 TO ESTABLISH QUICK GROUND COVER FOR EROSION CONTROL PURPOSES.

1	BROWN TOP MILLET	30	APRIL 1 TO AUGUST 15
2	RYE GRAIN ANNUAL RYE GRASS	56 15	AUGUST 15 TO MARCH 31

1 THE USE OF ITALIAN RYE GRASS IS PROHIBITED

GROUND PREPARATION
1. BRING ALL AREAS TO PROPER LINE, GRADE AND CROSS SECTION INDICATED ON THE PLANS.
2. REPAIR EROSION DAMAGE PRIOR TO COMMENCING SEEDING OPERATIONS.
3. LOOSEN SEEDBED TO MINIMUM DEPTH OF 3".
4. REMOVE ALL ROOTS, CLODS, STONES LARGER THAN 1" IN ANY DIMENSION, AND OTHER DEBRIS.
5. PROVIDE AND PREPARE TOPSOIL.
6. CONDUCT SOIL TEST TO DETERMINE PH FACTOR. IF PH IS NOT IN THE RANGE OF 6.0 TO 6.5, ADJUST.

APPLICATION OF FERTILIZER:
1. SPREAD UNIFORMLY OVER AREAS TO BE SEEDED AT: RATE OF 1000 LBS. PER ACRE.
2. FERTILIZE CENTIPEDE AT THE APPLICATION RATE OF 20 POUNDS PER ACRE OF 16-4-8 OR 15-0-15.
3. USE APPROVED MECHANICAL SPREADERS.
4. MIX WITH SOIL TO DEPTH OF APPROXIMATELY 3".

SOWING METHODS
1. PERFORM SEEDING DURING THE PERIODS AND AT THE RATES SPECIFIED IN THE SEEDING SCHEDULES.
2. DO NOT CONDUCT SEEDING WORK WHEN GROUND IS FROZEN OR EXCESSIVELY WET.
3. PRODUCE SATISFACTORY STAND OF GRASS REGARDLESS OF PERIOD OF THE YEAR THE WORK IS PERFORMED.
4. SEEDING, SLOPES LESS THAN FOUR HORIZONTAL TO ONE VERTICAL:
5. SHALL CONFORM TO METHODS EA, WF OR WCF AS SPECIFIED.

GRASSING NOTES

STANDARD NOTES

1. 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. MECHANICALLY TRACK ALL SLOPES AS SHOWN ON THE DETAIL.
2. 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.
3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INSTALLED INAPPROPRIATELY, OR INCORRECTLY, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
4. 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 SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
5. 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.
6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
7. 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 SCR100000.
8. 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.
9. 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.
10. 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.
11. A COPY OF THE SWPPP, INSPECTIONS 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.
12. 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.
13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
14. 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.
15. 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.).
16. 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.
   - SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
17. 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.
18. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SCR 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.
19. 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.

NO.	DATE	DESCRIPTION
1	5/16/25	60% CLIENT REVIEW
2	6/27/25	RESPONSE TO 60% COMMENTS
3	6/27/25	ISSUED FOR PERMITTING

WSA

KCI TECHNOLOGIES
ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
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EROSION CONTROL DETAILS
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

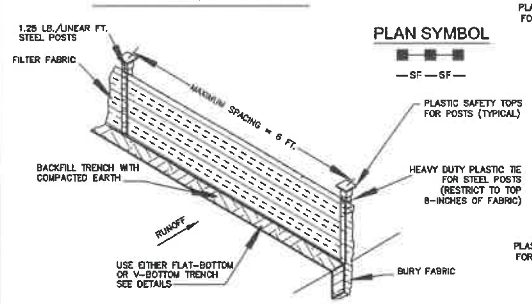
PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

EC-1

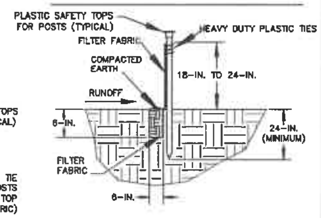
SOUTH CAROLINA PROFESSIONAL ENGINEER NO. 28177 6-27-25

SOUTH CAROLINA KCI TECHNOLOGIES INC. No. C0651 CERTIFICATE OF AUTHORIZATION

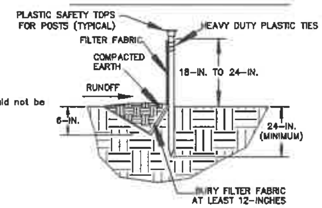
SILT FENCE INSTALLATION



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 passed 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 stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
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.

South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC-03 Page 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

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 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.
4. 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.
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 stormwater 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. Removed 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.

South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC-03 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

ISSUE SEQUENCE

NO.	DATE	DESCRIPTION
	5/16/25	60% CLIENT REVIEW
	6/27/25	RESPONSE TO 60% COMMENTS
	6/27/25	ISSUED FOR PERMITTING

KCI TECHNOLOGIES
ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
106 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

EROSION CONTROL DETAILS

PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION I
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.: 00030337
DESIGNED: WRT
CHECKED: KJW
APPROVED: MRB

SOUTH CAROLINA KCI TECHNOLOGIES INC. No. C0051 CERTIFICATE OF AUTHORIZATION

EC-2

KCI Technologies, Inc. 2025

PARRIS ISLAND
WATERLINE REPLACEMENT - DIVISION II

FOR

BEAUFORT-JASPER WATER & SEWER AUTHORITY

OKATIE, SOUTH CAROLINA

JUNE 2025

OWNER:
BEAUFORT - JASPER WATER & SEWER AUTHORITY
6 SNAKE ROAD
OKATIE, SOUTH CAROLINA 29909

OWNER CONTACT:
ERIC VEACH
PROJECT MANAGER
6 SNAKE ROAD
OKATIE, SOUTH CAROLINA 29909
PHONE: (843) 987-8066

ENGINEER:
KCI TECHNOLOGIES, INC.
MATTHEW BRODERICK, P.E.
106 CLAIR DRIVE
PIEDMONT, S.C. 29673
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TOPOGRAPHIC SURVEY:
ATLAS SURVEYING, INC.
168 BOARDWALK DRIVE, SUITE A
RIDGELAND, SC 29936
PROJECT NO: BFT-24384
PLAT DATE 04-24-2025, FILE: BFT-24384 AT1.DWG

BJWSA CIP-2305

PROJECT DESCRIPTION:

THIS PROJECT IS LOCATED IN BEAUFORT COUNTY, SOUTH CAROLINA AND GENERALLY CONSISTS OF WATERLINE REHABILITATION.

DIVISION I (UNDER SEPARATE COVER):
THIS DIVISION OF WORK INCLUDES INSTALLATION OF APPROXIMATELY 12,300 LINEAR FEET OF 16" POLYETHYLENE LINER INSIDE OF AN EXISTING 16" STEEL WATERLINE AND OTHER RELATED WORK REQUIRED FOR A COMPLETE INSTALLATION.

DIVISION II :
THIS DIVISION OF WORK INCLUDES INSTALLATION OF APPROXIMATELY 1,900 LINEAR FEET OF 18" FUSIBLE PVC INSTALLED BY HORIZONTAL DIRECTIONAL DRILL (HDD) ON BOTH SIDES OF ARCHER CREEK BRIDGE TO REPLACE AN EXISTING 16" WATERLINES SUSPENDED FROM THE BRIDGE AND 380 LINEAR FEET OF 16" DIP INSTALLED BY OPEN CUT.

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G-2	KEY MAP
C-1	PLAN AND PROFILE NORTH STA. 0+00 TO STA. 6+00 - DIVISION II
C-2	PLAN AND PROFILE NORTH STA. 6+00 TO END - DIVISION II
C-3	PLAN AND PROFILE SOUTH STA. 0+00 TO STA. 7+00 - DIVISION II
C-4	PLAN AND PROFILE SOUTH STA. 7+00 TO END - DIVISION II
C-6	DETAILS
C-5	DETAILS
EC-1	EROSION CONTROL DETAILS
EC-2	EROSION CONTROL DETAILS

811 Know what's below. Call before you

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 28173 6-27-25

SOUTH CAROLINA KCI TECHNOLOGIES INC. No. CO651 CERTIFICATE OF AUTHORIZATION

ISSUE SEQUENCE		
NO.	DATE	DESCRIPTION
A	5/15/25	90% CLIENT REVIEW
B	6/04/25	RESPONSE TO 90% COMMENTS
C	6/27/25	ISSUED FOR PERMITTING

KCI TECHNOLOGIES
KCI ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
106 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

TITLE SHEET

PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION II
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

TS

GENERAL PROJECT NOTES:

1. ALL WORK SHALL BE PERFORMED WITHIN ROAD RIGHTS-OF-WAY. WORK ON PRIVATE PROPERTY SHALL ONLY BE PERFORMED WITHIN THE LIMITS OF OBTAINED EASEMENTS.
2. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS BEFORE SUBMITTING HIS BID.
3. ALL DISTANCES, DIMENSIONS AND ELEVATIONS SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. IN CASE OF CONFLICT THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY SO THAT CLARIFICATIONS MAY BE MADE PRIOR TO THE START OF WORK.
4. THE PROPOSED GRADES AS SHOWN ARE THE FINISHED GRADES UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL SUPPLY AND ESTABLISH SURVEY CONTROL, INCLUDING THE HORIZONTAL AND VERTICAL CONTROL POINTS. THE CONTRACTOR SHALL MAINTAIN THIS CONTROL AND PROVIDE ALL BENCHMARKS, STAKES, GRADES, LEVELS, AND LINES NECESSARY FOR CONSTRUCTION. CONTRACTOR(S) SHALL PROVIDE ADEQUATE SUPERVISION TO PREVENT DAMAGE AND MOVEMENT FROM EQUIPMENT WORKING AROUND CONSTRUCTION STAKES. THESE CONSTRUCTION STAKES SHALL REMAIN IN PLACE & BE PROTECTED UNTIL OWNER APPROVES THEIR REMOVAL. ANY STAKES THAT HAVE BEEN DISPLACED AS A RESULT OF CONSTRUCTION ACTIVITY ARE TO BE REPLACED BY A LICENSED LAND SURVEYOR ENGAGED BY THE CONTRACTOR AT NO COST TO THE OWNER.
6. ALL EXISTING FACILITIES DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER.
7. ALL EXISTING PAVEMENT AND CONCRETE TO BE JOINED SHALL BE SAWCUT IN RECTANGULAR SHAPES.
10. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL CLEAN THE ENTIRE SITE OF ALL CONSTRUCTION RELATED MATERIAL AND DEBRIS.
11. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ON ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFFSITE GRADING, WRITTEN PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNER(S).
11. INSTALL ALL TEMPORARY EROSION CONTROL MEASURES PRIOR
12. THE CONTRACTOR SHALL MAINTAIN EACH STREAM OR CREEK IN AN UNOBSTRUCTED STATE. CONTRACTOR SHALL INSTALL SILT FENCE IN A MANNER AS TO NOT ALLOW TRENCHING OPERATION TO SPILL EXCESS SOIL INTO WATERS OF THE STATE.
13. THE ENGINEER HAS NOT REVIEWED THE STRUCTURAL STABILITY OF ANY IMPOUNDMENTS ON THE SITE AND DOES NOT ASSUME RESPONSIBILITY FOR THEM.
14. THE ENGINEER WILL NOT BE CONTINUOUSLY PRESENT IN THE FIELD. IT IS SPECIFICALLY UNDERSTOOD THAT HE DOES NOT UNDERTAKE NOR ASSUME ANY OBLIGATION FOR SUPERVISION OF CONSTRUCTION, SAFETY MEASURES TAKEN DURING THE COURSE OF CONSTRUCTION, RESPONSIBILITY FOR SCHEDULING THE WORK FOR INSURING COMPLETE COMPLIANCE WITH THE CONTRACT DOCUMENTS AND/OR ALL CODE REQUIREMENTS, RULES AND REGULATIONS OF ANY PUBLIC OR PRIVATE AUTHORITY HAVING JURISDICTION OVER THE WHOLE OR ANY PART OF THE WORK. IN ADDITION, THE ENGINEER NEITHER UNDERTAKES, ASSUMES, NOR GUARANTEES THE WORK AND/OR PERFORMANCE OF THE CONTRACTOR.

WATERLINE REHABILITATION NOTES:

1. CONTRACTOR TO COORDINATE AND VERIFY WITH BJWSA AND MCB PARRIS ISLAND ON STATUS OF EXISTING WATERLINES PRIOR TO CONSTRUCTION. CERTAIN EXISTING WATERLINES ARE PROPOSED TO BE ABANDONED, HOWEVER, CONTRACTOR SHALL CONFIRM WITH BJWSA AND MCB PARRIS ISLAND HOW AND WHEN THESE LINES WILL BE TAKEN OUT OF SERVICE WITH WATERLINE REHABILITATION.
2. MAXIMUM AREA OF GROUND DISTURBANCE IS 10 FT X 30FT FOR EACH TRENCHLESS REHABILITATION ACCESS PIT.
3. PAVEMENT CUTS SHALL BE TEMPORARILY FILLED WITH CRUSHED STONE FLUSH TO TOP OF PAVEMENT UNTIL PERMANENT PAVEMENT PATCH IS INSTALLED, ALL ROADS.

GENERAL RECOMMENDED SEQUENCE OF CONSTRUCTION:

1. CONDUCT KICKOFF MEETING WITH BJWSA AND MCB PARRIS ISLAND.
2. VERIFY ALL PERMITS HAVE BEEN OBTAINED.
3. INSTALL ANY EROSION CONTROL MEASURES IDENTIFIED ON APPROVED SEDIMENT AND EROSION CONTROL PLANS.
4. COORDINATE WITH BJWSA AND MCB PARRIS ISLAND TO CONFIRM SOUTH 16" WL IS IN SERVICE AND NORTH LINE (LINE TO BE REHABILITATED) IS OUT OF SERVICE.
5. SETUP TEMPORARY TRAFFIC CONTROL MEASURES.
6. BEGIN TRENCHLESS REHABILITATION OF 16" WATERLINE ON NORTH SIDE OF MALECON DRIVE.
7. ONCE INSTALLATION IS COMPLETE, PERFORM PRESSURE AND BACTERIOLOGICAL TESTING.
8. ONCE APPROVAL IS OBTAINED FROM ENGINEER, BJWSA, AND MCB PARRIS ISLAND, PLACE REHABILITATED 16" WATERLINE INTO PERMANENT SERVICE.
9. CLEANUP SITE AND INSTALL PERMANENT PAVEMENT REPAIR.
10. REMOVE TEMPORARY EROSION CONTROL MEASURES.

TRAFFIC CONTROL PLAN:

1. A SUGGESTED TRAFFIC CONTROL PLAN (TCP) IS PROVIDED TO ESTABLISH MINIMUM, ACCEPTABLE REQUIREMENTS FOR TRAFFIC CONTROL ASSOCIATED WITH THE SUGGESTED SEQUENCE OF CONSTRUCTION (SEE SHEET G-1) AND TO AID IN THE INCLUSION OF THE ASSOCIATED COSTS IN THE PREPARATION OF THE BID. THIS PLAN AND THE USE THEREOF DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES OF THE PROTECTION OF THE WORK AND PUBLIC SAFETY.
2. THE CONTRACTOR SHALL SUBMIT HIS OWN TRAFFIC CONTROL PLANS TO SCDOT FOR REVIEW AND APPROVAL A MINIMUM OF 30 DAYS PRIOR TO BEGINNING CONSTRUCTION. ANY AND ALL DEVIATIONS FROM THE TRAFFIC CONTROL PLANS SHALL BE APPROVED BY SCDOT.
3. ALL RESIDENCES AND BUSINESS SHALL BE NOTIFED BY THE CONTRACTOR 21 DAYS IN ADVANCE OF CONSTRUCTION.
4. NO SATURDAY AND HOLIDAY WORK HOURS ARE PERMITTED WITHOUT ADVANCE NOTICE AND APPROVAL BY SCDOT AND BEAUFORT COUNTY.
5. THE CONTRACTOR SHALL NOTIFY RESIDENT ENGINEER AT LEAST 48 HOURS PRIOR TO ANY ROAD CLOSURE, LANE CLOSURE, OR FLAGGING OPERATION.
6. AT A MINIMUM, ALL TRAFFIC CONTROL METHODS AND MEASURES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION AND THE SCDOT UTILITY ACCOMMODATION MANUAL
7. IF UNSAFE CONDITIONS ARE OBSERVED DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADDITIONAL TRAFFIC CONTROL MEASURES AS DIRECTED BY SCDOT AND/OR BEAUFORT COUNTY.
8. ACCESS FOR PUBLIC, MILITARY, AND EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.
9. TRAVEL LANES SHALL BE A MINIMUM OF 10 FEET WIDE.
10. NO MATERIALS OF CONSTRUCTION SHALL BE STOCKPILED WITHIN THE "CLEAR ZONE" AS DEFINED BY THE AASHTO "ROADSIDE DESIGN GUIDE," WHILE WORK IS NOT BEING PERFORMED.
11. NO EQUIPMENT OR MACHINERY SHALL BE LEFT PARKED, UNATTENDED OR WITHIN THE CLEAR ZONE AS DEFINED BY THE AASHTO "ROADSIDE DESIGN GUIDE," WHILE WORK IS NOT BEING PERFORMED.
12. ANY AND ALL DAMAGED OR REMOVED TRAFFIC SIGNAL APPURTENANCES, TRAFFIC CONTROL DEVICES, AND/OR PAVEMENT MARKINGS SHALL BE RESTORED BY THE CONTRACTOR.
13. THE CONTRACTOR SHALL CHECK ALL SIGNS, DRUMS, AND BARRICADES WITHIN THE PROJECT AREA EVERY MORNING BEFORE WORK AND EVERY EVENING WHEN WORK IS STOPPED FOR THE DAY TO ENSURE THAT THEY ARE SERVICEABLE AND IN PROPER WORKING ORDER. ON WEEKENDS, HOLIDAYS, AND WHEN THE PROJECT IS SHUTDOWN, THE CONTRACTOR SHALL HAVE THESE TRAFFIC CONTROL DEVICES CHECKED DAILY.
14. PERMANENT TRAFFIC CONTROL AND INFORMATION SIGNS SUCH AS, NOT LIMITED TO ,EXISTING SPEED LIMIT, STOP SIGNS, AND STREET NAME SIGNS SHALL BE MAINTAINED AT ALL TIMES. THIS IS CONSIDERED INCIDENTAL TO THE WORK.
15. THE SCDOT TRAFFIC ENGINEER RESERVES THE RIGHT TO MAKE CHANGES TO THE TRAFFIC CONTROL PLAN AS DEEMED NECESSARY.
16. ALL SIDE STREETS WITHIN THE WORK ZONE OR SIGN SEQUENCE SHALL ALSO BE SIGNED.
17. ALL OPEN HOLES OR TRENCHES SHALL BE BACKFILLED AND THE SHOULDER MADE READY TO HANDLE EMERGENCY TRAFFIC BY THE END OF EACH WORKDAY, OTHERWISE OPEN HOLES OR TRENCHES SHALL BE COVERED WITH APPROPRIATE STEEL PLATING TO PROTECT AGAINST PEDESTRIAN AND/OR ERRANT VEHICLE INTRUSION. AT NO TIME SHALL STEEL PLATING BE USED IN TRAVEL LANES OPEN TO VEHICULAR TRAFFIC.
18. OPEN HOLES OR TRENCHES SHALL NOT BE LEFT UNATTENDED OR UNPROTECTED WHENEVER WORK IS NOT BEING PERFORMED.

SURVEY NOTES:

1. ATLAS SURVEYING, INC.
   188 BOARDWALK DRIVE, SUITE A
   RIDGELAND, SC 29936
   PROJECT NO: BFT-24384
   PLAT DATE 04-24-2025, FILE: BFT-24384 AT1.DWG
2. SURVEY AS DATED: 4-30-2025
3. ALL DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS UNLESS NOTED.
4. ANY UNDERGROUND IMPROVEMENTS ARE SHOWN BASED ON SURFACE EVIDENCE ONLY. THE SURVEYOR CAN NOT CERTIFY TO NOR ACCEPT LIABILITY FOR THE PRESENCE AND/OR LOCATION OF BURIED OR OTHERWISE NON-VISIBLE IMPROVEMENTS TO THIS SITE.
4. COORDINATE SYSTEM: HARN/SC SOUTH CAROLINA STATE PLANES (INTNL FOOT)
5. DATUM: NAD83 2011 (HORIZONTAL), NAVD88 (VERTICAL)

HIGH PRESSURE GAS LINE NOTIFICATION

AN EXISTING HIGH PRESSURE GAS LIN RUNS PARALLEL TO THE PROPOSED WATER LINE ALIGNMENT. PARTICULAR CARE SHALL BE MADE TO MAINTAIN ADEQUATE SEPARATION TO AVOID ANY DAMAGE TO THE PIPELINE. THE EXACT LOCATION OF THE GAS LINE HAS NOT BEEN VERIFIED. CONTRACTOR SHALL CLEARLY MARK THE EXACT LOCATION AND MAKE ADJUSTMENTS TO THE WATERLINE ALIGNMENT TO PROVIDE A MINIMUM OF 2 FEET OF SEPARATION BETWEEN LINES. ANY DEPRAVATIONS FROM THE ALIGNMENT SHOWN ON THESE DRAWINGS SHALL BE APPROVED BY THE OWNER/ENGINEER FIELD REPRESENTATIVE.

LEGEND

Symbol	Description
	CALC POINT – CORNER NOT SET
	AIR RELEASE VALVE
	CONTROL PANEL
	DRAINAGE INLET
	ELECTRIC JUNCTION BOX
	ELECTRIC METER
	ELECTRIC MANHOLE
	ELECTRIC STUBOUT
	FIRE HYDRANT
	FIBER OPTIC BOX
	GAS VALVE
	GUY WIRE
	LIGHT POLE
	PIPELINE MARKER
	POWER POLE
	STORM DRAIN MANHOLE
X12.9	SPOT ELEVATION
	SIGN
	SANITARY SEWER VALVE MARKER
	UNDERGROUND TELEPHONE MARKER
	TRAFFIC SIGNAL POLE
OTEL	TELEPHONE JUNCTION BOX
OTPED	TELEPHONE PEDESTAL
	TRANSFORMER–ELECTRIC
	UNDERGROUND FIBER OPTICS MARKER
	UNDERGROUND GAS MARKER
	WATER BLOW OFF VALVE
	FRESHWATER WETLANDS
	WATER METER
	WATER VALVE
	WATER VALVE MARKER
	WOOD POST
	GENERATOR
	MARSHGRASS
BOC	BACK OF CURB
BCM	BUREAU OF COASTAL MANAGEMENT
DES	DEPARTMENT OF ENVIRONMENTAL SERVICES
CNA	COULD NOT ACCESS
DYL	DOUBLE YELLOW LINE
FFE	FINISHED FLOOR ELEVATION

LEGEND

Symbol	Description
FFE	FINISHED FLOOR ELEVATION
IE	INVERT ELEVATION
HDPE	HIGH DENSITY POLYETHYLENE
LF	LINEAR FEET
MCP	METAL CORRUGATED PIPE
PD	PIPE DIRECTION
PIN	PARCEL IDENTIFICATION NUMBER
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
SDWL	SINGLE DASHED WHITE LINE
SWL	SINGLE WHITE LINE
SYL	SINGLE YELLOW LINE
CED	CEDAR
CM	CRAPE MYRTLE
LA	LAUREL OAK
LO	LIVE OAK
PA	PALMETTO
PEC	PECAN
P	PINE
SB	SUGAR BERRY
—BB—	BOTTOM OF BANK
	CONTOUR LINE
—FM—	FORCEMAIN
	GUARD RAIL
—SCDES-BCM—	SCDES–BCM CRITICAL LINE
—OHP—	OVERHEAD POWER LINE
—TB—	TOP OF BANK
	ADJACENT PROPERTY LINE
—SD—	UNDERGROUND DRAINAGE LINE
—UE—	UNDERGROUND ELECTRIC LINE
—UFO—	UNDERGROUND FIBER OPTIC LINE
—UG—	UNDERGROUND GAS LINE
—UT—	UNDERGROUND TELEPHONE
—W—	UNTRACEABLE UNDERGROUND WATER LINE
—W—	UNDERGROUND WATER LINE
	CONCRETE
	EDGE OF PAVEMENT
	GRAVEL
	RIP–RAP
—FFL—	FEMA FLOOD LINE

A. CONNECTIONS TO EXISTING WATER DISTRIBUTION MAINS:

1. CONNECTIONS TO EXISTING WATER DISTRIBUTION MAINS SHALL NOT BE MADE WITHOUT PRIOR COORDINATION WITH OWNER PERSONNEL AND THE ENGINEER.
2. AT LEAST FIVE (5) WORKING DAYS PRIOR TO SCHEDULING CONNECTION WITH OWNER, THE CONTRACTOR SHALL PERFORM SUCH FIELD VERIFICATION WORK AS REQUIRED TO CONFIRM EXISTING SITE CONDITIONS IN THE AREA OF THE PROPOSED CONNECTION, INCLUDING, BUT NOT NECESSARILY LIMITED TO:
   - LOCATION, DEPTH, SIZE, AND MATERIAL OF EXISTING WATER DISTRIBUTION MAIN
   - LOCATION, DEPTH, SIZE, ETC. OF EXISTING UTILITIES ADJACENT TO THE PROPOSED CONNECTION
   - OTHER EXISTING CONDITIONS WHICH MIGHT AFFECT THE PERFORMANCE OF THE PROPOSED CONNECTION
3. CONTRACTOR TO PREPARE WITH THE ENGINEER AND OWNER A PLAN OF ACTION TO BE FOLLOWED IN PERFORMING THE PROPOSED CONNECTION. SUCH PLAN SHALL INCLUDE THE PROPOSED DATE AND TIME THE WORK IS TO BEGIN, IDENTIFICATION OF EXISTING DISTRIBUTION SYSTEM AREAS WHICH WILL BE AFFECTED BY THE CONNECTION, ACTIONS WHICH ARE REQUIRED OF THE ENGINEER AND OWNER, APPROXIMATE DOWNTIME OF EXISTING WATER DISTRIBUTION SYSTEM, AND OTHER ITEMS DEEMED APPROPRIATE.
4. UNLESS OTHERWISE APPROVED OR REQUIRED, CONNECTIONS TO EXISTING WATER DISTRIBUTION MAINS SHALL BE MADE ON TUESDAYS, WEDNESDAYS, OR THURSDAYS.
5. SHOULD WATER SYSTEM DEMANDS REQUIRE POSTPONEMENT OR RESCHEDULING OF A PROPOSED CONNECTION, THE CONTRACTOR SHALL DO SUCH WORK AT NO ADDITIONAL COST TO THE OWNER.
6. CONNECTIONS TO THE EXISTING SYSTEM SHALL NOT BE MADE WITHOUT THE PRESENCE OF THE ENGINEER OR OWNER.
7. PRIOR TO CUTTING OF THE EXISTING WATER DISTRIBUTION MAIN, THE CONTRACTOR PERSONNEL SHALL HAVE AS MUCH OF THE PIPING, FITTINGS, VALVES, ETC. PROPOSED AT THE CONNECTION PIPED-UP AND READY TO BE LOWERED INTO THE EXCAVATION.
8. PRIOR TO CUTTING OF THE EXISTING WATER DISTRIBUTION MAIN, THE CONTRACTOR SHALL PLACE A 12-INCH DEPTH OF #57 WASHED STONE IN THE EXCAVATION.
9. ALL EXISTING VALVES LOCATED NEAR THE PROPOSED CONNECTION POINT SHALL BE OPERATED TO ENSURE THAT THE WATER LINE CAN BE PROPERLY ISOLATED DURING THE CONNECTION OPERATION.

B. LOCATION OF VALVES, HYDRANTS, BLOW-OFFS, ETC:

1. NO VALVE, HYDRANT, BLOW-OFF, ETC. SHALL BE PLACED IN A DITCH LINE UNLESS SPECIFICALLY APPROVED BY THE OWNER. SHOULD THE CONTRACTOR LOCATE SUCH ITEMS IN A DITCH LINE WITHOUT APPROVAL OF THE OWNER, THE APPURTENANCES SHALL BE REMOVED AND RELOCATED TO A SUITABLE LOCATION AT NO ADDITIONAL COST TO THE OWNER.
2. ALL HYDRANTS, BLOW-OFFS, AIR RELEASE VALVES, ETC. SHALL BE LOCATED ADJACENT TO THE ROAD RIGHT-OF-WAY, APPROXIMATELY TWO (2) FEET FROM THE RIGHT-OF-WAY LINE.
3. HYDRANTS, BLOW-OFFS, ETC. PROPOSED UNDER THIS PROJECT SHALL BE LOCATED SUCH THAT OPERATION OF SAID HYDRANTS, BLOW-OFFS, ETC. WILL NOT DAMAGE ADJACENT PROPERTIES. OBTAIN THE APPROVAL OF THE ENGINEER AND THE OWNER FOR EACH LOCATION. FAILURE BY THE CONTRACTOR TO OBTAIN APPROVAL MAY REQUIRE THE CONTRACTOR TO RELOCATE SUCH APPURTENANCES AT HIS OWN EXPENSE.
4. UNLESS OTHERWISE APPROVED BY THE OWNER, DO NOT LOCATE HYDRANTS, BLOW-OFFS, ETC. IN FRONT OF EXISTING RESIDENCES OR BUSINESSES.

C. FLUSHING ACTIVITIES:

1. FLUSHING OF NEWLY INSTALLED WATER LINES SHALL ONLY OCCUR WHEN CONTRACTOR PERSONNEL ARE ON SITE. NO FLUSHING ACTIVITY SHALL BE LEFT UNATTENDED.
2. THE CONTRACTOR SHALL PROVIDE APPROPRIATE LENGTHS OF FIRE HOSE, PIPE, ETC. TO ENSURE THAT THE FLUSHING DISCHARGE DOES NOT DAMAGE ADJACENT PROPERTY, ROADSIDE DITCHES, ETC.
3. THE CONTRACTOR SHALL PERFORM FLUSHING EVENTS ONLY DURING TIMES AUTHORIZED BY THE OWNER. SHOULD WATER SYSTEM DEMANDS REQUIRE RESCHEDULING OR DISCONTINUING FLUSHING ACTIVITIES, THE CONTRACTOR SHALL DO SUCH AT NO ADDITIONAL COSTS TO THE OWNER.
4. THE CONTRACTOR WILL NOT BE CHARGED FOR WATER USED DURING AN AUTHORIZED FLUSHING EVENT. THE CONTRACTOR MAY BE CHARGED FOR WATER IF THE FLUSHING EVENT IS UNAUTHORIZED BY THE OWNER. THE COST OF WATER SHALL BE BASED ON THE CURRENT RATE SCHEDULE. THE ENGINEER WILL DETERMINE THE AMOUNT OF WATER USED DURING THE UNAUTHORIZED EVENT. THE ENGINEER'S DECISION WILL BE FINAL IN THIS MATTER.
5. ALL WATER DISCHARGED FROM FLUSHING EVENTS SHALL NOT BE DIRECTLY DISCHARGED INTO A CREEK, RIVER, LAKE, OR OTHER BODY OF WATER WITHOUT FIRST BEING DE-CHLORINATED.

NATURAL GAS:

DOMINION ENERGY SOUTH CAROLINA GAS
SOUTHERN DIVISION
601 OLD TAYLOR ROAD
CAYCE, SOUTH CAROLINA 29033
CONTACT: UTILIQUEST PR
PHONE: (803) 960-3310

POWER:

DOMINION ENERGY

TELECOMMUNICATIONS:

BRIGHTSPEED
CONTACT: DEWAYNE BEGLEY
PHONE: (540)938-9590

TELECOMMUNICATIONS:

HARGRAY INC.
CONTACT: USIC PR
PHONE: (800) 778-9140

MCRD PARRIS ISLAND:

PARRIS ISLAND, SOUTH CAROLINA
CONTACT : ANDY MATTIE
EMAIL ANDY.MATTIE@BJWSA.ORG

Know what's below. Call before you dig.

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION KCI TECHNOLOGIES INC. No. C0851

ISSUE SEQUENCE

NO	DATE	DESCRIPTION
	5/16/25	90% CLIENT REVIEW
	8/26/25	RESPONSE TO 60% COMMENTS
	8/27/25	ISSUED FOR PERMITTING

KCI TECHNOLOGIES
ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
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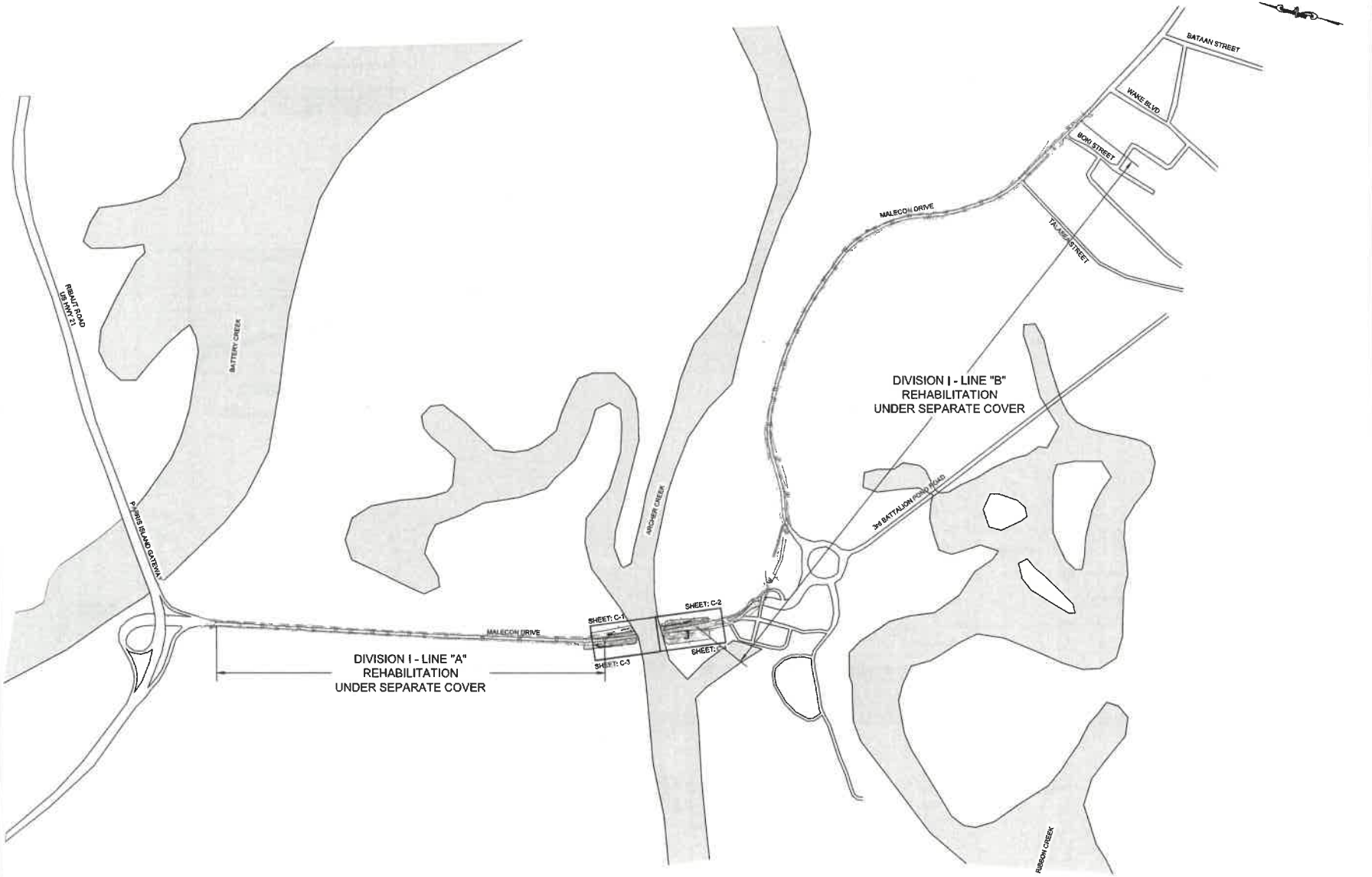
GENERAL NOTES

PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION II
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

G-1

KCI Technologies, Inc. 2025



KEY SHEET
SCALE 1" = 500'

Know what's below. Call before you dig.

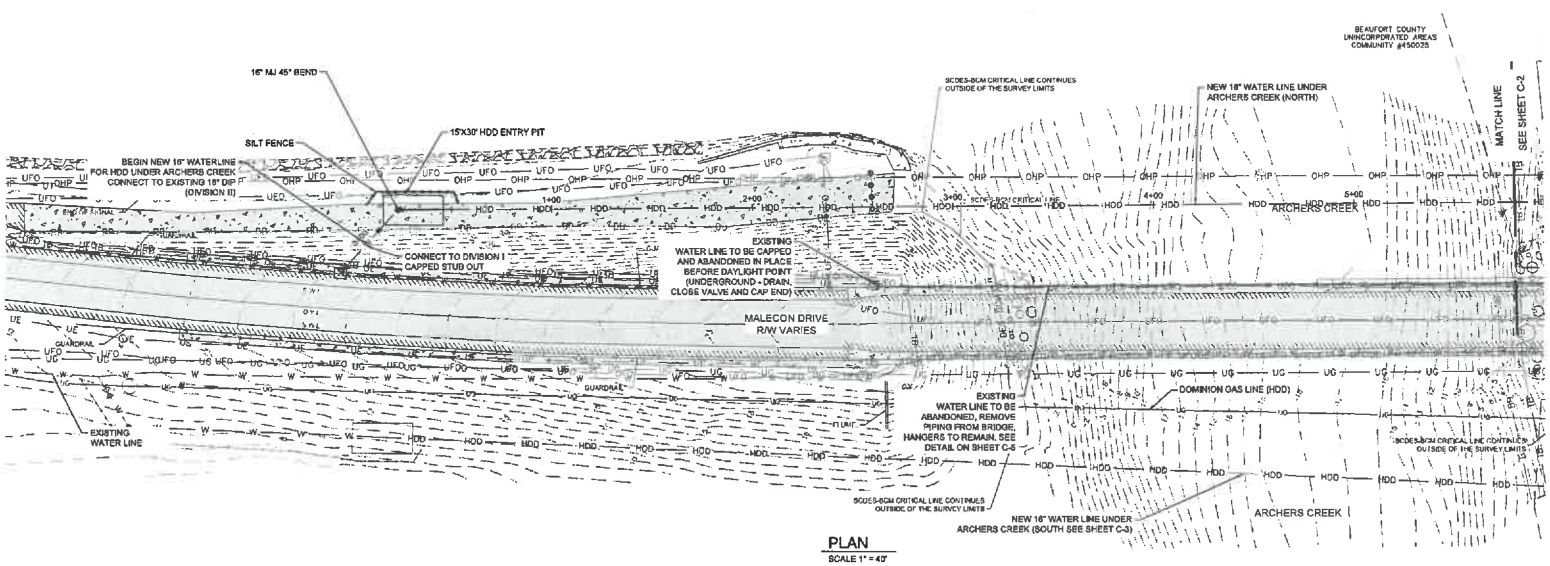
ISSUE SEQUENCE		
NO.	DATE	DESCRIPTION
A	5/16/25	90% CLIENT REVIEW
B	6/06/25	RESPONSE TO 90% COMMENTS
C	6/27/25	ISSUED FOR REBIDDING

KCI TECHNOLOGIES
KCI ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
106 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

KEY MAP
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION II
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

G-2

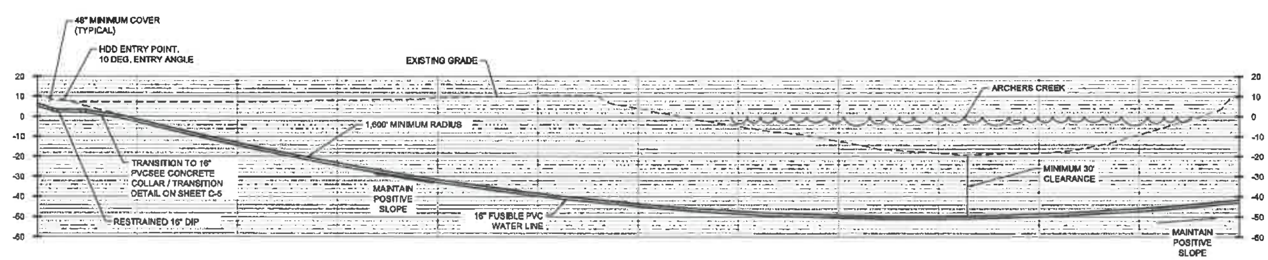


PLAN

SCALE 1" = 40'

DATUMS FOR 8668092, BATTERY CREEK SC
NOTICE: ALL DATA VALUES ARE RELATIVE TO MEAN SEA LEVEL

MEAN HIGH WATER 3.48 FT
MEAN LOW WATER -4.18 FT



PROFILE - PROP WATERLINE DIV II HDD NORTH, 0+00 - 6+00

SCALE: 1"=30' H., 1"=30' V.

GENERAL NOTES:

1. PIPE MATERIAL FOR HORIZONTAL DIRECTIONAL DRILL (HDD) SHALL BE 16" FUSIBLE PVC, DR 18 BASED ON ENGINEER'S CALCULATIONS. DRILLING CONTRACTOR SHALL PROVIDE A DRILLING PLAN WITH THE CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER PROVIDING ANTICIPATED LOADINGS AND APPROPRIATE PIPE SELECTION BASED EQUIPMENT TO BE USED AND ANTICIPATED BORING CONDITIONS. ALTERNATE PIPE MATERIALS MAY BE SUBMITTED FOR APPROVAL.
2. ANY ADJUSTMENTS TO THE VERTICAL OR HORIZONTAL ALIGNMENT OF THE HDD SHALL BE APPROVED BY THE ENGINEER, BEAUFORT - JASPER WATER & SEWER AND MCB PARRIS ISLAND.
3. REFERENCE SPECIFICATION 01.14.00 FOR EASEMENT SPECIAL CONDITIONS.

GRAPHIC SCALE: 1" = 30'

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

SOUTH CAROLINA KCI TECHNOLOGIES INC. No. C0651 CERTIFICATE OF AUTHORIZATION

ISSUE SEQUENCE

NO.	DATE	DESCRIPTION
A	5/16/25	90% CLIENT REVIEW
B	6/26/25	RESPONSE TO 90% COMMENTS
C	6/27/25	ISSUED FOR PERMITTING

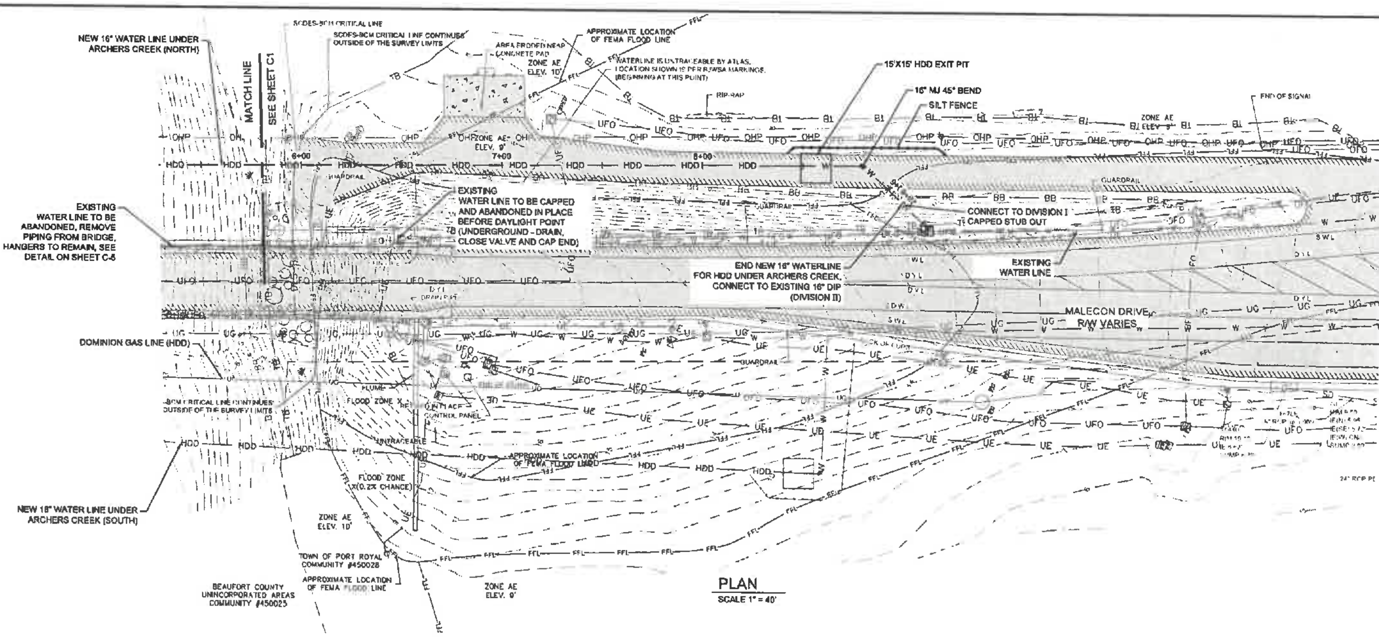
KCI TECHNOLOGIES
ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
106 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

PLAN AND PROFILE NORTH STA. 0+00 TO STA. 6+00 - DIVISION II

PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION II
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

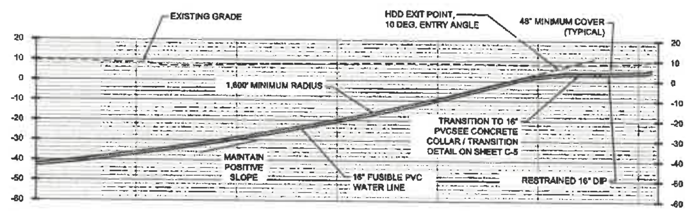
C-1



PLAN
SCALE 1" = 40'

DATUMS FOR 8668092, BATTERY CREEK SC
NOTICE: ALL DATA VALUES ARE RELATIVE TO MEAN SEA LEVEL

MEAN HIGH WATER 3.46 FT
MEAN LOW WATER -4.16 FT



PROFILE - PROP WATERLINE DIV II HDD NORTH, 6+00 - 9+10
SCALE: 1"=30' H., 1"=30' V.

GENERAL NOTES:

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3. REFERENCE SPECIFICATION 01.14.00 FOR EASEMENT SPECIAL CONDITIONS.

GRAPHIC SCALE 1" = 30'

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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION KCI TECHNOLOGIES INC. No. C0651

ISSUE SEQUENCE

NO.	DATE	DESCRIPTION
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	6/26/25	RESPONSE TO 60% COMMENTS
	6/27/25	ISSUED FOR PERMITTING

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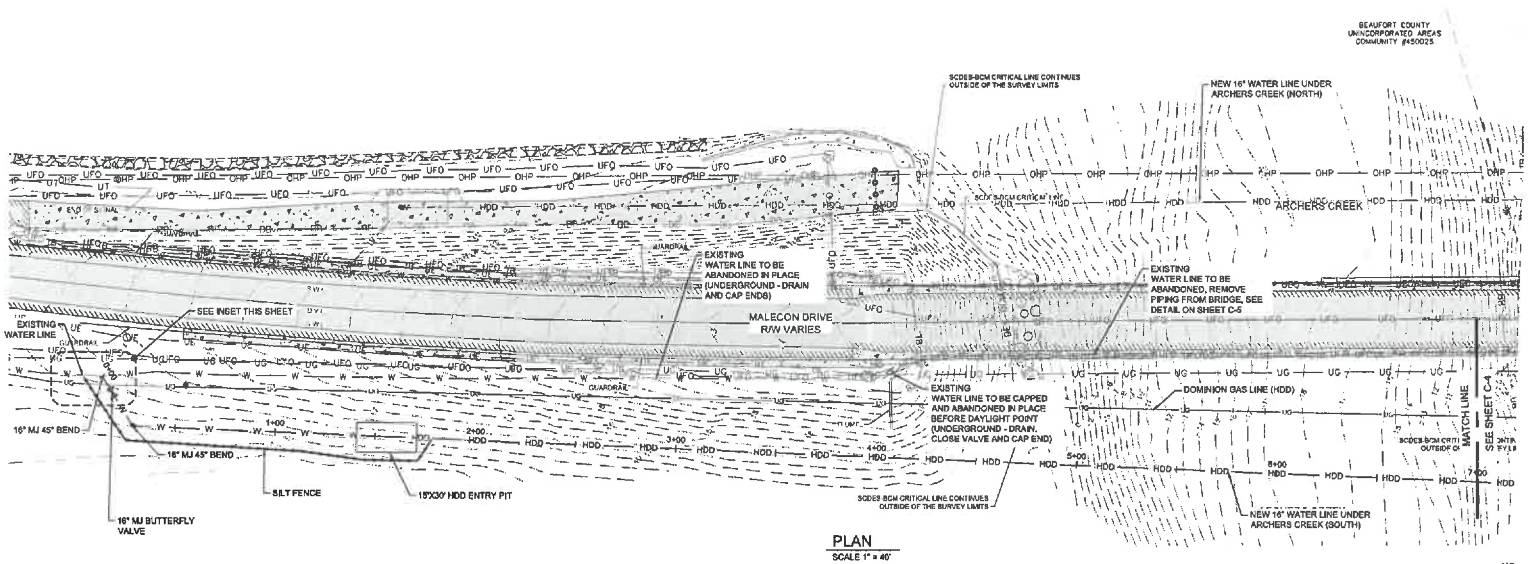
PLAN AND PROFILE NORTH STA. 6+00 TO END - DIVISION II

PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION II
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

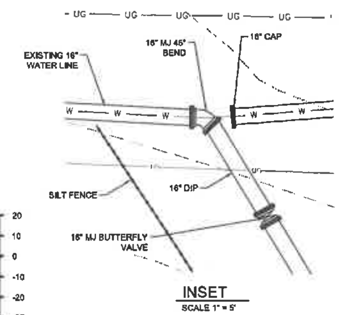
PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

C-2

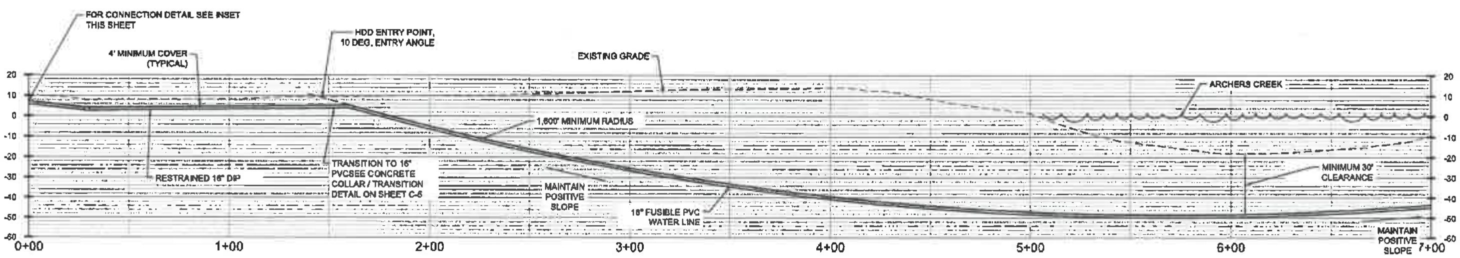


PLAN
SCALE 1" = 40'

DATUMS FOR 568/1132, BATTERY CREEK SC
NOTICE: ALL DATA VALUES ARE RELATIVE TO MEAN SEA LEVEL.
MEAN HIGH WATER 3.46 FT
MEAN LOW WATER -4.16 FT



INSET
SCALE 1" = 5'



PROFILE - PROP WATERLINE DIV II HDD SOUTH, 0+00 - 7+00

SCALE: 1"=30' H., 1"=30' V.

GENERAL NOTES:

1. PIPE MATERIAL FOR HORIZONTAL DIRECTIONAL DRILL (HDD) SHALL BE 16" FUSIBLE PVC, DR 18 BASED ON ENGINEER'S CALCULATIONS. DRILLING CONTRACTOR SHALL PROVIDE A DRILLING PLAN WITH THE CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER PROVIDING ANTICIPATED LOADINGS AND APPROPRIATE PIPE SELECTION BASED EQUIPMENT TO BE USED AND ANTICIPATED BORING CONDITIONS. ALTERNATE PIPE MATERIALS MAY BE SUBMITTED FOR APPROVAL.

2. ADJUSTMENTS TO THE VERTICAL OR HORIZONTAL ALIGNMENT OF THE HDD SHALL BE APPROVED BY THE ENGINEER, BEAUFORT - JASPER WATER & SEWER AND MCB PARRIS ISLAND.

3. REFERENCE SPECIFICATION 01.14.00 FOR EASEMENT SPECIAL CONDITIONS.

GRAPHIC SCALE: 1" = 30'

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

SOUTH CAROLINA KCI TECHNOLOGIES INC. No. C0651 CERTIFICATE OF AUTHORIZATION

ISSUE SEQUENCE

NO	DATE	DESCRIPTION
A	5/16/25	60% CLIENT REVIEW
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BJWSA

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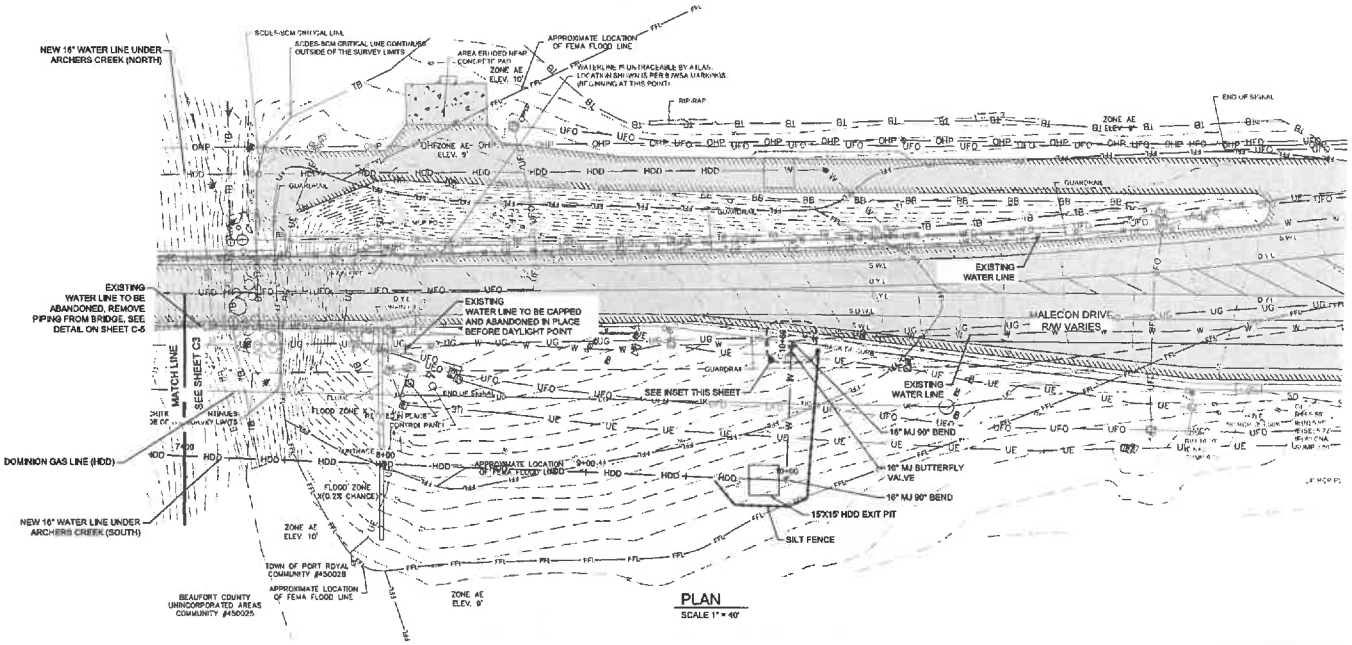
Phone: (864) 269-0890 Fax: (713) 237-9801

PLAN AND PROFILE SOUTH STA. 0+00 TO STA. 7+00 - DIVISION II

PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION II
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

C-3

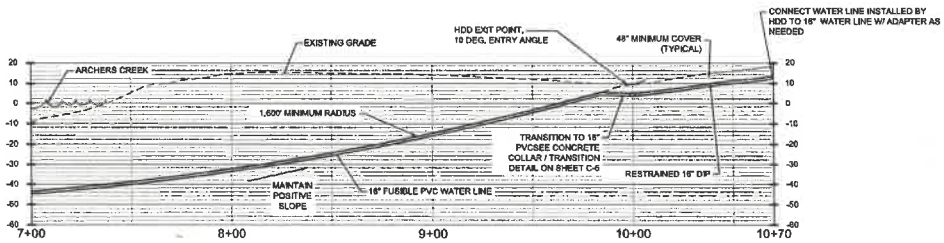


PLAN

SCALE 1" = 40'

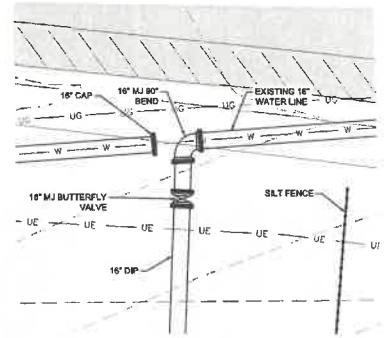
DATUMS FOR 8665 32, BATTERY CREEK SC
NOTICE: ALL DATA VALUES ARE RELATIVE TO MEAN SEA LEVEL

MEAN HIGH WATER 3.48 FT
MEAN LOW WATER -4.16 FT



PROFILE - PROP WATERLINE DIV II HDD SOUTH, 7+00 - 10+70

SCALE: 1"=30' H., 1"=30' V.



INSET

SCALE 1" = 5'

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3. REFERENCE SPECIFICATION 01.14.00 FOR EASEMENT SPECIAL CONDITIONS.

GRAPHIC SCALE: 1" = 30'

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PLAN AND PROFILE SOUTH STA. 7+00 TO END - DIVISION II

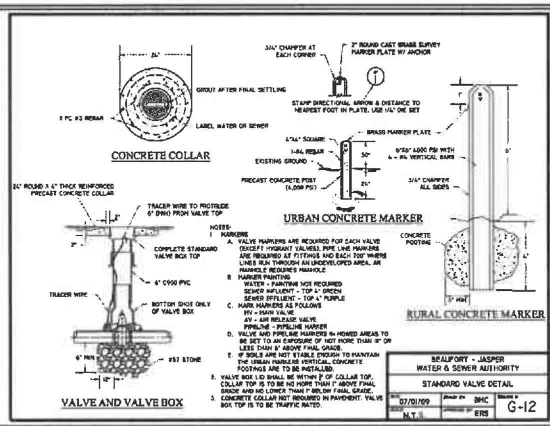
PARRIS ISLAND WATERLINE REPLACEMENT DIVISION II

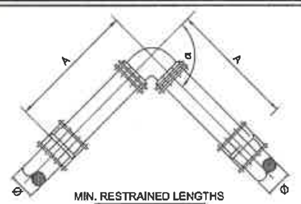
BEAUFORT-JASPER WATER & SEWER AUTHORITY

Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

C-4





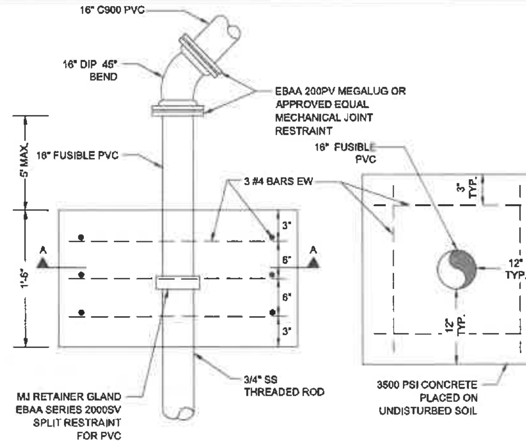
MIN. RESTRAINED LENGTHS

HORIZ. BENDS		
Ø	α	A
16"	90°	152'
16"	45°	63'
16"	22.5°	31'
16"	11.25°	15'
16"	END	349'
16"	VALVES	349'

NOTE:
1. DESIGN ASSUMPTIONS (PER EBBA IRON RESTRAINED LENGTH CALCULATOR, v7.1.2.): PIPE MATERIAL, PVC; SOIL TYPE, SM (SILTY SANDS); SAFETY FACTOR, 2.0 TO 1; TRENCH TYPE, 3; DEPTH OF BURY, 3 FT; TEST PRESSURE, 300 PSI.
2. PROVIDE MINIMUM RESTRAINED LENGTH FOR ALL FITTINGS INSTALLED IN ACCORDANCE WITH THE ABOVE TABLE. WHERE RESTRAINED LENGTHS OVERLAP BETWEEN FITTINGS, PROVIDE CONTINUOUS JOINT RESTRAINT ACROSS THE ENTIRE REQUIRED RESTRAINED LENGTH.
3. VALUES LISTED IN THE TABLE ABOVE ARE MINIMUM LENGTHS. WHERE RESTRAINED LENGTH FALLS BETWEEN PIPE JOINTS, THE NEXT FURTHEST JOINT SHALL ALSO BE RESTRAINED.

JOINT RESTRAINT

NOT TO SCALE

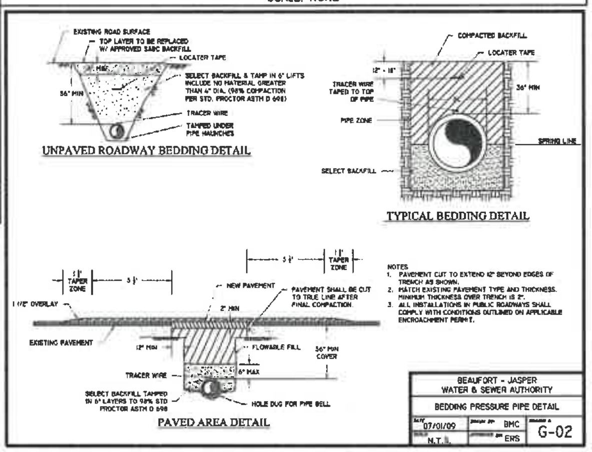


NOTES:

1. CONCRETE COLLARS SHALL BE INSTALLED WHERE INDICATED ON DRAWINGS OR SPECIFIED BY THE ENGINEER.
2. FORMS ARE NOT REQUIRED BELOW SPRING LINE, CONCRETE MAY BE POURED AGAINST SHAPED BANKS IN LIEU OF FORMS.

CONCRETE COLLAR / TRANSITION DETAIL

SCALE: NONE



CUT PIPE HANGING STRAP HERE ON BOTH SIDES AND LEAVE HANGER IN PLACE TO SUPPORT EXISTING INFRASTRUCTURE

PIPE HANGER REMOVAL DETAIL

N.T.S.

ISSUE SEQUENCE		
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BJWSA BEAUFORT - JASPER WATER & SEWER AUTHORITY

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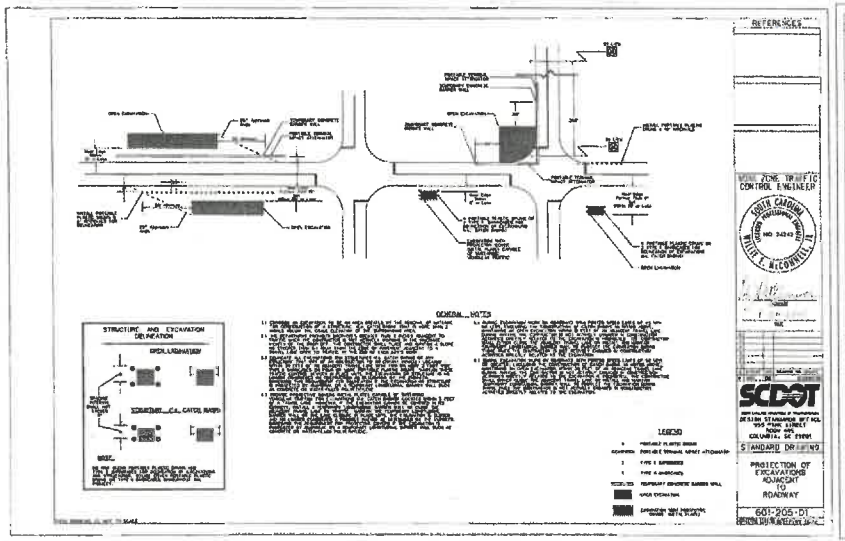
DETAILS

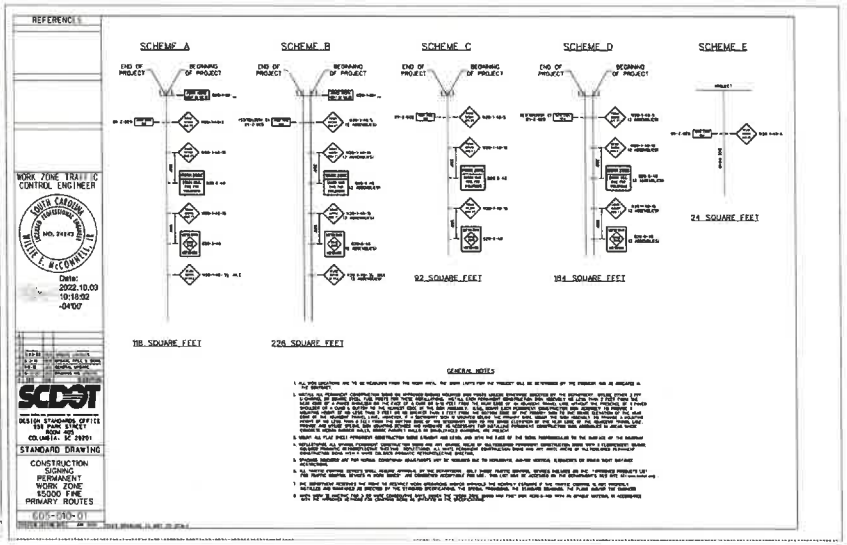
PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION II
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

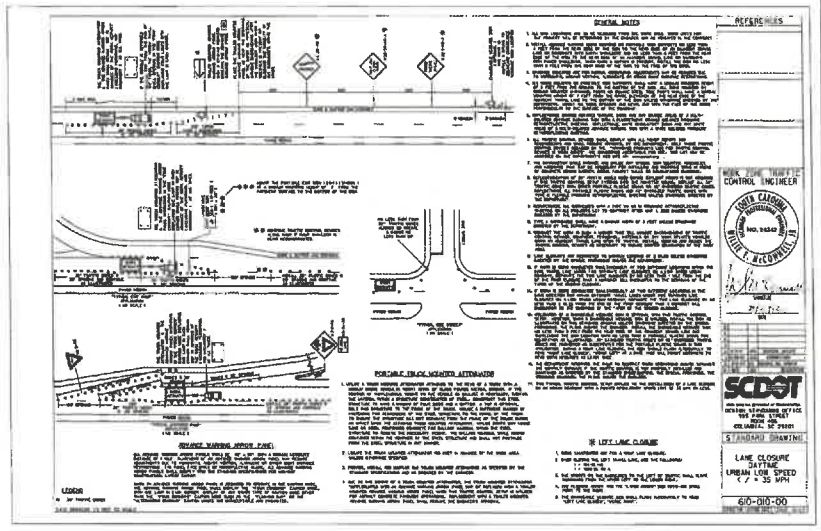
PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

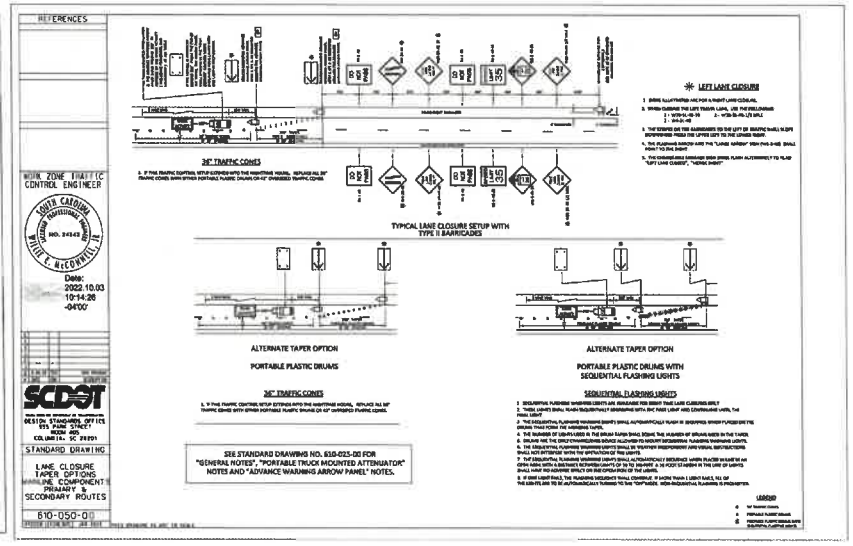
C-5

SOUTH CAROLINA KCI TECHNOLOGIES INC. No. C0551 CERTIFICATE OF AUTHORIZATION









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WSA

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DETAILS

PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION II
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	90030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

C-6

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

SOUTH CAROLINA PROFESSIONAL ENGINEER NO. 28173 — 8-27-25

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — KCI TECHNOLOGIES INC. No. C0651

CONSTRUCTION SEQUENCE:

ITEMS MUST OCCUR IN THE ORDER LISTED, ITEMS CANNOT OCCUR CONCURRENTLY UNLESS SPECIFICALLY NOTED.

1. RECEIVE NPDES COVERAGE FROM SCDHEC.
2. ATTEND PRE-CONSTRUCTION MEETING (ON-SITE), IF REQUIRED.
3. SURVEY AND LAYOUT PROPOSED LINE WORK, THE CONSTRUCTION EASEMENTS, LIMITS OF DISTURBANCE, BUFFER ZONE, AND CLEARING LIMITS.
4. NOTIFY SCDHEC AT LEAST 3 DAYS PRIOR TO BEGINNING LAND DISTURBANCE.
5. CLEAR & GRUB ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS.
6. INSTALL PERIMETER CONTROLS (E.G. SILT FENCE, CONSTRUCTION ENTRANCES, ETC.).
7. INSTALLATION OF INLET PROTECTION ON EXISTING STORM CULVERTS AND STORM INLETS.
8. INSTALLATION OF SEDIMENT TUBE CHECK DAMS IN CHANNELS TRIBUTARY TO THE WORK AREA.
9. CLEARING AND GRUBBING OF BALANCE OF SITE (SEDIMENT AND EROSION CONTROL MEASURES FOR THESE AREAS MUST ALREADY BE INSTALLED). CLEAR ALL PUBLIC RIGHT-OF-WAY IN THE PROJECT WORK AREA AND ALL EASEMENTS TO THE CLEARING LIMITS.
10. INSTALLATION OF LINE WORK. COMMENCE TRENCHING OPERATION WITHIN THE RIGHT-OF-WAYS AND EASEMENTS. IMMEDIATELY BACKFILL AND COMPACT THE TRENCH AND RESTORE THE ORIGINAL SURFACE. ESTABLISH STRAW OR MULCH COVER AND TEMPORARY GRASSING COVER IMMEDIATELY AFTER GRADING AND RESTORATION. FILL, COVER AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. MAINTAIN MULCH COVER AND TEMPORARY GRASSING UNTIL THE PERMANENT GRASSING IS COMPLETED AND ALL OTHER DISTURBED SURFACES ARE RESTORED. FOR DISTURBED PAVEMENT AREAS, PROVIDE TEMPORARY COMPACTED CRUSHED STONE SURFACE UNTIL PAVEMENT IS REPLACED.
11. INSTALLATION OF SEDIMENT TUBE CHECK DAMS AND OTHER SEDIMENT AND EROSION CONTROL MEASURES AFTER ROUGH GRADING OF DISTURBED AREAS FOLLOWING SEWER LINE INSTALLATION.
12. PERFORM INFILTRATION AND PRESSURE TESTS ON ALL GRAVITY SEWER AND FORCEMAIN LINES AND APPURTENANCES AND REPAIR ALL LEAKS.
13. RESTORE ALL AREAS DISTURBED BY THE INSTALLATION OF THE NEW SEWER LINES.
14. RESTORE ALL AREAS DISTURBED BY ABANDONMENT OF THE EXISTING SEWER LINES.
15. INSTALLATION OF FINE GRADING, PERMANENT/FINAL STABILIZATION, PAVING, ETC. ESTABLISH PERMANENT COVER WITHIN FIVE (5) DAYS AFTER ACCEPTANCE OF THE NEW SEWER LINES.
16. REMOVE TEMPORARY SEDIMENT & EROSION CONTROL MEASURES AFTER ENTIRE AREA DRAINING TO THE BASIN REACHES FINAL STABILIZATION (NOTIFY THE PROJECT OWNER/OPERATOR TO HAVE THE SWPPP PREPARER OR REGISTRATION EQUIVALENT APPROVE THE REMOVAL OF TEMPORARY STRUCTURES.)
17. SUBMIT NOTICE OF TERMINATION (NOT) TO SCDHEC AS APPROPRIATE.

- NOTE MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES MUST CONTINUE UNTIL THE SITE IS PERMANENTLY STABILIZED UNTIL THE CONTROLS ARE REMOVED.

EROSION CONTROL NOTES:

1. NO WORK SHALL COMMENCE ON SITE UNTIL A LAND DISTURBING PERMIT IS ISSUED BY SCDHEC. THE LAND DISTURBANCE PERMIT MUST BE KEPT ON SITE AT ALL TIMES AND SHOWN ON DEMAND.
2. LAND DISTURBING ACTIVITIES (GRADING, EXCAVATING, AND CONSTRUCTION) ON THE PROJECT SHALL NOT COMMENCE UNTIL THE APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AS SPECIFIED ON THE PLAN.
3. EROSION CONTROL SYMBOLS SHOWN ON PLAN MAY NOT ACCURATELY SHOW EXACT DIMENSIONS AND CONFIGURATIONS OF EROSION CONTROL MEASURES (I.E. NUMBER OF CHECK DAMS AND SPACING, OUTLET PROTECTION SIZE, ETC.). REFER TO EROSION CONTROL STANDARD DETAILS FOR EXACT DIMENSIONS AND CONFIGURATIONS.
4. CHECK DAMS IN SCDOT RIGHT OF WAY DITCHES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS BEEN COMPLETED. DITCHES SHALL BE MAINTAINED ACCORDING TO SCDOT MAINTENANCE SCHEDULES.
5. ALL SEDIMENT AND EROSION CONTROLS ARE TO BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND AFTER ANY STORM EVENT OF 0.5 INCHES OR GREATER OF PRECIPITATION DURING ANY 24-HOUR PERIOD. ANY NEEDED REPAIR WILL BE MADE IMMEDIATELY TO MAINTAIN ALL EROSION AND SEDIMENTATION CONTROLS AS DESIGNED.
6. SILT/SEDIMENT FENCES WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. SEDIMENT WILL BE REMOVED FROM BEHIND THE FENCE WHEN IT BECOMES ABOUT 0.5 FEET DEEP. REMOVED SEDIMENT SHALL BE DISPOSED OF IN A SUITABLE AREA AND STABILIZED TO PREVENT EROSION AND SEDIMENTATION.
7. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
8. 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 COMPLETED AND THE SITE IS STABILIZED.
9. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE ANY SEDIMENTS BEFORE BEING PUMPED BACK TO THE CREEK.
10. WHERE PRACTICABLE, TRENCHES SHOULD BE FILLED, COVERED, AND TEMPORARY SEEDING APPLIED AT THE END OF EACH DAY.
11. CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO THE PAVED ROADWAY FROM CONSTRUCTION AREAS. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
12. DURING CONSTRUCTION, TEMPORARY SLOPES GREATER THAN 2:1 THAT WILL REMAIN EXPOSED FOR LONGER THAN FOURTEEN (14) DAYS SHALL BE STABILIZED WITH TEMPORARY SOIL STABILIZATION MATS. PERMANENT SOIL STABILIZATION MATS SHALL BE INSTALLED ON PERMANENT SLOPES GREATER THAN 2:1 OR WHERE OTHERWISE INDICATED ON PLAN.
13. SEE SHEETS EC-4 and EC-5 FOR ADDITIONAL NOTES AND DETAILS.

GRASSING NOTES:

1. USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK OF THIS SEASON.
2. SEED: CONFORM TO ALL STATE LAWS AND TO ALL REQUIREMENTS AND REGULATIONS OF THE SOUTH CAROLINA DEPARTMENT OF AGRICULTURE. DELIVER TO SITE EACH VARIETY OF SEED INDIVIDUALLY PACKAGED AND TAGGED TO SHOW NAME, NET WEIGHT, ORIGIN AND LOT NUMBER.
3. FERTILIZER: CONFORM TO STATE FERTILIZER LAW.
4. AT TIME OF DELIVERY, FURNISH THE ENGINEER INVOICES OF ALL MATERIALS RECEIVED IN ORDER THAT APPLICATION RATES MAY BE DETERMINED. IMMEDIATELY REMOVE FROM THE SITE MATERIALS THAT DO NOT COMPLY WITH THE SPECIFIED REQUIREMENTS, AND PROMPTLY REPLACE WITH MATERIALS MEETING THE SPECIFIED REQUIREMENTS.
5. PROVIDE A MIXED FERTILIZER WITH DESIGNATION SUCH AS 10-10-10, WHERE THE FIRST NUMBER REPRESENTS MINIMUM PERCENT OF NITROGEN REQUIRED, THE SECOND NUMBER REPRESENTS THE MINIMUM PERCENT OF AVAILABLE PHOSPHORIC ACID REQUIRED, AND THE THIRD NUMBER REPRESENTS THE MINIMUM PERCENT OF WATER SOLUBLE POTASH REQUIRED IN THE FERTILIZER. FOR CENTIPEDE GRASS, USE ONLY 15-0-15 OR 16-4-8 FERTILIZER. FERTILIZER SHALL BE DELIVERED TO THE SITE IN BAGS LABELED WITH THE MANUFACTURER'S GUARANTEED ANALYSIS.
6. PROVIDE GRASS SEED WHICH IS: FREE FROM NOXIOUS WEED SEEDS, AND RECLEANED, GRADE A RECENT CROP SEED. TREATED WITH APPROPRIATE FUNGICIDE AT THE TIME OF MIXING. DELIVERED TO THE SITE IN SEALED CONTAINERS WITH DEALER'S GUARANTEED ANALYSIS.
7. LIME: PROVIDE AGRICULTURAL GRADE, STANDARD GROUND LIMESTONE CONFORMING TO CURRENT "RULES, REGULATIONS AND STANDARDS OF THE FERTILIZER BOARD OF CONTROL" ISSUED AT CLEMSON UNIVERSITY. BAG TAGS OR DELIVERY SLIP FOR BULK LOADS SHALL INDICATE BRAND OR TRADE NAME, CALCIUM CARBONATE EQUIVALENT, AND OTHER PERTINENT DATA TO IDENTIFY THE LIME.
8. WOOD CELLULOSE FIBER: PROVIDE WOOD CHIP PARTICLES MANUFACTURED PARTICULARLY FOR DISCHARGING UNIFORMLY ON THE GROUND SURFACE WHEN DISPERSED BY A HYDRAULIC WATER SPRAYER. MATERIAL TO BE HEAT PROCESSED SO AS TO CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS. IT SHALL BE DYED (NON-TOXIC) AN APPROPRIATE COLOR TO FACILITATE METERING.
9. STRAW MULCH: PROVIDE STRAW OR HAY MATERIAL. STRAW TO BE STALKS OF WHEAT, RYE, BARELY OR OATS. HAY TO BE TIMOTHY, PEAVINE, ALFALFA, OR COASTAL BERMUDA. MATERIAL TO BE REASONABLY DRY AND REASONABLY FREE FROM MATURE SEED BEARING STALKS, ROOTS OR BULBETS OR JOHNSON GRASS, NUTGRASS, WILD ONION, SANDBURG, WILD GARLIC, WILD MUSTARD, CROTOLARIA, PIGWEED, WITCHWEED, AND COCKLEBUR AND OTHER NOXIOUS WEEDS.
10. EXCELSIOR FIBER MULCH: TO CONSIST OF 4" TO 6", AVERAGE LENGTH, WOOD FIBERS CUT FROM SOUND, GREEN TIMBER. MAKE CUT IN SUCH A MANNER AS TO PROVIDE MAXIMUM STRENGTH OF FIBER, BUT AT A SLIGHT ANGLE TO NATURAL GRAIN OF THE WOOD.
11. EROSION CONTROL BLANKET: PROVIDE ON AREAS AS SHOWN ON THE PLANS. PROVIDE EROSION CONTROL BLANKET S150, FROM NORTH AMERICAN GREEN, OR APPROVED EQUAL.
12. SEED AREAS IMMEDIATELY UPON COMPLETION OF GRADING OR CONSTRUCTION AND CLEAN-UP OPERATIONS. SLOPES GREATER THAN FOUR HORIZONTAL TO ONE VERTICAL. UTILITY RIGHTS-OF-WAY ADJACENT TO STREAM BANKS.
13. SEEDING SCHEDULES: UNLESS OTHERWISE PROVIDED, SELECT THE TYPE OF SEEDING FROM THE TABLES SHOWN BELOW FOR THE UPPER STATE AND THE LOWER STATE REGIONS AS APPLICABLE TO THE PROJECT. THE TOTAL SEED RATE IN POUNDS PER ACRE IS THE SUM TOTAL SHOWN FOR ALL THE VARIETIES OF SEED OPPOSITE THE SCHEDULE NUMBER IN THE SEEDING SCHEDULES INCLUDED HEREIN. THE UPPER STATE REGION CONSISTS OF ALL THE COUNTIES WEST OF THE COUNTIES AIKEN, LEXINGTON, RICHLAND, KERSHAW, AND CHESTERFIELD. THE LOWER STATE REGION CONSISTS OF THE ABOVE-CITED COUNTIES AND ALL COUNTIES EAST.

1	COMMON BERMUDA(HULLED) 3 SERICEA LESPEDEZA(SCARIFIED) 2 KENTUCKY 31 FESCUE WEEPING LOVEGRASS 2	23 50 60 10	23 50 60 10	MARCH 15 TO AUGUST 14
2	KENTUCKY 31 FESCUE SERICEA LESPEDEZA(UNHULLED, UNSCARIFIED) COMMON BERMUDA(UNHULLED) 3 WEEPING LOVEGRASS 2 RESEEDING CRIMSON CLOVER 4 ANNUAL RYE GRASS 5 RYE GRAIN	50 60 30 10 20 5 30	50 60 30 10 0 15 0	AUGUST 15 TO MARCH 14

NOTES
1. INCLUDES RURAL AREAS ADJACENT TO WELL-DEVELOPED LAWNS.
2. NOT REQUIRED ON SHOULDERS, MEDIANS, ETC. AND ON SLOPES UNDER 5 FEET IN HEIGHT.
3. DO NOT USE GIANT BERMUDA SEED INCLUDING NK-37.
4. PROVIDE AN INOCULANT FOR TREATING RESEEDING CRIMSON CLOVER SEED OF A PURE CULTURE OF NITROGEN-FIXING BACTERIA SELECTED FOR A MAXIMUM VITALITY AND ABILITY TO TRANSFORM NITROGEN FROM THE AIR INTO SOLUBLE NITRATES AND DEPOSIT THEM INTO THE SOIL. ENSURE THAT INOCULANTS CONSIST OF PUREBRED CULTURES AND ARE NOT MORE THAN ONE YEAR OLD. DO NOT PLANT CLOVER IN MEDIANS OR IN RURAL AREAS ADJACENT TO WELL-DEVELOPED LAWNS.
5. THE USE OF ITALIAN RYE GRASS IS PROHIBITED ON ALL PROJECTS

3 6	COMMON BERMUDA(HULLED) 3 WEEPING LOVEGRASS 2 SERICEA LESPEDEZA(SCARIFIED) 2 WEEPING LOVEGRASS 2	30 10 50 10	30 10 50 10	MARCH 1 TO AUGUST 14
4 6	COMMON BERMUDA(UNHULLED) 3 WEEPING LOVEGRASS 2 SERICEA LESPEDEZA(UNHULLED, UNSCARIFIED) RESEEDING CRIMSON CLOVER 4 ANNUAL RYE GRASS 5 RYE GRAIN	40 10 60 20 6 20	40 10 60 0 18 0	AUGUST 15 TO FEBRUARY 28
5 6	CENTIPEDE	10	10	MARCH 1 TO APRIL 15

NOTES
1. INCLUDES RURAL AREAS ADJACENT TO WELL-DEVELOPED LAWNS.
2. NOT REQUIRED ON SHOULDERS, MEDIANS, ETC. AND ON SLOPES UNDER 5 FEET IN HEIGHT.
3. DO NOT USE GIANT BERMUDA SEED INCLUDING NK-37.
4. PROVIDE AN INOCULANT FOR TREATING RESEEDING CRIMSON CLOVER SEED OF A PURE CULTURE OF NITROGEN-FIXING BACTERIA SELECTED FOR A MAXIMUM VITALITY AND ABILITY TO TRANSFORM NITROGEN FROM THE AIR INTO SOLUBLE NITRATES AND DEPOSIT THEM INTO THE SOIL. ENSURE THAT INOCULANTS CONSIST OF PUREBRED CULTURES AND ARE NOT MORE THAN ONE YEAR OLD. DO NOT PLANT CLOVER IN MEDIANS OR IN RURAL AREAS ADJACENT TO WELL-DEVELOPED LAWNS.
5. PENSACOLA BAHIA IS 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
6. APPLY ONE-HALF OF LIME RATES AND ONE-HALF OF MAINTENANCE FERTILIZER RATES. FERTILIZE CENTIPEDE AT THE APPLICATION RATE OF 20 POUNDS PER ACRE OF 16-4-8 OR 15-0-15 FERTILIZERS IN MAY AND REPEAT IN AUGUST.
7. THE USE OF ITALIAN RYE GRASS IS PROHIBITED.

THE CONTRACTOR MAY INCLUDE QUANTITIES OF RYE GRAIN AND MILLET IN SCHEDULE NOS. 1 AND 3 TO ESTABLISH QUICK GROUND COVER FOR EROSION CONTROL PURPOSES

1	BROWN TOP MILLET	50	APRIL 1 TO AUGUST 15
2	RYE GRAIN ANNUAL RYE GRASS	56 15	AUGUST 16 TO MARCH 31

1 THE USE OF ITALIAN RYE GRASS IS PROHIBITED

GROUND PREPARATION:
1. BRING ALL AREAS TO PROPER LINE, GRADE AND CROSS SECTION INDICATED ON THE PLANS.
2. REPAIR EROSION DAMAGE PRIOR TO COMMENCING SEEDING OPERATIONS.
3. LOOSEN SEEDBED TO MINIMUM DEPTH OF 3".
4. REMOVE ALL ROOTS, CLODS, STONES LARGER THAN 1" IN ANY DIMENSION, AND OTHER DEBRIS.
5. PROVIDE AND PREPARE TOPSOIL.
6. CONDUCT SOIL TEST TO DETERMINE PH FACTOR. IF PH IS NOT IN THE RANGE OF 6.0 TO 6.5, ADJUST.

APPLICATION OF FERTILIZER:
1. SPREAD UNIFORMLY OVER AREAS TO BE SEEDED AT: RATE OF 1000 LBS. PER ACRE.
2. FERTILIZE CENTIPEDE AT THE APPLICATION RATE OF 20 POUNDS PER ACRE OF 16-4-8 OR 15-0-15.
3. USE APPROVED MECHANICAL SPREADERS.
4. MIX WITH SOIL TO DEPTH OF APPROXIMATELY 3".

SOWING METHODS
1. PERFORM SEEDING DURING THE PERIODS AND AT THE RATES SPECIFIED IN THE SEEDING SCHEDULES.
2. DO NOT CONDUCT SEEDING WORK WHEN GROUND IS FROZEN OR EXCESSIVELY WET.
3. PRODUCE SATISFACTORY STAND OF GRASS REGARDLESS OF PERIOD OF THE YEAR THE WORK IS PERFORMED.
4. SEEDING, SLOPES LESS THAN FOUR HORIZONTAL TO ONE VERTICAL:
5. SHALL CONFORM TO METHODS EA, WF OR WCF AS SPECIFIED.

GRASSING NOTES

STANDARD NOTES:

1. 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. MECHANICALLY TRACK ALL SLOPES AS SHOWN ON THE DETAIL.
2. 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.
3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INSTALLED INAPPROPRIATELY, OR INCORRECTLY, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
4. 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 SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
5. 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.
6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
7. 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 SCR100000.
8. 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.
9. 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.
10. 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.
11. A COPY OF THE SWPPP, INSPECTIONS 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.
12. 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.
13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
14. 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;
15. 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.).
16. 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;
   - SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
17. 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.
18. 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.
19. 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.

ISSUE SEQUENCE		
NO.	DATE	DESCRIPTION
	8/16/25	60% CLIENT REVIEW
	8/26/25	RESPONSE TO 60% COMMENTS
	8/27/25	ISSUED FOR PERMITTING

WSA BEAUFORT-JASPER WATER & SEWER AUTHORITY

KCI TECHNOLOGIES
ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
108 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

EROSION CONTROL DETAILS

PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION II
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.: 00030337
DESIGNED: WRT
CHECKED: KJW
APPROVED: MRB

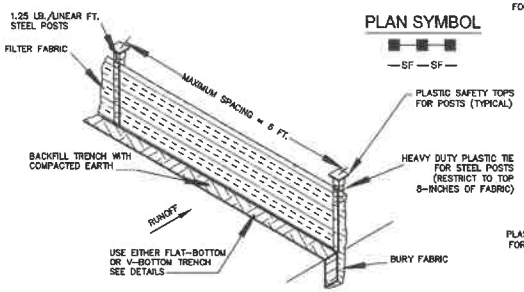
SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION KCI TECHNOLOGIES INC. No. C0851

SOUTH CAROLINA ... No. 20173 ... 6-27-25 ... MATTHEW W. ...

EC-1

KCI Technologies, Inc. 2025

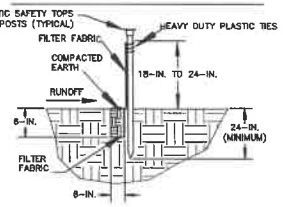
SILT FENCE INSTALLATION



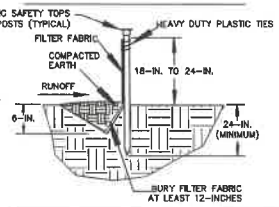
PLAN SYMBOL

—SF—SF—

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 passed 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 stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
7. Install Silt Fence Checks (Tie-Backs) every 50-100 feet, dependant 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.

South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC-03 Page 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

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 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.
4. 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.
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 stormwater 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. Removed 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.

South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC-03 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

ISSUE SEQUENCE		
NO.	DATE	DESCRIPTION
A	5/16/25	90% CLIENT REVIEW
B	6/26/25	RESPONSE TO 90% COMMENTS
C	8/27/25	ISSUED FOR PERMITTING

KCI TECHNOLOGIES
KCI ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS
106 Clair Drive Piedmont, South Carolina 29673-7771
Phone: (864) 269-0890 Fax: (713) 237-9801

EROSION CONTROL DETAILS

PARRIS ISLAND WATERLINE REPLACEMENT
DIVISION II
BEAUFORT-JASPER WATER & SEWER AUTHORITY
Okatie, South Carolina

PROJECT NO.:	00030337
DESIGNED:	WRT
CHECKED:	KJW
APPROVED:	MRB

EC-2

KCI Technologies, Inc. 2025
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Beaufort Jasper Water and Sewer Authority
CIP 2305 - Parris Island 16-Inch Waterline Replacement
KCI No. 00030337
60% CIPP Opinion of Probable Cost
Date: 07/11/25

KCI TECHNOLOGIES
ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS

	Division 1				
1	Mobilization	1	LS	$65,000.00	$ 65,000.00
2	Bonds / Insurance	1	LS	$50,000.00	$ 50,000.00
3	Sediment and Erosion Control	1	LS	$8,000.00	$ 8,000.00
4	16" Cured-In-Place Pipe (CIPP)	12,200	LF	$650.00	$ 7,930,000.00
5	Existing Water line Connection	4	EA	$5,000.00	$ 20,000.00
6	Asphalt Road Patch	85	SY	$55.00	$ 4,675.00
7	Non-Construction Cost	1	LS	$130,000.00	$ 130,000.00
8	Contingency	1	LS	$2,194,075.00	$ 2,194,075.00
	Division 1 Total Estimated Cost				**$ 10,401,750.00**
	Division 2				
1	Mobilization	1	LS	$100,000.00	$ 100,000.00
2	Bonds / Insurance	1	LS	$35,000.00	$ 35,000.00
3	Sediment and Erosion Control	1	LS	$12,000.00	$ 12,000.00
4	16" HDD (C-900 Fusible PVC)	2,000	LF	$1,500.00	$ 3,000,000.00
5	16" PVC	150	LF	$200.00	$ 30,000.00
6	16" Butterfly Valve	4	SY	$15,000.00	$ 60,000.00
7	Non-Construction Cost	1	LS	$52,000.00	$ 52,000.00
8	Contingency	1	LS	$809,250.00	$ 809,250.00
	Division 2 Total Estimated Cost				**$ 4,098,250.00**
	Total Estimated Cost:				**$ 14,500,000.00**

Military Enhancement Plan Eligibility Criteria Cover Sheet
1 Sept 2025

SC DEPARTMENT OF VETERANS' AFFAIRS
LEAD • SERVE • REMEMBER

Project: Beaufort County Waterline

Amount: $2,000,000

Application Cycle: September 2025

Criteria Review Date: September 9, 2025

Review Team:
Director of Military Affairs – Sandy Claypoole
Director of Government Affairs – Ed Bell

Yes	No	Initials
✓		SC
✓		EB

Eligibility Criteria:

✓ **1.** Applicant is one of the following counties or municipal government agents/agencies with a federal military installation, as defined above, within or adjacent to your jurisdictional boundaries: Richland, Sumter, Charleston, Berkeley, Dorchester, Georgetown, Beaufort, Orangeburg, Aiken, or Edgefield.

✓ **2.** Proposal clearly demonstrates how it will enhance military value, military installation resilience, or military family quality of life at the supported military installation(s). Proposal may include, but is not limited to, land acquisition, recreational purposes, education purposes, and facilities for military personnel.

✓ **3.** Amount requested is no more than $2 million.

✓ **4.** Proposal includes a cover letter on the letterhead of the applicant with a reference line including the project name and amount requested. The cover letter gives a description of the scope of the proposal the military installation(s) it will benefit, and whether there will be a financial match from the applicant.

✓ **5.** Proposal includes a signed letter of support by the local installation commander(s) representing the installation(s) or military community(ies) that will benefit from the proposal.

✓ **6.** Proposal includes a detailed explanation of how the proposal will enhance military value, military installation resilience, or military family quality of life at the supported military installation(s) or community.

✓ **7.** Proposal includes a detailed budget with a spending timeline.

✓ **8.** Proposal includes a list of specific project objectives and how they will be achieved.

✓ **9.** Proposal includes a timeline for completing the project to include start dates, milestones, and completion dates.

✓ **10.** Proposal includes an independent, third-party estimate of the cost of the proposal, prepared by a qualified entity. If property is being purchased, a fair market appraisal must be included in the proposal.

_____**11.** Proposal includes a detailed account of any other funding source applicant intends to apply for in conjunction with this grant, to include the source and dollar amount (if, for example, the grant covers only a sub-project of the larger project.

_____**12.** Proposal includes a copy of the anti-discrimination policy of the applying county or municipality.

_____**13.** Proposal includes the most recent operating financial statement of the applying county or municipality.

_____**14.** The proposal form contains point of contact information, along with applicant contact information and signature.