FRIPP ISLAND PUBLIC SERVICE DISTRICT

Tuesday, November 12, 2019
Fripp Island Fire Station
9:30 a.m.

AGENDA

1. Call to Order

2. Pledge of Allegiance

3. Minutes for October 2019 Commission Meeting

4. Reports
   - Manager's Report for October, 2019
     Revised June 30, 2019 Unaudited Financial Report
   - Fire Department Report for October, 2019
   - Fripp Inlet Bridge 2019 Inspection Report

5. Old Business
   - Water/Sewer Line Insurance
   - Beach Erosion Control Policy Discussion

6. New Business
   - Fairway Club Lift Station Pump Replacement
   - Fripp Inlet Bridge Repair/Rehab Project Cost Overruns & Additions
   - 2017 GO Bond Defeasance Scenarios
   - Bridge Insurance Procurement
     Agent/Broker of Record Change

7. Questions and Comments from Visitors
   - FIPOA Representative

8. Executive Session
   - Legal & Contractual Matters Relating to Water Service and Effluent Disposal Agreements

9. Upon returning to public session, the Commission may take such action(s) as it deems appropriate on the items discussed in executive session.

10. Adjourn

FRIPP ISLAND PUBLIC SERVICE DISTRICT

Minutes:	Commission Meeting on November 12, 2019
Present:	Dan H. McCormick, John W. Derrick, Richard S. Combes, Warren S. McKay, Rick E. Keup, Michael J. Wilt
Absent:	Joshua Horton, Fire Chief
Staff:	Angie Hughes, District Manager; Yvonne Fireall, Office Manager
Guests:	Thai Trinh, P.E. (JMT) via telephone, Mark Draves

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1. Chairman McCormick called the meeting to order at 9:30 a.m. and confirmed the presence of a quorum.

2. Chairman McCormick led the Commission in the Pledge of Allegiance.

3. Chairman McCormick confirmed that all requirements of the SC Code of Laws, Section 30-4-80, pertaining to the notice of meetings of public bodies, have been met for this meeting.

4. The Commission observed a moment of silence in remembrance of former Commissioner James L. Parks, who served three terms on the Commission through November 2018, and passed away on November 7, 2019.

5. The Commission approved the minutes for the October Commission meeting upon a motion by Mr. Combes (Vote: unanimous).

6. Reports

   a) The Commission reviewed the Manager's Report for October 2019 (*Att A).*
   b) The Commission reviewed the Fire Department Report for October 2019 (*Att B)*
   c) The Commission reviewed the Fripp Inlet Bridge 2019 Inspection Report *(Att C)* and entertained Thai Trinh via telephone to discuss additional spalls on the beams and railings that were not present at the last inspection and a pile at bent 38 that encountered resistance and twisted during pile driving operations. Mr. Trinh explained that it appeared the pile being driven had hit one of the old piles and recommended that the conflicting pile be cut off and incorporated into the design and a new pile be driven to replace it. The Commission approved the purchase and installation of a new pile for bent 38, at an estimated cost of $30,000, upon a motion by Mr. Wilt (Vote: unanimous).

7. Old Business

   a) The Commission reviewed and discussed the Water/Sewer Line Insurance and deferred further discussion until next meeting.
   b) The Commission reviewed the Beach Erosion Control Policy and an OCRM bulkhead permit application for property at 20 Sea Mist Lane (*Att D*) and directed the manager to issue a comment to OCRM stating that the District had no objection to the proposed activity.

8. New Business

a) The Commission approved the purchase of a replacement pump for the Fairway Club lift station, in the amount of $18,500.00 plus an estimated $800.00 for the boom truck rental necessary for installation (*Att E*), upon a motion by Mr. Keup (Vote: unanimous).
b) The Commission reviewed cost overruns and additions to the Fripp Inlet bridge repair/rehab project (*Att F*) and increased the District Manager's authority to approve additional changes for this project without Commission approval to a maximum of $25,000, upon a motion by Mr. Keup (Vote: unanimous).
c) The Commission reviewed the 2017 GO Bond Defeasance scenarios (*Att G*) and approved pursuing Scenario 2 to pre-pay $804,300 using FEMA funds and request that BB&T allow a further partial pre-payment of $800,000 using unspent bond proceeds, net of a 1% penalty, in order to reduce the annual debt service millage by approximately 3 mills, upon a motion by Mr. Keup (Vote: unanimous).
d) The Commission discussed bridge insurance procurement and approved a change in the Agent of Record for the insurance (*Att H*), upon a motion by Mr. Derrick (Vote: unanimous).

9. The Commission entertained questions and comments from visitors.

10. The Commission entered executive session at 12:31 p.m. to discuss legal and contractual matters relating to water service and effluent disposal agreements, upon a motion by Mr. Combes (Vote: unanimous). The Commission resumed open session at 12:34 p.m., upon a motion by Mr. McKay (Vote: unanimous).

11. There being no further business, the meeting adjourned at 12:35 p.m., upon a motion by Mr. McKay (Vote: unanimous).

Dan H, McCormick
Chairman

Angel L. Hughes
Secretary

Att A

FRIPP ISLAND PUBLIC SERVICE DISTRICT
MANAGER'S REPORT FOR OCTOBER 2019

I. Tap-Ins

	FY 2020		FY 2019		FY 2018	
Category	Oct	YTD	Oct	YTD	Oct	YTD
Water customers	2	2	-	-	-	2
Sewer customers						
a. Gravity	2	2	-	-	-	2
b. Vacuum	-	-	-	-	-	1

Total vacuum sewer customers: 562 of 725

II. Routine Operations

1. Butcher's Island and Hunting Island Booster Pumps Average Daily Run Time for Oct.

	2019	Diff	2018	Diff	2017	Diff	2016
Butcher's Isl Pumps Hrs/Day	3.5	0.1	3.4	0.8	2.6	1.4	1.2
Hunting Isl Pumps Hrs/Day	6.9	0.2	6.7	1.5	5.2	2.8	2.4
Total Hrs/Day	10.4	0.3	10.1	2.3	7.8	4.2	3.6

2. Fripp Island Master Metered Water Use for Oct., Average Gallons per Day

	2019	% Change	2018	% Change	2017	% Change	2016
BJW&SA	549,290	(0.7)	553,344	6.4	520,000	48.4	350,500
Harbor Island	76,942	(32.6)	114,197	80.0	63,453	12.7	56,293
Hunt Island	8,294	(28.0)	11,513	(11.6)	13,019	(56.0)	29,575
Fripp Island	457,097	6.3	430,125	(3.7)	446,469	54.2	289,571
Accountability,%	98.7	N/A	100.6	N/A	100.6	N/A	107.1
Rainfall, Inches	7.9		3.6		3.8		5.3*

*Measured rainfall for October 2016 was inaccurate because rainfall amounts were not recorded for October 7-10, due to evacuation for Hurricane Matthew. HIU experienced leaks during Sept. & Oct. 2018 that are now fixed. HISP continues to experience decreases in water usage due to fewer bathrooms and continued location and repair of leaking lines throughout the park.

3. The water tank levels and water line pressures were normal for Oct.

4. Wastewater Treatment Plant Flow for Oct., Gallons per Day

	2019	% Change	2018	% Change	2017	% Change	2016
Average Daily Flow	214,515	39.6	153,632	(20.7)	193,711	20.1	161,246
Weekly Max Flow	268,000	45.7	184,000	(8.5)	201,000	3.6	194,000
Peak Daily Flow	392,720	86.9	210,110	(17.0)	253,030	(24.0)	332,949

Peak daily flow of 392,720 occurred on Sun., 10/20/19, with 2.3 inches of rain. For Oct. 2018, peak daily flow occurred on Wed., 10/10/18, without rain. For Oct. 2017, peak daily flow occurred on Tues., 10/24/17 with 1 inch of rain. For Oct. 2016, peak daily flow occurred on Thurs., 10/13/16, during Hurricane Matthew recovery, without rain.

5. The water system samples were satisfactory for Oct. The wastewater treatment plant Biological Oxygen Demand sample taken on October 29th exceeded permitted level. Because BOD sample analysis requires 5 days, the District was notified on November 4th and re-sampled on November 5th. Further information will be provided in November's report. All other wastewater treatment plant samples were satisfactory for Oct.

III. Emergencies, Special Field Work and Activities

1. Water System
   a) Beaufort County's drought status is at incipient (one step down from normal), and conditions continue to improve for much of the state.
   b) The District is still waiting to receive the results from the triennial lead and copper sampling done in August.
   c) The District is still waiting to receive the results from the annual Sanitary Survey of the water system conducted during August.
   d) Due to low chlorine residuals, District staff drained the Ocean Creek water tank and conducted some hydrant flushing during the last week of October. Hydrant flushing will continue during the first week in November.
   e) BJW&SA notified the District that it would conduct its annual free chlorination disinfection November 30-December 13. The chlorine should reach Fripp Island's water system by December 7th and staff will conduct hydrant flushing to ensure that the disinfection reaches all main lines. As in the past, BJW&SA will credit the District's wholesale water account for water flushed during this time.

2. Wastewater System
   a) In September, operations staff ordered new analog input cards for one of the wastewater treatment plant's PLCs because it appeared that the cards had stopped working. When the new cards were received and installed, the PLC still did not function. Following troubleshooting and further research, it was determined that the power supply for the PLC had gone bad, rather than the input cards. A backup power supply kept on-hand was installed and the old one sent for rebuild, at a cost of $550. Based on new information indicating that the input and output cards have a useful life of 50 years or more, the two analog input cards that were ordered at a cost of $3,600 were returned to the manufacturer. The District will incur a small restocking fee.
   b) At the end of September, one of the three WWTP effluent pumps started leaking, and District staff began looking into suitable options for repair/replacement. Within a few days, a second effluent pump began leaking badly. Because the only remaining pump could experience a failure at any time, emergency procurement of a replacement pump was arranged at a cost of $14,500.00. Following installation of the new pump, both leaking pumps will be shipped to the District's preferred pump maintenance provider for rebuilding at a cost of $9,700.00 per pump. After the pumps are rebuilt, one will be installed and the second will be kept on hand as an emergency backup. The cost of the new pump will be capitalized in the District's financial records.

3. FEMA Reimbursement for Revetment – On October 4th, the District received $804,300 in public assistance funds obligated by FEMA for repair of the Fripp Inlet revetment along Porpoise Drive. These funds will be used to pre-pay a portion of the debt that was incurred to fund the revetment repairs, reducing the millage assessed on District taxpayers to repay the debt.

4. Erosion Control Activities
   a) On October 17th, letters regarding the District's role in erosion control for Fripp Island were mailed to SCDHEC-OCRM, Beaufort County Community Development, and the FIPOA.

b) The SCDHEC-OCRM construction authorization for the work on the revetment along Porpoise Drive was received during the last week in October and provided to Roger Wilson. We are still waiting on authorization for the work at the south end of Tarpon Boulevard.

5. Upgrade to Utility Billing System –The conversion from the old billing system to the new cloud-based system was completed in time for the September billing. Online account access and bill payment options should be available to utility customers for the next billing, which will go out at the end of December.

6. Beaufort County Tax Bill/District Tax Levy Resolution – The County has verified the tax millage that will appear on the tax bills, but the line items that appear on the tax bills still do not accurately reflect the use for each millage amount. District staff will meet with Beaufort County officials to address the issue of transparency on the tax bills in the next few months in order to effect the changes for the 2020 tax bills.

7. Fripp Inlet Bridge Repair Project – With an authorized extension of 7 days for the Hurricane Dorian evacuation, the bridge repair project must be substantially complete by April 4, 2020. The contractor has experienced minor setbacks due to issues with equipment and materials and has begun working some Saturdays in order to meet the substantial completion date.

8. Fripp Inlet Bridge Insurance Procurement for Inception Date February 1, 2020 – On October 30th, the District received a notice of non-renewal from Axis Surplus Insurance Company, the company providing the excess layer coverage of $14,100,000 for the bridge. The notice indicated that the policy will not be renewed by Axis. Timeline for procurement of coverage appears below:

Sept 2019	Reports, documentation, & updated Executive Summary provided to insurance agency for review and provision to brokers working with carriers.
Oct 2019	Annual bridge inspection completed
Nov 2019	Commission reviews annual inspection report
Dec 2019	Commission reviews quotes and policies offered
Jan 2020	Commission approves final policy & premium

AXIS SURPLUS INSURANCE COMPANY
11680 GREAT OAKS WAY
SUITE 500
ALPHARETTA GA 30022

NOTICE OF NONRENEWAL OF INSURANCE

Named Insured & Mailing Address:

FRIPP ISLAND PUBLIC SERVICE DISTRICT
FRIPP ISLAND BRIDGE
291 TARPON BOULEVARD
SAINT HELENA ISLAND SC 29920

Producer: AWO01

AMWINS BROKERAGE OF FLORIDA
1227 SOUTH PATRICK DRIVE, SUITE 101
SATELLITE BEACH FL 32937

Policy No.: EAF628031/01/2019
Type of Policy: COMMERCIAL PROPERTY
Date of Expiration: 02/01/2020; 12:01 A.M. Local Time at the mailing address of the Named Insured.

We will not renew this policy when it expires. Your insurance will cease on the Expiration Date shown above.

The reason for nonrenewal is

You are hereby notified in accordance with the terms and conditions of the above mentioned Policy and with applicable laws and regulations, that the above mentioned Policy will expire effective at and from the hour and date mentioned above and the policy will NOT be renewed for the reason(s) stated below:

The reason(s) for non renewal is that the premium or rates charged may change significantly or changes to the limits and/or policy terms and conditions may severely limit or restrict coverage.

IMPORTANT NOTICE

Within 30 days of receiving this notice, you or your attorney may request in writing that the Director review this action to determine whether the insurer has complied with South Carolina laws in canceling or nonrenewing your policy. If this insurer has failed to comply with the cancellation or nonrenewal laws, the director may require that your policy be reinstated. However, the Director is prohibited from making underwriting judgments. If this insurer has complied with the cancellation or nonrenewal laws, the director does not have the authority to overturn this action.

Other insurance may possibly be available through your agent or another insurer. The Department of Insurance has available a Property Insurance Buyer's Guide regarding property insurance shopping and availability. To obtain this Buyer's Guide, you may contact the South Carolina Department of Insurance by mail at P.O. Box 100105, Columbia, SC 29202-3105 or by calling (803) 737-6180 or (800) 768-3467.

Date Mailed:
9th day of October, 2019

CARLTON W. MANER

Named Insured

FRIPP ISLAND PUBLIC SERVICE DISTRICT
FRIPP ISLAND BRIDGE
291 TARPON BOULEVARD
SAINT HELENA ISLAND SC 29920

FRIPP ISLAND PUBLIC SERVICE DISTRICT
July 1, 2018 through June 30, 2019
Statement of Revenues & Expenses
Water & Wastewater Operations

	Actual	Budget	Variance Favorable (Unfavorable)	Variance Comments
Operating revenues				
Water operations	1,504,976	949,700	555,276	Invoice to SCDOT for HR waterline
Water Tank Leases	239,623	234,650	4,973	Fee incr for add'l equipmt install
Wastewater operations	710,745	694,820	15,925	Sewer sales & tap fees
Total operating revenues	2,455,344	1,879,170	576,174	
Cost of sales	(456,715)	(456,330)	(385)	
Gross profit from operations	1,998,629	1,422,840	575,789	
Operating expenses				
General & administrative	558,376	606,785	48,409	Salaries, eng. fees, timing
Water system expenses	67,264	82,110	14,846	Electricity, meter & pump repairs
Wastewater expenses	212,666	252,055	39,389	Elect., sewer lines & WW treatment
Total operating expenses	838,306	940,950	102,644	
Earnings (loss) from operations	1,160,323	481,890	678,433	
Nonoperating income (expenses)				
Interest earned	72,451	61,000	11,451	
Taxes & assessments collected	906,084	909,950	(3,866)	Timing of collections
Bond interest & expenses	(179,680)	(196,330)	16,650	Deferred debt amort not posted
Net nonoperating income (expenses)	798,855	774,620	24,235	
Earnings (loss) before depreciation	1,959,178	1,256,510	702,668	
Depreciation/Loss on disposal	595,757	610,090	14,333	Timing of Hwy 21 waterline
Net earnings (loss)	1,363,421	646,420	717,001	
Cash available on July 1, 2018			5,670,463	
Earnings (loss) before depreciation & debt amortization			1,959,178	
Changes in assets & liabilities				
(Increase) decrease in accounts receivable			(545,604)	
(Increase) decrease in inventory			(2,874)	
(Increase) decrease in prepaid expenses			(6,342)	
(Decrease) increase in accounts payable & transfers			225,507	
(Decrease) increase unrealized gains			101,495	
Net cash provided (used)			(227,818)	
Cash flow from capital & financing activities				
Asset additions/deletions & construction in progress			(3,015,287)	
Principal payments on bonds & deferred debt			(726,838)	GO (WWTP & WL) & Rev bonds (VS)
Bond proceeds & contributed capital			2,729,085	
Net cash provided (used)			(1,013,040)	
Cash available on June 30, 2019			6,388,783	

Available cash includes following balance sheet accounts:	Beginning	Ending	Change Pos. (Neg.)
Cash (gross revenue, petty cash & contingency fund)	2,246,311	2,642,061	395,750
Due from Beaufort County Treasurer (Vac sewer assessments)	350,417	355,209	4,792
Investments & restricted cash (Sewer const fund, DS, invest.)	3,073,735	3,391,513	317,778
Total	5,670,463	6,388,783	718,320

Att B

Fripp Island Fire Department
Monthly Report Summary
September 2019

Response Activities:

Total emergency responses for October, 21

	Oct 2019	Oct 2018	YTD CY19	YTD CY18
• Structure Fires	00	00	02	02
• Vehicle Fire	00	00	00	00
• Medical Emergencies	19	09	84	117
• Brush Fires	00	00	01	01
• Misc. Fire	01	03	20	26
• Service Calls	00	04	27	43
• Mutual Aid	00	00	02	09
• Auto Accident	01	00	09	05
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	21	16	145	203

Average emergency response time:

4 minutes 13 seconds.

Inspections:

Oct 2019	Oct 2018	YTD CY19	YTD CY18
0	2	3	11

Training Activities:

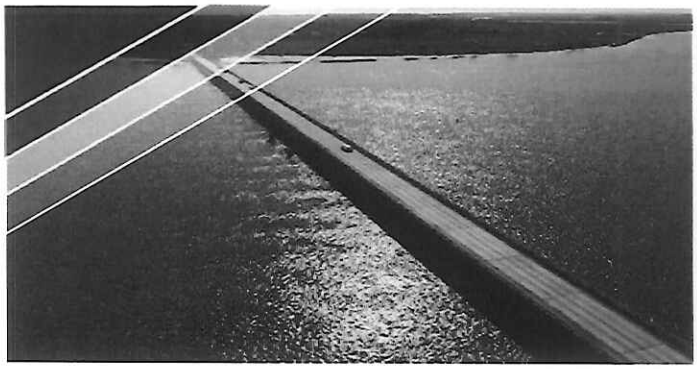
No training for October.

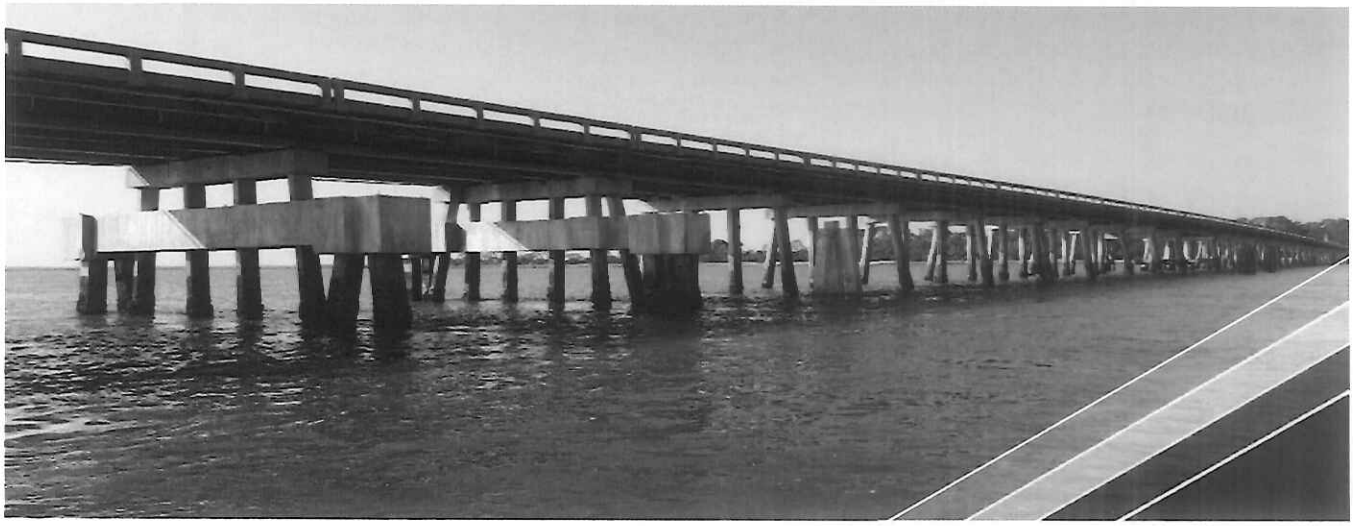
Roster:

Total personnel active for October, 22

Vol.-04
Paid-18

Att C





TECHNICAL REPORT

FRIPP INLET BRIDGE

2019 ABOVE WATER INSPECTION & HYDROGRAPIC SURVEY

JMT Project # 13-1394-015

Prepared by:
JMT
952 Houston Northcutt Blvd. Suite 100
Mt. Pleasant, South Carolina 29464

Submitted to:
Fripp Island Public Service District

Inspection Date: October 2, 2019
Report Date: November 8, 2019

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1.0 INTRODUCTION

1.1 Purpose and Scope

The scope of the project included a National Bridge Inspection Standards (NBIS) based above water bridge inspection of the structure and a hydrographic survey of Fripp Inlet in Beaufort County, South Carolina. On October 2, 2019, Johnson, Mirmiran and Thompson (JMT) performed an inspection of the above water structural elements associated with the bridge. On October 2, 2019 GEL Engineering, LLC performed a hydrographic survey of the Fripp Inlet extending 600 ft upstream and downstream of the bridge.

This report includes a significant findings summary, description of the structure, method of investigation, existing site conditions, evaluation and structural assessment with recommendations, as well as detailed drawings indicating the location of any observed defects and notable conditions.

1.2 General Description of the Structure

The Fripp Inlet Bridge is a 1,990 foot long bridge consisting of forty-nine simple Spans which carry one northbound and one southbound lane of traffic on Tarpon Boulevard over The Fripp Inlet in Beaufort County, South Carolina. The bridge span arrangement consists of one 70 foot long navigation span and forty-eight 40 foot long approach spans. The superstructure consists of a reinforced concrete deck supported by AASHTO Type IV Prestressed Concrete Beams at the navigation Span and by AASHTO Type II Prestressed Concrete Beams at all other Spans. The substructure consists of fifty pile Bents supported by prestressed concrete piles.

The original structure built in 1963 consists of three different Bent types, all of which consist of 21 in. octagonal prestressed concrete piles. Bent Type I has 4 prestressed concrete piles, (Bents No.1-4,6-8,10-12,14-16,18-20,22-24,27-29,31-33,35-37,39-41,43-45,47-50 refer to Photograph 29) for a total of 38 Bents. Bent Type II has 6 prestressed concrete piles, (Bents No. 5,9,13,17,21,30,34,38,42,46 refer to Photograph 30) for a total of 10 Bents. Bent Type III has 8 prestressed concrete piles, (Bents No. 25 and 26 refer to Photograph 31) for a total of 2 Bents. Refer to Figures in Appendix A for the Bent configurations.

Based on plans provided by Fripp Island Public Service District (PSD) and the Property Owners Association (POA), three separate retrofits have been added to the bridge since the original construction. A fourth retrofit is currently under construction.

The first retrofit in 1980, added new larger pile caps located below the 1963 pile caps and four composite 20 in. square prestressed concrete piles with a steel section of HP 12x74 to Bents 6 through 13. Based on the 1980 plans, the tip of the concrete portion was driven 5 ft to 10 ft below the original channel bottom. The tip of the steel section

was determined based on a test pile driven at Bent 7. The results of the test pile were unavailable, however the repair plans from 1996 indicated that the pile tips were at elevation -88. This was the only available record of the pile tip elevations for the 1980 repairs.

The 1996 retrofit expanded on the 1980 repairs by adding one battered 20 in. square prestressed concrete pile to the west side of Bents 6 through 13. The 1996 retrofit also added a new pile cap and six additional prestressed concrete piles to Bents 5 and 14 through 16. The plans did not show any repairs to Bent 17; however, the same retrofit was constructed at Bent 17.

The 1999 retrofit added rip rap to Bents 1 and 50, repaired spalls throughout the structure, and added a larger pile cap which encompasses the original pile cap and sits directly above and tied into the retrofit pile caps from the 1980 and 1996 repairs on Bents 6 through 13. One battered 20 in. square prestressed concrete pile was installed on the east side of Bents 5 through 17. Refer to Photograph 32 and 33 for an overall view of the retrofit pile caps.

Due to the continued scour of the channel bottom, the bridge substructure is currently being retrofitted with 12 additional retrofit bents. The new retrofit bents will have six 20 in. battered square prestressed concrete piles added to Bents 4 and 18, and six 20 in. battered square prestressed concrete piles with HP 10 x 57 points added to Bents 35-44. The tip of the concrete portion will be driven to an elevation of -97 for Bents 4 and 18, and -83 for Bents 35-44 with the steel tip driven to an elevation of -93. The retrofit will also include concrete spall repairs to prestressed concrete girders, shear keys, bridge railing, and replacement of three deteriorated timber dolphins.

Figure 1 in Appendix A depicts the location of the bridge over Fripp Inlet in Beaufort County, South Carolina.

The labeling convention used in this report to designate the Substructure Units (SSUs) follows that of the original design drawings dated December 1961. The Bents were labeled numerically from south to north, and the piles were labeled alphabetically from west to east. The beams were labeled numerically from west to east. Refer to Figure 2 in Appendix A for a plan and elevation sketch of the bridge.

1.3 Method of Investigation

A three-person team led by a South Carolina registered Professional Engineer and National Bridge Inspection Standards (NBIS) qualified bridge inspection team leader, conducted the on-site inspection. The inspection team performed a visual and tactile inspection of all accessible bridge components. The underside of bridge inspection was performed from a 20-foot Carolina Skiff. Plumbness measurements utilized a calibrated Smart Tool Level.

A hydrographic survey was performed by GEL Engineering to determine channel bottom elevations across the inlet and extending 600 ft upstream and downstream of the structure.

A few notes from previous inspection (which used a "snooper") were not accessible from the boat, and remain in the report for future monitoring.

See Appendix A for a complete list of observed defects.

2.0 EXISTING SITE CONDITIONS

2.1 Traffic Safety Features (Item 36)

NBIS Rating: 1000

(A) Bridge Railings

NBIS Rating: 1

Description: Reinforced concrete railing.

General Condition: Reinforced concrete bridge railings are located along the east and west fascia of the bridge. The railings are in good condition with previously identified defects appearing to be stable. The following three defects are new and were not listed on the previous inspection. Refer to Photographs 21-23. These new spalls are recommended for addition to the current repair contract.

- The barrier rail post at Bent 9 exhibits a 3" diameter by ½" penetration spall with 1 exposed reinforcing bar.
- The first east barrier rail post on Span 13 exhibits a 4" long by 1" wide with 1" penetration spall 1 exposed reinforcing bar.
- The outside west rail in Span 37 exhibits a 1' long by 5" vertical by 4" penetration spall with 1 exposed reinforcing bar.

(B) Transitions

NBIS Rating: 0

Description: No Guardrail transition installed.

General Condition: N/A

(C) Approach Guardrail

NBIS Rating: 0

Description: No Approach Guardrail installed.

General Condition: N/A

(D) Approach Guardrail Ends

NBIS Rating: 0

Description: No Approach Guardrail Ends installed.

General Condition: N/A

2.2 Bridge Deck (Item 58)

NBIS Rating: 6 (Satisfactory Condition)

(A) Deck

Description: The deck consists of a reinforced concrete slab.

General Condition: The bridge deck is in satisfactory condition. Transverse top of deck cracks ranging from hairline to 1/16 in. wide and 6 ft to 10 ft long were observed at random isolated spans along the bridge (Photograph 17-18). Minor hairline map cracks were observed throughout the top of deck covering 10% to 20% of the deck area. Isolated minor spalls, transverse cracks, impending spalls and exposed shallow reinforcement were located on the underside of the deck (Photographs 43) and at the curb faces (Photographs 14 and 19).

(B) Drains and Scuppers

Description: Each 40 ft span has 3 scuppers on the east and west side, the 70 ft span does not have scuppers.

General Condition: Scuppers are in satisfactory condition and clear of debris. The drainage inlets for the scuppers exhibit minor shallow spalls with exposed reinforcement at several locations throughout the top of deck. Numerous scuppers throughout the bridge exhibit corrosion holes up to 4 inches in diameter which allow runoff water to drain onto the exterior beams below the deck. Since FIPSD does not use road salts, the holes in the scuppers do not currently warrant repairs.

(C) Light Standards

Description: Bridge has concrete pedestals for future light poles on the west side.

General Condition: Concrete pedestals are in good condition.

(D) Utilities

Description: Utilities are located under the east sidewalk, along the west fascia and under the deck between beams 3 and 4.

General Condition: Utilities are in satisfactory condition and are located along the west fascia of the bridge and suspended from diaphragms between Beams 3 and 4 under the bridge deck. Two PVC and two ductile iron pipes were suspended below

the sidewalk along the east fascia of the bridge. The PVC conduit in Span 12 was unattached near mid span and sagged below the bridge. The ductile iron pipe exhibits light corrosion throughout the length of the bridge. No visible signs of water leakage were found at the pipe joints. The utility hanger inserts attached to the underside of the deck for the smaller, inboard ductile iron pipe exhibits moderate corrosion. Refer to Photographs 26 through 28 for views of the utilities.

(E) Joints

Description: Compression seals are located between all spans, typically sized between 1 ½ in. to 2 in.

General Condition: Compression seals in satisfactory condition. All the joints located between each simple span had compression seals with light debris throughout and moderate to heavy debris near the curb lines. The joints generally range from ⅞ in. to 2 ⅜. wide. Span 13 is misaligned ½ in. to the east. Span 15 is misaligned ¼" to the west.

(F) Centerline Reflectors and Raised Pavement Markers

Description: 4 in. by 4 in. two-way square yellow plastic square reflectors located down the center of the bridge.

General Condition: Approximately forty percent of the centerline reflectors or raised pavement markers are missing along the length of the bridge. These reflectors are used as a supplement to the yellow stripes which are in good condition. Due to the straight alignment, low volume, and low speed limit, it is not recommended to replace the missing centerline reflectors at this time.

2.3 Bridge Superstructure Item 59

NBIS Rating: 6 (Satisfactory Condition)

(A) Structural Members

Description: 40 ft spans (Span 1-24 and 26–49) consists of four AASHTO Type II prestressed concrete beams, the 70 ft span (Span 25) consists of four AASHTO Type IV prestressed concrete beams.

General Condition: The beams are in satisfactory condition. Shallow reinforcement spalls are present in random isolated areas throughout (Photograph 38). Beam ends exhibit bottom corner spalling and vertical cracking with associated impending spalls in isolated locations (Photograph 36). Previous concrete spall repairs to the beams exhibited loosed mortar or grout along the edges of the repairs. Some patches have failed. The beam sole plates exhibited moderate corrosion at most locations throughout the bridge. Several large spalls on the beams are noted, however these spalls are being repaired under the current contract. The following three spalls are

new this inspection cycle and are recommended for addition to the current repair contract: Beam 3 - Span 7; Beam 2 – Span 15 and Beam 3 – Span 25.

(B) Bearings / Shear Keys

Description: Each beam is simply supported by elastomeric bearing pads with one end fixed and the other end expansion.

General Condition: Very good condition.
The elastomeric bearing pads are in very good condition with no defects noted in the material. Lateral deformation in the elastomer was not seen at any bearing locations. The bearing pad supporting Beam 2 Span 8 at Bent 9 was hanging ¾ in. over the edge of the beam seat. This condition has remained stable for multiple inspection cycles (since 2015). It was not known if the bearing pad was placed incorrectly during construction or if the bearing pad had shifted while in service. The condition should be monitored during future inspections.

The two shear keys between Beams 1 and 2 at Bent 46 (north end of Span 45) exhibited full width by full height spalls with up to 3" penetrations. Up to four exposed anchor rods with exposed reinforcing are present. These spalls are currently under contract for repair.

(C) Diaphragms

Description: Reinforced concrete end diaphragms are located at Bents 1 and 50. The 40 ft spans had interior diaphragms at the mid-span and over the bents. The 70 ft span had interior diaphragms at $^1/_3$ span, $^2/_3$ span and over the bents.

General Condition: The diaphragms are in satisfactory condition.
The diaphragms are in satisfactory condition with minor spalls typically due to the electrical utility anchoring system located on the diaphragms between Beams 3 and 4. Spalls with up to 1" penetration and exposed reinforcing bars exist on the faces of the mid-span diaphragms between Beams 3 and 4 at Span 4. The bottom of all interior diaphragms in Span 6 exhibited 6" diameter spalling with exposed reinforcement bars that have up to 10% section loss. Repairs are not recommended at this time for these minor deteriorations.

2.4 Bridge Substructure (Item 60)

NBIS Rating: 5 (Fair Condition)

(A) Abutment

Description: Bents 1 and 50 are supported by four octagonal piles, all piles are buried.

General Condition: The end bents are in good condition.

(B) Wingwalls

Description: Reinforced concrete wingwalls run perpendicular to the roadway.

General Condition: Wingwalls are partially buried and the visible portion is in good condition. There is a vertical crack in the south west wingwall as well as a void under the wing wall with fill retained by timber boards in good condition. The timber retaining wall for utilities at the south west corner of the bridge has partially failed, allowing the fill to erode.

C) Settlement

Description: N/A

General Condition: No settlement observed.

(D) Pile Caps

Description: The original structure has reinforced concrete pile caps. Bent 5 and Bents 14-17 have a lower retrofit. Bents 6-13 have both an upper and lower retrofit.

General Condition: The original pile caps and upper retrofit caps are in good condition. The lower retrofit caps Bents 5 through 13 are in poor condition.
The pile caps supporting the superstructure do have some horizontal and vertical cracks with rust and efflorescence stains. A few of these locations have spalls/impending spalls with rust stains. Pre-existing defects to pile caps appear to be in stable condition. See Photographs 48 thru 51. Minor new defects consisting of hairline to 1/16" wide horizontal and vertical cracks occur at Bent 2, Bent 15, Bent 16, Bent 49 and Bent 25. New minor impending spalls and spalls occur at Bent 12, Bent 46, and Bent 49.

(E) Pile Collar

Description: Bent 25 has a reinforced concrete pile collar around the north piles. Bent 26 has a reinforced concrete pile collar around the south piles.

General Condition: The pile collars are in poor condition. The pile collars at Bents 25 and 26 on either side of the main navigation Span, exhibit cracks, impending spalls and spalls with rust staining throughout their length. See Photograph 67 and 68. Due to limited vertical clearance and shallow waters at the mouth of Fripp Inlet, heavy marine traffic uses the Harbor River at the north end of Hunting Island. Repairs to the collars are not recommended at his time, since there is no significant marine traffic.

(F) Piles

Description: The original structure has 21 in. octagonal prestressed concrete piles. The retrofit piles are 20 in. square prestressed concrete piles. Six 20 in. square

prestressed concrete piles and two 21 in. octagonal prestressed concrete piles have been jacketed.

General Condition: The piles are typically 95 to 100% covered in marine growth from the tidal zone to the channel bottom. The piles were in fair condition. Pre-existing defects to piles including delamination, vertical cracking and rust staining appear to be in stable condition. Vertical cracking varying from hairline to 1/16" wide exists at Bent 9-Pile B South, Bent 20-Pile C South, Bent 21-Pile D South Bent 23-Pile D and Bent 49-Pile A. See Photographs 55 thru 60.

2.5 Channel and Channel Protection (Item 61)

NBIS Rating: 7

(A) Channel

Description: The channel is located in a tidal zone with a water velocity ranging from 0 to 3 ft per second with a tidal fluctuation of approximately seven feet. An underwater bridge inspection was not performed with this inspection.

General Condition: Riprap and embankments are in good condition.

The Fripp Inlet has had previous history of significant scouring of the channel bottom particularly between Bents. 2-20. Past retrofit repairs that have added additional piles and pile caps to address the scour issue. The hydrographic survey indicates that the maximum water depth is 41.75 ft below mean low water at Bents 14-15.

A comparison of the Upstream and the Downstream channel bottom profiles from past hydrographic surveys, and channel bottom soundings, indicate that Fripp Inlet channel appears to be fairly stable with some minor changes when compared to the recent soundings. The Upstream and Downstream profiles do not indicate any significant channel degradation. Refer to Figures 7 and 8 in Appendix B for a comparison of channel bottom profiles between 1961 and 2019. Refer to Bridge Hydrographic Survey Appendix E.

The banks along the Fripp Inlet near the bridge are in stable condition. Embankment protection in the form of riprap and moderate vegetation exists on the north and south banks. There are no signs of active erosion. Refer to Photographs 4 and 7 for a view of the north and south embankments.

2.6 Item 70 – Bridge Posting

NBIS Rating: 1

Description: The Bridge load posting is temporarily reduced to a Weight Limit of 21 tons gross. The Bridge posting will be raised to a Weight Limit of 27 tons gross after the retrofits and repairs are completed.

General Condition:

Bridge limit of 42,000 lb is 52.5% of the 80,000 lb legal limit.

Bridge limit of 54,000 lb is 67.5% of the 80,000 lb legal limit.

2.7 Item 71 – Waterway Adequacy

NBIS Rating: 8

Description: The tidally influenced Fripp Island Inlet flows under the structure within the channel limits.

General Condition: Bridge deck is above roadway approaches. A hydraulic analysis has not been performed to determine the waterway adequacy.

2.8 Approach

(A) Joints / Pavement

Description: An asphalt roadway is located at the beginning and end of the bridge.

General Condition: The approach roadway is in good condition. The North and South approaches exhibit minor transverse hairline cracking the full width of the roadway. The North approach has 2 in. of settlement at Bent 50, with up to a 1 in. gap between the approach road and end of bridge, vegetation is growing in the gap. The North approach has an 18" long spall in the west curb. The East approach at End bent 1 has vertical erosion of embankment material at outflow drainage pipe 10' by 20' by 4'.

2.9 Miscellaneous

(A) Vertical Clearance

Description: The Bridge carries traffic over the tidally influenced Fripp Island Inlet. The navigational limits of the Fripp Inlet are encompassed between Bent 25 and Bent 26. The minimum vertical clearance over span 25 at the mean high-water elevation is 15.0 ft based on existing plans.

General Condition: N/A

(B) Waterway Fender System

Description: Each corner of the navigational channel is protected by a seven-pile timber dolphin.

General Condition: Three of the timber dolphins are in good condition. The timber dolphins along the east fascia were recently replaced as part of the current contract. The north west timber dolphin will be replaced as part of the current contract. The south west timber dolphin had been recently replaced under a separate contract. It is understood that the boat traffic generally consists of small pleasure boats, and not heavy commercial traffic.

(C) Traffic Signs

Description: "SPEED LIMIT 25", Electronic "YOUR SPEED ____", "TRUCKS 15", "NO FISHING ON BRIDGE", "BRIDGE SPEED LIMIT 25 MPH CARS 15 MPH TRUCKS".

General Condition: The traffic signs are in good condition.

3.0 EVALUATION AND STRUCTURAL ASSESSMENT

Overall, most of the structural components of the bridge were found to be in satisfactory to fair condition with only minor changes to the overall bridge condition in isolated locations. However, there were several structural components with significant enough deterioration to warrant repair. Notably, the bottom flanges of Span 2- Beam 3, Span 17– Beam 3 and Span 25- Beam 3 near the bearing locations, the exposed reinforcing on Beam 7-Beam 3, Span 15-Beam 2, Span 16-Beam 1, and Span 35-Beam 1 and the shear keys between Beams 1 and 2 at Bent 46. These are currently under contract for repair.

The bridge deck was found to be in satisfactory condition (Code 6). The hairline cracks, map cracking, minor spalls and exposed reinforcement do not currently affect the structural stability of the bridge. Six minor spalls on the bridge railings are recommended for repair.

The superstructure components of the bridge were found to be in satisfactory condition (Code 6) except as noted above. The minor isolated cracks and spalls in the prestressed concrete Beams do not currently affect the structural stability of the bridge.

The substructure components were found to be in fair condition (Code 5). Pre-existing defects were found to be in stable condition compared to previous inspections. The few minor new cracks, delaminated areas and spalls present on the structurally significant portion of these bents do not currently affect the structural stability of the bridge but should be monitored during future inspections. The numerous defects on the underside

of the retrofit caps in Bents 6 through 13 do not currently affect the structural capacity of the bridge.

A comparison of the bridge soundings with the available channel bottom profiles indicate that the channel bottom is stable, with some minor aggradation and degradation over the past several years. Overall, the channel bottom appears to have minor changes from 2018 to 2019.

In addition to the structural elements discussed above, the inspection team assessed other components such as Traffic Safety Features, Bridge Posting, Waterway Adequacy, and the Approach Roadway. An explanation of the rating system can be found in Appendix F.

4.0 RECOMMENDATIONS

The table below lists the summary of recommended repairs:

Repair Recommendation Summary

Inspection Note No.	Location	Repair Type	Under Contract	New Repair Recommendation
9	Span 9 - East Rail	Spall repair	-	Yes
10	Span 13 - East Rail	Spall repair (1st Post)	-	Yes
11	Span 13 - East Rail	Spall repair (2nd Post)	Yes	-
14	Span 16 - West Rail	Spall repair	Yes	-
17	Span 37 - West Rail	Spall repair	-	Yes
82	Span 2 - Beam 3	Spall Repair with exposed prestressing strands	Yes	-
87	Span 7 - Beam 3	Spall Repair with exposed prestressing strands	-	Yes
89	Span 15 - Beam 2	Spall Repair with exposed prestressing strands	-	Yes
90	Span 16 - Beam 1	Clean and coat with corrosion inhibitor	Yes	-
92	Span 17 - Beam 3	Spall Repair with exposed prestressing strands	Yes	-
95	Span 25 - Beam 3	Spall Repair with exposed prestressing strands (Near Bent 25 Bearing)	Yes	-
158	Span 25 - Beam 3	Spall Repair with exposed prestressing strands (Near Bent Mid-span)	-	Yes
97	Span 35 - Beam 1	Clean and coat with corrosion inhibitor	Yes	-
107	Bent 46 (Span 45)	Spall repair (Shear Key)	Yes	-

Six minor spalls are recommended for repair on the bridge railings in Spans 9, 13,16 and 37.

The concrete beams utilize prestressing strands in the bottom flange as the main load carrying system. The spalls on the bottom flange of Beam 3 in Spans 2, 17 and 25 occurred in the lower bending stress regions near the bearings, therefore the structural capacity of the member should not have been affected. However, repair is still recommended to prevent further damage propagating into the higher stress regions of the beam. This condition could eventually lead to a reduction in structural capacity. The spalls on the bottom flange in Spans 7,15, and Beam 3 Span 25 in a higher bending stress region towards the middle of the beam are currently small, therefore the structural capacity of the member should not have been affected significantly. However, repair is still recommended as this condition could lead to a greater reduction in structural capacity.

There are new minor deteriorations throughout the top of deck, underside of deck and on few isolated beams. This includes minor spalls or delamination, shallow spalls with exposed reinforcing steel or hairline transverse cracks. These minor deficiencies are common with an in-service bridge of this age. They do not affect the structural capacity and do not currently require repairs. Pre-existing defects have not deteriorated appreciably since the previous inspection in 2018. The few new cracks and delaminated areas in the piles and pile caps do not currently warrant repairs.

The condition of the bridge should be monitored with regularly scheduled inspection cycles. The National Bridge Inspection Standards recommends above water inspection cycles not to exceed two years and every five years for underwater inspections. This helps to track and monitor deficiencies and identify when repairs are warranted.

The overall condition of the channel bottom should be continuously monitored with periodic hydrographic surveys and evaluation of the scour surrounding the bridge. In addition, bridge soundings should be taken as part of the biennial above water inspections, as well as following significant flooding events.

5.0 SIGNIFICANT FINDINGS SUMMARY

- Spalling with significant penetration exists on the bottom flanges of Span 2 (Beam 3) Span 17 (Beam 3) and Span 25 (Beam 3). These defects exhibit exposed prestressing strands with significant loss of section. There is associated impending spalling on the bottom flanges adjacent to these defect regions.
- Spalling with significant penetration exists towards the mid-span of the beam on the bottom flange, in an area of high moment capacity on Span 7 (Beam 3), Span 15 (Beam 2), and Span 25 (Beam 3). The spalls are up to 1' wide by 2"

- Spalls up to 3" wide by 1" penetration with exposed reinforcing steel exists on the bottom flange of Span 16 (Beam 1) and Span 35 (Beam 1).
- Shear key at Bent 46 (Span 45 side) between Beams 1 and 2 exhibit full height by full width by up to 3" penetration spall with exposed anchor rods/reinforcing steel.
- Spans 9 (East Rail), 13 (East Rail), 13 (East Rail), Span 16 (West Rail), and Span 37 (West Rail) exhibit concrete spalls on the bridge railing with up to 1" penetration.
- Minor to moderate concrete deterioration such as cracks, spalls, and impending spalls were found at isolated random locations throughout. These defects have not changed appreciably since the previous inspection.
- Top of deck transverse cracks varying between hairline to 1/32" wide at random isolated locations throughout.
- Underside of deck spalls with associated areas of delamination and impending spalls were observed in Spans 3, 4 and 11.
- Vertical and transverse cracking between hairline and 1/16" wide are present at piles and pile caps. Isolated locations on the piles exhibit associated minor delamination areas.

Respectfully submitted,

JMT

Thai G. Trinh, P.E.

Project Manager

South Carolina Department of Health and Environmental Control
Office of Ocean and Coastal Resource Management
1362 McMillan Avenue, Suite 400
Charleston, South Carolina 29405

Healthy People Healthy Communities.

October 28, 2019
Permit Application Public Notice

***Joseph W. Floyd*, HNT-EC86-4PS0D**

The Department has received an application for a permit for the utilization/alteration of a critical area. The application was submitted pursuant to the Coastal Zone Management Act and the Coastal Division Regulations. The application in brief, is described as follows:

Location: **On and adjacent to Fripp Canal at 20 Sea Mist Lane, Fripp Island, Beaufort County, South Carolina TMS: R400 039 00A 0005 0000**

Work: **Proposed project will consist of constructing a 46" x135' bulkhead with 10' return walls 18" channelward of the OCRM critical line. Purpose of the bulkhead is to protect an eroding shoreline.**

This public notice is being distributed to all known interested persons and agencies to assist in developing facts on which a decision by the Department can be based. Please visit **https://epermweb.dhec.sc.gov/publicnotice** to view plans depicting the proposed work and submit comments setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition. Enter either ***Joseph W. Floyd*** or **HNT-EC86-4PS0D** into the appropriate search field to access details associated with this notice.

Comments regarding this application must be received by the Department on or before **November 12, 2019**. For more information, please contact **Geordy J Madlinger** at **843-846-9400** or via email at **MADLINGJ@dhec.sc.gov.**

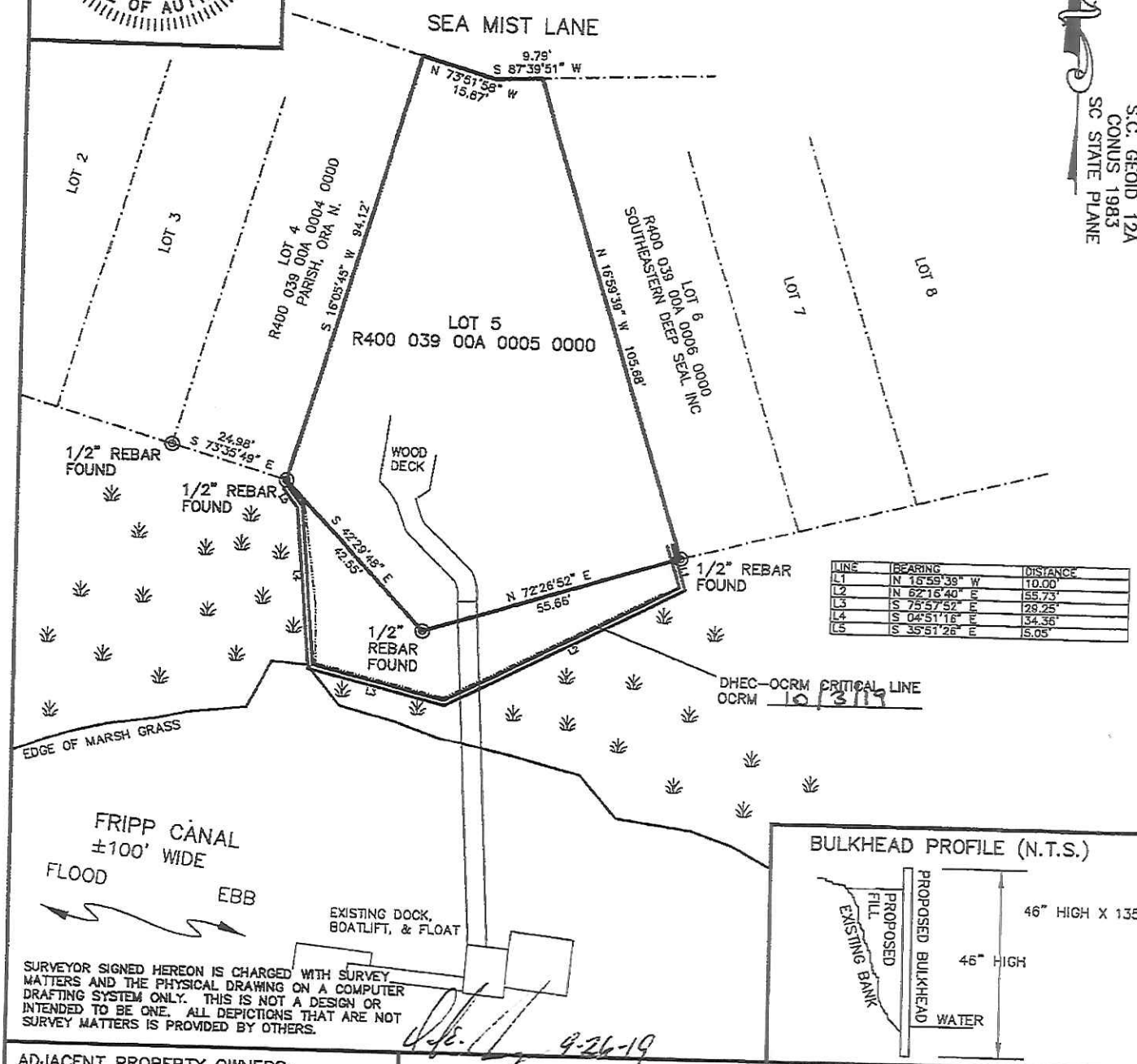
ATT D

SOUTH CAROLINA
GASQUE & ASSOCIATES, INC. No. C00192
CERTIFICATE OF AUTHORIZATION

GASQUE & ASSOCIATES INC.
LAND SURVEYORS & PLANNERS

28 PROFESSIONAL VILLAGE CIRCLE, BEAUFORT, S.C.
P.O. BOX 1363, BEAUFORT, S.C.
PHONE (843) 522-1798

S.C. GEOID 12A
CONUS 1983
SC STATE PLANE



LINE	BEARING	DISTANCE
L1	N 16°59'39" W	10.00'
L2	N 62°16'40" E	55.73'
L3	S 75°57'52" E	28.25'
L4	S 04°51'16" E	34.36'
L5	S 35°51'26" E	5.05'

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9-26-19

BULKHEAD PROFILE (N.T.S.)

ADJACENT PROPERTY OWNERS:

1. PARISH, ORAN
   R400 039 00A 0004 0000
   609 WOODWALK LANE
   MARTINEZ, GA 30907

2. SOUTH EASTERN DEEP SEAL INC
   R400 039 00A 0006 0000
   PO BOX 930923
   NORCROSS, GA 30093

0 15 30 60

SCALE: 1"=30'

R400 039 00A 0005 0000
JOSEPH W. FLOYD
20 SEA MIST LANE
ST. HELENA ISLAND, SC 29920

PROPOSED BULKHEAD

IN: FRIPP CANAL
AT: OCEAN CREEK, LOT 5
FRIPP ISLAND

COUNTY OF: BEAUFORT
STATE: SOUTH CAROLINA

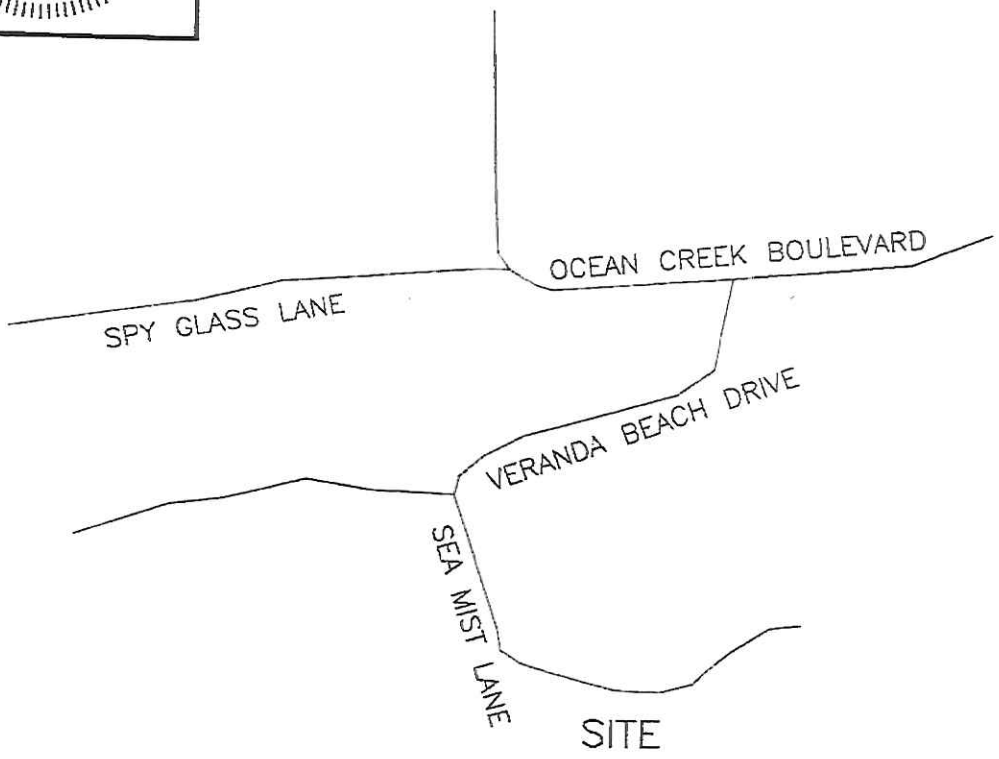
JOB# 50640 Dsgn. #6 DATE: 05/14/2019

SOUTH CAROLINA
GASQUE & ASSOCIATES, INC. No. C00192
CERTIFICATE OF AUTHORIZATION

GASQUE & ASSOCIATES INC.

LAND SURVEYORS & PLANNERS

28 PROFESSIONAL VILLAGE CIRCLE, BEAUFORT, S.C.
P.O. BOX 1363, BEAUFORT, S.C.
PHONE (843) 522-1798



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R400 039 00A 0005 0000
JOSEPH W. FLOYD
20 SEA MIST LANE
ST. HELENA ISLAND, SC 29920

IN: FRIPP CANAL
AT: OCEAN CREEK, LOT 5
FRIPP ISLAND

COUNTY OF: BEAUFORT
STATE: SOUTH CAROLINA

JOB# 50640 Dsgn. #6 DATE: 05/14/2019

FRIPP ISLAND PUBLIC SERVICE DISTRICT

291 Tarpon Boulevard
Fripp Island, South Carolina 29920

Telephone: 843-838-2400 Facsimile: 843-838-4900

ATT E

Memorandum

To: FIPSD Commission

From: Angie Hughes

Date: 11/7/2019

Re: Fairway Club Lift Station Pump Replacement

In early 2018, both pumps at the Fairway Club lift station failed, requiring emergency replacement of one pump and rebuilding of the second. The second, rebuilt pump was slated for replacement in fiscal year 2021. At the beginning of October 2019, the rebuilt pump failed. Because the pump had already been rebuilt once and failed within two years, District staff recommended that the pump be replaced. Lead time for receipt of a new pump was estimated by the manufacturer at 16-18 weeks. Since most of the wastewater on the island flows through the Fairway Club lift station, requiring that the station be returned to full capacity as soon as possible, and the District does not have a backup option if both pumps were to fail, the replacement pump was ordered immediately, at a cost of $18,500.00.

I am requesting Commission approval of the purchase of the replacement Fairway Club lift station pump, at a cost of $18,500, plus boom truck rental estimated at approximately $800. The pump is a capital asset that will be depreciated. While this item was not budgeted for the current year, the Commission reserves funds each year as part of the budgeting process to cover unexpected repair and/or replacement of equipment.

Thank you for your consideration.

Att F

Bridge Repair/Rehab Project Quantity Overruns & Additions To Scope of Work
As of November 8, 2019

Beginning Construction Contingency Funds	$367,551.00
Less Change Order #1 - 7/25/19	($9,010.87)
Construction Contingency Balance	$358,540.13

Repair Type 1: Beam Repair

Unit Price: $7,180 / CF
Estimated Bid Quantity: 2.7 CF

		Qty	Cost
10/24-10/30/19	Overrun:	0.5 CF	$3,590.00
2019 Bridge Inspection	Additional New:	0.8 CF	$5,744.00
Total Additional Cost for Repair Type 1			*$9,334.00*

Repair Type 2: Concrete Repair

Unit Price: $5,180 / CF
Estimated Bid Quantity: 2.6 CF

		Qty	Cost
2019 Bridge Inspection	Additional New:	0.17 CF	$880.60
Total Additional Cost for Repair Type 2			*$880.60*

Remaining Construction Contingency Balance $348,325.53

Engineer intends to process one change order for each repair type after all locations of that repair type are completed. The final change order amount(s) could exceed the amount the District Manager is authorized to approve.

Request permission for District Manager to approve additional cost overruns for concrete & beam spall repair, as requested and recommended by engineer.

Angie Hughes

From: Trinh, Thai <TTrinh@jmt.com>
Sent: Friday, November 1, 2019 9:42 AM
To: Angie Hughes
Cc: Rosenbeck, Paul
Subject: FW: New Fripp Spalls

Good morning Angie. We're finishing up the inspection report in the next couple of days. There are some new additional spalls on the beams and in the bridge railings that were not present in our last inspection two years ago. See below for specific details.

Since TIC is already on site doing similar repairs, we recommend that FIPSD add these new spalls to the beams and railing to their scope of work. Please let me know if you have any questions about adding in these repairs.

Johnson, Mirmiran & Thompson, Inc.
An Employee Owned Company

Thai Trinh, PE
Senior Associate – Structures Section Head
P: 843-556-2624
Direct: 843-779-3702

From: Swiecicki, Scott <SSwiecicki@jmt.com>
Sent: Thursday, October 31, 2019 4:58 PM
To: Trinh, Thai <TTrinh@jmt.com>
Cc: Wagner, Kenneth <KWagner@jmt.com>; Rosenbeck, Paul <PRosenbeck@jmt.com>
Subject: New Fripp Spalls

Thai,
The new significant spalls from the 2019 Fripp Inspection are:

New Bottom Flange Beam Spalls
Span 7 Mid-span Beam 3 -1' diameter by 2" penetration 1 exposed prestressing strand with 50% section loss
Span 15 Mid-Span Beam 2- Spall/Impending Spall up to 8" diameter with ½" penetration and 1 exposed strand
Span 25 2/3 point (about 45.5' from Bent 25) Beam 3- 9" diameter by 2" penetration 1 exposed prestressing strand with 10% section loss

Estimated Total for New Beam Spall Repair .8 CF

Bridge Railing New Spalls
Bent 9 post (east rail) 3" diameter by ½" penetration with 1 exposed bar up to 10% section loss
Bent 13 (east rail) 1st post 4" long by 1" wide by 1" penetration, with 1 exposed bar up to 10% section loss
Span 37 outside of west barrier, spall 1' long by 5" vertical by 4" penetration, with 1 exposed reinforcement bar with light corrosion.

Estimated Total for New Railing Spall Repair .17 CF

The estimated totals include additional area for the site preparation of chipping to sound concrete.

Angie Hughes

From: Rosenbeck, Paul <PRosenbeck@jmt.com>
Sent: Thursday, October 31, 2019 11:06 AM
To: Angie Hughes
Cc: Trinh, Thai
Subject: Site Visit #2 - Repair Item 8 Spall Repair
Attachments: Site Visit 10-30-2019.pdf

Angie,

Please see attached for JMT's final inspection of the completed work at span 25, beam 3 (Repair Item 8). Overall, the work was done in conformance with the specifications and JMT can recommend the repair for final acceptance.

As discussed, there was a quantity overrun at this location due to the spall limits being more extensive then originally thought. It is JMT's intention to process any change orders after all locations of Repair Type 1/1A (5 in total) have been accepted, rather than each location in isolation. JMT will continue to monitor all quantity overruns/underruns and keep FIPSD appraised of the situation as construction progresses.

Thanks.

Johnson, Mirmiran & Thompson, Inc.
An Employee-Owned Company

Paul D. Rosenbeck, PE
Senior Associate

952 Houston Northcutt Blvd, Suite 100
Mt. Pleasant, SC 29464
P. 843-779-3707
prosenbeck@jmt.com

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Thank You.

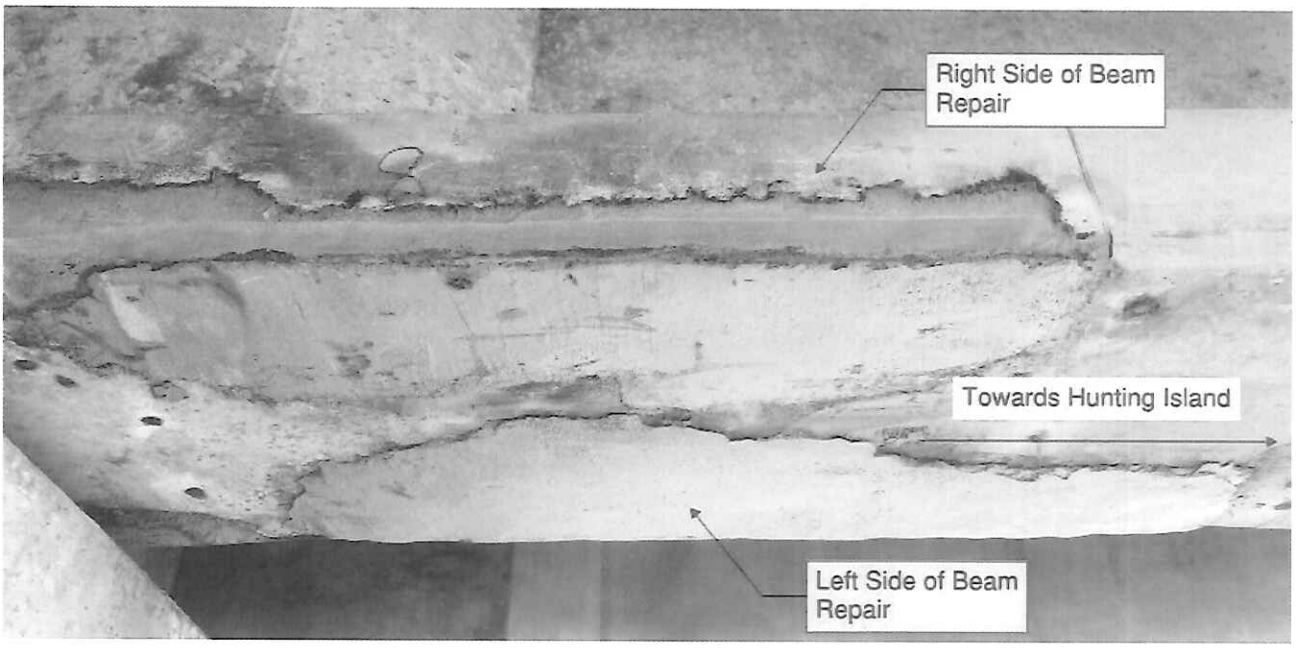
SITE VISIT LOG

Project Name:	Fripp Inlet Bridge Rehabilitation		
Project #:	13-1394-012		
Client:	Fripp Island Public Service District- Angie Hughes		
Contractor:	TIC		
Date:	10-30-2019		
Weather:	75° Overcast	**Time:**	11:00 – 12:00
Sub:	Repair Item 8 (Span 25 Beam 3 Major Spalling)		
Inspector:	Scott Swiecicki EIT		
Construction Activity:	Pile Installation		
Notes:	The inspector arrived at the subject repair site (see above) at approximately 1130am. A visual and tactile inspection of the repair was performed. The limits of the spall repair are documented in the 10-24-2019 construction site inspection. All defective concrete was removed until sound concrete was reached. The beam was observed to have sound repair in accordance with repair item 8 of the repair plans. **Bridge Repair Item 8 quantity of repair was 0.5 CF per the repair plans. After the inspection, JMT concurs with the increase of 0.5 CF of repairs, for a total of 1.0 CF for Repair Item 8.**		
Follow-Up Action:	Continuing of Construction Site Inspections as Necessary		
CONVERSATION:			

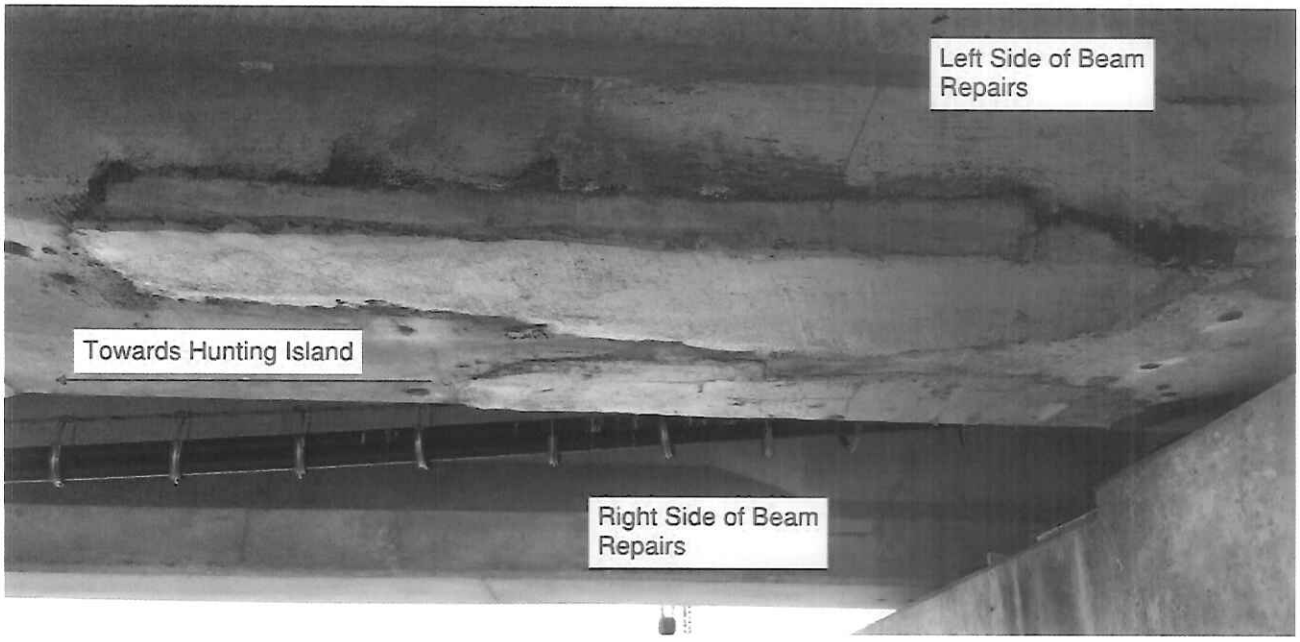
952 Houston Northcutt, Suite 100 ▪ Mount Pleasant ▪ South Carolina ▪ 29464
Phone 843.556.2624 ▪ Fax 843.5563.4329 ▪
www.jmt.com

SITE VISIT LOG

PHOTOS



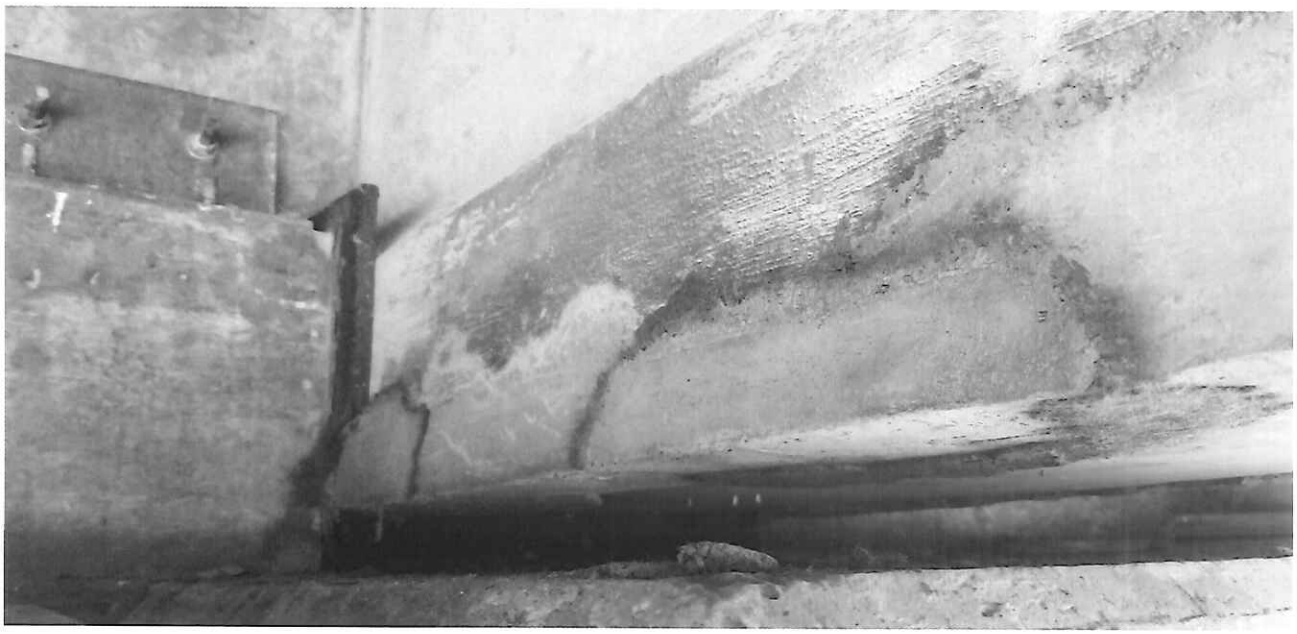
Orientation of Beam Repairs Upon Arrival at Site



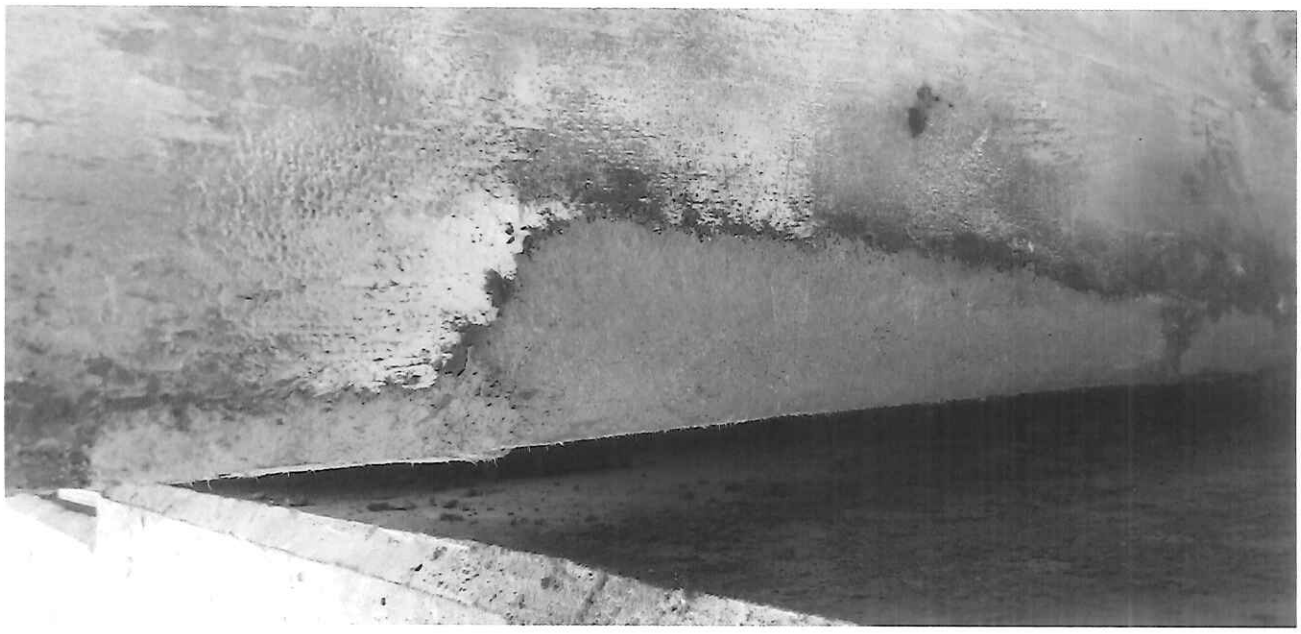
Orientation of Beam Repairs Upon Arrival at Site

952 Houston Northcutt, Suite 100 ▪ Mount Pleasant ▪ South Carolina ▪ 29464
Phone 843.556.2624 ▪ Fax 843.5563.4329 ▪
www.jmt.com

SITE VISIT LOG



Right Side of Beam Repairs Over the Bent Cap



Left Side of Beam Repairs Over the Bent Cap

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Phone 843.556.2624 ▪ Fax 843.5563.4329 ▪
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SITE VISIT LOG

Project Name:	Fripp Inlet Bridge Rehabilitation		
Project #:	13-1394-012		
Client:	Fripp Island Public Service District- Angie Hughes		
Contractor:	TIC		
Date:	10-24-2019		
Weather:	75° Sunny	**Time:**	11:00 – 12:00
Sub:	Repair Item 8 (Span 25 Beam 3 Major Spalling)		
Inspector:	Paul Rosenbeck PE, Scott Swiecicki EIT		
Construction Activity:	Spall Repair at Span 25 Beam 3 & Northwest Timber Dolphin Repairs		
Notes:	The inspection team arrived at the subject repair site (see above) at approximately 1130am. The beam was observed to have been saw cut and chipped in accordance with the contract repair plans. However, during the repair process it was discovered that the limits of the spalled/delaminated concrete and failed existing patch had grown considerably from what was anticipated at the initial inspection. As a result, work was stopped before sound concrete was reached from all sides. JMT documented and measured the extent of the deteriorated concrete and informed TIC to continue work in removing the failed material until sound concrete was reached. JMT observed that the beam had been chipped and saw cut to the following dimensions: Left Edge of Beam (Looking Towards Hunting Island): • 17" length x 11" width x 2" depth Right Edge of Beam (Looking Towards Hunting Island): • 44" length x 11" width x 2" depth JMT measured additional spalled and delaminated material that had not been removed at the following locations and dimensions. Left Edge of Beam (Looking Towards Hunting Island): • 26" length x 7" width x 2" depth • 24" length x 11" width x 2" depth Right Edge of Beam (Looking Towards Hunting Island): • 52" length x 4" width x 2" depth **Bridge Repair Item 8 quantity of repair was .5 CF. There is now an expected increase of approximately .76 CF for a total of 1.26 CF.**		
Follow-Up Action:	Remove additional concrete and repair as defined on Repair Plans Item 8.		
CONVERSATION:	Possible change of spall repair material from grout to epoxy.		

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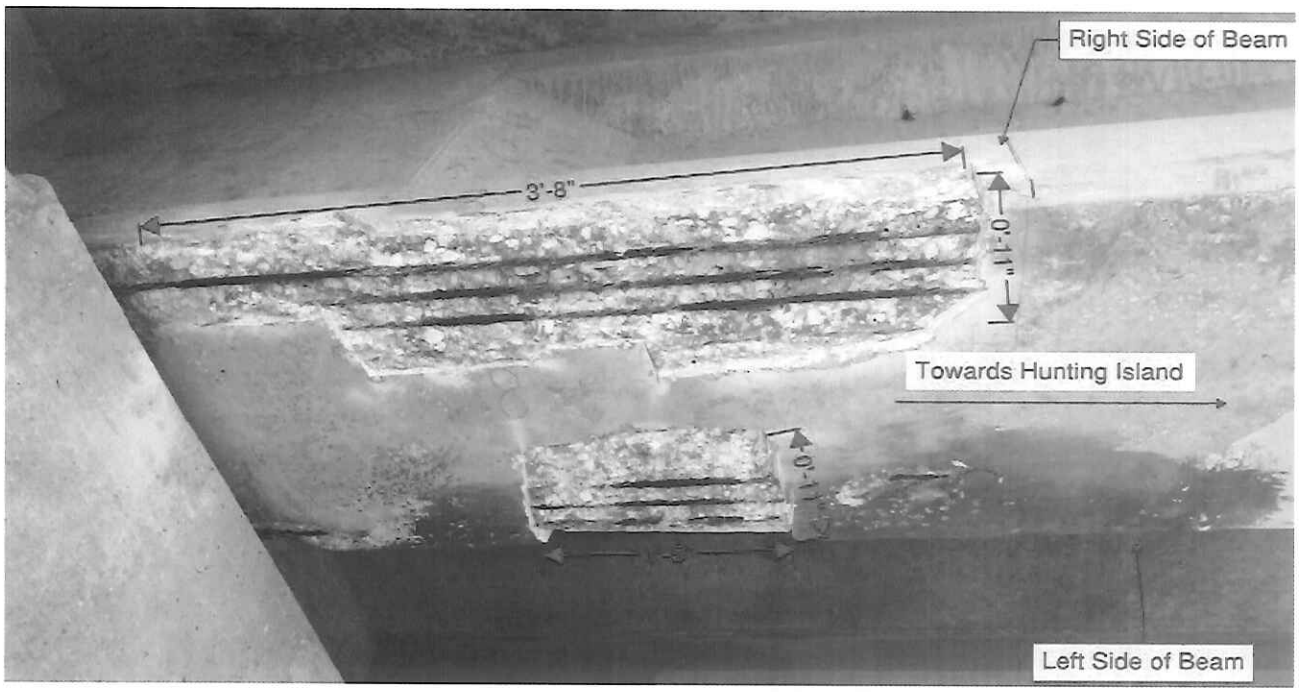
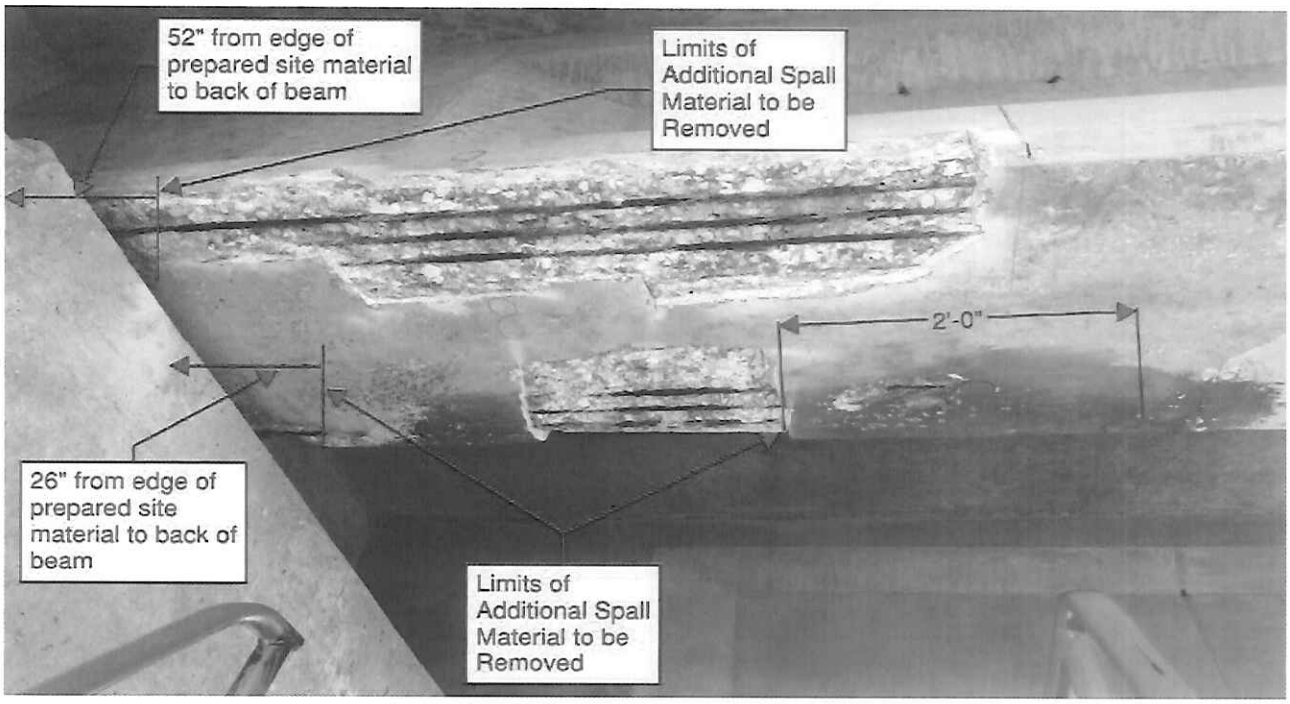
SITE VISIT LOG

PHOTOS



Orientation of Beam and Preparation for Repairs Upon Arrival at Site



Limits of Additional Spall Material to be Removed

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Att 6

Comparison of Millage Rates Under Defeasance Scenarios

FY20 millage rate for debt service: 20.4 equal to $20.40/1,000 of taxable value

Defeasance Scenario 1
Pre-Pay $804,300 on BB&T GO Bond using FEMA funds - no prepayment penalty

Resulting annual debt service millage reduced to 18.0

Defeasance Scenario 2
Pre-Pay $804,300 on BB&T GO Bond using FEMA funds - no prepayment penalty
Pre-Pay $804,300 on BB&T GO Bond using $800,000 unspent proceeds, net of 1% penalty

Resulting annual debt service millage reduced to 17.5

Defeasance Scenario 3
Pre-Pay $804,300 on BB&T GO Bond using FEMA funds - no prepayment penalty
Pre-Pay $800,000 on SRF GO Bond loan using $800,000 unspent proceeds - no prepayment penalty

Resulting annual debt service millage reduced to 18.0
SRF loan paid off in 2030 instead of 2037

Savings on a $500,000 property

	Resident	Non-Resident
Defeasance Scenario 1	$48/yr	$72/yr
Defeasance Scenario 2	$58/yr	$87/yr
Defeasance Scenario 3	same as Scenario 1, with millage dropping by 3.5 mills in 2030	

Fripp Island Public Service District, South Carolina

Defeasance Scenario 1

	Existing 2017 GO Bonds			Restructured 2017 GO Bonds (Reduced by $804,000 FEMA Funds)			Savings	
Calendar Year	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Debt Service Reduction	Millage Reduction
2020	-	27,606	27,606	-	17,234	17,234	10,372	0.22
2021	53,000	54,528	107,528	-	34,469	34,469	73,060	1.54
2022	55,000	53,135	108,135	-	34,469	34,469	73,666	1.55
2023	56,000	51,703	107,703	-	34,469	34,469	73,234	1.54
2024	58,000	50,233	108,233	-	34,469	34,469	73,764	1.56
2025	59,000	48,723	107,723	-	34,469	34,469	73,255	1.55
2026	151,000	46,014	197,014	82,000	33,411	115,411	81,603	1.72
2027	267,000	40,622	307,622	196,000	29,825	225,825	81,797	1.73
2028	273,000	33,656	306,656	200,000	24,716	224,716	81,940	1.73
2029	281,000	26,510	307,510	206,000	19,479	225,479	82,031	1.73
2030	288,000	19,169	307,169	212,000	14,087	226,087	81,083	1.71
2031	296,000	11,636	307,636	218,000	8,540	226,540	81,096	1.71
2032	303,000	3,909	306,909	222,000	2,864	224,864	82,045	1.73
Total	2,140,000	467,444	2,607,444	1,336,000	322,500	1,658,500	948,944	

Notes: Defeasance assumed to occur March 1, 2020. Value of a mill assumed to be $47,412

FIRST TRYON ADVISORS

Fripp Island Public Service District, South Carolina

Defeasance Scenario 2

	Existing 2017 GO Bonds			Restructured 2017 GO Bonds (Reduced by $804,000 FEMA Funds and $800,000 Unspent Proceeds Net of 1% Prepayment Penalty)			Savings	
Calendar Year	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Debt Service Reduction	Millage Reduction
2020	-	27,606	27,606	-	7,018	7,018	20,588	0.43
2021	53,000	54,528	107,528	-	14,035	14,035	93,493	1.97
2022	55,000	53,135	108,135	-	14,035	14,035	94,100	1.98
2023	56,000	51,703	107,703	-	14,035	14,035	93,668	1.98
2024	58,000	50,233	108,233	-	14,035	14,035	94,197	1.99
2025	59,000	48,723	107,723	-	14,035	14,035	93,688	1.98
2026	151,000	46,014	197,014	-	14,035	14,035	182,979	3.86
2027	267,000	40,622	307,622	85,000	12,939	97,939	209,683	4.42
2028	273,000	33,656	306,656	87,000	10,720	97,720	208,936	4.41
2029	281,000	26,510	307,510	90,000	8,437	98,437	209,073	4.41
2030	288,000	19,169	307,169	92,000	6,089	98,089	209,081	4.41
2031	296,000	11,636	307,636	94,000	3,689	97,689	209,946	4.43
2032	303,000	3,909	306,909	96,000	1,238	97,238	209,670	4.42
Total	2,140,000	467,444	2,607,444	544,000	134,341	678,341	1,929,104	

Notes: Defeasance assumed to occur March 1, 2020. Value of a mill assumed to be $47,412

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Fripp Island Public Service District, South Carolina

Defeasance Scenario 3

	Existing 2017 GO Bonds			Restructured 2017 GO Bonds (Reduced by $804,000 FEMA Funds)			Existing 2018 SRF Loan			Restructured 2018 SRF Loan (Reduced by $800,000 Unspent Proceeds)			Savings	
Calendar Year	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Debt Service Reduction	Millage Reduction
2020	-	27,606	27,606	-	17,234	17,234	88,467	37,130	125,597	106,718	18,879	125,597	10,372	0.22
2021	53,000	54,528	107,528	-	34,469	34,469	120,138	47,324	167,462	137,462	30,000	167,462	73,060	1.54
2022	55,000	53,135	108,135	-	34,469	34,469	122,681	44,781	167,462	140,372	27,091	167,462	73,666	1.55
2023	56,000	51,703	107,703	-	34,469	34,469	125,278	42,185	167,462	143,343	24,120	167,462	73,234	1.54
2024	58,000	50,233	108,233	-	34,469	34,469	127,929	39,533	167,462	146,377	21,085	167,462	73,764	1.56
2025	59,000	48,723	107,723	-	34,469	34,469	130,637	36,825	167,462	149,475	17,987	167,462	73,255	1.55
2026	151,000	46,014	197,014	82,000	33,411	115,411	133,402	34,060	167,462	152,639	14,823	167,462	81,603	1.72
2027	267,000	40,622	307,622	196,000	29,825	225,825	136,226	31,237	167,462	155,870	11,592	167,462	81,797	1.73
2028	273,000	33,656	306,656	200,000	24,716	224,716	139,109	28,353	167,462	159,169	8,293	167,462	81,940	1.73
2029	281,000	26,510	307,510	206,000	19,479	225,479	142,053	25,409	167,462	162,538	4,924	167,462	82,031	1.73
2030	288,000	19,169	307,169	212,000	14,087	226,087	145,060	22,402	167,462	132,893	1,744	134,637	113,908	2.40
2031	296,000	11,636	307,636	218,000	8,540	226,540	148,130	19,332	167,462	-	-	-	248,558	5.24
2032	303,000	3,909	306,909	222,000	2,864	224,864	151,266	16,197	167,462	-	-	-	249,507	5.26
2033	-	-	-	-	-	-	154,467	12,995	167,462	-	-	-	167,462	3.53
2034	-	-	-	-	-	-	157,737	9,726	167,462	-	-	-	167,462	3.53
2035	-	-	-	-	-	-	161,075	6,387	167,462	-	-	-	167,462	3.53
2036	-	-	-	-	-	-	164,485	2,978	167,462	-	-	-	167,462	3.53
2037	-	-	-	-	-	-	38,716	203	38,919	-	-	-	38,919	0.82
Total	2,140,000	467,444	2,607,444	1,336,000	322,500	1,658,500	2,386,855	457,057	2,843,913	1,586,855	180,539	1,767,395	2,025,463	

Notes: Defeasance assumed to occur March 1, 2020. Value of a mill assumed to be $47,412

Att H

AGENT/BROKER OF RECORD CHANGE

DATE (MM/DD/YYYY): 11/6/2019

NEW AGENCY PHONE (A/C, No, Ext): 919-832-5832 FAX (A/C, No): 866-694-1369 Snotherly Insurance Agency, Inc. 2308 Wake Forest Road Raleigh, NC 27608 E-MAIL ADDRESS: collin@sasinsgroup.com CODE: SUBCODE: AGENCY CUSTOMER ID:	INSURANCE COMPANY NAME Landmark American Insurance Company CURRENT AGENCY CURRENT PRODUCER

NAMED INSURED (AS IT APPEARS ON POLICY)	POLICY NUMBER(S)	EFFECTIVE DATE	EXPIRATION DATE	LINE OF BUSINESS
Fripp Island Public Service District - Fripp Island Bridge	LHD906815	02/01/19	02/01/20	Commercial Property

Please be advised that we wish to name Collin McDonald w/Snotherly Ins & Hull & Company of Charlotte (PRODUCER)

_____ (CODE #) as our exclusive representative effective 11/12/19 (DATE)

for the lines of business shown above, currently in force or submitted by application.

This authorization replaces any other authorization that may have been previously completed for any other insurance representative for the stated lines of business.

_____ _____
INSURED'S SIGNATURE DATE

_____
TITLE (IF APPLICABLE)

Fripp Island Public Service District - Fripp Island Bridge
COMPANY NAME (IF APPLICABLE)

291 Tarpon Boulevard
STREET ADDRESS OF INSURED

Fripp Island (CITY OF INSURED) SC (STATE OF INSURED) 29920 (ZIP CODE OF INSURED)

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AGENT/BROKER OF RECORD CHANGE

DATE (MM/DD/YYYY): 11/6/2019

NEW AGENCY		INSURANCE COMPANY NAME
PHONE (A/C, No, Ext): 919-832-5832 FAX (A/C, No): 866-694-1369 Snotherly Insurance Agency, Inc. 2308 Wake Forest Road Raleigh, NC 27608 E-MAIL ADDRESS: collin@sasinsgroup.com		Axis Surplus Insurance Company
CODE:	SUBCODE:	CURRENT AGENCY / CURRENT PRODUCER
AGENCY CUSTOMER ID:		

NAMED INSURED (AS IT APPEARS ON POLICY)	POLICY NUMBER(S)	EFFECTIVE DATE	EXPIRATION DATE	LINE OF BUSINESS
Fripp Island Public Service District - Fripp Island Bridge	EAF628031-19	02/01/19	02/01/20	Excess Commercial Property

Please be advised that we wish to name Collin McDonald w/Snotherly Ins & Hull & Company of Charlotte (PRODUCER)

_____ (CODE #) as our exclusive representative effective 11/12/19 (DATE)

for the lines of business shown above, currently in force or submitted by application.

This authorization replaces any other authorization that may have been previously completed for any other insurance representative for the stated lines of business.

_____ _____
INSURED'S SIGNATURE DATE

_____
TITLE (IF APPLICABLE)

Fripp Island Public Service District - Fripp Island Bridge
COMPANY NAME (IF APPLICABLE)

291 Tarpon Boulevard
STREET ADDRESS OF INSURED

Fripp Island (CITY OF INSURED) SC (STATE OF INSURED) 29920 (ZIP CODE OF INSURED)

ACORD 36 (2007/01)

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Angie Hughes

From: Trinh, Thai <TTrinh@jmt.com>
Sent: Tuesday, November 5, 2019 3:45 PM
To: Angie Hughes
Cc: O'Connor, Jim
Subject: RE: Bridge Cost Information

You're welcome. Glad to be of some service. I forgot to mention that Mobilization was also included in the overall cost.

Johnson, Mirmiran & Thompson, Inc.
An Employee Owned Company

Thai Trinh, PE
Senior Associate – Structures Section Head
P: 843-556-2624
Direct: 843-779-3702

From: Angie Hughes <angiehughes@fipsd.org>
Sent: Tuesday, November 5, 2019 3:42 PM
To: Trinh, Thai <TTrinh@jmt.com>
Cc: O'Connor, Jim <JOconnor@jmt.com>
Subject: [EXTERNAL] RE: Bridge Cost Information

Thai,
Thank you so much for the quick turnaround! This is exactly what we were looking for.

Best Regards,
Angie

Angel L. Hughes, Manager

Fripp Island Public Service District
291 Tarpon Boulevard | Fripp Island, SC | 29920
Phone: (843) 838-2400 | Direct: (843) 541-0092 | Fax: (843) 838-4900

From: Trinh, Thai <TTrinh@jmt.com>
Sent: Tuesday, November 5, 2019 2:40 PM
To: Angie Hughes <angiehughes@fipsd.org>
Cc: O'Connor, Jim <JOconnor@jmt.com>
Subject: RE: Bridge Cost Information

Angie, I rough out some cost based on current SCDOT bid tab unit prices for the major structural elements and included a 25% contingency and 10% engineering fees. The 40' and 70' spans would cost $725,000 and $1,200,000, respectively. Please let me know if you need anything else.

Johnson, Mirmiran & Thompson, Inc.
An Employee Owned Company

Thai Trinh, PE

Angie Hughes

From: McGill, Dana <dmcgill@emd.sc.gov>
Sent: Thursday, November 7, 2019 5:26 PM
To: Angie Hughes
Subject: Fripp Inlet Bridge

Good afternoon, Angie!

I was able to get you some answers!

In order to receive Public Assistance, the President MUST declare a major emergency or disaster[1]. As long as the declaration includes your area as a designated area, Fripp Island is legally responsible for the upkeep of the bridge[2], and the damage occurred as a result of the disaster[3], funding will be provided, regardless of insurance status.

If there is no declaration, no Public Assistance funding will be available.

[1] *Public Assistance Program and Policy Guide,* Ch. 1(I)
[2] *Public Assistance Program and Policy Guide,* Ch. Ch. 2 (IV.B.2.)
[3] *Public Assistance Program and Policy Guide,* Ch. 2, (IV.B.1.)

Please don't hesitate to give me a call if you still have questions.

Thanks!

Dana M. McGill
Public Assistance Specialist
South Carolina Emergency Management Division
2779 Fish Hatchery Road
West Columbia, SC 29172
803.737.8887 (office)
803.465.0344 (cell)
dmcgill@emd.sc.gov
M-TR 7:00 am – 5:30 pm