

WALK-ON #1

DFM

Lee County Board Of County Commissioners  
Agenda Item Summary

Blue Sheet No. 20060684

1. ACTION REQUESTED/PURPOSE: Rescind award under E-06-02 to the Construction Manager Agreement through RFQ-05-07 COUNTY-WIDE CONTRACT FOR CONSTRUCTION MANAGEMENT, to Gary Wilkes, Inc. (Contract #3160) for the projects known as FORT MYERS BEACH FISHING PIER ELASTOMERIC BEARING PAD REPLACEMENT and FORT MYERS BEACH FISHING PIER CONCRETE RESTORATION, due to the inability to obtain the bonds as required. Award the Construction Manager Agreement to TARGET BUILDERS, INC., for the GMP of \$719,246.00 (includes CM Fee of \$50,146.00) for the FORT MYERS BEACH FISHING PIER – ELASTOMERIC BEARING PAD REPLACEMENT project and the FORT MYERS BEACH FISHING PIER – CONCRETE RESTORATION PROJECT for the GMP of \$816,289.00 (Includes CM Fee of \$55,639.00), with a project completion time of 240 days. Also request that the Board approve waiving of the formal process (if needed) and authorize the use of the Direct Material Purchase Order as provided for in the CM Agreement with Lee County, which allows the County to purchase directly from suppliers of equipment and/or materials as a cost/time saving measure. Further authorize Chairwoman to execute the CM Agreement.

2. WHAT ACTION ACCOMPLISHES: Provides Lee County with a Construction Manager for the Fort Myers Beach Fishing Pier to include, but not limited to elastomeric bearing pad replacement and for the installation of new neoprene bearing pads for the prestressed concrete deck slabs.

3. MANAGEMENT RECOMMENDATION: Approval recommended.

4. Departmental Category: 02

5. Meeting Date: 05-23-2006

6. Agenda:  
 Consent  
 Administrative  
 Appeals  
 Public  
 Walk-On

7. Requirement/Purpose: (specify)  
 Statute  
 Ordinance  
 Admin. Code AC-4-4  
 Other

8. Request Initiated:  
Commissioner \_\_\_\_\_  
Department Public Works  
Division Facilities Management  
By: Jim Lavender, Director

9. Background:

On May 3, 2005, the Board of County Commissioners approved the award of RFQ-05-07 COUNTY-WIDE CONTINUING CONTRACT FOR CONSTRUCTION MANAGEMENT with a total of twelve (12) firms. As approved under that Blue Sheet, each projects' Guaranteed Maximum Price (GMP) will be brought back to the Board for approval.

On March 14, 2006, the Board approved an Emergency (E-06-02) Construction Manager Agreement to Gary Wilkes, Inc., for the FORT MYERS BEACH FISHING PIER ELASTOMERIC BEARING PAD REPLACEMENT project for a GMP of \$719,246.00 (includes CM Fee of \$50,146.00) and the FORT MYERS BEACH FISHING PIER CONCRETE RESTORATION project in the GMP of \$816,289.00 (includes CM Fee of \$55,639.00). However, Lee County was contacted by Gary Wilkes' bonding agent that they were unable to issue the bond, due to an inability to meet requirements. Since the work must be done on a timely basis, Facilities Management informed Gary Wilkes, Inc. of their intention to rescind the original award and award both projects to Target Builders, Inc., for the same GMP originally awarded.

Attachments: (1) Letter to Gary Wilkes Rescinding Award  
(2) Two (2) Proposals from Target Builders, Inc.

10. Review for Scheduling:

Department Director	Purchasing or Contracts	Human Resources	Other	County Attorney	Budget Services				County Manager/P.W. Director
					Analyst	Risk	Grants	Mer	
		N/A							

11. Commission Action:

Approved  
 Deferred  
 Denied  
 Other

RECEIVED BY COUNTY ADMIN:  
5-18-06  
1:25  
COUNTY ADMIN FORWARDED TO:

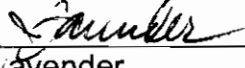
Rec. by CoAtty  
Date: 5/18/06  
Time: 1:20pm  
Forwarded To:



**Memorandum**  
from  
Public Works Administration/Construction & Design  
**Facilities Management**

Date: May 18, 2006

To: Lee Cares

From:   
Jim Lavender,  
Public Works Director

**RE: Justification for Blue Sheet Walk-On**

The Construction Manager Agreement, Contract Number 3160, for Fort Myers Beach Fishing Pier Concrete Restoration and Elastomeric Bearing Pad Replacement was a time sensitive project. A CM was approved by Lee County BOCC to complete this project. The CM was unable to secure the required bond so the Facilities Department did not have any choice but to change the CM. To complete this project a work platform will need to be installed under the pier just above the normal water line. If the project extends into storm season the possibility of work delays and damage to the work platform will increase and add to the cost of the project.



**LEE COUNTY**  
SOUTHWEST FLORIDA

**BOARD OF COUNTY COMMISSIONERS**

Writer's Direct Dial Number: 479-8335

Bob Janes  
*District One*

Douglas R. St. Cerny  
*District Two*

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*District Four*

John E. Albion  
*District Five*

Donald D. Stilwell  
*County Manager*

David M. Owen  
*County Attorney*

Diana M. Parker  
*County Hearing Examiner*

May 17, 2006

Gary Wilkes  
Gary Wilkes, Inc.  
General Contractor  
5701 Division Drive, Suite A  
Fort Myers, FL 33905  
Fax 694-0116

**RE:** Construction Management Agreement Contract Number 3160, Fort Myers Beach Fishing Pier Elastomeric Bearing Pad Replacement and Fort Myers Beach Pier Concrete Restoration.

This letter is to notify you that Lee County Facilities is rescinding your contract upon Board approval for the above two projects. This is because of the delays in completing the required contract documents within the required time limits of the contract and the time restraints of this project.

This affects the above project, all other agreements you have with the County are not affected by this letter.



Baxter Rothell  
Facilities Operation Manager  
1500 Monroe St  
Fort Myers, FL 33901

Cc:  
Lisa Crone, Contract Specialist  
Jim Lavender, Public Works Director  
Rich Beck, Facilities Director



General Contractors . Construction Managers

## PROPOSAL

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### GUARANTEED MAXIMUM PRICE (GMP)

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**Proposal Submitted to:**

Lee County  
Facilities Management  
1500 Monroe Street, 4<sup>th</sup> Floor  
Fort Myers, FL 33901  
**Attn: Baxter Rothell**

**Job Name:**

Fort Myers Beach Fishing Pier  
Elastomeric Bearing Pad Replacement  
950 Estero Boulevard  
Fort Myers Beach, Florida

**Date: 5/17/2006**

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**I. Summary of work:**

Work for the above-referenced project includes all labor and material to remove and replace the one (1) foot by two (2) foot by ½ inch elastomeric bearing pads on the Fort Myers Beach Fishing Pier as clarified below.

**II. List of Drawings & Specifications:** Provided by Pyper Engineering, Inc. (see attached Exhibit "A")

**III. Clarifications/Assumptions/Qualifications:**

- 1) This proposal may be withdrawn if not accepted within thirty (30) days.
- 2) Subject to Notice to Proceed and receipt of building permit, the project will be substantially complete within two hundred forty (240) calendar days and final completion will be obtained (30) days thereafter.
- 3) An allowance of \$26,000.00 is included in the GMP for all patching materials.
- 4) All of the hold down brackets shall be reinstalled in their present location.
- 5) The pier shall be scaffold per the design and recommendation by Pyper Engineering, Inc.
- 6) Proposal includes all supervision, materials, labor, equipment and insurance required to complete the job.
- 7) Proposal includes all safety equipment and procedures required by OSHA and pertinent local building codes.
- 8) Performance and payment bond is included in base bid.
- 9) Builders Risk Insurance to be provided by Owner.
- 10) Temporary utilities such as power and water during construction shall be provided by Owner
- 11) Pedestrian and crowd control and necessary signage to accomplish same shall be provided by Lee County.
- 12) Full-time supervision is not included.
- 13) No architectural and/or engineering services included.
- 14) Permit and/or impact fees are not included.
- 15) Target Builders, Inc. shall not be liable for structural failure caused by unseen conditions.

**IV. GMP TOTAL:**

**\$ 719,246.00 (see attached)**

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TARGET BUILDERS, INC.

OWNER

Accepted by: \_\_\_\_\_



Fort Myers Beach Fishing Pier  
Elastomeric Bearing Pad Replacement

ITEM	BID	SUBCONTRACTOR / SUPPLIER	GMP
General Conditions	34,975		34,975
Pad Replace Labor & Equipment	192,000		192,000
Material	26,000		26,000
Scaffold	245,000		245,000
Longshoreman Requirements	58,000		58,000
<b>Subtotals</b>	<b>555,975</b>		<b>555,975</b>
Temporary Utilities	By Owner		By Owner
Permit / Impact Fees	By Owner		By Owner
Builders Risk Insurance	By Owner		By Owner
General Liability Insurance	7,000		7,000
Performance Bond	19,125		19,125
Contingency	87,000		87,000
<b>Subtotal</b>	<b>669,100</b>		<b>669,100</b>
CM Fee	50,146		50,146
<b>FINAL BID AMOUNT</b>	<b>719,246</b>		<b>719,246</b>

Pyper Engineering, Inc.  
Fort Myers Beach Fishing Pier  
Elastomeric Bearing Pad Replacement

## Exhibit "A"

September 29, 2015  
Page 1 of 2

**ELASTOMERIC BEARING PAD REPLACEMENT**Part I General

## 1.01 Summary

- A. This work shall consist of removing and replacing the one (1) foot by two (2) foot by ½ inch elastomeric bearing pads on the Fort Myers Beach Fishing Pier located at 950 Estero Boulevard, Fort Myers Beach, Florida.
- B. Project details contained in the Jenkins and Charland, Inc., drawings titled Fort Myers Beach Fishing Pier, Phase III dated 09/26/91 shall be considered part of this specification.

Part II Products

## 2.01 Materials

The contractor shall use materials specified in this document or approved equal.

- A. Elastomer Bearing Material shall be neoprene rubber with a shore durometer hardness of 50. All material shall conform to the AASHTO Standard specifications for highway bridges and the AASHTO material specification M251-90.
- B. Elastomer Bearing Adhesive Silaprene, as manufactured by Uniroyal Plastics Company or equal, shall be applied to the elastomeric bearing pad to preclude future movement. The high strength adhesive/sealant shall be applied in accordance with the manufacturer's specifications. The concrete pier cap shall be cleaned with high pressure water or sand blasting. Preparation shall be approved by the Engineer.
- C. Hold Down Brackets and Bolts shall be replaced as directed. Reuse of the brackets and bolts is anticipated. Replacement bracket and bolt shall be stainless steel conforming to Type 316.
- D. Bracket and Bolt Relocation shall be as directed. Relocated threaded anchor rod shall be Type 316 stainless steel, chemically anchored.
- E. Chemical (adhesive) Anchors shall be an equal two part epoxy polymer injection system, such as red-head Epon, Powers 'Power-Fast' cartridge system, Brinker Brown 20/20 epoxy, Simpson Epoxy-Tie, Dur-O-Wal 'Dur-O-Pair' Epoxy Anchor or HILTI HSE2411 Epoxy Doweling System, or engineer approved

Fyfer Engineering, Inc.  
Fort Myers Beach Fishing Pier  
Elastomeric Bearing Pad Replacement

September 29, 2005  
Page 2 of 2

substitution, installed in accordance with manufacturer's instructions. Installers shall be trained by the manufacturer's representative. Minimum embedment shall be six (6) times fastener diameter unless noted otherwise.

- F. Elastomeric Joint Sealer shall meet the requirements of Sikaflex 15 LM or approved equal with compatible backer.
- G. Machine and Lag Bolts shall be A-307 hot dipped galvanized with galvanized washers.
- H. Substitutions: Under provisions of Section 01500.

### Part III Execution

#### 3.01 Hold Down Bracket Removal

- A. Hold down brackets and bolts shall be removed, cleaned, location marked and stored for reuse.

#### 3.02 Elastomeric Bearing Replacement

- A. The prestressed deck slabs shall be raised to allow bearing pad replacement and replaced in the original position undamaged.
- B. In areas where a structure is located on the prestressed slabs, the slabs and the structure shall be raised and replaced in the original position undamaged.
- C. Rail and utilities attached to the structure shall remain undamaged during the elastomeric pad replacement.
- D. Prestressed slabs shall be raised to allow sufficient clearance between the slab and pier cap for elastomeric pad removal, pier cap cleaning and elastomeric pad replacement including application of the adhesive specified.

#### 3.03 Hold Down Bracket Installation

- A. Hold down brackets to be reused shall be reinstalled in their original location with reused bolts or bolts meeting this specification.
- B. Hold down bracket replacement or relocation shall be approved by the Project Manager.
- C. Hold down bolts shall be tightened in accordance with the specified drawings.

# C.S.J of S.W Florida

15800 Brothers Ct.  
Ft. Myers, Fl 33912  
239-437-9555 phone 239-437-9556 fax



Glenn Jones

A-2

## Elastomeric Bearing Pads Estimated Cost of Materials

Item	Quantity	Cost
Bearing Pads	246	11,308.62
Bearing Pad Glue		1,500.00
Stainless-Steel brackets & bolts		10,000.00
Vulkem Caulk (tubes)	175	1,312.50
1 in. backer rod	384 lin. ft.	300.00
	Price	\$24,421.12
	Tax	1,465.26
	Total	\$25,886.38

Material Volume Estimate Based on phase one of test.





General Contractors . Construction Managers

PROPOSAL

GUARANTEED MAXIMUM PRICE (GMP)

Proposal Submitted to:

Lee County
Facilities Management
1500 Monroe Street, 4th Floor
Fort Myers, FL 33901
Attn: Baxter Rothell

Job Name:

Fort Myers Beach Fishing Pier
Concrete Restoration
950 Estero Boulevard
Fort Myers Beach, Florida

Date: 5/17/2006

I. Summary of work:

Work for the above-referenced project includes all labor and material for the Fort Myers Beach Fishing Pier Concrete Restoration as clarified below.

II. List of Drawings & Specifications: Provided by Pyper Engineering, Inc. (see attached Exhibit "A")

III. Clarifications/Assumptions/Qualifications:

- 1) This proposal may be withdrawn if not accepted within thirty (30) days.
2) Subject to Notice to Proceed and receipt of building permit, the project will be substantially complete within two hundred forty (240) calendar days and final completion will be obtained (30) days thereafter.
3) An allowance of \$65,000.00 is included in the GMP for all patching materials.
4) The pier shall be scaffold per the design and recommendation by Pyper Engineering, Inc.
5) Total replacement of structural members is not included.
6) Work at and below the high water line is not included.
7) Cracks and spalling that occur after the members have been repaired and sealed and coated are not included in the GMP.
8) Proposal includes all supervision, materials, labor, equipment and insurance required to complete the job.
9) Proposal includes all safety equipment and procedures required by OSHA and pertinent local building codes.
10) Performance and payment bond is included in base bid.
11) Builders Risk Insurance to be provided by Owner.
12) Temporary utilities such as power and water during construction shall be provided by Owner
13) Pedestrian and crowd control and necessary signage to accomplish same shall be provided by Lee County.
14) Full-time supervision is not included.
15) No architectural and/or engineering services included.
16) Permit and/or impact fees are not included.
17) Target Builders, Inc. shall not be liable for structural failure caused by unseen conditions.

IV. GMP TOTAL:

\$ 816,289.00 (see attached)

TARGET BUILDERS, INC.

OWNER

Accepted by: \_\_\_\_\_



Fort Myers Beach Fishing Pier  
Concrete Restoration

ITEM	BID	SUBCONTRACTOR / SUPPLIER	GMP
General Conditions	9,450		9,450
Concrete Restoration Labor & Equipment	514,200		514,200
Material	65,000		65,000
Longshoreman Requirements	58,000		58,000
Subtotals	646,650		646,650
Temporary Utilities	By Owner		By Owner
Permit / Impact Fees	By Owner		By Owner
Builders Risk Insurance	By Owner		By Owner
General Liability Insurance	9,000		9,000
Performance Bond	18,000		18,000
Contingency	87,000		87,000
Subtotal	760,650		760,650
CM Fee	55,639		55,639
<b>FINAL BID AMOUNT</b>	<b>816,289</b>		<b>816,289</b>

# PYPER ENGINEERING, INC.

www.pypereng.com

6249 Presidential Court, Suite D  
Fort Myers, Florida 33919-3525  
(239) 437-2029 / (239) 437-2031 (Fax)

December 13, 2004

Lee County of Southwest Florida  
Mr. Baxter Rothell  
Facilities Operations Manager  
1500 Monroe Street  
Fort Myers, FL 33901

Reference: Fort Myers Fishing Pier

Dear Baxter:

Per your December 7, 2004 verbal request, we have prepared the attached "Engineer's Opinion of Probable Costs" for the installation of new neoprene bearing pads for the prestressed concrete deck slabs on the referenced pier.

The following will explain the "Opinion" on an item by item basis:

- 1) Mobilization – Contractor moves onto the project site.
- 2) Work Platform and Jacking Points – We based our cost on the use of pile friction collars. The collars will provide a work platform as well as a place to raise the precast, prestressed deck slab approximately seven inches (7"). This will permit the workmen to remove the existing neoprene bearing pad, clean the pier cap, apply the mastic and install the new neoprene bearing pad. The two (2) pavilions will require special lifting procedures. These procedures will be covered in the design phase of this project.
- 2(a) CRACK & SPALL INSPECTION.
- 3) Remove and Reattach Stainless Steel Damaged Connector Brackets – Some of the brackets are undamaged, however, the concrete holding the anchor bolts has spalled. The brackets could be removed and relocated laterally to a solid concrete area and reinstalled. Care must be taken to avoid the slab prestress strands and the pier cap reinforcing steel.
- 4) Remove and Reattach Stainless Steel Connector Bolts – The connector bolts have to be removed to lift the deck slab as described in Item 2. After the work is completed, the bolts can be reinstalled.
- 5) Jack Precast Slabs – As described in Item 2, the slabs are to be raised seven inches (7") and then lowered to the new neoprene bearing pads.
- 6, 7, 8) Remove and Reattach Handrail, Electrical and Potable Water – In order to raise the deck slabs, the handrail, electrical conduit and the potable water carried on the side of the structure must be removed and reattached when the work is completed.



National Society of  
Professional Engineers®

Mr. Baxter Rothell  
Facilities Operations Manager  
December 13, 2004  
Page 2

- 9) Inspect Prestress Cable Ends – This is an excellent opportunity to inspect the prestress strand plugs at the ends of the deck slabs and to repair them as necessary. This would help prevent deterioration of the prestress strand due to corrosion.

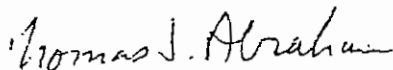
NOTE: This item may not be eligible for FEMA reimbursement.

- 10, 11, 12) Clean, Backer, Joint Sealant – These items deal with the installation of joint sealant when the deck slab is raised and then reset. First the old joint sealant is removed when the slab is in the raised position. The slab is then lowered [onto the new bearing pad], the backer installed and the new elastomeric joint sealant installed.
- 13) Mastic at Pile Caps for Bearing Pad – To preclude future movement of the new neoprene bearing pad, the pier cap is to be cleaned for good adhesion, the mastic applied and the new bearing pad set onto the mastic.
- 14) Remove and Replace 1/2" Bearing Pads – The old one foot (1'0") by two foot (2'0") bearing pad is to be removed and disposed of properly. The new bearing pad, of equal size, is then placed in the proper position on the mastic.

The "Engineer's Opinion" is based on our research for similar work and our engineering judgment. This estimate is not intended to cover hidden defects, hazardous materials, mechanical or electrical features.

If we can be of further service, please contact us.

Sincerely,  
Pyper Engineering, Inc.



Thomas J. Abraham  
Vice President



Andrew M. Pyper, PE  
President

TJA/AMP/lds

## CONCRETE REPAIR TYPES

The attached provide a methodology for concrete repairs for the Fort Myers Fishing Pier. The repair types are based on visual observation and are intended to cover a broad spectrum of repair situations. Some repair types will be used extensively, others very sparingly.

The contractor needs to submit data on methods of repairs planned prior to execution of the work to ensure repairs are executed correctly with thorough quality control. New repairs will involve removal of old repairs.

We also recommend thorough and more detailed attention to the repairs on piles seven (7) through eleven (11) where the most severe deterioration has occurred. Consider jacketing these piles with appropriate attention to aesthetics.

We met with Sika Corporation to discuss these repairs and to obtain up to date manufacturer recommended repair products. Sika is one of the leading companies manufacturing concrete repair products and represent the industry standard for this type of work.

The following product repair types were identified and recommended for the repairs on this project. Detailed notes and specifications are attached in this Appendix.

Concrete Restoration System (CRS) spec. components for the recommended methods and materials:

### Preparation for All:

Sika Armatec 110. Apply two coats on any exposed rebar for corrosion protection.

(See attached file: Prep-006-Epoxy Anti Corr.doc)

(See attached file: SC-201 Sika Armatec 110 Primer.doc)

### Type A - Repair Spalls by the Form and Pump Method

Sika MonoTop 611 Polymer-modified Repair Mortar

In areas that may be affected by tidal water prior to the mortar achieving sufficient strength to prevent mortar washout, add 2.8 ounces of Sikament 100SC anti-wash admixture to each bag of Sika Mono Top 611 mortar.

(See attached file: Prep-002-Formed.doc)

(See attached file: SC-132-Mtop611 Pump.doc)

Type B - Repair Spalls by The Hand Applied Method - using Sika Top 123 plus polymer-modified repair mortar

Apply two coats of Sika Armatec 110 on any exposed rebar for corrosion protection (same spec. components as above) and one coat on the existing concrete substrate as a bonding agent.

(See attached file: SC200-Bonding Bridge 110.doc)

(See attached file: Prep-001-HandApplied.doc)

(See attached file: SC-027 SikaTop 123Plus.doc)

Type C - Crack Repair

Repair cracks by epoxy injection using Sikadur 31 epoxy as the cap seal and Sikadur 52 as the injection resin.

(See attached file: Prep-012-Cracks-Injection.doc)

(See attached file: SC-018-Pres.Inj.52 & 31.doc)

Corrosion Protection for Areas That Have Not Yet Cracked or Spalled

Apply two coats of Sika Ferrogard 903 migrating corrosion inhibitor @ 100 sf/gal total coverage to all reinforced concrete surfaces.

(See attached file: Prep-007-Coatings.doc)

(See attached file: SC203-Ferrogard903.doc)

Protective Coating

To make the repaired areas look uniform and to waterproof/damp proof all concrete surfaces, apply two coats of SikaTop 144 polymer-modified cement coating @ approximately 150 sf/gal per coat.

(See attached file: Prep-007-Coatings.doc)

(See attached file: SC-057 SikaTop144.doc)

These are proprietary products and are brought forward to represent the industry standard. Other manufacturers have similar products under various trade names that may be equal or better than the above.

The specifications for repairs should state "XYZ Product Name or Equal" as a minimum. The trade names above state the expected standard of product to be used.

# PYPER ENGINEERING, INC.

[www.pypereng.com](http://www.pypereng.com)

6315 Presidential Court, Unit A  
Fort Myers, Florida 33919  
(239) 437-2029 / (239) 437-2031 (Fax)

April 21, 2005

Mr. Baxter Rothell  
Facilities Operations Manager  
1500 Monroe Street  
Fort Myers, FL 33901

LEE COUNTY  
RECEIVED  
05 APR 25 PM 1:51  
FOURTH FLOOR  
CITR

Reference: Fort Myers Fishing Pier  
Crack Repair Types

Dear Baxter:

In accordance with the agreements reached at our April 15, 2005 meeting, outlines of the various types of crack and spall repairs anticipated on the Fishing Pier are transmitted by this letter.

If upon further inspection, structural members are in a dynamic situation, these areas or members would require further design for repair or replacement. This situation cannot be anticipated at this time.

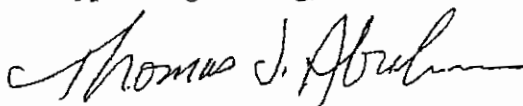
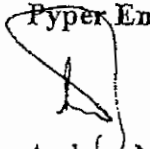
Also transmitted by a copy of our December 13, 2004 correspondence with Lee County, is a tentative phasing plan for the work to be done. Please note that an Item 2 (a) should be added to this plan for the visual inspection of the cracks and spall areas when the scaffolding is in place.

Our recommendations for repairs of the pier caps will favor Type A & B repairs. Epoxy resin pressure-injected does not stop the reinforcement corrosion. As the corrosion continues, the outward pressure of the corrosion material (ferrous oxide) will produce more cracks. A longer term solution is a repair wherein the concrete is removed around the corroded reinforcement and a proper spall repair accomplished.

Should there be a question, please call me.

Sincerely,  
Pyper Engineering, Inc.

Pyper Engineering, Inc.



Andrew M. Pyper, P.E.  
President

Thomas J. Abraham, P.E.  
Vice President

AMP/TJA/lds

encl: As stated

## DRAFT MATERIAL SPECIFICATIONS

Sika Corporation provided up-to-date manufacturer recommended repair products. Sika is one of the leading companies manufacturing concrete repair products and represents an industry standard for this type of work. Listed are the Sika products with the specifications attached. However, other equally effective products are available and the Specifications should be considered generic.

Armatec 110 is a three (3) component bonding agent and anti-corrosion coating.

Monotop 611 is a one (1) component silica fume-enhanced, polymer modified, Portland cement mortar.

Sikadur 31, Hi-Mod Gel is a two (2) component structural paste adhesive used to seal crack areas to be injected.

Sikadur 52 is a two (2) component epoxy adhesive for sealing and bonding cracks.

Ferroguard 903 is a corrosion inhibiting agent.

Sikatop 144 is a two (2) component cementitious protective coating.



## CONCRETE RESTORATION WORK

### Part I General

#### 1.01 Summary

- A. The extent and limit of restoration shall be as designated by the Project Manager.

### Part II Products

#### 2.01 Manufacturers and Materials

- A. The Contractor shall use materials specified in the materials section of this document.

### Part III Execution

#### 3.01 Concrete Restoration

##### A. Spall Repair

For repairing areas of spalled or hollow sounding concrete, remove all loose concrete until sound concrete is reached. Concrete shall be removed around all exposed reinforcing to allow for  $\frac{3}{4}$ " clearance all around the reinforcing. Saw cut edges of affected area to minimum  $\frac{1}{4}$ " maximum  $\frac{1}{2}$ " depth using straight-edged regular shaped patens. Clean exposed reinforcing using power hand tools or sand blasting to expose bare metal. Coat the exposed reinforcing with cementitious bonding/reinforcement protection agent. Fill area of repair with a two-component polymer-modified cementitious, non-sag with a penetrating corrosion inhibitor.

##### B. Crack Repair

The concrete crack shall be prepared with high pressure water blasting. All foreign matter shall be removed. Epoxy crack injection shall be accomplished within 24 hours of crack preparation in accordance with a low viscosity, moisture tolerant epoxy resin in accordance with the manufacturer's specifications.

## CONCRETE COATING

### Part I General

#### 1.01 Summary

Upon completion of the concrete restoration work, the pier caps and columns are to be coated with a corrosion inhibitor and a grey colored protective coating.

### Part II Products

#### 2.01 Manufacturer and Materials

A. The Contractor shall use materials specified in the materials section of this document as supplied by Lee County to accomplish the concrete coating work.

### Part III Execution

#### 3.01 Concrete Coatings

##### A. Corrosion Inhibitor

1. Repair all the spalled and cracked concrete. The concrete surface to be treated with the corrosion inhibitor shall be cleaned with a pressure washing system and left to air dry for a minimum of 48 hours prior to the application of the material, the drier the better. The pressure washer shall have a minimum psi rating of 3500 psi and used with a "0" degree oscillating tip to provide a light abrasion to open the concrete pores and ensure sufficient cleaning of the concrete.
2. The concrete must be surface dry. The corrosion inhibitor material will be applied in accordance with SC-203 attached.

##### B. Surface Coating - Grey Color

1. The concrete surface to be treated with the surface coating shall be cleaned with a 300 psi  $\pm$  50 psi pressure washing system prior to the application of the material. This work shall not take place within 48 hours of the last application of the corrosion inhibitor. The surface coating material will be applied in accordance with SC-057 attached. If a second coat is applied within 4 hours, no further preparation is required.

2. Surface, air and materials shall not be lower than 40 degrees Fahrenheit during application. Do not apply when temperature is expected to fall below 40 degrees Fahrenheit within 12 hours.
3. Weather should be clear, with moderate breeze. There shall be no precipitation during application, nor none expected for four (4) hours following application.
4. The Contractor or applicator shall provide protection for any glass or aluminum to avoid over-spray. In the event over-spray occurs, remove spill promptly to guard against potential etching glass and/or dulling of aluminum.
5. The Contractor or applicator shall examine the areas and conditions under which work of this section will be performed for conformance with the manufacturer's specifications. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.
6. Owner/manufacture's representative shall be contacted 48 hours prior to application to conduct random water permeability test as required over the work area to verify surface preparation.