MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS (DTPW)

ADDENDUM No. 3
May 19, 2023

PROJECT:	Bear Cut Bridge No. 874544 Rehabilitation Project No. 20220176
BID DUE DATE:	May 31, 2023; 02:00 P.M.
FROM:	Miami-Dade County DTPW Capital Improvements Division 111 NW First Street, 14th Floor Miami, FL 33128 305.375.2930
TO:	Prospective Bidders and Interested Parties

This Addendum forms part of the project solicitation documents and will be incorporated into the Contract Documents, as applicable. Insofar as the Original Contract Documents, Drawings and Specifications are inconsistent, this Addendum shall govern. Please acknowledge receipt of this Addendum, at the time of bid submittal to Miami-Dade County, in the space provided on the "Acknowledgement of Addenda Form" provided with the project solicitation documents. Failure to acknowledge receipt of all addenda may be cause for disqualification.

CHANGES TO BID SUBMITTAL DUE DATE:

1. Change Bid Due Date from Wednesday, May 24, 2023, to Wednesday, May 31, 2023, time, and place remains unchanged.

CHANGES TO BID FORM:

2. Delete Bid Form dated 3/9/2023 under Section 2 of the Solicitation Documents, in its Entirely and replace it with attached Revised Bid Form for Addendum No. 3, dated 5/19/2023. Changes are as follows:
   a. Pay Item 400-143A "Cleaning and Coating", EA, Quantity 228 has been deleted.
   b. Pay Item 561-2 "Coating Existing Structural Steel", SF, Quantity 670 has been added.

CHANGES TO THE PLANS:

3. Delete plans dated 10/02/2023 from Section 8 of the original Solicitation Documents, in its entirely and replace with attached plans dated May 15, 2023.

CHANGES TO THE SOLICITATION AND CONTRACT DOCUMENTS:

4. Add attached Appendix "E" to the Special Provisions, "Technical Specification for Pavement Removal and Replacement."

ADDENDUM No. 3
May 19, 2023

END OF ADDENDUM NO. 3

Alfredo E. Muñoz, P.E.
Chief Capital Improvements Division
Department of Transportation and Public Works (DTPW)
AM:lh

c: Laura Hernandez, DTPW
Jacquelin Alcina, DTPW
Jonathan Escalante, SBD
Project File
Katherine Fernandez, DTPW
Laurie Johnson, SBD
Clerk of the Board
Ryan Fisher, P.E. DTPW
Marcia Martin, SBD

REVISED BID FORM FOR ADDENDUM No. 3

Bid Form

PROJECT TITLE: Bear Cut Bridge No.: 874544 Rehabilitation. **PROJECT NO:** 20220176

IF THIS PROPOSAL IS ACCEPTED, THE UNDERSIGNED AGREES TO COMPLETE ALL WORK UNDER THIS CONTRACT WITHIN THREE HUNDRED SIXTY FIVE (365) CALENDAR DAYS AFTER THE EFFECTIVE DATE ESTABLISHED IN THE *NOTICE TO PROCEED WITH CONTRACT WORK*.

Item No	Quantity	Unit	Description	Written Unit Amount	Unit Price	Total
101-1-A	1.0	L.S.	Mobilization			
102-1A	1.0	L.S.	MAINTENANCE OF TRAFFIC			
102-74-1	1,080.0	EA/DAY	BARRICADES (TEMPORARY- TYPE I, II, VP & DRUM).			
102-74-6	480.0	ED	Channelizing Device- Pedestrian LCD (Longitudinal Channelizing Device)			
102-74-1C	136.0	ED	Barricades (Temporary Type I, II, VP & Drum) (with PMCS)			
102-60A	920.0	EA/DAY	WORK ZONE SIGNS			
102-76B	40.0	ED	FLASHING ARROW BOARD (Temporary, Multimode) / ADVANCE WARNING ARROW PANEL			
102-99A	68.0	ED	Portable Changeable Message Sign (Temporary)			
104-11A	580.0	L.F.	FLOATING TURBIDITY BARRIER			
400-4-8	14.0	C.Y.	CONCRETE CLASS IV, BULKHEAD			
400-134	12.0	GAL	EPOXY MATERIAL			
400-135	128.0	L.F.	CRACKS INJECT AND SEAL			

REVISED BID FORM FOR ADDENDUM No. 3

Bid Form

PROJECT TITLE: Bear Cut Bridge No.: 874544 Rehabilitation. **PROJECT NO:** 20220176

IF THIS PROPOSAL IS ACCEPTED, THE UNDERSIGNED AGREES TO COMPLETE ALL WORK UNDER THIS CONTRACT WITHIN THREE HUNDRED SIXTY FIVE (365) CALENDAR DAYS AFTER THE EFFECTIVE DATE ESTABLISHED IN THE *NOTICE TO PROCEED WITH CONTRACT WORK*.

Item No	Quantity	Unit	Description	Written Unit Amount	Unit Price	Total
400-143	20.0	S.F.	CLEANING AND COATING			
400-145A	1,732.0	S.F.	CLEANING CONCRETE SURFACE			
401-70-4	435.0	C.F.	SPALLED AREAS RESTORE (Portland Cement Grout)			
415-1-8	700.0	LB	REINFORCING STEEL - BULKHEAD			
450-82	194.0	L.F.	Beam Repair			
457-1-22	1,327.0	L.F.	Standard Integral Pile Jacket, Structural, Size, 16.1 to 30.0"			
457-1-23	258.0	L.F.	Standard Integral Pile Jacket, Structural, Size, > 30.0"			
458-1-11	4,368.0	L.F.	BRIDGE DECK EXPANSION JOINT (New Construction- F&I) (Poured Joint with Backer Rod)			
460-1-13-B	3.0	EA	STRUCTURAL STEEL REPAIR (Bolts Bearing Area Washer/Plate)			
460-40	87.0	L.F.	DECK JOINT HEADER REPAIR			
561-2	670.0	S.F.	Coating Existing Structural Steel			
Pay Item 561-2 will be use for Cleaning and Coating Bearing as needed						

REVISED BID FORM FOR ADDENDUM No. 3

Bid Form

PROJECT TITLE: Bear Cut Bridge No.: 874544 Rehabilitation. **PROJECT NO:** 20220176

IF THIS PROPOSAL IS ACCEPTED, THE UNDERSIGNED AGREES TO COMPLETE ALL WORK UNDER THIS CONTRACT WITHIN THREE HUNDRED SIXTY FIVE (365) CALENDAR DAYS AFTER THE EFFECTIVE DATE ESTABLISHED IN THE *NOTICE TO PROCEED WITH CONTRACT WORK*.

Item No	Quantity	Unit	Description	Written Unit Amount	Unit Price	Total
906-173	28.0	C.Y.	SLOPEWALL REPAIR			

Total:_____

The bidder understands and agrees that the above total is inclusive of all work necessary to complete the job as described in the plans and specifications.
Quantities are established and are included only for the purpose of facilitating the uniform comparison of bids submitted. The County shall not be held responsible if the quantities are not accurate and all computations for compensation shall be based upon the actual work performed, whether greater or less than estimated quantities.

Tax Identification Number: _____

D.C. Certificate of competency No: _____

Bidder's Name: _____

Bidder's telephone Number: _____

Bidder's address: _____

REVISED BID FORM FOR ADDENDUM No. 3

Bid Form

PROJECT TITLE: Bear Cut Bridge No.: 874544 Rehabilitation. **PROJECT NO:** 20220176

IF THIS PROPOSAL IS ACCEPTED, THE UNDERSIGNED AGREES TO COMPLETE ALL WORK UNDER THIS CONTRACT WITHIN THREE HUNDRED SIXTY FIVE (365) CALENDAR DAYS AFTER THE EFFECTIVE DATE ESTABLISHED IN THE *NOTICE TO PROCEED WITH CONTRACT WORK*.

BIDDER ACKNOWLEDGES THAT INCLUDED IN THE VARIOUS ITEMS OF THE PROPOSAL AND IN THE TOTAL BID PRICE ARE COSTS FOR COMPLYING WITH THE FLORIDA TRENCH SAFETY ACT (90-96), LAWS OF FLA. EFFECTIVE OCTOBER 1st, 1990. THE BIDDER FURTHER IDENTIFIES THE COSTS TO BE SUMMARIZED BELOW:

	Trench Safety Measure (Description)	Units of Measure (LF, SY)	Unit (Quantity)	Unit Cost	Extended Cost
A.					
B.					
C.					
D.					

FAILURE TO COMPLETE THE ABOVE MAY RESULT IN THE BID BEING DECLARED NON-RESPONSIVE

REVISED PLANS FOR ADDENDUM No. 3

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS HIGHWAY DIVISION
CONTRACT PLANS

PW PROJECT NO. 20210010 / EDP-MT-20210010
WORK ORDER #1

MIAMI-DADE COUNTY

REHABILITATION OF BEAR CUT BRIDGE NO. 874544 OVER
BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

BRIDGE REHABILITATION PLANS

BRIDGE NO. 874544

FINAL PLANS SUBMITTAL
MAY 2023

INDEX OF SHEETS

PREPARED FOR

MIAMI-DADE COUNTY

MIAMI-DADE COUNTY DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS HIGHWAY DIVISION
STEPHEN P. CLARK CENTER
111 NW 1 ST
MIAMI, FLORIDA 33128

HOWARD N. GOTSCHALL
LICENSE
No 79639
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

BRIDGE REHABILITATION PLANS
ENGINEER OF RECORD:

HOWARD GOTSCHALL P.E.
P.E. NO.: 79639
HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
PHONE: 305-428-4350

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
S-1	COVER SHEET
S-2	SUMMARY OF QUANTITIES
S-3 - S-6	GENERAL NOTES
S-9 - S-11	GENERAL PLAN & ELEVATION
S-12	JOINT REPLACEMENT LOCATION & DETAILS
S-13 - S-15	SUPERSTRUCTURE REPAIR PLAN
S-16	PILE JACKET DETAILS
S-17 - S-21	LOCATION OF SUBSTRUCTURE REPAIRS
S-22	CONCRETE RESTORATION DETAILS & CRACK INJECT/SEAL DETAILS
S-23	TYPICAL BRIDGE SECTION KEY FOR REPAIRS
S-24 - S-27	DEFICIENCIES TO REPAIR
S-28	BULKHEAD REPAIRS AT ABUTMENT 42 SEAWALL
S-29	REINFORCING BAR LIST

GABRIEL GONZALEZ
LICENSE
No 86473
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

TEMPORARY TRAFFIC CONTROL PLANS
ENGINEER OF RECORD:

GABRIEL GONZALEZ P.E.
P.E. NO.: 86473
HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
PHONE: 305-428-4350

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
S-7 - S-8	TEMPORARY TRAFFIC CONTROL PLANS

SHEET NO.
S-1

SUMMARY OF BRIDGE PAY ITEMS

PAY ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
101-1-A	MOBILIZATION	LS	1
104-11-A	FLOATING TURBIDITY BARRIER	LF	580
400-4-8	CONCRETE CLASS IV, BULKHEAD	CY	14
400-134	EPOXY MATERIAL FOR CRACK INJECTION - STRUCTURES REHAB	GA	12 *
400-135	EPOXY INJECTION OF CRACKS IN CONCRETE STRUCTURE	LF	128 *
400-143	CLEANING & COATING OF EXPOSED STRANDS - BEAMS	SF	20 *
~~400-143A~~	~~BEARINGS - CLEANING AND COATING~~	~~EA~~	~~228 *~~
400-145A	CLEANING CONCRETE SURFACE	SF	1732 *
401-70-4	RESTORE SPALLED AREAS, PORTLAND CEMENT GROUT	CF	435 *
415-1-8	REINFORCING STEEL - BULKHEAD	LB	700
450-82	BEAM REPAIR	LF	194 *
457-1-22	STANDARD INTEGRAL PILE JACKET, STRUCTURAL,SIZE, 16.1"-30"	LF	1327
457-1-23	STANDARD INTEGRAL PILE JACKET, STRUCTURAL,SIZE, >30"	LF	258
458-1-11	BRIDGE DECK EXPANSION JT., REHAB, POURED JOINT W BACKER ROD	LF	4368
460-1-13-B	STRUCTURAL STEEL REPAIR (BOLTS BEARING AREA WASHER/PLATE)	EA	3
460-40	DECK JOINT HEADER REPAIR	LF	87
561-2	COATING EXISTING STRUCTURAL STEEL	SF	670 *
906-173	SLOPEWALL REPAIR - FILL MATERIAL	CY	28 *

*DUE TO POSSIBLE FURTHER DETERIORATION BEFORE CONSTRUCTION, A CONSERVATIVE CONDITION FACTOR HAS BEEN BUILT INTO SOME QUANTITIES TO COVER DECLINING DEFICIENCIES & ANY NEW DEFICIENCIES DISCOVERED DURING REPAIR

CONCRETE REPAIR NOTES:

1. QUANTITIES: DUE TO THE NATURE OF THE DETERIORATION PRESENT ON THIS BRIDGE, MIAMI-DADE COUNTY HAS THE AUTHORITY TO INCREASE, DECREASE, OR DELETE THE QUANTITIES OF WORK TO BE PERFORMED IN EXCESS OR BELOW THE PERCENTAGES ALLOWED BY FDOT SECTION 4-3.1 OF THE STANDARD SPECIFICATIONS AND REVISIONS THERETO WITH NO ADJUSTMENT TO THE CONTRACT UNIT PRICES AS STATED UNDER DTPW, GENERAL REQUIREMENTS, ARTICLE 1.02,B. THE WORK WILL BE ASSIGNED BY THE ENGINEER FOR A SPECIFIC GROUP OF LOCATIONS AT A TIME. IN ADDITION TO THE LOCATIONS OF CONCRETE/SPALL REPAIRS SHOWN IN THE PLANS, THE CONTRACTOR WILL PERFORM A SOUNDING SURVEY OF THE BRIDGE SUBSTRUCTURE AND IDENTIFY ALL LOCATIONS IN NEED OF REPAIR. THE SURVEY WILL BE PERFORMED IN THE PRESENCE OF THE ENGINEER PRIOR TO COMMENCING ANY WORK. NO CONCRETE REMOVAL WILL BE PERFORMED WITHOUT THE ENGINEER'S APPROVAL. THE MIAMI-DADE COUNTY WILL BE ALLOWED TO STOP WORK DUE TO POOR WORKMANSHIP, UNAPPROVED MATERIALS OR UNAPPROVED WORK PROCEDURE AT ANY TIME WITHOUT CONSEQUENCE TO MIAMI-DADE COUNTY.
2. TRACKING REPAIR QUANTITIES: CONTRACTOR WILL PREPARE A DETAILED REPORT DOCUMENTING THE ADDITIONAL LOCATIONS REQUIRING CONCRETE/SPALL REPAIRS. THE REPORT WILL BE FORMATTED TO INDICATE PRECISE LOCATION OF EACH REPAIR AREA AND AN ESTIMATED QUANTITY FOR THE TOTAL CONCRETE/SPALL REPAIRS REQUIRED. THE REPORT WILL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THIS DOCUMENT WILL BE USED BY THE ENGINEER FOR PREPARING THE AUTHORIZATION TO PROCEED WITH REPAIRS AND BY THE CONTRACTOR TO TRACK QUANTITIES. THE CONTRACTOR WILL UPDATE THE REPORT ON A MONTHLY BASIS TO INCLUDE ACTUAL QUANTITIES OF REPAIRS AND REMAINING BUDGET AVAILABLE TO CONTINUE WITH REPAIRS. REPAIRS PERFORMED AFTER EXHAUSTION OF BUDGET DUE TO CONTRACTOR'S FAILURE TO TRACK QUANTITIES WILL BE AT THE CONTRACTOR'S EXPENSE. MIAMI-DADE COUNTY WILL DETERMINE THE SIZE OF THE WORK ASSIGNMENTS. NO WORK SHALL COMMENCE ON ANY NEW WORK ASSIGNMENT UNTIL THE SATISFACTORY COMPLETION OR SUBSTANTIAL PROGRESS (MORE THAN 40% COMPLETION) OF PREVIOUSLY ISSUED ASSIGNMENTS HAS BEEN CONFIRMED, EXCEPT WHEN THE ENGINEER DETERMINES THAT SUCH OTHER WORK IS IN THE BEST INTEREST OF THE COUNTY AND GIVES WRITTEN INSTRUCTIONS TO PROCEED.
3. THE CONTRACTOR WILL ADHERE TO THE REQUIREMENTS OF THE SPECIFICATIONS FOR CONCRETE SPALL REPAIRS WITH POLYMER MODIFIED PORTLAND CEMENT MORTAR. PLACE THE POLYMER MODIFIED PORTLAND CEMENT MORTAR WITH CORROSION INHIBITORS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. IN THE EVENT THAT MORE THAN 20% OF THE CROSS SECTIONAL AREA OF ANY STRUCTURAL MEMBER NEEDS TO BE REMOVED, PRIOR TO THE REMOVAL OF MORE THAN 20% OF THE MEMBER CROSS SECTIONAL AREA, THE CONTRACTOR WILL STOP WORK AND NOTIFY THE ENGINEER FOR FURTHER INSTRUCTIONS.

SUMMARY OF TEMPORARY TRAFFIC CONTROL PLAN ITEMS

PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	PHASE I			PHASE II			TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
			DURATION	QUANTITY	TOTAL	DURATION	QUANTITY	TOTAL				
			DAYS	P	P	DAYS	P	P	P	F		
0102-1-A	MAINTENANCE OF TRAFFIC	LS							1		20 CONSTRUCTION DAYS	
~~0102-10A~~	~~OFF-DUTY LAW ENFORCEMENT OFFICER~~	~~LS~~							~~1~~		~~20 CONSTRUCTION DAYS~~	
0102-60A	WORK ZONE SIGNS	ED	10	46	460	10	46	460	920			
0102-74-1	BARRICADES (TEMPORARY - TYPE I, II, VP & DRUM)	ED	10	54	540	10	54	540	1080			
0102-74-1C	BARRICADES (TEMPORARY - TYPE I, II, VP & DRUM)(WITH PCMS)	ED	24	4	96	10	4	40	136		14 DAYS PRIOR TO CONSTRUCTION	
0102-74-6	CHANNELIZING DEVICE-PEDESTRIAN LCD (LONGITUDINAL CHANNELIZING DEVICE)	FD	10	24	240	10	24	240	480			
0102-76B	FLASHING ARROW BOARD (TEMPORARY MULTI-MODEL)/ADVANCED WARNING ARROW PANEL	ED	10	2	20	10	2	20	40			
0102-99A	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	24	2	48	10	2	20	68		14 DAYS PRIOR TO CONSTRUCTION	

PAY ITEM NOTES:

1. FOR ESTIMATION OF THE PILE JACKET QUANTITIES, 1'-0" BELOW THE CAP TO 10'-0" BELOW THE WATER SURFACE WAS TYPICALLY USED. PILE JACKETS IN AREAS WHERE 10'-0" BELOW THE WATER COULD NOT BE ACHIEVED, THE PILE JACKETS WERE TERMINATED 2'-0" ABOVE THE MUDLINE. ALL COSTS ASSOCIATED WITH FURNISHING AND INSTALLING STRUCTURAL PILE JACKETS INCLUDED BUT NOT LIMITED TO FORMING, REINFORCING STEEL, PORTLAND CEMENT GROUT SHALL BE INCLUDED IN PAY ITEM NO. 457-1-22, STANDARD INTEGRAL PILE JACKET, STRUCTURAL, PILE SIZE 16.1" TO 30" AND PAY ITEM NO. 457-1-23, STANDARD INTEGRAL PILE JACKET, STRUCTURAL, PILE SIZE >30".
2. PAY ITEM DESCRIPTIONS ARE PROVIDED IN THE CONTRACT DOCUMENTS.
3. PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN THE INDIVIDUAL PAY ITEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICES FOR PAY ITEMS.
4. PAY ITEM NO. 101-1-A MOBILIZATION SHALL INCLUDE THE COST OF ITEMS AND EQUIPMENT ETC. REQUIRED TO PROVIDE SAFE ACCESS FOR INSPECTION AND MATERIALS TESTING, INCLUDING BUT NOT LIMITED TO SCAFFOLDING, PLATFORMS, BARGES, DEBRIS CONTAINMENT DEVICES, ETC.
5. ALL COSTS ASSOCIATED WITH SHALLOW PILE SPALL CONCRETE REPAIRS SHALL BE INCLUDED IN PAY ITEM NO. 401-70-4. THE QUANTITY SHOWN IN THE SUMMARY OF PAY ITEMS TABLE HAS BEEN INCLUDED TO ACCOUNT FOR UNCERTAINTY IN THE FIELD.
6. ALL COSTS ASSOCIATED WITH PILE SPALLS AND DELAMINATIONS CONCRETE REPAIRS INCLUDING BUT NOT LIMITED TO SHORING, STABILIZATION OF THE EXISTING STRUCTURE AS REQUIRED, SOUND TESTING, SURFACE PREPARATION, FORMING, SHOP DRAWINGS AND CALCULATIONS, AND ALL INCIDENTAL (ANCILLARY) WORK NECESSARY TO COMPLETE ALL CONCRETE REPAIRS IN ACCORDANCE WITH THE RECOMMENDED REPAIR PROCEDURES AND REQUIREMENTS OF THE ENGINEER SHALL BE INCLUDED IN PAY ITEM NO. 401-70-4, RESTORE SPALLED AREAS, PORTLAND CEMENT GROUT.
7. REINFORCING STEEL: PILE REPAIRS/CAP REPAIR (IE.: CONCRETE PILE REPAIRS/ REINFORCING STEEL (SPLICING, REPLACEMENT, MECHANICAL COUPLERS, DOWELING, ETC.) SHALL BE INCLUDED IN PAY ITEM NO. 401-70-4 RESTORE SPALLED AREAS, PORTLAND CEMENT GROUT. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING ANY REBAR NEEDED TO THE ENGINEER (SIZE/LENGTH) FOR REPLACING REBAR WITH EXTREME SECTION LOSS FOUND DURING REMOVING DAMAGED AREAS. PAYMENT FOR THE REBAR WILL BE INCIDENTAL TO PAY ITEM 401-70-4, RESTORE SPALLED AREAS. PAYMENT FOR REINFORCING IN THE PILE JACKETS SHALL BE INCLUDED IN PAY ITEM NO. 457-1-22 STANDARD INTEGRAL PILE JACKET, STRUCTURAL, PILE SIZE 16.1 TO 30" AND PAY ITEM NO. 457-1-23 STANDARD PILE JACKET, STRUCTURAL, PILE SIZE >30".
8. ALL COST ASSOCIATED WITH ENVIRONMENTAL AND PERMITTING COMPLIANCE INCLUDING BUT NOT LIMITED TO THE PROPER MONITORING, OBSERVATION, PROTECTION OF MANATEES, ENDANGERED SPECIES, AMERICAN CROCODILE, AMERICAN ALLIGATOR, ETC. INCLUDING BUT NOT LIMITED TO MANATEE PLACARDS, MANATEE OBSERVER, POLARIZED SUNGLASSES, BINOCULARS, INCIDENT LOGGING AND REPORTS, AGENCY COORDINATION PER THE ENVIRONMENTAL NOTES, WRITTEN NOTIFICATIONS AND MEETINGS, "NO-WAKE/IDLE SPEED" MAINTENANCE AND ENFORCEMENT, ETC. SHALL BE INCLUDED IN THE INDIVIDUAL UNIT PRICES FOR THE PAY ITEMS. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ENVIRONMENTAL AND PERMIT COMPLIANCE.

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
5/18/23	HNG	ADDITION, DELETION, AND REVISION OF PAY ITEMS.			

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: SUMMARY OF QUANTITIES

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-2

SCOPE OF WORK:

1. REHABILITATION WORK AT BEAR CUT BRIDGE (874544) IS TO INCLUDE JOINT REPLACEMENT, SUPERSTRUCTURE REPAIRS, CIP SUBSTRUCTURE REPAIR, BULKHEAD REPAIR, SLOPEWALL REPAIR, STRENGTHENING OF THE EXISTING PRESTRESS GIRDERS IN SPANS 36 AND 40 AND PILE REPAIR AS SHOWN IN THE PLANS. NOTE: CONTRACTOR MUST REPAIR THE GIRDERS PRIOR TO STRENGTHENING OF THE EXISTING PRESTRESS GIRDERS IN SPANS 36 AND 40. ⚠1

THE PRIMARY TASKS TO BE COMPLETED BY THE CONTRACTOR ARE AS FOLLOWS:

1. DAILY PLACING AND REMOVING MAINTENANCE OF TRAFFIC DEVICES WHEN CONSTRUCTION IS IN PROGRESS, INCLUDING, BUT NOT LIMITED TO BARRICADES, CONSTRUCTION SIGNS AND DIRECTIONAL ARROWS PLACED ALONG THE NEW ALIGNMENT.
2. REMOVE AND REPLACE THE EXISTING EXPANSION/FIXED JOINTS AT EACH PIER/ABUTMENT.
3. REPAIR CONCRETE SPALLS AND POPOUTS ON THE CONCRETE HEADERS AT ALL JOINTS.
4. RESTORE AND/OR REPAIR CONCRETE SPALL AREAS LOCATED IN SPECIFIED AREAS INDICATED IN THE PLANS.
5. REPAIR EXISTING CONCRETE BEAM DAMAGE AS INDICATED IN THE PLANS.
6. INSTALL CFRP (CARBON FIBER REINFORCED POLYMER) STRUCTURAL STRENGTHENING TO BEAMS AT LOCATIONS NOTED.
7. INJECT AND SEAL CRACKS AS INDICATED IN THE PLANS.
8. REPAIR EXISTING PILES WITH STRUCTURAL JACKETS AS INDICATED IN THE PLANS.
9. REPAIR BULKHEAD CAP AND REPAIR CRACKS AS INDICATED IN THE PLANS.
10. INJECT EXISTING SLOPE PROTECTION WITH FILL MATERIAL TO RAISE EXISTING PANELS TO THEIR ORIGINAL POSITION.
11. CLEANING AND COATING BEARINGS AS NEEDED COVERED BY PAY ITEM 561-2, COATING EXISTING STRUCTURAL STEEL. ⚠1

DESIGN SPECIFICATIONS:

1. FLORIDA DEPARTMENT OF TRANSPORTATION STRUCTURES MANUAL DATED JANUARY 2022 AND SUBSEQUENT STRUCTURES DESIGN BULLETINS.
2. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LOAD AND RESISTANCE FACTOR (LRFD) BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION.
3. FDOT DESIGN MANUAL DATED JANUARY, 2022.

COMPLY WITH THE REPAIR PROCEDURES, MATERIALS, MANUFACTURER RECOMMENDATIONS, ETC. AND THE FOLLOWING:

1. AMERICAN ASSOCIATION OF STATE HIGHWAYS AND TRANSPORTATION OFFICIALS (ASSHTO) CRITERIA
2. FDOT STANDARD SPECIFICATIONS AND CRITERIA
3. MIAMI-DADE COUNTY PWWMD SPECIFICATIONS
4. ACI GUIDE FOR THE DESIGN AND CONSTRUCTION OF EXTERNALLY BONDED FRP SYSTEMS FOR STRENGTHENING CONCRETE STRUCTURES (ACI 440.2-17, 2017 EDITION)

GOVERNING STANDARDS AND CONSTRUCTION SPECIFICATIONS:

1. FLORIDA DEPARTMENT OF TRANSPORTATION, FY 2021-22 STANDARD PLANS AND REVISED INDEX DRAWINGS AS APPENDED HEREIN, AND JANUARY 2022 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED BY CONTRACT DOCUMENTS.

VERTICAL DATUM:

1. ALL ELEVATIONS REFER TO NGVD 29 UNLESS OTHERWISE NOTED.

UTILITIES:

1. THE LOCATIONS OF UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE.
2. EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
3. TWO FULL BUSINESS DAYS PRIOR TO DIGGING THE CONTRACTOR SHALL CALL SUNSHINE STATE ONE CALL OF FLORIDA, TELEPHONE NUMBER 811, AND THE UTILITY OWNERS AND REQUEST UTILITY LOCATIONS. A CONTRACTOR'S REPRESENTATIVE MUST BE PRESENT WHEN UTILITY COMPANIES LOCATE THEIR FACILITIES. FOR UTILITY ADJUSTMENT SYMBOLS, SEE FDOT STANDARD INDEX NO. 002.
4. THE CONTRACTOR IS ADVISED THAT PROPERTIES ADJACENT TO THE PROJECT HAVE ELECTRIC, TELEPHONE, GAS, WATER, AND/OR SEWER SERVICE LATERALS WHICH MAY NOT BE SHOWN IN PLANS. THE CONTRACTOR MUST REQUEST THE LOCATION OF THESE LATERAL SERVICES FROM THE UTILITY COMPANIES. THE ADDITIONAL COST OF EXCAVATING, INSTALLING, BACKFILLING AND COMPACTING AROUND THESE LATERALS MUST BE INCLUDED IN THE BID RELATED ITEM FOR THE WORK BEING DONE.

UTILITIES OWNERS:

COMPANIES	CONTACT	PHONE NUMBER/EMAIL
COMCAST CABLE	RICARDO DAVIDSON	786-586-5805
DADE COUNTY PUBLIC WORKS & TRAFFIC	OCTAVIO VIDAL	305-412-0891 X 102
FLORIDA POWER & LIGHT - DISTRIBUTION	JOHN GIRALDO	John.Giraldo@fpl.com
FLORIDA POWER & LIGHT - SUBAQUEOUS	JOEL BRAY	386-586-6403
FLORIDA POWER & LIGHT - TRANSMISSION	EDDIE FREAY	305-938-1936
HOTWIRE COMMUNICATIONS	WALTER DAVILA	954-699-0900
MIAMI-DADE WATER & SEWER	LAZARO GUERRA	786-268-5273
CROWN CASTLE NG	----	fiber.dig@crowncastle.com
AT&T DISTRIBUTION	HENRY URENA	hu083j@att.com

811 KNOW WHAT'S BELOW ALWAYS CALL 811 BEFORE YOU DIG
It's fast. It's free. It's the law.
www.callsunshine.com

EXISTING PLANS: REVISED PLANS FOR ADDENDUM No. 3

1. EXISTING PLANS ARE AVAILABLE UPON REQUEST. LIMITED PLANS EXIST FOR THE EXISTING PLANS.

PILE JACKETS:

1. PILE JACKET FILLER SHALL BE IN ACCORDANCE WITH CONTRACT DOCUMENTS.
2. SHOULD HIGH WATER AFFECT PILE JACKET INSTALLATION, SUBMIT FOR ENGINEER'S APPROVAL A DEWATERING PLAN OR ALTERNATIVE INSTALLATION METHOD SUITABLE FOR UNDERWATER USAGE. PAYMENT FOR DEWATERING WORK SHALL BE INCLUDED UNDER THE COST OF PAY ITEM STANDARD INTEGRAL PILE JACKET, STRUCTURAL.
3. DETERMINE THE MEAN HIGH WATER (MHW), MEAN LOW WATER (MLW) AND MUDLINE AT EACH BENT LOCATION.
4. PERFORM AN INSPECTION OF ALL PILES BELOW AND ABOVE WATER LOCATING ALL DETERIORATED CONCRETE AND CORROSION BLEED-OUT ON THE PILINGS TO VERIFY SPECIFIED JACKET LENGTHS WILL ENCOMPASS ALL PILE DEFICIENCIES AND ANY ADDITIONAL PILES WITH DEFICIENCIES. PROVIDE SHOP DRAWINGS TO INCLUDE PILE JACKET AND EXTENSION LENGTHS FOR EACH PILE.

CONCRETE COVER:

1. CONCRETE COVER DIMENSIONS SHOWN IN THE PLANS DO NOT INCLUDE PLACEMENT AND FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER". SEE SPECIFICATIONS SECTION 415 FOR ALLOWABLE TOLERANCES. ALL DIMENSIONS PERTAINING TO THE LOCATION OF REINFORCING STEEL ARE TO CENTERLINE OF BAR EXCEPT WHERE CLEAR DIMENSION IS NOTED TO FACE OF CONCRETE.

   2" - CAST-IN-PLACE (CIP) SUPERSTRUCTURE (TOP OF DECK)
   2" - CIP SUPERSTRUCTURE
   2" - PRECAST PRESTRESSED BEAMS (EXCEPT TOP SURFACE)
   1" - TOP SURFACE OF BEAM TOP FLANGE
   4½" - CIP SUBSTRUCTURE (CAST AGAINST EARTH)
   4" - CIP SUBSTRUCTURE (FORMED SURFACES)
   2" - CIP SUBSTRUCTURE (TOP OF BEAM PEDESTALS)*
   *UNLESS NOTED OTHERWISE ON PLANS

MATERIALS:

1. REINFORCING STEEL: GRADE 60 CARBON STEEL PER SPECIFICATIONS SECTION 931
2.

CONCRETE STRENGTH		
CLASS	LOCATION	MINIMUM 28 DAY COMPRESSIVE STRENGTH (PSI)
IV	CIP SUPERSTRUCTURE	5500
IV	CIP SUBSTRUCTURE	5500
VI	PPC BEAMS	8500
IV	STRUCTURAL JACKETS	5500
V (SPECIAL)	PPC PILES	6000

ENVIRONMENT:

1. SUPERSTRUCTURE: EXTREMELY AGGRESSIVE - COASTAL ENVIRONMENT
   SUBSTRUCTURE: EXTREMELY AGGRESSIVE - COASTAL ENVIRONMENT

TEMPORARY SHORING:

1. BRIDGE PIERS: SHOULD THE PIER CONCRETE REPAIR DEPTH EXCEED 12", PROVIDE A TEMPORARY BRACING/SHORING SYSTEM TO SUPPORT THE PIER. SUBMIT TEMPORARY BRACING/SHORING SYSTEM SHOP DRAWINGS AND SUPPORTING DESIGN CALCULATIONS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. THE SHOP DRAWINGS MUST BE APPROVED BEFORE PROCEEDING WITH THE REPAIR WORK FOR THE PIER EXHIBITING A REPAIR DEPTH IN EXCESS OF 12". ALL COST ASSOCIATED WITH THE TEMPORARY BRACING/SHORING SYSTEM, INCLUDED BUT NOT LIMITED TO SHOP DRAWINGS, MATERIAL, ERECTION, REMOVAL, STORAGE, ETC. SHALL BE INCIDENTAL TO THE CONCRETE REPAIRS AND COVERED BY PAY ITEM 401-70-4. ⚠1

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
5/18/23	HNG	REVISION OF SCOPE OF WORK. REVISION TO TEMPORARY SHORING NOTE.			

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: GENERAL NOTES (1 OF 4)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

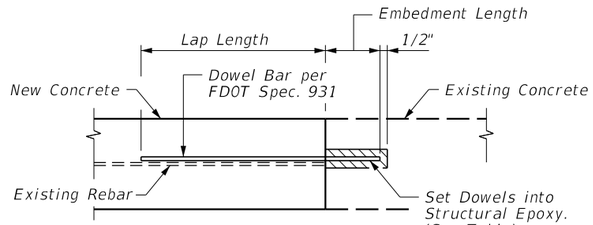
SHEET NO. S-3

REVISED PLANS FOR ADDENDUM No. 3

DOWEL DETAIL (GENERAL DETAIL-FOR STRUCTURAL JACKETS SEE SHEET S-16):

1. ANY REQUIRED DOWEL HOLES FOR SECURING NEW OR EXISTING REINFORCING STEEL SHALL BE DRILLED INTO EXISTING CONCRETE ACCORDING TO THE DETAIL AND FDOT SPECIFICATIONS.

2. NOTIFY THE ENGINEER OF ANY BROKEN BARS OR BARS WHICH ARE DETERMINED TO HAVE A SECTION LOSS OF 25% OR GREATER BY THE ENGINEER. THESE LOCATIONS SHALL RECEIVE DOWELS.



DOWEL DETAIL

DOWEL DIMENSIONS (UNLESS OTHERWISE NOTED)		
DOWEL SIZE	EMBEDMENT LENGTH	MIN. LAP LENGTH
4	8"	1'-9"
5	9"	2'-2"
6	11"	2'-7"
7	1'-2"	3'-0"
8	1'-4"	4'-0"

NAVIGATION:

1. THE WATERS WITHIN THE PROJECT AREA ARE FREQUENTED BY BOAT TRAFFIC. NOTIFY THE UNITED STATES COAST GUARD MARINE COORDINATOR AT THE SAFETY OFFICE, (305) 415-6744, THIRTY (30) DAYS PRIOR TO BEGINNING CONSTRUCTION AND SUBMIT A PLAN FOR CLEARING THE CHANNEL IN THE EVENT OF A HURRICANE WATCH/WARNING.

STRUCTURAL DAMAGE:

1. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES BY HIS OPERATION TO EXISTING STRUCTURES WHICH ARE NOT INCLUDED AS PART OF THE INTENDED WORK. ALL DAMAGE TO EXISTING STRUCTURES WHICH IS NOT PART OF THE INTENDED WORK SHALL BE REPAIRED/REPLACED/RESTORED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITHOUT COST TO THE COUNTY.

BONDING COMPOUND:

1. USE BONDING COMPOUND ONLY IF RECOMMENDED BY THE REPAIR MORTAR MANUFACTURER. APPLY BONDING COMPOUND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. REPAIR MORTAR AND BONDING COMPOUND ARE TO BE SELECTED FROM THE FDOT APL OR APPROVED EQUAL.

DESIGN LOADING:

1. LIVE LOADS: HL-93 WITH IMPACT
   LFD: HS20 OR MILITARY LOAD WITH IMPACT

   DEAD LOADS:

REINFORCED CONCRETE	150 PCF
TRAFFIC RAILING	420 PLF
PEDESTRIAN RAILING	235 PLF
MEDIAN TRAFFIC RAILING	486 PLF
FUTURE WEARING SURFACE	15 PSF
UTILITY LOAD	111 PSF

JOINTS IN CONCRETE:

1. CONSTRUCTION JOINTS WILL BE PERMITTED ONLY AT THE LOCATIONS INDICATED IN THE PLANS. ADDITIONAL CONSTRUCTION JOINTS OR ALTERATIONS TO THOSE SHOWN SHALL REQUIRE APPROVAL OF THE ENGINEER.

PLAN DIMENSIONS:

1. ALL DIMENSIONS IN THESE PLANS ARE MEASURED IN FEET AND INCHES EITHER HORIZONTALLY OR VERTICALLY UNLESS OTHERWISE NOTED.

2. TAKE ALL FIELD MEASUREMENTS NECESSARY TO ENSURE PROPER FIT OF THE FINISHED WORK AND ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY.

EXISTING BRIDGE CONSTRUCTION CONSIDERATIONS:

1. DIMENSION VERIFICATION: UNLESS OTHERWISE NOTED, THE DIMENSIONS, ELEVATIONS AND INTERSECTING ANGLES SHOWN ARE BASED ON THE INFORMATION AS DETAILED IN THE ORIGINAL CONSTRUCTION PLANS OF THE EXISTING BRIDGES AND MAY NOT REPRESENT AS-BUILT CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THIS DATA BEFORE BEGINNING CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

SITE CONDITIONS:

1. HABITAT BEYOND THE LIMITS OF CONSTRUCTION SHALL NOT BE DISTURBED.

REPAIRS TO EXISTING BRIDGE:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING THE DISCHARGE OF ANY FOREIGN MATERIAL INTO THE WATER. ERECT THE BEST AVAILABLE MEANS OF EROSION CONTROL MEASURES TO ISOLATE THE WORK AREA AT ALL TIMES.

2. DURING ALL CONSTRUCTION OPERATIONS, DO NOT ALLOW WASTE CONCRETE, DEBRIS, OR OTHER MATTER TO DROP INTO THE WATERWAY BELOW THE BRIDGE. PLATFORMS, NETS, SCREENS, OR OTHER PROTECTIVE DEVICES SHALL BE USED TO CATCH FALLING MATERIALS. IF AT ANY TIME, THE ENGINEER DETERMINES THAT ADEQUATE PROTECTIVE DEVICES ARE NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

3. ALL SPOIL MATERIAL (STRUCTURAL CONCRETE, REINFORCING STEEL, ETC.) REMOVED FROM THE JOB SITE SHALL BE DISPOSED OF BY THE CONTRACTOR OFF OF THE COUNTY'S PROPERTY. THE CONTRACTOR SHALL COMPLY WITH LOCAL AND STATE REGULATIONS THAT APPLY TO THE AREA CHOSEN FOR DISPOSAL OF THIS SPOIL MATERIAL.

SHOP DRAWINGS:

1. SHOP DRAWINGS, DESIGN CALCULATIONS, ETC., WHEN REQUIRED BY THE ENGINEER OF RECORD, SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.

POLLUTION CONTROL:

1. MATERIALS OR DEBRIS, SOLID OR LIQUID, SHALL NOT BE DISCHARGED INTO SURFACE WATERS OR WETLANDS, EXCEPT AS ALLOWED BY PERMIT. ANY NON-PERMITTED MATERIALS DISCHARGED INTO SURFACE WATER OR WETLANDS SHALL BE RETRIEVED AS REQUIRED BY APPLICABLE FEDERAL AND STATE LAWS.

2. FULL DEPTH TURBIDITY CONTAINMENT SYSTEM IS REQUIRED AROUND EACH BENT UNTIL ALL REPAIR WORK AROUND THE INDIVIDUAL BENT IS COMPLETED.

MAINTENANCE OF TRAFFIC:

FOR MAINTENANCE OF TRAFFIC NOTES, SEE TRAFFIC CONTROL PLAN SHEETS.

TRAFFIC CONTROL OFFICER ALLOWANCE:

A. THE COUNTY WILL REIMBURSE CONTRACTOR FOR THE SERVICES OF UNIFORMED LAW ENFORCEMENT OFFICERS AUTHORIZED TO SERVE AS TRAFFIC CONTROL OFFICERS FOR THE PURPOSE OF CONTROLLING OR DIRECTING TRAFFIC ON THE WORK ZONE AS PART OF THE COUNTY APPROVED TRAFFIC CONTROL PLAN AND MAINTENANCE OF TRAFFIC PROVIDED BY CONTRACTOR PURSUANT TO THE CONTRACT DOCUMENTS.
B. THE QUANTITY TO BE PAID FOR WILL BE THE INVOICE UNIT PRICE PER HOUR FOR THE ACTUAL NUMBER OF OFFICERS CERTIFIED TO BE ON THE PROJECT SITE, INCLUDING ANY LAW ENFORCEMENT VEHICLES AND ALL OTHER DIRECT AND INDIRECT COST.
C. PAYMENT WILL BE MADE AT INVOICE COST FROM AN APPROPRIATE DEDICATED ALLOWANCE ESTABLISHED BY THE COUNTY.
D. PAYMENT WILL BE MADE ONLY FOR THOSE TRAFFIC CONTROL OFFICERS SPECIFIED IN THE PLANS AND AUTHORIZED BY THE ENGINEER. THE NECESSARY INVOICES AND DOCUMENTATION MUST BE SUBMITTED TO THE ENGINEER ALONG WITH THE PAYMENT REQUEST.

CFRP STRENGTHENING NOTES:

1. FOR REPAIR NOTES AND ADDITIONAL DETAILS, SEE THE "CONCRETE RESTORATION DETAILS & CRACK INJECT/SEAL DETAILS" SHEET.

2. APPLICATION OF CFRP WRAPPING SYSTEM SHALL BE PERFORMED WITH NO LIVE LOAD DIRECTLY OVER THE BEAM.

3. CFRP PROPERTIES, MINIMUM REQUIREMENTS AND PREPARATION OF BEAM SURFACE AND INSTALLATION OF CFRP WRAPPING ARE IN ACCORDANCE WITH THE TECHNICAL SPECIAL PROVISIONS FOR CARBON STRENGTHENING USING CARBON FIBER REINFORCED POLYMER WRAP. NUMBER OF PLIES SPECIFIED IS BASED ON A TOTAL MINIMUM REQUIRED THICKNESS OF 0.08".

4. CFRP WRAPPING SHALL BE TESTED IN ACCORDANCE WITH THE TECHNICAL SPECIAL PROVISIONS FOR CARBON FIBER REINFORCED POLYMER FIELD TESTING REQUIREMENTS.

5. TAKE CARE TO AVOID DAMAGING THE EXISTING PRESTRESSED STRANDS IN THE BEAM UNITS. IF ANY STRANDS ARE DAMAGED, NOTIFY THE ENGINEER FOR CORRECTIVE RECOMMENDATIONS.

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	BWC
CHECKED BY:	HNG
DESIGNED BY:	BWC
CHECKED BY:	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: GENERAL NOTES (2 OF 4)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-4

REVISED PLANS FOR ADDENDUM No. 3

PROCEDURE NOTES:

SUPERSTRUCTURE/SUBSTRUCTURE REPAIRS:

1. THE SPALLED, DELAMINATED, ETC. AREAS NOTED AS REQUIRING REPAIR IN THESE PLANS REPRESENT KNOWN DEFICIENCIES AT THE TIME THAT THE PLANS WERE PREPARED, VERIFIED BY VISUAL INSPECTION AND SOUNDING HAMMER. SPALLS OR DELAMINATIONS THAT WERE LOCATED IN CLOSE PROXIMITY OR EXHIBIT SIGNIFICANT CRACKING HAVE BEEN GROUPED AND MAPPED AS A SINGLE REPAIR. THE REPAIR QUANTITIES SHOWN ARE AN ESTIMATE OF THE WORK REQUIRED TO REPAIR THE KNOWN DEFICIENCIES AT THE TIME THAT THE PLANS WERE PREPARED, THE ENTIRE PROJECT SHALL BE SURVEYED AND MARKED BY THE CONTRACTOR AND THE ENGINEER'S REPRESENTATIVE. SUBMIT THE SURVEY AND MARKING RESULTS, INCLUDING PROJECTED QUANTITIES TO THE ENGINEER PRIOR TO THE START OF THE CONCRETE REPAIR WORK. STOP WORK IMMEDIATELY AND NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK WHEN:

   - ADDITIONAL DEFICIENCIES NOT APPEARING IN THESE PLANS THAT ARE PRESENT AT THE TIME OF THE REPAIRS. NOTIFY THE ENGINEER REGARDING THE EXTENT OF DAMAGED CONCRETE ADDITIONAL TO THAT SHOWN IN THESE PLANS PRIOR TO BEGINNING WORK OF THE REPAIRS CONSIDERED ADDITIONAL.

   - REPAIR AREAS EXTEND MORE THAN TWELVE (12) INCHES BEYOND THE REPAIR AREA INITIALLY IDENTIFIED.

   REMOVAL DOWN TO SOUND CONCRETE SHALL BE ACCOMPLISHED USING METHODS THAT DO NOT DAMAGE THE SOUND PORTION OF THE STRUCTURE THAT IS TO REMAIN. IN ADDITION TO DAMAGED CONCRETE, ALL CONCRETE ADJACENT TO CORRODED REINFORCEMENT SHALL BE REMOVED UNTIL A MINIMUM OF TWO (2) INCHES AND A MAXIMUM OF FOUR (4) INCHES OF UNCORRODED REINFORCING STEEL IS UNDERCUT AND EXPOSED ALONG THE LENGTH OF THE BAR IN EACH DIRECTION. THIS IS TO BE DONE ONLY AFTER APPROVAL BY THE ENGINEER WHO AT HIS DISCRETION CAN ALLOW FOR SOME DEGREE OF CORROSION TO REMAIN AND SHALL STOP THE CONCRETE REMOVAL IN ORDER TO KEEP THE CONCRETE REPAIR QUANTITIES WITHIN THE SCOPE OF WORK.

   IN ALL CASES WHERE REINFORCING STEEL IS EXPOSED, CONCRETE SHALL BE REMOVED TO PROVIDE A MINIMUM OF $\frac{3}{4}$" CLEARANCE AROUND THE CIRCUMFERENCE OF THE BARS WHICH WILL PERMIT UNIFORM SURFACE PREPARATION OF THE BARS AND ADEQUATE CONCRETE BOND TO THE BAR SURFACE.

   ALL DEFICIENCIES SHALL BE RESTORED SUCH THAT THERE IS A UNIFORM TRANSITION FROM RESTORED SURFACES TO ADJACENT UNRESTORED SURFACES. DO NOT FEATHER THE EDGES.

2. SURFACE PREPARATION:

   REMOVE HEAVY OXIDES, SCALE, OR OTHER BOND INHIBITING MATERIALS FROM THE ENTIRE CIRCUMFERENCE OF EXPOSED REINFORCING STEEL BY USING A HAND HELD GRINDER OR BRUSH TO THE SATISFACTION OF THE ENGINEER PRIOR TO THE PLACEMENT OF CONCRETE.

   PRELIMINARY CLEANING: THOROUGHLY CLEAN CONCRETE SURFACES OF ALL DIRT, GREASE, OIL, SHELL CHIPS OF PARTIALLY LOOSENED CONCRETE, OR OTHER FOREIGN MATTER BY USING A HAND HELD GRINDER OR BRUSH TO THE SATISFACTION OF THE ENGINEER PRIOR TO THE PLACEMENT OF CONCRETE.

   FINAL CLEANING: AFTER THE ABOVE SURFACE PREPARATION STEPS HAVE BEEN COMPLETED AND IMMEDIATELY PRIOR TO REPAIR, WASH ALL AREAS CLEAN WITH FRESH WATER AND AIR BLAST, OR WITH A STIFF NOSE STREAM OF FRESH WATER UNTIL ALL LOOSENED MATERIALS AND SALT WATER SPRAY ARE REMOVED. THE CONCRETE SUBSTRATE SHALL BE FREE OF STANDING WATER PRIOR TO THE REPAIR.

   AFTER THE ABOVE SURFACE PREPARATION STEPS ARE COMPLETE, OBTAIN FINAL APPROVAL TO PROCEED WITH THE REPAIR FROM THE ENGINEER PRIOR TO PERFORMING THE REPAIR.

REPAIR FOR CONCRETE PILE:

1. MARINE GROWTH AND LOOSE SAND SHALL BE REMOVED FROM THE EXISTING EXPOSED PILE JACKET REINFORCEMENT AND EXISTING CONCRETE PILE IN THE AREA BEING REPAIRED. UNSOUND PILE CONCRETE SHALL BE REMOVED DOWN TO SOUND CONCRETE USING A PNEUMATIC CHIPPING HAMMER AND WATER BLASTING. WORK SHALL STOP AND THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IF REMOVAL OF MORE THAN 2 LINEAR VERTICAL FEET OF CONCRETE IS REQUIRED IN ORDER TO REACH SOUND CONCRETE.
2. THE CONTRACTOR SHALL EXERCISE SPECIAL CARE TO NOT DAMAGE ANY ELEMENTS OF THE STRUCTURES THAT ARE TO REMAIN, INCLUDING EXISTING REINFORCING.
3. TURBIDITY SCREENS SHALL BE USED TO PREVENT THE TURBIDITY LEVELS IN THE PROJECT AREA FROM EXCEEDING 29 NTU'S ABOVE THE NATURAL BACKGROUND. CONTRACTOR SHALL SUBMIT TO THE ENGINEER DETAILS OF THE FLOATING TURBIDITY BARRIER FOR APPROVAL.
4. PILE REPAIR SHALL UTILIZE AN EPOXY COMPOUND DESIGNED FOR UNDERWATER APPLICATION PER SECTION 926 OF THE FDOT CONSTRUCTION SPECIFICATIONS. AN FDOT APL MATERIAL OR APPROVED EQUAL PRODUCT SHALL BE UTILIZED IN THE PILE REPAIR. THE CONCRETE COVER FOR THE PILE JACKET REPAIR SHALL BE $4\frac{1}{2}$".
5. CONTRACTOR SHALL VERIFY REPAIR DIMENSIONS AND SUBMIT SHOP DRAWINGS OF THE PILE JACKET REPAIRS TO THE ENGINEER OF RECORD FOR APPROVAL BEFORE CONSTRUCTION BEGINS.

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL PROVIDE SAFE ACCESS FOR THE ENGINEER AT ALL TIMES FOR HIS INSPECTION OF THE PROJECT. THIS INCLUDES (BUT IS NOT LIMITED TO) SCAFFOLDING, AND/OR INSPECTION BOAT WITH OPERATOR REMAINING IN PLACE UNTIL THE ENGINEER CAN PERFORM ALL NECESSARY INSPECTIONS AMONG THE VARIOUS SCHEDULED ITEMS ON THE CONTRACT.

PLAN DIMENSIONS:

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT, DUE TO THE NATURE OF REHABILITATION/REPAIR PROJECTS, THE EXACT EXTENT OF REHABILITATION/REPAIR WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO THE COMMENCEMENT OF WORK. THESE PLANS WERE DETAILED TO AGREE WITH THE EXISTING PLANS AND THE RESULTS OF A LIMITED FIELD INVESTIGATION. THE CONTRACTOR SHALL FIELD VERIFY PLAN DIMENSIONS AND ELEVATIONS PRIOR TO START OF WORK.

THE DETAILS ON THE DRAWINGS INDICATE THE LIMITS OF REMOVAL AND REPAIR BASED ON THE BRIDGE INSPECTION REPORT DATED JUNE 30, 2020 AND FIELD OBSERVATIONS PERFORMED ON OCTOBER 25-27, 2021. THE REMOVAL AND REPAIR UNITS SHOWN ON THE CONTRACT DRAWINGS INDICATE APPROXIMATE REMOVAL AND REPAIR LIMITS BASED ON THE CONDITION OF THE STRUCTURE AT THE TIME OF THE INSPECTIONS.

THE CONTRACTOR SHALL TAKE ALL SUCH FIELD MEASUREMENTS AS ARE NECESSARY TO ENSURE PROPER FIT OF THE FINISHED WORK, AND THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS MADE SHALL BE INCLUDED IN THE SHOP DRAWINGS AND SUBMITTED TO THE ENGINEER. THE CONTRACTOR SHALL USE AN ASTERISK(*) OR SIMILAR MEANS TO INDICATE A FIELD MEASUREMENT ON SHOP DRAWINGS.

THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE FOLLOWING INDIVIDUALS AND/OR ENTITIES:

GENERAL CONTACTS:

COORDINATION:

ENGINEER OF RECORD
HOWARD GOTSCHALL, P.E.
P.E. NO. 79639
HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
305-428-4350
hgotschall@hanson-inc.com

MIAMI-DADE COUNTY
HIGHWAY BRIDGE ENGINEER MANAGER
RYAN FISHER, P.E.
MIAMI-DADE COUNTY DEPARTMENT
OF TRANSPORTATION AND PUBLIC WORKS
STEPHEN P. CLARK CENTER
111 NW 1 ST
MIAMI, FL 33128
786-469-5264
ryan.fisher@miamidade.gov

1
MIAMI-DADE COUNTY
FELIX ALVAREZ
DEPARTMENT OF REGULATORY AND
ECONOMIC RESOURCES (RER)
ENVIRONMENTAL RESOURCE
MANAGEMENT
701 NW 1ST COURT, 6TH FLOOR
MIAMI, FL 33136
305-372-6593
felix.alvarez@miamidade.gov

UNITED STATES COAST GUARD
LT. PAUL STEINER
100 MACARTHUR CSWY
MIAMI BEACH, FL. 33139
305-535-8724

CITY OF MIAMI PUBLIC
WORKS DEPARTMENT
444 SW 2ND AVENUE
MIAMI, FL. 33130
305-416-1200

PERMIT AGENCIES:

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
JENNIFER SMITH
400 N. CONGRESS AVENUE
SUITE 200
WEST PALM BEACH, FL. 33401
561-681-6642

USACE
AUDREY SIU
MIAMI REGULATIONS FIELD OFFICE
9900 SOUTHWEST 107TH AVENUE
SUITE 203
MIAMI, FL 33176
305-779-6051

BRIDGE NO. 874544

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
5/18/23	HNG	COORDINATION CONTACT ADDED.			

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: GENERAL NOTES (3 OF 4)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-5

cavan02260 5/18/2023 9:52:43 AM I:\21jobs\21L0042\FDOTDirStruct\Structures\B1GeneralNotes700.dgn

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISED PLANS FOR ADDENDUM No. 3

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK:

1. WEST INDIAN MANATEE (TRICHECHUS MANATUS LATIROSTRIS), A FEDERAL AND STATE LISTED ENDANGERED SPECIES, MAY MIGRATE THROUGH THE PROJECT AREA. THE PERMITTEE SHALL ADVISE ALL CONSTRUCTION PERSONNEL THAT ARE CIVIL AND CRIMINAL PENALTIES FOR HARMING, HARASSING, OR KILLING MANATEES WHICH ARE PROTECTED UNDER THE MARINE MAMMAL PROTECTION ACT, THE ENDANGERED SPECIES ACT, AND THE FLORIDA MANATEE SANCTUARY ACT.

1. THE PERMITTEE SHALL COMPLY AND INSTRUCT ALL PERSONNEL ASSOCIATED WITH THE PROJECT OF THE POTENTIAL PRESENCE OF MANATEES. ALL CONSTRUCTION PERSONNEL ARE RESPONSIBLE FOR OBSERVING WATER-RELATED ACTIVITIES FOR THE PRESENCE OF MANATEE(S).

3. SILTATION BARRIERS SHALL BE MADE OF MATERIAL IN WHICH MANATEES CANNOT BECOME ENTANGLED, ARE PROPERLY SECURED, AND ARE REGULARLY MONITORED TO AVOID MANATEE ENTRAPMENT. BARRIERS MUST NOT BLOCK MANATEE ENTRY TO OR EXIT FROM ESSENTIAL HABITAT. MANATEES CAN GET ENTANGLED IN TURBIDITY BARRIERS, AND MANATEES CAN ALSO GET PAST THE BARRIERS. THEREFORE, TURBIDITY BARRIERS BE MONITORED EACH MORNING AND EACH EVENING AT THE END OF THE WORK SHIFT TO CHECK FOR ENTANGLEMENT IN THE BARRIERS, AND ENTRAPMENT IN THE CONSTRUCTION AREA IF A MANATEE CROSSES A BARRIER. IF A MANATEE BECOMES ENTANGLED IN A BARRIER THE FWC MUST BE NOTIFIED IMMEDIATELY AT 1-888-404-FWCC. IF A MANATEE BECOMES ENTRAPPED WITHIN THE CONSTRUCTION AREA, THE BARRIER NEEDS TO BE REMOVED AND ONLY BE REPLACED ONCE THE ANIMAL LEAVES THE AREA UPON ITS OWN VOLITION.

4. ALL VESSELS ASSOCIATED WITH THE CONSTRUCTION SHALL OPERATE AT "IDLE SPEED/NO WAKE" AT ALL TIMES. SIGNAGE WILL BE DISPLAYED NEXT TO THE CONTROLS ON ALL CONSTRUCTION RELATED VESSELS, MEASURE AT LEAST 8.5 BY 11 INCHES, AND READ "CAUTION: MANATEE HABITAT" AND AT ALL TIMES WHILE IN THE IMMEDIATE ARE AND WHILE IN WATER WHERE THE DRAFT OF THE VESSEL PROVIDES LESS THAN A FOUR-FOOT CLEARANCE FROM THE BOTTOM. ALL VESSELS WILL FOLLOW ROUTES OF DEEP WATER WHENEVER POSSIBLE.

5. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A DESIGNATED, TRAINED MANATEE OBSERVER DURING ALL WATER RELATED ACTIVITIES. THAT PERSON TO BE EQUIPPED WITH POLARIZED SUNGLASSES TO AID ON OBSERVATION. THAT MANATEE OBSERVER BE ON SITE DURING ALL IN-WATER CONSTRUCTION ACTIVITIES AND ADVISED PERSONNEL TO CEASE OPERATION UPON SIGHTING A MANATEE WITH 50 FEET OF ANY IN-WATER CONSTRUCTION ACTIVITY. ACTIVITIES WILL NOT RESUME UNTIL THE MANATEE(S) HAS MOVED BEYOND THE 50-FOOT RADIUS OF THE PROJECT OPERATION, OR UNTIL 30 MINUTES ELAPSES IF THE MANATEE(S) HAS NOT REAPPEARED WITHIN 50 FEET OF OPERATION. ANIMALS MUST NOT BE HERDED AWAY OR HARASSED INTO LEAVING. IF MANATEE(S) ARE SEEN WITHIN 100 YARDS OF THE ACTIVE DAILY CONSTRUCTION OPERATION OR VESSEL MOVEMENT, ALL APPROPRIATE PRECAUTIONS SHALL BE IMPLEMENTED TO ENSURE PROTECTION OF THE MANATEE. THESE PRECAUTIONS SHALL INCLUDE THE OPERATION OF ALL MOVING EQUIPMENT NO CLOSER THAN 50 FEET OF A MANATEE. OPERATION OF ANY EQUIPMENT CLOSER THAN 50 FEET TO A MANATEE SHALL NECESSITATE IMMEDIATE SHUTDOWN OF THAT EQUIPMENT. ACTIVITIES WILL NOT RESUME UNTIL THE MANATEE(S) HAS DEPARTED THE PROJECT AREA OF ITS OWN VOLITION.

6. ANY COLLISION WITH OR INJURY TO A MANATEE SHALL BE REPORTED IMMEDIATELY TO THE FISH AND WILDLIFE CONSERVATION HOTLINE AT 1-888-404-3922. COLLISION AND/OR INJURY SHOULD ALSO BE REPORTED TO THE U.S. FISH AND WILDLIFE SERVICE IN JACKSONVILLE (1-904-731-3336) FOR NORTH FLORIDA OR VERO BEACH (1-772-562-3909) FOR SOUTH FLORIDA, AND TO FWC AT IMPERILEDSPECIES@MYFWC.COM.

7. TEMPORARY SIGNS CONCERNING MANATEES SHALL BE POSTED PRIOR TO AND DURING ALL CONSTRUCTION ACTIVITIES. ALL SIGNS ARE TO BE REMOVE BY THE PERMITTEE UPON COMPLETION OF THE PROJECT. A SIGN MEASURING AT LEAST 3FT. BY 4FT. WHICH READS CAUTION: MANATEE AREA WILL BE POSTED IN A LOCATION PROMINENTLY VISIBLE TO WATER RELATED CONSTRUCTION CREWS. A SECOND SIGN SHOULD BE POSTED IF VESSELS ARE ASSOCIATED WITH THE CONSTRUCTION AND SHOULD BE PLACED VISIBLE TO THE VESSEL OPERATOR. THE SECOND SIGN SHOULD BE AT LEAST 8½" X 11" WHICH READS CAUTION: MANATEE HABITAT. IDLE SPEED IS REQUIRED IF OPERATING A VESSEL IN THE CONSTRUCTION AREA. ALL EQUIPMENT MUST BE SHUT DOWN IF A MANATEE COMES WITHIN 50 FEET OF OPERATION.

8. OTHER STIPULATIONS AND CONDITIONS MAY BE ATTACHED TO THE PERMITS BY THE AGENCIES UPON AUTHORIZATION.

9. THE COST OF ALL ITEMS REQUIRED FOR THE MONITORING AND PROTECTION OF MANATEE SUCH AS, BUT NOT LIMITED TO MANATEE SIGNS, OBSERVERS, POLARIZED GLASSES, AND BINOCULARS, SHALL BE INCLUDED IN THE COST UNIT PRICE OF MOBILIZATION PAY ITEM NO. 101-1-A.

ENVIRONMENTAL NOTES:

1. THE FOLLOWING FEDERALLY AND STATE LISTED ANIMAL SPECIES COULD INHABIT OR MIGRATE THROUGH THE CONSTRUCTION AREA: WEST INDIAN MANATEE AND SEA TURTLES. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL AND STATE REQUIREMENTS REGARDING ENDANGERED AND THREATENED SPECIES AND STATE LISTED SPECIES OF SPECIAL CONCERN. SHOULD THESE SPECIES BE ENCOUNTERED; THE CONTRACTOR SHALL CONTACT THE MIAMI-DADE COUNTY ENVIRONMENTAL OFFICE WITHIN 24 HOURS OF EACH ENCOUNTER.

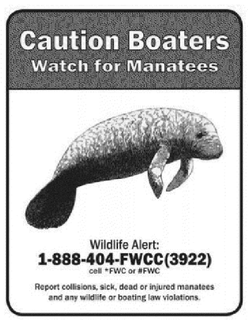
2. BASED ON DISCUSSIONS WITH MIAMI-DADE COUNTY DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER), SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD) AND UNITED STATES COAST GUARD (USCG), AN RER CLASS 1 CONSTRUCTION PERMIT IS REQUIRED AND IT WAS OBTAINED. HOWEVER, SHOULD THE CONTRACTOR INTEND TO USE BARGES OR MARINE VESSELS OUT OF THE STAGING AREA, ADDITIONAL PERMITS AND/OR COORDINATION WITH MIAMI-DADE COUNTY RER WILL BE REQUIRED AND IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR THE ENVIRONMENTAL COMPLIANCE FOR THE MONITORING OF ACTIVITY TO PROTECT MANGROVES, SEA TURTLES, MANATEES AND OTHER SPECIES. THE RER ENVIRONMENTAL LIASON FOR THIS PROJECT IS FELIX ALVAREZ, (305) 372-5593, felix.alvarez@miamidade.gov.

3. SEAGRASS BEDS AND OTHER BENTHIC COMMUNITIES EXIST IN THE PROJECT AREA. THE CONTRACTOR SHALL PREVENT CONTACT WITH THE SEABED IN THESE AREAS AND ANY DISTURBANCE OF BOTTOM SEDIMENTS (E.G., FROM MOVING OR ANCHORING BARGES AND OTHER STRUCTURES). THE CONTRACTOR SHALL NOT SHADE ANY BENTHIC COMMUNITY FROM DIRECT SUNLIGHT FOR MORE THAN TWO WEEKS. ANCHORING LOCATIONS SHALL BE APPROVED BY THE ENGINEER WHO SHALL COORDINATE WITH FELIX ALVAREZ WITH MIAMI-DADE COUNTY OF DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) AT (305) 372-6593 AND felix.alvarez@miamidade.gov.

4. THE CONTRACTOR SHALL REVIEW ENVIRONMENTAL REQUIREMENTS OF ANY PROPOSED STAGING AREAS WITH MIAMI-DADE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS AT LEAST SEVENTY TWO (72) HOURS PRIOR TO USE.

5. THE STAGING AREA SHALL NOT BE WITHIN THE LIMITS OF THE WETLANDS. THE ACCESS FOR BOAT AND BARGE FROM BEACH AND WATER MUST AVOID IMPACT ON SEA TURTLES (DURING SEA TURTLE SEASON) AND SEAGRASS. THE CONTRACTOR WILL BE REQUIRED TO GET PROPER AUTHORIZATION/APPROVAL FROM RER BEFORE THEY CAN USE THIS BEACH AND WATER ACCESS FOR ITS BOATS AND BARGES.

6. ANY MATERIAL TO BE STOCKPILED FOR PERIODS GREATER THAN 24 HOURS SHALL BE PROTECTED BY APPROPRIATE EROSION CONTROL DEVICES AT NO ADDITIONAL COMPENSATION.



MANATEE SIGN

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
5/18/23	HNG	REVISION TO ENVIRONMENTAL NOTES.			

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	BWC
CHECKED BY:	HNG
DESIGNED BY:	BWC
CHECKED BY:	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: GENERAL NOTES (4 OF 4)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-6

REVISED PLANS FOR ADDENDUM No. 3

TEMPORARY TRAFFIC CONTROL GENERAL NOTES

1. THESE TEMPORARY TRAFFIC CONTROL PLANS ARE PRELIMINARY AND TO BE USED AS REFERENCE AND/OR GUIDANCE ONLY. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE FINAL TEMPORARY TRAFFIC CONTROL DESIGN AND OBTAIN APPROVAL BY MIAMI-DADE COUNTY.
2. THE CONTRACTOR IS RESPONSIBLE FOR LANE CLOSURE ANALYSIS. NO LANE CLOSURES ALLOWED DURING DAYTIME, WEEKENDS, OR HOLIDAYS.
3. POSTED SPEED LIMITS TO BE MAINTAINED DURING CONSTRUCTION (45 MPH).
4. ALL CHANELIZING DEVICE SPACING SHOWN IN THE TEMPORARY TRAFFIC CONTROL PLAN SHEETS ARE NOT DRAWN TO SCALE. SEE FDOT STANDARD PLANS INDEX 102-600 FOR SPACING STANDARDS.
5. THE LOCATION FOR THE CONSTRUCTION STAGING AREA IS AT THE NORTHWEST CORNER OF THE BRIDGE, THE ACCESS GATE TO THIS AREA IS LOCATED APPROXIMATELY AT 25°44'01" N, 80°09'42" W. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH MIAMI-DADE DEPARTMENT OF PARKS, RECREATION AND OPEN SPACES.

TWO WEEKS PRIOR TO CONSTRUCTION PCMS MESSAGE SHALL DISPLAY:

R	O	A	D				
W	O	R	K				

PCMS MESSAGE 1

B	E	G	I	N	S		
X	X	-	X	X	-	X	X

PCMS MESSAGE 2

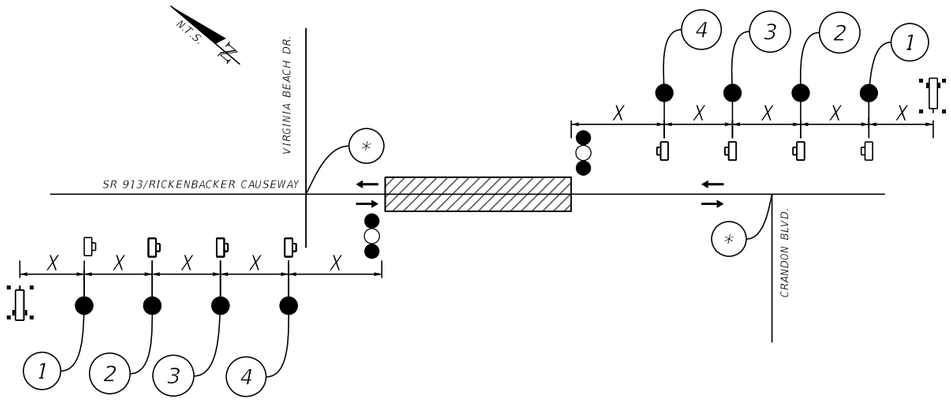
DURING CONSTRUCTION, PCMS MESSAGE SHALL DISPLAY THE FOLLOWING:

R	O	A	D				
W	O	R	K				
A	H	E	A	D			

PCMS MESSAGE 1

U	S	E					
C	A	U	T	I	O	N	

PCMS MESSAGE 2



ADVANCED SIGNING

LEGEND

- WORK AREA (SEE INDEX 102-613 AND 102-615)
- WORK ZONE SIGN
- CHANNELIZING DEVICE (SEE INDEX 102-600)
- PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN (PCMS)
- DIRECTION OF TRAFFIC
- ARROW BOARD MODE: MERGE (SEE FDOT STANDARD PLANS FOR LOCATION)

X = SEE FDOT STANDARD PLANS INDEX 102-600 FOR SPACING VALUES.

* = SEE FDOT STANDARD PLANS INDEX 102-660 AND 102-661 FOR PEDESTRIAN AND BICYCLE DETOURS.

1. W20-1F — ROAD WORK AHEAD
2. MOT-13-06 — SPEEDING FINES DOUBLED WHEN WORKERS PRESENT
3. W20-5 — LEFT LANE CLOSED AHEAD — OR — W20-5 RIGHT LANE CLOSED AHEAD
4. W4-2 — OR — W4-2

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: GABRIEL GONZALEZ P.E. NO. 86473

DRAWN BY:	GG
CHECKED BY:	MH
DESIGNED BY:	GG
CHECKED BY:	MH

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

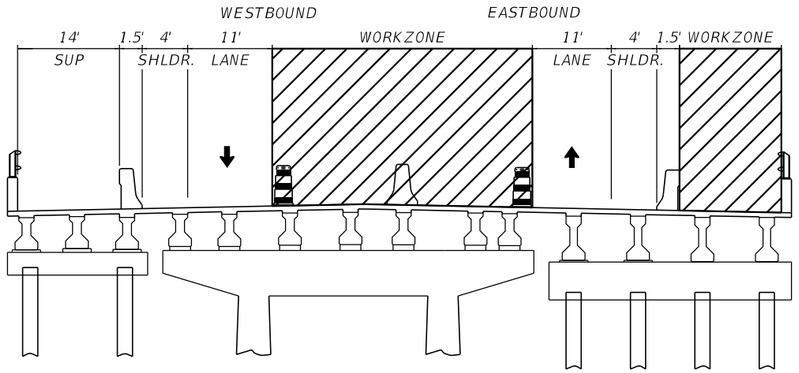
SHEET TITLE: TEMPORARY TRAFFIC CONTROL PLANS (1 OF 2)

REF. DWG. NO.:

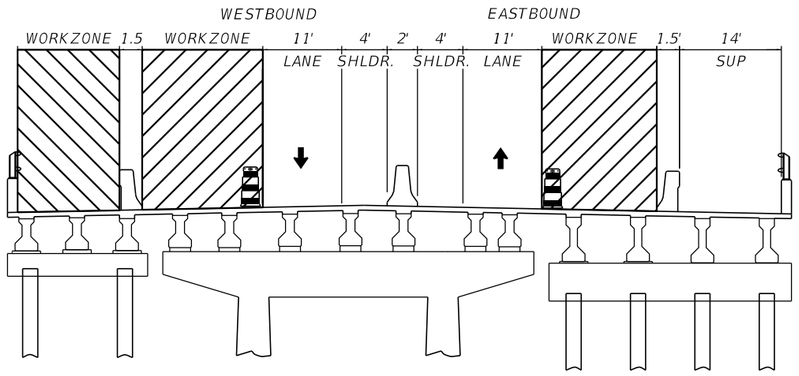
PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-7

REVISED PLANS FOR ADDENDUM No. 3



PHASE I



PHASE II

PHASING NOTES

PHASE I

1. INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) ONE WEEK IN ADVANCE OF TRAFFIC CONTROL OPERATIONS.
2. INSTALL ADVANCE WARNING SIGNS, DEVICES, MAINTAIN TRAFFIC PER TTC PLANS AND FDOT STANDARD PLANS INDEX 102-600, 102-613 & 102-615.
3. SHIFT TRAFFIC TO THE OUTSIDE LANE AS SHOWN IN THE TTC TYPICAL.
4. DETOUR PEDESTRIANS AND BICYCLISTS TO THE WESTBOUND SHARED USE PATH AS SHOWN IN THE TTC TYPICALS AND FDOT STANDARD PLANS INDEX 102-660 & 102-661.
5. WORK OPERATION ON INSIDE LANES, SHOULDERS AND EASTBOUND SHARED USE PATH.

PHASE II

1. INSTALL ADVANCE WARNING SIGNS, DEVICES, MAINTAIN TRAFFIC PER TTC PLANS AND FDOT STANDARD PLANS INDEX 102-600, 102-613 & 102-615.
2. SHIFT TRAFFIC TO THE INSIDE LANES AS SHOWN IN THE TTC TYPICALS.
3. DETOUR PEDESTRIANS AND BICYCLISTS TO THE EASTBOUND SHARED USE PATH AS SHOWN IN THE TTC TYPICALS AND FDOT STANDARD PLANS INDEX 102-660 & 102-661.
4. WORK OPERATION ON OUTSIDE LANE, SHOULDERS AND WESTBOUND SHARED USE PATH.
5. REMOVE ALL TRAFFIC CONTROL DEVICES.
6. OPEN LANES TO TRAFFIC AND SHARED USE PATH TO PEDESTRIAN AND BICYCLISTS.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: GABRIEL GONZALEZ P.E. NO. 86473

DRAWN BY:	GG
CHECKED BY:	MH
DESIGNED BY:	GG
CHECKED BY:	MH

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

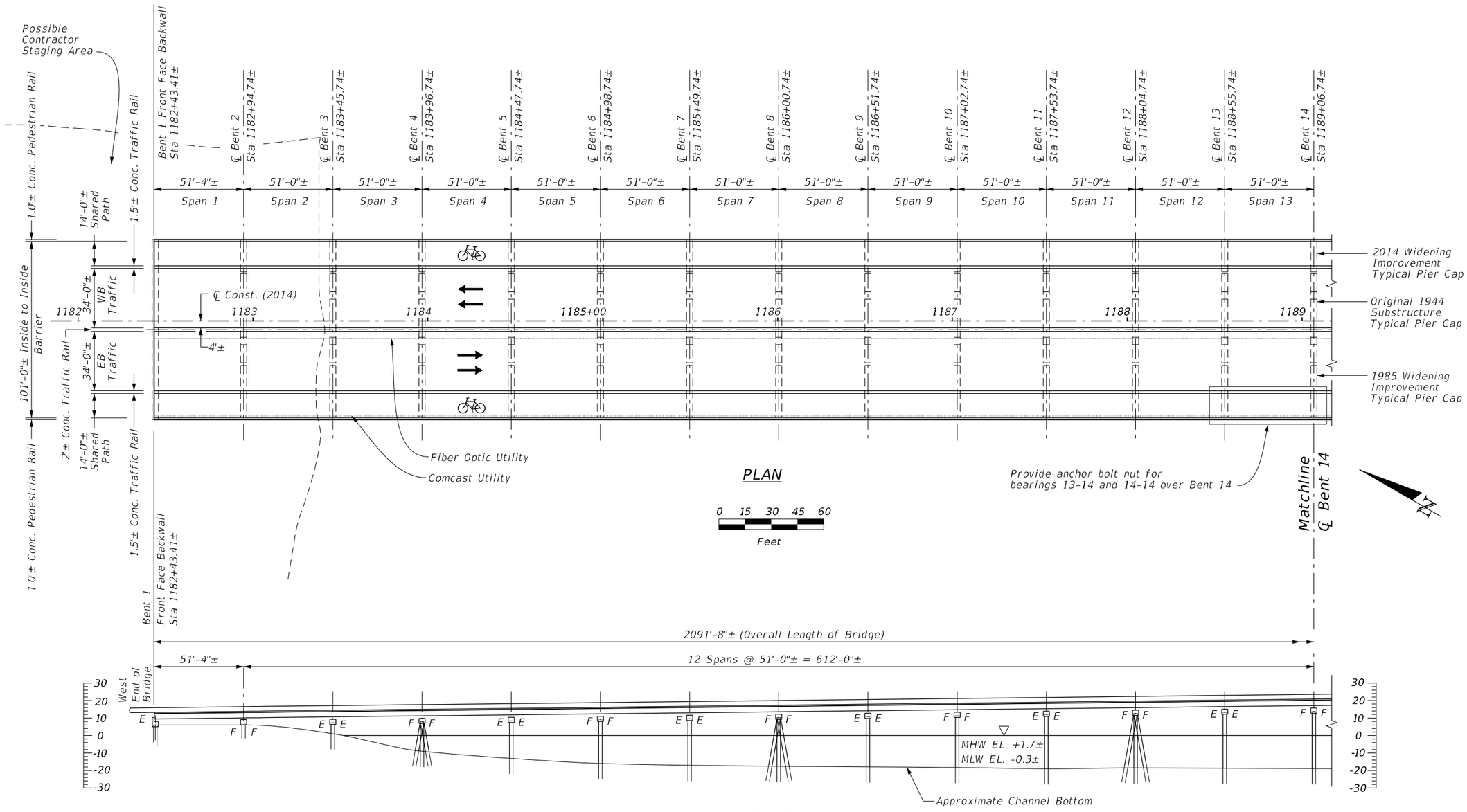
SHEET TITLE: TEMPORARY TRAFFIC CONTROL PLANS (2 OF 2)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-8

REVISED PLANS FOR ADDENDUM No. 3



NOTE:

Contractor shall field verify all span lengths and skew angles and notify the Engineer of any discrepancies.

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	BWC
CHECKED BY:	HNG
DESIGNED BY:	BWC
CHECKED BY:	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

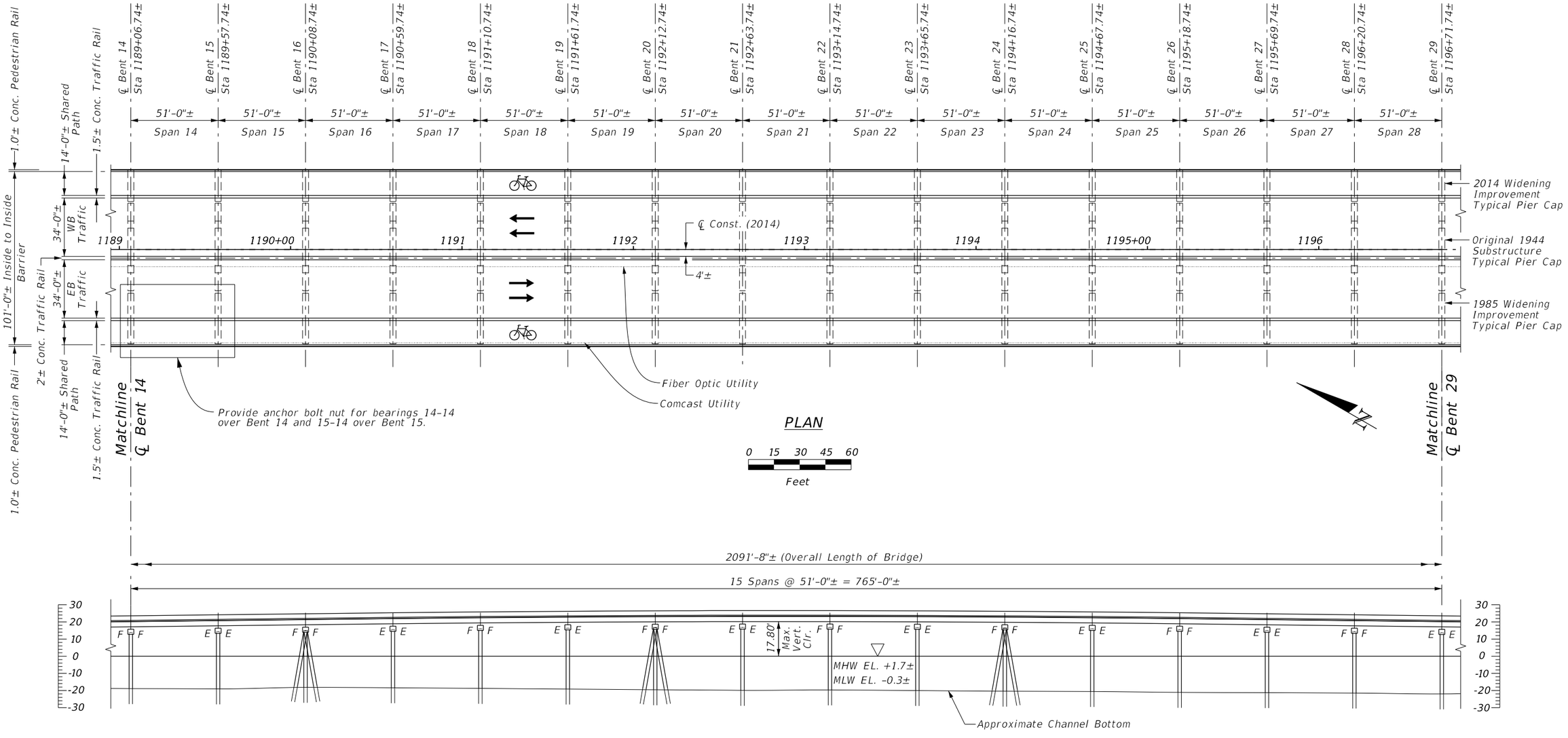
SHEET TITLE: GENERAL PLAN & ELEVATION (1 OF 3)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-9

REVISED PLANS FOR ADDENDUM No. 3



ELEVATION

NOTE:

Contractor shall field verify all span lengths and skew angles and notify the Engineer of any discrepancies.

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	BWC
CHECKED BY:	HNG
DESIGNED BY:	BWC
CHECKED BY:	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

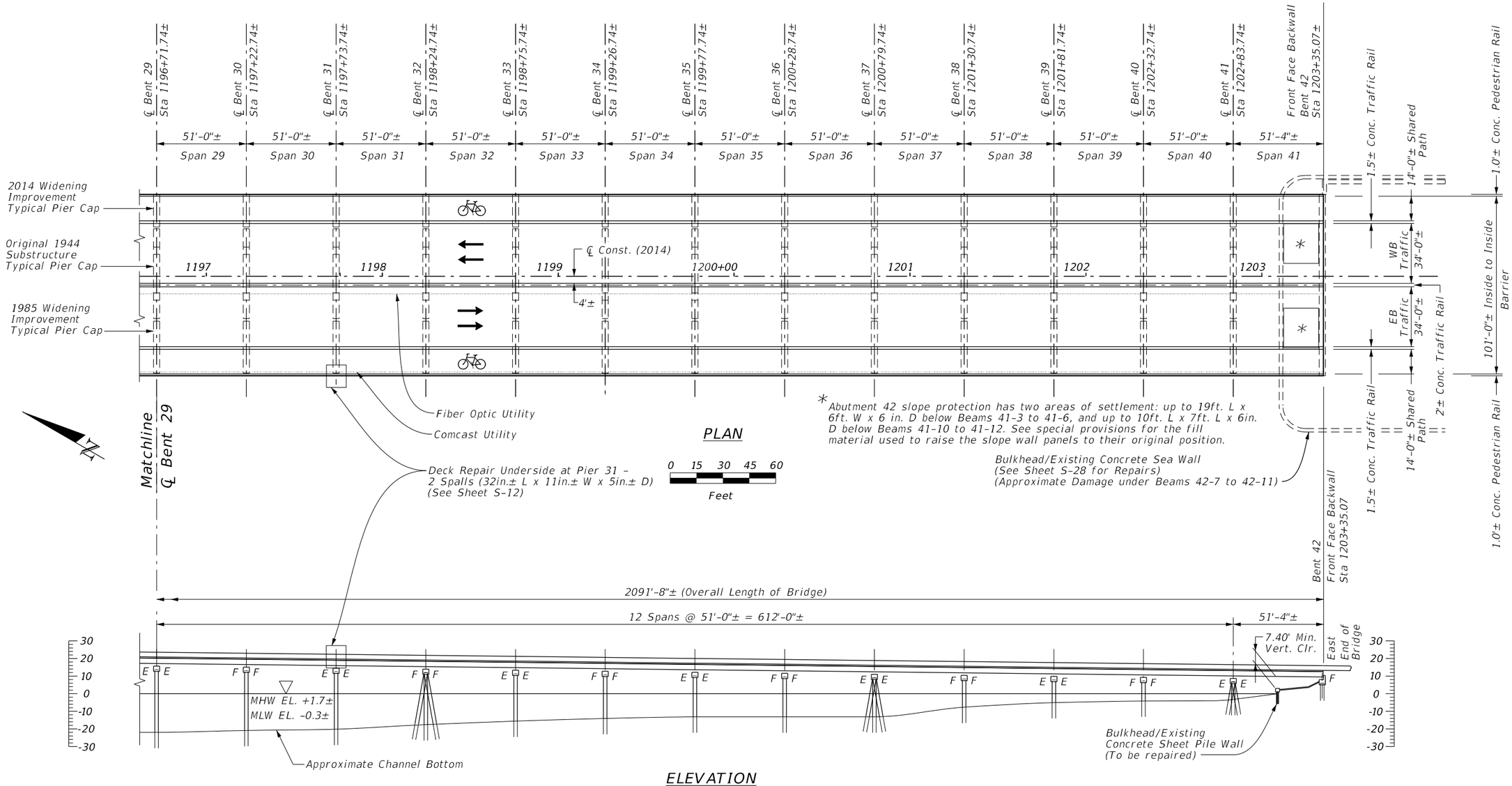
SHEET TITLE: GENERAL PLAN & ELEVATION (2 OF 3)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-10

REVISED PLANS FOR ADDENDUM No. 3



NOTE:

Contractor shall field verify all span lengths and skew angles and notify the Engineer of any discrepancies.

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	BWC
CHECKED BY:	HNG
DESIGNED BY:	BWC
CHECKED BY:	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: GENERAL PLAN & ELEVATION (3 OF 3)

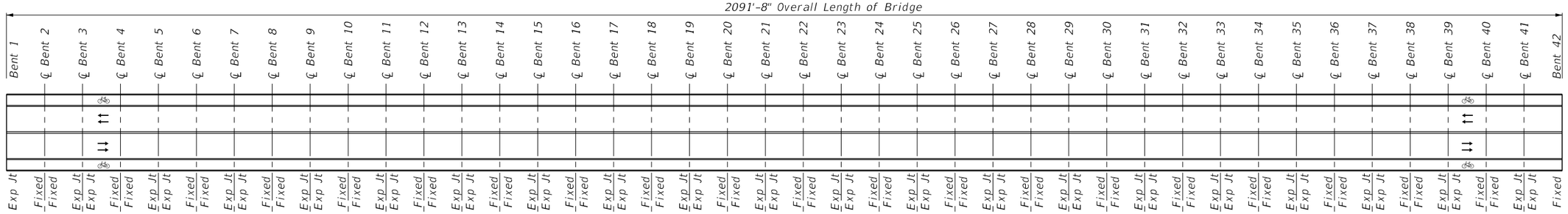
REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

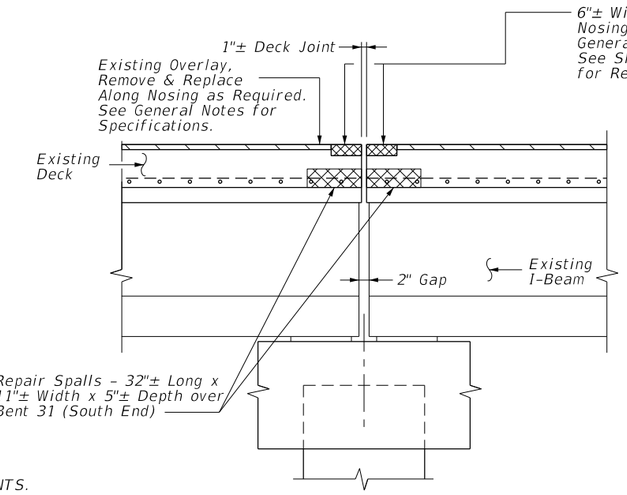
SHEET NO.: S-11

cavan02260 5/18/2023 9:52:48 AM I:\21jobs\21L0042\FDOTDirStruct\Structures\B1PlanElev700.dgn

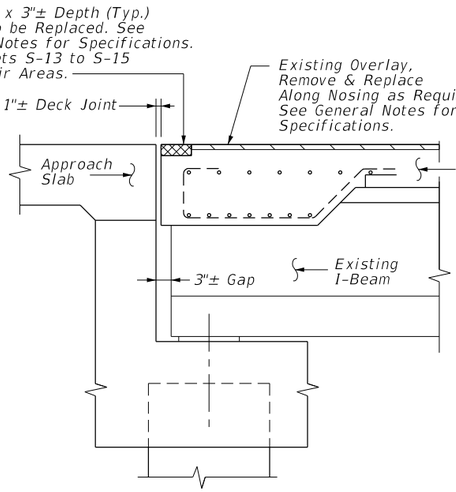
REVISED PLANS FOR ADDENDUM No. 3



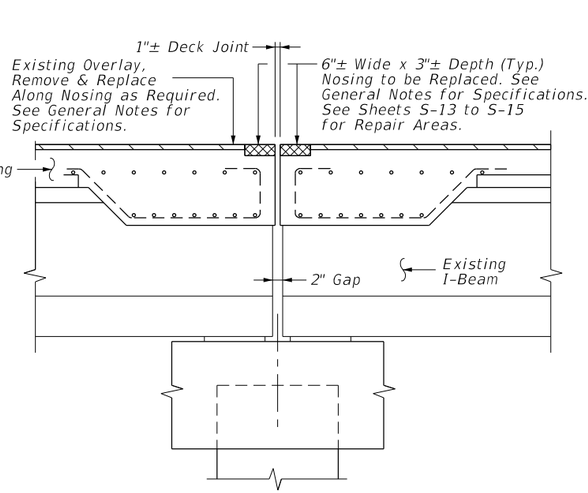
PLAN
NTS



SUPERSTRUCTURE
SECTION AT INTERMEDIATE BENTS
BEAMS 11-14



SUPERSTRUCTURE
SECTION AT END BENT 1
END BENT 42 SIMILAR



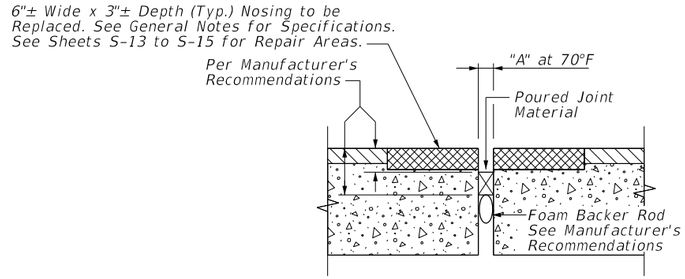
SUPERSTRUCTURE
SECTION AT INTERMEDIATE BENTS
BEAMS 1-10

NOTES FOR REPAIR OF JOINTS:

1. THE WORK TO BE COMPLETED INCLUDES CLEANING AND INSTALLATION OF A NEW WATER TIGHT JOINT AT ALL BENTS.
2. THE JOINT SHALL BE AIR BLASTED TO REMOVE ALL LOOSE MATERIAL THE CONTRACTOR SHALL SUBMIT A DEBRIS CONTAINMENT PLAN TO THE ENGINEER FOR APPROVAL.
3. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY EXISTING REINFORCEMENT, UNLESS OTHERWISE NOTED.
4. THE WIDTH OF REMOVAL OF EXISTING DECK CONCRETE SHALL REMAIN CONSTANT THROUGHOUT THE REPAIR AREA OF THE JOINT.
5. EXISTING JOINT WIDTH FROM EXISTING PLANS, CONTRACTOR TO FIELD VERIFY, JOINT WIDTH VARIES WITH TEMPERATURE.
6. 2" CLEAR COVER SHALL BE MAINTAINED FOR ALL BARS.
7. A CLEAN SAWCUT LINE IS REQUIRED FOR CONCRETE REMOVAL AROUND JOINTS.
8. ALL JOINTS ARE TO BE REMOVED AND REPLACED. REMOVAL OF THE FOAM BACKER ROD AND POURED JOINT MATERIAL IS INCIDENTAL TO THE "BRIDGE DECK EXPANSION JT., REHAB, POURED JOINT WITH BACKER ROD".
9. SEE SHEETS S-13 THROUGH S-15 FOR AREAS OF HEADER REPAIR.
10. EXISTING REINFORCEMENT WITHIN REPAIR AREA TO REMAIN IN PLACE.
11. EXISTING REINFORCEMENT THAT IS DAMAGED/NON-SALVAGEABLE SHALL BE REPLACED WITH DRILLED OR EPOXY GROUTED BARS AT NO ADDITIONAL COST.

NOTES: DECK REPAIR IS COVERED BY PAY ITEM 401-70-4.
CONTRACTOR SHALL CONTACT COMCAST (STEVEN FLIPPO, (561) 460-2728, sflippo@cypresscommunications.net) PRIOR TO WORKING ADJACENT TO CONDUIT ON UNDERSIDE OF BRIDGE ON SOUTH SIDE.

EXPANSION JOINT DATA TABLE			
LOCATION	DIMENSION "A" AT 70°F	DIMENSION "A" ADJUSTMENT PER 10°F	TOTAL DESIGN MOVEMENT
ALL	1"	0.017"	0.06"



TYPICAL SECTION THRU JOINT

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

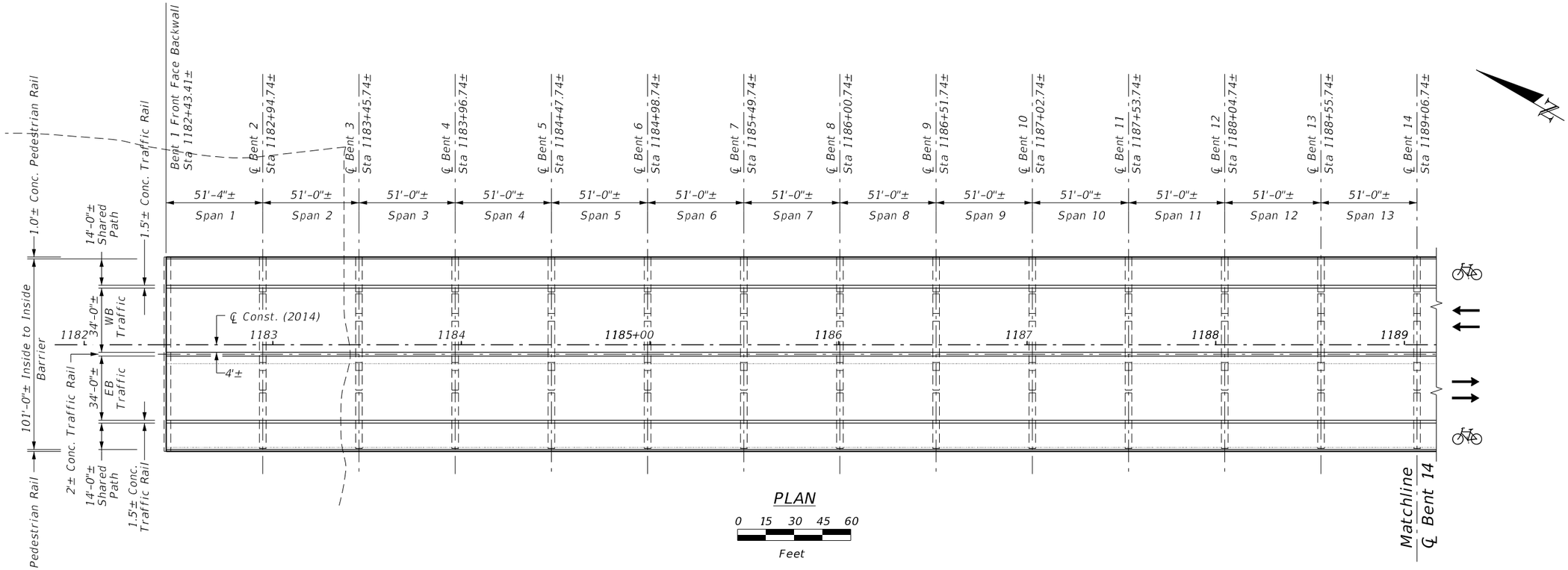
DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: JOINT REPLACEMENT LOCATION & DETAILS
REF. DWG. NO.:
PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY
SHEET NO.: S-12

REVISED PLANS FOR ADDENDUM No. 3



PLAN

0 15 30 45 60
Feet

2360	ADJACENT HEADER DAMAGE

Bridge: 874544

EASTBOUND EXPANSION JT. DEFICIENCIES

JOINT	2360 (ft.)	Header Replacement Quantity (Assume .25'D x 0.5'W x L)(CY)
1	3	0.014
2	2	0.009
3	1	0.005
4	2	0.009
5	3	0.014
6	2	0.009
7	–	–
8	–	–
9	–	–
10	3	0.014
11	–	–
12	2	0.009
13	–	–
14	3	0.014

2360	ADJACENT HEADER DAMAGE

Bridge: 874544

WESTBOUND EXPANSION JT. DEFICIENCIES

JOINT	2360 (ft.)	Header Replacement Quantity (Assume .25'D x 0.5'W x L)(CY)
1	3	0.014
2	4	0.019
3	–	–
4	–	–
5	4	0.019
6	–	–
7	–	–
8	–	–
9	–	–
10	–	–
11	–	–
12	–	–
13	–	–
14	–	–

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

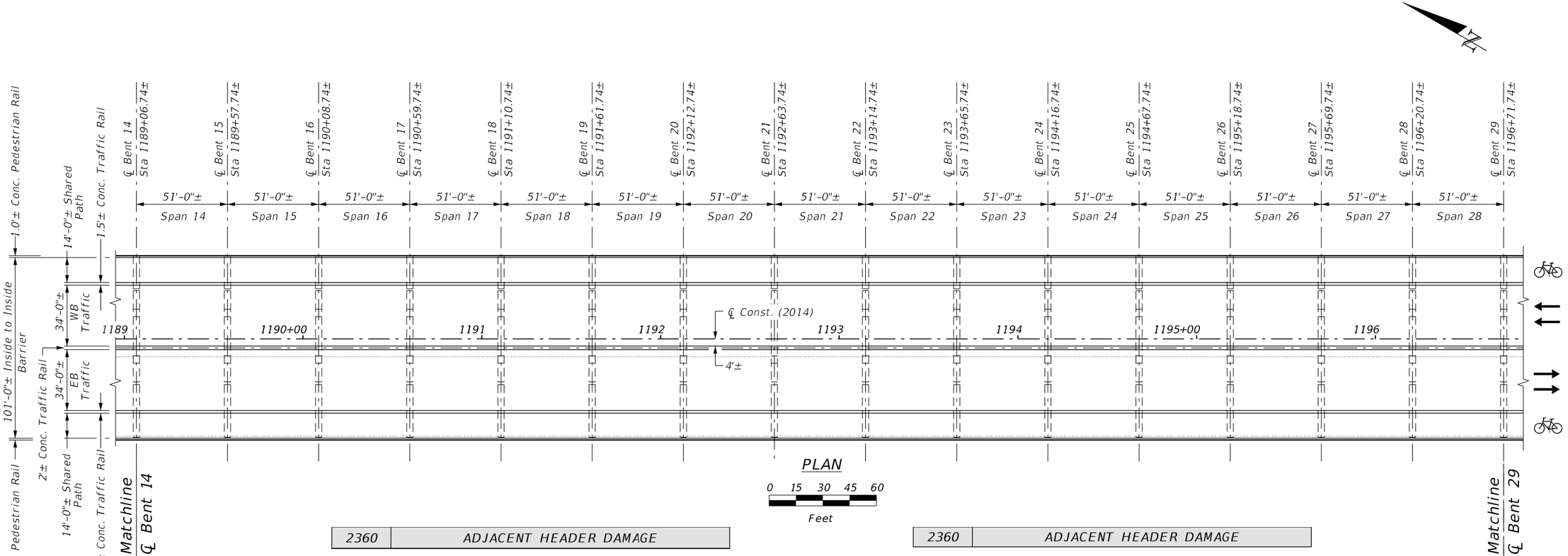
SHEET TITLE: SUPERSTRUCTURE REPAIR PLAN (1 OF 3)

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-13

REVISED PLANS FOR ADDENDUM No. 3



PLAN

0 15 30 45 60

Feet

2360	ADJACENT HEADER DAMAGE

2360	ADJACENT HEADER DAMAGE

Bridge: 874544

EASTBOUND EXPANSION JT. DEFICIENCIES		
		Header Replacement Quantity
JOINT	2360	(Assume .25'D x 0.5'W x L)(CY)
	(ft.)	
14	3	0.014
15	-	-
16	2	0.009
17	1	0.005
18	2	0.009
19	-	-
20	2	0.009
21	1.5	0.007
22	4	0.019
23	-	-
24	4	0.014
25	3	0.014
26	2	0.014
27	2	0.014
28	3	0.014
29	3	0.014

Bridge: 874544

WESTBOUND EXPANSION JT. DEFICIENCIES		
		Header Replacement Quantity
JOINT	2360	(Assume .25'D x 0.5'W x L)(CY)
	(ft.)	
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	1	0.005
29	-	-

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

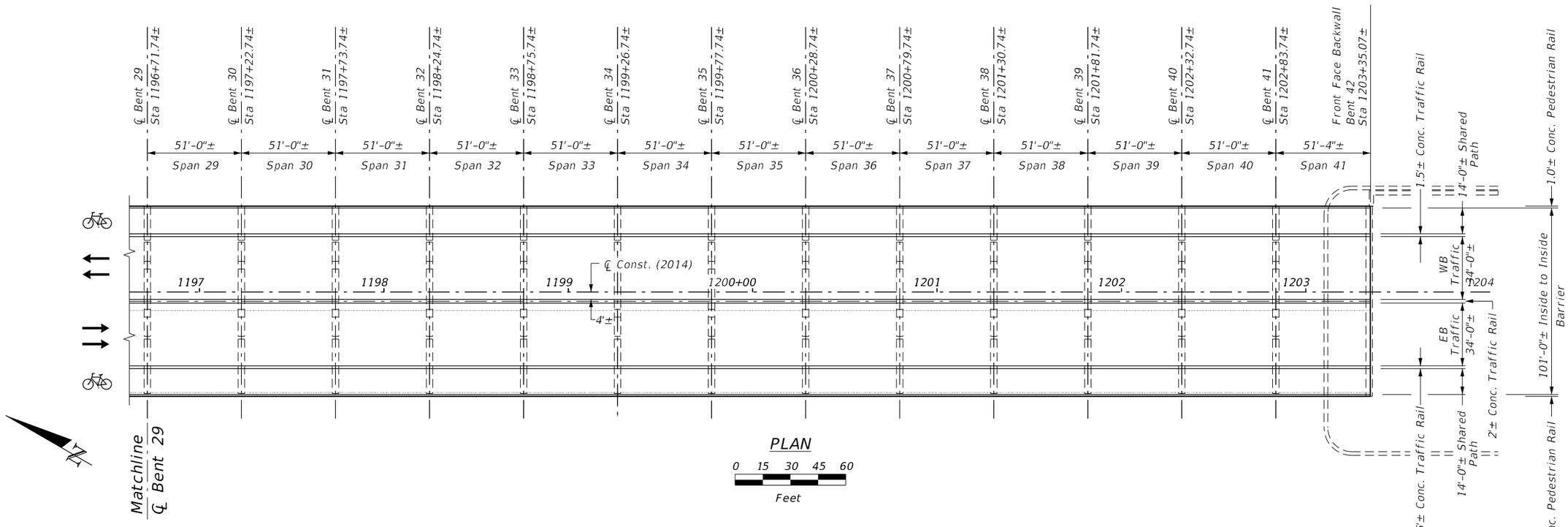
SHEET TITLE: SUPERSTRUCTURE REPAIR PLAN (2 OF 3)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-14

REVISED PLANS FOR ADDENDUM No. 3



PLAN

0 15 30 45 60

Feet

2360	ADJACENT HEADER DAMAGE

Bridge: 874544

EASTBOUND EXPANSION JT. DEFICIENCIES		
		Header Replacement Quantity
JOINT	2360	(Assume .25'D x 0.5'W x L)(CY)
	(ft.)	
29	3	0.014
30	2	0.014
31	2	0.014
32	1.5	0.014
33	4	0.014
34	–	–
35	1	0.005
36	2	0.009
37	2	0.009
38	1.5	0.007
39	–	–
40	2	0.009
41	2	0.009
42	2	0.009

2360	ADJACENT HEADER DAMAGE

Bridge: 874544

WESTBOUND EXPANSION JT. DEFICIENCIES		
		Header Replacement Quantity
JOINT	2360	(Assume .25'D x 0.5'W x L)(CY)
	(ft.)	
29	–	–
30	–	–
31	1	0.005
32	–	–
33	–	–
34	–	–
35	–	–
36	–	–
37	–	–
38	–	–
39	–	–
40	–	–
41	–	–
42	1	0.005

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

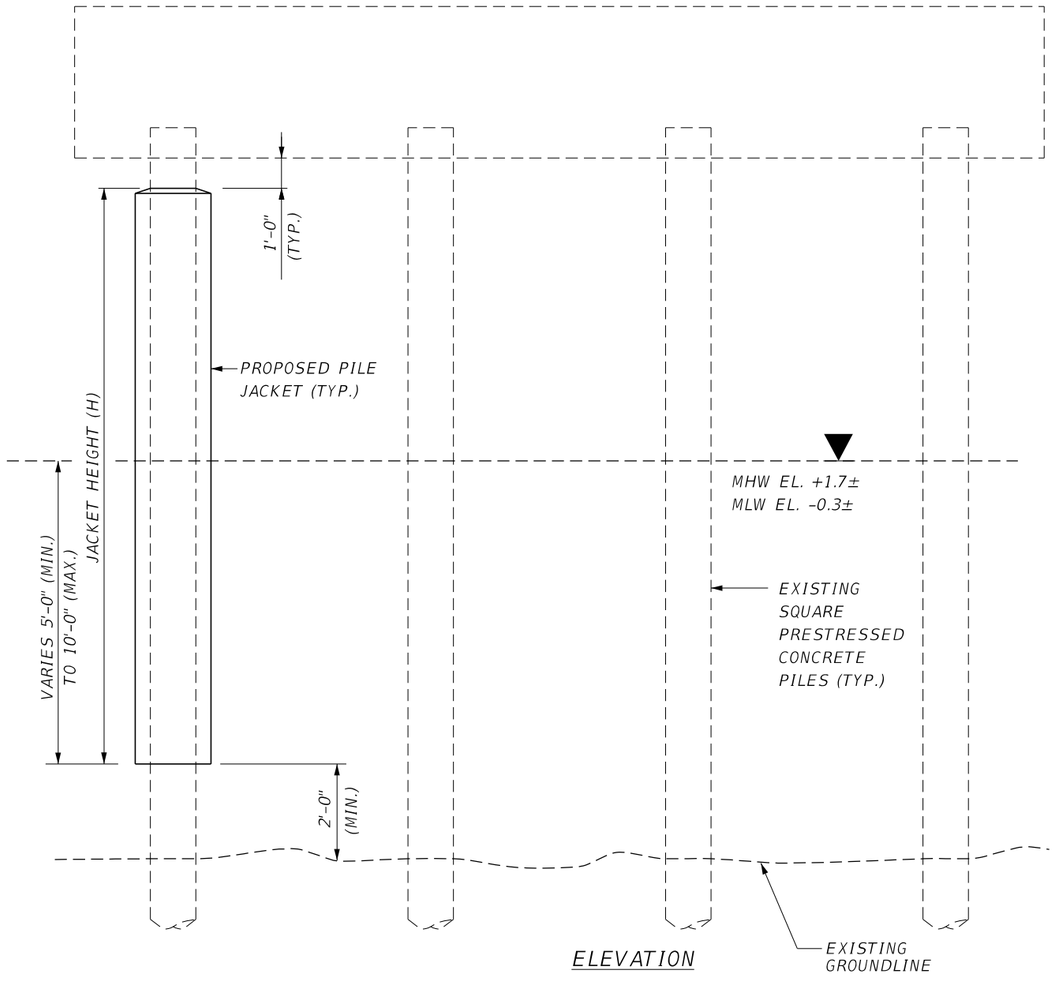
SHEET TITLE: SUPERSTRUCTURE REPAIR PLAN (3 OF 3)

REF. DWG. NO.

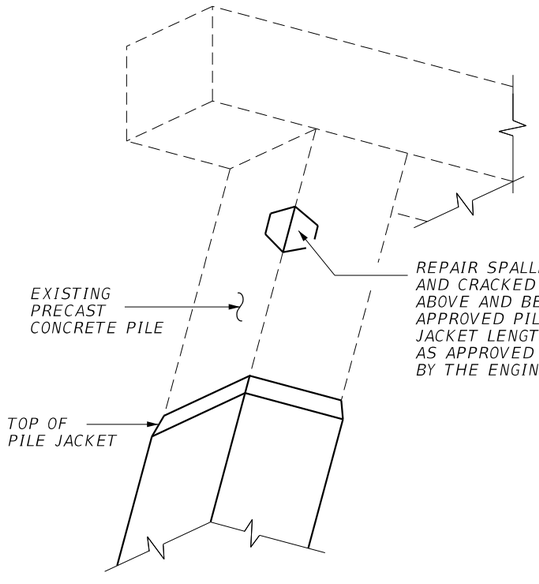
PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-15

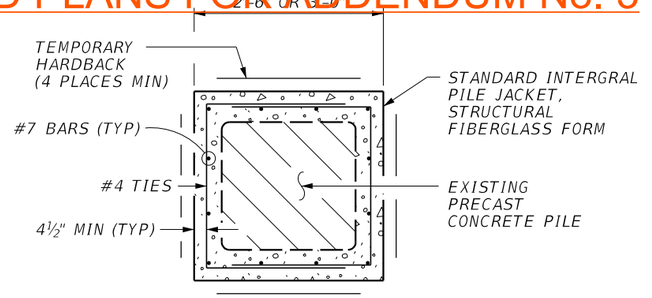
REVISED PLANS FOR ADDENDUM No. 3



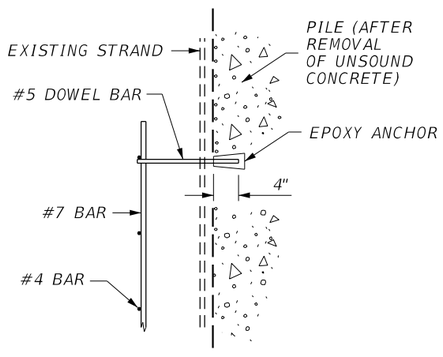
ELEVATION



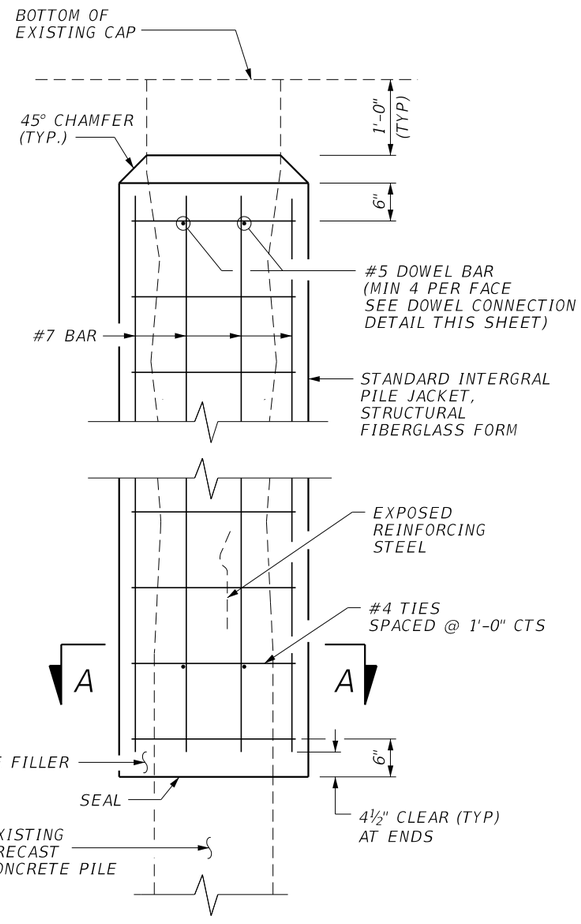
CONCRETE PILE DEFICIENCES



SECTION A-A THRU PILE JACKET



DOWEL CONNECTION



STANDARD INTEGRAL PILE JACKET

WORK IDENTIFICATION

1. CLEAN ALL PILES OF ALL MARINE GROWTH.
2. INSTALL STRUCTURAL PILE JACKET ON THE PILE AS DETAILED ON PILE JACKET DETAIL SHEETS.
3. STRUCTURAL JACKETS SHALL BE CONSTRUCTED USING REBAR AND CONCRETE FILLER.
4. PILE NUMBERING IS BASED ON LOOKING STATIONS AHEAD AND COUNTING LEFT TO RIGHT FOR ALL BENTS (BENT-PILE).
5. REPAIR SPALLS OUTSIDE THE LIMITS OF THE APPROVED JACKET LENGTHS IN ACCORDANCE WITH CONCRETE RESTORATION DETAILS SHEET.
6. THE CONTRACTOR SHALL CONFIRM ELEVATIONS WITH THE ENGINEER PRIOR TO ORDERING MATERIAL. MINOR ADJUSTMENTS MAY BECOME NECESSARY DUE TO CONSTRUCTION CONDITIONS.
7. WORK ON A MAXIMUM OF TWO PILES PER BENT AT ONE TIME. THE TWO PILES CANNOT BE ADJACENT TO EACH OTHER DURING WORK.

BRIDGE NO. 874544

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
BWC	HNG	BWC	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: PILE JACKET DETAILS

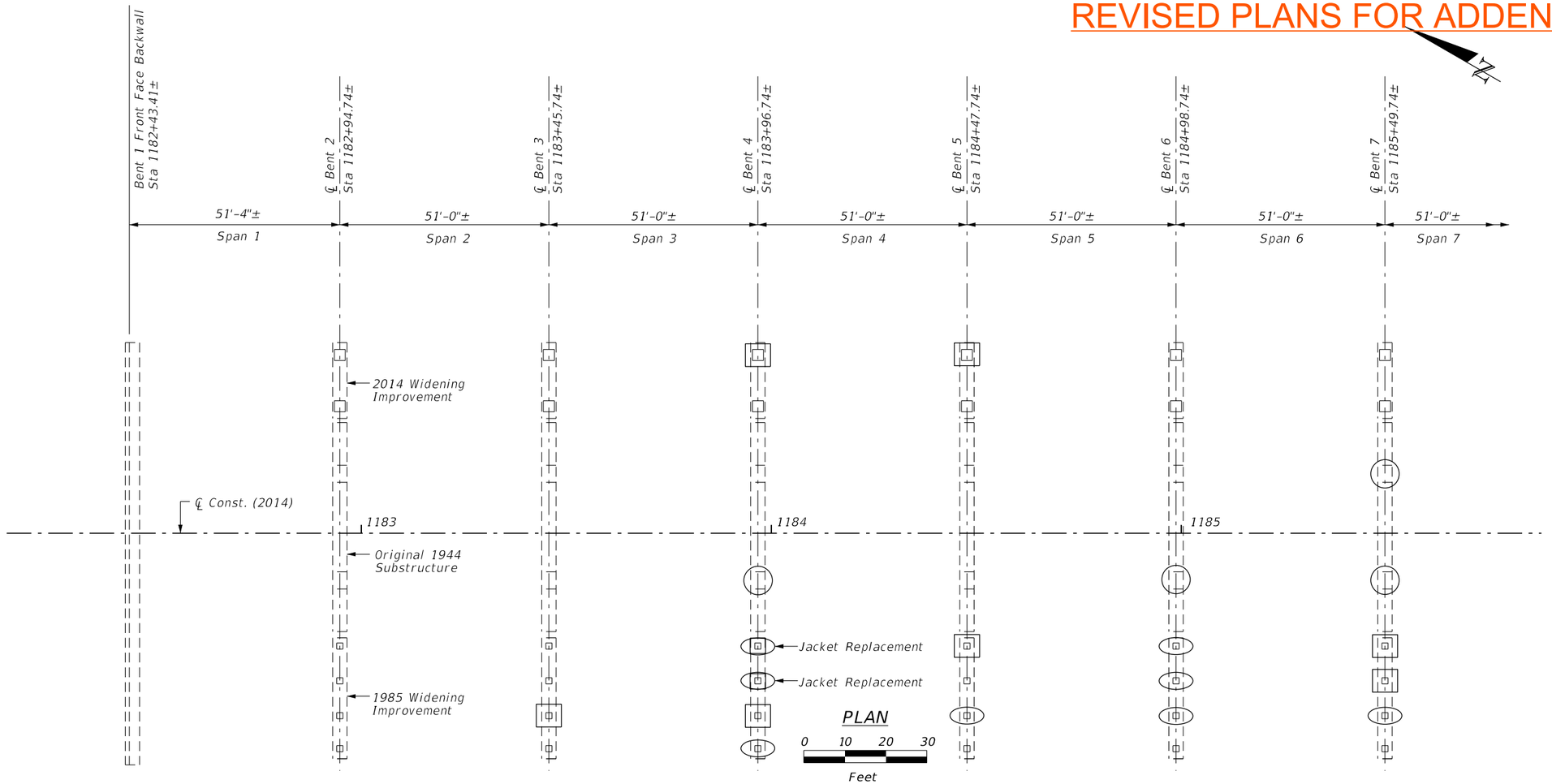
PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

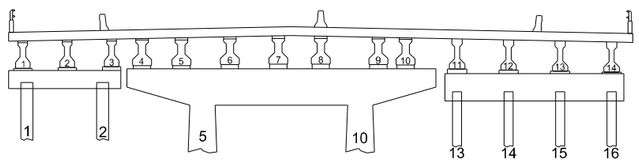
REF. DWG. NO.

SHEET NO. S-16

cavan02260 5/18/2023 9:52:53 AM I:\21jobs\21L0042\FDOTDirStruct\Structures\B1PileDet700.dgn

REVISED PLANS FOR ADDENDUM No. 3





SECTION LOOKING UPSTATION

LEGEND

Pile Repair
See Details, General Notes & Consult Field Engineer for Extent of Reconstruction.

Existing Pile Jacket Protection in Place. See As-Built Plans.

Pile Jacket Protection Required
See Details, General Notes & Consult Field Engineer for Extent of Reconstruction.

ESTIMATE OF QUANTITIES (1 OF 5)

See Details & General Notes

PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)
3-15	-	3.250	-	7-10	5.000	-	-
4-1	-	-	12.833	7-13	-	17.500	-
4-10	0.500	-	-	7-14	-	17.500	-
4-13	-	12.833	-				
4-14	-	12.833	-				
4-15	-	12.833	-				
5-1	-	-	16.500				
5-13	-	16.500	-				
6-10	2.000	-	-				
6-10	4.500	-	-				
6-10	0.313	-	-				
7-5	2.250	-	-	SUB-TOTAL	14.563	93.250	29.333

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	BWC
CHECKED BY:	HNG
DESIGNED BY:	BWC
CHECKED BY:	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

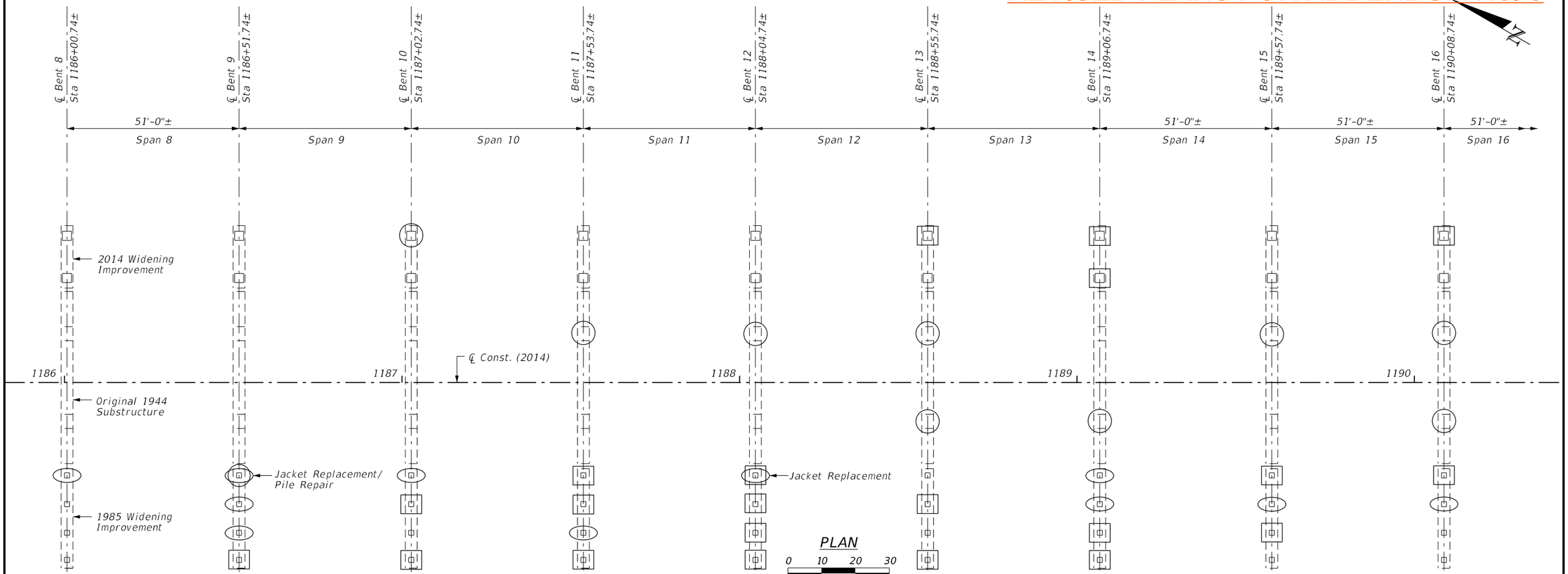
SHEET TITLE: LOCATION OF SUBSTRUCTURE REPAIRS (1 OF 5)

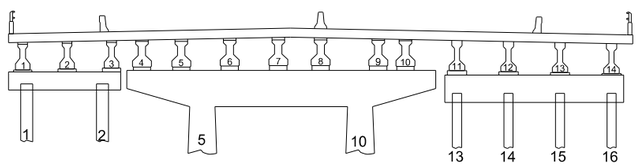
REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-17

REVISED PLANS FOR ADDENDUM No. 3





SECTION LOOKING UPSTATION

LEGEND

Pile Repair
See Details, General Notes & Consult Field Engineer for Extent of Reconstruction.

Existing Pile Jacket Protection in Place. See As-Built Plans.

Pile Jacket Protection Required
See Details, General Notes & Consult Field Engineer for Extent of Reconstruction.

ESTIMATE OF QUANTITIES (2 OF 5)

See Details & General Notes

PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)
9-13	-	18.750	-	12-15	-	20.500	-	14-16	-	21.750	-
9-13	0.250	-	-	12-16	-	20.500	-	15-5	1.125	-	-
9-16	-	18.750	-	13-1	-	21.000	-	15-5	2.500	-	-
10-1	0.063	-	-	13-5	0.500	-	-	15-13	-	22.250	-
10-14	-	19.500	-	13-10	2.000	-	-	15-15	-	22.250	-
10-16	-	19.500	-	13-10	0.781	-	-	16-1	-	-	22.750
11-5	1.167	-	-	13-14	-	21.000	-	16-5	1.750	-	-
11-13	-	20.000	-	13-16	-	21.000	-	16-5	0.875	-	-
11-14	-	20.000	-	14-1	-	-	21.750	16-10	3.000	-	-
11-16	-	20.000	-	14-2	-	-	21.750	16-13	-	22.750	-
12-5	0.500	-	-	14-10	0.313	-	-	-	-	-	-
12-13	-	20.500	-	14-10	0.250	-	-	-	-	-	-
12-14	-	20.500	-	14-15	-	21.750	-	SUB-TOTAL	15.074	392.250	66.250

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

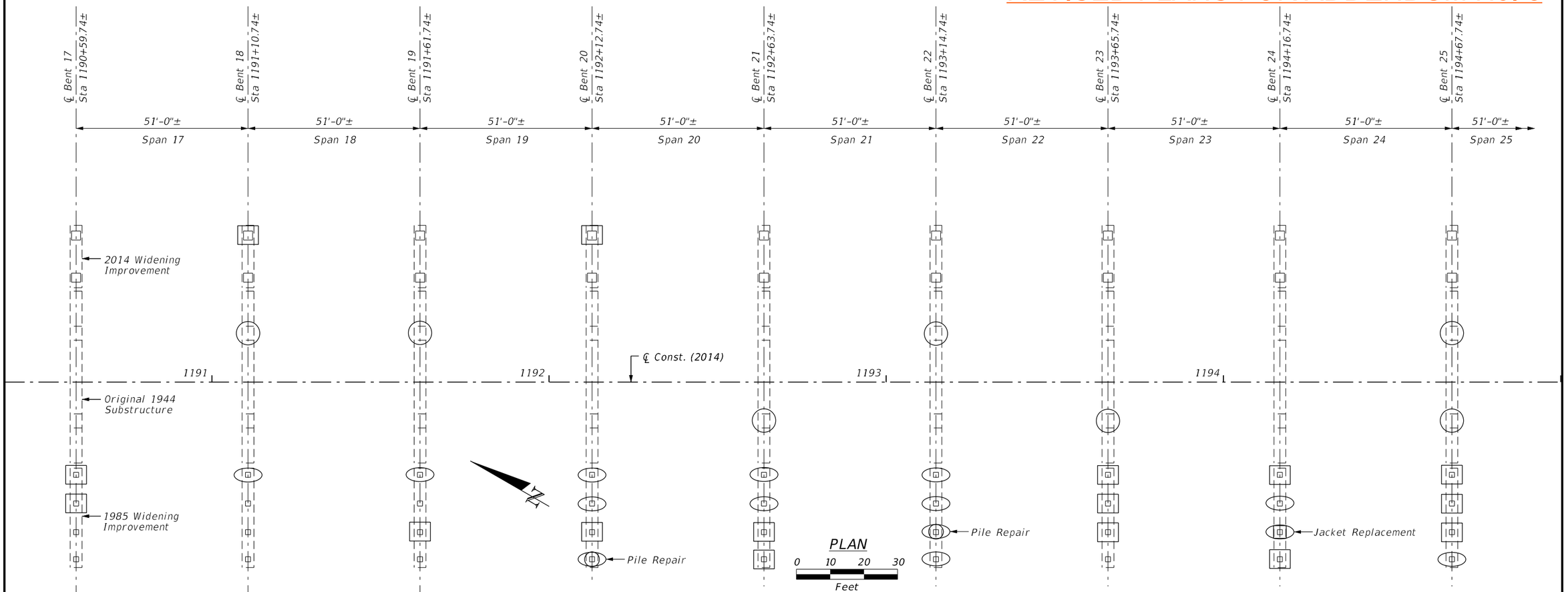
SHEET TITLE: LOCATION OF SUBSTRUCTURE REPAIRS (2 OF 5)

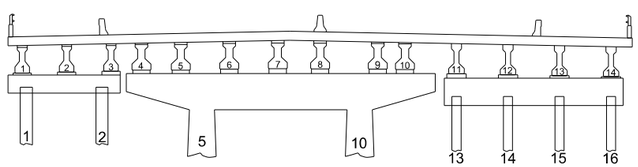
REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-18

REVISED PLANS FOR ADDENDUM No. 3





SECTION LOOKING UPSTATION

ESTIMATE OF QUANTITIES (3 OF 5)

See Details & General Notes

PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)
17-13	-	23.500	-	21-16	-	24.750	-	25-13	-	24.000	-
17-14	-	23.500	-	22-5	0.375	-	-	25-14	-	24.000	-
18-1	-	-	24.000	22-15	0.250	-	-	25-15	-	24.000	-
18-5	0.500	-	-	23-10	0.750	-	-				
19-5	1.563	-	-	23-13	-	24.500	-				
19-15	-	24.500	-	23-14	-	24.500	-				
20-1	-	-	14.500	23-15	-	24.500	-				
20-15	-	14.500	-	24-13	-	24.500	-				
20-16	0.188	-	-	24-15	-	24.500	-				
21-3	0.938	-	-	24-16	-	24.500	-				
21-6	0.333	-	-	25-5	0.375	-	-				
21-10	2.000	-	-	25-5	1.750	-	-				
21-15	-	24.750	-	25-10	1.111	-	-	SUB-TOTAL	10.133	354.500	38.500

BRIDGE NO. 874544

LEGEND

Pile Repair
See Details, General Notes & Consult Field Engineer for Extent of Reconstruction.

Existing Pile Jacket Protection in Place. See As-Built Plans.

Pile Jacket Protection Required
See Details, General Notes & Consult Field Engineer for Extent of Reconstruction.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

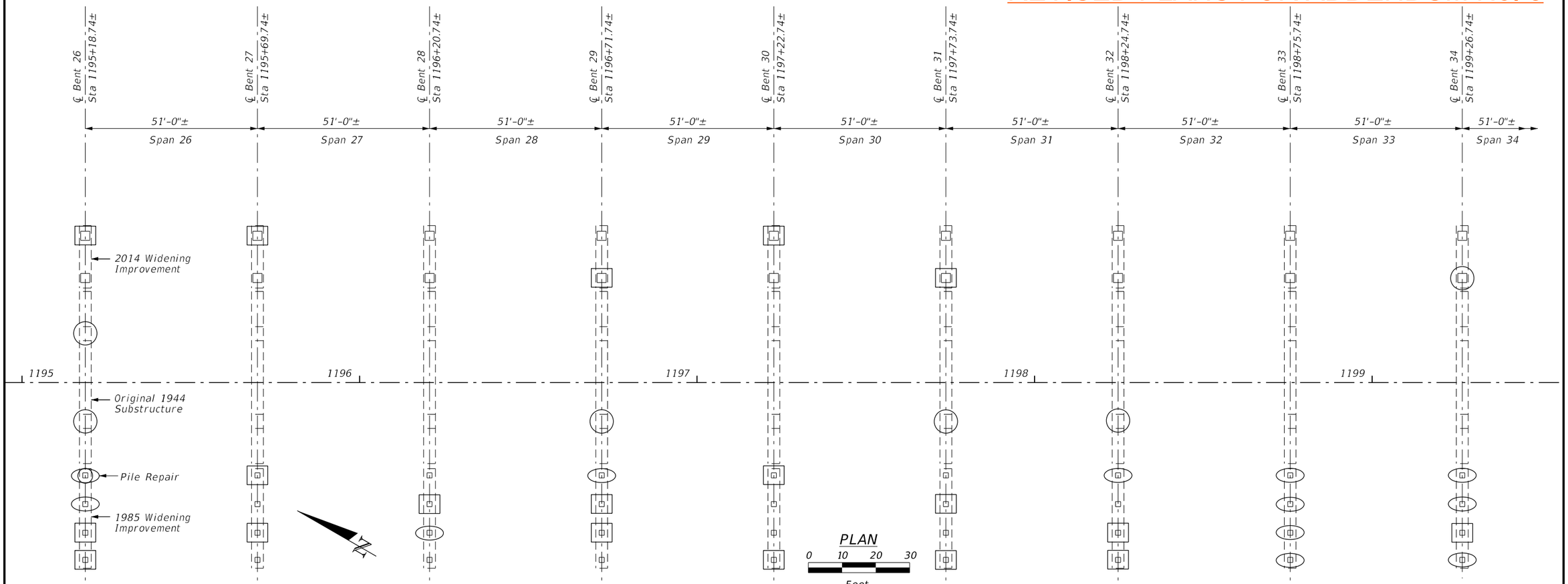
SHEET TITLE: LOCATION OF SUBSTRUCTURE REPAIRS (3 OF 5)

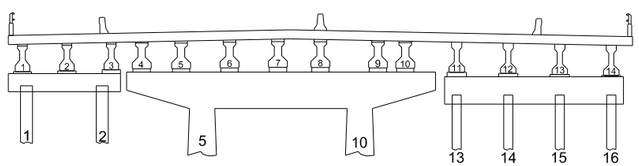
REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-19

REVISED PLANS FOR ADDENDUM No. 3





SECTION LOOKING UPSTATION

LEGEND

Pile Repair
See Details, General Notes & Consult Field Engineer for Extent of Reconstruction.

Existing Pile Jacket Protection in Place. See As-Built Plans.

Pile Jacket Protection Required
See Details, General Notes & Consult Field Engineer for Extent of Reconstruction.

ESTIMATE OF QUANTITIES (4 OF 5)

See Details & General Notes

PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)
26-1	-	-	23.500	29-10	2.604	-	-	32-10	0.500	-	-
26-5	2.333	-	-	29-14	-	21.750	-	32-15	-	20.000	-
26-5	0.479	-	-	29-15	-	21.750	-	32-16	-	20.000	-
26-10	1.500	-	-	30-1	-	-	21.000	34-2	0.167	-	-
26-13	0.250	-	-	30-13	-	21.000	-	34-15	-	18.750	-
26-13	1.500	-	-	30-16	-	21.000	-				
26-15	-	23.500	-	31-2	-	-	20.500				
26-16	-	23.500	-	31-10	0.340	-	-				
27-1	-	-	22.750	31-10	3.750	-	-				
27-13	-	22.750	-	31-10	0.375	-	-				
27-15	-	22.750	-	31-14	-	20.500	-				
28-14	-	22.250	-	31-16	-	20.500	-				
29-2	-	-	21.750	32-10	0.625	-	-	SUB-TOTAL	14.423	300.000	109.500

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
BWC	HNG	BWC	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: LOCATION OF SUBSTRUCTURE REPAIRS (4 OF 5)

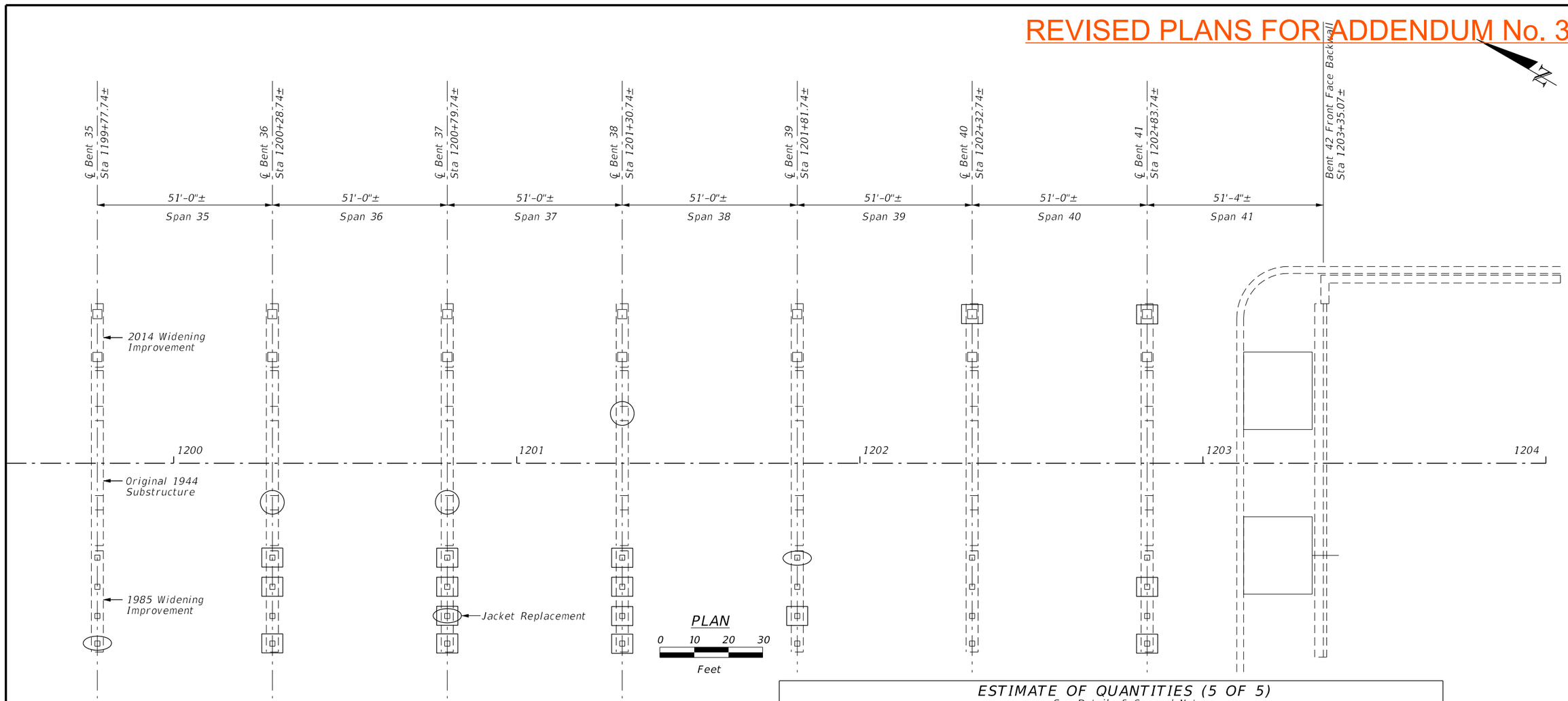
REF. DWG. NO.:

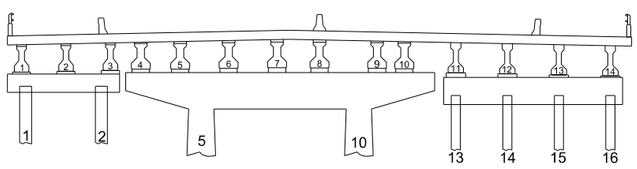
PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-20

cavan02260 5/18/2023 9:52:55 AM I:\21jobs\21L0042\FDOTDirStruct\Structures\B1PlanElev700.dgn

REVISED PLANS FOR ADDENDUM No. 3





SECTION LOOKING UPSTATION

LEGEND

Pile Repair
See Details, General Notes & Consult Field Engineer for Extent of Reconstruction.

Pile Jacket Protection Required
See Details, General Notes & Consult Field Engineer for Extent of Reconstruction.

Existing Pile Jacket Protection in Place. See As-Built Plans.

ESTIMATE OF QUANTITIES (5 OF 5)

See Details & General Notes

PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)
36-10	0.417	-	-	38-14	-	11.500	-
36-13	-	17.500	-	38-15	-	11.500	-
36-14	-	17.500	-	38-16	-	11.500	-
36-16	-	17.500	-	39-15	-	8.750	-
37-10	0.500	-	-	40-1	-	-	8.250
37-13	-	17.000	-	41-1	-	-	5.667
37-14	-	17.000	-	41-14	-	5.667	-
37-15	-	17.000	-	41-16	-	5.667	-
37-16	-	17.000	-				
38-5	0.703	-	-	SUB-TOTAL	1.964	186.583	13.917
38-5	0.344	-	-				
38-13	-	11.500	-	TOTAL	56.157	1326.583	257.500

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	BWC
CHECKED BY:	HNG
DESIGNED BY:	BWC
CHECKED BY:	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

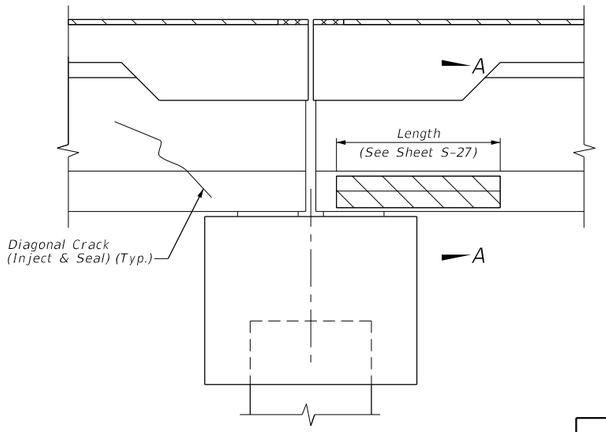
SHEET TITLE: LOCATION OF SUBSTRUCTURE REPAIRS (5 OF 5)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-21

REVISED PLANS FOR ADDENDUM No. 3



TYPICAL BEAM SHOWING EXPOSED REBAR/STRANDS

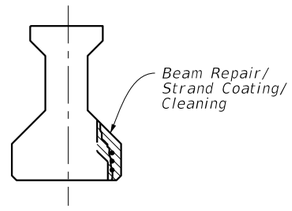
Concrete Beams with cracks shown on Sheet S-27 to be injected and sealed. Use Type F-1 compound epoxy for sealing crack surfaces in preparation for injection. Refer to Section 411 of standard specifications for additional information.

TYPICAL CRACK REPAIR METHOD

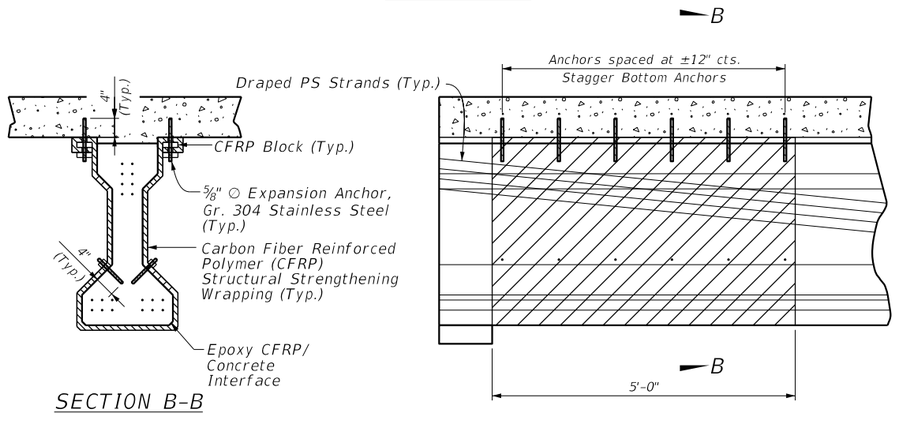
1. Cracks to be Repaired as Directed by the Engineer.
2. Remove Unsound Concrete from Crack Area.
3. Obtain Engineer's Approval to Carry Out Crack Repair (in Lieu of Spall Repair) for Cases Where Adjacent Concrete is Otherwise Unsound and Cracking is not a Result of Corroding Reinforcement.
4. For Cracks 1/32" to 1/8" use an Epoxy Resin with Minimum Viscosity of 325 cps, 28 day Compressive Strength of 13000 psi. for Cracks 1/8" to 1/4" use an Injection Gel or Equal Non-Sag Paste with 28 day Compressive Strength of 10000 psi.
5. For Cap Seal, use Injection Gel with Minimum 28 Day Compressive Strength of 12000 psi.
6. Engineer to Approve Crack and Cap Seal Material Prior to Beginning of Construction.
7. Apply Class II Finish at Completion of Crack Repair to Remove Fins or Knobs.

LAP SPLICE TABLE

Rebar Size	Lap Splice Length
4	1'-0"
5	1'-3"
6	1'-6"
7	2'-1"
8	2'-8"
9	3'-5"
10	4'-4"
11	5'-4"



SECTION A-A



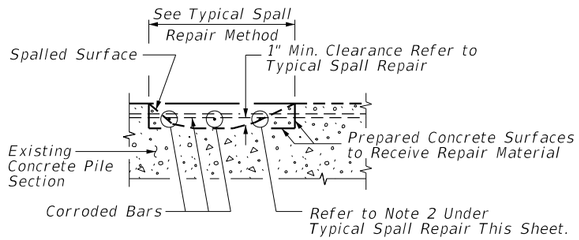
SECTION B-B

CARBON FIBER REINFORCED POLYMER (CFRP) STRUCTURAL STRENGTHENING WRAPPING DETAILS

Spans 36 & 40, Beams 11-14 (Each End) (4 Locations) (80 LF Total)

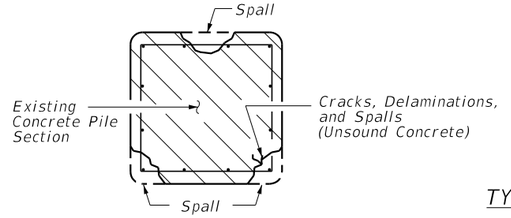
CFRP Wrapping to be included in Pay Item 450-82 (Beam Repair)

CFRP Wrapping System must provide a minimum increase in ultimate shear capacity of 70 kips.



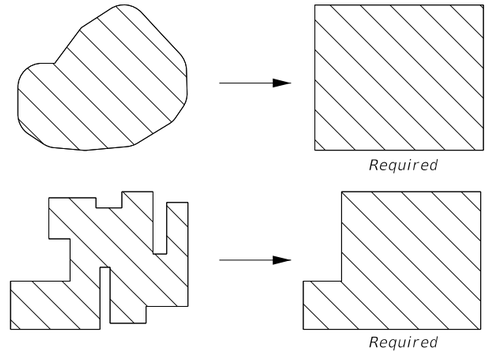
EXPOSING AND UNDERCUTTING REINFORCING STEEL

Applicable to Horizontal, Vertical, and Overhead Locations



TYPICAL DELAMINATIONS AND SPALLS

TYPICAL SPALL WITH EXPOSED REBAR



SIMPLE PATCH CONFIGURATION

At Corner Location Provide Right Angle Cuts.
Patch Configuration Shall be Kept as Simple as Possible.
Individual Repair Areas Within 2 Feet Shall be Joined at the Direction of the Engineer.

TYPICAL SPALL REPAIR

1. For Concrete Restoration, Remove and Repair Unsound Concrete from Areas to be Repaired in Accordance with this Sheet and the Technical Special Provisions. Areas Well Adhered to Existing Strand or Reinforcement Shall Remain.
2. Any Reinforcement Which is Loose shall be Secured in Place by Tying to other Secured Bars or by other Approved Methods. Lap Splices shall be Installed in Accordance with the Table.
3. Clean Exposed Rebars and Any Loose Concrete or Abrasives by Sandblasting.
4. Fill Voids with Repair Material in Accordance with the Technical Special Provisions and FDOT Specifications.
5. Apply primer to area then apply epoxy coating. Coating shall extend 6" from the edge of the spall in every direction. Check coating thickness and inspect for defects.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

BRIDGE NO. 874544

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	BWC
CHECKED BY:	HNG
DESIGNED BY:	BWC
CHECKED BY:	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: CONCRETE RESTORATION DETAILS & CRACK INJECT/SEAL DETAILS

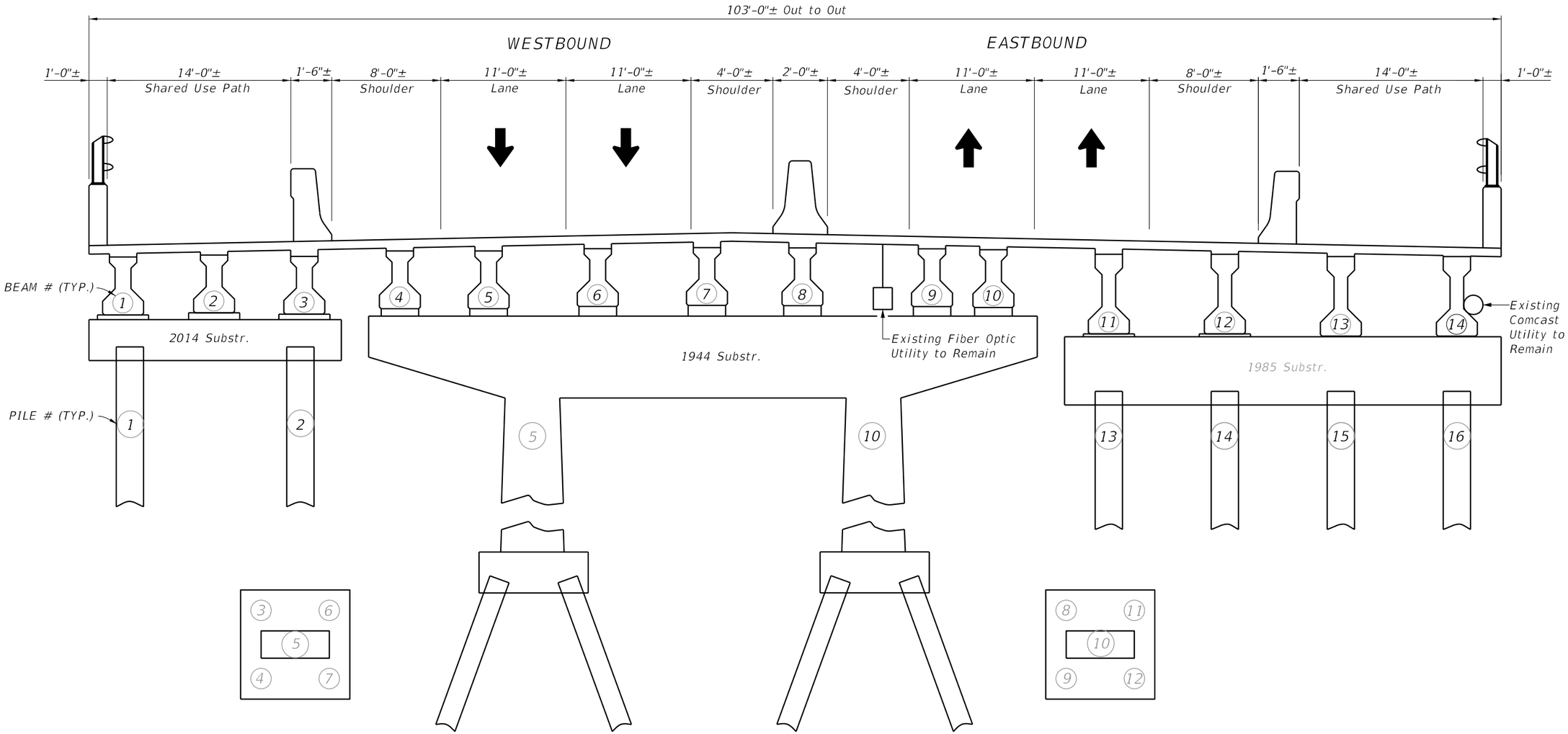
REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-22

cavan02260 5/18/2023 9:52:56 AM I:\21jobs\21L0042\FDOTDirStruct\Structures\B1PierDet700.dgn

REVISED PLANS FOR ADDENDUM No. 3



TYPICAL SECTION

KEY FOR REPAIR DESCRIPTIONS
LOOKING UPSTATION

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: TYPICAL BRIDGE SECTION KEY FOR REPAIRS

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-23

REVISED PLANS FOR ADDENDUM No. 3

PILE (PIER-PILE)	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
4-10	1080	EAST FACE, BELOW CAP	DELAMINATION (2FT X 1FT X 3IN)	1	2.000	1.000	0.250	0.500
6-10	1130	WEST FACE, STARTING AT THE FOOTING	DELAMINATION (4FT X 1FT X 3IN)	2	4.000	1.000	0.250	2.000
6-10	1130	WEST FACE, 1 FT. ABOVE THE FOOTING	DELAMINATION (3FT X 6FT X 3IN)	1	3.000	6.000	0.250	4.500
6-10	1130	NORTH FACE	VERTICAL CRACK (2.5 FT LONG)	1	2.500	0.500	0.250	0.313
7-5	1080	WEST FACE	DELAMINATION (3FT X 3FT X 3IN)	1	3.000	3.000	0.250	2.250
7-10	1080	WEST FACE	DELAMINATION (5FT X 4FT X 3IN)	1	5.000	4.000	0.250	5.000
9-13	1110	EAST & WEST FACES	CRACK ABOVE JACKET (1FT LONG)	1	1.000	0.500	0.250	0.250
10-1	1080	NE CORNER	SPALL (6IN X 6IN X 3IN)	1	0.500	0.500	0.250	0.063
11-5	1080	SOUTH FACE, 1 FT. ABOVE THE FOOTING	DELAMINATION (3FT X 4.67FT X 3IN)	1	3.000	4.667	0.083	1.167
12-5	1080	EAST FACE, 1 FT. BELOW CAP	DELAMINATION (2FT X 1FT X 3IN)	1	2.000	1.000	0.250	0.500
13-5	1080	SE CORNER AT THE CAP	DELAMINATION (2FT X 1FT X 3IN)	1	2.000	1.000	0.250	0.500
13-10	1130	SOUTH & WEST FACE, 1 FT. ABOVE THE FOOTING	DELAMINATION (2FT X 2FT X 3IN)	2	2.000	2.000	0.250	2.000
13-10	1130	SOUTH FACE, JUST BELOW CAP	VERTICAL CRACK (6.25FT LONG)	1	6.250	0.500	0.250	0.781
14-10	1130	NE CORNER, 1 FT. BELOW CAP	DELAMINATION (2.5FT X 0.5FT X 3IN)	1	2.500	0.500	0.250	0.313
14-10	1130	WEST FACE, 5 FT. FROM BOTTOM OF CAP	VERTICAL CRACK (2FT LONG)	1	2.000	0.500	0.250	0.250
15-5	1080	WEST FACE AT THE CAP	DELAMINATION (3FT X 1.5FT X 3IN)	1	3.000	1.500	0.250	1.125
15-5	1080	WEST FACE, 1 FT. BELOW CAP	DELAMINATION (5FT X 2FT X 3IN)	1	5.000	2.000	0.250	2.500
16-5	1080	EAST FACE, BELOW CAP	DELAMINATION (1.583FT X 4.417FT X 3IN)	1	1.583	4.417	0.250	1.748
16-5	1130	NORTH FACE	VERTICAL CRACK (7FT LONG)	1	7.000	0.500	0.250	0.875
16-10	1080	NW CORNER AT THE CAP	DELAMINATION (6FT X 2FT X 3IN)	1	6.000	2.000	0.250	3.000
18-5	1130	SW CORNER ABOVE AND BELOW THE CAP	VERTICAL CRACK (2FT LONG)	2	2.000	0.500	0.250	0.500
19-5	1080	SOUTH FACE	DELAMINATION (2.5FT X 2.5FT X 3IN)	1	2.500	2.500	0.250	1.563
20-16	1110	WEST FACE	CRACK ABOVE JACKET (18IN LONG)	1	1.500	0.500	0.250	0.188
21-3	1080	EAST FACE, ABOVE JACKET EXTENDING INTO NORTH & SOUTH FACE	DELAMINATION (2.5FT X 1.5FT X 3IN)	1	2.500	1.500	0.250	0.938
21-6	1130	ABOVE THE JACKET	VERTICAL CRACK (2.667FT LONG)	1	2.667	0.500	0.250	0.333
21-10	1080	NORTH FACE AT THE CAP	DELAMINATION (2FT X 4FT X 3IN)	1	2.000	4.000	0.250	2.000
22-5	1130	NORTH FACE	VERTICAL CRACK (3FT LONG)	1	3.000	0.500	0.250	0.375
22-15	1110	EAST FACE	CRACK ABOVE REPAIR (2FT LONG)	1	2.000	0.500	0.250	0.250
23-10	1130	WEST FACE	VERTICAL CRACK (6FT LONG)	1	6.000	0.500	0.250	0.750
25-5	1080	SOUTH FACE, 1 FT. ABOVE THE FOOTING	DELAMINATION (1.5FT X 1FT X 3IN)	1	1.500	1.000	0.250	0.375
25-5	1080	WEST FACE, 1 FT. ABOVE THE FOOTING	DELAMINATION (3.5FT X 2FT X 3IN)	1	3.500	2.000	0.250	1.750
25-10	1080	NE CORNER, 2 FT. BELOW CAP	DELAMINATION (5FT X 1.333FT X 2IN)	1	5.000	1.333	0.167	1.111
26-5	1080	WEST FACE AT THE CAP	DELAMINATION (2FT X 4.667FT X 3IN)	1	2.000	4.667	0.250	2.333
26-5	1080	WEST FACE, 1 FT. ABOVE THE FOOTING	DELAMINATION (0.5FT X 3.833FT X 3IN)	1	0.500	3.833	0.250	0.479
26-10	1080	EAST FACE, BELOW CAP	DELAMINATION (2FT X 3FT X 3IN)	1	2.000	3.000	0.250	1.500
26-13	1110	EAST & WEST FACES	CRACK 2FT LONG	1	2.000	0.500	0.250	0.250
26-13	1080	NORTH FACE	DELAMINATION WITH CRACK (3FT X 2FT X 3IN)	1	3.000	2.000	0.250	1.500
29-10	1080	EAST FACE, BELOW CAP	DELAMINATION (2.083FT X 5FT X 3IN)	1	2.083	5.000	0.250	2.604
31-10	1080	EAST FACE, BELOW CAP	DELAMINATION (2.333FT X 0.583FT X 3IN)	1	0.583	2.333	0.250	0.340
31-10	1080	NORTH FACE, BELOW CAP	DELAMINATION (5FT X 3FT X 3IN)	1	5.000	3.000	0.250	3.750
31-10	1130	NORTH FACE	VERTICAL CRACK (3FT LONG)	1	3.000	0.500	0.250	0.375
32-10	1130	NORTH FACE, 1 FT. BELOW CAP	DELAMINATION (3FT X 1FT X 3IN)	1	3.000	0.833	0.250	0.625
32-10	1130	NORTH FACE, BELOW CAP	CRACK (4FT LONG)	1	4.000	0.500	0.250	0.500
34-2	1080	SOUTH FACE	SPALL (2FT X 4IN X 3IN)	1	2.000	0.333	0.250	0.167
36-10	1080	NW CORNER, 1 FT. BELOW CAP	DELAMINATION (2FT X 0.833FT X 3IN)	1	2.000	0.833	0.250	0.417
37-10	1130	SOUTH FACE	VERTICAL CRACK (4FT LONG)	1	4.000	0.500	0.250	0.500
38-5	1130	SW CORNER, AT THE CAP	DELAMINATION (3.75FT X 0.75FT X 3IN)	1	3.750	0.750	0.250	0.703
38-5	1130	WEST FACE, BELOW CAP	CRACK (33IN LONG)	1	2.750	0.500	0.250	0.344

1080 - SPALL/DELAMINATION 1090 - ABRASION (PSC/RC) 1110 - PRESTRESSED CONCRETE CRACKING 1130 - REINFORCED CONCRETE CRACKING

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: DEFICIENCIES TO REPAIR (1 OF 4)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-24

REVISED PLANS FOR ADDENDUM No. 3

PIER CAP	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
3	1080	EAST SIDE AT COLUMN 1	DELAMINATION (2FT X 2FT X 3IN)	1	2.000	2.000	0.250	1.000
3	1080	EAST SIDE BETWEEN GIRDERS 4 & 5	DELAMINATION (2FT X 1FT X 3IN)	1	2.000	1.000	0.250	0.500
3	1080	EAST SIDE AT COLUMN 2	DELAMINATION (3FT X 3FT X 3IN)	1	3.000	3.000	0.250	2.250
4	1080	EAST FACE OVER COLUMN 4-2	7FT. L X 2FT. H DELAMINATION	1	7.000	2.000	0.250	3.500
4	1080	EAST FACE OVER COLUMN 4-1	32IN H X 22IN L X 3IN D SPALL/DELAMINATION	1	2.667	1.833	0.250	1.222
4	1080	WEST FACE OVER COLUMN 4-1	24IN L X 20IN H DELAMINATION	1	2.000	1.667	0.250	0.833
4	1080	NORTH FACE ABOVE PILE 1	SPALL (2FT X 6IN X 3IN)	1	2.000	0.500	0.250	0.250
5	1080	EAST FACE BETWEEN COLUMNS 5-1 & 5-2	THREE DELAMINATIONS UP TO 4FT. L X 2FT. H	3	4.000	2.000	0.250	6.000
5	1080	WEST FACE BETWEEN COLUMNS 5-1 & 5-2	7FT. L X 17IN H DELAMINATION	1	7.000	1.417	0.250	2.479
5	1130	BETWEEN BEAMS 5-5 AND 5-7	CRACKS UP TO 10FT. L X 1/64IN W WITH EFFLORESCENCE	1	10.000	0.500	0.250	1.250
6	1080	WEST FACE, NORTH OF COLUMN 6-1	3FT. L X 1FT. H DELAMINATION	1	3.000	1.000	0.250	0.750
6	1080	WEST FACE BETWEEN COLUMNS 6-1 & 6-2	4FT. L X 3FT. H DELAMINATION	1	4.000	3.000	0.250	3.000
6	1080	EAST FACE, NORTH OF COLUMN 6-1	3FT. L X 2FT. H DELAMINATION	1	3.000	2.000	0.250	1.500
6	1080	NORTH WEST CORNER	SPALL/DELAMINATION 24IN L X 10IN H 1/2IN D	1	2.000	0.833	0.083	0.139
7	1080	WEST FACE, 24IN FROM THE NORTH END	9FT. L X 1FT. H CONCRETE PATCH. (PREVIOUSLY SPALL)	1	9.000	1.000	0.250	2.250
7	1080	EAST FACE BETWEEN COLUMNS 7-1 & 7-2	FOUR DELAMINATIONS UP TO 5FT. L X 42IN H	4	5.000	3.500	0.250	17.500
7	1080	EAST FACE OVER COLUMN 7-1	1FT. L X 1FT. H DELAMINATION	1	1.000	1.000	0.250	0.250
7	1080	SOUTH END, UNDERSIDE	4FT. L X 2FT. W DELAMINATION	1	4.000	2.000	0.250	2.000
8	1080	EAST FACE EXTENDING SOUTH AND NORTH FROM COLUMN 8-2	DELAMINATION 6FT. L X 12IN H	1	6.000	1.000	0.250	1.500
8	1080	EAST FACE EXTENDING SOUTH AND NORTH FROM COLUMN 8-2	DELAMINATION 7FT. L X 3FT. H	1	7.000	3.000	0.250	5.250
9	1080	WEST FACE OVER COLUMNS 9-1 & 9-2	TWO SPALLS/DELAMINATION UP TO 36IN L X 5FT. H X 1IN D	2	3.000	5.000	0.083	2.500
9	1080	EAST FACE EXTENDING NORTH 2FT. FROM COLUMN 9-2	44IN L X 28IN H DELAMINATION	1	3.667	2.333	0.250	2.139
9	1080	EAST FACE EXTENDING SOUTH FROM BEAM 9-6	5FT. L X 30IN H DELAMINATION	1	5.000	2.500	0.250	3.125
10	1080	SOUTH OVERHANG UNDERSIDE	3FT. L X 12IN W DELAMINATION	1	3.000	1.000	0.250	0.750
10	1130	NORTH OVERHANG ABOVE COLUMN 1 (EAST SIDE)	CRACK 5FT LONG	1	5.000	0.500	0.250	0.625
11	1080	EAST FACE OVER COLUMN 11-1	TWO SPALLS/DELAMINATIONS UP TO 3FT. L X 3FT. H X 1-1/2IN D	2	3.000	3.000	0.125	2.250
11	1080	BETWEEN COLUMNS 11-1 & 11-2	2 DELAMINATIONS UP TO 2FT. L X 2FT. H	2	2.000	2.000	0.250	2.000
12	1080	WEST FACE, BETWEEN COLUMNS 12-1 & 12-2	2 DELAMINATIONS UP TO 33IN L X 16IN H	2	2.750	1.333	0.250	1.833
12	1080	WEST FACE, NORTH OVERHANG	30IN L X 20IN H DELAMINATION	1	2.500	1.667	0.250	1.042
12	1080	EAST FACE, BETWEEN COLUMNS 12-1 & 12-2	40IN L X 5IN H DELAMINATION	1	3.333	0.417	0.250	0.347
12	1080	EAST FACE, SOUTH OVERHANG	5FT. L X 2FT. H X 1/2IN D SPALL/DELAMINATION	1	5.000	2.000	0.042	0.417
13	1080	WEST FACE, OVER COLUMN 13-1	4FT. L X 6IN H X 2IN D SPALL/DELAMINATION	1	4.000	0.500	0.167	0.333
13	1080	WEST FACE, EXTENDING NORTH FROM COLUMN 13-2	5FT. L X 16IN H DELAMINATION	1	5.000	1.333	0.167	1.111
13	1080	EAST FACE, OVER COLUMN 13-2	32IN L X 6IN H DELAMINATION	1	2.667	0.500	0.250	0.333
14	1080	BOTTOM FACE, SOUTH OF COLUMN 14-1	6FT. L X 30IN W X 4IN D SPALL WITH 6 REBARS EXPOSED	1	6.000	2.500	0.333	5.000
14	1080	EAST & WEST FACE	4FT. L X 8IN H DELAMINATION	1	4.000	0.667	0.250	0.667
14	1080	EAST FACE, OVER COLUMN 14-2	2FT. L X 1FT. H DELAMINATION	1	2.000	1.000	0.250	0.500
15	1080	WEST FACE, SOUTH HAUNCH	30IN L X 8IN H DELAMINATION	1	2.500	0.667	0.250	0.417
15	1080	EAST FACE, OVER COLUMN 15-1	18IN L X 10IN H DELAMINATION	1	1.500	0.833	0.250	0.312
16	1080	EAST FACE, OVER COLUMN 16-2	52IN L X 7IN H DELAMINATION	1	4.333	0.583	0.250	0.632
17	1080	WEST FACE, OVER COLUMN 17-2	40IN L X 7IN H DELAMINATION	1	3.333	0.583	0.250	0.486
17	1080	EAST FACE, OVER COLUMN 17-1	34IN L X 7IN H DELAMINATION	1	2.833	0.583	0.250	0.413
18	1080	WEST FACE, NORTH HAUNCH	6IN L X 27IN H DELAMINATION	1	2.250	0.500	0.250	0.281
18	1080	SOUTHWEST CORNER	2FT. H X 6IN L DELAMINATION	1	2.000	0.500	0.250	0.250
19	1080	WEST FACE, OVER COLUMN 19-1	48IN L X 10IN H DELAMINATION	1	4.000	0.833	0.250	0.833
19	1080	EAST FACE, OVER COLUMN 19-1	48IN L X 12IN H DELAMINATION	1	4.000	1.000	0.250	1.000

1080 - SPALL/DELAMINATION 1090 - ABRASION (PSC/RC)

1110 - PRESTRESSED CONCRETE CRACKING

1130 - REINFORCED CONCRETE CRACKING

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: DEFICIENCIES TO REPAIR (2 OF 4)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-25

PIER CAP	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
19	1080	EAST FACE, OVER COLUMN 19-2	20IN L X 6IN H DELAMINATION	1	1.667	0.500	0.250	0.208
19	1080	SOUTHEAST CORNER, TOP SECTION	9IN L X 25IN H DELAMINATION	1	2.083	0.750	0.250	0.391
19	1080	ON TOP OF EDGE EXTENDING NORTH & ON BOTTOM EDGE, ABOVE COLUMN 19-2	TWO DELAMINATIONS UP TO 42IN L X 6IN W	2	3.500	0.500	0.250	0.875
20	1080	EAST FACE, NORTH OF COLUMN 20-1	88IN L X 12IN H DELAMINATION	1	7.333	1.000	0.250	1.833
20	1080	EAST FACE, SOUTH OF COLUMN 20-1	24IN L X 7IN H DELAMINATION	1	2.000	0.583	0.250	0.292
20	1080	EAST FACE, OVER COLUMN 20-2	52IN L X 6IN H DELAMINATION	1	4.333	0.500	0.250	0.542
20	1080	SOUTHEAST TOP CORNER	12IN L X 12IN H X 1IN D SPALL/DELAMINATION	1	1.000	1.000	0.083	0.083
22	1080	WEST FACE, OVER COLUMN 22-1	56IN L X 9IN H DELAMINATION	1	4.667	0.750	0.250	0.875
22	1080	WEST FACE, OVER COLUMN 22-1	CRACKING 56IN LONG	1	4.667	0.500	0.250	0.583
22	1080	EAST FACE, OVER COLUMN 22-2	42IN L X 9IN H DELAMINATION	1	3.500	0.750	0.250	0.656
22	1080	SOUTH HAUNCH AREA.	3FT. L X 3IN W CONCRETE PATCH. (PREVIOUSLY SPALL)	1	3.000	0.250	0.250	0.188
23	1080	EAST FACE, OVER COLUMN 23-2	72IN L X 15IN H DELAMINATION	1	6.000	1.250	0.250	1.875
24	1080	WEST AND EAST FACE, OVER COLUMN 24-1	3FT. L X 6IN H DELAMINATION	1	3.000	0.500	0.250	0.375
25	1080	SOUTH SIDE OF THE NORTH HAUNCH.	30IN L X 10IN W CONCRETE PATCH. (PREVIOUSLY SPALL)	1	2.500	0.833	0.250	0.521
25	1080	EAST FACE, OVER COLUMN 25-1	45IN L X 14IN H DELAMINATION	1	3.750	1.167	0.250	1.094
27	1080	WEST FACE, SOUTH OF COLUMN 27-2	24IN L X 12IN H X 1IN D SPALL/DELAMINATION	1	2.000	1.000	0.250	0.500
28	1080	WEST FACE, OVER COLUMN 28-2	38IN L X 12 H X 2IN D SPALL/DELAMINATION	1	3.167	1.000	0.167	0.528
29	1080	WEST FACE, OVER COLUMN 29-2, TOP SECTION	9FT. L X 10IN H DELAMINATION	1	9.000	0.833	0.250	1.875
29	1080	EAST FACE, OVER COLUMN 29-1	27IN L X 12IN H DELAMINATION	1	2.250	1.000	0.250	0.563
29	1080	BOTTOM FACE ADJACENT COLUMNS 29-1	40IN L X 36IN W X 2IN D SPALL/DELAMINATION	1	3.333	3.000	0.167	1.667
29	1080	WEST FACE ABOVE COLUMN 1	DELAMINATION (3FT X 8IN X 3IN)	1	3.000	0.666	0.250	0.500
29	1080	WEST FACE, MIDSPAN	DELAMINATION (2FT X 6IN X 3IN)	1	2.000	0.500	0.250	0.250
30	1080	NORTHWEST AND NORTHEAST CORNER	20IN H X 14IN W DELAMINATION	1	1.667	1.167	0.250	0.486
30	1080	BOTTOM FACE BETWEEN COLUMNS 30-1 ADJACENT TO 30-2	2FT. L X 1FT. W DELAMINATION	1	2.000	1.000	0.250	0.500
30	1080	SOUTHWEST CORNER AND SOUTHEAST CORNER	2FT. H X 2FT. W X 3IN D SPALL WITH EXPOSED REBAR	1	2.000	2.000	0.250	1.000
31	1080	EAST FACE, OVER COLUMN 31-2	42IN L X 5IN H DELAMINATION	1	3.500	0.417	0.250	0.365
31	1080	SOUTH HAUNCH SW CORNER	1FT. H X 1FT. W DELAMINATION	1	1.000	1.000	0.250	0.250
32	1080	EAST FACE, BETWEEN COLUMN 32-1 & 32-2 EXTENDING INTO BOTTOM FACE	40IN L X 20IN H DELAMINATION	1	3.333	1.667	0.250	1.389
32	1080	SOUTHEAST TOP CORNER	7IN H X 16IN W DELAMINATION	1	1.333	0.583	0.250	0.194
32	1080	EAST FACE	SPALL (3FT X 1FT X 3IN)	1	3.000	1.000	0.250	0.750
33	1080	EAST FACE BOTTOM AND TOP SECTION BETWEEN BEAMS 6 AND 7	2 DELAMINATIONS UP TO 31IN L X 15IN H	2	2.583	1.250	0.250	1.615
34	1080	BOTTOM WEST EDGE/FACE, BETWEEN COLUMNS 34-1 & 34-2	SPALL/DELAMINATION 13.5FT. L X 2FT. W X 4IN D WITH EXPOSED REBAR.	1	13.500	2.000	0.333	9.000
34	1080	TOP AND BOTTOM EAST EDGE/FACE AND UNDERSIDE, BETWEEN COLUMNS 34-1	FOUR DELAMINATIONS UP TO 3FT. L X 2FT. W	4	3.000	2.000	0.250	6.000
34	1080	SOUTHWEST TOP CORNER	6IN H X 20IN W DELAMINATION	1	0.500	1.667	0.250	0.208
34	1080	WEST FACE TOP AND BOTTOM, BETWEEN BEAMS 5 AND 6 AND UNDER UTILITY	3 DELAMINATIONS UP TO 54IN L X 8IN H	3	4.500	0.667	0.250	2.250
35	1080	TOP AND BOTTOM EAST EDGE/FACE, BETWEEN COLUMNS 35-1 & 35-2	FOUR DELAMINATIONS UP TO 17FT. L X 1FT. H	4	17.000	1.000	0.250	17.000
35	1080	SOUTH HAUNCH, SE CORNER	2FT. L X 2FT. W DELAMINATION	1	2.000	2.000	0.250	1.000
35	1080	EAST FACE, BETWEEN BEAMS 35-4 & 35-5	4FT. L X 1FT. H DELAMINATION	1	4.000	1.000	0.250	1.000
36	1080	TOP/BOTTOM W EDGE/FACE, UNDERSIDE & SOUTH END BETWEEN COLUMNS 36-1/36-2	FOUR DELAMINATIONS UP TO 38IN L X 21IN H	4	3.167	1.750	0.250	5.542
36	1080	TOP AND BOTTOM EAST EDGE/FACE	THREE DELAMINATIONS UP TO 46IN L X 23IN H	3	3.833	1.917	0.250	5.510
36	1080	SOUTH END	12IN H X 24IN W DELAMINATION	1	1.000	2.000	0.250	0.500
37	1080	WEST FACE, OVER COLUMN 37-1	12IN L X 48IN H DELAMINATION	1	1.000	4.000	0.250	1.000
37	1080	WEST FACE, OVER COLUMN 37-2	24IN L X 36IN H DELAMINATION	1	2.000	3.000	0.250	1.500
37	1080	WEST FACE, NORTH END	16IN L X 24IN H DELAMINATION	1	1.333	2.000	0.250	0.667
37	1080	EAST FACE, BETWEEN COLUMNS 37-1 & 37-2	11IN L X 25IN H DELAMINATION	1	0.917	2.083	0.250	0.477
38	1080	WEST FACE, SOUTH END	28IN L X 16IN H DELAMINATION	1	2.333	1.333	0.250	0.778
38	1080	WEST FACE, OVER COLUMN 38-2	44IN L X 12IN H DELAMINATION	1	3.667	1.000	0.250	0.917
40	1080	NORTH FACE EXTENDING FROM COLUMN 40-2	SPALL AREA WITH EXPOSED STEEL AND CORROSION BLEEDOUT	1	1.000	1.000	0.250	0.250

1080 - SPALL/DELAMINATION 1090 - ABRASION (PSC/RC) 1110 - PRESTRESSED CONCRETE CRACKING 1130 - REINFORCED CONCRETE CRACKING

BRIDGE NO. 874544

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: DEFICIENCIES TO REPAIR (3 OF 4)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-26

BEAM #	DEFECT #	LOCATION	DEFICIENCY	QTY	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
1-14	1080	PIER CAP 2	DELAMINATION (8IN X 5IN X 5IN)	1	0.667	0.417	0.417	0.116
1-14	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
2-14	1080	PIER CAP 3	DELAMINATION (8IN X 5IN X 5IN)	1	0.667	0.417	0.417	0.116
2-14	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
4-14	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
4-14	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
5-11	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
5-11	1080	BOTTOM NORTH FLANGE	DELAMINATION (4FT X 10IN X 3IN)	1	4.000	0.833	0.250	0.833
6-11	1080	BENT 6	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 0.50IN)	1	1.000	0.250	0.042	0.010
6-11	1100	PIER CAP 6	DELAMINATION (4FT X 7IN X 3IN)	1	4.000	0.583	0.250	0.583
6-13	1110	NORTH BOTTOM FLANGE, PIER CAP 6	HORIZONTAL CRACK (36IN)	1	3.000	——	——	——
7-11	1080	BENT 7	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 0.50IN)	1	1.000	0.250	0.042	0.010
7-11	1100	PIER CAP 7	DELAMINATION (4FT X 12IN X 3IN)	1	4.000	1.000	0.250	1.000
7-14	1110	SOUTH BOTTOM FLANGE, PIER CAP 8	HORIZONTAL CRACK (24IN)	1	2.000	——	——	——
7-14	1110	SOUTH BOTTOM FLANGE, PIER CAP 8	DIAGONAL CRACK (16IN)	1	1.333	0.500	0.250	0.167
8-11	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
8-11	1080	BOTTOM NORTH FLANGE OVER BENT 8 CAP	DELAMINATION (4FT X 10IN X 3IN)	1	4.000	0.833	0.250	0.833
8-13	1110	NORTH BOTTOM FLANGE, PIER CAP 9	HAIRLINE CRACK (28IN)	1	2.333	——	——	——
8-14	1110	NORTH AND SOUTH FACE OVER BENT 9	DIAGONAL HAIRLINE CRACK (24IN)	2	2.000	——	——	——
9-11	1080	NORTH BOTTOM FLANGE, PIER CAP 9	DELAMINATION (2FT X 3IN X 3IN)	1	2.000	0.250	0.250	0.125
9-11	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
9-13	1090	TOP OF FLANGE AT SLAB	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 0.50IN)	1	1.000	0.250	0.042	0.010
9-14	1110	NORTH AND SOUTH FACE OVER BENT 9	DIAGONAL HAIRLINE CRACK (24IN)	2	2.000	——	——	——
10-11	1100	NORTH BOTTOM FLANGE, PIER CAP 10	DELAMINATION (2FT X 5IN X 3IN)	1	2.000	0.417	0.250	0.208
10-11	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
11-11	1080	NORTH BOTTOM FLANGE, PIER CAP 9	DELAMINATION (2FT X 3IN X 3IN)	1	2.000	0.250	0.250	0.125
14-4	1080	BEAM ENDS	DELAMINATION (6IN X 3IN X 3IN)	1	0.500	0.250	0.250	0.031
16-14	1110	SOUTH BOTTOM FLANGE, PIER CAP 16	VERTICAL CRACK (28IN)	1	2.333	——	——	——
20-13	1080	BEAM ENDS	DELAMINATION (6IN X 3IN X 3IN)	1	0.500	0.250	0.250	0.031
20-13	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
27-12	1110	SOUTH BOTTOM FLANGE, PIER CAP 27	HORIZONTAL HAIRLINE CRACK (36IN)	1	3.000	——	——	——
30-14	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
30-14	1080	END BEAM DIAPHRAGM	DELAMINATION (16IN X 12IN X 0.50IN)	1	1.333	1.000	0.042	0.056
32-12	1100	BOTTOM FLANGE, PIER CAP 33	DELAMINATION (1FT X 6IN X 1IN)	1	1.000	0.500	0.083	0.042
36-14	1080	SOUTH BOTTOM FLANGE, PIER CAP 36	DELAMINATION (8FT X 1FT X 3IN)	1	8.000	1.000	0.250	2.000
39-14	1110	SOUTH BOTTOM FLANGE, PIER CAP 40	VERTICAL CRACK (30IN)	1	2.500	——	——	——
40-1	1100	BOTTOM FLANGE, PIER CAP 40	DELAMINATION/SPALL (2FT X 8IN X 4IN)	1	2.000	0.667	0.333	0.444
40-1	1100	BOTTOM FLANGE, PIER CAP 40	DELAMINATION/SPALL (1FT X 5IN X 3IN)	1	1.000	0.417	0.250	0.104
40-11	1100	NORTH BOTTOM FLANGE, PIER CAP 40	DELAMINATION/SPALL (1FT X 6IN X 4IN)	1	1.000	0.500	0.333	0.167
40-11	1100	SOUTH BOTTOM FLANGE, PIER CAP 40	DELAMINATION/SPALL (6IN X 4IN X 4IN)	1	0.500	0.333	0.333	0.056
40-11	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
40-14	1100	BOTTOM FLANGE, PIER CAP 40	DELAMINATION/SPALL (33IN X 17IN X 4IN)	1	2.750	1.417	0.333	1.298
40-14	1080	BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 0.50IN)	1	1.000	0.250	0.042	0.010

1080 - SPALL/DELAMINATION
1090 - ABRASION (PSC/RC)
1110 - PRESTRESSED CONCRETE CRACKING
1130 - REINFORCED CONCRETE CRACKING

BRIDGE NO. 874544

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

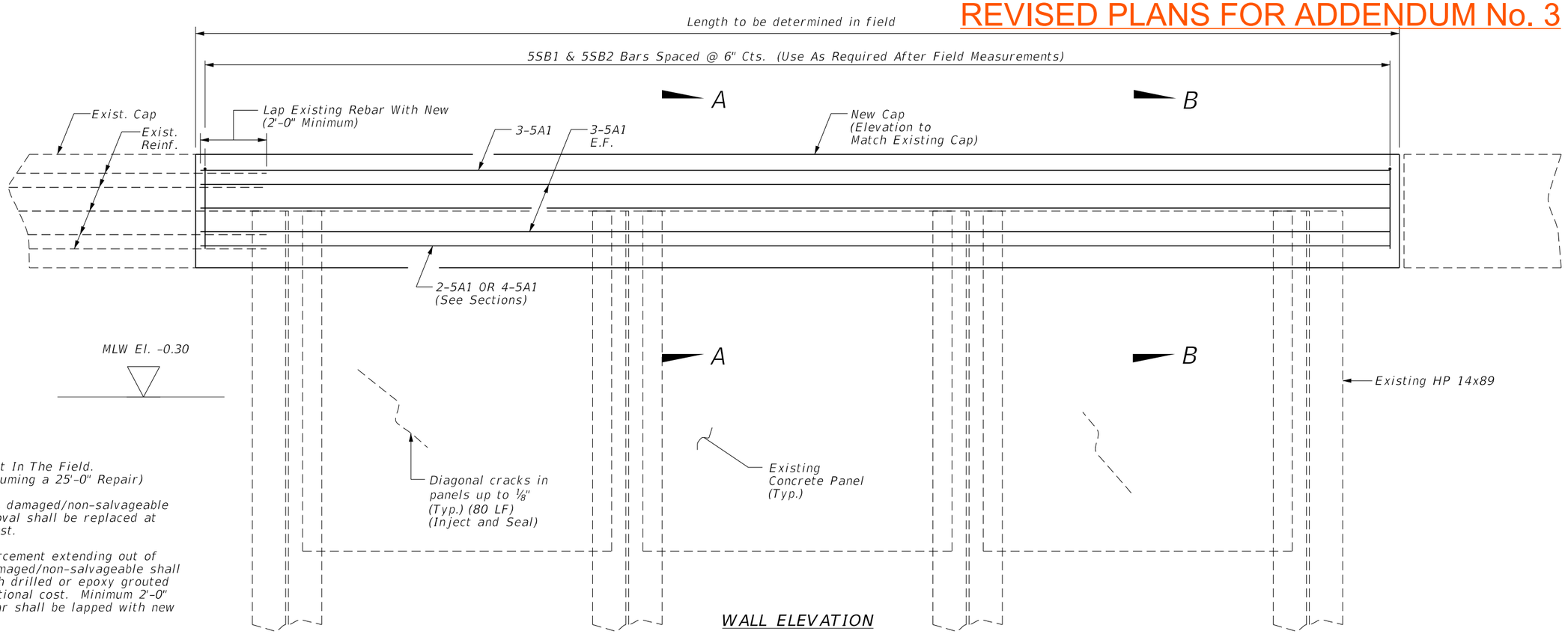
SHEET TITLE: DEFICIENCIES TO REPAIR (4 OF 4)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-27

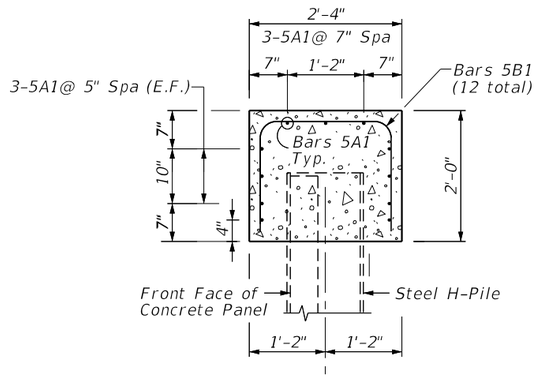
REVISED PLANS FOR ADDENDUM No. 3



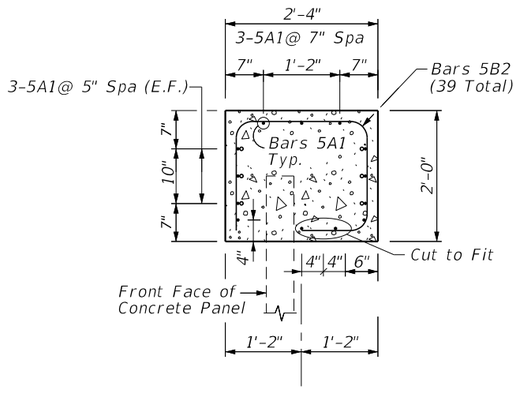
WALL ELEVATION

NOTES:

1. Cut Rebar To Fit In The Field. (Bar Layout Assuming a 25'-0" Repair)
2. Concrete Panels damaged/non-salvageable during cap removal shall be replaced at no additional cost.
3. Existing Reinforcement extending out of existing cap damaged/non-salvageable shall be replaced with drilled or epoxy grouted bars at no additional cost. Minimum 2'-0" of existing rebar shall be lapped with new rebar.
4. Quantities for cracks to be injected and sealed are estimated and will be field marked by the Engineer at time of construction.
5. Existing Bulkhead wall shall be stabilized during construction.
6. Contractor shall monitor the existing bulkhead wall during construction and if deflection of the wall is noted construction operations shall cease and the Engineer of Record shall be notified.



SECTION A-A



SECTION B-B

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	BWC
CHECKED BY:	HNG
DESIGNED BY:	BWC
CHECKED BY:	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: BULKHEAD REPAIRS AT ABUTMENT 42 SEAWALL

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-28

REVISED PLANS FOR ADDENDUM No. 3

LOCATION - BULKHEAD REPAIRS

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	Ø	REMARKS
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG	
NO REQUIRED = 1																																		
5	A1	25	0	13	1			25	0																									
5	B1	5	7	12	11			2	1		1	9		1	9																			
5	B2	6	9	39	5			1	9		2	1		---			1	2																

BRIDGE NO. 874544

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15 - 23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: REINFORCING BAR LIST

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-29

APPENDIX “E” TO SPECIAL PROVISIONS

TECHNICAL SPECIFICATIONS

SECTION 02745

PAVEMENT REMOVAL AND REPLACEMENT

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. Work included under this Section covers the furnishing of all labor, equipment and material required for cutting, removing, protecting, constructing, replacing or stabilizing all existing roadways, driveways and pavements.

B. All existing utility castings, including valves boxes, junction boxes, manholes, handholes, pull boxes, inlets and similar structures in the areas of trench restoration, pavement replacement and pavement overlay shall be adjusted by the Contractor to bring them flush with the surface of the finished work.

1.02 QUALITY CONTROL

The phrase "DOT Specifications" shall refer to the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition. The DOT Specifications, are referred to herein and are hereby made a part of this Contract to the extent of such references, and shall be as binding upon the Contract as through reproduced herein in their entirety.

1.03 DAMAGE BY CONTRACTOR

A. The Contractor shall protect from damage by construction operations, all pavements, including all base courses and surface courses, within the work area.

B. Any base course or surface course beyond those limits, damaged as a result of the Contractor's operation, shall be restored in accordance with the applicable requirements of these Specifications, to the satisfaction of the Department, and to the satisfaction of the governing authority having jurisdiction over the work area.

C. Any damage to adjacent lanes of pavement will require the Contractor to resurface the entire lane width for a length, as approved by the Department. When the damage amounts to 25 percent or more in any one block (approximately 600 feet), the Contractor shall resurface the entire width of the lane in which the damage occurred for the entire block.

D. The Contractor is hereby notified that wherever the line for repaving for trenches extends one foot into the edge of the existing paving, he shall repave to this edge only. Full lane paving will not be required. Damage to the pavement beyond this line by the Contractor will require that he repave the full width.

E. In order to protect himself from being held liable for any existing damaged pavement, including detour routes, the Contractor is advised to notify in writing the authority having jurisdiction over the street where such defective pavement exists prior to proceeding with any work in the vicinity. A copy of all such notices shall be forwarded to the Department.

PART 2 - PRODUCTS

2.01 MATERIAL, GENERAL

A. Limerock Base: The limerock base shall consist of either one or two courses limerock obtained from local sources where the overburden was removed from the pits prior to mining operations. The limerock shall comply with the requirements of DOT Specifications, Section 200 and Section 911 for Miami Oolite limerock, with a maximum size of the aggregate to be 1-1/2 inches.

B. Prime Coat and Tack Coat shall be as specified Section 02741.

C. Asphaltic Concrete: The materials and construction of the asphaltic concrete patch and surface courses shall be Type S-1 Asphaltic Concrete conforming to Sections 330, 331 and 916 of the DOT Specifications.

D. Sand cover material shall be clean and non-plastic, and shall be composed of hard durable grains, free from loam, roots, silt, clay, or rock particles and other deleterious substances. Local sand meeting such requirements may be used. Sand shall be subject to approval by the Department.

E. 1:10 Mix: Sand-cement mix for backfill within state roads shall be a 1:10 mix of Type I or II Portland Cement and Sand that shall produce a slump of 4 to 6 inches.

F. Flowable fill: Flowable fill, as specified in Section 03375, shall be used as backfill only when indicated per FDOT permit requirement or as directed by the Engineer of Record. It shall be used for trenches, support for pipe structures, culverts, utility cuts and other works where cavities exist and where firm support is needed for pavements and structural elements.

2.02 BITUMINOUS PAVING MATERIAL

Asphalt cement for asphaltic concrete mixes shall be Viscosity Grade AC-20, homogeneous, free from water and shall meet the requirements of D.O.T Specifications, Section 916-1. Unless otherwise specified, all test samples required shall be supplied by the Contractor. For friction courses, in addition to meeting the above requirements, the bituminous material shall contain 0.5% of a heat-stable, anti-stripping additive from an approved source.

A. Asphaltic Concrete - Type S-I Mix shall meet the requirements of D.O.T. Specifications for Type S-I Asphaltic Concrete, Sections 330, 331 and 916 of D.O.T Specifications.

B. Asphaltic Concrete - Type I Mix shall meet the requirements of Dade County Public Works Department Specifications for Type I Asphaltic Concrete Surface Course, Section 133 of the Public Works Manual.

C. Asphaltic Concrete - Type III Mix for asphaltic concrete wearing surface overlay, both machine laid and standard (skin patch), shall meet the requirements of D.O.T. Specifications for Type III Asphaltic Concrete, Section 333-1 through Section 333-6.

D. Type V paving repairs shall consist of a machine-laid asphaltic concrete wearing surface overlay, which shall be a nominal one-inch thick asphaltic concrete, meeting the material requirements of Type I repairs. See subsection 3.07, below.

E. Asphaltic Concrete - Type FC-1, FC-2, FC-3 and FC-4 shall meet the requirements of D.O.T Specifications for Friction Courses, Sections 337-1 through Section 337-7.

F. Emulsified Asphalt for Slurry Seal Coat shall be of the slow-setting, mixing type and shall be homogeneous, meeting the requirements of the Asphalt Institute, Grade SS-1 or SS-1h.

G. Liquid Asphalt for Prime and Tack Coat: See Section 02741.

H. Liquid Asphalt for Sand and Asphalt Paving shall be asphalt cement, viscosity Grade AC-5 or emulsified asphalt, Grade RS-2 (anionic) conforming to the requirements of D.O.T. Specifications, Section 916-1 and 916-4, respectively.

I. Mineral Aggregate for Slurry Seal Coat shall consist of screened sand or limestone screenings or gray granite screenings or a mixture of sand and screenings plus not less than 3%, by weight, of Type I or Type II Portland cement.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

A. Permanent pavement repair shall be in accordance with the details shown in the Standard Details herein, with edges straight and parallel and patches rectangular in plan. Replace any paving, beyond the limits shown in the details and as called for in the Specifications, as required. Where trenches are located out of the existing pavement and damage occurs to the pavement, that pavement shall also be replaced by the Contractor.

B. Pavement markings removed or obliterated by the Contractor's operations shall be promptly replaced, in kind, to the satisfaction of the Miami-Dade County Department of Public Works, Traffic Engineering Division, or other authority having jurisdiction over the work area.

C. All equipment necessary for construction shall be on the job site in first class working condition. Spilling or dropping of petroleum products is prohibited and all defective equipment shall be removed or replaced immediately. The Contractor shall be subject to all DERM (Department of Environmental Resources Management) regulations and clean up requirements.

D. The percentages of maximum density for subgrade and limerock base specified herein are minimum. Greater percentages of maximum density shall be obtained, if so required, by the governing authority having jurisdiction over the work location.

E. Asphaltic concrete mixtures shall be obtained only from plants which comply with the requirements of D.O.T. Specifications, Section 320 as applicable, using materials specified herein, and producing the specified mixture. General construction requirements for all hot bituminous mixtures specified herein shall conform to D.O.T. Specifications, Section 330, as applicable.

F. Asphaltic concrete shall be laid only where the surface to be covered is intact, firm, cured and dry, and only when weather conditions are suitable. The temperature of the mixture at the time of spreading shall be within limits of Florida D.O.T. specifications or within 25 degrees of the temperature set by the Department. No mixture shall be spread when the air temperature is less than 40 degrees Fahrenheit.

G. Any mixture caught in transit by a sudden rain may be laid at the Contractor's risk, if the base is in suitable condition. Under no circumstances shall asphaltic material be placed while rain is falling, or when there is water on the area to be paved.

H. Subgrade: Roadway subgrades shall be stabilized to the minimum depth shown on the Drawings to a Limerock Bearing Ratio of not less than 40. Stabilizing shall be Type B as defined in Section 160 of the DOT Specifications. Stabilization may require the addition and thorough mixing in of crushed limerock, course limerock screenings, or any other stabilizing material acceptable to the Department. The stabilizing material shall be applied in such quantity that, after mixing and blending, the subgrade will have a LBR of not less than 40. Stabilizing material shall be mixed or blended in the subgrade material by plowing, scarifying, disking, harrowing, blading and mixing with rotary tillers until the mixed materials are of uniform bearing value throughout the width and depth of the layer being processed.

I. At least three density determinations shall be made on each day's final compaction operations on each course, and the density determinations shall be made at more frequent intervals if deemed necessary by the Department.

J. Limerock Base: The limerock base shall be constructed in accordance with Sections 200 and 911 of the DOT Specifications, to the thickness and width indicated on the Drawings.

K. After spreading of the base material is completed, the entire surface shall be scarified and shaped so as to produce the exact grade and cross section after compaction. For double course base, this scarifying shall extend a depth sufficient to penetrate slightly the surface of the first course. The maximum depth of each lift shall be 8-inches.

L. When the material does not have the proper moisture content to insure the required density, wetting or drying shall be required. If the material is deficient in moisture, water will be added and uniformly mixed in by disking the base course to its full depth. If the material contains an excess of moisture, it shall be allowed to dry before being compacted. As soon as proper conditions of moisture are attained, the material shall be compacted to an average density not less than 98 percent maximum density as determined in more than one course, the density shall be obtained in each lift of the base.

M. During final compacting operations, if blading of any areas is necessary to obtain the true grade and cross section, the compacting operations for such areas shall be completed prior to making the density determination on the finished base.

N. Unless otherwise directed by the Engineer of Record, the surface shall be "hard-planed" with a blade grader immediately prior to the application of the prime coat to remove the thin glaze or cemented surface and to allow free penetration of the prime material. The materials planed from the base shall be removed from the base area.

O. If cracks or checks appear in the base, either before or after priming, which in the opinion of the Department, would impair the structural efficiency of the base course, the CONTRACTOR shall remove such cracks or checks by rescarifying, reshaping, adding base material where necessary and recompacting.

P. Mixing Base and Subgrade: If at any time the subgrade material shall become mixed with the base course material, the CONTRACTOR shall, without additional compensation, dig out and remove the mixture, reshape and compact the subgrade and replace the materials removed with clean base material, which shall be shaped and compacted as specified above.

Q. Asphaltic Concrete: The spreading, compacting and jointing the wearing surface shall be in accordance with Sections 330 and 331 of the DOT Specifications to the thickness indicated on the Drawings.

3.02 TEMPORARY PAVING

A. Prior to commencing excavation, the asphalt surface shall be saw-cut within the limits of the allowable trench width. Temporary paving will be required along the entire route where the original paved surface is removed. Unless otherwise approved by the Department, temporary paving shall be placed the same day the trench is backfilled. The trench shall be backfilled up to a level 1 inch below the existing pavement surface and a temporary, cold mixed sand/asphalt pavement shall be constructed up to the level of the existing pavement surface. The liquid asphalt shall be Grade RC-70, conforming to the requirements of D.O.T. Specifications, Section 916-2. The sand shall conform to the requirements of D.O.T. Specifications, Section 902 for fine aggregate.

B. The cold mix is to be installed one block at a time, not crossing any intersection, or a maximum of 1,200 feet shall be completed before the Contractor may move forward with his excavation work. Backfill, compaction and temporary paving is to keep pace with the pipe installation. Written permission must be obtained from the Department and the municipal agency permitting the work to allow greater lengths than 1,200 feet. Permitting agencies may reduce the allowable limits in their permit, or for other unforeseen right-of-way conditions.

C. Prior to completion of the work and within a maximum of 30 calendar days, the Contractor shall remove the 1 inch of cold mix and surplus backfill. He shall replace it with the specified compacted limerock base course and asphaltic within the specified working limits. Municipal agencies permitting this work may accelerate the time for removal of the cold mix, at their discretion.

D. The temporary pavement shall be maintained by the Contractor in a condition satisfactory to the Department until its removal. Removal shall include any surplus backfill material. Replacement of the temporary pavement with permanent pavement shall be made within 30

days. In replacing the temporary paving with permanent pavement, all work shall be completed in sections compatible with specified traffic maintenance procedures.

E. The Contractor may elect to install a suitable temporary hot mix asphaltic pavement, to be left in-place, in lieu of cold mix, when the hot mix asphalt is left in-place and installed over properly compacted limerock base course. This temporary pavement shall be incorporated into the specified permanent pavement restoration as part of Type I paving restoration.

F. Sand seal on the limerock base course will not be permitted in lieu of temporary paving.

G. Unless otherwise approved by the Department, temporary paving, shall be placed within twenty-four hours following the completion of backfilling.

3.03 TYPE I PAVING REPAIR (Limerock Base - Asphaltic Concrete Surface)

A. Type I paving repairs shall be made with an 8-inch thick compacted limerock base and a minimum 1-inch thick asphaltic concrete surface, as detailed in the Standard Details. On Public Works roads asphaltic concrete shall have a compacted thickness of 2-inch, placed in a minimum of two (2) compacted 1-inch lifts.

B. The backfill previously placed and compacted shall be excavated to the required depth below the existing road surface and the existing paving shall be cut back beyond all excavations, using an abrasive disc saw to trim the edges to straight and true lines, minimum width for the limerock base shall be equal to the trench width plus 2 feet. Eight inches of limerock base shall be placed in two layers, each layer compacted to not less than ninety-eight percent (98%) density in accordance with Section 200 of D.O.T. Specifications. During rolling, the base shall be wetted down, as necessary, to secure the greatest possible compaction. After rolling, the entire surface of the base shall be thoroughly scarified to a depth of not less than 3 inches and shaped to conform to and be parallel with the existing surface, then watered and rolled again. Rolling and watering shall continue until the entire depth of the base is bonded and compacted into an unyielding mass.

C. If at any time the subgrade material becomes mixed with the limerock base course materials, the Contractor shall, without additional compensation, dig out and remove the mixture, reshape and compact the subgrade and replace the materials removed with clean rock which shall be watered and rolled until satisfactorily compacted.

D. After the limerock base course has been properly prepared and is dry and ready to receive the wearing surface, a tack coat of emulsified asphalt, in accordance with Section 02741, shall be applied at a rate of 0.10 gallon per square yard, immediately followed by the asphaltic concrete. The tack coat shall be applied to the entire limerock base uniformly, and shall thoroughly coat all surfaced. Care shall be taken to tack coat and bond the edge of surrounding pavement.

E. The asphaltic concrete shall be plant mixed, using the best grade of local aggregates of approved size and gradation and mixed with an approved binder and conforming the either the State of Florida Department of Transportation Specifications, Type S-1 Asphaltic Concrete, Sections 330, 331 and 916 of D.O.T Specifications, or Dade County Public Works Type I, as ordered by the Engineer of Record.

F. Where the width of the repair permits, the asphaltic concrete plant mix material shall be placed by means of an approved mechanical spreader and finisher. The mixture shall be compacted to true grade and cross section by means of a tandem roller weighing not less than eight tons. The compacted asphaltic concrete mixture shall not be, in any case, less than one inch in thickness. Rolling shall proceed as closely behind the spreader as possible and all material shall be completely compacted the same day it is placed. The minimum width of the wearing surface shall be the same as the base.

3.04 TYPE II PAVING REPAIR (Special Limerock Base - Asphaltic Concrete Surface)

A. Type II repairs shall be used only when the restoration work falls within the limits of a State Road and shall be performed in accordance with the latest Florida Department of Transportation Standard Specifications for Road and Bridge Construction. Type II repairs shall be similar to Type I paving repairs except for the dimensions of the limerock base and the asphaltic concrete surface course.

B. The dimensions shall be as shown in the Department's Standard Detail or 1:10 mix to within 3 inches of grade as required by the Florida D.O.T., except that the limerock base course shall be a minimum of 18 inches and the asphaltic concrete surface course shall be 3 inches. Minimum width for the base shall be equal to the trench width plus 3 feet.

C. The compacted limerock base shall be primed at the rate of 0.10 gallons per square yard and the topped with a compacted 3-inch thick wearing surface of Type S-I asphaltic concrete. Minimum width for surface replacement shall be equal to the trench width plus 4-feet.

D. A friction type surface course may be required in addition to the standard repair. Friction courses shall be constructed using the type and thickness of asphaltic concrete specified by permit, and in accordance with the applicable provisions for Type V paving repairs.

3.05 TYPE III PAVING REPAIR (Concrete Base - Asphaltic Concrete Surface)

A. This type of repair shall be made only on Florida Department of Transportation roadways when the original pavement is composed of a concrete base and an asphaltic concrete wearing surface. The use of Type III repairs is usually confined to restoration of pavement over trenches cut across existing pavement (and traffic flow), and short trenches cut parallel to the roadway center line. A trench cut 200 feet or less in length shall be considered a "short trench".

B. Type III paving repairs shall be made with a 6-inch thick reinforced concrete base and a minimum 1-inch thick asphaltic concrete wearing surface, in accordance with the Standard Detail. Minimum width for the concrete base shall be equal to the trench width plus 2 feet.

C. The existing pavement shall be saw cut in straight lines, to form a shoulder of the required width on each side of the trench, as outlined by the Department at the location of the replacement. The pavement shall be removed and the fill shall be mechanically compacted to 98% of the maximum density obtainable as determined by AASHTO Standard T-180.

D. The fill material in the trench and shoulders shall be brought to the depth of the pavement or nine inches, whichever is greater. The fill disturbed by the removal of this material shall be recompacted, as specified above. A layer of six gauge, 6-inch X 6-inch roadway reinforcing mesh, supported on chairs or bricks, shall be placed 2-inch above the bottom of the slab. The subgrade shall then be wet down and filled to within one inch of the existing pavement surface, unless otherwise required by the Governing Municipality, with Type III High Early Strength concrete. The concrete shall be placed using a vibrator to insure a uniform density.

E. Concrete base shall be cured to comply with the requirements of D.O.T. Specifications Section 350-13.3 or other approved non-chemical method. When the concrete base has become at least 24 hours old a tack coat shall be applied at the rate of 0.10 gal. per square yard and then topped with a minimum 1-inch thick wearing surface of Type S-I asphaltic concrete, or as ordered by the Engineer, unless otherwise required by the Governing Municipality. Minimum width of the wearing surface shall be the same as the base.

F. Should the repaired area be six feet or more in width and have a length of one city block or more, the asphaltic concrete shall be placed with a finishing machine and rolled with an 8-ton tandem roller to conform to the grade of the existing pavement. For smaller repairs, the asphaltic concrete shall be spread by hand and struck off with a straight edge sufficiently high so that when it is compacted with an 8-ton roller it will conform to the grade of the existing pavement.

3.06 TYPE IV PAVING REPAIRS (Concrete Slab - Rigid Pavement)

A. Type IV repairs will be used when the restoration work falls within the limits of existing rigid pavement.

B. Paving repairs shall be similar to Type III paving repairs except that No. 4 reinforcing steel bars spaced 12 inches on centers both ways shall be substituted for the mesh reinforcement, and the slab shall be 8 inches thick instead of 6 inches, with the top of the concrete matching the elevation and finish of the existing pavement. The asphaltic concrete surface course is not required.

3.07 TYPE V PAVING REPAIRS (Asphaltic Concrete Wearing Surface Overlay)

A. Type V paving repairs shall be made where noted on the Plans and/or as ordered by the Engineer or Record. Type V paving repairs shall consist of a machine-laid asphaltic concrete wearing surface overlay, which shall be a nominal one-inch thick asphaltic concrete, meeting the material requirements of Type I repairs, as specified hereinabove. As used herein, "overlay" shall mean Type V paving repairs. A special wearing surface may be substituted, if required.

B. In general, the overlay shall be applied in a full lane width or widths, after the permanent paving repairs over the trench have been made. Type V is usually in addition to required Type I and Type II paving repairs. Since the quantity of Type V repairs that may be required is usually unknown until pavement restoration work begins, Type V repairs may be established in the Proposal on a contingent basis.

C. All longitudinal and transverse asphalt replacement overlay wearing surfaces shall butt into adjacent existing asphalt wearing surfaces in full lane asphaltic pavement restoration. The finish elevation of the new full lane overlay shall meet existing elevations adjacent to the new work.

D. The existing asphaltic concrete surface shall be saw cut for its full depth or 1-inch minimum, and then stripped back for at least 2 feet into the area to be overlaid to a second cut which shall also be in clean straight lines. The second, or interior, cut edge shall be rolled with a tandem roller weighing not less than 8 tons before the overlay is applied. The stripped area shall be used to provide a smooth transition or "feather" area between the overlay and the existing pavement. Before placing the overlay, all cut edges and the surface of the stripped area shall be tack coated with emulsified asphalt as specified hereinbelow.

E. If the Contractor requests in writing to "feather" the longitudinal edge, and if written permission is granted to "feather" the asphalt by the Department and the local municipality, a sanded mix of 70-30 type shall be used. "Feathering" shall begin 18 inches from the tapered edge.

F. Prior to installing a full lane width overlay over existing asphaltic pavement the trench and shoulders over the pipe shall be sawcut and filled with asphaltic concrete to the required depth, terminating flush with the existing adjacent asphalt in accordance with the municipality having jurisdiction over the work for Types I, II or M. Type V overlay will be installed as detailed above.

G. When a minor amount of asphalt surface will remain, generally with large pipe installations, after the pipe has been installed and the required longitudinal saw cutting of the asphaltic pavement completed, the Contractor may request permission to remove all the asphalt in the lane, by saw cutting the asphalt adjacent to the existing lane, then placing the Type V overlay flush with the adjacent asphalt. This would require that the Type I, II or M finish elevation be lowered 1 inch to allow for the Type V overlay.

H. Before the overlay is applied, existing surfaces shall be swept clean of all dirt and debris, using a power driven broom if warranted by the size of the location to be overlaid and/or as ordered by the Department. Pavement edges shall be cleared of all encroaching vegetation, loose sand, rock and all other foreign matter. When the existing surface is thoroughly clean, a tack coat of Emulsified Asphalt Grade RS-2 (anionic) shall be applied at the rate of approximately 0.10 gallon per square yard, in accordance with Section 02741, immediately followed by the asphaltic concrete overlay.

I. Machine-laid overlay shall be placed by means of an approved mechanical spreader and finisher, and the mixture shall be compacted to true grade and cross section by means of a tandem roller weighing not less than 8 tons.

J. The compacted overlay shall be thicker as required to produce a smooth uniform surface free of any irregularities, but shall not be less than one inch in thickness. Existing depressed areas in the asphaltic pavement, which could collect water after a rainfall shall be corrected before placing the asphaltic overlay. Rolling shall proceed as close behind the spreading of the asphaltic overlay as possible, and all materials shall be completely compacted the same day it is placed.

3.08 TYPE VI PAVING REPAIRS (Limerock Base - Sand Seal Surface)

A. The use of Type VI repairs is usually confined to the restoration of excavations in existing sand-seal surface areas or streets.

B. Repairs for restoration of excavations in existing sand-seal areas or roads shall consist of an 8-inch thick limerock base over the excavation and forming a shoulder 12 inches wide on each side, with the surface level with the existing grade, and a sand-seal surface course over the prepared base and complete width of the existing area or street where such existing sand-seal surface exists, for the full length of the cut.

C. Limerock base courses over excavations shall be as specified under Type I paving repairs. After the bonded base has dried sufficiently, the entire surface shall be swept to break the glaze and remove all traces of loose dirt, sand and other debris.

D. A bituminous surface treatment shall then be applied consisting of emulsified asphalt, Grade RS-2 (anionic) at a rate of approximately 0.10 gallon per square yard. The surface treatment shall immediately be covered with clean approved sand, spread by mechanical device at a rate sufficient to insure against bleeding through the sand cover, rolled and then opened to traffic and permitted to cure. During the curing period, additional sand shall be applied, if required, to prevent possible pickup of the new surface by traffic. Excess sand cover shall be swept away and removed.

3.09 TYPE M PAVING REPAIRS (Limerock Base - Asphaltic Concrete Surface)

A. Type M paving repairs shall be made where noted on the Plans and will be used only when the restoration work falls within the limits of the City of Miami. Repairs shall be similar to Type I paving repairs except for the dimensions of the limerock base and the asphaltic concrete surface course.

B. Type M paving repairs shall be made with a 12-inch thick compacted limerock base and a minimum 1½-inch thick asphaltic concrete surface as detailed in the Standard Details. Minimum width for the base shall be equal to the trench width plus one foot.

C. The backfill previously placed and compacted shall be excavated to the required depth below the existing road surface and the existing paving shall be cut back beyond all excavations, using an abrasive disc saw to trim the edges to straight and true lines. Twelve inches of limerock base shall be placed in two layers, each layer compacted to not less than 98 percent density. During rolling, it shall be wet down as necessary to secure the greatest possible compaction. After rolling, the entire surface shall be thoroughly scarified to a depth of not less than 3 inches and shaped to conform to the existing surface, then watered and rolled again. Rolling and watering shall continue until the entire depth of the base is bonded and compacted into an unyielding mass.

D. The asphaltic concrete shall be plant mixed, using the best grade of local aggregates of approved size and gradation and mixed with an approved binder and conforming to either the State of Florida Department of Transportation Specifications, Type S-1 Asphaltic Concrete, Section 331-1 through 331-5, or, City of Miami Public Works Type M, as ordered by the Department. Where the width of the repair permits, the material shall be placed by

means of an approved mechanical spreader and finisher. The mixture shall be compacted to true grade and cross section by means of a tandem roller weighing not less than eight tons. The compacted asphaltic concrete mixture shall not be, in any case, less than 1½-inch in thickness. Rolling shall proceed as closely behind the spreader as possible and all material shall be completely compacted the same day it is placed.

E. The asphaltic concrete wearing surface shall match the thickness of the adjacent roadway, but not greater than 3 inch nor less than 1-1/2 inches as specified in the Standard Details. Minimum width for the wearing surface shall be equal to the trench width plus two feet.

3.09 SLURRY SEAL COAT

A. When pavement restoration work falls within the City of Coral Gables, the existing pavement may have to be slurry-sealed as specified in Coral Gables Ordinance No. 1779. Slurry-seal repairs shall be made where ordered by the Engineer of Record or the Department.

B. Before any material is laid, the existing surface shall be cleaned with brooms or power blowers. Vegetation which has overgrown the edges shall be removed. All cracks, potholes and depressions shall be brought up to grade with bituminous concrete skin patching.

C. A tack coat, if required, shall consist of emulsified asphalt SS-1h, diluted with 3 parts of water, sprayed and squeegeed or broomed at a rate of 0.1 to 0.2 gallons per square yard.

D. A minimum thickness of 1/8-inch to a maximum of 1/4-inch of slurry mix shall be spread by a drag distributor at a maximum rate of 180 feet per minute. Any ridges or surplus material shall be smoothed by hand squeegee. The pavement shall be kept damp with a fog spray just ahead of the machine.

E. A second coat shall not be applied to, nor traffic permitted to drive upon, the first application until it has thoroughly dried. (A dry condition is such that an automobile tire track does not show after driving on the surface).

3.10 ASPHALT COLD MILLING

A. The Contractor shall perform asphalt cold milling where called for on the Plans or as required for a complete installation, when approved or requested by the Department. Cold milling shall be done using an automated pavement planer capable of maintaining an accurate depth. Cold milling equipment shall meet the approval of the Department and governing agency having jurisdiction at the location of the pavement milling operation. All charges for maintenance of traffic, transportation of personnel, equipment and other mobilization charges shall be considered as incidental to the cold milling operation.

B. Cold asphalt milling shall be provided to improve the rideability of the finished pavement, lower the finished grade adjacent to an existing curb prior to resurfacing or to completely remove existing pavement. The overall length of the milling machine (excluding the conveyor) shall be a minimum of 18 feet, and having a minimum cutting width of six feet. The milling operation shall be operated to effectively minimize the amount of dust being emitted

from the machine. Prewetting of the pavement may be required. In areas where milling is to be performed around Department utility structures such as manholes, valve boxes etc., proper caution shall be taken as not to damage any of the structures. Saw-cutting of the concrete surrounding the structure and using a pick or other means so as not to disturb the structure shall be employed to prevent any damage. Prior to opening an area which has been milled to traffic, the pavement shall be thoroughly swept with a power broom or other approved equipment to remove to the greatest extent practicable, the fine material which will dust under traffic. This operation shall be conducted in a manner so as to minimize the potential for creating a traffic hazard and to minimize air pollution.

C. The milling operation shall be continuous so as to complete each site without any delays. All milling operations shall be coordinated by the Department Inspector.

D. Traffic maintenance charges shall include the installation and maintenance of all traffic control and safety devices, in accordance with specifications outlined in the Dade County Public Works Manual. In addition, the Contractor shall provide all barricades, flashing warning lights and/or arrow boards necessary to maintain safety and warn motorists of the construction.

3.11 REPAIR OF DAMAGE PAVEMENT

A. All damage to pavement by the Contractor as a result of Work under this project shall comply with "DAMAGE BY CONTRACTOR", above, and shall be repaired in a manner satisfactory to the Department. The repair shall include the preparation of the subgrade, the placing and compacting of the limerock base, the priming of the base, the placing and maintaining of the surface treatment, all as specified herein.

B. The width of all repairs within the work area shall extend at least 12 inches beyond the limit of the damage. The edge of the pavement to be left in place shall be cut to a true edge with a saw or other acceptable method so as to provide a clean edge to abut the repair. The line of the repair shall be uniform with no irregularities. Repair of damage by the Contractor beyond the work area shall be approved by the governing agencies having jurisdiction over the work prior to commencing the work.

3.12 CONCRETE PAVEMENT REPAIR

A. This type of repair shall be made only on Florida Department of Transportation roadways when the original pavement is concrete.

B. The existing pavement shall be saw cut in straight lines as outlined by the Department at the location of the replacement. The pavement shall be removed and the fill shall be mechanically compacted to 98% of the maximum density obtainable as determined by AASHTO Standard T-180. The fill in the trench and shoulders shall be brought to a depth equal to the thickness of the existing concrete pavement, but not less than 8 inches in any case. The opening thus formed, shall be filled with concrete having a design strength of 5,000 psi and made with High Early Strength Cement. The concrete slab shall be reinforced with ½ inch steel reinforcing rods, 12 inches on center each way, placed 2 inches above the bottom of the slab. The surface of the slab shall be struck off with a screed and finished with a wood float and brush to conform to the grade and finish of the existing pavement.

Apply liquid curing compound after initial set. The Contractor shall provide adequate means to protect the slab until it has cured sufficiently to withstand vehicular traffic without spalling or breaking apart. Construction joints and expansion joints in the original pavement shall be reproduced in the repair with matching materials.

3.13 STATE ROAD PAVEMENT RESTORATION (1:10 Mix / Flowable Fill Backfill and Base and Asphaltic Concrete Surface)

A. General

1. All work performed within the right-of-way of the Florida Department of Transportation (DOT) shall comply with the requirements and conditions of the DOT, including the requirements and conditions of the DOT permits and with all requirements and conditions of these specifications.

2. The installation shall be coordinated with the DOT, the Department and the Contractor. The existing pavement shall be saw cut in straight lines, as outlined by the Department at the location of the restoration. The Contractor shall not begin work until he has received permission from them to do so.

3. State Road pavement restoration, where required and where specifically authorized by the Engineer in writing, shall be made with a backfill and base of "1:10 cement/sand concrete mix" or "flowable fill", as specified in Section 03375, a 3-inch thick asphaltic concrete course, machine-laid in two equal layers, and a 1-inch thick asphaltic concrete wearing surface (for full lane width).

B. Installation of Sand/Cement Mix

1. Installation of 1:10 Mix: In all cases, regardless of water-table location, the 1:10 mix shall be placed from a plane 12 inches above the top of the pipe to an elevation 3 inches below the adjacent asphaltic surface.

2. Installation of "Flowable Fill" Mix:

See Section 03375, "Flowable Fill".

C. Installation of Asphaltic Concrete Course

1. A 3-inch thick asphaltic concrete course shall be machine-laid in two equal layers. Then as required by the Florida D.O.T., the Contractor may be directed to cold-mill one inch, as described in Article 3.10, herein, and replace with one inch of material.

2. After the base surface has been properly prepared and is dry and ready to receive the wearing surface, a tack coat of emulsified asphalt (Grade RS-2) shall be applied at a rate of 0.10 gallon per square yard, immediately followed by the asphaltic concrete. The tack coat shall be applied to the entire base uniformly, and shall thoroughly coat all surfaces. Care shall be taken to tack coat and bond the edges of surrounding pavement.

3. The 3-inch asphaltic concrete course shall be plant mixed, using the best grade of local aggregates of approved size and gradation and mixed with an approved binder and conforming to the State of Florida Department of Transportation Specifications, Type S-1 Asphaltic Concrete, Section 331-1 through 331-5. Where the width of the repair permits, the material shall be placed by means of an approved mechanical spreader and finisher. The mixture shall be compacted to true grade and cross section by means of a tandem roller weighing not less than eight tons. The compacted asphaltic concrete mixture shall not be, in any case, less than three inches in thickness. Rolling shall proceed as closely behind the spreader as possible and all material shall be completely compacted the same day it is placed.

D. Installation of Friction Courses

1. This type of repair shall be made only on Florida Department of Transportation roadways to replace damaged existing friction courses. The particular friction course to be used at any repair location shall be as designated by the D.O.T. for that location.

2. There are 4 mixes designated by the D.O.T. as Friction courses, FC-1, FC-2, FC-3 and FC-4. Each is specified in D.O.T. Specifications, Section 337. The basic ingredients are also covered above in "Bituminous Paving Materials".

3. Methods of application are similar to those of Type S-I asphaltic concrete as specified above for Type III repairs, except that friction courses shall have a nominal thickness of 5/8 inch. The 5/8-inch nominal friction course may be placed over the 3-inches of newly placed Type S-1 asphaltic concrete or the existing asphalt concrete pavement may be milled to a nominal depth of 5/8-inch to allow for the placement of the FC-2 over the existing asphaltic concrete, as approved by the Department. Additional depth of milling of asphaltic concrete may be required by the Department for Type S-1 asphaltic concrete.
4. If the friction course is laid the same day that the underlying course was laid, no tack coat or primer is required, but if the underlying course is old enough to have cured, a tack coat of emulsified asphalt shall be applied at the rate of 0.10 gallons per square yard and topped with a 5/8-inch thick, machine-laid friction course.

3.14 STATE ROAD PAVEMENT RESTORATION (Rock Base and Asphaltic Surface Pavement)

A. These types of repairs shall be made only on Florida Department of Transportation roadways when the original pavement is other than concrete.

B. The existing pavement shall be saw cut in straight lines, as outlined by the Department at the location of the replacement, for the new asphaltic concrete. The pavement and fill in the trench and shoulders shall be removed for a varied depth of between 3 inches at the sides of the repair, and 21 inches over the trench and recompacted, if necessary. The opening thus formed shall be filled to a point 3-inches below the pavement surface with a base course of new limerock placed in layers, each 4-inches thick. The top 6-inches of sub-base and each 4-inch layer of new limerock shall be mechanically compacted to 98 percent of the maximum obtainable density but need not be water-bonded.

C. The compacted limerock base shall be primed at the rate of 0.10 gal. per square yard and then topped with a 3-inch thick wearing surface of Type S-I asphaltic concrete, or a 2-inch thickness of Type S-I and a 1-inch thickness of wearing surface. The asphaltic concrete shall be placed and finished as specified above.

END OF SECTION