

SECTION 00942 - Change Order Form

No. 01DATE OF ISSUANCE: 07/29/2021EFFECTIVE DATE: 09/21/2021

OWNER: Indian River County
 CONTRACTOR Halley Engineering Contractors, Inc.
 Project: 66TH AVENUE ROADWAY WIDENING (49TH STREET TO 69TH STREET)
 OWNER's Project No. IRC-1505 OWNER'S Bid No. 2021018
 FM No.: 436379-1-54-01 & 436379-1-54-02

You are directed to make the following changes in the Contract Documents:

Description:

Incorporate Contractor's Proposal to re-design the foundations, substructure and superstructure of the proposed bridge – 66th Avenue Over North Relief Canal.

The following terms and conditions related to the approval of the Contractor's proposal have been agreed to by Indian River County (IRC) and Halley Engineering Contractors, Inc. (HEC):

- IRC has reviewed the HEC proposal design concepts in conjunction with the Florida Department of Transportation (FDOT) and has determined that the concepts are valid with respect to the Contract Documents.
- IRC, HEC, FDOT agree that IRC will proceed with development of HEC's concepts, based upon the following:
 - Concept is based upon HEC's preliminary drawing dated 6/10/2021 (attached as Exhibit "A") and letter dated 6/3/2021 (attached as Exhibit "B").
 - Reduction in the number of piling.
 - Reduction in the number of bridge bents.
 - Elimination of the transverse post-tensioning.
 - Design refinement may result in additional construction detail modifications without affecting the aesthetic view of the structure, provided the final design will meet the design criteria shown in the plans.
- IRC will engage the original Bridge Engineer of Record – Wantman Group Incorporated, (Subconsultant to ARCADIS) to prepare the revised design at a total cost of \$ 55,000.00. HEC and IRC agree that the redesign engineering cost will be deducted from the Contract. HEC accepted this change as a lump sum contract and agrees that IRC is not responsible for any additional quantity changes or overruns that the revised design may incur.
- IRC and HEC agree that the value of any collateral savings will be approximately the same as the costs incurred by the IRC to process and implement HEC's proposed changes. Therefore, there will be no net collateral savings to be shared by IRC and HEC.
- The payment structure for the bridge items listed in Exhibit "C" will be changed to lump sum. The lump sum amount for the new pay item will be determined by adding together all the total pay items valued for the bridge pay items provided in the original contract as detailed in Exhibit "C" and

deducting cost for the redesign engineering of \$ 55,000.00. Payment for the new lump sum pay item will be in accordance with the schedule of values attached copy labeled Exhibit “D”.

- No additional compensation will be provided when the Engineer determines that an overrun to an existing pay item not deleted by the Change Order for HEC’s proposal occurs solely as a result of the Contractor’s proposal.
- No additional compensation will be provided when the Engineer determines that a new item of work not discussed herein is needed solely as a result of HEC’s proposal.
- HEC will be provided an opportunity to thoroughly review the revised bridge plans and design before they are finalized. After the revised bridge plans and design have been finalized, incorporating/ addressing all of HEC’s comments, no additional compensation will be provided to HEC for errors and omissions as a result of the revised bridge plans and design.
- IRC will accept all responsibility for the removal costs of any “man-made” objects that are encountered during installation of any piers that remain in the original planned locations, persistent to the original terms of the Contract.
- HEC will be responsible for any overrun of piling required as a result of the revised bridge plans and design, excluding unforeseen subsurface conditions.
- HEC has not made any modifications to the Maintenance of Traffic and general stipulations included in the contract documents as originally bid as a result of the proposed changes. Any required modifications will be submitted for approval prior to implementation, and the cost shall be the responsibility of HEC.
- IRC to provide the required drawings, calculations, applications and fees for any environmental permits or modifications to existing environmental permits solely necessary for the design and/or construction method modifications.
- IRC is committed to providing a 90% design and plans to HEC within 45 calendar days. HEC will have 21 calendar days to provide comments. IRC will provide 100% plans within 30 calendar days after receipt of comments from HEC. HEC will then have 21 days to provide final comments. IRC will provide the final design and plans within 15 calendar days after receipt of the final comments.
- HEC shall waive its rights to claim for any costs associated with utility conflicts resulting from HEC’s proposed design changes.
- HEC shall provide a schedule of values in the same level of detail as the original contract for the purposes of estimating monthly payments.

As a result of the above stated terms and conditions, modify the contract pay items as follows:

Delete the following existing contract pay items:

Item Number	Description	Unit	Quantity	Unit Cost	Amount
131 - 1A NRC B	12450-88-15A -PRESTRESSED PRECAST DECK UNITS (15" x 4'-5" x 14'-0")	LF	672	\$473.00	\$317,856.00
132 - 1A NRC B	12450-88-15B -PRESTRESSED PRECAST DECK UNITS (15" x 4'-8" x 14'-0")	LF	56	\$473.00	\$26,488.00
133 - 1A NRC B	12450-88-15C PRESTRESSED PRECAST DECK UNITS (15" x 4'-5" x 34'-0")	LF	816	\$525.00	\$428,400.00

Item Number	Description	Unit	Quantity	Unit Cost	Amount
134 - 1A NRC B	12450-88-15D PRESTRESSED PRECAST DECK UNITS (15" x 4'-8" x 34'-0")	LF	68	\$525.00	\$35,700.00
135 - 1A NRC B	400-2-4 - CLASS II CONCRETE FOR CLOSURE POURS BETWEEN DECK UNITS	CY	59	\$1,575.00	\$92,925.00
136 - 1A NRC B	415-1-4 - REINFORCING STEEL	LB	3,546	\$2.00	\$7,092.00
137 - 1A NRC B	521-5-4 - CONCRETE TRAFFIC RAILING BARRIER (32" VERTICAL SHAPE)	LF	125	\$105.00	\$13,125.00
138 - 1A NRC B	521-5-1 - CONCRETE TRAFFIC RAILING BARRIER (32" F SHAPE)	LF	125	\$105.00	\$13,125.00
139 - 1A NRC B	460-70-2 - ALUMINUM PEDESTRIAN BULLET BARRIER RAILING	LF	250	\$37.00	\$9,250.00
140 - 1A NRC B	460-70-3 - CONCRETE TRAFFIC RAILING BARRIER (SHOULDER) WITH SPREAD FOOTING (INDEX NO. 410, SHEET NO. 5 OF 22)	LF	76	\$525.00	\$39,900.00
141 - 1A NRC B	400-2-5 - CLASS II CONCRETE FOR PILE CAPS	CY	216	\$1,575.00	\$340,200.00
142 - 1A NRC B	415-1-5 - REINFORCING STEEL	LB	40,250	\$2.00	\$80,500.00
143 - 1A NRC B	455-34-3 - 18" SQUARE x 75'-0" MINIMUM (TEST PILE - ABUTMENT)	LF	75	\$525.00	\$39,375.00
144 - 1A NRC B	455-34-3A - 18" SQUARE x 60'-0" MINIMUM (ABUTMENT)	LF	1,980	\$32.00	\$63,360.00
145 - 1A NRC B	455-34-3B - 14" SQUARE x 30'-0" MINIMUM (WING BENT)	LF	360	\$32.00	\$11,520.00
146 - 1A NRC B	455-34-3C - 18" SQUARE x 100'-0" MINIMUM (TEST PILE - INTERMEDIATE BENT)	LF	100	\$525.00	\$52,500.00
147 - 1A NRC B	455-34-3D - 18" SQUARE x 60'-0" MINIMUM (DEBRIS PILE - INTERMEDIATE BENT)	LF	120	\$37.00	\$4,440.00
148 - 1A NRC B	455-34-3E - 18" SQUARE x 85'-0" MINIMUM (INTERMEDIATE BENT)	LF	3,230	\$37.00	\$119,510.00
149 - 1A NRC B	455-137 - PILE DYNAMIC LOAD TESTING	LS	1	\$525.00	\$525.00
150 - 1A NRC B	455-133 - 8" x 8'-0" x 14'-0" SHEET WALL	LF	560	\$210.00	\$117,600.00
151 - 1A NRC B	400-2-4A - CLASS II CONCRETE	CY	164	\$1,050.00	\$172,200.00
152 - 1A NRC B	415-1-4A - REINFORCING STEEL	LB	7,252	\$2.00	\$14,504.00
153 - 1A NRC B	400-2-10 - CLASS II CONCRETE	LS	1	\$94,000.00	\$94,000.00
154 - 1A NRC B	415-1-9 - REINFORCING STEEL	LS	1	\$21,000.00	\$21,000.00
155 - 1A NRC B	715-2117 - 4" DIAMETER PVC CONDUIT	LF	630	\$14.00	\$8,820.00
156 - 1A NRC B	339-1 - MISCELLANEOUS ASPHALT	SF	524	\$250.00	\$131,000.00
157 - 1A NRC B	530-3-3 - (ROCK RUBBLE) (CANAL EXCAVATION AS REQUIRED SHALL BE INCLUDED IN THE COST OF THE ROCK RUBBLE)	TN	1,800	\$95.00	\$171,000.00
				Total	\$2,425,915.00

Add the following pay items and work to the contract:

Added by CO 01	66th Avenue over North Relief Canal Bridge	LS	1	\$2,370,915.00	\$2,370,915.00
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Reason for Change Order:

The purpose of this Change Order is to incorporate the Contractor’s proposal to construct the 66th Avenue bridge over North Relief Canal based on the proposed redesign of the foundations, substructure and superstructure as a lump sum amount minus the cost the County will incur for this redesign from their Engineer of Record (EOR). There are many benefits to the redesign, including upgrading the bridge structure to the 2021 standards (in lieu of 2015). Most importantly changing from a prestressed/post tension single deck superstructure design to a prestressed Florida Slab Beam (FSB) design will allow the bridge to be opened to traffic in phases. Constructing the bridge in two phases fulfills the contract requirement of always maintaining open lanes of traffic on 66th Avenue as the Contractor’s MOT plan must accommodate. The net reduction to the Contract will be the redesign fee of \$55,000.00, which the County will use to reimburse their EOR for the engineering costs to perform this revision.

Attachments: (List documents supporting change)

- Exhibit A: Halley Engineering Contractors, Inc. preliminary drawing dated 6/10/2021 (1 Page)
- Exhibit B: Letter for 66th Ave over North Relief Canal Design Changes dated 6/3/2021 (2 Pages)
- Exhibit C: Contract Document List of Pay Items for North Relief Canal Bridge (2 Pages)
- Exhibit D: Schedule of Values (1 Page)
- Exhibit E: Change Order 01 Back-up Documentation (2 Pages)
 - Appendix A: Engineer’s Estimate (1 Page)
 - Appendix B: Re-design Cost (2 Pages)

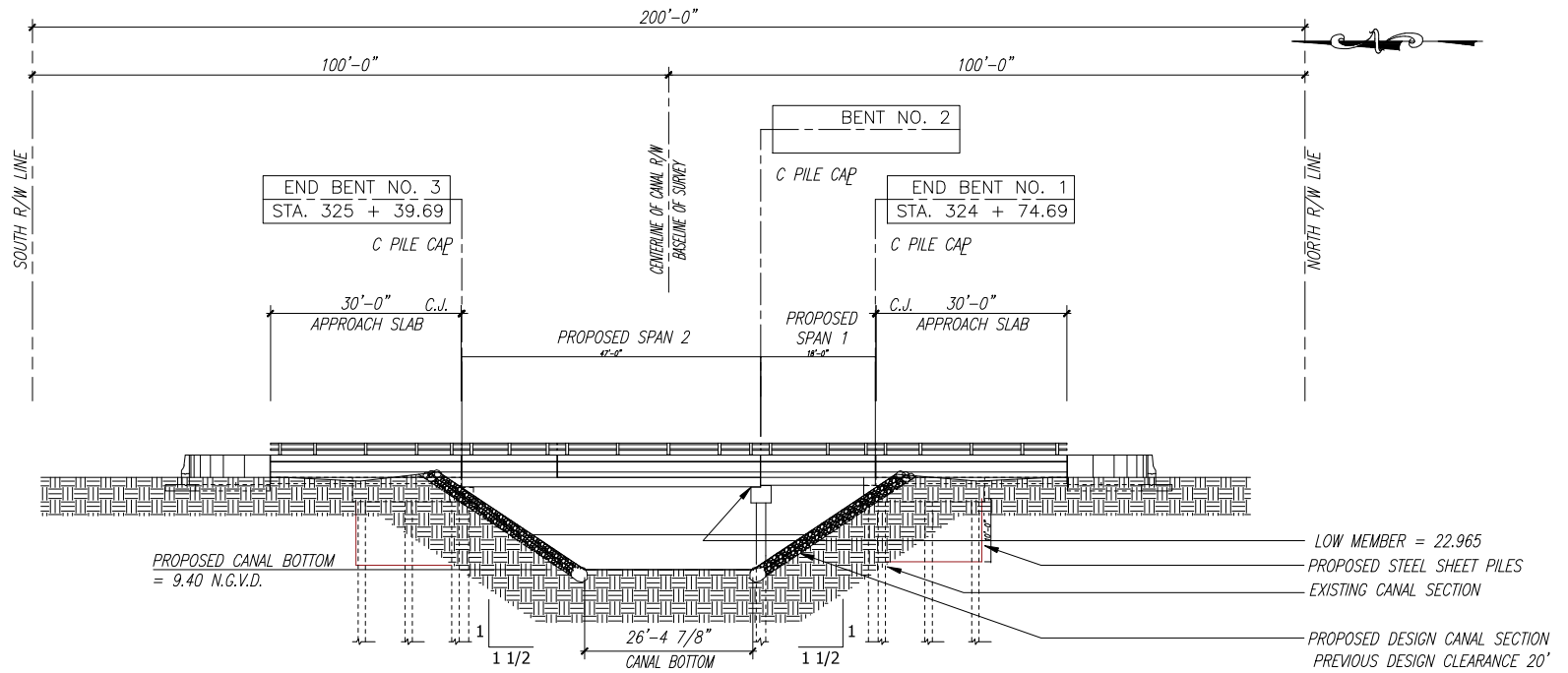
CHANGE IN CONTRACT PRICE:	
Description	Amount
Original Contract Price	<u>\$32,728,137.85</u>
Net decrease of this Change Order:	<u>-\$55,000.00</u>
Contract Price with all approved Change Orders:	<u>\$32,673,137.85</u>

CHANGE IN CONTRACT TIMES	
Description	Time
Original Contract Time:	(days or dates)
Substantial Completion:	_____
Final Completion:	_____
Net increase (decrease) this Change Order:	(days or dates)
Substantial Completion:	_____
Final Completion:	_____
Contract Time with all approved Change Orders:	(days or dates)
Substantial Completion:	_____
Final Completion:	_____

ACCEPTED: John Morris
CONTRACTOR (Signature)

RECOMMENDED: William R Adams, III, P.E.
ENGINEER (Signature)

APPROVED: James Ennis, P.E.
OWNER (Signature)



VERIFY SCALE
 1" = 10'-0" (HORIZONTAL) 1" = 5'-0" (VERTICAL)
 NOTE: THE SCALE OF THESE DRAWINGS MAY HAVE CHANGED DUE TO REPRODUCTION.
Sunshine 811

A PROPOSED BRIDGE ELEVATION
 Scale: 1" = 10'-0" (HORIZONTAL) 1" = 5'-0" (VERTICAL)

IWGI
 2035 Vista Parkway
 West Palm Beach, FL 33411
 Phone No. 561.687.2220
 Fax No. 561.687.1110
 Registry No. 33574

NO.	REVISION	DATE	BY
1	SLOPE TO 1:1 1/2	06/03/2021	CAB
2	REVISED PROPOSAL BY CG	04/01/2021	C.P.

INDIAN RIVER COUNTY
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING DIVISION

Scale: AS NOTED
 Approved:
 Drawn: C.A.B.
 Checked: T.A.D.
 Date: DECEMBER 2020
 Field Book No:

PROJECT:
 PROPOSED BRIDGE MODIFICATIONS FOR:
 66th AVENUE OVER THE NORTH RELIEF CANAL
 IRC 1505
 INDIAN RIVER COUNTY, FLORIDA

SEAL
 Timothy Allen DeLond 71588
 FLORIDA P.E. REG. NO. 10882

SHEET
 B-6
 PROJECT NO.
 16162296.00



2132 NW Settle Avenue
Port St. Lucie,
Fl. 34986
561-727-3939

5101 Cone Road
P.O. Box 310167
Tampa, Fl. 310167
813-623-2856

June 3, 2021

Halley Engineering
13901 Northwest 118th Ave
Medley, Fl. 33178

Attn John Morris

RE: 66th Avenue Roadway Improvements
IRC Project No. IRC-1505
FM No. 436379-1-54-01 & 436379-1-54-02
66th Avenue over North Relief Canal Design Changes

Dear Mr. Morris


Per our telephone conversation we will be proposing to IRC a design change in 66th Ave over the North Relief Canal. This change is being necessitated by the requirement to design the post tension bridge in phases as per the question and answers prior to bid time. The bridge as presently designed is to be constructed in a single phase. Prior to bid we looked at many options in this design and concluded that the best method would be to upgrade the bridge design and provide for the phasing of construction. Below will be the design modifications along with the benefits for the change

1. The bridge will remain the same length and width as presently designed with the same cross section for the canal.
2. All Roadway and bridge deck elevations will remain the same
3. The bridge will only be 2 spans (15'-50') versus the present design of 3 spans (15'-35'-15'). This will eliminate one intermediate bent in the water. This will also reduce the chance debris clogging the canal by 50% due to the elimination of one intermediate bent. The drainage district would prefer no bents in the canal. On the 58th avenue bridge design we have a single span 53' bridge with beams and no bents in the canal.
4. We will change from the prestressed/post tension deck units with an asphalt topping to the prestressed Florida Slab Beam Design (FSB) with a 6" Reinforced Concrete topping
 - a. Deleting the post tensioning will eliminate future maintenance problems caused by relaxation of the tendons and replacement of tendons if they fail.

- b. Deleting the post tensioning will allow the bridge to be widened in the future much easier with the same type of superstructure construction
 - c. Deleting the asphalt will eliminate future repairs and replacement of the asphalt on the bridge deck and a better joint system
5. We will change the design of the concrete sheeting behind the end bents to a steel sheet pile wall that was proposed on 43rd Ave but was rejected for cost reasons.
 - a. The reason for this change is the jetting of the concrete sheeting in the North relief canal would cause substantial water quality issues. Jetting is the only method that can be used to put in concrete sheeting. The steel sheets AZ12-700 10' long can be driven behind the cap. The banks of the relief canal will be lined with concrete rubble to also protect from erosion. We will obtain the permit from the Indian River Farms Control District for these changes. These changes are consistent with other projects approved by the district.
 6. We will design the bridge to the 2021 standards versus the 2015 standards it is presently designed under.
 7. We will design the substructure caps and the bridge deck to be phased to allow for the maximum amount of bridge construction in the 1st phase of the project. This will allow just a small piece of the bridge to be constructed in the 2nd phase of the project which will have the shortest construction time frame.
 8. Cone & Graham would accept this as a lump sum contract and agree that no additional charges for this design change or quantity errors would be charged to the county based on this change.
 9. We are proposing all these changes at a no cost change order to the county. We have a couple of options on how to facilitate this design change.
 1. We can pay the engineer (WGI) for this Design build of the bridge
 - a. IRC would have to cover the cost of the review of the design changes as we would have to submit the phasing plans for review under the original design.
 2. IRC could deduct the cost of the redesign from WGI from our contract to reimburse WGI for their work.

We would request a meeting as soon as possible to discuss these changes and the time to complete these changes in order to sequence construction.

Sincerely,


 Digitally signed
 by Randall
 Cropp
 Date: 2021.06.03
 08:15:08 -04'00'

Randy Cropp
 Cone & Graham
 East Coast Division Manager

Cc: Bill Adams, P.E. Consor (wadams@consoreng.com)
 Kelly Cowger, P.E. Consor (kcowger@consoreng.com)

ITEMIZED BID SCHEDULE - Revision 1

PROJECT NAME: 66TH AVENUE (NORTH OF 49TH STREET TO 69TH STREET)
 PROJECT NO. IRC-1505 BID NO. 2021018 FM NOS. 436379-1-54-01 & 436379-1-54-02

BIDDER'S NAME:

Item No.	Description	Unit	Unit Price	Quantity	Amount
PHASE 1A - BRIDGE AT NORTH RELIEF CANAL, 49TH STREET TO 57TH STREET					
110-3	DEMOLITION AND REMOVAL OF EXISTING BRIDGE (SUPERSTRUCTURE)	LS	\$ 147,000.00	1	\$ 147,000.00
12450-88-15A	PRESTRESSED PRECAST DECK UNITS (15" x 4'-5" x 14'-0")	LF	\$ 473.00	672	\$ 317,856.00
12450-88-15B	PRESTRESSED PRECAST DECK UNITS (15" x 4'-8" x 14'-0")	LF	\$ 473.00	56	\$ 26,488.00
12450-88-15C	PRESTRESSED PRECAST DECK UNITS (18" x 4'-5" x 34'-0")	LF	\$ 525.00	816	\$ 428,400.00
12450-88-15D	PRESTRESSED PRECAST DECK UNITS (18" x 4'-8" x 34'-0")	LF	\$ 525.00	68	\$ 35,700.00
400-2-4	CLASS II CONCRETE FOR CLOSURE POURS BETWEEN DECK UNITS	CY	\$ 1,575.00	59	\$ 92,925.00
415-1-4	REINFORCING STEEL	LB	\$ 2.00	3,546	\$ 7,092.00
521-5-4	CONCRETE TRAFFIC RAILING BARRIER (32" VERTICAL SHAPE)	LF	\$ 105.00	125	\$ 13,125.00
521-5-1	CONCRETE TRAFFIC RAILING BARRIER (32" F SHAPE)	LF	\$ 105.00	125	\$ 13,125.00
460-70-2	ALUMINUM PEDESTRIAN BULLET BARRIER RAILING	LF	\$ 37.00	250	\$ 9,250.00
460-70-3	CONCRETE TRAFFIC RAILING BARRIER (SHOULDER) WITH SPREAD FOOTING (INDEX NO. 410, SHEET NO. 5 OF 22)	LF	\$ 525.00	76	\$ 39,900.00
SUBSTRUCTURE					
400-2-5	CLASS II CONCRETE FOR PILE CAPS	CY	\$ 1,575.00	216	\$ 340,200.00
415-1-5	REINFORCING STEEL	LB	\$ 2.00	40,250	\$ 80,500.00
PRESTRESSED PILES (ABUTMENT)					
455-34-3	18" SQUARE x 75'-0" MINIMUM (TEST PILE - ABUTMENT)	LF	\$ 525.00	75	\$ 39,375.00
455-34-3A	18" SQUARE x 60'-0" MINIMUM (ABUTMENT)	LF	\$ 32.00	1,980	\$ 63,360.00
455-34-3B	14" SQUARE x 30'-0" MINIMUM (WING BENT)	LF	\$ 32.00	360	\$ 11,520.00
455-34-3C	18" SQUARE x 100'-0" MINIMUM (TEST PILE - INTERMEDIATE BENT)	LF	\$ 525.00	100	\$ 52,500.00
455-34-3D	18" SQUARE x 60'-0" MINIMUM (DEBRIS PILE - INTERMEDIATE BENT)	LF	\$ 37.00	120	\$ 4,440.00
455-34-3E	18" SQUARE x 85'-0" MINIMUM (INTERMEDIATE BENT)	LF	\$ 37.00	3,230	\$ 119,510.00
455-137	PILE DYNAMIC LOAD TESTING	LS	\$ 525.00	1	\$ 525.00
455-133	8" x 8'-0" x 14'-0" SHEET WALL	LF	\$ 210.00	560	\$ 117,600.00
(SIDEWALKS & MEDIAN)					
400-2-4A	CLASS II CONCRETE	CY	\$ 1,050.00	164	\$ 172,200.00
415-1-4A	REINFORCING STEEL	LB	\$ 2.00	7,252	\$ 14,504.00
(APPROACH SLABS) (2)					
400-2-10	CLASS II CONCRETE	LS	\$ 94,000.00	1	\$ 94,000.00
415-1-9	REINFORCING STEEL	LS	\$ 21,000.00	1	\$ 21,000.00

ITEMIZED BID SCHEDULE - Revision 1

PROJECT NAME: 66TH AVENUE (NORTH OF 49TH STREET TO 69TH STREET)
PROJECT NO. IRC-1505 BID NO. 2021018 FM NOS. 436379-1-54-01 & 436379-1-54-02

BIDDER'S NAME:

Item No.	Description	Unit	Unit Price	Quantity	Amount
715-2117	4" DIAMETER PVC CONDUIT	LF	\$ 14.00	630	\$ 8,820.00
339-1	MISCELLANEOUS ASPHALT	SF	\$ 250.00	524	\$ 131,000.00
530-3-3	(ROCK RUBBLE) (CANAL EXCAVATION AS REQUIRED SHALL BE INCLUDED IN THE COST OF THE ROCK RUBBLE)	TN	\$ 95.00	1,800	\$ 171,000.00
PHASE 1A - SUB-TOTAL NORTH RELIEF CANAL BRIDGE					\$ 2,572,915.00
PHASE 1A - BRIDGE AT 57TH AVENUE OVER LATERAL "A" CANAL, 49TH STREET TO 57TH STREET					
110-3	DEMOLITION AND REMOVAL OF EXISTING BRIDGE (SUPERSTRUCTURE)	L5	\$ 37,000.00	1	\$ 37,000.00
521-5-1	CONCRETE TRAFFIC RAILING BARRIER (32" F SHAPE)	LF	\$ 105.00	41	\$ 4,305.00
521-5-4	CONCRETE TRAFFIC RAILING BARRIER (32" VERTICAL SHAPE)	LF	\$ 105.00	41	\$ 4,305.00
521-72-3	SHOULDER CONCRETE BARRIER WALL (INDEX 410 - CANTILEVER WALL)	LF	\$ 525.00	48	\$ 25,200.00
460-70-2	ALUMINUM PEDESTRIEN/ BICYCLE BULLET BARRIER RAILING (SIDEWALKS)	LF	\$ 37.00	41	\$ 1,517.00
400-2-4	CLASS II CONCRETE	CY	\$ 1,575.00	6	\$ 9,450.00
415-1-9	REINFORCING STEEL (APPROACH SLABS)	LB	\$ 2.00	2,553	\$ 5,106.00
400-2-10	CLASS II CONCRETE	CY	\$ 473.00	58	\$ 27,434.00
415-1-9A	REINFORCING STEEL	LB	\$ 2.00	11,380	\$ 22,760.00
715-2117	4" PVC CONDUIT	LF	\$ 14.00	156	\$ 2,184.00
PHASE 1A - SUB-TOTAL 57TH AVENUE BRIDGE					\$ 139,261.00
PHASE 1A - 66TH AVENUE ROADWAY WIDENING (49TH STREET TO 57TH STREET)					PHASE 1A - SUB-TOTAL ROADWAY \$ 8,482,842.40
					PHASE 1A - SUB-TOTAL LANDSCAPE \$ 58,341.80
					PHASE 1A - SUB-TOTAL IRRIGATION \$ 10,000.00
					PHASE 1A - SUB-TOTAL 53RD STREET BRIDGE \$ 1,025,900.50
					PHASE 1A - SUB-TOTAL NORTH RELIEF CANAL BRIDGE \$ 2,572,915.00
					PHASE 1A - SUB-TOTAL 57TH AVENUE BRIDGE \$ 139,261.00
PHASE 1A - SUB-TOTAL					\$ 12,289,260.70

ProjectName: IRC-1505_66th Ave Road Widening (49th - 69th St)

Date Exported:

SIDETRACKING SOV for NRC Bridge

Commitment Item #	Description of Work	Unit Cost	UoM	Scheduled Value	Scheduled Quantity
	PH-I Substructure (Piles + Sheeting)	383,000.00	LS	383,000.00	1.00
	PH-I Substructure (Caps)	341,000.00	LS	341,000.00	1.00
	PH-I Rock Rubble	135,000.00	LS	135,000.00	1.00
	PH-I Superstructure	756,000.00	LS	756,000.00	1.00
	PH-I Approach Slab/Traffic Rail/Misc. Asphalt Concrete	230,000.00	LS	230,000.00	1.00
	PH-II Substructure (Piles + Sheeting)	136,000.00	LS	136,000.00	1.00
	PH-II Substructure (Caps)	58,000.00	LS	58,000.00	1.00
	PH-II Rock Rubble	38,000.00	LS	38,000.00	1.00
	PH-II Superstructure	233,915.00	LS	233,915.00	1.00
	PH-II Approach Slab/Traffic Rail/Misc. Asphalt Concrete	60,000.00	LS	60,000.00	1.00

2,370,915.00

CHANGE ORDER BACK-UP DOCUMENTATION

FIN No.: 436379-1-54-01 & 436379-1-54-02

Contract No: IRC-1505

Change Order No.: 01

Amount -\$55,000.00 and 0 Days

Title of Issue

Incorporate Contractor's Proposal to re-design the foundations, substructure and superstructure of the proposed bridge – 66th Avenue Over North Relief Canal.

I. Entitlement Analysis

The purpose of this Change Order is to incorporate the Contractor's proposal to construct the 66th Avenue bridge over North Relief Canal based on the proposed redesign of the foundations, substructure and superstructure as a lump sum amount minus the cost the County will incur for this redesign from their Engineer of Record (EOR). There are many benefits to the redesign, including upgrading the bridge structure to the 2021 standards (in lieu of 2015). Most importantly changing from a prestressed/post tension single deck superstructure design to a prestressed Florida Slab Beam (FSB) design will allow the bridge to be opened to traffic in phases. Constructing the bridge in two phases fulfills the contract requirement of always maintaining open lanes of traffic on 66th Avenue as the Contractor's MOT plan must accommodate. The net reduction to the Contract will be the redesign fee of \$55,000.00, which the County will use to reimburse their EOR for the engineering costs to perform this revision.

II. Time Analysis

The Contractor is not pursuing any time nor is time warranted for this change.

III. Engineer's Estimate

a. Basis of Estimate

The Engineer's Estimate totaling \$2,370,915.00 was based on the original contract unit prices for all pay items related to the construction of the North Relief Canal Bridge (\$2,425,915.00) less the cost of the engineering re-design of \$55,000.00.

b. Estimate

The Engineer's Estimate for the re-design of the North Relief Canal Bridge resulted in the amount of -\$55,000.00. This price includes all mark-ups and no bonding.

Refer to Appendix "A" for a breakdown of the Engineer's Estimate and Exhibit "C" for the backup documentation.

c. Contractor's Quote

The Contractor's quote is a zero-dollar (\$0.00) Change Order with the cost of the re-design from WGI, Inc. (Subconsultant to ARCADIS U.S., Inc.) to be removed from the contract for Indian River County to reimburse WGI, Inc. for their work.

d. Final Disposition

Since the Contractor's cost proposal in the amount of -\$55,000.00 is the same as the Engineer's Estimate, the Engineer & the County have accepted the Contractor's price.

IV. CRS Coding

107 MOT: Modification of Maintenance of Traffic for pedestrians, boats, cars, bikes, etc.

- a. Avoidability Code: 0 - Unavoidable: No Remedial Action Required
 b. Cost Recovery Code: N - No Action Recommended
 c. Claim/Extend Limits Code: N – Neither

V. Premium Cost Analysis

There will be no premium costs involved with the re-design of the foundations, substructure and superstructure of 66th Avenue Over North Relief Canal Bridge. None of the costs are the result of rework, delay, or inefficiency, therefore none of the costs associated with this issue are considered premium.

Agree Disagree

Pursue Cost Recovery? Yes No

VI. Statement of Claim Settlement Costs

None

VIII. Statutory Reason:

This contract modification is being done in compliance with Florida Statute 337.11 (9),
 to make the project functionally operational in accordance with the intent of the original contract.

VII. Federal Aid Participation

Time: Zero (0) Days

Cost: Decrease of Fifty-five thousand Dollars (-\$55,000.00)

Participating Non-Participating

 William R. Adams III, P.E. – Sr. Project Engineer

 Date

Attachments

- Appendix A: Engineer's Estimate (1 page)
- Appendix B: Re-design Cost (2 pages)

ENGINEER'S ESTIMATE					
FIN No.: 436379-1-54-01 & 436379-1- 54-02					
Contract No.: IRC-1505					
Change Order 01 - Redesign of 66th Avenue Bridge Over North Relief Canal					
July 7, 2021					
Line Item Number	Item Description	Unit Meas	Bid Qty	Unit Price	Contract Amount
131 - 1A NRC B	12450-88-15A - PRESTRESSED PRECAST DECK UNITS (15" x 4'-5" x 14'-0")	LF	-672.000	\$473.00	-\$317,856.00
132 - 1A NRC B	12450-88-15B - PRESTRESSED PRECAST DECK UNITS (15" x 4'-8" x 14'-0")	LF	-56.000	\$473.00	-\$26,488.00
133 - 1A NRC B		2 LF	-816.000	\$525.00	-\$428,400.00
134 - 1A NRC B	12450-88-15D - PRESTRESSED PRECAST DECK UNITS (15" x 4'-8" x 34'-0")	LF	-68.000	\$525.00	-\$35,700.00
135 - 1A NRC B	400-2-4 - CLASS II CONCRETE FOR CLOSURE POURS BETWEEN DECK UNITS	CY	-59.000	\$1,575.00	-\$92,925.00
136 - 1A NRC B	415-1-4 - REINFORCING STEEL	LB	-3,546.000	\$2.00	-\$7,092.00
137 - 1A NRC B	521-5-4 - CONCRETE TRAFFIC RAILING BARRIER (32" VERTICAL SHAPE)	LF	-125.000	\$105.00	-\$13,125.00
138 - 1A NRC B	521-5-1 - CONCRETE TRAFFIC RAILING BARRIER (32" F SHAPE)	LF	-125.000	\$105.00	-\$13,125.00
139 - 1A NRC B	460-70-2 - ALUMINUM PEDESTRIAN BULLET BARRIER RAILING	LF	-250.000	\$37.00	-\$9,250.00
140 - 1A NRC B	460-70-3 - CONCRETE TRAFFIC RAILING BARRIER (SHOULDER) WITH SPREAD FOOTING (INDEX NO. 410, SHEET NO. 5 OF 22)	LF	-76.000	\$525.00	-\$39,900.00
141 - 1A NRC B	400-2-5 - CLASS II CONCRETE FOR PILE CAPS	CY	-216.000	\$1,575.00	-\$340,200.00
142 - 1A NRC B	415-1-5 - REINFORCING STEEL	LB	-40,250.000	\$2.00	-\$80,500.00
143 - 1A NRC B	455-34-3 - 18" SQUARE x 75'-0" MINIMUM (TEST PILE - ABUTMENT)	LF	-75.000	\$525.00	-\$39,375.00
144 - 1A NRC B	455-34-3A - 18" SQUARE x 60'-0" MINIMUM (ABUTMENT)	LF	-1,980.000	\$32.00	-\$63,360.00
145 - 1A NRC B	455-34-3B - 14" SQUARE x 30'-0" MINIMUM (WING BENT)	LF	-360.000	\$32.00	-\$11,520.00
146 - 1A NRC B	455-34-3C - 18" SQUARE x 100'-0" MINIMUM (TEST PILE - INTERMEDIATE BENT)	LF	-100.000	\$525.00	-\$52,500.00
147 - 1A NRC B	455-34-3D - 18" SQUARE x 60'-0" MINIMUM (DEBRIS PILE - INTERMEDIATE BENT)	LF	-120.000	\$37.00	-\$4,440.00
148 - 1A NRC B	455-34-3E - 18" SQUARE x 85'-0" MINIMUM (INTERMEDIATE BENT)	LF	-3,230.000	\$37.00	-\$119,510.00
149 - 1A NRC B	455-137 - PILE DYNAMIC LOAD TESTING	LS	-1.000	\$525.00	-\$525.00
150 - 1A NRC B	455-133 - 8" x 8'-0" x 14'-0" SHEET WALL	LF	-560.000	\$210.00	-\$117,600.00
151 - 1A NRC B	400-2-4A - CLASS II CONCRETE	CY	-164.000	\$1,050.00	-\$172,200.00
152 - 1A NRC B	415-1-4A - REINFORCING STEEL	LB	-7,252.000	\$2.00	-\$14,504.00
153 - 1A NRC B	400-2-10 - CLASS II CONCRETE	LS	-1.000	\$94,000.00	-\$94,000.00
154 - 1A NRC B	415-1-9 - REINFORCING STEEL	LS	-1.000	\$21,000.00	-\$21,000.00
155 - 1A NRC B	715-2117 - 4" DIAMETER PVC CONDUIT	LF	-630.000	\$14.00	-\$8,820.00
156 - 1A NRC B	339-1 - MISCELLANEOUS ASPHALT	SF	-524.000	\$250.00	-\$131,000.00
157 - 1A NRC B	530-3-3 - (ROCK RUBBLE) (CANAL EXCAVATION AS REQUIRED SHALL BE INCLUDED IN THE COST OF THE ROCK RUBBLE)	TN	-1,800.000	\$95.00	-\$171,000.00
Added by CO 01	66th Avenue over North Relief Canal Bridge	LS	1.000	\$2,370,915.00	\$2,370,915.00
Total Cost of CO 01:					-\$55,000.00

*Refer to Exhibit C for backup documentation of unit cost

**BRIDGE REPLACEMENTS AND WIDENING OF 66TH AVENUE
FROM SOUTH OF SR 60 TO NORTH OF 57TH STREET
IRC PROJECT NUMBER 1505**

**PROFESSIONAL CIVIL ENGINEERING & STRUCTURAL ENGINEERING
SERVICES**

**AMENDMENT NO. 19 TO THE PROFESSIONAL ENGINEERING/LAND SURVEYING
SERVICES AGREEMENT BETWEEN ARCADIS US, Inc. (fka ARCADIS G&M, Inc.),
Inc. AND INDIAN RIVER COUNTY, FLORIDA.**

This is an amendment to the existing Engineering Services Agreement (AGREEMENT) dated September 6, 2005, between ARCADIS US, Inc. (ENGINEER) and Indian River County (COUNTY). This amendment addresses changes in "Section III - Scope of Services", and "Section V - Compensation".

Amendment Description

This Amendment includes the following:

"SECTION III – SCOPE OF SERVICES" is being modified to incorporate the following:

Re-design of the 66th Avenue Bridge over the IRFWCD North Relief Canal. The re-designed bridge will eliminate the post-tensioning design and replace it with an FDOT Standard Florida Slab Beam System and will utilize FDOT 2021 design standards.

"SECTION V – COMPENSATION" is being modified to incorporate the following:

The COUNTY agrees to pay and the ENGINEER or agrees to accept for services rendered pursuant to this Agreement fees in accordance with the following:

A. Professional Services Fee

The Lump Sum mutually agreed upon by the ENGINEER and the COUNTY for services rendered shall be as follows and includes a 10% ENGINEER'S sub-consultant fee for coordination.

North Relief Canal Bridge Re-Design Services

<i>Structural Plans - WGI, Inc.</i>	<i>\$50,000.00</i>
<i>Subconsultant Coordination – Arcadis (10%)</i>	<i>\$ 5,000.00</i>
<i>TOTAL LUMP SUM FEES</i>	<i>\$55,000.00</i>

The AGREEMENT is hereby amended as specifically set forth here in. All other sections of the AGREEMENT shall remain in full force and effect and are incorporated herein.

This Amendment No. 19 to the AGREEMENT regardless of where executed, shall be governed by, and constructed by the laws of the State of Florida.

In witness whereof the parties have executed this Amendment this _____ day of _____, 2021.

ARCADIS US, INC.
1500 Gateway Boulevard, Suite 200
Boynton Beach, Fl. 33426

INDIAN RIVER COUNTY, FLORIDA
BOARD OF COUNTY COMMISSIONERS

By: _____
Robert Lawson, V.P.

By: _____
Joseph E. Flescher, Chairman

WITNESSED BY:

Approved by BCC _____

Attest: _____
Jeffrey R. Smith, Clerk of Circuit Court

County Attorney
Approved as to Form and Legal Sufficiency

By: _____
Deputy Clerk

Jason Brown, County Administrator