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 DTS # _____
 Date CM signed: _____/2019

DOCUMENT TRANSMITTAL FORM

Use for Contracts, Agreements, RFPs, and Grants

TITLE	NDRC Ohio Creek – Design Services		
DEPARTMENT	Public Works		
PARTY (Company and principal's names with which the City is entering into the agreement.)	Arcadis, Inc. Amy Jablonsky		
EFFECTIVE DATES (Start & end dates)	September 1, 2020		
TOTAL DOLLAR VALUE	NTE \$121,145.00		
FUNDING SOURCE (Operating or capital budget; budget year; grant or other source. Show account information)	SOURCE: CIP/CDBG		
TYPE (New or extension)	Amendment No. 8		
SUMMARY OF SCOPE OF SERVICE/ PROGRAM	Provide professional services for design and construction of NDRC – Ohio Creek		
PROCUREMENT METHOD (RFP, Sealed BID, etc.)	Sealed bid		
VALIDATION OF PROCUREMENT: I HEREBY CERTIFY THAT THE GOODS AND/OR SERVICES TO BE PROVIDED UNDER THIS AGREEMENT WERE PROCURED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN CHAPTER 33.1 OF THE NORFOLK CITY CODE.			
REVIEWED BY PURCHASING: _____ <div style="display: flex; justify-content: space-around; width: 100%;"> Signature Date </div>			
CALL OUTS (Indicate any unique circumstances regarding provisions such as procurement protest pending, emergency purchase or other time sensitivity, so forth, along with any other pertinent information)	None		
Please indicate if there is a legitimate required date by which the City Manager needs to respond. Due Date: N/A			
Certificate of Satisfaction: <i>I (We) hereby certify that all reasonable due diligence has been performed to sufficiently develop the contents and implications of the attached document in a manner to protect and account to the public. Further, all City procurement procedures have been adhered to and therefore, I (we) recommend the City Manager execute this document.</i>			
_____ Richard Broad, Director		_____ Date	
_____ Date		_____ Department Head Signature	
_____ Date		_____ Department Head Signature	
Review and Concurrence by DCM		Review and Concurrence by CM	
_____ Wynter C. Benda		_____ Date	
_____ Chief Deputy City Manager		_____ City Manager	
_____ Date		_____ Date	

**AMENDMENT NO. 8 TO
AGREEMENT BETWEEN
THE CITY OF NORFOLK
AND
ARCADIS U.S., INC.
FOR
NATIONAL DISASTER RESILIENCE COMPETITION (NDRC) –
OHIO CREEK – DESIGN SERVICES**

THIS AMENDMENT dated the **18th day of September 2020**, by and between the CITY OF NORFOLK, a municipal corporation of the Commonwealth of Virginia, hereinafter called the "City", party of the first part, and Arcadis U.S., Inc. hereinafter called the "Architect", party of the second part.

WITNESSETH:

WHEREAS, the City and the Architect have heretofore entered into an Agreement dated January 6, 2017, and as amended August 3, 2017, February 22, 2018, January 18, 2019, February 1, 2019, November 21, 2019, March 17, 2020 and August 31, 2020; whereby the Architect was to provide professional services for design and construction of NDRC – Ohio Creek.

WHEREAS, the parties desire to amend the said Agreement to provide additional services for Final Design Completion and Independent Cost Estimate Preparation, and Negotiation Phase Services during Construction Manager at Risk’s (CMAR’s) preparation of the Guaranteed Maximum Price (GMP) and to authorize performance of the balance of the work identified in the attached proposal.

NOW, THEREFORE, WITNESSETH: That for and in consideration of the original premises and the mutual agreements herein contained, the City and the Architect hereby agree to the following amendments:

- I. AIA B201-2007, Article 6 “Compensation”, Paragraph 6.1, amend so as to add and incorporate Exhibit 16 dated August 17, 2020, hereto attached, as follows:

Item	Description	Fee
1.	Work Order 16 – Construction Phase Services, Task Order Nos. 1 through 9	\$121,145.00
Total Compensation Amendment No. 8		\$121,145.00

- II. All terms and provisions of Agreement dated January 6, 2017, and as amended August 3, 2017, February 22, 2018, January 18, 2019, February 1, 2019, November 21, 2019, March 17, 2020, and August 31, 2020 not amended hereby shall remain in full force and effect and binding on the parties.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed on their respective behalves by their officers duly authorized on the respective dates hereinafter indicated.

ARCADIS U.S., INC.

BY: DocuSigned by:
Amy Jablonsky
E29E46FFBA32478...
Amy Jablonsky, Vice President

Contents approved:

DocuSigned by:
Richard Broad
EB3D3D3E47F1434...
Director of Public Works

DS
SL

Approved as to form and correctness:

DocuSigned by:
[Signature]
6D972EB6E941472...
Deputy City Attorney

Attest:

DocuSigned by:
Richard A. Bue
7585E61B85734CE...
City Clerk

CITY OF NORFOLK

BY: DocuSigned by:
Wynter C. Benda
E2EC774E4128403...
Deputy City Manager

Certification of Funds

I hereby certify that the money required for this Amendment is in the City Treasury to the credit of the fund, which is to be drawn and now appropriated for any other purpose.

Account: 2500-41-9230-5303 FY17	Amount: \$26,191.13
Account: 2500-41-9412-5303 FY19	Amount: \$41,135.04
Account: 2500-41-9413-5303 FY19	Amount: \$53,818.83

Contract No. 26367D

Vendor Code: ACRADIO150

DocuSigned by:
Christine Garczynski 9/28/2020
7E1DF338CFDD4D0...
Director of Finance Date

DS
SF



Kyle Spencer, Coastal Resiliency Manager
City of Norfolk
City Manager's Office of Resilience
501 Boush St
Norfolk, VA 23510

Arcadis U.S., Inc.
295 Bendix Road
Suite 240
Virginia Beach
Virginia 23452
Tel 757 419 3970
Fax
www.arcadis.com

Subject:
National Disaster Resilience Competition (NDRC) Ohio Creek Design Services:
Scope of Services for Amendment 8 – Construction Phase Services; Additional
Services
City e-Builder Project No. 17011; Contract No. 26367

WATER

Date:
August 17, 2020

Dear Mr. Spencer:

The Arcadis U.S., Inc. ("Arcadis") team is pleased to provide you with a scope of services for Amendment 8, Construction Phase Services Additional Services – Construction Phase Services for the NDRC Ohio Creek Design Services Contract No. 26367.

Contact:
Amy Jablonsky

Phone:
757.419.3972

The following tasks are proposed as additional services to use in addition to the construction phase services budget of Work Order No. #16 (Amendment 6).

Email:
Amy.Jablonsky@arcadis.com

These tasks are:

- The Haynes Creek Weir Box Redesign
- Easement Support Services
- CLOMR Support Services
- Grandy Village Park and Planting Plan Re-design
- Grandy Village Park Rendering Update
- Jim Gunn Switchgear Platform Redesign
- Wetland Creation Redesign
- Kimball Terrace West Utility Relocations

This proposal and its contents shall not be duplicated, used or disclosed — in whole or in part — for any purpose other than to evaluate the proposal. This proposal is not intended to be binding or form the terms of a contract. The scope and price of this proposal will be superseded by the contract. If this proposal is accepted and a contract is awarded to Arcadis as a result of — or in connection with — the submission of this proposal, Arcadis and/or the client shall have the right to make appropriate revisions of its terms, including scope and price, for purposes of the contract. Further, client shall have the right to duplicate, use or disclose the data contained in this proposal only to the extent provided in the resulting contract.

Mr. Kyle Spencer
August 17, 2020
e-Builder Project # 17011
Contract No. 26367

The Haynes Creek Weir Box Redesign

The value engineering mark-ups and annotations by the CMAR received January 2020 indicated on the structural drawings for the Haynes Creek Weir Box (S-115 through S-121) to "See Revised Speight Marshall Francis Drawings." Therefore, performing a re-design of the weir box was not included in the understood scope of Task 1 "Prepare Conformed Contract Documents Based on Site Plan Review and Value Engineering Revisions" of Work Order No. #16 (Amendment 6). While performing this task it was discovered that there were no drawings developed or in progress to re-design the weir box.

The proposed work herein is to perform a re-design of the Haynes Creek Weir Box using a pre-cast design as indicated by the Contractor's notes as part of their GMP with the City, and provide conformed contract drawings for the Haynes Creek weir box project element. This task includes:

- Review of Contractor proposed revised Haynes Creek Weir Box for hydraulic functionality compared to the original design. It is assumed that a desk-top analysis of the hydraulic grade line will be sufficient, and that no hydrologic and hydraulic modeling will be required as part of this task.
- Coordinate with VHB on additional impacts to the wetlands as it relates to this revised design
- Perform the necessary structural design and analysis for the two Haynes Creek Weir Box structures. This cost assumes shallow foundations will not be deemed satisfactory. If a pile-founded design is determined not necessary after analysis, a shallow foundation will be designed and will result in \$4,774 reduction to the anticipated costs in the not to exceed budget.
- Develop the conformed drawings for the revised Haynes Creek Weir Box. It is assumed that three structural sheets and one process mechanical sheet will be prepared or revised for this work, and one stormwater and one grading sheet will need to be revised.

Easement Support Services

During the design phase services, Arcadis provided the City boundaries associated with planned improvements for the proposed project work. The City requested additional assistance in reviewing gaps in its easement pursuits and preparation of files to support the City in its pursuit of easements and right of entry forms. Arcadis is to review all planned work to identify any locations where work would be physically altering properties that were originally designated for right of entry letters. It is anticipated that approximately twenty-one additional easements will be identified for acquisition.

CLOMR Support Services

At the advice of FEMA's representatives, the City submitted a Conditional Letter of Map Revision (CLOMR) application for the Ohio Creek Project in January 2020. At that time, Arcadis was made of aware of this action adding a review/approval process by FEMA for this project. It represented a change of Work as we were previously directed by the City that the project would not be subject to FEMA review/certifications.

Arcadis along with Moffatt & Nichol, who performed the Hydrologic and Hydraulic (H&H) modeling and stormwater drainage improvement design for the project, will assist the City in responding to the comments and an Additional Data (AD) letter from FEMA requesting additional information from the City.

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Mr. Kyle Spencer
August 17, 2020
e-Builder Project # 17011
Contract No. 26367

The Arcadis and Moffat & Nichol team will:

- Meet and coordinate with FEMA and other members of the City to discuss FEMA's AD letter requests, relative to the City's floodplain management intent for the project.
- Develop letter response text and technical data calculations and products to be included in the City's response to the AD letter.

Moffatt & Nichol's role is further described in their project proposal for this scope of work.

Arcadis' time includes services associated with the development of responses and submission of one AD letter associated with the expectation that the project will not cause an increase of more than 1.00 foot in Base Flood Elevations (BFE) and that the project will not actually cause a change in the flood hazard information along the Eastern Branch of the Elizabeth River. If this changes based on subsequent FEMA review, additional scope and budget may be required to address FEMA requirements in the case of a change to flood hazard information and/or BFEs.

Grandy Village Park Redesign and Planting Plan Redesign

Upon SCAPE's, the projects landscape architect, proceeding to develop conformed documents using the value engineering mark-ups and annotations by the CMAR received January 2020, it became apparent that the proposed changes would not be ADA compliant, thus additional services are proposed for Arcadis and SCAPE to perform a redesign of the Grandy Village Park to ensure this project element is code compliant, physically implementable, and meets the minimum standard of care necessary to be signed/sealed by SCAPE.

Furthermore, where the value engineering mark-ups and annotations by the CMAR received January 2020 indicated that the planting plan would be modified by a Subcontractor, City representatives and SCAPE determined that a re-design by SCAPE would be necessary around the planting plan.

SCAPE's role is further described in their project proposal for this scope of work.

Grandy Village Park Rendering Update

The City has requested an update to the birds-eye rendering of the Grandy Village Park for purposes of City's communication with stakeholders on the updates to the park inclusive of the modifications from the Value Engineering process. SCAPE's render update is further described in their proposal for this scope of work.

Jim Gunn Switchgear Platform Redesign

During the design process, Arcadis met and reviewed design elements for this switchgear platform with Dominion Energy and provided a design aligned with feedback during the design phase. Arcadis received 16 comments from Dominion Energy Standards on March 27, 2020 via MEB under RFI 32, which necessitated a redesign of this platform.

Furthermore, RFI 53 received April 16, 2020, provided additional revisions to the platform and site area required by an agreement via email between the City and property owner May 23, 2019 (After completion of 100% design). The level of effort for this task assumes no structural redesign will be necessary to complete the work.

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Mr. Kyle Spencer
 August 17, 2020
 e-Builder Project # 17011
 Contract No. 26367

Wetland Creation Redesign

The Value Engineering Mark-ups received in January 2020 indicated the elimination of a wetland creation area. Arcadis modified the surrounding grading as part of the Value Engineering Conformed Documents task for Work Order 16th. Under an RFI for the Haynes Creek Force Main, Arcadis learned that this wetland area was reincluded in the actual GMP agreement, though not shown on the mark-ups that were the basis for Arcadis' conformed drawings task. This task is to capture the effort of revising the grading in placing the wetland back into the project.

Kimball Terrace West Utility Relocations

As a result of RFI 16, the water, sanitary and storm sewers between Ohio Creek and Haynes Creek that were designed as a part of the February 2019 construction document submittal need to be relocated. The work requires the shifting of the waterline and service connections, gravity sanitary sewer and service laterals, and storm sewer lines/collection inlets southward to avoid the planned Dominion Virginia Power infrastructure which was completed in late 2019. Final acceptance of plan is still outstanding with Dominion. Additional budget in addition to this proposal may be needed depending on the outcome of outstanding comments and final acceptance of the plan by Dominion.

NOT TO EXCEED TIME AND MATERIALS BUDGET – \$121,145.00

Subtask Number	Subtask Name	Subtask NTE	Anticipated Completion Date
1	Design of Haynes Creek Weir Box	\$35,935	October 30, 2020
2	Easement Support Services	\$6,595	August 21, 2020
3	CLOMR Support Services	\$19,070	October 30, 2020
4	Grandy Village Park Redesign and Planting Plan Redesign	\$29,980	October 30, 2020
5	Grandy Village Park Rendering Update	\$4,000	October 30, 2020
6	Jim Gunn Switchgear Platform Redesign and Additional Concession Agreed to by the City as detailed in RFI 53	\$12,880	October 30, 2020
7	Wetland Creation Redesign	\$440	August 21, 2020
8	Kimball Terrace West Utility Relocations	\$7,205	August 21, 2020
9	Project Management	\$5,040	October 30, 2020

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Mr. Kyle Spencer
August 17, 2020
e-Builder Project # 17011
Contract No. 26367

We greatly appreciate the opportunity to continue to work with the City on this iconic Project. Should you have any questions, please do not hesitate to contact me at amy.jablonsky@arcadis.com or Project Manager Travis Davis at travis.davis@arcadis.com.

Sincerely,

Arcadis U.S., Inc.



Amy Jablonsky
Vice President
Arcadis U.S., Inc.

Copies:

Travis Davis, Arcadis
Kris Edelman, Arcadis

Attachments

1 Attachment A: Fee Summary

Use or disclosure of information contained on this sheet is subject to the restriction and disclaimer located on the signature page of this document.

ATTACHMENT 1: FEE ESTIMATE - Ohio Creek

Task 1 Design of Haynes Creek Weir Box

POSITION	NAME	Units/Hours	RATE	DOLLARS
Engr/Sci Grade 8	Keller/Holst/Shadakopen	101	\$ 160.00	\$ 16,160.00
Engr/Sci Grade 9	Battle/Millspaugh	7	\$ 205.00	\$ 1,435.00
Engr/Sci Grade 10	Baird/Edelman/Hare/Manzo/Turner/Vargas	60	\$ 225.00	\$ 13,500.00
Tech/Proj Asst Grade 5&6	Love/Men/Taylor/Tourtlot	44	\$ 110.00	\$ 4,840.00
Subtotal for Labor Task 1		212	\$	35,935.00
Subcontractor Task 1		\$ -	\$	-
Travel Expenses Task 1		\$ -	\$	-
Non Travel Expenses for Task 1.1 (Printing, Shipping, and Misc)		\$ -	\$	-
Total for Task 1			\$	35,935.00

Task 2 Easement Support Services

POSITION	NAME	Units/Hours	RATE	DOLLARS
Engr/Sci Grade 8	Keller	22	\$ 160.00	\$ 3,520.00
Engr/Sci Grade 9	Battle/Millspaugh	15	\$ 205.00	\$ 3,075.00
Subtotal for Labor Task 2		37	\$	6,595.00
Subcontractor Task 2		\$ -	\$	-
Travel Expenses Task 2		\$ -	\$	-
Non Travel Expenses for Task 2.1 (Printing, Shipping, and Misc)		\$ -	\$	-
Total for Task 2			\$	6,595.00

Task 3 CLOMR Support Services

POSITION	NAME	Units/Hours	RATE	DOLLARS
Engr/Sci Grade 6	Carlson/Gong/Montgomer/Nguyen	1.5	\$ 120.00	\$ 180.00
Engr/Sci Grade 9	Battle/Millspaugh	10	\$ 205.00	\$ 2,050.00
Engr/Sci Grade 10	Baird/Edelman/Hare/Manzo/Turner/Vargas	4	\$ 225.00	\$ 900.00
Subtotal for Labor Task 3		15.5	\$	3,130.00
Subcontractor Task 3		\$ 15,940.00	\$	15,940.00
Travel Expenses Task 3		\$ -	\$	-
Non Travel Expenses for Task 3.1 (Printing, Shipping, and Misc)		\$ -	\$	-
Total for Task 3			\$	19,070.00

Task 4 Grandy Village Park Redesign and Planting Plan Redesign

POSITION	NAME	Units/Hours	RATE	DOLLARS
Subtotal for Labor Task 4		0	\$	-
Subcontractor Task 4		\$ 29,980.00	\$	29,980.00
Travel Expenses Task 4		\$ -	\$	-
Non Travel Expenses for Task 4.1 (Printing, Shipping, and Misc)		\$ -	\$	-
Total for Task 4			\$	29,980.00

Task 5 Grandy Village Park Rendering Update

POSITION	NAME	Units/Hours	RATE	DOLLARS
Subtotal for Labor Task 5		0	\$	-
Subcontractor Task 5		\$ 4,000.00	\$	4,000.00
Travel Expenses Task 5		\$ -	\$	-
Non Travel Expenses for Task 5.1 (Printing, Shipping, and Misc)		\$ -	\$	-
Total for Task 5			\$	4,000.00

Task 6 Jim Gunn Switchgear Platform Redesign and Additional Concession Agreed to by the City as detailed in RFI 53

POSITION	NAME	Units/Hours	RATE	DOLLARS
Engr/Sci Grade 8	Keller	8	\$ 160.00	\$ 1,280.00
Engr/Sci Grade 9	Battle/Millspaugh	48	\$ 205.00	\$ 9,840.00
Tech/Proj Asst Grade 5&6	Love/Men/Taylor/Tourtelot	16	\$ 110.00	\$ 1,760.00
Subtotal for Labor Task 6		72	\$	12,880.00
Subcontractor Task 6		\$ -	\$	-
Travel Expenses Task 6		\$ -	\$	-
Non Travel Expenses for Task 6.1 (Printing, Shipping, and Misc)		\$ -	\$	-
Total for Task 6			\$	12,880.00

Task 7 Wetland Creation Redesign

POSITION	NAME	Units/Hours	RATE	DOLLARS
Tech/Proj Asst Grade 5&6	Love/Men/Taylor/Tourtelot	4	\$ 110.00	\$ 440.00
Subtotal for Labor Task 7		4	\$	440.00
Subcontractor Task 7		\$ -	\$	-
Travel Expenses Task 7		\$ -	\$	-
Non Travel Expenses for Task 7.1 (Printing, Shipping, and Misc)		\$ -	\$	-
Total for Task 7			\$	440.00

Task 8 Kimball Terrace West Utility Relocations

POSITION	NAME	Units/Hours	RATE	DOLLARS
Engr/Sci Grade 7	Maxwell	21	\$ 135.00	\$ 2,835.00
Engr/Sci Grade 9	Battle/Millspaugh	2	\$ 205.00	\$ 410.00
Tech/Proj Asst Grade 5&6	Love/Men/Taylor/Tourtelot	36	\$ 110.00	\$ 3,960.00
Subtotal for Labor Task 8		59	\$	7,205.00
Subcontractor Task 8		\$ -	\$	-
Travel Expenses Task 8		\$ -	\$	-
Non Travel Expenses for Task 8.1 (Printing, Shipping, and Misc)		\$ -	\$	-
Total for Task 8			\$	7,205.00

Task 9 Project Management

POSITION	NAME	Units/Hours	RATE	DOLLARS
Engr/Sci Grade 9	Battle/Millspaugh	8	\$ 205.00	\$ 1,640.00
Engr/Sci Grade 9	Davis	8	\$ 205.00	\$ 1,640.00
Tech/Proj Asst Grade 7	Sizemore	16	\$ 110.00	\$ 1,760.00
Subtotal for Labor Task 9		8	\$	5,040.00
Subcontractor Task 9		\$ -	\$	-
Travel Expenses Task 9		\$ -	\$	-
Non Travel Expenses for Task 9.1 (Printing, Shipping, and Misc)		\$ -	\$	-
Total for Task 9			\$	5,040.00

Total Task Order Fee	\$ 121,145.00



June 4, 2020

NORFOLK, VIRGINIA, OHIO CREEK NDRC PROJECT DESIGN SERVICES

SCOPE OF WORK for

Technical and Coordination Support for City's Conditional Letter of Map Revision (CLOMR) Application to Federal Emergency Management Agency (FEMA)

Background

As the City has coordinated with the Federal Emergency Management Agency (FEMA) regarding the Ohio Creek NDRC project, FEMA's representatives advised the City to submit a Conditional Letter of Map Revision (CLOMR) application to document the coastal flood mitigation project features and their potential effects on the City's Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) findings. The City submitted a CLOMR application in January 2020, and the City has received comments and an Additional Data (AD) letter from FEMA requesting that the City provide additional information. The City and Arcadis have involved Moffatt & Nichol (M&N) staff in communications with FEMA representatives and on internal calls to determine how best to respond to the AD letter. The City and Arcadis have requested that M&N prepare a significant percentage of the technical data products required to respond to FEMA, and the response is due to FEMA by mid-June 2020.

The City of Norfolk's Office of Resilience and Arcadis have requested Moffatt & Nichol to assist with:

- Meetings and coordination with FEMA and other members of the City and Arcadis Team to discuss FEMA's AD letter requests, relative to the City's floodplain management intent for the project
- Development of letter response text and technical data calculations and products to be included in the City's response to the AD letter.

M&N's proposed scope of work to accomplish these tasks is outlined below.

Assumptions and Exclusions

1. Arcadis will provide any requested existing and proposed topographic surfaces and/or contour sets, along with project design alignments and other required information in AutoCAD format for M&N's use in developing the response products.
2. Arcadis will be responsible for any Professional Engineer seals or certifications relative to the coastal flood protection or pumping station design information that may be required for responding to FEMA communications. As an exception: If FEMA requires information regarding M&N's design of the stormwater gravity drainage system or the hydrologic and hydraulic modeling of the system, M&N will be responsible for those items.



June 4, 2020

3. This scope and fee does not include any additional hydrologic and hydraulic modeling, nor any other modeling of any kind other than the calculations specifically described under the Task 1 scope below.
4. Based on discussions to date, it is expected that the project will not cause an increase of more than 1.00 foot in Base Flood Elevations (BFEs) and that the project will not actually cause a change in the flood hazard information along the Eastern Branch Elizabeth River. The proposed scope and fee are based on this expectation. If during preparation of the response to the AD letter or subsequent FEMA review it is found to be otherwise, additional scope and budget may be required to address FEMA requirements in the case of a change to flood hazard information and/or BFEs.
5. All M&N effort accrued under this scope and fee proposal will be invoiced to Arcadis on a Time & Materials basis, under the rates included in the Agreement for Subcontractor Services between Arcadis and M&N, dated March 2, 2017, and including subsequent additions to the agreed labor rate categories and rates.
6. This scope and fee proposal is made under the terms and conditions of the Agreement for Subcontractor Services between Arcadis and M&N, dated March 2, 2017, and including subsequent additions to the agreed labor rate categories and rates. M&N assumes that those terms and conditions remain as previously agreed, including the prime agreement between Arcadis and the City, upon which the Agreement for Subcontractor Services was based.

Moffatt & Nichol Scope of Work

Task 1. FEMA CLOMR Support

M&N will perform the following work under Task 1 to assist the City and Arcadis to develop a response to the FEMA AD letter and continue the CLOMR review process.

- A. **FEMA AD Letter response components.** M&N will prepare a draft of a letter responding to FEMA's AD letter, to be reviewed for input and feedback by City and Arcadis staff. M&N will incorporate City and Arcadis comments and finalize the letter for the City to submit to FEMA. As part of preparing that letter, M&N will rely on others (City and Arcadis) to supply information required to respond to certain items in the AD letter, while M&N will prepare the technical calculations required to respond to other components of the AD letter. The below list summarizes M&N's expectations organized by the AD letter numbered list of items:
 1. The City will confirm level of federal funding for the CLOMR project, and M&N will compile this in the response letter.
 2. The City will provide text from the project's environmental documents, and M&N will compile this into the response letter.



June 4, 2020

3. M&N will prepare FEMA MT-2 Form 4 and Form 5, based on coastal structures / flood control structures design drawings and information provided by Arcadis. In addition, some coastal analysis aspects of MT-2 Form 4 will be populated through M&N calculations.
 4. M&N will compile proposed plans for flood control structures that will be provided by Arcadis. It is expected that the proposed plans will be certified by an Arcadis registered Professional Engineer.
 5. M&N will prepare FEMA coastal analysis calculations along up to two (2) transects representing the project area, for existing conditions and for proposed design conditions. The coastal analysis calculations will be performed in FEMA's CHAMP program including WHAFIS wave height analysis, and wave runup and overtopping rates will be confirmed using methods consistent with FEMA's *Guidance for Flood Risk Analysis and Mapping* volumes referenced in the AD letter. Stillwater elevations and starting wave heights for the calculations will be taken from the FEMA Region III Chesapeake Bay model utilized in the City's effective Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM).
 6. M&N will prepare a topographic work map for the CLOMR project area. M&N expects that Arcadis will provide any requested existing and proposed topographic surfaces and/or contour sets, along with project design alignments and other required information in AutoCAD format for M&N's use in developing the work map. The work map will be developed in either AutoCAD or ESRI ArcGIS format (not both).
 7. M&N will provide the digital topographic work map files to FEMA in either AutoCAD or ESRI ArcGIS geodatabase format (not both) per FEMA's request.
 8. M&N will prepare an annotated FIRM for the project area, as requested in the AD letter. Based on initial discussions with the FEMA representative, it is expected that the annotated FIRM will not show any actual changes to the FIRM zones or related hazard information. However, it was clear from the calls with FEMA that the annotated FIRM would be required even if the City does not intend to request an actual change to the flood hazard information.
 9. It is not expected that the project will cause an increase of more than 1.00 foot in Base Flood Elevations (BFEs). M&N will provide language in the response letter confirming that such an increase is not expected and, thus, that the items a),b) and c) in the AD letter are not required.
 10. It is not expected that the project will actually cause a change in the flood hazard information along the Eastern Branch Elizabeth River. Thus, it is not expected that the notification of property owners of any such changes would be required. M&N will provide language in the response letter confirming that such notifications are not required.
- B. **Meetings and coordination.** As part of this effort, M&N will participate in up to five (5) conference calls or virtual meetings with the City, Arcadis Team and/or FEMA representatives.



June 4, 2020

Invoicing and Payment

M&N will invoice Arcadis at monthly intervals, on a Time & Materials basis, for compensation of the M&N labor and expenses accrued up to the last Friday of each month. Arcadis will provide payment to M&N within 30 days of submittal of each invoice, subject to the terms and conditions of the Agreement for Subcontractor Services between Arcadis and M&N, dated March 2, 2017, and including subsequent additions to the agreed labor rate categories and rates.

The provided fee and breakdown by labor category is shown in the table attached. This fee is an estimate, and M&N will advise Arcadis and seek authorization if it becomes necessary to exceed.

Moffatt & Nichol
Project Fee Proposal

Project Number: 9797-17
 Project Title: Norfolk NDRC - MAN Engineering Support of the City's FEMA CLOMR Application
 Project Manager: Brian Lofgren, PE
 Project Principal: Ira Eckman, PE

Date: 06/04/20
 Sub Mark-up: 10%
 ODC Mark-up: 0%

Task	CLASSIFICATION/RATES										HOURS	LABOR TOTAL		
	Principal / Sr. Engineer / Architect P-9 P-8	Sr. Engineer / Staff Engineer P-7	Engineer P-6	Prof. Engineer / P-5	Prof. Engineer P-4	Prof. Engineer P-3	Engineer P-2	Senior Designer P-1	Designer P-4	CADD Technician T-3			CADD Technician T-2	Admin I A-1
A. FEMA AD letter response components	\$2775.00	\$225.00	\$205.00	\$160.00	\$135.00	\$120.00	\$110.00	\$160.00	\$135.00	\$110.00	\$110.00	\$80.00	\$80.00	
B. Meetings & coordination	-	10.00	20.00	-	32.00	-	-	-	-	-	8.00	-	-	
TOTAL MAN-HOURS	0.00	18.00	30.00	0.00	36.00	0.00	0.00	0.00	0.00	0.00	8.00	0.00	0.00	
III. MAN LABOR	\$0.00	\$4,050.00	\$6,150.00	\$0.00	\$4,860.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$880.00	\$0.00	\$0.00	
IV. PROJECT SUMMARY														
Total														
Mark-up														
1. Subconsultants	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
2.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
3.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
4.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
5.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
6.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
7.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
8.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
9.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
10.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total Subconsultants:														
B. Other Direct Costs														
Airfare	\$0	N/A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Lodging	\$0	N/A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Mileage/Rental Car	\$0	N/A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Postage/Reproduction	\$0	N/A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Outside Delivery	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Telephone/Fax	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Telex/Shipping Equipment	\$0	N/A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total Project Estimate														
											\$15,940	\$0	\$0	\$0
											\$15,940	\$0	\$0	\$0

SCAPE LANDSCAPE ARCHITECTURE DPC
277 BROADWAY NINTH FLOOR NEW YORK NY 10007
T 212 462 2628 SCAPESTUDIO.COM

June 17, 2020

ARCADIS US, Inc.

RE: Work Authorization 6 Proposal for Norfolk NDRC

ATTN: Kris Edelman & John Millspaugh

Dear Kris & John,

Please find below our updated proposal for Work Authorization 06A Based on your request and our subsequent conversations with ARCADIS and the City. This is one part of a two-part proposal covering the work required to prepare a confirmed drawing set for the Landscape Sheets based on the VE measures provided. Do not hesitate to reach out with any questions or to follow-up. We assume that this work authorization, once executed, will be effective beginning on the date of the Notice to Proceed for that you provided last week.

A handwritten signature in black ink, reading "Pippa Brashear". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Pippa Brashear
Planning Principal
SCAPE Landscape Architecture DPC

SCAPE LANDSCAPE ARCHITECTURE DPC

Norfolk NDRC – Work Authorization 06B – Revised Proposal 06/17/2020

NORFOLK NDRC: SCAPE WORK AUTHORIZATION 06B

This signed Work Authorization constitutes a written authorization of changes to the Agreement for Subcontractor Services signed between Arcadis and SCAPE and effective April 28, 2017. The description of work as well as the terms and conditions outlined below override any provisions previously agreed to, and in the case of conflict between this Work Authorization and the Agreement for Subcontractor Services, this Work Authorization shall control and govern.

DESCRIPTION OF WORK:

Task 0

A preliminary review of the VE mark-ups of the landscape drawings (L-series) provided by the City and their contractor (MEB) revealed that additional design work is necessary to ensure that these same VE modifications can be documented and ultimately constructed in a manner that is code complaint (e.g. meet ADA regulations), physically implemented, and meet the minimum standard of care necessary to allow them to be signed/sealed. Task 0 describes the work necessary to accomplish this task and proceed to task 1, the preparation of the conformed set.

Task 0A: Park Redesign: Redesign proposed landscape/park elements modified in the value engineering (VE) mark-ups (see attached documents):

- SCAPE will use the previously submitted signed and sealed drawing set (February 2019) as the basis for design studies and will attempt to implement the modifications conveyed in the final VE markups of the Resilience Park Materials Plans provided by MEB on May 1, 2020 (file: "Grandy Village Park VE Scope.pdf") and, for other sheets, the VE markups forwarded to SCAPE by ARCADIS on March 27, 2020 (file: "4-LANDSCAPE 10-11-19 VE.pdf ") in accordance with the original design intent and applicable code and ADA requirements. As the markup was not prepared by a licensed landscape architect and was not reviewed for code and ADA compliance, SCAPE cannot and does not assure that all suggested changes in the final VE mark-up will be incorporated into the design. Design changes will be necessary to meet applicable code and ADA requirements.
- SCAPE will review the (1) landscape materials and (2) grading within Grandy Village Park presented in the VE mark-ups to determine the extent they can be incorporated into the Park design.
- SCAPE will attempt to balance increases in materials, areas, etc. required to meet code compliance with proposed reductions or simplifications to minimize project costs. However, as SCAPE does not have access to MEB's Cost Estimate or quantity take-offs, SCAPE must rely entirely on MEB's review and confirmation of design revisions and is not responsible for the cost of landscape elements.

SCAPE LANDSCAPE ARCHITECTURE DPC

Norfolk NDRC – Work Authorization 06B – Revised Proposal 06/17/2020

- SCAPE understands that the City's current agreement with MEB is based on the VE markup set which, as set forth above, was not prepared by a licensed landscape architect and was not reviewed for code or ADA compliance or for constructability. As such, SCAPE anticipates significant change orders to that agreement will be required to account for costs associated with redesigning the Project for code, ADA and constructability requirements that were not addressed in the final VE mark-up. Any change orders resulting from design changes to the Project based on the VE suggestions are not the fault of SCAPE or ARCADIS and are merely a result of the attempt to reduce pricing based on the VE mark-ups.
- SCAPE will participate in up to three (3) meetings with ARCADIS, MEB, and the City to get clarification on VE markups, review and discuss design revisions, and get approval of design changes.
- Any comments or revision requests received after SCAPE's May 1 (05/01/2020) will be considered an additional service. This includes additional VE mark-ups, additional rounds of site-plan review, or any other changes.
- SCAPE assumes one (1) round of review and comment on the revised designs. It is assumed that MEB and the City will provide all feedback and confirm or request revision of the proposed design changes at the culmination of task 1A and before SCAPE commences Work Authorization 06A. Any delays due to delay in feedback or feedback provided after the commencement of Work Authorization 06A are not the responsibility of SCAPE and will be grounds for additional services.

Task 0B: Planting Redesign: Redesign proposed planting elements modified in the value engineering (VE) mark-ups (see attached documents):

- SCAPE will use the previously submitted signed and sealed drawing set (February 2019) as the basis for design studies to attempt to implement modifications conveyed in the VE markups forwarded to SCAPE by ARCADIS on March 27, 2020 (file: "4-LANDSCAPE 10-11-19 VE.pdf ") with original planting design intent.
- SCAPE's initial review of the provided VE markup's related to the planting design indicates that the VE proposed plant sizes and spacings will lead to a complete failure of the landscape to establish with normal maintenance. The desired cost savings that the VE drawings outline are still possible if the VE plant sizes and quantities are redeployed across the site at a tighter spacing in combination with overall reductions in planted areas or simplification of some planted areas (e.g. using seed in some areas).
- SCAPE's initial review of the VE mark-ups also indicated that while significant scope items (paths, surfaces, etc.) were removed, it is not clear whether these mark-ups accounted for increases to planting/seeding scope to provide proper cover to replace surfaces that are omitted. This will likely have some impact on

SCAPE LANDSCAPE ARCHITECTURE DPC

Norfolk NDRC – Work Authorization 06B – Revised Proposal 06/17/2020

planting design and quantities, thus SCAPE cannot and does not assure that all markups will be incorporated as drawn and notes that design changes will likely be necessary to meet said requirements.

- SCAPE will assess the plant sizing and quantities afforded by the VE mark-up and will prepare sketches to convey how these same plants can be composed across the site at spacings that will give the landscape planting a reasonable chance to establish, based on best practices and the standard of care.
- These redesigns will include changes to (1) planting plans within Grandy Village Park.
- SCAPE will present these revised designs in the form of mark-ups, sketches, and drawings to the City and their construction manager, MEB, for their prompt review and approval.
- The final design must appropriately cover and restore areas of the site opened during construction. Attempts will be made to balance increases in planting materials, areas, etc. required to meet site coverage with proposed reductions or simplifications to keep project costs in line. However, as SCAPE does not have access to MEB's Cost Estimate or quantity take-offs, SCAPE must rely entirely on MEB's review and confirmation of design revisions and is not responsible for the cost of landscape elements.
- Any comments or revision requests received after May 1 (05/01/2020) will be considered an additional service. This includes additional VE mark-ups, additional rounds of site-plan review, or any other changes.
- SCAPE assumes one (1) round of review and comment on the revised designs. It is assumed that MEB and the City will provide all feedback and confirm or request revision of the proposed design changes at the culmination of task 1B and before SCAPE commences Work Authorization 06A. Any delays due to delay in feedback or feedback provided after the commencement of Work Authorization 06A are not the responsibility of SCAPE and will be grounds for additional services.
- Tasks 1A and 1B are assumed to run concurrently.
- Any meetings associated with Task 1B are included in the scope for Task 1A.

SCHEDULE PARTICULARS:

Task 0 A & B Design Revisions – 4 weeks, exclusive of pencils-down times for Client or Contractor review and feedback

SCAPE LANDSCAPE ARCHITECTURE DPC

Norfolk NDRC – Work Authorization 06B – Revised Proposal 06/17/2020

COMPENSATION

Total approved fee not to exceed \$29,980

To be billed on an hourly time (and material, as applicable) basis utilizing approved all-inclusive rates stipulated in the contract.

The estimated fee per task is provided below:

0A	Park Redesign	\$17,980
0B	Planting Redesign	\$12,000
TOTAL LABOR		\$29,980

Any additional services will be subject to additional compensation on an hourly time (and material, as applicable) basis.

It is noted that SCAPE anticipates the above-mentioned fee may *not* be sufficient to complete the tasks outlined in this description of work. SCAPE will provide Arcadis with updates on the actual costs expended as needed and will pause all work when said costs arrive at the total approved NTE amount. SCAPE will not proceed with any design, documentation, review, or construction administration work without the written approval of additional fees sufficient for the completion of these tasks.

SCAPE LANDSCAPE ARCHITECTURE DPC
277 BROADWAY NINTH FLOOR NEW YORK NY 10007
T 212 462 2628 SCAPESTUDIO.COM

June 22, 2020

ARCADIS US, Inc.

RE: Work Authorization 6 Proposal for updated rendering for Norfolk NDRC

ATTN: Kris Edelman & John Millspaugh

Dear Kris & John,

Please find below the requested additional proposal for updating the birds-eye rendering of the resilience park. Do not hesitate to reach out with any questions or to follow-up.

A handwritten signature in black ink that reads "Pippa Brashear". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Pippa Brashear
Planning Principal
SCAPE Landscape Architecture DPC

SCAPE LANDSCAPE ARCHITECTURE DPC

Norfolk NDRC – Work Authorization 06 – Revised Proposal 06/03/2020

NORFOLK NDRC: SCAPE WORK AUTHORIZATION 06C

This signed Work Authorization constitutes a written authorization of changes to the Agreement for Subcontractor Services signed between Arcadis and SCAPE and effective April 28, 2017. The description of work as well as the terms and conditions outlined below override any provisions previously agreed to, and in the case of conflict between this Work Authorization and the Agreement for Subcontractor Services, this Work Authorization shall control and govern.

DESCRIPTION OF WORK:

Prepare revised birds eye rendering of the resilience park based on value engineering (VE) design revisions.

- Once SCAPE has received confirmation of all of the proposed design revisions for the resilience park, SCAPE will revise the attached birds-eye rendering of the park to reflect these design revisions.
- SCAPE assumes one (1) round of review and comment on the revised rendering. SCAPE will participate in up to one (1) call with ARCADIS and the City to review and discuss comments on the rendering.

SCHEDULE PARTICULARS:

Work is anticipated to take one week of time, exclusive of any time for review and comments.

COMPENSATION

Total approved fee not to exceed \$4,000

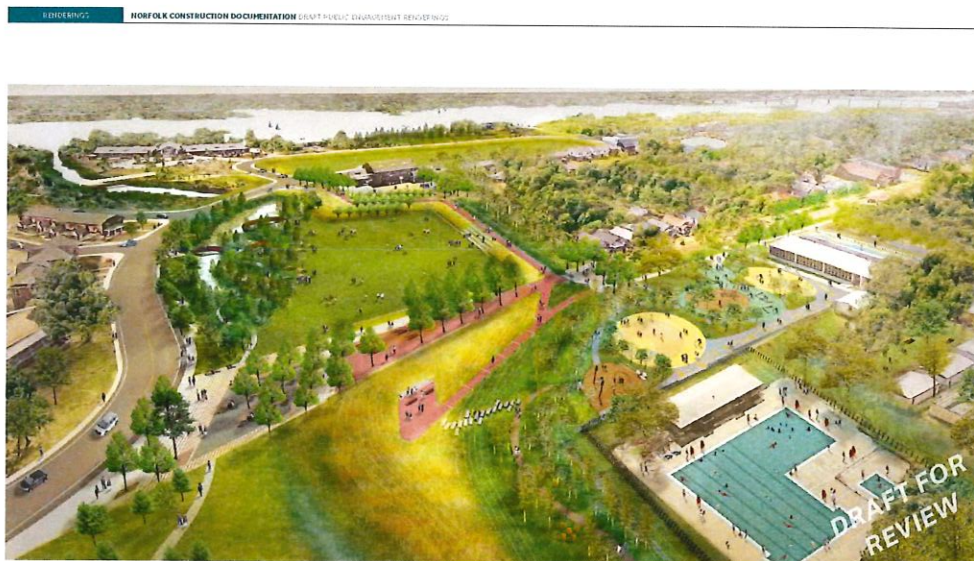
To be billed on an hourly time (and material, as applicable) basis utilizing approved all-inclusive rates stipulated in the contract.

Any additional services will be subject to additional compensation on an hourly time (and material, as applicable) basis.

SCAPE LANDSCAPE ARCHITECTURE DPC

Norfolk NDRC – Work Authorization 06 – Revised Proposal 06/03/2020

ATTACHMENT: RENDERING TO BE REVISED



SCAPE

Scope of services has been reviewed. By Selo Qejvani on August 18, 2020.

A handwritten signature in blue ink, appearing to be 'Selo Qejvani', written over the text.