



Contract Modification

Contract: _2016-026, Nichols Arboretum Sewer and Siphon Rehabilitation

Cont. Mod. Number 1	Revision Number	Cont. Mod. Date 8/28/2017	Electronic File Created No	Net Change \$314,700.42	Awarded Contract Amount \$890,900.00
Route		Managing Office City of Ann Arbor		District 0	Entered By Michael Nearing
Contract Location Nichols Arboretum					

Short Description

Change Order to add various items of extra work

Description of Changes

This Change Order will add various items of extra work to the project that were necessary to properly complete the work in accordance with the plans and specifications due to site conditions that varied from those as shown on the plans.

Increases / Decreases

Item Description	Item Code	Prop. Line	Proj. Line	Project	Catg.	Item Type	Quantity Change	Unit	Unit Price	Dollar Value
Clean 36-inch Dia. Sanitary Sewer	_210	0155	0155	_2016-026	001	Original	589.000	Lft	44.40000	\$26,151.60

Reason: During the course of the work it was discovered that MH 71-69254 was not located on the mainline 36" sanitary sewer. In order to perform the work of the contract, it was necessary to add the cleaning of the sanitary sewer from MH 71-69254 to MH 71-68806. Also during the work, it was discovered that this segment of sanitary sewer contained a great deal of medical waste and debris and needed to be removed from the sanitary sewer system in order to ensure proper flow and maximize system capacity. This length of sewer was 320.0 Lft.

During the course of the work, it was discovered that the segment of sanitary sewer from MH 71-69895 to 71-69896 was in poor condition and needed to be lined in order to preserve its integrity. This length of sewer was 269.0 Lft.

Removal and Replacement of Chamber Roof	_219	0200	0200	_2016-026	001	Original	-1.000	LS	6,276.00000	\$-6,276.00
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Reason: This item of work's description was incorrectly entered into FieldManager when the contract was originally created. The item number 7127051 will be created to replace this item of work.

CIPP Line 36-inch Dia. Sanitary Sewer	_220	0205	0205	_2016-026	001	Original	269.000	Lft	210.00000	\$56,490.00
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Reason: During the course of the work, it was discovered that the segment of sanitary sewer from MH 71-69895 to 71-69896 was in poor condition and needed to be lined in order to preserve its integrity. This length of sewer was 269.0 Lft.

Maintenance Gravel	3060020	0045	0045	_2016-026	001	Original	-305.000	Ton	75.00000	\$-22,875.00
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Reason: This item of work was added to the contract in error and should be removed to maintain the integrity of the contract.

Total Dollar Value: \$53,490.60



Contract Modification

New Items

Item Description	Item Code	Prop. Line	Proj. Line	Project	Catg.	ItemType	Proposed Quantity	Unit	Unit Price	Dollar Value
Sewer Flow Control, Adjustment	_850706C	0285	0285	_2016-026	001	Adjustment	32,608.700	Dlr	1.00000	\$32,608.70

Reason: During the course of the work, a differing site condition was discovered which the Contractor requested a 60 calendar day time extension in order to complete the work of the project to which the Engineer agreed. This item of work will compensate the Contractor for the additional time that the by-pass pumping system was on-site and available for use on the project. The adjustment is calculated as follows:

Adjustment = (additional duration of work/original contract duration) x original contract unit price

The original notice to proceed date was December 23, 2017; the original substantial completion date for the work was March 24, 2017. Original contract duration for the purposes of this work = 92 calendar days.

Therefore, the adjustment to the contract for Item of Work No. 209 is as follows:

$$\text{Adjustment} = (60/92) \times \$50,000 = \$32,608.70$$

_Vactor Rental, Complete	1047060	0270	0270	_2016-026	001	Extra	32,073.820	Dlr	1.00000	\$32,073.82
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Reason: During the course of the work, it was discovered that a portion of the existing 10" sanitary sewer owned by the University of Michigan adjacent to our work site began to leak when the by-pass pumping system was put into place. As a result, it was necessary to employ the use of vactor trucks to intercept the leaking sewage effluent before it could enter the Huron River during the lining of the existing 36" sanitary sewer between MH 71-68806 and MH 71-70049. This item of work compensates the Contractor for the use of their vactor trucks and represents payment in full for all labor, material, equipment, and clean-up costs including the disposal of the effluent associated with the work.

Liquidated Damages	1080000	0280	0280	_2016-026	001	Adjustment	55,900.000	Dlr	-1.00000	\$-55,900.00
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Reason: The Contractor did not complete the necessary construction activities by the revised Substantial Completion date of May 23, 2017. Consequently, liquidated damages for the failure to complete the necessary work are being assessed as follows:

Original Substantial Completion date was March 24, 2017.
A sixty (60) calendar day time extension was recommended by the Engineer.

Revised Substantial Completion Date is now May 23, 2017.

The project's work was Substantially Completed on July 6, 2017.

43 calendar days of realized delay occurred between May 23rd and July 6, 2017.

Total Amount of Liquidated Damages is 43 calendar days @ \$1,350.00 per day = \$55,900.00.

Aggregate Base, 8 inch	3020020	0230	0230	_2016-026	001	Modified	305.000	Syd	75.00000	\$22,875.00
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Reason: This item of work was inadvertently omitted from the original contract. We are adding it by this contract modification in order to properly perform the work of the project.



Contract Modification

New Items

Item Description	Item Code	Prop. Line	Proj. Line	Project	Catg.	ItemType	Proposed Quantity	Unit	Unit Price	Dollar Value
_ 1" x 3" Aggregate, 12 inch, Modified	3027011	0220	0220	_2016-026	001	Extra	134.000	Syd	120.00000	\$16,080.00

Reason: This item of work is necessary to compensate the Contractor for additional trucking costs associated with excavating for, furnishing, placing, compacting, and hauling excavated soils associated with installing additional gravel access path located in the Amphitheater of the Nichols Arboretum. See the project files for supporting documentation regarding this item of work.

_ Aggregate Surface Cse, 6 inch, Modified	3067011	0225	0225	_2016-026	001	Extra	107.000	Syd	40.00000	\$4,280.00
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Reason: This item of work is necessary to compensate the Contractor for additional trucking costs associated with excavating for, furnishing, placing, compacting, and hauling excavated soils associated with installing additional gravel access path located in the Amphitheater of the Nichols Arboretum. See the file for additional documentation regarding this item of work and all our agreements with the Contractor for the prosecution of the work.

_ CIPP Line 36-inch Dia. Sanitary Sewer, MH 71-69257 to MH 71-68806, Complete	4027001	0235	0235	_2016-026	001	Extra	455.000	Ft	279.00000	\$126,945.00
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Reason: It was discovered during the course of the work that MH 71-69254 was not located on the mainline 36" diameter sanitary sewer. This caused a need to re-define the construction sequence of the sewer rehabilitation and extended the limits of the work in order to have it properly performed. This item of work will compensate the Contractor in full for all additional labor, material, and equipment costs associated with CIPP lining this segment of sanitary sewer due to its depth. See the file for additional documentation regarding this item of work and all our agreements with the Contractor for the prosecution of the work.

_ Manned Entry of Sanitary Sewer, w/Life-support Equipment, Complete	4027050	0245	0245	_2016-026	001	Extra	2.000	Ea	2,500.00000	\$5,000.00
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Reason: During the course of the work it was discovered that MH 71-69254 was not located on the mainline 36" sanitary sewer. Consequently, it was necessary to extend the limits of the work in order to be able to terminate the proposed sewer liner at an accessible manhole. This item of work will compensate the Contractor for all expenses associated with manned entry into the sanitary sewer with full life-support equipment in order to remove portions of the liner that would plug lateral connections to the mainline sewer. See the file for additional documentation regarding this item of work and all our agreements with the Contractor for the prosecution of the work.

_ Sanitary Sewer, Drop Connection, Clean out, MH 71-70050, Complete	4027050	0250	0250	_2016-026	001	Extra	1.000	Ea	1,560.00000	\$1,560.00
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Reason: During the course of the work it was discovered that the external drop connection in sanitary manhole 71-70050 was plugged and not functioning. It is necessary to clean out this drop connection and restore it to working order to prevent future damage to the manhole. This unit price is payment in full for all labor, materials, and equipment to perform the work. See the file for additional documentation regarding this item of work and all our agreements with the Contractor for the prosecution of the work.



Contract Modification

New Items

Item Description	Item Code	Prop. Line	Proj. Line	Project	Catg.	ItemType	Proposed Quantity	Unit	Unit Price	Dollar Value
_ Custom Manhole, Cast-in-place, Special	4037050	0240	0240	_2016-026	001	Extra	1.000	Ea	50,416.30000	\$50,416.30

Reason: During the course of the work a sharp bend in the mainline 36" sanitary sewer was discovered between manholes 71-70047 and 71-70048. Upon discussions with City Staff and the Contractor, it was determined that a manhole needed to be constructed over this sharp bend and the bend in the sewer removed after the manhole has been constructed. This item of work includes all labor, materials, and equipment needed to construct this custom manhole and protect the surrounding work and environment. See the file for additional documentation regarding this item of work and all our agreements with the Contractor for the prosecution of the work.

_ Furnish and Install Hatch, Chamber 71-69893, Complete	7127050	0265	0265	_2016-026	001	Extra	1.000	Ea	1,995.00000	\$1,995.00
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Reason: This existing chamber currently is covered with a steel plate that cannot be secured. This item of work will compensate the contractor for all labor, material, and equipment costs associated with furnishing and installing a hatch that can be locked and prevent unintended entry. See the file for additional documentation regarding this item of work and all our agreements with the Contractor for the prosecution of the work.

_ Chamber Rehabilitation, MH 71-68895, Complete	7127051	0260	0260	_2016-026	001	Extra	1.000	LS	8,500.00000	\$8,500.00
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Reason: During the course of the project's construction this chamber was cleaned in accordance with requirements of the plans and specifications. Upon cleaning the chamber, it was discovered that its condition was better than originally anticipated and it could be rehabilitated as part of this project. This item of work will compensate the Contractor for all labor, material, and equipment costs associated with rehabilitating this structure and applying a hydrogen sulfide resistant coating to protect it from further damage. See the file for additional documentation regarding this item of work and all our agreements with the Contractor for the prosecution of the work.

_ Chamber Rehabilitation, MH 71-69893, Complete	7127051	0255	0255	_2016-026	001	Extra	1.000	LS	8,500.00000	\$8,500.00
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Reason: During the course of the project's construction this chamber was cleaned in accordance with requirements of the plans and specifications. Upon cleaning the chamber, it was discovered that its condition was better than originally anticipated and it could be rehabilitated as part of this project. This item of work will compensate the Contractor for all labor, material, and equipment costs associated with rehabilitating this structure and applying a hydrogen sulfide resistant coating to protect it from further damage. See the file for additional documentation regarding this item of work and all our agreements with the Contractor for the prosecution of the work.



Contract Modification

8/28/2017 4:34 PM
FieldManager 5.3a

New Items

Item Description	Item Code	Prop. Line	Proj. Line	Project	Catg.	ItemType	Proposed Quantity	Unit	Unit Price	Dollar Value
_ Removal and Replacement of Chamber Roof Slab - MH -71-69895	7127051	0275	0275	_2016-026	001	Modified	1.000	LS	6,276.00000	\$6,276.00

Reason: This item of work's description was incorrectly entered into FieldManager when the contract was originally created. The description of this item is the correct description as stated in the contract documents for the original item of work _219.

Total Dollar Value: \$261,209.82

Time Extensions

Site	Site Description	Site Type	Original Compl. Date/Days	Additional No. of Days	New Compl. Date/Days
00	Overall Contract Site	Working Days	0	60	60

Reason: During the course of the work it was discovered that MH 71-69254 was not on the mainline 36" sanitary sewer. Consequently, it was necessary to re-define the process for lining the sanitary sewer due to this significant changed condition. It was also necessary to extend the limits of the work and add several new items of work to the project in order to properly complete the work of this project.

This extension of contract time will extend the Substantial Completion Date of the work to May 23, 2017.

The Final Completion Date for the project will be extended by sixty calendar days as well which in turn revises the Final Completion date to July 30, 2017.

All contract requirements remain in effect during the performance of the work of this contract.

Project / Category Summary

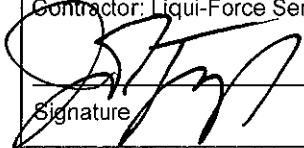
Project/Catg	Project/Category Description	Federal Number	Project Status	Finance System	Control Section	Dollar Value
_2016-026	Nichols Arboretum Sewer and Siphon Rehabilitation	0	CNST			
001	Category					\$314,700.42
Total:						\$314,700.42

Total Net Change Amount: \$314,700.42



Contract Modification

If authorized, the contractor agrees to do the work outlined above under the direction of the Engineer, and to accept as payment in full the basis of payment as indicated. Prime Contractor, you are authorized and instructed as the contractor to do the work described herein in accordance with the terms of your contract.

Contractor: Liqui-Force Services USA Inc.		Michael G. Nearing, P.E., Project Manager	
	<u>09/12/2017</u>	Michael G. Nearing, P.E. Digitally signed by Michael G. Nearing, P.E. Date: 2017.08.28 16:38:37 -04'00'	
Signature	Date	Signature	Date
Nicholas Hutchinson, P.E., City Engineer		Craig Hupy, Public Services Area Administrator	
Signature	Date	Signature	Date
Howard S. Lazarus, City Administrator			
Signature	Date		