

**KENNETH SCHMITT**  
Town Supervisor

**TOWN OF CARMEL**  
TOWN HALL

**ANN SPOFFORD**  
Town Clerk

**SUZANNE MC DONOUGH**  
Town Councilwoman  
Deputy Supervisor

60 McAlpin Avenue  
Mahopac, New York 10541  
Tel. (845) 628-1500 • Fax (845) 628-6836  
[www.carmelny.org](http://www.carmelny.org)

**KATHLEEN KRAUS**  
Receiver of Taxes

**MICHAEL A. BARILE**  
Town Councilman  
**FRANK D. LOMBARDI**  
Town Councilman  
**ROBERT S. SCHANIL, JR.**  
Town Councilman

**MICHAEL SIMONE**  
Superintendent of Highways  
Tel. (845) 628-7474

**TOWN BOARD VOTING MEETING & WORK SESSION**  
**Wednesday, May 6, 2020 7:00pm**

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**PLEDGE OF ALLEGIANCE - MOMENT OF SILENCE**

**Town Board Voting Meeting:**

1. Res: Making Promotional Appointment of Detective in the Town of Carmel Police Department
2. Res: Making Appointment of Police Officer in the Town of Carmel
3. Res: Making Appointment to the Town of Carmel Board of Assessment Review
4. Res: Accepting Proposal for Surveying Services
5. Res: Awarding Bid Lake Teakettle Park District and Lake Casse Park District Dam Rehabilitation Projects Contract C261

**Town Board Work Session:**

- Review of Town Board Minutes March 25, April 1, 2020
  - Ann Spofford, Town Clerk – Office of the State Comptroller Report – Procurement Policy
1. Police Chief Michael Cazzari/Lt. Stephen Kunze- Consider Request to Authorize Purchase of Body Armor Equipment
  2. James Gilchrist- Consider Request to Declare Old Vehicle Obsolete and Authorize Disposal
  3. James Gilchrist – Consider Request to Award Bid for Irrigation of Fields – Airport Park Phase #3
  4. Richard Franzetti, PE, Town Engineer – Consider Request to Acknowledge Emergency Repairs and Services for CWD #s 1,6,8,10,12, and 13
  5. Richard Franzetti, PE, Town Engineer – Consider Request to Acknowledge Emergency Repairs and Services for Various Town of Carmel Water and Sewer Districts
  6. Richard Franzetti, PE, Town Engineer – Consider Request to Accept Proposal for the Replacement of UV Disinfection Ballasts at Carmel Sewer District #2 Micro-Filtration Plant
  7. Richard Franzetti, PE, Town Engineer – Consider Request to Authorize Replacement of Influent Comminutor CSD#2
  8. Richard Franzetti, PE, Town Engineer – Consider Review of Draft Annual MS4 Report
  9. Richard Franzetti, PE, Town Engineer – Consider Request to Authorize Additional Services for the Lake Casse and Teakettle Lake Dams Rehabilitation
  10. Richard Franzetti, PE, Town Engineer – Consider Request to Authorize Additional Bonding – Contract #251 Carmel Sewer District #1 Main Extension
  11. Richard Franzetti, PE, Town Engineer – Water Tank Rehabilitation Project Basis of Design Summary Report CWD#s 2,3,8,9,14
- **Town Board Member Announcements/Comments**

## **RESOLUTION #1**

### **RESOLUTION MAKING PROBATIONARY PROMOTIONAL APPOINTMENT OF DETECTIVE – TOWN OF CARMEL IN THE POLICE DEPARTMENT**

RESOLVED that the Town Board of the Town of Carmel, acting as Commissioners of the Police Department hereby appoints Police Officer Brian Forde to the position of Detective, effective April 21, 2020, on a promotional probationary basis subject to the provisions of Civil Service Law and the Civil Service Rules and Regulations.

Resolution

Offered by: \_\_\_\_\_

Seconded by: \_\_\_\_\_

<u>Roll Call Vote</u>	<u>YES</u>	<u>NO</u>
Robert Schanil	___	___
Michael Barile	___	___
Frank Lombardi	___	___
Suzanne McDonough	___	___
Kenneth Schmitt	___	___

## **RESOLUTION #2**

### **RESOLUTION MAKING PROBATIONARY APPOINTMENT OF POLICE OFFICER – CARMEL POLICE DEPARTMENT**

RESOLVED that the Town Board of the Town of Carmel, acting as Commissioners of the Town of Carmel Police Department, hereby appoints Devon J. Sanborn to the position of Police Officer in the Town of Carmel Police Department, effective May 7, 2020, at an annual salary of \$46,939.00, on a probationary basis subject to the provisions of Civil service Law and the Civil Service Rules and Regulations.

Resolution

Offered by: \_\_\_\_\_

Seconded by: \_\_\_\_\_

<u>Roll Call Vote</u>	<u>YES</u>	<u>NO</u>
Robert Schanil	___	___
Michael Barile	___	___
Frank Lombardi	___	___
Suzanne McDonough	___	___
Kenneth Schmitt	___	___

# RESOLUTION #3

## RESOLUTION MAKING APPOINTMENT TO TOWN OF CARMEL BOARD OF ASSESSMENT REVIEW

RESOLVED that the Town Board of the Town of Carmel hereby appoints Ellen Dulberger to the Town of Carmel Board of Assessment Review for a term commencing immediately and expiring September 30, 2024.

### Resolution

Offered by: \_\_\_\_\_

Seconded by: \_\_\_\_\_

<u>Roll Call Vote</u>	<u>YES</u>	<u>NO</u>
Robert Schanil	___	___
Michael Barile	___	___
Frank Lombardi	___	___
Suzanne McDonough	___	___
Kenneth Schmitt	___	___

# RESOLUTION #4

## RESOLUTION ACCEPTING PROPOSAL FOR SURVEYING SERVICES

WHEREAS, The Town Board of the Town of Carmel has previously authorized the commencement of litigation against Serg, Inc., in connection with the acquisition of the traveled way known and designated as Odessa Court in the Shear Hill Estates realty subdivision; and

WHEREAS, in order to complete such acquisition a survey and legal description of the road and improvements sought to be acquired must be provided;

NOW THEREFORE BE IT RESOLVED that the Town Board of the Town of Carmel hereby accepts the proposal of Link Land Surveyors, Mahopac, NY, for the provision of the described surveying services, at a cost not to exceed \$4,850.00 and in accordance with the proposal dated February 28, 2020.

### Resolution

Offered by: \_\_\_\_\_

Seconded by: \_\_\_\_\_

<u>Roll Call Vote</u>	<u>YES</u>	<u>NO</u>
Robert Schanil	___	___
Michael Barile	___	___
Frank Lombardi	___	___
Suzanne McDonough	___	___
Kenneth Schmitt	___	___

## **RESOLUTION #5**

### **RESOLUTION AWARDING BID LAKE TEAKETTLE PARK DISTRICT AND LAKE CASSE PARK DISTRICT DAM REHABILITATION PROJECTS CONTRACT C261**

WHEREAS the Town Board of the Town of Carmel has previously authorized advertisement for the solicitation of bids for the dam rehabilitation projects required under the mandate of the New York State Department of Environmental Conservation for both Lake Teakettle Park District and Lake Casse Park District, Contract #C261; and

WHEREAS such bids were received and opened on February 3, 2020; and

NOW, THEREFORE, BE IT RESOLVED that the Town Board of the Town of Carmel, acting as the Commissioners of Lake Teakettle Park District, hereby awards said contract for Upper and Lower Teakettle Dam Rehabilitation to LandVScape, Inc., dba Nicky Diggs Excavation, Katonah, NY, the low responsible bidder meeting specifications NY a cost not to exceed \$47,219.50 for Lower Teakettle Dam and \$68,164.00 for Upper Teakettle Dam;

BE IT FURTHER RESOLVED that the Town Board of the Town of Carmel, acting as the Commissioners of Lake Casse Park District, hereby awards the said contract for Lake Casse Dam Rehabilitation to Legacy Supply, LLC, Valhalla, NY the low responsible bidder meeting specifications NY a cost not to exceed \$166,860.00 and

BE IT FURTHER RESOLVED, that upon presentation of performance bonds, labor and materials bonds and insurance certificates in form acceptable to Town Counsel, Town Supervisor Kenneth Schmitt is hereby authorized to sign any and all documentation necessary for the execution of all contract documentation required in connection herewith.

Resolution

Offered by: \_\_\_\_\_

Seconded by: \_\_\_\_\_

<u>Roll Call Vote</u>	<u>YES</u>	<u>NO</u>
Robert Schanil	___	___
Michael Barile	___	___
Frank Lombardi	___	___
Suzanne McDonough	___	___
Kenneth Schmitt	___	___

## 5/6/2020 Work Session Agenda Item #1

**From:** [Kunze, Stephen](#)  
**To:** [Pasquerello, Anne](#); [Greg Folchetti](#)  
**Subject:** Resolution for Purchase of Soft Body Armor  
**Date:** Tuesday, April 28, 2020 9:53:57 AM  
**Attachments:** [Survival Armor Bid.pdf](#)  
[image001.png](#)

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We would like board approval and a resolution to purchase 15-22 units of body armor at a cost of no more than \$30,000.00. We previously budgeted for this with an approved transfer request from "100.3120.0011-Police Personnel – Salary Uniform (2019) to 100.3120.0027 Police Equipment \*Purchase ballistic vests" which was dated 1/7/2020. The vest we are going to be purchasing is made by Survival Armor and we would be purchasing them from Rescuestuff Inc., which is our uniform provider. Survival Armor is on NYS bid which I attached, with the items we are purchasing highlighted. Rescuestuff Inc. is a Survival Armor dealer and will be selling them at the attached pricing.

We ask this matter to be placed on the the May 6, 2020 Town Board Work Session

Thanks,

Lieutenant Stephen Kunze  
Town of Carmel Police Department  
60 McAlpin Ave  
Mahopac, NY 10541  
[sk@ci.carmel.ny.us](mailto:sk@ci.carmel.ny.us)  
845-628-1300  
845-745-6289(mobile)



New York State Retail Price List No. 13

IFB/RFP: 22926

Group /Title: 35205/Body Armor, Law Enforcement (Soft, Hard, Ballistic, Stab & Riot) (Statewide)

**Discount: 57%**



12621 Corporate Lakes Drive, Unit #8  
Fort Myers, FL 33913  
Ph: 239-210-0891 ~ Fx: 239-210-0898

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

## PRODUCT Retail Price List



# LOT I - SOFT BODY ARMOR



Effective Date: 5/1/2019

STATE OF NY

Item #	Gender (M,F,N)	NIJ Model #	Description	Threat Level	MSRP (Per EA)	Discount % From MSRP	New NYS Net Price
<b>CONCEALABLE-BALLISTIC VESTS</b>							
MULW-II	N	ULW-II	Paladin - Premium Concealable Body Armor - With 1 Vertex Carrier, STP	NIJ-II	\$1,665.00	57%	\$715.95
FULW-II	F	ULW-FEM-II	Paladin - Premium Concealable Body Armor - Structured Female - With 1 Vantage Carrier, STP	NIJ-II	\$1,665.00	57%	\$715.95
MULW-III	N	ULW-III	Paladin - Premium Concealable Body Armor - With 1 Vertex Carrier, STP	NIJ-III	\$1,875.00	57%	\$806.25
FULW-III	F	ULW-FEM-III	Paladin - Premium Concealable Body Armor - Structured Female - With 1 Vantage Carrier, STP	NIJ-III	\$1,875.00	57%	\$806.25
MFC-II	N	FC-II	Falconflex - Flexible Concealable Body Armor - With 1 Vertex Carrier, STP	NIJ-II	\$1,595.00	57%	\$685.85
FFC-II	F	FC-FEM-II	Falconflex - Flexible Concealable Body Armor - Structured Female - With 1 Vertex Carrier, STP	NIJ-II	\$1,595.00	57%	\$685.85
MFC-III	N	FC-III	Falconflex - Flexible Concealable Body Armor - With 1 Vertex Carrier, STP	NIJ-III	\$1,742.00	57%	\$749.06
FFC-III	N	FC-FEM-III	Falconflex - Level IIIA - Flexible Concealable Body Armor - Structured Female - With 1 Vantage Carrier, STP	NIJ-III	\$1,742.00	57%	\$749.06
MTD06-II	N	TD06-II	Falcon6 - Premium Concealable Body Armor - With 1 Vertex Carrier, STP	NIJ-II	\$1,510.00	57%	\$649.30
FTD06-II	F	TD06-FEM-II	Falcon6 - Premium Concealable Body Armor - Structured Female - With 1 Vantage Carrier, STP	NIJ-II	\$1,510.00	57%	\$649.30
MTD06-III	N	TD06-III	Falcon6 - Premium Concealable Body Armor - With 1 Vertex Carrier, STP	NIJ-III	\$1,742.00	57%	\$749.06
FTD06-III	F	TD06-FEM-III-9	Falcon6 - Premium Concealable Body Armor - Structured Female - With 1 Vantage Carrier, STP	NIJ-III	\$1,742.00	57%	\$749.06
MLW-II	N	LW-II	Paragon6 Premium Concealable Body Armor - With 1 Vertex Carrier, STP	NIJ-II	\$1,465.00	57%	\$629.95
FLW-II	F	LW-FEM-II	Paragon6 - Premium Concealable Body Armor - Structured Female - With 1 Vantage Carrier, STP	NIJ-II	\$1,465.00	57%	\$629.95
MLW-III	N	LW-III	Paragon6 - Premium Concealable Body Armor - With 1 Vertex Carrier, STP	NIJ-III	\$1,692.00	57%	\$727.56
FLW-III	F	LW-FEM-III	Paragon6 - Premium Concealable Body Armor - Structured Female - With 1 Vantage Carrier, STP	NIJ-III	\$1,692.00	57%	\$727.56
MBAV-II	N	BAV-II	Plexus - Premium Concealable Body Armor - With 1 Vertex Carrier, STP	NIJ-II	\$1,425.00	57%	\$612.75
FBAV-FEM-II	F	BAV-FEM-II	Plexus - Premium Concealable Body Armor - Structured Female - With 1 Vertex Carrier, STP	NIJ-II	\$1,425.00	57%	\$612.75
MBAV-III	N	BAV-III	Plexus - Premium Concealable Body Armor - With 1 Vertex Carrier, STP	NIJ-III	\$1,638.00	57%	\$704.34
FBAV-III	F	BAV-FEM-III	Plexus - Premium Concealable Body Armor - Structured Female - With 1 Vertex Carrier, STP	NIJ-III	\$1,638.00	57%	\$704.34
MLC-II	N	LC-II	Phoenix - Comfort Concealable Body Armor - With 1 Vertex Carrier, STP	NIJ-II	\$1,261.00	57%	\$542.23
FLC-II	F	LC-FEM-II	Phoenix - Comfort Concealable Body Armor - Structured Female - With 1 Vantage Carrier, STP	NIJ-II	\$1,261.00	57%	\$542.23
MLT-3A	N	LT-3A	Phoenix - Comfort Concealable Body Armor - With 1 Vertex Carrier, STP	NIJ-III	\$1,461.00	57%	\$628.23
FTKU-III	F	TKU-FEM-III	Phoenix - Comfort Concealable Body Armor - Structured Female - With 1 Vantage Carrier, STP	NIJ-III	\$1,461.00	57%	\$628.23
MML-II	N	ML 3000-II	Performance Concealable Body armor - With 1 Vertex or Vantage Carrier, STP	NIJ-II	\$985.00	57%	\$423.55
MHML-III	N	HML 3000-III	Performance Concealable Body armor - With 1 Vertex or Vantage Carrier, STP	NIJ-III	\$1,136.00	57%	\$488.48
MHML-3A	N	HML-300-III	Performance - Concealable Body armor - With 1 Vertex or Vantage Carrier, STP	NIJ-III	\$1,136.00	57%	\$488.48
<b>TACTICAL-BALLISTIC VESTS</b>							
THREAT-ULW-II	N	ULW-II	THREAT Carrier with Paladin II Ballistics	NIJ-II	\$2,903.00	57%	\$1,248.29
THREAT-ULW-III	N	ULW-III	THREAT Carrier with Paladin IIIA Ballistics	NIJ-III	\$3,592.00	57%	\$1,544.56
THREAT-BAV-II	N	BAV-II	THREAT Carrier with Plexus II Ballistics	NIJ-II	\$2,290.00	57%	\$984.70
THREAT-BAV-III	N	BAV-III	THREAT Carrier with Plexus IIIA Ballistics	NIJ-III	\$2,663.00	57%	\$1,145.09
THREAT-LC-II	N	LC-II	THREAT Carrier with Phoenix II Ballistics	NIJ-II	\$1,831.00	57%	\$787.33
THREAT-LT-3A	N	LT-3A	THREAT Carrier with Phoenix IIIA Ballistics	NIJ-III	\$2,197.00	57%	\$944.71
THREAT-ML-II	N	ML 3000-II	THREAT Carrier with Performance II Ballistics	NIJ-II	\$1,631.00	57%	\$701.33
THREAT-HML-3A	N	HML 3000-III	THREAT Carrier with Performance IIIA Ballistics	NIJ-III	\$1,784.00	57%	\$767.12
THREAT-BIIS2-2	N	BIIS2-2	THREAT Carrier with Peacekeeper Level II Ballistics and 2 Spike	NIJ-II/2	\$3,395.00	57%	\$1,459.85
THREAT-B3AS3-6	N	B3AS3-6	THREAT Carrier with Peacekeeper Level IIIA Ballistics and 3 Spike	NIJ-III/3	\$3,629.00	57%	\$1,560.47
THREAT-SKS-1	N	SKS-1	THREAT Carrier with Peacekeeper Level 1 Spike	1	\$1,698.00	57%	\$730.14
THREAT-SKS-2	N	SKS-2	THREAT Carrier with Peacekeeper Level 2 Spike	2	\$1,957.00	57%	\$841.51
THREAT-SKS-3	N	SKS-3	THREAT Carrier with Peacekeeper Level 3 Spike	3	\$2,050.00	57%	\$881.50
Rex70-ULW-III	N	ULW-III	Rex 70 Tactical Carrier with Paladin IIIA Ballistics	NIJ-III	\$4,594.00	57%	\$1,975.42
Rex70-LW-III	N	LW-III	Rex 70 Tactical Carrier with Paragon6 IIIA Ballistics	NIJ-III	\$4,220.00	57%	\$1,814.60
Rex70-BAV-III	N	BAV-III	Rex 70 Tactical Carrier with Plexus IIIA Ballistics	NIJ-III	\$4,152.00	57%	\$1,785.36
Rex70-LT-3A	N	LT-3A	Rex 70 Tactical Carrier with Phoenix IIIA Ballistics	NIJ-III	\$3,711.00	57%	\$1,595.73
Rex70-HML-3A	N	HML 3000-III	Rex 70 Tactical Carrier with Performance IIIA Ballistics	NIJ-III	\$3,181.00	57%	\$1,367.83
Aegis-ULW-III	N	ULW-III	Aegis Tactical Carrier with Paladin IIIA Ballistics	NIJ-III	\$4,506.00	57%	\$1,937.58
Aegis-LW-III	N	LW-III	Aegis Tactical Carrier with Paragon6 IIIA Ballistics	NIJ-III	\$4,132.00	57%	\$1,776.76
Aegis-BAV-III	N	BAV-III	Aegis Tactical Carrier with Plexus IIIA Ballistics	NIJ-III	\$4,064.00	57%	\$1,747.52
Aegis-LT-3A	N	LT-3A	Aegis Tactical Carrier with Phoenix IIIA Ballistics	NIJ-III	\$3,624.00	57%	\$1,558.32
Aegis-HML-3A	N	HML 3000-III	Aegis Tactical Carrier with Performance IIIA Ballistics	NIJ-III	\$3,093.00	57%	\$1,329.99



**LOT II - HARD BODY ARMOR and RELATED PROTECTION PRODUCTS**



Effective Date: 5/1/2019

STATE OF NY

Item #	Gender (M,F,N)	NIJ Model #	Description	Threat Level	MSRP (Per EA)	Discount % From MSRP	New NYS Net Price
<b>TRAUMA PACS AND PLATES (CONT.)</b>							
HA-SA3S118X10S	N	3S11	8" x 10" SA3S11 Level III Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Shooters Cut	NIJ-III	\$756.00	57%	\$325.08
HA-SA3S1110X12F	N	3S11	10" x 12" SA3S11 Level III Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Full Cut	NIJ-III	\$939.00	57%	\$403.77
HA-SA3S1110X12S	N	3S11	10" x 12" SA3S11 Level III Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified shooters Cut	NIJ-III	\$939.00	57%	\$403.77
HA-SA28720	N	N/A	10"x12" ICW Special Threat Stealth Plate Multi Curve	STP	\$3,090.00	57%	\$1,328.70
<b>SHOOTERS KITS</b>							
SHKIT-SAPC-AR500	N	AR500	Shooters Kit with 2 AR500 Level III Plates	NIJ-III A	\$1,198.00	57%	\$515.14
SHKIT-SAPC-4S17	N	4S17	Shooters Kit with 2 4S17 Level IV Plates	NIJ-III A	\$1,465.00	57%	\$629.95
<b>BALLISTIC BLANKETS</b>							
BB-30" x 72"	N	N/A	Ballistic Resistant Blanket Size: 30" x 72"	NIJ-III A	\$1,876.00	57%	\$806.68
BB-32" x 72"	N	N/A	Ballistic Resistant Blanket Size: 32" x 72"	NIJ-III A	\$2,117.00	57%	\$910.31
BB-36" x 48"	N	N/A	Ballistic Resistant Blanket Size: 36" x 48"	NIJ-III A	\$3,068.00	57%	\$1,319.24
BB-36" x 72"	N	N/A	Ballistic Resistant Blanket Size: 36" x 72"	NIJ-III A	\$3,090.00	57%	\$1,328.70
BB-48" x 48"	N	N/A	Ballistic Resistant Blanket Size: 48" x 48"	NIJ-III A	\$3,241.00	57%	\$1,393.63
BB-48" x 72"	N	N/A	Ballistic Resistant Blanket Size: 48" x 72"	NIJ-III A	\$3,787.00	57%	\$1,628.41
<b>BALLISTIC BLANKETS (CONT.)</b>							
FB-30" x 72"	N	N/A	Frag Resistant Blanket Size: 30" x 72"	NIJ-III A	\$7,426.00	57%	\$3,193.18
FB-32" x 72"	N	N/A	Frag Resistant Blanket Size: 32" x 72"	NIJ-III A	\$7,437.00	57%	\$3,197.91
FB-36" x 48"	N	N/A	Frag Resistant Blanket Size: 36" x 48"	NIJ-III A	\$3,772.00	57%	\$1,621.96
FB-36" x 72"	N	N/A	Frag Resistant Blanket Size: 36" x 72"	NIJ-III A	\$7,448.00	57%	\$3,202.64
FB-48" x 48"	N	N/A	Frag Resistant Blanket Size: 48" x 48"	NIJ-III A	\$5,070.00	57%	\$2,180.10
FB-48" x 72"	N	N/A	Frag Resistant Blanket Size: 48" x 72"	NIJ-III A	\$7,451.00	57%	\$3,203.93
<b>SHIELDS</b>							
CSAS	N	N/A	Confined Space Assault Shield	NIJ-III A	\$3,530.00	57%	\$1,517.90
SRS	N	N/A	School Resource Officer Shield	NIJ-III A	\$5,350.00	57%	\$2,300.50
WRTH3AF18X24	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Flat, No Viewport, 18X24"	NIJ-III A	\$2,559.00	57%	\$1,100.37
WRTH3AF20X34	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Flat, No Viewport, 20X34"	NIJ-III A	\$3,503.00	57%	\$1,506.29
WRTH3AF20X40	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Flat, No Viewport, 20X40"	NIJ-III A	\$3,716.00	57%	\$1,597.88
WRTH3AF24X36	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Flat, No Viewport, 24X36"	NIJ-III A	\$3,820.00	57%	\$1,642.60
WRTH3AF24X48	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Flat, No Viewport, 24X48"	NIJ-III A	\$4,360.00	57%	\$1,874.80
WRTH3AF24X51	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Flat, No Viewport, 24X51"	NIJ-III A	\$4,485.00	57%	\$1,928.55
WRTH3AC18X24	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Curved, No Viewport, 18X24"	NIJ-III A	\$2,559.00	57%	\$1,100.37
WRTV3AF20X34	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Flat, With Viewport, 20X34"	NIJ-III A	\$4,485.00	57%	\$1,928.55
WRTV3AF20X40	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Flat, With Viewport, 20X40"	NIJ-III A	\$4,693.00	57%	\$2,017.99
WRTV3AF24X36	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Flat, With Viewport, 24X36"	NIJ-III A	\$4,801.00	57%	\$2,064.43
WRTV3AF24X48	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Flat, With Viewport, 24X48"	NIJ-III A	\$5,342.00	57%	\$2,297.06
WRTV3AF24X51	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Flat, With Viewport, 24X51"	NIJ-III A	\$5,467.00	57%	\$2,350.81
WRTV3AC20X34	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Curved, With Viewport, 20X34"	NIJ-III A	\$4,485.00	57%	\$1,928.55
WRTV3AC20X40	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Curved, With Viewport, 20X40"	NIJ-III A	\$4,693.00	57%	\$2,017.99
WRTV3AC24X36	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Curved, With Viewport, 24X36"	NIJ-III A	\$4,801.00	57%	\$2,064.43
WRTV3AC24X48	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Curved, With Viewport, 24X48"	NIJ-III A	\$5,342.00	57%	\$2,297.06
WRTV3AC24X51	N	N/A	Level IIIA WRAITH Stand Alone Ballistic Shield, Curved, With Viewport, 24X51"	NIJ-III A	\$5,467.00	57%	\$2,350.81
WRTH3F18X24	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Flat, No Viewport, 18X24"	NIJ-III	\$3,732.00	57%	\$1,604.76
WRTH3F20X34	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Flat, No Viewport, 20X34"	NIJ-III	\$6,973.00	57%	\$2,998.39
WRTH3F20X40	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Flat, No Viewport, 20X40"	NIJ-III	\$7,989.00	57%	\$3,435.27
WRTH3F24X36	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Flat, No Viewport, 24X36"	NIJ-III	\$7,639.00	57%	\$3,284.77
WRTH3F24X48	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Flat, No Viewport, 24X48"	NIJ-III	\$9,565.00	57%	\$4,112.95
WRTH3F24X51	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Flat, No Viewport, 24X51"	NIJ-III	\$9,969.00	57%	\$4,286.67
WRTH3C18X24	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Curved, No Viewport, 18X24"	NIJ-III	\$3,732.00	57%	\$1,604.76
WRTV3F20X34	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Flat, With Viewport, 20X34"	NIJ-III	\$6,973.00	57%	\$2,998.39
WRTV3F20X40	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Flat, With Viewport, 20X40"	NIJ-III	\$7,989.00	57%	\$3,435.27



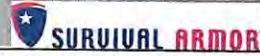
**LOT II - HARD BODY ARMOR and RELATED PROTECTION PRODUCTS**



Effective Date: 5/1/2019

STATE OF NY

Item #	Gender (M,F,N)	NIJ Model #	Description	Threat Level	MSRP (Per EA)	Discount % From MSRP	New NYS Net Price
<b>SHIELDS (CONT.)</b>							
WRTV3F24X36	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Flat, With Viewport, 24X36"	NIJ-III	\$7,639.00	57%	\$3,284.77
WRTV3F24X48	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Flat, With Viewport, 24X48"	NIJ-III	\$9,565.00	57%	\$4,112.95
WRTV3F24X51	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Flat, With Viewport, 24X51"	NIJ-III	\$9,969.00	57%	\$4,286.67
WRTV3C20X34	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Curved, With Viewport, 20X34"	NIJ-III	\$6,973.00	57%	\$2,998.39
WRTV3C20X40	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Curved, With Viewport, 20X40"	NIJ-III	\$7,989.00	57%	\$3,435.27
WRTV3C24X36	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Curved, With Viewport, 24X36"	NIJ-III	\$7,639.00	57%	\$3,284.77
WRTV3C24X48	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Curved, With Viewport, 24X48"	NIJ-III	\$9,565.00	57%	\$4,112.95
WRTV3C24X51	N	N/A	Level III WRAITH Stand Alone Ballistic Shield, Curved, With Viewport, 24X51"	NIJ-III	\$9,969.00	57%	\$4,286.67
WRAITH-LED	n	N/A	High powered LED light and Lithium ion charger for Wraith Shields		\$1,752.00	57%	\$753.36
<b>EOD SUITS</b>							
EOD-COMPSUIT			Olympian EOD - Complete Ensemble (Jacket, Pants, Mitts, Shoes, Spine Protector, Blast Plates, Helmet, Blower & Communications)		\$39,346.00	57%	\$16,918.78
EOD-COOLSUIT			Optional Cool Suit		\$6,592.00	57%	\$2,834.56



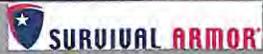
# LOT I - SOFT BODY ARMOR



Effective Date: 5/1/2019

STATE OF NY

Item #	Gender (M,F,N)	NIJ Model #	Description	Threat Level	MSRP (Per EA)	Discount % From MSRP	New NYS Net Price
<b>TACTICAL-BALLISTIC VESTS (CONT.)</b>							
AegisPC-ULW-III	N	ULW-III	Aegis PC Tactical Carrier with Paladin IIIA Ballistics	NIJ-III	\$4,506.00	57%	\$1,937.58
AegisPC-LW-III	N	LW-III	Aegis PC Tactical Carrier with Paragon6 IIIA Ballistics	NIJ-III	\$4,132.00	57%	\$1,776.76
AegisPC-BAV-III	N	BAV-III	Aegis PC Tactical Carrier with Plexus IIIA Ballistics	NIJ-III	\$4,064.00	57%	\$1,747.52
AegisPC-LT-3A	N	LT-3A	Aegis PC Tactical Carrier with Phoenix6 IIIA Ballistics	NIJ-III	\$3,624.00	57%	\$1,558.32
AegisPC-HML-3A	N	HML 3000-III	Aegis PC Tactical Carrier with Performance6 IIIA Ballistics	NIJ-III	\$3,093.00	57%	\$1,329.99
X50-ULW-III	N	ULW-III	X50 Tactical Carrier with Paladin IIIA Ballistics	NIJ-III	\$4,517.00	57%	\$1,942.31
X50-LW-III	N	LW-III	X50 Tactical Carrier with Paragon6 IIIA Ballistics	NIJ-III	\$4,143.00	57%	\$1,781.49
X50-BAV-III	N	BAV-III	X50 Tactical Carrier with Plexus IIIA Ballistics	NIJ-III	\$4,075.00	57%	\$1,752.25
X50-LT-3A	N	LT-3A	X50 Tactical Carrier with Phoenix6 IIIA Ballistics	NIJ-III	\$3,634.00	57%	\$1,562.62
X50-HML-3A	N	HML 3000-III	X50 Tactical Carrier with Performance6 IIIA Ballistics	NIJ-III	\$3,103.00	57%	\$1,334.29
X50PC-ULW-III	N	ULW-III	X50 PC Tactical Carrier with Paladin IIIA Ballistics	NIJ-III	\$4,517.00	57%	\$1,942.31
X50PC-LW-III	N	LW-III	X50 PC Tactical Carrier with Paragon6 IIIA Ballistics	NIJ-III	\$4,143.00	57%	\$1,781.49
X50PC-BAV-III	N	BAV-III	X50 PC Tactical Carrier with Plexus IIIA Ballistics	NIJ-III	\$4,075.00	57%	\$1,752.25
X50PC-LT-3A	N	LT-3A	X50 PC Tactical Carrier with Phoenix6 IIIA Ballistics	NIJ-III	\$3,634.00	57%	\$1,562.62
X50PC-HML-3A	N	HML 3000-III	X50 PC Tactical Carrier with Performance6 IIIA Ballistics	NIJ-III	\$3,103.00	57%	\$1,334.29
Shadow-ULW-III	N	ULW-III	Shadow Tactical Carrier with Paladin IIIA Ballistics	NIJ-III	\$3,762.00	57%	\$1,617.66
Shadow-LW-III	N	LW-III	Shadow Tactical Carrier With Paragon6 IIIA Ballistics	NIJ-III	\$3,395.00	57%	\$1,459.85
Shadow-BAV-III	N	BAV-III	Shadow Tactical Carrier With Plexus IIIA Ballistics	NIJ-III	\$3,368.00	57%	\$1,448.24
Shadow-LT-3A	N	LT-3A	Shadow Tactical Carrier With Phoenix6 IIIA Ballistics	NIJ-III	\$2,978.00	57%	\$1,280.54
Shadow-HML-3A	N	HML 3000-III	Shadow Tactical Carrier With Performance6 IIIA Ballistics	NIJ-III	\$2,468.00	57%	\$1,061.24
Phantom-ULW-III	N	ULW-III	Phantom Tactical Carrier With Paladin IIIA Ballistics	NIJ-III	\$3,446.00	57%	\$1,481.78
Phantom-LW-III	N	LW-III	Phantom Tactical Carrier With Paragon6 IIIA Ballistics	NIJ-III	\$3,178.00	57%	\$1,366.54
Phantom-BAV-III	N	BAV-III	Phantom Tactical Carrier With Plexus IIIA Ballistics	NIJ-III	\$3,052.00	57%	\$1,312.36
Phantom-LT-3A	N	LT-3A	Phantom Tactical Carrier With Phoenix6 IIIA Ballistics	NIJ-III	\$2,658.00	57%	\$1,142.94
Phantom-HML-3A	N	HML 3000-III	Phantom Tactical Carrier With Performance6 IIIA Ballistics	NIJ-III	\$2,121.00	57%	\$912.03
Spirit-ULW-III	N	ULW-III	Spirit Tactical Carrier With Paladin IIIA Ballistics	NIJ-III	\$3,504.00	57%	\$1,506.72
Spirit-LW-III	N	LW-III	Spirit Tactical Carrier With Paragon6 IIIA Ballistics	NIJ-III	\$3,161.00	57%	\$1,359.23
Spirit-BAV-III	N	BAV-III	Spirit Tactical Carrier With Plexus IIIA Ballistics	NIJ-III	\$3,136.00	57%	\$1,348.48
Spirit-LT-3A	N	LT-3A	Spirit Tactical Carrier With Phoenix6 IIIA Ballistics	NIJ-III	\$2,770.00	57%	\$1,191.10
Spirit-HML-3A	N	HML 3000-III	Spirit Tactical Carrier With Performance6 IIIA Ballistics	NIJ-III	\$2,289.00	57%	\$984.27
Warrior-ULW-III	N	ULW-III	Warrior Tactical Carrier With Paladin IIIA Ballistics	NIJ-III	\$ 3,265.00	57%	\$1,403.95
Warrior-LW-III	N	LW-III	Warrior Tactical Carrier With Paragon6 IIIA Ballistics	NIJ-III	\$2,976.00	57%	\$1,279.68
Warrior-BAV-III	N	BAV-III	Warrior Tactical Carrier With Plexus IIIA Ballistics	NIJ-III	\$2,991.00	57%	\$1,286.13
Warrior-LT-3A	N	LT-3A	Warrior Tactical Carrier With Phoenix6 IIIA Ballistics	NIJ-III	\$2,718.00	57%	\$1,168.74
Warrior-HML-3A	N	HML 3000-III	Warrior Tactical Carrier With Performance6 IIIA Ballistics	NIJ-III	\$2,408.00	57%	\$1,035.44
FOT-ULW-III	N	ULW-III	FOT Tactical Carrier With Paladin IIIA Ballistics	NIJ-III	\$4,315.00	57%	\$1,855.45
FOT-LW-III	N	LW-III	FOT Tactical Carrier With Paragon6 IIIA Ballistics	NIJ-III	\$3,989.00	57%	\$1,715.27
FOT-BAV-III	N	BAV-III	FOT Tactical Carrier With Plexus IIIA Ballistics	NIJ-III	\$3,831.00	57%	\$1,647.33
FOT-LT-3A	N	LT-3A	FOT Tactical Carrier With Phoenix6 IIIA Ballistics	NIJ-III	\$3,346.00	57%	\$1,438.78
FOT-HML-3A	N	HML 3000-III	FOT Tactical Carrier With Performance6 IIIA Ballistics	NIJ-III	\$2,688.00	57%	\$1,155.84
ASRV-ULW-III	N	ULW-III	ASRV Tactical Carrier With Paladin IIIA Ballistics	NIJ-III	\$2,771.00	57%	\$1,191.53
ASRV-LW-III	N	LW-III	ASRV Tactical Carrier With Paragon6 IIIA Ballistics	NIJ-III	\$2,546.00	57%	\$1,094.78
ASRV-BAV-III	N	BAV-III	ASRV Tactical Carrier With Plexus IIIA Ballistics	NIJ-III	\$2,451.00	57%	\$1,053.93
ASRV-LT-3A	N	LT-3A	ASRV Tactical Carrier With Phoenix6 IIIA Ballistics	NIJ-III	\$2,138.00	57%	\$919.34
ASRV-HML-3A	N	HML 3000-III	ASRV Tactical Carrier With Performance6 IIIA Ballistics	NIJ-III	\$1,705.00	57%	\$733.15
SAAV-ULW-III	N	ULW-III	SAAV - High Speed Low Drag Tactical Vest with 360 degrees of MOLLE with Paladin IIIA Ballistics	NIJ-III	\$4,288.00	57%	\$1,843.84
SAAV-LW-III	N	LW-III	SAAV - High Speed Low Drag Tactical Vest with 360 degrees of MOLLE with Paragon6 IIIA Ballistics	NIJ-III	\$3,931.00	57%	\$1,690.33
SAAV-BAV-III	N	BAV-III	SAAV - High Speed Low Drag Tactical Vest with 360 degrees of MOLLE with Plexus IIIA Ballistics	NIJ-III	\$3,854.00	57%	\$1,657.22
SAAV-LT-3A	N	LT-3A	SAAV - High Speed Low Drag Tactical Vest with 360 degrees of MOLLE with Phoenix6 IIIA Ballistics	NIJ-III	\$3,422.00	57%	\$1,471.46
SAAV-HML-3A	N	HML 3000-III	SAAV - High Speed Low Drag Tactical Vest with 360 degrees of MOLLE with Performance6 IIIA Ballistics	NIJ-III	\$2,891.00	57%	\$1,243.13
D-TAC-ULW-III	N	ULW-III	D-TAC Tactical Carrier With Paladin IIIA Ballistics	NIJ-III	\$4,198.00	57%	\$1,805.14
D-TAC-LW-III	N	LW-III	D-TAC Tactical Carrier With Paragon6 IIIA Ballistics	NIJ-III	\$3,881.00	57%	\$1,668.83
D-TAC-BAV-III	N	BAV-III	D-TAC Tactical Carrier With Plexus IIIA Ballistics	NIJ-III	\$3,837.00	57%	\$1,649.91
D-TAC-LT-3A	N	LT-3A	D-TAC Tactical Carrier With Phoenix6 IIIA Ballistics	NIJ-III	\$3,355.00	57%	\$1,442.65
D-TAC-HML-3A	N	HML 3000-III	D-TAC Tactical Carrier With Performance6 IIIA Ballistics	NIJ-III	\$2,814.00	57%	\$1,210.02
Covert Overt-ULW-III	N	ULW-III	Covert Overt - Multi-Use Outer and Concealable Vest Utilizing Concealable Panels With Paladin IIIA Ballistics - Includes full ballistics	NIJ-III	\$4,030.00	57%	\$1,732.90
Covert Overt-LW-III	N	LW-III	Covert Overt - Multi-Use Outer and Concealable Vest Utilizing Concealable Panels With Paragon6 IIIA Ballistics - Includes full ballistics	NIJ-III	\$3,703.00	57%	\$1,592.29
Covert Overt-BAV-III	N	BAV-III	Covert Overt - Multi-Use Outer and Concealable Vest Utilizing Concealable Panels With Plexus IIIA Ballistics - Includes full ballistics	NIJ-III	\$3,712.00	57%	\$1,596.16
Covert Overt-LT-3A	N	LT-3A	Covert Overt - Multi-Use Outer and Concealable Vest Utilizing Concealable Panels With Phoenix6 IIIA Ballistics - Includes full ballistics	NIJ-III	\$3,394.00	57%	\$1,459.42
Covert Overt-HML-3A	N	HML 3000-III	Covert Overt - Multi-Use Outer and Concealable Vest Utilizing Concealable Panels With Performance6 IIIA Ballistics - Includes full ballistics	NIJ-III	\$3,182.00	57%	\$1,368.26
Urban Police-ULW-III	N	ULW-III	Urban Police Tactical Carrier With Paladin IIIA Ballistics	NIJ-III	\$2,035.00	57%	\$875.05
Urban Police-LW-III	N	LW-III	Urban Police Tactical Carrier With Paragon6 IIIA Ballistics	NIJ-III	\$1,851.00	57%	\$795.93
Urban Police-BAV-III	N	BAV-III	Urban Police Tactical Carrier With Plexus IIIA Ballistics	NIJ-III	\$1,775.00	57%	\$763.25
Urban Police-LT-3A	N	LT-3A	Urban Police Tactical Carrier With Phoenix6 IIIA Ballistics	NIJ-III	\$1,515.00	57%	\$651.45
Urban Police-HML-3A	N	HML 3000-III	Urban Police Tactical Carrier With Performance6 IIIA Ballistics	NIJ-III	\$1,142.00	57%	\$491.06



# LOT I - SOFT BODY ARMOR



Effective Date: 5/1/2019

## STATE OF NY

Item #	Gender (M,F,N)	NIJ Model #	Description	Threat Level	MSRP (Per EA)	Discount % From MSRP	New NYS Net Price
<b>TACTICAL-BALLISTIC VESTS (CONT.)</b>							
IntnlTac-ULW-III A	N	ULW-III A	International Tac Tactical Carrier With Paladin III A Ballistics	NIJ-III A	\$2,539.00	57%	\$1,091.77
IntnlTac-LW-III A	N	LW-III A	International Tac Tactical Carrier With Paragon6 III A Ballistics	NIJ-III A	\$2,329.00	57%	\$1,001.47
IntnlTac-BAV-III A	N	BAV-III A	International Tac Tactical Carrier With Plexus III A Ballistics	NIJ-III A	\$2,224.00	57%	\$956.32
IntnlTac-LT-3A	N	LT-3A	International Tac Tactical Carrier With Phoenix6 III A Ballistics	NIJ-III A	\$1,909.00	57%	\$820.87
IntnlTac-HML-3A	N	HML 3000-III A	International Tac Tactical Carrier With Performance6 III A Ballistics	NIJ-III A	\$1,461.00	57%	\$628.23
MILTAC-ULW-III A	N	ULW-III A	MIL Tac Tactical Carrier With Paladin III A Ballistics	NIJ-III A	\$2,890.00	57%	\$1,242.70
MILTAC-LW-III A	N	LW-III A	MIL Tac Tactical Carrier With Paragon6 III A Ballistics	NIJ-III A	\$2,600.00	57%	\$1,118.00
MILTAC-BAV-III A	N	BAV-III A	MIL Tac Tactical Carrier With Plexus III A Ballistics	NIJ-III A	\$2,510.00	57%	\$1,079.30
MILTAC-LT-3A	N	LT-3A	MIL Tac Tactical Carrier With Phoenix6 III A Ballistics	NIJ-III A	\$2,081.00	57%	\$886.23
MILTAC-HML-3A	N	HML 3000-III A	MIL Tac Tactical Carrier With Performance6 III A Ballistics	NIJ-III A	\$1,543.00	57%	\$663.49
Spartan-ULW-III A	N	ULW-III A	Spartan Tactical Carrier With Paladin III A Ballistics	NIJ-III A	\$4,396.00	57%	\$1,890.28
Spartan-LW-III A	N	LW-III A	Spartan Tactical Carrier With Paragon6 III A Ballistics	NIJ-III A	\$4,026.00	57%	\$1,731.18
Spartan-BAV-III A	N	BAV-III A	Spartan Tactical Carrier With Plexus III A Ballistics	NIJ-III A	\$3,956.00	57%	\$1,701.08
Spartan-LT-3A	N	LT-3A	Spartan Tactical Carrier With Phoenix6 III A Ballistics	NIJ-III A	\$3,517.00	57%	\$1,512.31
Spartan-HML-3A	N	HML 3000-III A	Spartan Tactical Carrier With Performance6 III A Ballistics	NIJ-III A	\$2,976.00	57%	\$1,279.68
SBCR-ULW-III A	N	ULW-III A	SBCR Tac Tactical Carrier With Paladin III A Ballistics	NIJ-III A	\$4,560.00	57%	\$1,960.80
SBCR-LW-III A	N	LW-III A	SBCR Tac Tactical Carrier With Paragon6 III A Ballistics	NIJ-III A	\$4,175.00	57%	\$1,795.25
SBCR-BAV-III A	N	BAV-III A	SBCR Tac Tactical Carrier With Plexus III A Ballistics	NIJ-III A	\$4,020.00	57%	\$1,728.60
SBCR-LT-3A	N	LT-3A	SBCR Tac Tactical Carrier With Phoenix6 III A Ballistics	NIJ-III A	\$3,625.00	57%	\$1,558.75
SBCR-HML-3A	N	HML 3000-III A	SBCR Tac Tactical Carrier With Performance6 III A Ballistics	NIJ-III A	\$3,100.00	57%	\$1,333.00
POLMIL-ULW-III A	N	ULW-III A	Policia Militar Tactical Carrier With Paladin III A Ballistics	NIJ-III A	\$2,112.00	57%	\$908.16
POLMIL-LW-III A	N	LW-III A	Policia Militar Tactical Carrier With Paragon6 III A Ballistics	NIJ-III A	\$1,929.00	57%	\$829.47
POLMIL-BAV-III A	N	BAV-III A	Policia Militar Tactical Carrier With Plexus III A Ballistics	NIJ-III A	\$1,875.00	57%	\$806.25
POLMIL-LT-3A	N	LT-3A	Policia Militar Tactical Carrier With Phoenix6 III A Ballistics	NIJ-III A	\$1,697.00	57%	\$729.71
POLMIL-HML-3A	N	HML 3000-III A	Policia Militar Tactical Carrier With Performance III A Ballistics	NIJ-III A	\$1,373.00	57%	\$590.39
TRID-HML-3A	N	HML 3000-III A	Trident Tactical Carrier - Flotation Vest	NIJ-III A	\$4,225.00	57%	\$1,816.75
THRTP-ULW-III A	N	ULW-III A	Throat Protector Tactical Carrier With Paladin III A Ballistics	NIJ-III A	\$97.00	57%	\$41.71
THRTP-LW-III A	N	LW-III A	Throat Protector Tactical Carrier With Paragon6 III A Ballistics	NIJ-III A	\$82.00	57%	\$35.26
THRTP-BAV-III A	N	BAV-III A	Throat Protector Tactical Carrier With Plexus III A Ballistics	NIJ-III A	\$72.00	57%	\$30.96
THRTP-LT-3A	N	LT-3A	Throat Protector Tactical Carrier With Phoenix6 III A Ballistics	NIJ-III A	\$62.00	57%	\$26.66
THRTP-HML-3A	N	HML 3000-III A	Throat Protector Tactical Carrier With Performance6 III A Ballistics	NIJ-III A	\$50.00	57%	\$21.50
COLYK-ULW-III A	N	ULW-III A	Collar/Yoke Protector Tactical Carrier With Paladin III A Ballistics	NIJ-III A	\$560.00	57%	\$240.80
COLYK-LW-III A	N	LW-III A	Collar/Yoke Protector Tactical Carrier With Paragon6 III A Ballistics	NIJ-III A	\$525.00	57%	\$225.75
COLYK-BAV-III A	N	BAV-III A	Collar/Yoke Protector Tactical Carrier With Plexus III A Ballistics	NIJ-III A	\$498.00	57%	\$214.14
COLYK-LT-3A	N	LT-3A	Collar/Yoke Tactical Carrier With Phoenix6 III A Ballistics	NIJ-III A	\$468.00	57%	\$201.24
COLYK-HML-3A	N	HML 3000-III A	Collar/Yoke Tactical Carrier With Performance6 III A Ballistics	NIJ-III A	\$380.00	57%	\$163.40
GG-ULW-III A	N	ULW-III A	Groin Guard Tactical Carrier With Paladin III A Ballistics	NIJ-III A	\$350.00	57%	\$150.50
GG-LW-III A	N	LW-III A	Groin Guard Tactical Carrier With Paragon6 III A Ballistics	NIJ-III A	\$312.00	57%	\$134.16
GG-BAV-III A	N	BAV-III A	Groin Guard Tactical Carrier With Plexus III A Ballistics	NIJ-III A	\$305.00	57%	\$131.15
GG-LT-3A	N	LT-3A	Groin Guard Tactical Carrier With Phoenix6 III A Ballistics	NIJ-III A	\$262.00	57%	\$112.66
GG-HML-3A	N	HML 3000-III A	Groin Guard Tactical Carrier With Performance6 III A Ballistics	NIJ-III A	\$220.00	57%	\$94.60
ADSLV-ULW-III A	N	ULW-III A	Advanced Sleeve Tactical Carrier System With Paladin III A Ballistics	NIJ-III A	\$774.00		\$332.82
ADSLV-LW-III A	N	LW-III A	Advanced Sleeve Tactical Carrier System With Paragon6 III A Ballistics	NIJ-III A	\$707.00	57%	\$304.01
ADSLV-BAV-III A	N	BAV-III A	Advanced Sleeve Tactical Carrier System With Plexus III A Ballistics	NIJ-III A	\$691.00		\$297.13
ADSLV-LT-3A	N	LT-3A	Advanced Sleeve Tactical Carrier System With Phoenix6 III A Ballistics	NIJ-III A	\$615.00	57%	\$264.45
ADSLV-HML-3A	N	HML 3000-III A	Advanced Sleeve Tactical Carrier System With Performance6 III A Ballistics	NIJ-III A	\$535.00	57%	\$230.05
SLV-ULW-III A	N	ULW-III A	Sleeve Tactical Carrier System With Paladin III A Ballistics	NIJ-III A	\$685.00	57%	\$294.55
SLV-LW-III A	N	LW-III A	Sleeve Tactical Carrier System With Paragon6 III A Ballistics	NIJ-III A	\$645.00	57%	\$277.35
SLV-BAV-III A	N	BAV-III A	Sleeve Tactical Carrier System With Plexus III A Ballistics	NIJ-III A	\$610.00	57%	\$262.30
SLV-LT-3A	N	LT-3A	Sleeve Tactical Carrier System With Phoenix6 III A Ballistics	NIJ-III A	\$552.00	57%	\$237.36
SLV-HML-3A	N	HML 3000-III A	Sleeve Tactical Carrier System With Performance6 III A Ballistics	NIJ-III A	\$490.00	57%	\$210.70
<b>CORRECTIONAL STAB RESISTANT VESTS - CONCEALABLE</b>							
SKS-1	N	SKS-1	Spike 1 - NIJ 0115.00 Standard - Shank Resistant	NIJ 0115.00	\$1,142.00	57%	\$491.06
SKS-2	N	SKS-2	Spike 2 - NIJ 0115.00 Standard - Shank Resistant	NIJ 0115.00	\$1,371.00	57%	\$589.63
SKS-3	N	SKS-3	Spike 3 - NIJ 0115.00 Standard - Shank Resistant	NIJ 0115.00	\$1,597.00	57%	\$686.71



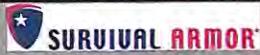
### LOT I - SOFT BODY ARMOR



Effective Date: 5/1/2019

STATE OF NY

Item #	Gender (M,F,N)	NIJ Model #	Description	Threat Level	MSRP (Per EA)	Discount % From MSRP	New NYS Net Price
<b>CORRECTIONAL COMBINATION VESTS - CONCEALABLE</b>							
MBIS2-2	N	BIS2-2	Combination 0101.06 Level II armor with Spike 2 Correction - Dual Certification - 1 Vertex Carrier, STP	NIJ-II/2	\$1,731.00	57%	\$744.33
FBF2-S2	F	BF2-S2	Combination 0101.06 Level II armor with Spike 2 Correction Female - Dual Certification - 1 Vantage Carrier, STP	NIJ-II/2	\$1,731.00	57%	\$744.33
MB3AS3-6	N	B3AS3-6	Combination 0101.06 Level IIIA armor with Spike 3 Correction - Dual Certification - 1 Vertex or Vantage Carrier, STP	NIJ-III/A/3	\$1,840.00	57%	\$791.20
<b>CARRIERS</b>							
MVT	M	N/A	Additional Premium Vertex Male Carrier		\$295.00	57%	\$126.85
MVT-MKP	M	N/A	Additional Premium Vertex Male Carrier with built in Med Kit Pouch		\$340.00	57%	\$146.20
FVA	F	N/A	Additional Premium Vantage Female Carrier		\$295.00	57%	\$126.85
FVA-MKP	F	N/A	Additional Premium Vantage Female Carrier with built in Med Kit Pouch		\$340.00	57%	\$146.20
UC	N	N/A	Additional Under Cover Carrier		\$204.00	57%	\$87.72
SS	M/F	N/A	Additional Premium Shock Shield Carrier		\$380.00	57%	\$163.40
SS-MKP	M/F	N/A	Additional Premium Shock Shield Carrier with built in Med Kit Pouch		\$413.00	57%	\$177.59
CTC	M/F	N/A	Concealable Tactical Carrier		\$206.00	57%	\$88.58
CTC-M	M/F	N/A	Concealable Tactical Carrier with MOLLE Attachment System		\$346.00	57%	\$148.78
HD	M/F	N/A	Heavy Duty Carrier		\$178.00	57%	\$76.54
USHIRT-Std	N	N/A	Uniform Shirt Carrier - Standard		\$170.00	57%	\$73.10
USHIRT-Custom	M/F	N/A	Uniform Shirt Carrier - Custom		\$260.00	57%	\$111.80
RAID-STD	M/F	N/A	Raid Outer Carrier Standard with standard 4 sewn on pockets		\$475.00	57%	\$204.25
FORAID-STD	M/F	N/A	Front Opening RAID Carrier with standard 4 sewn on pockets		\$525.00	57%	\$225.75
RAID-M	M/F	N/A	Raid Outer Carrier with MOLLE		\$451.00	57%	\$193.93
FORAID-M	M/F	N/A	Front Opening RAID Carrier with MOLLE Attachment System - No Pockets		\$520.00	57%	\$223.60
RAID-M+P	M/F	N/A	Raid Outer Carrier with MOLLE and 4 standard pockets		\$462.00	57%	\$198.66
FORAID-M+P	M/F	N/A	Front Opening RAID Carrier with MOLLE and 4 standard pockets		\$612.00	57%	\$263.16
RAID-TAC-STD	M/F	N/A	RAID TAC with standard 4 sew on pockets		\$488.00	57%	\$210.27
RAID-TAC-M	M/F	N/A	RAID TAC with MOLLE Attachment System - No Pockets		\$461.00	57%	\$198.23
RAID-TAC-M+P	M/F	N/A	RAID TAC with MOLLE Attachment System - 4 standard pockets - Black, Coyote, and OD Green are standard colors		\$513.00	57%	\$220.59
HVRAID-STD	M/F	N/A	HI-VIZ RAID with standard 4 sewn on pockets		\$482.00	57%	\$207.26
FOHVRAID-STD	M/F	N/A	Front Opening HI-VIZ RAID with standard 4 sewn on pockets		\$564.00	57%	\$242.52
HVRAID-M	M/F	N/A	HI-VIZ RAID with MOLLE Attachment System - No Pockets		\$458.00	57%	\$196.94
FOHVRAID-M	M/F	N/A	Front Opening HI-VIZ RAID with MOLLE Attachment System - No Pockets		\$541.00	57%	\$232.63
HVRAID-M+P	M/F	N/A	HI-VIZ RAID with MOLLE Attachment System - 4 Standard Pockets - Black is standard color		\$510.00	57%	\$219.30
FOHVRAID-M+P	M/F	N/A	Front Opening HI-VIZ RAID with MOLLE Attachment System - 4 Standard Pockets - Black is standard color		\$592.00	57%	\$254.56
RAID-EMS-STD	M/F	N/A	RAID-EMS-STD - Standard EMS Sewn on Pockets		\$479.00	57%	\$205.97
FORAID-EMS-STD	M/F	N/A	Front Opening RAID-EMS-STD - Standard EMS Sewn on Pockets		\$561.00	57%	\$241.23
RAID-EMS-M	M/F	N/A	RAID EMS - MOLLE Attachment System - No Pockets		\$453.00	57%	\$194.79
FORAID-EMS-M	M/F	N/A	Front Opening RAID EMS - MOLLE Attachment System - No Pockets		\$538.00	57%	\$230.48
RAID-EMS-M+P	M/F	N/A	RAID EMS - MOLLE Attachment System - 3 Standard Pockets - Black is standard Color		\$505.00	57%	\$217.15
FORAID-EMS-M+P	M/F	N/A	Front Opening RAID EMS - MOLLE Attachment System - 3 Standard Pockets - Black is standard Color		\$587.00	57%	\$252.41
CLASS-A-UNIF	M/F	N/A	CLASS A DUSC Uniform Shirt Carrier		\$489.00	57%	\$210.27
FO-CLASS-A-UNIF	M/F	N/A	Front Opening CLASS A DUSC Uniform Shirt Carrier		\$572.00	57%	\$245.96
CLASS-A-UNIF-M	M/F	N/A	CLASS A DUSC Uniform Shirt Carrier with MOLLE		\$505.00	57%	\$217.15
FO-CLASS-A-UNIF-M	M/F	N/A	Front Opening CLASS A DUSC Uniform Shirt Carrier with MOLLE		\$582.00	57%	\$250.26
CLASS-A-UNIF-M+P	M/F	N/A	CLASS A DUSC Uniform Shirt Carrier with MOLLE - 4 Standard Pockets - Black, Coyote, and OD Green are standard colors		\$560.00	57%	\$240.80
FO-CLASS-A-UNIF-M+P	M/F	N/A	Front Opening CLASS A DUSC Uniform Shirt Carrier with MOLLE - 4 Standard Pockets - Black, Coyote, and OD Green are standard colors		\$645.00	57%	\$277.35
FOT-OC-STD	M/F	N/A	Front Opening Overt Carrier for Concealable pads with standard 5 sewn on pockets		\$545.00	57%	\$234.35



# LOT I - SOFT BODY ARMOR



Effective Date: 5/1/2019

STATE OF NY

Item #	Gender (M,F,N)	NIJ Model #	Description	Threat Level	MSRP (Per EA)	Discount % From MSRP	New NYS Net Price
<b>CARRIERS (CONT.)</b>							
FO-OC-M	M/F	N/A	Front Opening Overt Carrier for Concealable pads with MOLLE Attachment System		\$495.00	57%	\$212.85
FO-OC-M+P	M/F	N/A	Front Opening Overt Carrier for Concealable pads with MOLLE Attachment System - 4 pockets		\$547.00	57%	\$235.21
FO-OC-RANG-STD	M/F	N/A	Front Opening Overt Carrier for Concealable pads with standard 5 sewn on pockets. Range Master Red		\$557.00	57%	\$239.51
FO-OC-RANG-M	M/F	N/A	Front Opening Overt Carrier for Concealable pads with MOLLE Attachment System - No pockets - Range Master Red		\$504.00	57%	\$216.72
FO-OC-RANG-M+4	M/F	N/A	Front Opening Overt Carrier for Concealable pads with MOLLE Attachment System - 4 pockets - Range Master Red		\$557.00	57%	\$239.51
DHS-M	M/F	N/A	DHS Overt Carrier for Concealable pads with MOLLE Attachment System - No pockets		\$403.00	57%	\$173.29
DHS-M+P	M/F	N/A	DHS Overt Carrier for Concealable pads with MOLLE Attachment System - 4 pockets		\$461.00	57%	\$198.23
ROV-GEN2#1201	M/F	N/A	Riot Blunt Trauma Outer Vest	N/A	\$911.00	57%	\$391.73
ROV-UMP#1201	M/F	N/A	Riot Blunt Trauma Outer Vest	N/A	\$1,285.00	57%	\$552.55
RS#1202	M/F	N/A	Riot Blunt Trauma Shirt	N/A	\$591.00	57%	\$254.13
TS#1203	M/F	N/A	Riot Blunt Trauma Tactical Shirt	N/A	\$1,119.00	57%	\$481.17
TS#1204	M/F	N/A	Riot Blunt Trauma Tactical Shirt - w/ optional pockets for Spike Armor - Spike Armor not included	N/A	\$1,119.00	57%	\$481.17
PANTS#1205	M/F	N/A	Riot Blunt Trauma Tactical Pants with Boot Guard	N/A	\$746.00	57%	\$320.78
SA-QRPC	M/F	N/A	Survival Armor Quick Release Plate Carrier	N/A	\$535.00	57%	\$230.05
QD-QOS	M/F	N/A	Quilted Over Carrier for Concealable pads		\$334.00	57%	\$143.62
MRPC	M/F	N/A	Modular Rifle Plate Carrier System		\$258.00	57%	\$110.94
IMPC	M/F	N/A	International MOLLE Plate Carrier System		\$195.00	57%	\$83.85
SAPC	M/F	N/A	Survival Armor MOLLE Plate Carrier System		\$247.00	57%	\$106.21
ISS	M/F	N/A	Integrated Support System		\$173.00	57%	\$74.39
MPC-STD	M/F	N/A	MOLLE Plate Carrier System		\$136.00	57%	\$58.48

## K-9 VESTS

K9H-ULW-III A	N	ULW-III A	K-9 Handler Tactical Carrier With Paladin IIIA Ballistics	NIJ-III A	\$4,028.00	57%	\$1,732.04
K9H-LW-III A	N	LW-III A	K-9 Handler Tactical Carrier With Paragon IIIA Ballistics	NIJ-III A	\$3,837.00	57%	\$1,649.91
K9H-FC-III A	N	FC-III A	K-9 Handler Tactical Carrier With FalconFlex IIIA Ballistics	NIJ-III A	\$3,800.00	57%	\$1,634.00
K9H-BAV-III A	N	BAV-III A	K-9 Handler Tactical Carrier With Plexus IIIA Ballistics	NIJ-III A	\$3,525.00	57%	\$1,515.75
K9H-LT-3A	N	LT-3A	K-9 Handler Tactical Carrier With Phoenix6 IIIA Ballistics	NIJ-III A	\$3,102.00	57%	\$1,333.86
K9H-HML-III A	N	HML 3000-III A	K-9 Handler Tactical Carrier With Performance6 IIIA Ballistics	NIJ-III A	\$2,452.00	57%	\$1,054.36
K9AD-ULW-II	N	ULW-II	K-9 Armor for Police Dogs in Paladin II Ballistics	NIJ-II	\$1,796.00	57%	\$772.28
K9AD-LW-II	N	LW-II	K-9 Armor for Police Dogs in Paragon II Ballistics	NIJ-II	\$1,708.00	57%	\$734.44
K9AD-FC-II	N	FC-II	K-9 Armor for Police Dogs in Falconflex II Ballistics	NIJ-II	\$1,890.00	57%	\$726.70
K9AD-BAV-II	N	BAV-II	K-9 Armor for Police Dogs in Plexus II Ballistics	NIJ-II	\$1,580.00	57%	\$679.40
K9AD-LT-II	N	LT-II	K-9 Armor for Police Dogs in Phoenix6 II Ballistics	NIJ-II	\$1,374.00	57%	\$590.82
K9AD-ML-II	N	ML 3000-II	K-9 Armor for Police Dogs in Performance6 II Ballistics	NIJ-II	\$1,280.00	57%	\$550.40
K9AD-ULW-III A	N	ULW-III A	K-9 Armor for Police Dogs in Paladin IIIA Ballistics	NIJ-III A	\$2,146.00	57%	\$922.78
K9AD-LW-III A	N	LW-III A	K-9 Armor for Police Dogs in Paragon IIIA Ballistics	NIJ-III A	\$2,017.00	57%	\$867.31
K9AD-FC-III A	N	FC-III A	K-9 Armor for Police Dogs in FalconFlex IIIA Ballistics	NIJ-III A	\$1,931.00	57%	\$830.33
K9AD-BAV-III A	N	BAV-III A	K-9 Armor for Police Dogs in Plexus IIIA Ballistics	NIJ-III A	\$1,884.00	57%	\$810.12
K9AD-LT-3A	N	LT-3A	K-9 Armor for Police Dogs in Phoenix6 IIIA Ballistics	NIJ-III A	\$1,698.00	57%	\$730.14
K9AD-HML-III A	N	HML 3000-III A	K-9 Armor for Police Dogs in Performance6 IIIA Ballistics	NIJ-III A	\$1,585.00	57%	\$681.55

## CARRY BAGS (VEST) - ACCESSORIES

T-CONCAR-BAG	N	N/A	Concealable Vest Carry Bag		\$87.00	57%	\$37.41
T-TACVEST-BAG	N	N/A	Tactical Vest Carry Bag		\$196.00	57%	\$84.28

## REPLACEMENT VEST STRAPS - ACCESSORIES

LDSS-6pc	N	N/A	LDSS-Replacement Straps Set		\$62.00	57%	\$26.66
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## POCKETS/POUCHES / MED KITS - ACCESSORIES

PKT-STD	N	N/A	Additional Pockets for Tactical Carriers		\$67.00	57%	\$28.81
PKT-CUST	N	N/A	Custom Pockets for Tactical Carriers		\$133.00	57%	\$57.19
TA-11SG00	N	N/A	HSGI Stun Gun TACO MOLLE Pouch		\$136.00	57%	\$58.05
TA-H-PAT-PAC	N	N/A	HSGI Patrol Pouch Pack (One each, Mini Map V2 MOLLE Pouch, Multi Access Comm TACO U-Mount Pouch and Duty Leo Platform TACO MOLLE Pouch)		\$487.00	57%	\$209.41
TA-H-SWATPAC	N	N/A	HSGI SWAT/Tactical Pouch Pack (One each, Bleeder/Blowout MOLLE Pouch, Multi Access Comm MOLLE Pouch and POGGY GP MOLLE Pouch) and (Two Double Decker TACO MOLLE Pouches)		\$600.00	57%	\$258.00

## POCKETS/POUCHES / MED KITS - ACCESSORIES

MED-RPCH	N	N/A	Retro Med Kit Pouch		\$31.00	57%	\$13.33
MEDKIT	N	N/A	Med Kit no QuikClot - with retro pocket		\$240.00	57%	\$103.20
MEDKITQC	N	N/A	Med Kit with QuikClot - with retro pocket		\$410.00	57%	\$176.30
INTMEDKIT	N	N/A	Med Kit no QuikClot - no retro pocket		\$215.00	57%	\$92.45
INTMEDKITQC	N	N/A	Med Kit with QuikClot - no retro pocket		\$385.00	57%	\$165.55

## ID PATCHES / OTHER ACCESSORIES

ID-FLAPS	N	N/A	Customer ID Flaps for Tactical Carriers		\$62.00	57%	\$26.66
HPT	N	N/A	High Performance T-Shirt - Crew Or V-Neck		\$78.00	57%	\$33.54



### LOT I - SOFT BODY ARMOR



Effective Date: 5/1/2019

STATE OF NY

Item #	Gender (M,F,N)	NIJ Model #	Description	Threat Level	MSRP (Per EA)	Discount % From MSRP	New NYS Net Price
<b>CUSTOMIZATION CHARGES</b>							
CUSTOM-RATE	N	N/A	Carrier Customization "will be billed actual cost based on customization, but not to exceed listed contract price" *		\$299.00	50%	\$150.00

\*Customization Charges are based on changing the pattern of the carrier. Adding to, changing or removing the following: Sewn on pockets, MOLLE, Badge, MIC or Name Tabs, Pockets, loop, grommets or any pattern configuration changes.



### LOT II - HARD BODY ARMOR and RELATED PROTECTION PRODUCTS



Effective Date: 5/1/2019

STATE OF NY

<b>BALLISTIC HELMETS</b>							
HA-SA-301S	N	N/A	SA-301 PASGT helmet w/Standard 3 Point Harness Level IIIA NIJ 0106.01 Small	NIJ-III A	\$680.00	57%	\$292.40
HA-SA-301M	N	N/A	SA-301 PASGT helmet w/Standard 3 Point Harness Level IIIA NIJ 0106.01 Medium	NIJ-III A	\$680.00	57%	\$292.40
HA-SA-301L	N	N/A	SA-301 PASGT helmet w/Standard 3 Point Harness Level IIIA NIJ 0106.01 Large	NIJ-III A	\$680.00	57%	\$292.40
HA-SA-301XL	N	N/A	SA-301 PASGT helmet w/Standard 3 Point Harness Level IIIA NIJ 0106.01 Xlarge	NIJ-III A	\$680.00	57%	\$292.40
HA-SA-301P4S	N	N/A	SA-301P4 PASGT helmet w/Modified 4 Point ACH H Suspension w/7 Pads Level IIIA NIJ 0106.01 Small	NIJ-III A	\$680.00	57%	\$292.40
HA-SA-301P4M	N	N/A	SA-301P4 PASGT helmet w/Modified 4 Point ACH H Suspension w/7 Pads Level IIIA NIJ 0106.01 Medium	NIJ-III A	\$680.00	57%	\$292.40
HA-SA-301P4L	N	N/A	SA-301P4 PASGT helmet w/Modified 4 Point ACH H Suspension w/7 Pads Level IIIA NIJ 0106.01 Large	NIJ-III A	\$680.00	57%	\$292.40
HA-SA-301P4XL	N	N/A	SA-301P4 PASGT helmet w/Modified 4 Point ACH H Suspension w/7 Pads Level IIIA NIJ 0106.01 Xlarge	NIJ-III A	\$680.00	57%	\$292.40
HA-SA-301ULPLTS	N	N/A	SA-301 ULPLT PASGT helmet Ultra Lightweight w/Dial Ratchet Harness Level IIIA NIJ 0106.01 Small	NIJ-III A	\$2,019.00	57%	\$868.17
HA-SA-301ULPLTM	N	N/A	SA-301 ULPLT PASGT helmet Ultra Lightweight w/Dial Ratchet Harness Level IIIA NIJ 0106.01 Medium	NIJ-III A	\$2,019.00	57%	\$868.17
HA-SA-301ULPLTL	N	N/A	SA-301 ULPLT PASGT helmet Ultra Lightweight w/Dial Ratchet Harness Level IIIA NIJ 0106.01 Large	NIJ-III A	\$2,019.00	57%	\$868.17
HA-SA-301ULPLTX	N	N/A	SA-301 ULPLT PASGT helmet Ultra Lightweight w/Dial Ratchet Harness Level IIIA NIJ 0106.01 Xlarge	NIJ-III A	\$2,019.00	57%	\$868.17
HA-SA-HPPLTS	N	N/A	SA-301 HPPLT PASGT Helmet (High Performance PASGT Includes Dial Ratchet Harness) Level IIIA NIJ 0106.01 Small	NIJ-III A	\$1,554.00	57%	\$668.22
HA-SA-HPPLTM	N	N/A	SA-301 HPPLT PASGT Helmet (High Performance PASGT Includes Dial Ratchet Harness) Level IIIA NIJ 0106.01 Medium	NIJ-III A	\$1,554.00	57%	\$668.22
HA-SA-HPPLTL	N	N/A	SA-301 HPPLT PASGT Helmet (High Performance PASGT Includes Dial Ratchet Harness) Level IIIA NIJ 0106.01 Large	NIJ-III A	\$1,554.00	57%	\$668.22
HA-SA-HPPLTXL	N	N/A	SA-301 HPPLT PASGT Helmet (High Performance PASGT Includes Dial Ratchet Harness) Level IIIA NIJ 0106.01 Xlarge	NIJ-III A	\$1,554.00	57%	\$668.22
HA-SA-501 SC-S	N	N/A	SA-501 ACH Standard Helmet Full Cut (w/4 Point ACH H Suspension w/7 Pads) Level IIIA NIJ 0106.01 Small	NIJ-III A	\$776.00	57%	\$333.68
HA-SA-501 SC-M	N	N/A	SA-501 ACH Standard Helmet Full Cut (w/4 Point ACH H Suspension w/7 Pads) Level IIIA NIJ 0106.01 Medium	NIJ-III A	\$776.00	57%	\$333.68
HA-SA-501 SC-L	N	N/A	SA-501 ACH Standard Helmet Full Cut (w/4 Point ACH H Suspension w/7 Pads) Level IIIA NIJ 0106.01 Large	NIJ-III A	\$776.00	57%	\$333.68
HA-SA-501 SC-XL	N	N/A	SA-501 ACH Standard Helmet Full Cut (w/4 Point ACH H Suspension w/7 Pads) Level IIIA NIJ 0106.01 Xlarge	NIJ-III A	\$776.00	57%	\$333.68
HA-SA-501 MC-S	N	N/A	SA-501 ACHMC Mid-Cut Helmet (4 Point H Harness w/7 Pads) Level IIIA NIJ 0106.01 Small	NIJ-III A	\$801.00	57%	\$344.43
HA-SA-501 MC-M	N	N/A	SA-501 ACHMC Mid-Cut Helmet (4 Point H Harness w/7 Pads) Level IIIA NIJ 0106.01 Medium	NIJ-III A	\$801.00	57%	\$344.43
HA-SA-501 MC-L	N	N/A	SA-501 ACHMC Mid-Cut Helmet (4 Point H Harness w/7 Pads) Level IIIA NIJ 0106.01 Large	NIJ-III A	\$801.00	57%	\$344.43
HA-SA-501 MC-XL	N	N/A	SA-501 ACHMC Mid-Cut Helmet (4 Point H Harness w/7 Pads) Level IIIA NIJ 0106.01 Xlarge	NIJ-III A	\$801.00	57%	\$344.43
HA-SA-501 HC-M	N	N/A	SA-501 ACHHC High-Cut Helmet (4 Point H Harness w/7 Pads) Level IIIA NIJ 0106.01 Medium	NIJ-III A	\$801.00	57%	\$344.43
HA-SA-501 HC-L	N	N/A	SA-501 ACHHC High-Cut Helmet (4 Point H Harness w/7 Pads) Level IIIA NIJ 0106.01 Large	NIJ-III A	\$801.00	57%	\$344.43
HA-SA-501 HC-XL	N	N/A	SA-501 ACHHC High-Cut Helmet (4 Point H Harness w/7 Pads) Level IIIA NIJ 0106.01 Xlarge	NIJ-III A	\$801.00	57%	\$344.43
HA-SA-501 HC-S	N	N/A	SA-501 ACHHC High-Cut Helmet (4 Point H Harness w/7 Pads) Level IIIA NIJ 0106.01 Small	NIJ-III A	\$801.00	57%	\$344.43
HA-SA-ULACH-S	N	N/A	SA-501 ULACH Standard Full-Cut Helmet (Ultra Lightweight ACH) Level IIIA NIJ 0106.01 Small	NIJ-III A	\$2,356.00	57%	\$1,013.08
HA-SA-ULACH-M	N	N/A	SA-501 ULACH Standard Full-Cut Helmet (Ultra Lightweight ACH) Level IIIA NIJ 0106.01 Medium	NIJ-III A	\$2,356.00	57%	\$1,013.08



**LOT II - HARD BODY ARMOR and RELATED PROTECTION PRODUCTS**



Effective Date: 5/1/2019

STATE OF NY

Item #	Gender (M,F,N)	NIJ Model #	Description	Threat Level	MSRP (Per EA)	Discount % From MSRP	New NYS Net Price
<b>BALLISTIC HELMETS (CONT.)</b>							
HA-SA-ULACH-L	N	N/A	SA-501 ULACH Standard Full-Cut Helmet (Ultra Lightweight ACH) Level IIIA NIJ 0106.01 Large	NIJ-III A	\$2,356.00	57%	\$1,013.08
HA-SA-ULACH-XL	N	N/A	SA-501 ULACH Standard Full-Cut Helmet (Ultra Lightweight ACH) Level IIIA NIJ 0106.01 Xlarge	NIJ-III A	\$2,356.00	57%	\$1,013.08
HA-SA-ULACHMC-S	N	N/A	SA-501 ULACHMC Mid-Cut Helmet (Ultra Lightweight ACH) Level IIIA NIJ 0106.01 Small	NIJ-III A	\$2,435.00	57%	\$1,047.05
HA-SA-ULACHMC-M	N	N/A	SA-501 ULACHMC Mid-Cut Helmet (Ultra Lightweight ACH) Level IIIA NIJ 0106.01 Medium	NIJ-III A	\$2,435.00	57%	\$1,047.05
HA-SA-ULACHMC-L	N	N/A	SA-501 ULACHMC Mid-Cut Helmet (Ultra Lightweight ACH) Level IIIA NIJ 0106.01 Large	NIJ-III A	\$2,435.00	57%	\$1,047.05
HA-SA-ULACHMC-X	N	N/A	SA-501 ULACHMC Mid-Cut Helmet (Ultra Lightweight ACH) Level IIIA NIJ 0106.01 Xlarge	NIJ-III A	\$2,435.00	57%	\$1,047.05
HA-SA-ULACHHC-S	N	N/A	SA-501 ULACHHC High-Cut Helmet (Ultra Lightweight ACH) Level IIIA NIJ 0106.01 Small	NIJ-III A	\$2,435.00	57%	\$1,047.05
HA-SA-ULACHHC-M	N	N/A	SA-501 ULACHHC High-Cut Helmet (Ultra Lightweight ACH) Level IIIA NIJ 0106.01 Medium	NIJ-III A	\$2,435.00	57%	\$1,047.05
HA-SA-ULACHHC-L	N	N/A	SA-501 ULACHHC High-Cut Helmet (Ultra Lightweight ACH) Level IIIA NIJ 0106.01 Large	NIJ-III A	\$2,435.00	57%	\$1,047.05
HA-SA-ULACHHC-X	N	N/A	SA-501 ULACHHC High-Cut Helmet (Ultra Lightweight ACH) Level IIIA NIJ 0106.01 Xlarge	NIJ-III A	\$2,435.00	57%	\$1,047.05
HA-SA-HPACH-S	N	N/A	SA-501 HPACH Standard Full-Cut Helmet (High Performance ACH) Level IIIA NIJ 0106.01 Small	NIJ-III A	\$2,019.00	57%	\$868.17
HA-SA-HPACH-M	N	N/A	SA-501 HPACH Standard Full-Cut Helmet (High Performance ACH) Level IIIA NIJ 0106.01 Medium	NIJ-III A	\$2,019.00	57%	\$868.17
HA-SA-HPACH-L	N	N/A	SA-501 HPACH Standard Full-Cut Helmet (High Performance ACH) Level IIIA NIJ 0106.01 Large	NIJ-III A	\$2,019.00	57%	\$868.17
HA-SA-HPACH-X	N	N/A	SA-501 HPACH Standard Full-Cut Helmet (High Performance ACH) Level IIIA NIJ 0106.01 Xlarge	NIJ-III A	\$2,019.00	57%	\$868.17
HA-SA-HPACHMC-S	N	N/A	SA-501 HPACHMC Mid-Cut Helmet (High Performance ACH) Level IIIA NIJ 0106.01 Small	NIJ-III A	\$2,076.00	57%	\$892.68
HA-SA-HPACHMC-M	N	N/A	SA-501 HPACHMC Mid-Cut Helmet (High Performance ACH) Level IIIA NIJ 0106.01 Medium	NIJ-III A	\$2,076.00	57%	\$892.68
HA-SA-HPACHMC-L	N	N/A	SA-501 HPACHMC Mid-Cut Helmet (High Performance ACH) Level IIIA NIJ 0106.01 Large	NIJ-III A	\$2,076.00	57%	\$892.68
HA-SA-HPACHMC-X	N	N/A	SA-501 HPACHMC Mid-Cut Helmet (High Performance ACH) Level IIIA NIJ 0106.01 Xlarge	NIJ-III A	\$2,076.00	57%	\$892.68
HA-SA-HPACHHC-S	N	N/A	SA-501 HPACHHC High-Cut Helmet (High Performance ACH) Level IIIA NIJ 0106.01 Small	NIJ-III A	\$2,076.00	57%	\$892.68
HA-SA-HPACHHC-M	N	N/A	SA-501 HPACHHC High-Cut Helmet (High Performance ACH) Level IIIA NIJ 0106.01 Medium	NIJ-III A	\$2,076.00	57%	\$892.68
HA-SA-HPACHHC-L	N	N/A	SA-501 HPACHHC High-Cut Helmet (High Performance ACH) Level IIIA NIJ 0106.01 Large	NIJ-III A	\$2,076.00	57%	\$892.68
HA-SA-HPACHHC-X	N	N/A	SA-501 HPACHHC High-Cut Helmet (High Performance ACH) Level IIIA NIJ 0106.01 Xlarge	NIJ-III A	\$2,076.00	57%	\$892.68
<b>BALLISTIC HELMET ACCESSORIES</b>							
HA-SA-RAIL M/L	N	N/A	SA Series Rail for Ballistic Helmet Medium/Large Size Only ACH/MICH		\$253.00	57%	\$108.79
HA-SA-SHROUD	N	N/A	SA Series Shroud for Ballistic Helmet any Size ACH/MICH		\$202.00	57%	\$86.86
HA-SA-BUNGEE	N	N/A	SA Series Bungee any Size ACH/MICH		\$41.00	57%	\$17.63
HA-SA-VELCRO	N	N/A	SA-Series Velcro for Ballistic Helmet any Size ACH/MICH		\$41.00	57%	\$17.63
HA-SA-HARNESS	N	N/A	SA Series Harness for Ballistic Helmet any Size any Cut or Shape		\$253.00	57%	\$108.79
HA-SA-COV ACHHC	N	N/A	SA Series Cover for Ballistic Helmet N/A Size ACH HIGH Cut		\$109.00	57%	\$46.87
HA-SA-COV ACHMC	N	N/A	SA Series Cover for Ballistic Helmet N/A Size ACH MID Cut		\$109.00	57%	\$46.87
HA-SA-COV ACHSC	N	N/A	SA Series Cover for Ballistic Helmet N/A Size ACH Standard Cut		\$109.00	57%	\$46.87
HA-SA-COV PASGT	N	N/A	SA Series Cover for Ballistic Helmet N/A Size PASGT		\$109.00	57%	\$46.87
HA-SAVISORLII	N	N/A	SA Series Visor for Ballistic Helmet Level II		\$1,522.00	57%	\$654.46
HA-SAVISORLIIIA	N	N/A	SA Series Visor for Ballistic Helmet Level IIIA		\$2,045.00	57%	\$879.35



## LOT II - HARD BODY ARMOR and RELATED PROTECTION PRODUCTS



Effective Date: 5/1/2019

STATE OF NY

Item #	Gender (M,F,N)	NIJ Model #	Description	Threat Level	MSRP (Per EA)	Discount % From MSRP	New NYS Net Price
<b>BALLISTIC HELMET ACCESSORIES (CONT.)</b>							
HA-TW1/2IN-PADS	N	N/A	Team Wendy Zap 1/2" MIL SPEC Pads, #4, ACH/MICH		\$253.00	57%	\$108.79
HA-TW1IN-PADS	N	N/A	Team Wendy Zap 1" MIL SPEC Pads, #8, ACH/MICH		\$327.00	57%	\$140.61
HA-TW3/4IN-PADS	N	N/A	Team Wendy Zap 3/4" MIL SPEC Pads, #6, ACH/MICH		\$253.00	57%	\$108.79
HA-TW-3/4INZAPC	N	N/A	Team Wendy Zap Pad, Crown- 3/4"- #6, ACH/MICH		\$48.00	57%	\$20.64
HA-TW-3/4INZAPO	N	N/A	Team Wendy Zap Pad, Oblong - 3/4" - #6, ACH/MICH		\$48.00	57%	\$20.64
HA-TW-3/4INZAPT	N	N/A	Team Wendy Zap Pad, Trapezoid - 3/4" - #6, ACH/MICH		\$48.00	57%	\$20.64
HA-TWEPICACPDIX	N	N/A	Team Wendy Epic Air Comfort Pad Set Large/Extra Large ACH/MICH		\$507.00	57%	\$218.01
HA-TWEPICACPDISM	N	N/A	Team Wendy Epic Air Comfort Pad Set Small/Medium ACH/MICH		\$507.00	57%	\$218.01
HA-TWEPICAPDOLX	N	N/A	Team Wendy Epic Air Pads Large/Extra Large Other Cuts ACH/MICH		\$507.00	57%	\$218.01
HA-TWEPICAPDSLX	N	N/A	Team Wendy Epic Air Pads Large/Extra Large Standard Cut ACH/MICH		\$507.00	57%	\$218.01
HA-TWEPICAPDSM	N	N/A	Team Wendy Epic Air Pads Small/Medium ACH/MICH		\$507.00	57%	\$218.01
HA-TWEPICLITELX	N	N/A	Team Wendy Epic Lite Pads Large/Extra Large ACH/MICH		\$279.00	57%	\$119.97
HA-TWEPICLITESM	N	N/A	Team Wendy Epic Lite Pads Small/Medium ACH/MICH		\$279.00	57%	\$119.97
HA-TWEPICPADSML	N	N/A	Team Wendy Epic Pads Medium/Large ACH/MICH		\$327.00	57%	\$140.61
HA-TW-EPICPADSS	N	N/A	Team Wendy Epic Pads Small ACH/MICH		\$327.00	57%	\$140.61
HA-TW-EPICPADSX	N	N/A	Team Wendy Epic Pads Extra Large ACH/MICH		\$327.00	57%	\$140.61
HA-TW-RET-2XL	N	N/A	Team Wendy Cam-Fit Retention, 2 Extra Large Size, ACH/MICH		\$433.00	57%	\$186.19
HA-TW-RET-H-2XL	N	N/A	Team Wendy Cam-Fit H-STYLE Retention, 2 Extra Large, ACH/MICH		\$355.00	57%	\$152.65
HA-TW-RET-H-STD	N	N/A	Team Wendy Cam-Fit H-STYLE Retention, Standard Size, ACH/MICH		\$355.00	57%	\$152.65
HA-TW-RET-STD	N	N/A	Team Wendy Cam-Fit Retention, Standard Size, ACH/MICH		\$433.00	57%	\$186.19
HA-TW-REV-LINER	N	N/A	Team Wendy Revolve Liner System Standard Size ACH/MICH		\$461.00	57%	\$198.23
<b>TRAUMA PACS AND PLATES</b>							
Trauma-5x8	N	N/A	5" x 8" Soft Trauma Pac		\$124.00	57%	\$53.32
Trauma-7x9	N	N/A	7" x 9" Soft Trauma Pac		\$184.00	57%	\$79.12
L7-5x8	N	N/A	5" x 8" Semi-Rigid Plate		\$185.00	57%	\$79.55
F7-5x8	F	N/A	5" x 8" Female Bend Plate		\$185.00	57%	\$79.55
L7-7x9	N	N/A	7" x 9" Semi-Rigid Plate		\$250.00	57%	\$107.50
F7-7x9	F	N/A	7" x 9" Female Bend Plate		\$250.00	57%	\$107.50
L7-10x12	N	N/A	10" x 12" Semi-Rigid Plate		\$370.00	57%	\$159.10
F7-10x12	F	N/A	10" x 12" Female Bend Plate		\$370.00	57%	\$159.10
Steel-5x8	N	N/A	5" x 8" Light Steel Plate		\$87.00	57%	\$37.41
HA-SA71-5X8	N	N/A	5" X 8" SA-71 Special Threat Plate		\$185.00	57%	\$79.55
HA-SAF71-5X8	N	N/A	5" X 8" SA-71 Female Special Threat Plate		\$185.00	57%	\$79.55
HA-SA71-7X9	N	N/A	7" X 9" SA-71 Special Threat Plate		\$250.00	57%	\$107.50
HA-SAF71-7X9	N	N/A	7" X 9" SA-71 Female Special Threat Plate		\$250.00	57%	\$107.50
HA-SA71-10X12	N	N/A	10" X 12" SA-71 Special Threat Plate		\$370.00	57%	\$159.10
HA-SAF71-10X12	N	N/A	10" X 12" SA-71 Female Special Threat Plate		\$370.00	57%	\$159.10
SASWP-5X8	N	N/A	5x8" SASWP Standard Weight Special Threat Patrol Rifle Plate		\$287.00	57%	\$123.41
SALWP-5x8	N	N/A	5x8" SA-LW Special Threat Patrol Rifle Plate		\$687.00	57%	\$295.41
SALWP-6x6	N	N/A	6x6" SA-LW Special Threat Patrol Rifle Plate		\$736.00	57%	\$316.48
SALWP-6x8	N	N/A	6x8" SA-LW Special Threat Patrol Rifle Plate		\$778.00	57%	\$334.54
SALWP-7x9	N	N/A	7x9" SA-LW Special Threat Rifle Plate		\$824.00	57%	\$354.32
SALWP- 8x10	N	N/A	8x10" SA-LW Special Threat Patrol Rifle Plate		\$915.00	57%	\$393.45
SA6-III+-23706	N	23706	10" x 12" - Level III Ballistic Multi-Curve -Stand-Alone Plate - NIJ 0101.06 Certified (Also in Shooters Cut)	NIJ-III	\$1,465.00	57%	\$629.95
HA-SA-26600-1	N	26600	10" x 12" - Level IV Ballistic Single Curve - Stand-Alone Plate - NIJ 0101.06 Certified (Also in Shooters Cut)	NIJ-IV	\$759.00	57%	\$326.37
HA-SA-23620-3	N	23620	10" x 12" SA-23620-3 Level III Ballistics Multi Curve - Stand Alone Plate NIJ 0101.06 Certified Shooters Cut Polyethylene (Neutrally Buoyant)	NIJ-III	\$1,442.00	57%	\$620.06
HA-SA-23707-7	N	23707	8" x 10" SA-23707-7 Level III+ Ballistics Multi Curve - Stand Alone Plate NIJ 0101.06 Certified Shooters Cut	NIJ-III+	\$1,137.00	57%	\$488.91



**LOT II - HARD BODY ARMOR and RELATED PROTECTION PRODUCTS**



Effective Date: 5/1/2019

STATE OF NY

Item #	Gender (M,F,N)	NIJ Model #	Description	Threat Level	MSRP (Per EA)	Discount % From MSRP	New NYS Net Price
<b>TRAUMA PACS AND PLATES (CONT.)</b>							
HA-SA-23707-3	N	23707	10" x 12" SA-23707-3 Level III+ Ballistics Multi Curve - Stand Alone Plate NIJ 0101.06 Certified Shooters Cut	NIJ-III+	\$1,490.00	57%	\$640.70
HA-SA4S176X6F	N	4S17	6" x 6" SA-4S17 Level IV Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Full Cut	NIJ-IV	\$285.00	57%	\$122.55
HA-SA4S178X10F	N	4S17	8" x 10" SA-4S17 Level IV Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Full Cut	NIJ-IV	\$317.00	57%	\$136.31
HA-SA4S178X10S	N	4S17	8" X 10" SA-4S17 Level IV Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Shooters Cut	NIJ-IV	\$317.00	57%	\$136.31
HA-SA4S1710X12F	N	4S17	10" x 12" SA-4S17 Level IV Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Full Cut	NIJ-IV	\$355.00	57%	\$152.65
HA-SA4S1710X12S	N	4S17	10" x 12" SA-4S17 Level IV Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Shooters Cut	NIJ-IV	\$355.00	57%	\$152.65
HA-SA-AR56X6F	N	AR500	6" x 6" SA-AR500 Level III Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Steel Rhino Extreme Spall Coated Full Cut	NIJ-III	\$237.00	57%	\$101.91
SALWP-10x12F	N	N/A	10x12" SA-LW Special Threat Patrol Rifle Plate Full Cut		\$1,290.00	57%	\$554.70
SALWP-10x12S	N	N/A	10x12" SA-LW Special Threat Patrol Rifle Plate Shooters Cut		\$1,290.00	57%	\$554.70
SAULWP-5x8	N	N/A	5x8" SA-UL Special Threat Patrol Rifle Plate		\$870.00	57%	\$374.10
SAULWP-6x6	N	N/A	6x6" SA-UL Special Threat Patrol Rifle Plate		\$861.00	57%	\$370.23
SAULWP-6x8	N	N/A	6x8" SA-UL Special Threat Patrol Rifle Plate		\$878.00	57%	\$377.54
SAULWP-7x9	N	N/A	7x9" SA-UL Special Threat Patrol Rifle Plate		\$911.00	57%	\$391.73
SA-3SA-SCSC	N	LON-III-P	10" x 12" - SA-3SA-SCSC Level III Stand Alone Single Curve Ballistic Plate - NIJ 0101.06 Certified.		\$832.00	57%	\$357.76
SA6-III+-23600	N	23600	10" x 12" - Level III Ballistic Single Curve -Stand-Alone Plate - NIJ 0101.06 Certified (Also in Shooters Cut)	NIJ-III	\$1,346.00	57%	\$578.78
HA-SA-AR58X10F	N	AR500	8" x 10" SA-AR500 Level III Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Steel Rhino Extreme Spall Coated Full Cut	NIJ-III	\$282.00	57%	\$121.26
HA-SA-AR58X10S	N	AR500	8" x 10" SA-AR500 Level III Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Steel Rhino Extreme Spall Coated Shooters Cut	NIJ-III	\$282.00	57%	\$121.26
HA-SA-AR510X12F	N	AR500	10" x 12" SA-AR500 Level III Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Steel Rhino Extreme Spall Coated Full Cut	NIJ-III	\$305.00	57%	\$131.15
HA-SA-AR510X12S	N	AR500	10" x 12" SA-AR500 Level III Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Steel Rhino Extreme Spall Coated Shooters Cut	NIJ-III	\$305.00	57%	\$131.15
HA-SA-AR16X6F	N	AR500	6" x 6" SA-AR1000 Level III+ Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Steel Rhino Extreme Spall Coated Full Cut	NIJ-III+	\$253.00	57%	\$108.79
HA-SA-AR18X10F	N	AR500	8" x 10" SA-AR1000 Level III+ Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Steel Rhino Extreme Spall Coated Full Cut	NIJ-III+	\$282.00	57%	\$121.26
HA-SA-AR18X10S	N	AR500	8" x 10" SA-AR1000 Level III+ Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Steel Rhino Extreme Spall Coated Shooters Cut	NIJ-III+	\$282.00	57%	\$121.26
HA-SA-AR110X12F	N	AR500	10" x 12" SA-AR1000 Level III+ Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Steel Rhino Extreme Spall Coated Full Cut	NIJ-III+	\$337.00	57%	\$144.91
HA-SA-AR110X12S	N	AR500	10" x 12" SA-AR1000 Level III+ Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Steel Rhino Extreme Spall Coated Shooters Cut	NIJ-III+	\$337.00	57%	\$144.91
HA-SA-3S96X6F	N	3S9	6" x 6" SA-3S9 Level III++ Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Full Cut	NIJ-III++	\$692.00	57%	\$297.56
HA-SA-3S98X10F	N	3S9	8" x 10" SA-3S9 Level III++ Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Full Cut	NIJ-III++	\$756.00	57%	\$325.08
HA-SA-3S98X10S	N	3S9	8" x 10" SA-3S9 Level III++ Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Shooters Cut	NIJ-III++	\$756.00	57%	\$325.08
HA-SA-3S910X12F	N	3S9	10" x 12" SA-3S9 Level III++ Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Full Cut	NIJ-III++	\$798.00	57%	\$343.14
HA-SA-3S910X12S	N	3S9	10" x 12" SA-3S9 Level III++ Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified shooters Cut	NIJ-III++	\$798.00	57%	\$343.14
HA-SA3S118X10F	N	3S11	8" x 10" SA3S11 Level III Ballistics Single Curve - Stand Alone Plate NIJ 0101.06 Certified Full Cut	NIJ-III	\$756.00	57%	\$325.08



TOWN OF CARMEL RECREATION & PARKS DEPARTMENT  
SYCAMORE PARK, 790 LONG POND ROAD  
MAHOPAC, NEW YORK 10541

JAMES R. GILCHRIST, CPRP, DIRECTOR

TELEPHONE: (845) 628-7888 FAX: (845) 628-2820

EMAIL: [carmelrecreation@ci.carmel.ny.us](mailto:carmelrecreation@ci.carmel.ny.us)

WEB: <http://www.carmelny.org>

Date: April 30, 2020

To: Kenneth Schmitt, Supervisor  
Carmel Town Hall

From: James R. Gilchrist, CPRP  
Director, Recreation and Parks

Subject: Request to Dispose of Equipment

I am requesting the authorization to dispose of the following Recreation and Parks Department vehicle:

Car #304 - 2004 Ford Focus VIN #1FAFP33Z04W166836

Please add this to the May 6, 2020 Town Board Work Session agenda and contact me with any questions.

/ns



**NEW YORK MUNICIPAL INSURANCE RECIPROCAL**  
*Insuring Our Own Future.*

Named Insured <b>Town of Carmel</b>		Endorsement Number <b>11</b>
Policy Number <b>MCATCAR001</b>	Policy Period <b>04/01/2019 - 04/01/2020</b>	Effective Date of Endorsement <b>03/05/2020</b>
Issued by (Name of Insurance Company) <b>NEW YORK MUNICIPAL INSURANCE RECIPROCAL</b>		

**THIS ENDORSEMENT CHANGES THIS POLICY. PLEASE READ IT CAREFULLY**

In consideration of a return premium of -\$42.90, it is hereby understood and agreed that the policy is amended as follows:

The following vehicle has been deleted:

2004 Ford Focus Vin # 6836

All other terms and conditions to remain the same.

Authorized Representative



TOWN OF CARMEL RECREATION & PARKS DEPARTMENT  
SYCAMORE PARK, 790 LONG POND ROAD  
MAHOPAC, NEW YORK 10541

JAMES R. GILCHRIST, CPRP, DIRECTOR

TELEPHONE: (845) 628-7888 FAX: (845) 628-2820

EMAIL: [carmelrecreation@ci.carmel.ny.us](mailto:carmelrecreation@ci.carmel.ny.us)

WEB: <http://www.carmelny.org>

DATE: May 4, 2020

TO: Carmel Town Board  
Carmel Town Hall

FROM: James R. Gilchrist, CPRP   
Director, Recreation and Parks

SUBJECT: Airport Park – Phase 3 Irrigation Water Supply Site Work Contract –C264

The following bids were received on May 1, 2020 for the subject project:

Amity Construction Corp.	254,499.00
Sport Tech Construction	382,000.00
Yonkers Excavating Corp.	402,400.00
Casabella Contracting	402,650.00
Legacy Supply LLC	598,315.79
Eventus Construction Co. Inc.	613,000.00
US Pitchcare LLC	671,500.00

Insite Engineering has reviewed the proposal submitted by Amity Construction Corp., which was the lowest bid received at \$254,999.00. I highly recommend Amity Construction Corp. based on Insite Engineering's review of the submitted bid documents and contractor listed references. I have attached Insite Engineering's recommendation for your review.

Please add this to the May 6, 2020 Town Board Work Session agenda and contact me with any questions.

/ns

Attachments



May 4, 2020

Jim Gilchrist  
Recreation Director, Town of Carmel  
Sycamore Park  
790 Long Pond Road  
Mahopac, NY 10541

RE: Airport Park Irrigation and Water Supply Contract – C264

Dear Mr. Gilchrist:

Our office is in receipt of the bid submitted by Amity Construction Corp. (Amity) for the above noted project. The proposal submitted by Amity was the lowest bid price received based on the submitted bid documents, with a corrected total of \$254,499.00. The local references provided by Amity were contacted and their responses noted acceptable performance based on recently completed work.

After reviewing the bid package and contacting contractor listed references, we find their bid package to be acceptable, and recommend they be awarded the contract. For reference the scope of work in this contract includes the following items:

- Electric, controls, and installation of a new well pump in Well #7 at the Putnam County Golf Course.
- Irrigation water supply piping from the well to the point of connection of the completed irrigation system at the park.
- Electric service installation for the future build out of the park.
- Domestic water service line installation for future connection to the park building.

If you have any questions or comments regarding this information, please feel free to contact our office.

Very truly yours,

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

A handwritten signature in black ink, appearing to read "Jeff", is written over a horizontal line.

By:

Jeffrey J. Contelmo, P.E.  
Senior Principal Engineer

JJC/zmp

cc: Rich Franzetti P.E., Town of Carmel Engineering  
Rob Vara, Town of Carmel Engineering  
Anne Pasquerello, Town of Carmel

Insite File No. 18192.100

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3 Garrett Place, Carmel, New York 10512 (845) 225-9690 Fax (845) 225-9717  
[www.insite-eng.com](http://www.insite-eng.com)

Z:\E\18192103\Correspondence\2020\050420\jg.doc

Richard J. Franzetti, P.E.  
Town Engineer



(845) 628-1500  
(845) 628-2087  
Fax (845) 628-7085

**Office of the Town Engineer**  
60 McAlpin Avenue  
Mahopac, New York 10541

## MEMORANDUM

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**To:** Carmel Town Board

**From:** Richard J. Franzetti P.E. Town Engineer 

**Date:** April 2, 2020

**Re:** Emergency Repairs/Services

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This memorandum is being presented to the Town Board to advise the Board of emergency invoices that were submitted for payment in excess of \$5,000.00 for services rendered. The following provides a brief a summary of the work that was performed.

- Carmel Water District 1, 8, 10 and 13  
Filter Plant backwash pump discharge  
Attached is an invoice in the amount of \$6,130.00 for Bee and Jay to repair and the backwash pump discharge flanges. The work was performed on January 6, 2020.
- Carmel Water District 6 Tomahawk Creek – well pump #2 failure  
Attached is invoice in the amount of \$13,149.60 for Bee and Jay Plumbing. Bee and Jay assessed the pump at well #2. It was determined pump had failed and would need to be replaced. This work was performed on January 13, 2020
- Carmel Water District 10 – valve repair  
Emergency Valve Repair at Hilltop and Crest Dr.  
Attached is an invoice in the amount of \$5,760.00 for Bee and Jay repair the broken valve on February 25 at the intersection of Hilltop and Crest Dr.
- Carmel Water District 12 – Well pump #1 and 2 Failure  
Attached is invoice in the amount of \$7,890.00 for Bee and Jay Plumbing. Bee and Jay assessed the pump at well #2. It was determined pump had failed and would need to be replaced This work was performed on March 23, 2020.

04-02--2020

Emergency Repairs/Services

Attached is invoice in the amount of \$7,877.00 for Bee and Jay Plumbing. Bee and Jay assessed the pump at well #1. It was determined pump had failed and would need to be replaced This work was performed on March 24, 2020.

- Carmel Water District 6 – Well pump #1 Failure

Attached is invoice in the amount of \$12,589.00 for Bee and Jay Plumbing. Bee and Jay assessed the pump at well #1. It was determined pump had failed and would need to be replaced. This work was performed on March 26, 2020.

We request that this memorandum be put into the agenda as a matter of record.



P.O. Box 78 - 719 Route 6 - Mahopac, NY 10541

p: 845.628.3924 f: 845.628.4062

e: service@beeandjay.com

# INVOICE

DATE	INVOICE #
3/17/2020	94180

www.BEEANDJAY.com

**BILL TO:**

Town Of Carmel, CWD-8  
Engineering Dept.  
60 Mc Alpin Avenue  
Mahopac, NY 10541

**SERVICE LOCATION:**

Filter Plant  
Heather Drive

PROFESSIONAL SERVICE 56 YEARS 1964-2020

Master Plumbers Lic.#s W.C. 556 P.C. 363

CUSTOMER #	TERMS	MECHANIC	SERVICE DATE	WORK ORDER #	
845 628 2087	Due Upon Receipt	JSE	12/12/2019	23050	
ITEM	QTY/HRS	DESCRIPTION		RATE	AMOUNT
Description		12/12/2019 - CWD# 8 Filter Plant 25 hp backwasher pump main discharge check rotted. Internal swing checks and seats opened valve manually to backwash filter and ordered replacement 6" flanged checks and 6" spacer and gaskets and bolts. 1/6/2020 - Shut down of filter plant, dismantled two 25 hp flanged discharge flanged piping and fittings, removed two old flanged checks, capped lines and restored filter plant. 1/7/2020 - Installation of two 6" flanged weighted checks and flange spacers, rods, gaskets and bolts, adjusted two weights assemblies, pressure tested, start up and backwashed both filters and restored filter plant operation.			
Labor TOC Tech	2	1- Tech 12/12/2019		185.00	370.00
Labor TOC Mech	8	1- Mech 01/06/2020		175.00	1,400.00
Labor TOC Tech	8	1- Tech 01/06/2020		185.00	1,480.00
Labor TOC Mech	8	1- Mech 01/07/2020		175.00	1,400.00
Labor TOC Tech	8	1- Tech 01/072020		185.00	1,480.00
Material		All Material Billed to Town			

**Total Due \$6,130.00**

\*\* Invoices not paid when due will be subjected to a finance charge of 1.5% per month

WE ACCEPT ALL MAJOR CREDIT CARDS !!

CARD TYPE: VISA MASTERCARD AMERICAN EXPRESS DISCOVER DINER'S CLUB OTHER \_\_\_\_\_

CARDHOLDER/NAME: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

CARD# \_\_\_\_\_ EXP. DATE: \_\_\_\_\_ CID # \_\_\_\_\_



P.O. Box 78 - 719 Route 6 - Mahopac, NY 10541  
 p: 845.628.3924 f: 845.628.4062  
 e: service@beeandjay.com

# INVOICE

DATE	INVOICE #
3/18/2020	94214

www.BEEANDJAY.com

**BILL TO:**

Town of Carmel- CWD 6  
 Engineering Dept.  
 60 McAlpin Ave.  
 Mahopac, NY 10541

**SERVICE LOCATION:**

Tomahawk Creek  
 Weber Hill Road  
 Mahopac, NY

PROFESSIONAL SERVICE 56 YEARS 1964-2020

Master Plumbers Lic.#s W.C. 556 P.C. 363

CUSTOMER #	TERMS	MECHANIC	SERVICE DATE	WORK ORDER #
845 628 2087	Due Upon Receipt	JSE	1/13/2020	23242
ITEM	QTY/HRS	DESCRIPTION	RATE	AMOUNT
Description		1/13/2020 - # 6 Tomahawk Creek- Control alarm for well #2 starter tripped out, pulled 5 hp submersible pump and motor, burnt out and seized, ordered replacement. 1/17/2020- Installation of new 5 hp Goulds pump and motor with Subcable, pipe and fittings with boom truck, restored into system and tested.		
Labor TOC Mech	8	1- Mech 1-13-2020	175.00	1,400.00
Labor TOC Tech	8	1- Tech 1-13-2020	185.00	1,480.00
Labor TOC Mech	8	1- Mech 1-17-2020	175.00	1,400.00
Labor TOC Tech	8	1- Tech 1-17-2020	185.00	1,480.00
Material	1	Goulds 25 gs Pump End	1,682.00	1,682.00
Material	1	Goulds 5 hp 230v 3 phase Motor	1,718.00	1,718.00
Material	1	340 feet 1-1/4" SCH 120 Pipe	1,360.00	1,360.00
Material	1	350 feet 8-4 Sub Cable	1,267.00	1,267.00
Material		16 Wire Guides	87.68	87.68
Material	1	1-1/4" Line Check	70.23	70.23
Material		10 Rolls Tape	25.00	25.00
Material		2- Set #8 Heat Shrinks	25.50	25.50
Material	1	1-1/4x6 Nipple	54.19	54.19
Boom Truck		Boom Truck	1,100.00	1,100.00

\*\* Invoices not paid when due will be subjected to a finance charge of 1.5% per month

**Total Due \$13,149.60**

WE ACCEPT ALL MAJOR CREDIT CARDS !!

CARD TYPE: VISA MASTERCARD AMERICAN EXPRESS DISCOVER DINER'S CLUB OTHER \_\_\_\_\_

CARDHOLDER/NAME: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

CARD# \_\_\_\_\_ EXP. DATE: \_\_\_\_\_ CID # \_\_\_\_\_



P.O. Box 78 - 719 Route 6 - Mahopac, NY 10541

p: 845.628.3924 f: 845.628.4062

e: service@beeandjay.com

# INVOICE

DATE	INVOICE #
3/18/2020	94193

www.BEEANDJAY.com

**BILL TO:**

Town of Carmel- CWD 10  
Engineering Dept.  
60 McAlpin Ave.  
Mahopac, NY 10541

**SERVICE LOCATION:**

Town of Carmel- CWD 10  
Crest Drive  
Mahopac, NY

PROFESSIONAL SERVICE 56 YEARS 1964-2020

Master Plumbers Lic.#s W.C. 556 P.C. 363

CUSTOMER #	TERMS	MECHANIC	SERVICE DATE	WORK ORDER #
845 628 2087	Payment Due Upon Rec	G&D	2/25/2020	23515

ITEM	QTY/HRS	DESCRIPTION	RATE	AMOUNT
Description		2/25/2020 Responded to service call of Emergency Crest Drive water main leak and valve damaged and leaking, saw cut and exposed 3 valves in street , located leaking valve and leaking 4" steel main. 2/26/2020 Shut down and cut out rotted section of 4" steel main and replaced leaking 4" galvanized valves with all related pipe and fittings.		
Labor TOC Mech	16	1- Mech	175.00	2,800.00
Labor TOC Tech	16	1- Tech	185.00	2,960.00
Material		Material Billed to town		

\*\* Invoices not paid when due will be subjected to a finance charge of 1.5% per month

**Total Due \$5,760.00**

WE ACCEPT ALL MAJOR CREDIT CARDS !!

CARD TYPE: VISA MASTERCARD AMERICAN EXPRESS DISCOVER DINER'S CLUB OTHER \_\_\_\_\_

CARDHOLDER/NAME: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

CARD# \_\_\_\_\_ EXP. DATE: \_\_\_\_\_ CID # \_\_\_\_\_



P.O. Box 78 - 719 Route 6 - Mahopac, NY 10541

p: 845.628.3924 f: 845.628.4062

e: service@beeandjay.com

# INVOICE

DATE	INVOICE #
3/30/2020	94281

www.BEEANDJAY.com

**BILL TO:**

Town of Carmel - CWD#12  
 Engineering Dept.  
 60 McAlpin Avenue  
 Mahopac, NY 10541

**SERVICE LOCATION:**

Town of Carmel - CWD #12  
 Jennifer Lane Pump Station  
 Well #2  
 Mahopac, NY

PROFESSIONAL SERVICE 56 YEARS 1964-2020

Master Plumbers Lic.#s W.C. 556 P.C. 363

CUSTOMER #	TERMS	MECHANIC	SERVICE DATE	WORK ORDER #
845 392 7661	Due Upon Receipt	G&D	3/24/2020	23691
ITEM	QTY/HRS	DESCRIPTION	RATE	AMOUNT
Description		CWD#12 - Jennifer Lane Pump Station - Well #1 - Pulled and replaced 5HP 460V - 25GS50 Goulds submersible pump with all related parts and equipment, start up, tested and returned online.		
Labor TOC Tech	8	1- Tech	185.00	1,480.00T
Labor TOC Mech	8	1- Mech	175.00	1,400.00T
Material		1 - 25GS50 Goulds pump end	1,682.00	1,682.00T
Material		1 - 5HP 460 Goulds volt motor	1,718.00	1,718.00T
Material		8 - Rolls of tape	52.00	52.00T
Material		2 - Sets of heat shrinks	45.00	45.00T
Boom Truck		Boom Truck Certificate on File	1,500.00 0.00%	1,500.00T 0.00

\*\* Invoices not paid when due will be subjected to a finance charge of 1.5% per month

**Total Due \$7,877.00**

WE ACCEPT ALL MAJOR CREDIT CARDS !!

CARD TYPE: VISA MASTERCARD AMERICAN EXPRESS DISCOVER DINER'S CLUB OTHER \_\_\_\_\_

CARDHOLDER/NAME: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

CARD# \_\_\_\_\_ EXP. DATE: \_\_\_\_\_ CID # \_\_\_\_\_



P.O. Box 78 - 719 Route 6 - Mahopac, NY 10541

p: 845.628.3924 f: 845.628.4062

e: service@beeandjay.com

# INVOICE

DATE	INVOICE #
3/30/2020	94280

www.BEEANDJAY.com

**BILL TO:**

Town of Carmel - CWD#12  
 Engineering Dept.  
 60 McAlpin Avenue  
 Mahopac, NY 10541

**SERVICE LOCATION:**

Town of Carmel - CWD #12  
 Jennifer Lane Pump Station  
 Well #2  
 Mahopac, NY

PROFESSIONAL SERVICE 56 YEARS 1964-2020

Master Plumbers Lic.#s W.C. 556 P.C. 363

CUSTOMER #	TERMS	MECHANIC	SERVICE DATE	WORK ORDER #
845 392 7661	Due Upon Receipt	G&D	3/23/2020	23692
ITEM	QTY/HRS	DESCRIPTION	RATE	AMOUNT
Description		CWD#12 - Jennifer Lane Pump Station - Well #2 - Pulled and replaced burnt out 5HP 460 motor - 25GS Goulds submersible pump and equipment with boom truck and restored pump on line and tested.		
Labor TOC Tech	8	1- Tech	185.00	1,480.00T
Labor TOC Mech	8	1- Mech	175.00	1,400.00T
Material		1 - 25GS50 Goulds Pump End	1,682.00	1,682.00T
Material		1 - 5HP 460 Goulds volt motor	1,718.00	1,718.00T
Material		10 - Rolls of tape	65.00	65.00T
Material		2 - Sets of heat shrink	45.00	45.00T
Boom Truck		Boom Truck Certificate on File	1,500.00 0.00%	1,500.00T 0.00

\*\* Invoices not paid when due will be subjected to a finance charge of 1.5% per month

**Total Due \$7,890.00**

WE ACCEPT ALL MAJOR CREDIT CARDS !!

CARD TYPE: VISA MASTERCARD AMERICAN EXPRESS DISCOVER DINER'S CLUB OTHER \_\_\_\_\_

CARDHOLDER/NAME: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

CARD# \_\_\_\_\_ EXP. DATE: \_\_\_\_\_ CID # \_\_\_\_\_



P.O. Box 78 - 719 Route 6 - Mahopac, NY 10541

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e: service@beeandjay.com

# INVOICE

DATE	INVOICE #
3/30/2020	94282

www.BEEANDJAY.com

**BILL TO:**

Town of Carmel-CWD#6 6  
Engineering Dept.  
60 McAlpin Ave.  
Mahopac, NY 10541

**SERVICE LOCATION:**

Town of Carmel - CWD #6 6  
Weber Hill Road Station  
Well #1  
Mahopac, NY

PROFESSIONAL SERVICE 56 YEARS 1964-2020

Master Plumbers Lic.#s W.C. 556 P.C. 363

CUSTOMER #	TERMS	MECHANIC	SERVICE DATE	WORK ORDER #
845 628 1500	Payment Due Upon Rec	G&D	3/26/2020	23868
ITEM	QTY/HRS	DESCRIPTION	RATE	AMOUNT
Description		3/26 - CWD #6 6 Weber Hill Road Station - Control failure Well #1 - tested and found burnt out pump, ordered replacement pump, motor, and cable. 3/27 - Pulled and replaced well pump #1 7.5hp pump and motor with sub cable with all related parts and fittings, start up and restored online.		
Labor TOC Tech	8	1- Tech	185.00	1,480.00
Labor TOC Mech	8	1- Mech	175.00	1,400.00
Material		1 - 7.5 hp 200 volt 3ph Goulds motor	2,128.00	2,128.00
Material		1 - 35GS75 Goulds pump end	3,716.00	3,716.00
Material		340' - # 6/3 Sub cable	2,129.00	2,129.00
Material		1 - 2" Line check	158.00	158.00
Material		2 - Sets of heat shrink	30.00	30.00
Material		8 - Rolls of tape	48.00	48.00
Boom Truck		Boom Truck	1,500.00	1,500.00

\*\* Invoices not paid when due will be subjected to a finance charge of 1.5% per month

**Total Due \$12,589.00**

WE ACCEPT ALL MAJOR CREDIT CARDS !!

CARD TYPE: VISA MASTERCARD AMERICAN EXPRESS DISCOVER DINER'S CLUB OTHER \_\_\_\_\_

CARDHOLDER/NAME: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

CARD# \_\_\_\_\_ EXP. DATE: \_\_\_\_\_ CID # \_\_\_\_\_

Richard J. Franzetti, P.E.  
Town Engineer



(845) 628-1500  
(845) 628-2087  
Fax (845) 628-7085

**Office of the Town Engineer**  
60 McAlpin Avenue  
Mahopac, New York 10541

## MEMORANDUM

---

**To:** Carmel Town Board

**From:** Richard J. Franzetti P.E. Town Engineer 

**Date:** April 30, 2020

**Re:** Emergency Repairs/Services

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This memorandum is being presented to the Town Board to advise the Board of emergency invoices that were submitted for payment in excess of \$5,000.00 for services rendered. The following provides a brief a summary of the work that was performed.

- Carmel Water District 1, 8, 10 and 13

- Filter Plant leaking air SAT pump replacement

- On February 13, 2020, Bee and Jay Plumbing the operator for the CWD 1, 8, 10, 13 water treatment plant alerted the Engineering Department about the saturated air tank (SAT) pumps had failed. These pumps control 95% of the valves and operations of the water treatment plant. Attached is an invoice in the amount of \$8,571.40 for Bee and Jay to replace both filter #1 and #2 air SAT system 2hp vertical transfer pumps. The work was performed on February 20, 2020.

- Carmel Water District 3 – Water Main repair on Brook Rd

- On March 26, 2020, Inframark the operator for CWD 3 advised the engineering Department of leak at the referenced location. Attached is an invoice in the amount of \$6,387.24 for Ed Kuck Excavating to replace the saddle connection to main, reconnect the service line and blacktop restoration. This work was performed on March 26, 2020.

- Carmel Water District 4 – Galvanized leak on 9 Summit Drive

- On April 14, 2020, Bee and Jay Plumbing the operator for the CWD 4 alerted the Engineering Department about leak at the referenced location Attached is the invoice in the amount of \$6,021.96 for Kuck Excavating to replace a galvanized main, replace one service line and restoration.

04-30-2020

Emergency Repairs/Services

- Carmel Water District 6 Shell Valley Booster Station – pump failure due to storm

On April 13, 2020, Bee and Jay Plumbing the operator for the CWD 6 alerted the Engineering Department that the booster pumps at the referenced site had failed. Bee and Jay assessed that the booster pumps were down due to a storm event of April 13, 2020. It was determined that pump would need to be replaced. Attached are invoices in the amount of \$8,326 and \$6,166.40 for Bee and Jay Plumbing to repair the two (2) booster pumps. The cost of this repair will be submitted to insurance for reimbursement.

- Carmel Water District 9 – Broken Flushing Hydrant on Woodland Rd

On April 2, 2020, Bee and Jay Plumbing the operator for the CWD 9 alerted the Engineering Department that there was a flushing hydrant leaking at the intersection of Woodland and Highland Rd. Attached is an invoice in the amount of \$5,395.00 for Kuck Excavating for the repair of a broken flushing hydrant on April 2, 2020.

- Carmel Water District 12

Line Repair on 47 Jennifer Lane

On March 27 2020, Inframark the operators of CWD 12 alerted the Engineering Department that there was a leak at the referenced address. Attached is an invoice in the amount of \$5,647.24 for Kuck Excavating to replace the saddle on the main to the curb valve and to connect to the existing service line.

Line Repair on 231 Agor Lane

On March 27 2020, Inframark the operators of CWD 12 alerted the Engineering Department that there was a leak at the referenced address. Attached is invoice in the amount of \$5,577.24, for Kuck Excavating to repair the service line. This work was performed on April 10, 2020.

- Carmel Sewer District 2 – Sewer Bypass Valve on Old Rt. 6

On March 2, 2020, Inframark the operators of CSD 2 alerted the Engineering Department that during valve exercising operation that the three (3) valve cluster that allows the sewage treatment plant microfiltration units to be bypassed in the event of a microfiltration unit failure were not functioning. This work was deemed an emergency as if needed, the system could not be placed into bypass mode in the event of an emergency. If that were the case it could cause a potential compliance issue which would cause the Town of Carmel would be in violation of our State Pollution Discharge Elimination System (SPDES) Permit. Attached is invoice in the amount of \$19,765.30 for Kuck Excavating to replace gearboxes on 3 valves. This work was completed on March 20, 2020.

- Carmel Sewer District 4 – Sewer Manhole Repair on 334 Center Dr and 238 Maple Rd

The Engineering Department had received complaints regarding sinking manholes at the referenced locations. Inframark the operators of CSD4 inspected the manholes and determined that a manhole riser ring would not correct the problem at these locations

04-30-2020

Emergency Repairs/Services

and that it would need to be excavated and raised the grade. Attached is an invoice in the amount of \$7,268.80 for Kuck Excavating to repair and restore sewer manholes. This work was performed on April 1 and April 3, 2020.

- Carmel Sewer District 5 – Sewer Manhole Repair on Carey Street

Attached is invoice in the amount of \$5,449.60 for Kuck Excavating to repair and restore the sewer manholes. This work was performed on April 17, 2020. This repair was made in response to the NYSDEC NOV issued on April 2, 2020.

We request that this memorandum be put into the agenda as a matter of record.



P.O. Box 78 - 719 Route 6 - Mahopac, NY 10541  
 p: 845.628.3924 f: 845.628.4062  
 e: service@beeandjay.com

# INVOICE

DATE	INVOICE #
3/18/2020	94195

www.BEEANDJAY.com

**BILL TO:**

Town Of Carmel, CWD-8  
 Engineering Dept.  
 60 Mc Alpin Avenue  
 Mahopac, NY 10541

**SERVICE LOCATION:**

71 Heather Drive  
 Mahopac, NY

**PROFESSIONAL SERVICE 56 YEARS 1964-2020**

Master Plumbers Lic.#s W.C. 556 P.C. 363

CUSTOMER #	TERMS	MECHANIC	SERVICE DATE	WORK ORDER #	
845 628 2087	Due Upon Receipt	TKE	2/20/2020	23497	
ITEM	QTY/HRS	DESCRIPTION		RATE	AMOUNT
Description		Responded to service call of 2/13/2020 - CWD# 8 Filter Plant - two leaking air SAT pumps leaking 15 year old beyond repair, ordered replacements 2/20/20-Shut down filter plant, isolated and replaced both filter #1 #2 air SAT system 2hp vertical transfer pumps with all related bolts and gaskets, start up and return filter plant on line and tested.			
Labor TOC Mech	8	1- Mech		175.00	1,400.00
Labor TOC Tech	8	1- Tech		185.00	1,480.00
Material	2	Goulds SSV6 2hp Vertical Pumps		2,803.00	5,606.00
Material		Two Sets Gaskets and Bolts		85.40	85.40

\*\* Invoices not paid when due will be subjected to a finance charge of 1.5% per month

**Total Due \$8,571.40**

WE ACCEPT ALL MAJOR CREDIT CARDS !!

CARD TYPE: VISA MASTERCARD AMERICAN EXPRESS DISCOVER DINER'S CLUB OTHER \_\_\_\_\_

CARDHOLDER/NAME: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

CARD# \_\_\_\_\_ EXP. DATE: \_\_\_\_\_ CID # \_\_\_\_\_

**Ed Kuck Excavating Inc**

20 Day Road  
Carmel, NY 10512

INV # TOC-025-20  
CWD #3  
REQ #  
Vendor 0670  
Tax ID - 133851002

Attention: Rob Vera

**EMERGENCY: ¾ INCH X 4 INCH SADDLE**

Respond as per :INFRAMARK

Job Location: 312 BROOK ROAD

Work Completed on: 3/26/2020

Start time: 8:00 am

End Time: 4:00 pm

**Job Description:**

- WATER LEAKING ON EDGE OF ROAD- LOCATED SERVICE LINE TO MAIN
  - DUG UP MAIN AND SERVICE CONNECTION
  - REPLACE SADDLE CONNECTION TO MAIN AND RECONNECTED SERVICE LINE
  - BACKFILLED AND COMPACT WITH ITEM 4
- \*NEEDS BLACKTOP RESTORATION

Materials / Equipment/ Labor	Total Hrs,yds,qty	Price per yd, qty, day	Total
Track Hoe MR55	8	\$85.00 per hour	\$680.00
Dump Truck	8	\$90.00 per hour	\$720.00
Support Vehicle	Day rate	\$155.00	\$155.00
Chop Saw	Day rate	\$ 70.00	70.00
Jumping Jack	Day rate	\$70.00	70.00
Plate tamper	Day rate	\$70.00	
Mud Sucker	Day rate	\$70.00	70.00
Locater	Day rate	\$70.00	
Machine Hammer	Day rate	\$250.00	
Machine operator	8 Hrs X 1 man	\$184.18	\$1,473.44
Laborers	8 Hrs X 2 men	\$159.30	\$2,548.80
Item 4	15 YARDS	\$40.00 per yard	\$600.00
Seed		\$96.00 bag	
Top soil		\$50.00	
Blacktop		\$114.00 per ton	
Cold Patch		\$140.00 per ton	
Hay		\$15.36 bag	
<b>Total</b>			<b>\$6,387.24</b>

**From:** [Franzetti, Richard](#)  
**To:** [amp2@ci.carmel.ny.us](mailto:amp2@ci.carmel.ny.us); [Barile, Michael](#); [Greg Folchetti](#); [Lombardi, Frank](#); [mb10541@comcast.net](mailto:mb10541@comcast.net); [McDonough, Suzanne](#); [mike@lynll.com](mailto:mike@lynll.com); [Schanil, Robert](#); [Schmitt, Kenneth](#); [Suzi McDonough Personal](#)  
**Cc:** [Vara, Rob](#); [Esteves, Donna](#)  
**Subject:** 03-26-2020 - CWD 3 (Secor) 74.26-1-41 312 Brook Road Leak Notice  
**Date:** Thursday, March 26, 2020 10:55:21 AM

---

Supervisor Schmitt and Town Board member,

Please be advised that there is a water leak at the referenced location. Crews are on site preparing to make the repair.

Water will be temporarily shut off to residents in the area in order to make the repair.

A notice has been posted on the engineering webpage alerting the residents in CWD3.

Call with any questions.

Richard J. Franzetti, P.E, BCEE

Town Engineer

60 McAlpin Avenue

Mahopac, New York 10541

Phone - (845) 628-1500 ext 181

Fax – (845) 628-7085

Cell – (914) 843-4704

[rjf@ci.carmel.ny.us](mailto:rjf@ci.carmel.ny.us)

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**Ed Kuck Excavating Inc**20 Day Road  
Carmel, NY 10512

INV # TOC-032-20

CWD # 4

REQ #

Vendor 0670

Tax ID - 133851002

Attention: Rob Vera

*EMERGENCY***: 2 INCH GALVINIZED LEAK**

Respond as per: BEE &amp; JAY

Job Location: #9 SUMMIT

Work Completed on: 4/14/2020

Start time:

End Time:

8 HOURS

**Job Description:**

- REPLACED 45 FT OF 2 INCH GALVINIZED MAIN
- REPLACE ONE SERVICE LINE CONNECTION
- BACKFILLED WITH ITEM 4
- RESTORE LAWN AREA

Materials / Equipment/ Labor	Total Hrs,yds,qty	Price per yd, qty, day	Total
Track Hoe MR55	8	\$85.00 per hour	680.00
Dump Truck	8	\$90.00 per hour	720.00
Support Vehicle	Day rate	\$155.00	155.00
Chop Saw	Day rate	\$ 70.00	70.00
Jumping Jack	Day rate	\$70.00	
Plate tamper	Day rate	\$70.00	
Mud Sucker	Day rate	\$70.00	
Locater	Day rate	\$70.00	
Machine Hammer	Day rate	\$250.00	
Machine operator	8 Hrs X 1 man	\$184.18	1,473.44
Laborers	8 Hrs X 2 men	\$159.30	2,548.80
Item 4	8 YARDS	\$40.00 per yard	320.00
Seed	¼ BAG SEED	\$96.00 bag	24.00
Top soil		\$50.00	
Blacktop		\$114.00 per ton	
Cold Patch		\$140.00 per ton	
Hay	2 BAGS	\$15.36 bag	30.72
<b>Total</b>			<b>\$6,021.96</b>



P.O. Box 78 - 719 Route 6 - Mahopac, NY 10541

p: 845.628.3924 f: 845.628.4062

e: service@beeandjay.com

# INVOICE

DATE	INVOICE #
4/20/2020	94410

www.BEEANDJAY.com

**BILL TO:**

Town of Carmel- CWD 6  
Engineering Dept.  
60 McAlpin Ave.  
Mahopac, NY 10541

**SERVICE LOCATION:**

Town of Carmel- CWD 6  
Shell Valley Booster Station  
Mahopac, NY

PROFESSIONAL SERVICE 56 YEARS 1964-2020

Master Plumbers Lic.#s W.C. 556 P.C. 363

CUSTOMER #	TERMS	MECHANIC	SERVICE DATE	WORK ORDER #
845 628 2087	Due Upon Receipt	JS	4/13/2020	25960
ITEM	QTY/HRS	DESCRIPTION	RATE	AMOUNT
Description		4/13/20 CWD# 6 Shell Valley booster station down due to storm damage. Tested found booster pumps down and damaged due to multiple brown outs and single phased station, manually started booster #2, ordered two 15 hp Goulds Boosters. 4/16/2020- Replaced Burnt out 15 hp Goulds Booster #1 and returned on line to auto operate, ordered booster #2 for replacement.		
Labor TOC Mech	4	1- Mech 4/13/2020	175.00	700.00
Labor TOC Tech	4	1- Tech 4/13/2020	185.00	740.00
Labor TOC Mech	6	1- Mech 4/16/2020	175.00	1,050.00
Labor TOC Tech	6	1- Tech 4/16/2020	185.00	1,110.00
Material	1	Goulds 15 hp Booster BF1N9AO Pumps and Motor	4,691.00	4,691.00
Material	1	Set Gaskets and Bolts	35.00	35.00

\*\* Invoices not paid when due will be subjected to a finance charge of 1.5% per month

**Total Due \$8,326.00**

WE ACCEPT ALL MAJOR CREDIT CARDS !!

CARD TYPE: VISA MASTERCARD AMERICAN EXPRESS DISCOVER DINER'S CLUB OTHER \_\_\_\_\_

CARDHOLDER/NAME: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

CARD# \_\_\_\_\_ EXP. DATE: \_\_\_\_\_ CID # \_\_\_\_\_

# BEE & JAY

P.O. Box 78 - 719 Route 6 - Mahopac, NY 10541  
 p: 845.628.3924 f: 845.628.4062  
 e: service@beeandjay.com

# INVOICE

DATE	INVOICE #
4/22/2020	94436

www.BEEANDJAY.com

**BILL TO:**

Town of Carmel- CWD 6  
 Engineering Dept.  
 60 McAlpin Ave.  
 Mahopac, NY 10541

**SERVICE LOCATION:**

Town of Carmel- CWD 6  
 Shell Valley Booster Station  
 Mahopac, NY

**PROFESSIONAL SERVICE 56 YEARS 1964-2020**

Master Plumbers Lic.#s W.C. 556 P.C. 363

CUSTOMER #	TERMS	MECHANIC	SERVICE DATE	WORK ORDER #
845 628 2087	Due Upon Receipt	EK	4/21/2020	24215
ITEM	QTY/HRS	DESCRIPTION	RATE	AMOUNT
Description		CWD# 6 Shell Valley booster station pump #2 pump and motor damaged in storm 4/13/2020 - Installation of 15 hp 460v booster pump and motor with all related parts, gaskets, calibrated controls, start up and tested.		
Labor TOC Mech	4	1- Mech	175.00	700.00
Labor TOC Tech	4	1- Tech	185.00	740.00
Material		1- Goulds 15 hp booster 5BF1N9A0	4,691.00	4,691.00
Material		1 Set Gasket Bolts	35.40	35.40

\*\* Invoices not paid when due will be subjected to a finance charge of 1.5% per month

**Total Due \$6,166.40**

WE ACCEPT ALL MAJOR CREDIT CARDS !!

CARD TYPE: VISA MASTERCARD AMERICAN EXPRESS DISCOVER DINER'S CLUB OTHER \_\_\_\_\_

CARDHOLDER/NAME: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

CARD# \_\_\_\_\_ EXP. DATE: \_\_\_\_\_ CID # \_\_\_\_\_

**Ed Kuck Excavating Inc**

20 Day Road  
 Carmel, NY 10512

INV # toc-029-20  
 CWD # 9  
 REQ #  
 Vendor 0670  
 Tax ID - 133851002

Attention: Rob Vera

**EMERGENCY: Broken Flushing Hydrant**

Respond as per: BEE & JAY

Job Location: WOODLAND ROAD

Work Completed on: 4/2 /2020

Start time:

End Time:

7 HOURS

**Job Description:**

- Water leaking along edge of road
- Found 2 inch flushing hydrant broken
- Dug up and replace with new one
- Backfilled and compact with item 4

Materials / Equipment/ Labor	Total Hrs,yds,qty	Price per yd, qty, day	Total
Track Hoe MR55	7	\$85.00 per hour	595.00
Dump Truck	7	\$90.00 per hour	630.00
Support Vehicle	Day rate	\$155.00	155.00
Chop Saw	Day rate	\$ 70.00	70.00
Jumping Jack	Day rate	\$70.00	70.00
Plate tamper	Day rate	\$70.00	
Mud Sucker	Day rate	\$70.00	70.00
Locater	Day rate	\$70.00	
Machine Hammer	Day rate	\$250.00	
Machine operator	7 Hrs X 1 man	\$184.18	1289.26
Laborers	7 Hrs X 2 men	\$159.30	2230.20
Item 4	6 YARDS	\$40.00 per yard	240.00
Seed		\$96.00 bag	
Top soil		\$50.00	
Blacktop		\$114.00 per ton	
Gravel	1 yard	\$46.00 Per yard	46.00
Hay		\$15.36 bag	
Total			\$5,395.46

**Ed Kuck Excavating Inc**  
 20 Day Road  
 Carmel, NY 10512

INV # TOC-026-20  
 CWD # 12  
 REQ #  
 Vendor 0670  
 Tax ID - 133851002

Attention: Rob Vera

**EMERGENCY:OLD BLUEJET/NEW 1 INCH X 6 INCH SADDLE & SERVICE LINE**

Respond as per: INFRAMARK  
 Job Location: #47 JENNIFER LANE  
 Work Completed on: 3/27/2020  
 Start time: 8:00AM

End Time: 4:00 PM

8 HOURS

**Job Description:**

- DUG UP AND EXPOSED LEAKING BLUEJET LINE
- REPLACE SADDLE ON MAIN TO NEW CURB VALVE AND CONNECTED TO EXISTING SERVICELINE
- BACKFILLED AREA
- BLACKTOP RESTORATION NEEDED

Materials / Equipment/ Labor	Total Hrs,yds,qty	Price per yd, qty, day	Total
Track Hoe MR55	8	\$85.00 per hour	\$680.00
Dump Truck	8	\$90.00 per hour	\$720.00
Support Vehicle	Day rate	\$155.00	\$155.00
Chop Saw	Day rate	\$ 70.00	
Jumping Jack	Day rate	\$70.00	
Plate tamper	Day rate	\$70.00	
Mud Sucker	Day rate	\$70.00	70.00
Locater	Day rate	\$70.00	
Machine Hammer	Day rate	\$250.00	
Machine operator	8 Hrs X 1 man	\$184.18	\$1,473.44
Laborers	8 Hrs X 2 men	\$159.30	\$2,548.80
Item 4		\$40.00 per yard	
Seed		\$96.00 bag	
Top soil		\$50.00	
Blacktop		\$114.00 per ton	
Cold Patch		\$140.00 per ton	
Hay		\$15.36 bag	
<b>Total</b>			<b>\$5,647.24</b>

**Ed Kuck Excavating Inc**20 Day Road  
Carmel, NY 10512

INV # TOC-031-20

CWD # 12

REQ #

Vendor 0670

Tax ID - 133851002

Attention: Rob Vera

**EMERGENCY:3/4 INCH LEAKING WATER SERVICE LINE IN ROAD**

Respond as per:INFRAMARK

Job Location: 231 AGOR

Work Completed on: 4/10/2020

Start time: 8:30

End Time: 4:30 8 hours

**Job Description:**

- Water leaking in middle of road
- Pulled a new service line from main to curb valve on house side
- Backfilled both sides

Materials / Equipment/ Labor	Total Hrs,yds,qty	Price per yd, qty, day	Total
Track Hoe MR55	8 hours	\$85.00 per hour	\$680.00
Dump Truck	8 hours	\$90.00 per hour	\$720.00
Support Vehicle	Day rate	\$155.00	155.00
Chop Saw	Day rate	\$ 70.00	
Jumping Jack	Day rate	\$70.00	
Plate tamper	Day rate	\$70.00	
Mud Sucker	Day rate	\$70.00	
Locater	Day rate	\$70.00	
Machine Hammer	Day rate	\$250.00	
Machine operator	8 Hrs X 1 man	\$184.18	1,473.44
Laborers	8 Hrs X 2 men	\$159.30	2,548.80
Item 4		\$40.00 per yard	
Seed		\$96.00 bag	
Top soil		\$50.00	
Blacktop		\$114.00 per ton	
Cold Patch		\$140.00 per ton	
Hay		\$15.36 bag	
Total			\$5,577.24

**Ed Kuck Excavating Inc**  
 20 Day Road  
 Carmel, NY 10512

INV # TOC-024-20  
 CSD # 2  
 REQ #  
 Vendor 0670  
 Tax ID - 133851002

Attention: Rob Vera

**EMERGENCY: SEWER BYPASS VALVE**

Respond as per: INFRAMARK  
 Job Location: 11 Old Route 6  
 Work Completed on: 3/02/20 3/16/20 3/17/20 3/18/20 3/19/20 3/20/20  
 Start time: standard

**Job Description:**

- Saw cut sidewalk and hammer up concrete
- Excavate and expose 3- 14 inch valves
- Replace gearboxes on 3 valves
- Backfill with pea gravel
- Install 3 – 6 inch valve boxes Install 1ft of Item 4
- Form and pour concrete sidewalk

Materials / Equipment/ Labor	Total Hrs,yds,qty	Price per yd, qty, day	Total
Track Hoe MR55	16 hours	\$85.00 per hour	\$1,360.00
Dump Truck	16 hours	\$90.00 per hour	\$1,440.00
Support Vehicle	Day rate	\$155.00	
Chop Saw	Day rate 1 day	\$ 70.00	70.00
Jumping Jack	Day rate 1 day	\$70.00	70.00
Plate tamper	Day rate	\$70.00	
Mud Sucker	Day rate 5 days	\$70.00	\$ 350.00
Locater	Day rate	\$70.00	
Machine Hammer	Day rate 1 day	\$250.00	\$ 250.00
Machine operator	16 Hrs X 1 man	\$184.18	\$ 2,946.88
Laborers Total hours	77 Hrs	\$159.30	\$ 12,266.10
Item 4	6 yards	\$40.00 per yard	240.00
Pea gravel	8 yards	\$49.04 yard	\$ 392.32
Top soil		\$50.00	
concrete	2 yards	\$190.00 per yard	\$ 380.00
Cold Patch		\$140.00 per ton	
Hay		\$15.36 bag	
<b>Total</b>			<b>\$19,765.30</b>

**Ed Kuck Excavating Inc**20 Day Road  
Carmel, NY 10512INV # TOC-028-20  
CSD # 4  
REQ #  
Vendor 0670  
Tax ID - 133851002

Attention: Rob Vera

**EMERGENCY: SEWER MANHOLE REPAIR & BLACKTOP RESTORATION**

Respond as per: INFRAMARK

Job Location: 344 CENTER ROAD 238 MAPLE ROAD

Work Completed on: 4/1/2020 &amp; 4/3/2020

Start time: End Time: 12 HOURS

**Job Description:**

- SEWER MANHOLE REPAIR 8 HOURS
- BLACKTOP RESTORATION 4 HOURS

Materials / Equipment/ Labor	Total Hrs,yds,qty	Price per yd, qty, day	Total
Track Hoe MR55		\$85.00 per hour	
Dump Truck	4 Hours	\$90.00 per hour	360.00
Support Vehicle	Day rate 2 DAYS	\$155.00	310.00
Chop Saw	Day rate	\$ 70.00	70.00
Jumping Jack	Day rate	\$70.00	
Plate tamper	Day rate	\$70.00	70.00
Mud Sucker	Day rate	\$70.00	
Locater	Day rate	\$70.00	
Machine Hammer	Day rate	\$250.00	
Machine operator	Hrs X 1 man	\$184.18	
Laborers	12 Hrs X 3 men	\$159.30	5,734.80
Item 4		\$40.00 per yard	
Seed		\$96.00 bag	
Top soil		\$50.00	
Blacktop	3 TONS	\$114.00 per ton	342.00
Cold Patch		\$140.00 per ton	
SAND MIX	8 BAGS		56.00
1-3 INCH RISER RING			110.00
1-5 INCH RISER RING			110.00
CONCRETE MIX	16 BAGS		80.00
PORTLAND BAGS	2		26.00
Total			\$ 7,268.80

**Ed Kuck Excavating Inc**

20 Day Road  
 Carmel, NY 10512

INV # TOC-033-20

SD # 5

REQ #

Vendor 0670

Tax ID - 133851002

Attention: Rob Vera

**EMERGENCY**  
**SEWER MANHOLE REPAIR**

Respond as per: INFRAMARK

Job Location: BETWEEN 111 AND 119 CAREY STREET

Work Completed on: 4/17/2020

Start time:

End Time:

8 HOURS

**Job Description:**

- TREE ROOTS TAKEN OVER SEWER MANHOLE
- EXPOSED MANHOLE, LIFTED OFF LID
- REMOVED ROOTS FROM MANHOLE AND PIPES
- CLEARED MAMHOLE AND SEALED UP HOLES
- RESET MANHOLE TOP AND RESTORED LAWN

Materials / Equipment/ Labor	Total Hrs,yds,qty	Price per yd, qty, day	Total
Track Hoe MR55	8	\$85.00 per hour	680.00
Dump Truck	8	\$90.00 per hour	720.00
Support Vehicle	Day rate	\$155.00	
Chop Saw	Day rate	\$ 70.00	
Jumping Jack	Day rate	\$70.00	
Plate tamper	Day rate	\$70.00	
Mud Sucker	Day rate	\$70.00	
Locater	Day rate	\$70.00	
Machine Hammer	Day rate	\$250.00	
Machine operator	8 Hrs X 1 man	\$184.18	1473.44
Laborers	8 Hrs X 2 men	\$159.30	2548.80
Item 4		\$40.00 per yard	
Seed	1/8 BAG	\$96.00 bag	12.00
Top soil		\$50.00	
Blacktop		\$114.00 per ton	
Cold Patch		\$140.00 per ton	
Hay	1 BAG	\$15.36 bag	15.36
<b>Total</b>			<b>\$5,449.60</b>

**From:** [Franzetti.Richard](mailto:Franzetti.Richard)  
**To:** [amp2@ci.carmel.ny.us](mailto:amp2@ci.carmel.ny.us); [Barile.Michael](mailto:Barile.Michael); [Greg.Folchetti](mailto:Greg.Folchetti); [Lombardi.Frank](mailto:Lombardi.Frank); [mb10541@comcast.net](mailto:mb10541@comcast.net); [McDonough.Suzanne](mailto:McDonough.Suzanne); [mike@lynll.com](mailto:mike@lynll.com); [Schanil.Robert](mailto:Schanil.Robert); [Schmitt.Kenneth](mailto:Schmitt.Kenneth); [Suzi McDonough Personal](mailto:Suzi.McDonough.Personal)  
**Cc:** [Esteves.Donna](mailto:Esteves.Donna); [Vara.Rob](mailto:Vara.Rob)  
**Subject:** 04-02-2020 - TOC response to NYSDEC NOV Hillsdale TB  
**Date:** Thursday, April 2, 2020 2:33:29 PM  
**Attachments:** [04-02-2020 TOC Response to NYSDEC Insp CSD5 NY00306678 f-signed.pdf](#)

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Supervisor Schmitt and Town Board members,

The attached letter was forwarded to the NYSDEC in response to their March 19, 2020 letter which identified the finding of the January 31, 2020 site inspection and issuance of a notice of violation (NOV).

As the Board is aware the facility had received an NOV in 2015 and again in 2017 and is the Town currently under an order of consent with the NYSDEC.

Please be advised that current NOV identified high flows in the collection system. Based on recent inspection of the collection system there is a manhole which contains a significant amount of roots which cause additional inflow. These roots will need to be removed and we will work with Inframark to have them removed.

Please stay safe.

Richard J. Franzetti. P.E, BCEE

Town Engineer

60 McAlpin Avenue

Mahopac, New York 10541

Phone - (845) 628-1500 ext 181

Fax – (845) 628-7085

Cell – (914) 843-4704

[rjf@ci.carmel.ny.us](mailto:rjf@ci.carmel.ny.us)

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Richard J. Franzetti, P.E.  
Town Engineer



(845) 628-1500  
(845) 628-2087  
Fax (845) 628-7085

Office of the Town Engineer  
60 McAlpin Avenue  
Mahopac, New York 10541

## MEMORANDUM

---

**To:** Carmel Town Board

**From:** Richard J. Franzetti P.E. Town Engineer 

**Date:** March 30, 2020

**Re:** CSD #2 - Replacement of UV Disinfection Ballasts at Micro-Filtration Plant

---

Inframark the operators for Carmel Sewer Districts 2 (CSD 2) have advised the Engineering Department (Department) that the ballasts, modules, controllers and circuitry of the ultraviolet disinfection bulbs at the microfiltration plant is not functioning and that they must be replaced maintain appropriate disinfection standards

As an FYI these projects were completed as a Regulatory Upgrade and were financed through NYS EFC by New York City. These facilities utilize a combination microfiltration elements and ultraviolet disinfection bulbs.

Inframark has advised this Department that while there is a market for various manufacturers of this equipment and that based upon their research, that the Trojan bulbs can be expected to provide longer service than any aftermarket bulbs (see attached studies). This Department therefore considers this particular manufacturer to be a sole source.

We have received the attached quote from Trojan UV:

CSD	2
Bulbs and ancillary equipment	\$35,813.00
Total after reimbursement	\$17,906.5

Inframark has indicated that this equipment is ~ 12 years old and that expected life expectancy of the equipment is ~10 years (as provided in the attached).

We have discussed this matter with the Comptroller There are sufficient funds in the budget but this will require a budget transfer to the equipment line.

We therefore request authorization to proceed with this work as outlined.

**TOWN OF CARMEL**  
**ENGINEERING**  
**REQUEST FOR PURCHASE OR REPAIR**  
District: CSD 2

**Inframark, LLC**  
2 Renwick Street  
Newburgh, NY 12550  
United States

T: +1 845 228 0460  
[www.inframark.com](http://www.inframark.com)

Date of Request: 3-20-20

Item requested: UV Service and Parts

Purpose of item: Earlier in the year the staff was replacing all of the bulbs and had some issues getting the system back online. New ultraviolet light bulbs were installed, but some of them either didn't light up or the computer did not recognize that the system was even on. A technician from Trojan came out for an assessment. Issues found were worn/damaged ballasts, modules, controllers and some of the circuitry was not functioning as it should. Also some of the quartz sleeves could not be salvaged. There are a total of 2 Ultraviolet light banks. Bank 1A is 95% operational and Bank 1B is not operating at all.

Estimated age of equipment to be replaced / repaired: System is approximately 12 years old.

Estimated life expectancy of new equipment / repair: System itself should last approx. 10 more years. Lamps should be replaced every 8,000 – 10,000 hours (3 years with alternating lamps). Quartz sleeves should last around 3 years as well.

Labor cost for installation and/or repair: Included

Vendor #1:	Trojan	Cost: \$35,813.00
Vendor #2:	Sole source – sole supplier	Cost:
Vendor #3:		Cost:

## Why do you need to stay with Trojan /GA Fleet:

The specified equipment is based on stringent NWRI specifications relating to **dose** and **validated** end of lamp life factor of 98%.

The job was originally bid and provided to NWRI regulations. If you choose to substitute a different lamp that has not been validated, you could **lose** your NWRI approval/compliance if the lamps you install do not have an end of lamp life (EOLL – how much the lamps have degraded at 12,000 hours, the guaranteed lamp life) equal to the basis of design (0.98 in the case of Carmel). The only way to determine this is to have the specific lamp's EOLL validated independently to the NWRI protocol. We can share our EOLL validation any time (used in the initial design).

We can provide NWRI lamp validation certificates and will the competition be supplying these as well? This is a very important piece of documentation that the alternative supplier needs to provide to ensure that you are being presented with all the facts to make an informed decision.

At this time, all competitive amalgam lamps have around an 82% UV output at 12,000 hours. This is a 16% reduction in our lamp UV output with the same hours. Trojan has also done 3<sup>rd</sup> party validation studies on various competitive lamps and find that the UV output that these lamps achieve at 100% power levels **decreases significantly** when the lamps are operated below 100% power. If non-validated, non-Trojan certified lamps are used, Trojan cannot ensure and guarantee disinfection or warrant the system and components as non-certified parts could potentially damage other components.

The Carmel UV disinfection system was designed, sized and disinfection guaranteed based on a specific set of lamp characteristics and therefore, operational control factors. The UV system will, regardless of the lamp used, be operated based on the as-designed control philosophy. If a component is used that has different characteristics, the UV dose delivered to the effluent can be significantly decreased. This would impact a plant in a number of ways including: 1) disinfection would be compromised and exceedences could occur, and 2) lamps would need to be replaced more often which would increase the plant's per year lamp cost and labor cost associated with UV operation.)

These issues become even more significant for reuse applications, like the NYC Watershed, where the disinfection limits are much more stringent and small changes in UV dose delivery can have a big impact on disinfection.

Regards,

**Daria**

Daria Gaschler, Parts and Replacements

FLEET PUMP & SERVICE GROUP, INC.

100 Calvert Street

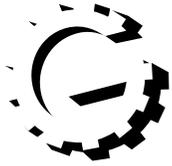
Harrison, NY 10528

(914)835-3801 Tel

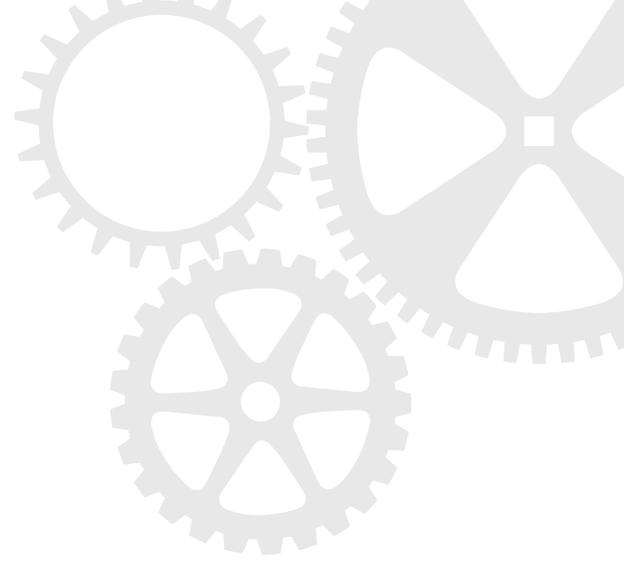
(914)835-2946 Fax

[dgaschler@fleetpump.com](mailto:dgaschler@fleetpump.com)

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



GET GENUINE.



## CASE STUDY: GENUINE TROJANUV3000™ LOW PRESSURE LAMPS

### Test Objective and Plan:

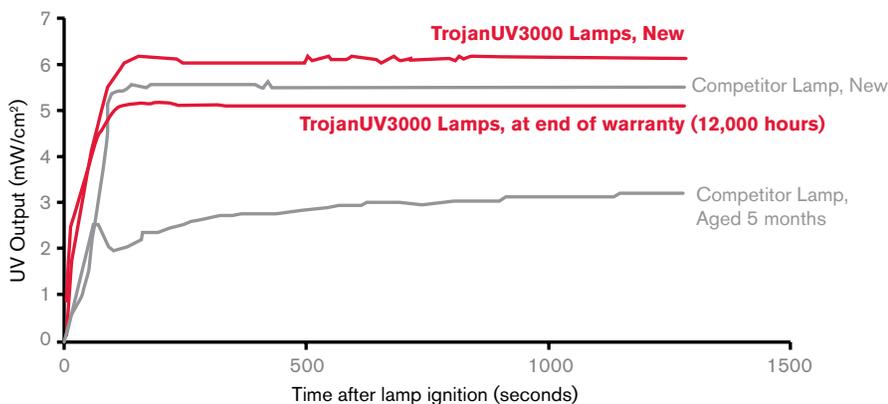
- Perform lamp output and aging study on Trojan UV3000™ lamps and non-genuine G64T5 low pressure UV lamps.
- Measure UV output and electrical characteristics of both brands of lamps.
- Monitor lamp performance as lamps were aged in a test tank in Trojan's lamp laboratory.

### Test Conditions:

- Non-genuine lamps were tested in Trojan's lamp aging tanks.
- Test equipment was designed to simulate field conditions as closely as possible.
- Lamps were operated in same quartz sleeves and with production ballasts used in the TrojanUV3000™ system.
- Water in the test tank was temperature controlled to simulate a real wastewater treatment plant.
- Lamps were cycled on/off four (4) times daily for comparison to Trojan's lamp warranty.
- Lamps were removed and inspected at regular intervals.
- Lamp output measurements were made in a "near field" test apparatus. Lamp output was measured underwater, simulating field conditions.

### Test Results for Non-Genuine Lamps:

- Non-genuine lamps showed brown coloring after approximately one month of operation (1,000 hour inspection).
- The brown coloring on the quartz glass was determined to be permanent, blocking UV light. Reduced UV output correlates to a reduced amount of UV energy available for inactivation of bacteria.
- One test lamp failed after 3,833 hours (6.5 months). At that point, the UV output of the remaining lamp was tested and showed a 40% decrease in lamp output compared to when lamps were new.



**Figure 1:** UV lamp output comparison over time of genuine TrojanUV3000™ lamp and non-genuine lamp. Note: A 40% reduction in UV output was measured in the non-genuine lamp after 5 months of operation. The Trojan lamp has consistently higher UV output, directly correlating to improved disinfection performance.

*"If it's not a Genuine Trojan part, it shouldn't be part of your Trojan system."*

### Test Summary:

- Based on the testing performed, it can be concluded that the non-genuine lamps were substantially different in terms of manufacturing process and resulting performance.
- Permanent damage to the lamp quartz occurred when the non-genuine lamp was operated under conditions simulating an installed TrojanUV3000™ system.
- At all times, the genuine Trojan lamp demonstrated significantly higher UV output.
- One test lamp failed prematurely after only 6.5 months. The remaining lamp showed a 40% drop in UV output after 6.5 months.
- TrojanUV3000™ system is designed assuming no more than 20% reduction in output over the lifetime of the lamp. Substituting these non-genuine lamp into the TrojanUV3000™ would result in significant under-dosing and risk to permit compliance. For this reason Trojan cannot endorse utilizing non-genuine lamps in TrojanUV3000™ systems.



**Figure 2:** The two bottom non-genuine test lamps show permanent brown coloration after 3,833 hours. The top genuine Trojan low pressure lamp is clear and maintains proper levels of UV output.

***“If it's not a Genuine Trojan part, it shouldn't be part of your Trojan system.”***

3020 Gore Road London, Ontario, Canada N5V 4T7  
T. 519.457.3400 F. 519.457.3030 [www.trojanuv.com](http://www.trojanuv.com)

**TROJAN UV**  
WATER CONFIDENCE™

## Lamp Specification for TrojanUV3000Plus™

September 6, 2007

1. Lamps shall be type GA64T6H (Amalgam). Referenced Trojan Part No. 794447.
2. Amalgam mercury lamp employing pre-heat of the coiled filament cathodes before ignition.
3. The filament shall be sufficiently rugged to withstand shock and vibration.
4. Electrical connection consisting of four pins at one end only.
5. Lamp external wiring material shall be white Teflon insulated stranded wire.
6. Three (3) Teflon rings shall be equally spaced along the arc length to center the lamp in the quartz sleeve.
7. 90% of UV output shall be within the wavelengths of 230 to 275nm.
8. Lamp shall be capable of operating continuously at any power level between 240W and 144W.
9. UV irradiance at a distance of 2.89 meters in air shall be at least 107 +/- 3 microwatts/square centimetre peak at 100h when operating at 240W electrical power.
10. Arc length: 58 inches (147 cm).
11. Composition of lamp wall shall be of a design that is rated to produce zero levels of ozone.
12. Lamp bases, adhesives and wiring shall be of materials that do not break down or off-gas when exposed to UV, moisture and ozone.
13. The lamp base shall incorporate pins that are at an angle to the longitudinal axis of the lamp.
14. UV Lamps shall emit on average 98% of the 100h output for 12,000h of operation. On/Off cycles limited to four (4) per day.

This amalgam lamp was specifically designed for the UV3000Plus™ Product. The lamp output (new and end of lamp life) has been validated by third party regulators and engineers to ensure disinfection performance requirements are met.

Using anything other than genuine Trojan parts invalidates your Disinfection Performance Guarantee and puts safety certifications, regulatory compliance and system performance at risk.

# TROJANUV LOW PRESSURE LOW OUTPUT LAMPS GUARANTEED DISINFECTION



Performance of your TrojanUV system is independently validated and is guaranteed for life – when you use Genuine TrojanUV low pressure low output (LPLO) lamps.

Your TrojanUV system was designed for End of Lamp Life (EOLL) – meaning the number of UV lamps installed at your plant was carefully selected to

ensure the required UV dose gets delivered throughout the lamp’s entire lifespan of 12,000 hours (1 year = 8,760 hours).

If non-TrojanUV (non-Genuine) LPLO lamps are installed in your system, disinfection performance and permit compliance are at risk (see Figure 1).

## CHART LEGEND

1. Your **TrojanUV system** is designed for a high EOLL
2. After a few months, non-Genuine lamps have significantly lower levels of output
3. Even if non-Genuine lamps continue to turn on after 1 year, the UV output is so low, disinfection is severely at risk

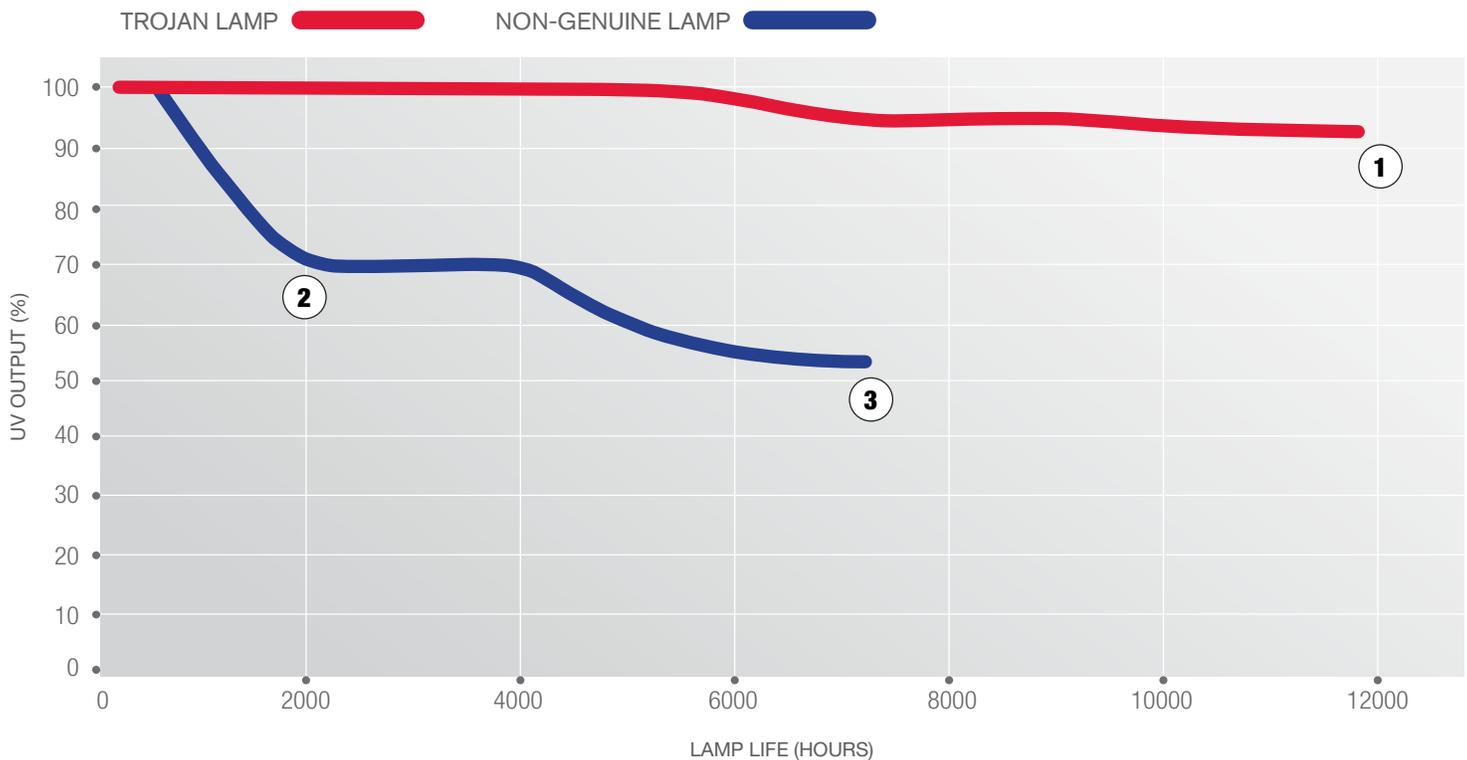


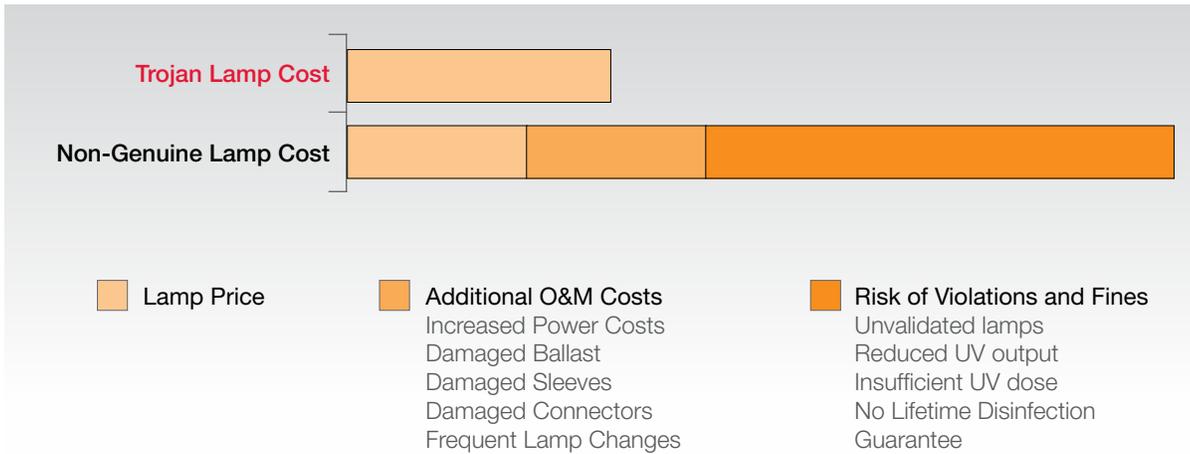
Figure 1: TrojanUV vs. Non-Genuine Low Pressure Low Output Lamps

Source: GAP EnviroMicrobial Services, Dec. 2011  
Testing done in accordance with industry protocols (NWRRI). Lamps are aged and tested in water tanks to simulate real-world operating conditions and third party witnessed.



# TOTAL COST SAVINGS

## HOW MUCH DO NON-GENUINE LAMPS REALLY COST?



Use of Non-Genuine LPLO lamps will void safety certifications (UL, CSA etc.) and damage other system components such as connectors, lamp plugs and ballasts leading to even higher O&M costs and increased maintenance.

## THE BOTTOM LINE

### Non-Genuine LPLO Lamps

Actual disinfection performance and long-term compatibility are unknown, unpredictable, risky, potentially dangerous and ultimately more expensive.

### Genuine TrojanUV LPLO Lamps

Ensure disinfection and maintain your warranties and Lifetime Performance Guarantee. Operate your UV system as engineered/ designed and maintain specified UV dose.

### Don't risk permit compliance.

Contact your local TrojanUV Representative or visit <http://www.trojanuv.com/getgenuine> to contact our Client Services / After Market Parts Team.



**GET GENUINE.**

*"If it's not a Genuine Trojan part, it shouldn't be part of your Trojan system."*

# TROJANUV3000™ SYSTEMS LAMP KIT INTRODUCTION



## TROJAN'S LOW PRESSURE LAMP KIT

Save both time and money with Trojan's new Low Pressure (LP) Lamp Kit for TrojanUV3000 Systems. Save 30% when purchasing a Lamp Kit that contains validated LP lamps, quartz sleeves, o-rings and compression springs. This is equivalent to quartz sleeves being offered at 50% off.

Recycling of your used lamps is also included.

## BENEFITS WITH TROJAN'S LAMP KIT

- Trojan LP lamps have undergone strict independent validation (NWRI protocol) demonstrating the highest UV output over the lamp's entire lifetime
- Lamp validation ensures your UV system will consistently meet disinfection requirements while also minimizing power consumption and saving you money
- New sleeves may require less frequent cleaning and used quartz sleeves can be recycled
- Ensure proper watertight sealing by replacing the o-ring each time
- Kits are available for both short (36") lamps (P/N 331014-001) and long (64") lamps (P/N331014-002)
- These lamps are used with TrojanUV3000PTP, TrojanUV3000B and TrojanUV3000 systems



### LAMP KIT INCLUDES:

### QUANTITY

Trojan LP Lamp (36" or 64")	4
Trojan Quartz Sleeve (900mm or 1610mm)	4
Trojan Sleeve Sealing O-Ring	4
Trojan Compression Spring	4

# KEY FEATURES. MORE BENEFITS.

## GET GENUINE

When it comes time to replace your Low Pressure Lamps, purchase genuine, validated Trojan replacement lamps for your UV system to ensure you maintain your Lifetime Disinfection Performance Guarantee.

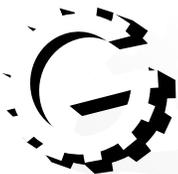
## THE BOTTOM LINE

Genuine components ensure your TrojanUV3000 system runs at peak performance. The new Lamp Kit for TrojanUV3000 Systems combines superior components at a 30% discount in order to save you time and money.

For additional information please contact your local Trojan Representative or visit [www.trojanuv.com/service/get-genuine-parts](http://www.trojanuv.com/service/get-genuine-parts) to contact our Client Services/After Market Parts Team.



*Figure 1: The four top non-OEM lamps (white ends) show permanent brown discoloration after only 3,833 hours. The four bottom genuine Trojan LP lamps (blue ends) are clear and maintain proper levels of UV output.*



**GET GENUINE.**

*"If it's not a Genuine Trojan part, it shouldn't be part of your Trojan system."*

**Service Proposal for: Inframark**

Site Name: Carmel NY SD#2 Project No. 511264  
 Equipment type: UV3000plus 07

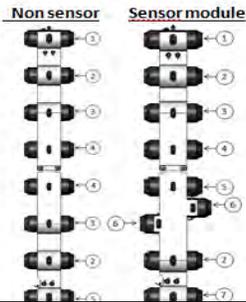
Description	Part number	Maintenance Schedule/Notes	Quantity	Unit Price	Extended
<b>MODULE PARTS</b>					
Lamp	794447-0YW	Replace every 12000 hours	20	\$ 316.35	\$ 6,327.00
Lamp quartz sleeves 4 /box	316136-004	Replace if etched or chipped	12	\$ 478.00	\$ 5,736.00
Lamp adaptors	316508	No charge till system is relamped	20	\$ -	\$ -
Sleeve sealing O-ring	316144P	Replace when lamp is replaced (sold in pkg/10)	10	\$ 1.55	\$ 15.50
Module control Boards	914385	As needed	3	\$ 213.00	\$ 639.00
<b>WIPER SYSTEM</b>					
Seal kit	327122	Replace every 2-3 years depending on wiping frequency - look for signs of wear. Refer attached Product Bulletin 07PB3P-004	196	\$ 28.88	\$ 5,660.48
<b>10 Non Sensor Module modules</b>					
<i>Wiper Canisters/ module</i>					
Canister Assy, Lamp 1 ( top)	327125-180PLGTOP	See image	10	\$ 74.75	\$ 747.50
Canister Assy, Lamp 2 & 7	327125-180STDMID	See image	20	\$ 74.75	\$ 1,495.00
Canister Assy, Lamp 3 & 6	327125-020STDMID	See image	20	\$ 74.75	\$ 1,495.00
Canister Assy, Lamp 4 & 5	327125-020STDCYL	See image	20	\$ 74.75	\$ 1,495.00
Canister Assy, Lamp 8 (bottom )	327125-180PLGBOT	See image	10	\$ 74.75	\$ 747.50
<b>2 Sensor Modules 1 per bank</b>					
<i>Wiper Canisters/ module</i>					
Canister Assy, Lamp 1 (top)	327125-180PLGTOP	See image	2	\$ 74.75	\$ 149.50
Canister Assy, Lamp 2 & 7	327125-180STDMID	See image	4	\$ 74.75	\$ 299.00
Canister Assy, Lamp 3	327125-020STDMID	See image	2	\$ 74.75	\$ 149.50
Canister Assy, Lamp 4	327125-020STDMID	See image	2	\$ 74.75	\$ 149.50
Canister Assy, Lamp 5	327125-180SNRCYL	See image	2	\$ 69.00	\$ 138.00
Canister Assy, Lamp 6 2 half canisters	327125-180SNRMID	See image	4	\$ 69.00	\$ 276.00
Canister Assy, Lamp 8	327125-180PLGTOP	See image	2	\$ 74.75	\$ 149.50
<b>UVI SENSOR</b>					
Sensor Assembly, UV Intensity	015393-S-153NB	5 yr warranty	2	\$ 2,415.00	\$ 4,830.00
Sensor Cable Assembly	015509	As required	2	\$ 149.11	\$ 298.22
<b>HSC</b>					
HSC Filter Element	907384	Replace yearly	1	\$ 166.30	\$ 166.30
25 ft. Blue and black hydraulic lines HSC to PDC	326420	As required			\$ -
<b>Maintenance</b>					
Acticlean Gel (sold in cs/4 x 4L)	901507	Top up acticlean gel every 6 months	1	\$ 201.00	\$ 201.00
Hydraulic oil 20 L pail	446022-020	Change every 2 years	1	\$ 148.50	\$ 148.50

**NOTE: PRICING VALID 90 days**  
 Leadtime to be confirmed

Service for 1 day on site for maintenance training		
1 day @ 1460.00 ( 8hr day)	\$	1,460.00
2 travel days @\$ 920.00	\$	1,840.00
Deduct if using local Field Service Technician	\$	1,200.00
Service portion	\$	4,500.00
Parts portion	\$	31,313.00
<b>Total</b>	<b>\$</b>	<b>35,813.00</b>

Require 4 weeks notice of booking  
 13-Mar-20

**Canister layout by module type**



## Terms and Conditions Covering All Trojan Sales

### **1. CONSTRUCTION AND LEGAL EFFECT**

The sale by Trojan Technologies (“Trojan”) to the purchaser (“Customer”) of the goods, products, equipment (individually or collectively the “Equipment”) and/or the services (the “Services”) listed in any quotation, proposal, bid, scope of supply, and /or similar document, as may be amended by any applicable change agreed by Trojan (individually or collectively the “Quotation”) will be solely upon the terms and conditions set out herein. These terms and conditions shall supercede all prior agreements and communications, written or oral, with respect to such sale.

Any purchase order shall not be effective until accepted by Trojan, and any additional or different terms and conditions contained in any purchase order, order acknowledgement or other communication of the Customer, and any waiver or modification of any terms and conditions set out herein, shall be deemed objected to without effect and will not be binding on Trojan unless specifically consented to in writing by an authorized representative of Trojan. A purchase order accepted by Trojan shall constitute an agreement between Trojan and the Customer, the terms and conditions of which are set out herein. The receipt of these terms by a Customer following a purchase order not in response to, or inconsistent with, a Quotation, shall be deemed a notification of objection to all inconsistent terms in that purchase order.

### **2. EQUIPMENT AND SERVICES SUPPLIED**

Trojan will supply only the specific Equipment and Services specifically listed in the Quotation. Trojan assumes no responsibility to supply other equipment or services.

### **3. PRICES AND EXPIRATION**

Prices for the Equipment and Services are as specified in the Quotation. If Trojan’s delivery of Equipment and/or Services surpasses one (1) year in length, then at least on an annual basis, or if changes to the Equipment or Services are requested or needed, the parties shall conduct good faith discussions regarding changes to the prices for the Equipment and/or Services, to reflect Trojan’s increased costs for which Supplier shall be entitled to additional fair and appropriate compensation. Installation, maintenance and any other services which relate to the Equipment are not included unless specifically provided for in the Quotation. The amount of any present or future excise, sales, use, value-added or similar tax, duty or other governmental charge applicable to the production, sale, shipment or use of Equipment or Services will be the responsibility of Customer and will be in addition to the prices set out in the Quotation. Any Quotation is valid for ninety (90) days from issuance, unless specifically consented to in writing by an authorized representative of Trojan.

### **4. PAYMENT**

4.1 Customer shall pay all invoiced amounts due to Trojan within 30 days from the date of Trojan’s invoice. Late payments are subject to subject to a monthly late payment assessment of up to 1.5% of the outstanding balance per month. Notwithstanding the foregoing, if Trojan believes timely payments from Customer will not follow, and/or if the level of costs incurred by Trojan for custom work or pass-through items is high, and/or if lead times are long, as determined by Trojan in its sole discretion, then Trojan may require payment on different terms, including but not limited to prepayment in full. For the avoidance of doubt, the final 5% of the purchase price is due no later than 30 days following the Acceptance Date, regardless of any delays in start-up of the Equipment.

4.2 Where the Customer is responsible for any delay in shipment by Trojan, the date on which the Equipment is ready for shipment by Trojan may be treated by it as the Delivery Date for purposes of determining the time of payment of the purchase price. In such event, the Equipment ready for shipment shall be held at the cost of the Customer and the Customer will be responsible for reasonable storage and insurance expenses with respect to such Equipment.

4.3 Customer and Trojan both recognize that there is a risk of wire fraud when individuals impersonating a business demand immediate payment under new wire transfer instructions. To avoid this risk, Customer must

verbally confirm any new or changed wire transfer instructions by calling Trojan and speaking with Trojan’s Credit Manager before transferring any monies using the new wire instructions. Both parties agree that they will not institute wire transfer instruction changes and require immediate payment under the new instructions but will instead provide a ten (10) day grace period to verify any wire transfer instruction changes before any outstanding payments are due using the new instructions.

### **5. DELIVERY TERMS, PACKAGING, SHIPPING, SITE STORAGE AND HANDLING**

Unless otherwise specified in writing by the Customer and consented to in writing by an authorized representative of Trojan, terms of Equipment delivery shall be “Ex Works” at the point of shipment, and:

- (a) Equipment will be boxed or crated as determined appropriate by Trojan for protection against normal handling and there will be an extra charge to the Customer for additional packaging required by the Customer with respect to waterproofing or other added protection,
- (b) the manner and routing of shipments will be at Trojan’s discretion,
- (c) responsibility for payment of shipping costs to the project site will be as specified in the Quotation,
- (d) any insurance to be arranged with respect to shipping of the Equipment will be as specified in the Quotation,
- (e) delivery of Equipment to the initial carrier will constitute delivery and title passing to the Customer and Equipment will be shipped at the Customer’s risk; any claim of the Customer for loss or damage in transit must be placed with the carrier and pursued by the Customer, and
- (f) Customer has sole responsibility for off-loading, storage and handling of the Equipment at the site.

### **6. DELIVERY**

6.1 Trojan’s quotation will provide a firm date for delivery of the Equipment (the “Delivery Date”) which Trojan will then use to establish the production schedule for the Equipment. The Delivery Date will then be binding on the Customer except for any changes agreed in writing between Trojan and Customer.

### **7. CANCELLATION AND RETURN OF EQUIPMENT**

The whole or any part of this order for the Equipment may be cancelled only with the prior written consent of Trojan. If Trojan does consent to a cancellation, such consent will be given only upon payment of reasonable cancellation charges in an amount determined by Trojan. In addition, with respect to any Equipment which is returned on a cancellation consented to by Trojan, the Customer will pay Trojan’s cost of placing the returned Equipment in a saleable condition, sales expenses incurred by Trojan in connection with such returned Equipment, a reasonable restocking charge and freight costs incurred in connection with the original shipment and in connection with returning such Equipment to Trojan, all in such amounts as are advised to the Customer by Trojan.

### **8. ACCEPTANCE**

Customer shall have no longer than thirty (30) days following receipt of a shipment of Equipment to inspect the Equipment. Customer may reject Equipment, in whole or in part, where the inspection reveals the Products are damaged, or are materially defective in workmanship or material. If Customer fails to timely reject Equipment or places the Equipment into operational use, the Products shall be deemed accepted.

### **9. START-UP**

9.1 For Equipment requiring start-up in the quotation, Trojan may request the Customer to provide a firm date for start-up of the Equipment (the “Start-Up Date”). Trojan may then schedule its technician to be on-site for the Start-up Date. The Start-up Date is binding except for any changes made as agreed between Customer and Trojan.

9.2 On the Start-up Date, Customer must have the Equipment and site ready, and must have paid all amounts then due and payable to Trojan.

9.3 Customer is the operator and in full control of its premises, including those areas where Trojan employees or contractors are performing service, repair and maintenance activities. Customer will ensure that all necessary

measures are taken for safety and security of working conditions, sites and installations during the performance of Services. Customer is the generator of any resulting wastes, including without limitation hazardous wastes. Customer is solely responsible to arrange for the disposal of any wastes at its own expense. Customer will, at its own expense, provide Trojan employees and contractors working on Customer's premises with all information and training required under applicable safety compliance regulations and Customer's policies. If Customer requires Trojan employees or contractors to attend safety or compliance training programs provided by Customer, Customer will pay Trojan the standard hourly rate and expense reimbursement for such training attended. The attendance at or completion of such training does not create or expand any warranty or obligation of Trojan and does not serve to alter, amend, limit or supersede any part of this Contract.

#### 10. EXCUSABLE DELAYS

Trojan shall not be liable for any failure to meet the Delivery Date or the Start-up Date and/or meet any other obligations hereunder if such failure is due to reason(s) beyond Trojan's reasonable control including, without limitation, acts or omissions of carriers, labour difficulties, shortages, strikes or work stoppages of any type, fire, accident, explosion, flood, defaults or delays of suppliers, governmental acts or omissions, acts of God, acts of civil or military authorities, incomplete or inaccurate information supplied by Customer or any other cause beyond Trojan's reasonable control. In any such event, the Delivery Date and Start-up Date and/or other obligation due date shall be extended on a day for day basis to the extent of such delay.

#### 11. WARRANTY

11.1 Trojan warrants the Equipment in accordance with its then-current warranty covering the specific Equipment ordered, generally under which Trojan warrants to the Customer that during the period ending 18 months after the Delivery Date or 12 months after the Start-up Date, whichever occurs first, Equipment which is manufactured by Trojan will be free from defects in material and workmanship and will function in accordance with the specifications specified in the Quotation.

11.2 This warranty shall not apply to any failure or defect which results from the Equipment not being operated and maintained in strict accordance with instructions specified in Trojan's Operation and Maintenance manual or which results from mishandling, misuse, neglect, improper storage, improper operation of the Equipment with other equipment furnished by the Customer or by other third parties or from defects in designs or specifications furnished by or on behalf of the Customer by a person other than Trojan. In addition, this warranty shall not apply to Equipment that has been altered or repaired after start-up by any one except:

- (a) authorized representatives of Trojan, or
- (b) Customer acting under specific instructions from Trojan.

All Equipment warranties set forth herein (and any related guarantees, performance bonds, and the like) shall only be enforceable if (a) all equipment is properly installed, inspected regularly and is in good working order, (b) all operations are consistent with Trojan recommendations, (c) operating conditions at the Customer site have not materially changed and remain within anticipated specifications, and (d) no reasonably unforeseeable circumstances exist or arise.

11.3 Customer must notify Trojan in writing within 5 days of the date of any Equipment failure. This notification shall include a description of the problem, a copy of the operator's log, a copy of the Customer's maintenance record and any analytical results detailing the problem. If Customer has not maintained the operator's log and maintenance record in the manner directed in the Operation and Maintenance manual, or does not notify Trojan of the problem as specified above, this warranty may, in Trojan's discretion, be invalid.

11.4 Customer will fully cooperate with Trojan, in the manner requested by Trojan, in attempting to diagnose and resolve the problem by way of telephone support. If the problem can be diagnosed by telephone support

and a replacement part is required, Trojan will either, at Trojan's expense, ship a repaired, reworked or new part to the Customer who will install such part as directed by Trojan or will direct Customer to acquire, at Trojan's expense, such part from a third party and then install such part as directed by Trojan.

11.5 If Trojan determines that the problem cannot be resolved by way of telephone support and/or shipment by Trojan, or acquisition by the Customer, of a replacement part for installation by the Customer, Trojan will send one or more persons to make an on-site inspection of the problem. If an on-site visit is made, Trojan personnel will evaluate the problem and repair or replace any Equipment determined to be in breach of this warranty. If the problem is not attributable to a breach of this warranty, Trojan reserves the right to invoice the Customer for this service.

11.6 Components of the Equipment which are manufactured by a third party but furnished to Customer by Trojan are warranted by the original manufacturer, only to the extent of the original manufacturer's warranty, and are not covered by this warranty.

11.7 This warranty is the exclusive remedy of the Customer for all claims based on a failure of or defect in the Equipment, whether the claim is based on contract (including fundamental breach), tort (including negligence), strict liability or otherwise. This warranty is lieu of all other warranties whether written, oral, implied or statutory. Trojan expressly disclaims any remedies of "cover" and any warranties implied by law, including but not limited to any warranty of merchantability or fitness for a particular purpose.

11.8 Lamp and lamp driver warranties, and obligations of Trojan concerning lamp replacements, are set out in separate lamp and lamp driver warranty documents.

#### 12. LIMITATIONS OF LIABILITY

12.1 Trojan does not assume any liability for monetary damages, personal injury or property damage caused by use or misuse of the Equipment. Trojan has no responsibility for the supervision or actions of Customer's employees or contractors or for non-Trojan items (e.g., chemicals, equipment) and disclaims all liability and responsibility for any loss or damage that may be suffered as a result of such actions or items, or any other actions or items not under Supplier's control. Trojan shall not in any event be liable for liquidated, penalty, special, incidental, indirect or consequential damages including, without limitation, lost profits, lost business opportunities, lost revenue or loss or depreciation of goodwill, even if it has been advised of the possibility thereof. Trojan's liability shall, in all instances, be limited to repair or replacement of Equipment in breach of the above warranty and shall not exceed the cost of such repair or replacement. This liability with respect to repair or replacement will terminate upon the expiration date of the above warranty.

12.2 In addition to the foregoing, in no event shall Trojan's liability exceed that portion of the purchase price actually paid to it.

12.3 This limitation of liability shall survive any termination of any agreement based on its Quotation.

#### 13. COMPLIANCE AND OTHER OBLIGATIONS

Trojan shall not be responsible for verifying that any agreement and/or the supply of Equipment and Services, is in compliance with all applicable laws, ordinances, regulations, codes and orders. If the Customer fails to notify Trojan in writing that the agreement or such supply is not in compliance with any applicable law, ordinance, regulation, code or order, the Customer shall be responsible for and hereby agrees to indemnify Trojan against all claims, demands, losses, liabilities, costs and expenses incurred by it as a result of such non-compliance. Unless otherwise expressly agreed, Customer is responsible for obtaining any required export or import licenses necessary for Equipment delivery. Customer will comply with all laws and regulations applicable to the installation or use of all Equipment, including applicable import and export control laws and regulations of the U.S., E.U. and any other country having proper jurisdiction, and will obtain all necessary export or import licenses in

connection with any subsequent export, re-export, transfer and use of all Equipment and technology delivered hereunder. Customer will not sell, transfer, export or re-export any Trojan Equipment or technology for use in activities which involve the design, development, production, use or stockpiling of nuclear, chemical or biological weapons or missiles, nor use Trojan Equipment or technology in any facility which engages in activities relating to such weapons. Customer will comply with all local, national, and other laws of all jurisdictions globally relating to anti-corruption, bribery, extortion, kickbacks, or similar matters which are applicable to Customer's business activities in connection with this Contract, including but not limited to the U.S. Foreign Corrupt Practices Act of 1977, as amended (the "FCPA"). Customer agrees that no payment of money or provision of anything of value will be offered, promised, paid or transferred, directly or indirectly, by any person or entity, to any government official, government employee, or employee of any company owned in part by a government, political party, political party official, or candidate for any government office or political party office to induce such organizations or persons to use their authority or influence to obtain or retain an improper business advantage for Customer or for Trojan, or which otherwise constitute or have the purpose or effect of public or commercial bribery, acceptance of or acquiescence in extortion, kickbacks or other unlawful or improper means of obtaining business or any improper advantage, with respect to any of Customer's activities related to this Contract. Trojan asks Customer to "Speak Up!" if aware of any violation of law, regulation or our Standards of Conduct ("SOC") in relation to this Contract. See <http://danaher.com/integrity-and-compliance> and [www.danaherintegrity.com](http://www.danaherintegrity.com) for a copy of the SOC and for access to our Helpline portal. Customer is not an agent or representative of Trojan businesses and will not present itself as such under any circumstance unless and to the extent it has been formally screened by Trojan compliance department and received a separate duly-authorized letter from Trojan Technologies setting forth the scope and limitations of such authorization.

#### 14. INSPECTION

Inspection of Equipment by the Customer or its representative at Trojan's plant may be permitted provided that it is conducted under principles of confidentiality and does not unduly interfere with Trojan's production workflow and that complete details of the desired inspection are provided to Trojan in writing with sufficient advance notice.

#### 15. PATENT INDEMNIFICATION

15.1 Trojan will not be liable with respect to any claim of patent or other intellectual property infringement made regarding any Equipment unless such claim is based on an assertion that Equipment manufactured by Trojan, in the form in which such Equipment is supplied to the Customer, infringes any United States or Canadian patent. Trojan's obligations hereunder shall not apply to Equipment modified, or used in an unauthorized manner, by the Customer or to the extent that infringement arises as a result of combining the Equipment with any other equipment, whether or not supplied by Trojan. Subject to the foregoing, provided that the Customer notifies Trojan promptly in writing of any such claim of infringement and authorizes Trojan to exercise sole control over the defence and/or settlement of any such claim, Trojan will indemnify the Customer against the reasonable expenses of defending such claim as well as any resulting damages finally awarded against Customer or agreed to in any settlement but only up to a maximum amount not exceeding the purchase price actually paid to Trojan for the allegedly infringing Equipment.

15.2 If an injunction is obtained against the further use of allegedly infringing Equipment, Trojan shall, at its option and expense, use its reasonable efforts to:

- (a) procure for the Customer the right to continue using the Equipment,
- (b) modify the Equipment so that it is no longer infringing,
- (c) replace the allegedly infringing Equipment with non-infringing Equipment, or

(d) refund the purchase price paid to Trojan for the Equipment, less reasonable depreciation as determined by Trojan.

15.3 The foregoing provisions constitute Trojan's sole responsibility and liability, and the Customer's sole remedy, with respect to actual or alleged infringement of patents or other intellectual property.

15.4 The Customer hereby agrees to indemnify Trojan against all claims relating to or resulting from any actual or alleged patent infringement by Trojan which arises out of the manufacture and/or supply by Trojan of Equipment manufactured according to a design and/or specifications furnished to Trojan by the Customer or on behalf of the Customer by a person other than Trojan.

#### 16. SPECIAL TOOLS, DIES, JIGS, FIXTURES AND PATTERNS

Any tools, dies, jigs, fixtures, patterns and similar items which are included or required in connection with the manufacture and/or supply of the Equipment will remain the property of Trojan without credit to the Customer. Trojan assumes the cost for maintenance and replacement of such items and shall have the right to discard and scrap any such item after it has been inactive for a minimum of one year, without credit to the Customer.

#### 17. INTELLECTUAL PROPERTY & SOFTWARE.

All Trojan contributions to the Equipment and Services, the results of the Services, and any other work Equipment designed or provided by Trojan hereunder may contain or result in statutory and non-statutory Intellectual Property, including but not limited to patentable subject matter or trade secrets; and all such Intellectual Property remains the sole property of Trojan; and Customer shall not disclose (except to the extent inherently necessary during any resale of Equipment sold hereunder), disassemble, decompile, or otherwise reverse engineer said contributions, or any results of the Services, or any work Equipment, or otherwise attempt to learn the underlying processes, source code, structure, algorithms, or ideas.

All licenses to Trojan's separately-provided software Equipment may be subject to the separate software license agreement(s) accompanying the software media. In the absence of such terms and for all other software, Trojan grants Customer only a personal, non-exclusive license to access and use the software provided by Trojan with Equipment purchased hereunder solely as necessary for Customer to enjoy the benefit of the Equipment. A portion of the software may contain or consist of open source software, which Customer may use under the terms and conditions of the specific license under which the open source software is distributed. Customer agrees that it will be bound by any and all such license agreements. Title to software remains with the applicable licensor(s).

#### 18. RECORDS & AUDITS

Unless otherwise specifically agreed in writing by an authorized representative of Trojan, neither the Customer nor any representative of the Customer shall have the right to examine or audit any books, records or accounts of Trojan; or be entitled to, or have control over, any engineering or production prints, drawings or technical data which Trojan, in its sole discretion, considers to be of a confidential nature.

#### 19. ASSIGNMENT

All rights and obligations of Trojan and the Customer will enure to the benefit of and be binding upon their respective successors and permitted assigns. The rights and obligations of Customer hereunder shall not be assignable without the prior written consent of Trojan. All rights and obligations of Trojan may be assigned in whole or in part to any Affiliate or to any person acquiring any assets of Trojan outside the ordinary course of business. An "Affiliate" shall mean any entity which controls, is controlled by or is under common control with Trojan, whether directly or indirectly. Any attempted assignment in violation of the provisions of this section shall be void.

#### 20. CONFIDENTIALITY

20.1 All technical information, specifications, drawings, documentation

and knowhow of every kind and description disclosed by Trojan to the Customer and which is identified by Trojan as confidential shall be deemed to constitute “Confidential Information” of Trojan unless such information:

- (a) becomes part of the public domain through no fault of the Customer,
- (b) is disclosed to the Customer by a third party without breach of any obligation or other restriction,
- (c) is known to the Customer at the time of disclosure and has been documented as such, or
- (d) is required to be disclosed by legal, judicial or administrative proceeding.

20.2 All Confidential Information shall be owned by, and remain the exclusive property of, Trojan.

20.3 All Confidential Information shall be held in confidence by the Customer and, if in any form of physical media, returned by the Customer to Trojan upon request. The Customer shall not:

- (a) reproduce the Confidential Information without the written consent of Trojan, or
- (b) use the Confidential Information for any purpose other than in connection with the operation and maintenance of the Equipment.

20.4 The Customer shall be liable for and shall indemnify Trojan against all claims, demands, liabilities, losses, costs and expenses arising from any failure to comply with the terms hereof relating to Confidential Information. The Customer acknowledges that monetary damages may not be adequate in the event of any such failure to comply and that Trojan shall be entitled to injunctive relief in the event of any such non-compliance.

## 21. GOVERNING LAW

All issues relating to the construction, validity, interpretation, enforcement and performance of this agreement and the rights and obligations of Trojan and the Customer hereunder shall be governed by the laws of the Province of Ontario and the federal laws of Canada applicable therein. Any provisions of the *International Sale of Goods Act* or any convention on contracts for the international sale of goods shall not be applicable to this agreement. The parties submit to and consent to the non-exclusive jurisdiction of courts located in the Province of Ontario.

## 22. MODIFICATION/WAIVER

These terms incorporate and/or replace all prior terms whether oral or written, and may not be changed by either party except by a writing signed by both parties. The failure by Trojan to enforce at any time any of the provisions of this contract, or to exercise any election or option provided herein, shall in no way be construed as a waiver of such provision or option, nor in any way affect the validity of this contract (or any part hereof), or the right of Trojan thereafter to enforce each and every such provision. If any provision hereof is held by a court of competent jurisdiction to be unenforceable the remaining terms and provisions shall be unaffected and remain in full force and effect.

###

### **Additional Terms and Conditions Covering Trojan Sales of Configured-to-Order Projects and Systems**

In addition to all terms and conditions above, the following Sections 104, 106, 108, and 109 apply to Trojan sales of Configured-to-Order Projects, Systems, and the like:

#### **104. PAYMENT**

Unless otherwise noted in the Quotation, 10% of the purchase price for the Equipment is due 30 days after approval of engineering submittals, 85% of the purchase price is due 30 days after the Delivery Date (as defined below) and 5% of the purchase price is due 30 days after the Acceptance Date (as defined below), provided that if the Start-Up Date is less than 30 days after the Acceptance Date, 90% of the purchase price is due on or before the Start-Up Date.

#### **106. DELIVERY**

106.1 Trojan will request the Customer to provide a firm date for delivery of the Equipment to the project site (the "Delivery Date") which Trojan will then use to establish the production schedule for the Equipment. The Delivery Date will then be binding on the Customer except for any changes made in accordance with the provisions below.

106.2 The Customer can request a rescheduling of the Delivery Date on one occasion only by notifying Trojan in writing not less than four weeks prior to the scheduled Delivery Date. The Customer may request that the Delivery Date be extended by a period up to six weeks, without penalty, but may not request that the Delivery Date be moved forward. The Customer may also request that the Delivery Date be extended beyond a six week period but, Trojan may not agree to such extension, beyond the maximum six week extension period

106.3 Trojan may, in its sole discretion, agree to change the Delivery Date on more than one occasion or if less than four weeks' prior notice is provided of a requested change, but is under no obligation to do so.

106.4 Trojan reserves the right to reschedule the Delivery Date to a date prior to or subsequent to the scheduled Delivery Date in order to accommodate its shipping, production or other requirements. This right to reschedule will be applicable unless otherwise agreed in writing by an authorized officer of Trojan. Trojan will provide the Customer or its representative with a minimum of 24 hours notice of any such rescheduling.

106.5 Where any change to the Delivery Date is made at Customer's request, for all purposes with respect to the warranty and payment provided by Trojan in connection with the Equipment, the initial Delivery Date will be considered to be the Delivery Date regardless of any change later made to the Delivery Date.

#### **108. ACCEPTANCE**

108.1 During the period between the Delivery Date and the Start-up Date, the Customer shall prepare the Equipment and the project site for installation and start-up and, unless otherwise agreed in writing by an authorized representative of Trojan, shall complete acceptance testing with respect to the Equipment. The Equipment shall be deemed to be accepted on the earliest to occur of the following dates (the "Acceptance Date"):

- (a) that date on which the Equipment can function in either manual or automatic operation and provide disinfection in accordance with criteria specified in the Quotation, or
- (b) 60 days after the Delivery Date.

108.2 All amounts which remain owing by the Customer for the Equipment, including any amount which is specified to be payable on the Acceptance Date, will be paid by the Customer to Trojan within 30 days after the Acceptance Date, unless otherwise agreed in writing by an authorized representative of Trojan.

108.3 Written notification must be given by the Customer to Trojan within seven days after the Acceptance Date listing any outstanding deficiencies with respect to the Equipment and Trojan will use all reasonable efforts to correct such deficiencies promptly.

#### **109. START-UP**

109.1 Trojan will request the Customer to provide a firm date for start-up of the Equipment (the "Start-Up Date"). Trojan will then schedule its technician to be on-site for the Start-up Date. The Start-up Date is binding except for any changes made in accordance with the provisions below.

109.2 On the Start-up Date, Customer must have the Equipment and site ready as provided in the Installation Preparation Checklist contained in the Contractor Installation Package sent to Customer, and must have paid all amounts then due and payable to Trojan.

109.3 Customer can request a rescheduling of the Start-up Date by notifying Trojan in writing not less than three weeks prior to the Start-up Date. Customer may request that the Start-up Date be extended, but may not request that the Start-up Date be moved forward. Trojan requires a minimum extension period of two weeks between the existing Start-up Date and the requested new Start-up Date in order to reschedule its technician.

109.4 Trojan may, in its sole discretion, agree to reschedule the Start-up Date where a Customer requests less than a two week extension but is under no obligation to do so. In the event that Trojan does agree to less than a two week extension or that Customer requests more than two changes to the Start-up Date, Customer will be charged an administration fee in an amount determined by Trojan.

109.5 Trojan reserves the right to reschedule the Start-up Date to a date which is prior to or subsequent to the scheduled Start-up Date in order to accommodate its resource availability. This right to reschedule will be applicable unless otherwise agreed in writing by an authorized officer of Trojan. Trojan will provide Customer or its representative with a minimum of 72 hours notice of any such change to the Start-up Date.

109.6 In the event that Trojan's technician arrives at the project site and finds that the Equipment or the project site is not ready for start-up as defined in the Contractor Installation Package, or any amounts then due and payable to Trojan remain unpaid, Customer may either:

- (a) provided all amounts then due and payable to Trojan have been paid, issue a purchase order for all costs involved in having Trojan correct the deficiencies, or
- (b) have Trojan's technician leave the site and then reschedule the Start-up Date to a date when all deficiencies will be corrected and the Equipment will be ready for start-up as defined in the Contractor Installation Package.

If Customer selects this option, the cost of rescheduling will be not less than a minimum amount specified by Trojan, with the final cost being determined by Trojan based on its costs and expenses incurred in connection with the rescheduling.

###

**From:** [Esteves, Donna](#)  
**To:** [Franzetti, Richard](#)  
**Cc:** [Vara, Rob](#)  
**Subject:** RE: 03-25-2020 FW: 3-20-20 -- P.O. Request - Town of Carmel - CSD 2, 4, 7 -- UV Service and Parts  
**Date:** Wednesday, March 25, 2020 10:52:35 AM  
**Attachments:** [image001.png](#)

---

Rich,

There are sufficient funds in the budget for this expense. If you authorize the purchase, I will put the purchase order and forward to Inframark as soon as it has been released.

Thanks,

*Donna Esteves*

Town of Carmel ~ Engineering Department  
60 Mc Alpin Ave  
Mahopac, NY 10541  
845-628-1500 ext. 184

---

**From:** Franzetti, Richard  
**Sent:** Wednesday, March 25, 2020 8:53 AM  
**To:** Esteves, Donna  
**Cc:** Brann, Thomas; 'Harris, Carrie'; Grippo, Arthur; Vara, Rob  
**Subject:** 03-25-2020 FW: 3-20-20 -- P.O. Request - Town of Carmel - CSD 2, 4, 7 -- UV Service and Parts

Donna,

Please issue a PO for CSD 4 and CSD 7.

For CSD 2, can you please advise if there are sufficient funds to make this purchase. \$35,813.00. Please note the I will need to present this request to the Town Board for approval.

Thanks

Richard J. Franzetti. P.E, BCEE  
Town Engineer  
60 McAlpin Avenue  
Mahopac, New York 10541  
Phone - (845) 628-1500 ext 181  
Fax – (845) 628-7085  
Cell – (914) 843-4704  
[rjf@ci.carmel.ny.us](mailto:rjf@ci.carmel.ny.us)

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**From:** Harris, Carrie <Carrie.Harris@inframark.com>  
**Sent:** Friday, March 20, 2020 10:35 AM  
**To:** Esteves, Donna <de@ci.carmel.ny.us>; Franzetti, Richard <rjf@ci.carmel.ny.us>  
**Cc:** Brann, Thomas <thomas.brann@inframark.com>; Grippo, Arthur <arthur.grippo@inframark.com>  
**Subject:** 3-20-20 -- P.O. Request - Town of Carmel - CSD 2, 4, 7 -- UV Service and Parts

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good morning Donna and Richard,

Please find attached a P.O. Request for CSD 2, 4 & 7 for UV service and parts. I made a separate request for each district. Please let me know if you need any further information.

Thanks,  
Carrie

**Carrie Harris** | Administrative Assistant



2 Renwick Street | Newburgh, NY 12550

(O) 845-565-6182 | (M) 845-670-2909 | [www.inframark.com](http://www.inframark.com)

**From:** [Maxwell, Mary Ann](#)  
**To:** [Franzetti, Richard](#)  
**Cc:** [Esteves, Donna](#); [Tenefrancia, Michelle](#)  
**Subject:** FW: 11-5-18 - CSD 2, 4 and 7 - UV Bulbs Purchase  
**Date:** Tuesday, November 06, 2018 12:08:35 PM

---

Brad Simmons from NYCDEP confirmed via email below that City will reimburse the Town 50% towards the purchase and installation of UV Bulbs for CSD 2,4 and 7. The Town will have to expense the full cost this year and request reimbursement when we submit our 2018 Micro Reconciliations next year.

The funding is available in CSD 2 and CSD 7 (8130.0140) to cover the full cost. CSD 4 we will need to do a budget revision transferring \$ into this account.

Let me know if you have any questions or concerns.

*Mary Ann Maxwell*  
Town Comptroller  
Town of Carmel  
(845) 628-1500 ext 175  
Fax (845) 628-7085  
[mam@ci.carmel.ny.us](mailto:mam@ci.carmel.ny.us)

---

**From:** Simmons, Brad [mailto:BSimmons@dep.nyc.gov]  
**Sent:** Tuesday, November 06, 2018 11:08 AM  
**To:** Maxwell, Mary Ann  
**Subject:** Re: 11-5-18 - CSD 2, 4 and 7 - UV Bulbs Purchase

To confirm, the cost sharing is 50/50 for UV bulb replacement at the three facilities.

Brad Simmons

---

**From:** Maxwell, Mary Ann <mam@ci.carmel.ny.us>  
**Sent:** Monday, November 5, 2018 1:08:13 PM  
**To:** Simmons, Brad  
**Subject:** RE: 11-5-18 - CSD 2, 4 and 7 - UV Bulbs Purchase

That's fine...thanks. Tomorrow is fine too.

*Mary Ann Maxwell*  
Town Comptroller  
Town of Carmel  
(845) 628-1500 ext 175  
Fax (845) 628-7085  
[mam@ci.carmel.ny.us](mailto:mam@ci.carmel.ny.us)

---

**From:** Simmons, Brad [mailto:BSimmons@dep.nyc.gov]  
**Sent:** Monday, November 05, 2018 1:04 PM  
**To:** Maxwell, Mary Ann

**Subject:** Re: 11-5-18 - CSD 2, 4 and 7 - UV Bulbs Purchase

I'm pretty sure that's the case. I'm out of the office but will try to get back to you later today to confirm.

---

**From:** Maxwell, Mary Ann <mam@ci.carmel.ny.us>  
**Sent:** Monday, November 5, 2018 11:46:52 AM  
**To:** Simmons, Brad  
**Cc:** Franzetti, Richard; Esteves, Donna; Tenefrancia, Michelle  
**Subject:** FW: 11-5-18 - CSD 2, 4 and 7 - UV Bulbs Purchase

Good morning Brad,

The Town of Carmel is considering the replacements of UV bulbs at each microfiltration plant (see cost breakout below by plant). In accordance with the terms of the operating agreement between NYCDEP and the Town of Carmel please confirm that NYCDEP will reimburse the Town 50% towards the purchase and installation of UV Bulbs for CSD 2,4 and 7 microfiltration plants.

I've included Rich Franzetti, Town Engineer, on this email if you have any questions or concerns.

Thank you,

Mary Ann

*Mary Ann Maxwell*  
Town Comptroller  
Town of Carmel  
(845) 628-1500 ext 175  
Fax (845) 628-7085  
[mam@ci.carmel.ny.us](mailto:mam@ci.carmel.ny.us)

---

**From:** Franzetti, Richard  
**Sent:** Monday, November 05, 2018 8:50 AM  
**To:** Maxwell, Mary Ann; Esteves, Donna  
**Subject:** 11-5-18 - CSD 2, 4 and 7 - UV Bulbs Purchase

Donna and Mary Ann

Are there sufficient funds for the purchase of UV Bulbs at CSD 2, 4 and 7? Costs are as follows:

<b>CSD</b>	<b>2</b>	<b>4</b>	<b>7</b>
Bulbs and ancillary equipment	\$42,847.00	\$7,222.00	\$8,282.00
Labor (Inframark)	\$1,440.00	\$720.00	\$720.00
Total	\$44,287.00	\$7,972.00	\$9,002.00
Total after reimbursement	\$22,143.50	\$3,971.10	\$4,501.00

Also can you please confirm that the NYCDEP will reimburse 50% of this cost to the Town of Carmel under the terms of the operating between the municipalities?

Thanks

Richard J. Franzetti. P.E, BCEE  
Town Engineer  
60 McAlpin Avenue  
Mahopac, New York 10541  
Phone - (845) 628-1500 ext 181  
Fax – (845) 628-7085  
Cell – (914) 843-4704  
[rjf@ci.carmel.ny.us](mailto:rjf@ci.carmel.ny.us)

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Richard J. Franzetti, P.E.  
Town Engineer



(845) 628-1500  
(845) 628-2087  
Fax (845) 628-7085

**Office of the Town Engineer**  
60 McAlpin Avenue  
Mahopac, New York 10541

## MEMORANDUM

---

**To:** Carmel Town Board

**From:** Richard J. Franzetti P.E. Town Engineer 

**Date:** April 23, 2020

**Re:** CSD#2 Influent Comminutor

---

Inframark the operators for Carmel Sewer District #2 (CSD#2), has alerted the Engineering Department (Department) that the waste lines leading into the waste pump room located in the headworks building is currently restricted/blocked. Inframark had tried to use their in-house sewer jetting and was unable to clear the blockage.

The reason for the blockage was that the grinder teeth (i.e., comminutor) at the head works of the plant are worn down and is allowing rags to go through the system. Inframark has moved operations to the bar screen (manual rag removal versus mechanical using the comminutor). Inframark was been directed to have the comminutor repaired and placed back in service.

Inframark has indicated that this replacement equipment is sole source and has obtained the attached quote from the manufacturer, GP Jager Inc. at \$29,488.40.

It should be noted that existing unit was approximately 10 years old and the life expectancy of the new equipment is approximately 10 years. Cost for the installation is estimated to be \$6,500.00.

This piece of equipment prevents the influent pumps from becoming clogged and failure to repair could cause a potential compliance issue which would cause the Town of Carmel would be in violation of our State Pollution Discharge Elimination System (SPDES) Permit.

There are sufficient funds in budget for this work as provided in the attached

This Department requests that the Town Board authorize the purchase of the comminutor, from GP Jager Inc. at a cost of \$29,488.40, as an emergency installation at an estimated cost of \$6,500.00

This Department respectfully requests that this request be placed on the next Town Board work session.

**From:** [Franzetti, Richard](mailto:franzetti.richard@ci.carmel.ny.us)  
**To:** [amp2@ci.carmel.ny.us](mailto:amp2@ci.carmel.ny.us); [Barile, Michael](mailto:Barile.Michael); [Greg Folchetti](mailto:Greg.Folchetti); [Lombardi, Frank](mailto:Lombardi.Frank); [mb10541@comcast.net](mailto:mb10541@comcast.net); [McDonough, Suzanne](mailto:McDonough.Suzanne); [mike@lynll.com](mailto:mike@lynll.com); [Schanil, Robert](mailto:Schanil.Robert); [Schmitt, Kenneth](mailto:Schmitt.Kenneth); [Suzi McDonough Personal](mailto:Suzi.McDonough.Personal)  
**Cc:** [Esteves, Donna](mailto:Esteves.Donna); [Vara, Rob](mailto:Vara.Rob)  
**Subject:** 04-06-2020 CSD2 Influent Comminutor  
**Date:** Monday, April 6, 2020 12:18:28 PM

---

Supervisor Schmitt and Town Board members

Please be advised the Inframark, the operators of CSD 2, has advised the Engineering Department that the waste lines leading into the waste pump room located in the headworks building is currently restricted/blocked. Inframark had tried to use their in-house sewer jetting and was unable to clear the blockage.

They contacted TAM contractors earlier today to come with a sewer jet truck with more sophisticated jetting equipment and capabilities in an effort to resolve this issue. This blockage is in the process of being cleared.

Part of the reason for this that the grinder teeth (i.e., comminutor) at the head works of the plant are worn down and is allowing rags to go through the system. Inframark has moved operations to the bar screen (manual rag removal versus mechanical using the comminutor).

Inframark has been directed to have the comminutor repaired and placed back in service.

Richard J. Franzetti. P.E, BCEE

Town Engineer

60 McAlpin Avenue

Mahopac, New York 10541

Phone - (845) 628-1500 ext 181

Fax – (845) 628-7085

Cell – (914) 843-4704

[rjf@ci.carmel.ny.us](mailto:rjf@ci.carmel.ny.us)

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**GP JAGER, INC.**

PO BOX 50  
 BOONTON, NJ 07005  
 USA

Voice: 973-750-1180  
 Fax: 973-750-1181

**GP Jager Inc.**

**QUOTATION**

Quote Number: 12142-040820

Quote Date: Apr 8, 2020

Page: 1

Lead time: **TBD**

Bill To:
TOWN OF CARMEL 60 MCALPIN AVE MAHOPAC, NY 10541 USA

Ship To:
CARMEL SEWER DISTRICT #2 11 OLD ROUTE 6 CARMEL, NY 10512 USA

Customer ID	Good Thru	Payment Terms	Manufacturer
12142	5/8/20	Net 30 Days	JWC

Qty	Item	Description	Unit Price	Amount	Project #
1.00	AMC0102-1501-2802	SCREEN, SEGMENT 6MM PRF 45DG 1500MM RB	11,740.27	11,740.27	
1.00	30005-0032	MONSTER RENEW 7 TOOTH CAM CUTTERS 1:1 STACK HARDENED ALLOY STL BUNA N ELASTOMERS CORK & RUBBER GASKETS MOTOR TYPE ELECTRIC LESS MOTOR LESS REDUCER LESS SPOOL GRINDER SN TBD PAINT EPOXY GREEN	17,217.33	17,217.33	
1.00	TARIFF	JWC TARIFF SURCHARGE  SN 105057, CARMEL SD #2  QUOTED BY JANELLE SANZ/RICH FIEDLER FREIGHT INCLUDED	530.80	530.80	

WE ACCEPT ALL MAJOR CREDIT CARDS.  
 A 3% CONVENIENCE FEE WILL APPLY.

Subtotal	29,488.40
Freight	
<b>TOTAL</b>	<b>29,488.40</b>

**TOWN OF CARMEL**

60 MCALPIN AVE  
MAHOPAC, NY 10541

**PO Number :** 25361  
Date : 04/14/2020  
Page: 1 of 1

**Purchase Order**

**Vendor :** 0000001561  
G.P. JAGER, INC.  
PO BOX 50  
BOONTON, NJ 07005

**Ship To:**  
TOWN OF CARMEL  
ENGINEERING DEPT.  
60 MCALPIN AVENUE  
MAHOPAC, NY 10541  
Phone # (845) 628-1500

**Bill To:**  
TOWN OF CARMEL  
ENGINEERING DEPT.  
60 MCALPIN AVENUE  
MAHOPAC, NY 10541

**CONTRACT #** SOLE SOURCE

**Description:** CSD2, EMERGENCY SCREEN REPLACEMENT FOR MUFFIN MONSTER

Qty.	Unit	Description	Unit Price	Amount
		CSD2, EMERGENCY SCREEN REPLACEMENT FOR MUFFIN MONSTER		29,488.40
		702.8130.0040 (CARMEL SEWER DISTRICT 2...CONTRACTUAL REPAIRS)		
<b>Total:</b>				\$29,488.40

Ordered By: DONNA Req. Date: 04/09/2020 Req. No: 21583 Approved By/Date:

\_\_\_\_\_  
Authorized Official

\_\_\_\_\_  
Date

**From:** [Esteves, Donna](#)  
**To:** [Franzetti, Richard](#)  
**Subject:** 04-21-20 ~ CSD2 Purchase Request  
**Date:** Tuesday, April 21, 2020 1:49:09 PM  
**Attachments:** [4-9-20 -- P.O. Request - Town of Carmel - CSD2 - Muffin Monster Renew.docx](#)

---

Rich,

Please see attached that will require a resolution from the Board for both the purchase from GP Jager for the screens, and labor for Inframark for the installation. There are sufficient funds in the CSD2 budget for this expense.

Thanks,

*Donna Esteves*  
Town of Carmel ~ Engineering Department  
60 Mc Alpin Ave  
Mahopac, NY 10541  
845-628-1500 ext. 184

Richard J. Franzetti, P.E.  
Town Engineer



(845) 628-1500  
(845) 628-2087  
Fax (845) 628-7085

**Office of the Town Engineer**  
60 McAlpin Avenue  
Mahopac, New York 10541

## MEMORANDUM

---

**To:** Carmel Town Board

**From:** Richard J. Franzetti P.E., Town Engineer 

**Date:** March 31, 2020

**Re:** DRAFT Annual MS4 Report

---

The Town of Carmel is an MS4 community and as such we are required to develop and submit an annual report under the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from MS4s (GP-0-15-003).

Attached for your consideration is the Draft Annual (MS4) Report. The Draft report will be placed on the Town of Carmel webpage on April 9, 2020 and will be posted for comment for at least 30 days prior to being made final.

The Final Annual MS4 report is due June 1, 2020. Given the voting schedule in May we respectfully request that if there are no comments made to the Draft document that the report be considered final, signed by the Supervisor and submitted to the NYSDEC in a timely fashion. A copy of this Final document will be placed on the Town of Carmel webpage.

Richard J. Franzetti, P.E.  
Town Engineer



(845) 628-1500  
(845) 628-2087  
Fax (845) 628-7085

**Office of the Town Engineer**  
60 McAlpin Avenue  
Mahopac, New York 10541

## MEMORANDUM

**To:** Carmel Town Board

**From:** Richard J. Franzetti, P.E., Town Engineer 

**Date:** April 30, 2020

**Re:** C261 Casse and Teakettle Dam Additional Services

As you may recall when this project last appeared before the Board, it was suggested that the lowest bidder for each dam be awarded the respective contracts (i.e., Nick Biggs for the Teakettle Dams and Legacy for the Lake Casse Dam).

As these bids were opened on February 3, 2020 per the bid specifications the bids are to remain open for 90 days after the day of the opening of the bids. In this case the date is May 3, 2020. A 60-day extension was requested from the six (6) contractors and the three (3) lowest bidders have agreed to this extension. Copies of the responses are attached.

In addition, as discussed during the public hearing, there will be a need for additional services from the consulting engineer Weston and Sampson (W&S) to address the construction administration/management of two (2) contractors and address the NYSDEC requirement to perform an emergence survey regarding the northern long eared bat and tree removal. At the direction of the Engineering Department W&S was requested to provide costs for these services. A copy of the proposal is attached.

Project Task	Original Contract	Amendment	New Contract
Lake Casse			
Contract Plans	\$6,100.00	-	No Change
Bid assistance	\$1,500.00	-	No Change
Construction Oversight	\$2,300.00	\$1,700.00	\$4,000.00
Permitting	-	\$800.00	\$800.00
Bat emergence (sub-contractor)	-	\$4,300.00	\$4,300.00
Total	\$9,900	\$6,800.00	\$16,700.00
Upper Teakettle			
Contract Plans	\$6,600.00	-	No Change
Bid assistance	\$1,500.00	-	No Change
Construction Oversight	\$2,700.00	\$2,000.00	\$4,700.00
Permitting	-	\$800.00	\$800.00
Bat emergence (sub-contractor)	-	\$3,400.00	\$3,400.00
Total	\$10,800.00	\$6,200.00	\$17,000.00

Tel: (845) 628-1500 Fax: (845) 628-7085 email [rjf@ci.carmel.ny.us](mailto:rjf@ci.carmel.ny.us)

April 30, 2020  
 C261 Casse and Teakettle Dam Additional Services

Project Task	Original Contract	Amendment	New Contract
Teakettle			
Contract Plans	\$5,600.00	-	No Change
Bid assistance	\$1,500.00	-	No Change
Construction Oversight	\$2,000.00	\$1,400.00	\$3,400.00
Permitting	-	\$800.00	\$800.00
Bat emergence (sub-contractor)	-	\$2,200.00	\$2,200.00
Total	\$9,100.00	\$4,400.00	\$13,500.00

The following is summary of the costs for each district. If the Board awards the project to the two (2) contractors as discussed at the prior meeting, the Lake Casse District costs will decrease by \$16,590.00. However, as discussed, additional services from the consulting engineer will be required to address the construction administration/management (CA/CM) of two (2) contractors and address the NYSDEC requirement to perform an emergence survey regarding the northern long eared bat and tree removal. The increase in CA/CM for Lake Casse District is \$1,700.00. Therefore, the overall savings for the Lake Casse District is \$14,980.00. It should be noted that there is an increase in the CA/CM for the Teakettle District of \$3,400.00 (\$2,000.00 for Upper Teakettle and \$1,400.00 for Teakettle).

Both districts will have an increase due to NYSDEC regulations as follows:

	Lake Casse	Upper Teakettle	Teakettle
Environmental Permitting	\$800.00	\$800.00	\$800.00
Bat emergence (sub-contractor)	\$4,300.00	\$3,400.00	\$2,200.00
Total	\$5,100.00	\$4,200.00	\$3,000.00

The Board should note that it was anticipated that the selected contractor would be conducting all the work outlined within the bid documents, working sequentially at each dam until completion. The increase in CA/CM for both districts reflects the additional efforts to independently manage two (2) contractors and the coordination between the contractors and the subcontractor as related to the bat emergence survey. This includes:

- Bat survey work and tree felling at the three (3) sites will require additional inspection related to the following:
  - Bat surveys can only be performed at once site per night.
  - Coordinating the bat surveys the night before with the sub-contractor;
  - Reviewing the survey results and notifying the contractor to perform work the following day;
  - Coordinating with the NYSDEC that is related to the inspection.
- Managing work schedules. The schedules of each contractor are not expected to coincide. The related inspection and oversight efficiencies of the work will be reduced due to the timing when the various contractors begin work.
- Review shop drawings and pay requests for two (2) contractors

We recommend that the Board approve this contract amendment.

**From:** [Kayla B](#)  
**To:** [Franzetti, Richard](#); "[estimating@benciccone.com](mailto:estimating@benciccone.com)"; "[jeff@legacysupplyllc.com](mailto:jeff@legacysupplyllc.com)"; "[lisa@legacysupplyllc.com](mailto:lisa@legacysupplyllc.com)"; "[Nicholas.Vieira](mailto:Nicholas.Vieira)"; "[Parrottdockbuilders@hotmail.com](mailto:Parrottdockbuilders@hotmail.com)"; "[Reisner@foremostny.com](mailto:Reisner@foremostny.com)"; "[excavatingyonkers@comcast.net](mailto:excavatingyonkers@comcast.net)"  
**Cc:** [Vara, Rob](#)  
**Subject:** RE: 04-23-2020 - C261 Casse and Teakettle Dam Rehab Contract Award  
**Date:** Thursday, April 23, 2020 9:12:31 AM  
**Attachments:** [image002.png](#)

---

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Yes, with a discussion on the start date.

Kayla Brumley

Nicky Diggs Excavation

Office: 914-232-1878

Fax: 914-301-5199



---

**From:** Franzetti, Richard  
**Sent:** Thursday, April 23, 2020 9:10 AM  
**To:** 'estimating@benciccone.com' ; 'jeff@legacysupplyllc.com' ; Kayla B ; 'lisa@legacysupplyllc.com' ; Nicholas.Vieira ; 'Parrottdockbuilders@hotmail.com' ; 'Reisner@foremostny.com' ; 'excavatingyonkers@comcast.net'  
**Cc:** Vara, Rob  
**Subject:** 04-23-2020 - C261 Casse and Teakettle Dam Rehab Contract Award  
**Importance:** High  
Bidders

As you are aware, the bids for the referenced project were opened on February 3, 2020. Per the bid specifications the bids are to remain open for 90 days after the day of opening. In this case the date is May 3, 2020.

Due to the current COVID 19 pandemic and various executive orders by the governor which have placed constraints on local government staffing and construction the Town of Carmel is requests a 60 day extension from you to keep your bid for the referenced project open.

Please advise if you are willing to grant this extension.

Richard J. Franzetti. P.E, BCEE

Town Engineer

60 McAlpin Avenue

Mahopac, New York 10541

Phone - (845) 628-1500 ext 181

Fax – (845) 628-7085

Cell – (914) 843-4704

[rjf@ci.carmel.ny.us](mailto:rjf@ci.carmel.ny.us)

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**From:** [Lisa Lyons-Cassidy](#)  
**To:** [Franzetti, Richard](#)  
**Cc:** [Vara, Rob](#)  
**Subject:** RE: 04-23-2020 - C261 Casse and Teakettle Dam Rehab Contract Award  
**Date:** Thursday, April 23, 2020 10:26:41 AM  
**Attachments:** [image001.png](#)

---

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Good morning Rich,  
Legacy will hold its pricing for the additional 60 days.  
Thank you,  
Lisa

---

**From:** Kayla B  
**Sent:** Thursday, April 23, 2020 9:12 AM  
**To:** Franzetti, Richard ; 'estimating@benciccone.com' ; 'jeff@legacysupplyllc.com' ; 'lisa@legacysupplyllc.com' ; Nicholas Vieira ; 'Parrottdockbuilders@hotmail.com' ; 'Reisner@foremostny.com' ; 'excavatingyonkers@comcast.net'  
**Cc:** Vara, Rob  
**Subject:** RE: 04-23-2020 - C261 Casse and Teakettle Dam Rehab Contract Award  
Yes, with a discussion on the start date.

Kayla Brumley  
**Nicky Diggs Excavation**  
**Office: 914-232-1878**  
**Fax: 914-301-5199**



---

**From:** Franzetti, Richard <[rjf@ci.carmel.ny.us](mailto:rjf@ci.carmel.ny.us)>  
**Sent:** Thursday, April 23, 2020 9:10 AM  
**To:** 'estimating@benciccone.com' <[estimating@benciccone.com](mailto:estimating@benciccone.com)>; 'jeff@legacysupplyllc.com' <[jeff@legacysupplyllc.com](mailto:jeff@legacysupplyllc.com)>; Kayla B <[office@nickydiggs.com](mailto:office@nickydiggs.com)>; 'lisa@legacysupplyllc.com' <[lisa@legacysupplyllc.com](mailto:lisa@legacysupplyllc.com)>; Nicholas Vieira <[nick@nickydiggs.com](mailto:nick@nickydiggs.com)>; 'Parrottdockbuilders@hotmail.com' <[Parrottdockbuilders@hotmail.com](mailto:Parrottdockbuilders@hotmail.com)>; 'Reisner@foremostny.com' <[Reisner@foremostny.com](mailto:Reisner@foremostny.com)>; 'excavatingyonkers@comcast.net' <[excavatingyonkers@comcast.net](mailto:excavatingyonkers@comcast.net)>  
**Cc:** Vara, Rob <[rjv2@ci.carmel.ny.us](mailto:rjv2@ci.carmel.ny.us)>  
**Subject:** 04-23-2020 - C261 Casse and Teakettle Dam Rehab Contract Award  
**Importance:** High

Bidders

As you are aware, the bids for the referenced project were opened on February 3, 2020. Per the bid specifications the bids are to remain open for 90 days after the day of opening. In this case the date

is May 3, 2020.

Due to the current COVID 19 pandemic and various executive orders by the governor which have placed constraints on local government staffing and construction the Town of Carmel is requests a 60 day extension from you to keep your bid for the referenced project open.

Please advise if you are willing to grant this extension.

Richard J. Franzetti. P.E, BCEE

Town Engineer

60 McAlpin Avenue

Mahopac, New York 10541

Phone - (845) 628-1500 ext 181

Fax – (845) 628-7085

Cell – (914) 843-4704

[rjf@ci.carmel.ny.us](mailto:rjf@ci.carmel.ny.us)

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**From:** [George Calauti](#)  
**To:** [Franzetti, Richard](#)  
**Subject:** Re: 04-23-2020 - C261 Casse and Teakettle Dam Rehab Contract Award  
**Date:** Thursday, April 23, 2020 10:51:38 AM

---

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Rich  
That is not a problem to extend it for 60 days.  
Thanks George Calauti /Yonkers Excavating Corp.

Sent from my iPhone

On Apr 23, 2020, at 9:10 AM, Franzetti, Richard wrote:

Bidders

As you are aware, the bids for the referenced project were opened on February 3, 2020. Per the bid specifications the bids are to remain open for 90 days after the day of opening. In this case the date is May 3, 2020.

Due to the current COVID 19 pandemic and various executive orders by the governor which have placed constraints on local government staffing and construction the Town of Carmel is requests a 60 day extension from you to keep your bid for the referenced project open.

Please advise if you are willing to grant this extension.

Richard J. Franzetti. P.E, BCEE

Town Engineer

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Mahopac, New York 10541

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[rjf@ci.carmel.ny.us](mailto:rjf@ci.carmel.ny.us)

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April 28, 2020

Richard J. Franzetti, P.E.  
Town Engineer  
Town of Carmel  
60 McAlpin Avenue  
Mahopac, NY 10541

Re: **Contract No. C261**  
**Carmel Dams Rehabilitation Proposal**  
**Request for Amendment No. 1**

Dear Mr. Franzetti:

The Town of Carmel (Town) retained the services of Weston & Sampson for the development of contract plans, design, bidding and construction inspection for tree removal and other state mandated maintenance activities at Lake Casse, Upper and Lower Teakettle Lake Dams (the Project). The Project was advertised for bids on January 9, 2020, and bids were received by the Town on February 3, 2020. The Project schedule anticipated award by the end of February with start of work by early to mid-March. This schedule was intended to allow time for trees to be dropped before April 1<sup>st</sup> with the intent of avoiding tree cutting restrictions and associated permitting and related activities that would be required if this work was performed between April 1<sup>st</sup> and October 31<sup>st</sup>. The bids received were higher than the available budgets for the work requiring that the Town pursue Bonds to support the work. This effort has delayed the award of the contract.

As a result of these unforeseen delays the tree felling will need to be done during the summer and the Town must meet the additional DEC permitting requirements. Weston & Sampson has been assisting the Town in coordinating with the DEC to determine the specific measures needed including reaching out to the DEC by phone and providing copies of project documents and information to allow DEC to make a determination of specific activities. The first step a Phase 1 Habitat Assessment for each dam performed by the Town to assess potential presence of roosting habitat for the Northern Long Eared Bat is currently being reviewed by the NYSDEC for conformance. The DEC is expected to do its own site visit this week to confirm the assessment. Based on the presence of potential roost tree species at the sites and discussions with the DEC it is expected that "bat emergence surveys" will be required at each site before potential roost trees can be cut. The Town has asked that Weston & Sampson provide the additional permitting assistance including the bat emergency surveys for each site.

In addition, the Town upon review of the bids has decided to split the Project into two separate construction contracts with two different contractors, one for Lake Casse Dam and one for the Teakettle dams, to take advantage of the lowest individual dam bids. This will increase the effort necessary for construction phase assistance beyond that in our approved contract scope of work.

The Town has therefore asked that Weston & Sampson submit this amendment request to perform these additional out of scope services.

**Environmental Permitting Coordination Assistance:**

We will assist the Town of Carmel in obtaining the necessary environmental permit approvals from DEC. This work includes reaching out to the NYSDEC regarding applicable environmental permits for this project, submission of plan sets to the NYSDEC for environmental permitting review and coordination between the Town and NYSDEC regarding permitting process and requirements and securing and coordinating of the services of a qualified wildlife specialist to perform bat surveys. The cost associated with the level of effort for this work is \$2,400.

### Additional Construction Phase Services:

#### A. **Bat Emergence Survey**

Based on feedback provided by the NYSDEC regarding the Tree Habitat Assessment provided by the Town, an Emergence Survey by a qualified Biologist may be required to determine the presence of Northern Long Eared Bats occupying potential roost habitats. This survey will require a certified biologist to observe bats beginning one half an hour before sunset and continue until at least one hour after sunset per NYSDEC Appendix E: Phase 4 Emergence Surveys. If no bats are observed, then those trees can be cut the next day. This survey would need to be repeated if bats are observed occupying roost habitat trees or if the tree removals cannot be completed the following day. We have secured a qualified local subconsultant to perform the required bat emergence surveys and follow up downed tree inspection. The following is the proposed scope of work for that effort:

##### Lake Casse Site:

Two hour watch for bat emergence on eight designated trees up to 2 nights of observation if fewer than 8 trees can be felled in one day and inspection of felled trees the following day. Total Cost \$4,300.

##### Upper Teakettle Site:

Two hour watch for bat emergence on five designated trees up to 2 nights of observation if fewer than 5 trees can be felled in one day and inspection of felled trees the following day. Total Cost \$3,400

##### Lower Teakettle Site:

Two hour watch each for bats on four designated trees one night of observation for all four trees is anticipated due to the site and tree size and inspection of felled trees the following day. Total Cost \$2,200

Above costs assume:

- up to 6 hours for fallen tree inspection after being downed.
- Only one site will be observed per night
- If due to contractors performance or presence of bats is detected and one or more trees requires reinspection those inspections will be at additional cost to be determined.
- This work can only be done at temperatures above 50 degrees, low wind, no chance of rain or fog.

#### B. **Additional Construction Administrative and Inspection Services**

The bid documents were originally written to be awarded to a single contractor to conduct all the work outlined within the documents. The Town now anticipates awarding two separate contracts. This removes some of the efficiencies in our construction administration effort under a single contract approach. The additional Construction Administrative Services will include the following:

- Review of a second set of shop drawings for compliance with the contract documents.
- Review and processing of any change orders or request for information that may arise during the construction.
- Preparation of supplementary drawings/sketches as required to clarify/resolve field construction problems that may occur.

It was also originally anticipated that the selected contractor would be conducting all the work outlined within the bid documents, working sequentially at each dam until completion, tree cutting, clearing and grubbing, sodding etc. With two separate contractors working independently work types and schedule are not expected to coincide and related inspection and oversight efficiencies of the work will be reduced due to when the various contractors begin work. Weston & Sampson will need to provide a resident project representative for each issued contract, to observe the work at each project site at different times for specific milestones as determined by the Town. This amendment anticipates up to 30 additional man-hours of resident project representative services will be required.

The total cost associated with the addition construction administration and inspection level of effort for this work is \$5,100.

The cost distribution for these services are split across the projects as indicated in the attached amendment cost summary.

We propose to perform this work on a lump sum basis consistent with the current contract. All other terms, conditions, and contract scope items shall remain as described in our original professional services contract with the Town. If additional level of effort is required additional fees will apply and a mutually agreeable amendment will be authorized by the Town.

We look forward to continuing to assist the Town with this important project. If you have any questions or require further information, please don't hesitate to contact me at [stonec@wseinc.com](mailto:stonec@wseinc.com) or at 518-463-4400.

Sincerely,  
WESTON & SAMPSON, PE, LS, LA, PC



Carl Stone, PE  
Senior Technical Leader

Attach. Amendment #1 Cost Summary

CC: File

AMENDMENT NO. 1  
to the  
Contract Scope of Work (dated April 16, 2019)  
for Lake Casse, Upper Teakettle and Teakettle Dams Rehabilitation (Project)  
Between the Town of Carmel (Town)  
and  
Weston & Sampson, PE, LS, LA, PC (Weston & Sampson)

This Amendment authorizes the addition of funds for the Lake Casse, Upper Teakettle and Teakettle Dams Rehabilitation, contract No. C261 for the additional scope or work described in our amendment request dated April 28, 2020. A summary of the additional funds authorized under this amendment and the original and resulting new project contract price is provided below:

Amendment No. 1 Summary

Amendment No. 1 Summary			
Project Task	Original Contract Value	Amendment No. 1	New Contract Value
Lake Casse Dam			
Task 1.0: Develop Contract Plans (Lump Sum)	\$6,100	-	\$6,100
Task 2.0: Bid Assistance (Lump Sum)	\$1,500	-	\$1,500
Task 3.0: Construction Oversight (Lump Sum)	\$2,300	\$1,700	\$4,000
Environmental Permitting Assistance	-	\$800	\$800
Bat Emergence Surveys	-	\$4,300	\$4,300
Lake Casse Park District Dam Total	\$9,900	\$6,800	\$16,700
Teakettle Lake Park District Upper Teakettle Dam			
Task 1.0: Develop Contract Plans (Lump Sum)	\$6,600	-	\$6,600
Task 2.0: Bid Assistance (Lump Sum)	\$1,500	-	\$1,500
Task 3.0: Construction Oversight (Lump Sum)	\$2,700	\$2,000	\$4,700
Environmental Permitting Assistance	-	\$800	\$800
Bat Emergence Surveys	-	\$3,400	\$3,400
Teakettle Lake Park District Upper Teakettle Dam Total	\$10,800	\$6,200	\$17,000

Teakettle Lake Park District Teakettle Dam			
Task 1.0: Develop Contract Plans (Lump Sum)	\$5,600	-	\$5,600
Task 2.0: Bid Assistance (Lump Sum)	\$1,500	-	\$1,500
Task 3.0: Construction Oversight (Lump Sum)	\$2,000	\$1,400	\$3,400
Environmental Permitting Assistance	-	\$800	\$800
Bat Emergence Surveys	-	\$2,200	\$2,200
<b>Teakettle Lake Park District Teakettle Dam Total</b>	<b>\$9,100</b>	<b>\$4,400</b>	<b>\$13,500</b>

We propose to perform this work for the Lump Sum Totals identified herein and in accordance with the terms and conditions as described in the original contract and herein.

ACCEPTED FOR:  
Town of Carmel

By: (signature) \_\_\_\_\_  
(please print name) \_\_\_\_\_

Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Richard J. Franzetti, P.E.  
Town Engineer



(845) 628-1500  
(845) 628-2087  
Fax (845) 628-7085

**Office of the Town Engineer**  
60 McAlpin Avenue  
Mahopac, New York 10541

## MEMORANDUM

**To:** Carmel Town Board

**From:** Richard J. Franzetti P.E. Town Engineer 

**Date:** April 30, 2020

**Re:** C251 – CSD 1 Main Extension Bond

As the Board is aware in the Engineering Department received a request from the property owners of 534 and 540 Route 6 (TM# 75.12-1-14 and 75.12-1-15 respectively) requesting to connect into the Carmel Sewer District 1 (CSD 1). These are Milestones Family Realty and Mahopac Animal Hospital respectively.

Bids for the referenced project were let out on March 19, 2020 and received on April 23, 2020. Bid specifications were provided to fourteen potential bidders and eight (8) bids were received. The bid summary is provided in the attached. Preliminary costs for the project, and the cost for three (3) low bidders are summarized as follows:

Bidder	Total Bid Price
Joken Development	\$342,507.50 <sup>(1)</sup>
Amaxx Inc.	\$384,613.20 <sup>(1)</sup>
Papitto Construction	\$428,000.00
2018 Cost Estimate	\$170,000.00

<sup>(1)</sup> Corrected due to addition error.

The Town Board previously approved bonding for this project in the amount of \$170,000.00. There are NOT sufficient funds for this work. Consequently, this work will need an increase in the bonding amount. A map plan and report, based on the bid documents and submittals and public hearing would be required as well as an authorized borrowing resolution. The rate payers of the Carmel Sewer District 1 would have to pay debt service cost once this project is complete.

We recommend that the new Bond amount be set at \$461,535.84 as indicated in the following chart:

04-30-2020

C251 – CSD 1 Main Extension Bond

C251 - CSD1 Extension		Joken	Amaxx	Papitto
Bid		\$342,507.50	\$384,613.20	\$428,000.00
Bonding Counsel	10%	\$34,250.75	\$38,461.32	\$42,800.00
Contingency	10%	\$34,250.75	\$38,461.32	\$42,800.00
Total		\$411,009.00	<b>\$461,535.84</b>	\$513,600.00

The value was chosen to provide for increase bond counsel costs and 10% contingency. This figure was developed based upon the second lowest bidders pricing in order to cover a possibility, while unlikely, that the lowest bidder may not be able to enter into a contract with the Town.

The Engineering Department requests that the Town Board approve the additional bonding required for this work.

**From:** [Spofford, Ann](#)  
**To:** [Franzetti, Richard](#)  
**Cc:** [Vara, Rob](#); [Greg Folchetti](#); [Daly, Alice](#); [Esteves, Donna](#)  
**Subject:** Bid Opening - CSD #1 Sewer Main Extension - C251  
**Date:** Thursday, April 23, 2020 11:42:34 AM  
**Attachments:** [C251 Legal Notice.pdf](#)  
[C-251\\_CSD#1 Sewer Main Ext 4 23 2020.pdf](#)  
[C251-2020 BidNet Report.pdf](#)

---

Good morning,

The above referenced bid opening was held in Meeting Room #1 at the Carmel Town Hall, 60 McAlpin Avenue, Mahopac, New York on April 23, 2020 at 11:00 a.m. by Ann Spofford, Town Clerk and witnessed by Alice Daly, Deputy Town Clerk and Robert Vara, Engineering Projects Coordinator.

As you are aware, in light of the COVID-19 pandemic and in an abundance of caution for the protection of the bidders as well as the Town Hall staff, the provision of Governor Cuomo's Executive Order #202.11 which provides for suspension of "Section 103(2) of the General Municipal Law, Section 144(1) of the State Finance Law, Section 376(8)(a) of the Education Law, and Section 359(1) of the Public Authorities Law to the extent necessary to allow the non-public opening of bids; provided, however, that, where practical, public entities shall record or live stream bid openings so that the public has the opportunity to view such bid openings;" was implemented. The bid opening was recorded by Domenic Zecca, Alesca Productions.

With no bidders present, reading of the attached legal notice was waived. All bids received were opened, publicly read and recorded. I have attached herewith, copies of the bid opening results. Copies of bid documents will be forwarded by separate email. The original bid documents are on file in the Office of the Town Clerk.

Bid specifications were provided to fourteen (14) potential bidders from this office and advertised on the BidNet Direct/Empire State Purchasing Group website. A copy of their Solicitation Document Report is also attached.

**Ann Spofford**

Town Clerk  
Town of Carmel  
60 McAlpin Avenue  
Mahopac, NY 10541  
Phone: 845.628.1500  
Fax: 845.628.7434

---

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and delete the message and any attached documents.*

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## C-251 2020 Carmel Sewer District #1 Sewer Main Extension

**Bid Opening: April 23, 2020 @ 11:00 AM**

	Bidder #1	Bidder #2	Bidder #3	Bidder #4	Bidder #5
Bid Security Attached Bond/Check	Bond ✓	Bond ✓	Bond ✓	Bond ✓	Bond ✓
Cert Copy of Res of Board of Directors (if corporation)	✓	✓	✓	✓	✓
Bidder's Qualification Statement	✓	✓	✓	✓	✓
Non-Collusion Affidavit	✓	✓	✓	✓	✓
Certification Re: Equal Employment Opportunity	✓	✓	✓	✓	✓
Certification of Non Segregated Facilities	✓	✓	✓	✓	✓
Site Visitation Statement	✓	✓	✓	✓	✓
Receipt of Addendum Acknowledged	✓	✓	✓	✓	✓
<b>Total Bid Price</b>	447,580.	428,500.	516,235.	384,613.50	453,942.15

C-251 2020 Carmel Sewer District #1 Sewer Main Extension

Bid Opening: April 23, 2020 @ 11:00 AM

Bidder Name / Address:

1. Legacy Supply LLC  
14 Railroad Avenue, Valhalla, NY 10595
2. Papitto Construction Co, Inc.  
867 Fair Street, Carmel, NY 10512
3. Gianfia Corp.  
179 Brady Avenue, Hawthorne, NY 10532
4. Amaxx, Inc  
124 Rte 22, Pawling, NY 12564
5. Yonkers Excavating Corp  
553 Croton Falls Road, Carmel, NY 10512

**C-251 2020 Carmel Sewer District #1 Sewer Main Extension**

**Bid Opening: April 23, 2020 @ 11:00 AM**

	Bidder #6	Bidder #7	Bidder #8	Bidder #9	Bidder #10
Bid Security Attached Bond/Check	Copy Bond ✓	Bond ✓	Bond ✓		
Cert Copy of Res of Board of Directors (if corporation)	✓	✓	✓		
Bidder's Qualification Statement	✓	✓	✓		
Non-Collusion Affidavit	✓	✓	✓		
Certification Re: Equal Employment Opportunity	✓	✓	✓		
Certification of Non Segregated Facilities	✓	✓	✓		
Site Visitation Statement	✓	✓	✓		
Receipt of Addendum Acknowledged	No	✓	✓		
<b>Total Bid Price</b>	436,728.01	498,000.	345,507.50		

C-251 2020 Carmel Sewer District #1 Sewer Main Extension

Bid Opening: April 23, 2020 @ 11:00 AM

Bidder Name / Address:

6. Scavo Contracting Corp  
P.O. Box 520, Patterson, NY 12563

7. TAM Enterprises Inc  
114 Hartley Road Goshen, NY 10924

8. Joken Development Corp  
9 Belway Place, White Plains, NY 10601

9. \_\_\_\_\_

10. \_\_\_\_\_

## Solicitation Document Report

**Report Executed By** Ann Spofford

**Report Executed On** 2020/04/22 12.59.55

**Project** C251 - Carmel Sewer District Sewer Main Extension

**Suppliers** Suppliers who have downloaded a document

Supplier Organization	Main Contact	Organization Downloads	Contact Information	Document	Download Date
Amity Construction Corp. 24 Haviland Road Poughkeepsie, NY	Matthew Thompson 845-471-9252 tommy@amityconstructioncorp.com	Partial 1/2	Matthew Thompson 845-471-9252 tommy@amityconstructioncorp.com	2020 C251 CSD1 Main Extention.pdf	2020/03/19
Aureus Energy Services 710 Lone Tree Circle Nunn, CO	Dean Veik 9708972216 304 d.veik@aureusenergy.com	Partial 1/2	Dean Veik 9708972216 304 d.veik@aureusenergy.com	2020 C251 CSD1 Main Extention.pdf	2020/04/22
BILOTTA CONSTRUCTION CORP. 296 Purchase St. RYE, NY	JOSEPH BILOTTA 914-967-2944 BILOTTACORP@gmail.COM	Partial 1/2	JOSEPH BILOTTA 914-967-2944 BILOTTACORP@gmail.COM	2020 C251 CSD1 Main Extention.pdf	2020/03/20
Ben Ciccone, Inc. 151 Daley Road Poughkeepsie, NY	Timothy Rabbitt 845-462-2800 14 estimating@benciccone.com	Partial 1/2	Timothy Rabbitt 845-462-2800 14 estimating@benciccone.com	2020 C251 CSD1 Main Extention.pdf	2020/03/19
					2020/04/02
					2020/04/09
Casa Builders Inc. dba Friedlander Construction 171 Main St New Paltz, NY	shawn Corcoran 8454174877 scorcoran.fc@gmail.com	Partial 1/2	shawn Corcoran 8454174877 scorcoran.fc@gmail.com	2020 C251 CSD1 Main Extention.pdf	2020/03/19
Casabella Contracting of NY, Inc 182 Lindsey Ave Buchanan, NY	Marcela Pignataro 9142184330 office@ccny.email	Full 2/2	Marcela Pignataro 9142184330 office@ccny.email	04-16-2020 C251 Addendum 1- with attachments REV 1 for NYSBID NET.pdf	2020/04/20
				2020 C251 CSD1 Main Extention.pdf	2020/03/19
					2020/03/23
Climate Survival Solutions, Inc. PBC PO Box 40445 Grand Junction, CO	Tim Loncarich 970-245-7945 bids@climatesurvivalsolutions.com	Full 2/2	Tim Loncarich 970-245-7945 bids@climatesurvivalsolutions.com	04-16-2020 C251 Addendum 1- with attachments REV 1 for NYSBID NET.pdf	2020/04/20

Supplier Organization	Main Contact	Organization Downloads	Contact Information	Document	Download Date
Climate Survival Solutions, Inc. PBC PO Box 40445 Grand Junction, CO	Tim Loncarich 970-245-7945 bids@climatesurvivalsolutions.com	Full 2/2	Tim Loncarich 970-245-7945 bids@climatesurvivalsolutions.com	2020 C251 CSD1 Main Extention.pdf	2020/03/20
Construction Bid Source 413 Brisbane Woods Way Cary, NC	Hannah Alcala 9078086783 hannah@constructionbidsource.com	Partial 1/2	Hannah Alcala 9078086783 hannah@constructionbidsource.com	2020 C251 CSD1 Main Extention.pdf	2020/03/23
Construction Journal 400 sw 7th street Stuart, FL	Construction Journal 7727812144 bids@thecj.com	Partial 1/2	Construction Journal 7727812144 bids@thecj.com	2020 C251 CSD1 Main Extention.pdf	2020/03/23
Dave Heiner Associates, Inc. 3799 Route 46, Suite 102 P.O. Box 6016 Parsippany, NJ	Donna Friedrich 973-299-9990 kaveta@daveheinerassoc.com	Partial 1/2	Donna Friedrich 973-299-9990 kaveta@daveheinerassoc.com	2020 C251 CSD1 Main Extention.pdf	2020/03/26
					2020/03/30
					2020/04/02
					2020/04/13
					2020/04/17
ELQ INDUSTRIES, INC 567 FIFTH AVE NEW ROCHELLE, NY	ROBERT ETRE 914-654-1040 tsilva@elqindustries.com	Partial 1/2	ROBERT ETRE 914-654-1040 tsilva@elqindustries.com	2020 C251 CSD1 Main Extention.pdf	2020/04/01
Gentile Construction Corp. 451 Old Nepperham Avenue Yonkers, NY	Joseph Gentile 914-755-0900 jgentile72@gmail.com	Partial 1/2	Joseph Gentile 914-755-0900 jgentile72@gmail.com	2020 C251 CSD1 Main Extention.pdf	2020/04/08
					2020/03/22
					2020/03/23
					2020/03/31
					2020/04/02
Gianfia Corp. 179 Brady Avenue Hawthorne, NY	Ralph Ruggiero 914-358-4601 Estimating@gianfiacorp.com	Partial 1/2	Ralph Ruggiero 914-358-4601 Estimating@gianfiacorp.com	2020 C251 CSD1 Main Extention.pdf	2020/03/19
					2020/04/15
Grant Street Construction, Inc. 48 Grant Street Cortland, NY	Richard Compagni 607-753-1690 grantstconst@yahoo.com	Partial 1/2	Richard Compagni 607-753-1690 grantstconst@yahoo.com	2020 C251 CSD1 Main Extention.pdf	2020/03/19

Supplier Organization	Main Contact	Organization Downloads	Contact Information	Document	Download Date
Jab•ko Construction 529 central park ave scarsdale, NY	Joseph Piekarski 914-255-4909 piekarskij5512@gmail.com	Full 2/2	Joseph Piekarski 914-255-4909 piekarskij5512@gmail.com	04-16-2020 C251 Addendum 1- with attachements REV 1 for NYSBID NET.pdf	2020/04/17
James J. Hahn Engineering, P.C. Putnam Business Park 1689 Route 22 Brewster, NY	James Hahn 845-279-2220 ayoung@hahn-eng.com	Partial 1/2	James Hahn 845-279-2220 ayoung@hahn-eng.com	2020 C251 CSD1 Main Extention.pdf 2020 C251 CSD1 Main Extention.pdf	2020/03/19 2020/03/19
					2020/04/15
Joken Development Corp 9 Belway Place White Plains, NY	Kenneth LePino 914-946-2469 dan@jokendev.com	Partial 1/2	Kenneth LePino 914-946-2469 dan@jokendev.com	2020 C251 CSD1 Main Extention.pdf	2020/03/19
KC Engineering and Land Surveying, P.C. 7 Penn Plaza, Suite 1604 New York, NY	Alyssa Watkins 8456733210 awatkins@kcepc.com	Partial 1/2	Alyssa Watkins 8456733210 awatkins@kcepc.com	2020 C251 CSD1 Main Extention.pdf	2020/03/20
Legacy Supply LLC 14 Railroad Avenue Valhalla, NY	Lisa Lyons-Cassidy 914-262-2048 lisa@legacysupplyllc.com	Partial 1/2	Lisa Lyons-Cassidy 914-262-2048 lisa@legacysupplyllc.com	2020 C251 CSD1 Main Extention.pdf	2020/03/19
MERCANDO CONSULTING GROUP,LLC 2637 E ATLANTIC BLVD POMPANO BEACH, FL	PETER CAIONE 5616009400 FJM@MERCANDO.NET	Partial 1/2	PETER CAIONE 5616009400 FJM@MERCANDO.NET	2020 C251 CSD1 Main Extention.pdf	2020/03/26
MS UNLIMITED INC. PO BOX 577 SYRACUSE, NY	MARYBETH SBARAGLIA 315-437-1291 marybeth@msunlim.com	Full 2/2	MARYBETH SBARAGLIA 315-437-1291 marybeth@msunlim.com	04-16-2020 C251 Addendum 1- with attachements REV 1 for NYSBID NET.pdf	2020/04/18
				2020 C251 CSD1 Main Extention.pdf	2020/04/18
MTS Infrastructure LLC 135 Lafayette Avenue White Plains, NY	Maria Martins 914-242-3583 mmartins@mtsinfrastructure.co m	Partial 1/2	Maria Martins 914-242-3583 mmartins@mtsinfrastructure.co m	2020 C251 CSD1 Main Extention.pdf	2020/03/19
Montesano 76 Plain Ave New Rochelle, NY	Richard Montesano 914-235-4800 Richard@montesanobros.com	Full 2/2	Frank Cooney 914-235-4800 fcooney@montesanobros.com	2020 C251 CSD1 Main Extention.pdf	2020/03/19

Supplier Organization	Main Contact	Organization Downloads	Contact Information	Document	Download Date
Montesano  76 Plain Ave New Rochelle, NY	Richard Montesano  914-235-4800 Richard@montesanobros.com	Full 2/2	Vito Bilotta 914-235-4800 vbilotta@montesanobros.com	04-16-2020 C251 Addendum 1- with attachements REV 1 for NYSBID NET.pdf  2020 C251 CSD1 Main Extention.pdf	2020/04/17  2020/04/17
Montesano Bros., Inc 76 Plain Avenue New Rochelle, NY, NY	Chris Fracassa 914 235-4800 cmf@montesanobros.com	Partial 1/2	Chris Fracassa 914 235-4800 cmf@montesanobros.com	2020 C251 CSD1 Main Extention.pdf	2020/04/06
Montesano Bros., Inc. 76 Plains Avenue New Rochelle, NY	Cory Bitts 914-235-4800 cory@montesanobros.com	Partial 1/2	Cory Bitts 914-235-4800 cory@montesanobros.com	2020 C251 CSD1 Main Extention.pdf	2020/04/09
NAC INDUSTRIESINC 112 hurly rd Oxford, CT	Nat Picco 9145849044 Nacindustries@gmail.com	Partial 1/2	Nat Picco 9145849044 Nacindustries@gmail.com	2020 C251 CSD1 Main Extention.pdf	2020/03/23
Nicky Diggs Excavation 155 Route 202 Somers, NY	Nicholas PVieira 9142321878 office@nickydiggs.com	Partial 1/2	Nicholas PVieira 9142321878 office@nickydiggs.com	2020 C251 CSD1 Main Extention.pdf	2020/03/19
Northbrook Contracting Corp. 7 Corporate Dr Peekskill, NY	Rick Recine 914-734-5506 rickr@northbrookcontracting.com	Full 2/2	Rick Recine 914-734-5506 rickr@northbrookcontracting.com	04-16-2020 C251 Addendum 1- with attachements REV 1 for NYSBID NET.pdf  2020 C251 CSD1 Main Extention.pdf	2020/04/17  2020/03/25 2020/04/01
Papitto Construction Co., Inc. 867 Fair Street Carmel, NY	Reno Caldarella 845-878-2550 reno@papittoconstruction.com	Partial 1/2	Reno Caldarella 845-878-2550 reno@papittoconstruction.com	2020 C251 CSD1 Main Extention.pdf	2020/03/26
RE LANDSCAPES, INC. 90 SHORE DRIVE BREWSTER, NY	KIMBERLY LABRIOLA 8452773777 finance@relandscapes.com	Partial 1/2	KIMBERLY LABRIOLA 8452773777 finance@relandscapes.com	2020 C251 CSD1 Main Extention.pdf	2020/03/30
SENTRO CONSTRUCTION CORP 32 west prospect ave white plains, NY	JOHN DODARO 9148049216 sentrocorp@aol.com	Partial 1/2	JOHN DODARO 9148049216 sentrocorp@aol.com	2020 C251 CSD1 Main Extention.pdf	2020/03/31 2020/04/02
Sun Up Enterprises, Inc. 1607 Route 376 Wappingers Falls, NY	Harold Buchner 845-462-1800 bidinfo@sunup1.com	Partial 1/2	Harold Buchner 845-462-1800 bidinfo@sunup1.com	2020 C251 CSD1 Main Extention.pdf	2020/04/01

Supplier Organization	Main Contact	Organization Downloads	Contact Information	Document	Download Date
TAM Enterprises, Inc. 114 Hartley Road Goshen, NY	Brian Cutler 845-294-8882 bcutler@tamentinc.com	Partial 1/2	Anthony Lasaponara 845-294-8882 ann@tamentinc.com	2020 C251 CSD1 Main Extention.pdf	2020/04/01
			Cliff Bell 8452948882 cliff@tamentinc.com	2020 C251 CSD1 Main Extention.pdf	2020/03/23
The Jack Farrelly Company 97 Old Poquonock Rd Bloomfield, CT	William AHall 8602439714 bill@jfpipeline.com	Partial 1/2	William AHall 8602439714 bill@jfpipeline.com	2020 C251 CSD1 Main Extention.pdf	2020/04/14
Vinco Builders LLC 5 Veschi Lane S Mahopac, NY	David Furfaro 845-520-9566 estimating@vincobuilders.com	Full 2/2	David Furfaro 845-520-9566 estimating@vincobuilders.com	04-16-2020 C251 Addendum 1- with attachements REV 1 for NYSBID NET.pdf	2020/04/17
				2020 C251 CSD1 Main Extention.pdf	2020/04/17
WM SCHULTZ CONSTRUCTION, INC. PO BOX 2620 BALLSTON SPA, NY	Terri ABoland 5188850060 tboland@wmschultz.com	Partial 1/2	Terri ABoland 5188850060 tboland@wmschultz.com	2020 C251 CSD1 Main Extention.pdf	2020/03/19
Woodland Manor LLC DBE/MBE 188 haviland dr patterson, NY	Omar Perez 845-363-1361 woodlandmanorny@yahoo.com	Partial 1/2	Omar Perez 845-363-1361 woodlandmanorny@yahoo.com	2020 C251 CSD1 Main Extention.pdf	2020/03/25
Yonkers Excavating Corp 553 Croton Falls Road Carmel, NY	George Calauti 9147550700 excavatingyonkers@comcast.net	Partial 1/2	George Calauti 9147550700 excavatingyonkers@comcast.net	2020 C251 CSD1 Main Extention.pdf	2020/03/27
amit ramnagar road, bajar chok ramnagr gondia, AL	amit damahe 9049317607 amitdamahe1@gmail.com	Partial 1/2	amit damahe 9049317607 amitdamahe1@gmail.com	2020 C251 CSD1 Main Extention.pdf	2020/03/20

## MEMORANDUM

TO: Richard Franzetti, PE, BCEE  
FROM: Joseph Zongol, PE  
DATE: April 27, 2020  
SUBJECT: Water Tank Rehabilitation Project, Basis of Design Summary

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### SUMMARY REPORT

The Town of Carmel retained the services of Weston & Sampson to provide evaluation, design, bidding, and construction phases services of improvements to nine existing water storage tanks in five different water districts across the town. This memorandum provides a summary of relevant information from several preliminary analyses we conducted relative to the proposed improvements and includes:

- Description of the water storage at each site
- Proposed approach to the project/design considerations
- Cost analysis comparing alternatives and the previously determined bond estimates
- Recommendations during construction (if applicable)
- Additional Engineering needs (if applicable)

The following is a summary for each water district:

#### CWD #2 – CARMEL HAMLET

- **District Distribution System Storage:** Three Welded Steel Tanks (1) Everett Road 300,000 gal. (2) Lindy Drive 300,000 gal. (3) Clapboard Ridge 500,000 gal.  
**Proposed approach:** Rehabilitate Lindy Drive and Clapboard Ridge tanks and build a new 300,000-gallon tank adjacent to existing Everett Road tank, keeping existing tank in service during construction and rehabilitation of the other tanks. Perform distribution system flow tests and water model to determine if using the existing Everett Road tank as additional storage is feasible. If it is determined that the water distribution system can support this approach, a potential net savings of approximately \$250,000 can be achieved in reduction of temporary water provisions necessary during construction. To be conservative, these potential savings are not included in the cost estimate shown below.
- **Cost Analysis:** Estimated total cost \$2,316,000; Bond Est. \$1,562,615; district will need to increase bond value to fund project.
- **Recommendations during Construction:** Water use restrictions per Town Code Section §151-22 while the tank is out of service.
- **Additional Engineering:** Water system model to determine temporary water approach (\$15,500), geotechnical investigation to support new tank foundation design (\$8,500), topographic survey for the new tank location (\$6,400), and SHPO Review and SEQR (\$4,900); total amendment request value \$35,300 for CWD #2. This amendment request is included in the cost estimate shown above.

#### CWD #3 – LAKE SECOR

- **District Distribution System Storage:** One 227,000-gallon glass lined tank
- **Proposed approach:** Rehabilitate the tank in place.
- **Cost Analysis:** Estimated rehabilitation cost \$161,400; Bond Est. \$282,538; district has sufficient bond funds in place

- **Recommendations during Construction:** Water use restrictions per Town Code Section §151-22 while the tank is out of service.
- **Additional Engineering:** None

#### CWD #8 – MAHOPAC RIDGE

- **District Distribution System Storage:** Two glass lined tanks: (1) Crest Road 263,000-gallon (2) Kings Ridge 74,000-gallon.
- **Proposed approach:** Rehabilitate the tanks in place.
- **Cost Analysis:** Estimated rehabilitation cost \$251,000; Bond Est. \$474,490; district has sufficient bond funds in place.
- **Recommendations during Construction:** Water use restrictions per Town Code Section §151-22 while the tank is out of service.
- **Additional Engineering:** None

#### CWD #9 – MAHOPAC HILLS

- **District Distribution System Storage:** Single 10,800-gallon hydro-pneumatic tank in a block and wood framed building.
- **Proposed approach:** Rehabilitate the tank in place. The system operator has requested that the wood structure be replaced. We estimate this construction cost to be approximately \$15,000 which is included in the cost estimate below.
- **Cost Analysis:** Estimated rehabilitation cost \$34,900; Bond Est. \$17,684; district will need to increase bond value to fund project. The engineering and estimated rehabilitation cost (\$8,500) for this tank is within the previously determined bond estimate unless rebuilding of the building structure is selected by the Town as shown in the table above.
- **Recommendations during Construction:** None
- **Additional Engineering:** We have prepared an amendment to our Engineering contract provide design (\$9,900) to support the construction of the new wood structure; total amendment request value \$9,900 for CWD #9. This amendment request is included in the cost estimate shown above.

#### CWD #14 – RED MILLS

- **District Distribution System Storage:** Two 18,000-gallon welded steel tanks
- **Proposed approach:** Build a new 40,000-gallon glass lined tank adjacent to the existing tanks, keeping existing tanks in service during construction and demolishing them when work is completed.
- **Cost Analysis:** Estimated new tank construction cost \$374,500; Bond Est. \$391,063; district has sufficient bond funds in place
- **Recommendations during Construction:** None
- **Additional Engineering:** Geotechnical investigation to support new tank foundation design (\$8,500), topographic survey for the new tank location (\$5,500), and SHPO Review and SEQR (\$4,900); total amendment request value \$18,900 for CWD #14. This amendment request is included in the cost estimate shown above.

#### Bidding Considerations

The Town has indicated that it may wish to have the flexibility to select the lowest bid by district, by individual tanks, or by type of work (i.e. rehabilitation vs. new tank construction). While this can be done, it will complicate the bidding process and will increase engineering bidding and construction administration costs as opposed to bidding as a single project. This would also likely increase contractor mobilization costs and lead to increased overall project costs. There is always the potential, however, that if the town bid each tank separately, the savings from the low bidders for each tank would offset the increased administration costs. Assessment of the impacts will require additional consideration. Additional discussions regarding alternative bidding approaches are recommended.

## BASIS OF DESIGN ATTACHMENT

### Introduction

The Town of Carmel retained the services of Weston & Sampson to provide evaluation, design, bidding, and construction phases services of improvements to nine existing water storage tanks in five different water districts across the town. This memorandum provides a summary of relevant information from several preliminary analyses we conducted relative to the proposed improvements and includes:

- Description of the water storage at each site
- Cost analysis comparing alternatives and the previously determined bond estimates
- Design Considerations
- Recommendations during construction (if applicable)
- Additional Engineering needs (if applicable)
- The resulting proposed basis of design for the Town's consideration.

### Background

The Town of Carmel (Town) owns several standpipe style water storage tanks in multiple districts across the Town, each district having its own budget, debt load, and financing requirements in order to maintain their tanks. The age and condition of the various storage tanks and distribution systems vary, but in general, all are in need of some level of maintenance and or repair. The Town retained Pittsburgh Tank & Tower Group (PTTG) to inspect each tank in the inventory and provide a report of their finding and recommendations back in March 2019. That report identified repairs ranging from exterior painting to complete interior cleaning, resealing, and painting, installation of new manways, access ladders, and other ancillary element repairs.

The Town Board of the Town of Carmel (Town), as Commissioners of the Town owned Water Districts, subsequently selected Weston & Sampson to provide engineering services for the design, bidding, and construction of the repairs identified by PPTG. As one of our first tasks, Weston & Sampson conducted a preliminary reconnaissance of each tank site, reviewed PPTGs recommended repairs and compared them to applicable American Water Work Association (AWWA), National Fire Protection Association (NFPA), Occupational Safety and Health Administration (OSHA), Department of Health (DOH), and good engineering practices to assess whether revision to the proposed improvements were warranted. Summaries of our revised recommended scope of work for each tank based on this work are attached.

As part of these efforts, we identified several tank sites with space to support construction of a new tank adjacent to the existing, which based on our past experience with this type of work, could prove more cost effective over the life of the tanks than rehabilitation. Therefore, as a value added service, Weston & Sampson prepared 50-year capital and O&M cost estimates for both repair and complete replacement of each steel tank with a new, glass-lined, water tanks with the same storage capacity as the existing for CWD #2 and CWD #14, the two districts with steel tanks within their systems that had space available at the sites. In our experience, we have found that depending on their age, condition, and extent of repairs needed to restore existing older steel tanks, the life cycle costs of replacement on such sites can be more economical than repair due in large part to the frequency and cost of maintenance of steel tanks.

For the cost analysis, we compared the capital and O&M costs of rehabilitation with that for new steel tanks in 2020 dollars, effectively providing a net present worth comparison. This analysis did not consider the time cost of money associated with funding through bonds. The capital and maintenance costs for both alternatives were compared to each other in order to determine which was most cost effective. Each cash flow was analyzed to determine the total cost for both alternatives, based on the initial capital cost and scheduled maintenance. The rehabilitation option includes a 15-year cycle for interior and exterior repainting and the new glass lined tank option includes a 20-year cycle for interior and exterior joint sealing. The maintenance costs for both options include provisions for temporary water while the tank is out of service, if required. The capital costs include engineering fees, including requested engineering contract amendment fees, as well as construction costs.

The results of our analysis (summarized in subsequent sections) shows that while new glass lined tanks have a higher capital cost for construction compared to the rehabilitation option, the longevity and lower life cycle maintenance cost of glass lined steel tanks compared to conventional steel tanks result in a lower overall life cycle cost for the newer glass lined tanks for the Everett Road Tank in District 2 and the Red Mills Tanks in District 14.

### CWD #2 – CARMEL HAMLET

Storage at CWD 2 consists of three (3) gravity atmospheric welded steel storage tanks providing a total storage capacity of 1.1 million gallons. These three (3) tanks provide water system pressure as well as fire protection. The tank capacities are as follows:

- Everett Road: 300,000 gallons
- Lindy Drive: 300,000 gallons
- Clapboard Ridge: 500,000 gallons

The system serves approximately 5,300 people with an average day demand of 850,000 gallons.

Weston & Sampson is also aware that the water distribution system contains heavily tuberculated water mains which reduces the flow of water within the system and that design is underway to clean and cement line the tuberculated water mains, but the anticipated construction schedule is unknown at this time. The condition of the water mains and their ability to adequately transmit water throughout the District is an important consideration in determining the recommended approaches to rehabilitation of these tanks as it has significant cost implications which are discussed further below. Similarly, the cost of providing temporary water supply during the period of construction is significant and warrants further consideration of other alternatives and project timing.

#### Cost Analysis:

The Table below summarizes the present value cost analysis for the District 2 tanks, and compares the cost of rehabilitation of the existing tanks, installation of a new tank to replace the existing tank, and the previously determined bond estimate. The new tank options include a 0% contingency, compared to the 10% contingency included for the rehabilitation options. The results are as follows.

Cost Analysis Summary: CWD #2 – Carmel Hamlet			
Alternative	Capital Cost	Maintenance Cost	Total 50 Year Cost
<b><i>Clapboard Ridge (Shoprite) Tank Rehabilitation <sup>(1)(2)</sup></i></b>	<b><i>\$756,000</i></b>	<b><i>\$1,545,000</i></b>	<b><i>\$2,301,000</i></b>
Clapboard Ridge (Shoprite) Tank Replacement	\$1,094,000	\$229,300	\$1,393,300
Everett Road Tank Rehabilitation <sup>(1)</sup>	\$653,000	\$1,215,000	\$1,868,000
<b><i>Everett Road Tank Replacement <sup>(3)</sup></i></b>	<b><i>\$838,000</i></b>	<b><i>\$217,600</i></b>	<b><i>\$997,600</i></b>
<b><i>Lindy Drive Tank Rehabilitation <sup>(1)(2)</sup></i></b>	<b><i>\$722,000</i></b>	<b><i>\$1,215,000</i></b>	<b><i>\$1,937,000</i></b>
Lindy Drive Tank Replacement	\$854,000	\$217,600	\$1,071,600
Total Estimated Cost for Recommended Options (Recommended in Bold Italics)	<b><i>\$2,316,000</i></b>	-	-
Bond Est. (15 yr.)	\$1,562,615	-	-

(1) The structural integrity of the existing tanks should be reviewed in 20 years to confirm the life expectancy is 50 years.

(2) Cost includes temporary water provisions

(3) The cost of the new Everett Road tank includes demolition of the existing tank when it is no longer needed.

Based on the results of this analysis, the physical condition of the tank, available Town owned land, and discussions with the Town, we recommend the construction of a new glass lined water storage tank to replace the existing 300,000-gallon Everett Road tank and rehabilitation of the Clapboard Ridge and Lindy Drive tanks.

A key advantage of building a new Everett Road Tank is that it can be constructed completely independently of the existing tanks and placed in service while the existing tanks remain in operation, and once the new tank is commissioned, the existing Everett Road tank can remain in service while the Clapboard Ridge and Lindy Drive tanks are being rehabilitated, providing storage for the water district to offset that lost when those are taken out of service. While the overall capital cost to replace the Everett Road tank is approximately \$185,000 more (including a 30% contingency of \$175,000) than rehabilitation, using the existing (old) Everett Road tank as “temporary” supplemental storage reduces, if not eliminates, the temporary water storage costs for the Lindy Drive and Clapboard Ridge Tanks which is estimated to be as much as \$375,000, providing a net savings of approximately \$190,000. For the purposes of this analysis, we have included the temporary water storage costs for the Lindy Drive and Clapboard Ridge Tanks in the table above. Some additional investigation and analysis is needed to assess this possibility including, performing some strategically located water system flow tests and preparation of a district water model. If the Town wishes to pursue this option further, an amendment to our contract would be required to include this out of scope work. The implications of this are discussed further below.

The estimated total construction cost exceeds the previously determined bond estimate.

#### Design Considerations:

The reason for the additional studies relative to assessing using the existing Everett Road tank as temporary storage while the Lindy Drive and Clapboard Ridge Tanks are being rehabilitated is that the condition of the water system distribution pipes may not be able to support this approach. The water from the Everett Road tanks (proposed and existing) may not provide sufficient flow and pressure to the Lindy Drive or Clapboard Ridge service areas due to the condition of the existing distribution system pipes. The proposed flow testing and water model will help determine this. Depending on the results of the flow tests and water model, we see the following possible outcomes:

1. **The existing distribution system can support Lindy Drive and Clapboard Ridge Tanks out of Service:** If the modeling shows that the existing distribution system conditions can provide the necessary flow and pressure as is, then the Lindy Drive tank and Clapboard Ridge tanks **can** be taken out of service and the construction will be staged with the new Everett Road tank constructed first. Then using the new and existing Everett Road tanks as permanent and “temporary” storage respectively, rehabilitate the other two tanks, one at a time. Finally, the old Everett Road tank will be demolished. This may be done over the course of this year and next year. It is possible that the model could show that the storage volume provided by this approach is sufficient, the delivery capability across the system may not be in which case some additional temporary booster pumping may be necessary in addition to the storage.
2. **Distribution system when relining is complete can support Lindy Drive and Clapboard Ridge Tanks out of Service:** If modeling shows that the existing distribution system even with booster pumping provisions cannot deliver the necessary flow and pressure with either the Lindy Drive tank or Clapboard Ridge tanks out of service, the model will then evaluate whether this could be achieved if the distribution piping cleaning and cement lining is completed first. If this is feasible, the new Everett Road tank replacement could proceed first while the rehabilitation of the Lindy Drive tank and Clapboard Ridge tank would need to be delayed until the cement lining is completed. It is possible that even with cleaned and lined pipes the system may not be able to deliver as needed in which case supplemental booster pump and or storage provisions may be necessary.
3. **Distribution system cannot support a tank out of service:** If it is determined that the Lindy Drive tank and Clapboard Ridge tanks **cannot** be taken out of service under any scenario **or** the Town cannot wait for the cement lining to be completed before proceeding with rehabilitating the Lindy Drive and Clapboard Ridge tanks then significant additional temporary storage as well as booster pump system are expected to be

necessary. Preliminary cost estimates of the necessary provisions for independent temporary water storage and delivery for District 2 are on the order of **\$375,000**.

Additional Engineering Needs:

Installation of a new tank at Everett Road adjacent to the existing will also require collection of additional field information in the way of borings for geotechnical analysis and a topographic survey to support detailed design. Also, the site is located in an archaeologically sensitive area as shown on the CRIS maps. A State Historic Preservation Office (SHPO) review will be necessary along with a SEQR review.

Therefore, we have prepared an amendment to include the necessary borings and geotechnical evaluation (\$8,500) to support new tank foundation design, SHPO and SEQR review (\$4,900), and topographic survey for the Everett Road site (\$6,400). Also included in the amendment is the above mentioned CWD #2 flow study and water system model (\$15,500) to determine the most cost-effective way to conduct the work while maintaining water service to the end users. The total amendment request value is \$35,300 for CWD #2 which is included in the cost estimate above.

Additional Considerations:

Based on the selected approach and potential water model results, water use restrictions per Town Code Section §151-22 while the tanks are out of service is recommended. In addition, the local fire departments should be notified when the tank(s) are out of the service in the event water is needed for fire protection.

**CWD #3 – LAKE SECOR**

Storage at CWD 3 consists of a single glass lined 227,000-gallon gravity atmospheric storage tank. This tank provides water system pressure while the supply well pumps are off as well as volume for fire protection. The water system serves approximately 1,400 people with an average day demand of 83,065 gallons. This district is served by two small water treatment facilities, The Spring Street/Lake Shore Drive facility has two wells, one that produces 10 gpm and the other that produces 36 gpm. The Orchard Road facility has one well that produces 56 gpm.

Cost Analysis:

We compared rehabilitation costs of the tank to the previously determined bond estimate. Since the existing tank is already a glass lined tank with reduced maintenance costs compared to other types of tanks on the market, replacement of these tanks was not considered. The results are as follows:

Cost Summary: CWD #3 – Lake Secor	
Alternative	Capital Cost
Lake Secor Tank Rehabilitation	\$161,400
Bond Est. (15 yr.)	\$282,538

The estimated rehabilitation cost this tank is within the previously determined bond estimate.

Design Considerations

The tank will have to be taken out of service for rehabilitation. Since this is the only storage tank in the system, provisions will have to be made to provide temporary water pressure and volume while the tank is out of the service.

Additional considerations:

Water use restrictions per Town Code Section §151-22 while the tank is out of service is recommended. In addition, the local fire departments should be notified when the tanks are out of the service in the event water is needed for fire protection.

**CWD #8 – MAHOPAC RIDGE**

Storage at CWD 8 consists of two (2) gravity atmospheric storage tanks providing a total storage capacity of 337,000 gallons between two pressure zones. The Crest Road tank is a glass lined 263,000-gallon standpipe which provides storage volume and maintains pressure to the low-service zone of District 8 in addition to Districts 1, 10 & 13. The Crest Road Tank also provides suction to the King Road booster pump station that pumps to the high service area of Kings Road and the Kings Road Tank. The Kings Road tank is a glass lined 74,000-gallon standpipe located in the high service zone which provides water to approximately 185 residents. Overall, the water system serves approximately 1,200 people with an average day demand of 260,000 gallons.

Cost Analysis:

We compared rehabilitation costs of the tanks to the previously determined bond estimate. Since the existing tanks are already glass lined tanks with reduced maintenance costs compared to other types of tanks on the market, replacement of these tanks was not considered. The results are as follows:

Cost Summary: CWD #8 – Mahopac Ridge	
Alternative	Capital Cost
Crest Road Tank Rehabilitation	\$126,200
Kings Ridge Tank Rehabilitation	\$124,800
Total Rehabilitation Cost	\$251,000
Bond Est. (15 yr.)	\$474,490

The estimated rehabilitation cost this tank is within the previously determined bond estimate.

Design Considerations

Each tank will have to be taken out of service for rehabilitation. Staging this work is important, one tank will have to be rehabilitated at a time. Provisions will have to be made to provide temporary water pressure and volume while the tanks are out of the service.

Additional Considerations:

Water use restrictions per Town Code Section §151-22 while the tanks are out of service is recommended. In addition, the local fire departments should be notified when the tanks are out of the service in the event water is needed for fire protection.

**CWD #9 – MAHOPAC HILLS**

Storage at CWD 9 consists of the Vista Terrance water tank which is a single 10,800-gallon pneumatic storage tank. This tank maintains pressure in the water system and provides modest storage volume. The tank is housed in a wood, stone, and CMU block structure. The water system serves approximately 300 people with an average day demand of 39,000 gallons.

Cost Analysis:

This tank is in good condition and serves the districts needs as is requiring only minor improvements to peripherals including minor additional enhancements to signage and exterior tank cleaning. The bond estimate is sufficient for the proposed work:

Cost Summary: CWD #9 – Mahopac Hills	
Alternative	Capital Cost
Vista Ridge Tank Rehabilitation <sup>(1)</sup>	\$34,900
Bond Est. (15 yr.)	\$17,684

(1) Cost includes rebuilding of wood structure and associated increased engineering costs

The engineering and estimated rehabilitation cost (\$8,500) for this tank is within the previously determined bond estimate unless rebuilding of the building structure is selected by the Town as shown in the table above.

Design Considerations

This requested work can be completed without taking the tank out of service as all the recommended repairs are external of the tank and will not impact operation.

Additional Engineering Needs:

Upon further review and consideration, the Town and system operator has requested that Weston & Sampson provide a design for the replacement of the wood structure that houses the pneumatic water tank within CWD #9 to provide improved maintenance access and extend its useful life. We have prepared an amendment to provide design drawings and specifications for the replacement-in-kind on existing foundations of the existing wood building enclosure that houses the hydro-pneumatic water tank (\$9,900). This will include removal of the existing structure down to the Concrete Masonry Unit (CMU) blocks, rebuilding the walls and roofing system, and repairing cracks within the CMU block joints. The Town has indicated that their engineering staff will provide the associated increased bidding, construction inspection, and construction administration services to account for this expansion in construction scope. The total amendment request value is \$9,900 for CWD #9. This amendment request is included in the cost estimate shown above.

**CWD #14 – RED MILLS**

Storage at CWD 14 consists of two 18,000-gallon, 25'high, 11-foot diameter vertical storage tanks providing a total storage capacity of 36,000 gallons. These tanks provide water for domestic use and fire protection. The water system serves approximately 495 residents with an average day demand of 34,000 gallons.

Cost Analysis:

This site offers space for construction of a single new tank adjacent to the existing to replace both existing tanks. As such, we performed a present value cost analysis, comparing rehabilitating both tanks to installing one new tank to replace both existing tanks. The new tank options include a 30% contingency, compared to the 10% contingency included for the rehabilitation options. The results are as follows.

Cost Analysis Summary: CWD #14 – Red Mills			
Alternative	Capital Cost	Maintenance Cost	Total 50 Year Cost
Red Mills Tank(s) Rehabilitation <sup>(1)</sup>	\$421,100	\$413,820	\$834,820
Red Mills Tank Replacement	\$374,500	\$57,080	\$406,880
Bond Est. (15 yr.)	\$391,063	-	-

Based on the results of this analysis and in consultation with the Town, we recommend the construction of a single new 40,000-gallon glass lined water storage tank to replace the existing steel tanks.

The estimated construction cost for a new glass lined tank is within the previously determined bond estimate.

### Design Considerations

The advantage to this approach is that the new tank can be constructed completely independently of the existing tanks and placed in service while the existing tanks are in operation. This will eliminate the need for temporary water provisions. This approach also provides a tank with decreased long-term maintenance costs.

### Additional Engineering Needs:

Installation of a new tank at Red Mills, adjacent to the existing will also require collection of additional field information in the way of borings for geotechnical analysis and a topographic survey to support detailed design. Also, the site is located in an archaeologically sensitive area as shown on the CRIS maps. A SHPO review and SERQ evaluation will be necessary.

Therefore, we have prepared an amendment to include a geotechnical investigation to support new tank foundation design (\$8,500), topographic survey for the new tank location (\$5,500), and SHPO Review and SEQR (\$4,900); total amendment request value \$18,900 for CWD #14. This amendment request is included in the cost estimate shown above.

### Bidding Considerations

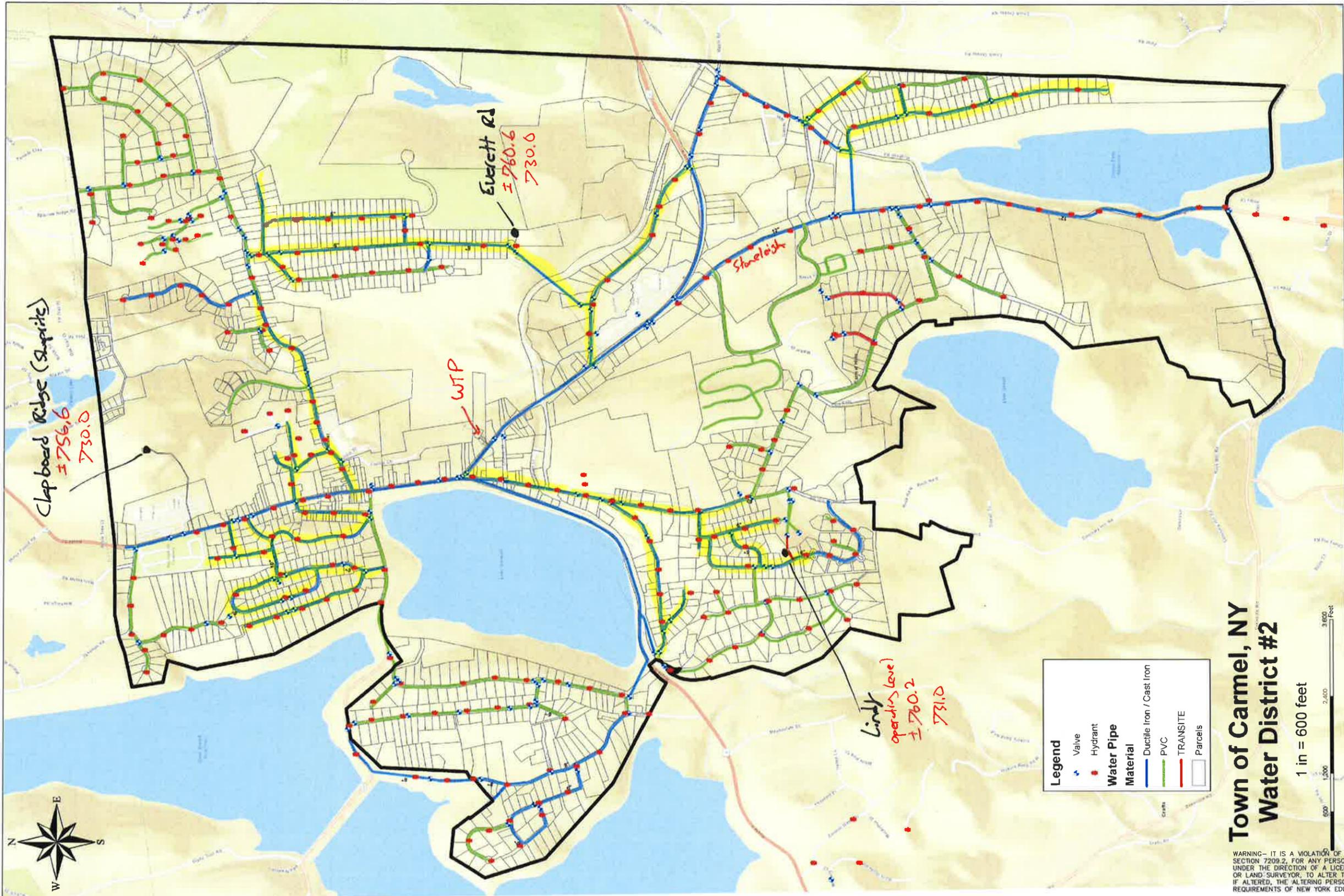
The Town has indicated that it may wish to have the flexibility to select the lowest bid by district, by individual tanks, or by type of work (i.e. rehabilitation vs. new tank construction). While this can be done, it will complicate the bidding process and will increase engineering bidding and construction administration costs as opposed to bidding as a single project. This would also likely increase contractor mobilization costs and lead to increased overall project costs.

Our scope of work was based on the assumption that one bid package would be developed for all of the work, throughout all five water districts. Each district would have its own bid form so that construction costs could be tracked between districts. If the town were to pursue allowing contractors to bid on each tank separately and selecting the lowest price per tank, additional effort would be required on the part of the Town and Engineer to administer contracts with up to 8 different contractors. The added costs come in the form of reviewing shop drawings, pay requisitions, and other construction administration tasks for each of the contractors. If a single contractor, or single contractor per district were awarded contracts, the shop drawing process would be consolidated, and consistency of construction materials and products would be provided. The overall "savings" on the construction side by selecting the lowest bidder by tank could potentially be offset by increased effort to administer multiple contracts.

From the contractor's perspective, if they were awarded multiple tank rehabilitation projects, their overall price could potentially be lower than the sum of multiple lowest contractor bid totals. The reason for this is that a contractor will have to include costs of insurance, bonds, and mobilization, regardless of how many tanks they are awarded. These costs distributed over multiple tanks would provide efficiencies that individual tank contracts would not.

In the event that there are multiple contractors working in the same district and construction of one tank needs to be completed prior to starting another tank, the town could potentially be exposed to delay claims if the first contractor does not complete their scope of work in the time allotted, delaying the second contractor.

There is always the potential, however, that if the town bid each tank separately, the savings from the low bidders for each tank would offset the increased administration costs. Assessment of the impacts will require additional consideration, but we would be happy to discuss alternative bidding approaches further at the appropriate time.



**Town of Carmel, NY  
Water District #2**

1 in = 600 feet

WARNING- IT IS A VIOLATION OF NEW YORK EDUCATION LAW, SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2

REVISIONS			
NO.	BY	DATE	REMARKS

DES. \_\_\_\_\_  
DWG. \_\_\_\_\_  
CHK. \_\_\_\_\_

J  
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A

**J. ROBERT FOLCHETTI & ASSOCIATES, L.L.C.**  
CIVIL / ENVIRONMENTAL ENGINEERS  
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845-363-1560

TOWN OF CARMEL  
PUTNAM COUNTY, NEW YORK  
**WATER DISTRICT No. 2**

**FIGURE 3  
WATERMANS, VALVES  
& HYDRANTS**  
N.T.S.

JRFA  
DATE   MAY 2018    
G SHEET      OF       
DWG. NO. \_\_\_\_\_

**500,000 Gallon GST**  
**Carmel Water District 2**  
**Clapboard Ridge, Mahopac, NY**



Dimensions: 46' by 40'

Proposed Work:

1. Post a Warning, Tampering with This Facility is a Federal Offense (US code title 42, section 300i-1) sign. **(Recommended)**
2. Repair any cracks and spalling in the concrete with a commercial non-shrinking grout. **(Recommended)**
3. Caulk/grout around the base of the tank to foundation connection. **(Recommended)**
4. Seal the foundation with a sealant. **(Recommended)**
5. Insert sacrificial cathodic protection rods radially every 15' beneath the floor of the tank. **(Recommended)**
6. Install a frost proof drain valve near the shell-to-floor connection, complete with a locking device. Installation of a splash pad to be by owner. **(Not recommended in cold climates)**
7. Install 30" secondary shell manway 180° from primary manway. **(Recommended, AWWA 7.4.4)**
8. Post Confined Space Entry signs on primary and secondary shell manways. **(Recommended, OSHA 1910.146(2)(c))**
9. Install a cable type ladder safety device on exterior shell access ladder. **(Recommended)**
10. Post Fall Protection Required sign at base of exterior shell access ladder. **(Recommended)**
11. Install a float-type liquid level indicator. **(Not recommended in cold climates)**
12. Extend the handrails around the circumference of the tank roof, complete with intermediate rail, toeboard and a swing gate at the junction of the shell-to-roof access ladder and tank roof. **(Recommended, OSHA 1910.28(b)(1)(i)(A))**
13. Post Confined Space Entry sign on primary and secondary roof hatch. **(Recommended for primary roof hatch)**
14. Replace the existing roof vent with a vacuum-pressure, frost proof vent and screen. This work should be performed on an EMERGENCY basis. **(Recommended)**
15. Install a GridBee mixing system. Electrical works to be done by others if required. **(Recommended)**

16. Perform a dry interior cleanout, up to 3" of sediment. This work should be performed on an EMERGENCY basis. Due to the amount of sediment and debris, a robotic in-service cleanout can not be performed. Additional accumulation will be priced at \$300 per hour to remove. The tank has to be drained by the owner prior to our arrival. **(Recommended)**
17. Sandblast, SSPC-SP10 (near white), all rusted and abraded interior areas and brush blast, SSPC-SP7, all remaining interior areas. All areas sandblasted to a #10 as well as all weld seams will receive one (1) spot coat of epoxy primer and an epoxy system will then be applied to the entire tank to achieve 8 to 10 mils of total dry film thickness. Total milage includes a combination of the existing and new coating. **(Recommended)**
18. Post a No Trespassing sign. **(Recommended)**
19. Clear any dirt, debris and other loose gravel away from the tank foundation, down to a minimum 6" below top of foundation. This should be done by a local excavating company. **(Recommended, AWWA D100-11 12.7.1)**
20. Electrically ground the tank. **(Recommended, NFPA 780-2017; 5.4 Metal Towers and Tanks)**
21. Remove the vegetation from around the tank foundation. This should be done by others. **(Recommended, OSHA 1910.176(c))**
22. Extend the overflow down the exterior to grade with same size pipe, complete with standoffs every 10' on center, an elbow ~~fitted with a flapper valve~~ and screen, and a splash pad. Installation of splash pad to be by owner. **(Recommended, AWWA D100-11 7.3)**
23. Replace the existing exterior shell access ladder with a compliant ladder complete with standoffs every 10' on center. **(Recommended, OSHA 1910.23(b)(4))**
24. Install a lockable ladder guard on exterior shell access ladder. **(Recommended)**
25. Install 30" secondary roof hatch 180° from primary roof hatch. **(Not Recommended)**
26. Install cable type ladder safety devices on suggested secondary interior access ladders. **(Not required)**
27. Replace existing primary interior access ladder with a compliant ladder complete with standoffs every 10' on center. This ladder should be replaced on an EMERGENCY basis. In cold climates it's up to the owner's discretion on placement of internal ladders. **(Not recommended in cold climates)**
28. Install cable type ladder safety devices on primary interior access ladder. **(Not recommended in cold climates)**
29. Pressure wash the tank exterior with biodegradable detergent injection (minimum 3,500 psi at 3.0 gpm) then remove all loose rust and scale with wire brushes and hand scrapers in accordance with SSPC#2 (hand tool cleaning), spot prime and apply one (1) finish coat of acrylic paint. **(Recommended)**

**300,000 Gallon GST**  
**Carmel Water District 2**  
**99 Everett Road, Mahopac, NY**



Dimensions: W40'-9" by H32'

Proposed Work:

1. Post a Warning, Tampering With This Facility is a Federal Offense (US code title 42, section 300i-1) sign. **(Recommended)**
2. Repair any cracks and spalling in the concrete with a commercial non-shrinking grout. **(Recommended)**
3. Caulk/grout around the base of the tank to foundation connection. **(Recommended)**
4. Seal the foundation with a sealant. **(Recommended)**
5. Insert sacrificial cathodic protection rods radially every 15' beneath the floor of the tank. **(Recommended)**
6. Install a frost proof drain valve near the shell-to-floor connection, complete with a locking device. Installation of a splash pad to be by owner. **(Not recommended in cold climates)**
7. Install 30" secondary shell manway 180° from primary manway. **(Recommended, AWWA 7.4.4)**
8. Post Confined Space Entry signs on primary and secondary shell manways. **(Recommended, OSHA 1910.146(2)(c))**
9. Install maintenance free galvanized steel bolts on primary shell manway. **(Recommended)**
10. Install a flapper valve and new screen on the overflow pipe elbow and a splash pad. Installation of splash pad to be by owner. **(Recommended, AWWA D100-11 7.3)**
11. Install anti-skid rung covers on the existing exterior shell access ladder. **(Recommended, OSHA 1910.23(b)(4))**
12. Install a cable type ladder safety device on exterior shell access ladder. **(Recommended)**
13. Post Fall Protection Required sign at base of exterior shell access ladder. **(Recommended)**
14. Install a swing gate at the exterior shell access standoff platform. **(Not recommended)**
15. Install a float-type liquid level indicator. **(Not recommended in cold climates)**
16. Extend the handrails around the circumference of the tank roof, complete with intermediate rail, toeboard and a swing gate at the junction of the shell-to-roof access ladder and tank roof. **(Recommended, OSHA 1910.28(b)(1)(i)(A))**

17. Replace 30" primary hatch cover with a 2" overlapping cover. **(Recommended, AWWA D100-11 7.4.3.1)**
18. Post Confined Space Entry sign on primary and secondary roof hatch. **(Recommended for primary roof hatch)**
19. Install anti-skid rung covers on primary interior access ladder. **(Not needed)**
20. Replace existing safety device with a cable type ladder safety device on primary interior access ladder. **(Not recommended in cold climates)**
21. Post Confined Space Entry sign on secondary access point/ fan mount. **(Recommended, OSHA 1910.146(2)(c))**
22. Replace the existing roof vent with a vacuum-pressure, frost proof vent and screen. This work should be performed on an EMERGENCY basis. **(Recommended, AWWA D100-11 7.5)**
23. Pressure wash the tank exterior and support structure using an anti- fungal biodegradable solution, hand tool clean as necessary, then apply a full prime coat of Macropoxy 5000, followed by an intermediate coat of Sherwin Williams Dura-Plate 235, and one (1) full finish coat of Sherwin Williams Acrolon 218 HS. **(Recommended)**
24. Seam seal all un-welded interior roof lap seams using Sikaflex® 1a. **(Recommended)**
25. Install a GridBee mixing system. Electrical works to be done by others if required. **(Recommended)**
26. Perform a dry interior cleanout, up to 3" of sediment. This work should be performed on an EMERGENCY basis. Due to the amount of sediment and debris, a robotic in-service cleanout can not be performed. Additional accumulation will be priced at \$300 per hour to remove. The tank has to be drained by the owner prior to our arrival. **(Recommended)**
27. Install a passive cathodic protection system. **(Recommended)**
28. Sandblast, SSPC-SP10 (near white), all rusted and abraded interior areas and brush blast, SSPC-SP7, all remaining interior areas. All areas sandblasted to a #10 as well as all weld seams will receive one (1) spot coat of epoxy primer and an epoxy system will then be applied to the entire tank to achieve 8 to 10 mils of total dry film thickness. Total milage includes a combination of the existing and new coating. **(Recommended)**

**300,000 Gallon GST**  
**Carmel Water District 2**  
**31 Lindy Drive, Mahopac, NY**



Dimensions: 43' by 34'-6"

Proposed Work:

1. Post a Warning, Tampering With This Facility is a Federal Offense (US code title 42, section 300i-1) sign. **(Recommended)**
2. Repair any cracks and spalling in the concrete with a commercial non-shrinking grout. **(Recommended)**
3. Caulk/grout around the base of the tank to foundation connection. **(Recommended)**
4. Seal the foundation with a sealant. **(Recommended)**
5. Install a frost proof drain valve near the shell-to-floor connection, complete with a locking device. Installation of a splash pad to be by owner. **(Not recommended in cold climates)**
6. Install 30" secondary shell manway 180° from primary manway. **(Recommended, AWWA D100-11 7.4.4)**
7. Post Confined Space Entry signs on primary and secondary shell manways. **(Recommended, OSHA 1910.146(2)(c))**
8. Install a cable type ladder safety device on exterior shell access ladder. **(Not needed until 2038)**
9. Post Fall Protection Required sign at base of exterior shell access ladder. **(Not required)**
10. Install a float-type liquid level indicator. **(Not recommended in cold climates)**
11. Extend the handrails around the circumference of the tank roof, complete with intermediate rail, toeboard and a swing gate at the junction of the shell-to-roof access ladder and tank roof. **(Recommended, OSHA 1910.28(b)(1)(i)(A))**
12. Post Confined Space Entry sign on primary and secondary roof hatch. **(Recommended for primary roof hatch)**
13. Replace the existing roof vent with a vacuum-pressure, frost proof vent and screen. This work should be performed on an EMERGENCY basis. **(Recommended, AWWA D100-11 7.5))**
14. Install a GridBee mixing system. Electrical works to be done by others if required. **(Recommended)**
15. Perform a dry interior cleanout, up to 3" of sediment. This work should be performed on an EMERGENCY basis. Due to the amount of sediment and debris, a robotic in-service cleanout can

not be performed. Additional accumulation will be priced at \$300 per hour to remove. The tank has to be drained by the owner prior to our arrival. **(Recommended)**

16. Install a passive cathodic protection system. **(Recommended)**
17. Sandblast, SSPC-SP10 (near white), all rusted and abraded interior areas and brush blast, SSPC-SP7, all remaining interior areas. All areas sandblasted to a #10 as well as all weld seams will receive one (1) spot coat of epoxy primer and an epoxy system will then be applied to the entire tank to achieve 8 to 10 mils of total dry film thickness. Total milage includes a combination of the existing and new coating. **(Recommended)**
18. Post a No Trespassing sign. **(Recommended)**
19. Electrically ground the tank. **(Recommended, NFPA 780-2017; 5.4 Metal Towers and Tanks)**
20. Remove the vegetation from around the tank foundation. This should be done by others. **(Recommended, OSHA 1910.176(c))**
21. Extend the overflow down the exterior to grade with same size pipe, complete with standoffs every 10' on center, an elbow fitted with a flapper valve and screen, and a splash pad. Installation of splash pad to be by owner. **(Recommended, AWWA D100-11 7.3)**
22. Install a lockable ladder guard on exterior shell access ladder. **(Recommended)**
23. Install 30" secondary roof hatch 180° from primary roof hatch **(Not Recommended)**
24. Install compliant interior access ladders complete with standoffs every 10' on center at primary and suggested secondary roof hatch. **(Not recommended in cold climates)**
25. Replace the internal overflow system with a properly sized exterior overflow system, complete with a weir box on the interior, standoffs every 10' on center, an elbow fitted with a flapper valve and screen, and a splash pad. Installation of splash pad to be by owner. **(Recommended, AWWA D-100; 7.3)**
26. Install a compliant exterior shell access ladder complete with standoffs every 10' on center. **(Recommended, OSHA 1910.23(b)(4))**
27. Install lock on primary roof hatch. **(Recommended)**
28. Install cable type ladder safety devices on primary and secondary interior access ladders. **(Not recommended in cold climates)**
29. Remove the cathodic protection system and weld steel plates over the holes. **(Recommended)**
30. Pressure wash the tank exterior with biodegradable detergent injection (minimum 3,500 psi at 3.0 gpm), then re-evaluate the tank exterior at next inspection cycle. **(Recommended)**

## 227,000 Gallon Bolted STP

### Carmel Water District 3

#### Secor Road/Cross Hill Road, Mahopac, NY



Dimensions: 25.18' by 61.16'

#### Proposed Work:

1. Post a Warning, Tampering With This Facility is a Federal Offense (US code title 42, section 300i-1) sign. **(Recommended)**
2. Install a frost proof drain valve near the shell-to-floor connection, complete with a locking device. Installation of a splash pad to be by owner. **(Not recommended in cold climates)**
3. Install 30" secondary shell manway 180° from primary manway. **(Not recommended)**
4. Post Confined Space Entry signs on primary and secondary shell manways. **(Recommended)**
5. Install a flapper valve and new screen on the overflow pipe elbow and a splash pad. Installation of splash pad to be by owner. **(Recommended, AWWA D103-11 7.3)**
6. Install a cable type ladder safety device on exterior shell access ladder. **(Recommended)**
7. Post Fall Protection Required sign at base of exterior shell access ladder. **(Recommended)**
8. Install a swing gate at the exterior shell access standoff platform. **(Chains currently on the step off are sufficient)**
9. Install a float-type liquid level indicator. **(Not recommended in cold climates)**
10. Install a GridBee mixing system. Electrical works to be done by others if required. **(Recommended)**
11. Perform a dry interior cleanout, up to 3" of sediment. This work should be performed on an EMERGENCY basis. Due to the amount of sediment and debris, a robotic in-service cleanout can not be performed. Additional accumulation will be priced at \$300 per hour to remove. The tank has to be drained by the owner prior to our arrival. **(Recommended)**
12. Install a passive cathodic protection system. **(Recommended)**
13. Post a No Trespassing sign. **(Recommended)**
14. Electrically ground the tank. **(Recommended)**
15. Install lock on primary roof hatch. **(Recommended)**
16. Install compliant interior access ladder complete with standoffs every 10' on center at primary roof hatch. **(Not recommended in cold climates)**

17. Install cable type ladder safety devices on primary and secondary interior access ladders. **(Not needed)**
18. Extend the handrails to include the roof hatch opening. **(Not needed)**
19. Pressure wash the tank exterior with biodegradable detergent injection (minimum 3,500 psi at 3.0 gpm), then re-evaluate the tank exterior at next inspection cycle. **(Recommended)**
20. Clean the interior seams and remove any loose fillet material then as needed apply a new fillet comprised of manus bond to all horizontal and vertical seams on the tank interior shell sheets. **(Recommended)** ~~then as needed apply a high solids CIM 1000 Trowel grade rubberized coating to all horizontal and vertical seams on the tank interior shell, floor and around the circumference of the shell to floor connection.~~
21. Apply a new exterior perimeter seal at the base of the tank where the sidewall and concrete intersect. **(Recommended)**

## 263,000 Gallon Bolted STP

Carmel Water District 8

Crest Road, Mahopac, NY



Dimensions: W30.77' by H47.43'

### Proposed Work:

1. Post a "Warning, Tampering With This Facility is a Federal Offense (US code title 42, section 300i-1)" sign. **(Recommended)**
2. Install a frost proof drain valve near the shell-to-floor connection, complete with a locking device. Installation of a splash pad to be by owner. **(Not recommended in cold climates)**
3. Install 30" secondary shell manway 180° from primary manway. **(Not recommended)**
4. Post "Confined Space Entry" signs on primary and secondary shell manways. **(Recommended, OSHA 1910.146(c)(2))**
5. Install maintenance free galvanized steel bolts on primary shell manway. **(Recommended)**
6. Install a ~~flapper valve and~~ new screen on the overflow pipe elbow and a splash pad. Installation of splash pad to be by owner. **(Recommended, AWWA D103-09 7.3)**
7. Install a cable type ladder safety device on exterior shell access ladder. **(Recommended)**
8. Post "Fall Protection Required" sign at base of exterior shell access ladder. **(Recommended)**
9. Install a swing gate at the exterior shell access standoff platform. **(Chains currently installed on step off are sufficient)**
10. Install a float-type liquid level indicator. **(Not recommended in cold climates)**
11. Install cable type ladder safety devices on primary interior access ladder. **(Not needed)**
12. Install lock on primary roof hatch. **(Recommended)**
13. Install compliant interior access ladder complete with standoffs every 10' on center at primary roof hatch **(Not recommended in cold climates)**
14. Extend the handrails to include the roof hatch opening. **(Not needed)**
15. Pressure wash the tank exterior with biodegradable detergent injection (minimum 3,500 psi at 3.0 gpm), then re-evaluate the tank exterior at next inspection cycle. **(Recommended)**
16. Clean and scrape the interior seams, then as needed apply a new fillet comprised of manus bond to all horizontal and vertical seams on the tank interior shell sheets. **(Recommended)**
17. Install a GridBee mixing system. Electrical works to be done by others if required. **(Recommended)**

18. Perform a dry interior cleanout, up to 3" of sediment. This work should be performed on an EMERGENCY basis. Due to the amount of sediment and debris, a robotic in-service cleanout can not be performed. ~~Additional accumulation will be priced at \$300 per hour to remove.~~ The tank has to be drained by the owner prior to our arrival. **(Recommended)**
19. Install a passive cathodic protection system. **(Recommended)**
20. Post a "No Trespassing" sign. **(Recommended)**
21. Install a new exterior perimeter seal kit to prevent outside water from seeping under the angle and floor of the tank. **(Recommended)**
22. Electrically ground the tank. **(Recommend)**

**74,000 Gallon Bolted STP**  
**Carmel Water District 8**  
**6 Kings Road, Mahopac, NY**



Dimensions: 13' by 56'

Proposed Work:

1. Post a "Warning, Tampering With This Facility is a Federal Offense (US code title 42, section 300i-1)" sign. **(Recommended)**
2. Install a frost proof drain valve near the shell-to-floor connection, complete with a locking device. Installation of a splash pad to be by owner. **(Not recommended in cold climates)**
3. Install 30" secondary shell manway 180° from primary manway. **(Not recommended)**
4. Post Confined Space Entry signs on primary and secondary shell manways. **(Recommended, OSHA 1910.146(c)(2))**
5. Install maintenance free galvanized steel bolts on primary shell manway. **(Recommended)**
6. Install a flapper valve and new screen on the overflow pipe elbow and a splash pad. Installation of splash pad to be by owner. **(Recommended, AWWA D103-09 7.3)**
7. Install a cable type ladder safety device on exterior shell access ladder. **(Recommended)**
8. Post Fall Protection Required sign at base of exterior shell access ladder. **(Recommended)**
9. Install a swing gate at the exterior shell access standoff platform. **(Chains currently on the step off are sufficient)**
10. Install a float-type liquid level indicator. **(Not recommended in cold climates)**
11. Post Confined Space Entry sign on primary and secondary roof hatch. **(Recommended, OSHA 1910.146(c)(2))**
12. Install a GridBee mixing system. Electrical works to be done by others if required. **(Recommended)**
13. Perform a dry interior cleanout, up to 3" of sediment. This work should be performed on an EMERGENCY basis. Due to the amount of sediment and debris, a robotic in-service cleanout can not be performed. Additional accumulation will be priced at \$300 per hour to remove. The tank has to be drained by the owner prior to our arrival. **(Recommended)**
14. Install a passive cathodic protection system. **(Recommended)**
15. Post a "No Trespassing" sign. **(Recommended)**
16. Install a lockable ladder guard on exterior shell access ladder. **(Recommended)**

17. Install cable type ladder safety devices on primary interior access ladder. **(Not needed)**
18. Install lock on primary roof hatch. **(Recommended)**
19. Install compliant interior access ladder complete with standoffs every 10' on center at primary roof hatch. **(Not recommended in cold climates)**
20. Clean the area around the anchor bolts, then tighten the jam nuts to specifications.  
**(Recommended, AWWA D103-09 5.9)**
21. Extend the handrails to include the roof hatch opening. **(Not needed)**
22. Pressure wash the tank exterior with biodegradable detergent injection (minimum 3,500 psi at 3.0 gpm), then re-evaluate the tank exterior at next inspection cycle. **(Recommended)**
23. ~~Clean the interior seams, then as needed apply a high solids CIM 1000 Trowel grade rubberized coating to all horizontal and vertical seams on the tank interior shell, floor and around the circumference of the shell to floor connection~~ Clean and scrape the interior seams to remove any loose fillet material, then as needed apply a new fillet comprised of manus bond to all horizontal and vertical seams on the tank interior shell sheets. **(Recommended)**
24. Electrically ground the tank. **(Recommended)**

## 40,000 Gallon Pressure Vessel

Carmel Water District 9

119 Vista Terrace, Mahopac, NY



Dimensions: 8'6" by 25'6"

Proposed Work:

1. Repair cracks and spalling of concrete supports with a commercial non-shrinking grout. **(Recommended)**
2. Seal foundation with sealant. **(Recommended)**
3. Post "Confined Space Entry" sign on elliptical style manway. **(Recommended, OSHA 1910.146(c)(2))**
4. Handwash exterior of tank with a biodegradable detergent and then reevaluate tank exterior at next inspection cycle. **(Recommended)**

## 18,000 Gallon STP (Left Tank)

Carmel Water District 14

Hill Street/Scott Road, Mahopac, NY



Dimensions: 10'-10" by 31'-7"

### Proposed Work:

1. Post a Warning, Tampering with This Facility is a Federal Offense (US code title 42, section 300i-1) sign. **(Owner preference)**
2. Repair any cracks and spalling in the concrete with a commercial non-shrinking grout. **(Recommended)**
3. Caulk/grout around the base of the tank to foundation connection. **(Recommended)**
4. Seal the foundation with a sealant. **(Recommended)**
5. Install 30" secondary shell manway 180° from primary manway. **(Recommended, AWWA D100-11 7.4.4)**
6. Post Confined Space Entry signs on primary and secondary shell manways. **(Recommended, OSHA 1916.146(2)(c))**
7. Install maintenance free galvanized steel bolts on primary shell manway. **(Recommended)**
8. Post Fall Protection Required sign at base of exterior shell access ladder. **(Not required until 2038)**
9. Install a float-type liquid level indicator. **(Not recommended in cold climates)**
10. Extend the handrails around the circumference of the tank roof, complete with intermediate rail, toeboard and a swing gate at the junction of the shell-to-roof access ladder and tank roof. **(Recommended, OSHA 1910.28(b)(1)(i)(A))**
11. Post Confined Space Entry sign on primary and secondary roof hatch. **(Not needed)**
12. Replace the existing roof vent with a vacuum-pressure, frost proof vent and screen. This work should be performed on an EMERGENCY basis. **(Recommended)**
13. Pressure wash the tank exterior and support structure using an anti-fungal biodegradable solution, hand tool clean as necessary, then apply a full prime coat of Macropoxy 5000, followed by an intermediate coat of Sherwin Williams Dura-Plate 235, and one (1) full finish coat of Sherwin Williams Acrolon 218 HS. **(Recommended)**
14. Install a GridBee mixing system. Electrical works to be done by others if required. **(Recommended)**

15. Perform a dry interior cleanout, up to 3" of sediment. This work should be performed on an EMERGENCY basis. Due to the amount of sediment and debris, a robotic in-service cleanout can not be performed. Additional accumulation will be priced at \$300 per hour to remove. The tank has to be drained by the owner prior to our arrival. **(Recommended)**
16. Install a passive cathodic protection system. **(Recommended)**
17. Post a No Trespassing sign. **(Owner preference)**
18. Clear any dirt, debris and other loose gravel away from the tank foundation, down to a minimum 6" below top of foundation. This should be done by a local excavating company. **(Recommended, AWWA D100-11 12.7.1)**
19. Electrically ground the tank. **(Recommended, NFPA 780-2017; 5.4 Metal Towers and Tanks)**
20. Extend the overflow down the exterior to grade with same size pipe, complete with standoffs every 10' on center, an elbow fitted with a flapper valve and screen, and a splash pad. Installation of splash pad to be by owner. **(Recommended, AWWA D100-11 7.3)**
21. Install a lockable ladder guard on exterior shell access ladder. **(Recommended)**
22. Install a compliant exterior shell access ladder complete with standoffs every 10' on center. **(Recommended, OSHA 1910.23(b)(4))**
23. Install lock on primary roof hatch. **(Recommended)**
24. Install compliant interior access ladder complete with standoffs every 10' on center at primary roof hatch. **(Not recommended in cold climates)**
25. Install cable type ladder safety devices on primary and secondary interior access ladders. **(Not recommended in cold climates)**
26. Clean the area around the anchor bolts, tighten the anchor nuts to specifications, then tack weld on the circumference of the nut-to-base plate connections and tack weld the bolt-to-nut connections. **(Recommended, AWWA D100-11 3.8.1.1)**
27. Replace the existing drain plug with a frost proof drain valve, complete with a locking device. Installation of a splash pad to be by owner. **(Not recommended in cold climates)**
28. Install davit arm on primary shell manway. **(Recommended, AWWA D100-11 7.4.4)**

**18,000 Gallon STP (Right Tank)**  
**Carmel Water District 14**  
**Hill Street/Scott Road, Mahopac, NY**



Dimensions: 10'-10" by 31'-7"

Proposed Work:

1. Post a Warning, Tampering With This Facility is a Federal Offense (US code title 42, section 300i-1) sign. **(Owner preference)**
2. Repair any cracks and spalling in the concrete with a commercial non-shrinking grout. **(Recommended)**
3. Caulk/grout around the base of the tank to foundation connection. **(Recommended)**
4. Seal the foundation with a sealant. **(Recommended)**
5. Install 30" secondary shell manway 180° from primary manway. **(Recommended, AWWA D100-11 7.4.4)**
6. Post Confined Space Entry signs on primary and secondary shell manways. **(Recommended, OSHA 1916.146(2)(c))**
7. Install maintenance free galvanized steel bolts on primary shell manway. **(Recommended)**
8. Install a cable type ladder safety device on exterior shell access ladder. **(Not required until 2038)**
9. Post Fall Protection Required sign at base of exterior shell access ladder. **(Not required until 2038)**
10. Install a float-type liquid level indicator. **(Not recommended in cold climates)**
11. Extend the handrails around the circumference of the tank roof, complete with intermediate rail, toeboard and a swing gate at the junction of the shell-to-roof access ladder and tank roof. **(Recommended, OSHA 1910.28(b)(1)(i)(A))**
12. Post Confined Space Entry sign on primary and secondary roof hatch. **(Recommended, OSHA 1916.146(2)(c))**
13. Replace the existing roof vent with a vacuum-pressure, frost proof vent and screen. This work should be performed on an EMERGENCY basis. **(Recommended, AWWA D100-11 7.5)**
14. Pressure wash the tank exterior and support structure using an anti- fungal biodegradable solution, hand tool clean as necessary, then apply a full prime coat of Macropoxy 5000, followed

by an intermediate coat of Sherwin Williams Dura-Plate 235, and one (1) full finish coat of Sherwin Williams Acrolon 218 HS. **(Recommended)**

15. Install a GridBee mixing system. Electrical works to be done by others if required. **(Recommended)**
16. Perform a dry interior cleanout, up to 3" of sediment. This work should be performed on an EMERGENCY basis. Due to the amount of sediment and debris, a robotic in-service cleanout can not be performed. Additional accumulation will be priced at \$300 per hour to remove. The tank has to be drained by the owner prior to our arrival. **(Recommended)**
17. Install a passive cathodic protection system. **(Recommended)**
18. Post a No Trespassing sign. **(Owner preference)**
19. Clear any dirt, debris and other loose gravel away from the tank foundation, down to a minimum 6" below top of foundation. This should be done by a local excavating company. **(Recommended, AWWA D100-11 12.7.1)**
20. Electrically ground the tank. **(Recommended, NFPA 780-2017; 5.4 Metal Towers and Tanks)**
21. Extend the overflow down the exterior to grade with same size pipe, complete with standoffs every 10' on center, an elbow ~~fitted with a flapper valve~~ and screen, and a splash pad. Installation of splash pad to be by owner. **(Recommended, AWWA D100-11 7.3)**
22. Install a lockable ladder guard on exterior shell access ladder. **(Recommended)**
23. Install compliant interior access ladders complete with standoffs every 10' on center at primary and suggested secondary roof hatch. **(Not recommended in cold climates)**
24. Install a compliant exterior shell access ladder complete with standoffs every 10' on center. **(Not recommended in cold climates)**
25. Install lock on primary roof hatch. **(Recommended)**
26. Install cable type ladder safety devices on primary and secondary interior access ladders. **(Not required)**
27. Clean the area around the anchor bolts, tighten the anchor nuts to specifications, then tack weld on the circumference of the nut-to-base plate connections and tack weld the bolt-to-nut connections. **(Recommended)**
28. Replace the existing drain plug with a frost proof drain valve, complete with a locking device. Installation of a splash pad to be by owner. **(Not recommended in cold climates)**
29. Install davit arm on primary shell manway. **(Recommended, AWWA D100-11 7.4.4)**

# Rehabilitation of Water Storage Tanks Carmel Water Districts 2, 3, 8, 9 & 14

R2019-006

May 6, 2020

Principal-in-Charge: Jeff Budrow, PE

Project Manager: Joe Zongol, PE

# Presentation Outline

- District Storage
- Proposed Approach
- Recommendations during Construction
- Additional Engineering
- Cost analysis comparing alternatives and bond estimates

# CWD #2 – Carmel Hamlet

- **District Storage:** Three Welded Steel Tanks (1) Everett Road 300,000 gal. (2) Lindy Drive 300,000 gal. (3) Clapboard Ridge 500,000 gal.
- **Proposed Approach:** build a new 300,000-gallon tank adjacent to existing Everett Road tank, keeping existing tank in service during construction. Rehabilitate Lindy Drive and Clapboard Ridge tanks one at a time
- **Recommendations during Construction:** Water use restrictions per Town Code Section §151-22
- **Additional Engineering:** Geotechnical Investigation, Topographic Survey, SHPO and SEQR review for the Everett Road Tank, and water system model of CWD #2

# CWD #2 – Carmel Hamlet

Cost Analysis Summary: CWD #2 – Carmel Hamlet			
Alternative	Capital Cost	Maintenance Cost	Total 50 Year Cost
Clapboard Ridge (Shoprite) Tank Rehabilitation <sup>(1)(2)</sup>	<b>\$756,000</b>	\$1,545,000	\$2,301,000
Clapboard Ridge (Shoprite) Tank Replacement	\$1,094,000	\$229,300	\$1,393,300
Everett Road Tank Rehabilitation <sup>(1)</sup>	\$653,000	\$1,215,000	\$1,868,000
Everett Road Tank Replacement <sup>(3)</sup>	<b>\$838,000</b>	\$217,600	\$997,600
Lindy Drive Tank Rehabilitation <sup>(1)(2)</sup>	<b>\$722,000</b>	\$1,215,000	\$1,937,000
Lindy Drive Tank Replacement	\$854,000	\$217,600	\$1,071,600
Total Estimated Cost for Recommended Options (Recommended in Bold Italics)	<b>\$2,316,000</b>	-	-
Bond Est. (15 yr.)	\$1,562,615	-	-

# CWD #2 – Carmel Hamlet

- Everett Road tank replacement is approx. \$185,000 more than rehabilitation
- Using the existing (old) Everett Road tank as “temporary” supplemental storage potentially provides net savings of around \$190,000.
- A water model is necessary to determine if this approach is feasible



Lindy Drive



Clapboard Ridge



Everett Road Parking Area

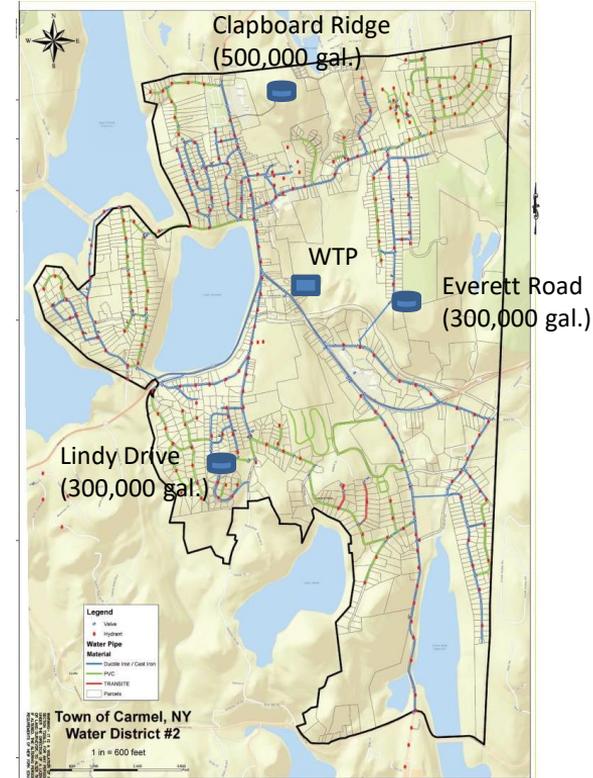


Everett Road Tank

# CWD #2 – Carmel Hamlet

## Project Implementation Outcomes:

1. The distribution system can support Lindy Drive and Clapboard Ridge Tanks out of Service
2. Distribution system, when relining is complete, can support Lindy Drive and Clapboard Ridge Tanks out of Service
3. Distribution system cannot support a tank out of service



# CWD #3 – Lake Secor

- **District Storage:** One 227,000-gallon glass lined tank
- **Proposed Approach:** The tank will have to be taken out of service for rehabilitation.
- **Recommendations during Construction:** Water use restrictions per Town Code Section §151-22



Cost Summary: CWD #3 – Lake Secor	
Alternative	Capital Cost
Lake Secor Tank Rehabilitation	\$161,400
Bond Est. (15 yr.)	\$282,538

# CWD #8 – Mahopac Ridge

- **District Storage:** Two glass lined tanks: (1) Crest Road 263,000-gal. (2) Kings Ridge 74,000-gal.
- **Proposed Approach:** Tanks taken out of service one at a time. Modifications to the pump station and a temporary pressure vessel will be necessary.
- **Recommendations during Construction:** Water use restrictions per Town Code Section §151-22



Crest Road



Kings Ridge



Cost Summary: CWD #8 – Mahopac Ridge	
Alternative	Capital Cost
Crest Road Tank Rehabilitation	\$126,200
Kings Ridge Tank Rehabilitation	\$124,800
<b>Total Rehabilitation Cost</b>	<b>\$251,000</b>
Bond Est. (15 yr.)	\$474,490

# CWD #9 – Mahopac Hills

- **District Storage:** Single 10,800-gallon hydro-pneumatic tank in a block and wood framed building
- **Proposed Approach:** The tank can remain in service during work
- **Additional Engineering:** The system operator has requested that the wood structure be replaced. Estimated construction cost \$15,000



Cost Summary: CWD #9 – Mahopac Hills	
Alternative	Capital Cost
Vista Ridge Tank Rehabilitation <sup>(1)</sup>	\$34,900
Bond Est. (15 yr.)	\$17,684

Note: Rehab. Estimate without wood structure is \$8,500

# CWD #14 – Red Mills

- **District Storage:** Two 18,000-gallon welded steel tanks
- **Proposed Approach:** Build a new 40,000-gallon tank adjacent to the existing tanks. Existing tanks can remain in service during work.
- **Additional Engineering:** Geotechnical Investigation, Topographic Survey, SHPO Review and SEQR



Cost Analysis Summary: CWD #14 – Red Mills			
Alternative	Capital Cost	Maintenance Cost	Total 50 Year Cost
Red Mills Tank(s) Rehabilitation <sup>(1)</sup>	\$421,100	\$413,820	\$834,820
Red Mills Tank Replacement	\$374,500	\$57,080	\$406,880
Bond Est. (15 yr.)	\$391,063	-	-

# Project Bidding Approaches

- Single Contract
  - Sole source responsibility with 1 GC
  - Uniformity of Equipment & Materials
  - Lowest CA Cost
  - Simplest Bidding
  - Reduced liability related to claims/delays

# Project Bidding Approaches

- Two Contracts
  - One contract for rehab work & one for new tanks
  - Uniformity of Equipment & Materials for each contract
  - Increased CA Cost to administer 2 contracts
  - Potential liability related to claims/delays for CWD #2

# Project Bidding Approaches

- Six Contracts
  - One contract per district, with Two for CWD #2 (one for new tank, one for rehab)
  - Potential lowest construction costs but increased mobilization
  - Potential Lack of Uniformity of Equipment & Materials for each contract
  - Increased CA Cost to administer 6 contracts
  - Potential liability related to claims/delays for CWD #2

**thank you**

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