

D214960 ALBANY DIVISION SCOUR REPAIR AT VARIOUS CULVERTS -  
MP 165.10 TO MP 185.93 QUANTITY BACKUP CALCULATIONS



11/21/2023



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# CHAPTER 1

## MP 165.10

**D214960 ALBANY DIVISION SCOUR REPAIR AT VARIOUS BRIDGES - MP 165.10 TO MP  
185.93 QUANTITY CALCULATIONS FOR MP 165.10**

ITEM #	DESCRIPTION	UNIT	QUANTITY
201.06	CLEARING AND GRUBBING	LS	1
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	935
203.61000125	TEMPORARY HAUL ROAD(S)	LS	1
206.0201	TRENCH AND CULVERT EXCAVATION	CY	295
209.1501	TURBIDITY CURTAIN - TEMPORARY	LF	800
209.22	STABILIZED CONSTRUCTION ACCESS	SY	134
553.030001	TEMPORARY WATERWAY DIVERSION STRUCTURE	EACH	1
553.030002	TEMPORARY WATERWAY DIVERSION STRUCTURE	EACH	1
556.0202	EPOXY-COATED BAR REINFORCEMENT FOR STRUCTURES	LB	100
582.06	REMOVAL OF STRUCTURAL CONCRETE - REPLACEMENT WITH CLASS D CONCRETE	SF	5
606.22	ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAIL	EACH	1
606.5148	RESETTING CORRUGATED BEAM GUIDE RAILING (NEW POSTS)	LF	100
606.61	REMOVING AND STORING CORRUGATED BEAM GUIDE RAILING	LF	100
606.7910	REMOVING AND DISPOSING ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAIL AND MEDIAN BARRIER	EACH	1
614.060402	TREE REMOVAL OVER 12 INCHES TO 24 INCHES DIAMETER BREAST HEIGHT - STUMPS GRUBBED	EACH	1
619.17060025	LINEAR DELINEATION SYSTEM	LF	150
619.1715	TEMPORARY POSITIVE BARRIER - CATEGORY 5 (PINNING PROHIBITED)	LF	200
619.1716	TEMPORARY POSITIVE BARRIER - CATEGORY 6 (PINNING REQUIRED)	LF	150
619.1803	TEMPORARY IMPACT ATTENUATOR - REDIRECTIVE (TEST LEVEL 3)	EACH	1
620.01500925	STONE FILLING, CLASS IX (BY WEIGHT)	TONS	1813
620.0801	BEDDING MATERIAL, TYPE 1	CY	109
621.04	CLEAN DRAINAGE STRUCTURE	EACH	1
621.51970008	GRADING. CLEANING AND RESHAPING EXISTING CHANNELS, DITCHES AND STREAMBEDS	LF	110

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 201.06

DESCRIPTION: CLEARING AND GRUBBING

QUANTITY 1.0 LS

Clearing and Grubbing is a Lump Sum item.

Lump Sum = 1.0 LS

This Clearing and grubbing is located at MP 165.10.

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 203.02

DESCRIPTION: UNCLASSIFIED EXCAVATION AND DISPOSAL

QUANTITY 935 CY

\*All Areas measured from DWG. ST1-04.

Location	Area* (SF)	Depth(FT)	Volume (CF)	Volume (CY)
1	2868	7	19315.98	715
2	125	7	858.9449541	32
4	500	7	3445.05	128
5	400	4	1614	60

Total Voume (CY) = 935

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 203.61000125

DESCRIPTION: TEMPORARY HAUL ROAD(S) \_\_\_\_\_

QUANTITY \_\_\_\_\_ 1 LS \_\_\_\_\_

Temporary Haul road is a Lump Sum item.

Lump Sum = 1.0 LS

This Temporary Haul Road is located at MP 165.10.

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 206.0201

DESCRIPTION: TRENCH AND CULVERT EXCAVATION

QUANTITY 295 CY

\*All Areas measured from DWG. ST1-04.

Location	Area* (SF)	Depth(FT)	Volume (CF)	Volume (CY)
1	660	6	3960	147
2	420	6	2520	93
3	94	6	563	21
5	400	2	910	34

Total Voume (CY) = 295



CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 209.1501

DESCRIPTION: TURBIDITY CURTAIN - TEMPORARY

QUANTITY 800 LF

\*All Lengths measured from DWG. ST1-03.

Turbidity Curtain Length = 800 ft

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 209.22

DESCRIPTION: STABILIZED CONSTRUCTION ACCESS

QUANTITY 134 SY

Area per Construction Entrance = 1209 SF Measured from DWG. ST1-01.  
Area per Construction Entrance = 134 SY

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 553.030001

DESCRIPTION: TEMPORARY WATERWAY DIVERSION STRUCTURE

QUANTITY 1 EACH

TEMPORARY WATERWAY DIVERSION STRUCTURE FOR STAGE 1 = 1 EA

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 556.0202

DESCRIPTION: EPOXY-COATED BAR REINFORCEMENT FOR STRUCTURES

QUANTITY 100 LB

Assume that a 6 LB of reinforcement will be required to replace damaged or deteriorated reinforcing bars discovered during concrete repair operations.

Quantity = 100

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 553.030002

DESCRIPTION: TEMPORARY WATERWAY DIVERSION STRUCTURE

QUANTITY 1 EACH

TEMPORARY WATERWAY DIVERSION STRUCTURE FOR STAGE 2 = 1 EA

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 582.06

DESCRIPTION: REMOVAL OF STRUCTURAL CONCRETE - REPLACEMENT WITH CLASS D CONCRETE

QUANTITY 5 SF

\*All Areas measured from DWG. ST1-04.

Location	Area* (SF)
C1	2
C2	3

Total Area (SF) = 5

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 606.22

DESCRIPTION: ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAIL

QUANTITY 1 EA

ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAIL = 1 EA

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 606.5148

DESCRIPTION: RESETTING CORRUGATED BEAM GUIDE RAILING (NEW POSTS)

QUANTITY 100 LF

\*All Lengths measured from DWG. ST1-02.

CORRUGATED BEAM GUIDE RAILING = 100 ft



CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 606.61

DESCRIPTION: REMOVING AND STORING CORRUGATED BEAM GUIDE RAILING

QUANTITY 100 LF

\*All Lengths measured from DWG. ST1-02.

REMOVAL OF CORRUGATED BEAM GUIDE RAILING = 100 ft

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 606.7910

DESCRIPTION: REMOVING AND DISPOSING ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAIL AND MEDIAN BARRIER

QUANTITY 1 EACH

REMOVING AND DISPOSING ANCHORAGE UNITS FOR  
CORRUGATED BEAM GUIDE RAIL AND MEDIAN BARRIER = 1 EA

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 614.060402

DESCRIPTION: TREE REMOVAL OVER 12 INCHES TO 24 INCHES DIAMETER BREAST HEIGHT - STUMPS GRUBBED

QUANTITY 1 EACH

TREE REMOVAL - STUMPS GRUBBED = 1 EA

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 619.17060025

DESCRIPTION: LINEAR DELINEATION SYSTEM

QUANTITY 150 LF

\*All Lengths measured from DWG. ST1-02.

Temporary positive barrier length = 150 ft

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 619.1715

DESCRIPTION: TEMPORARY POSITIVE BARRIER - CATEGORY 5 (PINNING PROHIBITED)

QUANTITY 200 LF

\*All Lengths measured from DWG. ST1-02.

Temporary positive barrier length = 200 ft

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 619.1716

DESCRIPTION: TEMPORARY POSITIVE BARRIER - CATEGORY 6 (PINNING REQUIRED)

QUANTITY 150 LF

\*All Lengths measured from DWG. ST1-02.

Temporary positive barrier length = 150 ft

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 619.1803

DESCRIPTION: TEMPORARY IMPACT ATTENUATOR - REDIRECTIVE (TEST LEVEL 3)

QUANTITY 1 EACH

Temprary impract attenuator = 1 EA

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 620.01500925

DESCRIPTION: STONE FILLING, CLASS IX (BY WEIGHT)

QUANTITY 1813 TONS

\*All Areas measured from DWG. ST1-05.

Location	Area* (SF)	Depth(FT)	Volume (CF)	Volume (CY)	Weight (TONS)
1	3528	6	21115	782	1261
2	545	6	3335	124	199
3	94	6	564	21	34
4	500	6	3075	114	184
5	400	6	2248	83	134

Total Weight (TONS) = 1813



CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 620.0801

DESCRIPTION: BEDDING MATERIAL, TYPE 1

QUANTITY 109 CY

\*All Areas measured from DWG. ST1-05.

Location	Area* (SF)	Depth(FT)	Volume (CF)	Volume (CY)
1	2868	0.75	2151	80
2	125	0.75	94	3
4	500	0.75	375	14
5	400	0.75	300	11

Total Volume (CY) = 109

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 621.04

DESCRIPTION: CLEAN DRAINAGE STRUCTURE

QUANTITY 1 EACH

Drainage Structure = 1 EA

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10	AP	JPOL		
SUBJECT	Nov. Engineers Estimate (MP165.10)	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 621.51970008

DESCRIPTION: GRADING, CLEANING AND RESHAPING EXISTING CHANNELS, DITCHES AND STREAMBEDS

QUANTITY 110 LF

\*Length measured from DWG. ST1-05.

RESHAPING EXISTING CHANNEL LENGTH = 110 ft

## CHAPTER 2

### MP 171.31

**D214960 ALBANY DIVISION SCOUR REPAIR AT VARIOUS BRIDGES - MP 165.10 TO MP 185.93**  
**QUANTITY CALCULATIONS FOR MP 171.31 (PDG Nov. 2023)**

ITEM #	DESCRIPTION	UNIT	QUANTITY
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	1,200
203.61000225	TEMPORARY HAUL ROAD(S)	LS	1
203.61000325	TEMPORARY HAUL ROAD(S)	LS	1
206.0201	TRENCH AND CULVERT EXCAVATION	CY	220
206.05	TEST PIT EXCAVATION	EACH	2
209.1501	TURBIDITY CURTAIN - TEMPORARY	LF	1,136
209.22	CONSTRUCTION ENTRANCE	SY	266
553.030003	TEMPORARY WATERWAY DIVERSION STRUCTURE	EACH	1
553.030004	TEMPORARY WATERWAY DIVERSION STRUCTURE	EACH	1
556.0202	EPOXY-COATED BAR REINFORCEMENT FOR STRUCTURES	LB	100
582.06	REMOVAL OF STRUCTURAL CONCRETE - REPLACEMENT WITH CLASS D CONCRETE	SF	1,153
606.50	RESETTING CABLE GUIDE RAILING	LF	50
606.5901	RESETTING ANCHORAGE UNITS FOR CABLE GUIDE RAILINGOR MEDIAN BARRIER	EACH	1
606.60	REMOVING AND STORING CABLE GUIDE RAILING	LF	50
613.04000001	STOCKPILING AND PLACING EXISTING STREAM BED MATERIALS	CY	12
619.1712	TEMPORARY POSITIVE BARRIER - CATEGORY 2 (PINNING PERMITTED)	LF	300
620.01501025	STONE FILLING, CLASS X (BY WEIGHT)	TON	500
620.05	STONE FILLING (HEAVY)	CY	245
620.0801	BEDDING MATERIAL, TYPE 1	CY	70
621.51970008	GRADING, CLEANING AND RESHAPING EXISTING CHANNELS, DITCHESAND STREAMBEDS	LF	127



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/3/2023
CHECKED BY	SML	DATE	11/7/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 203.02

DESCRIPTION: UNCLASSIFIED EXCAVATION AND DISPOSAL

QUANTITY: 1,200 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_171.dgn

Sed. = Sediment Bar

**MP 171.31**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
E2-Sed.	4201	3.5	14703.50	544.57
E5-Sed.	427	2.5	1067.50	39.54
E6-Sed.	501	2.5	1252.50	46.39
E8-Sed.	6171	2.5	15427.50	571.39

Total Volume (CY) = 1201.9

1,201.9

E2-Sediment bar has max depth 4' with an approximate average depth of 3.5'

E8-Sediment bar has max depth 3' with an approximate average depth of 2.5'

Total = 1,201.9

Say = 1,200



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	8/9/2023
CHECKED BY	MLS	DATE	8/25/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 203.61000225

DESCRIPTION: TEMPORARY HAUL ROAD(S)

QUANTITY: 1 LS

Subtotal

Temporary Haul Road is a Lump Sum item.

Lump Sum = 1.0 LS

1.0

This temporary haul road is located at MP 171.31 along the Northeast Bank.

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	8/9/2023
CHECKED BY	MLS	DATE	8/25/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 203.61000325

DESCRIPTION: TEMPORARY HAUL ROAD(S)

QUANTITY: 1 LS

Subtotal

Temporary Haul Road is a Lump Sum item.

Lump Sum = 1.0 LS

1.0

This temporary haul road is located at MP 171.31 along the Southwest Bank.

Total = 1.0

Say = 1





555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	8/17/2023
CHECKED BY	SML	DATE	11/7/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 206.0201

DESCRIPTION: TRENCH AND CULVERT EXCAVATION

QUANTITY: 220 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_171.dgn

**MP 171.31**

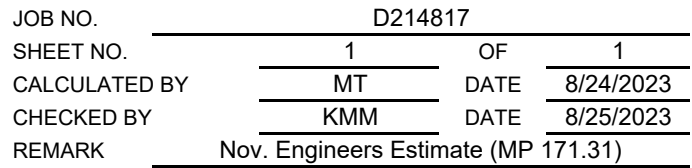
Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
E1-Key	274	4	1096.00	40.59
E3-Key	418	4	1672.00	61.93
E4-Key	263	6	1578.00	58.44
E7-Key	275	6	1650.00	61.11

Total Volume (CY) = 222.1

222.1

Total = 222.1

Say = 220





555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/3/2023
CHECKED BY	SML	DATE	11/7/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 209.1501

DESCRIPTION: TURBIDITY CURTAIN - TEMPORARY

QUANTITY: 1,136 LF

Subtotal

\*All Lengths Measured in Microstation, 214817\_est\_171.dgn

**MP 171.31**

Turbidity Curtain Length for Stage 1:	569	LF
Turbidity Curtain Length for Stage 2:	567	LF
Total Length (LF):	1136	LF

1,136.0

Total =	1,136.0
Say =	1,136



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	8/24/2023
CHECKED BY	KMM	DATE	8/25/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 209.22

DESCRIPTION: CONSTRUCTION ENTRANCE

QUANTITY: 266 SY

Area per Construction Entrance =	1196.0 SF	Measured in Microstation,
Area per Construction Entrance =	132.9 SY	214817_est_171.dgn
Number of Entrances =	2 EA	
Total Area =	265.8 SY	

Subtotal

265.8

Total =	265.8
Say =	266



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	KMM	DATE	8/22/2023
CHECKED BY	MT	DATE	8/23/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 553.030003

DESCRIPTION: TEMPORARY WATERWAY DIVERSION STRUCTURE

QUANTITY: 1 EACH

**MP 171.31**

Temporary Waterway Diversion Structure for Stage 1 = 1.00 EA

Subtotal

1.0

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	KMM	DATE	8/22/2023
CHECKED BY	MT	DATE	8/23/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 553.030004

DESCRIPTION: TEMPORARY WATERWAY DIVERSION STRUCTURE

QUANTITY: 1 EACH

**MP 171.31**

Temporary Waterway Diversion Structure for Stage 2 = 1.00 EA

Subtotal

1.0

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MLS	DATE	11/15/2023
CHECKED BY	SML	DATE	11/15/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 556.0202

DESCRIPTION: EPOXY-COATED BAR REINFORCEMENT FOR STRUCTURES

QUANTITY: 100 LB

Assume that a 100 LB of reinforcement will be required to replace damaged or deteriorated reinforcing bars discovered during concrete repair operations.

Quantity = 100

Subtotal

100

Total = 100

Say = 100



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	KMM	DATE	8/28/2023
CHECKED BY	MT	DATE	8/28/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 582.06

DESCRIPTION: REMOVAL OF STRUCTURAL CONCRETE - REPLACEMENT WITH CLASS D CONCRETE

QUANTITY: 1,153 SF

\*All Areas Measured in Microstation, 214817\_est\_171.dgn

**MP 171.31**

Location	Area* (SF)
C1	1153

Total Area (SF) = 1153.0

Subtotal

Total =	1,153.0
Say =	1,153





555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	11/14/2023
CHECKED BY	MT	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 606.50

DESCRIPTION: RESETTING CABLE GUIDE RAILING

QUANTITY: 50 LF

Subtotal

**MP 171.31**

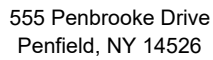
The entrance of the proposed haul road is located where there is existing cable guide railing

50 LF

50.0

Total = 50.0

Say = 50



JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	11/15/2023
CHECKED BY	MLS	DATE	11/15/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

**QUANTITY:** 1 EACH

Subtotal

**MP 171.31**

1 EA

---

1.0

Total =	1.0
<b>Say =</b>	<b>1</b>



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	11/14/2023
CHECKED BY	MT	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 606.60

DESCRIPTION: REMOVING AND STORING CABLE GUIDE RAILING

QUANTITY: 50 LF

Subtotal

**MP 171.31**

The entrance of the proposed haul road is located where there is existing cable guide railing

50 LF

50.0

Total = 50.0

Say = 50



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MLS	DATE	11/15/2023
CHECKED BY	SML	DATE	11/15/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 613.04000001

DESCRIPTION: STOCKPILING AND PLACING EXISTING STREAM BED MATERIALS

QUANTITY: 12 CY

Assume that 12 CY of existing material may remain on site. Assume this material will be removed, stockpiled and placed under this item.

Quantity = 12 CY

Subtotal

12

Total = 12

Say = 12



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	11/14/2023
CHECKED BY	MT	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 619.1712

DESCRIPTION: Temporary Positive Barrier - Category 2 (Pinning Permitted)

QUANTITY: 300 LF

**MP 171.31**

Temp. Positive Barrier will be placed along the existing cable guide rail on Langley Rd.

300 LF

Subtotal

300.0

Total =	300.0
Say =	300



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/14/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 620.01501025

DESCRIPTION: STONE FILLING, CLASS X (BY WEIGHT)

QUANTITY: 500 TON

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_171.dgn

\*Weight (lbs) = 0.85 x 2.65 x 62.4 x Volume (cf)

\*Assumed % of void = 15% when placed.

**MP 171.31**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Weight (LBS)	Placement Weight
S5-Bank	476	5	2380.00	334523.28	142.2
S6-Key	263	6	1578.00	221797.37	94.3
S7-Key	275	6	1650.00	231917.40	98.6
S8-Bank	547	5	2735.00	384420.66	163.4

Total Placement Weight with 15% Voids Assumed (TONS) = 498.4

498.4

Total = 498.4

Say = 500



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	8/18/2023
CHECKED BY	KMM	DATE	8/23/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 620.05

DESCRIPTION: STONE FILLING (HEAVY)

QUANTITY: 245 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_171.dgn

**MP 171.31**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
S1-Bank	649	2.5	1622.50	60.09
S2-Key	274	4	1096.00	40.59
S3-Key	418	4	1672.00	61.93
S4-Bank	894	2.5	2235.00	82.78

Total Volume (CY) = 245.4

245.4

Total = 245.4

Say = 245



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	8/21/2023
CHECKED BY	KMM	DATE	8/23/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

ITEM NO. 620.0801

DESCRIPTION: BEDDING MATERIAL, TYPE 1

QUANTITY: 70 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_171.dgn

**MP 171.31**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
S1-Bank	649	0.75	486.75	18.03
S4-Bank	894	0.75	670.50	24.83
S5-Bank	476	0.75	357.00	13.22
S8-Bank	547	0.75	410.25	15.19

Total Volume (CY) = 71.3

71.3

Total = 71.3

Say = 70





555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/3/2023
CHECKED BY	SML	DATE	11/7/2023
REMARK	Nov. Engineers Estimate (MP 171.31)		

**ITEM NO.** 621.51970008

**DESCRIPTION:** GRADING, CLEANING AND RESHAPING EXISTING CHANNELS, DITCHES AND STREAMBEDS

**QUANTITY:** 127 LF

\*All Lengths Measured in Microstation, 214817\_est\_171.dgn

**MP 171.31**

Length of Grading, Cleaning and Reshaping @ Inlet:	84	LF
Length of Grading, Cleaning and Reshaping @ Outlet:	43	LF
Total Length (LF):	127	LF

Subtotal

127.0

Total = 127.0  
Say = 127

## CHAPTER 3

### MP 174.71

**D214960 ALBANY DIVISION SCOUR REPAIR AT VARIOUS BRIDGES - MP 165.10 TO MP 185.93  
QUANTITY CALCULATIONS FOR MP 174.71 (PDG NOV. 2023)**

ITEM #	DESCRIPTION	UNIT	QUANTITY
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	1,980
203.61000425	TEMPORARY HAUL ROAD(S)	LS	1
203.61000525	TEMPORARY HAUL ROAD(S)	LS	1
204.01	CONTROLLED LOW STRENGTH MATERIAL (CLSM)	CY	20
206.0201	TRENCH AND CULVERT EXCAVATION	CY	240
206.05	TEST PIT EXCAVATION	EACH	2
209.1501	TURBIDITY CURTAIN - TEMPORARY	LF	727
209.22	CONSTRUCTION ENTRANCE	SY	266
553.030005	TEMPORARY WATERWAY DIVERSION STRUCTURE	EACH	1
553.030006	TEMPORARY WATERWAY DIVERSION STRUCTURE	EACH	1
556.0203	GALVANIZED BAR REINFORCEMENT FOR STRUCTURES	LB	100
582.06	REMOVAL OF STRUCTURAL CONCRETE - REPLACEMENT WITH CLASS D CONCRETE	SF	100
586.18000017	DRILLING HOLES IN EXISTING SUBSTRUCTURE	LF	10
613.04000001	STOCKPILING AND PLACING EXISTING STREAM BED MATERIALS	CY	85
614.060202	TREE REMOVAL OVER 6 INCHES TO 12 INCHES DIAMETER BREAST HEIGHT - STUMPS CUT FLUSH	EACH	2
620.01500825	STONE FILLING, CLASS VIII (BY WEIGHT)	TON	2,720
620.05	STONE FILLING (HEAVY)	CY	320
620.0801	BEDDING MATERIAL, TYPE 1	CY	295
621.51970008	GRADING, CLEANING AND RESHAPING EXISTING CHANNELS, DITCHESAND STREAMBEDS	LF	305

**ITEM NO.** 203.02

**DESCRIPTION:** UNCLASSIFIED EXCAVATION AND DISPOSAL

**QUANTITY:** 1,980 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_174.dgn  
Sed. = Sediment Bar

**MP 174.71**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
E2-Sed.	4266	1.25	5332.50	200.00
E5-Sed.	6181	1.75	10816.75	400.00

Total Volume (CY) = 600.0

600.0

Assume an average excavation depth of 1.25' for E2-Sediment bar.  
E5-Sediment bar has a max depth of 5'. It is assumed that 1.75' of material above the OHWM will be excavated.

For construction of stone apron at the outlet:

S6-Apron area from Item 620.01500825 = 5,323 SF  
Assume avg. excavation depth = 7 FT  
Assume excavation volume = 37,261 CF  
Assume excavation volume = 1,380 CY

1,380.0

Total = 1,980.0  
Say = 1,980



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	8/9/2023
CHECKED BY	MLS	DATE	8/25/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 203.61000425

DESCRIPTION: TEMPORARY HAUL ROAD(S)

QUANTITY: 1 LS

Subtotal

Temporary Haul Road is a Lump Sum item.

Lump Sum = 1.0 LS

1.0

This temporary haul road is located at MP 174.71 along the Northwest Bank.

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	8/9/2023
CHECKED BY	MLS	DATE	8/25/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 203.61000525

DESCRIPTION: TEMPORARY HAUL ROAD(S)

QUANTITY: 1 LS

Subtotal

Temporary Haul Road is a Lump Sum item.

Lump Sum = 1.0 LS

1.0

This temporary haul road is located at MP 174.71 along the Southeast Bank.

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	MLS	DATE	11/14/2023
CHECKED BY	MT	DATE	11/14/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 204.01

DESCRIPTION: CONTROLLED LOW STRENGTH MATERIAL (CLSM)

QUANTITY: 20 CY

Subtotal

From Drawings No.'s ST3-03, ST3-04 and ST3-05:

Assumed Length of Void along Front of Apron =	53	ft (75% of scour hole length)
Assumed Void Area per Length of Apron =	10	sf
Assumed Void Volume =	530	cf
Assumed CLSM Volume Required =	20	CY

20.0

Total =	20.0
Say =	20



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/6/2023
CHECKED BY	SML	DATE	11/7/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 206.0201

DESCRIPTION: TRENCH AND CULVERT EXCAVATION

QUANTITY: 240 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_174.dgn

**MP 174.71**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
E1-Key	357	4	1428.00	52.89
E3-Key	333	4	1332.00	49.33
E4-Key	624	6	3744.00	138.67

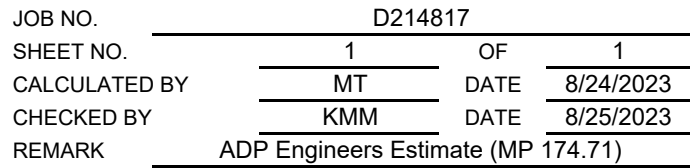
Total Volume (CY) = 240.9

240.9

Total = 240.9

Say = 240





**QUANTITY:** 2 EACH

Subtotal

Assume one test hole is required at this site. See reconstruction notes on General Notes Sheet

Assume Quantity = 2.0 at MP 174.71

---

2.0

Total =	2.0
<b>Say =</b>	<b>2</b>



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/6/2023
CHECKED BY	SML	DATE	11/7/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 209.1501

DESCRIPTION: TURBIDITY CURTAIN - TEMPORARY

QUANTITY: 727 LF

Subtotal

\*All Lengths Measured in Microstation, 214817\_est\_174.dgn

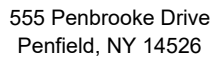
**MP 174.71**

Turbidity Curtain Length for Stage 1 (Upstream):	195	LF
Turbidity Curtain Length for Stage 1 (Downstream):	274	LF
Turbidity Curtain Length for Stage 2 (Upstream):	113	LF
Turbidity Curtain Length for Stage 2 (Downstream):	145	LF
Total Length (LF):	727	LF

727.0

Total = 727.0

Say = 727



JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	8/24/2023
CHECKED BY	KMM	DATE	8/25/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 209.22

### DESCRIPTION: CONSTRUCTION ENTRANCE

**QUANTITY:** 266 SY

Subtotal

Area per Construction Entrance =	1196.0 SF	Measured in Microstation, 214817_est_174.dgn
Area per Construction Entrance =	132.9 SY	
Number of Entrances =	2 EA	
Total Area =	265.8 SY	

265.8

Total =	265.8
<b>Say =</b>	<b>266</b>



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	KMM	DATE	8/22/2023
CHECKED BY	MT	DATE	8/23/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 553.030005

DESCRIPTION: TEMPORARY WATERWAY DIVERSION STRUCTURE

QUANTITY: 1 EACH

**MP 174.71**

Temporary Waterway Diversion Structure for Stage 1 = 1.00 EA

Subtotal

1.0

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	KMM	DATE	8/22/2023
CHECKED BY	MT	DATE	8/23/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 553.030006

DESCRIPTION: TEMPORARY WATERWAY DIVERSION STRUCTURE

QUANTITY: 1 EACH

**MP 174.71**

Temporary Waterway Diversion Structure for Stage 2 = 1.00 EA

Subtotal

1.0

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/13/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 556.0203

DESCRIPTION: GALVANIZED BAR REINFORCEMENT FOR STRUCTURES

QUANTITY: 100 LB

Subtotal

\*#8 Bar weight 2.670 lb/ft

\*Assumed only two #8 bars need to be replaced.

**MP 174.71**

Location C1:

Number of #8 Bar: 2 (Assumed)

Length of #8 Bar: 10 FT, DWG. CD-01

Total Weight of #8 Bar: 53.4 LB

Say 100 LB MLS 11/15/2023

100.0

Total = 100.0

Say = 100



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/6/2023
CHECKED BY	SML	DATE	11/7/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 582.06

DESCRIPTION: REMOVAL OF STRUCTURAL CONCRETE - REPLACEMENT WITH CLASS D CONCRETE

QUANTITY: 100 SF

\*All Areas Measured in Microstation, 214817\_est\_174.dgn

**MP 174.71**

Location	Area* (SF)
C1	100

Total Area (SF) = 100.0

Subtotal

Total =	100.0
Say =	100



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/13/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 586.18000017

DESCRIPTION: DRILLING HOLES IN EXISTING SUBSTRUCTURE

QUANTITY: 10 LF

MP 174.71

Number of Holes:	14	EA, Dwg. No. ST3-04
Depth of Holes:	0.67	LF, Dwg. No. ST3-05
Number of Linear Feet of Hole Drilled:	9.33	LF

Subtotal

9.3

Total =	9.3
Say =	10





555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/6/2023
CHECKED BY	SML	DATE	11/7/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 613.04000001

DESCRIPTION: STOCKPILING AND PLACING EXISTING STREAM BED MATERIALS

QUANTITY: 85 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_174.dgn

**MP 174.71**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
S6-Apron	5323	0.33	1774.33	65.72
S7-Key	624	0.33	208.00	7.70

Total Volume (CY) = 73.4

73.4

MLS 11/15/2023

Assume that an additional 12 CY of existing material may remain on site. Assume this material will be removed, stockpiled and placed under this item.

Quantity = 12 CY

12.0

Total = 85.4

Say = 85



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/10/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 614.060202

DESCRIPTION: TREE REMOVAL OVER 6 INCHES TO 12 INCHES DIAMETER BREAST HEIGHT -  
STUMPS CUT FLUSH

QUANTITY: 2 EACH

MP 174.71

Number of Trees to be Removed: 2 EACH

Subtotal

2.0

Total = 2.0

Say = 2



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/14/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 620.01500825

DESCRIPTION: STONE FILLING, CLASS VIII (BY WEIGHT)

QUANTITY: 2,720 TON

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_174.dgn

\*Weight (lbs) = 0.85 x 2.65 x 62.4 x Volume (cf)

\*Assumed % of void = 15% when placed.

**MP 174.71**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Weight (LBS)	Placement Weight (TONS)
S5-Bank	1424	5	7120.00	1000758.72	425.3
S6-Apron	5323	5	26615.00	3740897.94	1589.9
S7-Key	624	6	3744.00	526241.66	223.7
S8-Bank	1614	5	8070.00	1134286.92	482.1

Total Placement Weight with 15% Voids Assumed (TONS) = 2720.9

2,720.9

Total = 2,720.9

Say = 2,720



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/6/2023
CHECKED BY	SML	DATE	11/7/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 620.05

DESCRIPTION: STONE FILLING (HEAVY)

QUANTITY: 320 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_174.dgn

**MP 174.71**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
S1-Bank	1251	2.5	3127.50	115.83
S2-Key	357	4	1428.00	52.89
S3-Key	333	4	1332.00	49.33
S4-Bank	1089	2.5	2722.50	100.83

Total Volume (CY) = 318.9

318.9

Total = 318.9

Say = 320



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/6/2023
CHECKED BY	SML	DATE	11/7/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

ITEM NO. 620.0801

DESCRIPTION: BEDDING MATERIAL, TYPE 1

QUANTITY: 295 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_174.dgn

**MP 174.71**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
S1-Bank	1251	0.75	938.25	34.75
S4-Bank	1089	0.75	816.75	30.25
S5-Bank	1424	0.75	1068.00	39.56
S6-Apron	5323	0.75	3992.25	147.86
S8-Bank	1614	0.75	1210.50	44.83

Total Volume (CY) = 297.3

297.3

Total = 297.3

Say = 295



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817 (BD 22105.03)		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/6/2023
CHECKED BY	SML	DATE	11/7/2023
REMARK	ADP Engineers Estimate (MP 174.71)		

**ITEM NO.** 621.51970008

**DESCRIPTION:** GRADING, CLEANING AND RESHAPING EXISTING CHANNELS, DITCHES AND STREAMBEDS

**QUANTITY:** 305 LF

\*All Lengths Measured in Microstation, 214817\_est\_174.dgn

**MP 174.71**

Length of Grading, Cleaning and Reshaping @ Inlet:	115	LF
Length of Grading, Cleaning and Reshaping @ Outlet:	190	LF
Total Length (LF):	305	LF

Subtotal

305.0

Total = 305.0  
Say = 305

## CHAPTER 4

MP 179.96

**D214960 ALBANY DIVISION SCOUR REPAIR AT VARIOUS BRIDGES - MP 165.10 TO MP 185.93  
QUANTITY CALCULATIONS FOR MP 179.76 (PDG NOV. 2023)**

ITEM #	DESCRIPTION	UNIT	QUANTITY
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	45
203.61000625	TEMPORARY HAUL ROAD(S)	LS	1
203.61000725	TEMPORARY HAUL ROAD(S)	LS	1
206.0201	TRENCH AND CULVERT EXCAVATION	CY	165
206.05	TEST PIT EXCAVATION	EACH	2
209.1501	TURBIDITY CURTAIN - TEMPORARY	LF	568
209.22	CONSTRUCTION ENTRANCE	SY	133
553.030007	TEMPORARY WATERWAY DIVERSION STRUCTURE	EACH	1
553.030008	TEMPORARY WATERWAY DIVERSION STRUCTURE	EACH	1
556.0202	EPOXY-COATED BAR REINFORCEMENT FOR STRUCTURES	LB	100
582.06	REMOVAL OF STRUCTURAL CONCRETE - REPLACEMENT WITH CLASS D CONCRETE	SF	333
613.04000001	STOCKPILING AND PLACING EXISTING STREAM BED MATERIALS	CY	25
614.060102	TREE REMOVAL OVER 4 INCHES TO 6 INCHES DIAMETER BREAST HEIGHT - STUMPS CUT FLUSH	EACH	5
614.060202	TREE REMOVAL OVER 6 INCHES TO 12 INCHES DIAMETER BREAST HEIGHT - STUMPS CUT FLUSH	EACH	1
620.01500825	STONE FILLING, CLASS VIII (BY WEIGHT)	TON	470
620.01500925	STONE FILLING, CLASS IX (BY WEIGHT)	TON	405
620.0801	BEDDING MATERIAL, TYPE 1	CY	50
621.51970008	GRADING, CLEANING AND RESHAPING EXISTING CHANNELS, DITCHESAND STREAMBEDS	LF	32





555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/14/2023
CHECKED BY	SML	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 203.02

DESCRIPTION: UNCLASSIFIED EXCAVATION AND DISPOSAL

QUANTITY: 45 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_179.dgn

Sed. = Sediment Bar

**MP 179.76**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
E3:				
(a.)-Apron	37	4.58	169.58	6.28
(b.)-Scour	360	3.08	1110.00	41.11

Note:

E3(a.) = apron excluding the area of scour hole. It is within 1.5 ft of stream degradation, therefore depth minus 1.5 ft.

E3(c.) = area of scour hole, therefore depth minus 3 ft.

Total Volume (CY) = 47.4

47.4

Total = 47.4

Say = 45



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	8/9/2023
CHECKED BY	MLS	DATE	8/25/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

**ITEM NO.** 203.61000625

**DESCRIPTION:** TEMPORARY HAUL ROAD(S)

**QUANTITY:** 1 LS

Subtotal

Temporary Haul Road is a Lump Sum item.

Lump Sum = 1.0 LS

1.0

This temporary haul road is located at MP 179.76 along the Northwest Bank.

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	11/8/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 203.61000725

DESCRIPTION: TEMPORARY HAUL ROAD(S)

QUANTITY: 1 LS

Subtotal

Temporary Haul Road is a Lump Sum item.

Lump Sum = 1.0 LS

1.0

This temporary haul road is located at MP 179.76 along the Southeast Bank.

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/14/2023
CHECKED BY	SML	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 206.0201

DESCRIPTION: TRENCH AND CULVERT EXCAVATION

QUANTITY: 165 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_179.dgn

**MP 179.76**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
E1-Key	245	6	1470.00	54.44
E2-Key	197	6	1182.00	43.78
E4:				
(a.)-Key	123	4.50	553.50	20.50
(b.)-Key	49	4.50	220.50	8.17
(b.)-Scour	276	3.50	966.00	35.78

Note:

E4 (a.) & E4 (b.)= key excluding the area of scour hole. It is within 1.5 ft of stream degradation, therefore depth minus 1.5 ft.

E4 (b.)= key including the rearend area of scour hole. It's less deep than the center of scour hole, therefore depth minus 2.5 ft.

Total Volume (CY) = 162.7

162.7

Total = 162.7

Say = 165



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	8/24/2023
CHECKED BY	KMM	DATE	8/25/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 206.05

DESCRIPTION: TEST PIT EXCAVATION

QUANTITY: 2 EACH

Assume one test hole is required at this site. See reconstruction notes on General Notes Sheet

Assume Quantity = 2.0 at MP 179.76

Subtotal

2.0

Total = 2.0

Say = 2



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/14/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 209.1501

DESCRIPTION: TURBIDITY CURTAIN - TEMPORARY

QUANTITY: 568 LF

Subtotal

\*All Lengths Measured in Microstation, 214817\_est\_179.dgn

**MP 179.76**

Turbidity Curtain Length for Stage 1:	286	LF
Turbidity Curtain Length for Stage 2:	282	LF
Total Length (LF):	568	LF

568.0

Total = 568.0

Say = 568



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	11/8/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 209.22

DESCRIPTION: CONSTRUCTION ENTRANCE

QUANTITY: 133 SY

Area per Construction Entrance =	1196.0 SF	Measured in Microstation,
Area per Construction Entrance =	132.9 SY	214817_est_174.dgn
Number of Entrances =	1 EA	
Total Area =	132.9 SY	

Subtotal

132.9

Total =	132.9
Say =	133



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	KMM	DATE	8/22/2023
CHECKED BY	MT	DATE	8/23/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 553.030007

DESCRIPTION: TEMPORARY WATERWAY DIVERSION STRUCTURE

QUANTITY: 1 EACH

**MP 179.76**

Temporary Waterway Diversion Structure for Stage 1 = 1.00 EA

Subtotal

1.0

Total = 1.0

Say = 1





555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	KMM	DATE	8/22/2023
CHECKED BY	MT	DATE	8/23/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 553.030008

DESCRIPTION: TEMPORARY WATERWAY DIVERSION STRUCTURE

QUANTITY: 1 EACH

**MP 179.76**

Temporary Waterway Diversion Structure for Stage 2 = 1.00 EA

Subtotal

1.0

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/13/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 556.0202

DESCRIPTION: EPOXY-COATED BAR REINFORCEMENT FOR STRUCTURES

QUANTITY: 100 LB

Subtotal

\*#5 Bar weight 1.043 lb/ft  
 \*#8 Bar weight 2.670 lb/ft  
 \*Assumed only 5% of the bars need to be replaced.  
 \*All Length measured in DWG. ST4-02  
 \*Number of Bar calculated based on Record Plan TAA90-73B, pg 10

**MP 179.76**

Location C1:

Number of #5 Bar:	7	(Assumed)
Length of #5 Bar:	58.0	FT
Total Weight of #5 Bar:	21.2	LB, 5% applied
Number of #8 Bar:	58	(Assumed)
Length of #8 Bar:	4.8	FT
Total Weight of #8 Bar:	37.4	LB, 5% applied

Location C2:

Number of #5 Bar:	7	(Assumed)
Length of #5 Bar:	6.5	FT
Total Weight of #5 Bar:	2.4	LB, 5% applied
Number of #8 Bar:	6	(Assumed)
Length of #8 Bar:	4.8	FT
Total Weight of #8 Bar:	3.9	LB, 5% applied

Location C3:

Number of #5 Bar:	7	(Assumed)
Length of #5 Bar:	4.0	FT
Total Weight of #5 Bar:	1.5	LB, 5% applied
Number of #8 Bar:	4	(Assumed)
Length of #8 Bar:	4.8	FT
Total Weight of #8 Bar:	2.6	LB, 5% applied

Total: 68.9

Say 100 LB MLS 11/15/2023

Total =	100.0
Say =	100



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	10/26/2023
CHECKED BY	SML	DATE	11/7/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 582.06

DESCRIPTION: REMOVAL OF STRUCTURAL CONCRETE - REPLACEMENT WITH CLASS D CONCRETE

QUANTITY: 333 SF

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_179.dgn

**MP 179.76**

Location	Area* (SF)
C1	281
C2	32
C3	20

Total Area (SF) = 333.0

333.0

Total = 333.0

Say = 333



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/14/2023
CHECKED BY	SML	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 613.04000001

DESCRIPTION: STOCKPILING AND PLACING EXISTING STREAM BED MATERIALS

QUANTITY: 25 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_179.dgn

**MP 179.76**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
S6-Apron	397	0.33	132.33	4.90
S7-Key	448	0.33	149.33	5.53

Total Volume (CY) = 10.4

10.4

MLS 11/15/2023

Assume that an additional 12 CY of existing material may remain on site. Assume this material will be removed, stockpiled and placed under this item.

Quantity = 12 CY

12.0

Total = 22.4

Say = 25



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/10/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

**ITEM NO.** 614.060102

**DESCRIPTION:** TREE REMOVAL OVER 4 INCHES TO 6 INCHES DIAMETER BREAST HEIGHT -  
STUMPS CUT FLUSH

**QUANTITY:** 5 EACH

**MP 179.76**

Number of Trees to be Removed: 5 EACH

Subtotal

5.0

Total = 5.0

Say = 5



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/10/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

**ITEM NO.** 614.060202

**DESCRIPTION:** TREE REMOVAL OVER 6 INCHES TO 12 INCHES DIAMETER BREAST HEIGHT -  
STUMPS CUT FLUSH

**QUANTITY:** 1 EACH

**MP 179.76**

Number of Trees to be Removed: 1 EACH

Subtotal

1.0

Total = 1.0  
Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/14/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 620.01500825

DESCRIPTION: STONE FILLING, CLASS VIII (BY WEIGHT)

QUANTITY: 470 TON

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_179.dgn

\*Weight (lbs) = 0.85 x 2.65 x 62.4 x Volume (cf)

\*Assumed % of void = 15% when placed.

**MP 179.76**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Weight (LBS)	Placement Weight (TONS)
S1-Bank	599	5	2995.00	420965.22	178.9
S2-Key	239	6	1434.00	201557.30	85.7
S3-Key	192	6	1152.00	161920.51	68.8
S4-Bank	463	5	2315.00	325387.14	138.3

Total Placement Weight with 15% Voids Assumed (TONS) = 471.7

471.7

Total = 471.7

Say = 470



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/14/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 620.01500925

DESCRIPTION: STONE FILLING, CLASS IX (BY WEIGHT)

QUANTITY: 405 TON

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_179.dgn

\*Weight (lbs) = 0.85 x 2.65 x 62.4 x Volume (cf)

\*Assumed % of void = 15% when placed.

**MP 179.76**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Weight (LBS)	Placement Weight (TONS)
S5-Bank	219	5	1095.00	153908.82	65.4
S6-Apron	397	5	1985.00	279003.66	118.6
S7-Key	448	6	2688.00	377814.53	160.6
S8-Bank	205	5	1025.00	144069.90	61.2

Total Placement Weight with 15% Voids Assumed (TONS) = 405.8

405.8

Total = 405.8

Say = 405





555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/14/2023
CHECKED BY	SML	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

ITEM NO. 620.0801

DESCRIPTION: BEDDING MATERIAL, TYPE 1

QUANTITY: 50 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_179.dgn

**MP 179.76**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
S1-Bank	599	0.75	449.25	16.64
S4-Bank	463	0.75	347.25	12.86
S5-Bank	219	0.75	164.25	6.08
S6-Apron	397	0.75	297.75	11.03
S8-Bank	205	0.75	153.75	5.69

Total Volume (CY) = 52.3

52.3

Total = 52.3

Say = 50



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	10/26/2023
CHECKED BY	SML	DATE	11/7/2023
REMARK	Nov. Engineers Estimate (MP 179.76)		

**ITEM NO.** 621.51970008

**DESCRIPTION:** GRADING, CLEANING AND RESHAPING EXISTING CHANNELS, DITCHES AND STREAMBEDS

**QUANTITY:** 32 LF

\*All Areas Measured in Microstation, 214817\_est\_179.dgn

**MP 179.76**

Length of Grading, Cleaning and Reshaping @ Inlet:	32	LF
Total Length (LF):	32	LF

Subtotal

32.0

Total = 32.0  
Say = 32

## CHAPTER 5

### MP 185.93

**D214960 ALBANY DIVISION SCOUR REPAIR AT VARIOUS BRIDGES - MP 165.10 TO MP  
185.93 QUANTITY CALCULATIONS FOR MP 185.93 (PDG NOV. 2023)**

ITEM #	DESCRIPTION	UNIT	QUANTITY
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	60
203.61000825	TEMPORARY HAUL ROAD(S)	LS	1
203.61000925	TEMPORARY HAUL ROAD(S)	LS	1
206.0201	TRENCH AND CULVERT EXCAVATION	CY	95
209.1501	TURBIDITY CURTAIN - TEMPORARY	LF	491
209.22	CONSTRUCTION ENTRANCE	SY	266
553.030009	TEMPORARY WATERWAY DIVERSION STRUCTURE	EACH	1
553.030010	TEMPORARY WATERWAY DIVERSION STRUCTURE	EACH	1
613.04000001	STOCKPILING AND PLACING EXISTING STREAM BED MATERIALS	CY	12
614.060202	TREE REMOVAL OVER 6 INCHES TO 12 INCHES DIAMETER BREAST HEIGHT - STUMPS CUT FLUSH	EACH	3
614.060302	TREE REMOVAL OVER 12 INCHES TO 18 INCHES DIAMETER BREASTHEIGHT - STUMPS CUT FLUSH	EACH	1
620.01500925	STONE FILLING, CLASS IX (BY WEIGHT)	TON	140
620.05	STONE FILLING (HEAVY)	CY	75
620.0801	BEDDING MATERIAL, TYPE 1	CY	15
621.51970008	GRADING, CLEANING AND RESHAPING EXISTING CHANNELS, DITCHESAND STREAMBEDS	LF	50



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	10/26/2023
CHECKED BY	SML	DATE	11/8/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

ITEM NO. 203.02

DESCRIPTION: UNCLASSIFIED EXCAVATION AND DISPOSAL

QUANTITY: 60 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_185.dgn

Sed. = Sediment Bar

**MP 185.93**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
E2-Sed.	141	2	282.00	10.44
E4-Apron	687	2	1374.00	50.89

Total Volume (CY) = 61.3

61.3

Total = 61.3

Say = 60



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	8/9/2023
CHECKED BY	MLS	DATE	8/25/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

ITEM NO. 203.61000825

DESCRIPTION: TEMPORARY HAUL ROAD(S)

QUANTITY: 1 LS

Subtotal

Temporary Haul Road is a Lump Sum item.

Lump Sum = 1.0 LS

1.0

This temporary haul road is located at MP 185.93 along the Northwest Bank.

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	11/8/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

ITEM NO. 203.61000925

DESCRIPTION: TEMPORARY HAUL ROAD(S)

QUANTITY: 1 LS

Subtotal

Temporary Haul Road is a Lump Sum item.

Lump Sum = 1.0 LS

1.0

This temporary haul road is located at MP 185.93 along the Southwest Bank.

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	10/30/2023
CHECKED BY	SML	DATE	11/8/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

ITEM NO. 206.0201

DESCRIPTION: TRENCH AND CULVERT EXCAVATION

QUANTITY: 95 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_185.dgn

**MP 185.93**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
E1-Key	154	4	616.00	22.81
E3-Key	153	4	612.00	22.67
E5-Key	102	6	612.00	22.67
E6-Key	110	6	660.00	24.44

Total Volume (CY) = 92.6

92.6

Total = 92.6

Say = 95





555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/14/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

ITEM NO. 209.1501

DESCRIPTION: TURBIDITY CURTAIN - TEMPORARY

QUANTITY: 491 LF

Subtotal

\*All Lengths Measured in Microstation, 214817\_est\_185.dgn

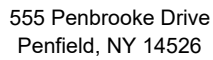
**MP 185.93**

Turbidity Curtain Length for Stage 1:	241	LF
Turbidity Curtain Length for Stage 2:	250	LF
Total Length (LF):	491	LF

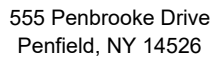
491.0

Total = 491.0

Say = 491



JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	SML	DATE	11/8/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		



JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	KMM	DATE	8/22/2023
CHECKED BY	MT	DATE	8/23/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

**QUANTITY:** 1 EACH

Subtotal

**MP 185.93**

Temporary Waterway Diversion Structure for Stage 1 = 1.00 EA

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1.0

Total =	1.0
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Say =	1
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555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	KMM	DATE	8/22/2023
CHECKED BY	MT	DATE	8/23/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

ITEM NO. 553.030010

DESCRIPTION: TEMPORARY WATERWAY DIVERSION STRUCTURE

QUANTITY: 1 EACH

**MP 185.93**

Temporary Waterway Diversion Structure for Stage 2 = 1.00 EA

Subtotal

1.0

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MLS	DATE	11/15/2023
CHECKED BY	SML	DATE	11/15/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

ITEM NO. 613.04000001

DESCRIPTION: STOCKPILING AND PLACING EXISTING STREAM BED MATERIALS

QUANTITY: 12 CY

Assume that 12 CY of existing material may remain on site. Assume this material will be removed, stockpiled and placed under this item.

Quantity = 12 CY

Subtotal

12.0

Total = 12.0

Say = 12



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/10/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

ITEM NO. 614.060202

DESCRIPTION: TREE REMOVAL OVER 6 INCHES TO 12 INCHES DIAMETER BREAST HEIGHT -  
STUMPS CUT FLUSH

QUANTITY: 3 EACH

**MP 185.93** SEE DRAWING NO. ST5-02

Number of Trees to be Removed: 3 EACH

Subtotal

3.0

Total = 3.0

Say = 3



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/10/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

**ITEM NO.** 614.060302

**DESCRIPTION:** TREE REMOVAL OVER 12 INCHES TO 18 INCHES DIAMETER BREASTHEIGHT -  
STUMPS CUT FLUSH

**QUANTITY:** 1 EACH

**MP 185.93** SEE DRAWING NO. ST5-02

Number of Trees to be Removed: 1 EACH

Subtotal

1.0

Total = 1.0

Say = 1



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	11/14/2023
CHECKED BY	MLS	DATE	11/14/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

ITEM NO. 620.01500925

DESCRIPTION: STONE FILLING, CLASS IX (BY WEIGHT)

QUANTITY: 140 TON

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_185.dgn

\*Weight (lbs) = 0.85 x 2.65 x 62.4 x Volume (cf)

\*Assumed % of void = 15% when placed.

**MP 185.93**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Weight (LBS)	Placement Weight (TONS)
S5-Bank	100	5	500.00	70278.00	29.9
S6-Key	102	6	612.00	86020.27	36.6
S7-Key	110	6	660.00	92766.96	39.4
S8-Bank	112	5	560.00	78711.36	33.5

Total Placement Weight with 15% Voids Assumed (TONS) = 139.3

139.3

Total = 139.3

Say = 140





555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	10/26/2023
CHECKED BY	SML	DATE	11/8/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

ITEM NO. 620.05

DESCRIPTION: STONE FILLING (HEAVY)

QUANTITY: 75 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_185.dgn

**MP 185.93**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
S1-Bank	151	2.5	377.50	13.98
S2-Key	154	4	616.00	22.81
S3-Key	153	4	612.00	22.67
S4-Bank	152	2.5	380.00	14.07

Total Volume (CY) = 73.5

73.5

Total = 73.5

Say = 75



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	10/26/2023
CHECKED BY	SML	DATE	11/8/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

ITEM NO. 620.0801

DESCRIPTION: BEDDING MATERIAL, TYPE 1

QUANTITY: 15 CY

Subtotal

\*All Areas Measured in Microstation, 214817\_est\_185.dgn

**MP 185.93**

Location	Area* (SF)	Depth (FT)	Volume (CF)	Volume (CY)
S1-Bank	151	0.75	113.25	4.19
S4-Bank	152	0.75	114.00	4.22
S5-Bank	100	0.75	75.00	2.78
S8-Bank	112	0.75	84.00	3.11

Total Volume (CY) = 14.3

14.3

Total = 14.3

Say = 15



555 Penbrooke Drive  
Penfield, NY 14526

JOB NO.	D214817		
SHEET NO.	1	OF	1
CALCULATED BY	MT	DATE	10/26/2023
CHECKED BY	SML	DATE	11/8/2023
REMARK	Nov. Engineers Estimate (MP 185.93)		

ITEM NO. 621.51970008

DESCRIPTION: GRADING, CLEANING AND RESHAPING EXISTING CHANNELS, DITCHESAND  
STREAMBEDS

QUANTITY: 50 LF

Subtotal

\*All Lengths Measured in Microstation, 214817\_est\_185.dgn

**MP 185.93**

Length of Grading, Cleaning and Reshaping @ Inlet:	31	LF
Length of Grading, Cleaning and Reshaping @ Outlet:	19	LF
Total Length (LF):	50	LF

50.0

Total = 50.0  
Say = 50

## CHAPTER 6

### PROJECTWIDE ITEMS

**D214960 ALBANY DIVISION SCOUR REPAIR AT VARIOUS BRIDGES - MP 165.10 TO MP  
185.93 QUANTITY CALCULATIONS FOR PROJECTWIDE ITEMS**

ITEM #	DESCRIPTION	UNIT	QUANTITY
619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	1
625.01	SURVEY OPERATIONS	LS	1
637.11000025	ENGINEER'S FIELD OFFICE - TYPE 1	MNTH	12
697.02030025	FIELD CHANGE ORDER	DC	144,000
699.04000025	MOBILIZATION 4%	LS	1

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10 TO MP 185.93	AP	JPOL		
SUBJECT	Nov. Engineers Estimate	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 619.01

DESCRIPTION: BASIC WORK ZONE TRAFFIC CONTROL

QUANTITY 1 LS

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10 TO MP 185.93	AP	JPOL		
SUBJECT	Nov. Engineers Estimate	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 625.01

DESCRIPTION: SURVEY OPERATIONS

QUANTITY 1 LS

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10 TO MP 185.93	AP	JPOL		
SUBJECT	Nov. Engineers Estimate	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 637.11000025

DESCRIPTION: ENGINEER'S FIELD OFFICE - TYPE 1

QUANTITY 12 MNTH

The estimated time of construction

Month(s) = 12 (Total for the project)



CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10 TO MP 185.93	AP	JPOL		
SUBJECT	Nov. Engineers Estimate	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 697.02030025

DESCRIPTION: FIELD CHANGE ORDER

Q QUANTITY 144,000 DC

CLIENT	NYSTA	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	MP 165.10 TO MP 185.93	AP	JPOL		
SUBJECT	Nov. Engineers Estimate	DATE	DATE	REVISION	SHEET NO.
		11/16/23	11/20/23	1	

ITEM NO. 699.04000025

DESCRIPTION: MOBILIZATION 4%

QUANTITY 1 LS