

IHNC Excavation Quantities

Tentatively Selected Plan

Description	New Lock Excavation & Bypass Channel Qty. (Cubic Yards, CY)	New Lock Excavation (Main Channel - DMMU's 3, 4, & 5), CY	Bypass Channel (DMMU's 6 & 7), CY	Excavation @ Existing Lock (DMMU's 9 & 10), CY	Total Excavation @ New & Existing Lock, CY
summation formula	a+b	a	b	c	a+b+c
Plan 1 - No Action	-	-	-	-	-
Plan 2 - 110 x 900 x Sill El. -22.0	453,261	347,494	105,767	265,559	718,820
Plan 3 - 110 x 1200 x Sill El. -22.0	553,885	426,207	127,678	265,559	819,444
Plan 4 - 75 x 900 x Sill El. -22.0	427,691	333,094	94,596	265,559	693,250
Plan 5 - 75 x 1200 x Sill El. -22.0	521,524	409,156	112,369	265,559	787,083

Disposition of Excavated Channel Material - For Tentatively Selected Plan (TSP) - Plan 2

Contaminated Material Barged to Venice Landfill (DMMU 5 & 7)	104,909	DMMU 7 includes 1-ft overdredge
Good Material Disposed in MS River (DMMU 3, 4, 6, 9 & 10)	613,911	DMMU 6 includes 1-ft overdredge
total exc @ new & exist lock	718,820	for backcheck

Note:
 No need to calculate the 1-ft of over dredge qty for DMMU's 3, 4, & 5, because excavation occurs within the main channel. The required excavation depth for the main channel is EL. -33.0, which includes the extra 1-ft for the stabilization slab.

1-ft over dredge qty was included with DMMU 6

old survey total qty	809956
new survey qty	718,820
difference	91,136
% decrease based on new surveys	11%

**IHNC Cost Quantities - For Sill Elevation of El. -22.0
For Plan 2 - 110 X 900**

*The stations for the x-sections shown are along the C/L of the New Lock & Sector Gate Structures & existing channel.
*The excavation areas for each DMMU were determined using Microstatic
*Changes made; Bypass Channel El. -17 (includes 3 ft of Adv. Maint. Dredging), Stations are every 100-ft

For the 900-ft Lock, Excavation would no start until approximate C/L Exist Channel Station 158+00.

EXCAVATION - C/L NEW LOCK STA. 155+00 TO STA. 171+00														Over-Depth/Dredge Quantity				
C/L Exist Channel Station	C/L Exist Channel Station	End Area (ft²)	Dist (ft)	Volume (CY)	#3, End Area (ft²)	#3, CY	#4, End Area (ft²)	#4, CY	#5, End Area (ft²)	#5, CY	#6, End Area (ft²)	#6, CY	#7, End Area (ft²)	#7, CY	#6, End Area (ft²)	#6, CY	#7, End Area (ft²)	#7, CY
1	23+44	155+00	0		0		0		-		0		-		0		-	
2	24+44	156+00	0	100	0	0	0	0	-		0	0	-		0	0	-	
3	25+44	157+00	0	100	0	0	0	0	-		0	0	-		0	0	-	
4	26+44	158+00	9231	100	34383	4570	17228	2616	9548		1847	6880	-		198	728	-	
5	27+44	159+00	9336	100	34767	4733	17406	2540	9520		1868	7122	-		195	719	-	
6	28+44	160+00	9438	100	35124	4666	17106	2601	9769		1978	7543	-		193	707	-	
7	29+44	161+00	9529	100	35574	4571	17450	2674	9576		2095	7846	-		189	702	-	
8	30+44	162+00	9681	100	35954	4852	18348	2497	8678		2142	8022	-		190	706	-	
9	31+44	163+00	9734	100	35252	5056	18422	-	2297	8676	2190	7441	-		191	713	-	
10	32+44	164+00	9302	100	33644	4892	17809	-	2388	9043	1828	6070	-		194	722	-	
11	33+44	165+00	8866	100	33170	4725	17765	-	2495	8844	1450	5846	-		196	715	-	
12	34+44	166+00	9046	100	33835	4868	18267	-	2281	8091	1707	6778	-		190	700	-	
13	35+44	167+00	9225	100	34515	4996	18183	-	2088	8039	-	7598	1953		-	188	694	
14	36+44	168+00	9413	100	35191	4823	17507	-	2253	8694	-	8307	2150		-	187	681	
15	37+44	169+00	9590	100	35778	4631	17522	-	2442	8965	-	8615	2336		-	181	676	
16	38+44	170+00	9730	100	36074	4831	18089	-	2399	8750	-	8559	2316		-	184	676	
17	39+44	171+00	9750			4937		-	2326		-		2306		-	181		
Total Excavation @ New Lock & Bypass						453,261	#3 231,102	#4 47,291	#5 69,102	#6 63,548	#7 33,080	#6 over 6,411	#7 over 2,728					

New Lock (DMMU 3, 4, & 5) 347,494

Bypass Channel (DMMU 6 & 7) 105,767

453,261 for backcheck

Disposal Methods

Contaminated Material Barged to Venice Landfill (DMMU 5 + 7 + 7 over) 104,909

Good Material Disposed in MS River (DMMU 3 + 4 + 6 over) 348,352

453,261 for backcheck

**IHNC Cost Quantities - For Sill Elevation of EI. -22.0
For Plan 3 - 110 X 1200**

*The stations for the x-sections shown are along the c/l of the new Lock & Sector Gate Structures & existing channel.
*The excavation areas for each DMMU were determined using Microstation.
*Changes made; Bypass Channel EI. -17 (includes 3 ft of Adv. Maint. Dredging), Stations are every 100-ft.

C/L Exist Channel Station	C/L Exist Channel Station	End Area (ft²)	Dist (ft)	Volume (CY)	EXCAVATION - C/L NEW LOCK STA. 155+00 TO STA. 171+00							Over-Depth/Dredge Quantity							
					#3_End Area (ft²)	#3_CY	#4_End Area (ft²)	#4_CY	#5_End Area (ft²)	#5_CY	#6_End Area (ft²)	#6_CY	#7_End Area (ft²)	#7_CY	#6_End Area (ft²)	#6_CY	#7_End Area (ft²)	#7_CY	
1	23+44	155+00	8830			4841		2270		-		1531		-		188		-	
2	24+44	156+00	8988	100	32996	17537		2441		-		1720		-		198		-	
3	25+44	157+00	9150	100	33589	16730		2629		-		1915		-		201		-	
4	26+44	158+00	9231	100	34383	17228		2616		-		1847		-		198		-	
5	27+44	159+00	9336	100	34767	17406		2540		-		1868		-		195		-	
6	28+44	160+00	9438	100	35124	17106		2601		-		1978		-		193		-	
7	29+44	161+00	9529	100	35574	17450		2674		-		2095		-		189		-	
8	30+44	162+00	9681	100	35954	18348		2497		-		2142		-		190		-	
9	31+44	163+00	9734	100	35252	18422		-	2297		-	2190		-		191		-	
10	32+44	164+00	9302	100	33644	17809		-	2388		-	1828		-		194		-	
11	33+44	165+00	8866	100	33170	17765		-	2495		-	1450		-		196		-	
12	34+44	166+00	9046	100	33835	18267		-	2281		-	1707		-		190		-	
13	35+44	167+00	9225	100	34515	18183		-	2088		-	-	1953		-	-	188		188
14	36+44	168+00	9413	100	35191	17507		-	2253		-	-	2150		-	-	187		187
15	37+44	169+00	9590	100	35778	17522		-	2442		-	-	-	2336		-	181		181
16	38+44	170+00	9730	100	36074	18089		-	2399		-	-	2316		-	-	184		184
17	39+44	171+00	9750			4937		-	2326		-	-	2306		-	-	181		181
						#3	#4	#5	#6	#7			#6 over	#7 over					
Total Excavation @ New Lock & Bypass						553,885	281,989	75,117	69,102	83,267	33,080			8,604	2,728				

New Lock (DMMU 3, 4, & 5) 426,207
Bypass Channel (DMMU 6 & 7) 127,678
553,885 for backcheck

Disposal Methods
Contaminated Material Barged to Venice Landfill (DMMU 5 + 7 + 7 over) 104,909
Good Material Disposed in MS River (DMMU 3 + 4 + 6 + 6 over) 448,976
553,885 for backcheck

553,885

**IHNC Cost Quantities - For Sill Elevation of El. -22.0
For Plan 4 - 75 X 900**

*The stations for the x-sections shown are along the c/l of the new Lock & Sector Gate Structures & existing channel.
*The excavation areas for each DMMU were determined using Microstation.
*Changes made; Bypass Channel El. -17 (includes 3 ft of Adv. Maint. Dredging), Stations are every 100-ft.

For the 900-ft Lock, Excavation would not start until approximate C/L Exist Channel Station 158+00.

EXCAVATION - C/L NEW LOCK STA. 155+00 TO STA. 171+00														Over-Depth/Dredge Quantity				
C/L Exist Channel Station	C/L Exist Channel Station	End Area (ft²)	Dist (ft)	Volume (CY)	#3_End Area (ft²)	#3_CY	#4_End Area (ft²)	#4_CY	#5_End Area (ft²)	#5_CY	#6_End Area (ft²)	#6_CY	#7_End Area (ft²)	#7_CY	#6_End Area (ft²)	#6_CY	#7_End Area (ft²)	#7_CY
1	23+44	155+00	0		0		0		-		0		-		0		-	
2	24+44	156+00	0	100	0	0	0	0	-		0	0	-		0	0	-	
3	25+44	157+00	0	100	0	0	0	0	-		0	0	-		0	0	-	
4	26+44	158+00	8677	100	32333	4606	17374	2306	-		1565	5893	-		200	722	-	
5	27+44	159+00	8783	100	32817	4776	17494	2200	-		1617	6248	-		190	706	-	
6	28+44	160+00	8938	100	33152	4671	17187	2319	-		1757	6694	-		191	702	-	
7	29+44	161+00	8964	100	33487	4610	17476	2308	-		1858	6987	-		188	696	-	
8	30+44	162+00	9119	100	33850	4827	18298	2189	-		1915	7152	-		188	696	-	
9	31+44	163+00	9160	100	33988	5054	18396	-	1971	7528	1947	6476	-		188	698	-	
10	32+44	164+00	8713	100	31394	4880	17761	-	2094	7900	1550	5028	-		189	706	-	
11	33+44	165+00	8240	100	31204	4711	17885	-	2172	7783	1165	4830	-		192	706	-	
12	34+44	166+00	8610	100	32017	4947	18420	-	2031	7120	1443	5793	-		189	683	-	
13	35+44	167+00	8679	100	32720	5000	18315	-	1814	7030	-	6694	1685		-	180	681	
14	36+44	168+00	8990	100	33443	4890	17630	-	1982	7506	-	7613	1930		-	188	694	
15	37+44	169+00	9069	100	33854	4630	17507	-	2071	7596	-	8063	2181		-	187	687	
16	38+44	170+00	9212	100	34322	4824	18206	-	2031	7369	-	8069	2173		-	184	680	
17	39+44	171+00	9322			5007		-	1948		-		2184		-	183		
						#3	#4	#5	#6	#7	#6 over	#7 over						
Total Excavation @ New Lock & Bypass					427,691	231,950	41,313	59,831	55,100	30,439	6,315	2,743						

Total Excavation @ New Lock & Bypass

427,691

New Lock (DMMU 3, 4, & 5)

333,094

Bypass Channel (DMMU 6 & 7)

94,596

427,691 for backcheck

Disposal Methods

Contaminated Material Barged to Venice Landfill (DMMU 5 + 7 + 7 over) 93,013

Good Material Disposed in MS River (DMMU 3 + 4 + 6 + 6 over) 334,678

427,691 for backcheck

427,691

**IHNC Cost Quantities - For Sill Elevation of El. -22.0
For Plan 5 - 75 X 1200**

*The stations for the x-sections shown are along the c/l of the new Lock & Sector Gate Structures & existing channel.
*The excavation areas for each DMMU were determined using Microstation.
*Changes made; Bypass Channel El. -17 (includes 3 ft of Adv. Maint. Dredging), Stations are every 100-ft.

EXCAVATION - C/L NEW LOCK STA. 155+00 TO STA. 171+00														Over-Depth/Dredge Quantity				
C/L Exist Channel Station	C/L Exist Channel Station	End Area (ft²)	Dist (ft)	Volume (CY)	#3_End Area (ft²)	#3_CY	#4_End Area (ft²)	#4_CY	#5_End Area (ft²)	#5_CY	#6_End Area (ft²)	#6_CY	#7_End Area (ft²)	#7_CY	#6_End Area (ft²)	#6_CY	#7_End Area (ft²)	#7_CY
1	23+44	155+00	8291		4846		2015		-		1250		-		180		-	
			100	30630		17615		7713				4602				700		
2	24+44	156+00	8249		4666		2150		-		1235		-		198		-	
			100	31206		16928		8350				5283				644		
3	25+44	157+00	8602		4475		2359		-		1618		-		150		-	
			100	31998		16817		8639				5894				648		
4	26+44	158+00	8677		4606		2306		-		1565		-		200		-	
			100	32333		17374		8344				5893				722		
5	27+44	159+00	8783		4776		2200		-		1617		-		190		-	
			100	32817		17494		8369				6248				706		
6	28+44	160+00	8938		4671		2319		-		1757		-		191		-	
			100	33152		17187		8569				6694				702		
7	29+44	161+00	8964		4610		2308		-		1858		-		188		-	
			100	33487		17476		8328				6987				696		
8	30+44	162+00	9119		4827		2189		-		1915		-		188		-	
			100	33850		18298		7704				7152				696		
9	31+44	163+00	9160		5054		-		1971		1947		-		188		-	
			100	33098		18396			7528			6476				698		
10	32+44	164+00	8713		4880		-		2094		1550		-		189		-	
			100	31394		17761			7900			5028				706		
11	33+44	165+00	8240		4711		-		2172		1165		-		192		-	
			100	31204		17885			7783			4830				706		
12	34+44	166+00	8610		4947		-		2031		1443		-		189		-	
			100	32017		18420			7120			5793				683		
13	35+44	167+00	8679		5000		-		1814		-		1685		-		180	
			100	32720		18315			7030				6694				681	
14	36+44	168+00	8990		4890		-		1982		-		1930		-		188	
			100	33443		17630			7506				7613				694	
15	37+44	169+00	9069		4630		-		2071		-		2181		-		187	
			100	33854		17507			7596				8063				687	
16	38+44	170+00	9212		4824		-		2031		-		2173		-		184	
			100	34322		18206			7369				8069				680	
17	39+44	171+00	9322		5007		-		1948		-		2184		-		183	
						#3		#4		#5		#6		#7		#6 over		#7 over
						283,309		66,015		59,831		70,880		30,439		8,307		2,743

Total Excavation @ New Lock & Bypass

521,524

New Lock (DMMU 3, 4, & 5) 409,156

Bypass Channel (DMMU 6 & 7) 112,369

521,524 for backcheck

Disposal Methods

Contaminated Material Barged to Venice Landfill (DMMU 5 + 7 + 7 over) 93,013

Good Material Disposed in MS River (DMMU 3 + 4 + 6 + 6 over) 428,511

521,524 for backcheck

521,524

IHNC Cost Quantities

For Excavation at the Existing Lock Structure - Sill El. -35.0

*The stations for the x-sections shown are along the c/l of the existing Lock & Sector Gate Structures.

*The quantities shown will be excavation required removal of the existing lock walls. The sill to remain in place.

<u>C/L Exist Channel Station</u>	<u>End Area (ft²)</u>	<u>Distance (ft)</u>	<u>Volume (cubic yards, CY)</u>	<u>Cumulative Volume (cubic yards, CY)</u>
For Excavation Area #9				
125+00	5024			
		100	20837	20837
126+00	6228			
		100	22259	43096
127+00	5792			
		100	20550	63646
128+00	5305			
		100	19050	82696
129+00	4982			
		100	18328	101024
130+00	4915			
		100	17589	118613
131+00	4583			
		100	17813	136426
132+00	5036			
		100	19519	155944
133+00	5504			
		100	17396	173341
134+00	3890			
		100	7204	180544
135+00	0			
Total Cubic Yards of Excavation for Area #9				180544
For Excavation Area #10				
125+00	1812			
		100	8783	8783
126+00	2931			
		100	10296	19080
127+00	2629			
		100	9498	28578
128+00	2500			
		100	9131	37709
129+00	2431			
		100	8893	46602
130+00	2371			
		100	8776	55378
131+00	2368			
		100	8915	64293
132+00	2446			
		100	8798	73091
133+00	2305			
		100	8096	81187
134+00	2067			
		100	3828	85015
135+00	0			
Total Cubic Yards of Excavation for Area #10				85015

Total for Both 9 & 10

265,559.26