

Estimate EC2/3 - Alt C

Estimated Cost:\$110,886,625.00

Contingency: 0.00%

Estimated Total: \$110,886,625.00

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative C

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/29/11

Checked by Steven Shadix on 01/13/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	10.000	CY	\$4.00000	\$40.00
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Total for Group 0001:\$40.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	1,429,406.000	CY	\$3.00000	\$4,288,218.00
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Total for Group 0002:\$4,288,218.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$30.00000	\$0.00
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Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	3,200.000	FT	\$12.00000	\$38,400.00
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0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	58,680.000	SF	\$4.00000	\$234,720.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	11,736.000	FT	\$12.00000	\$140,832.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	11,736.000	SF	\$14.00000	\$164,304.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	27.000	ACRE	\$1,100.00000	\$29,700.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	0.000	ACRE	\$1,650.00000	\$0.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$607,956.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	130,400.000	SY	\$2.00000	\$260,800.00
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Total for Group 0020:\$260,800.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Conceptual Est: Earthwork Cost \$4,000,000 - 5,000,000</i>	1.000	LS	\$120,000.00000	\$120,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$120,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	23,472.000	FT	\$6.00000	\$140,832.00
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Total for Group 0030:\$140,832.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	268.000	FT	\$375.00000	\$100,500.00
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Total for Group 0031:\$100,500.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	280.000	FT	\$825.00000	\$231,000.00
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Total for Group 0032:\$231,000.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	340.000	FT	\$1,500.00000	\$510,000.00
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Total for Group 0033:\$510,000.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$281,664.00000	\$281,664.00
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Total for Group 0034:\$281,664.00

Group 0040: Mainline Lanes

0018	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	44,336.000	SY	\$41.00000	\$1,817,776.00
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Total for Group 0040:\$1,817,776.00

Group 0041: Ramps

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0042:\$0.00

Group 0050: Utilities

0021	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$16,000.00000	\$16,000.00
0022	F-MC-SANI	1.000	LS	\$25,000.00000	\$25,000.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	Description				
	Supplemental Description				
	MAJOR COST DRIVERS, SANITARY SEWER				
0023	N-OC-DEMO	6.000	EACH	\$1,000,000.00000	\$6,000,000.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Electric Transmission Tower Relocation</i>				

Total for Group 0050:\$6,041,000.00

Group 0060: Lighting - Continuous Roadway

0024	G-MC-LTNG	7,668.000	FT	\$35.00000	\$268,380.00
	MAJOR COST DRIVERS, LIGHTING				

Total for Group 0060:\$268,380.00

Group 0070: Signs

0025	J-MC-TRAF	1.450	MILE	\$250,000.00000	\$362,500.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				

Total for Group 0070:\$362,500.00

Group 0071: Pavement Marking

0026	J-MC-TRAF	5.800	MILE	\$500.00000	\$2,900.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Edge Line</i>				
0027	J-MC-TRAF	2.900	MILE	\$300.00000	\$870.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Lane Line</i>				
0028	J-MC-TRAF	0.000	MILE	\$1,200.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Center Line</i>				
0029	J-MC-TRAF	400.000	FT	\$1.25000	\$500.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Channelizing Line</i>				
0030	J-MC-TRAF	24.000	FT	\$6.00000	\$144.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Stop Line</i>				
0031	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Transverse Line</i>				
0032	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Dotted Line</i>				
0033	J-MC-TRAF	6.000	EACH	\$80.00000	\$480.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Lane Arrow</i>				
0034	J-MC-TRAF	4.000	EACH	\$100.00000	\$400.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Word on Pavement</i>				

Total for Group 0071:\$5,294.00

Group 0072: Signals - Intersections

0035	K-MC-SGNL	0.000	EACH	\$200,000.00000	\$0.00
	MAJOR COST DRIVERS, SIGNALS				

Total for Group 0072:\$0.00

Group 0080: Retaining Walls

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	<u>Description</u> <u>Supplemental Description</u>				
0036	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS	0.000	SF	\$100.00000	\$0.00
Total for Group 0080:					\$0.00

Group 0090: Building Demolition

0037	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	0.000	EACH	\$10,000.00000	\$0.00
0038	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	2.000	EACH	\$25,000.00000	\$50,000.00
0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	1.000	EACH	\$750.00000	\$750.00
0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	1.000	EACH	\$2,500.00000	\$2,500.00
Total for Group 0090:					\$53,250.00

Group 0100: New Structures

0042	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over US 50</i>	20,000.000	SF	\$150.00000	\$3,000,000.00
0043	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad</i>	25,000.000	SF	\$150.00000	\$3,750,000.00
0044	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Wooster</i>	20,000.000	SF	\$150.00000	\$3,000,000.00
0045	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad</i>	25,000.000	SF	\$200.00000	\$5,000,000.00
0046	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Little Miami River (highway)</i>	114,000.000	SF	\$250.00000	\$28,500,000.00
0047	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Little Miami River (rail)</i>	45,600.000	SF	\$350.00000	\$15,960,000.00
0048	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over LMR Floodway (highway)</i>	0.000	SF	\$150.00000	\$0.00
0049	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over LMR Floodway (rail)</i>	0.000	SF	\$300.00000	\$0.00
Total for Group 0100:					\$59,210,000.00

Group 0110: Rail Transit

0050	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (DMU)</i>	5,868.000	FT	\$875.00000	\$5,134,500.00
0051	U-MC-MISC	1,800.000	FT	\$935.00000	\$1,683,000.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (DMU)</i>				
0052	U-MC-MISC	1.000	EACH	\$250,000.00000	\$250,000.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Grade Crossing</i>				
0053	U-MC-MISC	1.000	LS	\$3,069,160.00000	\$3,069,160.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Transit Station</i>				
Total for Group 0110:					\$10,136,660.00

Group 0120: Wetland Construction

0054	T-MC-WTLD	0.000	ACRE	\$60,000.00000	\$0.00
	MAJOR COST DRIVERS, WETLAND CONSTRUCTION				
0055	T-OC-WTLD	195.000	FT	\$600.00000	\$117,000.00
	OTHER COSTS, WETLAND CONSTRUCTION <i>Stream Restoration</i>				
Total for Group 0120:					\$117,000.00

Group 0130: Misc. Costs

0056	U-MC-MISC	1.000	LS	\$423,215.00000	\$423,215.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Performance Bond: 0.5% of total project cost (\$84,642,870)</i>				
0057	U-MC-MISC	1.000	LS	\$35,000.00000	\$35,000.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Railroad Insurance Bond</i>				
0058	U-MC-MISC	36.000	MNTH	\$2,500.00000	\$90,000.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Field Office Type C</i>				
0059	U-MC-MISC	1.000	LS	\$2,000,000.00000	\$2,000,000.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Mobilization: from CMS Item 624 for total project cost</i>				
0060	U-MC-MISC	1.000	LS	\$423,215.00000	\$423,215.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Construction Layout Stakes: 0.5% of total project cost (\$84,642,870)</i>				
0061	U-MC-MISC	1.000	LS	\$1,185,000.00000	\$1,185,000.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Maintaining Traffic: 1.4% of total project cost (\$84,642,870)</i>				
Total for Group 0130:					\$4,156,430.00

Group 0140: Design Contingency Costs

0062	V-MC-CNTG	1.000	LS	\$22,177,325.00000	\$22,177,325.00
	MAJOR COST DRIVERS, CONTINGENCY COSTS <i>PDP Design Contingency (step 5): 25% of total construction cost (\$88,709,300)</i>				
Total for Group 0140:					\$22,177,325.00

Estimate EC2/3 - Alt D

Estimated Cost:\$616,901,195.00

Contingency: 0.00%

Estimated Total: \$616,901,195.00

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative D

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/29/11

Checked by Steven Shadix on 01/13/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	3,302.000	CY	\$4.00000	\$13,208.00
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Total for Group 0001:\$13,208.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	391,336.000	CY	\$3.00000	\$1,174,008.00
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Total for Group 0002:\$1,174,008.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$30.00000	\$0.00
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Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	1,700.000	FT	\$12.00000	\$20,400.00
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0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	8,500.000	SF	\$4.00000	\$34,000.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	1,700.000	FT	\$12.00000	\$20,400.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	1,700.000	FT	\$14.00000	\$23,800.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	4.000	ACRE	\$1,100.00000	\$4,400.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	0.000	ACRE	\$1,650.00000	\$0.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$103,000.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	18,889.000	SY	\$2.00000	\$37,778.00
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Total for Group 0020:\$37,778.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Conceptual Est: Earthwork Cost \$1,000,000 - 2,000,000</i>	1.000	LS	\$35,000.00000	\$35,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$35,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	3,400.000	FT	\$6.00000	\$20,400.00
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Total for Group 0030:\$20,400.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$375.00000	\$0.00
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Total for Group 0031:\$0.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$825.00000	\$0.00
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Total for Group 0032:\$0.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	348.000	FT	\$1,500.00000	\$522,000.00
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Total for Group 0033:\$522,000.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$40,800.00000	\$40,800.00
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Total for Group 0034:\$40,800.00

Group 0040: Mainline Lanes

0018	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	6,423.000	SY	\$41.00000	\$263,343.00
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Total for Group 0040:\$263,343.00

Group 0041: Ramps

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0042:\$0.00

Group 0050: Utilities

0021	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$16,000.00000	\$16,000.00
0022	F-MC-SANI	1.000	LS	\$25,000.00000	\$25,000.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

MAJOR COST DRIVERS, SANITARY SEWER

0023	N-OC-DEMO	3.000	EACH	\$1,000,000.00000	\$3,000,000.00
MAJOR COST DRIVERS, BUILDING DEMOLITION					
<i>Electric Transmission Tower Relocation</i>					

Total for Group 0050:\$3,041,000.00

Group 0060: Lighting - Continuous Roadway

0024	G-MC-LTNG	7,519.000	FT	\$35.00000	\$263,165.00
MAJOR COST DRIVERS, LIGHTING					

Total for Group 0060:\$263,165.00

Group 0070: Signs

0025	J-MC-TRAF	1.400	MILE	\$250,000.00000	\$350,000.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					

Total for Group 0070:\$350,000.00

Group 0071: Pavement Marking

0026	J-MC-TRAF	5.600	MILE	\$500.00000	\$2,800.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Edge Line</i>					

0027	J-MC-TRAF	2.800	MILE	\$300.00000	\$840.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Lane Line</i>					

0028	J-MC-TRAF	0.000	MILE	\$1,200.00000	\$0.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Center Line</i>					

0029	J-MC-TRAF	400.000	FT	\$1.25000	\$500.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Channelizing Line</i>					

0030	J-MC-TRAF	24.000	FT	\$6.00000	\$144.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Stop Line</i>					

0031	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Transverse Line</i>					

0032	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Dotted Line</i>					

0033	J-MC-TRAF	6.000	EACH	\$80.00000	\$480.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Lane Arrow</i>					

0034	J-MC-TRAF	4.000	EACH	\$100.00000	\$400.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Word on Pavement</i>					

Total for Group 0071:\$5,164.00

Group 0072: Signals - Intersections

0035	K-MC-SGNL	0.000	EACH	\$200,000.00000	\$0.00
MAJOR COST DRIVERS, SIGNALS					

Total for Group 0072:\$0.00

Group 0080: Retaining Walls

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	<u>Description</u> <u>Supplemental Description</u>				
0036	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS	0.000	SF	\$100.00000	\$0.00
Total for Group 0080:					\$0.00

Group 0090: Building Demolition

0037	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	0.000	EACH	\$10,000.00000	\$0.00
0038	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	2.000	EACH	\$25,000.00000	\$50,000.00
0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	0.000	EACH	\$750.00000	\$0.00
0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	0.000	EACH	\$2,500.00000	\$0.00
Total for Group 0090:					\$50,000.00

Group 0100: New Structures

0042	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over US 50</i>	20,000.000	SF	\$150.00000	\$3,000,000.00
0043	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad & Wooster</i>	35,000.000	SF	\$150.00000	\$5,250,000.00
0044	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad</i>	15,000.000	SF	\$150.00000	\$2,250,000.00
0045	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Little Miami River (highway)</i>	354,000.000	SF	\$750.00000	\$265,500,000.00
0046	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Little Miami River (rail)</i>	141,600.000	SF	\$900.00000	\$127,440,000.00
0047	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over LMR Floodway (highway)</i>	243,000.000	SF	\$150.00000	\$36,450,000.00
0048	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over LMR Floodway (rail)</i>	97,200.000	SF	\$300.00000	\$29,160,000.00
Total for Group 0100:					\$469,050,000.00

Group 0110: Rail Transit

0049	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (DMU)</i>	850.000	FT	\$875.00000	\$743,750.00
0050	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (DMU)</i>	6,670.000	FT	\$935.00000	\$6,236,450.00
0051	U-MC-MISC	1.000	EACH	\$250,000.00000	\$250,000.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Grade Crossing

0052	U-MC-MISC	1.000	LS	\$3,069,160.00000	\$3,069,160.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Transit Station

Total for Group 0110:\$10,299,360.00

Group 0120: Wetland Construction

0053	T-MC-WTLD	0.000	ACRE	\$60,000.00000	\$0.00
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MAJOR COST DRIVERS, WETLAND CONSTRUCTION

0054	T-OC-WTLD	0.000	FT	\$600.00000	\$0.00
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OTHER COSTS, WETLAND CONSTRUCTION

Stream Restoration

Total for Group 0120:\$0.00

Group 0130: Misc. Costs

0055	U-MC-MISC	1.000	LS	\$2,427,092.00000	\$2,427,092.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Performance Bond: 0.5% of total project cost (\$485,418,226)

0056	U-MC-MISC	1.000	LS	\$35,000.00000	\$35,000.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Railroad Insurance Bond

0057	U-MC-MISC	60.000	MNTH	\$2,500.00000	\$150,000.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Field Office Type C

0058	U-MC-MISC	1.000	LS	\$2,000,000.00000	\$2,000,000.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Mobilization: from CMS Item 624 for total project cost

0059	U-MC-MISC	1.000	LS	\$2,427,092.00000	\$2,427,092.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Construction Layout Stakes: 0.5% of total project cost (\$485,418,226)

0060	U-MC-MISC	1.000	LS	\$1,213,546.00000	\$1,213,546.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Maintaining Traffic: 0.25% of total project cost (\$485,418,226)

Total for Group 0130:\$8,252,730.00

Group 0140: Design Contingency Costs

0061	V-MC-CNTG	1.000	LS	\$123,380,239.00000	\$123,380,239.00
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MAJOR COST DRIVERS, CONTINGENCY COSTS

PDP Design Contingency (step 5): 25% of total construction cost (\$493,520,956)

Total for Group 0140:\$123,380,239.00

Estimate EC2/3 - Alt E

Estimated Cost:\$371,309,832.00

Contingency: 0.00%

Estimated Total: \$371,309,832.00

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative E

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/29/11

Checked by Steven Shadix on 01/13/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	59.000	CY	\$4.00000	\$236.00
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Total for Group 0001:\$236.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	1,293,798.000	CY	\$3.00000	\$3,881,394.00
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Total for Group 0002:\$3,881,394.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$30.00000	\$0.00
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Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	3,000.000	FT	\$12.00000	\$36,000.00
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0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	36,580.000	SF	\$4.00000	\$146,320.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	7,316.000	FT	\$12.00000	\$87,792.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	7,316.000	FT	\$14.00000	\$102,424.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	17.000	ACRE	\$1,100.00000	\$18,700.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	0.000	ACRE	\$1,650.00000	\$0.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$391,236.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	81,289.000	SY	\$2.00000	\$162,578.00
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Total for Group 0020:\$162,578.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Conceptual Est: Earthwork Cost \$3,000,000 - 4,000,000</i>	1.000	LS	\$85,000.00000	\$85,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$85,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	15,120.000	FT	\$6.00000	\$90,720.00
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Total for Group 0030:\$90,720.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$375.00000	\$0.00
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Total for Group 0031:\$0.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$825.00000	\$0.00
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Total for Group 0032:\$0.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$1,500.00000	\$0.00
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Total for Group 0033:\$0.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$181,440.00000	\$181,440.00
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Total for Group 0034:\$181,440.00

Group 0040: Mainline Lanes

0018	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	27,639.000	SY	\$41.00000	\$1,133,199.00
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Total for Group 0040:\$1,133,199.00

Group 0041: Ramps

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0042:\$0.00

Group 0050: Utilities

0021	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$16,000.00000	\$16,000.00
0022	F-MC-SANI	1.000	LS	\$25,000.00000	\$25,000.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	Description				
	Supplemental Description				
	MAJOR COST DRIVERS, SANITARY SEWER				
0023	N-OC-DEMO	1.000	EACH	\$1,000,000.00000	\$1,000,000.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Electric Transmission Tower Relocation</i>				

Total for Group 0050:\$1,041,000.00

Group 0060: Lighting - Continuous Roadway

0024	G-MC-LTNG	8,137.000	FT	\$35.00000	\$284,795.00
	MAJOR COST DRIVERS, LIGHTING				

Total for Group 0060:\$284,795.00

Group 0070: Signs

0025	J-MC-TRAF	1.500	MILE	\$250,000.00000	\$375,000.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				

Total for Group 0070:\$375,000.00

Group 0071: Pavement Marking

0026	J-MC-TRAF	6.000	MILE	\$500.00000	\$3,000.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Edge Line</i>				
0027	J-MC-TRAF	3.000	MILE	\$300.00000	\$900.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Lane Line</i>				
0028	J-MC-TRAF	0.000	MILE	\$1,200.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Center Line</i>				
0029	J-MC-TRAF	400.000	FT	\$1.25000	\$500.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Channelizing Line</i>				
0030	J-MC-TRAF	24.000	FT	\$6.00000	\$144.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Stop Line</i>				
0031	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Transverse Line</i>				
0032	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Dotted Line</i>				
0033	J-MC-TRAF	6.000	EACH	\$80.00000	\$480.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Lane Arrow</i>				
0034	J-MC-TRAF	4.000	EACH	\$100.00000	\$400.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Word on Pavement</i>				

Total for Group 0071:\$5,424.00

Group 0072: Signals - Intersections

0035	K-MC-SGNL	0.000	EACH	\$200,000.00000	\$0.00
	MAJOR COST DRIVERS, SIGNALS				

Total for Group 0072:\$0.00

Group 0080: Retaining Walls

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	<u>Description</u>				
	<u>Supplemental Description</u>				
0036	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS	0.000	SF	\$100.00000	\$0.00

Total for Group 0080:\$0.00

Group 0090: Building Demolition

0037	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	0.000	EACH	\$10,000.00000	\$0.00
0038	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	0.000	EACH	\$25,000.00000	\$0.00
0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	0.000	EACH	\$750.00000	\$0.00
0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	0.000	EACH	\$2,500.00000	\$0.00

Total for Group 0090:\$0.00

Group 0100: New Structures

0042	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over US 50</i>	20,000.000	SF	\$150.00000	\$3,000,000.00
0043	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad & Wooster</i>	20,000.000	SF	\$150.00000	\$3,000,000.00
0044	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad</i>	30,000.000	SF	\$150.00000	\$4,500,000.00
0045	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Little Miami River (highway)</i>	252,800.000	SF	\$600.00000	\$151,680,000.00
0046	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Little Miami River (rail)</i>	101,120.000	SF	\$750.00000	\$75,840,000.00
0047	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over LMR Floodway (highway)</i>	125,200.000	SF	\$150.00000	\$18,780,000.00
0048	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over LMR Floodway (rail)</i>	50,080.000	SF	\$300.00000	\$15,024,000.00

Total for Group 0100:\$271,824,000.00

Group 0110: Rail Transit

0049	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (DMU)</i>	3,658.000	FT	\$875.00000	\$3,200,750.00
0050	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (DMU)</i>	4,480.000	FT	\$935.00000	\$4,188,800.00
0051	U-MC-MISC	1.000	EACH	\$250,000.00000	\$250,000.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Grade Crossing

0052	U-MC-MISC	1.000	LS	\$3,069,160.00000	\$3,069,160.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Transit Station

Total for Group 0110:\$10,708,710.00

Group 0120: Wetland Construction

0053	T-MC-WTLD	0.020	ACRE	\$60,000.00000	\$1,200.00
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MAJOR COST DRIVERS, WETLAND CONSTRUCTION

0054	T-OC-WTLD	0.000	FT	\$600.00000	\$0.00
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OTHER COSTS, WETLAND CONSTRUCTION

Stream Restoration

Total for Group 0120:\$1,200.00

Group 0130: Misc. Costs

0055	U-MC-MISC	1.000	LS	\$1,451,430.00000	\$1,451,430.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Performance Bond: 0.5% of total project cost (\$290,285,932)

0056	U-MC-MISC	1.000	LS	\$35,000.00000	\$35,000.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Railroad Insurance Bond

0057	U-MC-MISC	48.000	MNTH	\$2,500.00000	\$120,000.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Field Office Type C

0058	U-MC-MISC	1.000	LS	\$2,000,000.00000	\$2,000,000.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Mobilization: from CMS Item 624 for total project cost

0059	U-MC-MISC	1.000	LS	\$1,451,430.00000	\$1,451,430.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Construction Layout Stakes: 0.5% of total project cost (\$290,285,932)

0060	U-MC-MISC	1.000	LS	\$1,190,173.00000	\$1,190,173.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Maintaining Traffic: 0.41% of total project cost (\$290,285,932)

Total for Group 0130:\$6,248,033.00

Group 0140: Design Contingency Costs

0061	V-MC-CNTG	1.000	LS	\$792,375.00000	\$792,375.00
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MAJOR COST DRIVERS, CONTINGENCY COSTS

*Constructible Risk Contingency: Hafner Landfill Impact = 350' @ 15' depth = 31,695CY * (Excavation \$15/CY + Embankment \$10/CY)*

0062	V-MC-CNTG	1.000	LS	\$74,103,492.00000	\$74,103,492.00
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MAJOR COST DRIVERS, CONTINGENCY COSTS

PDP Design Contingency (step 5): 25% of total construction cost (\$296,413,965)

Total for Group 0140:\$74,895,867.00

Estimate EC2/3 - Alt F

Estimated Cost:\$296,468,618.00

Contingency: 0.00%

Estimated Total: \$296,468,618.00

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative F

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/29/11

Checked by Steven Shadix on 01/13/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	164,058.000	CY	\$4.00000	\$656,232.00
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Total for Group 0001:\$656,232.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	1,412,917.000	CY	\$3.00000	\$4,238,751.00
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Total for Group 0002:\$4,238,751.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$30.00000	\$0.00
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Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	3,000.000	FT	\$12.00000	\$36,000.00
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0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	59,780.000	SF	\$4.00000	\$239,120.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	11,956.000	FT	\$12.00000	\$143,472.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	11,956.000	FT	\$14.00000	\$167,384.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	28.000	ACRE	\$1,100.00000	\$30,800.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	0.000	ACRE	\$1,650.00000	\$0.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$616,776.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	132,845.000	SY	\$2.00000	\$265,690.00
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Total for Group 0020:\$265,690.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Conceptual Est: Earthwork Cost \$4,000,000 - 5,000,000</i>	1.000	LS	\$120,000.00000	\$120,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$120,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	23,912.000	FT	\$6.00000	\$143,472.00
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Total for Group 0030:\$143,472.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$375.00000	\$0.00
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Total for Group 0031:\$0.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$825.00000	\$0.00
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Total for Group 0032:\$0.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	308.000	FT	\$1,500.00000	\$462,000.00
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Total for Group 0033:\$462,000.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$286,944.00000	\$286,944.00
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Total for Group 0034:\$286,944.00

Group 0040: Mainline Lanes

0018	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	45,167.000	SY	\$41.00000	\$1,851,847.00
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Total for Group 0040:\$1,851,847.00

Group 0041: Ramps

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0042:\$0.00

Group 0050: Utilities

0021	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$16,000.00000	\$16,000.00
0022	F-MC-SANI	1.000	LS	\$25,000.00000	\$25,000.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	Description				
	Supplemental Description				
	MAJOR COST DRIVERS, SANITARY SEWER				
0023	N-OC-DEMO	0.000	EACH	\$1,000,000.00000	\$0.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Electric Transmission Tower Relocation</i>				

Total for Group 0050:\$41,000.00

Group 0060: Lighting - Continuous Roadway

0024	G-MC-LTNG	9,778.000	FT	\$35.00000	\$342,230.00
	MAJOR COST DRIVERS, LIGHTING				

Total for Group 0060:\$342,230.00

Group 0070: Signs

0025	J-MC-TRAF	1.850	MILE	\$250,000.00000	\$462,500.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				

Total for Group 0070:\$462,500.00

Group 0071: Pavement Marking

0026	J-MC-TRAF	7.400	MILE	\$500.00000	\$3,700.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Edge Line</i>				
0027	J-MC-TRAF	3.700	MILE	\$300.00000	\$1,110.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Lane Line</i>				
0028	J-MC-TRAF	0.000	MILE	\$1,200.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Center Line</i>				
0029	J-MC-TRAF	400.000	FT	\$1.25000	\$500.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Channelizing Line</i>				
0030	J-MC-TRAF	24.000	FT	\$6.00000	\$144.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Stop Line</i>				
0031	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Transverse Line</i>				
0032	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Dotted Line</i>				
0033	J-MC-TRAF	6.000	EACH	\$80.00000	\$480.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Lane Arrow</i>				
0034	J-MC-TRAF	4.000	EACH	\$100.00000	\$400.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Word on Pavement</i>				

Total for Group 0071:\$6,334.00

Group 0072: Signals - Intersections

0035	K-MC-SGNL	0.000	EACH	\$200,000.00000	\$0.00
	MAJOR COST DRIVERS, SIGNALS				

Total for Group 0072:\$0.00

Group 0080: Retaining Walls

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
0036	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS	0.000	SF	\$100.00000	\$0.00

Total for Group 0080:\$0.00

Group 0090: Building Demolition

0037	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	0.000	EACH	\$10,000.00000	\$0.00
0038	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	0.000	EACH	\$25,000.00000	\$0.00
0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	0.000	EACH	\$750.00000	\$0.00
0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	0.000	EACH	\$2,500.00000	\$0.00

Total for Group 0090:\$0.00

Group 0100: New Structures

0042	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over US 50</i>	20,000.000	SF	\$150.00000	\$3,000,000.00
0043	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad</i>	20,000.000	SF	\$150.00000	\$3,000,000.00
0044	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Wooster & Railroad</i>	30,000.000	SF	\$150.00000	\$4,500,000.00
0045	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Little Miami River (highway)</i>	230,300.000	SF	\$500.00000	\$115,150,000.00
0046	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Little Miami River (rail)</i>	92,120.000	SF	\$650.00000	\$59,878,000.00
0047	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over LMR Floodway (highway)</i>	79,700.000	SF	\$150.00000	\$11,955,000.00
0048	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over LMR Floodway (rail)</i>	31,880.000	SF	\$300.00000	\$9,564,000.00

Total for Group 0100:\$207,047,000.00

Group 0110: Rail Transit

0049	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (DMU)</i>	5,978.000	FT	\$875.00000	\$5,230,750.00
0050	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (DMU)</i>	3,800.000	FT	\$935.00000	\$3,553,000.00
0051	U-MC-MISC	1.000	EACH	\$250,000.00000	\$250,000.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Grade Crossing

0052	U-MC-MISC	1.000	LS	\$3,069,160.00000	\$3,069,160.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Transit Station

Total for Group 0110:\$12,102,910.00

Group 0120: Wetland Construction

0053	T-MC-WTLD	0.020	ACRE	\$60,000.00000	\$1,200.00
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MAJOR COST DRIVERS, WETLAND CONSTRUCTION

0054	T-OC-WTLD	0.000	FT	\$600.00000	\$0.00
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OTHER COSTS, WETLAND CONSTRUCTION

Stream Restoration

Total for Group 0120:\$1,200.00

Group 0130: Misc. Costs

0055	U-MC-MISC	1.000	LS	\$1,143,825.00000	\$1,143,825.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Performance Bond: 0.5% of total project cost (\$228,764,886)

0056	U-MC-MISC	1.000	LS	\$35,000.00000	\$35,000.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Railroad Insurance Bond

0057	U-MC-MISC	48.000	MNTH	\$2,500.00000	\$120,000.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Field Office Type C

0058	U-MC-MISC	1.000	LS	\$2,000,000.00000	\$2,000,000.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Mobilization: from CMS Item 624 for total project cost

0059	U-MC-MISC	1.000	LS	\$1,143,825.00000	\$1,143,825.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Construction Layout Stakes: 0.5% of total project cost (\$228,764,886)

0060	U-MC-MISC	1.000	LS	\$1,189,578.00000	\$1,189,578.00
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MAJOR COST DRIVERS, MISCELLANEOUS COSTS

Maintaining Traffic: 0.52% of total project cost (\$228,764,886)

Total for Group 0130:\$5,632,228.00

Group 0140: Design Contingency Costs

0061	V-MC-CNTG	1.000	LS	\$3,622,225.00000	\$3,622,225.00
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MAJOR COST DRIVERS, CONTINGENCY COSTS

*Constructible Risk Contingency: Hafner Landfill Impact = 1,600' @ 15' depth = 144,889CY * (Excavation \$15/CY + Embankment \$10/CY)*

0062	V-MC-CNTG	1.000	LS	\$58,569,279.00000	\$58,569,279.00
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MAJOR COST DRIVERS, CONTINGENCY COSTS

PDP Design Contingency (step 5): 25% of total construction cost (\$234,277,114)

Total for Group 0140:\$62,191,504.00

Estimate EC2/3 - Alt G

Estimated Cost:\$29,359,655.00

Contingency: 0.00%

Estimated Total: \$29,359,655.00

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative G

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/29/11

Checked by Steven Shadix on 01/13/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$4.00000	\$0.00
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Total for Group 0001:\$0.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	954,333.000	CY	\$3.00000	\$2,862,999.00
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Total for Group 0002:\$2,862,999.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$30.00000	\$0.00
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Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	1,200.000	FT	\$12.00000	\$14,400.00
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0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	54,740.000	SF	\$4.00000	\$218,960.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	11,948.000	FT	\$12.00000	\$143,376.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	10,948.000	FT	\$14.00000	\$153,272.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	25.000	ACRE	\$1,100.00000	\$27,500.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	0.000	ACRE	\$1,650.00000	\$0.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$557,508.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	121,645.000	SY	\$2.00000	\$243,290.00
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Total for Group 0020:\$243,290.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Conceptual Est: Earthwork Cost \$2,000,000 - 3,000,000</i>	1.000	LS	\$42,000.00000	\$42,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$42,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	21,896.000	FT	\$6.00000	\$131,376.00
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Total for Group 0030:\$131,376.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	456.000	FT	\$375.00000	\$171,000.00
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Total for Group 0031:\$171,000.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$825.00000	\$0.00
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Total for Group 0032:\$0.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	248.000	FT	\$1,500.00000	\$372,000.00
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Total for Group 0033:\$372,000.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$262,752.00000	\$262,752.00
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Total for Group 0034:\$262,752.00

Group 0040: Mainline Lanes

0018	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	41,360.000	SY	\$41.00000	\$1,695,760.00
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Total for Group 0040:\$1,695,760.00

Group 0041: Ramps

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	2,000.000	SY	\$41.00000	\$82,000.00
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Total for Group 0042:\$82,000.00

Group 0050: Utilities

0021	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$8,000.00000	\$8,000.00
0022	F-MC-SANI	1.000	LS	\$12,500.00000	\$12,500.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

MAJOR COST DRIVERS, SANITARY SEWER

0023	N-OC-DEMO	0.000	EACH	\$1,000,000.00000	\$0.00
MAJOR COST DRIVERS, BUILDING DEMOLITION					
<i>Electric Transmission Tower Relocation</i>					

Total for Group 0050:\$20,500.00

Group 0060: Lighting - Continuous Roadway

0024	G-MC-LTNG	5,824.000	FT	\$35.00000	\$203,840.00
MAJOR COST DRIVERS, LIGHTING					

Total for Group 0060:\$203,840.00

Group 0070: Signs

0025	J-MC-TRAF	1.100	MILE	\$250,000.00000	\$275,000.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					

Total for Group 0070:\$275,000.00

Group 0071: Pavement Marking

0026	J-MC-TRAF	4.400	MILE	\$500.00000	\$2,200.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Edge Line</i>					

0027	J-MC-TRAF	2.200	MILE	\$300.00000	\$660.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Lane Line</i>					

0028	J-MC-TRAF	0.100	MILE	\$1,200.00000	\$120.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Center Line</i>					

0029	J-MC-TRAF	200.000	FT	\$1.25000	\$250.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Channelizing Line</i>					

0030	J-MC-TRAF	24.000	FT	\$6.00000	\$144.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Stop Line</i>					

0031	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Transverse Line</i>					

0032	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Dotted Line</i>					

0033	J-MC-TRAF	2.000	EACH	\$80.00000	\$160.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Lane Arrow</i>					

0034	J-MC-TRAF	1.000	EACH	\$100.00000	\$100.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Word on Pavement</i>					

Total for Group 0071:\$3,634.00

Group 0072: Signals - Intersections

0035	K-MC-SGNL	1.000	EACH	\$200,000.00000	\$200,000.00
MAJOR COST DRIVERS, SIGNALS					

Total for Group 0072:\$200,000.00

Group 0080: Retaining Walls

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	<u>Description</u>				
	<u>Supplemental Description</u>				
0036	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS	0.000	SF	\$100.00000	\$0.00

Total for Group 0080:\$0.00

Group 0090: Building Demolition

0037	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	4.000	EACH	\$10,000.00000	\$40,000.00
0038	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	0.000	EACH	\$25,000.00000	\$0.00
0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	4.000	EACH	\$750.00000	\$3,000.00
0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	4.000	EACH	\$2,500.00000	\$10,000.00

Total for Group 0090:\$53,000.00

Group 0100: New Structures

0042	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad (highway)</i>	20,000.000	SF	\$150.00000	\$3,000,000.00
0043	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad (rail)</i>	8,000.000	SF	\$300.00000	\$2,400,000.00
0044	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Moore (highway)</i>	15,000.000	SF	\$150.00000	\$2,250,000.00
0045	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Moore (rail)</i>	6,000.000	SF	\$300.00000	\$1,800,000.00

Total for Group 0100:\$9,450,000.00

Group 0110: Rail Transit

0046	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (DMU)</i>	5,474.000	FT	\$875.00000	\$4,789,750.00
0047	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (DMU)</i>	350.000	FT	\$935.00000	\$327,250.00
0048	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Grade Crossing</i>	1.000	EACH	\$250,000.00000	\$250,000.00
0049	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Transit Station</i>	0.000	LS	\$0.00000	\$0.00

Total for Group 0110:\$5,367,000.00

Group 0120: Wetland Construction

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	<u>Description</u> <u>Supplemental Description</u>				
0050	T-MC-WTLD MAJOR COST DRIVERS, WETLAND CONSTRUCTION	0.000	ACRE	\$60,000.00000	\$0.00
0051	T-OC-WTLD OTHER COSTS, WETLAND CONSTRUCTION <i>Stream Restoration</i>	0.000	FT	\$600.00000	\$0.00
Total for Group 0120:					\$0.00

Group 0130: Misc. Costs

0052	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Performance Bond: 0.5% of total project cost (\$22,038,659)</i>	1.000	LS	\$110,194.00000	\$110,194.00
0053	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Railroad Insurance Bond</i>	1.000	LS	\$35,000.00000	\$35,000.00
0054	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Field Office Type C</i>	18.000	MNTH	\$2,500.00000	\$45,000.00
0055	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Mobilization: from CMS Item 624 for total project cost</i>	1.000	LS	\$800,000.00000	\$800,000.00
0056	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Construction Layout Stakes: 0.5% of total project cost (\$22,038,659)</i>	1.000	LS	\$110,194.00000	\$110,194.00
0057	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Maintaining Traffic: 1.75% of total project cost (\$22,038,659)</i>	1.000	LS	\$385,677.00000	\$385,677.00
Total for Group 0130:					\$1,486,065.00

Group 0140: Design Contingency Costs

0058	V-MC-CNTG MAJOR COST DRIVERS, CONTINGENCY COSTS <i>PDP Design Contingency (step 5): 25% of total construction cost (\$15,581,773)</i>	1.000	LS	\$5,879,931.00000	\$5,879,931.00
Total for Group 0140:					\$5,879,931.00

Estimate EC2/3 - Alt H

Estimated Cost:\$28,141,280.00

Contingency: 0.00%

Estimated Total: \$28,141,280.00

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative H

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/29/11

Checked by Steven Shadix on 01/13/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$4.00000	\$0.00
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Total for Group 0001:\$0.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	1,141,205.000	CY	\$3.00000	\$3,423,615.00
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Total for Group 0002:\$3,423,615.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$30.00000	\$0.00
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Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	1,200.000	FT	\$12.00000	\$14,400.00
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0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	55,570.000	SF	\$4.00000	\$222,280.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	12,114.000	FT	\$12.00000	\$145,368.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	11,114.000	FT	\$14.00000	\$155,596.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	26.000	ACRE	\$1,100.00000	\$28,600.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	0.000	ACRE	\$1,650.00000	\$0.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$566,244.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	123,489.000	SY	\$2.00000	\$246,978.00
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Total for Group 0020:\$246,978.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Conceptual Est: Earthwork Cost \$3,000,000 - 4,000,000</i>	1.000	LS	\$85,000.00000	\$85,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$85,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	22,228.000	FT	\$6.00000	\$133,368.00
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Total for Group 0030:\$133,368.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	208.000	FT	\$375.00000	\$78,000.00
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Total for Group 0031:\$78,000.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$825.00000	\$0.00
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Total for Group 0032:\$0.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	252.000	FT	\$1,500.00000	\$378,000.00
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Total for Group 0033:\$378,000.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$266,736.00000	\$266,736.00
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Total for Group 0034:\$266,736.00

Group 0040: Mainline Lanes

0018	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	41,986.000	SY	\$41.00000	\$1,721,426.00
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Total for Group 0040:\$1,721,426.00

Group 0041: Ramps

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	2,000.000	SY	\$41.00000	\$82,000.00
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Total for Group 0042:\$82,000.00

Group 0050: Utilities

0021	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$8,000.00000	\$8,000.00
0022	F-MC-SANI	1.000	LS	\$12,500.00000	\$12,500.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

MAJOR COST DRIVERS, SANITARY SEWER

0023	N-OC-DEMO	0.000	EACH	\$1,000,000.00000	\$0.00
MAJOR COST DRIVERS, BUILDING DEMOLITION					
<i>Electric Transmission Tower Relocation</i>					

Total for Group 0050:\$20,500.00

Group 0060: Lighting - Continuous Roadway

0024	G-MC-LTNG	5,857.000	FT	\$35.00000	\$204,995.00
MAJOR COST DRIVERS, LIGHTING					

Total for Group 0060:\$204,995.00

Group 0070: Signs

0025	J-MC-TRAF	1.100	MILE	\$250,000.00000	\$275,000.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					

Total for Group 0070:\$275,000.00

Group 0071: Pavement Marking

0026	J-MC-TRAF	4.400	MILE	\$500.00000	\$2,200.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Edge Line</i>					

0027	J-MC-TRAF	2.200	MILE	\$300.00000	\$660.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Lane Line</i>					

0028	J-MC-TRAF	0.100	MILE	\$1,200.00000	\$120.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Center Line</i>					

0029	J-MC-TRAF	200.000	FT	\$1.25000	\$250.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Channelizing Line</i>					

0030	J-MC-TRAF	24.000	FT	\$6.00000	\$144.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Stop Line</i>					

0031	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Transverse Line</i>					

0032	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Dotted Line</i>					

0033	J-MC-TRAF	2.000	EACH	\$80.00000	\$160.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Lane Arrow</i>					

0034	J-MC-TRAF	1.000	EACH	\$100.00000	\$100.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Word on Pavement</i>					

Total for Group 0071:\$3,634.00

Group 0072: Signals - Intersections

0035	K-MC-SGNL	1.000	EACH	\$200,000.00000	\$200,000.00
MAJOR COST DRIVERS, SIGNALS					

Total for Group 0072:\$200,000.00

Group 0080: Retaining Walls

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	<u>Description</u>				
	<u>Supplemental Description</u>				
0036	M-MC-WALL	0.000	SF	\$100.00000	\$0.00
	MAJOR COST DRIVERS, RETAINING WALLS				

Total for Group 0080:\$0.00

Group 0090: Building Demolition

0037	N-MC-DEMO	0.000	EACH	\$10,000.00000	\$0.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Residential</i>				
0038	N-MC-DEMO	0.000	EACH	\$50,000.00000	\$0.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Service Station Island & Tanks</i>				
0039	N-MC-DEMO	0.000	EACH	\$25,000.00000	\$0.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Commercial</i>				
0040	N-MC-DEMO	1.000	EACH	\$750.00000	\$750.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Sheds</i>				
0041	N-MC-DEMO	1.000	EACH	\$2,500.00000	\$2,500.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Garages</i>				

Total for Group 0090:\$3,250.00

Group 0100: New Structures

0042	R-MC-STRC	15,000.000	SF	\$150.00000	\$2,250,000.00
	MAJOR COST DRIVERS, STRUCTURES				
	<i>New Structure: Over Railroad (highway)</i>				
0043	R-MC-STRC	6,000.000	SF	\$300.00000	\$1,800,000.00
	MAJOR COST DRIVERS, STRUCTURES				
	<i>New Structure: Over Railroad (rail)</i>				
0044	R-MC-STRC	15,000.000	SF	\$150.00000	\$2,250,000.00
	MAJOR COST DRIVERS, STRUCTURES				
	<i>New Structure: Over Moore (highway)</i>				
0045	R-MC-STRC	6,000.000	SF	\$300.00000	\$1,800,000.00
	MAJOR COST DRIVERS, STRUCTURES				
	<i>New Structure: Over Moore (rail)</i>				

Total for Group 0100:\$8,100,000.00

Group 0110: Rail Transit

0046	U-MC-MISC	5,557.000	FT	\$875.00000	\$4,862,375.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>At Grade Ballasted Track (DMU)</i>				
0047	U-MC-MISC	30.000	FT	\$935.00000	\$28,050.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>Aerial Direct Fixation Track on Bridges (DMU)</i>				
0048	U-MC-MISC	1.000	EACH	\$250,000.00000	\$250,000.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>Grade Crossing</i>				
0049	U-MC-MISC	0.000	LS	\$0.00000	\$0.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>Transit Station</i>				

Total for Group 0110:\$5,140,425.00

Group 0120: Wetland Construction

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	<u>Description</u>				
	<u>Supplemental Description</u>				
0050	T-MC-WTLD	0.020	ACRE	\$60,000.00000	\$1,200.00
	MAJOR COST DRIVERS, WETLAND CONSTRUCTION				
0051	T-OC-WTLD	187.000	FT	\$600.00000	\$112,200.00
	OTHER COSTS, WETLAND CONSTRUCTION				
	<i>Stream Restoration</i>				

Total for Group 0120:\$113,400.00

Group 0130: Misc. Costs

0052	U-MC-MISC	1.000	LS	\$105,438.00000	\$105,438.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>Performance Bond: 0.5% of total project cost (\$21,087,571)</i>				
0053	U-MC-MISC	1.000	LS	\$35,000.00000	\$35,000.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>Railroad Insurance Bond</i>				
0054	U-MC-MISC	18.000	MNTH	\$2,500.00000	\$45,000.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>Field Office Type C</i>				
0055	U-MC-MISC	1.000	LS	\$800,000.00000	\$800,000.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>Mobilization: from CMS Item 624 for total project cost</i>				
0056	U-MC-MISC	1.000	LS	\$105,438.00000	\$105,438.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>Construction Layout Stakes: 0.5% of total project cost (\$21,087,571)</i>				
0057	U-MC-MISC	1.000	LS	\$379,577.00000	\$379,577.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>Maintaining Traffic: 1.8% of total project cost (\$21,087,571)</i>				

Total for Group 0130:\$1,470,453.00

Group 0140: Design Contingency Costs

0058	V-MC-CNTG	1.000	LS	\$5,628,256.00000	\$5,628,256.00
	MAJOR COST DRIVERS, CONTINGENCY COSTS				
	<i>PDP Design Contingency (step 5): 25% of total construction cost (\$22,513,024)</i>				

Total for Group 0140:\$5,628,256.00

Estimate EC2/3 - Alt I

Estimated Cost:\$49,079,173.00

Contingency: 0.00%

Estimated Total: \$49,079,173.00

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative I

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/29/11

Checked by Steven Shadix on 01/13/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$4.00000	\$0.00
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Total for Group 0001:\$0.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	1,145,468.000	CY	\$3.00000	\$3,436,404.00
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Total for Group 0002:\$3,436,404.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$30.00000	\$0.00
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Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	5,000.000	FT	\$12.00000	\$60,000.00
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0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	47,620.000	SF	\$4.00000	\$190,480.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	10,524.000	FT	\$12.00000	\$126,288.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	9,524.000	FT	\$14.00000	\$133,336.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	0.000	ACRE	\$1,100.00000	\$0.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	22.000	ACRE	\$1,650.00000	\$36,300.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$546,404.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	105,822.000	SY	\$2.00000	\$211,644.00
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Total for Group 0020:\$211,644.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Conceptual Est: Earthwork Cost \$3,000,000 - 4,000,000</i>	1.000	LS	\$85,000.00000	\$85,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$85,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	19,048.000	FT	\$6.00000	\$114,288.00
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Total for Group 0030:\$114,288.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	208.000	FT	\$375.00000	\$78,000.00
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Total for Group 0031:\$78,000.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	340.000	FT	\$825.00000	\$280,500.00
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Total for Group 0032:\$280,500.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	264.000	FT	\$1,500.00000	\$396,000.00
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Total for Group 0033:\$396,000.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$228,576.00000	\$228,576.00
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Total for Group 0034:\$228,576.00

Group 0040: Mainline Lanes

0018	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	35,980.000	SY	\$41.00000	\$1,475,180.00
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Total for Group 0040:\$1,475,180.00

Group 0041: Ramps

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	2,000.000	SY	\$41.00000	\$82,000.00
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Total for Group 0042:\$82,000.00

Group 0050: Utilities

0021	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$8,000.00000	\$8,000.00
0022	F-MC-SANI	1.000	LS	\$12,500.00000	\$12,500.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

MAJOR COST DRIVERS, SANITARY SEWER

0023	N-OC-DEMO	0.000	EACH	\$1,000,000.00000	\$0.00
MAJOR COST DRIVERS, BUILDING DEMOLITION					
<i>Electric Transmission Tower Relocation</i>					

Total for Group 0050:\$20,500.00

Group 0060: Lighting - Continuous Roadway

0024	G-MC-LTNG	5,761.000	FT	\$35.00000	\$201,635.00
MAJOR COST DRIVERS, LIGHTING					

Total for Group 0060:\$201,635.00

Group 0070: Signs

0025	J-MC-TRAF	1.090	MILE	\$250,000.00000	\$272,500.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					

Total for Group 0070:\$272,500.00

Group 0071: Pavement Marking

0026	J-MC-TRAF	4.360	MILE	\$500.00000	\$2,180.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Edge Line</i>					

0027	J-MC-TRAF	2.180	MILE	\$300.00000	\$654.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Lane Line</i>					

0028	J-MC-TRAF	0.100	MILE	\$1,200.00000	\$120.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Center Line</i>					

0029	J-MC-TRAF	200.000	FT	\$1.25000	\$250.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Channelizing Line</i>					

0030	J-MC-TRAF	24.000	FT	\$6.00000	\$144.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Stop Line</i>					

0031	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Transverse Line</i>					

0032	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Dotted Line</i>					

0033	J-MC-TRAF	2.000	EACH	\$80.00000	\$160.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Lane Arrow</i>					

0034	J-MC-TRAF	1.000	EACH	\$100.00000	\$100.00
MAJOR COST DRIVERS, TRAFFIC CONTROL					
<i>Word on Pavement</i>					

Total for Group 0071:\$3,608.00

Group 0072: Signals - Intersections

0035	K-MC-SGNL	1.000	EACH	\$200,000.00000	\$200,000.00
MAJOR COST DRIVERS, SIGNALS					

Total for Group 0072:\$200,000.00

Group 0080: Retaining Walls

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
0036	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS	0.000	SF	\$100.00000	\$0.00

Total for Group 0080:\$0.00

Group 0090: Building Demolition

0037	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	0.000	EACH	\$10,000.00000	\$0.00
0038	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	0.000	EACH	\$25,000.00000	\$0.00
0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	1.000	EACH	\$750.00000	\$750.00
0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	1.000	EACH	\$2,500.00000	\$2,500.00

Total for Group 0090:\$3,250.00

Group 0100: New Structures

0042	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Clear Creek (highway)</i>	25,000.000	SF	\$150.00000	\$3,750,000.00
0043	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Clear Creek (rail)</i>	10,000.000	SF	\$300.00000	\$3,000,000.00
0044	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad & Clear Creek (highway)</i>	50,000.000	SF	\$150.00000	\$7,500,000.00
0045	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad & Clear Creek (rail)</i>	10,000.000	SF	\$300.00000	\$3,000,000.00
0046	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Clear Creek & Debolt (highway)</i>	25,000.000	SF	\$150.00000	\$3,750,000.00
0047	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Clear Creek & Debolt (rail)</i>	10,000.000	SF	\$300.00000	\$3,000,000.00

Total for Group 0100:\$24,000,000.00

Group 0110: Rail Transit

0048	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (DMU)</i>	4,762.000	FT	\$875.00000	\$4,166,750.00
0049	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (DMU)</i>	1,000.000	FT	\$935.00000	\$935,000.00
0050	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Grade Crossing</i>	1.000	EACH	\$250,000.00000	\$250,000.00
0051	U-MC-MISC	0.000	LS	\$0.00000	\$0.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

MAJOR COST DRIVERS, MISCELLANEOUS COSTS
Transit Station

Total for Group 0110:\$5,351,750.00

Group 0120: Wetland Construction

0052	T-MC-WTLD	0.140	ACRE	\$60,000.00000	\$8,400.00
MAJOR COST DRIVERS, WETLAND CONSTRUCTION					
0053	T-OC-WTLD	1,057.000	FT	\$600.00000	\$634,200.00
OTHER COSTS, WETLAND CONSTRUCTION <i>Stream Restoration</i>					

Total for Group 0120:\$642,600.00

Group 0130: Misc. Costs

0054	U-MC-MISC	1.000	LS	\$188,375.00000	\$188,375.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Performance Bond: 0.5% of total project cost (\$37,674,839)</i>					
0055	U-MC-MISC	1.000	LS	\$35,000.00000	\$35,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Railroad Insurance Bond</i>					
0056	U-MC-MISC	18.000	MNTH	\$2,500.00000	\$45,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Field Office Type C</i>					
0057	U-MC-MISC	1.000	LS	\$800,000.00000	\$800,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Mobilization: from CMS Item 624 for total project cost</i>					
0058	U-MC-MISC	1.000	LS	\$188,375.00000	\$188,375.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Construction Layout Stakes: 0.5% of total project cost (\$37,674,839)</i>					
0059	U-MC-MISC	1.000	LS	\$376,749.00000	\$376,749.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Maintaining Traffic: 1.0% of total project cost (\$37,674,839)</i>					

Total for Group 0130:\$1,633,499.00

Group 0140: Design Contingency Costs

0060	V-MC-CNTG	1.000	LS	\$9,815,835.00000	\$9,815,835.00
MAJOR COST DRIVERS, CONTINGENCY COSTS <i>PDP Design Contingency (step 5): 25% of total construction cost (\$39,263,338)</i>					

Total for Group 0140:\$9,815,835.00

Estimate EC2/3 - Alt J

Estimated Cost:\$33,623,972.00

Contingency: 0.00%

Estimated Total: \$33,623,972.00

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative J

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/29/11

Checked by Steven Shadix on 01/13/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$4.00000	\$0.00
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Total for Group 0001:\$0.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	1,195,532.000	CY	\$3.00000	\$3,586,596.00
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Total for Group 0002:\$3,586,596.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$30.00000	\$0.00
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Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	3,500.000	FT	\$12.00000	\$42,000.00
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0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	60,740.000	SF	\$4.00000	\$242,960.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	13,148.000	FT	\$12.00000	\$157,776.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	12,148.000	FT	\$14.00000	\$170,072.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	0.000	ACRE	\$1,100.00000	\$0.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	28.000	ACRE	\$1,650.00000	\$46,200.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$659,008.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	134,978.000	SY	\$2.00000	\$269,956.00
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Total for Group 0020:\$269,956.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Conceptual Est: Earthwork Cost \$3,000,000 - 4,000,000</i>	1.000	LS	\$85,000.00000	\$85,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$85,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	24,296.000	FT	\$6.00000	\$145,776.00
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Total for Group 0030:\$145,776.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	208.000	FT	\$375.00000	\$78,000.00
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Total for Group 0031:\$78,000.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$825.00000	\$0.00
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Total for Group 0032:\$0.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	248.000	FT	\$1,500.00000	\$372,000.00
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Total for Group 0033:\$372,000.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$291,552.00000	\$291,552.00
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Total for Group 0034:\$291,552.00

Group 0040: Mainline Lanes

0018	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	45,892.000	SY	\$41.00000	\$1,881,572.00
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Total for Group 0040:\$1,881,572.00

Group 0041: Ramps

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	2,000.000	SY	\$41.00000	\$82,000.00
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Total for Group 0042:\$82,000.00

Group 0050: Utilities

0021	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$8,000.00000	\$8,000.00
0022	F-MC-SANI	1.000	LS	\$12,500.00000	\$12,500.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	Description				
	Supplemental Description				
	MAJOR COST DRIVERS, SANITARY SEWER				
0023	N-OC-DEMO	0.000	EACH	\$1,000,000.00000	\$0.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Electric Transmission Tower Relocation</i>				

Total for Group 0050:\$20,500.00

Group 0060: Lighting - Continuous Roadway

0024	G-MC-LTNG	6,074.000	FT	\$35.00000	\$212,590.00
	MAJOR COST DRIVERS, LIGHTING				

Total for Group 0060:\$212,590.00

Group 0070: Signs

0025	J-MC-TRAF	1.150	MILE	\$250,000.00000	\$287,500.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				

Total for Group 0070:\$287,500.00

Group 0071: Pavement Marking

0026	J-MC-TRAF	4.600	MILE	\$500.00000	\$2,300.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Edge Line</i>				
0027	J-MC-TRAF	2.300	MILE	\$300.00000	\$690.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Lane Line</i>				
0028	J-MC-TRAF	0.100	MILE	\$1,200.00000	\$120.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Center Line</i>				
0029	J-MC-TRAF	200.000	FT	\$1.25000	\$250.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Channelizing Line</i>				
0030	J-MC-TRAF	24.000	FT	\$6.00000	\$144.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Stop Line</i>				
0031	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Transverse Line</i>				
0032	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Dotted Line</i>				
0033	J-MC-TRAF	2.000	EACH	\$80.00000	\$160.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Lane Arrow</i>				
0034	J-MC-TRAF	1.000	EACH	\$100.00000	\$100.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Word on Pavement</i>				

Total for Group 0071:\$3,764.00

Group 0072: Signals - Intersections

0035	K-MC-SGNL	1.000	EACH	\$200,000.00000	\$200,000.00
	MAJOR COST DRIVERS, SIGNALS				

Total for Group 0072:\$200,000.00

Group 0080: Retaining Walls

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	<u>Description</u>				
	<u>Supplemental Description</u>				
0036	M-MC-WALL	0.000	SF	\$100.00000	\$0.00
	MAJOR COST DRIVERS, RETAINING WALLS				

Total for Group 0080:\$0.00

Group 0090: Building Demolition

0037	N-MC-DEMO	0.000	EACH	\$10,000.00000	\$0.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Residential</i>				
0038	N-MC-DEMO	0.000	EACH	\$50,000.00000	\$0.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Service Station Island & Tanks</i>				
0039	N-MC-DEMO	1.000	EACH	\$25,000.00000	\$25,000.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Commercial</i>				
0040	N-MC-DEMO	2.000	EACH	\$750.00000	\$1,500.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Sheds</i>				
0041	N-MC-DEMO	2.000	EACH	\$2,500.00000	\$5,000.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Garages</i>				

Total for Group 0090:\$31,500.00

Group 0100: New Structures

0042	R-MC-STRC	15,000.000	SF	\$150.00000	\$2,250,000.00
	MAJOR COST DRIVERS, STRUCTURES				
	<i>New Structure: Over Railroad (highway)</i>				
0043	R-MC-STRC	6,000.000	SF	\$300.00000	\$1,800,000.00
	MAJOR COST DRIVERS, STRUCTURES				
	<i>New Structure: Over Railroad (rail)</i>				
0044	R-MC-STRC	25,000.000	SF	\$150.00000	\$3,750,000.00
	MAJOR COST DRIVERS, STRUCTURES				
	<i>New Structure: Over Clear Creek & Debolt (highway)</i>				
0045	R-MC-STRC	10,000.000	SF	\$300.00000	\$3,000,000.00
	MAJOR COST DRIVERS, STRUCTURES				
	<i>New Structure: Over Clear Creek & Debolt (rail)</i>				

Total for Group 0100:\$10,800,000.00

Group 0110: Rail Transit

0046	U-MC-MISC	6,074.000	FT	\$875.00000	\$5,314,750.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>At Grade Ballasted Track (DMU)</i>				
0047	U-MC-MISC	400.000	FT	\$935.00000	\$374,000.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>Aerial Direct Fixation Track on Bridges (DMU)</i>				
0048	U-MC-MISC	1.000	EACH	\$250,000.00000	\$250,000.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>Grade Crossing</i>				
0049	U-MC-MISC	0.000	LS	\$0.00000	\$0.00
	MAJOR COST DRIVERS, MISCELLANEOUS COSTS				
	<i>Transit Station</i>				

Total for Group 0110:\$5,938,750.00

Group 0120: Wetland Construction

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
0050	T-MC-WTLD MAJOR COST DRIVERS, WETLAND CONSTRUCTION	0.130	ACRE	\$60,000.00000	\$7,800.00
0051	T-OC-WTLD OTHER COSTS, WETLAND CONSTRUCTION <i>Stream Restoration</i>	716.000	FT	\$600.00000	\$429,600.00

Total for Group 0120:\$437,400.00

Group 0130: Misc. Costs

0052	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Performance Bond: 0.5% of total project cost (\$25,428,464)</i>	1.000	LS	\$127,143.00000	\$127,143.00
0053	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Railroad Insurance Bond</i>	1.000	LS	\$35,000.00000	\$35,000.00
0054	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Field Office Type C</i>	18.000	MNTH	\$2,500.00000	\$45,000.00
0055	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Mobilization: from CMS Item 624 for total project cost</i>	1.000	LS	\$800,000.00000	\$800,000.00
0056	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Construction Layout Stakes: 0.5% of total project cost (\$25,428,464)</i>	1.000	LS	\$127,143.00000	\$127,143.00
0057	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Maintaining Traffic: 1.5% of total project cost (\$25,428,464)</i>	1.000	LS	\$381,427.00000	\$381,427.00

Total for Group 0130:\$1,515,713.00

Group 0140: Design Contingency Costs

0058	V-MC-CNTG MAJOR COST DRIVERS, CONTINGENCY COSTS <i>PDP Design Contingency (step 5): 25% of total construction cost (\$26,899,177)</i>	1.000	LS	\$6,724,795.00000	\$6,724,795.00
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Total for Group 0140:\$6,724,795.00

Estimate EC2/3 - Alt K

Estimated Cost:\$27,273,359.00

Contingency: 0.00%

Estimated Total: \$27,273,359.00

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative K

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/29/11

Checked by Steven Shadix on 01/13/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$4.00000	\$0.00
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Total for Group 0001:\$0.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	1,077,997.000	CY	\$3.00000	\$3,233,991.00
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Total for Group 0002:\$3,233,991.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$30.00000	\$0.00
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Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	3,500.000	FT	\$12.00000	\$42,000.00
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0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	60,260.000	SF	\$4.00000	\$241,040.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	13,052.000	FT	\$12.00000	\$156,624.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	12,052.000	FT	\$14.00000	\$168,728.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	28.000	ACRE	\$1,100.00000	\$30,800.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	0.000	ACRE	\$1,650.00000	\$0.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$639,192.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	133,911.000	SY	\$2.00000	\$267,822.00
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Total for Group 0020:\$267,822.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Conceptual Est: Earthwork Cost \$3,000,000 - 4,000,000</i>	1.000	LS	\$85,000.00000	\$85,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$85,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	24,104.000	FT	\$6.00000	\$144,624.00
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Total for Group 0030:\$144,624.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	424.000	FT	\$375.00000	\$159,000.00
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Total for Group 0031:\$159,000.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$825.00000	\$0.00
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Total for Group 0032:\$0.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$1,500.00000	\$0.00
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Total for Group 0033:\$0.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$289,248.00000	\$289,248.00
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Total for Group 0034:\$289,248.00

Group 0040: Mainline Lanes

0018	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	45,530.000	SY	\$41.00000	\$1,866,730.00
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Total for Group 0040:\$1,866,730.00

Group 0041: Ramps

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	2,000.000	SY	\$41.00000	\$82,000.00
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Total for Group 0042:\$82,000.00

Group 0050: Utilities

0021	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$8,000.00000	\$8,000.00
0022	F-MC-SANI	1.000	LS	\$12,500.00000	\$12,500.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	Description Supplemental Description				
	MAJOR COST DRIVERS, SANITARY SEWER				
0023	N-OC-DEMO	0.000	EACH	\$1,000,000.00000	\$0.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Electric Transmission Tower Relocation</i>				

Total for Group 0050:\$20,500.00

Group 0060: Lighting - Continuous Roadway

0024	G-MC-LTNG	6,276.000	FT	\$35.00000	\$219,660.00
	MAJOR COST DRIVERS, LIGHTING				

Total for Group 0060:\$219,660.00

Group 0070: Signs

0025	J-MC-TRAF	1.180	MILE	\$250,000.00000	\$295,000.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				

Total for Group 0070:\$295,000.00

Group 0071: Pavement Marking

0026	J-MC-TRAF	4.720	MILE	\$500.00000	\$2,360.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Edge Line</i>				
0027	J-MC-TRAF	2.360	MILE	\$300.00000	\$708.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Line</i>				
0028	J-MC-TRAF	0.100	MILE	\$1,200.00000	\$120.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Center Line</i>				
0029	J-MC-TRAF	200.000	FT	\$1.25000	\$250.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Channelizing Line</i>				
0030	J-MC-TRAF	24.000	FT	\$6.00000	\$144.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Stop Line</i>				
0031	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Transverse Line</i>				
0032	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Dotted Line</i>				
0033	J-MC-TRAF	2.000	EACH	\$80.00000	\$160.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Arrow</i>				
0034	J-MC-TRAF	1.000	EACH	\$100.00000	\$100.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Word on Pavement</i>				

Total for Group 0071:\$3,842.00

Group 0072: Signals - Intersections

0035	K-MC-SGNL	1.000	EACH	\$200,000.00000	\$200,000.00
	MAJOR COST DRIVERS, SIGNALS				

Total for Group 0072:\$200,000.00

Group 0080: Retaining Walls

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
0036	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS	0.000	SF	\$100.00000	\$0.00
Total for Group 0080:					\$0.00

Group 0090: Building Demolition

0037	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	0.000	EACH	\$10,000.00000	\$0.00
0038	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	0.000	EACH	\$25,000.00000	\$0.00
0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	0.000	EACH	\$750.00000	\$0.00
0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	0.000	EACH	\$2,500.00000	\$0.00
Total for Group 0090:					\$0.00

Group 0100: New Structures

0042	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad (highway)</i>	15,000.000	SF	\$150.00000	\$2,250,000.00
0043	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad (rail)</i>	6,000.000	SF	\$300.00000	\$1,800,000.00
0044	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Debolt (highway)</i>	10,000.000	SF	\$150.00000	\$1,500,000.00
0045	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Debolt (rail)</i>	4,000.000	SF	\$300.00000	\$1,200,000.00
Total for Group 0100:					\$6,750,000.00

Group 0110: Rail Transit

0046	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (DMU)</i>	6,026.000	FT	\$875.00000	\$5,272,750.00
0047	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (DMU)</i>	250.000	FT	\$935.00000	\$233,750.00
0048	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Grade Crossing</i>	1.000	EACH	\$250,000.00000	\$250,000.00
0049	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Transit Station</i>	0.000	LS	\$0.00000	\$0.00
Total for Group 0110:					\$5,756,500.00

Group 0120: Wetland Construction

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
0050	T-MC-WTLD MAJOR COST DRIVERS, WETLAND CONSTRUCTION	0.000	ACRE	\$60,000.00000	\$0.00
0051	T-OC-WTLD OTHER COSTS, WETLAND CONSTRUCTION <i>Stream Restoration</i>	557.000	FT	\$600.00000	\$334,200.00

Total for Group 0120:\$334,200.00

Group 0130: Misc. Costs

0052	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Performance Bond: 0.5% of total project cost (\$20,392,309)</i>	1.000	LS	\$101,962.00000	\$101,962.00
0053	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Railroad Insurance Bond</i>	1.000	LS	\$35,000.00000	\$35,000.00
0054	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Field Office Type C</i>	18.000	MNTH	\$2,500.00000	\$45,000.00
0055	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Mobilization: from CMS Item 624 for total project cost</i>	1.000	LS	\$800,000.00000	\$800,000.00
0056	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Construction Layout Stakes: 0.5% of total project cost (\$20,392,309)</i>	1.000	LS	\$101,962.00000	\$101,962.00
0057	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Maintaining Traffic: 1.9% of total project cost (\$20,392,309)</i>	1.000	LS	\$387,454.00000	\$387,454.00

Total for Group 0130:\$1,471,378.00

Group 0140: Design Contingency Costs

0058	V-MC-CNTG MAJOR COST DRIVERS, CONTINGENCY COSTS <i>PDP Design Contingency (step 5): 25% of total construction cost (\$21,818,687)</i>	1.000	LS	\$5,454,672.00000	\$5,454,672.00
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Total for Group 0140:\$5,454,672.00

Estimate EC2/3 - Alt L

Estimated Cost:\$19,353,252.00

Contingency: 0.00%

Estimated Total: \$19,353,252.00

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative L

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/29/11

Checked by Steven Shadix on 01/13/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	16.000	CY	\$4.00000	\$64.00
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Total for Group 0001:\$64.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	476,768.000	CY	\$3.00000	\$1,430,304.00
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Total for Group 0002:\$1,430,304.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$30.00000	\$0.00
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Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	600.000	FT	\$12.00000	\$7,200.00
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0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	52,080.000	SF	\$4.00000	\$208,320.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	11,416.000	FT	\$12.00000	\$136,992.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	10,416.000	FT	\$14.00000	\$145,824.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	0.000	ACRE	\$1,100.00000	\$0.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	24.000	ACRE	\$1,650.00000	\$39,600.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$537,936.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	115,734.000	SY	\$2.00000	\$231,468.00
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Total for Group 0020:\$231,468.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Conceptual Est: Earthwork Cost \$1,000,000 - 2,000,000</i>	1.000	LS	\$35,000.00000	\$35,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$35,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	20,832.000	FT	\$6.00000	\$124,992.00
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Total for Group 0030:\$124,992.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$375.00000	\$0.00
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Total for Group 0031:\$0.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	252.000	FT	\$825.00000	\$207,900.00
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Total for Group 0032:\$207,900.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$1,500.00000	\$0.00
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Total for Group 0033:\$0.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$249,984.00000	\$249,984.00
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Total for Group 0034:\$249,984.00

Group 0040: Mainline Lanes

0018	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	39,350.000	SY	\$41.00000	\$1,613,350.00
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Total for Group 0040:\$1,613,350.00

Group 0041: Ramps

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	2,000.000	SY	\$41.00000	\$82,000.00
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Total for Group 0042:\$82,000.00

Group 0050: Utilities

0021	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$8,000.00000	\$8,000.00
0022	F-MC-SANI	1.000	LS	\$12,500.00000	\$12,500.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	Description				
	Supplemental Description				
	MAJOR COST DRIVERS, SANITARY SEWER				
0023	N-OC-DEMO	0.000	EACH	\$1,000,000.00000	\$0.00
	MAJOR COST DRIVERS, BUILDING DEMOLITION				
	<i>Electric Transmission Tower Relocation</i>				

Total for Group 0050:\$20,500.00

Group 0060: Lighting - Continuous Roadway

0024	G-MC-LTNG	5,358.000	FT	\$35.00000	\$187,530.00
	MAJOR COST DRIVERS, LIGHTING				

Total for Group 0060:\$187,530.00

Group 0070: Signs

0025	J-MC-TRAF	1.020	MILE	\$250,000.00000	\$255,000.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				

Total for Group 0070:\$255,000.00

Group 0071: Pavement Marking

0026	J-MC-TRAF	4.080	MILE	\$500.00000	\$2,040.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Edge Line</i>				
0027	J-MC-TRAF	2.040	MILE	\$300.00000	\$612.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Lane Line</i>				
0028	J-MC-TRAF	0.100	MILE	\$1,200.00000	\$120.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Center Line</i>				
0029	J-MC-TRAF	200.000	FT	\$1.25000	\$250.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Channelizing Line</i>				
0030	J-MC-TRAF	24.000	FT	\$6.00000	\$144.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Stop Line</i>				
0031	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Transverse Line</i>				
0032	J-MC-TRAF	0.000	FT	\$2.00000	\$0.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Dotted Line</i>				
0033	J-MC-TRAF	2.000	EACH	\$80.00000	\$160.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Lane Arrow</i>				
0034	J-MC-TRAF	1.000	EACH	\$100.00000	\$100.00
	MAJOR COST DRIVERS, TRAFFIC CONTROL				
	<i>Word on Pavement</i>				

Total for Group 0071:\$3,426.00

Group 0072: Signals - Intersections

0035	K-MC-SGNL	1.000	EACH	\$200,000.00000	\$200,000.00
	MAJOR COST DRIVERS, SIGNALS				

Total for Group 0072:\$200,000.00

Group 0080: Retaining Walls

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	Description Supplemental Description				
0036	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS	0.000	SF	\$100.00000	\$0.00
Total for Group 0080:					\$0.00

Group 0090: Building Demolition

0037	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	10.000	EACH	\$10,000.00000	\$100,000.00
0038	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	6.000	EACH	\$25,000.00000	\$150,000.00
0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	12.000	EACH	\$750.00000	\$9,000.00
0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	12.000	EACH	\$2,500.00000	\$30,000.00
Total for Group 0090:					\$289,000.00

Group 0100: New Structures

0042	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Debolt (highway)</i>	15,000.000	SF	\$150.00000	\$2,250,000.00
0043	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Debolt (rail)</i>	6,000.000	SF	\$300.00000	\$1,800,000.00
Total for Group 0100:					\$4,050,000.00

Group 0110: Rail Transit

0044	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (DMU)</i>	5,208.000	FT	\$875.00000	\$4,557,000.00
0045	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (DMU)</i>	150.000	FT	\$935.00000	\$140,250.00
0046	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Grade Crossing</i>	1.000	EACH	\$250,000.00000	\$250,000.00
0047	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Transit Station</i>	0.000	LS	\$0.00000	\$0.00
Total for Group 0110:					\$4,947,250.00

Group 0120: Wetland Construction

0048	T-MC-WTLD MAJOR COST DRIVERS, WETLAND CONSTRUCTION	0.000	ACRE	\$60,000.00000	\$0.00
0049	T-OC-WTLD OTHER COSTS, WETLAND CONSTRUCTION <i>Stream Restoration</i>	0.000	FT	\$600.00000	\$0.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0120:\$0.00

Group 0130: Misc. Costs

0050	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Performance Bond: 0.5% of total project cost (\$14,510,704)</i>	1.000	LS	\$72,554.00000	\$72,554.00
0051	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Railroad Insurance Bond</i>	1.000	LS	\$35,000.00000	\$35,000.00
0052	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Field Office Type C</i>	18.000	MNTH	\$2,500.00000	\$45,000.00
0053	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Mobilization: from CMS Item 624 for total project cost</i>	1.000	LS	\$400,000.00000	\$400,000.00
0054	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Construction Layout Stakes: 0.5% of total project cost (\$14,510,704)</i>	1.000	LS	\$72,554.00000	\$72,554.00
0055	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Maintaining Traffic: 2.7% of total project cost (\$14,510,704)</i>	1.000	LS	\$391,789.00000	\$391,789.00

Total for Group 0130:\$1,016,897.00

Group 0140: Design Contingency Costs

0056	V-MC-CNTG MAJOR COST DRIVERS, CONTINGENCY COSTS <i>PDP Design Contingency (step 5): 25% of total construction cost (\$15,482,601)</i>	1.000	LS	\$3,870,651.00000	\$3,870,651.00
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Total for Group 0140:\$3,870,651.00

Estimate EC2/3 - Alt M5%

Estimated Cost:\$78,852,154.10

Contingency: 0.00%

Estimated Total: \$78,852,154.10

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative M - Light Rail Profile

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/30/11

Checked by Steven Shadix on 01/18/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	214.000	CY	\$4.00000	\$856.00
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Total for Group 0001:\$856.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	902,653.000	CY	\$3.00000	\$2,707,959.00
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Total for Group 0002:\$2,707,959.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY <i>Item 203 Granular Material, Type E</i>	720,519.000	CY	\$30.00000	\$21,615,570.00
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0004	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY <i>Item 204 Geotextile, Type D</i>	94,524.000	SY	\$1.40000	\$132,333.60
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Total for Group 0003:\$21,747,903.60

Group 0010: Roadway Costs

0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	4,000.000	FT	\$12.00000	\$48,000.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	98,890.000	SF	\$4.00000	\$395,560.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	14,878.000	FT	\$12.00000	\$178,536.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	14,878.000	FT	\$14.00000	\$208,292.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	34.000	ACRE	\$1,100.00000	\$37,400.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	0.000	ACRE	\$1,650.00000	\$0.00
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0011	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$867,788.00

Group 0020: Seeding & Mulching / Sodding

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	165,311.000	SY	\$2.00000	\$330,622.00
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Total for Group 0020:\$330,622.00

Group 0021: Erosion Control - Item 832

0013	B-MC-ERCO	1.000	LS	\$42,000.00000	\$42,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

MAJOR COST DRIVERS, EROSION CONTROL
Conceptual Est: Earthwork Cost \$2,000,000 - 3,000,000

Total for Group 0021:\$42,000.00

Group 0030: Underdrains

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	34,656.000	FT	\$6.00000	\$207,936.00
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Total for Group 0030:\$207,936.00

Group 0031: Culverts - Type A: < 5'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	446.000	FT	\$375.00000	\$167,250.00
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Total for Group 0031:\$167,250.00

Group 0032: Culverts, Type A: 5' - 10'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$825.00000	\$0.00
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Total for Group 0032:\$0.00

Group 0033: Culverts, Type A: 10' - 20'

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$1,500.00000	\$0.00
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Total for Group 0033:\$0.00

Group 0034: Closed Storm System

0018	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$357,072.00000	\$357,072.00
0019	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE <i>Side Roads</i>	1.000	LS	\$42,800.00000	\$42,800.00

Total for Group 0034:\$399,872.00

Group 0040: Mainline Lanes

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	56,206.000	SY	\$41.00000	\$2,304,446.00
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Total for Group 0040:\$2,304,446.00

Group 0041: Ramps

0021	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0022	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	14,156.000	SY	\$41.00000	\$580,396.00
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Total for Group 0042:\$580,396.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0050: Utilities

0023	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$8,000.00000	\$8,000.00
0024	F-MC-SANI MAJOR COST DRIVERS, SANITARY SEWER	0.000	LS	\$0.00000	\$0.00
0025	N-OC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Electric Transmission Tower Relocation</i>	1.000	EACH	\$1,000,000.00000	\$1,000,000.00

Total for Group 0050:\$1,008,000.00

Group 0060: Lighting - Continuous Roadway

0026	G-MC-LTNG MAJOR COST DRIVERS, LIGHTING	10,639.000	FT	\$35.00000	\$372,365.00
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Total for Group 0060:\$372,365.00

Group 0070: Signs

0027	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL	2.000	MILE	\$250,000.00000	\$500,000.00
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Total for Group 0070:\$500,000.00

Group 0071: Pavement Marking

0028	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Edge Line</i>	7.000	MILE	\$500.00000	\$3,500.00
0029	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Line</i>	3.000	MILE	\$300.00000	\$900.00
0030	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Center Line</i>	0.500	MILE	\$1,200.00000	\$600.00
0031	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Channelizing Line</i>	750.000	FT	\$1.25000	\$937.50
0032	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Stop Line</i>	120.000	FT	\$6.00000	\$720.00
0033	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Transverse Line</i>	0.000	FT	\$2.00000	\$0.00
0034	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Dotted Line</i>	0.000	FT	\$2.00000	\$0.00
0035	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Arrow</i>	10.000	EACH	\$80.00000	\$800.00
0036	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Word on Pavement</i>	5.000	EACH	\$100.00000	\$500.00

Total for Group 0071:\$7,957.50

Group 0072: Signals - Intersections

0037	K-MC-SGNL	2.000	EACH	\$200,000.00000	\$400,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
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Description
Supplemental Description

MAJOR COST DRIVERS, SIGNALS

Total for Group 0072:\$400,000.00

Group 0080: Retaining Walls

0038	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS	0.000	SF	\$100.00000	\$0.00
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Total for Group 0080:\$0.00

Group 0090: Building Demolition

0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	6.000	EACH	\$10,000.00000	\$60,000.00
0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	8.000	EACH	\$25,000.00000	\$200,000.00
0042	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	6.000	EACH	\$750.00000	\$4,500.00
0043	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	6.000	EACH	\$2,500.00000	\$15,000.00

Total for Group 0090:\$279,500.00

Group 0100: New Structures

0044	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (highway)</i>	10,000.000	SF	\$150.00000	\$1,500,000.00
0045	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (rail)</i>	4,000.000	SF	\$300.00000	\$1,200,000.00
0046	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (highway)</i>	20,000.000	SF	\$150.00000	\$3,000,000.00
0047	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (rail)</i>	8,000.000	SF	\$300.00000	\$2,400,000.00
0048	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad (highway)</i>	30,000.000	SF	\$150.00000	\$4,500,000.00
0049	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad (rail)</i>	12,000.000	SF	\$300.00000	\$3,600,000.00
0050	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over Dry Run Creek</i>	7,200.000	SF	\$150.00000	\$1,080,000.00
0051	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over Railroad</i>	7,200.000	SF	\$150.00000	\$1,080,000.00

Total for Group 0100:\$18,360,000.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
Group 0110: Rail Transit					
0052	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (Light Rail)</i>	7,289.000	FT	\$1,000.00000	\$7,289,000.00
0053	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (Light Rail)</i>	600.000	FT	\$1,085.00000	\$651,000.00
0054	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Grade Crossing</i>	1.000	EACH	\$250,000.00000	\$250,000.00
0055	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Transit Station</i>	1.000	LS	\$771,160.00000	\$771,160.00
Total for Group 0110:					\$8,961,160.00

Group 0120: Wetland Construction

0056	T-MC-WTLD MAJOR COST DRIVERS, WETLAND CONSTRUCTION	0.000	ACRE	\$60,000.00000	\$0.00
0057	T-OC-WTLD OTHER COSTS, WETLAND CONSTRUCTION <i>Stream Restoration</i>	1,261.000	FT	\$600.00000	\$756,600.00
Total for Group 0120:					\$756,600.00

Group 0130: Misc. Costs

0058	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Performance Bond: 0.5% of total project cost (\$60,047,612)</i>	1.000	LS	\$300,239.00000	\$300,239.00
0059	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Railroad Insurance Bond</i>	1.000	LS	\$35,000.00000	\$35,000.00
0060	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Field Office Type C</i>	18.000	MNTH	\$2,500.00000	\$45,000.00
0061	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Mobilization: from CMS Item 624 for total project cost</i>	1.000	LS	\$1,600,000.00000	\$1,600,000.00
0062	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Construction Layout Stakes: 0.5% of total project cost (\$60,047,612)</i>	1.000	LS	\$300,239.00000	\$300,239.00
0063	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Maintaining Traffic: 1.33% of total project cost (\$60,047,612)</i>	1.000	LS	\$798,634.00000	\$798,634.00
Total for Group 0130:					\$3,079,112.00

Group 0140: Design Contingency Costs

0064	V-MC-CNTG MAJOR COST DRIVERS, CONTINGENCY COSTS <i>PDP Design Contingency (step 5): 25% of total construction cost (\$63,081,724)</i>	1.000	LS	\$15,770,431.00000	\$15,770,431.00
Total for Group 0140:					\$15,770,431.00

Estimate EC2/3 - Alt N5%

Estimated Cost:\$49,967,127.30

Contingency: 0.00%

Estimated Total: \$49,967,127.30

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative N - Light Rail Profile

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/30/11

Checked by Steven Shadix on 01/18/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	35,268.000	CY	\$4.00000	\$141,072.00
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Total for Group 0001:\$141,072.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	213,991.000	CY	\$3.00000	\$641,973.00
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Total for Group 0002:\$641,973.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY <i>Item 203 Granular Material, Type E</i>	91,852.000	CY	\$30.00000	\$2,755,560.00
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0004	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY <i>Item 204 Geotextile, Type D</i>	91,852.000	SY	\$1.40000	\$128,592.80
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Total for Group 0003:\$2,884,152.80

Group 0010: Roadway Costs

0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	2,000.000	FT	\$12.00000	\$24,000.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	81,170.000	SF	\$4.00000	\$324,680.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	11,334.000	FT	\$12.00000	\$136,008.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	11,334.000	FT	\$14.00000	\$158,676.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	26.000	ACRE	\$1,100.00000	\$28,600.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	0.000	ACRE	\$1,650.00000	\$0.00
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0011	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$671,964.00

Group 0020: Seeding & Mulching / Sodding

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	125,934.000	SY	\$2.00000	\$251,868.00
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Total for Group 0020:\$251,868.00

Group 0021: Erosion Control - Item 832

0013	B-MC-ERCO	1.000	LS	\$24,000.00000	\$24,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

MAJOR COST DRIVERS, EROSION CONTROL
Conceptual Est: Earthwork Cost \$400,000 - 1,000,000

Total for Group 0021:\$24,000.00

Group 0030: Underdrains

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	27,568.000	FT	\$6.00000	\$165,408.00
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Total for Group 0030:\$165,408.00

Group 0031: Culverts - Type A: < 5'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$375.00000	\$0.00
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Total for Group 0031:\$0.00

Group 0032: Culverts, Type A: 5' - 10'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$825.00000	\$0.00
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Total for Group 0032:\$0.00

Group 0033: Culverts, Type A: 10' - 20'

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$1,500.00000	\$0.00
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Total for Group 0033:\$0.00

Group 0034: Closed Storm System

0018	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$272,016.00000	\$272,016.00
0019	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE <i>Side Roads</i>	1.000	LS	\$42,800.00000	\$42,800.00

Total for Group 0034:\$314,816.00

Group 0040: Mainline Lanes

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	42,818.000	SY	\$41.00000	\$1,755,538.00
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Total for Group 0040:\$1,755,538.00

Group 0041: Ramps

0021	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0022	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	14,156.000	SY	\$41.00000	\$580,396.00
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Total for Group 0042:\$580,396.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0050: Utilities

0023	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$8,000.00000	\$8,000.00
0024	F-MC-SANI MAJOR COST DRIVERS, SANITARY SEWER	0.000	LS	\$0.00000	\$0.00
0025	N-OC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Electric Transmission Tower Relocation</i>	2.000	EACH	\$1,000,000.00000	\$2,000,000.00

Total for Group 0050:\$2,008,000.00

Group 0060: Lighting - Continuous Roadway

0026	G-MC-LTNG MAJOR COST DRIVERS, LIGHTING	8,717.000	FT	\$35.00000	\$305,095.00
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Total for Group 0060:\$305,095.00

Group 0070: Signs

0027	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL	1.630	MILE	\$250,000.00000	\$407,500.00
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Total for Group 0070:\$407,500.00

Group 0071: Pavement Marking

0028	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Edge Line</i>	5.520	MILE	\$500.00000	\$2,760.00
0029	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Line</i>	2.260	MILE	\$300.00000	\$678.00
0030	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Center Line</i>	0.500	MILE	\$1,200.00000	\$600.00
0031	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Channelizing Line</i>	750.000	FT	\$1.25000	\$937.50
0032	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Stop Line</i>	120.000	FT	\$6.00000	\$720.00
0033	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Transverse Line</i>	0.000	FT	\$2.00000	\$0.00
0034	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Dotted Line</i>	0.000	FT	\$2.00000	\$0.00
0035	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Arrow</i>	10.000	EACH	\$80.00000	\$800.00
0036	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Word on Pavement</i>	5.000	EACH	\$100.00000	\$500.00

Total for Group 0071:\$6,995.50

Group 0072: Signals - Intersections

0037	K-MC-SGNL	2.000	EACH	\$200,000.00000	\$400,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
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Description
Supplemental Description

MAJOR COST DRIVERS, SIGNALS

Total for Group 0072:\$400,000.00

Group 0080: Retaining Walls

0038	M-MC-WALL	0.000	SF	\$100.00000	\$0.00
MAJOR COST DRIVERS, RETAINING WALLS					

Total for Group 0080:\$0.00

Group 0090: Building Demolition

0039	N-MC-DEMO	19.000	EACH	\$10,000.00000	\$190,000.00
MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>					
0040	N-MC-DEMO	0.000	EACH	\$50,000.00000	\$0.00
MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>					
0041	N-MC-DEMO	9.000	EACH	\$25,000.00000	\$225,000.00
MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>					
0042	N-MC-DEMO	12.000	EACH	\$750.00000	\$9,000.00
MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>					
0043	N-MC-DEMO	12.000	EACH	\$2,500.00000	\$30,000.00
MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>					

Total for Group 0090:\$454,000.00

Group 0100: New Structures

0044	R-MC-STRC	10,000.000	SF	\$150.00000	\$1,500,000.00
MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (highway)</i>					
0045	R-MC-STRC	4,000.000	SF	\$300.00000	\$1,200,000.00
MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (rail)</i>					
0046	R-MC-STRC	20,000.000	SF	\$150.00000	\$3,000,000.00
MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (highway)</i>					
0047	R-MC-STRC	8,000.000	SF	\$300.00000	\$2,400,000.00
MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (rail)</i>					
0048	R-MC-STRC	30,000.000	SF	\$150.00000	\$4,500,000.00
MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad (highway)</i>					
0049	R-MC-STRC	12,000.000	SF	\$300.00000	\$3,600,000.00
MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Railroad (rail)</i>					
0050	R-MC-STRC	7,200.000	SF	\$150.00000	\$1,080,000.00
MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over Dry Run Creek</i>					
0051	R-MC-STRC	7,200.000	SF	\$150.00000	\$1,080,000.00
MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over Railroad</i>					

Total for Group 0100:\$18,360,000.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0110: Rail Transit

0052	U-MC-MISC	5,367.000	FT	\$1,000.00000	\$5,367,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (Light Rail)</i>					
0053	U-MC-MISC	600.000	FT	\$1,085.00000	\$651,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (Light Rail)</i>					
0054	U-MC-MISC	1.000	EACH	\$250,000.00000	\$250,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Grade Crossing</i>					
0055	U-MC-MISC	1.000	LS	\$771,160.00000	\$771,160.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Transit Station</i>					

Total for Group 0110:\$7,039,160.00

Group 0120: Wetland Construction

0056	T-MC-WTLD	0.000	ACRE	\$60,000.00000	\$0.00
MAJOR COST DRIVERS, WETLAND CONSTRUCTION					
0057	T-OC-WTLD	863.000	FT	\$600.00000	\$517,800.00
OTHER COSTS, WETLAND CONSTRUCTION <i>Stream Restoration</i>					

Total for Group 0120:\$517,800.00

Group 0130: Misc. Costs

0058	U-MC-MISC	1.000	LS	\$184,874.00000	\$184,874.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Performance Bond: 0.5% of total project cost (\$36,974,739)</i>					
0059	U-MC-MISC	1.000	LS	\$35,000.00000	\$35,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Railroad Insurance Bond</i>					
0060	U-MC-MISC	18.000	MNTH	\$2,500.00000	\$45,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Field Office Type C</i>					
0061	U-MC-MISC	1.000	LS	\$800,000.00000	\$800,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Mobilization: from CMS Item 624 for total project cost</i>					
0062	U-MC-MISC	1.000	LS	\$184,874.00000	\$184,874.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Construction Layout Stakes: 0.5% of total project cost (\$36,974,739)</i>					
0063	U-MC-MISC	1.000	LS	\$798,655.00000	\$798,655.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Maintaining Traffic: 2.16% of total project cost (\$36,974,739)</i>					

Total for Group 0130:\$2,048,403.00

Group 0140: Design Contingency Costs

0064	V-MC-CNTG	1.000	LS	\$1,244,450.00000	\$1,244,450.00
MAJOR COST DRIVERS, CONTINGENCY COSTS <i>Constructible Risk Contingency: Newtown Landfill Impact = 400' @ 20' depth = 49,778CY * (Excavation \$15/CY + Embankment \$10/CY)</i>					
0065	V-MC-CNTG	1.000	LS	\$9,744,536.00000	\$9,744,536.00
MAJOR COST DRIVERS, CONTINGENCY COSTS <i>PDP Design Contingency (step 5): 25% of total construction cost (\$38,978,142)</i>					

Line # Item Number
Description
Supplemental Description

Quantity Units Unit Price

Extension

Total for Group 0140:\$10,988,986.00

Estimate EC2/3 - Alt O

Estimated Cost:\$51,622,131.10

Contingency: 0.00%

Estimated Total: \$51,622,131.10

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative O

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/29/11

Checked by Steven Shadix on 01/18/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	1,538.000	CY	\$4.00000	\$6,152.00
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Total for Group 0001:\$6,152.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	827,844.000	CY	\$3.00000	\$2,483,532.00
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Total for Group 0002:\$2,483,532.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY <i>Item 203 Granular Material, Type E</i>	300,445.000	CY	\$30.00000	\$9,013,350.00
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0004	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY <i>Item 204 Geotextile, Type D</i>	39,289.000	SY	\$1.40000	\$55,004.60
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Total for Group 0003:\$9,068,354.60

Group 0010: Roadway Costs

0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	2,500.000	FT	\$12.00000	\$30,000.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	86,260.000	SF	\$4.00000	\$345,040.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	12,352.000	FT	\$12.00000	\$148,224.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	12,352.000	FT	\$14.00000	\$172,928.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	28.400	ACRE	\$1,100.00000	\$31,240.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	0.000	ACRE	\$1,650.00000	\$0.00
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0011	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$727,432.00

Group 0020: Seeding & Mulching / Sodding

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	137,245.000	SY	\$2.00000	\$274,490.00
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Total for Group 0020:\$274,490.00

Group 0021: Erosion Control - Item 832

0013	B-MC-ERCO	1.000	LS	\$42,000.00000	\$42,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

MAJOR COST DRIVERS, EROSION CONTROL
Conceptual Est: Earthwork Cost \$2,000,000 - 3,000,000

Total for Group 0021:\$42,000.00

Group 0030: Underdrains

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	29,604.000	FT	\$6.00000	\$177,624.00
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Total for Group 0030:\$177,624.00

Group 0031: Culverts - Type A: < 5'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	568.000	FT	\$375.00000	\$213,000.00
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Total for Group 0031:\$213,000.00

Group 0032: Culverts, Type A: 5' - 10'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$825.00000	\$0.00
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Total for Group 0032:\$0.00

Group 0033: Culverts, Type A: 10' - 20'

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$1,500.00000	\$0.00
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Total for Group 0033:\$0.00

Group 0034: Closed Storm System

0018	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$296,448.00000	\$296,448.00
0019	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE <i>Side Roads</i>	1.000	LS	\$42,800.00000	\$42,800.00

Total for Group 0034:\$339,248.00

Group 0040: Mainline Lanes

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	46,663.000	SY	\$41.00000	\$1,913,183.00
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Total for Group 0040:\$1,913,183.00

Group 0041: Ramps

0021	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0022	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	14,156.000	SY	\$41.00000	\$580,396.00
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Total for Group 0042:\$580,396.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0050: Utilities

0023	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$8,000.00000	\$8,000.00
0024	F-MC-SANI MAJOR COST DRIVERS, SANITARY SEWER	0.000	LS	\$0.00000	\$0.00
0025	N-OC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Electric Transmission Tower Relocation</i>	0.000	EACH	\$1,000,000.00000	\$0.00

Total for Group 0050:\$8,000.00

Group 0060: Lighting - Continuous Roadway

0026	G-MC-LTNG MAJOR COST DRIVERS, LIGHTING	9,175.000	FT	\$35.00000	\$321,125.00
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Total for Group 0060:\$321,125.00

Group 0070: Signs

0027	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL	1.200	MILE	\$250,000.00000	\$300,000.00
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Total for Group 0070:\$300,000.00

Group 0071: Pavement Marking

0028	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Edge Line</i>	5.800	MILE	\$500.00000	\$2,900.00
0029	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Line</i>	2.400	MILE	\$300.00000	\$720.00
0030	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Center Line</i>	0.500	MILE	\$1,200.00000	\$600.00
0031	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Channelizing Line</i>	750.000	FT	\$1.25000	\$937.50
0032	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Stop Line</i>	120.000	FT	\$6.00000	\$720.00
0033	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Transverse Line</i>	0.000	FT	\$2.00000	\$0.00
0034	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Dotted Line</i>	0.000	FT	\$2.00000	\$0.00
0035	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Arrow</i>	10.000	EACH	\$80.00000	\$800.00
0036	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Word on Pavement</i>	5.000	EACH	\$100.00000	\$500.00

Total for Group 0071:\$7,177.50

Group 0072: Signals - Intersections

0037	K-MC-SGNL	2.000	EACH	\$200,000.00000	\$400,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

MAJOR COST DRIVERS, SIGNALS

Total for Group 0072:\$400,000.00

Group 0080: Retaining Walls

0038	M-MC-WALL	0.000	SF	\$100.00000	\$0.00
MAJOR COST DRIVERS, RETAINING WALLS					

Total for Group 0080:\$0.00

Group 0090: Building Demolition

0039	N-MC-DEMO	15.000	EACH	\$10,000.00000	\$150,000.00
MAJOR COST DRIVERS, BUILDING DEMOLITION					
<i>Residential</i>					
0040	N-MC-DEMO	0.000	EACH	\$50,000.00000	\$0.00
MAJOR COST DRIVERS, BUILDING DEMOLITION					
<i>Service Station Island & Tanks</i>					
0041	N-MC-DEMO	11.000	EACH	\$25,000.00000	\$275,000.00
MAJOR COST DRIVERS, BUILDING DEMOLITION					
<i>Commercial</i>					
0042	N-MC-DEMO	9.000	EACH	\$750.00000	\$6,750.00
MAJOR COST DRIVERS, BUILDING DEMOLITION					
<i>Sheds</i>					
0043	N-MC-DEMO	8.000	EACH	\$2,500.00000	\$20,000.00
MAJOR COST DRIVERS, BUILDING DEMOLITION					
<i>Garages</i>					

Total for Group 0090:\$451,750.00

Group 0100: New Structures

0044	R-MC-STRC	25,000.000	SF	\$150.00000	\$3,750,000.00
MAJOR COST DRIVERS, STRUCTURES					
<i>New Structure: Over Railroad (highway)</i>					
0045	R-MC-STRC	10,000.000	SF	\$300.00000	\$3,000,000.00
MAJOR COST DRIVERS, STRUCTURES					
<i>New Structure: Over Railroad (rail)</i>					
0046	R-MC-STRC	7,200.000	SF	\$150.00000	\$1,080,000.00
MAJOR COST DRIVERS, STRUCTURES					
<i>New Structure: Side Road Over Dry Run Creek</i>					
0047	R-MC-STRC	7,200.000	SF	\$150.00000	\$1,080,000.00
MAJOR COST DRIVERS, STRUCTURES					
<i>New Structure: Side Road Over Railroad</i>					

Total for Group 0100:\$8,910,000.00

Group 0110: Rail Transit

0048	U-MC-MISC	6,176.000	FT	\$875.00000	\$5,404,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>At Grade Ballasted Track (DMU)</i>					
0049	U-MC-MISC	250.000	FT	\$935.00000	\$233,750.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Aerial Direct Fixation Track on Bridges (DMU)</i>					
0050	U-MC-MISC	1.000	EACH	\$250,000.00000	\$250,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Grade Crossing</i>					
0051	U-MC-MISC	1.000	LS	\$771,160.00000	\$771,160.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Transit Station

Total for Group 0110:\$6,658,910.00

Group 0120: Wetland Construction

0052	T-MC-WTLD	0.000	ACRE	\$60,000.00000	\$0.00
MAJOR COST DRIVERS, WETLAND CONSTRUCTION					
0053	T-OC-WTLD	0.000	FT	\$600.00000	\$0.00
OTHER COSTS, WETLAND CONSTRUCTION					
<i>Stream Restoration</i>					

Total for Group 0120:\$0.00

Group 0130: Misc. Costs

0054	U-MC-MISC	1.000	LS	\$164,637.00000	\$164,637.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Performance Bond: 0.5% of total project cost (\$32,927,375)</i>					
0055	U-MC-MISC	1.000	LS	\$35,000.00000	\$35,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Railroad Insurance Bond</i>					
0056	U-MC-MISC	18.000	MNTH	\$2,500.00000	\$45,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Field Office Type C</i>					
0057	U-MC-MISC	1.000	LS	\$800,000.00000	\$800,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Mobilization: from CMS Item 624 for total project cost</i>					
0058	U-MC-MISC	1.000	LS	\$164,637.00000	\$164,637.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Construction Layout Stakes: 0.5% of total project cost (\$32,927,375)</i>					
0059	U-MC-MISC	1.000	LS	\$800,136.00000	\$800,136.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Maintaining Traffic: 2.43% of total project cost (\$32,927,375)</i>					

Total for Group 0130:\$2,009,410.00

Group 0140: Design Contingency Costs

0060	V-MC-CNTG	1.000	LS	\$8,007,400.00000	\$8,007,400.00
MAJOR COST DRIVERS, CONTINGENCY COSTS					
<i>Constructible Risk Contingency: Newtown Landfill Impact = 2,300' @ 20' depth = 320,296CY * (Excavation \$15/CY + Embankment \$10/CY)</i>					
0061	V-MC-CNTG	1.000	LS	\$8,722,947.00000	\$8,722,947.00
MAJOR COST DRIVERS, CONTINGENCY COSTS					
<i>PDP Design Contingency (step 5): 25% of total construction cost (\$34,891,785)</i>					

Total for Group 0140:\$16,730,347.00

Estimate EC2/3 - Alt P

Estimated Cost:\$30,250,368.50

Contingency: 0.00%

Estimated Total: \$30,250,368.50

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative P

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INV LVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/29/11

Checked by Steven Shadix on 01/18/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	7,055.000	CY	\$4.00000	\$28,220.00
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Total for Group 0001:\$28,220.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	396,394.000	CY	\$3.00000	\$1,189,182.00
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Total for Group 0002:\$1,189,182.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$30.00000	\$0.00
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Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	0.000	FT	\$12.00000	\$0.00
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0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	92,630.000	SF	\$4.00000	\$370,520.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	13,626.000	FT	\$12.00000	\$163,512.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	13,626.000	FT	\$14.00000	\$190,764.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	31.000	ACRE	\$1,100.00000	\$34,100.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	0.000	ACRE	\$1,650.00000	\$0.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	0.000	ACRE	\$2,200.00000	\$0.00
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Total for Group 0010:\$758,896.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	151,400.000	SY	\$2.00000	\$302,800.00
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Total for Group 0020:\$302,800.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Conceptual Est: Earthwork Cost \$1,000,000 - 2,000,000</i>	1.000	LS	\$35,000.00000	\$35,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$35,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	32,152.000	FT	\$6.00000	\$192,912.00
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Total for Group 0030:\$192,912.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	212.000	FT	\$375.00000	\$79,500.00
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Total for Group 0031:\$79,500.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$825.00000	\$0.00
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Total for Group 0032:\$0.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$1,500.00000	\$0.00
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Total for Group 0033:\$0.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$327,024.00000	\$327,024.00
0018	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE <i>Side Roads</i>	1.000	LS	\$42,800.00000	\$42,800.00

Total for Group 0034:\$369,824.00

Group 0040: Mainline Lanes

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	51,476.000	SY	\$41.00000	\$2,110,516.00
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Total for Group 0040:\$2,110,516.00

Group 0041: Ramps

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	0.000	SY	\$41.00000	\$0.00
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Total for Group 0041:\$0.00

Group 0042: Non - Mainline Lanes

0021	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	14,156.000	SY	\$41.00000	\$580,396.00
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Total for Group 0042:\$580,396.00

Group 0050: Utilities

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	Description				
	Supplemental Description				
0022	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$8,000.00000	\$8,000.00
0023	F-MC-SANI MAJOR COST DRIVERS, SANITARY SEWER	0.000	LS	\$0.00000	\$0.00
0024	N-OC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Electric Transmission Tower Relocation</i>	0.000	EACH	\$1,000,000.00000	\$0.00
Total for Group 0050:\$8,000.00					

Group 0060: Lighting - Continuous Roadway

0025	G-MC-LTNG MAJOR COST DRIVERS, LIGHTING	9,563.000	FT	\$35.00000	\$334,705.00
Total for Group 0060:\$334,705.00					

Group 0070: Signs

0026	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL	1.800	MILE	\$250,000.00000	\$450,000.00
Total for Group 0070:\$450,000.00					

Group 0071: Pavement Marking

0027	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Edge Line</i>	6.200	MILE	\$500.00000	\$3,100.00
0028	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Line</i>	2.600	MILE	\$300.00000	\$780.00
0029	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Center Line</i>	0.500	MILE	\$1,200.00000	\$600.00
0030	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Channelizing Line</i>	750.000	FT	\$1.25000	\$937.50
0031	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Stop Line</i>	120.000	FT	\$6.00000	\$720.00
0032	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Transverse Line</i>	0.000	FT	\$2.00000	\$0.00
0033	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Dotted Line</i>	0.000	FT	\$2.00000	\$0.00
0034	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Arrow</i>	10.000	EACH	\$80.00000	\$800.00
0035	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Word on Pavement</i>	5.000	EACH	\$100.00000	\$500.00
Total for Group 0071:\$7,437.50					

Group 0072: Signals - Intersections

0036	K-MC-SGNL MAJOR COST DRIVERS, SIGNALS	2.000	EACH	\$200,000.00000	\$400,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0072:\$400,000.00

Group 0080: Retaining Walls

0037	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS	0.000	SF	\$100.00000	\$0.00
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Total for Group 0080:\$0.00

Group 0090: Building Demolition

0038	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	9.000	EACH	\$10,000.00000	\$90,000.00
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0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
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0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	10.000	EACH	\$25,000.00000	\$250,000.00
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0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	9.000	EACH	\$750.00000	\$6,750.00
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0042	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	8.000	EACH	\$2,500.00000	\$20,000.00
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Total for Group 0090:\$366,750.00

Group 0100: New Structures

0043	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over Dry Run Creek</i>	7,200.000	SF	\$150.00000	\$1,080,000.00
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0044	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over Railroad</i>	7,200.000	SF	\$150.00000	\$1,080,000.00
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Total for Group 0100:\$2,160,000.00

Group 0110: Rail Transit

0045	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (DMU)</i>	6,813.000	FT	\$875.00000	\$5,961,375.00
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0046	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (DMU)</i>	0.000	FT	\$935.00000	\$0.00
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0047	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Grade Crossing</i>	1.000	EACH	\$250,000.00000	\$250,000.00
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0048	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Transit Station</i>	1.000	LS	\$771,160.00000	\$771,160.00
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Total for Group 0110:\$6,982,535.00

Group 0120: Wetland Construction

0049	T-MC-WTLD MAJOR COST DRIVERS, WETLAND CONSTRUCTION	0.000	ACRE	\$60,000.00000	\$0.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
0050	T-OC-WTLD OTHER COSTS, WETLAND CONSTRUCTION <i>Stream Restoration</i>	0.000	FT	\$600.00000	\$0.00

Total for Group 0120:\$0.00

Group 0130: Misc. Costs

0051	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Performance Bond: 0.5% of total project cost (\$16,401,674)</i>	1.000	LS	\$82,009.00000	\$82,009.00
0052	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Railroad Insurance Bond</i>	1.000	LS	\$25,000.00000	\$25,000.00
0053	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Field Office Type C</i>	18.000	MNTH	\$2,500.00000	\$45,000.00
0054	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Mobilization: from CMS Item 624 for total project cost</i>	1.000	LS	\$400,000.00000	\$400,000.00
0055	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Construction Layout Stakes: 0.5% of total project cost (\$16,401,674)</i>	1.000	LS	\$82,009.00000	\$82,009.00
0056	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Maintaining Traffic: 4.9% of total project cost (\$16,401,674)</i>	1.000	LS	\$803,683.00000	\$803,683.00

Total for Group 0130:\$1,437,701.00

Group 0140: Design Contingency Costs

0057	V-MC-CNTG MAJOR COST DRIVERS, CONTINGENCY COSTS <i>Constructible Risk Contingency: Newtown Landfill Impact = 2,300' @ 20' depth = 320,296CY * (Excavation \$15/CY + Embankment \$10/CY)</i>	1.000	LS	\$8,007,400.00000	\$8,007,400.00
0058	V-MC-CNTG MAJOR COST DRIVERS, CONTINGENCY COSTS <i>PDP Design Contingency (step 5): 25% of total construction cost (\$17,794,375)</i>	1.000	LS	\$4,448,594.00000	\$4,448,594.00

Total for Group 0140:\$12,455,994.00

Estimate EC2/3 - Alt Q5%

Estimated Cost:\$73,047,453.00

Contingency: 0.00%

Estimated Total: \$73,047,453.00

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative Q - Light Rail Profile

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INV LVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/30/11

Checked by Steven Shadix on 01/18/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	4,377,493.000	CY	\$4.00000	\$17,509,972.00
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Total for Group 0001:\$17,509,972.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	608,223.000	CY	\$3.00000	\$1,824,669.00
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Total for Group 0002:\$1,824,669.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	LS	\$30.00000	\$0.00
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Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	1,200.000	FT	\$12.00000	\$14,400.00
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0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	21,000.000	SF	\$4.00000	\$84,000.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	25,470.000	FT	\$12.00000	\$305,640.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	25,470.000	FT	\$14.00000	\$356,580.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	0.000	ACRE	\$1,100.00000	\$0.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	0.000	ACRE	\$1,650.00000	\$0.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	58.500	ACRE	\$2,200.00000	\$128,700.00
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Total for Group 0010:\$889,320.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	283,000.000	SY	\$2.00000	\$566,000.00
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Total for Group 0020:\$566,000.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Conceptual Est: Earthwork Cost over \$10,000,000</i>	1.000	LS	\$300,000.00000	\$300,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$300,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	62,740.000	FT	\$6.00000	\$376,440.00
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Total for Group 0030:\$376,440.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	600.000	FT	\$375.00000	\$225,000.00
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Total for Group 0031:\$225,000.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	568.000	FT	\$825.00000	\$468,600.00
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Total for Group 0032:\$468,600.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$1,500.00000	\$0.00
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Total for Group 0033:\$0.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$611,280.00000	\$611,280.00
0018	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE Side Roads	1.000	LS	\$80,000.00000	\$80,000.00

Total for Group 0034:\$691,280.00

Group 0040: Mainline Lanes

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	96,220.000	SY	\$41.00000	\$3,945,020.00
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Total for Group 0040:\$3,945,020.00

Group 0041: Ramps

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	13,333.000	SY	\$41.00000	\$546,653.00
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Total for Group 0041:\$546,653.00

Group 0042: Non - Mainline Lanes

0021	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	23,733.000	SY	\$41.00000	\$973,053.00
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Total for Group 0042:\$973,053.00

Group 0050: Utilities

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	<u>Description</u> <u>Supplemental Description</u>				
0022	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$12,000.00000	\$12,000.00
0023	F-MC-SANI MAJOR COST DRIVERS, SANITARY SEWER	1.000	LS	\$4,000.00000	\$4,000.00
0024	N-OC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Electric Transmission Tower Relocation</i>	0.000	EACH	\$1,000,000.00000	\$0.00
Total for Group 0050:\$16,000.00					

Group 0060: Lighting - Continuous Roadway

0025	G-MC-LTNG MAJOR COST DRIVERS, LIGHTING	19,735.000	FT	\$35.00000	\$690,725.00
Total for Group 0060:\$690,725.00					

Group 0070: Signs

0026	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL	2.800	MILE	\$250,000.00000	\$700,000.00
Total for Group 0070:\$700,000.00					

Group 0071: Pavement Marking

0027	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Edge Line</i>	12.040	MILE	\$500.00000	\$6,020.00
0028	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Line</i>	5.600	MILE	\$300.00000	\$1,680.00
0029	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Center Line</i>	0.420	MILE	\$1,200.00000	\$504.00
0030	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Channelizing Line</i>	1,200.000	FT	\$1.25000	\$1,500.00
0031	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Stop Line</i>	192.000	FT	\$6.00000	\$1,152.00
0032	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Transverse Line</i>	0.000	FT	\$2.00000	\$0.00
0033	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Dotted Line</i>	0.000	FT	\$2.00000	\$0.00
0034	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Arrow</i>	16.000	EACH	\$80.00000	\$1,280.00
0035	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Word on Pavement</i>	8.000	EACH	\$100.00000	\$800.00
Total for Group 0071:\$12,936.00					

Group 0072: Signals - Intersections

0036	K-MC-SGNL MAJOR COST DRIVERS, SIGNALS	3.000	EACH	\$200,000.00000	\$600,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0072:\$600,000.00

Group 0080: Retaining Walls

0037	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS	0.000	SF	\$100.00000	\$0.00
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Total for Group 0080:\$0.00

Group 0090: Building Demolition

0038	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	13.000	EACH	\$10,000.00000	\$130,000.00
0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	9.000	EACH	\$25,000.00000	\$225,000.00
0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	11.000	EACH	\$750.00000	\$8,250.00
0042	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	11.000	EACH	\$2,500.00000	\$27,500.00

Total for Group 0090:\$390,750.00

Group 0100: New Structures

0043	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (highway)</i>	15,000.000	SF	\$150.00000	\$2,250,000.00
0044	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (rail)</i>	6,000.000	SF	\$300.00000	\$1,800,000.00
0045	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over Dry Run Creek & Railroad</i>	15,600.000	SF	\$150.00000	\$2,340,000.00
0046	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over SR 32</i>	12,000.000	SF	\$150.00000	\$1,800,000.00

Total for Group 0100:\$8,190,000.00

Group 0110: Rail Transit

0047	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (Light Rail)</i>	12,735.000	FT	\$1,000.00000	\$12,735,000.00
0048	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (Light Rail)</i>	150.000	FT	\$1,085.00000	\$162,750.00
0049	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Grade Crossing</i>	1.000	EACH	\$250,000.00000	\$250,000.00
0050	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Transit Station</i>	0.000	LS	\$0.00000	\$0.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0110:\$13,147,750.00

Group 0120: Wetland Construction

0051	T-MC-WTLD	0.000	ACRE	\$60,000.00000	\$0.00
MAJOR COST DRIVERS, WETLAND CONSTRUCTION					
0052	T-OC-WTLD	5,088.000	FT	\$600.00000	\$3,052,800.00
OTHER COSTS, WETLAND CONSTRUCTION					
<i>Stream Restoration</i>					

Total for Group 0120:\$3,052,800.00

Group 0130: Misc. Costs

0053	U-MC-MISC	1.000	LS	\$275,810.00000	\$275,810.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Performance Bond: 0.5% of total project cost (\$55,161,968)</i>					
0054	U-MC-MISC	1.000	LS	\$35,000.00000	\$35,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Railroad Insurance Bond</i>					
0055	U-MC-MISC	18.000	MNTH	\$2,500.00000	\$45,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Field Office Type C</i>					
0056	U-MC-MISC	1.000	LS	\$1,200,000.00000	\$1,200,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Mobilization: from CMS Item 624 for total project cost</i>					
0057	U-MC-MISC	1.000	LS	\$275,810.00000	\$275,810.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Construction Layout Stakes: 0.5% of total project cost (\$55,161,968)</i>					
0058	U-MC-MISC	1.000	LS	\$1,489,374.00000	\$1,489,374.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Maintaining Traffic: 2.7% of total project cost (\$55,161,968)</i>					

Total for Group 0130:\$3,320,994.00

Group 0140: Design Contingency Costs

0059	V-MC-CNTG	1.000	LS	\$14,609,491.00000	\$14,609,491.00
MAJOR COST DRIVERS, CONTINGENCY COSTS					
<i>PDP Design Contingency (step 5): 25% of total construction cost (\$58,437,962)</i>					

Total for Group 0140:\$14,609,491.00

Estimate EC2/3 - Alt R5%

Estimated Cost:\$64,449,343.00

Contingency: 0.00%

Estimated Total: \$64,449,343.00

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative R - Light Rail Profile

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/30/11

Checked by Steven Shadix on 01/18/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	3,846,449.000	CY	\$4.00000	\$15,385,796.00
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Total for Group 0001:\$15,385,796.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	195,023.000	CY	\$3.00000	\$585,069.00
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Total for Group 0002:\$585,069.00

Group 0003: Fill - Granular

0003	A-MC-RDWY MAJOR COST DRIVERS, ROADWAY	0.000	CY	\$30.00000	\$0.00
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Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY OTHER COSTS, ROADWAY <i>Guardrail</i>	1,200.000	FT	\$12.00000	\$14,400.00
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0005	A-OC-RDWY OTHER COSTS, ROADWAY <i>10' Sidewalk/Bike</i>	8,000.000	SF	\$4.00000	\$32,000.00
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0006	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb</i>	21,688.000	FT	\$12.00000	\$260,256.00
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0007	A-OC-RDWY OTHER COSTS, ROADWAY <i>Curb & Gutter</i>	21,688.000	FT	\$14.00000	\$303,632.00
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0008	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; light brush with dozer, ball & chain</i>	0.000	ACRE	\$1,100.00000	\$0.00
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0009	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; medium clearing with dozer & rake</i>	0.000	ACRE	\$1,650.00000	\$0.00
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0010	A-OC-RDWY OTHER COSTS, ROADWAY <i>Clearing & Grubbing; heavy clearing with dozer</i>	50.000	ACRE	\$2,200.00000	\$110,000.00
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Total for Group 0010:\$720,288.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Seeding & Mulching</i>	240,978.000	SY	\$2.00000	\$481,956.00
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Total for Group 0020:\$481,956.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO MAJOR COST DRIVERS, EROSION CONTROL <i>Conceptual Est: Earthwork Cost over \$10,000,000</i>	1.000	LS	\$300,000.00000	\$300,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$300,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	55,126.000	FT	\$6.00000	\$330,756.00
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Total for Group 0030:\$330,756.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	536.000	FT	\$375.00000	\$201,000.00
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Total for Group 0031:\$201,000.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	556.000	FT	\$825.00000	\$458,700.00
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Total for Group 0032:\$458,700.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	0.000	FT	\$1,500.00000	\$0.00
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Total for Group 0033:\$0.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$520,512.00000	\$520,512.00
0018	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE Side Roads	1.000	LS	\$80,000.00000	\$80,000.00

Total for Group 0034:\$600,512.00

Group 0040: Mainline Lanes

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	81,933.000	SY	\$41.00000	\$3,359,253.00
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Total for Group 0040:\$3,359,253.00

Group 0041: Ramps

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	13,333.000	SY	\$41.00000	\$546,653.00
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Total for Group 0041:\$546,653.00

Group 0042: Non - Mainline Lanes

0021	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	23,733.000	SY	\$41.00000	\$973,053.00
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Total for Group 0042:\$973,053.00

Group 0050: Utilities

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	<u>Description</u> <u>Supplemental Description</u>				
0022	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$12,000.00000	\$12,000.00
0023	F-MC-SANI MAJOR COST DRIVERS, SANITARY SEWER	1.000	LS	\$4,000.00000	\$4,000.00
0024	N-OC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Electric Transmission Tower Relocation</i>	0.000	EACH	\$1,000,000.00000	\$0.00
Total for Group 0050:					\$16,000.00

Group 0060: Lighting - Continuous Roadway

0025	G-MC-LTNG MAJOR COST DRIVERS, LIGHTING	18,104.000	FT	\$35.00000	\$633,640.00
Total for Group 0060:					\$633,640.00

Group 0070: Signs

0026	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL	2.500	MILE	\$250,000.00000	\$625,000.00
Total for Group 0070:					\$625,000.00

Group 0071: Pavement Marking

0027	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Edge Line</i>	10.840	MILE	\$500.00000	\$5,420.00
0028	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Line</i>	5.000	MILE	\$300.00000	\$1,500.00
0029	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Center Line</i>	0.420	MILE	\$1,200.00000	\$504.00
0030	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Channelizing Line</i>	1,200.000	FT	\$1.25000	\$1,500.00
0031	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Stop Line</i>	192.000	FT	\$6.00000	\$1,152.00
0032	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Transverse Line</i>	0.000	FT	\$2.00000	\$0.00
0033	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Dotted Line</i>	0.000	FT	\$2.00000	\$0.00
0034	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Arrow</i>	16.000	EACH	\$80.00000	\$1,280.00
0035	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Word on Pavement</i>	8.000	EACH	\$100.00000	\$800.00
Total for Group 0071:					\$12,156.00

Group 0072: Signals - Intersections

0036	K-MC-SGNL MAJOR COST DRIVERS, SIGNALS	3.000	EACH	\$200,000.00000	\$600,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0072:\$600,000.00

Group 0080: Retaining Walls

0037	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS	0.000	SF	\$100.00000	\$0.00
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Total for Group 0080:\$0.00

Group 0090: Building Demolition

0038	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	8.000	EACH	\$10,000.00000	\$80,000.00
0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	11.000	EACH	\$25,000.00000	\$275,000.00
0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	9.000	EACH	\$750.00000	\$6,750.00
0042	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	9.000	EACH	\$2,500.00000	\$22,500.00

Total for Group 0090:\$384,250.00

Group 0100: New Structures

0043	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (highway)</i>	15,000.000	SF	\$150.00000	\$2,250,000.00
0044	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (rail)</i>	6,000.000	SF	\$300.00000	\$1,800,000.00
0045	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over Dry Run Creek & Railroad</i>	15,600.000	SF	\$150.00000	\$2,340,000.00
0046	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over SR 32</i>	12,000.000	SF	\$150.00000	\$1,800,000.00

Total for Group 0100:\$8,190,000.00

Group 0110: Rail Transit

0047	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (Light Rail)</i>	10,894.000	FT	\$1,000.00000	\$10,894,000.00
0048	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (Light Rail)</i>	150.000	FT	\$1,085.00000	\$162,750.00
0049	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Grade Crossing</i>	1.000	EACH	\$250,000.00000	\$250,000.00
0050	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Transit Station</i>	0.000	LS	\$0.00000	\$0.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0110:\$11,306,750.00

Group 0120: Wetland Construction

0051	T-MC-WTLD	0.000	ACRE	\$60,000.00000	\$0.00
MAJOR COST DRIVERS, WETLAND CONSTRUCTION					
0052	T-OC-WTLD	4,311.000	FT	\$600.00000	\$2,586,600.00
OTHER COSTS, WETLAND CONSTRUCTION					
<i>Stream Restoration</i>					

Total for Group 0120:\$2,586,600.00

Group 0130: Misc. Costs

0053	U-MC-MISC	1.000	LS	\$241,713.00000	\$241,713.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Performance Bond: 0.5% of total project cost (\$48,342,432)</i>					
0054	U-MC-MISC	1.000	LS	\$35,000.00000	\$35,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Railroad Insurance Bond</i>					
0055	U-MC-MISC	18.000	MNTH	\$2,500.00000	\$45,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Field Office Type C</i>					
0056	U-MC-MISC	1.000	LS	\$1,200,000.00000	\$1,200,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Mobilization: from CMS Item 624 for total project cost</i>					
0057	U-MC-MISC	1.000	LS	\$241,713.00000	\$241,713.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Construction Layout Stakes: 0.5% of total project cost (\$48,342,432)</i>					
0058	U-MC-MISC	1.000	LS	\$1,498,616.00000	\$1,498,616.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Maintaining Traffic: 3.1% of total project cost (\$48,342,432)</i>					

Total for Group 0130:\$3,262,042.00

Group 0140: Design Contingency Costs

0059	V-MC-CNTG	1.000	LS	\$12,889,869.00000	\$12,889,869.00
MAJOR COST DRIVERS, CONTINGENCY COSTS					
<i>PDP Design Contingency (step 5): 25% of total construction cost (\$51,559,474)</i>					

Total for Group 0140:\$12,889,869.00

Estimate EC2/3 - Alt S5%

Estimated Cost:\$69,457,739.00

Contingency: 0.00%

Estimated Total: \$69,457,739.00

HAM/CLE-32F-2.50/0.00 Eastern Corridor Segment II/III - Alternative S - Light Rail Profile

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number: 86462

Estimate Type: C1

Prepared by Leo Honebrink on 12/30/11

Checked by Steven Shadix on 01/18/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY	3,191,797.000	CY	\$4.00000	\$12,767,188.00
MAJOR COST DRIVERS, ROADWAY					

Total for Group 0001:\$12,767,188.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY	542,627.000	CY	\$3.00000	\$1,627,881.00
MAJOR COST DRIVERS, ROADWAY					

Total for Group 0002:\$1,627,881.00

Group 0003: Fill - Granular

0003	A-MC-RDWY	0.000	CY	\$30.00000	\$0.00
MAJOR COST DRIVERS, ROADWAY					

Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY	1,800.000	FT	\$12.00000	\$21,600.00
OTHER COSTS, ROADWAY					
<i>Guardrail</i>					

0005	A-OC-RDWY	26,000.000	SF	\$4.00000	\$104,000.00
OTHER COSTS, ROADWAY					
<i>10' Sidewalk/Bike</i>					

0006	A-OC-RDWY	25,524.000	FT	\$12.00000	\$306,288.00
OTHER COSTS, ROADWAY					
<i>Curb</i>					

0007	A-OC-RDWY	25,524.000	FT	\$14.00000	\$357,336.00
OTHER COSTS, ROADWAY					
<i>Curb & Gutter</i>					

0008	A-OC-RDWY	0.000	ACRE	\$1,100.00000	\$0.00
OTHER COSTS, ROADWAY					
<i>Clearing & Grubbing; light brush with dozer, ball & chain</i>					

0009	A-OC-RDWY	0.000	ACRE	\$1,650.00000	\$0.00
OTHER COSTS, ROADWAY					
<i>Clearing & Grubbing; medium clearing with dozer & rake</i>					

0010	A-OC-RDWY	58.600	ACRE	\$2,200.00000	\$128,920.00
OTHER COSTS, ROADWAY					
<i>Clearing & Grubbing; heavy clearing with dozer</i>					

Total for Group 0010:\$918,144.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO	283,600.000	SY	\$2.00000	\$567,200.00
MAJOR COST DRIVERS, EROSION CONTROL					
<i>Seeding & Mulching</i>					

Total for Group 0020:\$567,200.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO	1.000	LS	\$300,000.00000	\$300,000.00
MAJOR COST DRIVERS, EROSION CONTROL					
<i>Conceptual Est: Earthwork Cost over \$10,000,000</i>					

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$300,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	62,848.000	FT	\$6.00000	\$377,088.00
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Total for Group 0030:\$377,088.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	550.000	FT	\$375.00000	\$206,250.00
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Total for Group 0031:\$206,250.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	545.000	FT	\$825.00000	\$449,625.00
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Total for Group 0032:\$449,625.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	320.000	FT	\$1,500.00000	\$480,000.00
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Total for Group 0033:\$480,000.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$612,576.00000	\$612,576.00
0018	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE Side Roads	1.000	LS	\$80,000.00000	\$80,000.00

Total for Group 0034:\$692,576.00

Group 0040: Mainline Lanes

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	96,424.000	SY	\$41.00000	\$3,953,384.00
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Total for Group 0040:\$3,953,384.00

Group 0041: Ramps

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	13,333.000	SY	\$41.00000	\$546,653.00
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Total for Group 0041:\$546,653.00

Group 0042: Non - Mainline Lanes

0021	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	23,733.000	SY	\$41.00000	\$973,053.00
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Total for Group 0042:\$973,053.00

Group 0050: Utilities

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	Description <u>Supplemental Description</u>				
0022	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$12,000.00000	\$12,000.00
0023	F-MC-SANI MAJOR COST DRIVERS, SANITARY SEWER	1.000	LS	\$4,000.00000	\$4,000.00
0024	N-OC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Electric Transmission Tower Relocation</i>	1.000	EACH	\$1,000,000.00000	\$1,000,000.00

Total for Group 0050:\$1,016,000.00

Group 0060: Lighting - Continuous Roadway

0025	G-MC-LTNG MAJOR COST DRIVERS, LIGHTING	20,112.000	FT	\$35.00000	\$703,920.00
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Total for Group 0060:\$703,920.00

Group 0070: Signs

0026	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL	2.900	MILE	\$250,000.00000	\$725,000.00
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Total for Group 0070:\$725,000.00

Group 0071: Pavement Marking

0027	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Edge Line</i>	12.440	MILE	\$500.00000	\$6,220.00
0028	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Line</i>	5.800	MILE	\$300.00000	\$1,740.00
0029	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Center Line</i>	0.420	MILE	\$1,200.00000	\$504.00
0030	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Channelizing Line</i>	1,200.000	FT	\$1.25000	\$1,500.00
0031	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Stop Line</i>	192.000	FT	\$6.00000	\$1,152.00
0032	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Transverse Line</i>	0.000	FT	\$2.00000	\$0.00
0033	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Dotted Line</i>	0.000	FT	\$2.00000	\$0.00
0034	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Arrow</i>	16.000	EACH	\$80.00000	\$1,280.00
0035	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Word on Pavement</i>	8.000	EACH	\$100.00000	\$800.00

Total for Group 0071:\$13,196.00

Group 0072: Signals - Intersections

0036	K-MC-SGNL MAJOR COST DRIVERS, SIGNALS	3.000	EACH	\$200,000.00000	\$600,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0072:\$600,000.00

Group 0080: Retaining Walls

0037	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS	0.000	SF	\$100.00000	\$0.00
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Total for Group 0080:\$0.00

Group 0090: Building Demolition

0038	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	13.000	EACH	\$10,000.00000	\$130,000.00
0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	12.000	EACH	\$25,000.00000	\$300,000.00
0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	10.000	EACH	\$750.00000	\$7,500.00
0042	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	10.000	EACH	\$2,500.00000	\$25,000.00

Total for Group 0090:\$462,500.00

Group 0100: New Structures

0043	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (highway)</i>	15,000.000	SF	\$150.00000	\$2,250,000.00
0044	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (rail)</i>	6,000.000	SF	\$300.00000	\$1,800,000.00
0045	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over Dry Run Creek & Railroad</i>	15,600.000	SF	\$150.00000	\$2,340,000.00
0046	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over SR 32</i>	12,000.000	SF	\$150.00000	\$1,800,000.00

Total for Group 0100:\$8,190,000.00

Group 0110: Rail Transit

0047	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (Light Rail)</i>	12,962.000	FT	\$1,000.00000	\$12,962,000.00
0048	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (Light Rail)</i>	150.000	FT	\$1,085.00000	\$162,750.00
0049	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Grade Crossing</i>	1.000	EACH	\$250,000.00000	\$250,000.00
0050	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Transit Station</i>	0.000	LS	\$0.00000	\$0.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0110:\$13,374,750.00

Group 0120: Wetland Construction

0051	T-MC-WTLD	0.000	ACRE	\$60,000.00000	\$0.00
MAJOR COST DRIVERS, WETLAND CONSTRUCTION					
0052	T-OC-WTLD	5,504.000	FT	\$600.00000	\$3,302,400.00
OTHER COSTS, WETLAND CONSTRUCTION					
<i>Stream Restoration</i>					

Total for Group 0120:\$3,302,400.00

Group 0130: Misc. Costs

0053	U-MC-MISC	1.000	LS	\$261,460.00000	\$261,460.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Performance Bond: 0.5% of total project cost (\$52,291,808)</i>					
0054	U-MC-MISC	1.000	LS	\$35,000.00000	\$35,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Railroad Insurance Bond</i>					
0055	U-MC-MISC	18.000	MNTH	\$2,500.00000	\$45,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Field Office Type C</i>					
0056	U-MC-MISC	1.000	LS	\$1,200,000.00000	\$1,200,000.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Mobilization: from CMS Item 624 for total project cost</i>					
0057	U-MC-MISC	1.000	LS	\$261,460.00000	\$261,460.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Construction Layout Stakes: 0.5% of total project cost (\$52,291,808)</i>					
0058	U-MC-MISC	1.000	LS	\$1,516,463.00000	\$1,516,463.00
MAJOR COST DRIVERS, MISCELLANEOUS COSTS					
<i>Maintaining Traffic: 2.9% of total project cost (\$52,291,808)</i>					

Total for Group 0130:\$3,319,383.00

Group 0140: Design Contingency Costs

0059	V-MC-CNTG	1.000	LS	\$13,891,548.00000	\$13,891,548.00
MAJOR COST DRIVERS, CONTINGENCY COSTS					
<i>PDP Design Contingency (step 5): 25% of total construction cost (\$55,566,191)</i>					

Total for Group 0140:\$13,891,548.00

Estimate EC2/3 - Alt T5%

Estimated Cost:\$98,681,589.00

Contingency: 0.00%

Estimated Total: \$98,681,589.00

Eastern Corridor Segment II/III - Alternative T - Light Rail Profile

Base Date: 01/01/12

Spec Year: 10

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type: 448

Urban/Rural Type: URBAN CLASS

Season: SUMMER

County: HAMILTON

Midpoint of Latitude:

Midpoint of Longitude:

District:

Federal/State Project Number:

Estimate Type: C1

Prepared by Leo Honebrink on 12/30/11

Checked by Steven Shadix on 01/18/12

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0001: Excavation

0001	A-MC-RDWY	3,421,895.000	CY	\$4.00000	\$13,687,580.00
MAJOR COST DRIVERS, ROADWAY					

Total for Group 0001:\$13,687,580.00

Group 0002: Fill - Embankment

0002	A-MC-RDWY	1,710,764.000	CY	\$3.00000	\$5,132,292.00
MAJOR COST DRIVERS, ROADWAY					

Total for Group 0002:\$5,132,292.00

Group 0003: Fill - Granular

0003	A-MC-RDWY	0.000	CY	\$30.00000	\$0.00
MAJOR COST DRIVERS, ROADWAY					

Total for Group 0003:\$0.00

Group 0010: Roadway Costs

0004	A-OC-RDWY	2,500.000	FT	\$12.00000	\$30,000.00
OTHER COSTS, ROADWAY					
<i>Guardrail</i>					

0005	A-OC-RDWY	21,000.000	SF	\$4.00000	\$84,000.00
OTHER COSTS, ROADWAY					
<i>10' Sidewalk/Bike</i>					

0006	A-OC-RDWY	39,824.000	FT	\$12.00000	\$477,888.00
OTHER COSTS, ROADWAY					
<i>Curb</i>					

0007	A-OC-RDWY	39,824.000	FT	\$14.00000	\$557,536.00
OTHER COSTS, ROADWAY					
<i>Curb & Gutter</i>					

0008	A-OC-RDWY	0.000	ACRE	\$1,100.00000	\$0.00
OTHER COSTS, ROADWAY					
<i>Clearing & Grubbing; light brush with dozer, ball & chain</i>					

0009	A-OC-RDWY	0.000	ACRE	\$1,650.00000	\$0.00
OTHER COSTS, ROADWAY					
<i>Clearing & Grubbing; medium clearing with dozer & rake</i>					

0010	A-OC-RDWY	91.000	ACRE	\$2,200.00000	\$200,200.00
OTHER COSTS, ROADWAY					
<i>Clearing & Grubbing; heavy clearing with dozer</i>					

Total for Group 0010:\$1,349,624.00

Group 0020: Seeding & Mulching / Sodding

0011	B-MC-ERCO	442,489.000	SY	\$2.00000	\$884,978.00
MAJOR COST DRIVERS, EROSION CONTROL					
<i>Seeding & Mulching</i>					

Total for Group 0020:\$884,978.00

Group 0021: Erosion Control - Item 832

0012	B-MC-ERCO	1.000	LS	\$300,000.00000	\$300,000.00
MAJOR COST DRIVERS, EROSION CONTROL					
<i>Conceptual Est: Earthwork Cost over \$10,000,000</i>					

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0021:\$300,000.00

Group 0030: Underdrains

0013	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	85,468.000	FT	\$6.00000	\$512,808.00
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Total for Group 0030:\$512,808.00

Group 0031: Culverts - Type A: < 5'

0014	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1,072.000	FT	\$375.00000	\$402,000.00
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Total for Group 0031:\$402,000.00

Group 0032: Culverts, Type A: 5' - 10'

0015	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	804.000	FT	\$825.00000	\$663,300.00
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Total for Group 0032:\$663,300.00

Group 0033: Culverts, Type A: 10' - 20'

0016	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	268.000	FT	\$1,500.00000	\$402,000.00
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Total for Group 0033:\$402,000.00

Group 0034: Closed Storm System

0017	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE	1.000	LS	\$699,276.00000	\$699,276.00
0018	C-MC-DRNG MAJOR COST DRIVERS, DRAINAGE Side Roads	1.000	LS	\$170,300.00000	\$170,300.00

Total for Group 0034:\$869,576.00

Group 0040: Mainline Lanes

0019	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	96,614.000	SY	\$41.00000	\$3,961,174.00
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Total for Group 0040:\$3,961,174.00

Group 0041: Ramps

0020	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	13,333.000	SY	\$41.00000	\$546,653.00
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Total for Group 0041:\$546,653.00

Group 0042: Non - Mainline Lanes

0021	D-MC-PVMT MAJOR COST DRIVERS, PAVEMENT	81,284.000	SY	\$41.00000	\$3,332,644.00
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Total for Group 0042:\$3,332,644.00

Group 0050: Utilities

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
0022	E-MC-WATR MAJOR COST DRIVERS, WATER LINE	1.000	LS	\$12,000.00000	\$12,000.00
0023	F-MC-SANI MAJOR COST DRIVERS, SANITARY SEWER	1.000	LS	\$4,000.00000	\$4,000.00
0024	N-OC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Electric Transmission Tower Relocation</i>	1.000	EACH	\$1,000,000.00000	\$1,000,000.00

Total for Group 0050:\$1,016,000.00

Group 0060: Lighting - Continuous Roadway

0025	G-MC-LTNG MAJOR COST DRIVERS, LIGHTING	19,885.000	FT	\$35.00000	\$695,975.00
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Total for Group 0060:\$695,975.00

Group 0070: Signs

0026	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL	2.900	MILE	\$250,000.00000	\$725,000.00
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Total for Group 0070:\$725,000.00

Group 0071: Pavement Marking

0027	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Edge Line</i>	12.440	MILE	\$500.00000	\$6,220.00
0028	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Line</i>	5.800	MILE	\$300.00000	\$1,740.00
0029	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Center Line</i>	0.840	MILE	\$1,200.00000	\$1,008.00
0030	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Channelizing Line</i>	1,200.000	FT	\$1.25000	\$1,500.00
0031	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Stop Line</i>	192.000	FT	\$6.00000	\$1,152.00
0032	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Transverse Line</i>	0.000	FT	\$2.00000	\$0.00
0033	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Dotted Line</i>	0.000	FT	\$2.00000	\$0.00
0034	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Lane Arrow</i>	16.000	EACH	\$80.00000	\$1,280.00
0035	J-MC-TRAF MAJOR COST DRIVERS, TRAFFIC CONTROL <i>Word on Pavement</i>	8.000	EACH	\$100.00000	\$800.00

Total for Group 0071:\$13,700.00

Group 0072: Signals - Intersections

0036	K-MC-SGNL MAJOR COST DRIVERS, SIGNALS	3.000	EACH	\$200,000.00000	\$600,000.00
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<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0072:\$600,000.00

Group 0080: Retaining Walls

0037	M-MC-WALL MAJOR COST DRIVERS, RETAINING WALLS <i>MSE Walls</i>	36,000.000	SF	\$100.00000	\$3,600,000.00
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Total for Group 0080:\$3,600,000.00

Group 0090: Building Demolition

0038	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Residential</i>	31.000	EACH	\$10,000.00000	\$310,000.00
0039	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Service Station Island & Tanks</i>	0.000	EACH	\$50,000.00000	\$0.00
0040	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Commercial</i>	9.000	EACH	\$25,000.00000	\$225,000.00
0041	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Sheds</i>	20.000	EACH	\$750.00000	\$15,000.00
0042	N-MC-DEMO MAJOR COST DRIVERS, BUILDING DEMOLITION <i>Garages</i>	20.000	EACH	\$2,500.00000	\$50,000.00

Total for Group 0090:\$600,000.00

Group 0100: New Structures

0043	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (highway - WB)</i>	7,500.000	SF	\$150.00000	\$1,125,000.00
0044	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (highway - EB)</i>	10,000.000	SF	\$150.00000	\$1,500,000.00
0045	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over Dry Run Creek (rail)</i>	8,000.000	SF	\$300.00000	\$2,400,000.00
0046	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over 8 Mile Road (highway - WB)</i>	6,600.000	SF	\$150.00000	\$990,000.00
0047	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over 8 Mile Road (highway - EB)</i>	6,600.000	SF	\$150.00000	\$990,000.00
0048	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Over 8 Mile Road (rail)</i>	6,000.000	SF	\$300.00000	\$1,800,000.00
0049	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over Dry Run Creek & Railroad</i>	15,600.000	SF	\$150.00000	\$2,340,000.00
0050	R-MC-STRC MAJOR COST DRIVERS, STRUCTURES <i>New Structure: Side Road Over SR 32</i>	12,000.000	SF	\$150.00000	\$1,800,000.00

Total for Group 0100:\$12,945,000.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Group 0110: Rail Transit

0051	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>At Grade Ballasted Track (Light Rail)</i>	14,400.000	FT	\$1,000.00000	\$14,400,000.00
0052	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Aerial Direct Fixation Track on Bridges (Light Rail)</i>	200.000	FT	\$1,085.00000	\$217,000.00
0053	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Grade Crossing</i>	1.000	EACH	\$250,000.00000	\$250,000.00
0054	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Transit Station</i>	0.000	LS	\$0.00000	\$0.00

Total for Group 0110:\$14,867,000.00

Group 0120: Wetland Construction

0055	T-MC-WTLD MAJOR COST DRIVERS, WETLAND CONSTRUCTION	0.040	ACRE	\$60,000.00000	\$2,400.00
0056	T-OC-WTLD OTHER COSTS, WETLAND CONSTRUCTION <i>Stream Restoration</i>	11,519.000	FT	\$600.00000	\$6,911,400.00

Total for Group 0120:\$6,913,800.00

Group 0130: Misc. Costs

0057	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Performance Bond: 0.5% of total project cost (\$74,066,104)</i>	1.000	LS	\$370,331.00000	\$370,331.00
0058	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Railroad Insurance Bond</i>	1.000	LS	\$35,000.00000	\$35,000.00
0059	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Field Office Type C</i>	18.000	MNTH	\$2,500.00000	\$45,000.00
0060	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Mobilization: from CMS Item 624 for total project cost</i>	1.000	LS	\$1,600,000.00000	\$1,600,000.00
0061	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Construction Layout Stakes: 0.5% of total project cost (\$74,066,104)</i>	1.000	LS	\$370,331.00000	\$370,331.00
0062	U-MC-MISC MAJOR COST DRIVERS, MISCELLANEOUS COSTS <i>Maintaining Traffic: 2.7% of total project cost (\$74,066,104)</i>	1.000	LS	\$1,999,785.00000	\$1,999,785.00

Total for Group 0130:\$4,420,447.00

Group 0140: Design Contingency Costs

0063	V-MC-CNTG MAJOR COST DRIVERS, CONTINGENCY COSTS <i>Constructible Risk Contingency: Burger Landfill Impact = 800' @ 10' depth = 25,186CY * (Excavation \$15/CY + Embankment \$10/CY)</i>	1.000	LS	\$629,650.00000	\$629,650.00
0064	V-MC-CNTG MAJOR COST DRIVERS, CONTINGENCY COSTS <i>PDP Design Contingency (step 5): 25% of total construction cost (\$78,441,551)</i>	1.000	LS	\$19,610,388.00000	\$19,610,388.00

Line # Item Number
Description
Supplemental Description

Quantity Units Unit Price

Extension

Total for Group 0140:\$20,240,038.00