MEMORANDUM

CITY OF NOVI
cityofnovi.org

TO: VICTOR CARDENAS, CITY MANAGER

FROM: JEFFREY HERCZEG, DIRECTOR OF PUBLIC WORKS

SUBJECT: MAJOR ROAD PROJECTS UPDATE AND FUNDING

DATE: DECEMBER 13, 2023

Staff has identified three major road projects in the Capital Improvement Plan (CIP) which require funding beyond the current capacity in the road's funds. The identified projects are **Beck Road** (12 Mile to 8 Mile Road), **Road Commission for Oakland County (RCOC)12 Mile Road** (Beck to west of Novi Road), and the proposed connection of **Crescent Boulevard and Lee BeGole Drive** (northeast ring road Crescent to 11 Mile Road). All projects are expansion and traffic improvements to significant corridors. Additional information and history on all the projects are attached for reference. The status of the three projects are as follows:

RCOC 12 Mile Road (4 Lane Boulevard)

- Federally project in cooperation with RCOC
- Project limits originally were Beck Road to Dixon Road, estimated at ~$15M
- New project limits are from Beck Road to just west of Novi Road estimated at ~$35M
- Currently $1.2M is budgeted in 2025 for design and right-of-way acquisition (50/50 split with RCOC)
- City responsible for 10% of construction costs ($3.5M), with advanced construction in FY2026 required to secure federal funding of $10.5M (federal payback of $7.5M spilt between in FY 2027-28 below)

CON Estimate	$35,000,000			
Funds Identified	2026	2027	2028	Total
Federal "C"	$4,694,000	$4,694,000	$4,694,000	$14,082,000
State "C"	$9,863,660	$3,228,000	$1,200,000	$14,291,660
Local	$3,639,415	$1,980,500	$1,473,500	$7,093,415
Total	$18,197,075	$9,902,500	$7,367,500	$35,467,075
JobNet / TIP	2026	2027	2028	Total
Federal "C"	$4,694,000	Convert Above	Convert Above	$4,694,000
State "C"	$9,863,660	Convert Above	Convert Above	$9,863,660
Local	$20,909,415	$0	$0	$20,909,415
Total	$35,467,075	$0	$0	$35,467,075
City Front Costs	$10,454,708			
City Reimbursement		-$3,961,000	-$2,947,000	
City NET Costs				$3,546,708

Beck Road (4 Lane Boulevard)

- Environmental Assessment (EA) is wrapping up in 2024, final step is a public hearing
- $4.7M (for segment from Grand River to 11 Mile Road) Federal Funding Congressional Directed Spending to be obligated by August 2025 (segment estimated cost $9M)
- Continue to work with City of Wixom to peruse additional federal funding for the entire corridor
- Estimated cost for other 3 segments (11 Mile to 8 Mile) ~$30M
- Total cost Novi Beck Road Corridor Grand River to 8 Mile Road ~$40M

Crescent Boulevard to Lee BeGole Drive /11 Mile Road Roundabout (RAB)

- Currently budgeted in 2028 estimated $5M
- Recent acquisition of property across from the Department of Public Works makes road construction possible
- Aligns with potential Public Safety Complex planning process
- Increases value of property for resale if the City decides not to move the Public Safety Facility to said location

To fund and construct these projects staff recommends bonding the approximate ~$20M (~$5M for Beck (Grand River to 11 Mile, $10.5M for 12 Mile, and $5M for Crescent/Lee BeGole). The City will receive $7.5M back in federal reimbursement on the 12 Mile Road project as mentioned above but it will be repaid over a two year period.

The proposed bonding for these projects **does not** include going to the voters and asking for a millage to pay them, the debt service would be paid directly by the Municipal Street Fund and would only need council approval to proceed. City has several options for the bonds (20-year amortization) which include the following:

- Issue the $20M in bonds and use the $6.908M in grant repayments just to repay the debt which would result on an estimated annual debt service payment of $1.390M which would be part of the annual budgets moving forward.
- Issue the $20M in bonds and **do not** use the $6.908M in grant repayments to repay the debt which would result on an estimated annual debt service payment of $1.735M which would be part of the annual budgets moving forward. The grant repayments would be used to fund additional local street repairs as identified by the Road Committee final report or other council initiatives (see below).
- Issue $18M in bonds and use the $6.908M in grant repayments just to repay the debt which would result on an estimated annual debt service payment of $1.216M which would be part of the annual budgets moving forward. The reduction of $2M would involve the City Council temporarily suspending the fund balance minimum requirement in the street funds for two years and using those funds for the advance funding of 12 Mile. Using the fund balance would save the road funds more than $3.74M over the duration of the bonds.
- Issue the $18M in bonds and **do not** use the $6.908M in grant repayments to repay the debt which would result on an estimated annual debt service payment of $1.562M which would be part of the annual budgets moving forward. The grant repayments would be used to fund additional local street repairs as identified by the Road Committee final report or other council initiatives (see below). The reduction of $2M would involve the City Council temporarily suspending the fund balance

minimum requirement in the street funds for two years and using those funds for the advance funding of 12 Mile. Using the fund balance would save the road funds more than $3.74M over the duration of the bonds.

This essentially frees dollars in the CIP to complete other projects competing for funding year after year. In 2020 The Roads Committee reported out a gap of $2-$3M in the road funds results in moving and deferring existing projects. Further complicated by local projects with federal funding which need to be obligated in specific fiscal years below:

Project	**Year**	**Limits**	**Federal Share**	**Novi Share**
Wixom Road	2023	790' S of Grand River Ave to Ten Mile	$1,475,280	$ 323,506
Meadowbrook	2024	10 Mile Rd to 11 Mile Rd	$ 931,161	$ 232,790
9 Mile Road	2024	Meadowbrook to Haggerty	$ 573,379	$ 143,345
13 Mile Rd	2025	M-5 to Haggerty Rd	$ 523,745	$ 130,936
West Park Dr	2025	12 Mile Rd to West Rd	$ 576,978	$ 144,244
West Park Dr	2025	West Rd to Pontiac Trail	$1,198,688	$ 299,672
		Total	**$6,851,062**	**$2,528,803**

A bond of this magnitude would provide flexibility and allow execution of the larger projects timely enough to align funding sources which can ultimately be directed by the City Council's preferred priorities.

The remaining segments on the Beck project (11 Mile Road to 8 Mile Road) are estimated at ~$30M and assuming no additional federal dollars, they would have to be addressed separately and will likely need to be funded by a voter-approved millage as the estimated annual debt service is $2.603M or .56 mills. However, there is a lack of support for expansion from communities south of 8 Mile, so any expansion project south of 10 Mile (staff does recommend completing expansion to 10 Mile based on its current traffic volumes) would need further consideration.

City of Novi
Beck Rd
Boulevard from 11 Mile Rd to Providence S. Dr, 5 Lane Road from Providence S. Dr to Grand River
Preliminary Estimate of Cost - Signal at 11 Mile
5/10/2022

Item No.	Item Description	Unit	Quantity	Unit Price	Total Cost
1	Mobilization (10%)	LS	1	526,345.00	$ 526,345.00
2	Pre-Construction Audio-Visual	LS	1	$ 7,500.00	$ 7,500.00
3	Erosion Control, Silt Fence	Ft	6980	$ 3.00	$ 20,940.00
4	Erosion Control, Inlet Protection, Fabric Drop	Ea	46	$ 120.00	$ 5,520.00
5	Erosion Control, Check Dam, Stone	Ft	200	$ 40.00	$ 8,000.00
6	HMA Surface, Rem	Syd	21190	$ 4.00	$ 84,760.00
7	Pavt, Rem	Syd	654	$ 12.00	$ 7,848.00
8	Curb and Gutter, Rem	Ft	3441	$ 13.00	$ 44,733.00
9	Excavation, Earth	Cyd	2169	$ 15.00	$ 32,535.00
10	Subgrade, Undercut, Type Special 1x3	Cyd	2000	$ 60.00	$ 120,000.00
11	Roadway Grading	Sta	34.9	$ 26,000.00	$ 907,400.00
12	Sidewalk, Rem	Syd	736	$ 15.00	$ 11,040.00
13	Phragmites Plant Material Handling and Disposal	Cyd	144	$ 35.00	$ 5,040.00
14	Tree, Rem, 19 inch to 36 inch	Ea	5	$ 1,500.00	$ 7,500.00
15	Tree, Rem, 6 inch to 18 inch	Ea	20	$ 300.00	$ 6,000.00
16	Clearing	Acre	0.3	$ 18,300.00	$ 5,490.00
17	Aggregate Base, 21AA Limestone, 12 inch (roadway)	Syd	27919	$ 17.00	$ 474,623.00
18	Aggregate Base, 21AA Limestone, 4 inch (sidewalk)	Syd	2432	$ 8.00	$ 19,456.00
19	Geogrid, Triaxial	Syd	27919	$ 5.00	$ 139,595.00
20	Underdrain, Subgrade, Open Graded, 6 inch	Ft	7678	$ 16.00	$ 122,848.00
21	Conc Pavt w/ Integral Curb, Nonreinf, 9 inch, High Performance	Syd	26231	$ 70.00	$ 1,836,170.00
22	Driveway, Nonreinf Conc, 8 inch	Syd	1061	$ 55.00	$ 58,355.00
23	Sidewalk Ramp, Conc, 6 inch	Sft	895	$ 8.00	$ 7,160.00
24	Sidewalk, Conc, 4 inch	Sft	17970	$ 6.00	$ 107,820.00
25	Detectable Warning Surface	Ft	40	$ 45.00	$ 1,800.00
26	Dr Structure, 48 inch	Ea	46	$ 2,750.00	$ 126,500.00
27	Dr Structure Cover, Type K	Ea	46	$ 850.00	$ 39,100.00
28	Sewer, Cl A, 12 inch, Tr Det B	Ft	4872	$ 75.00	$ 365,400.00
29	Culv, Cl A, 48 inch	Ft	104	$ 600.00	$ 62,400.00
30	Culv End Sect, Conc, 48 inch	Ea	2	$ 3,000.00	$ 6,000.00
31	Culv End Sect, Footing	Ea	2	$ 400.00	$ 800.00
32	Dr Structure, Rem	Ea	7	$ 400.00	$ 2,800.00
33	Sewer, Rem, Less than 24 inch	Ft	441	$ 18.00	$ 7,938.00
34	Video Taping Sewer and Culv Pipe	Ft	4976	$ 2.00	$ 9,952.00
35	Culv, Rem, Less than 24 inch	Ea	7	$ 600.00	$ 4,200.00
36	Culv, Rem, 24 inch to 48 inch	Ea	1	$ 2,000.00	$ 2,000.00
37	DPS Structure Adjust, Case 1	Ea	19	$ 500.00	$ 9,500.00
38	DPS Structure Adjust, Case 2	Ea	18	$ 500.00	$ 9,000.00
39	Hydrant, Relocate, Case 1	Ea	4	$ 3,000.00	$ 12,000.00
40	Slope Restoration, Type A	Syd	13057	$ 4.00	$ 52,228.00
41	Pushbutton, Rem	Ea	9	$ 80.00	$ 720.00
42	Pedestal Fdn, Rem	Ea	4	$ 300.00	$ 1,200.00
43	Pedestal, Rem	Ea	4	$ 100.00	$ 400.00
44	Wood Pole, Rem	Ea	2	$ 350.00	$ 700.00
45	TS, Bracket Arm Mtd, Rem	Ea	4	$ 110.00	$ 440.00
46	Span Wire, Rem	Ea	2	$ 250.00	$ 500.00
47	TS, Span Wire Mtd, Rem	Ea	5	$ 110.00	$ 550.00
48	TS, Pedestrian, Bracket Arm Mtd, Rem	Ea	6	$ 100.00	$ 600.00
49	TS, Pedestrian, Bracket Arm Mtd, Salv	Ea	4	$ 100.00	$ 400.00
50	Guy, Rem	Ea	1	$ 150.00	$ 150.00
51	HH, Rem	Ea	4	$ 350.00	$ 1,400.00
52	Pedestal, Alum, RCOC	Ea	8	$ 900.00	$ 7,200.00
53	Pedestal, Alum	Ea	2	$ 900.00	$ 1,800.00
54	Pedestal, Fdn	Ea	10	$ 1,000.00	$ 10,000.00
55	Pushbutton and Sign	Ea	10	$ 550.00	$ 5,500.00
56	St Name Sign, Two Way, LED, 8', RCOC	Ea	4	$ 3,750.00	$ 15,000.00
57	St Name Sign, Two Way, 8', Salvage	Ea	2	$ 500.00	$ 1,000.00
58	St Name Sign, Bracket, 10' RCOC	Ea	4	$ 2,000.00	$ 8,000.00
59	St Name Sign, Bracket, 10'	Ea	2	$ 2,000.00	$ 4,000.00
60	Controller Fdn, Base Mount	Ea	1	$ 2,500.00	$ 2,500.00
61	Traffic Loop, Preformed, RCOC	Ea	15	$ 2,000.00	$ 30,000.00
62	Traffic Loop, Preformed	Ea	14	$ 2,000.00	$ 28,000.00
63	TS, One Way Mast Arm Mtd, FYA (LED)	Ea	19	$ 1,750.00	$ 33,250.00

64	TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown	Ea	8	$	975.00	$	7,800.00
65	Mast Arm Pole, Cat III	Ea	6	$	12,000.00	$	72,000.00
66	Mast Arm, 35-foot, Cat III	Ea	1	$	14,000.00	$	14,000.00
67	Mast Arm, 40 foot, Cat III	Ea	2	$	15,000.00	$	30,000.00
68	Mast Arm, 50 foot, Cat III	Ea	3	$	16,000.00	$	48,000.00
69	Mast Arm Pole Fdn, RCOC	Ft	80	$	550.00	$	44,000.00
70	Mast Arm Pole Fdn	Ft	40	$	550.00	$	22,000.00
71	Casing	Ft	120	$	250.00	$	30,000.00
72	HH, Round	Ea	7	$	1,300.00	$	9,100.00
73	Conduit, DB, 1, 1 1/4 inch	Ft	923	$	18.00	$	16,614.00
74	Conduit, DB, 1, 3 inch	Ft	330	$	20.00	$	6,600.00
75	Conduit, DB, 3, 3 inch	Ft	615	$	35.00	$	21,525.00
76	Mast Arm, Rem	Ea	2	$	500.00	$	1,000.00
77	Mast Arm Fdn, Rem	Ea	2	$	750.00	$	1,500.00
78	Signal Head Realignment	Ea	3	$	300.00	$	900.00
79	TS, Bag	Ea	1	$	150.00	$	150.00
80	Gate Well, 60 inch dia	Ea	4	$	3,250.00	$	13,000.00
81	Permanent Pavement Markings	LS	1	$	8,000.00	$	8,000.00
82	Permanent Signing	LS	1	$	12,000.00	$	12,000.00
83	Misc Items	LS	1	$	526,345.00	$	526,345.00
84	Maintaining Traffic	LS	1	$	100,000.00	$	100,000.00
85	Traffic Regulator Control	LS	1	$	26,279.75	$	26,279.75
86	Minor Traffic Devices	LS	1	$	105,119.00	$	105,119.00
	Base Bid Construction Cost					**$**	**6,547,538.75**
	Design Engineering + Grant Program Administration	6.75%				$	441,958.87
	Geotechnical	2%				$	130,950.78
	Design Contingency	10%				$	44,195.89
						$	**617,105.53**
	Construction Engineering	4.75%				$	311,008.09
	ROW Acquisition					$	722,965.69
	Noise Study					$	55,000.00
	Lighting (Design and Install by DTE)					$	197,110.00
	Materials Testing	2%				$	130,950.78
	Crew Days	$ 700	150			$	105,000.00
	Construction Contingency	10%				$	654,753.88
						$	**2,176,788.43**
	TOTAL COST					**$**	**9,341,432.71**

Estimate Assumptions:

Full survey has not been completed, so storm sewer elements are just an estimation of what is required.

Hydraulic survey will need to be performed for storm sewer design if outletting to Lyon Drain

City of Novi
Beck Rd
Boulevard from 11 Mile Rd to Providence S. Dr, 5 Lane Road from Providence S. Dr to Grand River
Preliminary Estimate of Cost - Roundabout at 11 Mile
5/10/2022

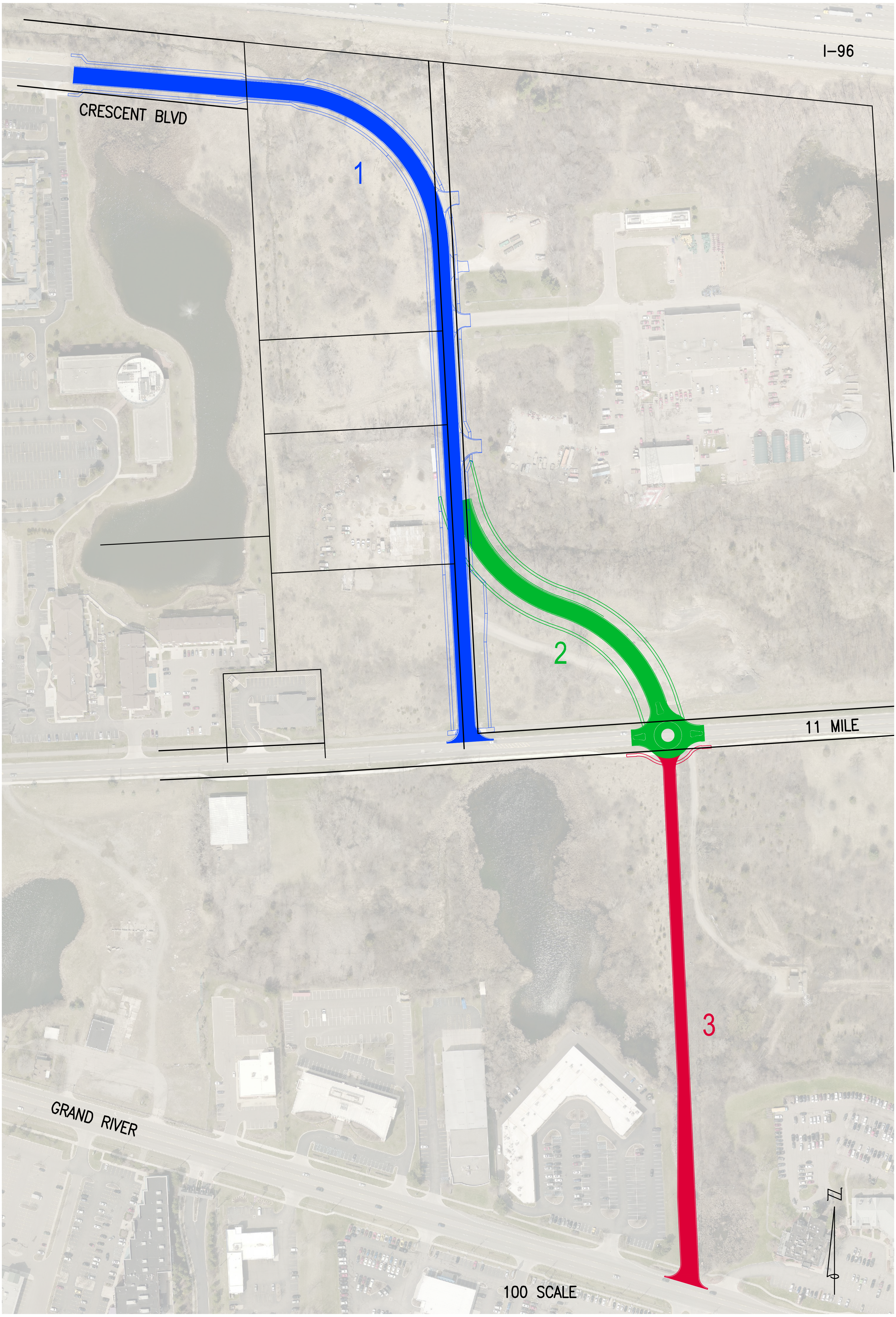
Item No.	Item Description	Unit	Quantity	Unit Price	Total Cost
1	Mobilization (10%)	LS	1	529,559.40	$ 529,559.40
2	Pre-Construction Audio-Visual	LS	1	$ 7,500.00	$ 7,500.00
3	Erosion Control, Silt Fence	Ft	7640	$ 3.00	$ 22,920.00
4	Erosion Control, Inlet Protection, Fabric Drop	Ea	44	$ 120.00	$ 5,280.00
5	Erosion Control, Check Dam, Stone	Ft	200	$ 40.00	$ 8,000.00
6	HMA Surface, Rem	Syd	24249	$ 4.00	$ 96,996.00
7	Pavt, Rem	Syd	745	$ 12.00	$ 8,940.00
8	Curb and Gutter, Rem	Ft	4323	$ 13.00	$ 56,199.00
9	Excavation, Earth	Cyd	2169	$ 15.00	$ 32,535.00
10	Subgrade, Undercut, Type Special 1x3	Cyd	2000	$ 60.00	$ 120,000.00
11	Roadway Grading	Sta	38.2	$ 26,000.00	$ 993,200.00
12	Sidewalk, Rem	Syd	854	$ 15.00	$ 12,810.00
13	Phragmites Plant Material Handling and Disposal	Cyd	144	$ 35.00	$ 5,040.00
14	Tree, Rem, 19 inch to 36 inch	Ea	5	$ 1,500.00	$ 7,500.00
15	Tree, Rem, 6 inch to 18 inch	Ea	20	$ 300.00	$ 6,000.00
16	Clearing	Acre	0.3	$ 18,300.00	$ 5,490.00
17	Aggregate Base, 21AA Limestone, 12 inch (roadway)	Syd	29544	$ 17.00	$ 502,248.00
18	Aggregate Base, 21AA Limestone, 4 inch (sidewalk)	Syd	2896	$ 8.00	$ 23,168.00
19	Geogrid, Triaxial	Syd	29544	$ 5.00	$ 147,720.00
20	Underdrain, Subgrade, Open Graded, 6 inch	Ft	8404	$ 16.00	$ 134,464.00
21	Conc Pavt w/ Integral Curb, Nonreinf, 9 inch, High Performance	Syd	27538	$ 70.00	$ 1,927,660.00
22	Driveway, Nonreinf Conc, 8 inch	Syd	1251	$ 55.00	$ 68,805.00
23	Sidewalk Ramp, Conc, 6 inch	Sft	1920	$ 8.00	$ 15,360.00
24	Sidewalk, Conc, 4 inch	Sft	21824	$ 6.00	$ 130,944.00
25	Detectable Warning Surface	Ft	128	$ 45.00	$ 5,760.00
26	Dr Structure, 48 inch	Ft	56	$ 2,750.00	$ 154,000.00
27	Dr Structure Cover, Type K	Ea	56	$ 850.00	$ 47,600.00
28	Sewer, Cl A, 12 inch, Tr Det B	Ft	5416	$ 75.00	$ 406,200.00
29	Culv, Cl A, 48 inch	Ft	104	$ 600.00	$ 62,400.00
30	Culv End Sect, Conc, 48 inch	Ea	2	$ 3,000.00	$ 6,000.00
31	Culv End Sect, Footing	Ea	2	$ 400.00	$ 800.00
32	Dr Structure, Rem	Ea	7	$ 400.00	$ 2,800.00
33	Sewer, Rem, Less than 24 inch	Ft	441	$ 18.00	$ 7,938.00
34	Video Taping Sewer and Culv Pipe	Ft	5520	$ 2.00	$ 11,040.00
35	Culv, Rem, Less than 24 inch	Ea	7	$ 600.00	$ 4,200.00
36	Culv, Rem, 24 inch to 48 inch	Ea	1	$ 2,000.00	$ 2,000.00
37	DPS Structure Adjust, Case 1	Ea	19	$ 500.00	$ 9,500.00
38	DPS Structure Adjust, Case 2	Ea	18	$ 500.00	$ 9,000.00
39	Hydrant, Relocate, Case 1	Ea	4	$ 3,000.00	$ 12,000.00
40	Slope Restoration, Type A	Syd	15537	$ 4.00	$ 62,148.00
41	Pushbutton, Rem	Ea	9	$ 80.00	$ 720.00
42	Pedestal Fdn, Rem	Ea	4	$ 300.00	$ 1,200.00
43	Pedestal, Rem	Ea	4	$ 100.00	$ 400.00
44	Wood Pole, Rem	Ea	2	$ 350.00	$ 700.00
45	TS, Bracket Arm Mtd, Rem	Ea	4	$ 110.00	$ 440.00
46	Span Wire, Rem	Ea	2	$ 250.00	$ 500.00
47	TS, Span Wire Mtd, Rem	Ea	5	$ 110.00	$ 550.00
48	TS, Pedestrian, Bracket Arm Mtd, Rem	Ea	6	$ 100.00	$ 600.00
49	TS, Pedestrian, Bracket Arm Mtd, Salv	Ea	4	$ 100.00	$ 400.00
50	Guy, Rem	Ea	1	$ 150.00	$ 150.00
51	HH, Rem	Ea	4	$ 350.00	$ 1,400.00
52	Pedestal, Alum	Ea	3	$ 900.00	$ 2,700.00
53	Pedestal, Fdn	Ea	3	$ 1,000.00	$ 3,000.00
54	Pushbutton and Sign	Ea	3	$ 550.00	$ 1,650.00
55	St Name Sign, Two Way, 8', Salvage	Ea	2	$ 500.00	$ 1,000.00
56	St Name Sign, Bracket, 10'	Ea	2	$ 2,000.00	$ 4,000.00
57	Traffic Loop, Preformed	Ea	14	$ 2,000.00	$ 28,000.00
58	TS, One Way Mast Arm Mtd, FYA (LED)	Ea	6	$ 1,750.00	$ 10,500.00
59	Mast Arm Pole, Cat III	Ea	2	$ 12,000.00	$ 24,000.00
60	Mast Arm, 40 foot, Cat III	Ea	1	$ 11,000.00	$ 11,000.00
61	Mast Arm, 50 foot, Cat III	Ea	1	$ 13,000.00	$ 13,000.00
62	Mast Arm Pole Fdn	Ft	40	$ 500.00	$ 20,000.00
63	Casing	Ft	40	$ 250.00	$ 10,000.00

64	HH, Round	Ea	2	$ 1,300.00	$ 2,600.00
65	Conduit, DB, 1, 1 1/4 inch	Ft	308	$ 18.00	$ 5,544.00
66	Conduit, DB, 1, 3 inch	Ft	110	$ 20.00	$ 2,200.00
67	Conduit, DB, 3, 3 inch	Ft	205	$ 35.00	$ 7,175.00
68	Gate Well, 60 inch dia	Ea	4	$ 3,250.00	$ 13,000.00
69	Permanent Pavement Markings	LS	1	$ 10,000.00	$ 10,000.00
70	Permanent Signing	LS	1	$ 14,000.00	$ 14,000.00
71	Misc Items	LS	1	$ 532,509.40	$ 532,509.40
72	Maintaining Traffic	LS	1	$ 100,000.00	$ 100,000.00
73	Traffic Regulator Control	LS	1	$ 26,625.47	$ 26,625.47
74	Minor Traffic Devices	LS	1	$ 106,501.88	$ 106,501.88
	Base Bid Construction Cost				**$ 6,627,790.15**
	Design Engineering + Grant Program Administration	6.75%			$ 447,375.84
	Geotechnical	2%			$ 132,555.80
	Design Contingency	10%			$ 44,737.58
					$ 624,669.22
	Construction Engineering	4.75%			$ 314,820.03
	ROW Acquisition				$ 746,237.44
	Lighting (Design and Install by DTE)				$ 197,110.00
	Noise Study				$ 55,000.00
	Materials Testing	2%			$ 132,555.80
	Crew Days	$ 700	150		$ 105,000.00
	Construction Contingency	10%			$ 662,779.02
					$ 2,213,502.29
	TOTAL COST				**$ 9,465,961.66**

Estimate Assumptions:

Full survey has not been completed, so storm sewer elements are just an estimation of what is required.
Hydraulic survey will need to be performed for storm sewer design if outletting to Lyon Drain
Traffic surveys will need to be copmleted for roundabout design

DRAWING PATH: P:\0126_0165\0163190010_Lee_BeGole_Drive\Drawings\Civil\Xref\Schematic_SCHEMATIC.dwg Dec 22, 2023 - 4:37pm



SHEET	DATE	PROJ NUMBER	ENG	PROJ MGR	CADD	COUNTY	CITY/VILLAGE/TOWNSHIP	SCALE	HORIZ DATUM	VERT DATUM
1 OF 1	06/06/19	############	###	###	###	#######	############	H: 1"=100' V: N/A	######	#########

LEE BEGOLE DRIVE
CRESCENT BOULEVARD EXTENSION

EXHIBIT

REVISIONS:
#
#
#
#
#
#

OHM
ARCHITECTS ENGINEERS PLANNERS
OHM-ADVISORS.COM

OHM Advisors

CITY OF NOVI
Lee BeGole Drive / Crescent Boulevard Extension
Probable Estimate of Cost
12/22/2023

Item No.	Item Description	Unit		Unit Price ($)	Item Cost ($)
1	STRAIGHT CONNECTION	LSUM	1.00	$ 4,250,000.00	$ 4,250,000.00
	Construction Subtotal				$ 4,250,000.00
	Inspection (Crew Days)	CD	120.00	$800.00	$96,000.00
	Contract Administration*	% Fee	4.75%		$201,875.00
	Materials Testing	% Fee	2.00%		$85,000.00
	Contingency	%	10%		
	Construction Total				**$ 5,096,163.00**
	Design Engineering*	% Fee	6.25%		$265,625.00
	Geotechnical Investigation	% Fee	1.00%		$42,500.00
	R.O.W. Acquisition	LS	1.00		$0.00
	Permitting	LS	1.00	$ 2,000.00	$2,000.00
	Hydraulic Analysis & Wetland Mitigation	LS	1.00	$ 15,000.00	$15,000.00
	Traffic Modeling & Alignment Study	LS	1.00		$0.00
	Contingency	%	10%		
	Engineering Total				**$357,637.50**
	Total Estimated Cost				**$ 5,453,800.50**

Estimate Assumptions:
Does not include any sanitary sewer. Does not include work outside of right-of-way for any planned developments.

* Per 'Attachment A' of the 2022-2027 Engineering Fee Table

OHM Advisors

CITY OF NOVI
Lee BeGole Drive / Crescent Boulevard Extension
Probable Estimate of Cost
12/22/2023

Item No.	Item Description	Unit		Unit Price ($)	Item Cost ($)
1	STRAIGHT CONNECTION	LSUM	1.00	$ 4,250,000.00	$ 4,250,000.00
2	TO 11 MILE WITH ROUNDABOUT	LSUM	1.00	$ 1,750,000.00	$ 1,750,000.00
	Construction Subtotal				$ 6,000,000.00
	Inspection (Crew Days)	CD	160.00	$800.00	$128,000.00
	Contract Administration*	% Fee	4.75%		$285,000.00
	Materials Testing	% Fee	2.00%		$120,000.00
	Contingency	%	10%		
	Construction Total				**$ 7,186,300.00**
	Design Engineering*	% Fee	6.25%		$375,000.00
	Geotechnical Investigation	% Fee	1.00%		$60,000.00
	R.O.W. Acquisition	LS	1.00	$ 15,000.00	$15,000.00
	Permitting	LS	1.00	$ 2,000.00	$2,000.00
	Hydraulic Analysis & Wetland Mitigation	LS	1.00	$ 30,000.00	$30,000.00
	Traffic Modeling & Alignment Study	LS	1.00	$ 7,500.00	$7,500.00
	Contingency	%	10%		
	Engineering Total				**$538,450.00**
	Total Estimated Cost				**$ 7,724,750.00**

Estimate Assumptions:
Does not include any sanitary sewer. Does not include work outside of right-of-way for any planned developments.

* Per 'Attachment A' of the 2022-2027 Engineering Fee Table

OHM Advisors

CITY OF NOVI
Lee BeGole Drive / Crescent Boulevard Extension
Probable Estimate of Cost
12/22/2023

Item No.	Item Description	Unit		Unit Price ($)	Item Cost ($)
1	STRAIGHT CONNECTION	LSUM	1.00	$ 4,250,000.00	$ 4,250,000.00
2	TO 11 MILE WITH ROUNDABOUT	LSUM	1.00	$ 1,750,000.00	$ 1,750,000.00
3	TO GRAND RIVER (2 LANES)	LSUM	1.00	$ 1,750,000.00	$ 1,750,000.00
	Construction Subtotal				$ 7,750,000.00
	Inspection (Crew Days)	CD	200.00	$800.00	$160,000.00
	Contract Administration*	% Fee	4.75%		$368,125.00
	Materials Testing	% Fee	2.00%		$155,000.00
	Contingency	%	10%		
	Construction Total				**$ 9,276,438.00**
	Design Engineering*	% Fee	6.25%		$484,375.00
	Geotechnical Investigation	% Fee	1.00%		$77,500.00
	R.O.W. Acquisition	LS	1.00	$ 15,000.00	$15,000.00
	Permitting	LS	1.00	$ 2,000.00	$2,000.00
	Hydraulic Analysis & Wetland Mitigation	LS	1.00	$ 30,000.00	$30,000.00
	Traffic Modeling & Alignment Study	LS	1.00	$ 15,000.00	$15,000.00
	Contingency	%	10%		
	Engineering Total				**$686,262.50**
	Total Estimated Cost				**$ 9,962,700.50**

Estimate Assumptions:
Does not include any sanitary sewer. Does not include work outside of right-of-way for any planned developments.

* Per 'Attachment A' of the 2022-2027 Engineering Fee Table