

SAMPLE ENGINEERING FIRM

FINAL ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

PROJECT: Project Example - Phases I and 2

JOB NO.: 402.138

DATE: April 30, 2021
REVISED: July 21, 2021

NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
I. WATERMAIN IMPROVEMENTS					
1	DIWM 8", Cl. 52 w/ Polyethylene Wrap	6,196	L.F.	\$ 47.50	\$ 498,560.00
2	DIWM 6", Cl. 52 w/ Polyethylene Wrap	1,110	L.F.	35.00	38,850.00
3	8" Valve in 4' Dia. Vault	23	EA.	3,100.00	71,300.00
4	8" Valve in 5' Dia. Vault w/Pressure Connection	2	EA.	7,000.00	14,000.00
5	Hydrant w/Aux. Valve	31	EA.	4,500.00	139,500.00
6	Water Service 1.5", Ty. K w/ Box (Long) w/ Trench Backfill	77	EA.	2,250.00	173,250.00
7	Water Service 1.5", Ty. K w/ Box (Short)	99	EA.	1,150.00	113,850.00
8	Full Dept Pavement Removal and Replacement	1	LS	17,500.00	17,500.00
9	Stub, Plug and Block	6	EA.	500.00	3,000.00
10	Connect to Existing Stub	3	EA.	500.00	1,500.00
11	Trench Backfill	3,665	L.F.	18.00	65,970.00
Sub-Total Watermain Improvements					\$ 1,137,280.00
II. SANITARY SEWER IMPROVEMENTS					
1	Sanitary Sewer, 8" PVC SDR 26, 8 - 15' Deep	6,935	L.F.	\$ 30.00	\$ 208,050.00
2	Sanitary Sewer, 8" PVC DR 18, 8 - 15' Deep	473	L.F.	45.00	21,285.00
3	Sanitary Sewer, 8" PVC SDR 21, 15 - 20' Deep	385	L.F.	39.50	15,207.50
4	Sanitary Sewer, 10" PVC SDR 26, 8 - 15' Deep	1,406	L.F.	45.00	63,270.00
5	Sanitary Sewer, 10" PVC SDR 21, 15 - 20' Deep	292	L.F.	54.50	15,914.00
6	Sanitary M.H., 4' Dia Ty. A w/Ty. 1 Fr. & SS Lid, 4 - 15' Deep	37	EA.	2,850.00	105,450.00
7	Sanitary M.H., 4' Dia Ty. A w/Ty. 1 Fr. & SS Lid, 15 - 20' Deep	9	EA.	3,500.00	31,500.00
8	drop	2	EA.	2,950.00	5,900.00
9	drop	1	EA.	4,200.00	4,200.00
10	Sanitary Service, 6" PVC SDR 26 (Long) w/ Trench Backfill	96	EA.	2,900.00	278,400.00
11	Sanitary Service, 6" PVC SDR 26 (Short)	80	EA.	600.00	48,000.00
12	Sanitary Riser	11	EA.	450.00	4,950.00
13	Full Dept Pavement Removal and Replacement	1	LS	20,000.00	20,000.00
14	Televise Mains	9,491	L.F.	1.75	16,609.25
15	Connect to Existing	2	EA.	500.00	1,000.00
16	Stub and Plug	2	EA.	500.00	1,000.00
17	Trench Backfill	1,520	L.F.	45.00	68,400.00
Sub-Total Sanitary Sewer Improvements					\$ 909,135.75

Cost Estimate is organized into categories of improvement types with items detailed individually.

Subtotal provided for each category of improvement

Included when required by the City of Naperville

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NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
IV. PAVEMENT IMPROVEMENTS - PUBLIC ROADS					
1	Sub-Grade Road (includes 3' outside E/P)	27,110	S.Y.	\$ 1.10	\$ 29,821.00
2	Agg. Base Cse. Ty. B (CA-6) 4" Beneath Curb	6,075	S.Y.	6.50	39,487.50
3	Agg. Base Cse. Ty. B (CA-6) 12"	22,290	S.Y.	12.50	278,625.00
4	Bit. Binder Cse., 2.5" HMA, N50	22,290	S.Y.	8.00	178,320.00
5	Bit. Surface Cse., 1.5" HMA, N50, Mix D	22,290	S.Y.	5.50	122,595.00
6	Mill Existing Lucent Lane, 2"	8,535	S.Y.	1.50	12,802.50
7	Bit. Surface Cse., 2" HMA, N50, Mix D (Lucent Lane)	8,535	S.Y.	7.75	66,146.25
8	Bit. Material. Prime Coat @ .3 Gal/S.Y.	8,455	GAL.	3.20	27,056.00
9	Bit. Material Tack Coat @ .1 Gal/S.Y.	2,818	GAL.	1.50	4,227.00
10	Striping & Signage	1	L.S.	10,000.00	10,000.00
11	Asphalt Path- 1.5" Surface; 1.5" Binder, 8" Agg	2,900	S.Y.	26.50	76,850.00
12	Emergency Access- 1.5" Surface; 1.5" Binder, 10" Agg	225	S.Y.	27.50	6,187.50
13	PCC Public Sidewalk 5' w/2" Agg. Base	18,730	S.F.	6.75	126,427.50
14	PCC Private Sidewalk 5' w/2" Agg. Base	49,450	S.F.	6.75	333,787.50
15	Backfill Curb	18,225	L.F.	1.50	27,337.50
16	PCC Curb & Gutter M 3.12	18,225	L.F.	14.75	268,818.75

Sub-Total Pavement Improvements- Public Roads

\$ 1,608,489.00

V. PAVEMENT IMPROVEMENTS - PRIVATE ROADS

Detailed Separately from Public Roads

1	Sub-Grade Road (includes 3' outside E/P)	2,495	S.Y.	\$ 1.10	\$ 2,744.50
2	Agg. Base Cse. Ty. B (CA-6) 4" Beneath Curb	605	S.Y.	6.50	3,932.50
3	Agg. Base Cse. Ty. B (CA-6) 10"	16,530	S.Y.	11.25	185,962.50
4	Bit. Binder Cse., 2.5" HMA, N50	16,530	S.Y.	8.00	132,240.00
5	Bit. Surface Cse., 1.5" HMA, N50, Mix D	16,530	S.Y.	5.50	90,915.00
6	Bit. Material. Prime Coat @ .3 Gal/S.Y.	4,959	GAL.	3.20	15,868.80
7	Bit. Material Tack Coat @ .1 Gal/S.Y.	1,653	GAL.	1.50	2,479.50
8	PCC Private Sidewalk 5" w/2" Agg. Base	6,140	S.F.	7.25	44,515.00
9	Backfill Curb	1,815	L.F.	1.50	2,722.50
10	Ribbon Curb	715	L.F.	12.00	8,580.00
11	PCC Curb & Gutter M 3.12	1,100	L.F.	14.75	16,225.00

Sub-Total Pavement Improvements- Private Roads

\$ 506,185.30

VI. LIGHTING & SIGNAGE IMPROVEMENTS

1	23 Watt, LED, 23' MH Luminaire, Complete w/ Wiring	72	EA.	\$ 6,750.00	\$ 486,000.00
2	Relocate Existing Light	3	EA.	2,000.00	6,000.00
Sub-Total Lighting & Signage Improvements					\$ 492,000.00

Clearly distinguish new from existing

VII. WETLAND/BUFFER IMPROVEMENTS

1	DuPage County Section 15-54.D Natural Area	1	LS	\$ 253,330.00	\$ 253,330.00
Wetland/Buffer Improvements					\$ 253,330.00

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III. STORM SEWER IMPROVEMENTS					
1	Storm Sewer, 12" RCP, Ty. 1	3,507	L.F.	\$ 26.00	\$ 91,182.00
2	Storm Sewer, 15" RCP, Ty. 1	1,462	L.F.	28.50	41,667.00
3	Storm Sewer, 18" RCP, Ty. 1	1,626	L.F.	32.50	52,845.00
4	Storm Sewer, 21" RCP, Ty. 1	693	L.F.	39.00	27,027.00
5	Storm Sewer, 24" RCP, Ty. 1	867	L.F.	44.00	38,148.00
6	Storm Sewer, 27" RCP, Ty. 1	653	L.F.	53.00	34,609.00
7	Storm Sewer, 30" RCP, Ty. 1	2,625	L.F.	62.00	162,750.00
8	Storm Sewer, 36" RCP, Ty. 1	2,383	L.F.	76.00	181,108.00
9	Storm Sewer, 42" RCP, Ty. 1	80	L.F.	99.00	7,920.00
10	Storm Sewer, 48" RCP, Ty. 1	467	L.F.	125.00	58,375.00
11	Storm Sewer, 6" PVC SDR 35	378	L.F.	22.00	8,316.00
12	Storm Sewer, 8" H.D.P.E., Perforated	350	L.F.	27.00	9,450.00
13	Inlet Ty. A, 2' Dia. w/ Ty. 8 Gr.	13	EA.	1,050.00	13,650.00
14	Inlet Ty. A, 2' Dia. w/ R-3501P Fr. & Gr.	19	EA.	1,050.00	19,950.00
15	Inlet Ty. B, 3' Dia. w/ Ty. 8 Gr.	3	EA.	1,300.00	3,900.00
16	Storm Manhole, Ty. A, 4' Dia. w/ Ty. 1 Fr. & C.L.	39	EA.	2,200.00	85,800.00
17	Storm Manhole, Ty. A, 4' Dia. w/ Ty. 1 Fr. & O.L.	19	EA.	2,200.00	41,800.00
18	Storm Manhole, Ty. A, 4' Dia. w/ R-3501P Fr. & Gr.	3	EA.	2,200.00	6,600.00
19	Storm Manhole, Ty. A, 5' Dia. w/ R-3501P Fr. & Gr.	2	EA.	3,150.00	6,300.00
20	Storm Manhole, Ty. A, 5' Dia. w/ Ty. 1 Fr. & C.L.	17	EA.	3,150.00	53,550.00
21	Storm Manhole, Ty. A, 5' Dia. w/ Ty. 1 Fr. & O.L.	14	EA.	3,150.00	44,100.00
22	Storm Manhole, Ty. A, 6' Dia. w/ Ty. 1 Fr. & C.L.	15	EA.	5,100.00	76,500.00
23	Storm Manhole, Ty. A, 6' Dia. w/ Ty. 1 Fr. & O.L.	2	EA.	5,100.00	10,200.00
24	Storm Manhole, Ty. A, 7' Dia. w/ Ty. 1 Fr. & C.L.	4	EA.	7,500.00	30,000.00
25	Catch Basin, Ty. A, 3' Dia. w/ R-3501P Fr. & Gr.	11	EA.	1,685.00	18,535.00
26	Catch Basin, Ty. A, 3' Dia. w/ Ty. 1 Fr. & O.L.	1	EA.	1,685.00	1,685.00
27	Catch Basin, Ty. A, 4' Dia. w/ R-3501P Fr. & Gr.	11	EA.	2,300.00	25,300.00
28	Catch Basin, Ty. A, 4' Dia. w/ Ty. 1 Fr. & O.L.	6	EA.	2,300.00	13,800.00
29	Catch Basin, Ty. A, 5' Dia. w/ R-3501P Fr. & Gr.	5	EA.	3,250.00	16,250.00
30	Catch Basin, Ty. C, 2' Dia. w/ R-3501P Fr. & GR.	13	EA.	1,350.00	17,550.00
31	Catch Basin, Ty. C, 2' Dia. w/ Ty. 1 Fr. & C.L.	2	EA.	1,350.00	2,700.00
32	Catch Basin, Restrictor Structure, 4' Dia. w/ Ty. 1 Fr. & C.L.	1	EA.	4,600.00	4,600.00
33	Catch Basin, Restrictor Structure, 5' Dia. w/ Ty. 1 Fr. & C.L.	4	EA.	6,500.00	26,000.00
34	Flared End Section, 12" R.C.P. w/ Gr.	7	EA.	1,750.00	12,250.00
35	Flared End Section, 15" R.C.P. w/ Gr.	3	EA.	1,825.00	5,475.00
36	Flared End Section, 18" R.C.P. w/ Gr.	3	EA.	2,250.00	6,750.00
37	Flared End Section, 21" R.C.P. w/ Gr.	1	EA.	2,350.00	2,350.00
38	Flared End Section, 24" R.C.P. w/ Gr.	2	EA.	2,500.00	5,000.00
39	Flared End Section, 27" R.C.P. w/ Gr.	2	EA.	2,600.00	5,200.00
40	Flared End Section, 30" R.C.P. w/ Gr.	1	EA.	3,000.00	3,000.00
41	Flared End Section, 36" R.C.P. w/ Gr.	3	EA.	3,400.00	10,200.00
42	Flared End Section, 42" R.C.P. w/ Gr.	1	EA.	4,150.00	4,150.00
43	4" PVC Sump Connections	176	EA.	375.00	66,000.00
44	Cleanout Structure	7	EA.	975.00	6,825.00
45	Level Spreader Assembly	2	EA.	2,850.00	5,700.00
46	Full Dept Pavement Removal and Replacement	1	LS	3,750.00	3,750.00
47	Connect to Existing Storm Sewer	16	EA.	500.00	8,000.00
48	Replace Existing Grates	7	EA.	400.00	2,800.00
49	Adjust Existing Rims	3	EA.	250.00	750.00
50	Trench Backfill	1,395	L.F.	15.00	20,925.00

Sub-Total Storm Sewer Improvements

\$ 1,401,292.00

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NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
SUMMARY					
I.	WATERMAIN IMPROVEMENTS				\$ 1,137,280.00
II.	SANITARY SEWER IMPROVEMENTS				\$ 909,135.75
III.	STORM SEWER IMPROVEMENTS				\$ 1,401,292.00
IV.	PAVEMENT IMPROVEMENTS - PUBLIC ROADS				\$ 1,608,489.00
V.	PAVEMENT IMPROVEMENTS - PRIVATE ROADS				\$ 506,185.30
VI.	LIGHTING & SIGNAGE IMPROVEMENTS				\$ 492,000.00
VII.	WETLAND/BUFFER IMPROVEMENTS				\$ 253,330.00
SUBTOTAL IMPROVEMENT					\$ 6,307,712.05
10% Contingency					\$ 630,771.21
TOTAL IMPROVEMENT					\$ 6,938,483.26

Required for ALL Projects

GENERAL NOTES:

1. This Engineer's Opinion of Probable Cost is based on the Final Engineering Plans prepared by Sample Engineering Consultants and does not include dry utilities, review fees, or permit fees or any other item not included.
2. The above trench backfill quantities assume trench backfill is required only when the trench is within 2' feet of the edge of pavement.
3. Each lot to be excavated at the time of development. Site will not be mass-graded.
4. Storm sewer design is present within the Final Engineering Plans and has been provided for the 10-year event.
5. Erosion control items are based on a single-phase and do not include permanent stabilization measures.
6. Water services provided on a per-building basis. Service lines not included in the estimate and should be included as part of the building construction.
7. Note that paving quantities include land development flatwork and do not include individual unit driveways.
8. Assumes sidewalks to be constructed during land development stage (service walks for each unit not included).

Notes are recommended to provide clarifications that may be helpful for understanding scope of work to efficiently process reduction requests.