

APPENDIX 3

CONCEPTUAL COST ESTIMATES



Christopher B. Burke Engineering, Ltd.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 Project# 20-0085
 Date: December 13, 2021

**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 1 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
STORM SEWER REMOVAL	FOOT	5	\$25.00	\$125.00
EARTH EXCAVATION	CY	40	\$40.00	\$1,600.00
TREE REMOVAL	LSUM	1	\$200.00	\$200.00
STORMWATER STRUCTURE, 4' DIAMETER	EACH	1	\$4,500.00	\$4,500.00
METAL CONE GRATE - 4' DIAMETER	EACH	1	\$2,000.00	\$2,000.00
STORM SEWER REMOVAL	FOOT	25	\$25.00	\$625.00
TOPSOIL, SEED AND EROSION CONTROL BLANKET	SQ YD	250	\$9.00	\$2,250.00
INLET AND PIPE PROTECTION	EACH	2	\$125.00	\$250.00
CONSTRUCTION LAYOUT	LSUM	1	\$1,000.00	\$1,000.00
MOBILIZATION	LSUM	1	\$1,000.00	\$1,000.00

SUB TOTAL = \$12,550.00
 CONTINGENCY (20%) = \$2,510.00
CONSTRUCTION TOTAL = \$15,060.00

 DESIGN ENGINEERING (7.5%) = \$1,129.50
 CONSTRUCTION ENGINEERING (7.5%) = \$1,129.50
 PERMITTING (2.5%) = N/A

TOTAL PROJECT COST INCLUDING ENGINEERING = \$17,319.00

NOTE: THIS ESTIMATE DOES NOT INCLUDE ROW ACQUISITION, LAND ACQUISITION, TEMPORARY AND/OR CONSTRUCTION EASEMENTS, OR RELOCATING ANY UTILITIES

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**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 2 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
STORM SEWER REMOVAL	FOOT	240	\$25.00	\$6,000.00
DRAINAGE STRUCTURE REMOVAL	EACH	4	\$500.00	\$2,000.00
CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	12	\$35.00	\$420.00
HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	25	\$25.00	\$625.00
18" STORM SEWER	FOOT	50	\$110.00	\$5,500.00
24" STORM SEWER	FOOT	190	\$125.00	\$23,750.00
TRENCH BACKFILL, SPECIAL	CY	50	\$40.00	\$2,000.00
PAVEMENT PATCHING, 8 INCH	SQ YD	25	\$65.00	\$1,625.00
PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	1	\$1,500.00	\$1,500.00
24" FLARED END SECTION GRATE	EACH	1	\$1,000.00	\$1,000.00
STONE RIPRAP	SY	10	\$80.00	\$800.00
NON-WOVEN GEOTEXTILE FABRIC	SY	10	\$3.00	\$30.00
EARTH EXCAVATION	CY	20	\$40.00	\$800.00
STORMWATER STRUCTURE, 4' DIAMETER	EACH	3	\$4,500.00	\$13,500.00
METAL CONE GRATE - 4' DIAMETER	EACH	1	\$2,000.00	\$2,000.00
TOPSOIL, SEED AND EROSION CONTROL BLANKET	SQ YD	240	\$9.00	\$2,160.00
INLET AND PIPE PROTECTION	EACH	3	\$125.00	\$375.00
CONSTRUCTION LAYOUT	LSUM	1	\$1,000.00	\$2,000.00
TRAFFIC CONTROL	LSUM	1	\$5,000.00	\$5,000.00
MOBILIZATION	LSUM	1	\$3,000.00	\$3,000.00

SUB TOTAL = \$74,085.00
 CONTINGENCY (20%) = \$14,817.00
CONSTRUCTION TOTAL = \$88,902.00

DESIGN ENGINEERING (7.5%) = \$6,667.65
 CONSTRUCTION ENGINEERING (7.5%) = \$6,667.65
 PERMITTING (2.5%) = N/A

TOTAL PROJECT COST INCLUDING ENGINEERING = \$102,237.30

NOTE: THIS ESTIMATE DOES NOT INCLUDE ROW ACQUISITION, LAND ACQUISITION, TEMPORARY AND/OR CONSTRUCTION EASEMENTS, OR RELOCATING ANY UTILITIES

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**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 3 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
REMOVAL AND DISPOSABLE OF UNSUITABLE MATERIAL	CY	1000	\$100.00	\$100,000.00
BRUSH CLEARING (INCLUDES ALL TREES ≤ 6-INCH DIAMETER)	ACRE	0.10	15,000.0	\$1,500.00
EMBANKMENT	CY	350	\$40.00	\$14,000.00
STONE RIPRAP, CLASS 2	SY	500	\$100.00	\$50,000.00
NON-WOVEN GEOTEXTILE FABRIC	SY	250	\$3.00	\$750.00
BRUSH CLEARING (INCLUDES ALL TREES ≤ 6-INCH DIAMETER)	ACRE	0.10	15,000.0	\$1,500.00
STABILIZED CONSTRUCTION ENTRANCE	SQ YD	150	\$50.00	\$7,500.00
SITE RESTORATION/LANDSCAPING	LSUM	1	\$10,000.00	\$10,000.00
CONSTRUCTION LAYOUT	LSUM	1	\$10,000.00	\$10,000.00
SITE DEWATERING/COFFERDAM	LSUM	1	\$50,000.00	\$50,000.00
MOBILIZATION	LSUM	1	\$10,000.00	\$10,000.00

SUB TOTAL = \$255,250.00
 CONTINGENCY (20%) = \$51,050.00
CONSTRUCTION TOTAL = \$306,300.00

DESIGN ENGINEERING (7.5%) = \$22,972.50
 CONSTRUCTION ENGINEERING (7.5%) = \$22,972.50
 PERMITTING (5%) = \$15,315.00

TOTAL PROJECT COST INCLUDING ENGINEERING = \$352,245.00

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**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 4 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
STORM SEWER REMOVAL	FOOT	180	\$25.00	\$4,500.00
DRAINAGE STRUCTURE REMOVAL	EACH	6	\$500.00	\$3,000.00
CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	880	\$35.00	\$30,800.00
HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	500	\$25.00	\$12,500.00
18" STORM SEWER	FOOT	325	\$110.00	\$35,750.00
24" STORM SEWER	FOOT	265	\$125.00	\$33,125.00
30" STORM SEWER	FOOT	540	\$175.00	\$94,500.00
42" STORM SEWER	FOOT	60	\$250.00	\$15,000.00
TRENCH BACKFILL, SPECIAL	CY	1600	\$40.00	\$64,000.00
PAVEMENT PATCHING, 8 INCH	SQ YD	500	\$65.00	\$32,500.00
PRECAST REINFORCED CONCRETE FLARED END SECTIONS 42"	EACH	1	\$4,000.00	\$4,000.00
42" FLARED END SECTION GRATE	EACH	1	\$1,200.00	\$1,200.00
PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	1	\$2,000.00	\$2,000.00
18" FLARED END SECTION GRATE	EACH	1	\$1,000.00	\$1,000.00
STORMWATER STRUCTURE, 4' DIAMETER	EACH	3	\$4,500.00	\$13,500.00
STORMWATER STRUCTURE, 5' DIAMETER	EACH	3	\$6,000.00	\$18,000.00
STORMWATER STRUCTURE, 6' DIAMETER	EACH	5	\$7,500.00	\$37,500.00
TOPSOIL, SEED AND EROSION CONTROL BLANKET	SQ YD	600	\$9.00	\$5,400.00
INLET AND PIPE PROTECTION	EACH	7	\$150.00	\$1,050.00
SITE DEWATERING/COFFERDAM	LSUM	1	\$10,000.00	\$10,000.00
CONSTRUCTION LAYOUT	LSUM	1	\$20,000.00	\$20,000.00
TRAFFIC CONTROL	LSUM	1	\$10,000.00	\$10,000.00
MOBILIZATION	LSUM	1	\$20,000.00	\$20,000.00

SUB TOTAL = \$469,325.00
 CONTINGENCY (20%) = \$93,865.00
CONSTRUCTION TOTAL = \$563,190.00

DESIGN ENGINEERING (7.5%) = \$42,239.25
 CONSTRUCTION ENGINEERING (7.5%) = \$42,239.25
 PERMITTING (2.5%) = \$14,079.75

TOTAL PROJECT COST INCLUDING ENGINEERING = \$647,668.50

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**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 5 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
DRAINAGE STRUCTURE REMOVAL	EACH	2	\$500.00	\$1,000.00
STORMWATER STRUCTURE, 4' DIAMETER	EACH	2	\$4,500.00	\$9,000.00
SITE DEWATERING/COFFERDAM	LSUM	1	\$10,000.00	\$10,000.00
MOBILIZATION	LSUM	1	\$5,000.00	\$5,000.00

SUB TOTAL = \$25,000.00
 CONTINGENCY (20%) = \$5,000.00
CONSTRUCTION TOTAL = \$30,000.00

DESIGN ENGINEERING (7.5%) = \$2,250.00
 CONSTRUCTION ENGINEERING (7.5%) = \$2,250.00
 PERMITTING (5%) = \$1,500.00

TOTAL PROJECT COST INCLUDING ENGINEERING = \$34,500.00

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**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 6 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
STORM SEWER REMOVAL	FOOT	60	\$25.00	\$1,500.00
DRAINAGE STRUCTURE REMOVAL	EACH	6	\$500.00	\$3,000.00
CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	460	\$35.00	\$16,100.00
HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	310	\$25.00	\$7,750.00
12" STORM SEWER	FOOT	55	\$100.00	\$5,500.00
15" STORM SEWER	FOOT	30	\$105.00	\$3,150.00
18" STORM SEWER	FOOT	125	\$110.00	\$13,750.00
24" STORM SEWER	FOOT	180	\$125.00	\$22,500.00
30" STORM SEWER	FOOT	235	\$175.00	\$41,125.00
TRENCH BACKFILL, SPECIAL	CY	550	\$40.00	\$22,000.00
PAVEMENT PATCHING, 8 INCH	SQ YD	310	\$65.00	\$20,150.00
PRECAST REINFORCED CONCRETE FLARED END SECTIONS 30"	EACH	1	\$3,500.00	\$3,500.00
30" FLARED END SECTION GRATE	EACH	1	\$1,200.00	\$1,200.00
STONE RIPRAP	SY	10	\$80.00	\$800.00
NON-WOVEN GEOTEXTILE FABRIC	SY	10	\$3.00	\$30.00
STORMWATER STRUCTURE, 4' DIAMETER	EACH	5	\$4,500.00	\$22,500.00
STORMWATER STRUCTURE, 5' DIAMETER	EACH	4	\$6,000.00	\$24,000.00
PLUG ABANDONED PIPES WITH FLOWABLE FILL	CY	22	\$200.00	\$4,400.00
TOPSOIL, SEED AND EROSION CONTROL BLANKET	SQ YD	300	\$9.00	\$2,700.00
INLET AND PIPE PROTECTION	EACH	7	\$150.00	\$1,050.00
CONSTRUCTION LAYOUT	LSUM	1	\$5,000.00	\$5,000.00
TRAFFIC CONTROL	LSUM	1	\$2,500.00	\$2,500.00
MOBILIZATION	LSUM	1	\$10,000.00	\$10,000.00

SUB TOTAL = \$234,205.00
 CONTINGENCY (20%) = \$46,841.00
CONSTRUCTION TOTAL = \$281,046.00

DESIGN ENGINEERING (7.5%) = \$21,078.45
 CONSTRUCTION ENGINEERING (7.5%) = \$21,078.45
 PERMITTING (2.5%) = \$7,026.15

TOTAL PROJECT COST INCLUDING ENGINEERING = \$323,202.90

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**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 7 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
STORM SEWER REMOVAL	FOOT	90	\$25.00	\$2,250.00
DRAINAGE STRUCTURE REMOVAL	EACH	2	\$500.00	\$1,000.00
CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	10	\$35.00	\$350.00
HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	20	\$25.00	\$500.00
24" STORM SEWER	FOOT	90	\$125.00	\$11,250.00
TRENCH BACKFILL, SPECIAL	CY	45	\$40.00	\$1,800.00
PAVEMENT PATCHING, 8 INCH	SQ YD	20	\$65.00	\$1,300.00
PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	1	\$3,000.00	\$3,000.00
24" FLARED END SECTION GRATE	EACH	1	\$1,100.00	\$1,100.00
STONE RIPRAP	SY	10	\$80.00	\$800.00
NON-WOVEN GEOTEXTILE FABRIC	SY	10	\$3.00	\$30.00
STORMWATER STRUCTURE, 4' DIAMETER	EACH	1	\$4,500.00	\$4,500.00
TOPSOIL, SEED AND EROSION CONTROL BLANKET	SQ YD	10	\$9.00	\$90.00
INLET AND PIPE PROTECTION	EACH	3	\$150.00	\$450.00
CONSTRUCTION LAYOUT	LSUM	1	\$2,000.00	\$2,000.00
TRAFFIC CONTROL	LSUM	1	\$1,000.00	\$1,000.00
MOBILIZATION	LSUM	1	\$3,000.00	\$3,000.00

SUB TOTAL = \$34,420.00
 CONTINGENCY (20%) = \$6,884.00
CONSTRUCTION TOTAL = \$41,304.00

DESIGN ENGINEERING (7.5%) = \$3,097.80
 CONSTRUCTION ENGINEERING (7.5%) = \$3,097.80
 PERMITTING (2.5%) = \$1,032.60

TOTAL PROJECT COST INCLUDING ENGINEERING = \$47,499.60

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**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 8 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
CULVERT REMOVAL	FOOT	120	\$40.00	\$4,800.00
CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	40	\$35.00	\$1,400.00
HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	120	\$25.00	\$3,000.00
TRENCH BACKFILL, SPECIAL	CY	30	\$40.00	\$1,200.00
PAVEMENT PATCHING, 8 INCH	SQ YD	20	\$65.00	\$1,300.00
PRECAST BOX CULVERT END SECTION	EACH	2	\$3,000.00	\$6,000.00
PRECASE CONCRTE BOX CULVERTS 5' X 3'	FOOT	120	\$750.00	\$90,000.00
TOPSOIL, SEED AND EROSION CONTROL BLANKET	SQ YD	10	\$9.00	\$90.00
SITE DEWATERING/COFFERDAM	LSUM	1	\$10,000.00	\$10,000.00
CONSTRUCTION LAYOUT	LSUM	1	\$5,000.00	\$5,000.00
TRAFFIC CONTROL	LSUM	1	\$1,000.00	\$1,000.00
MOBILIZATION	LSUM	1	\$5,000.00	\$5,000.00

SUB TOTAL = \$128,790.00
 CONTINGENCY (20%) = \$25,758.00
CONSTRUCTION TOTAL = \$154,548.00

DESIGN ENGINEERING (7.5%) = \$11,591.10
 CONSTRUCTION ENGINEERING (7.5%) = \$11,591.10
 PERMITTING (2.5%) = \$3,863.70

TOTAL PROJECT COST INCLUDING ENGINEERING = \$177,730.20

NOTE: THIS ESTIMATE DOES NOT INCLUDE ROW ACQUISTION, LAND ACQUISITION, TEMPORARY AND/OR CONSTRUCTION EASEMENTS, OR RELOCATING ANY UTILITIES

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**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 9 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
STORM SEWER REMOVAL	FOOT	175	\$25.00	\$4,375.00
DRAINAGE STRUCTURE REMOVAL	EACH	3	\$500.00	\$1,500.00
CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	12	\$35.00	\$420.00
TREE REMOVAL	EACH	1	\$900.00	\$900.00
HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	20	\$25.00	\$500.00
12" STORM SEWER	FOOT	60	\$100.00	\$6,000.00
18" STORM SEWER	FOOT	175	\$110.00	\$19,250.00
TRENCH BACKFILL, SPECIAL	CY	30	\$40.00	\$1,200.00
PAVEMENT PATCHING, 8 INCH	SQ YD	20	\$65.00	\$1,300.00
PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	1	\$1,500.00	\$1,500.00
18" FLARED END SECTION GRATE	EACH	1	\$1,000.00	\$1,000.00
STONE RIPRAP	SY	10	\$80.00	\$800.00
NON-WOVEN GEOTEXTILE FABRIC	SY	10	\$3.00	\$30.00
STORMWATER STRUCTURE, 4' DIAMETER	EACH	2	\$4,500.00	\$9,000.00
TOPSOIL, SEED AND EROSION CONTROL BLANKET	SQ YD	100	\$9.00	\$900.00
INLET AND PIPE PROTECTION	EACH	2	\$125.00	\$250.00
CONSTRUCTION LAYOUT	LSUM	1	\$1,000.00	\$1,000.00
TRAFFIC CONTROL	LSUM	1	\$500.00	\$500.00
MOBILIZATION	LSUM	1	\$3,000.00	\$3,000.00

SUB TOTAL = \$53,425.00
 CONTINGENCY (20%) = \$10,685.00
CONSTRUCTION TOTAL = \$64,110.00

DESIGN ENGINEERING (7.5%) = \$4,808.25
 CONSTRUCTION ENGINEERING (7.5%) = \$4,808.25
 PERMITTING (2.5%) = N/A

TOTAL PROJECT COST INCLUDING ENGINEERING = \$73,726.50

NOTE: THIS ESTIMATE DOES NOT INCLUDE ROW ACQUISITION, LAND ACQUISITION, TEMPORARY AND/OR CONSTRUCTION EASEMENTS, OR RELOCATING ANY UTILITIES

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**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 10 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
REMOVE AND REPLACE 36" METAL END SECTIONS	EACH	2	\$500.00	\$1,000.00
CURED-IN-PLACED PIPE LINING, 36"	LF	60	\$300.00	\$18,000.00
RESTORE CULVERT VOIDS WITH FLOWABLE FILL	CY	5	\$200.00	\$1,000.00
SITE DEWATERING/COFFERDAM	LSUM	1	\$10,000.00	\$10,000.00
MOBILIZATION	LSUM	1	\$5,000.00	\$5,000.00

SUB TOTAL = \$35,000.00
 CONTINGENCY (20%) = \$7,000.00
CONSTRUCTION TOTAL = \$42,000.00

DESIGN ENGINEERING (7.5%) = \$3,150.00
 CONSTRUCTION ENGINEERING (7.5%) = \$3,150.00
 PERMITTING (5%) = \$2,100.00

TOTAL PROJECT COST INCLUDING ENGINEERING = \$48,300.00

NOTES:

1. THIS ESTIMATE DOES NOT INCLUDE ROW ACQUISITION, LAND ACQUISITION, TEMPORARY AND/OR CONSTRUCTION EASEMENTS, OR RELOCATING ANY UTILITIES
2. CURRENTLY PRICING FOR CIPP LINERS AND RESIN IS VERY VOLATILE DUE TO PRODUCTION AND PRICING FOR RESIN. DEPENDING ON WHEN THE WORK IS BID, THE UNIT PRICES FOR CIPP MAY CHANGE SIGNIFICANTLY

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**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 11 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
STORM SEWER REMOVAL, 42"	FOOT	60	\$40.00	\$2,400.00
DRAINAGE STRUCTURE REMOVAL	EACH	4	\$500.00	\$2,000.00
CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	20	\$35.00	\$700.00
HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	35	\$25.00	\$875.00
60" STORM SEWER	FOOT	125	\$350.00	\$43,750.00
TRENCH BACKFILL, SPECIAL	CY	70	\$40.00	\$2,800.00
PAVEMENT PATCHING, 8 INCH	SQ YD	35	\$65.00	\$2,275.00
PRECAST REINFORCED CONCRETE FLARED END SECTIONS 60"	EACH	1	\$5,000.00	\$5,000.00
60" FLARED END SECTION GRATE	EACH	1	\$2,000.00	\$2,000.00
STONE RIPRAP	SY	15	\$80.00	\$1,200.00
NON-WOVEN GEOTEXTILE FABRIC	SY	15	\$3.00	\$45.00
STORMWATER STRUCTURE, 8' DIAMETER	EACH	3	\$10,000.00	\$30,000.00
TOPSOIL, SEED AND EROSION CONTROL BLANKET	SQ YD	12	\$9.00	\$108.00
INLET AND PIPE PROTECTION	EACH	2	\$150.00	\$300.00
SITE DEWATERING/COFFERDAM	LSUM	1	\$15,000.00	\$15,000.00
CONSTRUCTION LAYOUT	LSUM	1	\$5,000.00	\$5,000.00
TRAFFIC CONTROL	LSUM	1	\$5,000.00	\$5,000.00
MOBILIZATION	LSUM	1	\$5,000.00	\$5,000.00

SUB TOTAL =	\$123,453.00
CONTINGENCY (20%) =	\$24,690.60
CONSTRUCTION TOTAL =	\$148,143.60
DESIGN ENGINEERING (7.5%) =	\$11,110.77
CONSTRUCTION ENGINEERING (7.5%) =	\$11,110.77
PERMITTING (2.5%) =	\$3,703.59
TOTAL PROJECT COST INCLUDING ENGINEERING =	\$170,365.14

NOTE: THIS ESTIMATE DOES NOT INCLUDE ROW ACQUISITION, LAND ACQUISITION, TEMPORARY AND/OR CONSTRUCTION EASEMENTS, OR RELOCATING ANY UTILITIES

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**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 12 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
STORM SEWER REMOVAL	FOOT	95	\$25.00	\$2,375.00
DRAINAGE STRUCTURE REMOVAL	EACH	4	\$500.00	\$2,000.00
CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	280	\$35.00	\$9,800.00
HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	200	\$25.00	\$5,000.00
24" STORM SEWER	FOOT	65	\$125.00	\$8,125.00
36" STORM SEWER	FOOT	115	\$175.00	\$20,125.00
48" STORM SEWER	FOOT	280	\$275.00	\$77,000.00
TRENCH BACKFILL, SPECIAL	CY	500	\$40.00	\$20,000.00
PAVEMENT PATCHING, 8 INCH	SQ YD	200	\$65.00	\$13,000.00
PRECAST REINFORCED CONCRETE FLARED END SECTIONS 36"	EACH	1	\$3,500.00	\$3,500.00
36" FLARED END SECTION GRATE	EACH	1	\$1,100.00	\$1,100.00
STORMWATER STRUCTURE, 4' DIAMETER	EACH	2	\$4,500.00	\$9,000.00
STORMWATER STRUCTURE, 5' DIAMETER	EACH	1	\$6,000.00	\$6,000.00
STORMWATER STRUCTURE, 6' DIAMETER	EACH	1	\$7,500.00	\$7,500.00
STORMWATER STRUCTURE, 7' DIAMETER	EACH	2	\$9,000.00	\$18,000.00
PLUG ABANDONED PIPES WITH FLOWABLE FILL	CY	85	\$200.00	\$17,000.00
TOPSOIL, SEED AND EROSION CONTROL BLANKET	SQ YD	600	\$9.00	\$5,400.00
INLET AND PIPE PROTECTION	EACH	4	\$150.00	\$600.00
CONSTRUCTION LAYOUT	LSUM	1	\$20,000.00	\$20,000.00
TRAFFIC CONTROL	LSUM	1	\$10,000.00	\$10,000.00
MOBILIZATION	LSUM	1	\$15,000.00	\$15,000.00

SUB TOTAL = \$270,525.00
 CONTINGENCY (20%) = \$54,105.00
CONSTRUCTION TOTAL = \$324,630.00

DESIGN ENGINEERING (7.5%) = \$24,347.25
 CONSTRUCTION ENGINEERING (7.5%) = \$24,347.25
 PERMITTING (2.5%) = \$8,115.75

TOTAL PROJECT COST INCLUDING ENGINEERING = \$373,324.50

NOTE: THIS ESTIMATE DOES NOT INCLUDE ROW ACQUISITION, LAND ACQUISITION, TEMPORARY AND/OR CONSTRUCTION EASEMENTS, OR RELOCATING ANY UTILITIES

Christopher B. Burke Engineering, Ltd.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 Project# 20-0085
 Date: December 13, 2021

**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 13 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	12	\$35.00	\$420.00
HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	10	\$25.00	\$250.00
12" STORM SEWER	FOOT	22	\$125.00	\$2,750.00
TRENCH BACKFILL, SPECIAL	CY	10	\$40.00	\$400.00
PAVEMENT PATCHING, 8 INCH	SQ YD	10	\$65.00	\$650.00
STORMWATER STRUCTURE, 4' DIAMETER	EACH	1	\$4,500.00	\$4,500.00
ADJUST STORMWATER STRUCTURE	EACH	1	\$500.00	\$500.00
TOPSOIL, SEED AND EROSION CONTROL BLANKET	SQ YD	10	\$9.00	\$90.00
INLET AND PIPE PROTECTION	EACH	2	\$150.00	\$300.00
CONSTRUCTION LAYOUT	LSUM	1	\$20,000.00	\$1,000.00
TRAFFIC CONTROL	LSUM	1	\$10,000.00	\$1,000.00
MOBILIZATION	LSUM	1	\$15,000.00	\$1,000.00

SUB TOTAL = \$12,860.00
 CONTINGENCY (20%) = \$2,572.00
CONSTRUCTION TOTAL = \$15,432.00

DESIGN ENGINEERING (7.5%) = \$1,157.40
 CONSTRUCTION ENGINEERING (7.5%) = \$1,157.40
 PERMITTING (2.5%) = N/A

TOTAL PROJECT COST INCLUDING ENGINEERING = \$17,746.80

NOTE: THIS ESTIMATE DOES NOT INCLUDE ROW ACQUISITION, LAND ACQUISITION, TEMPORARY AND/OR CONSTRUCTION EASEMENTS, OR RELOCATING ANY UTILITIES

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 Date: December 13, 2021

**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 14 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
REMOVAL AND DISPOSABLE OF UNSUITABLE MATERIAL	CY	60	\$100.00	\$6,000.00
STONE RIPRAP	SY	100	\$200.00	\$20,000.00
NON-WOVEN GEOTEXTILE FABRIC	SY	70	\$3.00	\$210.00
BRUSH CLEARING (INCLUDES ALL TREES ≤ 6-INCH DIAMETER)	ACRE	0.25	15,000.0	\$3,750.00
SITE RESTORATION/LANDSCAPING	LSUM	1	\$10,000.00	\$10,000.00
CONSTRUCTION LAYOUT	LSUM	1	\$10,000.00	\$10,000.00
SITE DEWATERING/COFFERDAM	LSUM	1	\$20,000.00	\$20,000.00
MOBILIZATION	LSUM	1	\$10,000.00	\$10,000.00

SUB TOTAL = \$79,960.00
 CONTINGENCY (20%) = \$15,992.00
CONSTRUCTION TOTAL = \$95,952.00

DESIGN ENGINEERING (7.5%) = \$7,196.40
 CONSTRUCTION ENGINEERING (7.5%) = \$7,196.40
 PERMITTING (5%) = \$4,797.60

TOTAL PROJECT COST INCLUDING ENGINEERING = \$110,344.80

NOTE: THIS ESTIMATE DOES NOT INCLUDE ROW ACQUISITION, LAND ACQUISITION, TEMPORARY AND/OR CONSTRUCTION EASEMENTS, OR RELOCATING ANY UTILITIES

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 Project# 20-0085
 Date: December 13, 2021

**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 15 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
STORM SEWER REMOVAL, 48"	FOOT	90	\$45.00	\$4,050.00
DRAINAGE STRUCTURE REMOVAL	EACH	1	\$500.00	\$500.00
CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	10	\$35.00	\$350.00
HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	35	\$25.00	\$875.00
24" STORM SEWER	FOOT	125	\$125.00	\$15,625.00
TRENCH BACKFILL, SPECIAL	CY	65	\$40.00	\$2,600.00
PAVEMENT PATCHING, 8 INCH	SQ YD	35	\$65.00	\$2,275.00
PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	1	\$1,500.00	\$1,500.00
24" FLARED END SECTION GRATE	EACH	1	\$1,000.00	\$1,000.00
TOPSOIL, SEED AND EROSION CONTROL BLANKET	SQ YD	40	\$9.00	\$360.00
INLET AND PIPE PROTECTION	EACH	1	\$150.00	\$150.00
SITE DEWATERING/COFFERDAM	LSUM	1	\$20,000.00	\$20,000.00
CONSTRUCTION LAYOUT	LSUM	1	\$10,000.00	\$10,000.00
TRAFFIC CONTROL	LSUM	1	\$5,000.00	\$5,000.00
MOBILIZATION	LSUM	1	\$5,000.00	\$5,000.00

SUB TOTAL = \$69,285.00

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**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 16 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
STORM SEWER REMOVAL	FOOT	60	\$25.00	\$1,500.00
DRAINAGE STRUCTURE REMOVAL	EACH	3	\$500.00	\$1,500.00
CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	12	\$35.00	\$420.00
HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	25	\$25.00	\$625.00
24" STORM SEWER	FOOT	30	\$125.00	\$3,750.00
30" STORM SEWER	FOOT	60	\$175.00	\$10,500.00
TRENCH BACKFILL, SPECIAL	CY	30	\$40.00	\$1,200.00
PAVEMENT PATCHING, 8 INCH	SQ YD	25	\$65.00	\$1,625.00
PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	1	\$1,500.00	\$1,500.00
PRECAST REINFORCED CONCRETE FLARED END SECTIONS 30"	EACH	1	\$2,500.00	\$2,500.00
24" FLARED END SECTION GRATE	EACH	1	\$1,000.00	\$1,000.00
30" FLARED END SECTION GRATE	EACH	1	\$1,100.00	\$1,100.00
STONE RIPRAP	SY	20	\$80.00	\$1,600.00
NON-WOVEN GEOTEXTILE FABRIC	SY	20	\$3.00	\$60.00
STORMWATER STRUCTURE, 5' DIAMETER	EACH	2	\$6,000.00	\$12,000.00
TOPSOIL, SEED AND EROSION CONTROL BLANKET	SQ YD	50	\$9.00	\$450.00
INLET AND PIPE PROTECTION	EACH	4	\$125.00	\$500.00
CONSTRUCTION LAYOUT	LSUM	1	\$1,000.00	\$2,000.00
TRAFFIC CONTROL	LSUM	1	\$5,000.00	\$5,000.00
MOBILIZATION	LSUM	1	\$3,000.00	\$3,000.00

SUB TOTAL = \$51,830.00
 CONTINGENCY (20%) = \$10,366.00
CONSTRUCTION TOTAL = \$62,196.00

DESIGN ENGINEERING (7.5%) = \$4,664.70
 CONSTRUCTION ENGINEERING (7.5%) = \$4,664.70
 PERMITTING (2.5%) = \$1,554.90

TOTAL PROJECT COST INCLUDING ENGINEERING = \$73,080.30

NOTE: THIS ESTIMATE DOES NOT INCLUDE ROW ACQUISITION, LAND ACQUISITION, TEMPORARY AND/OR CONSTRUCTION EASEMENTS, OR RELOCATING ANY UTILITIES

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 Date: December 13, 2021

**Shorewood Forest Stormwater Infrastructure Study
 Problem Area 17 Drainage Improvements**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
REMOVE AND REPLACE 12" METAL END SECTIONS	EACH	1	\$500.00	\$500.00
CURED-IN-PLACED PIPE LINING, 12"	LF	220	\$100.00	\$22,000.00
RESTORE CULVERT VOIDS WITH FLOWABLE FILL	CY	2	\$200.00	\$400.00
REMOVAL AND DISPOSABLE OF UNSUITABLE MATERIAL	CY	2	\$100.00	\$200.00
MOBILIZATION	LSUM	1	\$5,000.00	\$1,500.00

SUB TOTAL = \$24,600.00
 CONTINGENCY (20%) = \$4,920.00
CONSTRUCTION TOTAL = \$29,520.00

 DESIGN ENGINEERING (7.5%) = \$2,214.00
 CONSTRUCTION ENGINEERING (7.5%) = \$2,214.00

TOTAL PROJECT COST INCLUDING ENGINEERING = \$33,948.00

NOTES:

1. THIS ESTIMATE DOES NOT INCLUDE ROW ACQUISITION, LAND ACQUISITION, TEMPORARY AND/OR CONSTRUCTION EASEMENTS, OR RELOCATING ANY UTILITIES
2. CURRENTLY PRICING FOR CIPP LINERS AND RESIN IS VERY VOLATILE DUE TO PRODUCTION AND PRICING FOR RESIN. DEPENDING ON WHEN THE WORK IS BID, THE UNIT PRICES FOR CIPP MAY CHANGE SIGNIFICANTLY

Christopher B. Burke Engineering, Ltd.
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 Project# 20-0085
 Date: December 13, 2021

Shorewood Forest Stormwater Infrastructure Study
Cured-In-Place-Pipe (CIPP) Lining Rehabilitation (Moderate to Poor Condition Pipes)

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
CURED-IN-PLACED PIPE LINING, 12"	LF	4,134	\$100.00	\$413,400.00
CURED-IN-PLACED PIPE LINING, 15"	LF	2,025	\$110.00	\$222,739.00
CURED-IN-PLACED PIPE LINING, 18"	LF	479	\$130.00	\$62,270.00
CURED-IN-PLACED PIPE LINING, 21"	LF	25	\$150.00	\$3,675.00
CURED-IN-PLACED PIPE LINING, 24"	LF	341	\$175.00	\$59,622.50
CURED-IN-PLACED PIPE LINING, 30"	LF	81	\$225.00	\$18,247.50
CURED-IN-PLACED PIPE LINING, 36"	LF	41	\$300.00	\$12,150.00
SEWER CLEANING (HEAVY GRADE)	LF	713	\$10.00	\$7,130.00
TRAFFIC CONTROL	LSUM	1	\$20,000.00	\$20,000.00
MOBILIZATION/DEMOBILIZATION	LSUM	1	5.0%	\$39,500.00

SUB TOTAL = \$858,734.00
 CONTINGENCY (25%) = \$214,683.50
CONSTRUCTION TOTAL = \$1,073,417.50

DESIGN ENGINEERING (7.5%) = \$80,506.31
 CONSTRUCTION ENGINEERING (7.5%) = \$80,506.31

TOTAL PROJECT COST INCLUDING ENGINEERING = \$1,234,000.00

NOTES:

1. THIS ESTIMATE DOES NOT INCLUDE ROW ACQUISITION, LAND ACQUISITION, TEMPORARY AND/OR CONSTRUCTION EASEMENTS, OR RELOCATING ANY UTILITIES
2. CURRENTLY PRICING FOR CIPP LINERS AND RESIN IS VERY VOLATILE DUE TO PRODUCTION AND PRICING FOR RESIN. DEPENDING ON WHEN THE WORK IS BID, THE UNIT PRICES FOR CIPP MAY CHANGE SIGNIFICANTLY
3. THIS ESTIMATE ASSUMES HEAVY CLEANING FOR 10% OF TOTAL STORM SEWER LENGTH

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 Project# 20-0085
 Date: December 13, 2021

**Shorewood Forest Stormwater Infrastructure Study
 Storm Sewer Replacement (Moderate to Poor Condition Pipes)**

ITEMS	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
STORM SEWER REMOVAL	FOOT	3983	\$25.00	\$99,575.00
HOT-MIX ASPHALT SURFACE REMOVAL	LSUM	1	\$50,000.00	\$50,000.00
10" STORM SEWER	FOOT	25	\$90.00	\$2,250.00
12" STORM SEWER	FOOT	1960	\$100.00	\$196,000.00
15" STORM SEWER	FOOT	1174	\$105.00	\$123,270.00
18" STORM SEWER	FOOT	303	\$110.00	\$33,330.00
21" STORM SEWER	FOOT	246	\$120.00	\$29,520.00
24" STORM SEWER	FOOT	115	\$125.00	\$14,375.00
36" STORM SEWER	FOOT	160	\$175.00	\$28,000.00
TRENCH BACKFILL, SPECIAL	CY	2500	\$40.00	\$100,000.00
PAVEMENT PATCHING	SQ YD	1750	\$65.00	\$113,750.00
RESTORATION	LSUM	1	\$25,000.00	\$25,000.00
TRAFFIC CONTROL	LSUM	1	\$25,000.00	\$25,000.00
MOBILIZATION/DEMOBILIZATION	LSUM	1	5%	\$42,000.00

SUB TOTAL = \$882,070.00
 CONTINGENCY (25%) = \$220,517.50
CONSTRUCTION TOTAL = \$1,102,587.50

 DESIGN ENGINEERING (7.5%) = \$82,694.06
 CONSTRUCTION ENGINEERING (7.5%) = \$82,694.06

TOTAL PROJECT COST INCLUDING ENGINEERING = \$1,268,000.00

NOTE: THIS ESTIMATE DOES NOT INCLUDE ROW ACQUISITION, LAND ACQUISITION, TEMPORARY AND/OR CONSTRUCTION EASEMENTS, OR RELOCATING ANY UTILITIES