ENGINEERING, INC.
TBPE F-18435

# OPINION OF PROBABLE COST ESTIMATE
# FOR
## Hillcrest Drive - Balcones Heights, Texas

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| PROJECT NO. : | 2020-049-01 |
| DATE : | 1/22/2020 |
| SUBMITTAL NO. : | Preliminary |
| SPECIFICATIONS : | TXDOT, COSA,SAWS |
| COMPLETED BY : | J.A.C. |
| CHECKED BY : | J.S. |

***EARTHWORK***

| SPEC. ITEM | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | COST |
|---|---|---|---|---|---|
| 0500 2001 | MOBILIZATION | 1 | LS | $ 175,000.00 | $ 175,000.00 |
| 0100 2002 | PREPARING ROW | 30 | STA | $ 4,200.00 | $ 126,000.00 |
| 0104 2017 | REMOVING CONC (DRIVEWAYS) | 2200 | SY | $ 18.00 | $ 39,600.00 |
| 0104 2029 | REMOVING CONC (CURB OR CURB & GUTTER) | 5900 | LF | $ 15.00 | $ 88,500.00 |
| 0104 2036 | REMOVING CONC (SIDEWALK OR RAMP) | 2600 | SY | $ 15.00 | $ 39,000.00 |
| 0104 6028 | REMOVING CONC (MISC) | 150 | SY | $ 29.00 | $ 4,350.00 |
| 0110 2001 | EXCAVATION (ROADWAY) | 6500 | CY | $ 17.00 | $ 110,500.00 |
| 0132 2001 | EMBANKMENT (FINAL)(ORD COMP)(TY A) | 1500 | CY | $ 25.00 | $ 37,500.00 |
| 0160 6006 | FURNISH AND PLACING TOP SOIL (3") | 2100 | SY | $ 4.50 | $ 9,450.00 |
| 0162 2002 | BLOCK SODDING | 2100 | SY | $ 6.00 | $ 12,600.00 |
| 0164 6007 | BROADCAST SEED (PERM) (URBAN) (CLAY) | 2100 | SY | $ 3.00 | $ 6,300.00 |
| 0168 2001 | VEGETATIVE WATERING | 250 | MG | $ 38.00 | $ 9,500.00 |
| | | | | EARTH WORK SUBTOTAL= | $ 658,300.00 |

***STREETS***

| SPEC. ITEM | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | COST |
|---|---|---|---|---|---|
| 0341 6008 | D-GR HMA TY-B PG64-22 | 7800 | TON | $ 95.00 | $ 741,000.00 |
| 0260 2002 | LIME (HYDRATED LIME (SLURRY)) | 300 | TON | $ 150.00 | $ 45,000.00 |
| 0260 6079 | LIME TRT (SUBGRADE)(6") | 13300 | SY | $ 7.00 | $ 93,100.00 |
| 0310 2005 | PRIME COAT (MC-30 OR AE-P) | 1200 | GAL | $ 6.00 | $ 7,200.00 |
| 0341 6042 | D-GR HMA TY-D SAC-B PG70-22 | 1300 | TON | $ 98.00 | $ 127,400.00 |
| | | | | STREETS SUBTOTAL= | $ 1,013,700.00 |

***DRAINAGE***

| SPEC. ITEM | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | COST |
|---|---|---|---|---|---|
| 0400 6001 | STRUCT EXCAV | 20 | CY | $ 22.00 | $ 440.00 |
| 0402 6001 | TRENCH EXCAVATION PROTECTION | 200 | LF | $ 2.50 | $ 500.00 |
| 0420 6009 | CL A CONC (COLLAR) | 4 | EA | $ 620.00 | $ 2,480.00 |
| 0420 6062 | CL C CONC (RETAINAING WALL) | 42 | CY | $ 900.00 | $ 37,800.00 |
| 0432 6001 | RIPRAP (CONC)(5") | 8 | CY | $ 430.00 | $ 3,440.00 |
| 0450 6029 | RAIL (TY C1W) | 40 | LF | $ 325.00 | $ 13,000.00 |
| 0464 6007 | RC PIPE (CL III)(30 IN) | 200 | LF | $ 85.00 | $ 17,000.00 |
| 0465 2521 | INLET (COMPL)(CURB)(10') | 7 | EA | $ 5,500.00 | $ 38,500.00 |
| 0465 6009 | JCTBOX(COMPL)(PJB)(5FTX5FT) | 2 | EA | $4,500.00 | $ 9,000.00 |
| 0465 6268 | INLET (COMPL) (EXT)(TY I)(5') | 5 | EA | $ 1,750.00 | $ 8,750.00 |
| 0496 6016 | REMOV STR (PIPE) | 150 | EA | $ 225.00 | $ 33,750.00 |
| 0496 6006 | REMOV STR (INLETS) | 5 | EA | $ 3,500.00 | $ 17,500.00 |
| | | | | DRAINAGE SUBTOTAL= | $ 182,160.00 |

***SANITARY SEWER***

| SPEC. ITEM | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | COST |
|---|---|---|---|---|---|
| 550.0 | TRENCH EXCAVATION PROTECTION | 2060 | LF | $ 2.50 | $ 5,150.00 |
| 824.0 | RELAY 6" LONG SERVICE | 16 | EA | $ 3,200.00 | $ 51,200.00 |
| 848.0 | 8" PVC SANITARY SEWER LINE | 1650 | LF | $ 75.00 | $ 123,750.00 |
| 848.0 | 12" PVC SANITARY SEWER LINE | 410 | LF | $ 76.00 | $ 31,160.00 |
| 851.0 | ADJUST EXISTING MANHOLES | 9 | EA | $ 2,600.00 | $ 23,400.00 |
| 852.2 | SANITARY SEWER DROP MANHOLE | 3 | EA | $ 6,900.00 | $ 20,700.00 |
| 852.3 | EXTRA DEPTH MH >6' | 12 | VF | $ 275.00 | $ 3,300.00 |
| 858.0 | CONCRETE ENCASEMENT, CRADDLES, SADDLES AND COLLARS | 5 | CY | $ 200.00 | $ 1,000.00 |
| 864.0 | BYPASS PUMPING | 1 | LS | $ 15,000.00 | $ 15,000.00 |
| 866.0 | SEWER MAIN TELEVISION INSPECTION | 2060 | LF | $ 3.50 | $ 7,210.00 |
| | | | | SANITARY SEWER SUBTOTAL= | $ 281,870.00 |

| MISCELLANEOUS | | | | | |
|---|---|---|---|---|---|
| SPEC. ITEM | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | COST |
| 0502 6001 | BARRICADES, SIGNS AND TRAFFIC HANDLING | 12 | MO | $ 17,500.00 | $ 210,000.00 |
| 0506 6001 | ROCK FILTER DAMS (INSTALL) (TY 3) | 60 | LF | $ 35.00 | $ 2,100.00 |
| 0506 6011 | ROCK FILTER DAMS (REMOVE) | 60 | LF | $ 7.00 | $ 420.00 |
| 0506 6020 | CONSTRUCTION EXITS (INSTALL) (TY 1) | 220 | SY | $ 25.00 | $ 5,500.00 |
| 0506 6024 | CONSTRUCTION EXITS (REMOVE) | 220 | SY | $ 9.00 | $ 1,980.00 |
| 0506 6038 | TEMPORARY SEDIMENT CONTROL FENCE INSTLL | 5900 | LF | $ 2.50 | $ 14,750.00 |
| 0506 6039 | TEMPORARY SEDIMENT CONTROL FENCE REMOVE | 5900 | LF | $ 1.00 | $ 5,900.00 |
| 0512 6009 | PORT CTB (FURNISHING)(LOW PROF)(TY-1) | 5900 | LF | $ 23.00 | $ 135,700.00 |
| 0512 6057 | PORT CTB (REMOVE)(LOW PROF)(TY-1) | 5900 | LF | $ 8.00 | $ 47,200.00 |
| 0529 6008 | CONC CURB & GUTTER (TY II) | 5900 | LF | $ 25.00 | $ 147,500.00 |
| 0530 6004 | DRIVEWAYS (CONC) | 3000 | SY | $ 60.00 | $ 180,000.00 |
| 0531 6001 | 6' CONC SIDEWALKS (4") | 3900 | SY | $ 45.00 | $ 175,500.00 |
| SP1000 | SIGNAGE & STRIPING | 1 | LS | $ 17,000.00 | $ 17,000.00 |
| SP1100 | OVERHEAD ELEC. (UTILITY POLE RELOCATION) | 39 | EA | $ 4,500.00 | $ 175,500.00 |
| | | | | MISCELANEOUS SUBTOTAL= | $ 1,119,050.00 |

| Signalization | | | | | |
|---|---|---|---|---|---|
| SPEC. ITEM | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | COST |
| 308.1 | DRILLED SHAFTS (30") | 23 | LF | $167.31 | $3,848.13 |
| 308.1 | DRILLED SHAFTS (36") | 26 | LF | $204.20 | $5,309.20 |
| 615.1 | TRAFFIC SIGNAL CONTROLLER ASSEMBLY (TYPE 332 CABINET) | 1 | EA | $13,251.54 | $13,251.54 |
| 618.1 | CONDUIT TRENCHED 2 INCH PVC (SCHEDULE 40) | 130 | LF | $21.97 | $2,856.10 |
| 618.2 | CONDUIT TRENCHED 3 INCH PVC (SCHEDULE 40) | 615 | LF | $24.49 | $15,061.35 |
| 620.1 | ELECTRICAL CONDUCTORS (No. 6) (BARE) | 15 | LF | $1.74 | $26.10 |
| 620.2 | ELECTRICAL CONDUCTORS (No. 8) (BARE) | 425 | LF | $3.80 | $1,615.00 |
| 620.3 | ELECTRICAL CONDUCTORS (No.6) (INSULATED) | 35 | LF | $2.16 | $75.60 |
| 624.3 | GROUND BOXES TYPE D (162922) W/APRON | 4 | EA | $774.12 | $3,096.48 |
| 628.1 | ELECTRICAL SERVICES | 1 | EA | $3,700.00 | $3,700.00 |
| 633.1 | BATTERY BACKUP SYSTEM | 1 | EA | $7,574.90 | $7,574.90 |
| 655.1 | TYPE 332 CONTROLLER FOUNDATION | 1 | EA | $4,046.78 | $4,046.78 |
| 680.2 | INSTALLATION OF HIGHWAY TRAFFIC SIGNALS ( SYSTEM) | 1 | EA | $31,640.72 | $31,640.72 |
| 681.1 | TEMPORARY TRAFFIC SIGNALS | 1 | EA | $30,000.00 | $30,000.00 |
| 682.1 | VEHICLE SIGNAL SECTION WITH BACK PLATE (12 INCH) (3 SEC) | 8 | EA | $793.28 | $6,346.24 |
| 682.2 | VEHICLE SIGNAL SECTION WITH BACK PLATE (12 INCH) (4 SEC) | 4 | EA | $1,050.00 | $4,200.00 |
| 682.4 | PEDESTRIAN SIGNAL SECTION (12 INCH) LED (2 IND) | 8 | EA | $411.22 | $3,289.76 |
| 683.1 | LED COUNTDOWN PEDESTRIAN MODULE | 8 | EA | $434.93 | $3,479.44 |
| 684.1 | TRAFFIC SIGNAL CABLES (TYPE A) (14 AWG) (4 COND) | 525 | LF | $1.65 | $866.25 |
| 684.1 | TRAFFIC SIGNAL CABLES (TYPE A) (14 AWG) (9 COND) | 1670 | LF | $2.07 | $3,456.90 |
| 684.1 | TRAFFIC SIGNAL CABLES (TYPE A) (16 AWG) (3 COND) | 1010 | LF | $2.00 | $2,020.00 |
| 686.1 | INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 32') (LUM) WITH ILSN | 2 | EA | $4,800.00 | $9,600.00 |
| 686.1 | INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 44') (LUM) WITH ILSN | 2 | EA | $7,500.00 | $15,000.00 |
| 687.1 | PEDESTAL POLE ASSEMBLY (10') | 4 | EA | $1,297.52 | $5,190.08 |
| 688.3 | AUDIBLE PEDESTRIAN SIGNAL UNITS | 8 | EA | $1,234.36 | $9,874.88 |
| 693.1 | INTERNALLY LIGHTED STREET NAME SIGNS (ILSN SIGN 8' S) | 4 | EA | $3,659.76 | $14,639.04 |
| 695.2 | EMERGENCY PREEMPTION PHASE SELECTOR | 1 | EA | $4,239.36 | $4,239.36 |
| 695.3 | EMERGENCY PREEMPTION DETECTOR | 4 | EA | $1,197.86 | $4,791.44 |
| 695.4 | EMERGENCY PREEMPTION DETECTOR CABLE | 700 | LF | $2.43 | $1,701.00 |
| 696.0 | RADAR ADVANCE DETECTOR | 4 | EA | $7,100.00 | $28,400.00 |
| 696.0 | RADAR PRESENCE DETECTOR | 4 | EA | $7,100.00 | $28,400.00 |
| 696.0 | RADAR ADVANCE DETECTION DEVICE (RADD) COMMUNICATION AND POWER CABLE | 700 | LF | $3.50 | $2,450.00 |
| 696.0 | RADAR PRESENCE DETECTION DEVICE (RADD) COMMUNICATION AND POWER CABLE | 700 | LF | $3.50 | $2,450.00 |
| 696.1 | INSTALL RADAR DETECTION DEVICE | 1 | EA | $3,000.00 | $3,000.00 |
| | | | | SIGNALIZATION SUBTOTAL= | $ 275,496.29 |

| DESIGN ENHANCEMENT | | | | | |
|---|---|---|---|---|---|
| SPEC. ITEM | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | COST |
| SP2000 | Arrival Monuments Budget | 2 | EA | $ 15,000.00 | $ 30,000.00 |
| SP2100 | Bus Shelters Budget | 4 | EA | $ 7,000.00 | $ 28,000.00 |
| SP2200 | Lighting Budget | 10 | EA | $ 4,200.00 | $ 42,000.00 |
| SP2300 | Landscape Enhancements Budget | 1 | LS | $ 80,000.00 | $ 80,000.00 |
| | | | | DESIGN ENHANCEMENT SUBTOTAL= | $ 180,000.00 |

**SUBTOTAL = $ 3,710,576.29**
**CONTINGENCY (10%) = $ 371,057.63**
**TOTAL= $ 4,081,633.92**

Cost estimates were prepared on the basis of experience and judgment, utilizing historical bid costs for similar work if available. Actual bids and ultimate construction costs may vary based on market conditions, inflation, and unforeseen field conditions. The final determination of construction cost is made through the bidding process with contractor(s).