Engineer's Summary of Infrastructure Cost

Name of Project: Water, Sanitary Sewer & Drainage Facilities and Paving Improvements to Serve Tuscan Lakes SF 55-3 SE & SF 60-3 SE

Owner of Project: Tuscan Lakes Development, L.P.

Owner's Address: City of League City, Galveston County, Texas

General description of infrastructure improvements: Construction of water, sanitary sewer and drainage facilities and paving improvements to serve the section.

Date of Construction Completion: Final Inspection held Summary of Costs: Municipal Water System: **Engineering Service:** \$16,151 Construction: \$148,363 Municipal Wastewater System: **Engineering Service:** \$35,031 Construction: \$321,796 Municipal Storm Sewer and Drainage System: **Engineering Service:** \$113,904 Construction: \$1,046,332 Municipal Street Improvements: **Engineering Service:** \$91,544 Construction: \$576,649 Private Street Improvement: N/A Engineering Service: Construction: Private Drainage Improvements: N/A **Engineering Service:** Construction:

I certify that to the best of my knowledge the above information represents the final costs of Infrastructure improvements within the project

Signature and Title:	0//.	PROJECT	MANAGER
Date: 7/21/20	р 17		

Attachments: spread sheet of final unit quantities and unit costs of construction

Construction of the Water, Sanitary Sewer and Drainage Facilities to serve Tuscan Lakes Sections SF 55-3 SE & SF 60-3 SE 1788-3055D (11.2)

		CONTRACT	COMPLETE	
ITEM DESCRIPTION	UNIT	UNIT COST	TOTAL QTY. TO DATE	TOTAL AMT. TO DATE
WATER ITEMS				
1. 6" PVC WATER LINE, C-900, DR 18, CL 235, ALL DEPTHS, INCLUDES ALL CAST IRON FITTINGS, COMPLETE IN PLACE	LF	\$14.75	1444	\$21,299.00
2. 8" PVC WATER LINE, C-900, DR 18, CL 235, ALL DEPTHS, INCLUDES ALL CAST IRON FITTINGS, COMPLETE IN PLACE	LF	\$16.50	3439	\$56,743.50
3. 14" STEEL CASING FOR 8" WATER LINE, COMPLETE IN PLACE	LF	\$30.00	25	\$750.00
4. FLUSHING VALVE UNIT, ALL DEPTHS, INCLUDES APPROPRIATE TEE, 6" GATE VALVE & BOX, 6" LEAD AND FLUSHING VALVE, AND TRENCH SAFETY, PER TECHNICAL SPECIFICATIONS, COMPLETE IN PLACE	EA	\$3,596.00	9	\$32,364.00
5. 6" AWWA GATE VALVE AND BOX, ALL DEPTHS, COMPLETE IN PLACE	EA	\$701.00	2	\$1,402.00
6. 8" AWWA GATE VALVE AND BOX, ALL DEPTHS, COMPLETE IN PLACE	EA	\$1,008.00	9	\$9,072.00
7. AUGER FOR 8" WATERLINE, (DOES NOT INCLUDE PIPE), (TO INCLUDE DEWATERING), COMPLETE IN PLACE	LF	\$113.00	25	\$2,825.00
8. BORE & JACK FOR 6" WATERLINE, (DOES NOT INCLUDE PIPE), (TO INCLUDE DEWATERING), COMPLETE IN PLACE	LF	\$41.00	202	\$8,282.00
9. 6" X 6" TAPPING SLEEVE & VALVE, COMPLETE IN PLACE	EA	\$5,403.00	2	\$10,806.00
10. REMOVE AND RELOCATE EXISTING FLUSHING VALVE UNIT (CONTRACTOR SHALL SUPPLY TEE, VALVE BOX AND LEAD), (TO BE RE-PAINTED IN ACCORDANCE WITH CITY OF LEAGUE CITY GENERAL DESIGN AND CONSTRUCTION STANDARDS) REMOVE EXISTING REDUCER, AND CONNECT PROPOSED WATER LINE, ALL DEPTHS, INCLUDING FITTINGS, AND REPAINT, COMPLETE IN PLACE	EA	\$2,052.00	1	\$2,052.00
11. REMOVE AND RELOCATE EXISTING FLUSHING VALVE UNIT (CONTRACTOR SHALL SUPPLY VALVE BOX), (TO BE REPAINTED IN ACCORDANCE WITH CITY OF LEAGUE CITY GENERAL DESIGN AND CONSTRUCTION STANDARDS) REMOVE EXISTING REDUCER AND CONNECT PROPOSED WATERLINE, ALL DEPTHS, INCLUDING FITTINGS, AND REPAINT, COMPLETE IN PLACE	EA	\$2,052.00	1	\$2,052.00
12. TRENCH SAFETY, ALL DEPTHS, COMPLETE IN PLACE	LF	\$0.10	4656	\$465.60
SUBTOTAL WATER ITEMS				\$148,113.10

Construction of the Water, Sanitary Sewer and Drainage Facilities to serve Tuscan Lakes Sections SF 55-3 SE & SF 60-3 SE 1788-3055D (11.2)

CONTRACT			COMPLETE	
NIT UNIT COST	UNI	COST TOTAL QTY. TO DATE	TOTAL AMT. TO DATE	
_F \$33.90	LF	33.90 1506	\$51,053.4	
_F \$36.00	LF	36.00 2341	\$84,276.0	
EA \$2,171.00	EA	71.00 23	\$49,933.0	
/F \$156.00	VF	56.00 33	\$5,148.0	
EA \$182.00	EA	82.00 2	\$364.0	
_F \$40.00	, LF	40.00 1565	\$62,600.00	
EA \$853.00	EA	53.00 27	\$23,031.0	
_F \$113.00	LF	13.00 25	\$2,825.0	
_F \$30.00	LF	30.00 25	\$750.0	
_F \$61.00	LF	61.00 31	\$1,891.0	
EA \$416.00	EA	16.00 6	\$2,496.0	
/F \$21.00	VF	21.00 1	\$21.00	
EA \$442.00	EA	42.00 1	\$442.0	
/F \$21.00	VF	21.00 0.3	\$6.3	
EA \$1,143.00	EA	43.00 2	\$2,286.0	
_F \$1.30	LF	\$1.30 3847	\$5,001.1	
_F \$0.10	LF	\$0.10 3822	\$382.2	
			\$292,506.0	

		CONTRACT	COMPLETE	
ITEM DESCRIPTION	UNIT	UNIT COST	TOTAL QTY. TO DATE	TOTAL AMT. TO DATE
STORM SEWER ITEMS				
1. 24" RCP STORM SEWER, ASTM C-76, CLASS III, ALL DEPTHS, COMPLETE IN PLACE	LF	\$48.50	2931	\$142,153.50
2. 30" RCP STORM SEWER, ASTM C-76, CLASS III, ALL DEPTHS, COMPLETE IN PLACE	LF	\$60.00	183	\$10,980.00
3. 36" RCP STORM SEWER, ASTM C-76, CLASS III, ALL DEPTHS, COMPLETE IN PLACE	LF	\$68.00	126	\$8,568.00
4. 42" RCP STORM SEWER, ASTM C-76, CLASS III, ALL DEPTHS, COMPLETE IN PLACE	LF	\$81.00	454	\$36,774.00
5. 48" RCP STORM SEWER, ASTM C-76, CLASS III, ALL DEPTHS, COMPLETE IN PLACE	LF	\$93.00	189	\$17,577.00
6. 54" RCP STORM SEWER, ASTM C-76, CLASS III, ALL DEPTHS, COMPLETE IN PLACE	LF	\$116.00	456	\$52,896.00
7. 6' X 5' RCP STORM SEWER CULVERT, ASTM C-1433, ALL DEPTHS, COMPLETE IN PLACE	LF	\$202.00	187	\$37,774.00
8. AUGER FOR 36" RCP STORM SEWER (DOES NOT INCLUDE PIPE) (TO INCLUDE DEWATERING), COMPLETE IN PLACE	LF	\$186.00	25	\$4,650.00
9. 12" HDPE STORM SEWER, ALL DEPTHS, COMPLETE IN PLACE	LF	\$24.00	686	\$16,464.00
10. TYPE "C" MANHOLE FOR 42" STORM SEWERS AND SMALLER, COMPLETE IN PLACE	EA	\$1,949.00	26	\$50,674.00
11. TYPE "C" MANHOLE FOR 48" STORM SEWERS AND LARGER, COMPLETE IN PLACE	EA	\$2,906.00	5	\$14,530.00
12. JUNCTION BOX WITH TYPE "C" MANHOLE TOP FOR BOX CULVERT STORM SEWER AND RCP STORM SEWER, (ALL SIZES), ALL DEPTHS, COMPLETE IN PLACE	EA	\$6,852.00	1	\$6,852.00
13. JUNCTION BOX WITH CAST IN PLACE INLET TOP (SEE DETAIL SHEET 37) FOR BOX CULVERT STORM SEWER AND RCP STORM SEWER (ALL SIZES), ALL DEPTHS), COMPLETE IN PLACE	EA	\$14,119.00	1	\$14,119.00
14. STAGE I - STANDARD 5' PRECAST INLET ("H-2"), ALL DEPTHS, INCLUDES TEMPORARY SILT BARRIER FENCE FOR STAGE I INLETS, COMPLETE IN PLACE	EA	\$1,216.00	28	\$34,048.00
15. STAGE II - STANDARD 5' PRECAST INLET ("H-2"),COMPLETE IN PLACE	EA	\$1,091.00	28	\$30,548.00
16. STAGE I - STANDARD 10' CURB INLET, ALL DEPTHS, INCLUDES TEMPORARY SILT BARRIER FENCE FOR STAGE I INLETS, COMPLETE IN PLACE	EA	\$1,484.00	2	\$2,968.00
17. STAGE II - STANDARD 10' CURB INLET, COMPLETE IN PLACE	EA	\$2,597.00	2	\$5,194.00
18. TYPE "A" INLET, COMPLETE IN PLACE	EA	\$1,361.00	3	\$4,083.00

		CONTRACT	COMPLETE	
ITEM DESCRIPTION	UNIT	UNIT COST	TOTAL QTY. TO DATE	TOTAL AMT. TO DATE
19. BREAK INTO JUNCTION BOX, CONNECT PROPOSED STORM SEWER (ALL SIZES), COMPLETE IN PLACE	LS	\$2,026.00	1	\$2,026.00
20. BREAK INTO EXISTING INLET AND CONNECT PROPOSED STORM SEWER (ALL SIZES), COMPLETE IN PLACE	LS	\$1,766.00	1	\$1,766.00
21. REMOVE AND DISPOSE APPROXIMATELY 35' EXISTING 24" RCP STORM SEWER AND APPROXIMATELY 250 SY OF EXISTING SLOPE PAVING (TO INCLUDE PUMPING AND DEWATERING), (TO INCLUDE TRENCH SAFETY), COMPLETE IN PLACE	LS	\$6,234.00	1	\$6,234.00
22. REMOVE AND DISPOSE APPROXIMATELY 715' EXISTING 12" PVC STORM SEWER AND 2 EXISTING TYPE "A" INLETS, COMPLETE IN PLACE	LS	\$6,753.00	1	\$6,753.00
23. 4" REINFORCED CONCRETE SLOPE PAVING WITH 3' TOE WALL ALL AROUND, COMPLETE IN PLACE	SY	\$87.00	510	\$44,370.00
24. SWALE "V" BOTTOM, SIDE SLOPE VARIES, COMPLETE IN PLACE	LF	\$5.90	2876	\$16,968.40
25. OVERFLOW SWALE, SIDE SLOPE VARIES, COMPLETE IN PLACE	LF	\$9.00	165	\$1,485.00
26. SAWCUT, REMOVE AND DISPOSE EXISTING SLOPE PAVING FOR PROPOSED OUTFALL, TIE IN PROPOSED 24" RCP STORM SEWER OUTFALL AND RESLOPE PAVE TO EXISTING CONDITIONS, COMPLETE IN PLACE	EA	\$2,078.00	2	\$4,156.00
27. CONTRACTOR SHALL CONTACT AND COORDINATE WITH MR. JOHN KELLY WITH TERRA MANAGEMENT SERVICES, AT (713) 462-5017 REGARDING LANDSCAPING, IRRIGATION AND SIDEWALK REPAIRS DUE TO CONNECTING WATERLINE INTO EXISTING WATERLINE ON MAXWAY COURT, COMPLETE IN PLACE	LS	\$3,636.00	1	\$3,636.00
28. CONTRACTOR SHALL CONTACT AND COORDINATE WITH MR. JOHN KELLY WITH TERRA MANAGEMENT SERVICES, AT (713) 462-5017 REGARDING LANDSCAPING, IRRIGATION AND SIDEWALK REPAIRS DUE TO CONNECTING WATERLINE INTO EXISTING WATERLINE ON AHNYA LANE, COMPLETE IN PLACE	LS	\$3,636.00	1	\$3,636.00
29. T.V. INSPECTION FOR STORM SEWER, PER LEAGUE CITY REQUIREMENTS, COMPLETE IN PLACE	LF	\$2.60	4727	\$12,290.20
30. TRENCH SAFETY, (ALL DEPTHS), COMPLETE IN PLACE	LF	\$0.10	4702	\$470.20
31. CONNECT PROPOSED STORM SEWER (ALL SIZES) TO EXISTING MANHOLE, COMPLETE IN PLACE	EA	\$1,700.00	0	\$0.00
32. AUGER FOR 12" HPDR STORM SEWER, DOES NOT INCLUDE PIPE, COMPLETE IN PLACE	LF	\$95.00	0	\$0.00
33. FILL AND ABANDON 4-12" HDPE STORM SEWER PIPES, INCLUDES CUTTING BOTH ENDS 3' BEHIND BACK OF CURB, REMOVAL AND DISPOSAL OF APPROXIMATELY 260 LF OF PIPE, FILLING REMAINING PIPE WITH GROUT OR ALTERNATIVE APPROVED BY ENGINEER, AND BURYING AND ABANDONING PIPE, COMPLETE IN PLACE	LS	\$7,212.00	0	\$0.00

SUBTOTAL STORM SEWER ITEMS

\$594,643.30

		CONTRACT	COMPLETE	
ITEM DESCRIPTION	UNIT	UNIT COST	TOTAL QTY. TO DATE	TOTAL AMT. TO DATE
DEWATERING ITEMS				
 BEDDING AND BACKFILL FOR WET SAND CONSTRUCTION AND UNSATISFACTORY SOIL CONDITIONS (PER DETAIL), (TO BE USED ONLY AS DIRECTED BY THE ENGINEER), COMPLETE IN PLACE 	LF	\$5.00	1400	\$7,000.00
2. DEWATERING, (TO BE USED ONLY AS DIRECTED BY THE ENGINEER), COMPLETE IN PLACE	LF	\$20.00	2554	\$51,080.00
SUBTOTAL DEWATERING ITEMS				\$58,080.00
BRIDGE ITEMS				
1. 24" DIAMETER DRILLED SHAFT, COMPLETE IN PLACE	LF	\$592.00	232	\$137,344.00
2. CLASS "C" CONCRETE ABUTMENTS, COMPLETE IN PLACE	CY	\$1,963.24	20	\$39,264.80
3. C-I-P CONCRETE SLAB SPAN, COMPLETE IN PLACE	SF	\$101.71	1000	\$101,710.00
4. CLASS "S" CONCRETE - BRIDGE SIDEWALK, COMPLETE IN PLACE	CY	\$617.73	15.9	\$9,821.91
5. CLASS "S" CONCRETE - BRIDGE CURB, COMPLETE IN PLACE	CY	\$1,395.34	4.9	\$6,837.17
6. SEALED EXPANSION JOINT-4", COMPLETE IN PLACE	LF	\$203.49	61	\$12,412.89
7. CONCRETE RIP RAP, TYPE RR8, COMPLETE IN PLACE	CY	\$852.78	23.8	\$20,296.16
8. APPROACH SLAB 13", CONCRETE PAVEMENT, COMPLETE IN PLACE	CY	\$686.09	93.8	\$64,355.24
9. CSS UNDER APPROACH SLAB, COMPLETE IN PLACE	CY	\$101.69	43.8	\$4,454.02
10. TYPE T221 RAIL, COMPLETE IN PLACE	LF	\$257.76	37	\$9,537.12
11. TYPE C221 RAIL, COMPLETE IN PLACE	LF	\$381.69	37	\$14,122.53
12. EXCAVATION, HAUL OFF, PLACEMENT, AND COMPACTION OF FILL WITHIN ROW OF BRIDGE AREA TO MAINTAIN MINIMUM 1' CLEARANCE UNDER BRIDGE DECK, COMPLETE IN PLACE	CY	\$56.06	40	\$2,242.40
SUBTOTAL BRIDGE ITEMS				\$422,398.24
MISCELLANEOUS ITEMS				
 STRIPPING MIN. 4-INCHES OF SURFACE MATERIAL AND HAULING TO OFFSITE FOR R.O.W.'S AND ADJACENT UTILITY EASEMENTS, (TO BE USED ONLY AS DIRECTED BY THE ENGINEER), COMPLETE IN PLACE 	AC	\$750.00	1	\$750.00
2. EXTRA CEMENT STABILIZED SAND BACKFILL, (2 SACK PER TON), (TO BE USED ONLY AS DIRECTED BY THE ENGINEER), COMPLETE IN PLACE	СҮ	\$25.00	0	\$0.00
3. 6" CONCRETE SLAB FOR STORM SEWER BEDDING (AS PER CITY OF LEAGUE CITY GENERAL DESIGN AND CONSTRUCTION STANDARDS) (TO BE USED ONLY AS DIRECTED BY THE ENGINEER), COMPLETE IN PLACE	LF	\$15.00	0	\$0.00
4. HYDROMULCH SEEDING FROM BACK OF CURB TO R.O.W., (TO BE USED ONLY AS DIRECTED BY THE ENGINEER), INCLUDING WATERING, COMPLETE IN PLACE	AC	\$1,400.00	0	\$0.00
SUBTOTAL MISCELLANEOUS ITEMS				\$750.00
TOTAL AMOUNT BID				\$1,516,490.64

		CONTRACT	COMPLETE	
ITEM DESCRIPTION	UNIT	UNIT COST	TOTAL QTY. TO DATE	TOTAL AMT. TO DATE
PAVING IMPROVEMENT ITEMS				
1. ROADWAY EXCAVATION, COMPLETE IN PLACE	CY	\$3.00	5500	\$16,500.00
2. HYDRATED LIME FOR STABILIZED SUB – GRADE, (6 % LIME BY WEIGHT) AS REQUIRED BY SOIL CONDITIONS AND APPROVED BY ENGINEER, COMPLETE IN PLACE	TON	\$160.00	193.55	\$30,968.00
3. 6" LIME STABILIZED SUB-GRADE (MANIPULATION), COMPLETE IN PLACE	SY	\$1.80	16320	\$29,376.00
4. 6" REINFORCED CONCRETE PAVEMENT, COMPLETE IN PLACE	SY	\$30.75	14480	\$445,260.00
5. 6" REINFORCED CONCRETE CURB, COMPLETE IN PLACE	LF	\$2.50	8330	\$20,825.00
6. PERMANENT TRAFFIC CONTROL DEVICES (INCLUDING ALL TRAFFIC BUTTONS, PAVEMENT STRIPING, STREET SIGNS, TRAFFIC SIGNS, AND REMOVAL OF EXISTING STRIPING), COMPLETE IN PLACE	LS	\$4,000.00	1	\$4,000.00
7. TEMPORARY TRAFFIC CONTROL PLAN (TO INCLUDE ALL DEVICES), COMPLETE IN PLACE	LS	\$1,000.00	1	\$1,000.00
8. LOT GRADING, INCLUDING MANIPULATION AND COMPACTION OF EXISTING FILL TO REQUIRED ELEVATION AS SHOWN ON LOT GRADING PLAN, COMPLETE IN PLACE	LS	\$9,000.00	1	\$9,000.00
9. REMOVE AND DISPOSE EXISTING TYPE III BARRICADE, COMPLETE IN PLACE	EA	\$200.00	2	\$400.00
10. 6" SCHEDULE 40 PVC, COMPLETE IN PLACE (LOCATION TO BE DETERMINED AT A LATER DATE)	LF	\$14.00	130	\$1,820.00
11. ROADWAY FILL, COMPLETE IN PLACE	CY	\$3.00	500	\$1,500.00
SUBTOTAL PAVING IMPROVEMENT ITEMS				\$560,649.00
MISCELLANEOUS ITEMS				
1. STRIPPING (ALL STRIPPING TO BE APPLIED ON SITE AFTER THE FINAL GRADE) (TO BE USED ONLY AS DIRECTED BY THE ENGINEER), COMPLETE IN PLACE	AC	\$500.00	0	\$0.00
2. HYDRATED LIME FOR STABILIZED SUB-GRADE, (6% LIME BY WEIGHT) AS REQUIRED BY SOILS CONDITIONS AND APPROVED BY ENGINEER, COMPLETE IN PLACE	TON	\$160.00	0	\$0.00
3. 6" LIME STABILIZED SUB-GRADE (MANIPULATION)	SY	\$1.80	0	\$0.00
4. 4" X 6' X 10' POSTAL PAD, COMPLETE IN PLACE	LS	\$1,000.00	0	\$0.00
5. 4" X 6' X 16' POSTAL PAD, COMPLETE IN PLACE	LS	\$1,600.00	0	\$0.00
6. 4" X 4' X 12' SIDEWALK W/ SCORED LINES AT 4' INTERVALS, COMPLETE IN PLACE	LS	\$300.00	0	\$0.00
7. 4" X 4' X 16' SIDEWALK W/ SCORED LINES AT 4' INTERVALS, COMPLETE IN PLACE	LS	\$400.00	0	\$0.00
8. FILL FOR RESERVE "A" (TO BE PLACED AROUND WETLANDS PER SHEET 11A OF THE CONSTRUCTION PLANS, FILL IS NOT TO BE PLACED IN WETLANDS, FILL WILL COME FROM ROADWAY EXCAVATION AND LOT GRADING), COMPLETE IN PLACE	CY	\$4.00	4000	\$16,000.00
SUBTOTAL MISCELLANEOUS ITEMS				\$16,000.00

\$16,000.00 \$576,649.00

TOTALS TO DATE