



FORD ENGINEERING, INC

January 10, 2020

City of Schertz
Engineering
10 Commercial Place, Bld 2
Schertz, TX 78154

Attn: Mr. John Nowak, PE

Re: City of Schertz – On-Call Civil Engineering Services Agreement
Proposal – Elbel Road – Storm Extension and Street Overlay

Ford Engineering, Inc. is pleased to provide this proposal for professional engineering services to the City of Schertz for the design of the storm water system extension on Elbel Road and associated street mill and overlay between Schertz Parkway and FM 3009.

Our understanding of the scope of work is generally as follows: The City desires to extend the storm drain system from Dietz Creek to the west; replace any defective curb and gutter, bring all ADA crossings up to compliance, add appropriate conduits for future signalization at Westchester, and finally mill and overlay the street with restriping of pavement markings.

The project length is approximately 3,400 linear feet. The existing road appears to be about 42 feet wide (FOC to FOC) with curb/gutters and existing sidewalk. There are overhead utilities within the street right of way. There are existing water and sewer mains located under the pavement.

Project Scope

Survey

Survey of the project length will be required for the limits described above. Topographic survey will identify existing curbs and gutters, pavement crown, sidewalks, driveways, drainage features and utilities, etc.

FEI will establish horizontal and vertical control for the project. Primary control set outside anticipated construction limits, and secondary control at approximately 1000-ft intervals. FEI will develop a project layout sheet with control.

Geotechnical

Arias and Associates will provide one geotechnical samplings 15-feet deep. Engineering analysis will identify existing pavement structure, existing soil engineering properties and identify the presence of groundwater.

Road Design

Ford Engineering Inc. will provide the **street design** for the limits described above. A design will include a cover sheet, typical street sections, overall layout, general notes,



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plan and profile of existing and proposed grades, SWPPP notes and considerations, and typical construction and traffic control details.

It is our understanding that the finished pavement will approximately match existing grade

Curbs, sidewalks and driveways are to remain unless otherwise determined. Substandard wheelchair ramps will be depicted to be replaced to meet current City Standard. Any curb and gutter determined to be in poor condition will be replaced.

Drainage

The proposed drainage system is anticipated to tie into an existing stub-out at the culvert crossing of Dietz Creek. All drainage areas and proposed drainage pipe sizing will meet current City standards. FEI will review and update the watersheds and catchment points for the proposed storm drain.

The City intends to mill and overlay the road, so the design will use inlets "on-grade" to capture the stormwater, or area inlet behind the sidewalk where appropriate. The analysis will determine the inlets sizes based on City of Schertz Design Criteria for a Collector street. FEI will size and layout the profiles for the storm drains to City of Schertz Design Criteria.

Permitting

The project limits is within the 100-year flood plain. FEI will prepare a flood plain permit submittal to be provided to the City of Schertz Floodplain Manager.

It is anticipated that the following permitting will **not** be required for this project: TXDOT, TDLR for ADA compliance, TCEQ, Texas Historical Office.

Bid Phase

FEI will provide bid documents, Addenda, responses to contractors, attend a pre-submittal meeting, review submitted bids, and provide a bid tabulation and recommendation for award..

Construction Phase

During construction, Ford Engineering, Inc. will attend a pre-construction conference with the City and selected contractor. FEI anticipates the following services: verification of all benchmarks, set stationing at ROW for every 100-ft and at PC and PT, review pay applications and schedules and provide recommendations to the City. Provide monthly visits to the project site to observe for general conformance to the plans. Should any field alteration or change orders arise, FEI will prepare appropriate exhibits and documentation to assist the City.

Upon completion of the project, FEI will assist in the preparation of punchlist items and the review of the final construction.

Design Phases



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It is anticipated that complete design of the project from the notice to proceed to the preparation of bid documents will require approximately 23 work weeks.

Preliminary Design Phase – 10 work weeks

Final Design Phase – 9 work weeks

Bid Phase – 4 work weeks

Construction Phase – 12 calendar months

Engineering Fee

Compensation for these services will be in the amount of **\$121,316.87** which will cover all costs associated with the scope described above, as further detailed in the attached Project Work Plan and Fee Proposal Breakdowns.

Additional services and significant changes will be compensated for as provided by Schedule of Fees in the agreement for Engineering Services between the City of Schertz and Ford Engineering, Inc. dated October 9, 2019.

Fees payable to permitting agencies will be the responsibility of the City.

Should there be any questions or if further information is needed, please do not hesitate to call us at 210-590-4777.

Sincerely,
FORD ENGINEERING INC.

Mark B Hill, P.E.

Encl: Project Work Plan and Fee Proposal Breakdown– Ford Engineering, Inc.

PROJECT WORK PLAN AND FEE PROPOSAL BREAKDOWN

Project: **Elbel Road - Storm Extension and Street Overlay**
 Prime Consultant: **Ford Engineering, Inc.**
 Proposal Date: **1/13/2020**
 Prepared By: **Mark B Hill**

TASK CODE AND DESCRIPTION	Principal	Project Engineer	EIT	Admin/Clerical	RPLS	Survey Tech	Survey Crew - 2 man	TASK HOURS	TASK / PHASE FEE
	\$200.00	\$150.00	\$100.00	\$65.00	\$165.00	\$85.00	\$145.00		
	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS			
Design	12	372	2	6	18	56		610	\$74,770.00
01. Project Management and General Items									
01.010. Project Mgmt	2			2				4	\$530.00
01.030. General Sheets - Index, Summaries / Quantities, Notes		2	8					10	\$1,100.00
03. Topographic Surveying / Base Mapping									
03.010. Establish Primary Project Control							4	4	\$580.00
03.040. Survey Topographic Features			24		4	8	44	80	\$10,120.00
03.050. Survey Cross Sections / Spot Elevations to Develop DTM									
03.070. Survey Quality Level C Locates						2	8	10	\$1,330.00
03.120. Stake Storm Drain Outfall Alignment (Coordinate with Environmental Division)					2	8		10	\$1,010.00
04. Roadway Design									
04.010. Typical Sections - Existing and Proposed		4	8					12	\$1,400.00
04.020. Horizontal Roadway Alignments		2	4					6	\$700.00
04.030. Roadway Profiles		8	24					32	\$3,600.00
04.040. Street Cross Sections		16	32					48	\$5,600.00
04.050. Plan Sheets	8	32	64					104	\$12,800.00
04.070. Driveway Summary Sheet		2	8					10	\$1,100.00
05. Drainage Design									
05.010. Establish Drainage Discharge									
05.010.010. Drainage Area Map		2	8					10	\$1,100.00
05.010.030. Calculate Design Discharges/ Report		16	32					48	\$5,600.00
05.020. Analyze Storm Drain Facilities (Plan and Profile)									
05.020.010. Roadways and Storm Drain System		16	40					56	\$6,400.00
05.020.060. Inlet Cross Sections		8	16					24	\$2,800.00
07. Utility Coordination / Management									
07.010. Utility Basemap		4	16					20	\$2,200.00

Principal	Project Engineer	EIT	Admin/Clerical	RPLS	Survey Tech	Survey Crew - 2 man
\$200.00	\$150.00	\$100.00	\$65.00	\$165.00	\$85.00	\$145.00

TASK CODE AND DESCRIPTION	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	TASK HOURS	TASK / PHASE FEE
08. Traffic Control Plan								
08.010. Construction Phasing Typical Sections		4	8				12	\$1,400.00
08.020. Construction Phasing and Sequence of Work		4	8				12	\$1,400.00
08.030. Conceptual Construction Phasing Layouts	2	8	16				26	\$3,200.00
09. Other Plans								
09.010. Intersection Layouts		4	16				20	\$2,200.00
09.030. Traffic Signal Plans (conduit runs only)		4	16				20	\$2,200.00
09.050. Pavement Marking and Signing Plan		8	24				32	\$3,600.00
10. Environmental and Regulatory Coordination							-	
11. Cost Estimating								
11.010. Prepare Cost Estimate		8	16				24	\$2,800.00
Final Design	5	111	2	0	0	0	160	\$22,030.00
01. Project Management and General Items								
01.010. Project Mgmt	2		2				4	\$530.00
01.030. General Sheets - Index, Summaries / Quantities, Notes		1	2				3	\$350.00
04. Roadway Design								
04.010. Typical Sections - Existing and Proposed		2	4				6	\$700.00
04.030. Roadway Profiles		2	4				6	\$700.00
04.040. Street Cross Sections		2	8				10	\$1,100.00
04.050. Plan Sheets	1	8	24				33	\$3,800.00
04.070. Driveway Summary Sheet		1	1				2	\$250.00
05. Drainage Design								
05.010. Establish Drainage Discharge								
05.010.020. Model Hydrology (Pre-Project and Post-Project)		2	4				6	\$700.00
05.010.030. Calculate Design Discharges/Report		2	8				10	\$1,100.00
05.020. Analyze Storm Drain Facilities (Plan and Profile)								
05.020.010. Roadways and Storm Drain System		8	24				32	\$3,600.00
05.020.060. Inlet Cross Sections		2	8				10	\$1,100.00
08. Traffic Control Plan								
08.010. Construction Phasing Typical Sections		2	4				6	\$700.00
08.020. Construction Phasing and Sequence of Work		2	4				6	\$700.00
08.030. Conceptual Construction Phasing Layouts	2	2	4				8	\$1,100.00
09. Other Plans								

Principal	Project Engineer	EIT	Admin/Clerical	RPLS	Survey Tech	Survey Crew - 2 man
\$200.00	\$150.00	\$100.00	\$65.00	\$165.00	\$85.00	\$145.00

TASK CODE AND DESCRIPTION	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	TASK HOURS	TASK / PHASE FEE	
09.010. Intersection Layouts		2	4				6	\$700.00	
09.030. Traffic Signal Plans		2	4				6	\$700.00	
09.050. Pavement Marking and Signing Plan		2	4				6	\$700.00	
10. Environmental and Regulatory Coordination							-		
10.010. Flood Plain Permit		2	4				6	\$700.00	
11. Cost Estimating									
11.010. Prepare Cost Estimate		8	16				24	\$2,800.00	
Bid Phase	0	14	3	0	0	0	32	\$3,845.00	
12. Bid Phase									
12.010. Submit 100% Plans		2	4	1			7	\$765.00	
12.020. Bid Documents - Front End		2	4				6	\$700.00	
12.050. Attend 100% Review Meeting/Precon walkthrough		4					4	\$600.00	
12.080. Attend Pre-Bid Meeting		2	2				4	\$500.00	
12.090. Respond to Contractor Questions		2					2	\$300.00	
12.100. Prepare and Distribute Necessary Addenda		2	2				4	\$500.00	
12.110. Prepare Bid Tabulation and Letter of Recommendation		1	2	2			5	\$480.00	
Construction Phase	0	47	30	0	0	2	8	\$11,380.00	
13. Construction Management									
13.010. Reestablish Project Control						2	8	\$1,330.00	
13.020. Review Contractor Pay Estimates		4	16				20	\$2,200.00	
13.040. Review Shop Drawings		1	2				3	\$350.00	
13.050. Respond to RFI's		2	4				6	\$700.00	
13.060. Project Site Visits & Reports (3 visits)		32	8				40	\$5,600.00	
13.080. Final Walkthrough and Punchlist Review		4					4	\$600.00	
13.100. Pre Construction Meeting		4					4	\$600.00	
15. Communications									
Project Closeout	0	16	0	0	0	0	18	\$1,900.00	
14. Project Closeout									
14.010. Prepare Record Drawings		2	16				18	\$1,900.00	
Supplemental Services									
Geotechnical								\$7,391.87	
TOTAL BASE FEE WITH HOUR BREAKDOWN	12	47	432	5	6	20	64	747	\$121,316.87