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▷ HRGREEN.COM

October 4, 2016

Mr. John Lothrop
Engineering Department
305 East Main Street
League City, TX 77573

RE: Proposal for Asphalt Overlay Improvements for:
Package #1: Various Streets West of Railroad
Package #2: Various Streets at Shellside and Historic District.
from Dickinson Street to Texas Avenue

Dear Mr. Lothrop:

HR Green is pleased to submit this proposal in the amount of \$204,311.70 for performing plans preparation, survey, geotechnical, bid-phase and construction phase services for the above referenced project. The project includes engineering design phase and construction phase services for an asphalt overlay project to be included in two separate packages.

This proposal is based on our understanding of the project as discussed with your staff and from site visits to the project. This proposal presents a general overview with preliminary construction cost estimate, scope of service and proposed fee.

GENERAL OVERVIEW

The limits of the two project packages are the following:

- Package #1: Various Streets West of Railroad, East of Hwy 3 and North of Main Street. The approximate length of Mill & Overlay operations is 6,069 LF. The existing roadway consists of a 30 foot wide curb and gutter asphalt pavement. Preliminary Construction cost for Package #1 is \$710,851.05 (with a 5% contingency).
- Package #2: Various Street within the Historic District and Shellside Subdivision. The approximate length of Mill & Overlay operations is 13,539 LF. The existing roadway consists of a 30 foot wide asphalt pavement with roadside ditches. Preliminary Construction cost for Package #2 is \$1,550,434.20 (with a 5% contingency).

The proposed pavement improvements will include a 3-inch asphalt mill and overlay with base repair in select areas. The project will require Topographic Survey and a Geotechnical Report.

PROPOSED FEE

The proposed fee for Design Phase, Bid Phase Services, Construction Phase Services, Topographic Survey and Geotechnical Report is \$204,311.70 (see Attachment "A"). As in our previous contract, Design Phase and Construction Phase services are based on lump sum fees and hourly charges will be based on raw labor rates

times a multiplier of 3.10. Reimbursable expenses will be charged at cost plus 10%, and mileage will be charged at the prevailing federal rate.

SCOPE OF SERVICES

I. Design Phase Services and Bid-Phase Services

- Prepare Title Sheet with project limits
- Prepare Summary of Quantities sheet
- Prepare existing and proposed Typical Sections
- Prepare driveway taper details
- Prepare roadway plan sheets.
- Prepare Base Repair Detail to be used in select areas in need of base repair.
- Include TxDOT standard Traffic Control Detail sheets to be used for one-lane closure pavement operations. This does not include development of traffic control plan sheets or detour plan sheets.
- Prepare project layout sheet indicating the limits of the project.
- Prepare engineers opinion of probable construction cost, bid documents and specification and attend Pre-Bid meeting.
- Assist the City in obtaining bids for the project.
- Make construction documents available on CivCast for vendor distribution.
- Provide information to and answer questions from bidders concerning construction documents.
- Evaluate the bids and low bidder qualifications and make recommendations to the City for the award of contract.
- Prepare five (5) contract document sets for execution by the successful Contractor.
- Review Contract documents provided by the Contractor and submit to the City for further execution.

II. Construction Phase Services

- Coordinate with the City and attend Pre-Construction meeting
- Prepare meeting minutes for the pre-construction meeting and provide copies to all attendees.
- Provide construction administration services for the project.
- Assist the City during construction phase.
- Review and respond accordingly to all submittals and RFI's.
- Prepare change orders necessitated by field conditions.
- Review contractor's pay estimates, evaluate completed work, and make payment recommendations to the City.
- Visit the site at appropriate intervals to observe construction progress and quality of work and to determine if the work is proceeding in accordance with the plans.
- Detailed measurements and investigations are not part of this task.
- Full time site representation and inspection services are not part of this task.
- HR Green is not responsible for the means, methods, techniques, sequence of procedures of construction selected by the Contractor(s) or the safety precautions and programs incident to the work of the Contractor(s). HR Green is not responsible for the failure of the Contractor to perform the work in accordance with the construction documents. During site visits and on the basis of on-site



Mr. John Lothrop
October 4, 2016

observations HR Green will keep the City informed of the progress of the work, and will endeavor to identify to the City any defects or deficiencies in such work when they are observed.

- Assist the City in conducting final observation of the project. Coordinate with the City and the Contractor on the punch list items identified in the final inspections.
- Assist the City with project close-out, conduct a final observation of the project and make recommendation for Final Payment on the Project.
- Construction testing is not included in this proposal. It is our understanding that the City of League City will contract directly with a testing firm to perform testing services.
- Provide one (1) set of reproducible record plans based on the red lined drawings provided to HR Green by the Contractor.

III. Not Included in Scope:

- Drainage Study
- Pavement Markings and Striping Plan
- Drainage Plans

HR Green appreciates the opportunity to submit this proposal and we look forward to working with you and your staff on this important project. Please call should you have any questions or comments.

Sincerely,

HR GREEN, INC.

A handwritten signature in black ink that reads 'Jesus Olivas'.

For Stephen A. Sparks, P.E.

Vice President

Attachments



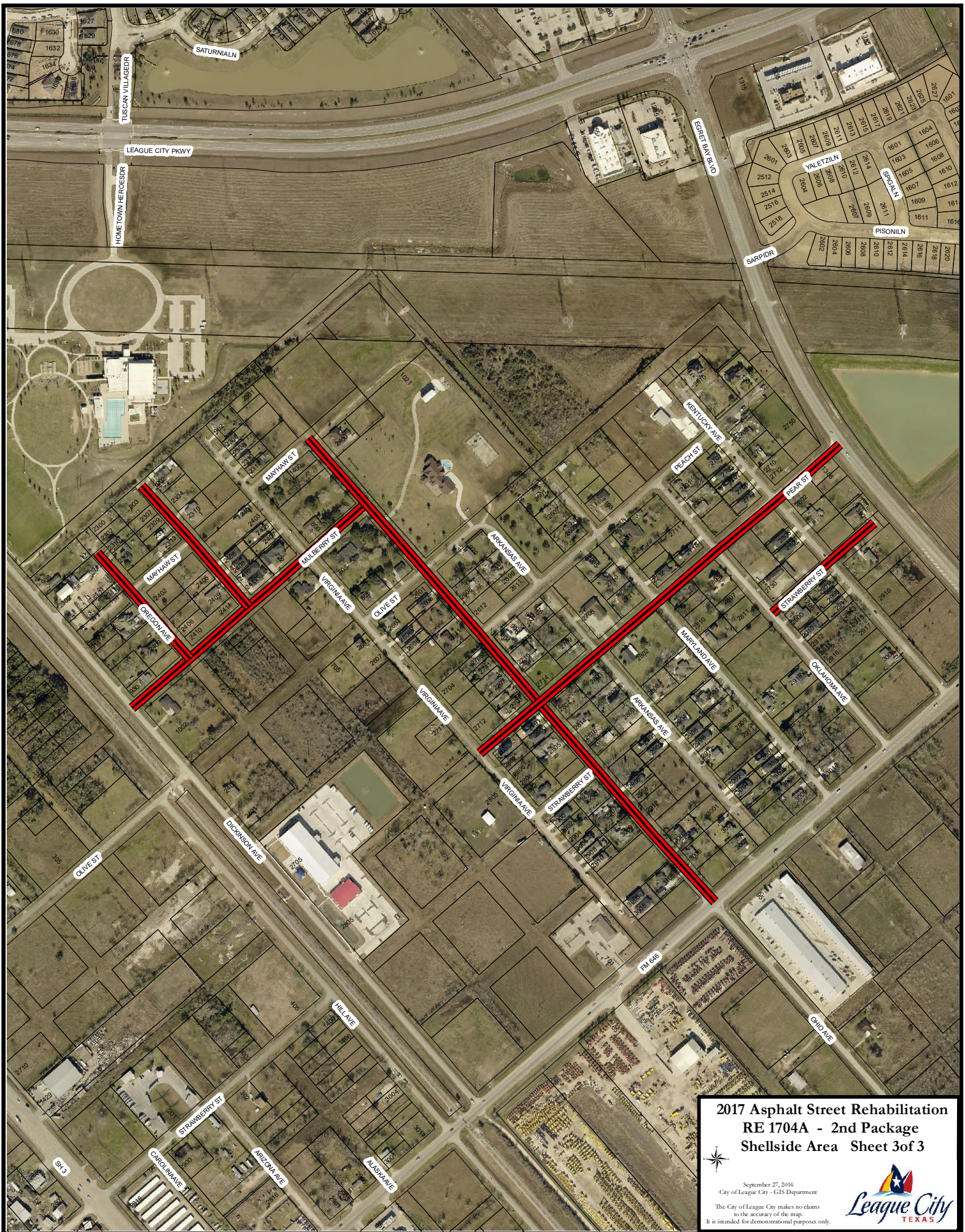
**2017 Asphalt Street Rehabilitation
RE 1704A - 1st Package
West of Railroad Sheet 1 of 3**



September 27, 2016
City of League City - GIS Department

The City of League City makes no claims
to the accuracy of the map.
It is intended for demonstrational purposes only.





**2017 Asphalt Street Rehabilitation
RE 1704A - 2nd Package
Shellside Area Sheet 3of 3**



September 27, 2016
City of League City - GIS Department

The City of League City makes no claims
to the accuracy of the map.
It is intended for demonstrational purposes only.



	Area	Street	Direction	Street Type	Linear Feet	Repair Type
1st Construction Bid Package	W of Railroad, E of Hwy 3, & N of Main St	Crystal from Houston to Perkins	E to W	Curb & Gutter	620	Mill & Overlay
		Velvet from Houston to Perkins	E to W	Curb & Gutter	619	Mill & Overlay
		Edgewood from Houston to Perkins	E to W	Curb & Gutter	605	Mill & Overlay
		Oaklawn from Houston to Perkins	E to W	Curb & Gutter	602	Mill & Overlay
		Avondale from Houston to Perkins	E to W	Curb & Gutter	611	Mill & Overlay
		Byron from SH 3 to Houston	E to W	Curb & Gutter	423	Mill & Overlay
		Marshall from SH 3 to Houston	E to W	Curb & Gutter	451	Mill & Overlay
		Coryell from SH 3 to Dallas	E to W	Curb & Gutter	151	Mill & Overlay
		Coryell from Dallas to Houston	E to W	Curb & Gutter	278	Mill & Overlay
		4th from SH 3 to Dallas	E to W	Curb & Gutter	151	Mill & Overlay
		4th from Dallas to Houston	E to W	Curb & Gutter	280	Mill & Overlay
		3rd from SH 3 to Houston	E to W	Curb & Gutter	156	Mill & Overlay
		3rd from Houston to Perkins	E to W	Open Ditch	268	Mill & Overlay
		2nd from SH 3 to Dallas	E to W	Curb & Gutter	156	Mill & Overlay
		2nd from Dallas to Houston	E to W	Curb & Gutter	277	Mill & Overlay
		Plymouth from Houston to Symms	E to W	Open Ditch	421	Mill & Overlay
2nd Construction Bid Package	Historic District	3rd from Michigan to Wisconsin	E to W	Open Ditch	1,839	Mill & Overlay
		4th from Railroad to Wisconsin	E to W	Open Ditch	2,126	Mill & Overlay
		Coryell from Illinois to Wisconsin	E to W	Open Ditch	337	Mill & Overlay
		Iowa from Satsuma to E Main	N to S	Open Ditch	1,450	Mill & Overlay
	Shellside	Mulberry from Dickinson to Ohio	E to W	Open Ditch	1,298	Mill & Overlay
		Ohio from Mayhaw to FM 646	N to S	Open Ditch	2,587	Mill & Overlay
		Pear from Virginia to Ohio	E to W	Open Ditch	313	Mill & Overlay
		Pear from Ohio to Oklahoma	E to W	Open Ditch	978	Mill & Overlay
		Pear from Oklahoma to Kentucky	E to W	Open Ditch	308	Mill & Overlay
		Pear from Kentucky to FM 270	E to W	Open Ditch	356	Mill & Overlay
		Oregon from N dead end to Mulberry	N to S	Open Ditch	690	Mill & Overlay
		Strawberry from Oklahoma to Kentucky	E to W	Open Ditch	312	Asphalt w/ Limestone Base
		Strawberry from Kentucky to E dead end	E to W	Open Ditch	254	Mill & Overlay
		Florida from N dead end to Mulberry	N to S	Open Ditch	691	Mill & Overlay

19,608

ATTACHMENT "A" - LEVEL OF EFFORT (HR GREEN, INC)
METHOD OF PAYMENT: LUMP SUM
PACKAGE #1: WEST OF RAILROAD VARIOUS STREETS ASPHALT OVERLAY

TASK DESCRIPTION	PRINCIPAL/ DEPARTMENT MANAGER	SENIOR PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	SENIOR ENGINEER TECHNICIAN	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
CONTRACT RATE PER HOUR (With 3.00 Mult.)	\$249.00	\$245.00	\$175.00	\$135.00	\$119.00	\$93.00	\$78.00	
PLANS PREPARATION								
ACQUIRE AND REVIEW EXISTING DATA			1	1	1			3
SITE VISITS			4	4	4	4		16
REVIEW SURVEY TOPO			2	8	8			18
REVIEW GEOTECHNICAL REPORT			2					2
TITLE SHEET: WITH PROJECT TITLE AND LIMITS OF PROJECT			1	1	2			4
GENERAL NOTES, SPECIFICATIONS AND PROVISIONS			1	1	2			4
SUMMARY OF QUANTITIES SHEET			4	8	2	4		18
EXISTING TYPICAL SECTIONS			1	2	2			5
PROPOSED TYPICAL SECTIONS (OPEN DITCH AND CURB AND GUTTER)			2	4	8			14
BASE REPAIR DETAIL SHEET			1	2	2	3		8
DRIVEWAY DETAILS SHEETS (2 submittals)			1	1	2	3		7
SURVEY CONTROL SHEETS: WITH BENCHMARKS AND PROJECT CONTROL			1	2	2	3		8
ROADWAY PLAN ONLY SHEETS (DB)(Scale: H 1"=20' Full, 1"=40' Half)(9 sheets-2 submittals)			15	20	60	80		175
TRAFFIC CONTROL STANDARD DETAILS: TxDOT TCP STANDARDS (11 SHEETS)			1	2	2	3		8
CONSTRUCTION PROJECT SIGN			1		2			3
COMPUTE & TABULATE REMOVAL QUANTITIES (2 submittals)			2	8	2			12
COMPUTE & TABULATE ROADWAY QUANTITIES (2 submittals)			2	8	2			12
COMPUTE MISCELLANEOUS QUANTITIES, ETC.			2	4	1			7
QA/QC PREPARATION \ COMMENT RESPONSES (2 submittals)		1	2	4	1			8
CONSTRUCTION COST ESTIMATE		1	4	8				13
HOURS SUB-TOTALS	0	2	50	88	105	100	0	345
CONTRACT RATE PER HOUR	\$249.00	\$245.00	\$175.00	\$135.00	\$119.00	\$93.00	\$78.00	
TOTAL LABOR COSTS	\$0.00	\$490.00	\$8,750.00	\$11,880.00	\$12,495.00	\$9,300.00	\$0.00	\$42,915.00
% DISTRIBUTION OF STAFFING	0.00%	0.58%	14.49%	25.51%	30.43%	28.99%	0.00%	
SUBTOTAL PLANS PREPARATION								\$42,915.00

TASK DESCRIPTION	PRINCIPAL/ DEPARTMENT MANAGER	SENIOR PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	SENIOR ENGINEER TECHNICIAN	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
BID PHASE SERVICES								
PREPARE PROJECT BID MANUAL AND DOCUMENTS			6				1	7
UPLOAD PLANS TO CIVCAST			2				1	3
ATTEND PRE-BID MEETING, ANSWER RFI's, PREPARE ADDENDUMS IF NECESSARY			4					4
EVALUATE BID TABULATIONS, VERIFY LOW BIDDER QUALIFICATIONS, AWARD LETTER			4					4
HOURS SUB-TOTALS	0	0	16	0	0	0	2	18
CONTRACT RATE PER HOUR	\$249.00	\$245.00	\$175.00	\$135.00	\$119.00	\$93.00	\$78.00	
TOTAL LABOR COSTS	\$0.00	\$0.00	\$2,800.00	\$0.00	\$0.00	\$0.00	\$156.00	\$2,956.00
% DISTRIBUTION OF STAFFING	0.00%	0.00%	88.89%	0.00%	0.00%	0.00%	11.11%	
SUBTOTAL BID PHASE SERVICES								\$2,956.00

ATTACHMENT "A" - LEVEL OF EFFORT (HR GREEN, INC)
METHOD OF PAYMENT: LUMP SUM
PACKAGE #1: WEST OF RAILROAD VARIOUS STREETS ASPHALT OVERLAY

TASK DESCRIPTION	PRINCIPAL/ DEPARTMENT MANAGER	SENIOR PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	SENIOR ENGINEER TECHNICIAN	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
CONSTRUCTION PHASE								0
ATTEND PRE-CONSTRUCTION MEETING			4					4
ATTEND CONSTRUCTION PROGRESS MEETINGS, AS NEEDED			6					6
REVIEW SHOP DRAWINGS AND SUBMITTALS			3					3
RESPOND TO RFI'S			3					3
ASSIST LEAGUE CITY CONSTRUCTION ENGINEER/INSPECTOR			3					3
ATTEND FINAL WALK THROUGH			3					3
PREPARE AS-BUILT DRAWINGS			1		8			9
HOURS SUB-TOTALS	0	0	23	0	8	0	0	31
CONTRACT RATE PER HOUR	\$249.00	\$245.00	\$175.00	\$135.00	\$119.00	\$93.00	\$78.00	
TOTAL LABOR COSTS	\$0.00	\$0.00	\$4,025.00	\$0.00	\$952.00	\$0.00	\$0.00	\$4,977.00
% DISTRIBUTION OF STAFFING	0.00%	0.00%	127.78%	0.00%	44.44%	0.00%	0.00%	
SUBTOTAL CONSTRUCTION PHASE SERVICES								\$4,977.00

TASK DESCRIPTION	PRINCIPAL/ DEPARTMENT MANAGER	SENIOR PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	SENIOR ENGINEER TECHNICIAN	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
PROJECT MANAGEMENT								
PROJECT MEETINGS WITH CITY OF LEAGUE CITY (3 MEETINGS)			6					6
COORDINATION WITH CITY OF LEAGUE CITY (CONF. CALLS/EMAILS)			2					2
COORDINATION WITH SURVEYOR			1					1
COORDINATION WITH GEOTECHNICAL			1					1
GENERAL PROJECT MANAGEMENT (PREPARE SUBMITTALS AND INVOICING)			1				6	7
HOURS SUB-TOTALS	0	0	11	0	0	0	6	17
CONTRACT RATE PER HOUR	\$330.00	\$245.00	\$175.00	\$135.00	\$119.00	\$93.00	\$78.00	
TOTAL LABOR COSTS	\$0.00	\$0.00	\$1,925.00	\$0.00	\$0.00	\$0.00	\$468.00	\$2,393.00
% DISTRIBUTION OF STAFFING	0.00%	0.00%	64.71%	0.00%	0.00%	0.00%	35.29%	
SUBTOTAL (FC 164)								\$2,393.00

TASK DESCRIPTION	SUB CONSULTANT FEE	10% MARK-UP						TOTAL LABOR HRS. & COSTS
SUBCONSULTANT SERVICES								
SERVEY (KUO) WITH 10% MARK UP	\$23,260.00	10%						\$25,586.00
GEOTECHNICAL (TERRA) WITH 10 % MARK UP	\$6,102.50	10%						\$6,712.75
TOTAL LABOR COSTS								\$32,298.75
SUBTOTAL SUBCONSULTANTS								\$32,298.75

ATTACHMENT "A" - LEVEL OF EFFORT (HR GREEN, INC)
METHOD OF PAYMENT: LUMP SUM
PACKAGE #1: WEST OF RAILROAD VARIOUS STREETS ASPHALT OVERLAY

OTHER DIRECT EXPENSES	UNITS	COST/UNIT	QUANTITY					
Mileage (# of miles) (current state rate)	MI	\$0.540	200					\$108.00
CIVCAST	EA	\$100.00	1					\$100.00
Courier Services (Deliveries)	EA	\$30.00	0					\$0.00
Photocopies B/W (8.5 X 11) (Bid Book: 5 sets x 300 sheets)	EA	\$0.12	1500					\$180.00
Photocopies B/W (11 X 17) (Plans: 2 Submittals x 70)	EA	\$0.15	140					\$21.00
Photocopies B/W (22 X 34) (Plans: 2 Submittals x 70)	EA	\$0.54	140					\$75.60
Photocopies Color (8.5 X 11)	EA	\$0.80	0					\$0.00
Photocopies Color (11 X 17)	EA	\$1.50	0					\$0.00
Blackline Prints (11" X 17")	EA	\$1.10	0					\$0.00
Plots (Color on Bond)	SF	\$4.00	0					\$0.00
TOTAL OTHER DIRECT EXPENSES								\$484.60

SUMMARY	
TOTAL LABOR COSTS FOR PLANS PREPARATION	\$42,915.00
TOTAL LABOR COSTS FOR BID-PHASE SERVICES	\$2,956.00
TOTAL LABOR COSTS FOR CONSTRUCTION-PHASE SERVICES	\$4,977.00
TOTAL LABOR COSTS FOR PROJECT MANAGEMENT	\$2,393.00
TOTAL LABOR COSTS FOR SUBCONSULTANTS	\$32,298.75
OTHER DIRECT EXPENSES FOR HR GREEN, INC.	\$484.60
GRAND TOTAL	\$86,024.35

ATTACHMENT "A" - LEVEL OF EFFORT (HR GREEN, INC)
METHOD OF PAYMENT: LUMP SUM
PACKAGE #2: SHELLSIDE AND HISTORIC DISTRICT VARIOUS STREETS ASPHALT OVERLAY

TASK DESCRIPTION	PRINCIPAL/ DEPARTMENT MANAGER	SENIOR PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	SENIOR ENGINEER TECHNICIAN	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
CONTRACT RATE PER HOUR (With 3.00 Mult.)	\$249.00	\$245.00	\$175.00	\$135.00	\$119.00	\$93.00	\$78.00	
PLANS PREPARATION								
AQUIRE AND REVIEW EXISTING DATA			1	1	1			3
SITE VISITS			4	4	4	4		16
REVIEW SURVEY TOPO			2	8	8			18
REVIEW GEOTECHNICAL REPORT			2					2
TITLE SHEET: WITH PROJECT TITLE AND LIMITS OF PROJECT			1	1	2			4
GENERAL NOTES, SPECIFICATIONS AND PROVISIONS			1	1	2			4
SUMMARY OF QUANTITIES SHEET			4	8	2	4		18
EXISTING TYPICAL SECTIONS			1	2	2			5
PROPOSED TYPICAL SECTIONS (OPEN DITCH AND CURB AND GUTTER)			2	4	8			14
BASE REPAIR DETAIL SHEET			1	2	2	3		8
DRIVEWAY DETAILS SHEETS (2 submittals)			1	1	2	3		7
SURVEY CONTROL SHEETS: WITH BENCHMARKS AND PROJECT CONTROL			1	2	2	3		8
ROADWAY PLAN ONLY SHEETS (DB)(Scale: H 1"=20' Full, 1"=40' Half)(11 sheets-2 submittals)			16	24	70	88		198
TRAFFIC CONTROL STANDARD DETAILS: TxDOT TCP STANDARDS (11 SHEETS)			1	2	2	3		8
CONSTRUCTION PROJECT SIGN			1		2			3
COMPUTE & TABULATE REMOVAL QUANTITIES (2 submittals)			4	16	2			22
COMPUTE & TABULATE ROADWAY QUANTITIES (2 submittals)			4	16	2			22
COMPUTE MISCELLANEOUS QUANTITIES, ETC.			4	16	1			21
QA/QC PREPARATION \ COMMENT RESPONSES (2 submittals)		1	4	16	1			22
CONSTRUCTION COST ESTIMATE		1	4	8				13
HOURS SUB-TOTALS	0	2	59	132	115	108	0	416
CONTRACT RATE PER HOUR	\$249.00	\$245.00	\$175.00	\$135.00	\$119.00	\$93.00	\$78.00	
TOTAL LABOR COSTS	\$0.00	\$490.00	\$10,325.00	\$17,820.00	\$13,685.00	\$10,044.00	\$0.00	\$52,364.00
% DISTRIBUTION OF STAFFING	0.00%	0.48%	14.18%	31.73%	27.64%	25.96%	0.00%	
SUBTOTAL PLANS PREPARATION								\$52,364.00

TASK DESCRIPTION	PRINCIPAL/ DEPARTMENT MANAGER	SENIOR PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	SENIOR ENGINEER TECHNICIAN	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
BID PHASE SERVICES								
PREPARE PROJECT BID MANUAL AND DOCUMENTS			6				1	7
UPLOAD PLANS TO CIVCAST			2				1	3
ATTEND PRE-BID MEETING, ANSWER RFI's, PREPARE ADDENDUMS IF NECESSARY			4					4
EVALUATE BID TABULATIONS, VERIFY LOW BIDDER QUALIFICATIONS, AWARD LETTER			4					4
HOURS SUB-TOTALS	0	0	16	0	0	0	2	18
CONTRACT RATE PER HOUR	\$249.00	\$245.00	\$175.00	\$135.00	\$119.00	\$93.00	\$78.00	
TOTAL LABOR COSTS	\$0.00	\$0.00	\$2,800.00	\$0.00	\$0.00	\$0.00	\$156.00	\$2,956.00
% DISTRIBUTION OF STAFFING	0.00%	0.00%	88.89%	0.00%	0.00%	0.00%	11.11%	
SUBTOTAL BID PHASE SERVICES								\$2,956.00

TASK DESCRIPTION	PRINCIPAL/ DEPARTMENT MANAGER	SENIOR PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	SENIOR ENGINEER TECHNICIAN	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
CONSTRUCTION PHASE								0
ATTEND PRE-CONSTRUCTION MEETING			4					4
ATTEND CONSTRUCTION PROGRESS MEETINGS, AS NEEDED			6					6
REVIEW SHOP DRAWINGS AND SUBMITTALS			3					3
RESPOND TO RFIS			3					3
ASSIST LEAGUE CITY CONSTRUCTION ENGINEER/INSPECTOR			3					3
ATTEND FINAL WALK THROUGH			3					3
PREPARE AS-BUILT DRAWINGS			1		8			9
HOURS SUB-TOTALS	0	0	23	0	8	0	0	31
CONTRACT RATE PER HOUR	\$249.00	\$245.00	\$175.00	\$135.00	\$119.00	\$93.00	\$78.00	
TOTAL LABOR COSTS	\$0.00	\$0.00	\$4,025.00	\$0.00	\$952.00	\$0.00	\$0.00	\$4,977.00
% DISTRIBUTION OF STAFFING	0.00%	0.00%	127.78%	0.00%	44.44%	0.00%	0.00%	
SUBTOTAL CONSTRUCTION PHASE SERVICES								\$4,977.00

TASK DESCRIPTION	PRINCIPAL/ DEPARTMENT MANAGER	SENIOR PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	SENIOR ENGINEER TECHNICIAN	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
PROJECT MANAGEMENT								
PROJECT MEETINGS WITH CITY OF LEAGUE CITY (3 MEETINGS)			6					6
COORDINATION WITH CITY OF LEAGUE CITY (CONF. CALLS/EMAILS)			2					2
COORDINATION WITH SURVEYOR			1					1
COORDINATION WITH GEOTECHNICAL			1					1
GENERAL PROJECT MANAGEMENT (PREPARE SUBMITTALS AND INVOICING)			1				6	7
HOURS SUB-TOTALS	0	0	11	0	0	0	6	17
CONTRACT RATE PER HOUR	\$330.00	\$245.00	\$175.00	\$135.00	\$119.00	\$93.00	\$78.00	
TOTAL LABOR COSTS	\$0.00	\$0.00	\$1,925.00	\$0.00	\$0.00	\$0.00	\$468.00	\$2,393.00
% DISTRIBUTION OF STAFFING	0.00%	0.00%	64.71%	0.00%	0.00%	0.00%	35.29%	
SUBTOTAL (FC 164)								\$2,393.00

TASK DESCRIPTION	SUB CONSULTANT FEE	10% MARK-UP						TOTAL LABOR HRS. & COSTS
SUBCONSULTANT SERVICES								
SERVEY (KUO) WITH 10% MARK UP	\$44,000.00	10%						\$48,400.00
GEOTECHNICAL (TERRA) WITH 10 % MARK UP	\$6,102.50	10%						\$6,712.75
TOTAL LABOR COSTS								\$55,112.75
SUBTOTAL SUBCONSULTANTS								\$55,112.75

OTHER DIRECT EXPENSES	UNITS	COST/UNIT	QUANTITY					
Mileage (# of miles) (current state rate)	MI	\$0.540	200					\$108.00
CIVCAST	EA	\$100.00	1					\$100.00
Courier Services (Deliveries)	EA	\$30.00	0					\$0.00
Photocopies B/W (8.5 X 11) (Bid Book: 5 sets x 300 sheets)	EA	\$0.12	1500					\$180.00
Photocopies B/W (11 X 17) (Plans: 2 Submittals x 70)	EA	\$0.15	140					\$21.00
Photocopies B/W (22 X 34) (Plans: 2 Submittals x 70)	EA	\$0.54	140					\$75.60
Photocopies Color (8.5 X 11)	EA	\$0.80	0					\$0.00
Photocopies Color (11 X 17)	EA	\$1.50	0					\$0.00
Blackline Prints (11" X 17")	EA	\$1.10	0					\$0.00
Plots (Color on Bond)	SF	\$4.00	0					\$0.00
TOTAL OTHER DIRECT EXPENSES								\$484.60

SUMMARY	
TOTAL LABOR COSTS FOR PLANS PREPARATION	\$52,364.00
TOTAL LABOR COSTS FOR BID-PHASE SERVICES	\$2,956.00
TOTAL LABOR COSTS FOR CONSTRUCTION-PHASE SERVICES	\$4,977.00
TOTAL LABOR COSTS FOR CPROJECT MANAGEMENT	\$2,393.00
TOTAL LABOR COSTS FOR SUBCONSULTANTS	\$55,112.75
OTHER DIRECT EXPENSES FOR HR GREEN, INC.	\$484.60
GRAND TOTAL	\$118,287.35

Preliminary Engineer's Opinion of Probable Construction Costs					
For City of League City - Various Streets Asphalt Overlay - Package #1					
Prepared By: HR Green, Inc.			Date Prepared: October 3, 2016		
A. Site Preparation Items			PACKAGE #1		
Item	Description	Quantity	Unit	Unit Price	Total Price
1	Clearing and Grubbing, Complete in Place, In accordance with drawings and Specifications	60.7	STA	\$200.00	\$12,140.00
2	Milling Existing Pavement, In accordance with drawings and Specifications	20,230	SY	\$3.25	\$65,747.50
Subtotal for Site Preparation					\$77,887.50
B. Pavement Items					
Item	Description	Quantity	Unit	Unit Price	Total Price
3	1 1/2 Inch Asphaltic Concrete Pavement (Surface), Complete in Place, In accordance with drawings and Specifications	1,669.0	Tons	\$90.00	\$150,210.00
4	1 1/2Inch Asphaltic Concrete Pavement (Level-Up), Complete in Place, In accordance with drawings and Specifications	1,669.0	Tons	\$95.00	\$158,555.00
5	Prime Coat (MC-30), Complete in Place, In accordance with drawings and Specifications	5,058	Gal	\$4.00	\$20,232.00
6	Tack Coat (MC-30), Complete in Place, In accordance with drawings and Specifications	2,023	Gal	\$3.00	\$6,069.00
7	Base Repair (At Select Areas)(10" Black Base), Complete in Place, In accordance with drawings and Specifications	2225.0	Tons	\$95.00	\$211,375.00
8	Backfill Material, Reclaimed Asphalt Pavement (RAP) for Shoulder Dressing, In accordance with drawing and specifications	60.7	STA	\$250.00	\$15,172.50
Subtotal for Pavement Items					\$561,613.50
C. Construction Traffic Control Items					
Item	Description	Quantity	Unit	Unit Price	Total Price
9	Temporary Traffic Handling and Control & Flagmen	3	Mo.	\$5,000.00	\$15,000.00
Subtotal for Construction Traffic Control Items					\$15,000.00
D. Signing and Pavement Marking Items					
Item	Description	Quantity	Unit	Unit Price	Total Price
10	Thermo Pvmnt Marking (24-inch)(White)(Solid), Complete in Place, In accordance with drawings and Specifications	0	LF	\$10.00	\$0.00
11	Thermo Pvmnt Marking (4-inch)(White)(Solid), Complete in Place, In accordance with drawings and Specifications	0	LF	\$0.65	\$0.00
12	Thermo Pvmnt Marking (4-inch)(Yellow)(Solid), Complete in Place, In accordance with drawings and Specifications	0	LF	\$0.55	\$0.00
13	Reflective Yellow Pavement Markers (4-inch)(2-Way)(Type II A-A), Complete in Place, In accordance with drawings and Specifications	0	Ea.	\$5.50	\$0.00
Subtotal for Sign and Pavement Marking Items					\$0.00
E. Supplemental Items					
Item	Description	Quantity	Unit	Unit Price	Total Price
14	Adjust Exist Manhole, In accordance with drawings and Specifications	15	Ea.	\$1,000.00	\$15,000.00
20	Adjust Exist Water Valve, In accordance with drawings and Specifications	15	Ea.	\$500.00	\$7,500.00
Subtotal for Supplemental Items					\$22,500.00
A. Site Preparation Items					\$77,887.50
B. Pavement Items					\$561,613.50
C. Construction Traffic Control Items					\$15,000.00
D. Signing and Pavement Marking Items					\$0.00
E. Supplemental Items					\$22,500.00
Sub Total					\$677,001.00
5% Contingency					\$33,850.05
Grand Total					\$710,851.05

Preliminary Engineer's Opinion of Probable Construction Costs					
For City of League City - Various Streets Asphalt Overlay - Package #2					
Prepared By: HR Green, Inc. Date Prepared: October 3, 2016					
A. Site Preparation Items		PACKAGE #2			
Item	Description	Quantity	Unit	Unit Price	Total Price
1	Clearing and Grubbing, Complete in Place, In accordance with drawings and Specifications	135.39	STA	\$200.00	\$27,078.00
2	Milling Existing Pavement, In accordance with drawings and Specifications	45,130	SY	\$3.25	\$146,672.50
Subtotal for Site Preparation					\$173,750.50
B. Pavement Items					
Item	Description	Quantity	Unit	Unit Price	Total Price
3	1 1/2 Inch Asphaltic Concrete Pavement (Surface), Complete in Place, In accordance with drawings and Specifications	3,723.0	Tons	\$90.00	\$335,070.00
4	1 1/2Inch Asphaltic Concrete Pavement (Level-Up), Complete in Place, In accordance with drawings and Specifications	3,723.0	Tons	\$95.00	\$353,685.00
5	Prime Coat (MC-30), Complete in Place, In accordance with drawings and Specifications	11,283	Gal	\$4.00	\$45,132.00
6	Tack Coat (MC-30), Complete in Place, In accordance with drawings and Specifications	4,513	Gal	\$3.00	\$13,539.00
7	Base Repair (At Select Areas)(10" Black Base), Complete in Place, In accordance with drawings and Specifications	4964.0	Tons	\$95.00	\$471,580.00
8	Backfill Material, Reclaimed Asphalt Pavement (RAP) for Shoulder Dressing, In accordance with drawing and specifications	135.39	STA	\$250.00	\$33,847.50
Subtotal for Pavement Items					\$1,252,853.50
C. Construction Traffic Control Items					
Item	Description	Quantity	Unit	Unit Price	Total Price
9	Temporary Traffic Handling and Control & Flagmen	4	Mo.	\$5,000.00	\$20,000.00
Subtotal for Construction Traffic Control Items					\$20,000.00
D. Signing and Pavement Marking Items					
Item	Description	Quantity	Unit	Unit Price	Total Price
10	Thermo Pvmt Marking (24-inch)(White)(Solid), Complete in Place, In accordance with drawings and Specifications	0	LF	\$10.00	\$0.00
11	Thermo Pvmt Marking (4-inch)(White)(Solid), Complete in Place, In accordance with drawings and Specifications	0	LF	\$0.65	\$0.00
12	Thermo Pvmt Marking (4-inch)(Yellow)(Solid), Complete in Place, In accordance with drawings and Specifications	0	LF	\$0.55	\$0.00
13	Reflective Yellow Pavement Markers (4-inch)(2-Way)(Type II A-A), Complete in Place, In accordance with drawings and Specifications	0	Ea.	\$5.50	\$0.00
Subtotal for Sign and Pavement Marking Items					\$0.00
E. Supplemental Items					
Item	Description	Quantity	Unit	Unit Price	Total Price
14	Adjust Exist Manhole, In accordance with drawings and Specifications	20	Ea.	\$1,000.00	\$20,000.00
20	Adjust Exist Water Valve, In accordance with drawings and Specifications	20	Ea.	\$500.00	\$10,000.00
Subtotal for Supplemental Items					\$30,000.00
A. Site Preparation Items					\$173,750.50
B. Pavement Items					\$1,252,853.50
C. Construction Traffic Control Items					\$20,000.00
D. Signing and Pavement Marking Items					\$0.00
E. Supplemental Items					\$30,000.00
Sub Total					\$1,476,604.00
5% Contingency					\$73,830.20
Grand Total					\$1,550,434.20

October 3, 2016

Jesus M. Olivas, P.E.
Project Manager
HR Green, Inc.
11011 Richmond Ave., Suite 375
Houston, TX 77042

Re: 2017 Asphalt Street Rehabilitation, City of League City
Re 1704A – 1st Package
Topographic Surveying, Basemap Plan & Construction Staking

Dear Mr. Olivas:

Kuo & Associates, Inc. is pleased to submit this proposal to perform the following: topographic surveying, preparation of basemap services for the above referenced project.

Item	Description
Item 1	Topographic Surveying
Item 2	Basemap Topo Plan
Item 3	Survey Control Map
Item 4	Establishing Design Center Line

The scope of work and fee will be as follows:

SCOPE OF WORK

Survey will be done along the streets as shown in the attached exhibit and table. Estimated length of survey is approximately 6,725 feet. To our understanding, survey to exclude any detail survey on the intersections on both end of the limit for each street

Survey shall conform to requirements of City of League City and Category 2 and 6 surveys TSPS Manual of Practice as applicable. In general, the scope for work will be including the following items and tasks:

Item 1: Topographic Survey:

- Horizontal and vertical controls will be established and tied to the Texas State Plane Coordinate System, South Central Zone NAD 83 and datum NAVD 88. Survey will be tied to the City of League City monument (if available) or nearby NGS monument.
- Cross sections will be surveyed at more or less 300' c-c including cross sections at each intersection along the project route.
- All planimetric features will be surveyed along the road right-of-way for a width from ROW to ROW. The survey will be extended on all sides of street at least up to ER, unless otherwise warranted for your design. Detail topo survey on the intersecting streets at each end of limited is excluded from the scope
- All visible existing utilities (i.e. manholes, culverts, power poles, etc.) will be located
- Attempt will be made to recover and verify sufficient monumentation along the existing roadway to establish estimated right-of-way lines for topographic surveying scope. Task of establishing estimated ROW may involve some limited abstracting and deed research, however, detail boundary category survey is excluded in determination.
- Signed and sealed field books containing notes as well as ASCII files of point numbers, coordinates, and descriptions will be provided.

Item 1: Basemap Plan

- Prepare a basemap plan with all topo features, elevations and estimated ROW. All deliverables will be as long strip in the AutoCAD format with side text on the top and bottom boundary of the drawing. All texts within the drawing will be "Leroy 80".

Item 3: Survey Control Map

- A survey control map will be prepared showing swing ties to traverse and baseline points as well as TBM's. The survey control map will be signed and sealed by a Registered Professional Land Surveyor in charge of the project.

Item 4: Establishing Design Center Line

- Recovery of existing controls and reestablish as necessary
- Stake/set the design center line in the field for construction work

To our understanding the following are excluded from the scope of this proposal

- Boundary level survey for determining of right of way of the street
- Any kind of SUE survey
- Inverting any manholes/inlets
- Utility research and utility plan
- Profile for ground and utilities

FEE AND SCHEDULE:

The fee for the above-described work is estimated to be lump sum amount of **\$23,260.00** as shown itemized in the table below:

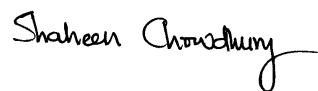
Item	Description	Fee
Item 1	Topographic Surveying	\$15,660.00
Item 2	Basemap Topo Plan	\$3,520.00
Item 3	Survey Control Map	\$2,060.00
Item 4	Establishing Design Center Line	\$2,020.00
Total		\$23,260.00

* See detail breakdown in the attached page

We estimate to complete the above work in 30 calendar days upon your authorization to proceed.

We appreciate this opportunity to submit this proposal. If you are in agreement with this proposal, please sign as indicated below. If you need further information, please do not hesitate to contact me.

Sincerely,



Shaheen Chowdhury, P.E., R.P.L.S.
President

Street									6725 LF
Item 1: Level of Efforts for Topographic Survey									
Survey Tasks	sub tasks	Principal \$180.00	RPLS \$130.00	SIT \$75.00	CADD \$75.00	Crew \$145.00	Hrs	Cost	Total
Survey Controls	Setting controls					2	2	\$290.00	\$2,760.00
	Horizontal control work			1		4	5	\$655.00	
	Vertical control work			1		12	13	\$1,815.00	
Topo Survey	Limited Abstracting for ROW							\$500.00	\$12,900.00
	ROW estimate for scope of topo survey		4	8			12	\$1,120.00	
	Surveying roadway & topo features					72	72	\$10,440.00	
	QC/QA		2			4	6	\$840.00	
Project Management	Proj Management							\$0.00	\$0.00
Total									\$15,660.00
Cost per LF									\$2.33

Item 2: Level of Efforts for Basemap Plan									
Tasks	sub tasks	Principal \$180.00	RPLS \$130.00	SIT \$75.00	CADD \$75.00	Crew \$145.00	Hrs	Cost	Total
Plan	Topo Plan			4	36		40	\$3,000.00	\$3,520.00
	QC/QA		4				4	\$520.00	

Item 3: Level of Efforts for Survey Control Maps									
Survey Tasks	sub tasks	Principal \$180.00	RPLS \$130.00	SIT \$75.00	CADD \$75.00	Crew \$145.00	Hrs	Cost	Total
Survey Control Map	Preparing Survey control map		2	8	16		26	\$2,060.00	\$2,060.00

Item 4: Level of Efforts for Establishing Design Center Line									
Survey Tasks	sub tasks	Principal \$180.00	RPLS \$130.00	SIT \$75.00	CADD \$75.00	Crew \$145.00	Hrs	Cost	Total
Establish design center line	Establish design center line		1	2		12	15	\$2,020.00	\$2,020.00

October 3, 2016

Jesus M. Olivas, P.E.
Project Manager
HR Green, Inc.
11011 Richmond Ave., Suite 375
Houston, TX 77042

Re: 2017 Asphalt Street Rehabilitation, City of League City
Re 1704A – [2nd Package](#)
Topographic Surveying, Basemap Plan & Construction Staking

Dear Mr. Olivas:

Kuo & Associates, Inc. is pleased to submit this proposal to perform the following: topographic surveying, preparation of basemap services for the above referenced project.

Item	Description
Item 1	Topographic Surveying
Item 2	Basemap Topo Plan
Item 3	Survey Control Map
Item 4	Establishing Design Center Line

The scope of work and fee will be as follows:

SCOPE OF WORK

Survey will be done along the streets as shown in the attached exhibits and table. Estimated length of survey is approximately 13,800 feet. To our understanding, survey to exclude any detail survey on the intersections on both end of the limit for each street

Survey shall conform to requirements of City of League City and Category 2 and 6 surveys TSPS Manual of Practice as applicable. In general, the scope for work will be including the following items and tasks:

Item 1: Topographic Survey:

- Horizontal and vertical controls will be established and tied to the Texas State Plane Coordinate System, South Central Zone NAD 83 and datum NAVD 88. Survey will be tied to the City of League City monument (if available) or nearby NGS monument.
- Cross sections will be surveyed at more or less 300' c-c including cross sections at each intersection along the project route.
- All planimetric features will be surveyed along the road right-of-way for a width from ROW to ROW. The survey will be extended on all sides of street at least up to ER, unless otherwise warranted for your design. Detail topo survey on the intersecting streets at each end of limited is excluded from the scope
- All visible existing utilities (i.e. manholes, culverts, power poles, etc.) will be located
- Attempt will be made to recover and verify sufficient monumentation along the existing roadway to establish estimated right-of-way lines for topographic surveying scope. Task of establishing estimated ROW may involve some limited abstracting and deed research, however, detail boundary category survey is excluded in determination.
- Signed and sealed field books containing notes as well as ASCII files of point numbers, coordinates, and descriptions will be provided.

Item 1: Basemap Plan

- Prepare a basemap plan with all topo features, elevations and estimated ROW. All deliverables will be as long strip in the AutoCAD format with side text on the top and bottom boundary of the drawing. All texts within the drawing will be "Leroy 80".

Item 3: Survey Control Map

- A survey control map will be prepared showing swing ties to traverse and baseline points as well as TBM's. The survey control map will be signed and sealed by a Registered Professional Land Surveyor in charge of the project.

Item 4: Establishing Design Center Line

- Recovery of existing controls and reestablish as necessary
- Stake/set the design center line in the field for construction work

To our understanding the following are excluded from the scope of this proposal

- Boundary level survey for determining of right of way of the street
- Any kind of SUE survey
- Inverting any manholes/inlets
- Utility research and utility plan
- Profile for ground and utilities

FEE AND SCHEDULE:

The fee for the above-described work is estimated to be lump sum amount of **\$44,000.00** as shown itemized in the table below:

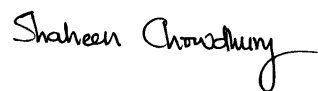
Item	Description	Fee
Item 1	Topographic Surveying	\$29,920.00
Item 2	Basemap Topo Plan	\$6,820.00
Item 3	Survey Control Map	\$3,220.00
Item 4	Establishing Design Center Line	\$4,040.00
Total		\$44,000.00

* See detail breakdown in the attached page

We estimate to complete the above work in 60 calendar days upon your authorization to proceed.

We appreciate this opportunity to submit this proposal. If you are in agreement with this proposal, please sign as indicated below. If you need further information, please do not hesitate to contact me.

Sincerely,



Shaheen Chowdhury, P.E., R.P.L.S.
President

Street								13800	LF
Item 1: Level of Efforts for Topographic Survey									
Survey Tasks	sub tasks	Principal \$180.00	RPLS \$130.00	SIT \$75.00	CADD \$75.00	Crew \$145.00	Hrs	Cost	Total
Survey Controls	Setting controls					4	4	\$580.00	\$4,360.00
	Horizontal control work			2		8	10	\$1,310.00	
	Vertical control work			2		16	18	\$2,470.00	
Topo Survey	Limited Abstracting for ROW							\$700.00	\$25,560.00
	ROW estimate for scope of topo survey		4	16			20	\$1,720.00	
	Surveying roadway & topo features					148	148	\$21,460.00	
	QC/QA		4			8	12	\$1,680.00	
Project Management	Proj Management							\$0.00	\$0.00
Total									\$29,920.00
								Cost per LF	\$2.17

Item 2: Level of Efforts for Basemap Plan									
Tasks	sub tasks	Principal \$180.00	RPLS \$130.00	SIT \$75.00	CADD \$75.00	Crew \$145.00	Hrs	Cost	Total
Plan	Topo Plan			8	76		84	\$6,300.00	\$6,820.00
	QC/QA		4				4	\$520.00	

Item 3: Level of Efforts for Survey Control Maps									
Survey Tasks	sub tasks	Principal \$180.00	RPLS \$130.00	SIT \$75.00	CADD \$75.00	Crew \$145.00	Hrs	Cost	Total
Survey Control Map	Preparing Survey control map		4	12	24		40	\$3,220.00	\$3,220.00

Item 4: Level of Efforts for Establishing Design Center Line									
Survey Tasks	sub tasks	Principal \$180.00	RPLS \$130.00	SIT \$75.00	CADD \$75.00	Crew \$145.00	Hrs	Cost	Total
Establish design center line	Establish design center line		2	4		24	30	\$4,040.00	\$4,040.00



October 4, 2016

HR Green, Inc.
11011 Richmond Avenue, Suite 375
Houston, Texas 77042

Attn: Mr. Jesus M. Olivas, P.E.
P: 713-338-8004
E: jolivas@hrgreen.com

Re: Cost Estimate for Geotechnical Engineering Services
2017 Asphalt Street Rehabilitation
League City, Texas
Terracon Proposal No. P91165097

Dear Mr. Olivas:

Terracon Consultants, Inc. (Terracon) understands we have been selected based on qualifications to provide geotechnical engineering services for the above referenced project. This letter outlines our understanding of the scope of services to be performed by Terracon for this project and provides an estimate of the cost of our services.

1.0 PROJECT INFORMATION

Item	Description
Project location	The project consists of 22 streets in League City, Texas.
Existing conditions	The 22 streets are two-lane asphaltic concrete roadways with roadside ditches. We understand these streets exhibit signs of distress.
Proposed improvements	<ul style="list-style-type: none">■ Approximately 19,608 linear feet of pavement repair. We understand that the pavement repair is planned to consist of milling the existing asphaltic concrete wearing surface and then overlying the existing base material with a new hot mix asphaltic concrete (HMAC) surface course. We understand no utility improvements are planned.■ Base repair in some distressed areas. We understand the base repair is planned to consist of 10 inches of HMAC black base in addition to asphaltic concrete overlay.

If our understanding of the project is not accurate, please let us know so that we may revise our scope of services and cost estimates, if necessary.



2.0 SCOPE OF SERVICES

A brief summary of the services to be provided by Terracon is summarized in the following paragraphs.

2.1 Field Program

The field program is planned to consist of drilling 34 test borings to a depth of 5 feet. The boring schedule is planned to be as follows:

Roadway Description	Length (feet)	No. of Borings	Boring Depth (feet)	Drilling Footage (feet)
Crystal Street: from Houston Avenue to Perkins Avenue	620	1	5	5
Velvet Street: from Houston Avenue to Perkins Avenue	619	1	5	5
Edgewood Street: from Houston Avenue to Perkins Avenue	605	1	5	5
Oaklawn Street: from Houston Avenue to Perkins Avenue	602	1	5	5
Avondale Street: from Houston Avenue to Perkins Avenue	611	1	5	5
Byron Avenue: from State Highway 3 to Houston Avenue	423	1	5	5
Marshall Avenue: from State Highway 3 to Houston Avenue	451	1	5	5
Coryell Street: from State Highway 3 to Houston Avenue	429	1	5	5
4th Street: from State Highway 3 to Houston Avenue	431	1	5	5
3rd Street: from State Highway 3 to Perkins Avenue	1,020	2	5	10
2nd Street: from State Highway 3 to Houston Avenue	433	1	5	5
Plymouth Street: from Houston Avenue to Simms Street	421	1	5	5
3rd Street: from Michigan Avenue to Wisconsin Avenue	1,839	3	5	15
4th Street: from Railroad Avenue to Wisconsin Avenue	2,126	3	5	15
Coryell Street: from Illinois Avenue to Wisconsin Avenue	337	1	5	5
Iowa Avenue: from Satsuma Street to East Main Street	1,450	3	5	15
Mulberry Street: from Dickinson Avenue to Ohio Street	1,298	2	5	10
Ohio Street: from Mayhaw Street to FM 646	2,587	3	5	15
Pear: from Virginia Avenue Egret Bay Boulevard	1,955	3	5	15
Oregon Avenue: from its Dead-End to Mulberry Street	690	1	5	5
Strawberry Street: from Oklahoma Avenue to its dead-end	566	1	5	5
Florida Avenue: from its dead-end to Mulberry Street	691	1	5	5
Total Drilled Footage				170

The borings will be located in the field using hand measuring equipment and estimating angles and distances from the existing site features as shown on the site plans provided to us. Therefore, the layout of the borings will be approximate. Boring depths will be measured from existing grade.

The drilling services for this project will be performed by a drilling subcontractor or Terracon's in-house drillers. During drilling, we plan to measure the approximate thicknesses of the pavement components at each boring location. Soil samples will generally be collected utilizing either open-tube samplers or the Standard Penetration Test. Once the samples have been collected and classified in the field, they will be properly prepared and placed in appropriate sample containers for transport to our laboratory. Upon completion of drilling, the borings will be backfilled with soil cuttings and patched at the surface with asphaltic concrete patch product.

This scope of services assumes that the site can be accessed with standard truck-mounted drilling equipment during normal business hours and does not include services associated with, surveying of boring locations, obtaining permits for drilling within the limits of existing pavements, or location of underground utilities. Since the borings will be located on existing pavements we anticipate that some form of traffic control will be required during our field activities. We understand the City of League City will provide traffic control during our field activities.

Terracon will notify Texas811, a free utility locating service, to help locate public utilities within dedicated public utility easements. Location of private utilities on the property is not part of the Texas811 call service or Terracon scope. All private utilities should be marked by others prior to the start of drilling. If underground utilities are known to exist within the site, Terracon should be notified so that we may review utility plans to help avoid the existing lines. Terracon cannot be responsible for damage to unmarked and/or unlocated utilities for which we are unaware or that are improperly located.

2.2 Environmental Considerations

In an effort to reduce the potential for cross-contamination of subsurface media and exposure of site workers to contaminants that might be present at the site, Terracon requests that prior to mobilization to the site, the client inform Terracon of known or suspected environmental conditions at or adjacent to the site. If adverse environmental conditions are present, additional expenses may be necessary to properly protect site workers and abandon borehole that penetrate affected groundwater-bearing units.

If Terracon is not informed of potentially adverse environmental conditions prior to the geotechnical services, Terracon will not be responsible for cross-contamination of groundwater aquifers, soil contamination, or any modification to the environmental conditions to the site that may occur during our geotechnical services. The geotechnical scope of services described above is based on our assumption that the site does not pose environmental risks to the personnel conducting the geotechnical exploration services.

2.3 Laboratory Testing

The sample classifications will be reviewed and a laboratory testing program will be assigned which will be specific to the project requirements and the subsurface conditions observed. The testing program could include, but may not be limited to, moisture contents, dry unit weights, Atterberg limits, compressive strength tests, and grain size analyses.

2.4 Geotechnical Engineering Report

The results of our field and laboratory programs will be evaluated by a professional geotechnical engineer licensed in the State of Texas. Based on the results of our evaluation, an engineering report will be prepared which details the results of the testing performed and provides Boring Logs, Site Location Plan, and Boring Location Plan. The report will also provide geotechnical engineering recommendations, which will address the following:

- Site and subgrade preparation; and
- Pavement design and reconstruction guidelines.

2.5 Schedule

We can initiate our field operations within five to seven working days following authorization to proceed, if site access and weather conditions will permit. We anticipate completion of our services and submittal of our report in about three to four weeks after completion of our field services. In situations where information is needed prior to submittal of our report, we can provide verbal information or recommendations for specific project requirements directly after we have completed our field and laboratory programs.

3.0 COMPENSATION

For the scope of services consisting of field exploration, laboratory testing, and an engineering report as outlined in this document, we estimated the costs summarized in the following table. The costs are presented in detail on the attached **Details of Cost Estimate**. The cost of our services will not exceed these amounts without approval of the client.

Task	Cost Estimate
Field Program	\$7,430
Laboratory Testing	\$2,075
Engineering and Report	\$2,700
Total Cost Not to Exceed	\$12,205

Additional consultation (such as attendance on project meetings, conference calls, engineering analyses, review of project documents, etc.) requested will be performed on a time-and-material basis in accordance with the attached unit rates in concurrence with your approval. Any project and/or scope changes requiring additional or revised analyses will also incur additional charges. The fee to provide additional consultation services will be in excess of the above provided fee to complete the geotechnical project and would not be incurred without prior approval of the client.

4.0 AUTHORIZATION

The work will be performed under a mutually agreed upon client's Agreement for Services which will be signed once the budget estimate is accepted, and upon completion of review by our legal department. We will provide you with our comments, once our review is completed.

We appreciate the opportunity to provide this cost estimate and look forward to the opportunity of working with you.

Sincerely,

Terracon Consultants, Inc.

(Texas Registration No. F-3272)



Daniel B. Mabirizi, E.I.T.
Senior Staff Engineer (League City)



Patrick M. Beecher, P.E.
Geotechnical Services Manager (Houston)



Brett A. Pope, P.E.
Project Manager (Houston)

Attachment: Details of Cost Estimate

Details of Cost Estimate

Item	Description	Quantity	Unit	Rate	Amount
Field Exploration					
1	Standard Truck Drilling Rig Mobilization	1	each	\$500	\$500
2	Standard Truck Drill and Sample	170	feet	\$12	\$2,040
3	Pavement Coring and Patching	34	each	\$90	\$3,060
4	Field Technician (logging)	18	hours	\$55	\$990
5	Staff Engineer (field coordination & site visit)	4	hours	\$110	\$440
6	Standby	2	hours	\$200	\$400
Sub-total for Field Exploration					\$7,430
Laboratory Testing					
1	Liquid and Plastic Limits	20	each	\$50	\$1,000
2	Unconfined Compressive Strength	15	each	\$45	\$675
3	Moisture Content	40	each	\$10	\$400
Sub-total for Laboratory Testing					\$2,075
Engineering Analyses & Report					
1	Principal Engineer	2	hours	\$170	\$340
2	Project Engineer	4	hours	\$140	\$560
3	Staff Engineer	15	hours	\$110	\$1,650
4	Support Personnel	3	hours	\$50	\$150
Sub-total for Engineering Analyses & Report					\$2,700
Total Cost Not to Exceed					\$12,205



CITY OF LEAGUE CITY
ASPHALT OVERLAY VARIOUS STREETS PACKAGE #1
Submittal Schedule

ID	Task Name	Duration	Start	Finish	t	10/9	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	Design Services	204 days	Tue 11/1/16	Fri 8/11/17												
2	Project Management	204 days	Tue 11/1/16	Fri 8/11/17												
3	Geotechnical Report	30 days	Tue 11/1/16	Mon 12/12/16												
4	Survey Topo	30 days	Tue 11/1/16	Mon 12/12/16												
5	Title Sheet	1 day	Tue 11/1/16	Tue 11/1/16												
6	General Notes & Specs	1 day	Wed 11/2/16	Wed 11/2/16												
7	Existing and Proposed Typical Sections	2 days	Thu 11/3/16	Fri 11/4/16												
8	Base Repair Details	1 day	Mon 11/7/16	Mon 11/7/16												
9	Driveway Detail Sheet	2 days	Tue 11/8/16	Wed 11/9/16												
10	Traffic Control Standards	1 day	Thu 11/10/16	Thu 11/10/16												
11	Construction Project Sign	1 day	Fri 11/11/16	Fri 11/11/16												
12	Project Layout Sheets	3 days	Tue 12/13/16	Thu 12/15/16												
13	Summary of Quantity Sheets	2 days	Tue 12/13/16	Wed 12/14/16												
14	Survey Control Sheets	2 days	Tue 12/13/16	Wed 12/14/16												
15	Roadway Plan Sheets	36 days	Tue 12/13/16	Tue 1/31/17												
16	Compute Quantities & Estimate	5 days	Tue 1/31/17	Mon 2/6/17												
17	Submit 95% Review Plans	1 day	Tue 2/7/17	Tue 2/7/17												
18	COLC Review 95% Submittal	3 days	Wed 2/8/17	Fri 2/10/17												
19	Address 95% Review Comments	2 days	Mon 2/13/17	Tue 2/14/17												
20	Submit 100% Review Plans	1 day	Wed 2/15/17	Wed 2/15/17												
21	COLC Review 100% Submittal	3 days	Thu 2/16/17	Mon 2/20/17												
22	Address 100% Review Comments	4 days	Tue 2/21/17	Fri 2/24/17												
23	Submit Final Signed & Sealed Mylars	1 day	Mon 2/27/17	Mon 2/27/17												
24	Bid Phase Services	30 days	Tue 2/28/17	Mon 4/10/17												
25	Contractor Contract Negotiation & Award	30 days	Tue 2/28/17	Mon 4/10/17												
26	Notice to Proceed to Contractor	1 day	Mon 4/10/17	Mon 4/10/17												
27	Construction Phase	90 days	Mon 4/10/17	Fri 8/11/17												

Project: Project Schedule
Date: Tue 10/4/16

Task

Split

Milestone

Summary

Project Summary

External Tasks

External Milestone

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

Deadline

Progress



CITY OF LEAGUE CITY
ASPHALT OVERLAY VARIOUS STREETS PACKAGE #2
Submittal Schedule

ID	Task Name	Duration	Start	Finish	11/20	January 1 1/1	April 1 3/26	July 1 6/18	October 1 9/10	10/22
1	Design Services	252 days	Thu 12/1/16	Fri 11/17/17						
2	Project Management	252 days	Thu 12/1/16	Fri 11/17/17						
3	Geotechnical Report	30 days	Thu 12/1/16	Wed 1/11/17						
4	Survey Topo	30 days	Thu 12/1/16	Wed 1/11/17						
5	Title Sheet	1 day	Thu 12/1/16	Thu 12/1/16						
6	General Notes & Specs	1 day	Fri 12/2/16	Fri 12/2/16						
7	Existing and Proposed Typical Sections	2 days	Mon 12/5/16	Tue 12/6/16						
8	Base Repair Details	1 day	Wed 12/7/16	Wed 12/7/16						
9	Driveway Detail Sheet	2 days	Thu 12/8/16	Fri 12/9/16						
10	Traffic Control Standards	1 day	Mon 12/12/16	Mon 12/12/16						
11	Construction Project Sign	1 day	Tue 12/13/16	Tue 12/13/16						
12	Project Layout Sheets	3 days	Thu 1/12/17	Mon 1/16/17						
13	Summary of Quantity Sheets	2 days	Thu 1/12/17	Fri 1/13/17						
14	Survey Control Sheets	2 days	Thu 1/12/17	Fri 1/13/17						
15	Roadway Plan Sheets	53 days	Thu 1/12/17	Mon 3/27/17						
16	Compute Quantities & Estimate	5 days	Mon 3/27/17	Fri 3/31/17						
17	Submit 95% Review Plans	1 day	Fri 3/31/17	Fri 3/31/17						
18	COLC Review 95% Submittal	3 days	Mon 4/3/17	Wed 4/5/17						
19	Address 95% Review Comments	6 days	Thu 4/6/17	Thu 4/13/17						
20	Submit 100% Review Plans	1 day	Fri 4/14/17	Fri 4/14/17						
21	COLC Review 100% Submittal	3 days	Mon 4/17/17	Wed 4/19/17						
22	Address 100% Review Comments	2 days	Thu 4/20/17	Fri 4/21/17						
23	Submit Final Signed & Sealed M/Plans	1 day	Mon 4/24/17	Mon 4/24/17						
24	Bid Phase Services	30 days	Tue 4/25/17	Mon 6/5/17						
25	Contractor Contract Negotiation & Award	30 days	Tue 4/25/17	Mon 6/5/17						
26	Notice to Proceed to Contractor	1 day	Mon 6/5/17	Mon 6/5/17						
27	Construction Phase	120 days	Mon 6/5/17	Fri 11/17/17						

Project: Project Schedule
Date: Tue 10/4/16

Task Split Milestone Summary Project Summary

External Tasks External Milestone Inactive Task Inactive Milestone Inactive Summary

Manual Task Duration-only Manual Summary Rollup Manual Summary Start-only

Finish-only Deadline Progress