

SUMMARY
CH2M HILL Engineers, Inc.
Collin County Outer Loop Segment 3 Schematic Design: Denton County Line to FM 2478

<i>Collin County Outer Loop Segment 3 Schematic Design: Denton County Line to FM 2478</i>	
Total CH2M HILL Fee	\$ 746,800.40
Total Lamb Star Fee	\$ 349,359.00
Total CH2M HILL Team Fee	\$1,096,159.40

FEE PROPOSAL
CH2M HILL Engineers, Inc.
Collin County Outer Loop Segment 3 Schematic Design: Denton County Line to FM 2478

Collin County Outer Loop DNT to E. of SH 289	Principal	Project Manager	Senior Engineer	Project Engineer	Design Engineer	EIT	Senior Designer	Public Inv Specialist	Clerical	Totals
Rate	\$275.00	\$150.00	\$195.00	\$135.00	\$115.00	\$105.00	\$135.00	\$125.00	\$75.00	
BASIC SERVICES										
TASK BS1 - ASSEMBLY AND REVIEW OF DATA										
A. COLLECTION OF DATA, REPORTS, AND MAPS										
Data Collection		1				8				9
B. FIELD RECONNAISSANCE										
Field Reconnaissance		6	6	6						18
C. REVIEW OF DATA										
Review of Data	2	4				8				14
TASK BS1 TOTALS (HOURS)	2	11	6	6	0	16	0	0	0	41
TASK BS1 TOTALS (COST)	\$ 550.00	\$ 1,650.00	\$ 1,170.00	\$ 810.00	\$ -	\$ 1,680.00	\$ -	\$ -	\$ -	\$ 5,860.00
TASK BS2 - CORRIDOR SECTION EVALUATION										
A. CORRIDOR SECTION EVALUATION										
Coordination Meetings	4	24				8			4	40
Development of Alternate Sections		8	8	16		8				40
Technical Memo		6	4	8						18
Development of final DSR		4	4	16	4					28
TASK BS2 TOTALS (HOURS)	4	42	16	40	4	16	0	0	4	126
TASK BS2 TOTALS (COST)	\$ 1,100.00	\$ 6,300.00	\$ 3,120.00	\$ 5,400.00	\$ 460.00	\$ 1,680.00	\$ -	\$ -	\$ 300.00	\$ 18,360.00
TASK BS3 - DIAGRAMMATIC CORRIDOR REFINEMENT										
A. DENTON COUNTY LINE TO DNT										
Integrate Approved ROW Corridor		4		16						20
B. DNT TO EAST OF PRESTON ROAD										
Existing Approved Corridor				4		4				8
C. EAST OF PRESTON ROAD TO FM 2478										
Determination of Alternate Corridor	1	8		24			16			49
High Level Environmental Constraints Determination				16			16			32
Identification of Impacts		8		16		24				48
Alternate Corridor Matrix Evaluation		12		12						24
D. INTERCHANGE CONCEPTS										
Legacy Drive		4	2	6						12
Coit Road		4	2	6						12
Custer Road		4	2	6						12
E. OUTER LOOP CORRIDOR ALTERNATIVES EXHIBIT										
Exhibit Preparation		8	2	40		40				90
Diagrammatic Ramping Concept Exhibit		16	2	40		20				78
F. STAKEHOLDER COORDINATION										
Coordination Meetings	4	24				8			4	40
G. FINAL OUTER LOOP CORRIDOR EXHIBIT										
Final Exhibit Preparation		4	2	20		20				46
Final Diagrammatic Ramping Concept Exhibit		8	2	20		10				40
H. PUBLIC MEETING										
Prepare and Update Mailing List		4				8		2		14
Prepare Public Notices		1		2				2		5
Prepare Public Meeting Materials		4				12			6	22
Conduct Public Meeting	6	6				6		6		24
Prepare Meeting Summary Report		8						12		20
I. CORRIDOR APPROVAL										
Prepare Presentation		6		6						12
Conduct Presentation	6	6								12
TASK BS3 TOTALS (HOURS)	17	139	14	234	0	152	32	22	10	620
TASK BS3 TOTALS (COST)	\$ 4,675.00	\$ 20,850.00	\$ 2,730.00	\$ 31,590.00	\$ -	\$ 15,960.00	\$ 4,320.00	\$ 2,750.00	\$ 750.00	\$ 83,625.00

Collin County Outer Loop DNT to E. of SH 289		Principal	Project Manager	Senior Engineer	Project Engineer	Design Engineer	EIT	Senior Designer	Public Inv Specialist	Clerical	Totals
Rate		\$275.00	\$150.00	\$195.00	\$135.00	\$115.00	\$105.00	\$135.00	\$125.00	\$75.00	
TASK BS4 - DESIGN SCHEMATIC											
A. GENERAL											
	Typical Sections		16		48		32				96
	Schematic Exhibit Development		40		40		80				160
	3D Corridor Model Development		16	40	60			40			156
	Evaluate Utility Conflicts		4		20	20					44
	ROW Development		8		40						48
B. MAINLANES											
	Horizontal Alignments		8	8	20		8	4			48
	Superelevation & Transitions			2	8						10
	Vertical Alignments		4	8	30		8	4			54
	Evaluate Retaining Wall Locations		16	16	60		40				132
	Plan Development		8		32		32				72
	Pavement Markings		2			40					42
C. MAINLANE RAMPS											
	Horizontal Alignments		12	16	20		12	24			84
	Superelevation & Transitions			24	24						48
	Vertical Alignments		12	24	48		12	24			120
	Plan Development		8		32		32				72
	Pavement Markings		2			20					22
D. FRONTAGE ROADS											
	Horizontal Alignments		8	8	30		16	8			70
	Superelevation & Transitions			4	16						20
	Vertical Alignments		4	8	30		16	8			66
	Evaluate Control of Access		4	8	40	20					72
	Plan Development		8		32		32				72
	Pavement Markings		2			30					32
E. INTERCHANGES & GRADE SEPARATED LOCATIONS											
	Legacy Drive		40	15	100		100				255
	Coordination of DNT Interchange Design (BY OTHERS)		40		40						80
	BNSF at Outer Loop Mainlanes		20	10	60		60				150
	Preston Road (SH 289)		30	30	110		110				280
	Coit Road		40	15	100		100				255
	Custer Road		40	15	100		100				255
F. PROJECT DELIVERY											
	Prepare and Submit 30% Including QA/QC	2	16	20	16	8				8	70
	Prepare and Submit 60% Including QA/QC	2	16	20	16	8				8	70
	Prepare and Submit 90% Including QA/QC	2	16	20	16	8				8	70
	Prepare and Submit 100% Including QA/QC	2	16	20	16	8				8	70
G. PROJECT UPDATE PRESENTATIONS											
	Prepare Presentation		6		6						12
	Conduct Presentation		6								12
TASK BS4 TOTALS (HOURS)		14	468	331	1,210	162	790	112	0	32	3,119
TASK BS4 TOTALS (COST)		\$ 3,850.00	\$ 70,200.00	\$ 64,545.00	\$ 163,350.00	\$ 18,630.00	\$ 82,950.00	\$ 15,120.00	\$ -	\$ 2,400.00	\$ 421,045.00
TASK BS5 - HYDROLOGIC AND HYDRAULIC INVESTIGATION											
A. MINOR DRAINAGE											
	Drainage Area Mapping		4	8	40			24			76
	Calculate Discharges		4	8	24			16			52
	Size Cross Drainage Structures		4	8	24			24			60
B. MAJOR DRAINAGE											
	Review of FEMA Data		4	40							44
	Drainage Area Mapping		2	20				20			42
	Calculate Discharges		2	20							22
	Develop Hydraulic Models		4	80				60			144
	Develop Alternative Drainage Schemes		2	40				20			62
	Identify Easement Requirements		2	20	40						62
	Prepare Drainage Report		8	60	20					8	96
TASK BS5 TOTALS (HOURS)		0	36	304	148	0	0	164	0	8	660
TASK BS5 TOTALS (COST)		\$ -	\$ 5,400.00	\$ 59,280.00	\$ 19,980.00	\$ -	\$ -	\$ 22,140.00	\$ -	\$ 600.00	\$ 107,400.00

Collin County Outer Loop DNT to E. of SH 289	Principal	Project Manager	Senior Engineer	Project Engineer	Design Engineer	EIT	Senior Designer	Public Inv Specialist	Clerical	Totals
Rate	\$275.00	\$150.00	\$195.00	\$135.00	\$115.00	\$105.00	\$135.00	\$125.00	\$75.00	
TASK BS6 - ENVIRONMENTAL STUDIES										
A. ENVIRONMENTAL STUDIES										
Produce Project Impacts Shapefile		4		24						28
Coordination Meetings	4	8		8					4	24
TASK BS6 TOTALS (HOURS)	4	12	0	32	0	0	0	0	4	52
TASK BS6 TOTALS (COST)	\$ 1,100.00	\$ 1,800.00	\$ -	\$ 4,320.00	\$ -	\$ -	\$ -	\$ -	\$ 300.00	\$ 7,520.00
TASK BS7 - PUBLIC INVOLVEMENT										
A. PUBLIC INVOLVEMENT										
Prepare and Update Mailing List		2				4		2		8
Prepare Public Notices		4		4				4		10
Prepare Public Meeting & Public Hearing Materials		4				12			6	22
Conduct Public Meeting	4	4				4				12
Conduct Public Hearing	6	6				6		6		24
Prepare Meeting Summary Report(s)		8						16		24
TASK BS7 TOTALS (HOURS)	10	26	0	4	0	26	0	28	6	100
TASK BS7 TOTALS (COST)	\$ 2,750.00	\$ 3,900.00	\$ -	\$ 540.00	\$ -	\$ 2,730.00	\$ -	\$ 3,500.00	\$ 450.00	\$ 13,870.00
TASK BS8 - PROJECT MANAGEMENT										
A. SCHEDULE, PROGRESS REPORT, AND INVOICES										
Schedule	4	24		24						52
Progress Reports	8	40		24						72
Preparing Invoices	2	32							60	94
B. PROGRESS MEETINGS										
Coordination Meetings	12	24				8			4	48
C. STAKEHOLDER COORDINATION MEETINGS										
Coordination Meetings	24	72				24			12	132
TASK BS8 TOTALS (HOURS)	50	192	0	48	0	32	0	0	76	398
TASK BS8 TOTALS (COST)	\$ 13,750.00	\$ 28,800.00	\$ -	\$ 6,480.00	\$ -	\$ 3,360.00	\$ -	\$ -	\$ 5,700.00	\$ 58,090.00
TOTAL CH2M HOURS (BASIC SERVICES)	101	926	671	1,722	166	1,032	308	50	140	5,116
TOTAL CH2M LABOR COST (BASIC SERVICES)	\$27,775.00	\$138,900.00	\$130,845.00	\$232,470.00	\$19,090.00	\$108,360.00	\$41,580.00	\$6,250.00	\$10,500.00	\$715,770.00
SPECIAL SERVICES										
TASK SS1 - SURVEY AND RIGHT-OF-WAY										
A. SURVEY										
Survey						REFER TO LAMB-STAR FEE				
Coordinate and Review Survey Data		24		24			24			72
B. RIGHT-OF-WAY										
Right-Of-Way						REFER TO LAMB-STAR FEE				
Coordinate and Review ROW Data		24		24			24			72
TASK SS1 TOTALS (HOURS)	0	48	0	48	0	0	48	0	0	0
TASK SS1 TOTALS (COST)	\$ -	\$ 7,200.00	\$ -	\$ 6,480.00	\$ -	\$ -	\$ 6,480.00	\$ -	\$ -	\$ 20,160.00
TASK SS2 - UTILITY INVESTIGATION										
A. UTILITY INVESTIGATION										
SUE Investigation						REFER TO LAMB-STAR FEE				
Coordinate and Review SUE Data		16		16			16			48
TASK SS2 TOTALS (HOURS)	0	16	0	16	0	0	16	0	0	48
TASK SS2 TOTALS (COST)	\$ -	\$ 2,400.00	\$ -	\$ 2,160.00	\$ -	\$ -	\$ 2,160.00	\$ -	\$ -	\$ 6,720.00
TOTAL CH2M HOURS (SPECIAL SERVICES)	0	64	0	64	0	0	64	0	0	48
TOTAL CH2M LABOR COST (SPECIAL SERVICES)	\$0.00	\$9,600.00	\$0.00	\$8,640.00	\$0.00	\$0.00	\$8,640.00	\$0.00	\$0.00	\$26,880.00
Reimbursable Direct Expenses										
8.5" x 11" Copies						Unit	Quantity	Rate	Total	
11" x 17" Copies						EA	2,000	\$0.10	\$200	
Report Binding						EA	3,000	\$0.15	\$450	
Mileage						EA	4	\$20.00	\$80	
FEMA Data						MILE	2,960	\$0.54	\$1,598	
CD/DVD						LS	1	\$350.00	\$350	
Color Plots (Bond)						EA	4	\$5.00	\$20	
Postage (Express Mail)						SF	768	\$1.50	\$1,152	
						EA	100	\$3.00	\$300	
Total Reimbursable Direct Expenses										\$4,150.40
TOTAL CH2M FEE										\$746,800.40

LAMB-STAR ENGINEERING, L.P.
 Survey Fee Estimate
 CH2M Hill/Collin County
 Collin County Outer Loop Segment 3 Schematic Design: Denton County Line to FM 2478

LAMB-STAR ENGINEERING, L.P.																				
TASK/LABOR	SENIOR SURVEY STAFF	SENIOR SURVEY PROJECT MANAGER	SURVEY PROJECT MANAGER	SURVEY PRODUCTION MANAGER	SENIOR SURVEY/LASER SCANNING TECHNICIAN	SURVEY TECHNICIAN	FIELD COORDINATOR	CLERICAL/ ADMIN	ABTRACTOR (IN-HOUSE)	ONE-MAN FIELD CREW	TWO-MAN FIELD CREW	THREE-MAN FIELD CREW	TWO-MAN SCANNING CREW	ADDITIONAL RODMAN, CHAINMAN, OR FLAGMAN	G.P.S. STATIC RECEIVERS (PER DAY PER RECEIVER)	G.P.S. RTK SYSTEM	ROBOTIC REFLECTORLESS EQUIPMENT	LASER SCANNING EQUIPMENT	TOTAL PER TASK	
Deed Sketch					16	8														\$2,240.00
ROE for 59 parcels			4		12	40		4												\$5,324.00
Boundary determination for 66 Parcels (Includes Field Recovery)	8	15	70	20	110	90	40			30	120	50								\$70,450.00
Place Easements for 26 Parcels	2	4	24		40	64														\$13,840.00
Horizontal & Vertical Control Points w/ Data Sheet (15 Total)	2		4	8	45	15				20	100	50								\$33,380.00
Aerial Panel Points (93 total - includes Ground Truthing points)				4	10	20	16			20	90	40								\$27,570.00
Field locate Drainage Structures						16	5			10	20	20								\$9,480.00
Cross Section Roadways (6) & Culverts (15)				4	8	16	20			25	80	40								\$26,645.00
Topo Utility Features					8	8	3				30									\$6,180.00
Provide Level C/D Utility Investigation			4	12	24	24														\$6,540.00
Topo Supplement for Aerial Mapping				4	8	16	20			20	140	60								\$38,420.00
Prepare Topographic Map	2		4	8	16	24														\$5,600.00
Prepare 26 Parcel Exhibits		10	24	28	112	38	20													\$26,020.00
Prepare 26 Metes and Bounds Descriptions		4	8	16	40	8														\$8,720.00
Prepare Overall Exhibit Strip Map (5 sheets)	2	4	8	12	40															\$7,940.00
																				\$0.00
TOTAL HOURS	16	37	150	116	489	387	124	4	0	125	580	260	0	0	0	0	0	0	0	2288
HOURLY RATE	\$ 200.00	\$ 180.00	\$ 150.00	\$ 135.00	\$ 100.00	\$ 80.00	\$ 130.00	\$ 81.00	\$ 75.00	\$ 105.00	\$ 145.00	\$ 180.00	\$ 160.00	\$ 40.00	\$ 300.00	\$ 50.00	\$ 40.00	\$ 45.00		\$288,349.00

DIRECT EXPENSES	RATE	+ 10.0%	QUANTITY	ESTIMATE
Mileage	\$0.54	NA	1500	\$ 810.00
Aerial Mapping Services		\$ -		\$ 38,500.00
Materials (Aerial Panels)		\$ -		\$ 1,500.00
Materials (Control Monuments)		\$ -		\$ 500.00
Property Record Fees		\$ -		\$ 500.00
Parcel & Easement Abstracting (32 parcels x \$600 per parcel)	\$600.00		32	\$ 19,200.00
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
TOTAL DIRECT EXPENSES				\$ 61,010.00

Field
Office
PM
ODE

TOTAL ESTIMATE **\$349,359.00**