

# APPENDIX H COST ESTIMATES



HDR ENGINEERING, INC.  
TBPE FIRM NO. F-754



**COST ESTIMATING TEMPLATE**

**PRELIMINARY**

**NOT TO BE USED FOR PERMITTING, BIDDING, OR CONSTRUCTION**

PREPARED BY:

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PE NO. 73469

3/9/2016

This estimate represents our engineering judgment as professionals knowledgeable with the construction of similar projects. This estimate is for planning and programming purposes only and does not guarantee what actual construction costs will be.

Pavement designs represented are typical for the classifications listed, and are not to be used for construction.

Utility relocation and ROW acquisition costs are not included in the estimate unless specifically identified

## COST ESTIMATING TEMPLATE

### INSTRUCTIONS

**1. REVIEW UNIT COST DATA AND UPDATE AS NECESSARY IN THE 'UNIT COST INPUT 2015' WORK SHEET**

THE PAY ITEMS AND UNIT PRICES ARE INTENDED TO COVER THE MAJOR ITEMS AND MAY NOT COVER ALL RELEVANT ITEMS.

*Note that City unit prices tend to be higher than TxDOT due to smaller quantities and restricted urban work areas*

**2. REVIEW UNIT COST DATA AND UPDATE AS NECESSARY IN THE ILLUMINATION CALC AND DRAINAGE CALC WORK SHEETS**

City of Austin average bid prices may be found here:

<http://www.austintexas.gov/page/average-bid-prices>

TxDOT average bid prices may be found here:

<http://www.txdot.gov/business/letting-bids/average-low-bid-unit-prices.html>

HMAC costs are used for most projects. Typical pavement sections used to calculate total cost/SY.

*Typical pavement sections should be reviewed with Client to confirm price/sy for various pavement sections.*

**3. REVIEW COSTS CALCULATED AS A PERCENTAGE OF CONSTRUCTION COST IN 'ADDITIONAL COST (% BASIS)**

*NEW PROJECT TYPE 1 AND 2 ARE PROVIDED TO ADD ADDITIONAL TYPES IF NECESSARY*

**4. REVIEW "TYPICAL SECTION DATA" WORK SHEET. THIS SHEET IS SET UP FOR CITY OF SAN MARCOS TRANSPORTATION MASTER PLAN & COA SOUTH LAMAR OPTIONS. ADDITIONAL SECTIONS AND RELEVANT DATA SHOULD BE ADDED AT THE BOTTOM OF THE TABLE IF NEEDED.**

NEW TYPICAL SECTION LINES ARE PROVIDED TO ADD ADDITIONAL SECTIONS IF NECESSARY

ENTER DATA ON THE 'ESTIMATE' WORK SHEET. USE PULL DOWN OPTIONS WHERE SHOWN.

ENTER DATA IN THE BLUE CELLS ONLY

**5. IF YOU WISH TO RUN MULTIPLE OPTIONS IN THE SAME SPREADSHEET, COPY THE 'ESTIMATE' WORKSHEET AND ENTER THE APPROPRIATE DATA (RIGHT CLICK ON THE TAB, CHECK THE 'MAKE A COPY' BOX, AND PLACE THE NEW WORKSHEET BEFORE THE 'ADDITIONAL COST(% BASIS)' TAB). RENAME THE WORKSHEETS TO MATCH THE OPTIONS.**

This estimate represents our engineering judgment as professionals knowledgeable with the construction of similar projects. This estimate is for planning and programming purposes only and does not guarantee what actual construction costs will be.

**ESTIMATED CONSTRUCTION COST  
 SOUTH LAMAR TRANSPORTATION IMPROVEMENT PROGRAM  
 CITY OF AUSTIN TRANSPORTATION DEPARTMENT**

**PROJECT NAME:** SOUTH LAMAR TRANSPORTATION IMPROVEMENTS - FULL RECONSTRUCTION

**PROJECT LIMITS:** FROM RIVERSIDE DRIVE TO BARTON SPRINGS ROAD

**PROJECT DESCRIPTION:** COMPLETE RECONSTRUCTION

**I. PROJECT DATA**

a. PROJECT TYPE:	URBAN RECONSTRUCTION	
b. TYPICAL SECTION:	SOLA-NORTH	
c. PROJECT LENGTH =	0.300	MILES
d. NOMINAL ROW WIDTH =	100	FEET
e. NOMINAL PAVEMENT WIDTH =	60	FEET
f. HMAC PAVEMENT TYPE	URBAN ARTERIAL	
g. ROADWAY TYPE (FOR DRAINAGE CALCULATION)	URBAN 4-5 LANES	
h. EDWARDS AQUIFER/WATER QUALITY ZONE?	YES	
i. CURRENT YEAR / YEAR OF EXPENDITURE	2015	
j. NUMBER OF SIGNALIZED INTERSECTIONS	3	
k. NUMBER OF PEDESTRIAN HYBRID BEACONS (HAWK'S)	0	
l. NUMBER OF MONTHS FOR CONSTRUCTION	24	
m. FULL PAVEMENT RECONSTRUCTION OR MILL/OVERLAY?	RECONSTR	
n.		
o.		
p.		

II. CONSTRUCTION ITEMS		QTY	UNITS	UNIT PRICE	TOTAL COST
a.	PREPARING ROW & REMOVALS	16	STA	\$ 1,000.00	\$ 16,000
b.	EXCAVATION & PAVEMENT REMOVALS	14,670	CY	\$ 9.00	\$ 132,030
c.	EMBANKMENT	3,690	CY	\$ 15.00	\$ 55,350
d.	HMAC PAVEMENT	10,560	SY	\$ 71.37	\$ 753,632
e.	DRAINAGE SYSTEMS	0.300	LS/MI		\$ 405,197
f.	WATER QUALITY ADDITIONAL ALLOWANCE	20%	LS	\$ 81,039.40	\$ 81,039
g.	ILLUMINATION (COMBINATION)	0.30	LS/MI	\$ 239,000.00	\$ 143,400
h.	SIGNING AND PAVEMENT MARKINGS	0.30	LS	\$ 50,000.00	\$ 15,000
i.	TEMPORARY/PERMANENT EROSION CONTROL	3%	LS		\$ 42,817
j.	SIDEWALKS	3,168	SY	\$ 54.00	\$ 171,072
k.	PEDESTRIAN PAVERS, RAISED PLANTERS & GATEWAY ELEMENTS	5.0%	LS		\$ 67,310
l.	CURB AND GUTTER	12,672	LF	\$ 20.00	\$ 253,440
m.	CYCLE TRACK PAVEMENT	3,520	SY	\$ 41.71	\$ 146,823
n.	SIGNALIZATION (FULL INTERSECTION)	1	EA	\$250,000	\$ 250,000
o.	SIGNALIZATION (PROTECTED BIKEWAY)	2	EA	\$400,000	\$ 800,000
p.	SIGNALIZATION (PEDESTRIAN HYBRID BEACONS)	-	EA	\$ 80,000.00	\$ -
q.	CROSS DRAINAGE STRUCTURES		LS		\$ -
r.	RETAINING WALLS		LS		\$ -
s.	BARRICADES, SIGNS, AND TRAFFIC HANDLING	24	MO	\$ 4,000.00	\$ 96,000
t.	RAISED/PAVED CYCLE TRACK OR PARKING BUFFER	704	SY	\$ 54.00	\$ 38,016
u.	PUBLIC ART	2%	LS		\$ 65,275
v.	SAFETY ALLOWANCE (TRAFFIC CONTROL PLAN CONTINGENCY)	0.30	LS/MI	\$ 10,000.00	\$ 3,000
w.	DRIVEWAY RECONSTRUCTION/CONSOLIDATION	0.30	LS/MI	\$ 400,000.00	\$ 120,000
x.	BUS PAD/BUS STOP IMPROVEMENTS	0.30	LS/MI	\$ 50,000.00	\$ 15,000
y.	IRRIGATION	0.30	LS/MI	\$ 75,000.00	\$ 22,500
z.	MEDIAN IMPROVEMENTS-TREES, SOD & TREE GATES	0.30	LS/MI	\$300,000	\$ 90,000
aa.					
bb.					
<b>SUBTOTAL</b>					<b>\$ 3,782,902</b>
<b>III. OTHER ITEMS</b>					
	MOBILIZATION	10%			\$ 378,290
	ENGINEERING AND DESIGN	15%			\$ 567,435
	CONSTRUCTION CONTINGENCY	15%			\$ 567,435
	CONSTRUCTION ENGINEERING AND INSPECTION (CE&I)	10%			\$ 472,863
<b>SUBTOTAL</b>					<b>\$ 1,986,024</b>
<b>IV. TOTAL PROJECT COST (CURRENT YEAR DOLLARS)</b>					<b>\$ 5,768,926</b>
<b>V. AUSTIN ENERGY UTILITY RELOCATIONS/ADJUSTMENTS</b>				1,584 LF	\$916.80
<b>VI. TOTAL PROJECT COST INCLUDING AUSTIN ENERGY RELOCATION</b>					<b>\$ 7,221,226</b>

*This estimate represents our engineering judgment as professionals knowledgeable with the construction of similar projects. This estimate is for planning and programming purposes only and does not guarantee what actual construction costs will be. Estimates rounded up to nearest \$50,000 for reporting purposes.*

**ESTIMATED CONSTRUCTION COST  
SOUTH LAMAR TRANSPORTATION IMPROVEMENT PROGRAM  
CITY OF AUSTIN TRANSPORTATION DEPARTMENT**

**PROJECT NAME:** SOUTH LAMAR TRANSPORTATION IMPROVEMENTS - FULL RECONSTRUCTION

**PROJECT LIMITS:** FROM BARTON SPRINGS ROAD TO TREADWELL

**PROJECT DESCRIPTION:** COMPLETE RECONSTRUCTION

**I. PROJECT DATA**

a. PROJECT TYPE:	URBAN RECONSTRUCTION	
b. TYPICAL SECTION:	SOLA-SOUTH	
c. PROJECT LENGTH =	0.340	MILES
d. NOMINAL ROW WIDTH =	100	FEET
e. NOMINAL PAVEMENT WIDTH =	42	FEET
f. HMAC PAVEMENT TYPE	URBAN ARTERIAL	
g. ROADWAY TYPE (FOR DRAINAGE CALCULATION)	URBAN 4-5 LANES	
h. EDWARDS AQUIFER/WATER QUALITY ZONE?	YES	
i. CURRENT YEAR / YEAR OF EXPENDITURE	2015	
j. NUMBER OF SIGNALIZED INTERSECTIONS	1	
k. NUMBER OF PEDESTRIAN HYBRID BEACONS (HAWK'S)	0	
l. NUMBER OF MONTHS FOR CONSTRUCTION	24	
m. FULL PAVEMENT RECONSTRUCTION OR MILL/OVERLAY?	RECONSTR	
n.		
o.		
p.		

II. CONSTRUCTION ITEMS	QTY	UNITS	UNIT PRICE	TOTAL COST
a. PREPARING ROW & REMOVALS	18	STA	\$ 1,000.00	\$ 18,000
b. EXCAVATION & PAVEMENT REMOVALS	16,626	CY	\$ 9.00	\$ 149,634
c. EMBANKMENT	4,182	CY	\$ 15.00	\$ 62,730
d. HMAC PAVEMENT	8,378	SY	\$ 71.37	\$ 597,881
e. DRAINAGE SYSTEMS	0.340	LS/MI		\$ 405,197
f. WATER QUALITY ADDITIONAL ALLOWANCE	20%	LS	\$ 81,039.40	\$ 81,039
g. ILLUMINATION (COMBINATION)	0.34	LS/MI	\$ 239,000.00	\$ 162,520
h. SIGNING AND PAVEMENT MARKINGS	0.34	LS	\$ 50,000.00	\$ 17,000
i. TEMPORARY/PERMANENT EROSION CONTROL	3%	LS		\$ 38,894
j. SIDEWALKS	3,590	SY	\$ 54.00	\$ 193,882
k. PEDESTRIAN PAVERS, RAISED PLANTERS & GATEWAY ELEMENTS	5.0%	LS		\$ 60,772
l. CURB AND GUTTER	14,362	LF	\$ 20.00	\$ 287,232
m. CYCLE TRACK PAVEMENT	2,793	SY	\$ 41.71	\$ 116,480
n. SIGNALIZATION (FULL INTERSECTION)	1	EA	\$ 250,000	\$ 250,000
o. SIGNALIZATION (PEDESTRIAN HYBRID BEACONS)	-	EA	\$ 80,000.00	\$ -
p. CROSS DRAINAGE STRUCTURES		LS		\$ -
q. RETAINING WALLS		LS		\$ -
r. BARRICADES, SIGNS, AND TRAFFIC HANDLING	24	MO	\$ 4,000.00	\$ 96,000
s. RAISED/PAVED CYCLE TRACK OR PARKING BUFFER	798	SY	\$ 54.00	\$ 43,085
t. PUBLIC ART	2%	LS		\$ 47,000
u. SAFETY ALLOWANCE (TRAFFIC CONTROL PLAN CONTINGENCY)	0.34	LS/MI	\$ 10,000.00	\$ 3,400
v. DRIVEWAY RECONSTRUCTION/CONSOLIDATION	0.34	LS/MI	\$ 400,000.00	\$ 136,000
w. BUS PAD/BUS STOP IMPROVEMENTS	0.34	LS/MI	\$ 50,000.00	\$ 17,000
x. IRRIGATION	0.34	LS/MI	\$ 75,000.00	\$ 25,500
y. MEDIAN IMPROVEMENTS-TREES, SOD & TREE GATES	0.34	LS/MI	\$ 300,000	\$ 102,000
z.				
aa.				
<b>SUBTOTAL</b>				\$ 2,911,246
<b>III. OTHER ITEMS</b>				
MOBILIZATION	10%			\$ 291,125
ENGINEERING AND DESIGN	15%			\$ 436,687
CONSTRUCTION CONTINGENCY	15%			\$ 436,687
CONSTRUCTION ENGINEERING AND INSPECTION (CE&I)	10%			\$ 363,906
<b>SUBTOTAL</b>				\$ 1,528,404
<b>IV. TOTAL PROJECT COST (CURRENT YEAR DOLLARS)</b>				\$ 4,439,650
<b>V. AUSTIN ENERGY UTILITY RELOCATIONS/ADJUSTMENTS</b>	1,795	LF	\$ 916.80	\$ 1,645,839
<b>VI. TOTAL PROJECT COST INCLUDING AUSTIN ENERGY RELOCATION</b>				\$ 6,085,490

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Estimates rounded up to nearest \$50,000 for reporting purposes.*



**ESTIMATED CONSTRUCTION COST**  
**SOUTH LAMAR TRANSPORTATION IMPROVEMENT PROGRAM**  
**CITY OF AUSTIN TRANSPORTATION DEPARTMENT**

**PROJECT NAME:** SOUTH LAMAR TRANSPORTATION IMPROVEMENTS - FULL RECONSTRUCTION

**PROJECT LIMITS:** FROM TREADWELL TO PANTHER TRAIL

**PROJECT DESCRIPTION:** COMPLETE RECONSTRUCTION

**I. PROJECT DATA**

a. PROJECT TYPE:	URBAN RECONSTRUCTION	
b. TYPICAL SECTION:	SOLA-SOUTH	
c. PROJECT LENGTH =	2.120	MILES
d. NOMINAL ROW WIDTH =	100	FEET
e. NOMINAL PAVEMENT WIDTH =	42	FEET
f. HMAC PAVEMENT TYPE	URBAN ARTERIAL	
g. ROADWAY TYPE (FOR DRAINAGE CALCULATION)	URBAN 4-5 LANES	
h. EDWARDS AQUIFER/WATER QUALITY ZONE?	YES	
i. CURRENT YEAR / YEAR OF EXPENDITURE	2015	
j. NUMBER OF SIGNALIZED INTERSECTIONS	10	
k. NUMBER OF PEDESTRIAN HYBRID BEACONS (HAWK'S)	2	
l. NUMBER OF MONTHS FOR CONSTRUCTION	48	
m. FULL PAVEMENT RECONSTRUCTION OR MILL/OVERLAY?	RECONSTR	
n.		
o.		
p.		

II. CONSTRUCTION ITEMS		QTY	UNITS	UNIT PRICE	TOTAL COST
a.	PREPARING ROW & REMOVALS	112	STA	\$ 1,000.00	\$ 112,000
b.	EXCAVATION & PAVEMENT REMOVALS	103,668	CY	\$ 9.00	\$ 933,012
c.	EMBANKMENT	26,076	CY	\$ 15.00	\$ 391,140
d.	HMAC PAVEMENT	52,237	SY	\$ 71.37	\$ 3,727,966
e.	DRAINAGE SYSTEMS	2.120	LS/MI		\$ 2,318,681
f.	WATER QUALITY ADDITIONAL ALLOWANCE	20%	LS	\$ 463,736.20	\$ 463,736
g.	ILLUMINATION (COMBINATION)	2.12	LS/MI	\$ 239,000.00	\$ 1,013,360
h.	SIGNING AND PAVEMENT MARKINGS	2.12	LS	\$ 50,000.00	\$ 106,000
i.	TEMPORARY/PERMANENT EROSION CONTROL	3%	LS		\$ 235,036
j.	SIDEWALKS	22,387	SY	\$ 54.00	\$ 1,208,909
k.	PEDESTRIAN PAVERS, RAISED PLANTERS & GATEWAY ELEMENTS	5.5%	LS		\$ 405,394
l.	CURB AND GUTTER	89,549	LF	\$ 20.00	\$ 1,790,976
m.	CYCLE TRACK PAVEMENT	17,412	SY	\$ 41.71	\$ 726,285
n.	SIGNALIZATION (FULL INTERSECTION)	10	EA	\$250,000	\$ 2,500,000
o.	SIGNALIZATION (PEDESTRIAN HYBRID BEACONS)	2	EA	\$ 80,000.00	\$ 160,000
p.	CROSS DRAINAGE STRUCTURES		LS		\$ -
q.	RETAINING WALLS		LS		\$ -
r.	BARRICADES, SIGNS, AND TRAFFIC HANDLING	48	MO	\$ 4,000.00	\$ 192,000
s.	RAISED/PAVED CYCLE TRACK OR PARKING BUFFER	4,975	SY	\$ 54.00	\$ 268,646
t.	PUBLIC ART	2%	LS		\$ 302,340
u.	SAFETY ALLOWANCE (TRAFFIC CONTROL PLAN CONTINGENCY)	2.12	LS/MI	\$ 10,000.00	\$ 21,200
v.	DRIVEWAY RECONSTRUCTION/CONSOLIDATION	2.12	LS/MI	\$ 400,000.00	\$ 848,000
w.	BUS PAD/BUS STOP IMPROVEMENTS	2.12	LS/MI	\$ 50,000.00	\$ 106,000
x.	IRRIGATION	2.12	LS/MI	\$ 75,000.00	\$ 159,000
y.	MEDIAN IMPROVEMENTS-TREES, SOD & TREE GATES	2.12	LS/MI	\$300,000	\$ 636,000
z.					
aa.					
SUBTOTAL					\$ 18,625,682
<b>III. OTHER ITEMS</b>					
	MOBILIZATION	10%			\$ 1,862,568
	ENGINEERING AND DESIGN	15%			\$ 2,793,852
	CONSTRUCTION CONTINGENCY	15%			\$ 2,793,852
	CONSTRUCTION ENGINEERING AND INSPECTION (CE&I)	10%			\$ 2,328,210
SUBTOTAL					\$ 9,778,483
<b>IV. TOTAL PROJECT COST (CURRENT YEAR DOLLARS)</b>					<b>\$ 28,404,164</b>
<b>V. AUSTIN ENERGY UTILITY RELOCATIONS/ADJUSTMENTS</b>		<b>11,194</b>	<b>LF</b>	<b>\$916.80</b>	<b>\$ 10,262,292</b>
<b>VI. TOTAL PROJECT COST INCLUDING AUSTIN ENERGY RELOCATION</b>					<b>\$ 38,666,457</b>

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 Estimates rounded up to nearest \$50,000 for reporting purposes.*

**ESTIMATED CONSTRUCTION COST  
SOUTH LAMAR TRANSPORTATION IMPROVEMENT PROGRAM  
CITY OF AUSTIN TRANSPORTATION DEPARTMENT  
ADDITIONAL SHORT/MID/LONG-TERM IMPROVEMENTS**

**PROJECT NAME:** SOUTH LAMAR TRANSPORTATION IMPROVEMENTS  
**PROJECT LIMITS:** FROM RIVERSIDE DR TO PANTHER TRAIL  
**DESCRIPTION:** INSTALL NB BUS QUEUE JUMP - SOUTH LAMAR AT BLUEBONNET

SHEET A

Pavement Area (SY) =	350
Project Length (LF) =	250

ITEM DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
<b>PREP ROW, EARTHWORK &amp; REMOVALS</b>				
PREPARING ROW	STA	2.5	\$ 250.00	\$ 625
REMOVING CONC (DRIVEWAYS)	SY	80	\$ 10.00	\$ 800
REMOVING CONC (SIDEWALKS)	SY	170	\$ 10.00	\$ 1,700
REMOVING CONC (CURB AND GUTTER)	LF	250	\$ 5.00	\$ 1,250
REMOVING CONC (WHEELCHAIR RAMP)	SY	2	\$ 30.00	\$ 60
REMOVING CONC (RETAINING WALLS)	LS	1	\$ 2,000.00	\$ 2,000
REMOVE STAB BASE AND ASPH PAV (6"-20")	SY	350	\$ 9.00	\$ 3,150
EXCAVATION ROADWAY	CY	120	\$ 6.00	\$ 720
REMOVE EXIST INLET	EA	1	\$ 1,000.00	\$ 1,000
<b>PAVEMENT</b>				
FL BS (CMP IN PLC)(TY A GR 5)(FNAL POS)	CY	120	\$ 50.00	\$ 6,000
PRIME COAT (MC-30)	GAL	70	\$ 4.50	\$ 315
D-GR HMA(SQ) TY-C PG64-22	TON	160	\$ 100.00	\$ 16,000
D-GR HMA(SQ) TY-D SAC-B PG70-22	TON	80	\$ 110.00	\$ 8,800
<b>DRAINAGE</b>				
RIPRAP (CONC)(5 IN)	CY	0	\$ 550.00	\$ -
enter drainage items and unit cost	LF	0	\$ 200.00	\$ -
enter drainage items and unit cost	EA	0	\$ 5,600.00	\$ -
RC PIPE (CL III)(24 IN)	LF	15	\$ 65.00	\$ 975
(COMPL)(PCO)(5FT)(LEFT)	EA	1	\$ 4,700.00	\$ 4,700
<b>MISCELLANEOUS CONSTRUCTION</b>				
BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	4	\$ 1,500.00	\$ 6,000
CONC CURB & GUTTER (TY II)	LF	250	\$ 20.00	\$ 5,000
DRIVEWAYS (CONC)	SY	80	\$ 75.00	\$ 6,000
CONC SIDEWALKS (5")	SY	120	\$ 50.00	\$ 6,000
CURB RAMP (TY 1)	EA	2	\$ 1,500.00	\$ 3,000
CONC MEDIAN	SY	0	\$ 50.00	\$ -
MBGF	LF			\$ -
SGT/TAS	EA			\$ -
RETAINING WALLS	SF	260	\$ 50.00	\$ 13,000
TEMP EROSION CONTROL, SWPPP, AND PERM SEED/SOD	LS	1	5%	\$ 4,355
BUS PAD/BUS STOP REMOVE AND REPLACE	LS	1	\$ 50,000.00	\$ 50,000
<b>TRAFFIC ITEMS</b>				
IN SM RD SN SUP&AM TY10BWG(1)SA(P)	EA	2	\$ 550.00	\$ 1,100
PAVEMENT MARKINGS	LS	1	\$ 3,000.00	\$ 3,000
TRAFFIC SIGNAL	LS	1	\$ 250,000.00	\$ 250,000
MOBILIZATION	LS	1	10%	\$ 39,555
SUBTOTAL MATERIAL ITEMS				\$ 435,105
ENGINEERING			15%	\$ 65,266
CONSTRUCTION ENGR & INSPECTION			7%	\$ 30,457
CONTINGENCY			10%	\$ 43,510
SUBTOTAL				\$ 574,338
SMALL QUANTITY ESCALATION FACTOR				\$ -
<b>TOTAL INCLUDING MATERIALS, ENGINEERING, INSPECTION AND CONTINGENCY</b>				<b>\$ 574,338</b>

\*\*\*Estimates rounded up to nearest \$50,000 for reporting purposes.

**ESTIMATED CONSTRUCTION COST  
SOUTH LAMAR TRANSPORTATION IMPROVEMENT PROGRAM  
CITY OF AUSTIN TRANSPORTATION DEPARTMENT**

**ADDITIONAL SHORT/MID/LONG-TERM IMPROVEMENTS**

**PROJECT NAME:** SOUTH LAMAR TRANSPORTATION IMPROVEMENTS  
**PROJECT LIMITS:** FROM RIVERSIDE DR TO PANTHER TRAIL  
**DESCRIPTION:** Between Manchaca Rd and Barton Skwy - Construct NB Bus Lane

SHEET B

Pavement Area (SY) =	370
Project Length (LF) =	275

ITEM DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
<b>PREP ROW, EARTHWORK &amp; REMOVALS</b>				
PREPARING ROW	STA	2.75	\$ 250.00	\$ 688
REMOVING CONC (DRIVEWAYS)	SY	300	\$ 10.00	\$ 3,000
REMOVING CONC (SIDEWALKS)	SY	170	\$ 10.00	\$ 1,700
REMOVING CONC (CURB AND GUTTER)	LF	275	\$ 5.00	\$ 1,375
REMOVING CONC (WHEELCHAIR RAMP)	SY	4	\$ 30.00	\$ 120
REMOVING CONC (RETAINING WALLS)	LS	0	\$ 2,000.00	\$ -
REMOVE STAB BASE AND ASPH PAV (6"-20")	SY	370	\$ 9.00	\$ 3,330
EXCAVATION ROADWAY	CY	130	\$ 6.00	\$ 780
REMOVE EXIST INLET	EA	1	\$ 1,000.00	\$ 1,000
<b>PAVEMENT</b>				
FL BS (CMP IN PLC)(TY A GR 5)(FNAL POS)	CY	130	\$ 50.00	\$ 6,500
PRIME COAT (MC-30)	GAL	80	\$ 4.50	\$ 360
D-GR HMA(SQ) TY-C PG64-22	TON	170	\$ 100.00	\$ 17,000
D-GR HMA(SQ) TY-D SAC-B PG70-22	TON	90	\$ 110.00	\$ 9,900
<b>DRAINAGE</b>				
RIPRAP (CONC)(5 IN)	CY	0	\$ 550.00	\$ -
enter drainage items and unit cost	LF	0	\$ 200.00	\$ -
enter drainage items and unit cost	EA	0	\$ 5,600.00	\$ -
RC PIPE (CL III)(24 IN)	LF	15	\$ 65.00	\$ 975
(COMPL)(PCO)(5FT)(LEFT)	EA	1	\$ 4,700.00	\$ 4,700
<b>MISCELLANEOUS CONSTRUCTION</b>				
BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	4	\$ 1,500.00	\$ 6,000
CONC CURB & GUTTER (TY II)	LF	275	\$ 20.00	\$ 5,500
DRIVEWAYS (CONC)	SY	300	\$ 75.00	\$ 22,500
CONC SIDEWALKS (5")	SY	120	\$ 50.00	\$ 6,000
CURB RAMP (TY 1)	EA	4	\$ 1,500.00	\$ 6,000
CONC MEDIAN	SY	0	\$ 50.00	\$ -
MBGF	LF			\$ -
SGT/TAS	EA			\$ -
RETAINING WALLS	SF	0	\$ 50.00	\$ -
TEMP EROSION CONTROL, SWPPP, AND PERM SEED/SOD	LS	1	5%	\$ 4,871
BUS PAD/BUS STOP REMOVE AND REPLACE	LS	1	\$ 50,000.00	\$ 50,000
<b>TRAFFIC ITEMS</b>				
IN SM RD SN SUP&AM TY10BWG(1)SA(P)	EA	4	\$ 550.00	\$ 2,200
PAVEMENT MARKINGS	LS	1	\$ 3,000.00	\$ 3,000
TRAFFIC SIGNAL	LS	2	\$ 250,000.00	\$ 500,000
MOBILIZATION	LS	1	10%	\$ 65,750
SUBTOTAL MATERIAL ITEMS				\$ 723,249
ENGINEERING				\$ 108,487
CONSTRUCTION ENGR & INSPECTION				\$ 50,627
CONTINGENCY				\$ 72,325
SUBTOTAL				\$ 954,688
SMALL QUANTITY ESCALATION FACTOR				\$ -
<b>TOTAL INCLUDING MATERIALS, ENGINEERING, INSPECTION AND CONTINGENCY</b>				<b>\$ 954,688</b>

\*\*\*Estimates rounded up to nearest \$50,000 for reporting purposes.



**ESTIMATED CONSTRUCTION COST  
SOUTH LAMAR TRANSPORTATION IMPROVEMENT PROGRAM  
CITY OF AUSTIN TRANSPORTATION DEPARTMENT  
ADDITIONAL SHORT/MID/LONG-TERM IMPROVEMENTS**

**PROJECT NAME:** SOUTH LAMAR TRANSPORTATION IMPROVEMENTS  
**PROJECT LIMITS:** FROM RIVERSIDE DR TO PANTHER TRAIL  
**DESCRIPTION:** Construct bicycle path connection underpass beneath UPRR from Treadwell St to West Bouldin Creek Greenbelt and S 6th St

SHEET C

ITEM DESCRIPTION	UNIT	QTY	UNIT COST	COST
Bikeway, Lighting, Walls, landscaping				\$ 1,300,000
UPRR Railroad bridge for bikeway underpass (accelerated construction)				\$ 1,200,000
SUBTOTAL MATERIAL ITEMS				\$ 2,500,000
ENGINEERING			15%	\$ 375,000
CONSTRUCTION ENGR & INSPECTION			7%	\$ 175,000
CONTINGENCY			10%	\$ 250,000
SUBTOTAL				\$ 3,300,000
UPRR Work - flaggers, etc				\$ 150,000
<b>TOTAL INCLUDING MATERIALS, ENGINEERING, INSPECTION AND CONTINGENCY</b>				<b>\$ 3,450,000</b>

\*\*\*Estimates rounded up to nearest \$50,000 for reporting purposes.

Notes:

1. Construction cost data taken from Engineer's Estimate or the COA Bowie St UPRR Underpass with some of the costs removed (lighting, walls, etc specific to that project).
2. UPRR bridge costs assumes precast abutments and accelerated construction during work window i.e. no shoofly

**ESTIMATED CONSTRUCTION COST  
SOUTH LAMAR TRANSPORTATION IMPROVEMENT PROGRAM  
CITY OF AUSTIN TRANSPORTATION DEPARTMENT  
ADDITIONAL SHORT/MID/LONG-TERM IMPROVEMENTS**

**PROJECT NAME:** SOUTH LAMAR TRANSPORTATION IMPROVEMENTS  
**PROJECT LIMITS:** FROM RIVERSIDE DR TO PANTHER TRAIL  
**DESCRIPTION:** 1) South Lamar at Hether St/Mary St - Prohibit left-turn movement at St Mary St approach  
 2) South Lamar at Hether St. Mary St - Close NB "ramp" from South Lamar to St Mary St  
 3) Mary St at Evergreen Ave - Construct roundabout

SHEET D.1

Pavement Area (SY) =

ITEM D.1 - South Lamar at Hether St/Mary St - Prohibit left-turn movement at St Mary St approach

ITEM DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
<b>PREP ROW, EARTHWORK &amp; REMOVALS</b>				
PREPARING ROW	STA	2	\$ 250.00	\$ 500
REMOVING CONC (DRIVEWAYS)	SY	0	\$ 10.00	\$ -
REMOVING CONC (SIDEWALKS)	SY	170	\$ 10.00	\$ 1,700
REMOVING CONC (CURB AND GUTTER)	LF	250	\$ 5.00	\$ 1,250
REMOVING CONC (WHEELCHAIR RAMP)	SY	0	\$ 30.00	\$ -
REMOVING CONC (RETAINING WALLS)	LS	0	\$ 2,000.00	\$ -
REMOVE STAB BASE AND ASPH PAV (6"-20")	SY	390	\$ 9.00	\$ 3,510
EXCAVATION ROADWAY	CY	0	\$ 6.00	\$ -
REMOVE EXIST INLET	EA	0	\$ 1,000.00	\$ -
<b>PAVEMENT</b>				
FL BS (CMP IN PLC)(TY A GR 5)(FNAL POS)	CY	130	\$ 50.00	\$ 6,500
PRIME COAT (MC-30)	GAL	80	\$ 4.50	\$ 360
D-GR HMA(SQ) TY-C PG64-22	TON	180	\$ 100.00	\$ 18,000
D-GR HMA(SQ) TY-D SAC-B PG70-22	TON	90	\$ 110.00	\$ 9,900
<b>DRAINAGE</b>				
RIPRAP (CONC)(5 IN)	CY	0	\$ 550.00	\$ -
RC PIPE (CL III)(24 IN)	LF	0	\$ 65.00	\$ -
(COMPL)(PCO)(5FT)(LEFT)	EA	0	\$ 4,700.00	\$ -
<b>MISCELLANEOUS CONSTRUCTION</b>				
BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	3	\$ 1,500.00	\$ 4,500
CONC CURB & GUTTER (TY II)	LF	250	\$ 20.00	\$ 5,000
DRIVEWAYS (CONC)	SY	0	\$ 75.00	\$ -
CONC SIDEWALKS (5")	SY	0	\$ 50.00	\$ -
CURB RAMP (TY 1)	EA	0	\$ 1,500.00	\$ -
CONC MEDIAN	SY	90	\$ 50.00	\$ 4,500
MBGF	LF	0	\$ -	\$ -
SGT/TAS	EA	0	\$ -	\$ -
RETAINING WALLS	SF	0	\$ 50.00	\$ -
TEMP EROSION CONTROL, SWPPP, AND PERM SEED/SOD	LS	1	5%	\$ 2,786
BUS PAD/BUS STOP REMOVE AND REPLACE	LS	0	\$ 50,000.00	\$ -
<b>TRAFFIC ITEMS</b>				
IN SM RD SN SUP&AM TY10BWG(1)SA(P)	EA	2	\$ 550.00	\$ 1,100
PAVEMENT MARKINGS	LS	1	\$ 3,000.00	\$ 3,000
TRAFFIC SIGNAL	LS	1	\$ 250,000.00	\$ 250,000
MOBILIZATION	LS	1	10%	\$ 31,261
<b>SUBTOTAL MATERIAL ITEMS D.1</b>				<b>\$ 343,867</b>

**ESTIMATED CONSTRUCTION COST  
SOUTH LAMAR TRANSPORTATION IMPROVEMENT PROGRAM  
CITY OF AUSTIN TRANSPORTATION DEPARTMENT  
ADDITIONAL SHORT/MID/LONG-TERM IMPROVEMENTS**

SHEET D.2

2) ITEM D.2 - South Lamar at Hether St. Mary St - Close NB "ramp" from South Lamar to St Mary St				
PREPARING ROW	STA	2	\$ 250.00	\$ 500
REMOVING CONC (CURB AND GUTTER)	LF	50	\$ 5.00	\$ 250
REMOVE STAB BASE AND ASPH PAV (6"-20")	SY	120	\$ 9.00	\$ 1,080
BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	2	\$ 1,500.00	\$ 3,000
CONC CURB & GUTTER (TY II)	LF	160	\$ 20.00	\$ 3,200
CONC MEDIAN	SY	120	\$ 50.00	\$ 6,000
TEMP EROSION CONTROL, SWPPP, AND PERM SEED/SOD	LS	1	5%	\$ 702
IN SM RD SN SUP&AM TY10BWG(1)SA(P)	EA	2	\$ 550.00	\$ 1,100
PAVEMENT MARKINGS	LS	1	\$ 2,000.00	\$ 2,000
MOBILIZATION	LS	1	10%	\$ 1,783
<b>SUBTOTAL MATERIAL ITEMS D.2</b>				<b>\$ 19,615</b>

SHEET D.3

<b>Item D.3 - Round About- W Mary St at Evergreen</b>				<b>\$ 500,000.00</b>
Includes:				
Pav't reconstruction/add'l pavt				
Raised/ Directional Islands				
Retaining wall				
Curb and Gutter				
Relocate Fire Hydrant				
<b>SUBTOTAL ITEMS D.1, D.2.,AND D.3</b>				<b>\$ 863,481</b>
ENGINEERING			15%	\$ 129,522.19
CONSTRUCTION ENGR & INSPECTION			7%	\$ 60,443.69
CONTINGENCY			10%	\$ 86,348.13
<b>TOTAL INCLUDING MATERIALS, ENGINEERING, INSPECTION AND CONTINGENCY</b>				<b>\$ 1,139,795</b>

\*\*\*Estimates rounded up to nearest \$50,000 for reporting purposes.

**ESTIMATED CONSTRUCTION COST  
SOUTH LAMAR TRANSPORTATION IMPROVEMENT PROGRAM  
CITY OF AUSTIN TRANSPORTATION DEPARTMENT  
ADDITIONAL SHORT/MID/LONG-TERM IMPROVEMENTS**

**PROJECT NAME:** SOUTH LAMAR TRANSPORTATION IMPROVEMENTS  
**PROJECT LIMITS:** FROM RIVERSIDE DR TO PANTHER TRAIL

**DESCRIPTION:**  
 1) South Lamar at Del Curto Rd - Install new traffic signal  
 2) South Lamar at Bluebonnet - Prohibit left-turn movement at WB Bluebonnet Ln approach  
 3) Del Curto Rd at Bluebonnet - Construct roundabout

SHEET E

ITEM E.1 - South Lamar at Del Curto Rd - Install new traffic signal	LS	1	\$ 250,000.00	\$ 250,000
ITEM E.2 - Prohibit left-turn movement at WB Bluebonnet Ln approach Note: Signal Cost is included here and also for Bus Queue Jump Estimate (Sheet A)	LS	1	\$ 343,867	\$ 343,867
ITEM E.3 - Del Curto Rd at Bluebonnet - Construct roundabout	LS	1	\$ 500,000.00	\$ 500,000
<b>SUBTOTAL ITEMS E.1, E.2.,AND E.3</b>				<b>\$ 1,093,867</b>
ENGINEERING			15%	\$ 164,079.99
CONSTRUCTION ENGR & INSPECTION			7%	\$ 76,570.66
CONTINGENCY			10%	\$ 109,386.66
<b>TOTAL INCLUDING MATERIALS, ENGINEERING, INSPECTION AND CONTINGENCY</b>				<b>\$ 1,443,904</b>

\*\*\*Estimates rounded up to nearest \$50,000 for reporting purposes.

**ESTIMATED CONSTRUCTION COST  
SOUTH LAMAR TRANSPORTATION IMPROVEMENT PROGRAM  
CITY OF AUSTIN TRANSPORTATION DEPARTMENT  
ADDITIONAL SHORT/MID/LONG-TERM IMPROVEMENTS**

**PROJECT NAME:** SOUTH LAMAR TRANSPORTATION IMPROVEMENTS  
**PROJECT LIMITS:** FROM RIVERSIDE DR TO PANTHER TRAIL  
**DESCRIPTION:** South Lamar at Barton Skyway (Lightsey Rd) - Construct NB right-turn bay

SHEET F

Pavement Area (SY) =	400
Project Length (LF) =	300

ITEM DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
<b>PREP ROW, EARTHWORK &amp; REMOVALS</b>				
PREPARING ROW	STA	3	\$ 250.00	\$ 750
REMOVING CONC (DRIVEWAYS)	SY	90	\$ 10.00	\$ 900
REMOVING CONC (SIDEWALKS)	SY	170	\$ 10.00	\$ 1,700
REMOVING CONC (CURB AND GUTTER)	LF	300	\$ 5.00	\$ 1,500
REMOVING CONC (WHEELCHAIR RAMP)	SY	2	\$ 30.00	\$ 60
REMOVE STAB BASE AND ASPH PAV (6"-20")	SY	400	\$ 9.00	\$ 3,600
EXCAVATION ROADWAY	CY	140	\$ 6.00	\$ 840
<b>PAVEMENT</b>				
FL BS (CMP IN PLC)(TY A GR 5)(FNAL POS)	CY	140	\$ 50.00	\$ 7,000
PRIME COAT (MC-30)	GAL	80	\$ 4.50	\$ 360
D-GR HMA(SQ) TY-C PG64-22	TON	180	\$ 100.00	\$ 18,000
D-GR HMA(SQ) TY-D SAC-B PG70-22	TON	90	\$ 110.00	\$ 9,900
<b>DRAINAGE</b>				
RIPRAP (CONC)(5 IN)	CY	0	\$ 550.00	\$ -
enter drainage items and unit cost	LF	0	\$ 200.00	\$ -
enter drainage items and unit cost	EA	0	\$ 5,600.00	\$ -
RC PIPE (CL III)(24 IN)	LF	0	\$ 65.00	\$ -
(COMPL)(PCO)(5FT)(LEFT)	EA	0	\$ 4,700.00	\$ -
<b>MISCELLANEOUS CONSTRUCTION</b>				
BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	3	\$ 1,500.00	\$ 4,500
CONC CURB & GUTTER (TY II)	LF	300	\$ 20.00	\$ 6,000
DRIVEWAYS (CONC)	SY	90	\$ 75.00	\$ 6,750
CONC SIDEWALKS (5")	SY	120	\$ 50.00	\$ 6,000
CURB RAMP (TY 1)	EA	2	\$ 1,500.00	\$ 3,000
CONC MEDIAN	SY	0	\$ 50.00	\$ -
MBGF	LF			\$ -
SGT/TAS	EA			\$ -
RETAINING WALLS	SF	0	\$ 50.00	\$ -
TEMP EROSION CONTROL, SWPPP, AND PERM SEED/SOD	LS	1	5%	\$ 3,543
<b>TRAFFIC ITEMS</b>				
IN SM RD SN SUP&AM TY10BWG(1)SA(P)	EA	2	\$ 550.00	\$ 1,100
PAVEMENT MARKINGS	LS	1	\$ 3,000.00	\$ 3,000
TRAFFIC SIGNAL MOD'S- SOUTH LAMAR AT BARTON SKYWAY	LS	1	\$ 100,000.00	\$ 100,000
MOBILIZATION	LS	1	10%	\$ 17,850
SUBTOTAL MATERIAL ITEMS				\$ 196,353
ENGINEERING			15%	\$ 29,453
CONSTRUCTION ENGR & INSPECTION			7%	\$ 13,745
CONTINGENCY			10%	\$ 19,635
SUBTOTAL				\$ 259,186
SMALL QUANTITY ESCALATION FACTOR				\$ -
<b>TOTAL INCLUDING MATERIALS, ENGINEERING, INSPECTION AND CONTINGENCY</b>				<b>\$ 259,186</b>

CITY OF AUSTIN CORRIDOR IMPROVEMENT STUDY  
 TYPICAL SECTION DESIGNATION AND DIMENSIONS

LINE NO.	DESIGNATION	DESCRIPTION	ROW WIDTH (FT)	AVERAGE PAVEMENT WIDTH (FT)	SIDEWALK/ SHARED PATH WIDTH LEFT (FT)	SIDEWALK/ SHARED PATH WIDTH RIGHT (FT)	TOTAL SIDEWALK/ SHARED PATH WIDTH (FT)	NEW CYCLE TRACK WIDTH LEFT (FT)	NEW CYCLE TRACK WIDTH RIGHT (FT)	NEW TOTAL CYCLE TRACK WIDTH (FT)	CONTINUOUS ILLUMINATION (EA LINE)	SIDEWALK ILLUMINATION (EA LINE)	CURB/GUTTER CURB WIDTH (EA)	RAISED/PAVED PARKING BARRIER WIDTH (BOTH SIDES) (FT)	COMBINATION ILLUMINATION (EA LINE)		
30	SOLA-NORTH	SOUTH LAMAR TYPICAL SECTION RIVERSIDE TO BARTON SPRINGS	100	60	9	9	18	10	10	20	0	0	8	4	2		
31	SOLA-SOUTH	SOUTH LAMAR BARTON SPRINGS TO PANTHER TRAIL	100	42	9	9	18	7	7	14	0	0	8	4	2		
COL #-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

COST ESTIMATE TEMPLATE  
 UNIT COST DATA  
 USING TXDOT 2014 SPECIFICATION ITEMS  
 USING CITY OF AUSTIN CURRENT PAY ITEMS

DATA YEAR:	2015
UNIT PRICES UPDATED BY:	FULTON
UNIT PRICES UPDATED ON:	7/1/2015

TXDOT ITEM	COA ITEM		UOM	UNIT COST	NOTES
100	101	PREPARING ROW & REMOVALS	STA	\$ 1,000.00	
105		REMOVING STAB BASE & ASPH PAV	SY	\$ 7.00	USING TYPICAL DEPTH OF PAV/BASE
110	110	EXCAVATION	CY	\$ 9.00	
132	132	EMBANKMENT	CY	\$ 15.00	
169	605	SOIL RETENTION BLANKET	SY	\$ 1.00	
247	210	FLEXIBLE BASE	CY	\$ 50.00	
260	277	LIME	TON	\$ 150.00	
260	277	LIME TREATED SUBGRADE	SY	\$ 3.50	
310		PRIME	GAL	\$ 4.50	
316		ASPHALT	GAL	\$ 4.50	OIL USED FOR ONE COURSE SURFACE TREATMENT/UNDERSEAL
316		AGGREGATE	CY	\$ 80.00	AGGREGATE USED FOR ONE COURSE SURFACE TREATMENT/UNDERSEAL
341	340	HMAC BASE COURSES	TON	\$ 80.00	USE FOR BASE COURSE ON LARGER PROJECTS
341	340	HMAC SURFACE COURSE	TON	\$ 110.00	USE FOR SURFACE COURSE ON LARGER PROJECTS
360	360	CONCRETE PAVEMENT-8-10 INCHES CPCD	SY	\$ 65.00	
360	360	CONCRETE PAVEMENT-10-12 INCHES CPCD	SY	\$ 75.00	
4XX	403	BRIDGE UNIT COST PER SF OF DECK	SF	\$ 75.00	<a href="http://www.txdot.gov/inside-txdot/division/bridge/unit-cost.html">http://www.txdot.gov/inside-txdot/division/bridge/unit-cost.html</a>
4XX	559	BOX CULVERT UNIT COST PER SF OF CULVERT (IN PLAN)	SF	\$ 100.00	USE FOR CROSS DRAINAGE STRUCTURES
502	803	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	\$ 4,000.00	
528		LANDSCAPE PAVERS	SY	\$ 54.00	ASSUME LANDSCAPE PAVERS FOR RAISED BUFFER STRIPS
529	430	CONCRETE CURB AND GUTTER	LF	\$ 20.00	
530		CONCRETE DRIVEWAYS (URBAN RECONSTRUCTION PROJECTS)	LS/MI	\$ 400,000.00	DATA TAKEN FROM BURNET/LAMAR CORRIDOR STUDIES COST ESTIMATE
531	432	CONCRETE SIDEWALKS	SY	\$ 54.00	
680		TRAFFIC SIGNAL PER INTERSECTION	EA	\$250,000.00	TOTAL COST PER INTERSECTION
680		HYBRID PEDESTRIAN BEACON	EA	\$ 80,000.00	
423		RETAINING WALL (MSE)(ASHLAR STONE FIN)	SF	\$ 45.00	
423	414	RETAINING WALL (CIP)	SF	\$ 75.00	
423	180000	RETAINING WALL (BLOCK)	SF	\$ 40.00	
		SAFETY ALLOWANCE	LS/MI	\$ 10,000.00	INCLUDES ADD'L TCP ITEMS AND FORCE ACCOUNT ITEMS
		BUS PAD IMPROVEMENTS	LS/MI	\$ 50,000.00	DATA TAKEN FROM BURNET/LAMAR CORRIDOR STUDIES COST ESTIMATE
		IRRIGATION	LS/MI	\$ 75,000.00	INCLUDES METER AT 2,000 SPACING AT \$6,000 PER
		MEDIAN IMPROVEMENTS - TREES, SOD & TREE GRATES	LS/MI	\$ 300,000	AVERAGE FROM BURNET/LAMAR AND FM 969/MLK CORRIDOR STUDIES
		SIGNING & STRIPING AVG COST PER MILE	LS/MI	\$ 50,000	

DIRECTIONS FOR THIS WORKSHEET:

ENTER REVISED UNIT PRICING IN THE BLUE BOXES

UNIT COSTS ARE BASED ON YEAR SHOWN AT TOP OF WORKSHEET; ADJUSTMENT TO YEAR OF EXPENDITURE (YOE) WILL BE MADE ON INDIVIDUAL ESTIMATES

UPDATE UNIT COSTS PERIODICALLY: TXDOT 12 MONTH AVERAGES ARE HERE:

<http://www.txdot.gov/business/letting-bids/average-low-bid-unit-prices.html>

ESTIMATED UNIT COSTS ARE BASED ON 12 MONTH TRAILING AVERAGES FOR 2004 SPECIFICATIONS; NEED TO UPDATE WHEN 2014 SPECIFICATION DATA IS AVAILABLE

SPREADSHEET IS NOT INTENDED TO COVER ALL UNIT PRICES; INCLUDES ONLY MAJOR ITEMS

LATEST BRIDGE UNIT COST TABLE IS [FISCAL YEAR 2013](#)

**COST ESTIMATE TEMPLATE  
ADDITIONAL COST TABLE**

PERCENTAGES SHOWN SHALL BE APPLIED TO THE TOTAL ESTIMATED CONSTRUCTION COST OF OTHER ITEMS.

PROJECT TYPE	1. PERCENTAGE APPLIED TO CONSTRUCTION DOLLARS BEFORE OTHER ITEMS					2. PERCENTAGE APPLIED TO ALL ITEMS EXCEPT CONTINGENCIES	3. PERCENTAGE APPLIED AFTER ALL OTHERS		
		TEMP AND PERMANENT EROSION CONTROL		PEDESTRIAN PAVERS, RAISED PLANTERS AND GATEWAY ELEMENTS	PUBLIC ART (CITY OF AUSTIN PROJECTS)	MOBILIZATION	ENGINEERING AND CONSTRUCTION CONTINGENCIES		
		TEMP BMP'S SEEDING, SODDING AND WATERING	PERM BMP'S AND WQ				ENGINEERING	CONSTRUCTION	CE&I
RESIDENTIAL		5%	3%	0%	0%	10%	15%	10%	10%
RURAL NEW ALIGNMENT		3%	3%	0%	0%	10%	12%	7%	10%
RURAL RECONSTRUCTION		3%	3%	0%	0%	10%	12%	10%	10%
URBAN NEW ALIGNMENT		3%	3%	5%	2%	10%	15%	10%	10%
URBAN RECONSTRUCTION		3%	3%	5%	2%	10%	15%	15%	10%
PEDESTRIAN IMPROVEMENTS ONLY		2%	3%	4%	2%	10%	12%	8%	10%
NEW PROJECT TYPE 1		3%	3%	5%		10%	15%	15%	10%
NEW PROJECT TYPE 2		3%	3%	5%		10%	15%	15%	10%
COLUMN # --->	2	3	4	5	6	7	8	9	10

*This estimate represents our engineering judgment as professionals knowledgeable with the construction of similar projects. This estimate is for planning and programming purposes only and does not guarantee what actual construction costs will be.*



COST ESTIMATE TEMPLATE  
DRAINAGE CALCULATION

ROW	DRAINAGE QUANTITY AND COST PER MILE	RESIDENTIAL				URBAN 2-3 LANES				URBAN 4-5 LANES				RURAL 2-3 LANES				RURAL 4-5 LANES					
		QTY	UNIT COST	TOTAL COST	COST/MILE	QTY	UNIT COST	TOTAL COST	COST/MILE	QTY	UNIT COST	TOTAL COST	COST/MILE	QTY	UNIT COST	TOTAL COST	COST/MILE	QTY	UNIT COST	TOTAL COST	COST/MILE		
3	RESIDENTIAL																						
4	2 INLETS AT 300 FT SPACING	2	\$	4,000 \$	8,000 \$																		
5	10' 24 INCH REP LATERAL AT 300 FT SPACING	40	\$	75 \$	3,000 \$																		
6	24 INCH TRUNK LINE	2640	\$	100 \$	264,000 \$	264,000 \$	264,000 \$																
7																							
8																							
9																							
10	URBAN 2-3 LANES																						
11	2 INLETS AT 300 FT SPACING	2	\$	4,000 \$	8,000 \$																		
12	10' 24 INCH REP LATERAL AT 300 FT SPACING	40	\$	75 \$	3,000 \$																		
13	24 INCH TRUNK LINE	3360	\$	150 \$	504,000 \$	504,000 \$	504,000 \$																
14																							
15																							
16																							
17																							
18	URBAN 4-5 LANES																						
19	2 INLETS AT 300 FT SPACING	2	\$	4,000 \$	8,000 \$																		
20	10' 24 INCH REP LATERAL AT 300 FT SPACING	20	\$	75 \$	1,500 \$																		
21	24 INCH TRUNK LINE FOR ONE-QUARTER OF THE LENGTH	840	\$	125 \$	105,000 \$																		
22	18 INCH TRUNK LINE FOR ONE-QUARTER OF THE LENGTH	840	\$	175 \$	147,000 \$																		
23	18 INCH TRUNK LINE FOR ONE-QUARTER OF THE LENGTH	840	\$	400 \$	336,000 \$																		
24																							
25																							
26																							
27	RURAL 2-3 LANES																						
28	1 BRIDGE CLASS CULVERT PER MILE													140	\$	500 \$	70,000 \$	77,000 \$					
29	VERTICAL CURB/RAMP													2	\$	20,000 \$	40,000 \$	40,000 \$					
30	18" CROSS CULVERT AT 2,000 FT SPACING													70	\$	100 \$	7,000 \$	10,000 \$					
31	2 SET AT 2,000 FT SPACING													2	\$	2,000 \$	4,000 \$	14,000 \$					
32	DRIVEWAY CULVERTS AT 1,500 FT SPACING													30	\$	75 \$	2,250 \$	5,000 \$					
33	2 SET AT 1,500 FT SPACING													2	\$	2,000 \$	4,000 \$	15,000 \$					
34																							
35																							
36																							
37	RURAL 4-5 LANES																						
38	1 BRIDGE CLASS CULVERT PER MILE																		200	\$	500 \$	110,000 \$	110,000 \$
39	VERTICAL CURB/RAMP																		7	\$	20,000 \$	40,000 \$	40,000 \$
40	18" CROSS CULVERT AT 2,000 FT SPACING																		100	\$	100 \$	10,000 \$	17,000 \$
41	2 SET AT 2,000 FT SPACING																		2	\$	2,000 \$	4,000 \$	14,000 \$
42	DRIVEWAY CULVERTS AT 1,500 FT SPACING																		30	\$	75 \$	2,250 \$	8,000 \$
43	2 SET AT 1,500 FT SPACING																		2	\$	2,000 \$	4,000 \$	15,000 \$
44																							
45	SUBTOTAL			\$	458,000.00	\$	854,000.00	\$	1,322,000.00	\$	173,000.00	\$	214,000.00										
46	CONTINGENCY (10% DRG)			\$	45,800.00	\$	85,400.00	\$	132,200.00	\$	17,300.00	\$	21,400.00										
47	TOTAL ESTIMATED DRAINAGE COST PER MILE			\$	503,800.00	\$	939,400.00	\$	1,454,200.00	\$	190,300.00	\$	235,400.00										

This estimate represents our engineering judgment as professional knowledgeable with the construction of similar projects. This estimate is for planning and programming purposes only and does not guarantee what actual construction costs will be.

**COST ESTIMATE TEMPLATE  
EARTHWORK CALCULATION**

ROW NO.	I. EXCAVATION AND EMBANKMENT QUANTITY PER MILE	PROJECT TYPE								
		RESIDENTIAL	RURAL NEW ALIGNMENT	RURAL RECONSTRUCTION	URBAN NEW ALIGNMENT	URBAN RECONSTRUCTION	PEDESTRIAN IMPROVEMENTS ONLY	NEW PROJECT TYPE 1	NEW PROJECT TYPE 2	
2	EXCAVATION									
3	ASSUMED AVERAGE ROW WIDTH (FT)	60	100	100	125	125	100	20	100	
4	ASSUMED AVERAGE EXCAVATION DEPTH (FT)	1	1	1	2	2	1	1	3	
5	AVERAGE EXCAVATION PER MILE (CY)	11,800	19,600	19,600	48,900	48,900	19,600	4,000	58,700	
6										
7										
8	EMBANKMENT									
9	ASSUMED AVERAGE ROW WIDTH (FT)	60	100	100	125	125	100	20	100	
10	ASSUMED AVERAGE EMBANKMENT HEIGHT (FT)	0	1	1	1	0.5	0.5	1	5	
11	AVERAGE EMBANKMENT PER MILE (CY)	-	19,600	19,600	24,500	12,300	9,800	4,000	97,800	

This estimate represents our engineering judgment as professionals knowledgeable with the construction of similar projects. This estimate is for planning and programming purposes only and does not guarantee what actual construction costs will be.

**COST ESTIMATE TEMPLATE**  
**CALCULATION OF HMAC PAVT UNIT COST PER SY YD - FULL RECONSTRUCTION**

	PAVEMENT TYPE					
	RESIDENTIAL (and Alleys)	CYCLE TRACK PAVT (New pav't)	URBAN ARTERIAL	URBAN MINOR	RURAL ARTERIAL	RURAL MINOR
1 <b>II. PAVEMENT THICKNESS INPUT</b>						
2						
3 HMAC SURFACE COURSE (INCHES)	2	2	2	2	2	2
4 HMAC BASE COURSE(S) (INCHES)	2	4	8	6	4	2
5 OCST (1 IS YES AND 0 IF NO)	0	0	0	0	0	0
6 PRIME (1 IF YES AND 0 IF NO)	1	1	1	1	1	1
7 FLEXIBLE BASE (INCHES)	8	8	12	8	12	12
8 LIME TREATED SUBGRADE (INCHES)	8	0	8	0	8	0
9						
10 <b>III. QUANTITY CALCULATIONS PER SY</b>						
11						
12 HMAC SURFACE COURSE (TON)	0.1100	0.1100	0.1100	0.1100	0.1100	0.1100
13 HMAC BASE COURSE(S) (TON)	0.110	0.220	0.440	0.330	0.220	0.110
14 OCST (ASPH) (GAL)	0.000	0.000	0.000	0.000	0.000	0.000
15 OCST (AGGR) (CY)	0.000	0.000	0.000	0.000	0.000	0.000
16 PRIME (GAL)	0.200	0.200	0.200	0.200	0.200	0.200
17 FLEXIBLE BASE (CY)	0.222	0.222	0.333	0.222	0.333	0.333
18 LIME (TON)	0.020	0.000	0.020	0.000	0.020	0.000
19 LIME TREATED SUBGRADE (SY)	1	0	1	0	1	0

BASIS OF ESTIMATE		
PAVEMENT ITEMS		
HMAC	110	LBS/SY/IN
OCST (ASPH)	0.4	GAL/SY
OCST (AGGR)	0.0080	125 SY/CY
PRIME	0.2	GAL/SY
LIME (6%)	5	LBS/SY/IN

<b>III. UNIT COST CALCULATION</b>												
23 HMAC SURFACE COURSE	\$	12.10	\$	12.10	\$	12.10	\$	12.10	\$	12.10	\$	12.10
24 HMAC BASE COURSE(S)	\$	8.80	\$	17.60	\$	35.20	\$	26.40	\$	17.60	\$	8.80
25 OCST (ASPH)	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
26 OCST (AGGR)	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
27 PRIME	\$	0.900	\$	0.900	\$	0.900	\$	0.900	\$	0.900	\$	0.900
28 FLEXIBLE BASE	\$	11.111	\$	11.111	\$	16.667	\$	11.111	\$	16.667	\$	16.667
29 LIME	\$	3.00	\$	-	\$	3.00	\$	-	\$	3.00	\$	-
30 LIME TREATED SUBGRADE	\$	3.50	\$	-	\$	3.50	\$	-	\$	3.50	\$	-
31 <b>TOTAL UNIT COST PER SY</b>	\$	<b>39.41</b>	\$	<b>41.71</b>	\$	<b>71.37</b>	\$	<b>50.51</b>	\$	<b>53.77</b>	\$	<b>38.47</b>

<b>COST ESTIMATE TEMPLATE</b>													
<b>CALCULATION OF MILL AND OVERLAY UNIT COST PER SY YD</b>													
<b>UOM</b>													
36 PLANE ASPH CONC PAV (0" TO 2")	\$	3.00	\$	3.00	\$	3.00	\$	3.00	\$	2.50	\$	2.50	\$/SY
37 JT/CRCR SEAL (RUBBER-ASPHALT)	\$	1,500.00	\$	1,500.00	\$	1,500.00	\$	1,500.00	\$	1,500.00	\$	1,500.00	\$/MI
38	\$	0.21	\$	0.21	\$	0.21	\$	0.21	\$	0.21	\$	0.21	\$/SY
39 2" HMAC TY C										0.11		0.11	TONS/SY
40										100.00		100.00	S/TON
41										<b>11.00</b>		<b>11.00</b>	\$/SY
42 2" HMAC TY D		0.11		0.11		0.11		0.11					TON/SY
43	\$	110.00	\$	110.00	\$	110.00	\$	110.00					S/TON
44	\$	<b>12.10</b>	\$	<b>12.10</b>	\$	<b>12.10</b>	\$	<b>12.10</b>					\$/SY
45 <b>TOTAL UNIT COST PER SY</b>	\$	<b>15.31</b>	\$	<b>15.31</b>	\$	<b>15.31</b>	\$	<b>15.31</b>	\$	<b>13.71</b>	\$	<b>13.71</b>	\$/SY

This estimate represents our engineering judgment as professionals knowledgeable with the construction of similar projects. This estimate is for planning and programming purposes only and does not guarantee what actual construction costs will be.  
 Pavement designs represented are typical for the classifications listed, and are not to be used for construction.

COST ESTIMATE TEMPLATE  
ILLUMINATION CALCULATION

**I. TYPICAL CONTINUOUS LIGHTING- COBRA HEADS AT 200 FT SPACING**

ASSUME 2,000 SECTION OF ROADWAY

TxDOT Item	CoA Item	ITEM	QTY	UOM	UNIT COST	TOTAL COST
		ILLUMINATION POLE	10	EA	\$ 3,500.00	\$ 35,000
		30" DRILL SHAFT AT 15 LF EA	300	LF	\$ 175.00	\$ 52,500
		2" PVC	2000	LF	\$ 9.00	\$ 18,000
		4" PVC TO POWER	200	LF	\$ 15.00	\$ 3,000
		NO. 8 CONDUCTOR INSULATED	4400	LF	\$ 1.50	\$ 6,600
		NO. 8 BARE	2200	LF	\$ 1.00	\$ 2,200
		POWER SOURCE; 1 PER 2,000 LF	1	EA	\$ 5,000.00	\$ 5,000
		GROUND BOXES W/APRON	10	EA	\$ 600.00	\$ 6,000
		SUBTOTAL			\$	128,300
		CONTINGENCY	0%		\$	-
		TOTAL COST PER 2,000 FT SECTION			\$	128,300
<b>TOTAL COST PER MILE PER SIDE</b>						<b>\$ 339,000.00</b>

**II. DECORATIVE LIGHTING- CITY POLES FOR SIDEWALK LIGHTING 200 FT SPACING**

ASSUME 2,000 SECTION OF ROADWAY & SEPARATE DECORATIVE POLES

ITEM	QTY	UOM	UNIT COST	TOTAL COST
1655 ILLUMINATION POLE	10	EA	\$ 2,000.00	\$ 20,000
DRILL SHAFT	10	EA	\$ 2,000.00	\$ 20,000
2" PVC	2000	LF	\$ 9.00	\$ 18,000
4" PVC TO POWER	200	LF	\$ 15.00	\$ 3,000
NO. 8 CONDUCTOR INSULATED	4400	LF	\$ 1.50	\$ 6,600
NO. 8 BARE	2200	LF	\$ 1.00	\$ 2,200
POWER SOURCE; 1 PER 2,000 LF	1	EA	\$ 6,000.00	\$ 6,000
GROUND BOXES	10	EA	\$ 700.00	\$ 7,000
SUBTOTAL			\$	82,800
CONTINGENCY	0%		\$	-
TOTAL COST PER 2,000 FT SECTION			\$	82,800
<b>TOTAL COST PER MILE PER SIDE</b>				<b>\$ 219,000.00</b>

**III. COMBINATION STREET LIGHTING AND DECORATIVE LIGHTING- SOUTH LAMAR CONCEPTS**

ASSUME 2,000 SECTION OF ROADWAY & COMBINATION STREET/DECORATIVE POLES

ITEM	QTY	UOM	UNIT COST	TOTAL COST
1655 ILLUMINATION POLE	10	EA	\$ 2,750.00	\$ 27,500
DRILL SHAFT	10	EA	\$ 2,000.00	\$ 20,000
2" PVC	2000	LF	\$ 9.00	\$ 18,000
4" PVC TO POWER	200	LF	\$ 15.00	\$ 3,000
NO. 8 CONDUCTOR INSULATED	4400	LF	\$ 1.50	\$ 6,600
NO. 8 BARE	2200	LF	\$ 1.00	\$ 2,200
POWER SOURCE; 1 PER 2,000 LF	1	EA	\$ 6,000.00	\$ 6,000
GROUND BOXES	10	EA	\$ 700.00	\$ 7,000
SUBTOTAL			\$	90,300
CONTINGENCY	0%		\$	-
TOTAL COST PER 2,000 FT SECTION			\$	90,300
<b>TOTAL COST PER MILE PER SIDE</b>				<b>\$ 239,000.00</b>

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Item	Description	Unit	No. Units	Unit Cost	Extended Unit Cost	Assumptions
Austin Energy Conversions	Convert overhead power to underground*	LF	1	\$650.00	\$650.00	3-phase circuits on both sides of roadway; combine into single trench; includes design and construction; trench, ductbank, conduits, and manholes
Coaxial Cable	Material Cost	LF	1	\$6.00	\$6.00	1 CATV coaxial cable; common trench; includes labor (used cost for 50-100 pair TUG)
Fiber Optic Cable	Material Cost	LF	1	\$30.00	\$30.00	1 144-strand fiber optic cable; common trench; includes labor
Copper Telephone Cable	Material Cost	LF	3	\$26.00	\$78.00	3 400 - 600 pair TUG; common trench; includes labor
<b>Estimated Construction Cost Per Foot</b>					<b>\$764.00</b>	<b>Does not include ancillary items such as changing services from OH to UG, ground mounted switch gears, or easements</b>
MOBILIZATION		5%			<b>\$38.20</b>	<b>USE LOWER PERCENTAGE FOR JOINT-BID UTILITIES</b>
ENGINEERING AND DESIGN		10%			<b>\$76.40</b>	
CONSTRUCTION CONTIGENCY		5%			<b>\$38.20</b>	<b>USE LOWER PERCENTAGE FOR JOINT-BID UTILITIES</b>
<b>TOTAL UNIT COST FOR AUSTIN ENERGY/COMMUNICATION RELOCATION TO UNDERGROUND</b>					<b>\$916.80</b>	

\* - Cost provided by Austin Energy from their internal planning guide

PER KEVIN FRANCIS, THE REIMBURSABLE COST TO MOVE FRANCHISE UTILITIES IS ONLY THE COST OF MOVING AERIAL TO AERIAL; THE BALANCE OF THE COST TO GO UNDERGROUND WOULD BE PAID BY THE CITY. THE UNACCOUNTED COSTS FOR MOVING AERIAL SERVICES TO UNDERGROUND AND SWITCHGEAR WOULD BE SIGNIFICANT SO NEED TO ADD CONTIGENCY.