

NOTIFICATION OF ADDENDUM

ADDENDUM NO. 2

DATED 7/02/2009

Control	0009-12-073
Project	C 9-12-73
Highway	IH 30
County	ROCKWALL

Ladies/Gentlemen:

Attached please find an addendum on the above captioned project. Included in the attachment is an addendum notification which details the changes and the respective proposal pages which were added and/or changed.

Except for new bid insert pages, it is unnecessary to return any of the pages attached.

Bid insert pages must be returned with the bid proposal submitted to the Department, unless your firm is submitting a bid using a computer print out. The computer print out must be changed to reflect the new bid item information.

Contractors and material suppliers, etc. who have previously been furnished informational proposals are not being furnished a copy of the addendum. If you have a subcontractor on the above project, please advise them of this addendum. Acknowledgment of this addendum is not requested if your company has been issued a proposal stamped "This Proposal Issued for Informational Purposes."

You are required to acknowledge receipt of this addendum on the Addendum Acknowledgement form contained in your bid proposal by placing a mark in the box next to the respective addendum.

Failure to Acknowledge receipt of this addendum in your bid proposal will result in your bid not being read.

SUBJECT: PLANS AND PROPOSAL ADDENDUMS

PROJECT: C 9-12-73

CONTROL: 0009-12-073

COUNTY: ROCKWALL

LETTING: 07/07/2009

REFERENCE NO: 0702

PROPOSAL ADDENDUMS

_ PROPOSAL COVER

X BID INSERTS (SH. NO.: 1-18, 3-18 thru 7-18, 10-18)

X GENERAL NOTES (SH. NO.: S)

_ SPEC LIST (SH. NO.:)

_ SPECIAL PROVISIONS:)

ADDED:

DELETED:

_ SPECIAL SPECIFICATIONS:

ADDED:

DELETED:

X OTHER: See changes outlined below.

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

Bid Inserts:

Sheet 1-18: Item 110-2001 changed quantity from 109057 to 113753.
Item 132-2006 changed quantity from 102699 to 119647.
Item 132-2026 changed quantity from 30993 to 59444.

Sheet 3-18: Item 400-2006 is removed.

Sheet 4-18: Item 416-2037 is changed to item 416-2034.

Item 423-2001 changed quantity from 48741 to 58186.

Item 420-2006 is added with a quantity of 9.4 Cy.

Sheet 5-18: Item 450-2130 is removed.

Item 432-2040 is added with a quantity of 7.31 Cy.

Item 450-2088 is added with a quantity of 50 Lf.

Sheet 6-18: Item 466-2034 is removed.

Sheet 7-18: Item 466-2036 changed quantity from 1 to 2.

Sheet 10-18: Item 618-2034 changed quantity from 2835 to 3235.

Item 618-2040 changed quantity from 235 to 635.

General Notes:

Sheet S: Added note to item 450 and 440.

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

(CONTINUED)

Plan Sheets:

The following sheets have been replaced:

9, 10, 11, 12, 13, 14, 15I, 16, 16A - 16C, 17, 20, 21, 24, 29,
182, 186, 187, 191, 196, 201, 207.

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	100	2002	002	PREPARING ROW DOLLARS and CENTS	STA	59.000	1
	104	2001		REMOVING CONC (PAV) DOLLARS and CENTS	SY	36,483.000	2
	104	2017		REMOVING CONC (DRIVEWAYS) DOLLARS and CENTS	SY	1,947.000	3
	104	2022		REMOVING CONC (CURB AND GUTTER) DOLLARS and CENTS	LF	358.000	4
	105	2039		REMOVE STAB BASE AND ASPH PAV (6"-20") DOLLARS and CENTS	SY	63,696.000	5
	110	2001		EXCAVATION (ROADWAY) DOLLARS and CENTS	CY	113,753.000	6
	110	2002		EXCAVATION (CHANNEL) DOLLARS and CENTS	CY	58.000	7
	132	2006	001	EMBANKMENT (FINAL)(DENS CONT)(TY C) DOLLARS and CENTS	CY	119,647.000	8
	132	2026	001	EMBANKMENT (FINAL) (DENS CONT) (TY C2) DOLLARS and CENTS	CY	59,444.000	9
	161	2002	001	COMPOST MANUF TOPSOIL (BOS) (4") DOLLARS and CENTS	SY	71,162.000	10

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	164	2007	002	BROADCAST SEED (PERM) (URBAN) (CLAY) DOLLARS and CENTS	SY	71,162.000	11
	164	2029	002	CELL FBR MLCH SEED(TEMP)(WARM) DOLLARS and CENTS	SY	48,060.000	12
	164	2031	002	CELL FBR MLCH SEED(TEMP)(COOL) DOLLARS and CENTS	SY	48,060.000	13
	168	2001		VEGETATIVE WATERING DOLLARS and CENTS	MG	5,357.000	14
	170	2001		IRRIGATION SYSTEM DOLLARS and CENTS	LS	1.000	15
	192	2002		PLANT MATERIAL (1-GAL) DOLLARS and CENTS	EA	1,941.000	16
	192	2003		PLANT MATERIAL (3-GAL) DOLLARS and CENTS	EA	1,618.000	17
	192	2004		PLANT MATERIAL (5-GAL) DOLLARS and CENTS	EA	413.000	18
	192	2016		PLANT BED PREPARATION DOLLARS and CENTS	SY	1,770.000	19
	192	2027		PLANT MATERIAL (100 GAL) (TREE) DOLLARS and CENTS	EA	45.000	20
	260	2002	001	LIME (HYDRATED LIME (SLURRY)) DOLLARS and CENTS	TON	3,398.000	21

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	ITEM NO	DESC CODE	S.P. NO.				
	260	2010	001	LIME TRT (NEW BASE)(12") DOLLARS and CENTS	SY	106,516.000	22
	340	2064	003	D-GR HMA(METH) TY-C SAC-B PG76-22 DOLLARS and CENTS	TON	397.000	23
	341	2011	020	D-GR HMA(QCQA) TY-B PG64-22 DOLLARS and CENTS	TON	24,353.000	24
	360	2004	003	CONC PVMT (CONT REINF-CRCP)(11") DOLLARS and CENTS	SY	6,688.000	25
	360	2005	003	CONC PVMT (CONT REINF-CRCP)(12") DOLLARS and CENTS	SY	43,704.000	26
	360	2008	003	CONC PVMT (CONT REINF-CRCP)(15") DOLLARS and CENTS	SY	39,613.000	27
	400	2005		CEM STABIL BKFL DOLLARS and CENTS	CY	236.000	28
	402	2001		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	9,573.000	29
	403	2001		TEMPORARY SPL SHORING DOLLARS and CENTS	SF	48,682.000	30
	416	2001	001	DRILL SHAFT (18 IN) DOLLARS and CENTS	LF	139.000	31
	416	2004	001	DRILL SHAFT (36 IN) DOLLARS and CENTS	LF	1,735.000	32

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	ITEM NO	DESC CODE	S.P. NO.				
	416	2018	001	DRILL SHAFT (SIGN MTS)(24 IN) DOLLARS and CENTS	LF	48.000	33
	416	2022	001	DRILL SHAFT (SIGN MTS)(48 IN) DOLLARS and CENTS	LF	51.000	34
	416	2029	001	DRILL SHAFT (RDWY ILL POLE) (30 IN) DOLLARS and CENTS	LF	48.000	35
	416	2032	001	DRILL SHAFT (TRF SIG POLE) (36 IN) DOLLARS and CENTS	LF	70.000	36
	416	2034	001	DRILL SHAFT (TRF SIG POLE) (48 IN) DOLLARS and CENTS	LF	22.000	37
	420	2003	002	CL C CONC (ABUT) DOLLARS and CENTS	CY	120.400	38
	420	2004	002	CL C CONC (BENT) DOLLARS and CENTS	CY	190.800	39
	420	2006	002	CL C CONC (RAIL FOUNDATION) DOLLARS and CENTS	CY	9.400	40
	420	2033	002	CL S CONC (APPR SLAB) DOLLARS and CENTS	CY	250.000	41
	422	2001		REINF CONC SLAB DOLLARS and CENTS	SF	31,200.000	42
	423	2001		RETAINING WALL (MSE) DOLLARS and CENTS	SF	58,186.000	43

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	425	2004	001	PRESTR CONC BEAM (TY IV) and DOLLARS CENTS	LF	4,783.760	44
	428	2001	001	CONC SURF TREAT (CLASS I) and DOLLARS CENTS	SY	3,278.000	45
	432	2002		RIPRAP (CONC)(5 IN) and DOLLARS CENTS	CY	696.000	46
	432	2039		RIPRAP (MOW STRIP)(4 IN) and DOLLARS CENTS	CY	64.000	47
	432	2040		RIPRAP (MOW STRIP)(5 IN) and DOLLARS CENTS	CY	7.310	48
	442	2005	005	STR STL (MISCELLANEOUS) and DOLLARS CENTS	LB	862.000	49
	450	2007		RAIL (TY T501) and DOLLARS CENTS	LF	8,691.000	50
	450	2054		RAIL (TY T501RW DAL) and DOLLARS CENTS	LF	380.000	51
	450	2088		RAIL (TY T501)(TRANSITION) and DOLLARS CENTS	LF	50.000	52
	450	2093		RAIL (TY T501)(SPCIAL) and DOLLARS CENTS	LF	1,300.000	53
	450	2120		RAIL (TY SSTR)(SPL) and DOLLARS CENTS	LF	1,300.000	54

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	ITEM NO	DESC CODE	S.P. NO.				
	454	2001		SEALED EXPANSION JOINT (4 IN)(SEJ-A) DOLLARS and CENTS	LF	318.000	55
	462	2010		CONC BOX CULV (6 FT X 3 FT) DOLLARS and CENTS	LF	133.000	56
	464	2003		RC PIPE (CL III)(18 IN) DOLLARS and CENTS	LF	4,999.000	57
	464	2005		RC PIPE (CL III)(24 IN) DOLLARS and CENTS	LF	8,101.000	58
	464	2007		RC PIPE (CL III)(30 IN) DOLLARS and CENTS	LF	929.000	59
	464	2009		RC PIPE (CL III)(36 IN) DOLLARS and CENTS	LF	1,892.000	60
	465	2005	001	MANH (COMPL)(TY M) DOLLARS and CENTS	EA	31.000	61
	465	2104	001	INLET EXT DOLLARS and CENTS	EA	54.000	62
	465	2137	001	INLET (COMPL)(BWI)(TYI) DOLLARS and CENTS	EA	19.000	63
	465	2195	001	INLET (COMPL)(CURB)(TY 1) DOLLARS and CENTS	EA	40.000	64
	465	2281	001	INLET (COMPL)(TY C 1-GRATE) DOLLARS and CENTS	EA	6.000	65

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	ITEM NO	DESC CODE	S.P. NO.				
	466	2036		WINGWALL (FW-S)(HW=6 FT) DOLLARS and CENTS	EA	2.000	66
	476	2049		JACK OR TUN BOX CULV (6 FT X 3 FT) DOLLARS and CENTS	LF	210.000	67
	496	2002		REMOV STR (INLET) DOLLARS and CENTS	EA	6.000	68
	496	2004		REMOV STR (SET) DOLLARS and CENTS	EA	34.000	69
	496	2006		REMOV STR (HEADWALL) DOLLARS and CENTS	EA	8.000	70
	496	2007		REMOV STR (PIPE) DOLLARS and CENTS	LF	2,125.000	71
	500	2001	005	MOBILIZATION DOLLARS and CENTS	LS	1.000	72
	502	2001	033	BARRICADES, SIGNS AND TRAFFIC HAN- DLING DOLLARS and CENTS	MO	22.000	73
	506	2002	011	ROCK FILTER DAMS (INSTALL) (TY 2) DOLLARS and CENTS	LF	528.000	74
	506	2009	011	ROCK FILTER DAMS (REMOVE) DOLLARS and CENTS	LF	528.000	75

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	ITEM NO	DESC CODE	S.P. NO.				
	506	2016	011	CONSTRUCTION EXITS (INSTALL) (TY 1) DOLLARS and CENTS	SY	4,008.000	76
	506	2019	011	CONSTRUCTION EXITS (REMOVE) DOLLARS and CENTS	SY	4,008.000	77
	508	2002		CONSTRUCTING DETOURS DOLLARS and CENTS	SY	12,916.000	78
	512	2011	001	PORT CTB (DES SOURCE)(SAFETY SH)(TY 2) DOLLARS and CENTS	LF	19,890.000	79
	512	2017	001	PORT CTB (DES SOURCE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	10,360.000	80
	512	2018	001	PORT CTB (DES SOURCE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	520.000	81
	512	2020	001	PORT CTB (MOVE)(SAFETY SH)(TY 2) DOLLARS and CENTS	LF	16,530.000	82
	512	2026	001	PORT CTB (MOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	12,080.000	83
	512	2027	001	PORT CTB (MOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	240.000	84
	512	2038	001	PORT CTB (REMOVE)(SAFETY SH)(TY 2) DOLLARS and CENTS	LF	19,890.000	85
	512	2044	001	PORT CTB (REMOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	10,360.000	86

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	ITEM NO	DESC CODE	S.P. NO.				
	512	2045	001	PORT CTB (REMOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	520.000	87
	512	2048	001	PORT CTB (FUR & INST)(F-SHAPE)(TY 1) DOLLARS and CENTS	LF	7,410.000	88
	528	2006		COLORED TEXTURED CONC (5") DOLLARS and CENTS	SY	1,312.670	89
	529	2005		CONC CURB (MONO) (TY I) DOLLARS and CENTS	LF	3,811.000	90
	529	2006		CONC CURB (MONO) (TY II) DOLLARS and CENTS	LF	13,897.000	91
	530	2010		DRIVEWAYS (CONC) DOLLARS and CENTS	SY	2,046.000	92
	531	2004		CONC SIDEWALKS (6") DOLLARS and CENTS	SY	391.000	93
	531	2005		CURB RAMPS (TY 1) DOLLARS and CENTS	EA	18.000	94
	540	2011		MTL BEAM GD FEN TRANS (THRIE-BEAM) DOLLARS and CENTS	EA	2.000	95
	544	2013		GDRAIL END TRT(INSTALL)(HBA POST) DOLLARS and CENTS	EA	2.000	96
	545	2001		CRASH CUSH ATTEN (INSTL) DOLLARS and CENTS	EA	6.000	97

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	ITEM NO	DESC CODE	S.P. NO.				
	545	2023		CRASH CUSH ATTEN (MOVE&RESET)(REACT)(N) DOLLARS CENTS and	EA	2.000	98
	545	2024		CRASH CUSH ATTEN (REMOVE)(REACT)(N) DOLLARS CENTS and	EA	6.000	99
	610	2020	006	INS RD IL AM (TY SA) 40B-8 (.25 KW)S DOLLARS CENTS and	EA	10.000	100
	610	2025	006	INS RD IL AM (TY SA) 40T-8 (.25 KW)S DOLLARS CENTS and	EA	8.000	101
	618	2034		CONDT (PVC) (SCHD 80) (2") DOLLARS CENTS and	LF	3,235.000	102
	618	2035		CONDT (PVC) (SCHD 80) (2") (BORE) DOLLARS CENTS and	LF	420.000	103
	618	2038		CONDT (PVC) (SCHD 80) (3") DOLLARS CENTS and	LF	123.000	104
	618	2039		CONDT (PVC) (SCHD 80) (3") (BORE) DOLLARS CENTS and	LF	580.000	105
	618	2040		CONDT (PVC) (SCHD 80) (4") DOLLARS CENTS and	LF	635.000	106
	620	2009	001	ELEC CONDR (NO. 6) BARE DOLLARS CENTS and	LF	958.000	107

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	ITEM NO	DESC CODE	S.P. NO.				
	620	2010	001	ELEC CONDR (NO. 6) INSULATED DOLLARS and CENTS	LF	356.000	108
	620	2011	001	ELEC CONDR (NO. 8) BARE DOLLARS and CENTS	LF	3,240.000	109
	620	2012	001	ELEC CONDR (NO. 8) INSULATED DOLLARS and CENTS	LF	8,096.000	110
	620	2016	001	ELEC CONDR (NO.12) INSULATED DOLLARS and CENTS	LF	320.000	111
	624	2008		GROUND BOX TY A (122311) W/APRON DOLLARS and CENTS	EA	12.000	112
	624	2014		GROUND BOX TY D (162922) W/APRON DOLLARS and CENTS	EA	10.000	113
	628	2040		ELC SRV TY A 240/480 100 (SS)SS(E)SP(O) DOLLARS and CENTS	EA	6.000	114
	628	2100		ELC SRV TY D 120/240 070 (NS)SS(E)SP(O) DOLLARS and CENTS	EA	1.000	115
	636	2001	014	ALUMINUM SIGNS (TY A) DOLLARS and CENTS	SF	56.000	116
	636	2002	014	ALUMINUM SIGNS (TY G) DOLLARS and CENTS	SF	475.000	117
	636	2003	014	ALUMINUM SIGNS (TY O) DOLLARS and CENTS	SF	263.500	118

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	ITEM NO	DESC CODE	S.P. NO.				
	644	2022		INS SM RD SN SUP&AM TY S80(1) SA(P) DOLLARS and CENTS	EA	33.000	119
	644	2025		INS SM RD SN SUP&AM TY S80(1) SA(T) DOLLARS and CENTS	EA	5.000	120
	644	2027		INS SM RD SN SUP&AM TY S80(1) SA(U) DOLLARS and CENTS	EA	2.000	121
	644	2032		INS SM RD SN SUP&AM TY S80(1) SB(P) DOLLARS and CENTS	EA	2.000	122
	644	2042		INS SM RD SN SUP&AM TY S80(2) SA(P) DOLLARS and CENTS	EA	2.000	123
	647	2001		INSTALL LRSS (STRUCT STEEL) DOLLARS and CENTS	LB	1,976.000	124
	650	2217		INS OH SN SUP (25 FT CANT)(CIRC TUBE) DOLLARS and CENTS	EA	1.000	125
	650	2218		INS OH SN SUP (30 FT CANT)(CIRC TUBE) DOLLARS and CENTS	EA	1.000	126
	658	2261		INSTL DEL ASSM (D-SW)SZ (TYC)GF1(BI) DOLLARS and CENTS	EA	40.000	127
	658	2263		INSTL DEL ASSM (D-SY)SZ 1(FLX)GND DOLLARS and CENTS	EA	16.000	128
	658	2317		INSTL OM ASSM (OM-2Z)(FLX)SLF DOLLARS and CENTS	EA	6.000	129

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	ITEM NO	DESC CODE	S.P. NO.				
	662	2001		WK ZN PAV MRK NON-REMOV (W) 4" (BRK) DOLLARS and CENTS	LF	1,701.000	130
	662	2004		WK ZN PAV MRK NON-REMOV (W) 4" (SLD) DOLLARS and CENTS	LF	18,149.000	131
	662	2032		WK ZN PAV MRK NON-REMOV (Y) 4" (SLD) DOLLARS and CENTS	LF	12,853.000	132
	662	2064		WK ZN PAV MRK REMOV (W) 4" (BRK) DOLLARS and CENTS	LF	732.000	133
	662	2067		WK ZN PAV MRK REMOV (W) 4" (SLD) DOLLARS and CENTS	LF	26,302.000	134
	662	2079		WK ZN PAV MRK REMOV (W) 24" (SLD) DOLLARS and CENTS	LF	146.000	135
	662	2099		WK ZN PAV MRK REMOV (Y) 4" (SLD) DOLLARS and CENTS	LF	29,119.000	136
	666	2003		REFL PAV MRK TY I (W) 4" (BRK)(100MIL) DOLLARS and CENTS	LF	5,840.000	137
	666	2012		REFL PAV MRK TY I (W) 4" (SLD)(100MIL) DOLLARS and CENTS	LF	27,960.000	138
	666	2036		REFL PAV MRK TY I (W) 8" (SLD)(100MIL) DOLLARS and CENTS	LF	10,310.000	139
	666	2039		REFL PAV MRK TY I (W) 12"(LNDP)(100MIL) DOLLARS and CENTS	LF	121.000	140

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	ITEM NO	DESC CODE	S.P. NO.				
	666	2042		REFL PAV MRK TY I (W) 12"(SLD)(100MIL) DOLLARS and CENTS	LF	3,959.000	141
	666	2048		REFL PAV MRK TY I (W) 24"(SLD)(100MIL) DOLLARS and CENTS	LF	279.000	142
	666	2054		REFL PAV MRK TY I (W) (ARROW) (100MIL) DOLLARS and CENTS	EA	19.000	143
	666	2075		REFL PAV MRK TY I(W)(EXIT GORE)(100MIL) DOLLARS and CENTS	EA	2.000	144
	666	2096		REFL PAV MRK TY I (W) (WORD) (100MIL) DOLLARS and CENTS	EA	15.000	145
	666	2102		REF PAV MRK TY I(W)36"(YLD TRI)(100MIL) DOLLARS and CENTS	EA	52.000	146
	666	2111		REFL PAV MRK TY I (Y) 4" (SLD)(100MIL) DOLLARS and CENTS	LF	26,593.000	147
	666	2123		REFL PAV MRK TY I (Y) 8" (SLD)(100MIL) DOLLARS and CENTS	LF	1,080.000	148
	666	2126		REFL PAV MRK TY I (Y) 12"(SLD)(100MIL) DOLLARS and CENTS	LF	441.000	149
	666	2189		PAVEMENT SEALER 4" DOLLARS and CENTS	LF	60,930.000	150
	666	2191		PAVEMENT SEALER 8" DOLLARS and CENTS	LF	11,390.000	151

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	ITEM NO	DESC CODE	S.P. NO.				
	666	2193		PAVEMENT SEALER 12" and DOLLARS CENTS	LF	4,521.000	152
	666	2195		PAVEMENT SEALER 24" and DOLLARS CENTS	LF	279.000	153
	666	2219		PAVEMENT SEALER (ARROW) and DOLLARS CENTS	EA	19.000	154
	666	2220		PAVEMENT SEALER (WORD) and DOLLARS CENTS	EA	15.000	155
	666	2226		PAVEMENT SEALER (EXIT GORE) and DOLLARS CENTS	EA	2.000	156
	666	2257		PAVEMENT SEALER (YLD TRI) and DOLLARS CENTS	EA	52.000	157
	672	2010	034	REFL PAV MRKR TY I-A and DOLLARS CENTS	EA	54.000	158
	672	2017	034	REFL PAV MRKR TY II-C-R and DOLLARS CENTS	EA	1,041.000	159
	677	2001		ELIM EXT PAV MRK & MRKS (4") and DOLLARS CENTS	LF	1,276.000	160
	677	2007		ELIM EXT PAV MRK & MRKS (24") and DOLLARS CENTS	LF	668.000	161
	677	2018		ELIM EXT PAV MRK & MRKS (WORD) and DOLLARS CENTS	EA	2.000	162

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	ITEM NO	DESC CODE	S.P. NO.				
	680	2003		INSTALL HWY TRF SIG (SYSTEM) DOLLARS and CENTS	EA	1.000	163
	682	2001	001	BACK PLATE (12 IN) (3 SEC) DOLLARS and CENTS	EA	20.000	164
	682	2014	001	PED SIG SEC (12 IN) LED (2 INDICATIONS) DOLLARS and CENTS	EA	12.000	165
	682	2022	001	VEH SIG SEC (12 IN) LED (GRN ARW) DOLLARS and CENTS	EA	3.000	166
	682	2023	001	VEH SIG SEC (12 IN) LED (GRN) DOLLARS and CENTS	EA	17.000	167
	682	2024	001	VEH SIG SEC (12 IN) LED (YEL ARW) DOLLARS and CENTS	EA	3.000	168
	682	2025	001	VEH SIG SEC (12 IN) LED (YEL) DOLLARS and CENTS	EA	17.000	169
	682	2027	001	VEH SIG SEC (12 IN) LED (RED) DOLLARS and CENTS	EA	20.000	170
	684	2031		TRF SIG CBL (TY A) (14 AWG) (5 CONDR) DOLLARS and CENTS	LF	1,040.000	171
	684	2033		TRF SIG CBL (TY A) (14 AWG) (7 CONDR) DOLLARS and CENTS	LF	205.000	172
	684	2038		TRF SIG CBL (TY A) (14 AWG) (12 CONDR) DOLLARS and CENTS	LF	1,398.000	173

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	684	2046		TRF SIG CBL (TY A) (14 AWG) (20 CONDR) DOLLARS and CENTS	LF	535.000	174
	686	2043		INS TRF SIG PL AM(S) 1 ARM (44') DOLLARS and CENTS	EA	1.000	175
	686	2047		INS TRF SIG PL AM(S) 1 ARM (48') DOLLARS and CENTS	EA	1.000	176
	686	2049		INS TRF SIG PL AM(S) 1 ARM (48') LUM DOLLARS and CENTS	EA	3.000	177
	686	2057		INS TRF SIG PL AM(S) 1 ARM (55') LUM DOLLARS and CENTS	EA	1.000	178
	687	2001		PED POLE ASSEMBLY DOLLARS and CENTS	EA	2.000	179
	688	2001		PED DETECT (2 INCH PUSH BTN) DOLLARS and CENTS	EA	12.000	180
	5049	2002		BIODGRD EROSION CONTROL LOGS (18" DIA) DOLLARS and CENTS	LF	300.000	181
	5049	2003		BIODGRD EROSION CONTROL LOGS (12" DIA) DOLLARS and CENTS	LF	30,342.000	182
	5367	2008		CABLE BARRIER TERMINAL SECTION (TL-4) DOLLARS and CENTS	EA	2.000	183

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	6006	2001		SPREAD SPECTRUM RADIO DOLLARS and CENTS	EA	1.000	184
	6006	2003		HELIAX CABLE DOLLARS and CENTS	LF	123.000	185
	6006	2004		ANTENNA (OMNI-DIRECTIONAL) DOLLARS and CENTS	EA	1.000	186
	6266	2001		VIVDS PROCESSOR SYSTEM DOLLARS and CENTS	EA	2.000	187
	6266	2002		VIVDS CAMERA ASSEMBLY DOLLARS and CENTS	EA	11.000	188
	6266	2003		VIVDS SET-UP SYSTEM DOLLARS and CENTS	EA	2.000	189
	6266	2005		VIVDS COMMUNICATION CABLE (COAXIAL) DOLLARS and CENTS	LF	3,101.000	190

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SW3P RESPONSIBILITIES

TxDOT Area of Responsibility

Responsible for the area defined by the limits of the subject project, except for those areas utilized and operated by the contractor. These areas include, though are not limited to, areas used for field offices, equipment and/or material storage, and concrete or asphalt plants.

TxDOT Operational Responsibility

Responsible for seeking coverage under the TPDES Construction General Permit (CGP) and operating the project within the requirements of the CGP for discharging storm water from the subject project and to notify MS4 permit holders of the intent to discharge storm water.

File a Notice of Termination with TCEQ upon completion of the project when the exposed areas have been stabilized with a vegetative cover of at least 70%.

Contractor Area of Responsibility

Responsible for all areas under their direct operational control which includes, though not limited to, areas used for field offices, equipment and/or material storage, and concrete or asphalt plants. These areas may be located on or off the subject project's R.O.W.

Contractor Operational Responsibility

Responsible for seeking coverage under the TPDES Construction General Permit (CGP) and adhering to all requirements of the permit for discharging storm water from the areas under their operational control. Perform regular inspections, prepare a written report of deficiencies, and repair deficiencies within the time frame set forth by the permit. File a Notice of Termination with TCEQ upon completion of the project when the exposed areas have been stabilized with a vegetative cover of at least 70%.

Responsible under contractual obligations to TxDOT to install, clean, repair, replace or remove sediment and erosion control devices as indicated on TxDOT's Inspection Reports, or as required by daily construction practices, within the time frame set forth by the permit.

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Specification Data

Table 1: Soil Constants Requirements				
Item	Description	Plasticity Index		Note
		Max	Min	
132	Embk(Dens Cont) (Type C1)	40	8	1
132	Embk(Dens Cont) (Type C2)	25	10	2

Note 1: Material excavated from the project must meet the PI requirements when used in the top 10 feet of embankment that supports the pavement structure or other locations shown in the plans. Do not use shale and obtain approval to incorporate shaley clay produced by the construction project.

Note 2: Use as a non-select embankment backfill as defined under Item 423.2.C.1. Use as an embankment to backfill behind abutments to the extent of the approach slab or to backfill areas enclosed by an abutment and retaining walls or other locations as shown in the plans.

Table 2: Basis of Estimate for Permanent Construction						
Item	Description	Thickness	Rate		Quantity	
161	Compost Manf. Topsoil	4"			71,162	SY
164	Broadcast Seed (Perm)	N/A			71,162	SY
166 *	Fertilizer (12-6-6)	N/A	850	Lbs/Ac	6	Ton
168	Vegetative Watering	N/A	155	Mg/Ac	2279	Mg
204	Sprinkling (dust cont)	N/A		Mg/Sta		Mg
260	Hydrated Lime (dry)			7% by wt	3,398	Ton
341	Hot Mix Asphalt (Ty B)		110	Lbs/SY/In	24,353	Ton
340	Hot Mix Asphalt (Ty C)		110	Lbs/SY/In	397	Ton
* For contractor's information only						
Note: (1) Base material weight based on 1.50 Ton/CY (dry- compacted)						
(2) Asphalt weight based on 110 Lbs/SY/inch						
(3) Subgrade weight based on ____ Ton/CY (dry- compacted)						

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Table 3: Basis of Estimate for Temporary Erosion Control Items					
Item	Description	Rate		Quantity	
164	Cell Fbr Mlch Seed (Temp)(wm) Cell Fbr Mlch Seed (Temp)(col)			48,060 48,060	SY
166*	Fert (12-6-6)	850	Lbs /Ac	8	Ton
168	Vegetative Watering	155	Mg/Ac	3078	Mg
*For contractor's information only					

Table 4: Hamburg Wheel Test Requirements			
High-Temperature Binder Grade	Test Method	Laboratory Mixture Design or Trial Batch	Production and Placement Test ¹
		Minimum # of Passes @ 0.5" Rut Depth, Tested @122°F	Minimum # of Passes @ 0.5" Rut Depth, Tested @122°F
PG 64-22 or lower	Tex-242-F	7,000	7,000

1. The Engineer may accept if no more than 1 of the 5 most recent Hamburg Wheel tests is below the specified number of passes and the failing test is no more than 2000 passes below the specified number of passes.

General:

Access will be provided to all business and residences at all times. Materials, labor and maintenance for these temporary accesses will not be paid for directly but will be considered subsidiary to the various bid items.

The construction, operation and maintenance of the proposed project will be consistent with the state implementation plan as prepared by the Texas Commission on Environmental Quality.

The disturbed area for this project, as shown on the plans is 45 acres. However, **the Total Disturbed Area** (TDA) will establish the required authorization for storm water discharges. The TDA of this project will be determined by the sum of the disturbed area in all project locations in the contract, and all disturbed area on all Project-Specific

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Locations (PSL) located in the project limits and/or within 1 mile of the project limits. The department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction site as shown on the plans, according to the TDA of the project. The contractor will obtain any required authorization from the TCEQ for the discharge of storm water from any PSL for construction support activities on or off of the project row according to the TDA of the project. When the TDA for the project exceeds 1 acre, provide a copy of the appropriate application of permit (NOI, or Construction Site Notice) to the engineer, for any PSL located in the project limits or within 1 mile of the project limits. Follow the directives and adhere to all requirements set forth in the TCEQ, Texas Pollution Discharge Elimination System, Construction General Permit (TPDES, CGP).

Prior to contract letting, bidders may obtain a free computer diskette or electronic files (from the engineer's office) that contains the earthwork information. If copies of the actual cross-sections, in addition to or instead of the diskette, are requested, they will be available at the engineer's office for borrowing by copying companies for the purpose of making copies for the bidder at the bidder's expense. This data is for non-construction purposes only and it is the responsibility of the prospective bidder to validate the enclosed data with appropriate plans, specifications and estimate for the project(s).

Install traffic marking signs prior to sealcoat application and remove within three days after placement of traffic markings.

Leave all right of way areas undisturbed until actual construction is to be performed in said areas.

Use established industry and utility safety practices to erect poles, luminaries, signs or structures near any overhead or underground utility. Consult with the appropriate utility company prior to beginning such work.

Underground utilities owned by the Texas Department of Transportation may be present within the Right-Of-Way on this project. For signal, illumination, surveillance, and communication & control, call 1-800-DIG-TESS (1-800-344-8377), TxDOT Traffic Signal Office (214-320-6682), and TxDOT Freeway Management Office (214-320-4439) for locates a minimum of 48 hours in advance of excavation. For irrigation systems, call TxDOT Maintenance Landscape Office (214-320-6205) for locates a minimum of 48 hours in advance of excavation. If city or town owned irrigation facilities are present, call the appropriate department of the local city or town a minimum of 48 hours in advance of excavation.

For the project to be deemed complete, permanently stabilize all unpaved disturbed areas of the project with a vegetative cover at a minimum of 70% density for the control of erosion.

Repair or replace any structures and utilities that might have been damaged by negligence or a failure to have utility locates performed.

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Perform all electrical work in accordance with the National Electrical Code and Texas Department of Transportation Specifications.

Consult with appropriate electric company representatives according to their respective area to coordinate electrical services installations.

Meet weekly with the engineer to notify him or her of planned work for the upcoming week.

Provide the engineer with a daily work schedule of planned work.

Submit pre-letting questions by e-mail or fax as follows:

e-mail: WFULLE1@dot.state.tx.us

fax: (214) 320-6655

The answers will be submitted in the same format in which they are received. A file containing these questions and answers will be available for review at the area engineer's office located at 4777 E. Highway 80, Mesquite, TX 75150.

Material On Hand (MOH) will not be used in calculating partial payments for Mobilization.

Provide the Engineer with a copy of all DBE subcontractor agreements prior to commencing work.

The following standard detail sheets have been modified:

SMD(SLIP-1)-02(DAL) - District Standard for small sign assemblies.

Item 8:

This Project will be a Five-Day Workweek in accordance with Article 8.3.A.1.

This project includes an incentive for early completion of Milestone 1 as per Special Provision 008-069.

No.	Milestone	Milestone Starts	Milestone Finishes	Maximum Days of Milestone Incentive	Daily Incentive (\$)
1	Open the IH 30 bridge over John King Blvd and John King Blvd under IH 30 bridge to traffic as shown in the plans	When time charges begin.	All lanes of IH 30 bridge and John King Blvd are open to traffic on or before December 31, 2009	60	\$1,550.00 [The maximum incentive for milestone 1 shall not exceed \$93,000.00]

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Item 100:

Remove and replace the existing roadway signs as shown on the plans, or as directed, during construction within the right of way.

The limits of preparing right of way will be measured from Sta. 278+65.50 to Sta. 337+54.84 along the centerline of construction.

Item 104:

In those areas where the pavement is not to be overlaid, provide a smooth surface after the curb removal. Planing or grinding is considered an acceptable method at these locations. Measurement and payment is in accordance with this item.

Sawing of concrete is not paid for directly, but is considered subsidiary to this item.

Items 104 and 496:

Concrete pavement removed as a result of removing the inlets will not be paid for directly but will be considered as subsidiary to Item 496.

Removal of all concrete and structures of the types specified in the plans will be paid for under the pertinent bid item. The removal of other types of obstructions encountered will be paid for under Item 100, if applicable.

Items 105, 251, 305, and 354:

Saw existing asphalt along neat lines where portions are to be left in place temporarily or permanently. Sawing is not paid for directly, but is subsidiary to this item.

Item 105:

Separate the asphalt pavement from the base material. Stockpile the asphalt pavement at Rockwall Maintenance Office. Place the asphalt pavement material in a stockpile that meets the dimensions and requirements designated by the engineer.

Stockpile materials in uniform piles up to 15 feet in height unless otherwise instructed. Furnish adequate equipment at the stockpile to keep and leave the materials in a neat and orderly manner.

Properly dispose of unsalvageable material at your own expense.

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Items 110 and 132:

Excavation and embankment for driveways, sleeper slabs, alleys and intersections will not be paid for directly, but will be considered subsidiary to this item.

Items 110, 112 and 132:

Scarify and loosen the excavated areas, unpaved surface areas, except rock, to a depth of at least 8 inches and compact in accordance with the specifications.

Use an approved laboratory to perform tests for sulfate and plasticity index and provide results on sources outside the right of way at no additional expense to the department. Test soil for sulfate levels in accordance with Tex-145-E. Contact the engineer for a list of approved laboratories. Notify the engineer 72 hours before sampling and testing material. Perform split-sample verification testing with the engineer when directed. The engineer will sample and test material produced by the construction project for specification requirements or material sources specified in the plans.

When lime treatment is allowed to reduce Plasticity Index, apply lime slurry in accordance with Item 260, "Lime Treatment (Road-Mixed)." Furnish material containing sulfate at or below the threshold of 5000 parts per million (ppm). For material with sulfate levels greater than 3000 ppm, allow the mixture to mellow for at least three days, or as directed. The engineer will test material placed or excavated to a depth of one foot below and laterally to one foot outside the proposed treatment limit. Notify the engineer 48 hours before lime treatment of the material.

Shale is not an acceptable material for embankment. Do not use shaley clays in embankment unless approved in writing.

Items 110, 132 and 164:

Perform vertical tracking on slopes to temporarily stabilize soil. Provide equipment with a track undercarriage capable of producing a linear soil impression measuring at least 12 inches in length by 2 to 4 inches in width by ½ to 2 inches in depth. Do not exceed 12 inches between track cleats. Install continuous linear track impressions where the minimum 12 inches in length impressions is perpendicular to the direction of water flow. This will not be paid for directly but considered subsidiary to this item.

Item 132:

Earth embankment Type C1 and C2, are mainly composed of material other than shale. Furnish material that is free from vegetation or other objectionable material and that conforms to the requirements of Table 1 (Sheet B). If necessary, add lime slurry in accordance with Item 260, "Lime Treatment (Road-Mixed)" in order to meet these

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requirements. Use Tex-121-E, figure 1, page 5 to calculate the amount of lime required. Furnish material containing sulfate at or below the threshold of 5000 parts per million (ppm). For material with sulfate levels greater than 3000 ppm, allow the mixture to mellow for at least three days, or as directed. Test soil for sulfate levels in accordance with Tex-145-E. Use an approved laboratory to perform tests for sulfate and plasticity index and provide results on sources outside the right of way to the department. Contact the engineer for a list of approved laboratories. Notify the engineer 48 hours before sampling and testing material. Perform split-sample verification testing with the engineer when directed. The engineer will sample and test material produced by the construction project for specification requirements or material sources specified in the plans. The engineer will test material placed or excavated to a depth of one foot below and laterally to one foot outside the proposed treatment limit. Lime treatment and testing of this material will not be paid for directly, but will be considered subsidiary to this item.

Do not use shaley clays in embankment unless approved in writing.

Use embankment material Type C2 described in Table 1 "Soil Constants Requirements" for embankments behind bridge abutments to the extent of the bridge approach slabs, and other embankments enclosed by an abutment and retaining walls.

Item 260:

Furnish and distribute MS-2 smoothly and evenly at the rate of 0.20 gallons per square yard to cure lime, as directed.

Provide Hydrated Lime Slurry and apply lime by slurry placement method.

Item 301:

Provide liquid antistripping agents unless otherwise directed. Provide manufacturer's instruction for liquid antistripping agent.

Add the minimum percentage determined by the manufacturer and try subsequent trials at 0.25% increments, unless otherwise instructed by the manufacture.

Items 305 and 354:

Separate the asphalt pavement from the base material. Stockpile the asphalt pavement at SH 276 at Rochelle. Place the asphalt pavement material in a stockpile that meets the dimensions and requirements designated by the engineer.

Stockpile materials in uniform piles up to 15 feet in height unless otherwise instructed. Furnish adequate equipment at the stockpile to keep and leave the materials in a neat and orderly manner.

Properly dispose of unsalvageable material at your own expense.

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Slope longitudinal faces greater than 1 ¼" To a minimum of 1:1 slope at the end of the work period if traffic is able to traverse the joint. Slope transverse tapers to a minimum of 36:1 at the end of the workday. Remove the taper prior to continuing the milling.

For open shoulder sections, plane the asphalt so the flow of water is not impeded at the shoulder edge or across the surface. Added planing up to three feet in width outside the lines and grades of the plans, necessary to provide proper drainage, will be subsidiary to the bid item.

Item 320:

Material Transfer Device is required.

The use of windrow pick-up equipment is allowed except on the first course of roadway material placed over the subgrade.

Items 340, 341:

Place hot mix asphalt when the roadway surface temperature is equal to or higher than the temperatures listed in Table 4 unless otherwise approved. Measure the roadway surface temperature with a handheld infrared thermometer. The Engineer may allow mixture placement to begin prior to the roadway surface reaching the required temperature requirements if conditions are such that the roadway surface will reach the required temperature within 2 hrs. of beginning placement operations. Unless otherwise shown on the plans, place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable in the opinion of the Engineer.

Item 340:

Use aggregate that meets the Surface Aggregate Classification (SAC) requirement of Class B.

Provide the engineer the opportunity to witness all mixture design tests. The engineer may require a retest if not given the opportunity to witness.

Dilution of tack is not allowed.

Provide PG binder 76-22 in Type C mixture.

Item 341:

Use aggregate that meets the Surface Aggregate Classification (SAC) requirement of Class B.

Minimum requirement for coarse aggregate 5 cycle magnesium sulfate soundness is 25%. Meet this requirement for type B hot mix only.

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Provide the engineer the opportunity to witness all mixture design tests. The engineer may require a retest if not given the opportunity to witness.

Dilution of tack is not allowed.

Provide PG binder 64-22 in Type B mixture.

Hamburg Wheel test requirements for mixes with PG 64-22 shall meet Table 5. The use of RAP is permitted to meet these requirements.

Item 360:

Use of multiple piece tiebars will be required. Provide chairs for multiple piece tiebars, threaded connectors or other adequate devices, used in concrete paving, or tie them to the pavement reinforcing steel. If approved by the engineer for specific areas, in lieu of multiple piece tiebars, drill holes into the pavement and grout straight tiebars in place with epoxy. Use a non-impact, rotary core drill to prevent damage to the pavement unless otherwise directed. Clean the drill holes and then completely fill with epoxy before inserting the tiebar. Do not bend the tiebars or insert them into plastic concrete without the approval of the engineer.

Provide curbs monolithically constructed with the concrete pavement. If continuous monolithic curb has to be temporarily omitted for any reason, provide dowelled curbs in the proposed areas, as detailed in the plans, and apply an approved epoxy resin to the pavement to receive the curb as directed. This work and materials will not be paid for directly, but is considered subsidiary to this item.

If asphalt curing is used, cure the concrete pavement with MS-2.

Stockpile the concrete aggregates at the plant site.

Provide pavement widening joints, as detailed in the plans, at all locations where concrete pavement is placed adjacent to existing concrete pavement. Installation of these joints is not paid for directly, but is considered subsidiary to this item.

Payment for furnishing and installing the pre-molded expansion joint material between the retaining walls and concrete pavement is not paid for directly, but is considered subsidiary to this item.

Provide a curing machine equipped with rubber tires, or other acceptable arrangement, so that the machine will span the pavement and monolithic curb.

Curb transition is paid for as Type II curb.

The installation of curb openings is not paid for directly, but is considered subsidiary to this item.

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Place construction, sawed and contraction joints in accordance with the pavement detail sheet and as directed. Joint locations, other than as shown on the plans, are subject to approval. Pavement leaveouts are required on this project as necessary to provide for traffic at driveways and side streets as shown in the plans or as directed. The cost of providing these leaveouts, including the construction of a suitable crossover connection at each site, is not paid for directly but is considered subsidiary to this item.

If a traveling form paver is used, provide one equipped with an electronically operated horizontal control device.

Provide tiebars in longitudinal joints but do not place them within 15 inches of transverse joints.

Use "mechanical steel placing equipment" at the discretion of the engineer.

Item 400:

Structural Excavation is not paid for directly but is considered subsidiary to pertinent items.

When placing concrete storm drain pipe on slopes of greater than 10 percent, provide cement stabilized backfill to a depth shown on the plans. The aggregate shall conform to the requirements of Article 421.2.E.2.

Item 416:

Provide a smooth finish for all portions of drill shafts extending above proposed ground. Include cost for this work in the unit bid price for this item.

Provide a minimum of one core per bent, regardless of placement method.

Item 420:

Apply an ordinary surface finish to all concrete surfaces within 30 days after form removal.

NATIONAL BRIDGE INVENTORY NUMBERS:

Provide National Bridge Inventory (NBI) numbers on all bridge structures and bridge class culverts.

Where beam types allow access to the face of abutment backwall, place NBI numbers on the face of each abutment backwall using 3" block numbers. Locate NBI numbers between the outside beams at opposite corners of the bridge.

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Where beam types do not allow access to the face of abutment backwall, place NBI numbers on the face of each abutment cap using 3" block numbers. Locate NBI numbers below the outside beams at opposite corners of the bridge.

Where a bridge begins, ends or contains a bent common to multiple structures, place NBI numbers on both faces near both ends of the common bent cap. The number placed at each of the four locations will correspond to the NBI number assigned to the bridge immediately above the number. Locate NBI numbers below the outside beam. Place using 3" Block Numbers.

For all conditions, use appropriate die cut stencils and black paint for placement. All materials, labor and incidentals associated with placing NBI numbers are subsidiary to the various bid items.

Items 420, 422, 430 and 440:

Provide bridge slab reinforcing steel with epoxy coating complying with Item 440 requirements.

Item 421:

Furnish mix designs to the Engineer in a format compatible to the latest version of the Department's Construction Management System (Site Manager). Mix Design templates will be provided by the Engineer.

Provide sulfate resistant concrete for box culverts and drill shafts. High performance concrete meets the requirement for sulfate resistant concrete when Class C fly ash and Type I cement is not used in the mix design.

Strength evaluation using maturity testing, Tex-426-A, may be used for all concrete elements except drill shafts and mass concrete pours.

Maturity meters may be used for temperature gradient determination in mass concrete pours.

Provide a digital hydraulic compression testing Machine and accessories. The machine shall have a minimum testing range of 2500 pounds force to 250,000 pounds force with a hydraulic switching valve to allow for rapid advancing, hold, controlled advancing and rapid retracting. The machine shall have a load cell to measure compressive forces within the testing range and shall be calibrated and verified in accordance with ASTM latest version. The Machine can meet or exceed the following when approved by the Engineer:

ELE International ACCU-TEK250 Digital Compression Tester including accessories or Forney F-250EX Standard Compression Machine including accessories or TxDOT approved equal.

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Item 423:

For Mechanically Stabilized Earth (MSE) walls, provide a system from one of the following approved suppliers:

Reinforced Earth Walls
The Reinforced Earth Company
1331 Airport Freeway, Suite 302
Eules, Texas 76040-4150
817-283-5503

Reinforced Soil Embankment Walls
Texas Welded Wire, Inc.
645 W. Hurst Blvd.
Hurst, Texas 76053
817-282-4560

Retained Earth Walls
Foster Geotechnical
901 North Highway 77
Hillsboro, Texas 76645
254-580-9100

Stabilized Earth Wall
T&B Structural Systems, Inc.
6800 Manhattan Blvd., Suite 303
Fort Worth, Texas 76120
817-280-9858

Strengthened Earth Walls
Hanson Concrete Products
3500 Maple Ave.
Dallas, Texas 75219
214-525-5877

Strengthened Soil Walls
Shaw Technologies Inc.
P.O. Box 271448
Flower Mound, Texas 75027
972-490-1924

Tensar Retaining Wall System
Tensar Earth Technologies, Inc.
5775-B Glenridge Drive
Atlanta, Georgia 30328
404-250-1290

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Tricon Retained Soil Walls
Tricon Precast, Inc.
15055 Henry Rd.
Houston, Texas 77060
713-931-9832

VP Wall System
Valley Prestress Products, Inc.
P.O. Box 1367
Mission, Texas 78573
956-584-5701

Provide MSE walls with an Ashlar Stone texture form liner finish. See drawings for form liner stone texture detail. Several MSE wall panels will have a custom formed graphic image as shown and noted on the drawings.

The bottom of the custom formed graphic image is to be a minimum of 1 foot above finished grade and a minimum of 1 foot below the bottom of wall coping.

Unless otherwise noted in the plans, the top of the leveling pad is located 2 feet below the proposed ground.

Square foot surface area of retaining wall is measured from the top of retaining wall to the top of the leveling pad. Footing adjustments made to accommodate the available optional retaining walls are not measured.

Unless otherwise shown on the plans, provide Type A backfill as defined under this item for permanent MSE walls not subject to inundation. Unless otherwise shown on the plans, provide type D backfill as defined under this item for walls subject to inundation.

Supply drainage aggregate meeting the requirements of this item for use as filter material with the retaining wall.

Cement-Stabilized Backfill (CSB) is not permitted.

Crushed concrete is not permitted as backfill.

Rap is not acceptable as backfill for MSE retaining walls.

Unless otherwise noted on the plans, provide flowable backfill meeting the requirements of Item 401 between the back of panels and inlets or drainage pipes where the required compaction can not be achieved. Flowable backfill used for this purpose is subsidiary to this item.

Provide earth reinforcements with a length greater than or equal to percentage of wall height shown on the drawings or 8 feet whichever is greater.

Submit design calculations supporting the details necessary to incorporate coping, railing, inlets, drainage, electrical conduits and any additional necessary features.

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The contractor has the option of constructing any of the types of retaining walls for which details and specifications are included in the plans. Footing adjustments made to accommodate the available optional retaining walls are not measured. Regardless of option or options chosen, use the same fascia pattern throughout the entire project, including cast in place full height retaining walls or retaining wall type abutments.

Submit detailed drawings depicting the patterns and matching of precast with cast-in-place for approval.

Form the map of Texas emblem into a form liner textured MSE wall panel on each bridge abutment side wall face. Four emblems total. Emblems are to be located separate and away from the Prairie and Sail graphic images to be applied to the bridge abutment side walls. Show map of Texas emblem locations on graphic panel shop drawing submittal. City of Rockwall Representative approval of the exact location of each map of Texas emblem is required. The cost of forming emblems is considered subsidiary to this item. Inset the map of Texas a minimum of $\frac{3}{4}$ inch into the face of the panel, and provide a smooth finish with a City of Rockwall Representative approved color.

At contractor's expense, repair all damage to the precast units (such as cracks and chips) as required to match the fascia pattern.

Items 423 and 427:

For cast in place walls, provide an Ashlar Stone form liner texture finish to match the MSE wall texture.

No additional payment shall be made for the Prairie, Sail or map of Texas form liners as they are subsidiary to MSE Walls. However, Contractor shall submit a copy of an invoice from the MSE panel providers listing the costs for the Prairie, Sail and map of Texas form liners.

No additional payment shall be made for the Ashlar Stone form liner texture fascia treatment on the MSE panels as they are subsidiary to MSE walls. However, Contractor shall submit a copy of an invoice from the MSE panel providers listing the costs for the Ashlar Stone fascia treatment.

No additional payment shall be made for the Ashlar Stone or Riverbed Aggregate form liner texture fascia treatment on the cast in place concrete retaining walls, bridge bents or bent cap seam covers as they are subsidiary to wall and bridge construction. However, Contractor shall submit a copy of an invoice from the concrete wall providers listing the costs for the Ashlar Stone and Riverbed Aggregate fascia treatment.

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Item 427:

For cast in place bridge bent and bent cap concrete seam cover fields, provide a Riverbed Aggregate form liner finish to the exposed outer surfaces as noted on drawings.

For cast in place bent cap concrete seam covers, provide custom relief Texas Star graphic and form liner texture finish to exposed face per the detail drawings. For cast in place concrete exposed surfaces and MSE panel retaining wall colors, see table under Item 427.

No additional payment shall be made for the Texas star and Riverbed Aggregate finish field form liners on the bridge bent cap concrete seam covers as they are subsidiary to the bridge bent cap concrete seam cover construction. However, Contractor shall submit a copy of an invoice from the cast in place concrete providers listing the costs for the Texas star and Riverbed Aggregate field seam cover form liners.

Due to the inseting of custom graphics and textures into the wall panels, the panel thickness must be increased a corresponding amount to ensure that the face of surface clearance to the embedded panel reinforcement is maintained as required.

Finish concrete structure surface areas with 2 coats of opaque sealers meeting TxDOT DMS 8108 of the color(s) shown in the drawings and in accordance with Item 427. Note that Sail, Prairie, map of Texas and Texas Star graphic schemes have unique paint palettes as indicated on the drawings and shall be installed in lieu of standard color applied on the balance of the project. Apply 2 coats of all opaque sealer paint applications.

Ensure that surfaces are free of weak surface material, curing compounds and other surface contaminants prior to coating.

FORM LINER FINISHES: Place architectural concrete treatments as shown. Placement of this item is subsidiary to the item to which it is attached. Unless otherwise noted, all exposed retaining wall surfaces shall receive Ashlar Stone form liner texture as listed on drawings or equal. Unless otherwise noted, all exposed bent column surfaces shall receive Riverbed Aggregate form liner texture as listed on drawings or equal. Where used, provide Ashlar Stone or Riverbed Aggregate texture that is continuous with no apparent curves or discontinuities. Variations of the pattern from true vertical exceeding 1/4" for each 5'-0" of panel height are not acceptable.

Provide form liners that release without leaving pieces of liner material on the concrete and without pulling or breaking concrete from the textured surface. Provide form release agents as recommended by the manufacturer. Replace form liners as directed that have become damaged or worn. Replacement of form liners is considered incidental to the work and no additional compensation is provided.

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Ashlar Stone and Riverbed Aggregate form liners: No horizontal splices in the form liner are permitted. Splices may occur only within the simulated mortar joints between simulated stone elements.

Provide sample panels a minimum of ten days in advance of starting construction of the textured concrete surfaces. Construct sample panel(s) in accordance with Item 427 "Form Liner Finishes" using each type of approved form liner. Sample panels must meet the requirements of the plans and specifications and be approved before any construction form liners may be ordered, obtained or used. Provide panels having a textured portion at least 5'-0" by 5'-0" with a representative 4 inch wide un-textured surrounding surface. If directed, construct and finish additional test panels until a satisfactory concrete surface texture is obtained.

The approved sample panel is the standard of comparison for the production concrete surface texture. If directed, build a new test panel to demonstrate acceptability of any proposed change in construction method.

Tool or replace areas requiring surface treatment that do not match their associated sample panels. Upon completion, tooled or replaced panels must match the associated sample panel. Tooling or replacement is at the contractor's expense.

For proper placement of the expansion joint behind the rail, omit surface finish from the top of T501 (RW) (DAL) rail to bottom of panel as directed.

Joint reveal details and location may vary slightly from what is shown to match the adjacent MSE walls as directed. No additional compensation will be allowed.

MSE wall and cast in place concrete retaining wall Form Liners shall be from the following manufacturers unless otherwise noted or approved by City of Rockwall Representative as an equal product:

Scott Systems, Inc. – Phone: 1-303-373-2500
Greenstreak, Inc. – Phone: 1-800-325-9504
Fitzgerald Formliners – Phone: 1-800-547-7760
Or Approved Equal.

PRAIRIE, SAIL, MAP OF TEXAS EMBLEM AND TEXAS STAR BRIDGE SEAM COVER CUSTOM GRAPHIC IMAGE SCHEMES Master Mold, Form Liner, and Mockup Panel production procedures: The Prairie, Sail, map of Texas and Texas Star graphic schemes shall be constructed using the relief layers and textures as illustrated on the drawings herein.

The contractor shall provide scaled shop drawings illustrating the formalization of this design into final drawings for fabrication for review and approval by the City of Rockwall Representative. The drawings shall include the locations of the graphic panels and map of Texas emblems within the bridge abutment wall elevations and shall include graphic layer shading and MSE panel numbering to identify the level and texture for all portions of the graphic images. The City of Rockwall Representative will provide the initial

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scaleable electronic images of the Prairie, Sail map of Texas and Texas Star bridge Seam Cover graphics in Microstation DGN files to the contractor for use in developing scaled panel shop drawings back to the City of Rockwall Representative for approval prior to fabrication.. The contractor shall provide 1' x 1' square samples of actual form liner material to be used for all textures incorporated in the graphic to the City of Rockwall Representative for approval prior to purchasing and fabrication. The contractor shall notify the City of Rockwall Representative of the fabrication schedule 10 days in advance and coordinate the communication of the following information as outlined below.

The contractor shall prepare one full-scale 5' x 10' mockup panel from each graphic scheme (2). Panels to be used for the mockups are indicated on drawings.

It is intended that acceptable mockup wall panels are to be incorporated into the final construction of the wall. The contractor shall protect and store acceptable panels until such time as they may be incorporated into the work. The mockup wall section shall be temporarily erected in the vertical position outdoors facing south similar to its final position in the constructed project, in a location that allows free solar exposure to the surface, while allowing it to be viewed from a distance no less than 100' from any vantage point as measured from the center of the south face. The City of Rockwall Representative will come to the site and physically examine the mockup and provide comment on the acceptability for final construction. The contractor will receive written comments regarding the mockup within 10 business days of notification that the mockup has been constructed and notification of its location. At the discretion of the City of Rockwall Representative, the contractor shall recast unacceptable wall panel(s) in order to correct the deficiencies as outlined in Item 427.

The two approved mockup panels (one Prairie, one Sail) shall be the standard of quality that will be acceptable for the balance of the custom form liner work required for the project.

Unless otherwise noted, it is the intent of these plans that all exposed surfaces (concrete or steel) of bridges, retaining walls, concrete traffic railing and concrete traffic barrier be given a tinted coating as shown or as directed. Such coating shall meet the applicable provisions of Item 427.

For paint scheme on Sail, Prairie, map of Texas and Texas Star graphic panels see detailed drawings.

The Contractor shall provide 3 inch square, minimum, paint color cards or chip samples of each wall and graphic image color to be used on the project to the City of Rockwall Representative for approval prior to purchasing the paint/opaque sealers. The paint color cards are to be labeled on back to identify what item they are covering. Include manufacturer paint specifications confirming exterior concrete application, finish type, warranty, sealer compatibility and Federal Standard 595B paint color code.

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Use Federal Standard 595B colors with individual elements receiving the colors shown in the following table:

Element	Color	Specification Number
CTB	YELLOW SAND	TO BE DETERMINED
Bents	YELLOW SAND	T.B.D.
Bent caps	WARM GREY	T.B.D.
Ashlar Stone retaining wall surfaces	YELLOW SAND	T.B.D.
Retaining wall coping and other abutment components above wall coping	WARM GREY	T.B.D.
Abutments below wall coping	YELLOW SAND	T.B.D.
Prestressed concrete girders and structural steel	YELLOW SAND	T.B.D.
Bottom of slab overhang & slab edge	YELLOW SAND	T.B.D.
Concrete rail parts except central 18" band	YELLOW SAND	T.B.D.
Central 18" band of concrete rails	RED BROWN	T.B.D.

In addition to the Opaque Sealer specified in the table above, all surfaces listed, all exposed form liner wall surfaces, MSE walls, the Sail, Prairie, and map of Texas and Texas Star graphic panels, bents, bent caps, bents and seam cover exposed surfaces on the IH-30 bridge project shall be coated with Clear Type I – Sacrificial Antigriffitti coating per TxDOT DMS 8111.

Form liner materials shall have properties as indicated on the drawings.

No additional payment shall be made for painting and clear coating of the MSE Panels. However, Contractor shall submit a copy of an invoice(s) to the Engineer showing cost of paint and cost of applying paint to the MSE panels.

Item 428:

Provide a Class I surface treatment.

Apply concrete surface treatment to the widened portions of bridge structures only.

Do not treat the inside face of concrete rails.

Item 450 and 440:

Provide epoxy coated reinforcing steel that embeds into the bridge slab.

The 2 special traffic barrier end terminals will be paid for as Item 450 2088.

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Item 464:

The concrete collars and the connections of pipes to existing or proposed concrete boxes or pipe will not be paid for directly but will be considered subsidiary to the various bid items.

At locations where storm drains dead-end, plug with a concrete plug of a thickness equal to 1 ½ inches per foot of diameter of pipe with a minimum thickness of 3 inches. The cost of the plugs shall be included in the unit price bid per foot of the various storm drain pipes.

Item 471:

Tackweld all inlet grates and manhole covers to the frame with two 1-inch welds. Supply un-painted cast iron inlet grate and frame and/or cast iron manhole frame and cover.

Item 479:

Accept ownership of inlet grates and manhole covers and properly dispose of them outside the limits of the right of way in accordance with federal, state and local regulations.

Submit a plan detailing proposed methods of handling phased construction at manholes and water valves.

Payment for the phase construction will be considered subsidiary to this item.

Item 496:

Inlet grates and manhole covers become the property of the contractor for disposal.

Item 502:

Provide written proposed lane closure information by 1:00 pm on the business day prior to the proposed closures. Do not close lanes when this requirement is not met.

When excavation is required next to a pavement lane carrying traffic and the widening is not completed by the end of the work day, backfill against the edge of the pavement with at least a 3:1 slope using an acceptable material to support vehicular traffic. Carefully remove and dispose of this material when work resumes. Backfilling pavement edges, and the materials required for the work will be subsidiary to this item.

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Erect a Type III barricade immediately in front of or at each end of all stockpiles that are less than 30 feet from the edge of any traveled lane. Place one Type 2 Object Marker (OM-2Y) alongside the stockpile for every 100 feet of stockpile length.

Place barricades and signs in locations that do not obstruct the sight distance of drivers entering the highway from driveways or side streets.

Provide rectangular shape (CW12-2P) Temporary Clearance Signs on all bridges where the existing vertical clearance has changed. Install Signs to the satisfaction of the Engineer prior to opening to traffic. Plywood sign blanks will have minimum dimensions of 84" X 12". Work performed and materials are subsidiary to this item.

Do not commence work on the road before sunrise. Do not operate or park any equipment/machinery closer than 30 feet from the traveled roadway after sunset unless authorized by the engineer.

When moving unlicensed equipment on or across any pavement or public highways, protect the pavement from all damage using an acceptable method.

Provide 1 shadow vehicles equipped with truck mounted attenuators as shown on the traffic control plan.

If required, provide uniformed off duty police officers and squad cars during lane or ramp closures, night time work or other situations that indicate a need for additional traffic control to protect the traveling public or the construction workforce. Provide documentation such as payroll, log sheets with signatures and badge number, or invoices from the government entity providing the officers for reimbursement. Reimbursement will not be made for coordination fees charged by the police department.

Freeway Lane Closures				
Category of Work	Number of Rdwy Lanes per direction	Peak Times Monday-Friday 6:00 am - 9:00 am 3:30 pm - 7:00 pm Major Events and Major Holidays**	Off Peak Times Monday-Friday 9:00 am - 3:30pm 7:00 pm - 10:30 pm and Saturday	Lowest Volume Time Monday-Friday 10:30 pm to 6:00 am and Sunday
Placement of CTB & Bridge Beams,	5	None	2	3
Pavement Markings, Full Depth Roadway Repair, Bridge or	4	None	2	3
	3	None	1	2

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Similar Demolitions*	2	None	1	2
Adjacent Construction, Lanes for Construction Traffic or Similar Operations	5	None	1	2
	4	None	1	2
	3	None	1	1
	2	None	None	1
<p>* Provide a traffic control plan where bridge demolition cannot be accomplished with lane closures. Freeway closures will only be done during Lowest Volume Times. ** Major Holidays are defined under Item 1.82 and also include the Easter Weekend.</p>				

Additional lanes may be closed during Off Peak Times or Lowest Times with written permission of the Engineer. Lane Closures during Off Peak Times may be started earlier or be extended later with written permission of the Engineer.

Traffic Control Plans with Lane Closures causing backups of 20 minutes or greater in duration will be modified by the Engineer.

Work in other areas of the project is not restricted to this time frame.

No extra pay will be allowed for changeable message boards required on standard TCP sheets.

Changeable message boards will be required on this project. Provide 2 CMS's for the duration of the project. Placement, programming, maintenance and replacement of CMS's will be subsidiary to this bid item.

Item 504:

Furnish one Field Office and Laboratory (Type B) for this project.

Provide one local phone line to the field office. Supply one phone jack and one telephone per each room in the field office. The cost of the phone installation and various monthly phone service charges will be the contractor's responsibility.

Parking shall be provided for (8) vehicles, chain link fencing will be provided around the field office and parking areas.

Provide an all in one printer/scanner/fax/copier with software that is compatible with TxDOT equipment, cost not in excess of \$300. This is subsidiary to the bid item.

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Item 506:

If temporary construction stream crossings are allowed under a Nationwide Permit, submit in writing for approval the type and location of each temporary stream crossing. Use temporary bridges, timber mats, or other structurally sound and non-eroding material for temporary stream crossings. A temporary culvert crossing will consist of storm sewer pipes and 4- to 8-inch nominal size rock. Temporary stream crossings must not cause more than minimal changes to the hydraulic flow characteristics of the stream, increase flooding, or cause more than minimal degradation of water quality. Remove the temporary stream crossings in their entirety and return the affected areas to their pre-existing elevation. All work and materials use for temporary construction stream crossings will not be paid for directly but are subsidiary to pertinent Items.

SW3P Maintenance Reports are made every seven calendar days. Make corrections as soon as possible before the next anticipated rain event or within seven calendar days after being able to enter the site to work for each BMP. A BMP site being "Too Wet to Work" is the only acceptable reason for not accomplishing the corrections with the seven calendar day time limit and should be thoroughly documented on Form 2118. If maintenance corrections are not made within this time frame then all work will cease, time charges will continue until SW3P is brought into compliance and is documented on Form 2118 after TxDOT review.

This in no way releases the contractor of liability for noncompliance.

Obtain from the Engineer a copy of the project's TPDES Storm Water Program and Notice of Intent or Construction Site Notice. Laminate the sheets and bond with adhesive to 36" X 48" plywood sign blanks. Ensure the sheets remain dry. Apply Type C Blue reflective sheeting as the background and add the text "SW3P" in 5" white lettering, centered at the top. Attach the signs to approved temporary mounts and locate at each of the project limits or as directed by the Engineer. SW3P Signs, maintenance, and repostings will be subsidiary to Item 502.

Item 508:

Testing of materials used in the construction of a temporary detour may be waived when approved by the Engineer.

Item 512:

Furnish pre-cast F Shape Barrier with drainage slots as detailed on the Concrete Safety Barrier Standards. Submit for approval the type of barrier joint connection proposed for the project.

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Item 529:

Provide grooved joints at 10-foot intervals and $\frac{3}{4}$ inch expansion joint material for doweled curb at the same locations as on the existing pavement.

For Curb and Gutter sections, provide grooved joints at 10-foot intervals and $\frac{3}{4}$ inch expansion joint material at a maximum of 50-foot centers and at all radius points and inlets.

Curb and Gutter transitions will be paid for by the foot at the unit price for the corresponding curb or curb and gutter section.

Saw joints at the same location as on the existing pavement.

Item 536:

Use Class "B" concrete for concrete medians and directional islands.

Item 540:

Furnish one type of post throughout the project except as specifically noted in the plans.

Item 542:

Salvage metal beam guard fence removed from this project and haul to and stockpile at Rockwall Maintenance. The work involved in hauling this material will not be paid for directly, but will be considered subsidiary to this item.

Remove or cut off existing anchor bolts and fill holes with grout in bridge slabs as directed.

Item 545:

Stockpile crash cushion attenuators at Rockwall Maintenance. The work involved in hauling and handling this material will not be paid for directly, but will be considered subsidiary to this item.

Item 556:

The unit price bid per linear foot of "pipe underdrain" shall include the cost of making connections to storm sewer lines.

Place bell and spigot type pipe with an open joint of approximately $\frac{3}{4}$ inch.

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In the event that Type 5 Underdrain Pipe is bid, make the connection as shown in the plans. The cost of making the connection will be considered subsidiary to this item.

The requirements for decantation of filter material are deleted for this project.

Item 585:

Use Surface Test Type A on all intersections and driveways.

Use Surface Test Type B pay adjustment schedule 2 on the travel lanes.

Use Surface Test Type B pay adjustment schedule 3 on the service roads.

Use Surface Test Type B pay adjustment schedule 2 on the ramps.

Item 610:

Provide to the Engineer, in addition to any submittals required by the specifications and elsewhere in the general notes, a list of pre-qualified material to be used on the project.

Use luminaire ballasts rated for operation at 240 and 480 volts.

The luminaires to be removed under this item contain capacitors that may use polychlorinated biphenyl (PCB) as an insulating oil. PCB has been declared a hazardous substance by the EPA. Place all luminaires to be removed on the right of way. The Department will remove all capacitors from the luminaires. Assume all unlabeled capacitors to contain PCB. Take measures to prevent capacitor enclosures from being punctured or otherwise damaged. If PCB capacitors are ruptured, use proper procedures and personnel protective equipment, in accordance with federal and state guidelines.

Existing illumination circuits may be located within or adjacent to the project limits. Either verify with the Engineer or supply a video survey to the Engineer of all the lighting in and adjacent to the project limits before beginning work. Ensure that all assemblies operational at the beginning of construction are operational at the completion of the project. This work will be done at the contractor's expense.

Item 618:

The location of conduits and ground boxes are diagrammatic only and may be shifted to accommodate field conditions as directed.

Secure permission and approval from the proper authority prior to cutting into or removing any sidewalks or curbs for installation of this Item.

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When holes are drilled through concrete structures, use a coring device. Do not use masonry or concrete drills.

Structurally mount junction boxes as shown on the plans. When used for traffic signal installations, use boxes 12"x12"x8", or as approved.

Use conduit hangers for 3 inch and larger conduit when hanging conduit from structures.

Place conduit under existing pavement by an approved boring method. Do not place boring pits closer than 2 feet from the edge of the pavement unless otherwise directed. Do not use water jetting. When boring is used for under pavement conduit installations, the maximum allowable over-cut is 1" in diameter. When conduits are bored, do not exceed 18 inches in the vertical and horizontal tolerances as measured from the intended target point.

Do not use a pneumatically driven device for punching holes beneath the pavement (commonly known as a "missile").

Furnish and install a non-metallic ¾" wide flat pull rope in conduit runs in excess of 50 feet.

Use a colored cleaner-primer on all PVC to PVC joints before application of PVC cement.

Seal all conduit ends with a permanently soft, non-toxic duct seal. Use a duct seal that does not adversely affect other plastic materials or corrode metals.

Furnish and install non-metallic pull ropes in conduit installed for future use and cap using standard weather-tight conduit caps, as approved. This work will not be paid for directly, but is subsidiary to this Item.

Item 620:

When two or more conductors are present in one conduit or enclosure, identify the conductors as shown in the 'Electrical Details' (ED) standard sheets. Use the identification tag with two plastic straps. On each tag indicate the circuit number, letter, or other identification as shown on the plans.

Do not use non-certified persons to perform electrical work. See Item 7 and any special provisions to Item 7 of the Texas Standards Specifications book for further information for electrical certification.

Dual Breakaway

For both transformer and shoe-base type illumination poles, provide double-pole breakaway fuse holder as shown on the Texas Department of Transportation (TxDOT) - Construction Division's (CST) materials producers list. Category is "Roadway Illumination and Electrical Supplies." Fuse holder is shown on list under Items 610 & 620. Provide 10 amp time delay fuses.

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Item 624:

All conduits feeding to junction boxes mounted on bridges and underpasses will contain an equipment grounding conductor. All equipment grounding conductors will be bonded together at every accessible location. The equipment grounding conductor will also be bonded to a ground rod driven in the closest ground box located at grade level to the bridge or overpass.

Item 628:

Contact the appropriate utility company during the first three weeks of the project lead-time period to allow adequate time for any necessary utility adjustments, transformer installation, etc.

Blast clean service pole pedestals with Class "A" blast cleaning as defined in Item 446. This work will not be paid for directly, but is subsidiary to this Item.

Label the service enclosures indicating service address as well as all required information as shown on the Electrical Detail (ED) standard sheets. Labeling shall be silk screening or other acceptable method. This work will not be paid for directly, but is subsidiary to this Item.

When concrete for service pole foundations is required, use Class A in accordance with Item 421, "Concrete for Structures", except consider the concrete subsidiary to Item 628 for payment purposes. When reinforcing steel for service pole foundations is required, it will be in accordance with Item 440, "Reinforcing Steel", except consider the steel subsidiary to Item 628 for payment purposes.

Contact the City of Rockwall, Mr. Chuck Todd, within the first week of the project lead time to obtain addresses for the service poles to be installed on this project. He can be contacted at 972-771-7746.

Provide a photocell and lighting contactor in electrical services for signals that have luminaires.

Use only white insulated wire for neutral wire.

Bill the electrical service power usage to the Texas Department of Transportation.

Item 636:

Leave the advance guide sign and/or the exit direction sign for an interchange in place at all times unless prior written approval is given. Replace signs removed by the Contractor before the end of the work day.

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Manufacture all white legends using Clearview font on overhead and large ground-mounted guide signs. This includes destinations, cardinal directions, exit information and exit numbers. Use the font shown on the existing standard sheets for all route markers (including interstate shields) and "Exit Only" panel information.

Use Type D Super High Specific Intensity (Non-fluorescent Prismatic) sheeting for overhead guide signs (both background and legend), conforming to DMS-8300, Flat Surface Reflective Sheeting. Use ASTM Type VIII and Type IX.

Use Type D Super High Specific Intensity (non-fluorescent Prismatic) sheeting for legends and borders on large ground-mounted guide signs, conforming to DMS-8300, Flat Reflective Sheeting. Use ASTM Type VIII and Type IX. Use Type C High Specific Intensity sheeting for the background on large ground-mounted guide signs, conforming to DMS-8300, Flat Surface Reflective Sheeting.

Affix a sign identification decal to the back of all signs in accordance with Item 643.

Attach sheeting applied to extruded aluminum panels to each individual extrusion. Lap each extrusion's horizontal edge with sheeting and do not bridge horizontal gaps between extrusions.

Install new overhead signs tilted "down" at 3°. Furnish and obtain approval of all shop drawings detailing the method to accomplish this installation. All material and labor required for this special installation is considered subsidiary to Item 636.

Ensure the minimum vertical clearance, as shown in the plans, at the highpoint of the roadway after the installation of all overhead signs. Mount new overhead signs with 46% of the sign height positioned below the centerline of the truss, or obtain approval for any exceptions.

Items 644, 647, and 650:

Prior to taking elevations to determine lengths for fabrication of sign posts and/or sign support towers, obtain verification of all proposed locations.

Provide field galvanizing and metallizing equipment, as per Item 445, at all times and make repairs to galvanized surfaces according to the above specification item at intervals as directed.

Base all sign support quantities for pipe and structural steel on the dimensions shown on the approved shop drawings or as approved in writing. Make calculations for measurement of the sign support quantities from the approved show drawing in accordance with Article 9.1 of the standard specifications. Measure increases or decreases in quantities caused by changes in design after the shop drawings are approved as specified and revised quantities will be the basis for payment.

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After sign supports with signs attached have been erected, wash individual units requiring cleaning with an approved cleaning solution to remove all grease, oil, dirt, smears, streaks, and other foreign particles.

Torque the anchor bolts for only the Exit Gore signs to 60 foot-pounds.

Item 650:

All towers and trusses will be match marked, by the fabricator, for erection. Use the tower heights shown in the sign summaries and on the plans for bidding purposes only. Prior to fabrication, take finished grade elevations at the tower locations and determine their exact heights for fabrication in accordance with the details shown on the plans.

Item 656:

Before placing the concrete for the controller foundation, coordinate with the TxDOT-Dallas District to ensure that the anchor bolt spacing will match the anchor bolts and cabinet supplied by the District.

Form a 3/4-inch chamfer on the top edge of each signal pole foundation.

Probe for utilities and underground structures prior to drilling foundations. Foundations shall be paid for once regardless of extra work caused by obstructions.

Item 666:

Provide Type III Glass Traffic Beads that meet the requirements of Departmental Materials Specifications DMS-8290.

Item 672:

Black adhesive will be used on asphalt pavements. White adhesive will be used on concrete pavements.

Item 677:

Grinding of pavements is not allowed to eliminate pavement markings.

Placement of paint or thermo is not allowed to eliminate pavement markings.

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Item 680:

Requirements for this Item include the following work, all of which are subsidiary to this Item:

1. Furnish and install all sign panels for mounting on signal poles, mast arms, and span wires. Fabricate the sign panels in accordance with Item 636, and mount with Astro-Sign Brac, Signfix aluminum channel, or equal as approved by the Engineer. Submit five (5) sets of shop drawings for street name signs. Install the sign panels supplied for mounting on signal poles, mast arms, and span wires. Furnish and install all other signs in accordance to Item 636. Furnish all mounting hardware for all signs. Mount signs with Astro-Sign Brac, Signfix aluminum channel, or equal as approved by the Engineer.
2. Provide submittal literature for all traffic signal equipment before installation.
3. Have a qualified technician on the project site to place the traffic signal in operation.
4. Use qualified personnel to respond to and diagnose all trouble calls during the thirty-day test period. Repair any malfunction to Contractor-supplied signal equipment. Provide to the Engineer a local telephone number, not subject to frequent changes and available on a 24-hour basis, for reporting trouble calls. Response time to reported calls must be less than 2 hours. Make appropriate repairs within 24 hours. Place a logbook in the controller cabinet and keep a record of each trouble call reported. Notify the Engineer of each trouble call. Do not clear the error log in the conflict monitor during the thirty-day test period without approval.
5. Remove the existing stop sign assemblies after the traffic signals are in operation. Paid for under item 100, Prep ROW
6. Install the Opticom equipment supplied by the City of Rockwall.
7. Furnish and install a new eight-phase NEMA controller, meeting the requirements of Departmental Materials Specifications DMS-11170 in a base mounted controller and cabinet. This location will be added to an existing closed loop system. This intersection will be part of an existing closed loop signal system. The signal controller shall be compatible with the Econolite controllers in the existing system.
8. Connect all field wiring to the controller assembly. TxDOT will program the controller for operation, hook up the conflict monitor and other equipment, and turn on the controller. Have a qualified technician and a representative from the controller supplier on the project site to place the traffic signals in operation.
9. Install the controller cabinet in an orientation as directed.
10. Deliver the cabinet, controller, and accessories to the District Signal Shop, 4777 E Hwy 80, Mesquite. Notify the District Signal Shop two working days before delivery at (214)320-6682.
11. When the work required by this contract has been satisfactorily completed on any individual or inter-connected system of signalized intersections, final clean-up has been performed, and the traffic signal equipment supplied has operated continuously and satisfactorily for at least 30 days, release from further maintenance on that particular intersection is authorized. This partial acceptance, made in writing, does not void or alter any of the terms of the contract.
12. Prevent any damage to property owner's poles, fences, shrubs, mailboxes, etc. Protect all underground and overhead utilities and repair any damage. Provide access to all driveways during construction.

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13. Notify the District Signal Maintenance Office at (214)320-6682 and Construction Office at (214)320-6694 one week before beginning any work involving traffic signals.

Item 682:

Install signal head attachments so that the wiring to each signal head passes from the mast arm through the attachment hardware to the signal head. Do not leave cable or wiring exposed.

Provide signal head attachments that allow for adjustment about the horizontal and vertical axis.

Provide aluminum signal heads and aluminum tubing in the following color: Federal Yellow #13538 of Federal Standard 595. Provide back plates and the inside of visors with a flat black finish. Provide polycarbonate back plates for all traffic signal heads.

Turn down signal heads or cover with burlap or other material, as approved, until traffic signal is placed in operation.

Mount signal heads level and plumb and aimed as directed.

Item 684:

Provide stranded 14 AWG Type A signal cables as shown on the plans.

Provide a separate multi-conductor signal cable (14 AWG) inside pedestal poles and signal poles from the terminal strip to each signal head as shown on the plans.

Identify each cable as shown on the plans (cable 1, etc.) with permanent marking labels (Panduit Type PLM standard single marker tie, Thomas&Betts Type 548M, or equal) at each ground box, pole base, and controller.

Item 686:

Provide 12 circuit Buchanan Type 112SN, Kulka Type 985-GP-12 CU, or equal terminal strips in the signal pole access compartment. Provide additional terminal strips of 8 circuits each when more than 12 circuits are required.

Mark pole shafts and mast arms with the identification numbers from the plans to facilitate field-assembly. Identify pole shafts and mast arms by intersection for projects with multiple intersections.

Provide nuts on top and bottom (double nuts) of the base plate as shown on the plans.

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Set anchor bolts for mast arm signal poles and strain poles so that two are in tension and two are in compression. Obtain approval of anchor bolt placement before placing concrete.

Use the traffic signal pole heights and mast arm lengths shown on the plans and in the material summary for bidding purposes only. Make field measurements to determine the actual pole height and mast arm length required. Provide vertical clearance of 17 to 19 feet from the roadway to the lowest point of the signal head or mast arm. Place signal heads 40 feet minimum and 180 feet maximum from the stop line. If the nearest signal is more than 180 feet from the stop line, place a supplemental near-side signal head. Determine the field measurements and elevations from the actual field location of the poles, considering all above and below ground utilities and existing roadway elevations.

Provide vibration dampers for mast arms 28 feet long and longer. Use dampers 18"x48" for arms up to 48 feet long, and 16"x66" for longer mast arms. Install using Astro-sign Brac, Signfix aluminum channel, or equal, at a maximum of 3 feet from the end of the mast arm.

Item 687:

Use a 24 inch drilled shaft foundation for all pedestal pole assemblies.

Item 688:

Provide pedestrian push button assemblies that have permanent-type signs within the detector unit which indicates which crosswalk signal is actuated. Provide push buttons with a minimum 2 inch convex plunger. Provide a protective shroud encircling the plunger to deter vandalism that is cast as part of the housing cover. Use a plunger that protrudes beyond the shroud a distance adequate to accommodate the switch travel. Verify the location of the push button assemblies and the direction of the arrows on the signs prior to installation.

Item 6006:

Integrate the proposed traffic signal with the existing closed-loop system to make one system linked by spread spectrum radio communication as shown on the plans. Signal monitor communications are part of the closed-loop system. Provide communication between the master controller unit and any controller linked by either hardwire or radio that is transparent to the communication media. The existing closed-loop system consists of Type Encom spread spectrum radios. Ensure that all spread spectrum radios on the proposed closed-loop system are compatible to allow for proper closed-loop operation and communication. The existing master spread spectrum radio on the proposed system is located at: SH 205 at Boydston.

Install the heliax cable so that it is not exposed to the outdoor environment.

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Provide the latest version of the applicable SSR diagnostic software to the District on 3.5 inch disks, and ensure that it will operate under DOS 6.2 or Windows 98 operating systems.

Item 6266:

Provide a Video Processor System (VPS) that can provide up to thirty-two (32) detector outputs to the controller from up to ten (10) camera/video processor units (C/VPU). Route the detector outputs through the detector panel and the detector test switches. For each C/VPU, provide a field of view with a minimum of thirty-two (32) virtual detection zones for vehicle detection.

(Note: Use one processor system per intersection)

Wire the outputs as follows:

Card1		Card2	
Output	Detector	Output	Detector
1	1-1	17	3-1
2	6-1	18	8-1
3	6-2	19	8-2
4	6-3	20	8-3
5	6-4	21	8-4
6	Spare	22	Spare
7	SD1	23	SD5
8	SD2	24	SD6
9	5-1	25	7-1
10	2-1	26	4-1
11	2-2	27	4-2
12	2-3	28	4-3
13	2-4	29	4-4
14	Spare	30	Spare
15	SD3	31	SD7
16	SD4	32	SD8

*SD: System Detector

Provide eleven (11) cameras for this project, including one (1) spare camera.

Provide a set-up system. Load required set-up software onto all of the District Signal Shop's notebook computers and provide all necessary licensing. The Contractor does not provide computers as part of the set-up system.

Provide phase red and green load switch outputs from up to eight (8) phases of a NEMA TS2 Type 2 controller as inputs to the VPU for use with internal detector extend/delay timing functions. Ensure the C/VPU is able to condition the detector outputs and detection zones based on the state of the associated phase number and color. Provide separate count loop inputs into the controller for each approach lane.

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Supply a package that will operate with Windows 98 and NT and provide the functionality defined in both sections 7.0 and 9.0 in both a direct connect and remote communications mode. Ensure the software resident in the C/VPU and the personal computer is capable of transmitting and receiving all information needed for zone set up, monitoring vehicle detection by viewing flashing detection zone overlays, and uploading/downloading and interrogating all stored data within the C/VPU. Ensure remote communications with the C/VPU is possible with the addition of external communication devices (modem, Codec, etc.) using the RS-232 and video output ports on the front of the VPU.

Ensure the C/VPU operational software is stored internally in flash memory and capable of being updated without the removal and replacement of memory devices.

Provide a camera interface panel mounted to the wall of the cabinet for protecting the camera video and power inputs/outputs. The panel shall contain as a minimum; an EDCO ACP-340 for the camera and VIVDS Processor unit power, with an on/off switch, a convenience outlet protected by the ACP-340, a 10-amp circuit breaker, and a terminal strip with a minimum of six (6) 8-32 binder head screws. The AC connections shall be protected using a piece of 1/8-inch plexi-glass.

Install the VIVDS detection zones as directed. Have qualified personnel on site at the time of the signal turn-on to assist with the installation of detection zones.

If the camera locations shown in the plans do not allow for proper sight of the proposed detection zones, relocate the cameras as needed and as directed. This labor and material cost will not be paid separately, but is subsidiary to this item.

The Video Processor Unit (VPU) may reside inside the camera housing. Use video output from the C/VPU in color or black/white with active detection zones overlaid on full motion video.

Provide Field Communications Link required by the manufacturer of the video detection system. These cables will be paid for as the type shown in the plans regardless of actual type of cable.

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The list of material below is for the Contractor's information only.
It is the responsibility of the Contractor to verify
all items and quantities listed below.

**LIST OF MATERIAL/LABOR
SUBSIDIARY TO ITEM 680**

DESCRIPTION	UNIT	QUANTITY
2 INCH WEATHERHEAD	EA	1
250W HPS LUMINAIRE	EA	4
8 PHASE NEMA CONTROLLER COMPLETE W/ CABINET AND ACCESSORIES	EA	1
TRAFFIC SIGNAL CONTROLLER FOUNDATION	EA	1
INSTALL OPTICOM EQUIPMENT (INTERSECTION)	LS	1
REGULATORY SIGN PANEL (R10-12,ETC)	EA	14
SINGLE STREET NAME SIGN PANEL	EA	6
CONCRETE PAD (5' X 5' X 4", CLASS B)	SF	25
COPPER GROUND ROD 5/8" X 10'	EA	1

**LIST OF MATERIAL
FURNISHED BY THE CITY OF ROCKWALL**

DESCRIPTION	UNIT	QUANTITY
OPTICOM CABLE	LF	1180
OPTICOM DETECTOR W/MOUNTING BRACKET	EA	4
OPTICOM MODULES (2-CHANNEL)	EA	4
OPTICOM CARD RACK AND HARNESS	EA	1
OPTICOM CONTROLLER ASSEMBLY COMPLETE WITH CABINET AND ACCESSORIES	EA	1