

NOTIFICATION OF ADDENDUM

ADDENDUM NO. 1

DATED 9/06/2016

Control	0196-01-106, ETC.
Project	STP 2017(083)MM, ETC.
Highway	IH 35E
County	DENTON

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: STP 2017(083)MM CONTROL: 0196-01-106
COUNTY: DENTON
LETTING: 09/09/2016
REFERENCE NO: 0901

PROPOSAL ADDENDUMS

- _ PROPOSAL COVER
X BID INSERTS (SH. NO.: 1-27 - 27-27)
X GENERAL NOTES (SH. NO.: A - KK)

X SPEC LIST (SH. NO.: 2-4, 3-4, 4-4)
_ SPECIAL PROVISIONS:
_ ADDED:

DELETED:

_ SPECIAL SPECIFICATIONS:
_ ADDED:

DELETED:

X OTHER: PLAN SHEET AND OTHER CHANGES

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

PROPOSAL

*****BID INSERTS*****

SHEET 1-27: ITEMS 104-6001, 104-6036, 110-6001 QUANTITY IS REVISED

SHEET 2-27: ITEMS 132-6025, 132-6026, 161-6017, 164-6039
164-6041, 164-6043, 168-6001 QUANTITY IS REVISED

SHEET 3-27: ITEMS 400-6006, 402-6001, 403-6001 QUANTITY IS REVISED
360-6030 QUANTITY IS DELETED
400-6007 QUANTITY IS ADDED

SHEET 4-27: ITEM 416-6018 QUANTITY IS REVISED

SHEET 5-27: ITEMS 427-6003, 432-6024 QUANTITY IS REVISED

SHEET 6-27: ITEMS 432-6044, 432-6045, 450-6023 QUANTITY IS REVISED
450-6042 QUANTITY IS ADDED

DESCRIPTION OF ABOVE CHANGES (CONTINUED)
(INCLUDING PLANS SHEET CHANGES)

450-6051 QUANTITY IS DELETED

SHEET 7-27: ITEM 464-6005 QUANTITY IS REVISED

SHEET 9-27: ITEMS 465-6279, 465-6325, 465-6326, 466-6170
QUANTITY IS REVISED
ITEMS 471-6001, 471-6005 QUANTITY ARE DELETED

SHEET 10-27: ITEM 496-6002 QUANTITY IS REVISED

SHEET 11-27: ITEMS 506-6041, 506-6043, 512-6005, 512-6029
512-6053 QUANTITY IS REVISED

SHEET 12-27: ITEM 540-6001 QUANTITY IS REVISED
ITEM 529-6007 QUANTITY IS ADDED

SHEET 13-27: ITEMS 540-6006, 545-6003 QUANTITY IS REVISED

SHEET 14-27: ITEMS 545-6005, 545-6019, 610-6104 QUANTITY IS REVISED

SHEET 15-27: ITEM 620-6012 QUANTITY IS REVISED

SHEET 16-27: ITEMS 636-6001, 636-6003 QUANTITY IS REVISED
636-6002 QUANTITY IS DELETED

INFORMATION ON BID INSERT SHEETS MAY HAVE SHIFTED DUE TO CHANGES ABOVE.

*****GENERAL NOTES*****

GENERAL NOTES SHEETS A-KK HAVE BEEN REPLACED AS PART OF THIS ADDENDUM
GENERAL NOTE SHEET LL HAS BEEN ADDED AS PART OF THIS ADDENDUM

*****SPECIFICATION LIST*****

SHEET 2-4 DELETE STANDARD SPEC 471
INFORMATION ON SPEC LIST SHEETS MAY HAVE SHIFTED DUE TO CHANGES ABOVE.

*****PLAN SHEETS*****

SHEET 2 REVISED
SHEET 24 REVISED
SHEETS 24A-R REVISED
SHEET 25 REPLACED
SHEETS 25A-F REPLACED
SHEETS 26-31 REVISED
SHEET 34 REVISED
SHEET 35 REVISED
SHEET 38 REVISED
SHEET 46 REVISED
SHEETS 51-54 REVISED
SHEET 56 REVISED
SHEETS 58-61 REVISED
SHEET 66 REVISED

SHEET 67 REVISED
DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

(CONTINUED)

SHEET 71 REVISED
SHEET 75 REVISED
SHEET 76 REVISED
SHEET 88 REVISED
SHEETS 91-94 REVISED
SHEET 159 REVISED
SHEET 163 REVISED
SHEET 176 REVISED
SHEET 202 REVISED
SHEET 204 REVISED
SHEET 209 REVISED
SHEET 253 REVISED
SHEETS 260-266 REVISED
SHEETS 268-276 REVISED
SHEET 293 REVISED
SHEET 294 REVISED
SHEETS 326-329 REVISED
SHEET 338 REVISED
SHEET 340 REVISED
SHEET 342 REVISED
SHEETS 347-349 REVISED
SHEET 353A ADDED
SHEETS 354-358 REVISED
SHEET 386A ADDED
SHEETS 400-406 REVISED
SHEET 541 REVISED
SHEET 573 REVISED
SHEETS 658-660 REVISED

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	100	6002		PREPARING ROW DOLLARS and CENTS	STA	70.000	1
	104	6001		REMOVING CONC (PAV) DOLLARS and CENTS	SY	29,390.000	2
	104	6009		REMOVING CONC (RIPRAP) DOLLARS and CENTS	SY	2,267.000	3
	104	6017		REMOVING CONC (DRIVEWAYS) DOLLARS and CENTS	SY	878.000	4
	104	6023		REMOVING CONC (CTB) DOLLARS and CENTS	LF	6,060.000	5
	104	6024		REMOVING CONC (RETAINING WALLS) DOLLARS and CENTS	SY	408.000	6
	104	6033		REMOVING CONC (DRAIN) DOLLARS and CENTS	SY	43.000	7
	104	6036		REMOVING CONC (SIDEWALK OR RAMP) DOLLARS and CENTS	SY	373.000	8
	104	6044		REMOVING CONC (FLUME) DOLLARS and CENTS	SY	64.000	9
	105	6094		REMOVING STAB BASE & ASPH PAV(12"-27") DOLLARS and CENTS	SY	36,031.000	10
	110	6001		EXCAVATION (ROADWAY) DOLLARS and CENTS	CY	77,519.000	11

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	132	6025		EMBANKMENT (FINAL) (DENS CONT) (TY C1) DOLLARS and CENTS	CY	109,019.000	12
	132	6026		EMBANKMENT (FINAL) (DENS CONT) (TY C2) DOLLARS and CENTS	CY	116,438.000	13
	161	6017		COMPOST MANUF TOPSOIL (4") DOLLARS and CENTS	SY	53,153.000	14
	162	6002		BLOCK SODDING DOLLARS and CENTS	SY	13,474.000	15
	164	6039		DRILL SEEDING (PERM) (URBAN) (CLAY) DOLLARS and CENTS	SY	53,153.000	16
	164	6041		DRILL SEEDING (TEMP) (WARM) DOLLARS and CENTS	SY	26,578.000	17
	164	6043		DRILL SEEDING (TEMP) (COOL) DOLLARS and CENTS	SY	26,578.000	18
	168	6001		VEGETATIVE WATERING DOLLARS and CENTS	MG	16,315.800	19
	260	6002		LIME (HYDRATED LIME (SLURRY)) DOLLARS and CENTS	TON	3,218.000	20
	260	6011		LIME TRT (EXST MATL) (12") DOLLARS and CENTS	SY	81,443.000	21
	344	6004		SUPERPAVE MIXTURES SP-A PG64-22 DOLLARS and CENTS	TON	34,302.000	22
	344	6050		SUPERPAVE MIXTURES SP-C PG70-22 DOLLARS and CENTS	TON	8,644.000	23

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	ITEM NO	DESC CODE	S.P. NO.				
	344	6066		SUPERPAVE MIXTURES SP-C PG76-22 DOLLARS and CENTS	TON	8,644.000	24
	344	6168		SUPERPAVE MIXTURES SP-D PG64-22(LEV- UP) DOLLARS and CENTS	TON	220.000	25
	356	6017		FABRIC DOLLARS and CENTS	SY	1,110.000	26
	360	6002		CONC PVMT (CONT REINF - CRCP) (8") DOLLARS and CENTS	SY	1,669.000	27
	360	6005		CONC PVMT (CONT REINF - CRCP) (11") DOLLARS and CENTS	SY	718.000	28
	400	6005		CEM STABIL BKFL DOLLARS and CENTS	CY	2,354.000	29
	400	6006		CUT & RESTORING PAV DOLLARS and CENTS	SY	503.000	30
	400	6007		CUT & RESTORE CONC PAVING DOLLARS and CENTS	SY	690.000	31
	401	6001		FLOWABLE BACKFILL DOLLARS and CENTS	CY	1,577.000	32
	402	6001		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	8,205.000	33
	403	6001		TEMPORARY SPL SHORING DOLLARS and CENTS	SF	95,396.000	34
	410	6001		SOIL NAIL ANCHORS DOLLARS and CENTS	LF	6,030.000	35

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	416	6001		DRILL SHAFT (18 IN) DOLLARS and CENTS	LF	366.000	36
	416	6004		DRILL SHAFT (36 IN) DOLLARS and CENTS	LF	1,930.000	37
	416	6005		DRILL SHAFT (42 IN) DOLLARS and CENTS	LF	1,122.000	38
	416	6006		DRILL SHAFT (48 IN) DOLLARS and CENTS	LF	35.000	39
	416	6007		DRILL SHAFT (54 IN) DOLLARS and CENTS	LF	124.000	40
	416	6018		DRILL SHAFT (SIGN MTS) (24 IN) DOLLARS and CENTS	LF	28.000	41
	416	6029		DRILL SHAFT (RDWY ILL POLE) (30 IN) DOLLARS and CENTS	LF	160.000	42
	416	6031		DRILL SHAFT (TRF SIG POLE) (30 IN) DOLLARS and CENTS	LF	33.000	43
	416	6032		DRILL SHAFT (TRF SIG POLE) (36 IN) DOLLARS and CENTS	LF	103.000	44
	420	6007		CL A CONC (FLUME) DOLLARS and CENTS	CY	116.000	45
	420	6014		CL C CONC (ABUT)(HPC) DOLLARS and CENTS	CY	234.800	46
	420	6030		CL C CONC (CAP)(HPC) DOLLARS and CENTS	CY	273.400	47

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	ITEM NO	DESC CODE	S.P. NO.				
	420	6038		CL C CONC (COLUMN)(HPC) DOLLARS and CENTS	CY	231.100	48
	420	6066		CL C CONC (RAIL FOUNDATION) DOLLARS and CENTS	CY	173.300	49
	422	6002		REINF CONC SLAB (HPC) DOLLARS and CENTS	SF	67,407.000	50
	422	6016		APPROACH SLAB (HPC) DOLLARS and CENTS	CY	294.000	51
	423	6001		RETAINING WALL (MSE) DOLLARS and CENTS	SF	65,806.000	52
	423	6022		RETAINING WALL (SOIL NAIL)(FACIA) DOLLARS and CENTS	SF	3,390.000	53
	425	6039		PRESTR CONC GIRDER (TX54) DOLLARS and CENTS	LF	7,856.140	54
	427	6003		OPAQUE SEALER FINISH DOLLARS and CENTS	SF	93,275.000	55
	432	6001		RIPRAP (CONC)(4 IN) DOLLARS and CENTS	CY	365.000	56
	432	6002		RIPRAP (CONC)(5 IN) DOLLARS and CENTS	CY	19.000	57
	432	6009		RIPRAP (CONC) (CL B) (4") DOLLARS and CENTS	CY	15.000	58
	432	6024		RIPRAP (STONE COMMON)(DRY)(12 IN) DOLLARS and CENTS	CY	97.000	59

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	ITEM NO	DESC CODE	S.P. NO.				
	432	6044		RIPRAP (CONC)(FLUME) and DOLLARS CENTS	CY	25.000	60
	432	6045		RIPRAP (MOW STRIP)(4 IN) and DOLLARS CENTS	CY	331.000	61
	442	6007		STR STEEL (MISC NON - BRIDGE) and DOLLARS CENTS	LB	219.000	62
	450	6014		RAIL (TY T551) and DOLLARS CENTS	LF	466.000	63
	450	6023		RAIL (TY SSTR) and DOLLARS CENTS	LF	1,401.000	64
	450	6024		RAIL (TY SSTR)(HPC) and DOLLARS CENTS	LF	4,051.200	65
	450	6042		RAIL (TY PR1) and DOLLARS CENTS	LF	130.000	66
	450	6054		RAIL (TY SSTR) (W/DRAIN SLOTS) and DOLLARS CENTS	LF	452.000	67
	454	6001		SEALED EXPANSION JOINT (4 IN) (SEJ - A) and DOLLARS CENTS	LF	372.000	68
	462	6004		CONC BOX CULV (4 FT X 3 FT) and DOLLARS CENTS	LF	1,335.000	69
	462	6007		CONC BOX CULV (5 FT X 3 FT) and DOLLARS CENTS	LF	1,460.000	70
	464	6003		RC PIPE (CL III)(18 IN) and DOLLARS CENTS	LF	25.000	71

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	ITEM NO	DESC CODE	S.P. NO.				
	464	6005		RC PIPE (CL III)(24 IN) DOLLARS and CENTS	LF	4,051.000	72
	464	6007		RC PIPE (CL III)(30 IN) DOLLARS and CENTS	LF	350.000	73
	464	6008		RC PIPE (CL III)(36 IN) DOLLARS and CENTS	LF	600.000	74
	464	6009		RC PIPE (CL III)(42 IN) DOLLARS and CENTS	LF	735.000	75
	464	6017		RC PIPE (CL IV)(18 IN) DOLLARS and CENTS	LF	900.000	76
	464	6018		RC PIPE (CL IV)(24 IN) DOLLARS and CENTS	LF	835.000	77
	464	6020		RC PIPE (CL IV)(36 IN) DOLLARS and CENTS	LF	185.000	78
	465	6005		JCTBOX(COMPL)(PJB)(3FTX3FT) DOLLARS and CENTS	EA	4.000	79
	465	6006		JCTBOX(COMPL)(PJB)(4FTX4FT) DOLLARS and CENTS	EA	1.000	80
	465	6007		JCTBOX(COMPL)(PJB)(3FTX5FT) DOLLARS and CENTS	EA	1.000	81
	465	6009		JCTBOX(COMPL)(PJB)(5FTX5FT) DOLLARS and CENTS	EA	1.000	82
	465	6022		INLET (COMPL)(PCO)(5FT)(LEFT) DOLLARS and CENTS	EA	8.000	83

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	465	6023		INLET (COMPL)(PCO)(5FT)(RIGHT) DOLLARS and CENTS	EA	2.000	84
	465	6024		INLET (COMPL)(PCO)(5FT)(BOTH) DOLLARS and CENTS	EA	13.000	85
	465	6070		INLET (COMPL)(PSL)(RC)(3FTX3FT) DOLLARS and CENTS	EA	21.000	86
	465	6071		INLET (COMPL)(PSL)(RC)(4FTX4FT) DOLLARS and CENTS	EA	3.000	87
	465	6126		INLET (COMPL)(PSL)(FG)(3FTX3FT-3FTX-3FT) DOLLARS and CENTS	EA	6.000	88
	465	6128		INLET (COMPL)(PSL)(FG)(4FTX4FT-4FTX-4FT) DOLLARS and CENTS	EA	3.000	89
	465	6160		INLET(COMPL)(PAZD)(FG)(4FTX4FT-4FTX-4FT) DOLLARS and CENTS	EA	2.000	90
	465	6162		INLET(COMPL)(PAZD)(FG)(5FTX5FT-4FTX-4FT) DOLLARS and CENTS	EA	1.000	91
	465	6178		INLET (COMPL)(TY MSE1) DOLLARS and CENTS	EA	11.000	92
	465	6179		INLET (COMPL)(TY MSE2) DOLLARS and CENTS	EA	2.000	93
	465	6225		JCT BOX (COMPL)(SPL) DOLLARS and CENTS	EA	4.000	94

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	ITEM NO	DESC CODE	S.P. NO.				
	465	6279		INLET (COMPL)(TY C)(MOD) DOLLARS and CENTS	EA	12.000	95
	465	6325		INLET (COMPL)(TY D)(3 GRATE) DOLLARS and CENTS	EA	1.000	96
	465	6326		INLET (COMPL)(TY G)(3 GRATE) DOLLARS and CENTS	EA	2.000	97
	466	6135		HEADWALL (CH - PW - S) (DIA= 42 IN) DOLLARS and CENTS	EA	1.000	98
	466	6170		WINGWALL (FW - S) (HW=9 FT) DOLLARS and CENTS	EA	1.000	99
	466	6182		WINGWALL (PW - 1) (HW=7 FT) DOLLARS and CENTS	EA	3.000	100
	476	6029		JACK BOR OR TUN PIPE(42 IN)(RC)(CL III) DOLLARS and CENTS	LF	140.000	101
	476	6072		JACK BOR TUN BOX CULV (5 FT X 3 FT) DOLLARS and CENTS	LF	50.000	102
	479	6004		ADJUSTING MANHOLES (SANITARY) DOLLARS and CENTS	EA	1.000	103
	479	6006		ADJUSTING INLET (CAP) DOLLARS and CENTS	EA	1.000	104
	496	6002		REMOV STR (INLET) DOLLARS and CENTS	EA	3.000	105
	496	6006		REMOV STR (HEADWALL) DOLLARS and CENTS	EA	8.000	106

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	ITEM NO	DESC CODE	S.P. NO.				
	496	6007		REMOV STR (PIPE) DOLLARS and CENTS	LF	921.000	107
	496	6010		REMOV STR (BRIDGE 100 - 499 FT LENGTH) DOLLARS and CENTS	EA	1.000	108
	496	6043		REMOV STR (SMALL FENCE) DOLLARS and CENTS	LF	1,580.000	109
	496	6050		REMOV STR (DRIVEWAY CULVERT) DOLLARS and CENTS	EA	3.000	110
	496	6092		REMOVE STR (BARRIER GATE) DOLLARS and CENTS	EA	2.000	111
	500	6001		MOBILIZATION DOLLARS and CENTS	LS	1.000	112
	502	6001		BARRICADES, SIGNS AND TRAFFIC HAN- DLING DOLLARS and CENTS	MO	17.000	113
	506	6021	003	CONSTRUCTION EXITS (INSTALL) (TY 2) DOLLARS and CENTS	SY	936.000	114
	506	6024	003	CONSTRUCTION EXITS (REMOVE) DOLLARS and CENTS	SY	936.000	115
	506	6038	003	TEMP SEDMT CONT FENCE (INSTALL) DOLLARS and CENTS	LF	4,410.000	116
	506	6039	003	TEMP SEDMT CONT FENCE (REMOVE) DOLLARS and CENTS	LF	4,410.000	117
	506	6041	003	BIODEG EROSN CONT LOGS (INSTL) (12") DOLLARS and CENTS	LF	3,601.000	118

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	ITEM NO	DESC CODE	S.P. NO.				
	506	6043	003	BIODEG EROSN CONT LOGS (REMOVE) DOLLARS and CENTS	LF	3,601.000	119
	508	6001		CONSTRUCTING DETOURS DOLLARS and CENTS	SY	10,658.000	120
	512	6005		PORT CTB (FUR & INST)(F-SHAPE)(TY 1) DOLLARS and CENTS	LF	18,690.000	121
	512	6029		PORT CTB (MOVE)(F-SHAPE)(TY 1) DOLLARS and CENTS	LF	16,558.000	122
	512	6053		PORT CTB (REMOVE)(F-SHAPE)(TY 1) DOLLARS and CENTS	LF	18,690.000	123
	514	6013		PERM CTB (F-SHAPE) (TY 1) DOLLARS and CENTS	LF	2,987.000	124
	514	6019		PERM CTB(SGL SLOPE)(TY 1)(42)(HPC) DOLLARS and CENTS	LF	717.100	125
	514	6035		PERM CTB (TRAN SSCB TO CTB) (MOD) DOLLARS and CENTS	LF	120.000	126
	514	6048		PERM CTB (F-SHAPE) (TY 1) (DB) DOLLARS and CENTS	LF	2,830.000	127
	528	6001		COLORLED TEXTURED CONC (4") DOLLARS and CENTS	SY	8,806.000	128
	528	6004		LANDSCAPE PAVERS DOLLARS and CENTS	SY	40.000	129
	529	6004		CONC CURB (MONO) (TY 1) DOLLARS and CENTS	LF	27.000	130

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	ITEM NO	DESC CODE	S.P. NO.				
	529	6005		CONC CURB (MONO) (TY II) DOLLARS and CENTS	LF	1,018.000	131
	529	6007		CONC CURB & GUTTER (TY I) DOLLARS and CENTS	LF	92.000	132
	529	6008		CONC CURB & GUTTER (TY II) DOLLARS and CENTS	LF	10,780.000	133
	530	6004		DRIVEWAYS (CONC) DOLLARS and CENTS	SY	708.000	134
	531	6001		CONC SIDEWALKS (4") DOLLARS and CENTS	SY	2,557.000	135
	531	6004		CURB RAMPS (TY 1) DOLLARS and CENTS	EA	9.000	136
	531	6010		CURB RAMPS (TY 7) DOLLARS and CENTS	EA	8.000	137
	531	6013		CURB RAMPS (TY 10) DOLLARS and CENTS	EA	9.000	138
	531	6016		CURB RAMPS (TY 21) DOLLARS and CENTS	EA	5.000	139
	533	6001		RUMBLE STRIPS (SHOULDER) DOLLARS and CENTS	LF	17,025.000	140
	540	6001		MTL W-BEAM GD FEN (TIM POST) DOLLARS and CENTS	LF	2,501.000	141
	540	6002		MTL W-BEAM GD FEN (STEEL POST) DOLLARS and CENTS	LF	451.000	142

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	540	6006		MTL BEAM GD FEN TRANS (THRIE-BEAM) DOLLARS and CENTS	EA	9.000	143
	540	6007		MTL BEAM GD FEN TRANS (TL2) DOLLARS and CENTS	EA	1.000	144
	540	6014		SHORT RADIUS DOLLARS and CENTS	LF	25.000	145
	540	6015		DRIVEWAY TERMINAL ANCHOR SECTION DOLLARS and CENTS	EA	1.000	146
	540	6016		DOWNSTREAM ANCHOR TERMINAL SEC- TION DOLLARS and CENTS	EA	8.000	147
	542	6001		REMOVE METAL BEAM GUARD FENCE DOLLARS and CENTS	LF	2,717.000	148
	542	6003		REMOVE DOWNSTREAM ANCHOR TERMI- NAL DOLLARS and CENTS	LF	90.000	149
	544	6001		GUARDRAIL END TREATMENT (INSTALL) DOLLARS and CENTS	EA	8.000	150
	544	6003		GUARDRAIL END TREATMENT (REMOVE) DOLLARS and CENTS	EA	10.000	151
	545	6001		CRASH CUSH ATTEN (INSTL) DOLLARS and CENTS	EA	2.000	152
	545	6003		CRASH CUSH ATTEN (MOVE & RESET) DOLLARS and CENTS	EA	2.000	153
	545	6005		CRASH CUSH ATTEN (REMOVE) DOLLARS and CENTS	EA	3.000	154

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	ITEM NO	DESC CODE	S.P. NO.				
	545	6019		CRASH CUSH ATTEN (INSTL)(S)(N)(TL3) DOLLARS and CENTS	EA	3.000	155
	610	6004		RELOCATE RD IL ASM (TRANS-BASE) DOLLARS and CENTS	EA	16.000	156
	610	6005		RELOCATE RD IL ASM (U/P) DOLLARS and CENTS	EA	6.000	157
	610	6007		REMOVE RD IL ASM (SHOE-BASE) DOLLARS and CENTS	EA	7.000	158
	610	6081		IN RD IL AM (TY SA) 50S-12 (400W) S DOLLARS and CENTS	EA	6.000	159
	610	6082		IN RD IL AM (TY SA) 50S-12-12 (400W) S DOLLARS and CENTS	EA	1.000	160
	610	6104		IN RD IL (U/P) (TY 1) (150W EQ) LED DOLLARS and CENTS	EA	12.000	161
	618	6023		CONDT (PVC) (SCH 40) (2") DOLLARS and CENTS	LF	8,840.000	162
	618	6024		CONDT (PVC) (SCH 40) (2") (BORE) DOLLARS and CENTS	LF	1,400.000	163
	618	6029		CONDT (PVC) (SCH 40) (3") DOLLARS and CENTS	LF	7,510.000	164
	618	6030		CONDT (PVC) (SCH 40) (3") (BORE) DOLLARS and CENTS	LF	4,800.000	165
	618	6033		CONDT (PVC) (SCH 40) (4") DOLLARS and CENTS	LF	395.000	166

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	618	6034		CONDT (PVC) (SCH 40) (4") (BORE) DOLLARS and CENTS	LF	1,075.000	167
	618	6064		CONDT (RM) (1") DOLLARS and CENTS	LF	885.000	168
	620	6004		ELEC CONDR (NO.12) INSULATED DOLLARS and CENTS	LF	400.000	169
	620	6005		ELEC CONDR (NO.10) BARE DOLLARS and CENTS	LF	680.000	170
	620	6006		ELEC CONDR (NO.10) INSULATED DOLLARS and CENTS	LF	1,360.000	171
	620	6007		ELEC CONDR (NO.8) BARE DOLLARS and CENTS	LF	2,900.000	172
	620	6008		ELEC CONDR (NO.8) INSULATED DOLLARS and CENTS	LF	9,670.000	173
	620	6009		ELEC CONDR (NO.6) BARE DOLLARS and CENTS	LF	9,730.000	174
	620	6010		ELEC CONDR (NO.6) INSULATED DOLLARS and CENTS	LF	12,475.000	175
	620	6011		ELEC CONDR (NO.4) BARE DOLLARS and CENTS	LF	3,020.000	176
	620	6012		ELEC CONDR (NO.4) INSULATED DOLLARS and CENTS	LF	8,680.000	177
	624	6001		GROUND BOX TY A (122311) DOLLARS and CENTS	EA	11.000	178

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	624	6007		GROUND BOX TY C (162911) DOLLARS and CENTS	EA	19.000	179
	624	6028		REMOVE GROUND BOX DOLLARS and CENTS	EA	11.000	180
	628	6001		RELOCATE ELECTRICAL SERVICES DOLLARS and CENTS	EA	1.000	181
	628	6239		ELC SRV TY D 120/240 100(NS)SS(E)PS(U) DOLLARS and CENTS	EA	1.000	182
	636	6001		ALUMINUM SIGNS (TY A) DOLLARS and CENTS	SF	54.000	183
	636	6003		ALUMINUM SIGNS (TY O) DOLLARS and CENTS	SF	1,471.000	184
	644	6001		IN SM RD SN SUP&AM TY10BWG(1)SA(P) DOLLARS and CENTS	EA	45.000	185
	644	6004		IN SM RD SN SUP&AM TY10BWG(1)SA(T) DOLLARS and CENTS	EA	46.000	186
	644	6027		IN SM RD SN SUP&AM TYS80(1)SA(P) DOLLARS and CENTS	EA	2.000	187
	644	6030		IN SM RD SN SUP&AM TYS80(1)SA(T) DOLLARS and CENTS	EA	8.000	188
	644	6033		IN SM RD SN SUP&AM TYS80(1)SA(U) DOLLARS and CENTS	EA	5.000	189
	644	6036		IN SM RD SN SUP&AM TYS80(1)SA(U-BM) DOLLARS and CENTS	EA	4.000	190

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	644	6064		IN BRIDGE MNT CLEARANCE SGN ASSM(TY N) DOLLARS and CENTS	EA	9.000	191
	644	6066		IN SM RD SN SUP&AM (RAIL MOUNT) DOLLARS and CENTS	EA	1.000	192
	644	6068		RELOCATE SM RD SN SUP&AM TY 10BWG DOLLARS and CENTS	EA	4.000	193
	647	6002		RELOCATE LRSA DOLLARS and CENTS	EA	2.000	194
	650	6032		INS OH SN SUP(30 FT CANT) DOLLARS and CENTS	EA	2.000	195
	650	6045		INS OH SN SUP(40 FT CANT) DOLLARS and CENTS	EA	4.000	196
	650	6204		REMOVE OVERHD SIGN SUP DOLLARS and CENTS	EA	6.000	197
	650	6206		REM & RELOCATE OVHD SIGN & SUP DOLLARS and CENTS	EA	1.000	198
	658	6001		INSTL DEL ASSM (D-SW)SZ 1(FLX)GND DOLLARS and CENTS	EA	28.000	199
	658	6013		INSTL DEL ASSM (D-SW)SZ (BRF)CTB DOLLARS and CENTS	EA	24.000	200
	658	6026		INSTL DEL ASSM (D-SY)SZ (BRF)CTB DOLLARS and CENTS	EA	27.000	201
	658	6027		INSTL DEL ASSM (D-SY)SZ (BRF)CTB (BI) DOLLARS and CENTS	EA	60.000	202

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	658	6036		INSTL DEL ASSM (D-DW)SZ 1(FLX)GND DOLLARS and CENTS	EA	33.000	203
	658	6038		INSTL DEL ASSM (D-DW)SZ 1(FLX)SRF DOLLARS and CENTS	EA	5.000	204
	658	6045		INSTL OM ASSM (OM-1)(FLX)GND DOLLARS and CENTS	EA	4.000	205
	658	6051		INSTL OM ASSM (OM-3L)(FLX)SRF DOLLARS and CENTS	EA	11.000	206
	658	6054		INSTL OM ASSM (OM-3R)(FLX)SRF DOLLARS and CENTS	EA	4.000	207
	658	6061		INSTL DEL ASSM (D-SW)SZ 1(BRF)GF2 DOLLARS and CENTS	EA	3.000	208
	662	6060		WK ZN PAV MRK REMOV (W)4"(BRK) DOLLARS and CENTS	LF	11,620.000	209
	662	6063		WK ZN PAV MRK REMOV (W)4"(SLD) DOLLARS and CENTS	LF	42,901.000	210
	662	6071		WK ZN PAV MRK REMOV (W)8"(SLD) DOLLARS and CENTS	LF	1,647.000	211
	662	6075		WK ZN PAV MRK REMOV (W)24"(SLD) DOLLARS and CENTS	LF	531.000	212
	662	6095		WK ZN PAV MRK REMOV (Y)4"(SLD) DOLLARS and CENTS	LF	39,436.000	213
	666	6006		REFL PAV MRK TY I (W)4"(DOT)(100MIL) DOLLARS and CENTS	LF	245.000	214

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	6018		REFL PAV MRK TY I (W)6"(DOT)(100MIL) DOLLARS and CENTS	LF	515.000	215
	666	6036		REFL PAV MRK TY I (W)8"(SLD)(100MIL) DOLLARS and CENTS	LF	7,336.000	216
	666	6042		REFL PAV MRK TY I (W)12"(SLD)(100MIL) DOLLARS and CENTS	LF	2,648.000	217
	666	6048		REFL PAV MRK TY I (W)24"(SLD)(100MIL) DOLLARS and CENTS	LF	590.000	218
	666	6054		REFL PAV MRK TY I (W)(ARROW)(100MIL) DOLLARS and CENTS	EA	29.000	219
	666	6057		REFL PAV MRK TY I(W)(DBL ARROW)(100MIL) DOLLARS and CENTS	EA	6.000	220
	666	6063		REFL PAV MRK TY I(W)(UTURN ARW)(100MIL) DOLLARS and CENTS	EA	1.000	221
	666	6075		REFL PAV MRK TY I (W)(NUMBER)(100MIL) DOLLARS and CENTS	EA	1.000	222
	666	6078		REFL PAV MRK TY I (W)(WORD)(100MIL) DOLLARS and CENTS	EA	30.000	223
	666	6099		REF PAV MRK TY I(W)18"(YLD TRI)(100MIL) DOLLARS and CENTS	EA	173.000	224
	666	6141		REFL PAV MRK TY I (Y)12"(SLD)(100MIL) DOLLARS and CENTS	LF	645.000	225
	666	6167		REFL PAV MRK TY II (W) 4" (BRK) DOLLARS and CENTS	LF	805.000	226

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	6170		REFL PAV MRK TY II (W) 4" (SLD) DOLLARS and CENTS	LF	1,610.000	227
	666	6207		REFL PAV MRK TY II (Y) 4" (SLD) DOLLARS and CENTS	LF	1,610.000	228
	666	6224		PAVEMENT SEALER 4" DOLLARS and CENTS	LF	21,055.000	229
	666	6225		PAVEMENT SEALER 6" DOLLARS and CENTS	LF	175.000	230
	666	6226		PAVEMENT SEALER 8" DOLLARS and CENTS	LF	2,002.000	231
	666	6228		PAVEMENT SEALER 12" DOLLARS and CENTS	LF	153.000	232
	666	6230		PAVEMENT SEALER 24" DOLLARS and CENTS	LF	35.000	233
	666	6300		RE PM W/RET REQ TY I (W)4"(BRK)(100MIL) DOLLARS and CENTS	LF	9,260.000	234
	666	6303		RE PM W/RET REQ TY I (W)4"(SLD)(100MIL) DOLLARS and CENTS	LF	23,475.000	235
	666	6315		RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL) DOLLARS and CENTS	LF	25,032.000	236
	672	6009		REFL PAV MRKR TY II-A-A DOLLARS and CENTS	EA	50.000	237
	672	6010		REFL PAV MRKR TY II-C-R DOLLARS and CENTS	EA	734.000	238

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	677	6001		ELIM EXT PAV MRK & MRKS (4") DOLLARS and CENTS	LF	26,474.000	239
	677	6003		ELIM EXT PAV MRK & MRKS (8") DOLLARS and CENTS	LF	1,374.000	240
	677	6005		ELIM EXT PAV MRK & MRKS (12") DOLLARS and CENTS	LF	233.000	241
	677	6008		ELIM EXT PAV MRK & MRKS (ARROW) DOLLARS and CENTS	EA	9.000	242
	677	6012		ELIM EXT PAV MRK & MRKS (WORD) DOLLARS and CENTS	EA	5.000	243
	678	6001		PAV SURF PREP FOR MRK (4") DOLLARS and CENTS	LF	2,395.000	244
	678	6004		PAV SURF PREP FOR MRK (8") DOLLARS and CENTS	LF	170.000	245
	680	6004		REMOVING TRAFFIC SIGNALS DOLLARS and CENTS	EA	2.000	246
	680	6005		INS HY TRF SIG (DPT SUP CNT & CAB)(ISO) DOLLARS and CENTS	EA	2.000	247
	681	6001		TEMP TRAF SIGNALS DOLLARS and CENTS	EA	1.000	248
	682	6001		VEH SIG SEC (12")LED(GRN) DOLLARS and CENTS	EA	15.000	249
	682	6002		VEH SIG SEC (12")LED(GRN ARW) DOLLARS and CENTS	EA	10.000	250

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	682	6003		VEH SIG SEC (12")LED(YEL) DOLLARS and CENTS	EA	21.000	251
	682	6004		VEH SIG SEC (12")LED(YEL ARW) DOLLARS and CENTS	EA	4.000	252
	682	6005		VEH SIG SEC (12")LED(RED) DOLLARS and CENTS	EA	21.000	253
	682	6006		VEH SIG SEC (12")LED(RED ARW) DOLLARS and CENTS	EA	8.000	254
	682	6018		PED SIG SEC (LED)(COUNTDOWN) DOLLARS and CENTS	EA	10.000	255
	682	6035		BACK PLATE (12")(3 SEC)(VENTED)ALUM DOLLARS and CENTS	EA	21.000	256
	682	6036		BACK PLATE (12")(4 SEC)(VENTED)ALUM DOLLARS and CENTS	EA	4.000	257
	684	6031		TRF SIG CBL (TY A)(14 AWG)(5 CONDR) DOLLARS and CENTS	LF	975.000	258
	684	6033		TRF SIG CBL (TY A)(14 AWG)(7 CONDR) DOLLARS and CENTS	LF	2,320.000	259
	684	6038		TRF SIG CBL (TY A)(14 AWG)(12 CONDR) DOLLARS and CENTS	LF	930.000	260
	684	6041		TRF SIG CBL (TY A)(14 AWG)(15 CONDR) DOLLARS and CENTS	LF	505.000	261
	684	6046		TRF SIG CBL (TY A)(14 AWG)(20 CONDR) DOLLARS and CENTS	LF	625.000	262

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	684	6079		TRF SIG CBL (TY C)(12 AWG)(2 CONDR) DOLLARS and CENTS	LF	1,915.000	263
	684	6082		TRF SIG CBL (TY C)(18 AWG)(2 CONDR) DOLLARS and CENTS	LF	5,720.000	264
	686	6029		INS TRF SIG PL AM (S)1 ARM(28') DOLLARS and CENTS	EA	1.000	265
	686	6031		INS TRF SIG PL AM(S)1 ARM(28')LUM DOLLARS and CENTS	EA	1.000	266
	686	6037		INS TRF SIG PL AM(S)1 ARM(36') DOLLARS and CENTS	EA	1.000	267
	686	6047		INS TRF SIG PL AM(S)1 ARM(44')LUM DOLLARS and CENTS	EA	1.000	268
	686	6051		INS TRF SIG PL AM(S)1 ARM(48')LUM DOLLARS and CENTS	EA	3.000	269
	687	6001		PED POLE ASSEMBLY DOLLARS and CENTS	EA	6.000	270
	688	6001		PED DETECT PUSH BUTTON (APS) DOLLARS and CENTS	EA	8.000	271
	688	6002		PED DETECT PUSH BUTTON (STANDARD) DOLLARS and CENTS	EA	2.000	272
	688	6003		PED DETECTOR CONTROLLER UNIT DOLLARS and CENTS	EA	1.000	273
	688	6004		VEH LP DETECT (SAWCUT) DOLLARS and CENTS	LF	160.000	274

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	730	6002		FULL - WIDTH MOWING DOLLARS and CENTS	AC	78.000	275
	740	6005		ANTI - GRAFFITI COATNG(PERMNENT-TY III) DOLLARS and CENTS	SF	57,970.000	276
	6001	6002		PORTABLE CHANGEABLE MESSAGE SIGN DOLLARS and CENTS	EA	3.000	277
	6007	6014		FIBER OPTIC CBL (SNGLE-MODE)(48 FIBER) DOLLARS and CENTS	LF	9,090.000	278
	6007	6015		FIBER OPTIC CBL (SNGLE-MODE)(72 FIBER) DOLLARS and CENTS	LF	4,645.000	279
	6007	6089		FO SPLICE ENCLOSURE (TYPE 2) DOLLARS and CENTS	EA	2.000	280
	6007	6094		FIBER OPTIC FUSION SPLICE DOLLARS and CENTS	EA	336.000	281
	6007	6103		REMOVE FIBER OPTIC CABLE DOLLARS and CENTS	EA	3.000	282
	6008	6025		ITS GRND MNT CAB (TY 4) (CONF 1) (REL) DOLLARS and CENTS	EA	2.000	283
	6010	6012		RELOCATE CCTV FIELD EQUIPMENT DOLLARS and CENTS	EA	2.000	284
	6014	6001		MULTIDUCT COND SYS (PVC)(SCHD 40) DOLLARS and CENTS	LF	2,170.000	285
	6014	6002		MULTIDCT COND SYS(PVC)(SCHD 40)4"(BORE) DOLLARS and CENTS	LF	915.000	286

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	6025	6001		RADAR PRESENCE DETECTOR DOLLARS and CENTS	EA	6.000	287
	6025	6002		RADAR PRESENCE DETECTOR COMM CABLE DOLLARS and CENTS	LF	1,820.000	288
	6039	6001		RELOCATE EXISTING OVERHEAD SIGNS DOLLARS and CENTS	EA	3.000	289
	6064	6026		ITS POLE (40 FT)(REL) DOLLARS and CENTS	EA	1.000	290
	6064	6062		ITS POLE (60 FT)(REL) DOLLARS and CENTS	EA	1.000	291
	6120	6001		DEAD END ROADWAY BARRICADE DOLLARS and CENTS	LF	64.000	292
	6155	6001		RADAR DETECTOR DOLLARS and CENTS	EA	4.000	293
	6155	6002		RADAR COMMUNICATION CABLE DOLLARS and CENTS	LF	1,370.000	294
	6186	6012		ITS GND BOX(PCAST) TY 2 (366060)W/APRN DOLLARS and CENTS	EA	10.000	295
	7106	6001		WATER MAIN(DIP)(CL 52)(16") DOLLARS and CENTS	LF	187.000	296
	7106	6002		WATER MAIN(DIP)(CL 52)(20") DOLLARS and CENTS	LF	2,396.000	297
	7106	6003		36" STEEL CASING PIPE BY OPEN TRENCH DOLLARS and CENTS	LF	203.000	298

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	7106	6004		DUCTILE IRON WATER FITTINGS W/ RESTRAINT DOLLARS and CENTS	TON	5.900	299
	7106	6005		8"WTR PP AWWA C-900 MIN DR18 150PR CLS DOLLARS and CENTS	LF	12.000	300
	7106	6006		12"WTR PP AWWA C-900 MIN DR18 150PR CLS DOLLARS and CENTS	LF	10.000	301
	7106	6007		8" GATE VALVE DOLLARS and CENTS	EA	1.000	302
	7106	6008		12" GATE VALVE DOLLARS and CENTS	EA	2.000	303
	7106	6009		16" GATE VALVE DOLLARS and CENTS	EA	4.000	304
	7106	6010		20" GATE VALVE DOLLARS and CENTS	EA	4.000	305
	7106	6011		14"X12" TAPPING SLEEVE & VALVE DOLLARS and CENTS	EA	2.000	306
	7106	6012		2" AIR AND VACUUM RELEASE VALVE (TY 2) DOLLARS and CENTS	EA	2.000	307
	7106	6013		72" ACCESS MANHOLE DOLLARS and CENTS	EA	2.000	308
	7106	6014		8" WATERLINE ABANDONMENT PLUG DOLLARS and CENTS	EA	1.000	309

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	7106	6015		14" WATERLINE ABANDONMENT PLUG DOLLARS and CENTS	EA	2.000	310
	7106	6016		8" WATER CONNECTION DOLLARS and CENTS	EA	1.000	311
	7106	6017		14" WATER CONNECTION DOLLARS and CENTS	EA	2.000	312

County: Denton

Highway: IH35E

SPECIFICATION DATA

Table 1: Soil Constants Requirements				
Item	Description	Plasticity Index		Note
		Max	Min	
132	Embk(Final)(Dens Cont)(Type C1)	40	8	1
132	Embk(Final) (Dens Cont) (Type C2)	25	8	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 423.2.4.1. Use as an embankment to backfill behind abutments to the extent of the approach slab or to backfill areas enclosed by an abutment and / or retaining walls or other locations as shown in the plans.

Table 2: Basis of Estimate for Permanent Construction					
Item	Description	Thickness	Rate		Quantity
162	Block Sod	N/A			13,474 SY
164	Drill Seed (Perm) (U) (C)	N/A			53,153 SY
166 *	Fertilizer (12-6-6)	N/A	500	Lb/Ac	3.5 Ton
168	Vegetative Watering (Warm)**	N/A	12	MG/Ac/Day	8408.2 MG
260	Hydrated Lime (slurry)			8% by wt	3,218 Ton
		N/A			
344	Superpave SP-A PG 64-22	9"	110	Lbs/SY/In	34,302 Ton
344	Superpave SP-C PG 70-22	2"	110	Lbs/SY/In	8,644 Ton
344	Superpave SP-C PG 76-22	2"	110	Lbs/SY/In	8,644 Ton

County: Denton

Highway: IH35E

* For contractor's information only	
**Adjust for actual field conditions/temperatures as necessary. See Vegetation Establishment Plan Sheet for estimated daily rates.	
Note:	(1) Base material weight based on 1.50 Ton/CY (dry- compacted) (2) Asphalt weight based on 110 Lbs/SY/In (3) Subgrade weight based on 1.50 Ton/CY (dry-compacted)

Item	Description	Rate		Quantity
164	Drill Seeding (Temp) (Warm)	See Specifications		26,578 SY
166*	Fertilizer (12-6-6)	500	Lb/Ac	1.4 Ton
168	Vegetative Watering (Warm)**	7	MG/Ac/Day	3953.8 MG
164	Drill Seeding (Temp) (Cool)	See Specifications		26578 SY
166*	Fertilizer (12-6-6)	500	Lb/Ac	1.4 Ton
168	Vegetative Watering (Cool)**	1	MG/Ac/Day	3953.8 MG

*For Contractor's Information Only.
**Adjust for Actual Field Conditions/Temperatures as Necessary. See Vegetation Establishment Sheet for estimated daily rates.

Element	Color	Specification Number ²
CTB	CREAM	27886
Columns	ANJOU PEAR/WARM GRAY	6381/24201
Bent caps	WARM GRAY	24201
Striated retaining wall surfaces	WARM GRAY	24201
Retaining wall coping and other components except striated surfaces.	CREAM	27886
Abutments (all parts)	ANJOU PEAR	6381
Prestressed concrete girders and structural steel	WARM GRAY	24201
Bottom of slab overhang & slab edge	WARM GRAY	24201
Concrete rail parts except outside lower 18"	CREAM	27886
Lower outside 18" of concrete rails	CREAM	27886

CSJ: 0196-01-106

Sheet 24

County: Denton

Highway: IH35E

1. 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 or Item 446.
2. Federal Standard 595 colors.

County: Denton

Highway: IH35E

GENERAL

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 30.50 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 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).

This project required formal consultation with environmental resources agencies. There is a high probability that an environmentally sensitive area could be encountered on the contractor designated Project-Specific Locations (PSL) for this project (haul roads, equipment staging areas, borrow pits, disposal sites, field offices, storage areas, parking areas, etc.). Item 7.6 "Project-Specific Locations", provides a listing of regulatory agencies that may need to be contacted regarding this project.

Submit all payrolls for this project through The Electronic Project Record System (EPRS). The Electronic Payrolls is an online program offered by the Texas Department of Transportation. The EPRS - Electronic Payrolls allows contractors working for TxDOT to submit their payrolls over the internet instead of mailing in a paper copy of their payroll.

Prior to contract letting, bidders may request electronic earthwork information by email. Email: Brandon.Sparkman@txdot.gov; Barry.Heard@txdot.gov
Earthwork files will be provided by email or by using TxDOT's Dropbox FTP Service.

Bidders may also obtain a free electronic copy that contains earthwork information from the engineer's office. Paper copies of cross-sections may be produced by using the provided free diskette at the bidders' expense and at copying companies. 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.

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

Provide as-built cable interconnection diagrams and communication network schematics at least 30 days prior to the start of data communications testing.

All materials and services not expressly called for in the specification or not shown in the plans, which may be necessary for complete and proper construction of the "ITS" Network, will be performed, furnished and installed at no cost to the Department.

Contact the TxDOT Freeway Management Office (214-319-3631) at least 48 hours in advance of performing any work on this project that disconnects or reconnects existing TxDOT "ITS" fiber optic cable. TxDOT "ITS" personnel must be on-site while this work is performed.

To minimize "down time" to the Dallas District Traffic Management System, the fiber optic cable relocation and tracer wire installation shall be performed during a single weekend.

The following standard detail sheets have been modified:

ECD(MOD)

SCP-5(MOD)

COSS & OSB-SZ(MOD)

Item 2:

Submit pre-letting questions, by email only, to the attention of Area Engineer and Assistant Area Engineer that contains "CSJ 0196-01-106 CONTRACTOR QUESTIONS" in the subject line.

Email:

Area Engineer: Barry.Heard@txdot.gov

Assistant Area Engineer: Brandon.Sparkman@txdot.gov

The answers will be submitted in the same format that they are received. A file containing these questions and answers will be available for review at the area engineer's office located at 2624 W. PRAIRIE, DENTON, TX, 76201.

An electronic file containing answered pre-letting questions and other project related design information will be placed in the following FTP site periodically: (please note that the design information is for contractor information only).

FTP Username: dal-denton-ro

FTP password: aRRyTE9z

Access: Read-Only

To Access do the following:

Go to <ftp://ftp.dot.state.tx.tx.us>

Click Page>Open FTP site in Windows Explorer

Click File>Login As

Enter the information above and click "Log On".

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All files in the FTP site are subject to the following License Agreement:

BY DOWNLOADING FILES FROM THIS FTP SERVICE, YOU ARE AGREEING TO THIS LICENSE AGREEMENT.

The Texas Department of Transportation (TxDOT) does not provide technical support with respect to these files. You must read the following disclaimer and accept its terms as a prerequisite to the use of these files.

1. TxDOT makes no warranty of any kind, express or implied, with respect to any file. TxDOT makes no warranty that any file is marketable or fit for any particular purpose. A description of a file shall not be deemed to create an express warranty that the file conforms to that description. You agree to accept the files in the format provided.
2. You assume all risk and liability for any losses, damages, claims, or expenses resulting from the use or possession of any file.
3. You agree to indemnify, defend, and hold harmless TxDOT and its officers, agents, and employees from and against any and all claims, suits, losses, damages, or costs, including reasonable attorney's fees, arising from or by reason of your use or possession of any file. This indemnification shall survive your acceptance of any file.
4. Revisions or additions may occur at any time. You agree to indemnify, defend, and hold harmless TxDOT and its officers, agents, and employees from and against any and all claims, suits, losses, damages, or costs, including reasonable attorney's fees, arising from the use of outdated files. This indemnification shall survive your acceptance of any file.
5. The files are copyrighted by TxDOT and may not be resold without the express written consent of TxDOT.

Item 5:

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 communications & control maintained by TxDOT, call the TxDOT Traffic Signal Office (214-320-6682) for locates a minimum of 48 hours in advance of excavation. For irrigation systems, call TxDOT Landscape Office (214-320-6636) 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. The Contractor is liable for all damages when utilities are damaged due to Contractor's negligence including, but not limited to, repair or replacement at the Contractor's expense.

Locate all utilities, both underground and above ground, in the project area prior to beginning work so that conflicts are avoided.

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.

County: Denton

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Submit all shop drawings, working drawings, or other documents which require review sufficiently in advance of scheduled construction to allow no less than thirty (30) calendar days for review and response.

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.

Item 6:

Paint containing hazardous materials will be removed by the contractor, 10.1.2

Item 7:

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

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.

Item 8:

This Project will be a Six-Day Workweek in accordance with Article 8.3.1.2.

Nighttime work is allowed in accordance with Article 8.3.3.

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

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

Critical Path Method (CPM) schedule in P6 format will be required for this project. Submit baseline schedule and obtain approval prior to beginning construction. The Estimate will be held if monthly update is not submitted.

A road-users-cost based Incentive and Disincentive for Substantial Completion of Work per Item 008-006 is included in this Project. The Incentive and Disincentive amount is fixed at \$5000.00/day. The maximum number of working days used in computing the credit will be 90 days for early Substantial Completion of Work.

Item 100:

Remove the existing roadway small signs, delineators and object markers as shown on the plans, or as directed, during construction within the right of way. Small sign, delineator and object marker removals are subsidiary to this Item.

The limits of preparing right of way will be measured from Sta. 1761+75.00 to Sta. 1851+15.58 along the centerline of construction.

Item 104:

County: Denton

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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 105, and 305:

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:

Take possession of recycled asphalt pavement from the project and recycle the material.

Properly dispose of unsalvageable material at your own expense.

Item 110:

Excavated shale is not an acceptable material for embankment.

Items 110 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.

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

Item 132:

Excavated material from the project site has not been determined to be suitable for embankment. The bidder assumes all risk for the use of excavated materials for embankment and is expected to meet all material requirements for embankment regardless of the source.

Perform Tex-106-E (Plasticity Index) by an approved laboratory on excavated soils from sources outside right of way when used in roadway embankment. Provide the test results at no expense to the department. The engineer will sample and test soils produced by the construction project for specification requirements or material sources specified in the plans. Earth embankment Type C, is 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, treat material with lime slurry in accordance with Item 260, "Lime Treatment (Road-Mixed)" in order to meet these requirements. Use Tex-121-E, figure 1, page 4 to calculate the amount of lime required. When lime treated subgrade is specified, 3000 PPM is the maximum allowed sulfate content in the top 3 feet when material comes from borrow source. Follow recommendations of 260.4.4 for mixing and mellowing. 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 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.

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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 / or retaining walls.

Item 160:

Sequence construction operations to salvage topsoil from one location and spread on areas ready to receive topsoil. Keep stockpiling of topsoil to a minimum.

Use fertile clay or loam from the project site not more than two feet below natural grade as topsoil.

Item 161:

Provide tickets representing quantity of compost delivered to site.

Item 247:

Construct uniform layer thickness of 12 inches, or less with the required density and moisture content. Minimum PI is equal to three (3) for all grades.

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. Add the minimum dosage determined by the manufacturer or higher dosage determined by design requirement and try subsequent trials at 0.25% increments.

Items 305:

Take possession of recycled asphalt pavement from the project and recycle the material.

Properly dispose of unsalvageable material at your own expense.

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:

Use a self-propelled wheel mounted MTV capable of receiving mix from the haul trucks, separate from the paver. It shall have a minimum storage capacity of approximately 25 tons. It shall be equipped with a pivoting discharge conveyor and shall completely and thoroughly remix the material prior to placement. The effectiveness of the MTV's remixing ability is subject to the approval of the Engineer. In addition, the paver shall have a surge storage insert with a minimum capacity of 20 tons.

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

Item 344:

Tack Coat is required.

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

Superpave Mixtures used as concrete pavement underlayment is deemed as "Exempt Production".

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 SP-C mixture.

Provide PG binder 70-22 in Type SP-C mixture.

Provide PG binder 64-22 in Type SP-A mixture.

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.

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

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

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.

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

Supply the Engineer with a list of certified personnel and copies of their current ACI certificates before beginning production and when personnel changes are made. Supply hard copies of calibration reports for testing equipment when required by the Engineer.

If more than 30% of an area in any 1000-Ft section of roadway requires grinding, action will be taken by the Contractor to make that 1000-Ft full width section uniform without changing ride quality, compromising quality of pavement and decreasing skid resistance. Approved blasting method or other method approved by the Engineer will be performed at the Contractor's expense

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.

Item 416:

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

Extend drilled shaft foundations for overhead sign structures five feet into rock at locations where rock is encountered at a depth less than the drilled shaft lengths shown in the plans.

Provide a formed 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.

Use concrete classified as "miscellaneous concrete" for ground mounted sign foundations, with the exception of large roadside signs and overhead sign structures.

Do not install PVC and/or rigid metal conduit in sign foundations for sign structures without sign lights.

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Payment will be made only once for drilling shafts/pole foundations regardless of the extra work caused by obstructions.

Install a 5/8"x10' copper clad ground rod in each traffic signal pole foundation. The ground rod for each foundation will protrude above the finish grade of the foundation a minimum of 1" and a maximum of 2".

All drilled shaft foundations will be based on the lengths shown on the plans or those established in writing. Adequate calculations for measurements of foundations have been made in accordance with Item 9: Measurement and Payment, Article 9.1 of the Standard Specifications. Increases or decreases in the quantities required by change in design will be measured as specified and the revised quantities will be the basis for payment.

Concrete removal required for installation of drilled shafts will be subsidiary to Item 416.

Item 420:

Mass concrete is a plans quantity item.

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

Form columns to a point a minimum of one foot below the proposed future or existing bottom of channel elevation indicated on the bridge layouts by an acceptable method. This form work is not paid for directly, but is considered subsidiary to this item.

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.

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 Bridge Class Culverts, place National Bridge Inventory numbers at the middle of the downstream headwall using 3" block letters.

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.

Item 421:

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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 High Performance Concrete (HPC) of the class specified for the following bridge components: approach slabs, abutments, bents, columns, slabs, sidewalks and medians.

Provide High Performance Concrete (HPC) of the class specified for all railing and permanent concrete traffic barrier placed on bridges or approach slabs. HPC concrete is not required for portions of rail or concrete traffic barrier not located on a bridge.

Provide sulfate resistant concrete for box culverts and all drilled shafts.

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

Supply the Engineer with a list of certified personnel and copies of their current ACI certificates before beginning production and when personnel changes are made. Supply hard copies of calibration reports for testing equipment when required by the Engineer.

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 Euless, TX 76040-4150	(817) 283-5503
Reinforced Soil Embankment Walls	Texas Welded Wire, Inc. 645 W. Hurst Blvd. Hurst, TX 76053	(817) 282-4560
Retained Earth Walls	Foster Geotechnical 901 North Highway 77 Hillsboro, TX 76645	(254) 580-9100

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Stabilized Earth Wall	Vist-A-Wall Systems, LLC 650 Justice Lane Mansfield, TX 76063	(817) 507-0200
Strengthened Soil Walls	Lewis Block & Supply Company P.O. Box 480615 Kansas City, MO 64148	(816) 572-6710
Structural Embankment, LLC	Structural Embankment, LLC P.O. Box 2200 Weatherford, TX 76086	(817) 599-5700
Tensar Retaining Wall System	Tensar Earth Technologies, Inc. 2500 Northwinds Parkway Suite 500 Alpharetta, GA 30009	(770) 344-2090
Tricon Retained Soil Walls	Tricon Precast, Ltd. 15055 Henry Road Houston, TX 77060	(281) 931-9832
VP Wall System	Valley Prestress Products, Inc. 1520 Calhoun Rd. P.O. Box 309 Eagle Lake, TX 77434	(956) 584-5701

All retaining walls will have a uniform texture and appearance.

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 AS backfill as defined under this item for permanent MSE or concrete block (CB) walls not 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.

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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 minimum length of 8' or longer as required by RW(MSE)-DD. Earth reinforcement length is measured perpendicular to the wall. Adjust skewed earth reinforcements as necessary to obtain required length.

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

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.

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

Use Embankment Type C1 as non-select embankment backfill as defined under Item 423.2.4.1. For non-select embankment fill behind retaining walls provide and install fill in accordance with Item 132, Type C1.

For cut walls, the backfill between the select fill zone and the existing ground shall be either select material as required for the select fill zone or backfill meeting or exceeding the requirements of Item 132, type C2. Place material in accordance with Item 132, Type C2 requirements. If existing ground is laid back (i.e. not vertical), the lay back shall be done as a series of equal height benches so as to prevent the formation of a smooth surface at the material interface.

Avoid distinct vertical joints between select backfill and embankment (Non-Select) backfill as required by Section 423.3.4. This may be conveniently done by providing a zone of material behind the strap zone (1' min width) in which alternating lifts of select and non-select materials are interlaced.

Coarse aggregate grade 6 will only be allowed for Retaining Wall (Soil Nail) (Fascia) Class C concrete.

Items 423 and 427:

Retaining wall colors are shown elsewhere in the plans.

Item 425:

Repair "Safety Harness Pole Holes" in beams in accordance with Item 429 prior to placement of the Bridge Slab. This work is considered subsidiary to the various bid items.

Item 427:

Finish concrete structures surface area I with an opaque sealer of the color(s) shown elsewhere in the plans in accordance Item 427.

County: Denton

Highway: IH35E

Apply a 4-SF sample of each color on the project surfaces for approval. Adjust color as required by Engineer to compensate for surroundings and natural lighting conditions on the project site.

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 is subsidiary to this item.

Where used, provide fractured fin/ribs/striations that are continuous with no apparent curves or discontinuities. Variations of the fractured ribs from true vertical exceeding $\frac{1}{4}$ " for each 4'-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.

No horizontal splices in the form liner are permitted. Vertical splices may occur only in valleys between fractured ribs.

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 427.4.3.5 "Form Liner Finish" 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 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 T551 (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.

Item 440:

Provide reinforcing steel with epoxy coating meeting the requirements of item 440 for the following bridge components: approach slab, slab, sidewalk, median, concrete traffic barrier, and rail.

County: Denton

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Epoxy coated reinforcing is not required for portions of rail or concrete traffic barrier not located on a bridge.

Reinforcing for abutments, bents and columns are not required to be epoxy coated.

R-bars (I-beams, U-beams, X-Beams and TX Girders), Z-bars (boxes), and H-bars (Slab beams) are not required to be epoxy coated.

All ties, chairs and other appurtenances used with epoxy coated reinforcing shall be epoxy coated or non-metallic.

Fiber Reinforced Concrete (FRC) can be used as a substitute for Non-Structural Class Reinforced Concrete in Mow-Strip and Rip Rap Items as approved. FRC may also be used for other Non-Structural Class Reinforced Concrete Items as approved.

Item 441:

Submit erection drawings for rolled-beam units.

Item 442:

Use temperature Zone 1 for CVN testing.

Item 446:

Paint all structural steel using protective "System II" paint in accordance with Item 446. Paint colors are shown elsewhere in the plans.

After all concrete placement has been completed, remove any concrete or other contaminate from the beam by hand cleaning methods so as not to damage the primer and then water blast / wash with a minimum of 2,500 psi pressure.

Item 449:

Use Crouse Hinds TL-2, OZ/Gedney Stl, Thomas & Betts Kopr-Shield or other approved electrically conducting lubricant compound.

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.

Backfill all excavations for curb inlets, inlet extensions, manholes, junction boxes, headwalls, wingwalls, etc. with flowable backfill. The flowable backfill shall extend a minimum distance of two foot away from the outside face of the structure around the pipe(s) or box(s) attaching to the inlets, etc. along the centerline of pipe or to the limits of the excavation whichever is greater. The flowable backfill will need to be done in conjunction with the stage construction of the drainage structures. This will be considered included in the price of the structures.

Item 471:

County: Denton

Highway: IH35E

Tackweld all inlet grates and manhole covers to the frame with two 1-inch welds. Supply unpainted 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:

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.

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

Item 500:

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

Item 502:

The Contractor Force Account "Safety Contingency" that has been established for this project is intended to be utilized for work zone enhancements, to improve the effectiveness of the Traffic Control Plan, that could not be foreseen in the project planning and design stage. These enhancements will be mutually agreed upon by the Engineer and the Contractor's Responsible Person based on weekly or more frequent traffic management reviews on the project. The Engineer may choose to use existing bid items if it does not slow the implementation of enhancement.

Access will be provided to all business and residences at all times. Where turning radii are limited during phased construction at intersections, provide all weather surfaces such as RAP or base in turning movements to accommodate and to protect the traffic from edge drop-offs. Materials, labor, maintenance and removal for these temporary accesses and radii will not be paid for directly but will be considered subsidiary to the various bid items.

Provide a person on the project at all times (24 hours/day, 7 days/week) to patrol, monitor, and maintain the traffic control devices and signs. The person must be knowledgeable of TxDOT Guidelines for traffic control devices and signs.

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.

County: Denton

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

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, Pavement Markings, Full Depth Roadway Repair, Bridge or Similar Demolitions*	5	None	2	3
	4	None	2	3
	3	None	1	2
	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

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* 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.

*** The Table above is only to be used when traffic counts do not exceed 2000 Vehicles per Lane per Hour. (The capacity of all remaining open lanes must not exceed 2000 Vehicles per Lane per Hour). When traffic counts do or will exceed 2000 Vehicles per Lane per Hour, Director of Construction, Assistant District Engineer or District Engineer approval will be required for lane closures.

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.

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.

Chain link fencing, area dimensioned as directed by the Engineer, will be provided around TxDOT field office/laboratory and parking areas separate from contractor areas. Keep Contractor and TxDOT parking separate. No Contractor vehicles, equipment, dumpsters, storage, etc. is allowed in TxDOT parking area.

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 various bid items.

Item 506:

Take all practicable precautions to prevent debris from being discharged into the Waters of Texas or a designated wetland. Install Best Management Practices before demolition begins and maintain them during the demolition. Remove any debris or construction material that escapes containment devices and are discharged into the restricted areas, before the next rain event or within 24 hours of the discharge.

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

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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.

Provide SW3P Signs. Obtain from the Engineer a copy of the project's completed TPDES Storm Water Program Construction Site Notice and Contractor Site Notice. Laminate the sheets and bond with adhesive to 36" X 36" 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 just inside the right of way line at a readable height or as directed by the Engineer. If the sign cannot be placed outside the clear zone, it must adhere to the TMUTCD. SW3P signs, maintenance, and reposting (for replacement or as needed to ensure readability) will be subsidiary to Item 502.

Concrete Washouts are required per the CGP. The Concrete Washout Area(s) structural controls must consist of temporary berms, temporary shallow pits, and/or temporary storage tanks to prevent contaminated runoff and must be lined as to prevent contamination of underlying soil. Ensure pits properly maintained including removal of concrete as not to allow over flow. The location(s) of washout area will be approved by the Engineer. When washout pits are no longer needed, they will be removed and area will be restored to original condition. This work, materials and labor will not be measured or paid for directly but will be subsidiary to Item 506, "Temporary Erosion, Sedimentation, and Environmental Controls."

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.

Item 508:

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

Item 512:

The contractor will furnish pre-cast F Shape Barriers for traffic control, and remove and retain possession of non-permanent barriers at the end of the project. Pre-cast F Shape Barriers must have drainage slots as detailed on the Concrete Safety Barrier Standards. Submit for approval the type of barrier joint connection proposed for the project.

Item 514:

Provide High Performance Concrete (HPC) and epoxy coated reinforcing for all Permanent Concrete Traffic Barrier located on bridge approaches or bridge slabs.

Item 529:

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Provide grooved joints at 10-foot intervals and ¾ 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 ¾ 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:

Properly dispose of unsalvaged material at your own expense. The work involved in hauling this material will not be paid for directly, but will be considered subsidiary to this item.

Accept ownership of metal beam guard fence removed from this project, and dispose accordance with federal, state, and local regulations.

Item 545:

Contractor to retain crash cushion attenuators.

Item 585:

Use Surface Test Type A on all intersections and driveways.

Use Surface Test Type B pay adjustment schedule 1 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 1 on the ramps.

Item 610:

Complete lighting in the initial stages of construction. Make every effort to keep the jobsite lit for the duration of the project. Do not de-energize existing lighting before new lighting is operation without prior approval.

Use luminaire ballasts rated for operation at 480 volts for mainlane lighting.

Use 480 volt electronic LED drivers for luminaires on this project new underpass lighting.

Fabricate steel roadway illumination poles in accordance with TxDOT standards RIP-11 (Roadway Illumination Poles -2011). Poles fabricated according to RIP-11 require no shop drawings. Alternate designs to RIP-11 or the use of aluminum to fabricate poles will require the submission of shop drawings electronically.

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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, 6014:

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. After the work is completed, the Contractor shall restore any curbs or walkways, which have been removed, to their original condition and to the satisfaction of the engineer.

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

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 mule tape in conduit runs in excess of 50 feet. Also furnish and install non-metallic mule tape in conduit installed for future use and cap using standard weather-tight conduit caps, as approved. Furnish Garvin # PT-1250-3K, ComStar PUL 1250P3K, Ideal Part No. 31-315 or equal as approved by the Engineer. This work will not be paid for directly, but is subsidiary to this Item.

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.

Separate conduit and bore for future communication cable shall be installed.

Where two conduits are shown to be installed between ground boxes, these conduits shall be parallel and bored separately. Install cables and conductors of 120 V equipment through one conduit and low voltage equipment in the other conduit. Avoid crossing high and low voltage cables in ground boxes where possible.

2" Schedule 80 PVC will be used at the power pole to supply electricity to underground services.

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“ITS” conduit shall be installed a minimum of 42 inches deep, when trenching methods are used, and a minimum of 60 inches deep when bored under existing pavement, unless shown otherwise in the plans.

When trenching through rocky soil, place non-concrete encased “ITS” conduit on a two-inch sand cushion and backfill with a minimum of six inches of sand.

Where a trench is cut through the surfaced parking shoulder, median or driveways for laying conduit, the base and surfacing will be replaced with similar materials equal in appearance and quality to the original construction.

The minimum bending radius for all “ITS” conduits supplied on this project shall be 18 inches, or as approved.

Install a permanent non-metallic pull cord, with a minimum tensile strength of 600 pounds, in all new “ITS” conduits. For conduits installed for future use, plug conduits using a mechanical conduit plug. Ensure that the mechanical plug creates a water and airtight seal. This work will not be paid for directly but will be subsidiary to this item.

Install “ITS” conduits in stages to accommodate phased construction. Cap the ends of conduits to prevent obstructions.

Install, for each “ITS” conduit run, a metallic underground warning tape, as detailed in the plans. This warning tape will be imprinted with “CAUTION BURIED FIBER OPTIC CABLE.” This will not be paid for directly, but will be considered subsidiary to Item 618: Conduit. The warning tape does not need to be installed when conduit is bored under a roadway section or landscaped area. At locations where the Contractor chooses to bore conduit underground, in areas where trenching methods can be used, the Contractor will install the metallic underground warning tape.

If the Contractor chooses to combine multiple conduits into one bore, the Contractor will install a casing around the conduits. The casing will not be paid for directly, but will be considered subsidiary to this item.

Items 620, 6007:

The equipment grounding conductor shall be a bare wire or identified with continuous green colored jacket insulation. Grounded conductors (Neutral) shall be identified by a continuous white colored jacket. Ungrounded conductors (Hot) in a 120/240v or 240/480v system shall be identified by each pole or leg. For 240-volt branch circuit fed from 120/240 source and 480-volt branch circuit fed from 240/480 source, ensure one leg is identified by a continuous black colored jacket and the other leg by a continuous red colored jacket.

Extra cable length will be included in each run, to provide adequate slack, at each ground box, camera pole, communications hub, dynamic message sign, or radar vehicle sensing device, as determined.

All communication cables will be color-coded consistently, or permanently labeled, between all connections and splices, to ensure immediate identification. The Contractor will submit a chart

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or list identifying all cables, in a logical and sequential manner prior to installation, for the Engineer's approval.

The single mode fiber optic cable will be installed continuous, without splices, from the communications hub to hub, as indicated in the plans, or as directed.

All fiber optic trunk cables and the insulated tracer wire will be installed in multiduct conduit unless otherwise shown in the plans. Electrical conductors will be installed in one three-inch conduit, non-fiber communications cables are to be installed in the second three-inch conduit, and the tolling fiber cable will be installed in the third three-inch conduit.

Insulated tracer wire shall have Orange colored insulation and shall be labeled as a "Tracer Wire" in each Satellite Building, Hub Cabinet, and CCTV Cabinet with one exception: CCTV Cabinets located near Hub Cabinets.

All fiber optic pigtailed, patch cords, and patch panels shall have ST connectors and will not be paid for separately and shall be considered subsidiary to item 6007.

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.

Item 624:

All "ITS" ground boxes will be constructed with aprons.

Submittal literature will be provided to the Engineer prior to installation.

Concrete removal required for installation of ground boxes will be subsidiary to Item 624.

Each Type A or D ground box for ITS shall be installed 12 inches below grade and covered with excavated material. The Contractor will be responsible for providing the latitude and longitude of each ground box. This work will not be paid for directly, but is subsidiary to this Item.

Each Type 1 or 2 ground box that contains non-tracer power conductors shall have its lid tack-welded shut at the completion of work in the ground box. Tack-welding shall be done in 2 inch strips (with 4 inch gaps) along the outer edge of the lid. This work will not be paid for directly, but is subsidiary to this Item.

Slack conductors required by Standard Sheet ED(3)-14 will be subsidiary to Item 624.

Item 627:

Use the timber pole heights, as shown on the plans and in the material summary, for bidding purposes only. Coordinate pole locations, and make field measurements before construction to ensure a vertical clearance of 17 to 19 feet from the highest point on the roadway surface to the span. In addition, place the signal heads a minimum of 40 feet and a maximum of 180 feet from the stop line. If the nearest signal must be more than 180 feet from the stop line, place a supplemental near-side signal head. Determine the field measurements and elevations from

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the actual field location of the poles, considering all above and below ground utilities and existing roadway elevations.

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.

The Meter Base or Transocket shall be mounted facing the roadway and the service enclosure shall be mounted on the opposite side of the pole from the Meter Base or Transocket on all types of poles, Granite Concrete, Timber Pole or Steel Pole.

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.

A Licensed Master Electrician shall be required to install all electrical services.

Bill the electrical service power usage from traffic signals and ITS to the Texas Department of Transportation Bill the electrical service power usage for illumination to the City of Denton.

On each electrical service meter base, install a brass tag with the following requirements:

Dimensions: 1.5 inches tall by 2.5 inches wide.

Engraved tag with numeric portion of street address and attach tag to meter base cover with sheet metal screws. Tag may be placed anywhere on the cover, so as to not interfere with operation of the latch.

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.

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 current standard sheets for all route markers (including interstate shields) and "Exit Only" panel information. Letter, arrow, and number heights shall all conform to the latest edition of the Standard Highway Sign Design Manual.

Provide two (2) sets of shop drawings for signs. The shop drawings shall conform to the details shown on the plans. The shop drawings shall show the details of the panels, wind beams, stiffeners, joint backing plates, splices, joint backing plates, splices, fasteners, brackets, and sign support connections. The shop drawings shall show letter types and sizes, interline spacing and message arrangements.

Affix a sign identification decal to the back of all signs and mark out the installation date in accordance with Item 643.

Attach sheeting applied to extruded aluminum panels to each individual extrusion.

Install new overhead signs tilted "down" at 3° if the structure has existing signs that not to be replaced. Otherwise the 3° bracket is not required. The 3° bracket will be mounted directly to

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the back of the sign and then to the truss. 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.

Place new guide signs on existing overhead sign structures and bridge rail supports. Existing attachment hardware may be reused if position of sign meets the 46% mounting criteria and if the existing hardware is large enough to accommodate the new sign. Sign support brackets may be cut or removed as directed; however do not extend or lengthen existing brackets. Furnish any additional sign attachment hardware, support brackets, etc. as required. Payment will not be made for the additional brackets, but is considered subsidiary to this Item.

All additional hat signs and plaques mounted to the top of signs shall be supported with wind beams 2.5 times the height of the sign and/or plaque.

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.

All sign mounts shall have a clamp base system for all small roadside sign assemblies.

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.

A 3 inch strip of red reflective sheeting shall be placed on all Do Not Enter sign assemblies. This sheeting shall be placed directly below the Do Not Enter sign for the entire length of the sign post facing wrong way traffic. This work will be considered subsidiary to Item 644.

The post lengths shown on the Summary of Large Signs are approximations only. After the "X" dimensions are determined, submit actual post lengths to the Engineer for approval. Post lengths and size shall be approved by the Engineer before fabrication.

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.

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All sign support quantities, pipe and structural steel, will be based on the dimensions shown on the approved shop drawings, or those established in writing. Calculations for measurement of the sign support quantities will be made from the approved shop drawings, in accordance with Item 9: Measurement and Payment, Article 9.1, of the Standard Specifications. Increases and decreases in quantities by change in design, after the shop drawings are approved, will be measured as specified, and the revised quantities will be the basis for payment.

Provide field galvanizing equipment, ASTM A780 (Stick only) or approved alternatives, at all times. Make repairs to galvanized surfaces according to the above specifications, at locations where damage has occurred.

After the sign supports, with signs attached, have been erected, individual units requiring cleaning will be washed with a cleaning solution. The cleaning solution will be capable of removing all grease, oil, dirt smears, streaks, and other foreign particles.

Remove the existing cantilever overhead sign supports as shown on the plans or as directed. Material removed in this project will become the property of the Contractor. Dispose of material off the right of way in accordance with federal, state, and local regulations.

Item 656:

Before placing the concrete for the controller foundation, coordinate with the City of Denton to ensure that the anchor bolt spacing will match the anchor bolts and cabinet supplied by the city.

Form a 3/4-inch chamfer on the top edge of each pedestal 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 672:

Black adhesive will be used on asphalt pavements and white adhesive will be used on concrete pavements.

Item 677:

A water blasting method approved by the Engineer will be the only method allowed for the removal of permanent and temporary pavement markings except on a sealcoat surface. A 2 foot wide sealcoat will be required on sealcoat surfaces to eliminate permanent and temporary pavement markings.

Item 680:

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

1. Notify the District Signal Maintenance Office at (214)320-6682, Construction Office at (214)320-6694 and Bud Vokoun, PE with the City of Denton at (940) 349-7710 one week before beginning any work involving traffic signals.
2. Provide submittal literature for all traffic signal equipment before installation.
3. Install the supplied traffic signal controller and cabinet.
4. Install the controller cabinet in an orientation as directed.

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5. Connect all field wiring to the controller assembly, including SSR coaxial cable termination into the polyphaser. The City will assist in determining how the detection cables are to be connected, and will also program the controller for operation, hook up the malfunction management unit (MMU) or conflict monitor, detector units, and other equipment, and turn on the controller. Pick up the signal cabinet from the City of Denton. Have a qualified technician and a representative from the controller supplier on the project site to place the traffic signals in operation.
6. 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.
7. Provide 250W HPS Equivalent LED Fixtures with 240 volt electronic LED drivers as shown on the Material Producers List.
8. Install the emergency vehicle preemption equipment supplied by the City of Denton.
9. Have a qualified technician on the project site to place the traffic signal in operation.
10. 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 or MMU during the thirty-day test period without approval.
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.
13. The concrete foundation for the controller as shown on the TS-CF-04 is diagrammatic and the dimensions will be adjusted in the field to fit existing conditions.
14. Salvage the existing traffic signals at IH35E at Mayhill and IH35E at Loop 288 as shown on the plans. Salvage poles, cabinets, service poles and equipment, exposed conduit, and any other equipment as directed. This equipment remains the property of the City of Denton. The material listed above is to be stockpiled at City of Denton Traffic Operations. Coordinate with Scott Wilson (City of Denton Traffic Operations) at 940-349-8491. All other material removed in this project will become the property of the Contractor. Dispose of material off the right of way in accordance with federal, state, and local regulations. Maintain the operation of the existing traffic signal until directed to remove it.
15. Completely remove timber poles not set in concrete without cutting off the pole. Timber poles set in concrete are considered unsalvageable.
16. Install 2(two) City supplied PTZ cameras and associated cabling at the Loop 288 signal.

Item 681:

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

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1. Re-guy signal heads and re-strap the cable after making adjustments to head locations. Accomplish relocation of signal heads for a phase change during the same day.
2. Bottom tether cable for signal heads and signs will be required.
3. Provide submittal literature for all traffic signal equipment before installation.
4. Furnish and install a controller (eight phase NEMA TS 2 Type 1) and cabinet (NEMA TS 2 Size 6, 16 position load bay), meeting the requirements of Departmental Materials Specifications DMS-11170. Provide detector panel toggle switches that additionally permit the user to disconnect the detector. Provide a pole-mounted cabinet that has three brackets for pole mounting, and install a 5' x 5' x 4" Class A concrete pad under the cabinet in accordance to Items 420 and 421.
5. Operate and maintain the temporary signal. Provide a telephone number to the District for trouble calls. Check the signal equipment at least monthly, and within 24 hours in response to complaints, and immediately repair or replace any malfunctioning Contractor-supplied equipment. Notify the Department immediately upon finding malfunctioning Department-supplied equipment or a problem with the signal timing. If the controller is supplied by the Contractor, provide a reliable technical support person and phone number for the manufacturer of the controller. If the vehicle detection is Department-supplied, notify the TxDOT Dallas District Signal Shop one week prior to traffic switches to reprogram and re-aim the detectors.
6. Add 50 amp circuit to existing electrical service for the temporary signal at Loop 288.

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 pedestrian and vehicle signal heads in the following color: Federal Yellow #13538 of Federal Standard 595. Provide non-painted aluminum tubing. Provide back plates, louvers, and the inside of visors with a flat black finish. Provide aluminum vented 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 aim as directed.

Item 684:

Provide 18 AWG Type C signal cables for loop detector lead-ins.

Provide stranded 14 AWG Type A signal cables for LED signal heads and stranded 12 AWG Type C cables for APS units.

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.

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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. The conductors for the Line and Load side of the terminal strip shall be identified with a plastic label with two straps per tag. The line side shall have each signal head, PED head, and push button identified on the tag.

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.

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.

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 to 48 feet in length. Install as shown on MA-DPD-12.

For existing signal poles, replacement of existing conductors is not required inside the poles. Plug any unused openings in existing mast arms and poles with an approved material.

Item 687:

Provide 12 circuit Buchanan Type 112SN, Kulka Type 985-GP-10 CU, or equal terminal strip in the pedestal pole access compartment. The conductors for the line and load side of the terminal strip shall be identified with a plastic label with two straps per tag. The load side shall have each signal head and ped head identified on the tag.

Item 688:

Maintain a minimum 12 inch separation between loop lead-in sawcuts and loop sawcuts, and a minimum 6 inch separation between loop lead-in sawcuts and other loop lead-in sawcuts.

Use loop wire for concrete pavement and loop duct for asphalt pavements.

Install loop detectors only during off-peak traffic periods.

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

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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 pushbuttons and APS units and the direction of the arrows on the signs prior to installation.

Assist the Engineer in determining the loop inductance of each loop detector installation. In the presence of the engineer, conduct field testing to determine the total inductance of the loop detector and the percentage shift in loop inductance for various size vehicles.

Item 730:

At the discretion of the Engineer, mow non-paved areas within the project prior to placement of permanent vegetation. Mow up to three (3) cycles per growing season.

Item 6010: CCTV Field Equipment

The cables and harnesses will enter at the bottom of the CCTV housing. The CCTV will have gaskets, at entry points, to prevent moisture entry.

Item 6027: Preparation of Existing Conduits, Ground Boxes, or Manholes

The Contractor is responsible for damage done to existing cable during the preparation of existing conduit. The Contractor will repair or replace damage done to existing cables. The repairing or replacing of damage to existing cables will be done at the expense of the Contractor, and to the satisfaction of the Engineer.

Item 7106: City of Denton Water:

A preconstruction meeting is required before any project shall begin in the City of Denton or its jurisdiction limits. Represented at the meeting, as applicable, shall be:

- TxDOT Engineer
- City of Denton representatives
- Contractor's representatives
- Consulting Engineers representatives
- Affected utilities in the construction area represented.

This meeting shall consist of reviewing the plans with all the representatives present to discuss proposed construction methods and utility adjustment, to discuss project management and administrative procedures and to clear up any doubts about the plans and specifications. The Contractor will be required to present a proposed project schedule at the meeting. Location of the meeting shall be at a location designated by the City. Call 940-349-8910 for specifics at least 48 hours in advance of the meeting.

A current set of City approved plans and specifications shall be in the possession of the contractor on the first day of the project. These shall be shown to the State and City of Denton Inspectors before any work is allowed to proceed on that project. A legible set of plans shall be retained by the contractor throughout the project until its completion.

The following are to be applied at the discretion of the City Engineer to the public improvements being inspected by the Public Works Inspection Department. This is an effort to speed

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completion of projects to final acceptance which should increase the efficiency of the inspection process being provided.

Final Acceptance of Water, Sewer, and Storm Sewer Improvements

- As-built drawings from the Consulting Engineer
- All required tests pass (air, water, bacteriological samples, etc.). Fire hydrants must be raised to final elevation prior to testing.

NCTCOG Item 501.1 Underground Conduit Materials

General: This item establishes the permissible conduit material types and size restrictions for water, sanitary sewer and drainage applications. No other conduit types shall be permitted unless specifically called for in the plans or Special Contract Requirements.

Water: Conduit shall be either AWWA C900 PVC pipe, AWWA C151 Ductile Iron pipe, AWWA C303 Bar-wrapped Concrete Steel Cylinder pipe, or AWWA C200 Steel Water pipe. Size and thickness restrictions for each pipe material type are given in the table below:

<u>Pipe Material</u>	<u>Diameter Range (in)</u>	<u>Min. Thickness Class</u>
AWWA C900	6 – 12	SDR-18
AWWA C151	16 – 24	Class 52
AWWA C303	16 and larger	Design Specific
AWWA C200	30 and larger	Design Specific

NCTCOG Item 501.7.4 Ductile Iron Fittings

General: This item shall govern the material requirements of ductile iron fittings for use in water service supply. Installation of ductile iron fittings is described under the ductile iron and PVC pipe installation specifications.

Materials: Unless otherwise noted on the plans or in the Special Contract Requirements fittings shall be made of ductile iron and conform to either AWWA C110 for standard fitting sizes or AWWA C153 for compact fitting sizes. Fitting sizes and dimensions shall be as called for on the plans. Fittings shall have a bituminous seal coating and a cement interior lining in accordance with AWWA C104. Fittings shall be wrapped in AWWA C105 polyethylene encasement after installation. Fitting connection types shall be as called for on the plans or where unspecified, mechanical joint by mechanical joint. Bolting hardware shall conform to NCTCOG Item 501.7.4. Mechanical joints shall utilize T style bolts only. Flange connections shall utilize hex bolts only.

Payment: There is no separate pay item for ductile iron fittings as they are considered a subsidiary cost of water line pipe installation.

NCTCOG Item 501.14 Polyvinyl Chloride (PVC) Water Pipe

General: This item shall govern the materials of construction and installation of PVC pipe for use in potable water distribution.

Material: Unless otherwise noted on the plans or in the Special Contract Requirements, pipe shall meet AWWA specification C-900 for diameter sizes 4" through 12" with a minimum wall

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thickness of DR 18. PVC water pipe shall be blue in color. Any discoloration in the pipe shall be sufficient cause for rejection.

Installation: Water pipe and fittings shall be installed at the locations and in the quantities indicated on the plans or in the Special Contract Requirements. Water pipe without a design profile shall be installed at the minimum depths required by the current City of Denton Water Criteria Manual. Water pipe shall be installed according to the provisions of NCTCOG Items 505 "General Conduit Installation" and 506 "Water Conduit Installation". Trench width and depth shall be governed by the appropriate trench detail drawing in the plans or the current City trench detail drawing. Installation under existing pavement shall require a pavement saw cut conforming to NCTCOG Item 402.3 "Sawing". Embedment and backfill shall be as required by the appropriate trench detail drawing in the plans or the current City trench detail drawing. Unless the plans or Special Contract Requirements indicate otherwise, concrete thrust blocking shall be installed at all pipe bends, tees, or pipe ends according to the thrust blocking details in the plans or the current City standard thrust blocking details. The maximum length of open trench at any time shall be 200 feet. Open trench at the end of the working day must be plated or barricaded from public access.

Testing and Disinfection: Water pipe shall be hydrostatically tested according to the provisions of NCTCOG Item 506.5 "Hydrostatic Test" and NCTCOG Table 506.5.(a). Water pipe shall be purged and disinfected according to the provisions of NCTCOG Item 506.7 "Purging and Disinfection of Water Conduits". Disinfection may be accomplished by either the continuous feed or slug feed methods. The City reserves the right to review the Contractor's plan of disinfection and make modifications to the plan.

AM-6

Payment: Payment for this item shall be at the contract unit price per linear foot of water pipe installed. Unit price shall include pavement cut and repair, trench excavation, embedment, pipe and fitting installation, backfill, thrust blocking, testing and disinfection, and temporary and permanent pavement repair if required, including but not limited to curb and gutter, driveway approach, sidewalks, and asphalt or concrete pavement repair. A separate unit price may be utilized to differentiate pipe installed under pavement from pipe installed in unpaved areas. Asphalt or concrete saw cut and removal shall be included in the unit price for water pipe installed under pavement.

NCTCOG Item W02 Abandonment of Existing Water Line Segment

General: This item shall govern the abandonment of existing water line segments and their associated appurtenances and fittings. The abandonment of valve vaults or other water related underground structures is not covered under this item.

Material: NCTCOG Class B concrete

Execution: Contractor shall abandon all existing water line segments called out on the construction plans. Water mains to be abandoned shall be cut at the locations indicated on the plans. The cut shall remove a two foot section of the existing pipe and shall plug the exposed AM-10 ends of the remaining pipe with Class B concrete. Valves located in the abandoned line segment shall be closed and the valve stacks shall be removed and disposed of by the Contractor. Fire hydrants located in the abandoned line segment shall be removed and returned to the City of Denton Meter Shop. The fire hydrant lead line shall be plugged with Class B concrete at the boot connection. Service lines located in the abandoned segment shall be cut 12

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inches from the water meter can and plugged with a watertight manufactured cap. Crimping of copper tubing is not an acceptable alternative to capping. The removed portion of service line and the water meter valve shall be disposed of by the contractor. All removed pipe and fittings shall be disposed of according to NCTCOG Item 107.25. Backfill and pavement repair at each cut location shall correspond to the appropriate pipe installation trench detail requirements for the existing surface condition.

Payment: All water line abandonment is subsidiary to water line lowering and no separate or additional payment shall be made. Water line segment abandoned shall include the capping, removal or plugging of all the appurtenances, fittings and pipe described in the execution section above. The water line lowering shall also include excavation, backfill and pavement repair (if required).

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
250W HPS EQ LED LUMINAIRE	EA	5
INSTALL CITY SUPPLIED OPTICOM EQUIPMENT (INTERSECTION)	LS	2
INSTALL CITY-SUPPLIED CONTROLLER AND BASE	EA	1
INSTALL CITY-SUPPLIED ANTENNA AND RADIO EQUIPMENT	EA	1
INSTALL CITY SUPPLIED PTZ CAMERAS AND WIRING	EA	2
REGULATORY SIGN PANEL (R10-12,ETC)	EA	15
CONCRETE FOUNDATION (8' X 9' X 6", CLASS B)	CY	1.3
SINGLE STREET NAME SIGN PANEL	EA	4
DUAL STREET NAME SIGN PANEL	EA	2

LIST OF MATERIAL/LABOR
SUBSIDIARY TO ITEM 681

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DESCRIPTION	UNIT	QUANTITY
40 FT TIMBER POLE (CLASS 2)	EA	8
8 FT LUMINAIRE MAST ARM FOR WOOD POLE MOUNTING W/ 250W HPS EQ LED LUMINAIRE	EA	4
CABLE STRAPS	EA	1050
3/8 INCH ZINC-COATED STRANDED STEEL CABLE	LF	1895
1/4 INCH ZINC-COATED STRANDED STEEL CABLE	LF	1005
GROUND ANCHORS	EA	16
YELLOW PLASTIC GUY GUARD	EA	16
DOUBLE EYE ANCHOR ROD	EA	16
5/8" X 8' COPPERCLAD GROUND ROD W/CLAMP	EA	1
2 INCH WEATHERHEAD	EA	8
3 INCH WEATHERHEAD	EA	4
8 PHASE NEMA CONTROLLER COMPLETE W/ POLE MOUNTED CABINET AND ACCESSORIES	EA	1
2 INCH PVC CONDUIT	LF	30
2 INCH RIGID METAL CONDUIT	LF	100
3 INCH PVC CONDUIT	LF	235
3 INCH RIGID METAL CONDUIT	LF	56
#4 XHHW CABLE	LF	38
#4 BARE WIRE	LF	19
#6 BARE WIRE	LF	402
#8 XHHW CABLE	LF	3198
#14 5 CONDUCTOR CABLE	LF	3366
#14 7 CONDUCTOR CABLE	LF	1300
PRESENCE RADAR CABLE	LF	2103

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PRESENCE RADAR DETECTOR UNITS	EA	6
LED SIGNAL HEAD (3 SECTION)	EA	11
LED SIGNAL HEAD (4 SECTION)	EA	2
LED PEDESTRIAN SIGNAL HEAD	EA	6
INSTALL OPTICOM EQUIPMENT (INTERSECTION)	LS	1
REGULATORY SIGN PANEL (R10-12,ETC)	EA	4
RELOCATE SINGLE STREET NAME SIGN PANEL	EA	7
CONCRETE FOUNDATION (5' X 5' X 4", CLASS A)	SF	25

LIST OF MATERIAL
FURNISHED BY THE CITY OF DENTON

DESCRIPTION	UNIT	QUANTITY
OPTICOM CABLE	LF	2145
OPTICOM DETECTOR W/MOUNTING BRACKET	EA	4
OPTICOM MODULES (2-CHANNEL)	EA	2
OPTICOM CARD RACK AND HARNESS	EA	1
OPTICOM CONTROLLER ASSEMBLY COMPLETE WITH CABINET AND ACCESSORIES	EA	1
TRAFFIC SIGNAL CONTROLLER/CABINET	EA	1
TRAFFIC SIGNAL CONTROLLER BASE	EA	1
WAVETRONIX ADVANCE RADAR DETECTOR	EA	4
WAVETRONIC PROCESSOR CARD	EA	2
ADVANCE RADAR DETECTION CABLE	LF	1370
MANAGED ETHERNET SWITCH	EA	1
ECOM E-LITE RADIO AND ANTENNEA	EA	1

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SSR RADIO ANTENNA CABLE	LF	265
PTZ CAMERAS AND ASSOCIATED CABLES	EA	2
BATTERY BACK-UP UNIT	EA	1
ILSN ASSEMBLIES	EA	6

CONTROL : 0196-01-106, ETC
PROJECT : STP 2017(083)MM, ETC
HIGHWAY : IH 35E
COUNTY : DENTON

TEXAS DEPARTMENT OF TRANSPORTATION

GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS

ALL SPECIFICATIONS AND SPECIAL PROVISIONS APPLICABLE TO THIS PROJECT ARE IDENTIFIED AS FOLLOWS:

STANDARD SPECIFICATIONS: ADOPTED BY THE TEXAS DEPARTMENT OF
----- TRANSPORTATION NOVEMBER 1, 2014.
STANDARD SPECIFICATIONS ARE INCORPORATED
INTO THE CONTRACT BY REFERENCE.

ITEMS 1 TO 9 INCL., GENERAL REQUIREMENTS AND COVENANTS
ITEM 100 PREPARING RIGHT OF WAY (100)
ITEM 104 REMOVING CONCRETE
ITEM 105 REMOVING TREATED AND UNTREATED BASE AND ASPHALT PAVEMENT
ITEM 110 EXCAVATION (132)
ITEM 132 EMBANKMENT (100) (160) (204) (210) (216) (260) (400)
ITEM 161 COMPOST (160)
ITEM 162 SODDING FOR EROSION CONTROL (166) (168)
ITEM 164 SEEDING FOR EROSION CONTROL (162) (166) (168)
ITEM 168 VEGETATIVE WATERING
ITEM 260 LIME TREATMENT (ROAD-MIXED) (105) (132) (204) (210) (216)
(247) (300) (310) (520)
ITEM 344 SUPERPAVE MIXTURES (300) (301) (320) (520) (585)
ITEM 356 FABRIC UNDERSEAL (300) (316) (520)
ITEM 360 CONCRETE PAVEMENT (421) (422) (438) (440) (529) (585)
ITEM 400 EXCAVATION AND BACKFILL FOR STRUCTURES (110) (132) (401)
(402) (403) (416) (420) (421) (423)
ITEM 401 FLOWABLE BACKFILL (421)
ITEM 402 TRENCH EXCAVATION PROTECTION
ITEM 403 TEMPORARY SPECIAL SHORING (410) (411) (423)
ITEM 410 SOIL NAIL ANCHORS (421) (431) (440)
ITEM 416 DRILLED SHAFT FOUNDATIONS (405) (420) (421) (423) (440) (448)
ITEM 420 CONCRETE SUBSTRUCTURES (400) (404) (421) (422) (426) (427)
(440) (441) (448)
ITEM 422 CONCRETE SUPERSTRUCTURES (420) (421) (424) (438) (440) (448)
(454) (780)
ITEM 423 RETAINING WALLS (110) (132) (216) (400) (416) (420) (421) (424)
(440) (445)
ITEM 425 PRECAST PRESTRESSED CONCRETE STRUCTURAL MEMBERS (409)
(420) (421) (424) (426) (427) (434) (440) (442) (445)

ITEM 427 SURFACE FINISHES FOR CONCRETE (420)
 ITEM 432 RIPRAP (247) (420) (421) (431) (440)
 ITEM 442 METAL FOR STRUCTURES (441) (445) (446) (447) (448)
 ITEM 450 RAILING (420) (421) (422) (424) (440) (441) (442) (445) (446)
 (448)
 ITEM 454 BRIDGE EXPANSION JOINTS (429) (442) (785)
 ITEM 462 CONCRETE BOX CULVERTS AND DRAINS (400) (402) (403) (420)
 (421) (422) (424) (440) (464) (476)
 ITEM 464 REINFORCED CONCRETE PIPE (400) (402) (403) (467) (476)
 ITEM 465 JUNCTION BOXES, MANHOLES, AND INLETS (400) (420) (421) (424)
 (440) (476)
 ITEM 466 HEADWALLS AND WINGWALLS (400) (420) (421) (432) (440) (464)
 ITEM 476 JACKING, BORING, OR TUNNELING PIPE OR BOX (402) (403) (460)
 (462) (464)
 ITEM 479 ADJUSTING MANHOLES AND INLETS (400) (421) (465) (471)
 ITEM 496 REMOVING STRUCTURES
 ITEM 500 MOBILIZATION
 ITEM 502 BARRICADES, SIGNS, AND TRAFFIC HANDLING
 ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL
 CONTROLS (161) (432) (556)
 ITEM 508 CONSTRUCTING DETOURS
 ITEM 512 PORTABLE CONCRETE TRAFFIC BARRIER (420) (421) (424) (440)
 (442)
 ITEM 514 PERMANENT CONCRETE TRAFFIC BARRIER (400) (416) (420) (421)
 (424) (440) (442) (448)
 ITEM 528 COLORED TEXTURED CONCRETE AND LANDSCAPE PAVERS (132) (247)
 (275) (401) (420) (421) (440)
 ITEM 529 CONCRETE CURB, GUTTER, AND COMBINED CURB AND GUTTER (360)
 (420) (421) (440)
 ITEM 530 INTERSECTIONS, DRIVEWAYS, AND TURNOUTS (247) (260) (263)
 (275) (276) (292) (316) (330) (334) (340) (360) (421) (440)
 ITEM 531 SIDEWALKS (104) (360) (420) (421) (440) (530)
 ITEM 533 MILLED RUMBLE STRIPS
 ITEM 540 METAL BEAM GUARD FENCE (421) (441) (445) (529)
 ITEM 542 REMOVING METAL BEAM GUARD FENCE
 ITEM 544 GUARDRAIL END TREATMENTS
 ITEM 545 CRASH CUSHION ATTENUATORS (421)
 ITEM 610 ROADWAY ILLUMINATION ASSEMBLIES (416) (421) (432) (441) (442)
 (445) (449) (614) (616) (618) (620) (622) (624) (628)
 ITEM 618 CONDUIT (400) (476)
 ITEM 620 ELECTRICAL CONDUCTORS (610) (628)
 ITEM 624 GROUND BOXES (420) (421) (432) (440) (618) (620)
 ITEM 628 ELECTRICAL SERVICES (441) (445) (449) (618) (620) (627) (656)
 ITEM 636 SIGNS (643)
 ITEM 644 SMALL ROADSIDE SIGN ASSEMBLIES (421) (440) (441) (442) (445)
 (636) (643) (656)
 ITEM 647 LARGE ROADSIDE SIGN SUPPORTS AND ASSEMBLIES (416) (421)
 (440) (441) (442) (445) (636)
 ITEM 650 OVERHEAD SIGN SUPPORTS (416) (420) (421) (441) (442) (445)
 (449) (618) (636) (654)
 ITEM 658 DELINEATOR AND OBJECT MARKER ASSEMBLIES (445)
 ITEM 662 WORK ZONE PAVEMENT MARKINGS (666) (668) (672) (677)
 ITEM 666 RETROREFLECTORIZED PAVEMENT MARKINGS (316) (502) (662) (677)
 (678) (6040)

ITEM 672 RAISED PAVEMENT MARKERS (677)(678)
 ITEM 677 ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS (300)
 (302)(316)
 ITEM 678 PAVEMENT SURFACE PREPARATION FOR MARKINGS (677)
 ITEM 680 HIGHWAY TRAFFIC SIGNALS (416)(610)(618)(620)(624)(625)
 (627)(628)(636)(656)(682)(684)(686)(688)
 ITEM 681 TEMPORARY TRAFFIC SIGNALS (416)(610)(618)(620)(621)(622)
 (624)(625)(627)(628)(636)(656)(680)(682)(684)(686)(687)
 (688)
 ITEM 682 VEHICLE AND PEDESTRIAN SIGNAL HEADS
 ITEM 684 TRAFFIC SIGNAL CABLES
 ITEM 686 TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (416)(421)(441)
 (442)(445)(449)
 ITEM 687 PEDESTAL POLE ASSEMBLIES (445)(449)(656)(682)
 ITEM 688 PEDESTRIAN DETECTORS AND VEHICLE LOOP DETECTORS (618)
 (624)(682)(684)
 ITEM 730 ROADSIDE MOWING
 ITEM 740 GRAFFITI REMOVAL AND ANTI-GRAFFITI COATING

SPECIAL PROVISIONS: SPECIAL PROVISIONS WILL GOVERN AND TAKE
 ----- PRECEDENCE OVER THE SPECIFICATIONS ENUMERATED
 HEREON WHEREVER IN CONFLICT THEREWITH.

REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS
 (FORM FHWA 1273, MAY, 2012)

WAGE RATES

SPECIAL PROVISION "SCHEDULE OF LIQUIDATED DAMAGES" (000---001)
 SPECIAL PROVISION "NONDISCRIMINATION" (000---002)
 SPECIAL PROVISION "CERTIFICATION OF NONDISCRIMINATION IN EMPLOYMENT"
 (000---003)
 SPECIAL PROVISION "NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO
 ENSURE EQUAL EMPLOYMENT OPPORTUNITY" (000---004)
 SPECIAL PROVISION "STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
 CONSTRUCTION CONTRACT SPECIFICATIONS" (000---005)
 SPECIAL PROVISION "ON-THE-JOB TRAINING PROGRAM" (000---006)
 SPECIAL PROVISION "DISADVANTAGED BUSINESS ENTERPRISE IN FEDERAL AID
 CONTRACTS" (000---007)
 SPECIAL PROVISION "IMPORTANT NOTICE TO CONTRACTORS" (000---010)
 SPECIAL PROVISION "CARGO PREFERENCE ACT REQUIREMENTS IN FEDERAL AID
 CONTRACTS" (000---241)
 SPECIAL PROVISION "CERTIFICATE OF INTERESTED PARTIES (FORM 1295)"
 (000---249)
 SPECIAL PROVISION "IMPORTANT NOTICE TO CONTRACTORS" (000---018)
 SPECIAL PROVISION "IMPORTANT NOTICE TO CONTRACTORS" (000---334)
 SPECIAL PROVISION TO ITEM 2 (002---004)
 SPECIAL PROVISION TO ITEM 6 (006---001)
 SPECIAL PROVISIONS TO ITEM 7 (007---001)(007---003)(007---004)
 SPECIAL PROVISION TO ITEM 8 (008---006)
 SPECIAL PROVISION TO ITEM 300 (300---009)
 SPECIAL PROVISION TO ITEM 421 (421---002)
 SPECIAL PROVISION TO ITEM 506 (506---003)

SPECIAL SPECIFICATIONS:

- ITEM 6001 PORTABLE CHANGEABLE MESSAGE SIGN
- ITEM 6007 FIBER OPTIC CABLE
- ITEM 6008 ITS FIELD EQUIPMENT CABINET
- ITEM 6010 CCTV FIELD EQUIPMENT
- ITEM 6014 MULTI-DUCT CONDUIT SYSTEM
- ITEM 6025 RADAR PRESENCE DETECTION DEVICE
- ITEM 6039 RELOCATE OVERHEAD SIGNS
- ITEM 6040 MOBILE RETROREFLECTIVITY DATA COLLECTION FOR PAVEMENT MARKINGS
- ITEM 6064 INTELLIGENT TRANSPORTATION SYSTEM (ITS) POLE WITH CABINET
- ITEM 6120 DEAD END ROADWAY BARRICADE
- ITEM 6155 RADAR DETECTOR AND COMMUNICATION CABLE (680)
- ITEM 6186 INTELLIGENT TRANSPORTATION SYSTEM(ITS) GROUND BOX
- ITEM 7106 WATER MAIN RELOCATIONS AND ROUTINE APPURTENANCE ADJUSTMENTS

GENERAL: THE ABOVE-LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH
----- PAYMENT IS TO BE MADE. THESE, TOGETHER WITH SUCH OTHER
PERTINENT ITEMS, IF ANY, AS MAY BE REFERRED TO IN THE ABOVE-
LISTED SPECIFICATION ITEMS, AND INCLUDING THE SPECIAL
PROVISIONS LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFI-
CATIONS FOR THIS PROJECT.

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