

NOTIFICATION OF ADDENDUM

ADDENDUM NO. 1

DATED 7/26/2021

Control	2502-01-021
Project	F 2021(093)
Highway	SL 121
County	BELL

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: F 2021(093)

CONTROL: 2502-01-021

COUNTY: BELL

LETTING: 08/05/2021

REFERENCE NO: 0721

PROPOSAL ADDENDUMS

- X PROPOSAL COVER
- X BID INSERTS (SH. NO.: 7-22, 11-22, 22-22)
- X GENERAL NOTES (SH. NO.: B)

- _ SPEC LIST (SH. NO.:)
- _ SPECIAL PROVISIONS:)
- _ ADDED:)

DELETED:

- _ SPECIAL SPECIFICATIONS:
- ADDED:

DELETED:

- X OTHER: PLANS

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

*****PROPOSAL COVER*****
REVISED THE NUMBER OF WORKING DAYS.

*****BID TABS*****
SHEET 7-22: REVISED QUANTITY FOR ITEM 464-6005.
SHEET 11-22: REVISED QUANTITY FOR ITEM 502-6001.
SHEET 22-22: DELETED ITEM 3076-6010. ADDED ITEM 3076-6023.

*****GENERAL NOTES*****
SHEET B: REVISED BASIS OF ESTIMATE FOR ITEMS 734, 738, 3076.

*****PLANS*****
SHEET 25: REVISED BASIS OF ESTIMATE FOR ITEMS 734, 738, 3074.
SHEETS 26B, 26C, 26F: SEE CHANGES OUTLINED ABOVE.
SHEETS 33, 35, 40, 41: SEE CHANGES OUTLINED ABOVE.
SHEET 38: REVISED QUANTITIES FOR ITEM 734-6002, 738-6003.
SHEET 390: REVISED RETAINING WALL DETAILS.

Control	2502-01-021
Project	F 2021(093)
Highway	SL 121
County	BELL

PROPOSAL TO THE TEXAS TRANSPORTATION COMMISSION

2014 SPECIFICATIONS

WORK CONSISTING OF WIDEN ROAD - ADD LANES BELL COUNTY, TEXAS

The quantities in the proposal are approximate. The quantities of work and materials may be increased or decreased as considered necessary to complete the work as planned and contemplated.

This project is to be completed in 480 working days and will be accepted when fully completed and finished to the satisfaction of the Executive Director or designee.

Provide a proposal guaranty in the form of a Cashier's Check, Teller's Check (including an Official Check) or Bank Money Order on a State or National Bank or Savings and Loan Association, or State or Federally chartered Credit Union made payable to the Texas Transportation Commission in the following amount:

ONE HUNDRED THOUSAND (Dollars) (\$100,000)

A bid bond may be used as the required proposal guaranty. The bond form may be detached from the proposal for completion. The proposal may not be disassembled to remove the bond form. The bond must be in accordance with Item 2 of the specifications.

Any addenda issued amending this proposal and/or the plans that have been acknowledged by the bidder, become part of this proposal.

By signing the proposal the bidder certifies:

1. the only persons or parties interested in this proposal are those named and the bidder has not directly or indirectly participated in collusion, entered into an agreement or otherwise taken any action in restraint of free competitive bidding in connection with the above captioned project.
2. in the event of the award of a contract, the organization represented will secure bonds for the full amount of the contract.
3. the signatory represents and warrants that they are an authorized signatory for the organization for which the bid is submitted and they have full and complete authority to submit this bid on behalf of their firm.
4. that the certifications and representations contained in the proposal are true and accurate and the bidder intends the proposal to be taken as a genuine government record.

• **Signed:** **

(1) _____ (2) _____ (3) _____

Print Name:

(1) _____ (2) _____ (3) _____

Title:

(1) _____ (2) _____ (3) _____

Company:

(1) _____ (2) _____ (3) _____

- Signatures to comply with Item 2 of the specifications.

**Note: Complete (1) for single venture, through (2) for joint venture and through (3) for triple venture.

* **When the working days field contains an asterisk (*) refer to the Special Provisions and General Notes.**

NOTICE TO CONTRACTORS

ANY CONTRACTORS INTENDING TO BID ON ANY WORK TO BE AWARDED BY THIS DEPARTMENT MUST SUBMIT A SATISFACTORY “AUDITED FINANCIAL STATEMENT” AND “EXPERIENCE QUESTIONNAIRE” AT LEAST TEN DAYS PRIOR TO THE LETTING DATE.

UNIT PRICES MUST BE SUBMITTED IN ACCORDANCE WITH ITEM 2 OF THE STANDARD SPECIFICATIONS OR SPECIAL PROVISION TO ITEM 2 FOR EACH ITEM LISTED IN THIS PROPOSAL.

Printed Name of Authorized Signer: _____

Signature of Authorized Signer: _____ Date: _____

PROJECT F 2021(093)
 COUNTY BELL

Proposal Sheet
 TxDOT
 FORM 234-B I-61-5M

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	104	6001		REMOVING CONC (PAV) DOLLARS and CENTS	SY	1,174.000	1
	104	6009		REMOVING CONC (RIPRAP) DOLLARS and CENTS	SY	3,032.000	2
	104	6011		REMOVING CONC (MEDIANS) DOLLARS and CENTS	SY	1,682.000	3
	104	6015		REMOVING CONC (SIDEWALKS) DOLLARS and CENTS	SY	850.000	4
	104	6017		REMOVING CONC (DRIVEWAYS) DOLLARS and CENTS	SY	2,432.000	5
	104	6021		REMOVING CONC (CURB) DOLLARS and CENTS	LF	441.000	6
	104	6022		REMOVING CONC (CURB AND GUTTER) DOLLARS and CENTS	LF	6,484.000	7
	104	6037		REMOVE CONC (RAIL) DOLLARS and CENTS	LF	1,354.000	8
	104	6044		REMOVING CONC (FLUME) DOLLARS and CENTS	SY	567.000	9
	104	6045		REMOVE CONC (MISC) DOLLARS and CENTS	EA	1.000	10

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	104	6054		REMOVING CONCRETE(MOW STRIP) DOLLARS and CENTS	LF	1,457.000	11
	105	6022		REMOVING STAB BASE AND ASPH PAV (13") DOLLARS and CENTS	SY	117,253.000	12
	105	6034		REMOVING STAB BASE AND ASPH PAV(1"- 9") DOLLARS and CENTS	SY	2,996.000	13
	110	6001		EXCAVATION (ROADWAY) DOLLARS and CENTS	CY	64,024.000	14
	132	6004		EMBANKMENT (FINAL)(DENS CONT)(TY B) DOLLARS and CENTS	CY	43,812.000	15
	160	6003		FURNISHING AND PLACING TOPSOIL (4") DOLLARS and CENTS	SY	106,481.000	16
	162	6008		ROLL SODDING DOLLARS and CENTS	SY	78,224.000	17
	164	6007		BROADCAST SEED (PERM) (URBAN) (CLAY) DOLLARS and CENTS	SY	49,866.000	18
	164	6029		CELL FBR MLCH SEED(TEMP)(WARM) DOLLARS and CENTS	SY	34,510.000	19
	164	6031		CELL FBR MLCH SEED(TEMP)(COOL) DOLLARS and CENTS	SY	34,510.000	20
	168	6001		VEGETATIVE WATERING DOLLARS and CENTS	MG	1,601.500	21
	169	6002		SOIL RETENTION BLANKETS (CL 1) (TY B) DOLLARS and CENTS	SY	35,671.000	22

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	169	6006		SOIL RETENTION BLANKETS (CL 2) (TY F) DOLLARS and CENTS	SY	14,195.000	23
	170	6001		IRRIGATION SYSTEM DOLLARS and CENTS	LS	1.000	24
	192	6002		PLANT MATERIAL (1-GAL) DOLLARS and CENTS	EA	6.000	25
	192	6012		MULCH DOLLARS and CENTS	CY	13.000	26
	192	6014		PLANT SOIL MIX DOLLARS and CENTS	CY	230.000	27
	192	6024		PLANT MATERIAL (30 GAL) (TREE) DOLLARS and CENTS	EA	5.000	28
	192	6031		PLANT MATERIAL (5 GAL) (SHRUB) DOLLARS and CENTS	EA	14.000	29
	193	6001		PLANT MAINTENANCE DOLLARS and CENTS	MO	9.000	30
	193	6007		IRRIGATION SYSTEM OPER AND MAINT DOLLARS and CENTS	MO	9.000	31
	216	6001		PROOF ROLLING DOLLARS and CENTS	HR	5.000	32
	247	6053	003	FL BS (CMP IN PLC)(TYD GR1-2)(FNAL POS) DOLLARS and CENTS	CY	33,536.000	33
	310	6027		PRIME COAT(MC-30 OR AE-P) DOLLARS and CENTS	GAL	39,676.000	34

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	316	6024	002	ASPH (CRS-2P) DOLLARS and CENTS	GAL	59,514.000	35
	316	6409	002	AGGR (TY-B GR-4) DOLLARS and CENTS	CY	980.000	36
	346	6002	003	STONE-MTRX-ASPH SMA-C SAC-A PG76-22 DOLLARS and CENTS	TON	2,670.000	37
	354	6022		PLANE ASPH CONC PAV(0" TO 3") DOLLARS and CENTS	SY	2,240.000	38
	356	6021		PAV JT UNDERSEAL (24") DOLLARS and CENTS	LF	1,508.000	39
	360	6054		CONC PVMT (CONT REINF-CRCP) (HES) (9") DOLLARS and CENTS	SY	1,101.000	40
	400	6001		STRUCT EXCAV DOLLARS and CENTS	CY	944.000	41
	400	6005		CEM STABIL BKFL DOLLARS and CENTS	CY	547.000	42
	402	6001		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	13,533.000	43
	403	6001		TEMPORARY SPL SHORING DOLLARS and CENTS	SF	31,278.000	44
	416	6004		DRILL SHAFT (36 IN) DOLLARS and CENTS	LF	1,153.000	45
	416	6029		DRILL SHAFT (RDWY ILL POLE) (30 IN) DOLLARS and CENTS	LF	426.000	46

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	416	6031		DRILL SHAFT (TRF SIG POLE) (30 IN) DOLLARS and CENTS	LF	23.000	47
	416	6032		DRILL SHAFT (TRF SIG POLE) (36 IN) DOLLARS and CENTS	LF	278.000	48
	416	6034		DRILL SHAFT (TRF SIG POLE) (48 IN) DOLLARS and CENTS	LF	44.000	49
	420	6007		CL A CONC (FLUME) DOLLARS and CENTS	CY	3.000	50
	420	6019		CL C CONC (ABUT)(EXTEND) DOLLARS and CENTS	CY	116.600	51
	420	6029		CL C CONC (CAP) DOLLARS and CENTS	CY	133.200	52
	420	6037		CL C CONC (COLUMN) DOLLARS and CENTS	CY	174.400	53
	420	6049		CL C CONC (CRASHWALL) DOLLARS and CENTS	CY	109.000	54
	422	6003		REINF CONC SLAB (EXTEND SLAB) DOLLARS and CENTS	SF	33,268.000	55
	422	6011		BRIDGE MEDIAN DOLLARS and CENTS	SF	9,920.000	56
	422	6035		APPROACH SLAB (EXTEND) DOLLARS and CENTS	CY	288.500	57
	423	6001		RETAINING WALL (MSE) DOLLARS and CENTS	SF	11,717.000	58

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	423	6003		RETAINING WALL (TEMP WALL) DOLLARS and CENTS	SF	2,965.000	59
	423	6005		RETAINING WALL (SPREAD FOOTING) DOLLARS and CENTS	SF	1,849.000	60
	423	6015		RETAINING WALL (SPECIAL) DOLLARS and CENTS	SF	234.000	61
	425	6036		PRESTR CONC GIRDER (TX34) DOLLARS and CENTS	LF	4,312.370	62
	432	6001		RIPRAP (CONC)(4 IN) DOLLARS and CENTS	CY	17.000	63
	432	6002		RIPRAP (CONC)(5 IN) DOLLARS and CENTS	CY	2,210.000	64
	432	6004		RIPRAP CONC (8 IN) DOLLARS and CENTS	CY	148.000	65
	432	6008		RIPRAP (CONC)(CL B)(RR8&RR9) DOLLARS and CENTS	CY	373.000	66
	432	6033		RIPRAP (STONE PROTECTION)(18 IN) DOLLARS and CENTS	CY	57.000	67
	432	6045		RIPRAP (MOW STRIP)(4 IN) DOLLARS and CENTS	CY	36.000	68
	438	6002		CLEANING AND SEALING EXIST JOINTS(CL3) DOLLARS and CENTS	LF	268.000	69
	438	6006		CLEANING AND SEALING JOINTS (CL 3) DOLLARS and CENTS	LF	248.000	70

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	438	6009		CLEANING EXISTING JOINTS DOLLARS and CENTS	LF	134.000	71
	450	6030		RAIL (TY C221) DOLLARS and CENTS	LF	1,306.000	72
	450	6048		RAIL (HANDRAIL)(TY B) DOLLARS and CENTS	LF	540.000	73
	450	6052		RAIL (HANDRAIL)(TY F) DOLLARS and CENTS	LF	7,450.000	74
	450	6097		RAIL (TY T222) DOLLARS and CENTS	LF	1,524.700	75
	454	6008		HEADER TYPE EXPANSION JOINT DOLLARS and CENTS	CF	19.000	76
	454	6009		JOINT SEALANT DOLLARS and CENTS	LF	134.000	77
	462	6004	002	CONC BOX CULV (4 FT X 3 FT) DOLLARS and CENTS	LF	110.000	78
	464	6003	001	RC PIPE (CL III)(18 IN) DOLLARS and CENTS	LF	340.000	79
	464	6005	001	RC PIPE (CL III)(24 IN) DOLLARS and CENTS	LF	20,120.000	80
	464	6007	001	RC PIPE (CL III)(30 IN) DOLLARS and CENTS	LF	1,156.000	81
	464	6008	001	RC PIPE (CL III)(36 IN) DOLLARS and CENTS	LF	53.000	82

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	464	6009	001	RC PIPE (CL III)(42 IN) DOLLARS and CENTS	LF	31.000	83
	464	6017	001	RC PIPE (CL IV)(18 IN) DOLLARS and CENTS	LF	430.000	84
	464	6018	001	RC PIPE (CL IV)(24 IN) DOLLARS and CENTS	LF	784.000	85
	464	6020	001	RC PIPE (CL IV)(36 IN) DOLLARS and CENTS	LF	186.000	86
	464	6030	001	RC PIPE (ARCH)(CL III)(DES 1) DOLLARS and CENTS	LF	445.000	87
	465	6002	001	MANH (COMPL)(PRM)(48IN) DOLLARS and CENTS	EA	14.000	88
	465	6006	001	JCTBOX(COMPL)(PJB)(4FTX4FT) DOLLARS and CENTS	EA	1.000	89
	465	6021	001	INLET (COMPL)(PCO)(5FT)(NONE) DOLLARS and CENTS	EA	34.000	90
	465	6023	001	INLET (COMPL)(PCO)(5FT)(RIGHT) DOLLARS and CENTS	EA	72.000	91
	465	6024	001	INLET (COMPL)(PCO)(5FT)(BOTH) DOLLARS and CENTS	EA	33.000	92
	465	6149	001	INLET (COMPL)(PAZD)(SL)(3FTX3FT) DOLLARS and CENTS	EA	3.000	93
	465	6153	001	INLET (COMPL)(PAZD)(RC)(4FTX4FT) DOLLARS and CENTS	EA	2.000	94

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	465	6256	001	INLET(COMPL)(CURB)(SPL) DOLLARS and CENTS	EA	1.000	95
	465	6488	001	INLET (COMPL)(RWF)(FTW) DOLLARS and CENTS	EA	1.000	96
	465	6558	001	INL(CMP)(PAZD-CZ)(FG)(3FTX3FT-3FTX3FT) DOLLARS and CENTS	EA	3.000	97
	466	6020		HEADWALL (CH - FW - 15) (DIA= 24 IN) DOLLARS and CENTS	EA	1.000	98
	466	6040		HEADWALL (CH - FW - 30) (DIA= 42 IN) DOLLARS and CENTS	EA	1.000	99
	466	6099		HEADWALL (CH - PW - 0) (DIA= 30 IN) DOLLARS and CENTS	EA	1.000	100
	466	6134		HEADWALL (CH - PW - S) (DIA= 36 IN) DOLLARS and CENTS	EA	1.000	101
	466	6167		WINGWALL (FW - S) (HW=6 FT) DOLLARS and CENTS	EA	2.000	102
	466	6179		WINGWALL (PW - 1) (HW=4 FT) DOLLARS and CENTS	EA	1.000	103
	466	6182		WINGWALL (PW - 1) (HW=7 FT) DOLLARS and CENTS	EA	1.000	104
	467	6363		SET (TY II) (18 IN) (RCP) (6: 1) (P) DOLLARS and CENTS	EA	4.000	105
	467	6364		SET (TY II) (18 IN) (RCP) (8: 1) (C) DOLLARS and CENTS	EA	1.000	106

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	467	6388		SET (TY II) (24 IN) (RCP) (3: 1) (C) DOLLARS and CENTS	EA	2.000	107
	467	6390		SET (TY II) (24 IN) (RCP) (4: 1) (C) DOLLARS and CENTS	EA	20.000	108
	467	6391		SET (TY II) (24 IN) (RCP) (4: 1) (P) DOLLARS and CENTS	EA	4.000	109
	467	6395		SET (TY II) (24 IN) (RCP) (6: 1) (P) DOLLARS and CENTS	EA	5.000	110
	467	6417		SET (TY II) (30 IN) (RCP) (3: 1) (C) DOLLARS and CENTS	EA	2.000	111
	467	6422		SET (TY II) (30 IN) (RCP) (6: 1) (C) DOLLARS and CENTS	EA	1.000	112
	467	6450		SET (TY II) (36 IN) (RCP) (4: 1) (C) DOLLARS and CENTS	EA	3.000	113
	467	6463		SET (TY II) (42 IN) (RCP) (4: 1) (C) DOLLARS and CENTS	EA	2.000	114
	467	6519		SET (TY II) (DES 1) (RCP) (6: 1) (P) DOLLARS and CENTS	EA	26.000	115
	479	6004		ADJUSTING MANHOLES (SANITARY) DOLLARS and CENTS	EA	1.000	116
	480	6001		CLEAN EXIST CULVERTS DOLLARS and CENTS	EA	7.000	117
	496	6002		REMOV STR (INLET) DOLLARS and CENTS	EA	13.000	118

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	496	6004		REMOV STR (SET) DOLLARS and CENTS	EA	66.000	119
	496	6006		REMOV STR (HEADWALL) DOLLARS and CENTS	EA	21.000	120
	496	6007		REMOV STR (PIPE) DOLLARS and CENTS	LF	3,867.000	121
	500	6001		MOBILIZATION DOLLARS and CENTS	LS	1.000	122
	502	6001	008	BARRICADES, SIGNS AND TRAFFIC HAN- DLING DOLLARS and CENTS	MO	32.000	123
	502	6025	008	BARR, SIGNS, TRAFFIC HANDLING DOLLARS and CENTS	EA	15.000	124
	506	6002	005	ROCK FILTER DAMS (INSTALL) (TY 2) DOLLARS and CENTS	LF	136.000	125
	506	6011	005	ROCK FILTER DAMS (REMOVE) DOLLARS and CENTS	LF	136.000	126
	506	6021	005	CONSTRUCTION EXITS (INSTALL) (TY 2) DOLLARS and CENTS	SY	1,800.000	127
	506	6024	005	CONSTRUCTION EXITS (REMOVE) DOLLARS and CENTS	SY	1,800.000	128
	506	6037	005	SANDBAGS FOR EROSION CONTROL (12") DOLLARS and CENTS	LF	2,150.000	129
	506	6038	005	TEMP SEDMT CONT FENCE (INSTALL) DOLLARS and CENTS	LF	14,440.000	130

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	506	6039	005	TEMP SEDMT CONT FENCE (REMOVE) DOLLARS and CENTS	LF	14,440.000	131
	508	6001		CONSTRUCTING DETOURS DOLLARS and CENTS	SY	37,905.000	132
	512	6021		PORT CTB (DES SOURCE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	17,300.000	133
	512	6022		PORT CTB (DES SOURCE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	1,140.000	134
	512	6033		PORT CTB (MOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	42,320.000	135
	512	6034		PORT CTB (MOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	3,080.000	136
	512	6045		PORT CTB (STKPL)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	17,300.000	137
	512	6046		PORT CTB (STKPL)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	1,140.000	138
	528	6003		COLORED TEXTURED CONC (8") DOLLARS and CENTS	SY	378.000	139
	529	6002		CONC CURB (TY II) DOLLARS and CENTS	LF	126.000	140
	529	6008		CONC CURB & GUTTER (TY II) DOLLARS and CENTS	LF	61,373.000	141
	530	6005		DRIVEWAYS (ACP) DOLLARS and CENTS	SY	2,689.000	142

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	530	6017		DRIVEWAYS (CONC) (HES) DOLLARS and CENTS	SY	1,809.000	143
	531	6002		CONC SIDEWALKS (5") DOLLARS and CENTS	SY	26,576.000	144
	531	6004		CURB RAMPS (TY 1) DOLLARS and CENTS	EA	5.000	145
	531	6005		CURB RAMPS (TY 2) DOLLARS and CENTS	EA	8.000	146
	531	6010		CURB RAMPS (TY 7) DOLLARS and CENTS	EA	30.000	147
	531	6015		CURB RAMPS (TY 20) DOLLARS and CENTS	EA	2.000	148
	531	6016		CURB RAMPS (TY 21) DOLLARS and CENTS	EA	3.000	149
	531	6017		CURB RAMPS (TY 22) DOLLARS and CENTS	EA	12.000	150
	540	6001	001	MTL W-BEAM GD FEN (TIM POST) DOLLARS and CENTS	LF	1,450.000	151
	540	6006	001	MTL BEAM GD FEN TRANS (THRIE-BEAM) DOLLARS and CENTS	EA	6.000	152
	542	6001		REMOVE METAL BEAM GUARD FENCE DOLLARS and CENTS	LF	4,526.000	153
	542	6004		RM MTL BM GD FENCE TRANS (THRIE- BEAM) DOLLARS and CENTS	EA	14.000	154

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	544	6001		GUARDRAIL END TREATMENT (INSTALL) DOLLARS and CENTS	EA	6.000	155
	544	6003		GUARDRAIL END TREATMENT (REMOVE) DOLLARS and CENTS	EA	18.000	156
	550	6008		CHAIN LINK FENCE (INSTALL) (8') DOLLARS and CENTS	LF	160.000	157
	552	6004		WIRE FENCE (TY D) DOLLARS and CENTS	LF	300.000	158
	552	6005		GATE (TY 1) DOLLARS and CENTS	EA	2.000	159
	552	6006		GATE (TY 2) DOLLARS and CENTS	EA	2.000	160
	552	6007		GATE (TY 3) DOLLARS and CENTS	EA	2.000	161
	552	6008		WIRE FENCE (WATER GAP) DOLLARS and CENTS	LF	200.000	162
	552	6009		GATE (SPECIAL) DOLLARS and CENTS	EA	1.000	163
	552	6010		WIRE FENCE (WATER GAP) (SPECIAL) DOLLARS and CENTS	LF	200.000	164
	560	6007		MAILBOX INSTALL-S (WC-POST) TY 3 DOLLARS and CENTS	EA	14.000	165
	560	6008		MAILBOX INSTALL-D (WC-POST) TY 3 DOLLARS and CENTS	EA	1.000	166

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	560	6011		MAILBOX INSTALL-S (TWW-POST) TY 4 DOLLARS and CENTS	EA	3.000	167
	560	6013		MAILBOX INSTALL-M (TWW-POST) TY 4 DOLLARS and CENTS	EA	1.000	168
	610	6104		IN RD IL (U/P) (TY 1) (150W EQ) LED DOLLARS and CENTS	EA	4.000	169
	610	6198		IN RD IL (TY SA) 40B-8 (250W EQ) LED DOLLARS and CENTS	EA	8.000	170
	610	6214		IN RD IL (TY SA) 40T-8 (250W EQ) LED DOLLARS and CENTS	EA	48.000	171
	618	6023		CONDT (PVC) (SCH 40) (2") DOLLARS and CENTS	LF	9,205.000	172
	618	6029		CONDT (PVC) (SCH 40) (3") DOLLARS and CENTS	LF	619.000	173
	618	6047		CONDT (PVC) (SCH 80) (2") (BORE) DOLLARS and CENTS	LF	5,900.000	174
	618	6054		CONDT (PVC) (SCH 80) (3") (BORE) DOLLARS and CENTS	LF	5,166.000	175
	618	6062		CONDT (RM) (3/4") DOLLARS and CENTS	LF	1,850.000	176
	620	6007		ELEC CONDR (NO.8) BARE DOLLARS and CENTS	LF	23,818.000	177
	620	6008		ELEC CONDR (NO.8) INSULATED DOLLARS and CENTS	LF	42,748.000	178

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	620	6009		ELEC CONDR (NO.6) BARE DOLLARS and CENTS	LF	721.000	179
	620	6010		ELEC CONDR (NO.6) INSULATED DOLLARS and CENTS	LF	1,441.000	180
	624	6002		GROUND BOX TY A (122311)W/APRON DOLLARS and CENTS	EA	31.000	181
	624	6010		GROUND BOX TY D (162922)W/APRON DOLLARS and CENTS	EA	35.000	182
	628	6045		ELC SRV TY A 240/480 060(NS)SS(E)SP(O) DOLLARS and CENTS	EA	8.000	183
	628	6152		ELC SRV TY D 120/240 060(NS)SS(N)SP(O) DOLLARS and CENTS	EA	6.000	184
	636	6001	001	ALUMINUM SIGNS (TY A) DOLLARS and CENTS	SF	38.300	185
	644	6001		IN SM RD SN SUP&AM TY10BWG(1)SA(P) DOLLARS and CENTS	EA	15.000	186
	644	6004		IN SM RD SN SUP&AM TY10BWG(1)SA(T) DOLLARS and CENTS	EA	10.000	187
	644	6033		IN SM RD SN SUP&AM TYS80(1)SA(U) DOLLARS and CENTS	EA	2.000	188
	644	6064		IN BRIDGE MNT CLEARANCE SGN ASSM(TY N) DOLLARS and CENTS	EA	2.000	189
	644	6068		RELOCATE SM RD SN SUP&AM TY 10BWG DOLLARS and CENTS	EA	67.000	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	6070		RELOCATE SM RD SN SUP&AM TY S80 DOLLARS and CENTS	EA	7.000	191
	644	6076		REMOVE SM RD SN SUP&AM DOLLARS and CENTS	EA	19.000	192
	658	6047		INSTL OM ASSM (OM-2Y)(WC)GND DOLLARS and CENTS	EA	4.000	193
	658	6061		INSTL DEL ASSM (D-SW)SZ 1(BRF)GF2 DOLLARS and CENTS	EA	16.000	194
	658	6101		INSTL OM ASSM (OM-2Z)(WFLX)SRF)SRF DOLLARS and CENTS	EA	7.000	195
	662	6001		WK ZN PAV MRK NON-REMOV (W)4"(BRK) DOLLARS and CENTS	LF	390.000	196
	662	6004		WK ZN PAV MRK NON-REMOV (W)4"(SLD) DOLLARS and CENTS	LF	43,474.000	197
	662	6012		WK ZN PAV MRK NON-REMOV (W)8"(SLD) DOLLARS and CENTS	LF	4,291.000	198
	662	6016		WK ZN PAV MRK NON-REMOV (W)24"(SLD) DOLLARS and CENTS	LF	666.000	199
	662	6034		WK ZN PAV MRK NON-REMOV (Y)4"(SLD) DOLLARS and CENTS	LF	61,223.000	200
	662	6063		WK ZN PAV MRK REMOV (W)4"(SLD) DOLLARS and CENTS	LF	65,410.000	201
	662	6065		WK ZN PAV MRK REMOV (W)6"(DOT) DOLLARS and CENTS	LF	350.000	202

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	662	6071		WK ZN PAV MRK REMOV (W)8"(SLD) DOLLARS and CENTS	LF	4,883.000	203
	662	6075		WK ZN PAV MRK REMOV (W)24"(SLD) DOLLARS and CENTS	LF	1,295.000	204
	662	6080		WK ZN PAV MRK REMOV (W)(ARROW) DOLLARS and CENTS	EA	51.000	205
	662	6081		WK ZN PAV MRK REMOV (W)(DBL ARROW) DOLLARS and CENTS	EA	1.000	206
	662	6095		WK ZN PAV MRK REMOV (Y)4"(SLD) DOLLARS and CENTS	LF	59,827.000	207
	662	6109		WK ZN PAV MRK SHT TERM (TAB)TY W DOLLARS and CENTS	EA	600.000	208
	662	6111		WK ZN PAV MRK SHT TERM (TAB)TY Y-2 DOLLARS and CENTS	EA	300.000	209
	666	6030	007	REFL PAV MRK TY I (W)8"(DOT)(100MIL) DOLLARS and CENTS	LF	2,254.000	210
	666	6036	007	REFL PAV MRK TY I (W)8"(SLD)(100MIL) DOLLARS and CENTS	LF	11,532.000	211
	666	6048	007	REFL PAV MRK TY I (W)24"(SLD)(100MIL) DOLLARS and CENTS	LF	3,602.000	212
	666	6102	007	REF PAV MRK TY I(W)36"(YLD TRI)(100MIL) DOLLARS and CENTS	EA	82.000	213
	666	6105	007	REFL PAV MRK TY I (W)(BIKE ARW)(100MIL) DOLLARS and CENTS	EA	1.000	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	6111	007	REFL PAV MRK TY I(W)(BIKE SYML)(100MIL) DOLLARS and CENTS	EA	1.000	215
	666	6138	007	REFL PAV MRK TY I (Y)8"(SLD)(100MIL) DOLLARS and CENTS	LF	328.000	216
	666	6300	007	RE PM W/RET REQ TY I (W)4"(BRK)(100MIL) DOLLARS and CENTS	LF	7,686.000	217
	666	6303	007	RE PM W/RET REQ TY I (W)4"(SLD)(100MIL) DOLLARS and CENTS	LF	4,451.000	218
	666	6312	007	RE PM W/RET REQ TY I (Y)4"(BRK)(100MIL) DOLLARS and CENTS	LF	368.000	219
	666	6315	007	RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL) DOLLARS and CENTS	LF	8,084.000	220
	668	6077		PREFAB PAV MRK TY C (W) (ARROW) DOLLARS and CENTS	EA	56.000	221
	668	6085		PREFAB PAV MRK TY C (W) (WORD) DOLLARS and CENTS	EA	32.000	222
	672	6009		REFL PAV MRKR TY II-A-A DOLLARS and CENTS	EA	181.000	223
	672	6010		REFL PAV MRKR TY II-C-R DOLLARS and CENTS	EA	423.000	224
	677	6008		ELIM EXT PAV MRK & MRKS (ARROW) DOLLARS and CENTS	EA	2.000	225
	677	6012		ELIM EXT PAV MRK & MRKS (WORD) DOLLARS and CENTS	EA	1.000	226

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	680	6002	006	INSTALL HWY TRF SIG (ISOLATED) DOLLARS and CENTS	EA	6.000	227
	680	6004	006	REMOVING TRAFFIC SIGNALS DOLLARS and CENTS	EA	6.000	228
	681	6001		TEMP TRAF SIGNALS DOLLARS and CENTS	EA	6.000	229
	682	6001		VEH SIG SEC (12")LED(GRN) DOLLARS and CENTS	EA	48.000	230
	682	6002		VEH SIG SEC (12")LED(GRN ARW) DOLLARS and CENTS	EA	35.000	231
	682	6003		VEH SIG SEC (12")LED(YEL) DOLLARS and CENTS	EA	48.000	232
	682	6004		VEH SIG SEC (12")LED(YEL ARW) DOLLARS and CENTS	EA	43.000	233
	682	6005		VEH SIG SEC (12")LED(RED) DOLLARS and CENTS	EA	48.000	234
	682	6006		VEH SIG SEC (12")LED(RED ARW) DOLLARS and CENTS	EA	24.000	235
	682	6018		PED SIG SEC (LED)(COUNTDOWN) DOLLARS and CENTS	EA	50.000	236
	682	6054		BACKPLATE W/REF BRDR(3 SEC)(VENT)ALUM DOLLARS and CENTS	EA	52.000	237
	682	6055		BACKPLATE W/REF BRDR(4 SEC)(VENT)ALUM DOLLARS and CENTS	EA	20.000	238

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	684	6012		TRF SIG CBL (TY A)(12 AWG)(7 CONDR) DOLLARS and CENTS	LF	17,948.000	239
	684	6021		TRF SIG CBL (TY A)(12 AWG)(16 CONDR) DOLLARS and CENTS	LF	5,548.000	240
	685	6002		RELOCATE RDSB FLASH BEACON ASSEM- BLY DOLLARS and CENTS	EA	2.000	241
	686	6035		INS TRF SIG PL AM(S)1 ARM(32')LUM DOLLARS and CENTS	EA	2.000	242
	686	6039		INS TRF SIG PL AM(S)1 ARM(36')LUM DOLLARS and CENTS	EA	4.000	243
	686	6043		INS TRF SIG PL AM(S)1 ARM(40')LUM DOLLARS and CENTS	EA	3.000	244
	686	6047		INS TRF SIG PL AM(S)1 ARM(44')LUM DOLLARS and CENTS	EA	7.000	245
	686	6051		INS TRF SIG PL AM(S)1 ARM(48')LUM DOLLARS and CENTS	EA	7.000	246
	686	6059		INS TRF SIG PL AM(S)1 ARM(55')LUM DOLLARS and CENTS	EA	2.000	247
	687	6001		PED POLE ASSEMBLY DOLLARS and CENTS	EA	28.000	248
	688	6001		PED DETECT PUSH BUTTON (APS) DOLLARS and CENTS	EA	49.000	249
	688	6003		PED DETECTOR CONTROLLER UNIT DOLLARS and CENTS	EA	6.000	250

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	730	6107		FULL - WIDTH MOWING DOLLARS and CENTS	CYC	5.000	251
	734	6002		LITTER REMOVAL DOLLARS and CENTS	CYC	10.000	252
	738	6003		CLEANING / SWEEPING (OUTSIDE MAIN LANE) DOLLARS and CENTS	CYC	32.000	253
	3002	6001		MEMBRANE UNDERSEAL DOLLARS and CENTS	GAL	1,343.000	254
	3076	6001		D-GR HMA TY-B PG64-22 DOLLARS and CENTS	TON	36,370.000	255
	3076	6023		D-GR HMA TY-C PG70-22 DOLLARS and CENTS	TON	12,469.000	256
	3084	6001		BONDING COURSE DOLLARS and CENTS	GAL	26,451.000	257
	4002	6001		REPLACE ELASTOMERIC BEARING PADS DOLLARS and CENTS	EA	24.000	258
	6185	6002	002	TMA (STATIONARY) DOLLARS and CENTS	DAY	52.000	259
	6185	6003	002	TMA (MOBILE OPERATION) DOLLARS and CENTS	HR	328.000	260
	6292	6003		RVDS(PRESENCE AND ADVANCE DET) DOLLARS and CENTS	EA	25.000	261

BASIS OF ESTIMATE TABLES

Table 1: Basis of Estimate for Erosion Control Items				
Item	Description	Rate	Basis	Quantities
168	VEGETATIVE WATERING			
	(3 APPLICATIONS - PERM)	13,100 GAL/AC/APP	26.5 AC	1,042 MG
	(3 APPLICATIONS - TEMP)	13,100 GAL/AC/APP	14.25 AC	560 MG

Table 3: Basis of Estimate for Base Work				
Item	Description	Rate	Basis	Quantities
*216	PROOF ROLLING			
	PROOF ROLLING	8HR /ROADBED-MILE	3 ROADBED-MILE	24 HR
247	FLEXIBLE BASE			
	(TY D GR 1-2 FNAL POS)	138 LB/CF	905,472 CF	33,536CY *62,478 TON
310	PRIME COAT			
	PRIME COAT (MC-30 OR AE-P)	0.20 GAL / SY	198,380 SY	39,676 GAL

* FOR CONTRACTOR'S INFORMATION ONLY

Table 4: Basis of Estimate for Seal Coats				
Item	Description	Rate	Basis	Quantities
316	ASPH (CRS-2P)	0.45 GAL / SY	132,253 SY	59,514 GAL
	AGGR (TY-D GR-4 OR TY-L GR-4)	1 CY / 135 SY	132,253 SY	980 CY

(3) ESTIMATED @ 0.17 GAL / SY RESIDUAL.

Table 6: Basis of Estimate for Asphalt Pavements				
Item	Description	Rate	Basis	Quantities
346	STONE-MATRIX ASPHALT (SMA)			
	STONE-MTRX-ASPH SMA-C SAC-A PG76-22	220 LB / SY	24,273 SY	2,670 TON
3076	DENSE-GRADED HOT MIX ASPHALT			
	TY-B PG 64-22	550 LB / SY	132,253 SY	36,370 TON
	TY-C PG 70-22	220 LB / SY	113,355 SY	12,469 TON

Table 7: Basis of Estimate for Roadside Maintenance				
Item	Description	Rate	Basis	Quantities
730	ROADSIDE MOWING	20 AC / CYCLE	2 CYC / YR	40 AC
734	LITTER REMOVAL	1 CYC / 3 MONTH	32 Mo	10 CYC
738	CLEANING AND SWEEPING HIGHWAYS			
	(OUTSIDE MAINLANE)	1 CYC / 1 MONTH	32 Mo	32 CYC

Table 8: Basis of Estimate for Interlayer Material				
Item	Description	Rate	Basis	Quantities
3084	BONDING COURSE	0.20 GAL / SY	132,255 SY	26,451 GAL

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 40 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).

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.

Contractor questions on this project are to be emailed to the Waco District at the following address:

Bill Compton - Wacoprebid@txdot.gov, 254-867-2707, 100 S. Loop Dr., Waco, TX

Carmen Chau - Wacoprebid@txdot.gov, 254-867-2794, 100 S. Loop Dr., Waco, TX

Or Via phone or in person to the following individual(s):

Area Engineer's: Stephen Kasberg 254-939-3778

Assistant Area Engineer's: Michael Yate 254-939-3778

All contractor questions will be reviewed by the Area Engineer or Assistant Area Engineer. Once a response is developed, it will be posted to TxDOT's Public FTP at the following Address:

<https://ftp.dot.state.tx.us/pub/txdot-info/Pre-Letting%20Responses/>

All questions submitted that generate a response will be posted through this site. The site is organized by District, Project Type (Construction or Maintenance), Letting Date, CCSJ/Project Name.

Paper copies of cross-sections may be produced by using the provided .pdf file located on the above FTP Website 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).

GENERAL NOTES

The following standard detail sheets have been modified:

None

ITEM 5: CONTROL OF THE WORK

Submit all fabrication and shop drawings per TxDOT's online shop drawing submittal system and copy the Area Engineer on the email submittal, unless otherwise directed.

Place survey monuments, provided by the department, at points indicated and as detailed in the plans or as directed. Furnish surface coordinates and the elevation of the set monument and an azimuth from the monument to some prominent physical feature, preferably another survey monument on the project. This work will not be paid for directly, but will be considered subsidiary to the various bid items.

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 (254)867-2808 for locates a minimum of 48 hours in advance of excavation. For irrigation systems, call TxDOT Landscape Office (254)867-2726 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.

BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY**Protection of Fiber Optic Cable Systems**

The State and/or its Contractor must, five (5) working days before any work is performed, call the railroad's communications network control center at 1-800-533-2891 (a 24-hour number) to assist in determining if fiber optic communications, control systems, or other type of cable systems are buried in the general locations where work is to be performed. In the event such cable is present, the State and/or its Contractor must then call the owner of the cable line to determine its exact location. The Contractor will indemnify and hold harmless the railroad against any cost or claims arising out of damage to any fiber optic communications, control systems or other types of cable systems, but only to the extent such damage is caused by negligence of the Contractor.

Work in this contract is required to be done on railroad property. Cooperate with the railroads and comply with all of their requirements including obtaining any training they require before performing work on railroad property.

When a precast or cast-in-place concrete element is included in the plans, a precast concrete alternate may be submitted in accordance with "Standard Operating Procedure for Alternate Precast Proposal Submission" found online at

<https://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/publications/bridge.html#design>.

Acceptance or denial of an alternate is at the sole discretion of the Engineer. Impacts to the project schedule and any additional costs resulting from the use of alternates are the sole responsibility of the Contractor.

ITEM 6: CONTROL OF MATERIALS

References to manufacturer's trade name or catalog numbers are for the purpose of identification only and the contractor will be permitted to furnish like materials of other manufacturers provided they are of equal quality and comply with specifications for this project.

This project has structure(s?) with surface coatings which contain hazardous constituent(s?) which is/are asbestos in joint sealing compound. Contractor is responsible for the health and safety of his employees and compliance with all OSHA standards and regulations.

ITEM 7: LEGAL RELATIONS AND RESPONSIBILITIES

No significant traffic generator events identified.

If utilizing private property for waste disposal sites, field office sites, equipment storage sites or for any other purpose involved with this project, provide to the Engineer written proof of the property owner's approval of the use of this property. This proof may be in the form of a letter or agreement signed by the property owner or other documents acceptable to the Engineer.

Personal vehicles of the contractor's employees will not be parked within the right of way at any time including any section closed to public traffic, unless the vehicle is being utilized for construction procedures. However, the contractor's employees may park on the right of way at the sites where the contractor has his office, equipment and materials storage yard.

The contractor is alerted to the possible presence of swallows under the existing bridges or culverts. Because the migratory bird treaty act prohibits harm to swallows, their eggs or their nestlings, the contractor will not begin potentially disturbing activities on or near the bridge until the birds have abandoned any occupied nests (approximately September 1). Active nests may not be removed regardless of the date.

Prior to the swallows returning to the nests (approximately March 1), abandoned nests will be removed from the bridge. The contractor will prevent the establishment of new nests on any portion of the structure. Methods for preventing the establishment of new nests must be approved by the project Engineer. Examples of acceptable nest prevention methods are bird-deterrent netting and bird-repelling sprays and/or gels to be applied to the structure. This work will not be paid for directly, but will be subsidiary to the various bid items.

The Contractor will submit detailed site-specific plans for work in each "water of the United States" designated on the EPIC sheet. These plans must be approved by the TxDOT Engineer prior to starting any work in these areas. The plans must also describe facilities and work activities adjacent the Ordinary High-Water Marks. The plan must show actual dimensions and materials for:

- Proposed construction roads and work areas leading to or in close proximity to the Ordinary High-Water Marks

- Temporary material or equipment storage areas in close proximity to the Ordinary High-Water Marks
- Locations of proposed sediment and erosion control devices
- Identification of construction equipment and construction techniques to accomplish the work

Once this drawing and supporting information is reviewed and approved by TxDOT, all construction workers should be made aware of the limits designated on the drawings by the Contractor's supervision. Work in all waters of the US will be limited to the minimum necessary required to construct the bridge, culvert or roadway fills. Work will also include all activities needed for bridge and culvert demolitions. Working or disturbing soil in the stream channel outside the limits of the work plan will not be allowed. Orange fencing will be provided and maintained to establish the TxDOT approved boundaries in which work may be conducted between the Ordinary High-Water Marks. Orange fencing will not be paid for but will be considered subsidiary to Item 502, "Barricades, Signs and Traffic Handling".

ITEM 8: PROSECUTION AND PROGRESS

This Project will be a Standard Workweek in accordance with Article 8.3.1.4.

Nighttime work is allowed in accordance with Article 8.3.3.

Meet weekly or at intervals as agreed upon with the engineer to notify him or her of planned work for the upcoming 3-week period.

Provide the engineer with a daily work schedule of planned activities including anticipated quantities of materials (CY of each concrete placement, tons of HMAC to be placed, etc.).

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 schedule update is not submitted.

Submit the schedule in both PDF and in a base software electronic file format acceptable to TxDOT to allow for import and analysis into TxDOT's current scheduling software.

For this project, provide a Project Schedule Summary Report (PSSR).

This project is deemed to be a significant project. Additional Project Specific Liquidated Damages of \$2,590 per day will be added to the project per SP 000-658.

ITEM 100: PREPARING RIGHT OF WAY

The limits of preparing right of way will be measured at the following locations:

From Sta. 852+18.00 to Sta. 1015+00.00

along the centerline of construction.

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

ITEM 104: REMOVING CONCRETE

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

ITEMS 105, 251, 305, and 354: REMOVING TREATED AND UNTREATED BASE AND ASPHALT PAVEMENT, REWORKING BASE COURSES, SALVAGING, HAULING AND STOCKPILING RECLAIMABLE ASPHALT PAVEMENT, AND PLANING AND TEXTURING PAVEMENT

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.

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

Properly dispose of unsalvageable material at Contractor's expense.

Remove the loose material from the roadway before opening to traffic.

ITEM 110: EXCAVATION

In a cut section, when soils are encountered at subgrade depths that are unstable and are deemed unsuitable by the Engineer, undercut this material for a minimum depth of one (1.0) foot below the maximum depth as determined and replace with a material having a plasticity index less than 25 and a liquid limit of less than 50.

ITEMS 110 & 132: EXCAVATION & EMBANKMENT

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

In those cases where fixed features require, the governing slopes indicated herein and on the cross sections may be varied between the limits and to the extent determined.

ITEM 132: EMBANKMENT

The Ty C2 embankment material for this project must meet the following requirements:

Properties	Test Method	Specification Limits
LIQUID LIMITS	TEX-104-E	≤ 45
PLASTICITY INDEX (PI)	TEX-106-E	10 ≤ PI ≤ 20

BAR LINEAR SHRINKAGE	TEX-107-E	≥ 5
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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.

Type C2 Embankment will consist of suitable earthen material such as rock, loam, clay or other materials that that will form a stable embankment and meet the physical requirements listed herein. Shale will not be allowed

ITEM 162: SODDING FOR EROSION CONTROL

Rolled sod (Bermuda grass) will be cynodon dactylon Bermuda grass cut to a minimum depth (thickness) of one (1) inch. The sod will have the following characteristics: (1) uniformity; (2) good color; (3) free of weeds, weed seed, insects, and disease; (4) healthy, virile root system of dense, thickly matted roots throughout the soil of the sod; (5) adequate moisture to prevent drying out by exposure to the air and sun to the extent as to damage sod.

Prior to laying the block sod, blade the area and rake smooth. Refer to the plans and details for areas to receive the sod. Remove one (1) in. of soil along paved edges and curb lines before laying sod and dress the slope to match all exposed edges after placing the sod.

ITEM 164: SEEDING FOR EROSION CONTROL

Temporary seeding mixtures (cool and warm) will also include three (3) lbs of Bermuda grass seed per acre, with all seeds being planted concurrently.

Contractor will mow or disc wheat and or oats in spring prior to vegetation going to seed.

Permanent seed mixes for both urban and rural projects including sand or clay soils in the Waco District will be bid and installed to include a minimum of one & one-half (1.5) pounds per acre Green Sprangletop seed and four (4) pounds per acre Bermudagrass seed, with other seed types also being included and quantities remaining unchanged.

ITEMtem 169: SOIL RETENTION BLANKETS:

Hydraulically apply Flexterra FGM, CocoFlex ET-FGM, Earth Guard or other spray applied soil retention as approved by the Engineer for erosion control on the specified slopes or areas in the construction plan. Apply as required per manufacturer’s recommendations.

Use Tables under Item 164 to determine type of seeds to be used. Water for application, seeding, labor, equipment, tools, supplies, materials, fertilizer and incidentals will not be paid for directly but will be subsidiary to this Item.

ITEM 247: FLEXIBLE BASE

Construct uniform layer thickness of 6 inches, or less with the required density and moisture content.

Minimum PI is equal to three (3) for all grades, or a minimum Bar Linear Shrinkage of 2%.

RAP may not be incorporated into Flexbase Material

ITEM 310: PRIME COAT

When cutback asphalt is used, a minimum curing time of seven (7) days will be required before application of Item 316, "Seal Coat", unless otherwise approved in writing.

ITEM 316: SEAL COAT

Warm Season asphalt will be applied between May 1 and September 15 unless approved in writing.

Cool Season asphalt will be applied between September 15 and May 1 unless approved in writing.

No AC or Emulsion for surface treatment items will be placed between September 15 and May 1 unless approved in writing.

All trucks hauling materials to be paid for by truck measurement will be "struck off" prior to delivery to the project.

Unless otherwise approved, seal coat will not be exposed to traffic for more than 1 calendar day before application of HMAC..

	AC20-5TR, AC20-XP AC15-P	CRS-2P	RC-250
JANUARY			REQUIRES INTERMEDIATE COURSE TO BE PLACED
FEBRUARY			
MARCH		REFER TO STANDARD SPECIFICATIONS ITEM 316 FOR TEMPERATURE REQUIREMENTS	
APRIL			
MAY			
JUNE	REFER TO STANDARD SPECIFICATIONS ITEM 316 FOR TEMPERATURE REQUIREMENTS		
JULY			
AUGUST			
SEPTEMBER		REFER TO STANDARD SPECIFICATIONS ITEM 316 FOR TEMPERATURE REQUIREMENTS	
OCTOBER			
NOVEMBER			REQUIRES INTERMEDIATE COURSE TO BE PLACED
DECEMBER			

Do not begin rework or flexible base operations if a first course and intermediate surface treatment cannot be placed prior to October 31.

In addition to the temperature requirements of this Item, AC Asphalts used in Surface Treatments and Sealcoats must be placed between May 15 and August 31. Emulsions may be substituted for AC Asphalts outside this timeframe only with the approval of the Engineer.

ITEM 320: EQUIPMENT FOR ASPHALT CONCRETE PAVEMENT

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.

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

ITEM 346: STONE-MATRIX ASPHALT

RAP from Contractor owned sources may be used if the RAP is fractionated.

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

Maximum stripping of 0% is required.

No Recycled Asphalt Shingles (RAS) will be allowed.

ITEM 354: PLANING AND TEXTURING PAVEMENT

Patch pavement cut to excessive depth by equipment failure with an approved epoxy material. Re-plane patched area to an acceptable approved ride quality. Payment for these corrections is subsidiary to this item

ITEM 360: CONCRETE PAVEMENT

Use of multiple piece tiebars will be required in any areas where adjacent base construction will be completed in a separate phase exposing tie bars to potential damage during base construction. Provide chairs for multiple piece tiebars, threaded connectors or other adequate devices, used in concrete paving, or tie them to the pavement reinforcing steel.

Insertion of tie bars into plastic concrete will be allowed as part of slip form paving operation via methods approved by the Engineer.

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. Impact rotary gang drills may be used at the discretion of the Engineer if it can be demonstrated to not have an adverse impact on the final product.

Do not bend the tiebars

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.

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.

Pavement leave-outs are required on this project as necessary to provide for traffic at driveways and side streets as shown in the plans. The cost of providing these leave-outs, including the construction of a suitable crossover connection at each site, will not be paid for directly but will be 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.

Curb transition is paid for as Type ___II___ curb.

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

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

Provide Class HES concrete at the locations shown on the plans. Design Class HES to meet the requirements of Class P and minimum average compressive strength of _3200_ psi in _24_ hr.

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: EXCAVATION AND BACKFILL OF STRUCTURES

When placing concrete storm drain pipe on slopes of greater than 10 percent, provide cement stabilized backfill to a depth shown on the plans.

Aggregate for cement stabilized backfill will be coarse aggregates, GRADE 3, 4 or 5 and fine aggregate, as shown in Item 421, "Hydraulic Cement Concrete". The ratio of coarse aggregate to sand should not contain more than sixty percent (60%) sand unless otherwise approved. CLASS B bedding is required if rock is encountered.

ITEM 416: DRILLED SHAFT FOUNDATIONS

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

ITEM 420 CONCRETE SUBSTRUCTURES

Mass concrete is a plans quantity item.

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.

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

Mock-ups

Submit a written work plan to the Engineer including materials and construction methods that affect the quality of the concrete finish. Prior to construction of any cast-in-place concrete, construct mock up elements for bridge and overhead sign columns, retaining wall panels, and retaining wall copings and pilasters as indicated to simulate the material and methods intended for use and demonstrate the adequacy of the concrete surface.

Prior to mock-up construction, attend a pre-concrete forming and finishing conference at the jobsite. All project supervisory and lead worker personnel involved in the construction of cast in-place concrete are required to attend this conference. This conference will include discussion on the Contractor's plan for insuring that single concrete bridge structure elements placed in multiple placements are produced with identical concrete materials, without variations or changes in material amounts, and placed in a manner to provide a uniform color surface finish without variations between placements.

Mock-up construction is subsidiary to Item 420, "Concrete Substructures", and will not be paid for directly. The mock-up will include, at a minimum, at least 6-ft of column height. Construct the mock-ups using the proposed concrete mix, forming material, joint sealer (if used), form release agent, and all other construction procedures (including curing) listed in the work plan. Use the same surface finishes outlined in Item 427. Submit a written repair procedure with materials and methods used that is in accordance with the General Notes and Specification Data and Standard Specification Item 427. Apply this repair procedure to each mock-up for approval. Use this repair procedure for all "Surface Area I" concrete on the project, unless otherwise approved.

The finish quality of the mock-up concrete (including repairs) will have a pleasing and uniform appearance, free of color variations, as described above prior to construction of any columns or caps. A new mock-up may be necessary if the finish is not adequate or if other materials and procedures are intended for use or are changed during the course of construction. The mock-up will remain on the job and serve as a benchmark for satisfactory appearance.

BENT NUMBERING:

For bridges with four or more spans, number every third bent (counting the abutments) on the up-station and down-station faces of the outside column(s) at approximately the mid height of the column. For structures with three columns or less per bent, place numbers on column A. Where there are four or more columns per bent, place numbers on both outside columns. Bent numbers shall be as shown on the bridge layout.

Provide block numbers with a height of 6". Place numbers using appropriate die cut stencils and black paint. All materials, labor and incidentals associated with placing bent numbers are subsidiary to the various bid items.

For bridges with aesthetic treatments, the numbering will be incorporated into the aesthetics package.

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.

Reduce headwall heights, if necessary, to provide a maximum of three (3) inches projection above the roadway slope. No increase or decrease will be made in plan quantities of concrete or reinforcing steel for this work.

ITEM 422: CONCRETE SUPERSTRUCTURES

Provide Carpet Drag, burlap drag or broom finish for bridge deck, approach slabs and direct traffic culvert top slabs.

ITEM 423: RETAINING WALLS

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

<http://www.txdot.gov/business/resources/approved-systems/mse-wall.html>

For concrete block retaining walls, provide a system from one of the following approved suppliers:

<http://www.txdot.gov/business/resources/approved-systems/retaining-system.html>

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.

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. Unless otherwise shown on the plans, provide type DS backfill as defined under this item for permanent MSE or CB walls subject to inundation.

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

Cement-Stabilized Backfill (CSB) is not permitted.

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. Regardless of option or options chosen, use the same fascia pattern throughout the entire project, including cast in place full height retaining walls or retaining wall type abutments.

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

Unless otherwise shown on the plans, form the map of Texas emblem into a wall panel next to each bridge abutment. Engineer approval of the exact location of each emblem is required. The cost of forming emblems is considered subsidiary to this item. Inset the map of Texas a minimum of $\frac{3}{4}$ inch into the face of the panel, and provide a smooth finish with an engineer approved contrasting color.

Use Embankment Type C2 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 C2.

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.

Mow strip along Mechanically Stabilized Earth walls are required and will be subsidiary to Item 423, "Retaining Walls".

Six inch (6") perforated pipe underdrain, as per MSE wall standard sheet, will be required. Pipe outfall should be terminated into wall of drainage structures. Pipe underdrain for retaining walls will be subsidiary to Item 423, "Retaining Walls".

ITEM 427: SURFACE FINISHES FOR CONCRETE

Table of Special Surface Finishes and Coatings

ITEM	SPECIAL SURFACE FINISH	COATING	REMARKS
CULVERTS	SURFACE AREA I RUB FINISH	NONE	N/A
RETAINING WALL PANELS	FORMLINER FINISH	SEE "TABLE OF PAINTED ELEMENTS" BELOW	N/A
RETAINING WALL COPING	OFF-THE-FORM FINISH	SEE "TABLE OF PAINTED ELEMENTS" BELOW	USE WHITE CEMENT*
RETAINING WALL PILASTERS	FORMLINER FINISH	SEE "TABLE OF PAINTED ELEMENTS" BELOW	USE WHITE CEMENT*
BRIDGES	SURFACE AREA I OFF-THE-FORM FINISH OR FORMLINER FINISH	SEE "TABLE OF PAINTED ELEMENTS" BELOW	SEE BRIDGE PLANS FOR ELEMENTS WITH FORMLINER FINISHES
BRIDGE OR ROADWAY RAIL	OFF-THE-FORM FINISH	NONE	USE WHITE CEMENT*
CONCRETE TRAFFIC BARRIER	OFF-THE-FORM FINISH	NONE	USE WHITE CEMENT*

*Opaque sealer coating with anti-graffiti coating is allowed in lieu of white cement, as long as it is placed in accordance with the "Special Application Requirements" listed below.

*In order to achieve the desired results when white cement is specified, the mixture will include manufactured sand. Fly ash will not be allowed in mixture. Verification of mixture materials will be provided to the Engineer prior to beginning work.

Apply an Ordinary Surface Finish to elements not listed in "Surface Area I".

Special Surface Finishes listed above will not be paid for directly but are considered subsidiary to various bid items.

Off-the-Form Surface Finish: Supplemented by the following and will apply to Readily-Visible Concrete Surfaces only:

- Off-the-Form Finish will have a pleasing appearance with minimal color and texture variations and minimal surface defects when observed at a distance of approximately twenty (20) feet. Provide this finish by using non-staining, non-porous, high-quality forming materials as specified under item 427.3.5. Use the same type of forming materials for like elements for the entire structure.
- Engineer will determine acceptability of finished surfaces.
- Refurbish or replace forms that have become discolored or cause a variation from the finish established in the mock-up
- Avoid “pinking” of concrete due to reddening of young overlaid plywood. Treat plywood or use a release agent that prevents pinking. If pinking occurs, clean the green concrete surface as soon as the forms are removed. If pinking is still not removed by washing or does not disappear with time, clean the plywood after submitting a written cleaning procedure approved.
- Use similar curing times for a particular type of element (e.g. bent, rail), when possible. Do not allow more than three (3) days difference in curing duration for form curing, wet mat curing, or a combination of the two.
- Once form removal commences on a particular continuous surface, continue work uninterrupted until all forms are removed to prevent discoloration due to differing form-curing times.
- Contractor will provide a system such as Visqueen™ plastic sheeting for covering and/or protecting bent and abutment concrete and colored textured concrete from staining until the slab is placed. Sufficient protection should remain after slab placement at the base of bent columns until vegetation is sufficiently established to prevent staining. This system will be reviewed and approved prior to bridge construction. If for any reason the approved system fails to perform properly, the system will be rejected and a new system will be approved prior to beginning bridge construction. Work and materials necessary for protecting concrete will be considered subsidiary to Item 420, “Concrete Structures” and Item 427, “Surface Finishes For Concrete”.

Drip pans will be removed from visible sight as directed after bridge deck(s) are completed. When anti-graffiti coating is required, it will be paid for directly. See General Notes Item 740, Graffiti Removal and Anti-Graffiti Coating for more details.

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 ¼" 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.

Horizontal splices will be positioned in recesses and rustication areas of the form liner such that joints shall fall in shadow areas to optimize the concealment of the joint line. 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.

Painting Notes (For Elements Listed In "Table of Painted Elements" below)

All concrete surfaces to receive a painting system will be water blasted prior to application of the paint/sealer. Water blasting equipment used will be capable of supplying a minimum pressure at the nozzle end of three-thousand (3,000) psi. Use a zero-degree rotary, vibratory or wobble-type nozzle. The nozzle end will be held four (4) to eight (8) inches away from the surface. The surface will be allowed to dry a minimum of twenty-four (24) hours of continuous dry weather after water blasting or concrete wetting before applying paint system.

Painting systems for the elements listed below will be a concrete paint comprised of water-based, latex paint meeting TxDOT A-100 specifications.

Apply paint when air temperature is fifty (50) degrees and rising and is no greater than ninety-five (95) degrees. Wait a minimum of twenty-four (24) hours after surface has been wetted from cleaning or rain to allow sufficient drying of surface.

The Contractor will provide color test sections for the District Landscape Architect's approval prior to painting the actual structures. One test section will be provided for each unique color to be used on the project. These test sections will not be paid for directly but will be considered subsidiary to Item 427, 'Surface Finishes For Concrete'.

All painted surfaces will receive an Anti-Graffiti Type III – Permanent Coating. See General Notes Item 740, Graffiti Removal and Anti-Graffiti Coating for more details.

Tables of Painted Elements (to be painted in accordance with the above “Painting Notes”)

The tables below list elements that are to be painted in accordance with the above-mentioned “Painting Notes”. Also included are specified colors for each element.

ELEMENT	COLOR
RETAINING WALL AND/OR TEXAS EMBLEM	TBD BY DISTRICT LANDSCAPE ARCHITECT
RETAINING WALL COPING, PILASTERS, BRIDGE RAILING, & ROADWAY RAILING (UNLESS WHITE CEMENT)	SHERWIN WILLIAMS “WACO WHITE”

Special Application Requirements (For opaque sealer used in lieu of white cement)

The below requirements are supplemental to Item 427. All requirements specified and shown under Item 427 to achieve the required finish are not paid directly, but are subsidiary to the various concrete structure bid items. These requirements apply only to the opaque sealer used in lieu of white cement.

- Do not apply any coatings until sixty (60) days after completion of the required curing period.
- Use an approved UV disappearing curing compound rather than the standard approved curing compounds.
- Perform PH tests as directed and in accordance with standards from the Society of Protective Coatings until a PH of 9 or lower is achieved to insure the concrete is sufficiently cured so as to not reject the coating materials.
- Sandblast concrete surfaces to produce a Level 3 surface texture measured by using International Concrete Restoration Institute (ICRI) standard gauge CSP-3 rubber chart that depicts the level of sandblasting achieved.
- Water blast concrete surfaces at three-thousand (3,000) psi to remove all dust and debris.
- Wait a minimum of twenty-four (24) hours after sand and water blast cleaning to allow thorough drying of prepared concrete surface.
- Apply a water repellent concrete sealer containing forty percent (40%) silane at one hundred (100) sq. ft. per gallon when air temperature forty (40) degrees and rising and is no greater than ninety-five (95) degrees.
- Wait a minimum of twelve (12) hours to start opaque sealer application after concrete sealer application.
- Color will be Sherwin Williams “Waco White”.

- Apply two (2) coats of opaque sealer for a total maximum application rate of two hundred (200) sq. ft. per gallon when air temperature is fifty (50) degrees and rising and is no greater than ninety-five (95) degrees.
- Apply Anti-Graffiti Type III – Permanent Coating after opaque sealer coating has thoroughly dried. Follow requirements specified under General Notes Item 740, Graffiti Removal and Anti-Graffiti Coating for more details as well as manufacturer's recommendations for additional application requirements. When applying anti-graffiti coating after application of an opaque sealer, the color of the anti-graffiti will be clear or translucent.

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

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.

ITEM 432: RIPRAP

Weep holes and granular material, are required and locations will be determined prior to placement of concrete riprap at bridge abutments.

ITEM 440: REINFORCEMENT FOR CONCRETE

For bridge widening, existing uncoated reinforcing in the slab exposed during slab removal shall receive an abrasive blast cleaning followed closely by an application of BASF Emaco P25, Sika Armatec 110 EpoCem or Euclid Duralprep A.C. Perform all work in accordance with manufacturer's specifications. Cleaning and coating operations must be performed no more than 7 days prior to placement of the concrete. In the event more than 7 days is required between initial coating and slab placement, the contractor shall apply a second coat of the same material used initially to the bars approximately 1 day prior to placement of the concrete. This work is considered subsidiary to the various bid items.

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. FRC may also be used for other Non-Structural Class Reinforced Concrete Items as approved.

ITEMS 450 & 514: RAILING AND PERMANENT CONCRETE TRAFFIC BARRIER

Blast clean all railing and barrier wall installed as part of the project in accordance with Item 427, "Surface Finishes for Concrete", prior to final acceptance of the project. This work will be considered subsidiary to Items 450, "Railing" and Item 514, "Permanent Concrete Traffic Barrier".

Ensure slip formed barrier and cast-in-place barrier will be uniform in color and texture.

ITEM 462: CONCRETE BOX CULVERTS AND DRAINS

Joints between pre-cast concrete box culverts will be pre-formed flexible joint sealants as described in Section 464.3.3, "Jointing".

For this contract the contractor may use either pre-cast or cast in place culvert construction.

Reshape embankment side slopes, provide embankment as required, and add topsoil to achieve a smooth uniform finish around the installation of the safety end treatments and culvert extensions as directed. Finishing and reshaping work will be subsidiary to Items 132, "Embankment", Item 162, "Sodding for Erosion Control", and Item 467, "Safety End Treatment".

Provide and install pneumatically placed concrete on the ditch bottom and side slopes between temporary terminations between old and new culverts. Pneumatically placed concrete will be placed to the height of the largest culvert on the ditch side slopes; and to a limit 10 feet outside the location of BMPs along the ditch bottom. Cement stabilized sand may be substituted for pneumatically placed concrete, with Engineer approval.

ITEM 464: REINFORCED CONCRETE PIPE

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

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

ITEM 465: JUNCTION BOXES, MANHOLES, AND INLETS

The temporary capping of existing or proposed inlets during construction will not be paid for directly but will be considered subsidiary to the various bid items.

ITEM 471: FRAMES, GRATES, RINGS AND COVERS

For typical applications, supply un-painted cast iron inlet grate and frame and/or cast iron manhole frame and cover in areas subject to traffic loading, provide heavy steel manhole covers or grates and associated steel frame. Tack weld steel inlet grates and manhole covers to steel frames.

ITEM 479: ADJUSTING MANHOLES AND INLETS

Salvage and stockpile all existing inlet grates and manhole covers removed under this item at a location designated by the engineer.

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: REMOVING STRUCTURES

Submit to the Engineer for approval a detailed plan for bridge removal including methods, equipment and sequencing

Remove and salvage all dedication medallions and/ or plaques found attached to any existing bridge structure being replaced. Each medallion and plaque will be cleaned free of all concrete and foreign matter, and will be turned over to the Engineer in a timely manner. All work performed in the removal, salvaging and cleaning of the medallions and plaques will not be paid for directly but will be subsidiary to the various bid items. The Engineer will collect the medallions and plaques, tagging each of them with its respective highway number, name of creek or stream crossing and date of removal, and send them to the Waco District Environmental Coordinator for further handling.

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.

Salvage all existing inlet grates and manhole covers being removed.

ITEM 500: MOBILIZATION

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

ITEM 502: BARRICADES, SIGNS, AND TRAFFIC HANDLING

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.

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

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 to be available 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.

A meeting between the contractor and Engineer to discuss upcoming changes in construction phasing and traffic switches is required at least fourteen (14) days prior to the phase change. Items to be discussed at this meeting include temporary signing, traffic control, pavement markings, the processes necessary for the phase change and subcontractor scheduling.

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.

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.

As approved by the Engineer, provide uniformed off duty police officers and squad cars during lane or ramp closures, night time work or other situations that indicate a need for additional traffic control to protect the traveling public or the construction workforce. Provide documentation such as payroll, log sheets with signatures and badge number, or invoices from the government entity providing the officers for reimbursement. Complete the weekly tracking form provided by the department and submit invoices that agree with the tracking form for payment at the end of each month approved services were provided. Reimbursement will not be made for coordination fees charged by any party.

The Contractor Responsible Person(s) (CRP) for Work Zone Traffic Controls will inspect and ensure any deficiencies are corrected each and every day throughout the duration of this contract. Any misaligned or damaged traffic control devices will be repaired as soon as practical after deficiency is discovered.

In addition to providing a Contractor's Responsible Person and a phone number for emergency contact, have an employee(s) available to respond on the project for emergencies and for taking corrective measures within One (1) Hour.

At locations where new traffic signals are being installed and no existing traffic signals are in place, install temporary "SIGNAL AHEAD" signs (W3-3, 36X36). Place the signs when the new signal is turned on flash mode and remain until the barricades are removed or as approved.

Payment for the supply and installation of the temporary signs will be subsidiary to Item 502, "Barricades, Signs and Traffic Handling".

Limit lane closures along SL 121 to the hours between 9:00 am and 3:30 pm. Work in other areas of the project is not restricted to this time frame

ITEM 504: FIELD OFFICE

Furnish one Asphalt Mix Control Laboratory (Type D) for this project.

ITEM 506: TEMPORARY EROSION, SEDIMENTATION AND ENVIRONMENTAL CONTROLS

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 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.

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

No soil disturbing activities will begin on any section of TxDOT ROW without adequate sedimentation controls first being installed and functioning at adjacent drainage outfalls. Begin and continuously prosecute the repairs, additions and maintenance of erosion and sedimentation control devices within seven days after the Contractor receives each Form 2118, Field Inspection and Maintenance Report, from the Engineer. Failure of the Contractor to fulfill either of the above requirements places TxDOT in potential non-compliance with permit requirements and may result

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in withholding estimates or stopping work or both until all environmental permit requirements are fulfilled.

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."

Cleaning and sweeping of open roadways due to material spillage or loss from Contractor equipment or tires will be the responsibility of the Contractor at no cost to TxDOT. This work will not be charged as Item 738, "Cleaning and Sweeping Highways". Cleaning and sweeping of roadways will be completed as directed, including multiple times per day if necessary, to maintain acceptable roadways for the traveling public and to meet environmental regulations. Construction activities will cease when material deposited on the roadway is not properly removed or when equipment is not available as needed. Adequate construction exits will be planned, constructed and maintained by the Contractor per Item 506, "Temporary Erosion, Sedimentation, and Environmental Controls".

ITEM 508: CONSTRUCTING DETOURS:

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

ITEM 512: PORTABLE TRAFFIC BARRIER

Department-furnished concrete traffic barrier units are at a TxDOT yard near the project location or other locations within fifty (50) miles of the project as directed. Barrier provided by TxDOT will be single slope or F-shape barrier. The Contractor will furnish equipment necessary to load the units at the stockpile locations.

The current locations for barrier are:

3704 North Interstate 35 Frontage Road, Temple Tx

**** Contact District Construction office to verify barrier availability and type. Designate the appropriate type above, if quantity mandates use of both, provide quantity for each in plan summaries. For locations, provide list of planned locations****

Upon completion of the project, all barrier will remain property of the Department and stockpiled at a TxDOT yard near the project location or other locations within fifty (50) miles of the project as directed. The Contractor will furnish equipment necessary to load and unload the units at the stockpile locations. When stockpiling, separate damaged barriers from salvaged barriers as directed.

Stockpiling of portable concrete traffic barriers will not be permitted to be stockpiled (stacked) more than three (3) barriers high in any direction.

Portable concrete traffic barrier that is determined unusable will become property of contractor and will not be returned to TxDOT stockpile location. This work will be considered subsidiary to this item.

All hardware will become the property of the Department and will be returned to the TxDOT Maintenance yard within fifty (50) miles of the project as directed. Place hardware in fifty-five (55) gallon barrels with holes in bottom to allow drainage.

ITEM 529: CONCRETE CURB, GUTTER, AND COMBINED CURB AND GUTTER

Attach machine laid curb to pavement with a two compound epoxy adhesive. Epoxy will be applied to that area of pavement under the machine laid curb and must be a minimum of six (6) inches in width and 0.2 inches (20 mils) thick. The epoxy will be applied uniformly by an approved method.

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

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

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

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

ITEM 530: INTERSECTIONS, DRIVEWAYS AND TURNOUTS

Provide Class "HES" concrete for concrete intersections and driveways listed or shown on the plans.

ITEM 536: CONCRETE MEDIANS AND DIRECTIONAL ISLANDS

Use Class "B" concrete for concrete medians and directional islands, unless otherwise noted on specific plan sheets

ITEM 540: METAL BEAM GUARD FENCE

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

Wooden block out will not be allowed.

ITEMS 542 & 544: REMOVING METAL BEAM GUARD FENCE & GUARDRAIL END TREATMENTS

W-Beam elements, steel posts and composite material blockouts deemed salvageable will remain the property of the State and will be dismantled and returned to the TxDOT Maintenance yard within fifty (50) miles of project as directed. All other guard fence, and SGT's deemed non-salvageable will become the property of the contractor.

ITEM 544: GUARDRAIL END TREATMENTS

The use of wooden block-outs will not be allowed.

ITEM 545: CRASH CUSHION ATTENUATORS

Stockpile crash cushion attenuators at 410 W Loop 121, Belton, TX 76513.

ITEM 550: CHAIN LINK FENCE

Coat all pipe and chain link fence material including but not limited to fittings, chain link fabric, wires, posts, rails, bars, bands, caps, or as directed with 10 mils minimum thermally fused PVC. The color shall be black.

ITEM 556: PIPE UNDERDRAINS

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

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

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

ITEM 560: MAILBOX ASSEMBLIES

Mail boxes will be kept in a position accessible to the carrier's vehicle along the travel way except when performance of grading operations necessitates the moving of mail boxes. When grading operations necessitate the moving of mail boxes, the contractor will place them at a nearby location which will be accessible to the carrier's vehicle. Mail boxes will be returned to a position accessible to the carrier's vehicle along the travel way when grading operations are not in progress. This work will not be paid for directly, but will be subsidiary to Item 560, "Mailbox Assemblies".

ITEM 585: RIDE QUALITY FOR PAVEMENT SURFACES

Use Surface Test Type A on all intersections and driveways.

Use Surface Test Type B pay adjustment schedule _1__ on the travel lanes.

ITEM 618: CONDUIT

The locations of conduit as shown are for diagrammatic purposes only and may be varied to meet local conditions, subject to approval.

When backfilling bore pits, ensure that the conduit does not become damaged during installation or due to any settling of the backfill material. Compact select backfill in three equal lifts to the bottom of the conduit or if sand is used, place to a point two (2) inches above the conduit. Backfill

density will be equal to the existing soil. Be careful to prevent any material from entering the conduit.

Backfill all open trenches before the end of the workday and do not leave any trench open overnight.

ITEM 620: ELECTRICAL CONDUCTORS

Place the communications and/or coaxial cables in a separate conduit from the 120 or 240-volt electrical conductors.

Any damage to any wire or any cable is cause for immediate rejection of the entire cable being tested. Remove and replace the entire cable at the Contractor's expense.

For both transformer and shoe-base type illumination poles, provide double-pole breakaway fuse holder from manufacturers pre-qualified by the Traffic Operations Division.

Provide ten (10) amp time delay fuses.

ITEM 624: GROUND BOXES

Ground box locations shown on the plans are approximate locations. Actual locations are as directed.

ITEM 628: ELECTRICAL SERVICES

Contact the Electric Utility Company to make all necessary arrangements to provide electrical service shown on the plans in accordance with Article 628.5 and the Electrical Details, except that TxDOT will make application to the Electric Utility Company for service (See note below).

NOTE:

Before fabricating the electrical service, contact the Waco District Traffic Signal Service Supervisor (Phone (254) 867-2807), to make application (billing arrangements) for service with the Electric Utility Company.

Furnish and install a lock on all electrical services. The lock is to be a Master-Lock number 2195.

The proposed electrical service location will be approved by TxDOT prior to installation.

ITEM 636: SIGNS

Verify all dimensions at the actual proposed sign location in order to maintain dimensions as shown on the Sign Mounting Details.

Stake the location of the new signs to be approved.

For freeway sections, keep the advance guide sign or the exit direction sign for an exit in place at all times, unless written approval is given. Replace any signs that have been removed before the end of the work day, unless written approval is given.

ITEM 644: SMALL ROADSIDE SIGN ASSEMBLIES

Bolt Clamp type will be used on Texas Triangular Slip Base System.

As practical with new construction, leave the existing sign assemblies in place until the proposed foundation, post and sign are in installed, and then remove the old sign assemblies.

Do not leave any sign foundation holes open overnight. Ensure all holes drilled are at least the minimum required depth with no loose material remaining in the hole.
Stake proposed sign locations and receive approval before installation of sign foundations.

Existing Mile Markers Signs are to be relocated to their original location(s) as they were prior to the beginning of the project.

Expanded foam foundations are not permitted.

Cut the bottom of all posts square.

For sign types which design details are not shown on these plans, fabricate according to the "STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS".

Removed material that is deemed salvageable (signs and posts) will be the property of TxDOT. Deliver salvageable material to the TxDOT Maintenance Office. Remove unsalvageable material.

The Contractor will relocate the existing double sided street name signs and furnish the post mounted brackets for the street name signs to be paid for as part of the proposed Stop Signs (R1-1). Existing street name signs will be mounted above Stop signs. If damaged while being relocated, the Contractor will furnish new double sided street name sign at their own expense.

ITEM 656: FOUNDATIONS FOR TRAFFIC CONTROL DEVICES

Locations shown on the plans are for diagrammatic purposes only and may be varied to meet local conditions, subject to approval. Stake these locations and have them approved before installation of foundations.

For the signal controllers furnished by TxDOT, anchor bolts and bolt patterns for the controller foundations will be supplied.

Consult with the Engineer to ensure proper location and orientation of the signal controller before construction.

Backfill all open foundation holes before the end of the workday and do not leave any holes open overnight.

Clean up and remove from all work areas all loose material resulting from contract operations each day before suspending work for the day.

ITEM 658: DELINEATOR AND OBJECT MARKER ASSEMBLIES

All flexible and GF2 delineators will have a tubular body.

The delineator assembly BRF Class A (D-SW) and (D-SY) are to be single delineators (Class I) attached to a flat, plastic bracket to facilitate the mounting of the delineator on top of the bridge rail at the locations shown on the plans. Submit a sample for approval before ordering materials.

ITEM 662: WORK ZONE PAVEMENT MARKINGS

Lane lines for transitions and detours will consist of raised pavement markers as shown for solid lines on the Barricade and Construction Standards Work Zone Pavement Marking Details.

Paint and beads may be used for non-removable pavement markings.

ITEM 666: RETROREFLECTORIZED PAVEMENT MARKINGS

The Contractor will layout the proposed striping in accordance with TxDOT Traffic Control Plan Standards and latest version Texas Manual on Uniform Traffic Control Devices (TMUTCD) and project striping layout sheets. The Engineer will verify proposed striping layout prior to the beginning of striping operations.

The Contractor will locate the beginning and ending points of No Pass Zones.

ITEM 668: PREFABRICATED PAVEMENT MARKINGS

Use Type C prefabricated pavement markings.

ITEM 672: RAISED PAVEMENT MARKERS

Existing raised pavement markers to be replaced will be removed at the same time that the new markers are placed (i.e. remove and replace in one operation). Existing raised pavement markers replaced by new markers will be removed in accordance with Item 677, "Eliminating Existing Pavement Markings and Markers". Immediately fill the damaged area in the pavement due to the removal of existing markers with an approved bituminous material. This removal and backfill work will not be paid for directly, but will be subsidiary to Item 672, "Raised Pavement Markers".

ITEM 677: ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS

Water blasting method will be used on all final pavement surfaces for removal of temporary or permanent pavement markings.

The following are considered acceptable Pavement Marking Removal methods on this project for non-final pavement surfaces:

Provide 2' wide strip seals

Water blasting

Mechanical Method

ITEM 682: VEHICLE AND PEDESTRAIN SIGNAL HEADS

Provide new signal head housings with black aluminum housings and back plates. Cover all signal heads installed, but not in operation, in an approved manner from the time of installation until the signal is placed in operation. This will not be paid for directly, but will be subsidiary to Item 682, "Vehicle and Pedestrian Signal Heads".

Provide and install standard detachable tunnel visors on all signal heads. Provide and install all necessary mounting hardware to insure proper mounting of all signal heads. The mounting hardware and attachments will be new (no reuse of old existing attachment hardware) and the same color as the signal head housings. Use signal heads made of aluminum with 12 inch LED indications and aluminum back plates.

Install signal heads mounted on mast arms, as described on the Traffic Signal Support Structures Details, or as approved. Mount signal heads mounted on end of arm with a 90 degree mast arm elbow fitting as shown on the Structure Assembly on the Traffic Signal Support Structures Details.

Use standard 1 1/2-inch diameter steel pipe side pole mount for pedestrian signal heads.

Ensure that each signal head has a minimum vertical clearance of 18.5 feet and a maximum vertical clearance of 19 feet between the bottom edge of the signal head and the surface of the roadway.

ITEM 686: TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL)

No exposed signal cable on the mast arm assemblies will be allowed. Install the signal cable so it will exit the mast arm directly behind each signal head as directed. This will require drilling holes in the mast at the exact location for each signal head. Drip loops are not allowed.

ITEM 688: PEDESTRIAN DETECTORS AND VEHICLE LOOP DETECTORS

Install pedestrian push button signs (R10-4B) directly above the push buttons.

Installation of pedestrian push buttons signs, electrical connections and all mounting hardware will not be paid for directly, but considered subsidiary to Item 688, "Pedestrian Detectors and Vehicle Loop Detectors."

ITEM 730: ROADSIDE MOWING:

Throughout the course of the project, when in the opinion of the Engineer, tall grass and weeds affect the safety of the public by restricting visibility, interfere with normal traffic flow or appear unsightly, the contractor will be required to mow same. Final cleanup will include mowing of grass and weeds. This work will be paid by the acre.

Mowing cycles will coincide with adjoining construction projects and adjoining segments maintained by contracted maintenance.

At the discretion of the Engineer, mow non-paved areas within the project prior to placement of permanent vegetation. The Contractor will plan and schedule to perform the full width mowing cycle work under this Item as follows:

RURAL AREAS

- At least two (2) times per year
- June 1 to July 15 and late October to late November

URBAN AREAS

- At least four (4) times per year
 - Prior to March 1, June 1 to July 15, September and late October to late November
- The Engineer will approve the actual beginning time of work for each cycle of work performed. The Contractor will provide the Engineer two weeks advance notice before beginning actual work for each cycle.

ITEM 734: LITTER REMOVAL:

Litter shall be picked up within **48 hours** of the completion of a mowing cycle.

Contractor shall pickup and dispose of litter on the roadways designated in the plans for litter pickup. Disposal shall conform to all applicable regulations and laws.

The Department will issue a written notice to begin a litter cycle. In the notice the Contractor will be given the number of acres required for litter pickup, the number of working days allowed to complete the cycle, and the date when time charges for the cycle will start. Liquidated damages will be assessed for any working day charged beyond the authorized time. Cycles for litter removal and disposal will be scheduled by the Maintenance Supervisor. Once work has started on a cycle, the Contractor will proceed in an expeditious manner satisfactory to the Engineer until all work on the cycle is satisfactorily completed.

ITEM 738: CLEANING AND SWEEPING HIGHWAYS

For sweeping operations, a vacuum pickup type broom will be utilized.

Regular sweeping of dirt or mud due to construction operations from the travel ways will not be paid for directly but will be subsidiary to the various bid items.

ITEM 3076: DENSE-GRADED HOT-MIX ASPHALT

Design for a target Laboratory-molded density of 97.0% when using the Texas Gyrotory Compactor (TGC) (Tex-204-F, Part I).

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

Maximum stripping of 0% is required.

RAP from Contractor owned sources may be used if the RAP is fractionated.

ITEM 6001: PORTABLE CHANGEABLE MESSAGE SIGN

This project will require "full matrix" type portable changeable message signs.

Ensure that the Contractor's Responsible Person for traffic control can revise messages within thirty (30) minutes of notification.

Furnish portable changeable message signs. The portable changeable message sign(s) will be used for all lane closures and freeway closures as shown on the traffic control plan standard sheets.

Supply portable changeable message sign(s) in accordance with the Traffic Control Plan standard sheets and Article 6f.55 of the Texas Manual on Uniform Traffic Control Devices for Streets and Highways Part VI.

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