Control	**1228-04-015**
Project	**C 1228-4-15**
Highway	**FM 1015**
County	**HIDALGO**

ADDENDUM ACKNOWLEDGMENT

Each bidder is required to acknowledge receipt of an addendum issued for a specific project. This page is provided for the purpose of acknowledging an addendum.

FAILURE TO ACKNOWLEDGE RECEIPT OF AN ADDENDUM WILL RESULT IN THE BID NOT BEING READ.

In order to properly acknowledge an addendum place a mark in the box next to the respective addendum.

ADDENDUM NO. 1 ☐

ADDENDUM NO. 2 ☐

ADDENDUM NO. 3 ☐

ADDENDUM NO. 4 ☐

ADDENDUM NO. 5 ☐

In addition, the bidder by affixing their signature to the signature page of the proposal is acknowledging that they have taken the addendum(s) into consideration when preparing their bid and that the information contained in the addendum will be included in the contract, if awarded by the Commission or other designees.

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Control	**1228-04-015**
Project	**C 1228-4-15**
Highway	**FM 1015**
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PROPOSAL TO THE TEXAS TRANSPORTATION COMMISSION

2024 SPECIFICATIONS

WORK CONSISTING OF REHABILITATE EXISTING ROADWAY

HIDALGO 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 410 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.

TEXAS DEPARTMENT OF TRANSPORTATION

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS,

That we, (Contractor Name) _____

_____

Hereinafter called the Principal, and (Surety Name) _____

_____

a corporation or firm duly authorized to transact surety business in the State of Texas, hereinafter called the Surety, are held and firmly bound unto the Texas Department of Transportation, hereinafter called the Obligee, in the sum of not less than two percent (2%) of the department's engineer's estimate, rounded to the nearest one thousand dollars, not to exceed one hundred thousand dollars ($100,000) as a proposal guaranty (amount displayed on the cover of the proposal), the payment of which sum will and truly be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the principal has submitted a bid for the following project identified as:

Control	**1228-04-015**
Project	**C 1228-4-15**
Highway	**FM 1015**
County	**HIDALGO**

NOW, THEREFORE, if the Obligee shall award the Contract to the Principal and the Principal shall enter into the Contract in writing with the Obligee in accordance with the terms of such bid, then this bond shall be null and void. If in the event of failure of the Principal to execute such Contract in accordance with the terms of such bid, this bond shall become the property of the Obligee, without recourse of the Principal and/or Surety, not as a penalty but as liquidated damages.

Signed this _____ Day of _____ 20_____

By: _____

(Contractor/Principal Name)

_____

(Signature and Title of Authorized Signatory for Contractor/Principal)

*By: _____

(Surety Name)

_____

(Signature of Attorney-in-Fact)

*Attach Power of attorney (Surety) for Attorney-in-Fact

Impressed Surety Seal Only

This form may be removed from the proposal.

C U T H E R E

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BIDDER'S CHECK RETURN

IMPORTANT

The space provided for the return address must be completed to facilitate the return of your bidder's check. Care must be taken to provide a legible, accurate, and complete return address, including zip code. A copy of this sheet should be used for each different return address.

NOTE

Successful bidders will receive their guaranty checks with the executed contract.

RETURN BIDDERS CHECK TO (PLEASE PRINT):

Control	**1228-04-015**
Project	**C 1228-4-15**
Highway	**FM 1015**
County	**HIDALGO**

IMPORTANT

PLEASE RETURN THIS SHEET IN ITS ENTIRETY

Please acknowledge receipt of this check(s) at your earliest convenience by signing below in longhand, in ink, and returning this acknowledgement in the enclosed self addressed envelope.

Check Received By: _____ Date:_____

Title: _____

For (Contractor's Name): _____

Project _____ County_____

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NOTICE TO THE BIDDER

In the space provided below, please enter your total bid amount for this project. Only this figure will be read publicly by the Department at the public bid opening.

It is understood and agreed by the bidder in signing this proposal that the total bid amount entered below is not binding on either the bidder or the Department. It is further agreed that **the official total bid amount for this proposal will be determined by multiplying the unit bid prices for each pay item by the respective estimated quantities shown in this proposal and then totaling all of the extended amounts.**

$_____

Total Bid Amount

Control 0001-03-030
Project STP 2000(938)HES
Highway SH 20
County EL PASO

ALT	ITEM	DESC	SP	Bid Item Description	Unit	Quantity	Bid Price	Amount	Seq
	104	509		REMOV CONC (SDWLK)	SY	266.400	$10.000	$2,664.00	1

EXAMPLE

Total Bid Amount _____$2,664.00_____

Signed _____
Title _____
Date _____

Additional Signature for Joint Venture:

Signed _____
Title _____
Date _____

EXAMPLE OF BID PRICES SUBMITTED BY COMPUTER PRINTOUT

EXAMPLES

BID PRICES SUBMITTED BY HAND WRITTEN FORMAT

ALT	ITEM-CODE			UNIT BID PRICE ONLY WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC NO	S.P. NO.				
	190	026		RED OAK 1 1/2 - 1 3/4 GAL BB	EA	9.000	1
				EXAMPLE: One hundred fifty DLRS and No CENTS			

Unit price for each plant in place

	249	014		FLEX BASE(DEL)(DENSCOT)(TY A GR4 CL2)	TON	56,787.00	14
				EXAMPLE: Seven DLRS and Fifty three CENTS			

Unit price for each ton of Flexible Base

	430	001	001	CL A CONC FOR EXT STR (CULV)	CY	45.000	27
				EXAMPLE: Three hundred five DLRS and No CENTS			

Unit price for each cubic yard of Concrete

	610	007	001	RDWY ILL ASSEM(TY ST 50T-8-8)(.4 KW)S	EA	13.000	7
				EXAMPLE: Fourteen hundred sixteen DLRS and Thirty seven CENTS			

Unit price of each Roadway Illumination Assembly

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ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	100	7002		PREPARING ROW DOLLARS and CENTS	STA	103.000	1
	104	7001		REMOV CONC (PAV) DOLLARS and CENTS	SY	2,914.000	2
	104	7011		REMOV CONC (DRIVEWAYS) DOLLARS and CENTS	SY	1,291.000	3
	104	7013		REMOV CONC (SIDEWALK, RAMP OR SUP) DOLLARS and CENTS	SY	382.000	4
	104	7017		REMOV CONC (CURB & GUTTER) DOLLARS and CENTS	LF	17,545.000	5
	104	7019		REMOV CONC (GUTTER) DOLLARS and CENTS	LF	279.000	6
	104	7046		REMOV CONC (MISC) DOLLARS and CENTS	SY	6.000	7
	105	7122		RMV (8"-22") TRT/UNTRT BASE & ASPH PAV DOLLARS and CENTS	SY	95,595.000	8
	110	7001		EXCAV (ROADWAY) DOLLARS and CENTS	CY	6,070.000	9
	132	7006		EMBANK (FNL)(DC)(TY C) DOLLARS and CENTS	CY	419.000	10
	134	7001		BACKFILL (TY A) DOLLARS and CENTS	STA	15.000	11
	160	7007		FURN & PLACE TOPSOIL (VEH) DOLLARS and CENTS	CY	50.000	12

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	164	7020		HYDRO MULCH SEED (PERM_URBAN_-CLAY) DOLLARS and CENTS	SY	27,066.000	13
	164	7021		HYDRO MULCH SEED (TEMP_WARM) DOLLARS and CENTS	SY	27,066.000	14
	168	7001		VEGETATIVE WATERING DOLLARS and CENTS	TGL	587.000	15
	204	7001		SPRINKLING (DUST CONTROL) DOLLARS and CENTS	TGL	1,298.000	16
	216	7001		PROOF ROLLING DOLLARS and CENTS	HR	1.400	17
	247	7277		FL BS (RDWY DEL)(TY E GR 4)(FNL POS) DOLLARS and CENTS	CY	16,140.000	18
	250	7002		GEOGRID BASE REINFORCEMENT (TYPE 2) DOLLARS and CENTS	SY	4,220.000	19
	260	7005		LIME (COM OR QK)(SLURRY) DOLLARS and CENTS	TON	2,266.000	20
	260	7009		LIME TRT (EXIST MATL)(12") DOLLARS and CENTS	SY	91,540.000	21
	275	7001		CEMENT DOLLARS and CENTS	TON	1,036.000	22
	275	7010		CEMENT TRT (NEW BASE)(6") DOLLARS and CENTS	SY	87,320.000	23
	275	7014		CEMENT TRT (NEW BASE)(14") DOLLARS and CENTS	SY	4,082.000	24

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	305	7050		SALV,HAUL & STKPL RCL ASPH PV(3"TO 6") DOLLARS and CENTS	SY	86,276.000	25
	305	7053		SALV,HAUL & STKPL RCL APH PV(3"TO 8") DOLLARS and CENTS	SY	7,783.000	26
	310	7004		PRIME COAT (MC-30) DOLLARS and CENTS	GAL	19,608.000	27
	341	7045		D-GR HMA TY-D SAC-B PG64-22 DOLLARS and CENTS	TON	13,986.000	28
	344	7002		SP MIXES SP-B SAC-B PG64-22 DOLLARS and CENTS	TON	568.000	29
	344	7065		SP MIXES SP-D SAC-B PG76-22 DOLLARS and CENTS	TON	447.000	30
	346	7017		STONE-MTRX-ASPH SMA-F SAC-A PG76-22 DOLLARS and CENTS	TON	1,478.000	31
	354	7018		PLANE & TEXT ASPH CONC PAV(1.5") DOLLARS and CENTS	SY	14,401.000	32
	360	7006		CONC PVMT (CRCP) (12") DOLLARS and CENTS	SY	79,537.000	33
	360	7035		CONC PVMT(TRANSITION SLAB) (12") DOLLARS and CENTS	SY	2,084.000	34
	360	7079		CONC PVMT (CRCP)(FAST TRK) (15") DOLLARS and CENTS	SY	4,622.000	35
	400	7005	001	STRUCT EXCAV (SPECIAL) DOLLARS and CENTS	CY	26.000	36

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	400	7008	001	CUT & RESTORE ASPH PAVING DOLLARS and CENTS	SY	200.000	37
	400	7010	001	CEM STABIL BKFL DOLLARS and CENTS	CY	67.000	38
	402	7001		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	110.000	39
	416	7042		DRILL SHAFT (TRF SIG POLE) (24 IN) DOLLARS and CENTS	LF	48.000	40
	416	7044		DRILL SHAFT (TRF SIG POLE) (36 IN) DOLLARS and CENTS	LF	75.000	41
	464	7003		RC PIPE (CL III)(18 IN) DOLLARS and CENTS	LF	384.000	42
	465	7339		INLET (STAGE II)(PCU)(5FT)(NONE) DOLLARS and CENTS	EA	37.000	43
	465	7340		INLET (STAGE II)(PCO)(5FT)(NONE) DOLLARS and CENTS	EA	3.000	44
	465	7341		INLET (STAGE II)(PCO)(5FT)(LEFT) DOLLARS and CENTS	EA	1.000	45
	465	7342		INLET (STAGE II)(PCO)(5FT)(RIGHT) DOLLARS and CENTS	EA	2.000	46
	465	7343		INLET(STAGE II)(PCO)(5FT)(BOTH) DOLLARS and CENTS	EA	1.000	47
	467	7308		SET (TY II) (18 IN) (RCP) (6: 1) (P) DOLLARS and CENTS	EA	6.000	48

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	479	7001		ADJUSTING MANHOLES DOLLARS and CENTS	EA	12.000	49
	480	7001		CLEAN EXIST CULVERTS DOLLARS and CENTS	EA	2.000	50
	496	7002		REMOV STR (INLET) DOLLARS and CENTS	EA	44.000	51
	496	7004		REMOV STR (SET) DOLLARS and CENTS	EA	4.000	52
	496	7007		REMOV STR (PIPE) DOLLARS and CENTS	LF	281.000	53
	500	7001		MOBILIZATION DOLLARS and CENTS	LS	1.000	54
	502	7001		BARRICADES, SIGNS AND TRAFFIC HANDLING DOLLARS and CENTS	MO	26.000	55
	503	7002		PORTABLE CHANGEABLE MESSAGE SIGN DOLLARS and CENTS	EA	4.000	56
	505	7001		TMA (STATIONARY) DOLLARS and CENTS	DAY	410.000	57
	505	7003		TMA (MOBILE OPERATION) DOLLARS and CENTS	DAY	410.000	58
	506	7001		ROCK FILTER DAMS (INSTALL) (TY 1) DOLLARS and CENTS	LF	60.000	59
	506	7011		ROCK FILTER DAMS (REMOVE) DOLLARS and CENTS	LF	60.000	60

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	506	7021		CONSTRUCTION EXITS (INSTALL) (TY 2) DOLLARS and CENTS	SY	3,198.000	61
	506	7024		CONSTRUCTION EXITS (REMOVE) DOLLARS and CENTS	SY	3,198.000	62
	506	7030		BACKHOE WORK (EROSION & SEDMT CONT) DOLLARS and CENTS	HR	16.000	63
	506	7039		TEMP SEDMT CONT FENCE (INSTALL) DOLLARS and CENTS	LF	242.000	64
	506	7041		TEMP SEDMT CONT FENCE (REMOVE) DOLLARS and CENTS	LF	242.000	65
	506	7043		BIODEG EROSN CONT LOGS (INSTL) (8") DOLLARS and CENTS	LF	660.000	66
	506	7044		BIODEG EROSN CONT LOGS (INSTL) (12") DOLLARS and CENTS	LF	211.000	67
	506	7046		BIODEG EROSN CONT LOGS (REMOVE) DOLLARS and CENTS	LF	871.000	68
	508	7001		CONSTRUCTING DETOURS DOLLARS and CENTS	SY	2,313.000	69
	512	7005		PORT CTB (FUR & INST)(F-SHAPE)(TY 1) DOLLARS and CENTS	LF	7,920.000	70
	512	7009		PORT CTB (FUR & INST)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	1,520.000	71
	512	7010		PORT CTB (FUR & INST)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	160.000	72

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	512	7029		PORT CTB (MOVE)(F-SHAPE)(TY 1) DOLLARS and CENTS	LF	31,140.000	73
	512	7033		PORT CTB (MOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	4,900.000	74
	512	7034		PORT CTB (MOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	540.000	75
	512	7053		PORT CTB (REMOVE)(F-SHAPE)(TY 1) DOLLARS and CENTS	LF	7,920.000	76
	512	7057		PORT CTB (REMOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	1,520.000	77
	512	7058		PORT CTB (REMOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	160.000	78
	529	7008		CONC CURB & GUTTER (TY I) DOLLARS and CENTS	LF	14,240.000	79
	529	7009		CONC CURB & GUTTER (TY II) DOLLARS and CENTS	LF	3,410.000	80
	530	7006		DRIVEWAYS (CONC) DOLLARS and CENTS	SY	1,897.000	81
	530	7010		DRIVEWAYS (ACP) DOLLARS and CENTS	SY	862.000	82
	531	7001		CONC SIDEWALKS (4") DOLLARS and CENTS	SY	366.000	83
	531	7008		CURB RAMPS (TY 5) DOLLARS and CENTS	EA	4.000	84

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	545	7002		CRASH CUSH ATTEN (MOVE & RESET) DOLLARS and CENTS	EA	57.000	85
	545	7004		CRASH CUSH ATTEN (REMOVE) DOLLARS and CENTS	EA	16.000	86
	545	7014		CRASH CUSH ATTEN (INSTL)(S)(N)(TL3) DOLLARS and CENTS	EA	16.000	87
	560	7002		MAILBOX INSTALL-S (TWG-POST) TY 2 DOLLARS and CENTS	EA	9.000	88
	618	7021		CONDT (PVC) (SCH 40) (1") DOLLARS and CENTS	LF	30.000	89
	618	7030		CONDT (PVC) (SCH 40) (2") DOLLARS and CENTS	LF	325.000	90
	618	7031		CONDT (PVC) (SCH 40) (2") (BORE) DOLLARS and CENTS	LF	90.000	91
	618	7040		CONDT (PVC) (SCH 40) (4") DOLLARS and CENTS	LF	284.000	92
	618	7065		CONDT (PVC) (SCH 80) (4") (BORE) DOLLARS and CENTS	LF	310.000	93
	620	7007		ELEC CONDR (NO.8) BARE DOLLARS and CENTS	LF	785.000	94
	620	7009		ELEC CONDR (NO.6) BARE DOLLARS and CENTS	LF	65.000	95
	620	7010		ELEC CONDR (NO.6) INSULATED DOLLARS and CENTS	LF	142.000	96

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	621	7006		TRAY CABLE (4 CONDR) (12 AWG) DOLLARS and CENTS	LF	1,110.000	97
	624	7001		GROUND BOX TY A (122311) DOLLARS and CENTS	EA	2.000	98
	624	7002		GROUND BOX TY A (122311)W/APRON DOLLARS and CENTS	EA	6.000	99
	625	7004		ZINC-COAT STL WIRE STRAND (3/8") DOLLARS and CENTS	LF	1,310.000	100
	628	7322		ELC SRV TY T 120/240 000(NS)GS(L)TS(O) DOLLARS and CENTS	EA	1.000	101
	636	7001		ALUMINUM SIGNS (TY A) DOLLARS and CENTS	SF	117.000	102
	644	7025		IN SM RD SN SUP&AM TYS80(1)SA(P) DOLLARS and CENTS	EA	27.000	103
	644	7026		IN SM RD SN SUP&AM TYS80(1)SA(P-BM) DOLLARS and CENTS	EA	5.000	104
	644	7028		IN SM RD SN SUP&AM TYS80(1)SA(T) DOLLARS and CENTS	EA	9.000	105
	644	7029		IN SM RD SN SUP&AM TYS80(1)SA(T-2EXT) DOLLARS and CENTS	EA	1.000	106
	644	7031		IN SM RD SN SUP&AM TYS80(1)SA(U) DOLLARS and CENTS	EA	7.000	107
	644	7035		IN SM RD SN SUP&AM TYS80(1)SA(U-WC) DOLLARS and CENTS	EA	5.000	108

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	644	7073		REMOVE SM RD SN SUP&AM DOLLARS and CENTS	EA	44.000	109
	662	7049		WK ZN PAV MRK REMOV (REFL) TY I-C DOLLARS and CENTS	EA	712.000	110
	662	7051		WK ZN PAV MRK REMOV (REFL) TY II-A-A DOLLARS and CENTS	EA	941.000	111
	662	7065		WK ZN PAV MRK REMOV (W)6"(BRK) DOLLARS and CENTS	LF	14,155.000	112
	662	7066		WK ZN PAV MRK REMOV (W)6"(DOT) DOLLARS and CENTS	LF	510.000	113
	662	7068		WK ZN PAV MRK REMOV (W)6"(SLD) DOLLARS and CENTS	LF	80,720.000	114
	662	7072		WK ZN PAV MRK REMOV (W)8"(SLD) DOLLARS and CENTS	LF	639.000	115
	662	7077		WK ZN PAV MRK REMOV (W)24"(SLD) DOLLARS and CENTS	LF	640.000	116
	662	7082		WK ZN PAV MRK REMOV (W)(ARROW) DOLLARS and CENTS	EA	6.000	117
	662	7092		WK ZN PAV MRK REMOV (W)(WORD) DOLLARS and CENTS	EA	6.000	118
	662	7094		WK ZN PAV MRK REMOV (W)36"(YLD TRI) DOLLARS and CENTS	EA	15.000	119
	662	7098		WK ZN PAV MRK REMOV (Y)6"(BRK) DOLLARS and CENTS	LF	2,984.000	120

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	662	7100		WK ZN PAV MRK REMOV (Y)6"(SLD) DOLLARS and CENTS	LF	111,220.000	121
	666	7024		REFL PAV MRK TY I (W)8"(SLD)(100MIL) DOLLARS and CENTS	LF	463.000	122
	666	7117		REFL PAV MRK TY I (Y)12"(SLD)(100MIL) DOLLARS and CENTS	LF	298.000	123
	666	7236		RE PM TY III (W)(6")(SLD) DOLLARS and CENTS	LF	18,201.000	124
	666	7237		RE PM TY III (W)(6")(BRK) DOLLARS and CENTS	LF	4,300.000	125
	666	7239		RE PM TY III (W)(8")(SLD) DOLLARS and CENTS	LF	2,684.000	126
	666	7242		RE PM TY III (W)(12")(SLD) DOLLARS and CENTS	LF	26.000	127
	666	7244		RE PM TY III (W)(24")(SLD) DOLLARS and CENTS	LF	285.000	128
	666	7248		RE PM TY III (Y)(6")(SLD) DOLLARS and CENTS	LF	18,490.000	129
	666	7249		RE PM TY III (Y)(6")(BRK) DOLLARS and CENTS	LF	3,774.000	130
	666	7270		RE PROFILE PM TY I(Y)6"(SLD)(100MIL) DOLLARS and CENTS	LF	6,442.000	131
	666	7274		RE PROFILE PM TY I(Y)6"(BRK)(100MIL) DOLLARS and CENTS	LF	360.000	132

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	7408		REFL PAV MRK TY I (W)6"(BRK)(100MIL) DOLLARS and CENTS	LF	526.000	133
	666	7411		REFL PAV MRK TY I (W)6"(SLD)(100MIL) DOLLARS and CENTS	LF	5,262.000	134
	668	7012		PREFAB PM TY B (W)(6")(BRK)CONTRAST DOLLARS and CENTS	LF	4,256.000	135
	668	7090		PREFAB PM TY C (W)(24")(SLD)CONTRAST DOLLARS and CENTS	LF	496.000	136
	668	7091		PREFAB PM TY C (W)(ARROW) DOLLARS and CENTS	EA	22.000	137
	668	7103		PREFAB PM TY C (W)(WORD) DOLLARS and CENTS	EA	14.000	138
	672	7002		REFL PAV MRKR TY I-C DOLLARS and CENTS	EA	401.000	139
	672	7004		REFL PAV MRKR TY II-A-A DOLLARS and CENTS	EA	824.000	140
	677	7001		ELIM EXT PM & MRKS (4") DOLLARS and CENTS	LF	77,644.000	141
	677	7004		ELIM EXT PM & MRKS (8") DOLLARS and CENTS	LF	1,819.000	142
	677	7006		ELIM EXT PM & MRKS (12") DOLLARS and CENTS	LF	1,200.000	143
	677	7008		ELIM EXT PM & MRKS (24") DOLLARS and CENTS	LF	184.000	144

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	677	7009		ELIM EXT PM & MRKS (ARROW) DOLLARS and CENTS	EA	18.000	145
	677	7015		ELIM EXT PM & MRKS (WORD) DOLLARS and CENTS	EA	11.000	146
	678	7002		PAV SURF PREP FOR MRK (6") DOLLARS and CENTS	LF	45,501.000	147
	678	7004		PAV SURF PREP FOR MRK (8") DOLLARS and CENTS	LF	2,684.000	148
	678	7006		PAV SURF PREP FOR MRK (12") DOLLARS and CENTS	LF	26.000	149
	678	7008		PAV SURF PREP FOR MRK (24") DOLLARS and CENTS	LF	686.000	150
	678	7009		PAV SURF PREP FOR MRK (ARROW) DOLLARS and CENTS	EA	21.000	151
	678	7016		PAV SURF PREP FOR MRK (WORD) DOLLARS and CENTS	EA	9.000	152
	680	7001		INSTALL HWY TRF SIG (FLASH BEACON) DOLLARS and CENTS	EA	1.000	153
	680	7002		INSTALL HWY TRF SIG (ISOLATED) DOLLARS and CENTS	EA	2.000	154
	680	7004		REMOVING TRAFFIC SIGNALS DOLLARS and CENTS	EA	2.000	155
	681	7001		TEMP TRAF SIGNALS DOLLARS and CENTS	EA	2.000	156

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	682	7001		VEH SIG SEC (12")LED(GRN) DOLLARS and CENTS	EA	8.000	157
	682	7002		VEH SIG SEC (12")LED(GRN ARW) DOLLARS and CENTS	EA	4.000	158
	682	7003		VEH SIG SEC (12")LED(YEL) DOLLARS and CENTS	EA	12.000	159
	682	7004		VEH SIG SEC (12")LED(YEL ARW) DOLLARS and CENTS	EA	8.000	160
	682	7005		VEH SIG SEC (12")LED(RED) DOLLARS and CENTS	EA	10.000	161
	682	7006		VEH SIG SEC (12")LED(RED ARW) DOLLARS and CENTS	EA	4.000	162
	682	7018		PED SIG SEC (LED)(COUNTDOWN) DOLLARS and CENTS	EA	8.000	163
	682	7039		BACKPLATE W/REFL BRDR(3 SEC)ALUM DOLLARS and CENTS	EA	8.000	164
	682	7040		BACKPLATE W/REFL BRDR(4 SEC)ALUM DOLLARS and CENTS	EA	4.000	165
	684	7007		TRF SIG CBL (TY A)(12 AWG)(2 CONDR) DOLLARS and CENTS	LF	1,655.000	166
	684	7010		TRF SIG CBL (TY A)(12 AWG)(5 CONDR) DOLLARS and CENTS	LF	5,840.000	167
	684	7012		TRF SIG CBL (TY A)(12 AWG)(7 CONDR) DOLLARS and CENTS	LF	1,070.000	168

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	686	7008		INS TRF SIG PL AM (S)STR(TY B)LUM DOLLARS and CENTS	EA	5.000	169
	687	7001		PED POLE ASSEMBLY DOLLARS and CENTS	EA	8.000	170
	688	7001		PED DETECT PUSH BUTTON (APS) DOLLARS and CENTS	EA	8.000	171
	688	7003		PED DETECTOR CONTROLLER UNIT DOLLARS and CENTS	EA	1.000	172
	690	7106		INSTALL OF FOUNDATION (PEDESTAL POLE) DOLLARS and CENTS	LF	1.000	173
	760	7001		DITCH CLEANING AND RESHAPING (FOOT) DOLLARS and CENTS	LF	4,506.000	174
	764	7007		STORM SEWER CLEANING (PIPE)(12"-18"DIA) DOLLARS and CENTS	LF	212.000	175
	764	7010		STORM SEWER CLEANING (PIPE)(31"-36"DIA) DOLLARS and CENTS	LF	458.000	176
	3007	7001		BONDING COURSE DOLLARS and CENTS	GAL	1,838.000	177
	4008	7001		RC LOW HEAD PRSSR PIPE (CL III)(42") DOLLARS and CENTS	LF	107.000	178
	6008	7003		RVDS (PRESENCE AND ADVANCE DETEC-TION) DOLLARS and CENTS	EA	4.000	179

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	6041	7001		LOOP INSTALLATION DOLLARS and CENTS	LF	240.000	180
	6041	7002		SENSOR INSTALLATION DOLLARS and CENTS	EA	4.000	181

CERTIFICATION OF INTEREST IN OTHER BID PROPOSALS FOR THIS WORK

By signing this proposal, the bidding firm and the signer certify that the following information, as indicated by checking “Yes” or “No” below, is true, accurate, and complete.

A. Quotation(s) have been issued in this firm's name to other firm(s) interested in this work for consideration for performing a portion of this work.

_____ YES

_____ NO

B. If this proposal is the low bid, the bidder agrees to provide the following information prior to award of the contract.

1. Identify firms which bid as a prime contractor and from which the bidder received quotations for work on this project.
2. Identify all the firms which bid as a prime contractor to which the bidder gave quotations for work on this project.

ENGINEER SEAL

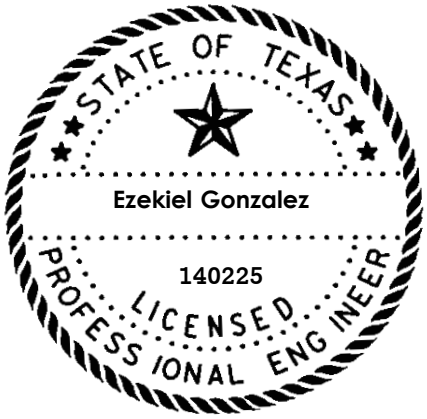
Control **1228-04-015**

Project **C 1228-4-15**

Highway **FM 1015**

County **HIDALGO**

The enclosed Texas Department of Transportation Specifications, Special Specifications, Special Provisions, General Notes and Specification Data in this document have been selected by me, or under my responsible supervision as being applicable to this project. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.



The seal appearing on this document was authorized by

Ezekiel Gonzalez, P.E.

JUNE 27, 2024

County: Hidalgo **Control:** 1228-04-015

Highway: FM 1015

2024 SPECS GENERAL NOTES:

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General Requirements and Covenants to ITEMS 1 thru 9:

For all pits or quarries, comply with the "Texas Aggregate Quarry and Pit Safety Act."

Provide on a weekly basis a list of equipment, including idle equipment, utilized on the project that week.

The 1-800 call services for utility locations do not include TxDOT facilities. Contact the Pharr District Signal Section (956-702-6225) for coordination regarding TxDOT underground lines.

ITEM 2: Instructions to Bidders

Contractor questions on this project are to be addressed to the following individual(s):

Hector Siller, P.E., Pharr Area Engineer; Hector.Siller@txdot.gov
Jesus Noriega, P.E., Assist. Area Engineer; Jesus.Noriega@txdot.gov

Contractor questions will be accepted through email, phone, and in person by the above individuals. Questions may also be submitted via the Letting Pre-Bid Q&A web page. This webpage can be accessed from the Notice to Contractors dashboard located at the following Address:

https://tableau.txdot.gov/views/ProjectInformationDashboard/NoticetoContractors

All contractor questions will be reviewed by the Engineer. All questions and any corresponding responses that are generated will be posted through the same Letting Pre-Bid Q&A web page.

The Letting Pre-Bid Q&A web page for each project can be accessed by using the dashboard to navigate to the project you are interested in by scrolling or filtering the dashboard using the controls on the left. Hover over the blue hyperlink for the project you want to view the Q&A for and click on the link in the window that pops up.

Information found on TxDOT's FTP server will be considered for informational purposes only. Index of /pub/txdot-info/Pre-Letting Responses/Pharr District/21-Pharr District (Construction) (state.tx.us)

ITEM 5: Control of the Work

The responsibility for the construction surveying on this contract will be in accordance with Article 5.9.1., "Method A."

Prior to contract letting, bidders may obtain a free computerized transfer of files (from the Engineer's office) that contains the earthwork information. If copies of the actual cross-sections in additional to, or instead of the electronic files are requested, they will be available at the Engineer's office for borrowing by copying companies for the purpose of making copies for the bidder at the bidder's expense.

ITEM 7: Legal Relations and Responsibilities

In accordance with Article 7.2.4. of the standard specifications, roadway, or lane closures during the following key dates and/or special events are prohibited:

- National Holidays
- The day before a National Holiday
- During emergency events such as natural disasters or as directed by the Engineer
- Local Special Event

ITEM 8: Prosecution and Progress

Working days will be computed and charged in accordance with Article 8.3.1.4. Standard Workweek. .

Prepare progress schedules using the Critical Path Method (CPM).

Working within the vicinity of known utility conflicts prior to the respective dates listed on Special Provision 000- 034 is solely the risk of the Contractor. The Department will not consider either monetary or time relief for inefficient work or any other impacts prior to the respective utility dates.

Early commencement of construction, or working out of phase, does not alter the utility relocation schedule proposed through this contract. All utility relocation dates will be incorporated into the Contractor's baseline and progress schedule.

ITEM 100: Preparing Right of Way

Preparation of right of way will be done in accordance with the construction phasing shown on the Traffic Control Plans. Performance of this item will not be allowed outside of the project's current construction phase without prior approval by the Engineer.

Removal of all existing vegetation and trees within the ROW will be subsidiary to prep ROW.

ITEM 132: Embankment

Embankment (DENS CONT) shall be Type C with a max. PI of 40. Material used as embankment material in the top two feet below the bottom of Flexible Base shall meet the following requirements based on preliminary tests and such other tests found necessary by the Engineer.

1. The material shall be such as to produce a well-bonded embankment and shall have a minimum PI of 8 and a maximum PI of 30.

It is the Contractor's responsibility to advise the Engineer of the location of the source sufficiently in advance to avoid delay.

ITEM 134: Backfilling Pavement Edges

Areas to be backfilled shall extend approximately 3-ft out from the edges of the proposed overlay. Final slopes shall be uniform and smooth. The 100-foot station payment includes backfilling of both sides.

Backfill Ty A shall not contain particles more than two inches in size and shall have a minimum PI of 10 and a maximum PI of 20.

Any additional backfill material necessary due to pre-existing edge conditions or to replace existing fill removed during blading operations will not be paid for directly. It will be considered subsidiary to this bid Item.

ITEM 160: Topsoil

Use topsoil as needed and directed by the Project Engineer for select problem areas. Unless otherwise approved by the Project Engineer, use topsoil from approved sources outside the right of way as per standard specifications. Existing topsoil is to be salvaged and retained for re-use on the project as topsoil.

ITEM 164: Seeding for Erosion Control

During drill seeding operations, application methods shall be in accordance with the method shown in the Standard Specification Book.

SS-1 Tacking Agent shall be a ratio of 2:1, two (Emulsion) to one (water) and applied at a rate of 0.05 gallons per square yard. The SS-1 Tacking Agent required for Drill Seed operations, will not be paid for directly, but will be subsidiary to Item 164 "Drill Seeding." Watering shall not be used with the Drill Seed Method. A biodegradable tacking agent may be used in lieu of the SS-1 tacking agent in accordance with the manufacturer's recommendations when approved by the Engineer.

Cool Season or Warm Season Grasses shall be included as part of Item 164 (See Table 3 and/or Table 4 in the Standard Specification Book or dates and seed type).

Seed mixture shall be as specified under Item 164.

ITEM 166: Fertilizer

Fertilizer rate is based on a rate of 100 Lbs. of Nitrogen per acre. The Nitrogen-Phosphorous Potassium (NPK) ratio shall include a minimum of 5% Phosphorous and 5% Potassium.

Fertilizer shall be homogenized.

ITEM 247: Flexible Base

Flexible Base Type E will be composed of caliche (argillaceous Limestone, calcareous or calcareous clay particles) and may contain stone, conglomerate, gravel, sand, or granular materials when these materials are in situ with the caliche.

Flexible Base (TY E GR 4) caliche shall conform to the following requirements:

Table 1: Gradation Requirements for Flexible Base

Retained on Sq. Sieve:	Percent Retained
2”	0
½”	20-60
No. 4	40-75
No. 40	70-90
Max. PI	15
Max. Wet Ball PI	15
Wet Ball Mill Max. Amount	50
Min. Comp. Strength PSI	150 at 15 PSI lateral pressure
Triaxial Test	Tex-117-E

The Wet Ball Test (Tex-116-E) shall be run and the Plasticity Index of the material passing the No.40 sieve shall be determined (Wet Ball PI).

Flexible Base (TY E GR 4) caliche shall meet minimum compressive strength specified on Table 1 Gradation Requirements for Flexible Base above.

The percent of density as determined by Compaction Ratio (Tex-113-E) for the new Flexible Base shall be a minimum of 98%.

The Contractor's attention is called to the fact that certain existing and/or proposed structures may be within the limits of the Flexible Base. It shall be the Contractor's responsibility to perform construction operations without damage to these structures.

For water added under Item 247, the sulfate content will not exceed 3000-ppm and the chloride content will not exceed 3000-ppm.

ITEM 250: Geogrid Base Reinforcement

Provide a construction plan to the Engineer detailing how the base will be lime treated without damaging the Geogrid Base Reinforcement placed on top of the subgrade.

ITEM 260: Lime Treatment (Road-Mixed)

The Contractor's attention is called to the fact that certain existing and/or proposed structures are within the limits of the lime-treated Subgrade. Unless otherwise directed by the Engineer, these structures shall be installed before the final rolling of this Subgrade. It shall be the Contractor's responsibility to perform the proper lime treating operation without damage to these structures.

The slurry method of applying lime will be required, except when the lime is to be added to naturally wet materials as directed by the Engineer.

For this project, the Engineer will direct a random number of lime trucks to be check weighed.

The percent of density as determined by Tex-121-E for the new and salvage Flexible Base shall be a minimum of 98% for all courses.

In order to avoid damaging the Geogrid, add lime to the first lift of new base and/or salvage base at a central mixing site or mixing plant away from the construction area. The Engineer shall approve the site or plant location and method of mixing.

Proof roll all constructed lime treated subgrade and bases courses in accordance with Item 216, "Proof Rolling." Correct soft spots as directed. Correction of soft spots in the subgrade or base courses will be at the Contractor's expense.

Contractor is to place an underseal and/or pavement course as indicated on plans within 14 calendar days of initial prime coat application. Otherwise, reapply prime coat as directed by the Engineer. Reapplication of the prime coat will be at the Contractor's expense.

Allow the mixture to mellow for a minimum period of 48 hours for all types of lime utilized. Additional time might be required due to sulfate and organic testing requirements, as directed by Engineer.

ITEM 275: Cement Treatment (Road-Mixed)

The percent of density as determined by Tex-120-E for the new and salvage Flexible Base shall be a minimum of 98% for all courses.

Proof roll all constructed cement treated subgrade and bases courses in accordance with Item 216, "Proof Rolling." Correct soft spots as directed. Correction of soft spots in the subgrade or base courses will be at the Contractor's expense.

In order to avoid damaging the Geogrid, add cement to the first lift of new base and/or salvage base at a central mixing site or mixing plant away from the construction area. The Engineer shall approve the site or plant location and method of mixing.

Contractor is to place an underseal and/or pavement course as indicated on plans within 14 calendar days of initial prime coat application. Otherwise, reapply prime coat as directed by the Engineer. Reapplication of the prime coat will be at the Contractor's expense.

ITEM 300: Asphalts, Oils, and Emulsions

Temporary ramps/detours and driveways may use Performance Grade Binder 64-22.

ITEM 301: Asphalt Antistripping Agents

Hydrated Lime shall be added as an Antistripping additive between the rates of 1% minimum and 2.0% maximum by weight for Items 292, 341, 344, and 346. If the Hamburg Wheel Test cannot be met within these limits, Liquid Antistripping agents as approved by the Engineer may be used in conjunction with lime for Items 292, 341, 344, and 346.

ITEM 305: Salvaging, Hauling, and Stockpiling Reclaimable Asphalt Pavement

Stockpile 11974 CY of material generated from the project at designated site located at the Intersection of IH -2 West Frontage Rd and N. Mile 2 West Rd. Ensure this material meets the requirements of Item 305 when stockpiled at above specified location.

ITEM 310: Prime Coat

The Contractor shall exercise diligence in the application of asphalt by the use of flagging and rolling procedures to keep from spraying or splattering the traveling public with asphaltic material.

All existing Flexible Base, which may become exposed by the milling operation, shall be primed at the rate of 0.2 Gal/SY.

Do not apply subsequent courses over the initial prime coat no earlier than 12 hours after the prime coat was applied, unless otherwise authorized or directed by the Engineer.

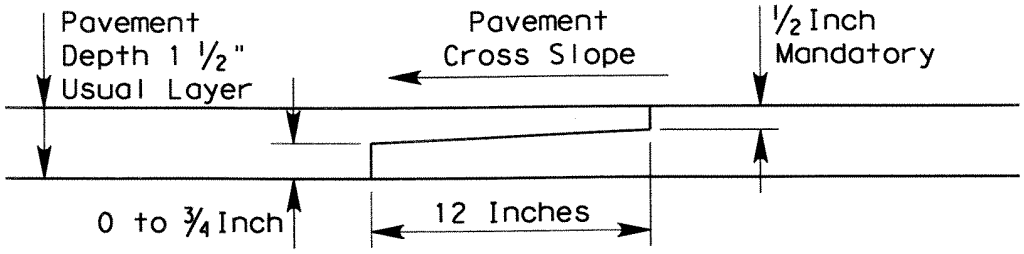
ITEM 341: Dense-Graded Hot-Mix Asphalt

The Contractor shall exercise diligence in the application of "Bonding Course" by the use of flagging and rolling procedures to keep from spraying or splattering the traveling public with asphaltic material.

Blading (not to exceed more than 3-ft from the pavement edge) may also be necessary to clean dirt and grass from pavement edges and turnout areas as work under this bid Item. The cost of this blading will not be paid for directly but shall be considered subsidiary to this bid Item.

Level-up will be placed before the surface course. An asphaltic concrete spreading and finishing machine and/or motor graders; when approved by the Engineer may be used to place the ACP level-up.

All unconfined longitudinal joints shall be constructed with a joint maker providing a maximum ½-inch vertical edge and a minimum 6:1 edge taper or as approved by the Engineer. The Engineer may waive this requirement when no impacts to the traveling public are foreseen.



NOTCHED WEDGE JOINT

The engineer may allow for variances to the dimensions shown.

The Hamburg Wheel Test requirement for PG 64 binder will be 5,000 passes @ 0.5-inch rut depth.

Public and private driveways need to have a smooth vertical transition between the edge of pavement and the existing driveways. The Contractor is to add a vertical taper if needed which will be subsidiary to Item 341.

The use of RAP and RAS (recycled asphalt shingles) will not be allowed as part of the mix design for the final riding surface.

Use a release agent from the Department's MPL to clean and to coat the inside of truck beds for hauling equipment. Hauling equipment shall be cleaned prior to hauling material to job site. Submit a copy of the bill of lading to the Engineer as part of the QCP. Ensure the pavement is free from any spillage of hydraulic oil or diesel from construction equipment. The Department may reject trucks that contain any foreign material and suspend production if the pavement is contaminated by any pollutants mentioned above.

The percentage of RAS used in the total mix shall not exceed 3% when allowed.

When SAC B aggregate is used, material properties are required to be 10 or less on the magnesium sulfate soundness test and 20 or less on the Micro-Deval test.

ITEM 344: Superpave Mixtures

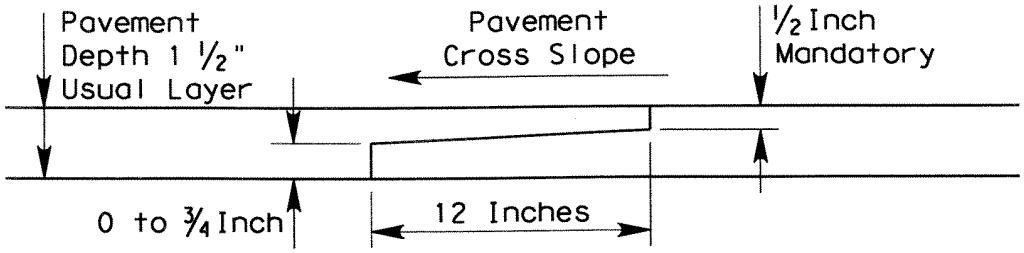
The Contractor shall exercise diligence in the application of "Bonding Course" by the use of flagging and rolling procedures to keep from spraying or splattering the traveling public with asphaltic material.

Blading (not to exceed more than 3-ft from the pavement edge) may also be necessary to clean dirt and grass from pavement edges and turnout areas as work under this bid Item. The cost of this blading will not be paid for directly but shall be considered subsidiary to this bid Item.

Level-up will be placed before the surface course. An asphaltic concrete spreading and finishing machine and/or motor graders; when approved by the Engineer may be used to place the ACP level-up.

Aggregates used on shoulders and ramps are required to meet SAC requirements.

All unconfined longitudinal joints shall be constructed with a joint maker providing a maximum ½-inch vertical edge and a minimum 6:1 edge taper or as approved by the Engineer. The Engineer may waive this requirement when no impacts to the traveling public are foreseen.



NOTCHED WEDGE JOINT

The engineer may allow for variances to the dimensions shown.

Public and private driveways need to have a smooth vertical transition between the edge of pavement and the existing driveways. The Contractor is to add a vertical taper if needed which will be subsidiary to Item 344.

The use of RAP and RAS (recycled asphalt shingles) will not be allowed as part of the mix design for the final riding surface.

Use a release agent from the Department's MPL to clean and to coat the inside of truck beds for hauling equipment. Hauling equipment shall be cleaned prior to hauling material to job site. Submit a copy of the bill of lading to the Engineer as part of the QCP. Ensure the pavement is free from any spillage of hydraulic oil or diesel from construction equipment. The Department

may reject trucks that contain any foreign material and suspend production if the pavement is contaminated by any pollutants mentioned above.

The percentage of RAS used in the total mix shall not exceed 3% when allowed.

SAC B aggregate must have material properties that require 10 or less on the magnesium sulfate soundness test and 20 or less on the Micro-Deval test.

ITEM 346: Stone-Matrix Asphalt

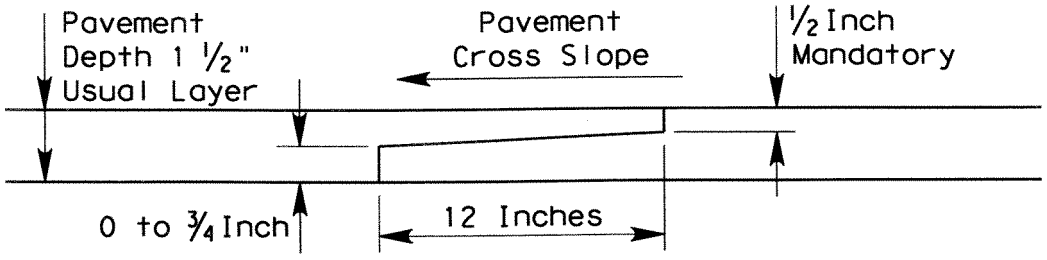
The Contractor shall exercise diligence in the application of "Bonding Course" by the use of flagging and rolling procedures to keep from spraying or splattering the traveling public with asphaltic material.

Blading (not to exceed more than 3-ft from the pavement edge) may also be necessary to clean dirt and grass from pavement edges and turnout areas as work under this bid Item. The cost of this blading will not be paid for directly but shall be considered subsidiary to this bid Item.

Level-up will be placed before the surface course. An asphaltic concrete spreading and finishing machine and/or motor graders; when approved by the Engineer may be used to place the ACP level-up.

Aggregates used on shoulders and ramps are required to meet SAC requirements.

All unconfined longitudinal joints shall be constructed with a joint maker providing a maximum ½-inch vertical edge and a minimum 6:1 edge taper or as approved by the Engineer. The Engineer may waive this requirement when no impacts to the traveling public are foreseen.



NOTCHED WEDGE JOINT

The engineer may allow for variances to the dimensions shown.

Public and private driveways need to have a smooth vertical transition between the edge of pavement and the existing driveways. The Contractor is to add a vertical taper if needed which will be subsidiary to Item 346.

The use of RAP and RAS (recycled asphalt shingles) will not be allowed as part of the mix design for the final riding surface.

Use a release agent from the Department's MPL to clean and to coat the inside of truck beds for hauling equipment. Hauling equipment shall be cleaned prior to hauling material to job site. Submit a copy of the bill of lading to the Engineer as part of the QCP. Ensure the pavement is free from any spillage of hydraulic oil or diesel from construction equipment. The Department may reject trucks that contain any foreign material and suspend production if the pavement is contaminated by any pollutants mentioned above.

The percentage of RAS used in the total mix shall not exceed 3% when allowed.

SAC B aggregate must have material properties that require 10 or less on the magnesium sulfate soundness test and 20 or less on the Micro-Deval test.

ITEM 3007 – Bonding Course

The minimum application rates are listed in Table BC.

The target shear bond strengths are listed in Table BCS. Results from these informational tests will not be used for specification compliance.

Table BC

Material	Minimum Application Rate (gal. per square yard)
TRAIL – Emulsified Asphalt	0.06
TRAIL – Hot Asphalt	0.12
Spray Applied Underseal Membrane	0.10

Table BCS (For Informational Tests)

Material	Target Shear Bond Strength (Tex-249-F psi)
SMA – Stone-Matrix Asphalt	60.0
All Other Materials	40.0

ITEM 354: Planing and Texturing Pavement

Contractor is to place seal coat or ACP layer(s) as indicated on plans within 14-calendar days of planing/milling operation unless otherwise directed by the Engineer.

All planing/milling operation drop offs greater than 1-inch need to have a 3:1 slope taper unless otherwise directed by the Engineer. The cost of the 3:1 slope taper is subsidiary to Item 354.

For locations on the plans that propose full width planning/milling as shown on the typical sections, Contractor is to place seal coat or ACP layer(s) as indicated on the plans within 2-calendar days of the planing/milling operation unless otherwise directed by the Engineer. Contractor will not be allowed to move onto the next planing/milling location or seal coat/ACP overlay location until the exposed area is covered as per above. Contractor cannot get paid for the planing/milling operation until exposed area is covered as per above.

All planing/milling material; RAP (recycled asphalt pavement) from this project will remain the property of the State unless otherwise noted in the plans and/or as directed by the Engineer. Stockpile 600 CY of material generated from the project at designated site located at the Intersection of IH -2 West Frontage Rd and N. Mile 2 West Rd

ITEM 400: Excavation and Backfill for Structures

If the Contractor elects to cut pavement (existing/detour) for structural work beyond that required by the construction phasing shown in the plans and approved by the Engineer, it shall be restored at his expense and backfilled to its original condition or better in accordance with Item 400.

Unless shown otherwise in the plans, use a 1-ft depth for Item 400 Structural Excavation (Special) for gravel bedding needed below drainage structures with unstable material.

Structural Excavation Special (Gravel):
Use durable natural stone when tested in accordance with Tex-411-A, has weight loss of no more than 18% after 5 cycles of magnesium sulfate solution. Provide gravel conforming to an aggregate Grade No. 1 as shown on Table 4 of Article 421.2.

ITEM 416: Drilled Shaft Foundations

Payment for furnishing and installing anchor bolts mounted in drill shafts will be included in the unit price bid for the various diameter drill shafts.

The Contractor shall coordinate with the utility companies to verify utility locations before drilling foundations.

The Contractor shall form, or provide a smooth finish, the portions of drilled shaft that project above the ground line. Place a ¾ inch chamfer on the top edge of each pole foundation. This work will not be paid for directly but will be considered subsidiary to this bid Item.

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

In the presence of excess ground water and/or unstable conditions in sub-grade soils prevents excavation to the line and depths indicated on the plans for "Drilled Shaft Foundation", other proposed methods of foundation installation such as casing, etc. shall be submitted for review and approved by the Engineer.

ITEM 421: Hydraulic Cement Concrete

Provide Sulfate Resistant Concrete for all concrete piling and drilled shafts.

Provide equipment at the batch plant for determining the free moisture and/or absorption of aggregates in accordance with applicable TXDOT Test.

Provide the following items for concrete batch inspection in accordance with specifications outlined in DMS-10101, "Computer Equipment":

(1) One Desktop Microcomputer or One Laptop Microcomputer
(2) One Integrated Printer/Scanner/Copier/Fax Unit
(3) Contractor-Furnished Software
(4) Hardware

Submit to the Engineer for approval the project locations for all Portland Cement concrete washout areas prior to starting any concrete work.

Fiber Reinforced Concrete is not permitted.

ITEM 432: Riprap

Provide Class "A" concrete minimum for riprap aprons placed around all box culvert and pipe safety end treatments. Provide ¼-inch thick dummy joints at least every 15-ft for riprap aprons placed around box and pipe culverts.

Do not use fiber reinforced concrete RIPRAP on side slopes equal to or steeper than 6:1 unless approved by the Engineer.

ITEM 464: Reinforced Concrete Pipe

Use tongue and groove pipe where the RCP extends into the lime treated subgrade. The 4-foot depth restriction for heavy equipment passage over pipe structures is voided. The Contractor will be responsible for any construction damage to these facilities.

Do not use mortar joints.

All reinforced concrete pipe shall include rubber gaskets unless shown otherwise on the plans or directed by the Engineer.

ITEM 465: Junction Boxes, Manholes, and Inlets

For TY PSL with RG, FG, or SFG lid inlets, provide Class B concrete riprap with (6"x6" W3xW3 (No. 6 gauge) welded wire fabric) for any side that is touching the natural ground. The riprap will be 4-in thick and 3-ft wide with an 8-in deep by 6-in wide toe unless otherwise shown in the plans. The cost will be subsidiary to Item 465, unless otherwise shown in the plans.

For all inlet extensions, provide a temporary circular curb/inlet extension opening for drainage during construction. The circular opening will be a 4-in Diameter by 2-in deep slot that matches the statewide PCO standard. Fill curb circular curb/inlet extension opening with epoxy and mortar as per Item 429 Concrete Structure Repair specifications. Epoxy and mortar are subsidiary to Item 465.

ITEM 467: Safety End Treatment

All Type II SET's shall have riprap, Class "A" minimum, aprons as shown on the plans. The Contractor may submit an alternate precast SET design for approval by the Engineer.

ITEM 502: Barricades, Signs, and Traffic Handling

Shadow vehicles equipped with Truck-Mounted Attenuators are required for traffic handling. See notes for Item 505: Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA), for additional references pertaining to the TMAs.

Replace/relocate all regulatory signs removed due to construction operations with the same sign on fixed support(s) immediately upon its removal. First obtain Project Engineer approval before removing any regulatory roadway sign. Required flaggers are to be available to direct traffic during sign intermediate down time.

Relocate any Directional Sign Assemblies removed during construction operations immediately upon their removal.

These signs shall be relocated to a location in accordance with the Latest Version of the "Texas Manual on Uniform Traffic Control Devices". In no case will a sign be removed without a replacement sign and support(s) being readily available and a location established. Removal and relocation of these signs required for traffic control will not be paid for directly but shall be considered subsidiary to Item 502.

From the beginning to the end of the project, all traffic control devices need to be in acceptable condition as per the Texas Quality Guidelines for Work Zone Traffic Control Devices.

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 "Safety Contingency" is not intended to be used in lieu of bid Items established by the contract.

Remove and dispose of all litter, debris, objectionable material, excess materials that accumulate at the base of all traffic control devices as directed by the Engineer.

ITEM 504: Field Office and Laboratory

Furnish (1) Field Office (Type C).

The Contractor will furnish a Type D Structure (Asphalt Mix Laboratory) modified by the following.

Laboratory room:

The other room of this building will be used as a laboratory and will include access to a bathroom facility from the interior. The laboratory and bathroom facility will have the walls, ceiling and floor insulated such that the air temperature can always be maintained at 76 degrees Fahrenheit.

Furnish for the Department's use in the asphalt laboratory one (1) desktop computer.

ITEM 505: Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)

In addition to the shadow vehicles with truck mounted attenuator (TMA) that are specified as being required on the traffic control plan for the project, provide 2 additional shadow vehicle(s) with TMA as per

or as per TCP(1-4) -18 as detailed on General Note 5 of this standard sheet;
or as per TCP(2-1) -18 as detailed on General Note 5 of this standard sheet;
or as per TCP(2-2) -18 as detailed on General Note 7 of this standard sheet;
or as per TCP(2-3) -23 as detailed on General Note 8 of this standard sheet;
or as per TCP(2-5) -18 as detailed on General Note 4 of this standard sheet.

Therefore, 3 total shadow vehicles with TMA will be required on this project for the type of work as shown on the plans. The Contractor will be responsible for determining if one or more of his construction operations will be ongoing at the same time and thus determine the total number of TMAs needed for the project.

ITEM 506: Temporary Erosion, Sedimentation, and Environmental Controls

Before starting each phase of construction, review with the Engineer the SWP3 used for temporary erosion control as outlined on the plans. Before construction, place the temporary erosion and sedimentation control features as shown on the SWP3. Location of construction exits are to be approved by the Engineer. After completing earthwork operations reseed and restore the disturbed areas with the Department’s specifications for temporary or permanent erosion control (for stabilization or finished work). Before starting grading operations and during the project duration, place the temporary or permanent erosion control measures to prevent sediment from leaving the right of way.

The Contractor Force Account “Erosion Control Maintenance” that has been established for this project is intended to be utilized for work zone Best Management Practice (BMP) maintenance, to improve the effectiveness of the Environmental Controls that may need maintenance attention and/or require replacement while the project is still under the construction stage. These procedures will be mutually agreed upon by the Engineer and the Contractor’s Responsible Person based on weekly or more frequent BMP management reviews on the project. The

"Erosion Control Maintenance" is not intended to be used in lieu of bid Items established by the contract.

ITEM 508: Constructing Detours

Flexible Base, prime coat, and Asphaltic Concrete Pavement used for detours shall meet the requirements of Items 247, 310 and 341 respectively, except for measurement and payment.

ITEM 512: Portable Traffic Barrier

During the various construction phases, provide drainage slots in every temporary concrete traffic barrier used for traffic control in order to handle temporary drainage. Provide any additional drainage measures needed as directed by the Engineer.

ITEM 529: Concrete Curb, Gutter, and Combined Curb and Gutter

Before final acceptance of the project, remove discoloration caused by tire marks, mud, asphalt, paint, or other similar material by any method satisfactory to the Engineer to achieve a uniform color and texture of the finished surface exposed to view.

Curb attached to the MBGF thrie-beam transition section will be subsidiary to the MBGF transition.

ITEM 530: Intersections, Driveways, and Turnouts

Prime coat shall meet the requirements of Item 310.

Public and private driveways need to have a smooth vertical transition tie-in between the proposed driveway and the existing driveway. The Contractor is to add a vertical taper if needed which will be subsidiary to Item 530.

ITEM 531: Sidewalks

Construct ¼-inch thick score joints at a maximum 6-foot spacing and expansion joints at a maximum 18 foot spacing. Construct a joint in the center of the sidewalk if it is over 15-feet wide. For steel reinforcement, use 6x6-inch spacing with #3 bars or 6x6 – D6 welded wire fabric.

ITEM 560: Mailbox Assemblies

Coordinate and verify final mailbox locations with TxDOT and the US Postmaster.

ITEM 585: Ride Quality for Pavement Surfaces

Use Surface Test Type "B" for service roads and ramps.

Quality control results shall be submitted to TxDOT the next working day after each day's paving.

Pavement areas with public turnout intersections that carry major traffic volumes will not be subjected to inertial profiler testing. These areas shall be evaluated using the 10-ft. straightedge.

Diamond grinding shall be used to remove localized roughness.

Use Surface Test Type B pay adjustment schedule 2 to evaluate ride quality of the travel lanes in accordance with Item 585, "Ride Quality for Pavement Surfaces." This includes ramps and service road travel lanes.

ITEM 618: Conduit

All conduit ends in pole bases, controllers and ground boxes shall be plugged with 4 to 6 inches of polyurethane sealant or its equivalent after cables are in place.

Conduit shall be placed in a straight line not to exceed 2.0 feet in any direction. The depth of the conduit shall be 2.0 feet except when crossing a roadway where the depth shall not be more than 3.0 feet nor less than 1.0 foot below the bottom of the base material in the roadway when placed by the jacking or boring method. Any evidence of damage to the roadway during the jacking or boring operation shall be sufficient grounds to stop the method being used.

Conduit runs under paved roadways or driveways shall be jacked or bored and then pushed across. At these locations, galvanized rigid metal may be used. All other runs shall be made by trenching. Existing pavement which will be removed, reconstructed, or overlaid with new pavement may be trenched across. Trenches for conduit runs shall be a minimum 2 feet deep and 4 inches wide. The conduit shall be placed on a 2-inch sand cushion and then backfilled with a minimum of 6 inches sand fill. The remainder of the trench shall be backfilled with flexible base, soil or two-sack concrete as required by location of conduit on the project or as directed. The top 3 inches shall match the existing surface material.

All conduit elbows and rigid extensions required to be installed on PVC conduit systems will not be paid for separately but will be considered subsidiary to the various bid Items.

Use materials from prequalified Material Producer List as shown on the Texas Department of Transportation (TxDOT) - Construction Division's (CST) Material Producer List. Category is "Roadway Illumination and Electrical Supplies."

ITEM 620: Electrical Conductors

For Flashing Beacons (Item 685) and Ped poles (Item 687) within the project, provide single-pole breakaway disconnects.

Use Bussman HEBW, Littelfuse LEB, Ferraz-Shawmut FEB, or equal on ungrounded conductors.

For all grounded conductors use Bussman HET, Littelfuse LET, Ferraz-Shawmut FEBN, or equal on ungrounded conductors. For all grounded conductors use Bussman HET, Littelfuse LET, Ferraz Shawmut FEBN, or equal. These breakaway connectors have a white colored marking and a permanently installed solid neutral.

ITEM 621: Tray Cable

Connect luminaires on traffic signal poles using a 4-conductor tray cable with conductor colors of red, black, and green #12 AWG (XHHW). The white (neutral) conductor will not be needed and will be capped.

ITEM 628: Electrical Services

Arrange for and cooperate with the utility company to provide electrical power for the service(s) shown and as required by the plans. A meter will be required on all electrical services.

ITEMS 636: Signs

Complete sign blanks and panels shall be handled and stored at the job site in such a manner that corners, edges and faces are not damaged. Finished sign blanks shall be stored in either a weatherproof warehouse or outside and off the ground in a vertical position. All paper, cardboard and chemically treated separators and packaging shall be removed prior to outside storage.

ITEM 644: Small Roadside Sign Assemblies

All signs shall be installed as shown in the plans and in accordance with the current edition of the "Texas Manual on Uniform Traffic Control Devices" and the “Sign Crew Field Book” (SCFB).

All signs shall be erected according to the locations shown on the signing layout sheets except that a sign may be shifted in order to secure a more desirable location. All sign locations will be staked as shown in the plans and as approved. It is the intent of the plans to erect all roadside traffic signs with the sign edge a minimum of 6 feet from the edge of the shoulder, or if none, 12 feet from the edge of the travel lane. In curb and gutter sections, the sign edge shall be a minimum of 2 feet from the face of the curb.

For this project, aluminum type sign blanks as provided for under Item 636 will be required for all proposed signing installed under Item 644. Aluminum sign blanks less than 7.5 square feet shall be 0.08-inch-thick, sign blanks 7.5 to 15 square feet shall be 0.100-inch-thick and sign blanks greater than 15 square feet shall be 0.125 inch thick.

All excess excavation shall be spread uniformly inside the right of way as directed and shall be included in the price of these Items.

Sign types which design details are not shown on the plans shall conform with the latest edition of the Department's "Standard Highway Sign Design for Texas" Manual.

Signs shown to be removed shall include the complete sign installation and separate the sign post at the concrete foundation. The concrete foundation shall be disposed in accordance with this bid Item. Except for concrete foundations, all removed sign panels, sign posts, and hardware shall remain then property of the Department. All removed sign installations shall be completely disassembled. All salvageable sections of sign panels shall be recycled by TxDOT. The removed sign material will be required to be hauled to the maintenance yard closest to the project. No signs shall be removed without prior approval.

ITEM 656: Foundations for Traffic Control Devices

The dimensions shown on the plans for location of signal pole foundations, conduit and other items may be varied to meet existing conditions as approved.

The work area shall be cleaned up and all loose material resulting from the contract operations shall be removed from the work area each day before work is suspended.

No traffic signal pole shall be placed on the foundations prior to seven (7) days following placement of concrete.

ITEMS 662 and 666: Work Zone Pavement Markings and Retroreflectorized Pavement Markings

All permanent pavement markings and work zone pavement markings for this project under these Items shall be 0.100 inches (100 mil) thick thermoplastic.

Any permanent pavement markings or non-removal work zone pavement markings lacking reflectivity in accordance with the requirements of Tex 828-B, or that fail to meet minimum retro reflectivity requirements for longitudinal pavement markings when required, will be addressed per the requirements of the specification. The roadway will be re-striped at no additional compensation.

Pavement surface preparation for markings and markers will not be paid for directly but shall be considered subsidiary to Item 666.

Prior to any striping operations, an on-site coordination meeting between all the parties involved will be required to review striping details and requirements to ensure quality work.

The beads used on this project shall meet the requirements of Departmental Materials Specification DMS-8290, Glass Traffic Beads Texas Type II & III. Use a 50% Type II/ 50% Type III mix utilizing a double drop system with Type III beads dropped first.

ITEM 677: Eliminating Existing Pavement Markings and Markers

Asphalt and aggregate types and grades shall be as approved in writing when a surface treatment is used to eliminate existing pavement markings.

ITEM 680: Highway Traffic Signals

The installation of highway traffic signals shall consist of the following principal Items:

1. Furnishing and installing 16-phase full traffic actuated controllers, base mounted cabinets, conflict monitors, load switches and loop amplifiers.
2. Furnishing and installing post mounted flashing beacon controllers and cabinets.
3. Furnishing and installing either, steel strain and/or mast arm poles, electrical service, luminaires, signal heads and cables, pedestrian heads and push buttons with signs that meet the "Americans with Disabilities Act" Standards, galvanized steel span wire, loop detectors, ground boxes, conduit runs and controller foundations.
4. Removal and disposal of existing signal material specified in the plans.

5. All other Items not listed above which are needed to provide for complete traffic signal installations and for proper signal operation as called for in the plans and specifications shall be furnished and installed.

Any deviation of location for proposed signal work shall be as approved.

Signal controller

The signal installations shall be wired in accordance with the phase diagrams in the plans. The proposed base mounted cabinets shall contain 16-phase conflict monitors, which display the "R-Y-G" and "Walk" phases. In addition to detecting phasing conflicts, the Conflict monitors shall also be able to detect multiple signal head indications within every phase. The conflict monitors shall continue to operate in the event of a power supply failure in the timer and shall be able to retain in memory the time and date of the failure detection. Time changes shall be programmable in the field without replacing components or use of external devices. The full-actuated controllers shall meet N.E.M.A. Specifications. The flasher Controllers shall be solid state.

A controller manufacturer's technician shall be required to load initial timing programs into the controllers as called for in the plans. Once the traffic signals are turned on, the same technician shall monitor the signal operation and traffic movement and shall adjust settings for best signal operation. The technician shall provide the State with a certification that the timing plan and coordination has been established according to the plans. This certification shall include a record showing all settings and functions programmed into the timer and any related units.

The controller must be delivered with two sets of wiring diagrams and operating manuals enclosed in a weatherproof bag.

All wiring not covered by the plans and specifications shall be in accordance with the latest edition of the National Electrical Code.

Under this Item, the proposed cabinets shall be base mounted or as shown in the plans.

Existing utilities

The exact location of existing underground utilities shall be verified with the utility companies prior to construction to avoid conflict with or damage to these utilities.

The coordination with the utility companies will be required to make any adjustments, due to utility conflicts, as defined in the specifications or deemed necessary.

Uniformity in equipment

1. All traffic signal controllers furnished shall be by the same manufacturer.

2. All flashing beacon controllers furnished shall be by the same manufacturer.
3. All traffic signal heads, and flashing beacon heads furnished shall be by the same manufacturer.
4. All signal fittings and pipe brackets shall be of an approved metallic material and of the same design and manufacturer.
5. All traffic signal poles furnished shall be by the same manufacturer.
6. All loop detector amplifiers furnished shall be by the same manufacturer and of the same type.

Handling of traffic

Roads and streets shall always be kept open to traffic. The setting of loop detectors shall be arranged so as to close only one lane of a roadway at a time. The installation of signal heads, poles and conduit shall also be arranged so as to permit the continuous movement of traffic in both directions at all times.

All construction operations shall be conducted to provide the least possible interference to traffic as shown on the plans, as provided for in the specifications and/or as directed. All signing, barricading, and handling of traffic shall conform to the current edition of the "Texas Manual on Uniform Traffic Control Devices".

Sequence of work

1. The existing traffic signal installations and/or flashing beacon installations shall always remain in operation during construction of the proposed traffic signal and/or flashing beacon installations or modifications.
2. The complete removal of the specified existing traffic signal and/or flashing beacon installations or specified Items when the proposed traffic signal and/or flashing beacon installations are in place and operational.
3. All labor, tools, and materials used to remove the specified existing traffic signal material shall not be paid for directly but shall be considered subsidiary to the various items of work.
4. Final inspection shall be performed in conjunction with the district signal shop.

ITEM 682: Vehicle and Pedestrian Signal Heads

All signal heads shall be covered with burlap from the time of installation until the signal is placed in operation. All signal heads shall be of polycarbonate material and yellow in color. Signal heads shall have standard detachable visors. LEDs shall be furnished for all traffic signal heads.

Signal heads shall be positioned carefully to provide the best view of signal indications to motorists. All signal heads shall be installed to a neat overall appearance. Nominal height for signal heads above pavement surface shall be 18 feet 6 inches, plus/minus 3 inches.

Pedestrian signal heads shall be positioned carefully to provide the best view to pedestrians.

ITEM 682: Vehicle and Pedestrian Signal Heads

All flashing beacon heads shall be covered with burlap from the time of installation until they are placed in operation. All flashing beacon heads shall be of polycarbonate material and yellow in color. Flashing beacon heads shall have standard detachable visors. LEDs shall be furnished for all traffic signal heads.

Flashing beacon heads shall be positioned carefully to provide the best view of head indications to motorists. All beacon heads shall be installed to a neat overall appearance.

Nominal height for flashing beacon heads above pavement surface shall be 18 feet 6 inches, plus/minus 3 inches.

ITEM 684: Traffic Signal Cables

All signal cable shall be #12 AWG; 2/c loop. Lead-In shall be #14 AWG shielded and loop wires in pavement.

ITEM 686: Traffic Signal Pole Assemblies (Steel)

The locations for the proposed traffic signal poles are approximate. The exact locations will be determined in the field in coordination with the District Signal Shop.
Erection and/or removal of poles and luminaries located near any overhead electrical power lines shall be accomplished using established industry and utility safety practices. The appropriate utility company shall be consulted with prior to beginning such work.

CONTROL : 1228-04-015
PROJECT : C 1228-4-15
HIGHWAY : FM 1015
COUNTY : HIDALGO

TEXAS DEPARTMENT OF TRANSPORTATION

GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS

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

STANDARD SPECIFICATIONS: ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION SEPTEMBER 1, 2024. STANDARD SPECIFICATIONS ARE INCORPORATED INTO THE CONTRACT BY REFERENCE.

ITEMS 1 TO 9 INCL., GENERAL REQUIREMENTS AND COVENANTS
ITEM 100 PREPARING RIGHT OF WAY <103><752>
ITEM 104 REMOVING CONCRETE
ITEM 105 REMOVING TREATED AND UNTREATED BASE AND ASPHALT PAVEMENT
ITEM 110 EXCAVATION <132>
ITEM 132 EMBANKMENT <100><110><160><204><210><216><400>
ITEM 134 BACKFILLING PAVEMENT EDGES <162><166><168><300><314>
ITEM 160 TOPSOIL <168>
ITEM 164 SEEDING FOR EROSION CONTROL <162><166><168>
ITEM 168 VEGETATIVE WATERING
ITEM 204 SPRINKLING
ITEM 216 PROOF ROLLING <210>
ITEM 247 FLEXIBLE BASE <105><204><210><216><520>
ITEM 250 GEOGRID BASE REINFORCEMENT
ITEM 260 LIME TREATMENT (ROAD-MIXED) <105><132><204><210><216> <247><300><310><520>
ITEM 275 CEMENT TREATMENT (ROAD-MIXED) <204><210><216><247><300> <310><520>
ITEM 305 SALVAGING, HAULING, AND STOCKPILING RECLAIMABLE ASPHALT PAVEMENT
ITEM 310 PRIME COAT <300><316>
ITEM 341 DENSE-GRADED HOT-MIX ASPHALT <300><301><320><504><520> <585>
ITEM 344 SUPERPAVE MIXTURES <300><301><320><504><520><585>
ITEM 346 STONE-MATRIX ASPHALT <300><301><320><504><520><585>
ITEM 354 PLANING AND TEXTURING PAVEMENT
ITEM 360 CONCRETE PAVEMENT <300><421><422><431><438><440><529> <585>
ITEM 400 EXCAVATION AND BACKFILL FOR STRUCTURES <110><132><401> <402><403><416><420><421><423>

ITEM 402 TRENCH EXCAVATION PROTECTION
ITEM 416 DRILLED SHAFT FOUNDATIONS <405><420><421><423><440><448>
ITEM 464 REINFORCED CONCRETE PIPE <400><402><403><420><421><422><424><440><462><464><465><467><471><476>
ITEM 465 JUNCTION BOXES, MANHOLES, AND INLETS <400><420><421><424><440><462><464><471><476>
ITEM 467 SAFETY END TREATMENT <400><420><421><432><440><442><445><460><464>
ITEM 479 ADJUSTING MANHOLES AND INLETS <400><421><465><471>
ITEM 480 CLEANING EXISTING CULVERTS
ITEM 496 REMOVING STRUCTURES
ITEM 500 MOBILIZATION
ITEM 502 BARRICADES, SIGNS, AND TRAFFIC HANDLING <503><505><510>
ITEM 503 PORTABLE CHANGEABLE MESSAGE SIGN
ITEM 504 FIELD OFFICE AND LABORATORY
ITEM 505 TRUCK-MOUNTED ATTENUATOR (TMA) AND TRAILER ATTENUATOR (TA)
ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS <161><432><556>
ITEM 508 CONSTRUCTING DETOURS
ITEM 512 PORTABLE TRAFFIC BARRIER <420><421><424><440><442><445><502><514>
ITEM 529 CONCRETE CURB, GUTTER, AND COMBINED CURB AND GUTTER <360><420><421><440>
ITEM 530 INTERSECTIONS, DRIVEWAYS, AND TURNOUTS <247><260><275><276><292><316><330><334><360><421><440>
ITEM 531 SIDEWALKS <104><360><420><421><440><530>
ITEM 545 CRASH CUSHION ATTENUATORS <421><502>
ITEM 560 MAILBOX ASSEMBLIES
ITEM 618 CONDUIT <400><445><476>
ITEM 620 ELECTRICAL CONDUCTORS <610><628>
ITEM 621 TRAY CABLE <620>
ITEM 624 GROUND BOXES <420><421><432><440><618><620>
ITEM 625 ZINC-COATED STEEL WIRE STRAND
ITEM 628 ELECTRICAL SERVICES <441><445><449><618><620><627><656>
ITEM 636 SIGNS
ITEM 644 SMALL ROADSIDE SIGN ASSEMBLIES <421><440><441><442><445><636><656>
ITEM 662 WORK ZONE PAVEMENT MARKINGS <666><668><672><677>
ITEM 666 RETROREFLECTORIZED PAVEMENT MARKINGS <316><502><667><677><678>
ITEM 668 PREFABRICATED PAVEMENT MARKINGS AND RUMBLE STRIPS <678>
ITEM 672 RAISED PAVEMENT MARKERS <677><678>
ITEM 677 ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS <300><302><315><316>
ITEM 678 PAVEMENT SURFACE PREPARATION FOR MARKINGS <677>
ITEM 680 HIGHWAY TRAFFIC SIGNALS <416><450><531><610><618><620><621><624><625><628><636><656><682><684><685><686><687><688>
ITEM 681 TEMPORARY TRAFFIC SIGNALS <416><610><617><618><620><621><624><625><627><628><636><656><680><682><684><685><686><687><688>
ITEM 682 VEHICLE AND PEDESTRIAN SIGNAL HEADS
ITEM 684 TRAFFIC SIGNAL CABLES <625><680><690>
ITEM 686 TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) <416><421><441>

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          <442><445><449><610><613><614><650><654>
ITEM 687  PEDESTAL POLE ASSEMBLIES <445><449><656><682><688>
ITEM 688  PEDESTRIAN DETECTORS AND VEHICLE LOOP DETECTORS <618>
          <624><682><684>
ITEM 690  MAINTENANCE OF TRAFFIC SIGNALS AND ILLUMINATION <104>
          <400><416><421><431><432><440><445><449><450><476><610>
          <613><614><616><618><620><621><624><625><627><628><636>
          <656><680><682><684><685><686><687>
ITEM 760  CLEANING AND RESHAPING DITCHES
ITEM 764  PUMP STATIONS AND DRAINAGE SYSTEM CLEANING


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


SPECIAL LABOR PROVISIONS FOR STATE PROJECTS (000---005)
SPECIAL PROVISION "NONDISCRIMINATION" (000---001)
SPECIAL PROVISION "AMERICANS WITH DISABILITIES ACT CURB RAMP WORKSHOP
                  " (000---006)
SPECIAL PROVISION "NOTICE OF CONTRACTOR PERFORMANCE EVALUATIONS"
                     (000---016)
SPECIAL PROVISION "CERTIFICATE OF INTERESTED PARTIES (FORM 1295)"
                     (000---017)
SPECIAL PROVISION "IMPORTANT NOTICE TO CONTRACTORS" (000---018)
SPECIAL PROVISION "SMALL BUSINESS ENTERPRISE IN STATEFUNDED PROJECTS"
                     (000---019)
SPECIAL PROVISION "NULL" (000---034)
SPECIAL PROVISION  TO ITEM   300  (300---001)
SPECIAL PROVISION  TO ITEM   302  (302---001)
SPECIAL PROVISION  TO ITEM   400  (400---001)


SPECIAL SPECIFICATIONS:
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ITEM 3007 BONDING COURSE
ITEM 4008 REINFORCED CONCRETE LOW-HEAD PRESSURE PIPE <400><402>
          <403><464><467><476>
ITEM 6008 RADAR VEHICLE DETECTION SYSTEM FOR SIGNALIZED
          INTERSECTION CONTROL
ITEM 6041 TRAFFIC DATA COLLECTION SYSTEM - VEHICLE CLASSIFICATION
          (TDCS-VC) <360><400><618><620><624><628><656><680><684>
          <688>


GENERAL:  THE ABOVE-LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH
-------   PAYMENT IS TO BE MADE.  THESE, TOGETHER WITH SUCH OTHER
          PERTINENT ITEMS, IF ANY, AS MAY BE REFERRED TO IN THE ABOVE-
          LISTED SPECIFICATION ITEMS, AND INCLUDING THE SPECIAL
          PROVISIONS LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFI-
          CATIONS FOR THIS PROJECT.
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Control **1228-04-015**

Project **C 1228-4-15**

Highway **FM 1015**

County **HIDALGO**

SMALL BUSINESS ENTERPRISE REQUIREMENTS

The following goal for small business enterprises is established:

SBE
0.0%

CHILD SUPPORT STATEMENT

Under Section 231.006, Family Code, the vendor or applicant certifies that the individual or business entity named in this contract, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this contract may be terminated and payment may be withheld if this certification is inaccurate.

CONFLICT OF INTEREST CERTIFICATION

Pursuant to Texas Government Code Section 2261.252(b), the Department is prohibited from entering into contracts in which Department officers and employees have a financial interest.

By signing the Contract, the Contractor certifies that it is not prohibited from entering into a Contract with the Department as a result of a financial interest as defined under Texas Government Code Section 2261.252(b), and that it will exercise reasonable care and diligence to prevent any actions or conditions that could result in a conflict of interest with the Department.

The Contractor also certifies that none of the following individuals, nor any of their family members within the second degree of affinity or consanguinity, owns 1% or more interest or has a financial interest as defined under Texas Government Code Section 2261.252(b) in the Contractor:

- Any member of the Texas Transportation Commission; and
- The Department's Executive Director, General Counsel, Chief of Procurement and Field Support Operations, Director of Procurement, and Director of Contract Services.

Violation of this certification may result in action by the Department.

E-VERIFY CERTIFICATION

Pursuant to Texas Transportation Code §223.051, all TxDOT contracts for construction, maintenance, or improvement of a highway must include a provision requiring Contractors and subcontractors to use the U.S. Department of Homeland Security's E-Verify system to determine employment eligibility. By signing the contract, the Contractor certifies that prior to the award of the Contract:

- the Contractor has registered with and will, to the extent permitted by law, utilize the United States Department of Homeland Security's E-Verify system during the term of the Contract to determine the eligibility of all persons hired to perform duties within Texas during the term of the agreement; and
- the Contractor will require that all subcontractors also register with and, to the extent permitted by law, utilize the United States Department of Homeland Security's E-Verify system during the term of the subcontract to determine the eligibility of all persons hired to perform duties within Texas during the term of the agreement.

Violation of this requirement constitutes a material breach of the Contract, subjects a subcontractor to removal from the Contract, and subjects the Contractor or subcontractors to possible sanctions in accordance with Title 43, Texas Administrative Code, Chapter 10, Subchapter F, "Sanctions and Suspension for Ethical Violations by Entities Doing Business with the Department."

Certification Regarding Disclosure of Public Information

Pursuant to Subchapter J, Chapter 552, Texas Government Code, contractors executing a contract with a governmental body that results in the expenditure of at least $1 million in public funds must:

1) preserve all contracting information* as provided by the records retention requirements applicable to Texas Department of Transportation (TxDOT) for the duration of the contract,
2) on request of TxDOT, promptly provide any contracting information related to the contract that is in the custody or possession of the entity, and
3) on completion of the contract, either:
    A. provide, at no cost to TxDOT, all contracting information related to the contract that is in the custody or possession of the entity, or
    B. preserve the contracting information related to the contract as provided by the records retention requirements applicable to TxDOT

The requirements of Subchapter J, Chapter 552, Government Code, may apply to this contract, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

By entering into Contract, the Contractor agrees to:

- provide, or make available, to TxDOT and any authorized governmental investigating or auditing agency all records, including electronic and payment records related to the contract, for the same period provided by the records retention schedule applicable to TxDOT, and
- ensure that all subcontracts include a clause requiring the same.

* As defined in Government Code §552.003, "Contracting information" means the following information maintained by a governmental body or sent between a governmental body and a vendor, contractor, potential vendor, or potential contractor:

1) information in a voucher or contract relating to the receipt or expenditure of public funds by a governmental body;
2) solicitation or bid documents relating to a contract with a governmental body;
3) communications sent between a governmental body and a vendor, contractor, potential vendor, or potential contractor during the solicitation, evaluation, or negotiation of a contract;
4) documents, including bid tabulations, showing the criteria by which a governmental body evaluates each vendor, contractor, potential vendor, or potential contractor responding to a solicitation and, if applicable, an explanation of why the vendor or contractor was selected; and
5) communications and other information sent between a governmental body and a vendor or contractor related to the performance of a final contract with the governmental body or work performed on behalf of the governmental body.

CERTIFICATION TO NOT BOYCOTT ISRAEL

Pursuant to Texas Government Code §2271.002, the Department must include a provision requiring a written verification affirming that the Contractor does not boycott Israel, as defined in Government Code §808.001, and will not boycott Israel during the term of the contract. This provision applies to a contract that:

1) is with a Contractor that is not a sole proprietorship,
2) is with a Contractor with 10 or more full-time employees, and
3) has a value of $100,000 or more.

By signing the contract, the Contractor certifies that it does not boycott Israel and will not boycott Israel during the term of this contract. “Boycott” means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes.

Violation of this certification may result in action by the Department.

CERTIFICATION TO NOT BOYCOTT ENERGY COMPANIES

Pursuant to Texas Government Code §2274.002, the Department must include a provision requiring a written verification affirming that the Contractor does not boycott energy companies, as defined in Government Code §809.001, and will not boycott energy companies during the term of the contract. This provision applies to a contract that:

1) is with a Contractor that is not a sole proprietorship,
2) is with a Contractor with 10 or more full-time employees, and
3) has a value of $100,000 or more.

By signing the contract, the Contractor certifies that it does not boycott energy companies and will not boycott energy companies during the term of this contract. “Boycott” means taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations with a company because the company: (1) engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law; or (2) does business with a company described by (1).

Violation of this certification may result in action by the Department.

CERTIFICATION TO NOT DISCRIMINATE AGAINST FIREARM ENTITIES OR FIREARM TRADE ASSOCIATIONS

Pursuant to Texas Government Code §2274.002, the Department must include a provision requiring a written verification affirming that the Contractor:

1) does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, as defined in Government Code §2274.001, and
2) will not discriminate against a firearm entity or firearm trade association during the term of the contract.

This provision applies to a contract that:

1) is with a Contractor that is not a sole proprietorship,
2) is with a Contractor with 10 or more full-time employees, and
3) has a value of $100,000 or more.

By signing the contract, the Contractor certifies that it does not discriminate against a firearm entity or firearm trade association as described and will not do so during the term of this contract. "Discriminate against a firearm entity or firearm trade association" means, with respect to the entity or association, to: (1) refuse to engage in the trade of any goods or services with the entity or association based solely on its status as a firearm entity or firearm trade association; (2) refrain from continuing an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association; or (3) terminate an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association. "Discriminate against a firearm entity or firearm trade association" does not include: (1) the established policies of a merchant, retail seller, or platform that restrict or prohibit the listing or selling of ammunition, firearms, or firearm accessories; (2) a company's refusal to engage in the trade of any goods or services, decision to refrain from continuing an existing business relationship, or decision to terminate an existing business relationship to comply with federal, state, or local law, policy, or regulations or a directive by a regulatory agency, or for any traditional business reason that is specific to the customer or potential customer and not based solely on an entity 's or association's status as a firearm entity or firearm trade association.

Violation of this certification may result in action by the Department.

PROHIBITION ON CERTAIN TELECOMMUNICATIONS EQUIPMENT OR SERVICES

The Federal Register Notice issued the Final Rule and states that the amendment to 2 CFR 200.216 is effective on August 13, 2020. The new 2 CFR 200.471 regulation provides clarity that the telecommunications and video surveillance costs associated with 2 CFR 200.216 are unallowable for services and equipment from these specific providers. OMB's Federal Register Notice includes the new 2 CFR 200.216 and 2 CFR 200.471 regulations.

https://www.federalregister.gov/documents/2020/08/13/2020-17468/guidance-for-grants-and-agreements

Per the Federal Law referenced above, use of services, systems, or services or systems that contain components produced by any of the following manufacturers is strictly prohibited for use on this project. Therefore, for any telecommunications, CCTV, or video surveillance equipment, services or systems cannot be manufactured by, or have components manufactured by:

- Huawei Technologies Company,
- ZTE Corporation (any subsidiary and affiliate of such entities),
- Hyatera Communications Corporation,
- Hangzhou Hikvision Digital Technology Company,
- Dahua Technology Company (any subsidiary and affiliate of such entities).

Violation of this prohibition will require replacement of the equipment at the contractor's expense.

Special Provision to Item 000
Special Labor Provisions for State Projects

1. GENERAL

This is a "Public Works" Project, as provided under Government Code, Chapter 2258, "Prevailing Wage Rates," and is subject to the provisions of the statute. No provisions in the Contract are intended to conflict with the provisions of the statute.

The Commission has ascertained and indicated in the Special Provisions the regular rate of per diem wages prevailing in each locality for each craft or type of worker. Apply the wage rates contained in the Specifications as minimum wage rates for the Contract.

2. MINIMUM WAGES, HOURS, AND CONDITIONS OF EMPLOYMENT

All workers necessary for the satisfactory completion of the work are within the purview of the Contract.

Whenever and wherever practical, give local citizens preference in the selection of labor.

Do not require any worker to lodge, board, or trade at a particular place, or with a particular person, as a condition of employment.

Do not charge or accept a fee of any from any person who obtains work on the project. Do not require any person who obtains work on the project to pay any fee to any other person or agency obtaining employment for the person on the project.

Do not charge for tools or equipment used in connection with the duties performed, except for loss or damage of property. Do not charge for necessary camp water.

Do not charge for any transportation furnished to any person employed on the project.

The provisions apply where work is performed by piece work and station work. The minimum wage paid will be exclusive of equipment rental on any shipment that the worker or subcontractor may furnish in connection with their work.

Take responsibility for carrying out the requirements of this Specification and ensure that each subcontractor working on the project complies with its provisions.

Any form of subterfuge, coercion, or deduction designated to evade, reduce, or discount the established minimum wage scales will be considered a violation of the Contract.

The Fair Labor Standards Act established one and one-half (1-1/2) pay for overtime in excess of 40 hr. worked in 1 week. Do not consider time consumed by the worker in going to and returning from the place of work as part of the hours of work. Do not require or permit any worker to work more than 40 hr. in 1 week, unless the worker receives compensation at a rate not less than 1-1/2 times the basic rate of pay for all hours worked in excess of 40 hr. in the workweek.

The general rates of per diem wages prevailing in this locality for each class and type of workers whose services are considered necessary to fulfill the Contract are indicated in the Special Provisions, and these rates govern as minimum wage rates on this Contract. A penalty of $60 per calendar day or portion of a calendar day for each worker who is paid less than the stipulated general rates of per diem wages for any work done under the Contract will be deducted. The Department, upon receipt of a complaint by a worker,

will determine within 30 days whether good cause exists to believe that the Contractor or a subcontractor has violated wage rate requirements and notify the parties involved of the findings. Make every effort to resolve the alleged violation within 14 days after notification. The next alternative is submittal to binding arbitration in accordance with the provisions of the Texas General Arbitration Act (Article 224 et seq., "Revised Statutes").

Notwithstanding any other provision of the Contract, covenant and agree that the Contractor and its subcontractors will pay each of their employees and contract labor engaged in any way in work under the Contract, a wage not less than what is generally known as the "federal minimum wage" in accordance with 29 USC § 206 as that statute may be amended from time to time.

Pay any worker employed whose position is not listed in the Contract, a wage not less than the per diem wage rate established in the Contract for a worker whose duties are most nearly comparable.

3. RECORD AND INSPECTIONS

Keep copies of weekly payrolls for review. Require subcontractors to keep copies of weekly payrolls for review. Show the name, occupation, number of hours worked each day, and per diem wage paid each worker together with a complete record of all deductions made from such wages. Keep records for a period of 3 yr. from the date of completion of the Contract.

Where the piece-work method is used, indicate on the payroll for each person involved:

- quantity of piece work performed,
- price paid per piece-work unit, and
- total hours employed.

The Engineer may require the Contractor to file an affidavit for each payroll certifying that payroll is a true and accurate report of the full wages due and paid to each person employed.

Post or make available to employees the prevailing wage rates from the Contract. Require subcontractors to post or make available to employees the prevailing wage rates from the Contract.

The wage rates listed herein are those predetermined by the Secretary of Labor and State Statue and listed in the United States Department of Labor's (USDOL) General Decisions dated 01-05-2024 and are the minimum wages to be paid accordingly for each specified classification. To determine the applicable wage rate zone, a list entitled "TEXAS COUNTIES IDENTIFIED BY WAGE RATE ZONES" is provided in the contract. Any wage rate that is not listed herein and not in the USDOL's general decision, must be requested by the contractor through the completion of an Additional Classification and Wage Rate Request and be submitted for approval. IMPORTANT NOTICE FOR STATE PROJECTS: only the controlling wage rate zone applies to the contract. Effective 01-05-2024.

CLASS. #	CLASSIFICATION DESCRIPTION	ZONE TX02 *(TX20240002)	ZONE TX03 *(TX20240003)	ZONE TX04 *(TX20240004)	ZONE TX05 *(TX20240005)	ZONE TX06 *(TX20240006)	ZONE TX07 *(TX20240007)	ZONE TX08 *(TX20240008)	ZONE TX24 *(TX20240024)	ZONE TX25 *(TX20240025)	ZONE TX27 *(TX20240027)	ZONE TX28 *(TX20240028)	ZONE TX29 *(TX20240029)	ZONE TX30 *(TX20240030)	ZONE TX37 *(TX20240037)	ZONE TX38 *(TX20240038)	ZONE TX42 *(TX20240042)
1428	Agricultural Tractor Operator						$12.69					$12.35			$11.75		
1300	Asphalt Distributor Operator	$14.87	$13.48	$13.88	$15.72	$15.58	$15.55	$15.72	$13.28	$15.32	$15.62	$14.36	$14.25	$14.03	$13.75	$14.06	$14.40
1303	Asphalt Paving Machine Operator	$13.40	$12.25	$12.35	$13.87	$14.05	$14.36	$14.20	$13.26	$13.99	$14.68	$12.92	$13.44	$12.53	$14.00	$14.32	$12.99
1106	Asphalt Raker	$12.28	$10.61	$12.02	$14.21	$11.65	$12.12	$11.64	$11.44	$12.69	$12.05	$11.34	$11.67	$11.40	$12.59	$12.36	$11.78
1112	Batching Plant Operator, Asphalt																
1115	Batching Plant Operator, Concrete																
1214	Blaster																
1615	Boom Truck Operator						$18.36										
1444	Boring Machine Operator																
1305	Broom or Sweeper Operator	$11.21	$10.33	$10.08	$11.99		$11.04	$11.62		$11.74	$11.41	$10.30		$10.23	$10.60	$12.68	$11.05
1144	Communications Cable Installer																
1124	Concrete Finisher, Paving and Structures	$13.55	$12.46	$13.16	$12.85	$12.64	$12.56	$12.77	$12.44	$14.12	$13.04	$13.38	$12.64	$12.80	$12.79	$12.98	$13.32
1318	Concrete Pavement Finishing Machine Operator				$16.05		$15.48			$16.05		$19.31				$13.07	
1315	Concrete Paving, Curing, Float, Texturing Machine Operator											$16.34				$11.71	
1333	Concrete Saw Operator				$14.67					$14.48	$17.33					$13.99	
1399	Concrete/Gunite Pump Operator																
1344	Crane Operator, Hydraulic 80 tons or less				$18.22		$18.36			$18.12	$18.04	$20.21			$18.63	$13.86	
1345	Crane Operator, Hydraulic Over 80 Tons																
1342	Crane Operator, Lattice Boom 80 Tons or Less	$16.82	$14.39	$13.85	$17.27		$15.87			$17.27		$14.67			$16.42	$14.97	$13.87
1343	Crane Operator, Lattice Boom Over 80 Tons				$20.52		$19.38			$20.52		$17.49			$25.13	$15.80	
1306	Crawler Tractor Operator	$13.96	$16.63	$13.62	$14.26		$15.67			$14.07	$13.15	$13.38			$14.60	$13.68	$13.50
1351	Crusher or Screen Plant Operator																
1446	Directional Drilling Locator						$11.67										
1445	Directional Drilling Operator				$20.32		$17.24										
1139	Electrician	$20.96		$19.87	$19.80		$26.35		$20.27	$19.80		$20.92				$27.11	$19.87
1347	Excavator Operator, 50,000 pounds or less	$13.46	$12.56	$13.67	$17.19		$12.88	$14.38	$13.49	$17.19		$13.88			$14.09	$12.71	$14.42
1348	Excavator Operator, Over 50,000 pounds		$15.23	$13.52	$17.04		$17.71			$16.99	$18.80	$16.22				$14.53	$13.52
1150	Flagger	$9.30	$9.10	$8.50	$10.28	$8.81	$9.45	$8.70		$10.06	$9.71	$9.03	$8.81	$9.08	$9.90	$10.33	$8.10
1151	Form Builder/Setter, Structures	$13.52	$12.30	$13.38	$12.91	$12.71	$12.87	$12.38	$12.26	$13.84	$12.98	$13.07	$13.61	$12.82	$14.73	$12.23	$12.25
1160	Form Setter, Paving & Curb	$12.36	$12.16	$13.93	$11.83	$10.71	$12.94			$13.16	$12.54	$11.33	$10.69		$13.33	$12.34	$13.93
1360	Foundation Drill Operator, Crawler Mounted				$17.99					$17.99						$17.43	
1363	Foundation Drill Operator, Truck Mounted		$16.86	$22.05	$21.51		$16.93			$21.07	$20.20	$20.76		$17.54	$21.39	$15.89	$22.05
1369	Front End Loader Operator, 3 CY or Less	$12.28	$13.49	$13.40	$13.85		$13.04	$13.15	$13.29	$13.69	$12.64	$12.89			$13.51	$13.32	$12.17
1372	Front End Loader Operator, Over 3 CY	$12.77	$13.69	$12.33	$14.96		$13.21	$12.86	$13.57	$14.72	$13.75	$12.32			$13.19	$13.17	$13.02
1329	Joint Sealer																
1172	Laborer, Common	$10.30	$9.86	$10.08	$10.51	$10.71	$10.50	$10.24	$10.58	$10.72	$10.45	$10.30	$10.25	$10.03	$10.54	$11.02	$10.15
1175	Laborer, Utility	$11.80	$11.53	$12.70	$12.17	$11.81	$12.27	$12.11	$11.33	$12.32	$11.80	$11.53	$11.23	$11.50	$11.95	$11.73	$12.37
1346	Loader/Backhoe Operator	$14.18	$12.77	$12.97	$15.68		$14.12			$15.18	$13.58	$12.87		$13.21	$14.13	$14.29	$12.90
1187	Mechanic	$20.14	$15.47	$17.47	$17.74	$17.00	$17.10			$17.68	$18.94	$18.58	$17.00	$16.61	$18.46	$16.96	$17.47

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1380	Milling Machine Operator	$15.54	$14.64	$12.22	$14.29		$14.18			$14.32	$14.35	$12.86			$14.75	$13.53	$12.80
1390	Motor Grader Operator, Fine Grade	$17.49	$16.52	$16.88	$17.12	$18.37	$18.51	$16.69	$16.13	$17.19	$18.35	$17.07	$17.74	$17.47	$17.08	$15.69	$20.01
1393	Motor Grader Operator, Rough	$16.15	$14.62	$15.83	$16.20	$17.07	$14.63	$18.50		$16.02	$16.44	$15.12	$16.85	$14.47	$17.39	$14.23	$15.53
1413	Off Road Hauler			$10.08	$12.26		$11.88			$12.25		$12.23			$13.00	$14.60	
1196	Painter, Structures					$21.29	$18.34						$21.29			$18.62	
1396	Pavement Marking Machine Operator	$16.42		$13.10	$13.55		$19.17	$12.01		$13.63	$14.60	$13.17		$16.65	$10.54	$11.18	$13.10
1443	Percussion or Rotary Drill Operator																
1202	Piledriver															$14.95	
1205	Pipelayer		$11.87	$14.64	$13.17	$11.17	$12.79		$11.37	$13.24	$12.66	$13.24	$11.17	$11.67		$12.12	$14.64
1384	Reclaimer/Pulverizer Operator	$12.85			$11.90		$12.88			$11.01		$10.46					
1500	Reinforcing Steel Worker	$13.50	$14.07	$17.53	$16.17		$14.00			$16.18	$12.74	$15.83		$17.10		$15.15	$17.72
1402	Roller Operator, Asphalt	$10.95		$11.96	$13.29		$12.78	$11.61		$13.08	$12.36	$11.68			$11.71	$11.95	$11.50
1405	Roller Operator, Other	$10.36		$10.44	$11.82		$10.50	$11.64		$11.51	$10.59	$10.30		$12.04	$12.85	$11.57	$10.66
1411	Scraper Operator	$10.61	$11.07	$10.85	$12.88		$12.27		$11.12	$12.96	$11.88	$12.43		$11.22	$13.95	$13.47	$10.89
1417	Self-Propelled Hammer Operator																
1194	Servicer	$13.98	$12.34	$14.11	$14.74		$14.51	$15.56	$13.44	$14.58	$14.31	$13.83		$12.43	$13.72	$13.97	$14.11
1513	Sign Erector																
1708	Slurry Seal or Micro-Surfacing Machine Operator																
1341	Small Slipform Machine Operator									$15.96							
1515	Spreader Box Operator	$12.60		$13.12	$14.71		$14.04			$14.73	$13.84	$13.68		$13.45	$11.83	$13.58	$14.05
1705	Structural Steel Welder															$12.85	
1509	Structural Steel Worker						$19.29									$14.39	
1339	Subgrade Trimmer																
1143	Telecommunication Technician																
1145	Traffic Signal/Light Pole Worker						$16.00										
1440	Trenching Machine Operator, Heavy						$18.48										
1437	Trenching Machine Operator, Light																
1609	Truck Driver Lowboy-Float	$14.46	$13.63	$13.41	$15.00	$15.93	$15.66			$16.24	$16.39	$14.30	$16.62	$15.63	$14.28	$16.03	$13.41
1612	Truck Driver Transit-Mix				$14.14					$14.14							
1600	Truck Driver, Single Axle	$12.74	$10.82	$10.75	$13.04	$11.61	$11.79	$13.53	$13.16	$12.31	$13.40	$10.30	$11.61		$11.97	$11.46	$10.75
1606	Truck Driver, Single or Tandem Axle Dump Truck	$11.33	$14.53	$11.95	$12.95		$11.68		$14.06	$12.62	$11.45	$12.28		$13.08	$11.68	$11.48	$11.10
1607	Truck Driver, Tandem Axle Tractor withSemi Trailer	$12.49	$12.12	$12.50	$13.42		$12.81	$13.16		$12.86	$16.22	$12.50			$13.80	$12.27	$12.50
1441	Tunneling Machine Operator, Heavy																
1442	Tunneling Machine Operator, Light																
1706	Welder		$14.02		$14.86		$15.97		$13.74	$14.84					$13.78		
1520	Work Zone Barricade Servicer	$10.30	$12.88	$11.46	$11.70	$11.57	$11.85	$10.77		$11.68	$12.20	$11.22	$11.51	$12.96	$10.54	$11.67	$11.76

Notes:

*Represents the USDOL wage decision.

Any worker employed on this project shall be paid at the rate of one and one half (1-1/2) times the regular rate for every hour worked in excess of forty (40) hours per week.

For reference, the titles and descriptions for the classifications listed here are detailed further in the AGC of Texas' *Standard Job Classifications and Descriptions for Highway, Heavy, Utilities, and Industrial Construction in Texas* posted on the AGC's Web site for any contractor.

TEXAS COUNTIES IDENTIFIED BY
WAGE RATE ZONES: 2, 3, 4, 5, 6, 7, 8, 24, 25, 27, 28, 29, 30, 37, 38, 42

County Name	Zone	County Name	Zone	County Name	Zone	County Name	Zone
Anderson	28	Donley	37	Karnes	27	Reagan	37
Andrews	37	Duval	30	Kaufman	25	Real	37
Angelina	28	Eastland	37	Kendall	7	Red River	28
Aransas	29	Ector	2	Kenedy	30	Reeves	8
Archer	25	Edwards	8	Kent	37	Refugio	27
Armstrong	2	El Paso	24	Kerr	27	Roberts	37
Atascosa	7	Ellis	25	Kimble	37	Robertson	7
Austin	38	Erath	28	King	37	Rockwall	25
Bailey	37	Falls	28	Kinney	8	Runnels	37
Bandera	7	Fannin	28	Kleberg	27	Rusk	4
Bastrop	7	Fayette	27	Knox	37	Sabine	28
Baylor	37	Fisher	37	Lamar	28	San Augustine	28
Bee	27	Floyd	37	Lamb	37	San Jacinto	38
Bell	7	Foard	37	Lampasas	7	San Patricio	29
Bexar	7	Fort Bend	38	LaSalle	30	San Saba	37
Blanco	27	Franklin	28	Lavaca	27	Schleicher	37
Borden	37	Freestone	28	Lee	27	Scurry	37
Bosque	28	Frio	27	Leon	28	Shackelford	37
Bowie	4	Gaines	37	Liberty	38	Shelby	28
Brazoria	38	Galveston	38	Limestone	28	Sherman	37
Brazos	7	Garza	37	Lipscomb	37	Smith	4
Brewster	8	Gillespie	27	Live Oak	27	Somervell	28
Briscoe	37	Glasscock	37	Llano	27	Starr	30
Brooks	30	Goliad	29	Loving	37	Stephens	37
Brown	37	Gonzales	27	Lubbock	2	Sterling	37
Burleson	7	Gray	37	Lynn	37	Stonewall	37
Burnet	27	Grayson	25	Madison	28	Sutton	8
Caldwell	7	Gregg	4	Marion	28	Swisher	37
Calhoun	29	Grimes	28	Martin	37	Tarrant	25
Callahan	25	Guadalupe	7	Mason	27	Taylor	2
Cameron	3	Hale	37	Matagorda	27	Terrell	8
Camp	28	Hall	37	Maverick	30	Terry	37
Carson	2	Hamilton	28	McCulloch	37	Throckmorton	37
Cass	28	Hansford	37	McLennan	7	Titus	28
Castro	37	Hardeman	37	McMullen	30	Tom Green	2
Chambers	38	Hardin	38	Medina	7	Travis	7
Cherokee	28	Harris	38	Menard	37	Trinity	28
Childress	37	Harrison	42	Midland	2	Tyler	28
Clay	25	Hartley	37	Milam	28	Upshur	4
Cochran	37	Haskell	37	Mills	37	Upton	37
Coke	37	Hays	7	Mitchell	37	Uvalde	30
Coleman	37	Hemphill	37	Montague	37	Val Verde	8
Collin	25	Henderson	28	Montgomery	38	Van Zandt	28
Collingsworth	37	Hidalgo	3	Moore	37	Victoria	6
Colorado	27	Hill	28	Morris	28	Walker	28
Comal	7	Hockley	37	Motley	37	Waller	38
Comanche	37	Hood	28	Nacogdoches	28	Ward	37
Concho	37	Hopkins	28	Navarro	28	Washington	28
Cooke	37	Houston	28	Newton	28	Webb	3
Coryell	7	Howard	37	Nolan	37	Wharton	27
Cottle	37	Hudspeth	8	Nueces	29	Wheeler	37
Crane	37	Hunt	25	Ochiltree	37	Wichita	5
Crockett	8	Hutchinson	37	Oldham	37	Wilbarger	37
Crosby	2	Irion	2	Orange	38	Willacy	30
Culberson	8	Jack	28	Palo Pinto	28	Williamson	7
Dallam	37	Jackson	27	Panola	28	Wilson	7
Dallas	25	Jasper	28	Parker	25	Winkler	37
Dawson	37	Jeff Davis	8	Parmer	37	Wise	25
Deaf Smith	37	Jefferson	38	Pecos	8	Wood	28
Delta	25	Jim Hogg	30	Polk	28	Yoakum	37
Denton	25	Jim Wells	27	Potter	2	Young	37
DeWitt	27	Johnson	25	Presidio	8	Zapata	30
Dickens	37	Jones	25	Rains	28	Zavala	30
Dimmit	30			Randall	2		

01/05/2024

Special Provision to Item 000
Nondiscrimination

1. DESCRIPTION

All recipients of federal financial assistance are required to comply with various nondiscrimination laws, including Title VI of the Civil Rights Act of 1964, as amended (Title VI). Title VI forbids discrimination against anyone in the United States on the grounds of race, color, or national origin by any agency receiving federal funds.

The Texas Department of Transportation, as a recipient of federal financial assistance, and under Title VI and related statutes, ensures that no person will on the grounds of race, religion (where the primary objective of the financial assistance is to provide employment in accordance with 42 USC 2000d-3), color, national origin, sex, age, or disability be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any Department programs or activities.

2. DEFINITION OF TERMS

Where the term "Contractor" appears in the following six nondiscrimination clauses, the term "Contractor" is understood to include all parties to Contracts or agreements with the Department.

3. NONDISCRIMINATION PROVISIONS

During the performance of this Contract, the Contractor agrees as follows.

3.1. **Compliance with Regulations**. The Contractor must comply with the Regulations pertinent to nondiscrimination in federally assisted programs of the United States Department of Transportation 49 CFR 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this Contract.

3.2. **Nondiscrimination**. The Contractor, regarding the work performed during the Contract, must not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor must not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the Contract covers a program set forth in Appendix B of the Regulations.

3.3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment**. In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, the Contractor must notify each potential subcontractor or supplier of the Contractor's obligations under this Contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

3.4. **Information and Reports**. The Contractor must provide all information and reports required by the Regulations or directives issued pursuant thereto, and must permit access to its books, records, accounts, other sources of information, and facilities as may be determined by the Recipient or the Department to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor must so certify to the Recipient, or the Department as appropriate, and must set forth what efforts it has made to obtain the information.

3.5. **Sanctions for Noncompliance**. In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, the Recipient must impose such Contract sanctions as it or the Department may

determine to be appropriate, including, but not limited to actions defined in Article 7.1., “Ethics,” or Article 5.1., “Authority of Engineer.”

3.6. **Incorporation of Provisions**. The Contractor must include the provisions of Sections 3.1–3.6 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The Contractor must take such action with respect to any subcontract or procurement as the Recipient or the Department may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that, in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the Recipient to enter into such litigation to protect the interests of the Recipient, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

Special Provision to Item 000
Americans with Disabilities Act Curb Ramp Workshop

Before starting work, schedule and attend a mandatory preconstruction Americans with Disabilities Act curb ramp workshop. The workshop will be administered by the Department, will be 4 hr. or less, and will be held during normal working hours at an approved location near the project.

Supervisory personnel responsible for control of the work must attend the workshop.

The Department will provide workshop facilitators and facilities. No direct compensation will be made for fulfilling these requirements because this workshop will be subsidiary to the Items of the Contract.

Special Provision 000
Important Notice to Contractors

1. GENERAL

In accordance with Texas Transportation Code §223.012, the Engineer will evaluate Contractor performance based on quality, safety, and timeliness of the project.

2. DEFINISIONS

2.1. **Project Recovery Plan (PRP)**. A formal, enforceable plan developed by the Contractor, in consultation with the District, that documents the cause of noted quality, safety, and timeliness issues and specifies how the Contractor proposes to correct project-specific performance deficiencies.

In accordance with 43 TAC §9.23, the District will request a PRP if the Contractor's performance on a project is below the Department's acceptable standards and will monitor the Contractor's compliance with the established plan.

2.2. **Corrective Action Plan (CAP)**. A formal, enforceable plan developed by the Contractor, and proposed for adoption by the Construction Division or Maintenance Division, that documents the cause of noted quality, safety, and timeliness issues and specifies how the Contractor proposes to correct statewide performance deficiencies.

3. CONTRACTOR EVALUATIONS

In accordance with 43 TAC §9.23, the Engineer will schedule evaluations at the following intervals, at minimum:

- interim evaluations at or within 30 days after the anniversary of the Notice to Proceed, for Contracts extending beyond 1 yr. and
- final evaluation, upon project closeout.

In case of a takeover agreement, neither the Surety nor its performing Contractor will be evaluated.

In addition to regularly scheduled evaluations, the Engineer may schedule an interim evaluation at any time to formally communicate issues with quality, safety, or timeliness. Upon request, work with the Engineer to develop a PRP to document expectations for correcting deficiencies.

Comply with the PRP as directed. Failure to comply with the PRP may result in additional remedial actions available to the Engineer under Item 5, "Control of the Work." Failure to meet a PRP to the Engineer's satisfaction may result in immediate referral to the Performance Review Committee for consideration of further action against the Contractor.

The Engineer will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards or comply with a PRP, including consideration of sufficient time.

Follow the escalation ladder if there is a disagreement regarding an evaluation or disposition of a PRP. The Contractor may submit additional documentation pertaining to the dispute. The District Engineer's decision on a Contractor's evaluation score and recommendation of action required in a PRP or follow-up for noncompliance is final.

4. DIVISION OVERSIGHT

Upon request of the Construction Division or Maintenance Division, develop and submit for Division approval a proposed CAP to document expectations for correcting deficiencies in the performance of projects statewide.

Comply with the CAP as directed. The CAP may be modified at any time up to completion or resolution after written approval of the premise of change from the Division. Failure to meet an adopted or revised adopted CAP to the Division's satisfaction within 120 days will result in immediate referral to the Performance Review Committee for consideration of further action against the Contractor.

The Division will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards or comply with a CAP, including consideration of sufficient time and associated costs as appropriate.

5. PERFORMANCE REVIEW COMMITTEE

The Performance Review Committee, in accordance with 43 TAC §9.24, will review at minimum all final evaluations, history of compliance with PRPs, any adopted CAPs including agreed modifications, any information about events outside a Contractor's control contributing to the Contractor's performance, and any documentation submitted by the Contractor and may recommend one or more of the following actions:

- take no action,
- reduce the Contractor's bidding capacity,
- prohibit the Contractor from bidding on one or more projects,
- immediately suspend the Contractor from bidding for a specified period of time, by reducing the Contractor's bidding capacity to zero, or
- prohibit the Contractor from being awarded a Contract on which they are the apparent low bidder.

The Deputy Executive Director will determine any further action against the Contractor.

6. APPEALS PROCESS

In accordance with 43 TAC §9.25, the Contractor may appeal remedial actions determined by the Deputy Executive Director.

Special Provision 000
Certificate of Interested Parties (Form 1295)

Submit Form 1295, "Certificate of Interested Parties," in the following instances:

- at Contract execution for Contracts awarded by the Commission,
- at Contract execution for Contracts awarded by the District Engineer or Chief Engineer with an award amount of $1 million or more,
- at any time an existing Contract awarded by the District Engineer or Chief Engineer increases in value to $1 million or more because of changes in the Contract,
- at any time there is an increase of $1 million or more to an existing Contract (e.g., change orders, extensions, and renewals), and
- at any time there is a change to the information in Form 1295, when the form was filed for an existing Contract.

Form 1295 and instructions for completing and filing the form are available on the Texas Ethics Commission website.

Special Provision 000
Important Notice to Contractors

Table 1
Daily Contract Administration Liquidated Damages

For Dollar Amount of Original Contract		Dollar Amount of Daily Contract Administration Liquidated Damages per Working Day
From More Than	To and Including	
0	1,000,000	618
1,000,000	3,000,000	832
3,000,000	5,000,000	940
5,000,000	15,000,000	1,317
15,000,000	25,000,000	1,718
25,000,000	50,000,000	2,411
50,000,000	Over 50,000,000	4,265

In addition to the amount shown in Table 1, the liquidated damages will be increased by the amount shown in Item 8 of the General Notes for Road User Cost (RUC), when applicable.

Special Provision to Item 000
Small Business Enterprise in State-Funded Projects

1. DESCRIPTION

The purpose of this Special Provision is to implement the Department's policy of ensuring that SBEs have an opportunity to participate in the performance of Contracts. If the SBE goal is greater than zero, Section 2.1., "Article A—SBE Goal is Greater than Zero," will apply to this Contract; otherwise, Section 2.2., "Article B—No SBE Goal," will apply. The percentage goal for SBE participation in the work to be performed under this Contract will be in accordance with the proposal.

2. DEFINITIONS

A Small Business Enterprise (SBE) is a firm certified as such by the Department. Firms certified as Historically Underutilized Businesses (HUBs) by the Texas Comptroller of Public Accounts and as Disadvantaged Business Enterprises (DBEs) by the Texas Uniform Certification Program automatically qualify as SBEs.

2.1. **Article A—SBE Goal is Greater than Zero**.

2.1.1. **Policy**. The Department is committed to providing contracting opportunities for small businesses. Therefore, it is the Department's policy to develop and maintain a program to facilitate contracting opportunities for small businesses. Consequently, the requirements of the Department's SBE Program apply to this Contract as follows.

The Contractor will make a good faith effort to meet the SBE goal for this Contract.

The Contractor and any subcontractors will not discriminate on the basis of race, color, national origin, age, disability, or sex in the award and performance of this Contract. These nondiscrimination requirements must be incorporated into any subcontract and purchase order.

After a conditional award is made to the low Bidder, the Department will determine the adequacy of a Contractor's efforts to meet the Contract goal, in accordance with Section 2.1.2., "Contractor's Responsibilities." If the requirements in accordance with Section 2.1.2., "Contractor's Responsibilities," are met, the Contract will be forwarded to the Contractor for execution.

The Contractor's performance in meeting the SBE goal during the construction period of the Contract will be monitored by the Department.

2.1.2. **Contractor's Responsibilities**. These requirements must be satisfied by the Contractor. An SBE Contractor may satisfy the SBE requirements by performing at least 25% of the Contract work with their own organization in accordance with Item 8, "Prosecution and Progress."

The Contractor must complete an SBE Commitment Agreement Form for each SBE-certified firm the Contractor intends to use to satisfy the SBE goal. The SBE Commitment Agreement Form must be submitted to the Department's Civil Rights Division (CIV) in Austin, Texas, no later than 5 P.M. on the 10th business day, excluding national holidays, after the conditional award of the Contract. When requested, additional time not to exceed 7 business days, excluding national holidays, may be granted based on documentation submitted by the Contractor.

A Contractor that cannot meet the Contract goal, in whole or in part, must document the good faith efforts taken to meet the SBE goal. The Department will consider as good faith efforts all documented explanations

that are submitted and that describe a Contractor's failure to meet an SBE goal or obtain SBE participation, including:

- advertising in general circulation, trade association, and minority- or women-focused media regarding subcontracting opportunities,
- dividing the Contract work into reasonable portions in conformance with standard industry practices,
- documenting reasons for rejection or meeting with the rejected SBE to discuss the rejection,
- providing qualified SBEs with adequate information pertinent to bonding, insurance, plans, Specifications, scope of work, and the requirements of the Contract,
- negotiating in good faith with qualified SBEs, not rejecting qualified SBEs that are also the lowest responsive Bidder; and
- using the services of available minorities and women; community organizations; Contractor groups; local, state, and federal business assistance offices; and other organizations that provide support services to SBEs.

The good faith effort documentation is due at the time and place in accordance with this Section. CIV will evaluate the Contractor's documentation. If it is determined that the Contractor has failed to meet the good faith effort requirements, the Contractor will be given an opportunity for reconsideration by the Department.

Should the Bidder to which the Contract is conditionally awarded refuse, neglect, or fail to meet the SBE goal or demonstrate to the Department's satisfaction sufficient efforts to obtain SBE participation, the proposal guaranty filed with the bid will become the property of the State, not as a penalty, but as liquidated damages.

The Contractor must not terminate an SBE subcontractor submitted on a commitment agreement for a Contract with an assigned goal without the prior written consent of the Department.

The Contractor must designate an SBE contact person who will administer the Contractor's SBE program and who will be responsible for submitting reports, maintaining records, and documenting good faith efforts to use SBEs.

The Contractor must inform the Department of the representative's name, title, and telephone number within 10 days of beginning work.

2.1.3. **Eligibility of SBEs**. The Department certifies the eligibility of SBEs.

Firms certified as SBEs are listed in the Department's online directory located at https://txdot.txdotcms.com/.

Only firms certified at the time of letting or at the time the commitments are submitted are eligible to be used in the information furnished by the Contractor in accordance with Section 2.1.2., "Contractor's Responsibilities."

Certified HUBs and DBEs are eligible as SBEs.

The Department's SBE Program is governed by 43 TAC, Chapter 9, Subchapter K, "Small Business Enterprise (SBE) Program."

2.1.4. **Determination of SBE Participation**. SBE participation will be counted toward meeting the SBE goal in this Contract in accordance with the following.

A Contractor will receive credit for all payments actually made to an SBE for work performed and costs incurred in accordance with the Contract, including all subcontracted work.

An SBE Contractor or subcontractor may not subcontract more than 75% of a Contract. The SBE must perform no less than 25% of the value of the Contract work with their own organization in accordance with Item 8.

An SBE may lease equipment consistent with standard industry practice. An SBE may lease equipment from the prime Contractor if a rental agreement, separate from the subcontract specifying the terms of the lease arrangement, is approved by the Department before the SBE starting the work in accordance with the following.

- If the equipment is of a specialized nature, the lease may include the operator. If the practice is generally acceptable with the industry, the operator may remain on the lessor's payroll. The operator of the equipment must be subject to the full control of the SBE, for a short term, and involve a specialized piece of heavy equipment readily available at the jobsite.
- For equipment that is not specialized, the SBE must provide the operator and be responsible for all payroll and labor compliance requirements.

2.1.5. **Records and Reports**. The Contractor must submit monthly reports of SBE payments (including payments to HUBs and DBEs) to the Area Engineer's Office after work begins. These reports will be due within 15 days after the end of a calendar month.

These reports will be required until all SBE subcontracting or supply activity is completed. The SBE Progress Report must be used for monthly reporting. Upon completion of the Contract and before receiving the final payment, the Contractor must submit the SBE Final Report to the Area Engineer's Office and a copy to the District Construction Office. These forms may be obtained from CIV and reproduced as necessary. The Department may verify the amounts being reported as paid to SBEs by randomly requesting copies of invoices and cancelled checks paid to SBEs. When the SBE goal requirement is not met, documentation supporting good faith efforts, in accordance with Section 2.1.2., "Contractor's Responsibilities," must be submitted with the SBE Final Report.

SBE subcontractors and suppliers should be identified on the monthly report by SBE certification number, name, and the amount of actual payment made to each during the monthly period. These reports are required regardless of whether SBE activity has occurred in the monthly reporting period.

All such records must be retained for 3 yr. following completion of the Contract work and be available at reasonable times and places for inspection by authorized representatives of the Department.

2.1.6. **Compliance of Contractor**. To ensure compliance with SBE requirements of this Contract, the Department will monitor the Contractor's efforts to involve SBEs during the performance of this Contract. This will be accomplished by a review of monthly reports submitted by the Contractor indicating their progress in achieving the SBE Contract goal and by compliance reviews conducted by the Department.

A Contractor's failure to comply with the requirements of this Special Provision will constitute a material breach of this Contract. In such a case, the Department reserves the right to employ remedies as the Department deems appropriate in the terms of the Contract.

2.2. **Article B—No SBE Goal.**

2.2.1. **Policy**. It is the Department's policy that SBEs will have an opportunity to participate in the performance of Contracts.

2.2.2. **Contractor's Responsibilities**. If there is no SBE goal, the Contractor must offer SBEs an opportunity to participate in the performance of Contracts and subcontracts. If an SBE is used, the requirements in accordance with Section 2.1.4., "Determination of SBE Participation," will apply.

2.2.3. **Prohibit Discrimination**. The Contractor and any subcontractor will not discriminate on the basis of race, color, national origin, religion, age, disability, or sex in the award and performance of Contracts. These nondiscrimination requirements must be incorporated into any subcontract and purchase order.

2.2.4. **Records and Reports**. The Contractor must submit annual reports pertinent to SBEs (including HUBs and DBEs) to the Area Engineer's Office by August 31 or at project completion, whichever comes first.

These reports will be required until all SBE subcontracting or supply activity is completed. The SBE Progress Report must be used for reporting. Upon completion of the Contract and before receiving the final payment, the Contractor must submit the SBE Final Report to the Area Engineer's Office and a copy to the District Construction Office. These forms may be obtained from CIV and reproduced as necessary. The Department may verify the amounts being reported as paid to SBEs by randomly requesting copies of invoices and cancelled checks paid to SBEs.

SBE subcontractors and suppliers should be identified on the report by SBE certification cumber, name, and the amount of actual payment made.

All such records must be retained for 3 yr. following completion of the Contract work and be available at reasonable times and places for inspection by authorized representatives of the Department.

Special Provision 000
Important Notice to Contractors

As of July 5, 2024, utilities within the project limits have not been cleared. The Department anticipates clearance by the dates listed below. Unless otherwise stated, clearance of these obstructions will be performed by their owners. Estimated clearance dates are not anticipated to interfere with the Contractor's operations. In the event the clearance dates are not met, requests for additional compensation or time will be made in accordance with the standard specifications.

The Contractor is invited to review the mapped information of obstructions on file with the Engineer.

UTILITY						
Utility Owner	**Utility**	**Compensable Yes/No**	**Station**	**Status**	**Estimated Comp Date**	**Effect on Construction**
AT&T	Existing copper line crossing to be removed.	No	STA 75+91 to STA 115+95	Pending design plans for removal.	November 29, 2024	No effect. Existing lines to be removed.
Military Highway Water Supply Co.	Existing Sanitary Sewer line to remain in place.	No	STA 87+88 to STA 115+92	Pending processing of exception to policy to remain in place.	November 29, 2024	No effect. Utility to remain in place, not in conflict with proposed construction.
Military Highway Water Supply Co.	Existing abandoned force main line to be removed during construction.	No	STA 58+72 to STA 98+63	Note included in plans, Contractor to coordinate with MHWSC.	November 29, 2024	No effect. Abandoned line to be removed.
Military Highway Water Supply Co.	Existing abandoned gravity line to be removed during construction.	No	STA 78+88 to STA.\ 87+88	Note included in plans, Contractor to coordinate with MHWSC.	November 29, 2024	No effect. Abandoned line to be removed.

Special Provision to Item 300
Asphalts, Oils, and Emulsions

Item 300, "Asphalts, Oils, and Emulsions," of the Standard Specifications is amended with respect to the clause cited below. No other clauses or requirements of this Item are waived or changed.

Section 300.2.4., "Emulsified Asphalt," Table 7, is supplemented by the following.

Table 7A
Surface Performance-Grade Emulsified Asphalt

Grade	Test Procedure	HFRS-2(SPG xy[1])		CRS-2(SPG xy)		CHFRS-2(SPG xy)	
		Min	Max	Min	Max	Min	Max
Tests on emulsions:							
Viscosity, Saybolt Furol at 50°C, SFs[2]	T 72	150	400	150	400	150	400
Storage stability test, 24 h., %[2]	T 59	–	1	–	1	–	1
Demulsibility, 35 mL, 0.02 N $CaCl_2$, %	T 59	60	–	–	–	–	–
Demulsibility, 35 mL, 0.8% dioctyl sodium sulfosuccinate, %	T 59	–	–	60	–	60	–
Particle charge test	T 59	–	–	Positive		Positive	
Sieve test, %[2]	T 59	–	0.10	–	0.10	–	0.10
Residue recovery Residue, %	PP 72, Procedure B	65	–	65	–	65	–
Tests on recovered residue:							
Residue properties		Meet the SPG in Table 18A, except the Max phase angle is 84[3]					
Solubility in trichloroethylene, %	T 44	97.5	–	97.5	–	–	–
Float test, 60°C, sec.[4]	T 50	1,200	–	–	–	1,200	–

1. X is the average 7-day Max pavement surface design temperature, and y is the Min pavement surface design temperature used in Table 18A.
2. This test requirement on representative samples is waived if successful application of the material has been achieved in the field.
3. Meet original performance properties and PAV residue requirements only.
4. If float test is less than 1,200 sec. using PP 72, Procedure B, for residue recovery, then use T 59 for residue recovery.

Section 300.2.11., "Performance-Graded Binders," is supplemented by the following.

Table 18A
Surface Performance Grade (SPG) Specification

Surface Performance Grade	SPG 67				SPG 73				SPG 79			
	-13	-19	-25	-31	-13	-19	-25	-31	-13	-19	-25	-31
Average 7-day Max pavement surface design temperature[1], °C	<67				<73				<79			
Min pavement surface design temperature[1], °C	>-13	>-19	>-25	>-31	>-13	>-19	>-25	>-31	>-13	>-19	>-25	>-31
Original Binder												
Flash point temp., T 48, Min, °C	230											
Viscosity, T 316[2]: Max 0.15 Pa*s, test temp., °C	205											
Original Performance Properties												
Dynamic shear, T 315: G*/sind, Min 0.65 kPa, Test temp. @ 10 rad/s, °C	67				73				79			
Phase angle[3] (d), Max, @ temp.	–	80	80	80	80	80	80	80	80	80	80	80

Surface Performance Grade	SPG 67				SPG 73				SPG 79			
	-13	**-19**	**-25**	**-31**	**-13**	**-19**	**-25**	**-31**	**-13**	**-19**	**-25**	**-31**
where G*/sind = 0.65 kPa												
Pressure Aging Vessel (PAV) Residue (R 28)												
PAV aging temperature, °C	100				100				100			
Creep stiffness, T 313: S, Max 500 MPa, Test temp. @ 8 sec., °C	-13	-19	-25	-31	-13	-19	-25	-31	-13	-19	-25	-31

1. Temperatures are at the surface of the pavement structure. These may be determined from experience or may be estimated using equations developed by SHRP or LTPP but modified to represent surface temperatures. Surface-grade high temperatures are generally 3°C–4°C greater than those determined for Superpave PG binders.
2. The referee method will be AASHTO T 316 using a #21 spindle at 50 r/min; however, alternate methods may be used for routine testing and quality assurance.
3. Phase angle is determined at the temperature where G*/sin δ = 0.65 kPa. For routine testing and quality assurance, the phase angle can be interpolated from testing at two temperatures, one above and one below where G*/sin δ = 0.65 kPa.

Special Provision to Item 302
Aggregates for Surface Treatments

Item 302, "Aggregates for Surface Treatments," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 2.1., "Aggregate." Table 2 is voided and replaced by the following.

Table 2
Aggregate Gradation Requirements (Cumulative % Retained[1])

Sieve	Grade									
	1	2	3S[2]	3		4S[2]	4	4P	5S[2]	5[3]
				Non-Lightweight	Lightweight					
1"	–	–	–	–	–	–	–	–	–	–
7/8"	0–2	0	–	–	–	–	–	–	–	–
3/4"	20–35	0–2	0	0	0	–	–	–	–	–
5/8"	85–100	20–40	0–5	0–5	0–2	0	0	0	–	–
1/2"	-	80–100	55–85	20–40	10–25	0–5	0–5	0-5	0	0
3/8"	95–100	95–100	95–100	80–100	60–80	60–85	20–45	20-40	0–5	0–5
1/4"	––	–	–	95–100	95–100	–	–	–	65–85	–
#4	–	--	–	–	–	95–100	95–100	90-100	95–100	50–80
#8	99–100	99–100	99–100	98–100	98–100	98–100	98–100	97-100	98–100	98–100

1. Round test results to the nearest whole number.
2. Single-size gradation.
3. Grade 5S may be substituted for Grade 5 for LRA only, unless otherwise approved by the Engineer.

Article 302.4., "Construction," is supplemented with the following.

Stockpiling of Aggregates. Provide a smooth and well-drained area, cleared of trash, weeds, and grass. Build stockpiles to minimize aggregate degradation and segregation. Avoid contamination and mixing of stockpiles. Provide aggregate stockpiles for a minimum of two days' production before beginning plant operations. Maintain at least a 2-day aggregate supply throughout the project unless otherwise directed. Stockpile aggregate for each source and type separately.

Materials Stockpile Life. Stockpile life is defined as 1 yr. from the date of testing. Non-precoated surface treatment aggregate remaining in stockpiles after 1 yr. may be resubmitted for testing. Precoated surface treatment aggregate remaining in stockpiles after 1 yr. will no longer be approved for Department use and will be removed from the Department approved stockpile area.

Special Provision to Item 400
Excavation and Backfill for Structures

Item 400, "Excavation and Backfill for Structures" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 400.2., "Materials", is supplemented by the following.

Unless otherwise shown on the plans, use sand backfill with 70-100% passing the No. 10 sieve. The Plasticity Index (PI) is determined in accordance with Tex-106-E and must not exceed 6. At all pipe joints backfilled with sand, the Contractor must install a filter fabric designed to prevent the migration of sand into the pipes as approved by the Engineer. Filter fabric must meet the requirements of DMS-6200, Type I.

Unless otherwise shown on the plans, the gravel must conform to Aggregate Grade No. 1, 2, 3 or 4 requirements shown in Table 4 of Article 421.2.

Section 400.4.4., "Sand Backfill" and Section 400.4.5., "Structural Excavation (Special).," are added.

> **4.4. Sand Backfill.** Sand Backfill will be measured by the cubic yard. When shown on the plans, the excavation must be backfilled to the elevations shown with sand. The sand backfill will be measured in accordance with the backfill diagram shown on the plans.
>
> **4.5. Structural Excavation (Special).** Structural Excavation (Special) for Gravel Bedding will be measured by the cubic yard.

Section 400.5.1., "Structural Excavation", is supplemented by the following.

When the plans specify or when the Engineer directs the use of gravel bedding material, excavation below the footing grades will be measured and paid for as "Structural Excavation (Special)". The unit price bid for "Structural Excavation (Special)" will be full compensation for furnishing, hauling and placing gravel bedding material and for all labor, equipment, tools and incidentals necessary to complete the work.

Section 400.5.6., "Sand Backfill", is added.

> **5.6. Sand Backfill.** The unit price bid for "Sand Backfill" will be full compensation for excavation and furnishing sand backfill and filter fabric, hauling, placing and compacting the sand backfill and filter fabric; and materials, equipment, labor, tools and incidentals.

Special Specification 3007
Bonding Course

1. DESCRIPTION

Construct a bonding course using a Tracking-Resistant Asphalt Interlayer (TRAIL) or a Spray Applied Underseal Membrane before the placement of a new hot-mix asphalt concrete pavement.

2. MATERIALS

Furnish asphalt materials in accordance with Article 300.2., "Materials" for one of the following two options:

2.1. **TRAIL**. Furnish asphalt material described as "tack" for typical use in the TRAIL Material Producer List. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use, unless required in conformance with the manufacturer's recommendation for approved TRAIL products on the MPL.

2.2. **Underseal Membrane**. Furnish asphalt material meeting the requirements of Special Specification 3005, "Spray Applied Underseal Membrane." Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

Furnish asphalt material for applying tack coat to all miscellaneous contact surfaces when approved by the Engineer:

2.3. **Miscellaneous Tack**. Furnish CSS-1H, SS-1H, EBL, or a PG binder with a minimum high-temperature grade of PG 58 for tack coat binder in accordance with Item 300, Asphalts, Oils, and Emulsions. Specialized tack coat materials on the MPL for Tracking Resistant Asphalt Interlayer (TRAIL) will be allowed or required when shown on the plans. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use, unless required in conformance with the manufacturer's recommendation for approved TRAIL products on the MPL.

2.4. **Sampling**. The Engineer will obtain at least one sample of the tack coat binder per project per source in accordance with Tex-500-C, Part III, and test it to verify compliance with Item 300. The Engineer will notify the Contractor when the sampling will occur and will witness the collection of the sample from the asphalt distributor immediately before use. Label the can with the corresponding lot and sublot numbers, producer, producer facility location, grade, district, date sampled, all applicable bills of lading (if available), and project information, including highway and control-section-job (CSJ) number. For emulsions, the Engineer may test as often as necessary to ensure the residual of the emulsion is greater than or equal to the specification requirement in Item 300.

2. EQUIPMENT

2.5. **TRAIL**. Provide the equipment recommended by the producer.

2.6. **Underseal Membrane**. Provide in accordance with Special Specification 3005, "Spray Applied Underseal Membrane."

3. CONSTRUCTION

2.7. **Preparation**. Clean the surface before placing the bonding course. Apply bonding course uniformly at the approved rate, unless otherwise directed. The Engineer will set the rate between 0.04 – 0.14 gal. of residual asphalt per square yard of surface area. The Engineer may adjust the application rate, taking into

consideration the existing pavement surface conditions. Prevent splattering of the bonding course when placed adjacent to curb, gutter, and structures,

Apply a thin, uniform tack coat to all miscellaneous contact surfaces of curbs, structures, and joints. Prevent splattering of the tack coat when placed adjacent to curb, gutter, and structures.

2.8. **TRAIL**. Perform the following construction methods when applying a TRAIL for a bonding course:

3.1.2. **Test Strips**. When required by the Engineer, perform a test strip of TRAIL at a location on or near the project as directed. Allow the strip to cure for a maximum of 30 min. Drive over the test strip with equipment used during laid-down construction to simulate the effect of paving equipment. There should be no evidence of tracking or picking up of the TRAIL material on the wheels of the equipment.

3.1.3. **Placement**. Uniformly apply the TRAIL material to all areas where mix will be placed, including joints, at the rate shown on the plans or as directed, within 15°F of the approved temperature, and not above the maximum allowable temperature. Unless otherwise directed, uniformly apply the TRAIL material at a minimum rate specified on the plans. The Engineer will set the application rate between 0.06 – 0.14 gal. per square yard for emulsion TRAIL and the application rate between 0.08 – 0.12 gal. per square yard for hot-applied TRAIL.

2.9. **Underseal Membrane**. Place in accordance with Special Specification 3005, "Spray Applied Underseal Membrane."

3.1.4. **Placement**. Do not allow any loose mixture onto the prepared surface before application of the membrane. Unless otherwise directed, uniformly apply the membrane to all areas where mix will be placed, including joints, at the rate shown on the plans. Unless otherwise directed, uniformly apply the membrane at the minimum rate specified on the plans. The Engineer may adjust the application rate, taking into consideration the existing pavement surface conditions. The Engineer will set the application rate between 0.10 – 0.22 gal. per square yard for underseal membrane.

2.10. **Quality Control**. Stop application if it is not uniform due to streaking, ridging, pooling, or flowing off the roadway surface. Verify equipment condition, operating procedures, application temperature, and material properties. Determine and correct the cause of non-uniform application.

The Engineer may perform independent tests to confirm contractor compliance and may require testing differences or failing results to be resolved before resuming production.

The Engineer may stop the application and require construction of test strips at the Contractor's expense if any of the following occurs:

- non-uniformity of application continues after corrective action;
- evidence of tracking or picking up of the TRAIL;
- in three consecutive shots, application rate differs by more than 0.02 gal. per square yard from the rate directed; or
- any shot differs by more than 0.04 gal. per square yard from the rate directed.

The Engineer will approve the test strip location. The Engineer may require additional test strips until surface treatment application meets specification requirements.

4. MEASUREMENT

2.11. **Volume**. Asphalt material, including all components, will be measured at the applied temperature by strapping the tank before and after road application. The distributor calibrated strap stick will be used for measuring the asphalt level in the distributor asphalt tank. The certified tank chart will be used to determine the beginning gallons and the final gallons in the distributor tank. The quantity to be measured for payment will be the difference between the beginning gallons and the final gallons.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Bonding Course." These prices are full compensation for surface preparation; furnishing, preparing, hauling, Miscellaneous Tack used for all miscellaneous contact surfaces, and placing materials; removing existing pavement markers and excess aggregate; rolling; cleaning up stockpiles; and equipment, labor, tools, and incidentals.

Special Specification 4008
Reinforced Concrete Low-Head Pressure Pipe

1. DESCRIPTION

Furnish and install reinforced concrete low-head pressure pipe. Install the pipe of the various classes, sizes, and dimensions to the lines and grades shown on the plans or as directed. The installation of pipe includes all joints or connections to new or existing pipe, wells, vents, inlets, and headwalls, as required to complete the work.

2. MATERIALS

Furnish materials in accordance with the following Items.

- Item 400, “Excavation and Backfill for Structures”
- Item 402, “Trench Excavation Protection”
- Item 403, “Temporary Special Shoring”
- Item 464, “Reinforced Concrete Pipe”

Provide reinforced concrete low-head pressure pipe that conforms to ASTM C361 except for the following modifications.

2.1. **Classification**. The Article titled “Classification” is voided and replaced by the correspondingly named Article of ASTM C76 for Class II, III, IV, and V pipe.

2.2. **Bases of Acceptance**. The Article titled “Bases of Acceptance” is voided and replaced by the correspondingly named article of ASTM C76.

2.3. **Materials**. The Article titled “Materials” is supplemented by the following:

Type II cement is required unless otherwise shown on the plans.

2.4 **Concrete Strength Testing**. All references to methods pertaining to testing the strength of the concrete contained in Articles titled “Materials” and “Physical Test Requirements” are voided and replaced by the following.

The strength requirements for the concrete must meet the design requirements of ASTM C76 for Class II, III, IV, and V pipe.

Perform three-edge bearing tests for Class II, III, IV, and V pipe on one pipe for every 100 pipes or fraction of each size and class for the load to produce a 0.01-in. crack and, at the discretion of the Engineer, the ultimate load. Plainly mark “TEST” with durable paint on top and bottom, and do not use the pipe sections tested only to the 0.01-in. crack.

2.5. **Design**. The Article titled “Design” is voided and replaced by the correspondingly named Article of ASTM C76 except for the following.

Use circumferential reinforcement at each end of the pipe unit that consists of two complete coils or rings in which the end is lapped or welded. Unless otherwise shown on the plans, the clear distance of the end coil or ring must not be less than 1/2 in. or more than 1 in. from the end of the pipe unit.

Extend the longitudinal reinforcement the full length of the pipe. The longitudinal bars provided in the bell may be continuous bars or spliced to the main longitudinal bars.

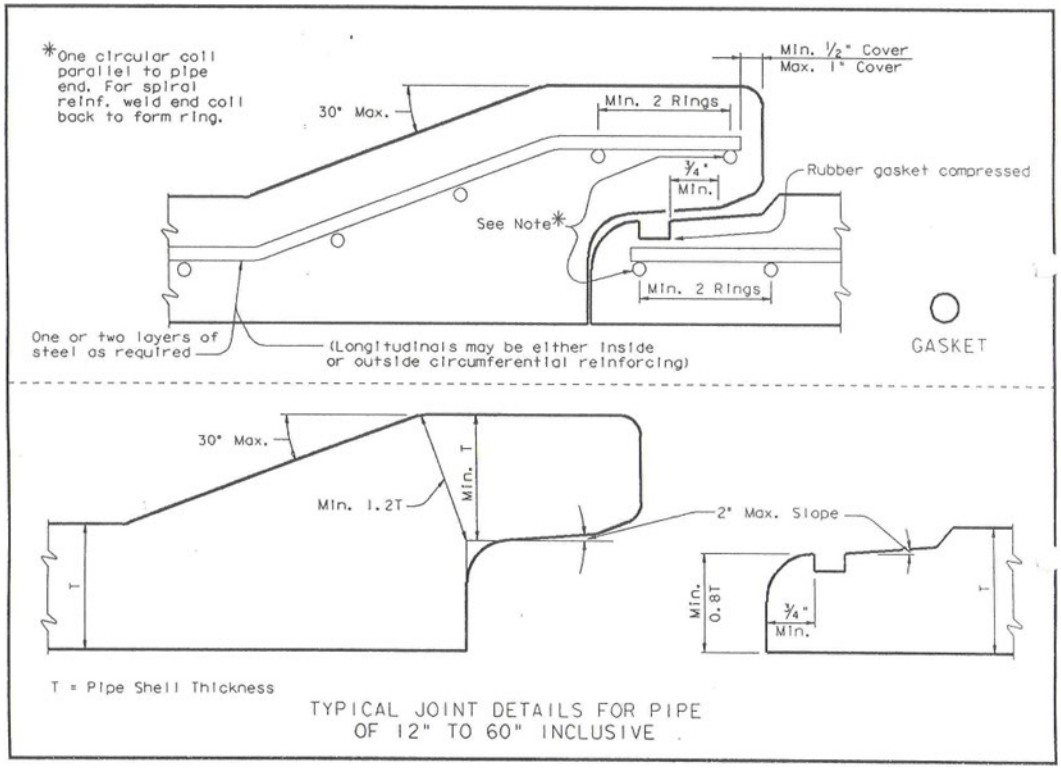
Construct all joints in accordance with ASTM C361.

In addition to the requirements included in the Section “Joints” of ASTM C361, the joints must meet the following requirements. See typical joint drawing below for illustration of joint details for pipe with an inside diameter (ID) of 12 in.–60 in. inclusive. For pipes with IDs larger than 60 in., joint design details must be submitted for approval.

Construct a joint of all-concrete design with gasket retained in a groove, using an endless gasket of round cross-section.

Construct the thickness of spigot shell at end of spigot that is no less than 80% of thickness of pipe shell.

Use a finish of the inner surface of the bell or groove and surfaces of the spigot or tongue that is in accordance with ASTM C443.



2.6. **Physical Test Requirements**. The Article titled “Physical Test Requirements” is supplemented by the following.

Use a method and equipment to manufacture the pipe that produce uniformly dense concrete free of porous areas. When tested for absorption as provided in ASTM C76, “Absorption Test Requirement of Concrete,” the absorption must not exceed 5%.

2.7. **Hydrostatic Tests**. The Article “Hydrostatic Tests” is voided and replaced by the following.

For Class II, III, IV, and V pipe, hydrostatic tests on pipe will not be required.

2.8. **Hydrostatic Test of Rubber Gasket Joints**. The Article titled “Hydrostatic Test on Rubber Gasket Joints” is voided and replaced by the following.

For Class II, III, IV, and V pipe, hydrostatic tests on rubber gasket joints will not be required provided the manufacturer provides adequate gauging devices and properly checks the pipe with same to assure that all

dimensions of pipe affecting water tightness of the joints are within the required tolerances. Gauge tests of pipe sections selected for other tests in the presence of the Inspector.

3. CONSTRUCTION

The construction methods must be in accordance with Item 464, except for the following modifications.

References to jointing are voided.

Install rubber gasket joints by forcing the spigot or tongue of each pipe section (with the gasket in place) into the bell or groove of the previously laid joint using approved device that will smoothly force the sections together and so that the gasket is properly seated and compressed. Adequately lubricate the bell and spigot or groove and tongue with soft soap or other approved lubricant before the sections are forced together.

Construct angles or bends in pipelines using either prefabricated angle joints or a reinforced concrete collar. Unless otherwise shown on the plans, use collars of such width that each pipe section will be imbedded in the collar at least 6 in. Construct the thickness of the collar outside the pipe that is at least 6 in. Furnish reinforcement in the collar that consists of at least one layer of 6 × 6 – W6 × W6 WWR or heavier, supplemented by additional circumferential reinforcing steel as required to provide reinforcing at least equal to that in the pipe. Lap the fabric at least 6 in. Furnish Class A or Class C concrete and form and place monolithically.

Where pipe connects to headwalls or wells at the bell end of pipelines, cut off the bell and lay the pipe so that the normal pipe section extends into the headwall or well.

4. MEASUREMENT

This Item will be measured by the foot of pipe. Such measurement will be made between the ends of the pipe barrel along the central axis as installed. Where spurs or branches, or connections to existing pipelines, are involved, measurement of the spur or new connecting pipe will be made from the intersection of its central axis with the outside surface of the pipe into which it connects. Where inlets, manholes, junction chambers or other structures are included in lines of pipe, that length of pipe provided for tying into the structure wall will be included for measurement, but no other portion of the structure length or width will be included.

Excavation in natural ground for installing concrete pipe will be measured as prescribed in Item 400.

Unless otherwise shown on the plans, structural excavation for pipe headwalls will not be measured, but will be subsidiary to the various bid items.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Reinforced Concrete Low-Head Pressure Pipe” of the class and size specified. This price is full compensation for constructing, furnishing, transporting, placing, and jointing the pipe; excavation, hauling, and placing of earth cushion material where required for bedding pipe in rock excavation; preparation and shaping of beds; hauling, placing, and jointing of pipes; end finish; all connections to existing structures; and all materials, labor, equipment, tools, and incidentals necessary to complete the work, except that excavation and backfill will be paid for in accordance with Item 400. The excavation of rock or other incompressible materials, as may be required in providing proper bedding, will be paid for in accordance with Item 400. Where pipes are laid on a skew, full compensation for cutting the ends parallel with the centerline of the highway will be included in the price paid per foot for the designated item of pipe and no additional allowance will be made.

Protection methods for excavations greater than 5 ft. in depth will be measured and paid for as required under Item 402 or Item 403.

Special Specification 6008

Radar Vehicle Detection System for Signalized Intersection Control

1. DESCRIPTION

Furnish, install, relocate, or remove radar vehicle detection systems (RVDS) of the specified devices at signalized intersections to provide the required zones of detection as shown on the plans, or as directed.

2. MATERIALS

2.1. **General**. Except as allowed for relocation of RVDS equipment, ensure all equipment and component parts are new in accordance with Division Specification TO-8000, "Radar Vehicle Detection System," Section 1.0–Section 6.0, and in an operable condition at time of delivery and installation.

The Traffic Safety Division, Traffic Management Section, (TRF-TM) updates TxDOT Material producer list (MPL) of all RVDSs conforming to this Specification. New materials appearing on the MPL require no further sampling and testing before use unless deemed necessary by the Engineer or TRF-TM. Provide prequalified RVDSs from the TxDOT MPL.

Ensure all RVDSs serving the same detection purpose within the project are from the same manufacturer. RVDS devices are classified by their functional requirements. The functional requirements are for radar presence detection devices (RPDDs) and radar advance detection devices (RADDs). The RVDS system classifications are RVDS (RPDD Only), RVDS (RADD Only), and RVDS (RPDD and RADD).

Provide each RVDS sensor with a mounting bracket designed to mount directly to a pole, mast arm, or other structure. Ensure bracket is designed such that the sensor can be tilted vertically and horizontally for alignment and then locked into place after proper alignment is achieved. All hardware must be designed to support the load of the RVDS sensor and mounting bracket.

2.2. **Configuration**. Ensure the RVDS provides vehicle detection as required on the plans, or as directed.

Ensure the RVDS does not require tuning or recalibration to maintain performance once initial calibration and configuration are complete. RVDS must not require cleaning or adjustment to maintain performance.

RVDS must self-recover from power failure once power is restored.

2.3. **Cabling**. Provide appropriate length of all cables necessary to make the RVDS fully operational at each installation site.

2.4. **Software**. Ensure the RVDS manufacturer includes all software required to configure and monitor operation of RVDS field equipment locally and remotely. RVDS software must be a stable production release.

Software must allow the user to configure, operate, exercise, diagnose, and read status of all RVDS features and functions using a laptop computer.

Software must include the ability to save a local copy of RVDS field device configurations and load saved configurations to RVDS field devices.

Ensure all licenses required for operation and use of software are included at no additional cost.

Software updates must be provided at no additional cost during the warranty period.

2.5. **Electrical**. All conductors supplying the equipment must meet NEC requirements.

Ensure equipment is designed to protect personnel from exposure to high voltage during installation, operation, and maintenance.

2.6. **Mechanical**. Ensure that all parts are fabricated from corrosion-resistant materials, such as plastic, stainless steel, aluminum, or brass.

Ensure that all screws, nuts, and locking washers are corrosion-resistant. Do not use self-tapping screws.

Ensure equipment is clearly and permanently marked with manufacturer name or trademark, part number, date of manufacture, and serial number.

Ensure RVDS is modular in design for ease of field replacement and maintenance. Provide a sensor that will minimize weight and wind loading when mounted on a traffic signal pole or mast arm.

All printed circuit boards must have conformal coating.

2.7. **Environmental**. RVDS sensor must be able to withstand the maximum wind load based on the Department's basic wind velocity zone map standard without any damage or loosening from structure.

The RVDS enclosure must conform to criteria set forth in NEMA 250 for Type 4X enclosures.

The RVDS must meet all NEMA TS2 environmental requirements for temperature, humidity, transients, vibration, and shock.

2.8. **Connectors and Harnesses**. Ensure all conductors are properly color-coded and identified.

Ensure cable connector design prohibits improper connections. Cable connector pins are plated to improve conductivity and resist corrosion.

Connections for data and power must be made to the RVDS sensor using waterproof, quick-disconnect connectors. Pigtails from the sensor to a waterproof junction box (NEMA 4) or an approved waterproof connector must be allowed for splicing. The pigtails must not be shorter than 3 ft. unless otherwise shown on the plans.

3. CONSTRUCTION

3.1. **System Installation**. Install RVDS system devices according to the manufacturer's recommendations to provide properly functioning detection as required. This must include the installation of sensors on signal poles or mast arms, controller interface modules, power and surge protection panels, cabling and all associated equipment, software, serial and Ethernet communication ports, and connectors and hardware required to set up and operate. Ensure that the supplier of the RVDS provides competent onsite support representative during installation to supervise installation and testing of the RVDS. Ensure the radar sensor locations are optimal for system operation and operate as required. Maintain safe construction practices during equipment installation.

Ensure installation and configuration of software on Department computers are included with the RVDS.

Take care to prevent damage to any support structures. Any equipment or structure damaged or lost must be replaced by the Contractor (with items approved) at no cost to the Department.

3.2. **Mechanical Components**. Ensure that all fasteners, including bolts, nuts, and washers with a diameter less than 5/8 in. are Type 316 or Type 304 stainless steel and meet ASTM F593 and ASTM F594 for corrosion

resistance. Ensure that all bolts and nuts 5/8 in. and more in diameter are galvanized and meet ASTM A307. Separate dissimilar metals with an inert dielectric material.

3.3. **Wiring**. Install all wiring and electrical work supplying power to the equipment in a neat, skillful manner. Supply and install all wiring necessary to interconnect RVDS sensors to the traffic signal cabinet to complete the work. Furnish and install any additional required wiring at no additional cost to the Department.

Wiring must be cut to proper length before installation. Provide cable slack for ease of removal and replacement. All cable slack must be neatly laced with lacing or straps in the bottom of the cabinet. Ensure cables are secured with clamps.

3.4. **Grounding**. Ensure all RVDS components, cabinets, and supports are grounded in accordance with the NEC and manufacturer recommendations.

3.5. **Relocation of RVDS Field Equipment**. Perform the relocation in strict conformance with the requirements herein and as shown on the plans. Completion of the work must present a neat, skillful, and finished appearance. Maintain safe construction practices during relocation.

Inspect the existing RVDS field equipment with a representative from the Department and document any evidence of damage before removal. Conduct a pre-removal test in accordance with the testing requirements contained in this Specification to document operational functionality. Remove and deliver equipment that fails inspection to the Department.

Before removal of existing RVDS field equipment, disconnect and isolate the power cables from the electric power supply and disconnect all communication cabling from the equipment located inside the cabinet. Coil and store power and communication cabling inside the cabinet until relocation. Remove existing RVDS field equipment as shown on the plans only when authorized.

Take care to prevent damage to any support structures. Any equipment or structure damaged or lost must be replaced by the Contractor (with items approved) at no cost to the Department.

Make all arrangements for connection to the power supply and communication source, including any permits required for the work under the Contract. Provide wire for the power connection at least the minimum size indicated on the plans and insulated for 600 V. Meet the NEC.

3.6. **Removal of RVDS Field Equipment**. Perform the removal in strict conformance with the requirements herein and as shown on the plans. Completion of the work must present a neat, skillful, and finished appearance. Maintain safe construction practices during removal.

Disconnect and isolate any existing electrical supply before removal of existing field equipment.

Take care to prevent damage to any support structures. Any equipment or structure damaged or lost must be replaced by the Contractor (with items approved) at no cost to the Department.

All materials not designated for reuse or retention by the Department will become the property of the Contractor and be removed from the project site at the Contractor's expense. Deliver items to be retained by the Department to a location shown on the plans or General Notes. The Contractor is fully responsible for any removed equipment until released.

3.7. **Documentation**. Provide electronic copies of operation and maintenance manuals, along with a copy of all product documentation on electronic media. Include the following documentation.

- Complete and accurate schematic diagrams
- Complete installation procedures
- Manufacturer's specifications (functional, electrical, mechanical, and environmental)
- Complete maintenance and troubleshooting procedures

- Explanation of product operation
- Warranty as specified in Section 3.8., "Warranty"

The RVDS must pass testing to ensure functionality and reliability before delivery. This includes functional tests for internal subassemblies, a 24-hr. minimum unit level burn-in test, and a unit functionality test. Provide test results and supporting documentation, including serial number tested, for each RVDS. If requested, manufacturing data per serial number must be provided for each RVDS.

Unless deemed unnecessary by the Engineer or TRF-TM, provide certification from an independent laboratory demonstrating compliance with NEMA TS2 environmental requirements for temperature, humidity, transients, vibration, and shock.

Unless deemed unnecessary by the Engineer or TRF-TM, provide third-party enclosure test results demonstrating the sensor enclosure meets Type 4X criteria.

Unless deemed unnecessary by the Engineer or TRF-TM, provide evidence of RVDS manufacturer's quality assurance program, including proof of RVDS manufacturer ISO 9001 certification or other quality management system programs for manufacturing RVDS.

3.8. **Warranty**. Ensure that the detection system has a manufacturer's warranty covering defects for at least 5 yr. from the date of final acceptance. In addition to the terms required by TO-8000, Article 8, ensure the warranty includes providing replacements, within 10 calendar days of notification, for defective parts and equipment during the warranty period at no cost to the Department.

3.9. **Training and Support**. Provide manufacturer-approved end user training to the Department and their representatives. Training must include instruction in system configuration, operation, and maintenance. Provide training for at least 10 Department-designated representatives up to 8 hr., including class and field training.

Ensure that the detection system manufacturer will provide product support for at least 5 yr. from the date of final acceptance.

4. TESTING

Perform the following tests on equipment and systems unless otherwise shown on the plans. The Department may witness all the tests.

4.1. **Stand-Alone Test**. Conduct a stand-alone test for each unit after installation. The test must exercise all stand-alone (non-network) functional operations and verify that RVDS is placing detector contact closure to assigned detector channels in the traffic signal controller assembly. Notify the Engineer 5 working days before conducting this test.

4.2. **Consequences of Test Failure**. If a unit fails a test, provide a new unit, and then repeat the test until successfully completed.

4.3. **Final Acceptance Test**. Conduct a final acceptance test on the complete functional system. Demonstrate all control, monitoring, and communication requirements and operate the system for 30 days. The Engineer will furnish a letter of approval stating the first day of the final acceptance test.

4.4. **Consequences of Final Acceptance Test Failure**. If a defect within the system is detected during the final acceptance test, document and correct the source of failure. Once corrective measures are taken, monitor the point of failure until a consecutive 30-day period free of defects is achieved.

4.5. **Relocation**.

4.5.1. **Pre-Test**. Provide five copies of the test procedures, including tests of the basic functionality of the unit, and blank data forms to the Engineer for review and comment as part of material documentation requirements. Functionality tests may include, but not be limited to, physical inspection of the unit and cable assemblies. Include the sequence of the tests in the procedures along with acceptance thresholds. The Engineer will comment on and approve or reject test procedures within 30 days after Contractor submittal of test procedures. Rejected test procedures must be resubmitted within 10 days. Review time is in calendar days. Conduct all tests in accordance with the approved test procedures.

Conduct basic functionality testing before removal of RVDS field equipment. Test all functional operations of the equipment in the presence of representatives of the Contractor and the Department. Ensure that both representatives sign the test report indicating that the equipment has passed or failed each function. Once removed, the equipment will become the responsibility of the Contractor until accepted by the Department. Compare test data prior to removal and after installation. The performance test results after relocation must be equal to or better than the test results before removal. Repair or replace the failing components within the systemso that the system can pass the performance test after relocation.

4.5.2. **Post-Test**. Testing of the RVDS field equipment is to relieve the Contractor of system maintenance. The Contractor will be relieved of the responsibility for system maintenance in accordance with Item 7, “Legal Relations and Responsibilities,” after a successful test period. The Contractor will not be required to pay for electrical energy consumed by the system.

After all existing RVDS field equipment has been installed, conduct approved continuity, stand-alone, and performance tests. Furnish test data forms containing the sequence of tests, including all the data taken as well as quantitative results for all tests. Submit the test data forms to the Engineer at least 30 days before the day the tests are to begin. Obtain approval of test procedures before submission of equipment for tests. Send at least one copy of the data forms to the Engineer.

Conduct an approved stand-alone test of the equipment installation at the field sites. At minimum, exercise all stand-alone (non-network) functional operations of the field equipment with all the equipment installed per the plans as directed. Complete the approved data forms with test results and submit them to the Engineer for review and either acceptance or rejection of equipment. Give at least 30 working days’ notice before all tests to allow the Engineer or their representative to observe each test.

The Department must conduct approved RVDS field equipment system tests on the field equipment with the central equipment. The tests must, at minimum, exercise all remote-control functions and display the return status codes from the controller.

If any unit fails to pass a test, prepare and deliver a report to the Engineer. Describe the nature of the failure and the corrective action needed. If the failure is the result of improper installation or damage during reinstallation, reinstall or replace the unit and repeat the test until the unit passes successfully, at no additional cost to the Department or extension of the Contract period.

5. MEASUREMENT

New RVDSs furnished and installed by the Contractor will be measured by each approach to the signalized intersection.

RVDSs furnished by the Department for Contractor installation only will be measured by each approach to the signalized intersection.

Existing RVDSs to be relocated or removed will be measured by each sensor relocated or removed.

6. PAYMENT

6.1. **Furnish and Install**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit bid price for "RVDS (Presence Detection Only)," "RVDS (Advance Detection Only)," and "RVDS (Presence and Advance Detection)."

This price is full compensation for furnishing, installing, configuring, integrating, and testing the completed installation, including RVDS equipment, voltage converters or injectors, cables, connectors, associated equipment, and mounting hardware. This price also fully compensates for all labor, tools, equipment, any required equipment modifications for electrical service, documentation, testing, training, software, warranty, and incidentals necessary to complete the work.

6.2. **Install Only**. The work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "RVDS (Presence Detection Only) (Install Only)," "RVDS (Advance Detection Only) (Install Only)," and "RVDS (Presence and Advance Detection) (Install Only)."

This price is full compensation for making fully operational an RVDS furnished by the Department; for installing, configuring, integrating, and testing the completed installation, including RVDS equipment, voltage converters or injectors, cables, connectors, associated equipment, and mounting hardware; and for all labor, tools, equipment, any required equipment modifications for electrical service, documentation, testing, training, software, and incidentals necessary to complete the work.

6.3. **Relocate**. The work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "Relocate RVDS." This price is full compensation for relocating and making fully operational existing RVDS field equipment; for furnishing and installing additional cables or connectors; for testing, delivery, and storage of components designated for salvage or reuse; and for all testing, training, software, equipment, any required equipment modifications for electrical service, labor, materials, tools, and incidentals necessary to complete the work.

6.4. **Remove**. The work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "Remove RVDS." This price is full compensation for removing existing RVDS equipment; for removal of cables and connectors; for testing, delivery, and storage of components designated for salvage; and for all testing, training, software, equipment, labor, materials, tools, and incidentals necessary to complete the work.

6.5. **Communication Cable**. All communication cables necessary to make the RVDS fully operational will be subsidiary to this Item.

Special Specification 6041

Traffic Data Collection System—Vehicle Classification (TDCS-VC)

1. DESCRIPTION

Install or replace and calibrate traffic data collection system—vehicle classification (TDCS-VC) in pavement at the location shown on the plans.

2. MATERIALS

2.1. Provide all materials, not supplied by the Department, necessary for the TDCS-VC. Provide a task in the project schedule for delivery of Department-furnished materials and provide at least 30-day notice to the Department for delivery of Department-furnished materials.

Act in accordance with the pertinent requirements of the following Items.

- Item 360, “Concrete Pavement”
- Item 400, “Excavation and Backfill for Structures”
- Item 618, “Conduit”
- Item 620, “Electrical Conductors”
- Item 624, “Ground Boxes”
- Item 628, “Electrical Services”
- Item 656, “Foundations for Traffic Control Devices”
- Item 680, “Highway Traffic Signals”
- Item 684, “Traffic Signal Cables”
- Item 688, “Pedestrian Detectors and Vehicle Loop Detectors”

2.2. **Loop Wire**. Use stranded copper No. 14 AWG XHHW cross-linked thermosetting polyethylene insulated conductor rated for 600 VAC for vehicle detector loop wire unless otherwise shown on the plans. Show the name or trademark of the manufacturer, insulation voltage rating, wire gauge, and insulation type at approximate 2-ft. intervals on the insulation surface of each length of wire.

Use sealant for the vehicle detector loops in accordance with DMS-6340, “Vehicle Loop Wire Sealant.”

2.3. **Loop Lead-In Wire**. Use Type C cables meeting material requirements in Standard Specifications found in Item 684.

2.4. **Splice Protection**. Use through-splice connector, Uraseal Type ES200SV or other equivalent, for small hard-to-splice areas that provides a 100% watertight seal, and provide insulation protection up to 600 VAC identical to the insulation requirements found in Item 684.

2.5. **Department-Furnished Materials**. The Department will furnish the following TDCS-VC equipment and materials to the Contractor.

- Kistler piezoelectric Class II sensors with lead-in wires
- Specialized epoxy for Kistler piezoelectric Class II sensors
- Traffic data collection cabinet—typically Type 5 cabinet unless otherwise shown on the plans

- Cabinet base
- Cabinet and base hardware
- VC controller
- Internet protocol (IP) cellular modem

Contact Department representative to coordinate delivery of Department-furnished materials. Certify that the materials are in good condition, and sign off on delivery of the materials.

3. EQUIPMENT

Provide all equipment, including, but not limited to, boring equipment, concrete wet saws, shovels, fish tape, screwdriver, flashlight, gloves, safety glasses, head protection, safety footwear, and other equipment necessary to install a fully functional TDCS-VC. Provide boring equipment with guidance and location devices.

4. CONSTRUCTION

Lay out, stake, and install sensors, loops, conduit, ground boxes, and foundation as shown on the plans. The TDCS locations on the plans are diagrammatical, and the Department representative may shift within design guidelines where necessary to secure a more desirable location. Use established industry and utility safety practices when working near overhead or underground utilities. Consult with the appropriate utility company before beginning work.

Provide at least 30-day notice before installation and saw cutting. Have Department representative onsite during installation and saw cutting.

4.1. **Conduit**. Install conduit in the specified types and sizes shown on the plans. Install conductors and seal the ends of conduits terminating in ground boxes and in the controller assembly enclosure with an approved sealing compound.

Install conduit by the horizontal directional drilling method when boring. A soil investigation is not required.

4.2. **Loop**. Install or replace conductors for loop lead-in cable consisting of two No. 14 stranded tinned copper. Ensure loop lead-in cable is in accordance with the calculated cross-sectional area of ASTM B286, Table 1. Use lead-in cable that is insulated with high-density polyethylene. Ensure that the conductors are twisted together with at least two turns per foot, and the twisted pair is protected with a copper or aluminum polyester shield.

Cut slots for loops no deeper than 3 in., but deep enough to provide at least 1-in. depth of sealant over the wire and wide enough such that the loop wire wraps will fit loosely in the slot. Wash clean, blow out, and thoroughly dry slots cut in the pavement before installing conductors. Install five turns of wire for each loop. Twist each wire pair from the loop to the shoulder termination ground box at least five turns per foot. After conductors are installed in the slots cut in the pavement, fill the slots with loop sealant to within 1/8 in. of the pavement surface in a manner such that the loop wire is encapsulated with the sealant to the bottom of the slot, with a minimum sealant thickness of 1 in. above the top conductor in the saw cut. Remove all surplus sealant from the adjacent road surfaces without the use of solvents before the sealant sets.

Cut slots for replacement loops at same locations as previous installation. The previously installed loops are not salvageable.

Install loop conductors without splices, terminating in the nearest ground box. Seal the open end of cable jackets or tubing in a manner like the splicing requirements found in Item 684 to prevent the entrance of water.

Provide all materials, including, but not limited to, loop wire, loop lead-in wire, splices, backer rod, and loop wire sealant.

4.3. **Sensor and Loop Lead-In Wire Identification**. Use at least four wraps of colored electrical tape or heat shrink sleeves based on the following color code unless otherwise shown on the plans. Use brown for first lane, red for second, orange for third, yellow for fourth, green for fifth, and blue for sixth. Identify Lane 1 as the outside lane of the dominant direction of either northbound or eastbound based on roadway designation. Identify the entrance lane sensor lead-in wire and loop lead-in wire with a single-color band, and the exit lane loop lead-in wire with a double-color band. Entrance and exit are based on traffic direction.

4.4. **VC Piezoelectric Class II Sensor Slot**. Cut the slot using a pavement milling machine. Wash clean, blow out, and thoroughly dry slots cut in the pavement before installation. Provide equipment and materials at the site to perform additional chipping, grinding, and cleaning of the slot.

Cut slots for replacement sensors at same locations as previous installation. The previously installed sensors are not salvageable.

4.5. **VC Piezoelectric Class II Sensor Installation**. Install piezoelectric sensor conforming to manufacturer's requirements. Provide equipment, tools, and materials at the site to perform installation of piezoelectric sensors.

4.6. **VC Conductors and Splicing Identification**. Make splices between loop lead-in wire and loop detector wires only in the ground box near the loop the cable is servicing. Use non-corrosive solder for splices. Splice loop wires to the loop lead-in cables. Identify each loop wire pair, loop lead-in wire, and VC lead-in or extension cable based on loop number or piezoelectric sensor number in each ground box and in the cabinet enclosure per Section 4.3., "Sensor and Loop Lead-In Wire Identification." Do not splice the piezoelectric sensor wire.

4.7. **Controller Assembly**. Construct controller foundation in accordance with Item 656. Install Department-furnished cabinet in accordance with Item 680.

4.8. **Performance Tests**. Complete the "Sensor Reading Data Sheet." The "Sensor Reading Data Sheet" will be provided by the Department. Ensure all measurements meet the parameters conforming to the manufacturer's manual and in accordance with "FHWA's 13 Vehicle Category Classification" in the *FHWA Traffic Monitoring Guide*: https://www.fhwa.dot.gov/policyinformation/tmguide/tmg_fhwa_pl_13_015.pdf.

Replace failed or damaged existing TDCS-VC components when caused by the Contractor. The Department will relieve the Contractor of maintenance responsibilities upon passing a 30-day performance test of the TDCS-VC and acceptance of the Contract. If any failure occurs during the 30-day test period, repair or replace the component failure. This repair or replacement will start a new 30-day test period.

4.9. **Removal**. Remove existing electrical services, controllers, cables, conduit, ground boxes, and other accessories. Remove materials so damage does not occur, or abandon in place. Remove and store items designated for reuse or salvage at locations shown on the plans or as directed.

Remove abandoned concrete foundations, including rebar, to a point 2 ft. below final grade. Backfill holes with material equal in composition and density to the surrounding area. Replace surface material with similar material to an equivalent condition.

Accept ownership and dispose of unsalvageable materials in conformance with federal, state, and local regulations.

5. MEASUREMENT

For complete loop installation, loop replacement, sensor installation, sensor replacement, or sensor removal, these bid items will be measured by the each per jobsite.

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Loop Installation or Replacement" and "Sensor Installation or Replacement." This price is full compensation for furnishing all equipment, materials, labor, tools, and incidentals.

Conduit will be paid for under Item 618. Conductors will be paid for under Item 620. Ground boxes will be paid for under Item 624. Electrical services will be paid for under Item 628. Foundations will be paid for under Item 656. Cabinet installation will be paid for under Item 680.

6.1. **Loop Installation or Replacement**. This price is full compensation for removing and disconnecting loop wires; installing new loops, loop lead-in wires, and connections; accessing existing conduit and bores, as applicable; replacing damaged components; disposing of unsalvageable materials; and materials, equipment, labor, tools, and incidentals.

6.2. **Sensor Installation or Replacement**. This price is full compensation for installing sensors and connections; installing new Department-furnished materials, including, but not limited to, piezoelectric Class II sensors; installing connections and conductors; accessing existing conduit and bores, as applicable; replacing damaged components; disposing of unsalvageable materials; and materials, equipment, labor, tools, and incidentals. If replacement, the price includes removing and disconnecting sensor conductors.

6.3. **Removal**. This price is full compensation for removing, salvaging, disassembling, and stockpiling cabinet, controller, and modem; abandoning in place existing conduit; removing existing foundations; backfilling and surface placement; disposing of unsalvageable materials; and materials, equipment, labor, tools, and incidentals.

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