

NOTIFICATION OF ADDENDUM

ADDENDUM NO. 1

DATED 11/20/2015

Control	0016-02-145
Project	STP 2016(388)MM
Highway	IH 35
County	HAYS

Ladies/Gentlemen:

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

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

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

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

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

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

SUBJECT: PLANS AND PROPOSAL ADDENDUMS
PROJECT: STP 2016(388)MM CONTROL: 0016-02-145
COUNTY: HAYS
LETTING: 12/03/2015
REFERENCE NO: 1119

PROPOSAL ADDENDUMS

- _ PROPOSAL COVER
X BID INSERTS (SH. NO.: 1-11)
X GENERAL NOTES (SH. NO.: A, C, H, K, L, P, R, AND X)
_ SPEC LIST (SH. NO.:)
_ SPECIAL PROVISIONS:)
_ ADDED:

DELETED:

_ SPECIAL SPECIFICATIONS:
_ ADDED:

DELETED:

X OTHER: SEE PLAN SHEET AND OTHER CHANGES BELOW

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

PROPOSAL -
E- VERIFY CERTIFICATION IS VOIDED AND NOT REPLACED

BID INSERTS -
DELETED ITEM 247.6392
ADDED ITEM 247.6366

PLANS -
SHEET 21 - CHANGED THE DESCRIPTION FOR FLEX BASE

SHEET 22 (SPEC DATA A) - REVISED ITEM 247 ON THE BASIS OF ESTIMATE TABLE

SHEET 22A (SPEC DATA C) - DELETED ITEM 2

SHEET 22C (SPEC DATA H) - REVISED THE NUMBER OF WORKING DAYS IN THE 5TH
NOTE TO ITEM 8

SHEET 22C (SPEC DATA H) - DELETED THE TABLE AND THE NOTE IMMEDIATELY
UNDERNEATH

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

SHEET 22E (SPEC DATA K) - DELETED ITEM 166

SHEET 22E (SPEC DATA L) - DELETED THE FIRST TWO NOTES FROM ITEM 247

SHEET 22G (SPEC DATA P) - REVISED THE 9TH NOTE TO ITEM 354

SHEET 22H (SPEC DATA R) - DELETED THE SECOND NOTE TO ITEM 421

SHEET 22K (SPEC DATA X) - DELETED THE 4TH NOTE TO ITEM 504

SHEET 22K (SPEC DATA X) - DELETED TABLE 2 AND THE NOTE IMMEDIATELY
UNDERNEATH

SHEET 23 - REVISED ITEM 247

SHEET 26 - REVISED ITEM 247

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	100	6002		PREPARING ROW DOLLARS and CENTS	STA	201.000	1
	104	6009		REMOVING CONC (RIPRAP) DOLLARS and CENTS	SY	64.500	2
	105	6070		REMOVING STAB BASE & ASPH PAV (6" - 8") DOLLARS and CENTS	SY	24,048.000	3
	110	6001		EXCAVATION (ROADWAY) DOLLARS and CENTS	CY	52,007.000	4
	132	6005		EMBANKMENT (FINAL)(ORD COMP)(TY C) DOLLARS and CENTS	CY	39,377.000	5
	160	6003		FURNISHING AND PLACING TOPSOIL (4") DOLLARS and CENTS	SY	116,806.000	6
	164	6003		BROADCAST SEED (PERM) (RURAL) (CLAY) DOLLARS and CENTS	SY	116,806.000	7
	164	6009		BROADCAST SEED (TEMP) (WARM) DOLLARS and CENTS	SY	58,303.000	8
	164	6011		BROADCAST SEED (TEMP) (COOL) DOLLARS and CENTS	SY	58,303.000	9
	168	6001		VEGETATIVE WATERING DOLLARS and CENTS	MG	3,498.000	10
	169	6001		SOIL RETENTION BLANKETS (CL 1) (TY A) DOLLARS and CENTS	SY	6,200.000	11
	247	6366		FL BS (CMP IN PLC)(TY A GR 5)(FNAL POS) DOLLARS and CENTS	CY	12,945.000	12

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	310	6001		PRIME COAT (MULTI OPTION) DOLLARS and CENTS	GAL	9,585.000	13
	340	6011		D-GR HMA(SQ) TY-B PG64-22 DOLLARS and CENTS	TON	13,697.000	14
	340	6050		D-GR HMA(SQ) TY-C PG70-22 DOLLARS and CENTS	TON	3,004.000	15
	340	6136		D-GR HMA(SQ) TY-D SAC-B PG76-22 DOLLARS and CENTS	TON	985.000	16
	340	6243		D-GR HMA (SQ) TYC PG70-22 (LEVEL-UP) DOLLARS and CENTS	TON	1,320.000	17
	342	6002		PFC (ASPHALT) PG76-22 DOLLARS and CENTS	TON	75.200	18
	342	6006		PFC-C (AGGREGATE)(PG76 MIX) SAC-A DOLLARS and CENTS	TON	1,168.000	19
	354	6022		PLANE ASPH CONC PAV(0" TO 3") DOLLARS and CENTS	SY	7,990.000	20
	400	6008		CUT & RESTORE ASPH PAVING DOLLARS and CENTS	SY	40.000	21
	401	6001		FLOWABLE BACKFILL DOLLARS and CENTS	CY	350.000	22
	402	6001		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	4,706.000	23
	416	6018		DRILL SHAFT (SIGN MTS) (24 IN) DOLLARS and CENTS	LF	120.000	24

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	416	6029		DRILL SHAFT (RDWY ILL POLE) (30 IN) DOLLARS and CENTS	LF	264.000	25
	420	6057		CL C CONC (WINGWALLS) DOLLARS and CENTS	CY	296.000	26
	432	6002		RIPRAP (CONC)(5 IN) DOLLARS and CENTS	CY	1,052.000	27
	432	6024		RIPRAP (STONE COMMON)(DRY)(12 IN) DOLLARS and CENTS	CY	128.000	28
	432	6045		RIPRAP (MOW STRIP)(4 IN) DOLLARS and CENTS	CY	351.000	29
	462	6002		CONC BOX CULV (3 FT X 3 FT) DOLLARS and CENTS	LF	600.000	30
	462	6003		CONC BOX CULV (4 FT X 2 FT) DOLLARS and CENTS	LF	709.000	31
	462	6006		CONC BOX CULV (5 FT X 2 FT) DOLLARS and CENTS	LF	691.000	32
	462	6012		CONC BOX CULV (6 FT X 5 FT) DOLLARS and CENTS	LF	2,712.000	33
	464	6003		RC PIPE (CL III)(18 IN) DOLLARS and CENTS	LF	7.000	34
	464	6005		RC PIPE (CL III)(24 IN) DOLLARS and CENTS	LF	1,406.000	35
	464	6007		RC PIPE (CL III)(30 IN) DOLLARS and CENTS	LF	1,208.000	36

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	465	6053		INLET (COMPL)(POD)(SFG)(3FTX5FT) DOLLARS and CENTS	EA	2.000	37
	465	6063		INLET (COMPL)(PSL)(RH)(4FTX4FT) DOLLARS and CENTS	EA	2.000	38
	465	6068		INLET (COMPL)(PSL)(RH)(6FTX6FT) DOLLARS and CENTS	EA	2.000	39
	465	6128		INLET (COMPL)(PSL)(FG)(4FTX4FT-4FTX- 4FT) DOLLARS and CENTS	EA	12.000	40
	465	6148		INLET(COMPL)(PSL)(SFG)(3FTX5FT-3FTX- 5FT) DOLLARS and CENTS	EA	27.000	41
	465	6209		INLET (COMPL)(TY 1)(SPL) DOLLARS and CENTS	EA	2.000	42
	467	6117		SET (TY I)(S=3 FT)(HW= 5 FT)(3:1)(C) DOLLARS and CENTS	EA	1.000	43
	467	6120		SET (TY I)(S=3 FT)(HW= 5 FT)(6:1)(P) DOLLARS and CENTS	EA	1.000	44
	467	6147		SET (TY I)(S= 4 FT)(HW= 4 FT)(6:1) (P) DOLLARS and CENTS	EA	2.000	45
	467	6180		SET (TY I)(S= 5 FT)(HW= 4 FT)(6:1) (P) DOLLARS and CENTS	EA	2.000	46
	467	6390		SET (TY II) (24 IN) (RCP) (4: 1) (C) DOLLARS and CENTS	EA	2.000	47
	467	6394		SET (TY II) (24 IN) (RCP) (6: 1) (C) DOLLARS and CENTS	EA	1.000	48

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	467	6395		SET (TY II) (24 IN) (RCP) (6: 1) (P) DOLLARS and CENTS	EA	1.000	49
	479	6006		ADJUSTING INLET (CAP) DOLLARS and CENTS	EA	4.000	50
	496	6002		REMOV STR (INLET) DOLLARS and CENTS	EA	3.000	51
	496	6004		REMOV STR (SET) DOLLARS and CENTS	EA	16.000	52
	496	6007		REMOV STR (PIPE) DOLLARS and CENTS	LF	1,074.000	53
	496	6042		REMOV STR (SMALL) DOLLARS and CENTS	EA	3.000	54
	500	6001		MOBILIZATION DOLLARS and CENTS	LS	1.000	55
	502	6001		BARRICADES, SIGNS AND TRAFFIC HAN- DLING DOLLARS and CENTS	MO	12.000	56
	506	6002	001	ROCK FILTER DAMS (INSTALL) (TY 2) DOLLARS and CENTS	LF	660.000	57
	506	6009	001	ROCK FILTER DAMS (INSTALL) (TY 4) DOLLARS and CENTS	CY	30.000	58
	506	6011	001	ROCK FILTER DAMS (REMOVE) DOLLARS and CENTS	LF	690.000	59
	506	6038	001	TEMP SEDMT CONT FENCE (INSTALL) DOLLARS and CENTS	LF	1,750.000	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	6039	001	TEMP SEDMT CONT FENCE (REMOVE) DOLLARS and CENTS	LF	1,750.000	61
	512	6001		PORT CTB (FUR & INST)(SGL SLOPE)(TY 1) DOLLARS and CENTS	LF	150.000	62
	512	6005		PORT CTB (FUR & INST)(F-SHAPE)(TY 1) DOLLARS and CENTS	LF	3,840.000	63
	512	6029		PORT CTB (MOVE)(F-SHAPE)(TY 1) DOLLARS and CENTS	LF	6,420.000	64
	512	6053		PORT CTB (REMOVE)(F-SHAPE)(TY 1) DOLLARS and CENTS	LF	3,840.000	65
	529	6007		CONC CURB & GUTTER (TY 1) DOLLARS and CENTS	LF	14,316.000	66
	533	6001		RUMBLE STRIPS (SHOULDER) DOLLARS and CENTS	LF	6,265.000	67
	540	6001		MTL W-BEAM GD FEN (TIM POST) DOLLARS and CENTS	LF	6,737.500	68
	540	6016		DOWNSTREAM ANCHOR TERMINAL SEC- TION DOLLARS and CENTS	EA	8.000	69
	542	6001		REMOVE METAL BEAM GUARD FENCE DOLLARS and CENTS	LF	1,081.000	70
	542	6002		REMOVE TERMINAL ANCHOR SECTION DOLLARS and CENTS	EA	4.000	71
	542	6003		REMOVE DOWNSTREAM ANCHOR TERMI- NAL DOLLARS and CENTS	LF	14.000	72

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	544	6001		GUARDRAIL END TREATMENT (INSTALL) DOLLARS and CENTS	EA	8.000	73
	544	6003		GUARDRAIL END TREATMENT (REMOVE) DOLLARS and CENTS	EA	4.000	74
	545	6001		CRASH CUSH ATTEN (INSTL) DOLLARS and CENTS	EA	4.000	75
	545	6003		CRASH CUSH ATTEN (MOVE & RESET) DOLLARS and CENTS	EA	4.000	76
	545	6005		CRASH CUSH ATTEN (REMOVE) DOLLARS and CENTS	EA	4.000	77
	556	6007		PIPE UNDERDRAINS (TY 7) (6") DOLLARS and CENTS	LF	100.000	78
	610	6009		REMOVE RD IL ASM (TRANS-BASE) DOLLARS and CENTS	EA	7.000	79
	610	6206		IN RD IL (TY SA) 40S-8 (250W EQ) LED DOLLARS and CENTS	EA	6.000	80
	610	6214		IN RD IL (TY SA) 40T-8 (250W EQ) LED DOLLARS and CENTS	EA	27.000	81
	618	6023		CONDT (PVC) (SCH 40) (2") DOLLARS and CENTS	LF	16,050.000	82
	618	6047		CONDT (PVC) (SCH 80) (2") (BORE) DOLLARS and CENTS	LF	1,670.000	83
	620	6007		ELEC CONDR (NO.8) BARE DOLLARS and CENTS	LF	17,270.000	84

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	ITEM NO	DESC CODE	S.P. NO.				
	620	6008		ELEC CONDR (NO.8) INSULATED DOLLARS and CENTS	LF	36,470.000	85
	620	6009		ELEC CONDR (NO.6) BARE DOLLARS and CENTS	LF	835.000	86
	620	6010		ELEC CONDR (NO.6) INSULATED DOLLARS and CENTS	LF	1,670.000	87
	624	6002		GROUND BOX TY A (122311)W/APRON DOLLARS and CENTS	EA	44.000	88
	624	6009		GROUND BOX TY D (162922) DOLLARS and CENTS	EA	12.000	89
	628	6002		REMOVE ELECTRICAL SERVICES DOLLARS and CENTS	EA	1.000	90
	628	6009		ELC SRV TY A 120/240 060(NS)SS(E)SP(O) DOLLARS and CENTS	EA	4.000	91
	636	6002		ALUMINUM SIGNS (TY G) DOLLARS and CENTS	SF	1,199.500	92
	644	6001		IN SM RD SN SUP&AM TY10BWG(1)SA(P) DOLLARS and CENTS	EA	6.000	93
	644	6004		IN SM RD SN SUP&AM TY10BWG(1)SA(T) DOLLARS and CENTS	EA	18.000	94
	644	6068		RELOCATE SM RD SN SUP&AM TY 10BWG DOLLARS and CENTS	EA	15.000	95
	644	6070		RELOCATE SM RD SN SUP&AM TY S80 DOLLARS and CENTS	EA	4.000	96

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	644	6076		REMOVE SM RD SN SUP&AM DOLLARS and CENTS	EA	30.000	97
	647	6001		INSTALL LRSS (STRUCT STEEL) DOLLARS and CENTS	LB	4,517.000	98
	647	6003		REMOVE LRSA DOLLARS and CENTS	EA	9.000	99
	650	6204		REMOVE OVERHD SIGN SUP DOLLARS and CENTS	EA	1.000	100
	658	6001		INSTL DEL ASSM (D-SW)SZ 1(FLX)GND DOLLARS and CENTS	EA	50.000	101
	658	6036		INSTL DEL ASSM (D-DW)SZ 1(FLX)GND DOLLARS and CENTS	EA	15.000	102
	658	6061		INSTL DEL ASSM (D-SW)SZ 1(BRF)GF2 DOLLARS and CENTS	EA	38.000	103
	658	6064		INSTL DEL ASSM (D-SY)SZ 1(BRF)GF2 DOLLARS and CENTS	EA	35.000	104
	662	6063		WK ZN PAV MRK REMOV (W)4"(SLD) DOLLARS and CENTS	LF	10,000.000	105
	666	6005		REFL PAV MRK TY I (W)4"(DOT)(090MIL) DOLLARS and CENTS	LF	418.000	106
	666	6035		REFL PAV MRK TY I (W)8"(SLD)(090MIL) DOLLARS and CENTS	LF	11,533.000	107
	666	6041		REFL PAV MRK TY I (W)12"(SLD)(090MIL) DOLLARS and CENTS	LF	868.000	108

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	6167		REFL PAV MRK TY II (W) 4" (BRK) DOLLARS and CENTS	LF	2,274.000	109
	666	6168		REFL PAV MRK TY II (W) 4" (DOT) DOLLARS and CENTS	LF	418.000	110
	666	6170		REFL PAV MRK TY II (W) 4" (SLD) DOLLARS and CENTS	LF	2,169.000	111
	666	6174		REFL PAV MRK TY II (W) 6" (SLD) DOLLARS and CENTS	LF	18,993.000	112
	666	6178		REFL PAV MRK TY II (W) 8" (SLD) DOLLARS and CENTS	LF	11,533.000	113
	666	6180		REFL PAV MRK TY II (W) 12" (SLD) DOLLARS and CENTS	LF	868.000	114
	666	6207		REFL PAV MRK TY II (Y) 4" (SLD) DOLLARS and CENTS	LF	16,897.000	115
	666	6218		REFL PAV MRK TY II (BLACK) 4"(SHADOW) DOLLARS and CENTS	LF	15,711.000	116
	666	6299		RE PM W/RET REQ TY I (W)4"(BRK)(090MIL) DOLLARS and CENTS	LF	2,274.000	117
	666	6302		RE PM W/RET REQ TY I (W)4"(SLD)(090MIL) DOLLARS and CENTS	LF	2,169.000	118
	666	6308		RE PM W/RET REQ TY I (W)6"(SLD)(090MIL) DOLLARS and CENTS	LF	18,993.000	119
	666	6314		RE PM W/RET REQ TY I (Y)4"(SLD)(090MIL) DOLLARS and CENTS	LF	16,897.000	120

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	672	6008		REFL PAV MRKR TY I-R DOLLARS and CENTS	EA	84.000	121
	672	6010		REFL PAV MRKR TY II-C-R DOLLARS and CENTS	EA	731.000	122
	677	6001		ELIM EXT PAV MRK & MRKS (4") DOLLARS and CENTS	LF	3,815.000	123
	677	6003		ELIM EXT PAV MRK & MRKS (8") DOLLARS and CENTS	LF	6,735.000	124
	677	6005		ELIM EXT PAV MRK & MRKS (12") DOLLARS and CENTS	LF	1,536.000	125
	677	6008		ELIM EXT PAV MRK & MRKS (ARROW) DOLLARS and CENTS	EA	2.000	126
	677	6012		ELIM EXT PAV MRK & MRKS (WORD) DOLLARS and CENTS	EA	2.000	127
	3002	6001		MEMBRANE UNDERSEAL DOLLARS and CENTS	GAL	1,998.000	128
	6001	6002		PORTABLE CHANGEABLE MESSAGE SIGN DOLLARS and CENTS	EA	4.000	129
	6053	6002		REMOVE OVERHEAD SIGN PANELS DOLLARS and CENTS	EA	2.000	130
	6129	6001		CONCRETE ENCASED DUCT BANK DOLLARS and CENTS	LF	2,842.000	131

Project Number:
County: Hays
Highway: IH 35

Sheet:
Control: 0016-02-145

GENERAL NOTES: Version September 14, 2015
Basis of Estimate

Item	Description	**Rate	Basis	Quantity
160	Topsoil	1 CY/7 SY		116,606 SY
164	Seed for Erosion Control (Item 164)(Perm) (Item 164)(Temp)(Warm) (Item 164)(Temp)(Cool)	4840 SY/AC 4840 SY/AC 4840 SY/AC 4840 SY/AC	116,806 SY 58,303 SY 58,303 SY	
**166	Fertilizer (13-13-13)	1/8 LB/SY 4840 SY/AC	116,606 SY 116,606 SY	14,576 LB 24.1 AC
168	Vegetative Watering (Item 164)(Perm) (Item 164)(Temp)(Warm) (Item 164)(Temp)(Cool)	20 GAL/SY 10 GAL/SY 10 GAL/SY	116,606 SY 58,303 SY 58,303 SY	2,332 MG 583 MG 583 MG
**204	Sprinkling (Dust) (Item 132) (Item 247)	30 GAL/CY 30 GAL/CY 30 GAL/CY		
**210	Roll (Flat Wheel) (Item 247)	1 HR/200 TON		
**210	Roll (Tamping) (Item 132)	1 HR/200 CY		
**210	Roll (Heavy Tamp) (Item 132)	1 HR/200 CY		
**210	Roll (Lt Pneu Tire) (Item 132) (Item 247)	1 HR/500 CY 1 HR/200 TON		
247	FL BS (CMP IN PLC) (TY A GR 5)	27 CF/CY	419,647 CF	12,945 CY
310	Prime Coat (MC-30 or AE-P)	0.20 GAL/SY	46,627 SY	9,586 GAL
340	Dense-Graded Hot-Mix Asphalt (Small Quantity) TY D CL A PG 76-22 (1.5 IN) TY C CL A PG 70-22 (2 IN) TY C CL A PG 70-22 (LEVEL-UP)(4 IN) TY B CL A PG 70-22 (5 IN) TY B CL A PG 70-22 (9.5 IN)	110 LB/SY/IN 110 LB/SY/IN 110 LB/SY/IN 110 LB/SY/IN 110 LB/SY/IN	11,919 SY 37,669 SY 7,568 SY 27,308 SY 11,844 SY	983 TON 3,004 TON 1,319 TON 7,509 TON 6,189 TON
342	Permeable Friction Course (PFC) PFC Aggregate GR 4 SAC CL A (PG76 MIX) (1.5 IN) PFC Asphalt PG 76-22 (1.5 IN)	82.7 LB/SY/IN 5.3 LB/SY/IN	18,854 SY 18,854 SY	1,169 TON 74.9 TON
3002	Non-Tracking Seal	0.25 GAL/SY	6,456 SY	1,998 GAL

** For Informational Purposes Only

The following standard detail sheet or sheets have been modified:

SETB-CD (MOD)

GENERAL

Perform work during good weather. If work is damaged by a weather event, the Contractor is responsible for all costs associated with replacing damaged work.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

References to manufacturer's trade name or catalog numbers are for the purpose of identification only. Similar materials from other manufacturers are permitted if they are of equal quality, comply with the specifications for this project, and are approved.

If work is performed at Contractor's option, when inclement weather is impending, and the work is damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the work, if required.

The roadbed shall be free of organic material prior to placing any section of the pavement structure.

Equip all construction equipment used in roadway work with highly visible omnidirectional flashing warning lights.

Intelligent Transportation Systems (ITS) Infrastructure may exist within the limits of this project and that the system must remain operational throughout construction. The exact location of ITS Infrastructure is not known. Contact the TxDOT Area Engineer's or Inspection Team's Office for the location(s) at least 48 hours before commencing any work that might affect present ITS Infrastructure. Use caution if working in these areas to avoid damaging or interfering with existing facilities. Repair any damage to this system within 8 hours of occurrence at no cost to the Department. In the event of system damage, notify TxDOT/CTECC at (512) 974-0883 within one hour of occurrence. Failure of the Contractor to repair damage to any infrastructure that conveys any corridor information to TxDOT/CTECC will result in the Contractor being billed for the full cost of emergency repairs.

Provide a smooth, clean sawcut along the existing asphalt pavement structure, as directed. Consider subsidiary to the pertinent Items.

Construct all manholes/valves to final pavement elevations prior to the placement of final surface. If the manholes/valves are going to be exposed to traffic, place temporary asphalt around the manhole/valve to provide a 50:1 taper. The asphalt taper is subsidiary to the ACP work.

Supply litter barrels in enough numbers at locations as directed to control litter within the project. Consider subsidiary to pertinent Items.

Use a self-contained vacuum broom to sweep the roadway and keep it free of sediment as directed. The contractor will be responsible for any sweeping above and beyond the normal maintenance required to keep fugitive sediment off the roadway as directed by the Engineer.

Protect all areas of the right of way, which are not included in the actual limits of the proposed construction areas, from disturbance. Restore any area disturbed because of the Contractor's operations to a condition as good as, or better than, before the beginning of work at no cost to the state.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Damage to existing pipes and SET's due to Contractor operations shall be repaired at Contractor's expense.

All locations used for storing construction equipment, materials, and stockpiles of any type, within the right of way, will be as directed. Use of right of way for these purposes will be restricted to those locations where driver sight distance to businesses and side street intersections is not obstructed and at other locations where an unsightly appearance will not exist. The Contractor will not have exclusive use of right of way but will cooperate in the use of the right of way with the city/county and various public utility companies as required.

Measure all minimum vertical clearances for all structures (including, but not limited to, signal mast arms, span wires, and overhead sign bridge structures) within the limits of the project for all roadway alignments in all directions of travel. Coordinate with the Engineer to take these measurements and obtain prior to opening roadways to traffic unless otherwise approved. The Engineer will report all minimum vertical clearance information to the District Permit Office.

During evacuation periods for Hurricane events the Contractor will cooperate with Department for the restricting of Lane Closures and arranging for Traffic Control to facilitate Coastal Evacuation Efforts.

ITEM 5 – CONTROL OF THE WORK

Contractor shall host weekly project meetings, each of which will include a discussion regarding safety.

Contractor shall attend I-35 corridor safety conferences as directed by the Engineer. It is anticipated these conferences will be held monthly.

Overhead and underground utilities may exist in the vicinity of the project. The exact location of underground utilities is not known.

Mark and maintain 100-foot station intervals for the duration of the project, as directed. Consider subsidiary to pertinent Items.

Electronic Shop Drawing Submittals:

Submit Electronic Shop Drawing Submittals according to the current **Guide to Electronic Shop Drawing Submittal** (GESDS). For instructions on submitting shop drawings electronically go to

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

TxDOT website (Business with TxDOT > Bridge Information > Shop Drawings. File is titled: **Guide to Electronic Shop Drawing Submittal.**)

For information on the electronic shop plan process, please visit the Bridge Division/Fabrication Branch web pages at: <http://www.txdot.gov/business/resources/specifications/shop-drawings.html>

The Guide to Electronic Shop Drawing Submittal at:

ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/e_submit_guide.pdf

and the Submittal Requirements table at:

ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/electronic_submission.pdf have been updated to include additional guidance on segmental bridge submittals.

And

Copies of the standard shop drawings are on file with Traffic Operations Division, Bridge Division, and the Materials Section of Construction Division. Additional shop drawings for roadway illumination assemblies built in conformance with these drawings are not required. Pre-approved shop drawing manufacturers and assembly model numbers can be found at TxDOT website (Business with TxDOT > Materials Information > Material Producer List. Category is Roadway Illumination and Electrical Supplies

1. In the E-mail “To:” box place the E-mail address to the following:

Alternatively/In addition, if the Shop Drawings (and Working Drawings, if/when required) are not required to be submitted to the **Bridge Division Fabrication Section:**

Submit all Shop Drawings (and Working Drawings, if/when required), which do not require direct submittal to the **Bridge Division Fabrication Section**, electronically, to the following address:

South Austin Area	David Klipple	David.Klipple@txdot.gov	AUS_SA-ShopReview@txdot.gov
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Consultant E-Mail Contact:

CP&Y, Inc.	Paul Schrader	pschrader@cpyi.com	AUS_SA-ShopReview@txdot.gov
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2. In the e-mail “CC:” or “Copy To:” box place the following E-mail addresses:

In every e-mail submittal, the “CC:” or “Copy To:” line of the header will include the following e-mail addresses:

a. Contractor’s Contact:

AND

b. Area Office Contact:

South Austin Area	David Klipple	David.Klipple@txdot.gov	AUS_SA-ShopReview@txdot.gov
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Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

ITEM 6 - CONTROL OF MATERIALS

Give a minimum of 1 business day notice for materials, which require Inspection at the Plant.

ITEM 7 – LEGAL RELATIONS AND RESPONSIBILITIES

For all work over or near Bodies of Water (Lakes, Rivers, Ponds, Creeks, etc.):

Keep on hand Synthetic Absorbent Booms (Petroleum Sorbent Booms, Petroleum Socks, Absorbant Socks, etc.) and Absorbent Pads (Eversoak Sorbents, Industrial Absorbent Pads, Calicorp Absorbent Pads, etc.), both types, for spilled petroleum products, in enough quantity to mitigate a petroleum-type spill due to Contract work.

Do not initiate activities in a Project Specific Location (PSL) associated with a U.S. Army Corps of Engineers (USACE) jurisdictional area that have not been previously evaluated by the USACE as part of the permit review of this project. Such activities include, but are not limited to, haul roads, equipment staging areas, borrow and disposal sites. Associated defined here means materials are delivered to or from the PSL. The jurisdictional area includes all waters of the U.S. including wetlands or associated wetlands affected by activities associated with this project. Special restrictions may be required for such work. Consult with the USACE regarding activities, including Project Specific Locations (PSLs) that have not been previously evaluated by the USACE. Provide the Department with a copy of all consultations or approvals from the USACE before initiating activities.

Proceed with activities in PSLs that do not affect a USACE jurisdictional area if self-determination has been made that the PSL is non-jurisdictional or proper USACE clearances have been obtained in jurisdictional areas or have been previously evaluated by the USACE as part of the permit review of this project. Document any determinations that their activities do not affect a USACE jurisdictional area. Maintain copies of their determinations for review by the Department or any regulatory agency.

The Contractor must document and coordinate with the USACE, if required, before any excavation hauled from or embankment hauled into a USACE jurisdictional area by either (1) or (2) below.

(1) Restricted Use of Materials for the Previously Evaluated Permit Areas.

Document both the project specific location (PSL) and their authorization. Maintain copies for review by the Department or any regulatory agency. When an area within the project limits has been evaluated by the USACE as part of the permit process for this project:

- a. Suitable excavation of required material in the areas shown on the plans and cross sections as specified in Item 110, Excavation, is used for permanent or temporary fill (Item 132, Embankment) within a USACE jurisdictional area;
- b. Suitable embankment (Item 132) from within the USACE jurisdictional area is used as fill within a USACE evaluated area; and,
- c. Unsuitable excavation or excess excavation [“Waste”] (Item 110, Excavation) that is disposed of at an approved location within a USACE evaluated area.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

(2) Contractor Materials from Areas Other than Previously Evaluated Areas.

Provide the Department with a copy of all USACE coordination or approvals before initiating any activities in a jurisdictional area within the project limits that has not been evaluated by the USACE or for any off right of way locations used for the following, but not limited to, haul roads, equipment staging areas, borrow and disposal sites:

- a. Item 132, Embankment, used for temporary or permanent fill within a USACE jurisdictional area; and,
- b. Unsuitable excavation or excess excavation ["Waste"] (Item 110, Excavation) that is disposed of outside a USACE evaluated area.

The total area estimated to be disturbed for this project is 27.0 acres. The disturbed area in this project, all project locations in the Contract, and the Contractor project specific locations (PSLs), within 1 mile of the project limits, for the Contract will further establish the authorization requirements for storm water discharges. The Department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction activities shown on the plans. The Contractor is to obtain required authorization from the TCEQ for Contractor PSLs for construction support activities on or off the ROW. When the total area disturbed in the Contract and PSLs within 1 mile of the project limits exceeds 5 acres, provide a copy of the Contractor NOI for PSLs on the ROW to the Engineer and to the local government that operates a separate storm sewer system.

This project required formal consultation, permits, or both with environmental resource agencies. Environmentally sensitive areas will most likely be encountered on Contractor designated PSLs for this project.

TxDOT has assumed a U.S. Army Corps of Engineers' (USACE) Nationwide Permit #14 (NWP #14) for this project. This allows a maximum of $\frac{1}{10}$ of an acre of permanent fill to be placed within the creek channel. If more than $\frac{1}{10}$ of an acre will need to be filled, a pre-construction notice will need to be completed and mailed to the USACE or an additional permit will need to be obtained, by the Contractor, prior to construction. If temporary access roads will be needed, adhered to the requirement of NWP #14 and restore all disturbed areas to their original contours, once construction is complete.

A project that requires a USACE permit must use at least one of the Best Management Practices (BMP) from each category listed on the Texas Commission on Environmental Quality (TCEQ) Section 401 checklist for NWP's. The erosion control BMP for this project would be blankets/seeding.

Do not park equipment or make stockpiles where driver sight distance to businesses and side street intersections is obstructed, especially after work hours. If it is necessary to park where drivers' views are blocked, make every effort to flag traffic accordingly. Give the travelling public first priority.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Maintain positive drainage for permanent, as well as, temporary drainage for the duration of the project. This work is the sole responsibility of the Contractor. Construct temporary and permanent drainage systems prior to the placement of temporary pavement, when possible, but absolutely prior to the placement of permanent pavement. Be responsible for any items associated with the temporary/interim drainage and all related maintenance. No direct payment will be made for this work. The Engineer will have the final authority in determining/approving the adequacy of any temporary/permanent drainage features installed.

Migratory Birds

Migratory birds may be nesting within the project limits and may be concentrated on roadway structures such as bridges and culverts. Remove all old migratory bird nests from any structures between September 1 and January 31, and while the nests are not occupied or being used by migratory birds. In addition, be prepared to prevent migratory birds from re-nesting between February 1 and August 31.

All methods used for the removal of old bird nests and the prevention of re-nesting must be approved by the Engineer, well in advance of the planned use.

In the event that any active nest of a migratory bird species is encountered on-site during project construction, all construction activity, within the immediate vicinity of the nest, will cease immediately. Contact the Engineer to determine how to proceed.

No extension of time or compensation payment will be granted for a delay or suspension of work caused by nesting swallows. This work is subsidiary to the various bid items.

Law Enforcement Personnel

All law enforcement personnel used in Work Zone Traffic Control shall be trained for performing duties in work zones and are required to take "Safe and Effective Use of Law Enforcement Personnel in Work Zones" (Course # 133119) which can be found on line at the following site: www.nhi.fhwa.dot.gov Certificates of completion shall be kept on hand by law enforcement personnel.

For payment submit charge summary, invoices, and the Department prescribed form.

No payment of law enforcement personnel for moving equipment or drive time to/from the event site.

A maximum combined rate of \$70 per hour for the law enforcement personnel and the patrol vehicle will be allowed. Scheduling fee is subsidiary as per Item 502.4.2.

Cancel law enforcement personnel when the event is canceled. Cancellation, minimums or "show up" fee shall not be paid when cancellation is made 18 hours prior to beginning of the event. Failure to cancel within 18 hours will not be cause for payment for cancellation, minimums, or "Show Up" time. Payment of actual "show up" time to the event site due to cancellation shall be on a case by case basis at a maximum of 2 hours per officer.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Alterations to the cancellation and rate guide shall be approved by the Engineer or as pre-determined by the official policy of the officers governing authority.

ITEM 8 – PROSECUTION AND PROGRESS

Electronic versions of schedules shall be saved in Primavera P6 format.

Working days will be charged in accordance with 8.3.1, “Five-Day Workweek.”

A CPM schedule in Primavera format and a PSSR is required. Use software fully compatible with Primavera P6. Provide a two week “look ahead” weekly. The “look ahead” shall include upcoming work items and possible lane and full highway closures.

Maintain a one page 8.5”x11” project fact sheet to be reviewed and distributed by the Department. Use a template provided by the Department.

Substantially complete Milestone 1 in 40 working days. The disincentive for late completion is \$8,000 per day. The time charges for Milestone 1 will begin at the start of Phase 1 Step 1 when the existing southbound exit ramp to Yarrington Rd (approx. Sta 4500+00) is closed to traffic and end at the start of Phase 1 Step 2 when the proposed southbound entrance ramp from RM 150 (Ramp SB206, approx. Sta 4515+00) is opened to traffic.

Work will not be permitted on the frontage road and main lanes in the same direction at the same time. Frontage road work will be allowed in the opposite direction of the main lane work.

Two (2) successive on-ramp or two (2) successive off-ramp closures will not be allowed without prior approval from the Engineer.

Waiving lane rental fees will only be considered when a condition, not under the control of the Contractor, does not allow the re-opening of a lane on time, as determined by the Engineer.

LANE RENTALS

The contractor will be assessed a lane rental charge for each lane closed and/or obstructed after 5:00A.M. and/or before 9:00 P.M. on allowed work days.

The schedule of rental charges will be as follows:

MAIN LANE LATE CHARGES

Lane Rental Period	Late Charges (per lane)
0 – 15 minutes	\$5,500
15 – 30 minutes	\$12,800
30 – 45 minutes	\$22,000
45 – 60 minutes	\$33,000
Every additional 0-15 minute interval after 1 hour	\$11,000
Late charges are cumulative.	

For example: If the contractor has one lane of traffic closed until 5:32AM, the late charges will be accrued as follows:

$$1 \text{ lane closed} \times [\$5,500 + \$12,800 + \$22,000] = \underline{\$40,300.}$$

The Department will not adjust the number of working days for the project, if any, due to differences in opinion regarding any assumptions made in the preparation of the schedule or for errors, omissions or discrepancies found in the time determination schedule.

ITEM 100 - PREPARING RIGHT OF WAY

Prep ROW will not begin until trees designated for preservation have been protected, items listed in the EPIC have been addressed, and SW3P controls installed. Burning brush is not allowed.

Items listed in the standard specification and designated on the plan sheets are subsidiary. The quantities provided are for contractor information. Incorrect quantities, failure to designate an item listed in the standard specification as subsidiary, or lack of information in the plans does not constitute "Differing Site Conditions" unless not reasonably detectable.

Unless limits are provided in plans, perform pruning or removal for areas within 30' of edge of pavement under construction. Prune or remove vegetation along sidewalks, along paths, along guard fence, along rails, around signs, markers, and structures to provide visibility to traveling public, line of sight for travelers, and 5' of clearance. Prune to provide a minimum of 14'

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

vertical clearance under all trees. Use work methods described in Item 752. Flailing equipment is not allowed on oak trees. This work is subsidiary.

Use hand methods or other means of removal if doing work by mechanical methods is impractical. This work is subsidiary.

Backfill material will be Type B Embankment using ordinary compaction.

ITEM 110 – EXCAVATION

The Engineer will define unsuitable material.

ITEM 132 – ALL EMBANKMENT

At no time will the retaining wall backfill material exceed the adjacent embankment operation by more than one lift. At no time will the embankment adjacent to the retaining wall backfill exceed the wall backfill by any elevation.

The Engineer will define unsuitable material. Material which the Contractor might deem to be unsuitable due to moisture content will not be considered unsuitable material.

Prior to begin embankment of existing area, correct or replace unstable material to a depth of 6” below existing grade. Embankment areas shall be inspected prior to begin work.

Rock or broken concrete produced by the project is allowed in earth embankments. The size of the rock or broken concrete shall not exceed the layer thickness requirements in Section 132.3.4., “Compaction Methods.” The material shall not be placed vertically within 5’ of the finished subgrade elevation.

Embankment placed vertically within 5’ of the finished subgrade elevation or within the edges of the subgrade and treated with lime, cement, or other calcium based additives must have a sulfate content less than 3000 ppm. Allow 5 business days for testing. Treatment of sulfate material 3000 ppm to 7000 ppm requires 7 days of mellowing and continuous water curing, in accordance TxDOT guidelines for Treatment of Sulfate-Rich Soils and Bases in Pavement Structures (9/2005). Material over 7000 ppm is not allowed.

Provide embankment material for subgrade between proposed base layer and existing ground for the centerline station limits below that meets the select backfill requirements in Item 423:

Mainlanes and Ramps: Stations 4385+00 to 4520+00 and Stations 4640+00 to 4675+00

Frontage Roads: Stations 4405+00 to 4435+00

ITEM 132 – EMBANKMENT TY C

Do not furnish shale clays. The Engineer must approve the embankment material before use on the project. Existing material from within the project limits or approved by the engineer may be used vertically beyond 5’ of the finished subgrade elevation or beyond the edge of the subgrade.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Furnish embankment with sulfate content less than 3000 ppm if treated with calcium-based chemicals or within 5' of the finished subgrade elevation.

Embankment placed over the area of MSE backfill must meet the same backfill requirements for the type specified under Item 423.

TY C Requirements

Percent Passing	Percent Retained					LL Max	PI Max	PI Min
	1 3/4"	7/8"	3/8"	#4	#40			
100	0-10	10-20	-	45-75	50-85	45	20	6

ITEM 160 - TOPSOIL

Off-site topsoil shall have a minimum PI of 25.

No Sandy Loam allowed.

Obtain approval of the actual depth of the topsoil sources for both on-site and off-site sources.

Construct topsoil stockpiles of no more than five (5) feet in height.

It is permissible to use topsoil dikes for erosion control berms within the right of way, as directed.

Seed or track slopes within 14 days of placement.

Salvage topsoil from sites of excavation and embankment. Maximum salvage depth is 6 inches.

Windrowing of topsoil obtained from the Right of Way (ROW) is not allowed.

ITEM 168 – VEGETATIVE WATERING

Water all areas of project to be seeded or sodded.

Maintain the seedbed in a condition favorable for the growth of grass. Watering can be postponed immediately after a rainfall on the site of 1/2 inch or greater, but will be resumed before the soil dries out. Continue watering until final acceptance.

Vegetative watering rates and quantities are based on 1/4 inch of watering per week over a 3-month watering cycle. The actual rates used and paid for will be as directed and will be based on prevailing weather conditions to maintain the seedbed.

Obtain water at a source that is metered (furnish a current certification of the meter being used) or furnish the manufacturer's specifications showing the tank capacity for each truck used.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Notify the Engineer, each day that watering takes place, before watering, so that meter readings or truck counts can be verified.

ITEM 169 – SOIL RETENTION BLANKETS

Use materials from prequalified material producers list as shown on the Texas Department of Transportation (TxDOT) ----- Construction Divisions (CST) materials producers list. See TxDOT website ([www.txdot.gov/Business with TxDOT > Materials Information > Material Producer List](http://www.txdot.gov/Business%20with%20TxDOT%20Materials%20Information%20Material%20Producer%20List)) for list of pre-qualified manufacturers. Direct all questions to the Maintenance Division, Vegetation Management Section, 125 E. 11th Street, Austin, TX 78701-2483.

ITEM 204 – SPRINKLING

Apply water for dust control as directed. When dust control is not being maintained, cease operations until dust control is maintained. Consider subsidiary to the pertinent Items.

ITEM 216 - PROOF ROLLING

Correct and perform “Proof Rolling” retest at the Contractor’s expense, to the satisfaction of the Engineer, when initial “Proof Rolling” yields a failing result.

ITEM 247 - FLEXIBLE BASE

The lift thickness shall be 4” to 6” unless shown in the plans. When compacted in multiple lifts, the density of the bottom and middle lifts shall be 95% and 98% of the maximum dry density, respectively.

Correction of subgrade soft spots is subsidiary.

Complete all subgrade, ditches, slopes, and place all drainage structures to conform to required lines, grades, and cross-sections, as shown and directed, prior to the placement of Flex Base.

Do not use a vibratory roller to compact the material directly over a box culvert.

ITEM 300 – ASPHALTS, OILS, AND EMULSIONS

Asphalt season is May 1 thru September 15. Emulsified Asphalt season is April 1 thru October 15.

Measurement based on volume method as described in Item 316.

Apply tack coat at 0.06 GAL/SY (residual) or 0.12 GAL/SY total for emulsion. In addition to tack allowed per the specification, an approved list of tack coats is maintained by the District Lab.

If an under seal is not provided, furnish a tack coat.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Spray a test strip of non-tracking tack coat at a location on or near the project. Consult the manufacturer for the recommended application rate. Allow the strip to cure for the maximum time specified. Drive over the test strip with equipment to simulate the effect of paving equipment. There should be no evidence tracking or picking up of the tack coat on the wheels of the equipment. The Engineer shall verify the bond strength.

ITEM 302 – AGGREGATES FOR SURFACE TREATMENTS

Previously tested aggregates delivered to the project, which are found to contain excessive quantities of dust (more than 0.5 percent passing the no. 40 sieve) during pre-coating, stockpiling or hauling operations, will be rejected. Use test method Tex-200-F, Part II, for testing.

Table 3 Los Angeles Abrasion, % Max, is lowered from 35 to 30 and is applicable to all aggregates.

When TY E is allowed, furnish coarse fractionated recycled asphalt pavement (CF-RAP). CF-RAP aggregate stockpiles must be approved on a stockpile-by-stockpile basis, unless approved by the Engineer. Do not exceed stockpiles greater than 2000 tons. CF-RAP shall meet the below gradation requirement (after ignition burn off of asphalt) or finer than Grade 4. CF-RAP shall meet deleterious material and decantation requirements in accordance with Table 3.

CF-RAP Requirements

Percent Retained				
5/8"	1/2"	3/8"	#4	#8
0	10-25	60-80	85-100	90-100

ITEM 310, 314, 340 & 342

Perform work during good weather, unless otherwise directed. If work is performed at Contractor’s option, when inclement weather is impending, and the work is damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the work, if required.

ITEM 310 – PRIME COAT

Apply blotter material to all driveways and intersections. This work is subsidiary.

When Multi Option is allowed, provide MC 30, EC 30 or AE-P. MC 30 is not allowed in Travis County.

Rolling to ensure penetration is required.

Any oil or asphaltic material being paid for on the project shall use tank strap method as shown in TxDOT Seal Coat and Surface Treatment Manual 2010-1.

Prior to compaction and after grading of the final course of flexible base, apply half the specified rate of prime coat. Allow the prime coat to penetrate before rolling. Once compaction requirements are met, apply the remaining half of prime coat.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

ITEM 340 & 342

The Contractor must sample asphalt binder, in accordance to the applicable item. Label the sample can with the corresponding CSJ, lot, and subplot numbers. Samples must be stored in a common area where they are readily available to the TxDOT representative at the plant. The Contractor will be responsible for supplying storage for all samples. Retain all asphalt samples until hot mix production is complete or directed otherwise. Contractor is responsible for disposal of all asphalt binder samples, in accordance to Local, State, and Federal regulations.

Core holes may be filled with a Asphaltic patching material meeting the requirements of DMS-9203 or with SCM meeting requirements of DMS-9202.

Mill a transverse butt joint to transition from the new ACP to the existing surface. Make the transition a minimum of 50' H: 1" V. Saw cut the existing pavement at the transverse butt joint. Use a device to create a maximum 3H: 1V notched wedge joint on all longitudinal joints of 2" or greater. This work is subsidiary.

Prior to milling, core the existing pavement to verify thickness. This work is subsidiary.

Ensure placement sequence to avoid excess distance of longitudinal joint lap back not to exceed one day's production rates.

Submit any proposed adjustments or changes to a JMF before production of the new JMF.

Tack every layer. Do not dilute tack coat. Apply it evenly through a distributor spray bar.

Provide a minimum transition of 10' for intersections, 10' for commercial driveways, and 6' for residential driveways unless otherwise shown on the plans.

Irregularities will require the replacement of a full lane width using an asphalt paver. Replace the entire subplot if the irregularities are greater than 40% of the subplot area.

Lime or an approved anti-stripping agent must be used when crushed gravel is utilized to meet a SAC "A" requirement.

When using RAP or RAS, include the management methods of processing, stockpiling, and testing the material in the QCP submitted for the project. If RAP and RAS are used in the same mix, the QCP must document that both of these materials have dedicated feeder bins for each recycled material. Blending of RAP and RAS in one feeder bin or in a stockpile is not permitted.

Asphalt content and binder properties of RAP and RAS stockpiles must be documented when recycled asphalt content greater than 20% is utilized.

No RAS is allowed in surface courses.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Department approved warm-mix additives is required for all surface mix application when RAP is used. Dosage rates will be approved during JMF approval.

The Hamburg Wheel Test shall have a minimum rut depth of 3mm.

ITEM 340 - DENSE-GRADED HOT-MIX ASPHALT (Small Quantity)

Target laboratory molded density is 97% for all mixtures for TGC mixture designs.

When using Superpave Gyrotory Compactor (SGC) to design mixtures, submit the SGC mix design to the Engineer for approval.

When using substitute binders, mold specimens for mix design and production at the temperature required for the substitute binder used to produce the HMA.

The Hamburg minimum # of passes for PG 64 or lower is reduced to 7,000.

The Engineer may accept Hamburg Wheel test results for production and placement if no more than 1 of the 5 most recent tests is below the specified number of passes and the failing test is no more than 2,000 passes below the specified number of passes.

All mixtures must meet the Hamburg requirement as stated in the table below.

High-Temperature Binder Grade	Test Method	Hamburg Wheel Test <u>Requirements</u>¹		
		Minimum # of Passes	Maximum Rut Depth (mm)²	Minimum Rut Depth (mm)^{2,3}
PG 64 or lower	Tex-242-F	7,000	12.5	3
PG 70	Tex-242-F	15,000	12.5	3
PG 76 or higher	Tex-242-F	20,000	12.5	3

1. The Engineer may accept Hamburg Wheel test results for production and placement if no more than 1 of the 5 most recent tests is below the specified number of passes and the failing test is no more than 2,000 passes below the specified number of passes.
2. Rut depth tested @ 122°F
3. Unless approved otherwise.

Complete all roadways before final surface course placement, unless directed otherwise.

ITEM 342 - PERMEABLE FRICTION COURSE (PFC)

For SAC A, blending SAC B aggregate with an RSSM greater than the SAC A rating or 10, whichever is greater, is prohibited.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

The use of RAP is prohibited.

Submit the A-R binder design to the District Laboratory for approval.

Water flow rate should not exceed 20 seconds when tested using Tex-246-F. Perform water flow rate testing once per lot.

ITEM 354 - PLANING AND TEXTURING PAVEMENT

Milling machines must be able to meet the longitudinal grade and cross slope required.

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

Plane a full lane width before opening to traffic at the end of a work period.

Accomplish a 2-inch depth of planing and texturing in two passes. A single cut will be permitted if at most a 1¼-inch vertical offset is created against adjacent lanes when opened to traffic at the end of a work period.

Accomplish the 2 inch Planed Butt Joint only when there is at least 4 inches of existing thickness of ACP. Consider the determination of existing thickness of ACP as subsidiary to the various Items.

Taper planing at bridge ends as directed. Plane taper surfaces before placing HMAACP to allow a minimum of 1-inch surface course to abut the bridge ends.

Taper transverse faces at ends of passes as directed.

Make Transverse Tapers on each end of each pass using a minimum slope rate of 50 feet H to 1 inch V.

Stockpile salvaged materials at the City of Kyle Public Works Facility at 520 East RR 150, Kyle, Texas 78640.

Plane the designated areas and depths specified in the plans, including bridge decks, shoulders, and ramps, as required. Mill the pavement producing a final pavement surface with transverse pattern of 0.2 in. center to center of each strike area with difference no greater than 1/16 in. between the ridge and valley (RVD) measurement of the final milled surface. Construct a uniform finish free from gouges and ridges that does not vary more than 1/8 inch in width of the cut.

Use planing machine that is power-driven, self-propelled micro-milling equipment possessing the size and shape to allow traffic safe passage through areas adjacent to the work.

Also, ensure the micro milling equipment will be:

- Equipped with a cutting mandrel with carbide or equivalent tipped cutting teeth designed for micro-milling bituminous pavement full lane width to close tolerances.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

- Capable of removing pavement to an accuracy of 1/16 in (1.6 mm) with a maximum tool spacing of 5/8 inches
- Equipped with grade and slope controls operating from a string line or ski and based on mechanical or sonic operation
- Furnished with a lighting system for night work, as necessary
- Provided with conveyors capable of side, rear, or front loading to transfer the milled material from the roadway to a truck

Prior to commencement of the work, construct a test section that is 1000 feet in length with a uniformly textured surface and cross section as approved by the Engineer to demonstrate compliance with the transverse pattern, cross slope, and RVD measurement requirements. Stop milling operation and submit a written plan of action detailing proposed steps to improve operations if any of these requirements are exceeded in the test section. If approved by the Engineer, construct another 1000 ft test section in a different area than the initial section using the approved corrective action. The second test section is subject to the same requirements as those required in the initial test section. Continual micro-milling is prohibited until an acceptable test section is obtained.

Ensure micro-milling methods produce a uniform finished surface and maintain a constant cross slope between pavement edges in each lane. Provide positive drainage to prevent water accumulation on the micro-milled pavement, as shown on the Plans or directed by the Engineer. The cross slope must be uniform with no depressions or slope misalignments greater than 1/4 per 12 ft. exit when the slope is tested with a straightedge placed perpendicular to the center line.

Bevel back the longitudinal vertical edges greater than 2 in (50 mm) produced by the removal process and left exposed to traffic. Bevel the vertical edges back at least 3 in for each 2 in (75 mm for each 50 mm) of material removed. Use an attached mold board or other approved method.

Taper the transverse edges 10 ft (3 m) to avoid creating a traffic hazard and to produce a smooth surface when removing material at ramp areas and ends of milled sections.

Protect with a temporary asphaltic concrete tie-in (paper joint) vertical edges at other areas such as bridge approach slabs, drainage structures, and utility appurtenances greater than 1/2 in areas left open to transversing vehicles. Place the temporary tie-in at taper rate of at least 6 to 1 horizontal to vertical distance. Do not micro-mill bridge joints. Damage due to micro-milling will be repaired at the Contractor's expense and to the satisfaction of the Engineer.

Remove dust, residue, and loose milled material from the micro-milled surface. Do not allow traffic on the milled surface and do not place asphaltic concrete on the milled surface until removal is complete.

Measure the milled surface with a 10-foot straightedge at locations determined by the Engineer for quality acceptance and acceptance of test section of milling operation. Remove and replace any areas exceeding 1/8 inch RVD, as directed by the Engineer at no cost to the Department.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

ITEM 400 - EXCAVATION AND BACKFILL FOR STRUCTURES

Cut pavements with a saw as directed. This work is subsidiary.

Backfill the bridge ends in accordance and to limits shown in TxDOT standard CSAB. Use material in accordance with CSAB or Item 423 Type BS. The CSAB optional bond breaker materials are allowed. This work is subsidiary.

ITEM 416 - DRILLED SHAFT FOUNDATIONS

Stake all Foundations, for approval, before beginning drilling operations.

Remove spoils from a flood plain at the end of each work day.

ITEM 421 - HYDRAULIC CEMENT CONCRETE

Sulfate resistant concrete is not required for any class of concrete.

Over-design requirements for compressive strength are waived for non-structural concrete, as defined in Table 8, Item 421.4.1.

Minimum air-entrainment requirements are waived for all classes of concrete, except for Class S, DC, or CO concrete. For all classes of concrete, except for Class S, P, or CO concrete or non-structural concrete, as defined in Table 8, the entrained air content must not exceed 8% air.

For all non-pavement applications using Class S, or CO concrete, target 5.5% entrained air. If the air content exceeds the target air content by more than 3 percentage points, the load of concrete will be rejected.

All Class P concrete must be air-entrained. Target an entrained air content of 4.0%. To meet the air-entraining requirements, use an approved air-entraining admixture. If the air content is greater than 7%, the load of concrete will be rejected.

ITEM 427 - SURFACE FINISHES FOR CONCRETE

Consider Surface Finishes for concrete as subsidiary to the pertinent Items.

Follow form liner manufacturer's recommended procedures for form liner construction.

The form liner will release clean and free of the concrete, without pulling or breaking concrete from the textured surface.

Seal all form liner joints, in a manner acceptable to prevent leakage at the surface.

Perform an Ordinary Surface Finish to the faces of concrete units, such as Retaining Walls, Inlets, etc., that will have backfill material against them.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Perform Low-Pressure water blasting to the concrete surfaces, if forms are not removed in time.

For Surface Area I: Perform the Rub Finish as soon as possible after form removal. Complete the finish application within 5 calendar days from the pour date. Should the completion of the finish work fall behind, or exceed the 5-day period, pours of any additional structures will cease, until such time as the surface finish of existing structures is completed.

Provide form liner surface finishes of the types and at locations shown in the plans.

Provide a Surface Area I, **Rub Finish** to all concrete structures, except those with form liner surfaces.

Submit a containment plan that details the procedures and type and size of equipment proposed to keep public property, private property and the environment from being adversely affected by the cleaning and painting operations. Approval of the plan is required before cleaning and painting operations begin. Provide a system capable of collecting all falling paint chips and other debris. Store, characterize, and dispose of all recovered debris in accordance with 30 TAC 335, "Industrial Solid Waste and Municipal Hazardous Waste." Discharge liquids in accordance with the TCEQ Texas Pollution Discharge Elimination Program (30 TAC 305, "Effluent Guidelines and Standards for TPDES Permits") and Texas Surface Water Quality Standards (30 TAC 307). Alternatively, liquids may be captured, stored, and characterized for disposal at an authorized facility in accordance with 30 TAC 315, "Pretreatment Regulation for Existing and New Sources of Pollution," or 30 TAC 335, "Industrial Solid Waste and Municipal Hazardous Waste."

ITEM 432 - RIPRAP

Make 5-inches thick unless otherwise noted or directed.

Make all mow strip riprap four (4) inches, unless otherwise directed.

Where any proposed riprap joins existing riprap, saw cut the existing riprap and dowel/epoxy the joint as directed. Consider subsidiary to the pertinent Items.

Additional riprap may be required, as determined by the Engineer, near the end of project completion, due to unanticipated erosion locations. Any additional, approved riprap will be paid under this Item.

Consider saw cutting of riprap as subsidiary.

Provide Class B Concrete for riprap.

Remove all loose Formwork and other Materials from the Floodplain or drainage areas, daily, which could float off in a Storm water Event, as directed.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

ITEM 442 - METAL FOR STRUCTURES

Use temperature Zone 1 for Charpy V-Notch (CVN) testing.

ITEM 462, 464, 465, 466, & 467

Place FLOWABLE FILL in areas, underneath the Roadway, where there will be less than 3 feet of depth from top of pipe or structure to the subgrade elevation. Payment made under Item 401.

When RCP or structure is to be placed below finished roadway subgrade and there is less than three foot of fill from top of RCP to finished subgrade elevation, then Flowable fill is required, as directed. Payment made under Item 401.

ITEM 462 - CONCRETE BOX CULVERTS AND DRAINS

Notify TxDOT Contact for Bridge Inventory prior to opening each phase of bridge or bridge class culvert construction to traffic. Notification is required for all new and modified bridge class structures. Notify TxDOT Contact within 24 hours of Bridge demolition. Structure shall be inventoried by Austin District Bridge Section within 90 days of structure opening to traffic.

TxDOT Contact: Austin District Bridge Engineer, Michelle Romage-Chambers, at Michelle.RomageChambers@txdot.gov & (512-814-9624).

Provide Shop Drawings, signed and sealed by a Licensed Professional Engineer, for all precast box culverts. Indicate the appropriate design load as shown on the plans LRFD and the maximum design depth of fill.

Use cohesionless backfill material of aggregate size range of 3/8-inch to 1½-inch, for bedding material.

Remove all loose Formwork and other Materials from the Floodplain or drainage areas, daily, which could float off in a Storm water Event, as directed.

ITEM 464 – REINFORCED CONCRETE PIPE

Provide concrete collars, grout and other materials, as needed, to connect pipe underdrain and PVC pipe connections to proposed RCP and to tie proposed RCP to existing storm drain infrastructure at locations shown on the plans. Consider this work subsidiary to the pertinent Items.

ITEM 465 – JUNCTION BOXES, MANHOLES AND INLETS

Adjust inlet locations to the upstream side of driveways to accommodate driveway relocation.

Consider excavation and backfill, frames, grates, rings and covers subsidiary to pertinent Items.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Salvage existing grates, which are to remain the property of the Department, as directed. Stockpile neatly, as directed.

Provide temporary drainage at each curb inlet and maintain until the final course of asphaltic concrete pavement is placed.

Remove all loose Formwork and other Materials from the Floodplain or drainage areas, daily, which could float off in a Storm water Event, as directed.

ITEM 466 - HEADWALLS AND WINGWALLS

Use Class C concrete for headwalls or wingwalls.

Remove all loose Formwork and other Materials from the Floodplain or drainage areas, daily, which could float off in a Storm water Event, as directed.

ITEM 467 - SAFETY END TREATMENT

Cut pipe ends, in the field, to match roadway side slopes, or as directed. Apply asphalt base aluminum paint to the cut ends.

All Type II SET's shall have mitered pipe ends and cast-in-place riprap aprons.

Use Class C concrete.

Remove all loose Formwork and other Materials from the Floodplain or drainage areas, daily, which could float off in a Storm water Event, as directed.

ITEM 476 - JACKING, BORING, OR TUNNELING PIPE OR BOX

Use Class III RCP for boring or tunneling unless otherwise approved.

When directed, pressure Grout all voids in a timely manner. The Engineer will direct this action when indications are that voids are in excess of one inch between the outside face of the pipe/casing and the excavation & between any interior pipe(s) and the inside of the casing. Consider this work subsidiary to the pertinent Items.

Remove all loose Formwork and other Materials from the Floodplain or drainage areas, daily, which could float off in a Storm water Event, as directed.

ITEM 496 – REMOVING STRUCTURES

Where sections of pipe are to be abandoned in place, remove as much pipe as practical without damaging existing pavement. Plugs for abandoned pipe shall be concrete and extend a minimum of 1 ½ times the diameter of the pipe into the abandoned pipe. Materials and labor shall be subsidiary to this item.

ITEM 502 - BARRICADES, SIGNS, AND TRAFFIC HANDLING**Table 1**

Roadway	Limits	Allowable Closure Time
IH 35	All (1 lane closed)	9 P to 5 A
IH 35	All (2 lanes closed, see allowable work below)	9 P to 5 A
IH 35	All (2 lanes closed, all work)	11 P to 5 A
IH 35	All (Full Closure, see allowable work below)	11P to 4 A
SH 45	US 183 to SH130	8 P to 5 A
LP 1	William Cannon to Parmer Lane	8 P to 5 A
US 183	SH 29 to FM 1327	8 P to 5 A
SH 71	SH 130 to IH 35	8 P to 5 A
SH 71	SH 304 to Tahitian Drive	8 P to 5 A
SH 71	US 290 W to RM 3238	8 P to 5 A
US 290 W	IH 35 to Nutty Brown Rd	8 P to 5 A
US 290 E	IH 35 to SH 95	8 P to 5 A
FM 734	FM 1431 to US 290 E	8 P to 5 A
US 79	IH 35 to Bus 79 in Taylor	8 P to 5 A
RM 1431	Lohmans Ford Rd to IH 35	8 P to 5 A
SH 29	LP 332 western terminus to SH 130	8 P to 5 A
SH 80	Charles Austin to River Road	8 P to 5 A
RM 2222	All	8 P to 5 A
RM 620	All	8 P to 5 A
RM 2244	All	8 P to 5 A
SPUR 69	All	8 P to 5 A
LP 360	All	8 P to 5 A
LP 343	All	8 P to 5 A
LP 275	All	8 P to 5 A
FM 1325	All	8 P to 5 A
All	Within 200' of a signalized intersection	8 P to 5 A

2 lanes closed on IH 35 allowed to begin at 9 P for main lane (shoulder work not included) hot mix overlay or base repair operations. Full closures of IH 35 only allowed Sunday Night thru Friday morning for bridge beam installation, bridge demolition, or OSB truss removal/installation. For locations not listed in Table 1, nighttime lane closures will be allowed from 7:00P to 5:30A. Daytime or Friday night lane closures will not be allowed for any project. One lane in each direction shall remain open at all times. No closures will be allowed on the weekends, working day prior, and working day after the National Holidays defined in the Standard Specifications and Easter weekend. No closures will be allowed on Friday and the weekends for projects within 20 miles of Formula 1 at COTA, ACL Fest, SXSW, ROT Rally, UT home football games, or other special events that could be impacted by the construction. All lanes shall be open by noon of the day before these special events. The previous closure restrictions and Table 1 may be amended by the Engineer or if amended elsewhere in the plans.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Cover, relocate or remove existing signs that conflict with traffic control. Install all permanent signs, delineation, and object markers required for the operation of the roadway before opening to traffic. Use of temporary mounts is allowed or may be required until the permanent mounts are installed or not impacted by construction. Maintain the temporary mounts. This work is subsidiary.

Shadow Vehicle with TMA is required as shown in the TCP sheets and for setup/removal of traffic control devices.

Submit an emailed request for a lane closure (LCN) to the TxDOT representative. The email shall be submitted in the format provided. Receive concurrence prior to implementation. Submit a cancellation of lane closures a minimum of 18 hours prior to implementation. Blanket requests for extended periods are not allowed. Max duration of a request is 2 weeks prior to requiring resubmittal. Provide 2 hour notice prior to implementation and immediately upon removal of the closure.

For roadways not listed in Table 1: Submit the request a minimum of 48 hours prior to the closure and by the following deadline immediately prior to the closure: 11A on Tuesday or 11A on Friday.

For roadways listed in Table 1: Submit the request 96 hours prior to implementation.

For all roadways: Submit request for traffic detours and full roadway closures 168 hours prior to implementation. Submit request for nighttime work 96 hours to implementation date. Cancellations of accepted closures (not applicable to full closures or detours) due to weather will not require resubmission in accordance with the above restrictions if the work is completed during the next allowable closure time.

Closures that conflict with adjacent contractor will be prioritized according to critical path work per latest schedule. Conflicting critical path or non-critical work shall be approved for first LCN submitted. Denial of a closure due to prioritization or other reasons will not be reason for time suspension, delay, overhead, etc.

Prior to implementation of all mainlane full and partial closures, place a portable message board with the following message: "LANES (OR FREEWAY) CLOSED X MILES. EXPECT DELAYS". Message may be revised by the Engineer. The message board shall remain active during duration of closure.

Meet with the Engineer prior to lane closures to ensure that sufficient equipment, materials, devices, and workers will be used. Take immediate action to modify traffic control, if at any time backup (queuing) becomes greater than 20 minutes. Have a contingency plan of how modification will occur. Consider inclement weather prior to implementing the lane closures. Do not set up traffic control when the pavement is wet.

Place a 28-inch, reflectorized cone meeting requirements of BC (10)-14 on top of foundations that have protruding studs. This work is subsidiary.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Incorporate and maintain a 3H: 1V safety wedge into the proposed construction for any roadway edge of 2 inches or greater adjacent to a roadway under traffic.

For Mainlanes use night-work and same-night remove-and-replace operations.

Maintain a minimum of 1 through lane(s) in each direction, during the daylight hours, as directed.

Furnish advisory speed signs in enough numbers as directed. To determine an advisory speed limit to post for various curves and ramps within this project notify the Engineer 2 months prior to manufacture of the sign.

ITEM 504 - FIELD OFFICE AND LABORATORY

All labs and offices shall include cleaning at least once a week. The cleaning shall include sweeping and mopping of floors, cleaning the toilet and lavatory, and emptying wastebaskets. Space heaters are not considered adequate heating.

Projects with more than 500 CY of structural class concrete and/or 2000 CY of non-structural concrete shall include a concrete testing facility. Provide a structure with at least 200 sq. ft. of gross floor area in room 8 ft. high. The structure shall include the laboratory equipment and all other related items to perform the contract-controlling test procedures.

Projects with HMAC, furnish a Type D structure for the Engineer's exclusive use. The structure shall include high speed internet service with WIFI signal, one desk, two chairs, and one file cabinet. Provide a minimum of three 120-volt circuits with 20-amp breakers and at most two grounded convenience outlets per circuit. Provide parking for 4 TxDOT trucks.

ITEM 506 - TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Obtain the Engineer's approval for proposed methods used for erosion control before starting each phase of construction.

Stockpile 4-inch by 8-inch (4" x 8") rock for emergency erosion control use, as directed. Place this rock in ditches and other areas, as directed. The Contractor will be reimbursed in accordance with Pertinent Items or Article 9.7, "Payment for extra work and Force Account method."

Place temporary sediment fence at locations where large roadside guide signs and new overhead sign structures are installed. In addition, place temporary sediment fence at those locations where existing large guide signs and structures are to be removed.

Double-bag all sandbags used for erosion control Items. Consider subsidiary to pertinent Items.

ITEM 512 – PORTABLE TRAFFIC BARRIER

In lieu of a crash cushion, place 25:1 Class C concrete transition where PTB terminates adjacent to existing concrete barrier. Installation and removal will be paid using Item 512.

Any increase in temporary barrier quantities that occur due to Contractor changes in the sequence of work or the traffic control plan will not be paid.

Upon completion of the project, PTB will become the property of the contractor, as directed.

ITEM 533 – MILLED RUMBLE STRIPS

For edge line rumble strips: Use Option 1 for shoulder width less than 2'. Use Option 3 for shoulder greater than 2' but less than 4'. Use Option 4 for shoulder greater than 4'.

ITEM 540 - METAL BEAM GUARD FENCE

Adjust the limits of the Metal Beam Guard Fence (MBGF) to meet field conditions. Stake the locations for approval prior to installation. Install all permanent MBGF and delineators before opening the road to traffic.

Furnish round timber posts. Furnish steel posts at locations where the minimum embedment shown on the plans for wooden posts cannot be achieved. Field verify the steel post lengths before fabrication. Consider the steel posts subsidiary.

Provide Rail Elements that meet AASHTO M 180 TY I Galvanization (1.80 Oz per SY).

ITEM 542 – REMOVING METAL BEAM GUARD FENCE

Contractor retains all materials. Contractor may reuse steel posts, composite blocks, and metal beam rail elements that are undamaged, rust free, dent free, and in compliance with current standards. Structurally sound rust spots with the largest dimension of 4" may be cleaned and repaired in accordance with 540.3.5 Galvanizing Repair.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Deliver all removed MBGF Rail Elements and removed Steel Posts that TxDOT deems as reusable, to TxDOT within a 50 mile radius of the project, as directed. Consider this work subsidiary to the various Items.

ITEM 545 - CRASH CUSHION ATTENUATORS (CCA)

When CCA's are Contractor supplied and they are not called to be placed in a permanent location, retain the CCA's as Contractor property, at the end of the project.

When the CCA's are supplied by the Contractor, provide crash cushions that work for 70 mph speeds.

Use a coring machine or saw cut to remove the mounting hardware/bolts from the existing pavement. Cutting the hardware flush with the surface is not allowed. Refill voids in accordance with the pavement specification. This work is subsidiary.

ITEM 585 - RIDE QUALITY FOR PAVEMENT SURFACES

Use Surface Test Type B Pay Schedule 1 to evaluate ride quality of the travel lanes.

ITEMS 610, 618, 620, 624, & 628

Use materials from prequalified material producers list as shown on the Texas Department of Transportation (TxDOT) ----- Construction Division's (CST) materials producers list. See TxDOT website (www.txdot.gov) – Business with TxDOT > Resources > Material Producer List - for list of pre-qualified manufacturers. "No substitutions" will be allowed for materials found on the list.

ITEM 610 - ROADWAY ILLUMINATION ASSEMBLIES

Neatly stockpile the assemblies upon removal, as directed, at the Austin District Headquarters located at 7901 N. IH 35.

Fabricate steel roadway illumination poles in accordance with TxDOT standards RIP-(1)—RIP-(4) (Roadway Illumination Poles -2011). Poles fabricated according to RIP-11 require no shop drawings.

Alternate designs to RIP-11 or the use of aluminum to fabricate poles will require the submission of shop drawings electronically.

For information on the electronic shop plan process, please visit the Bridge Division/Fabrication Branch web pages at: <http://www.txdot.gov/business/resources/specifications/shop-drawings.html>

The Guide to Electronic Shop Drawing Submittal at:

ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/e_submit_guide.pdf

Project Number:
County: Hays
Highway: IH 35

Sheet:
Control: 0016-02-145

and the Submittal Requirements table at:

ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/electronic_submission.pdf
have been updated to include additional guidance on segmental bridge submittals.

And

Copies of the standard shop drawings are on file with Traffic Operations Division, Bridge Division, and the Materials Section of Construction Division. Additional shop drawings for roadway illumination assemblies built in conformance with these drawings are not required. Pre-approved shop drawing manufacturers and assembly model numbers can be found at:

<http://www.txdot.gov/business/resources/specifications/shop-drawings.html> Category is
Roadway Illumination and Electrical Supplies.

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

Provide 10-amp time delay fuses.

Provide luminaire ballasts with a 240-volt operating range.

Maintain all new and existing illumination for the duration of the contract.

All existing illumination, within the project limits, will remain operational until the last possible moment, as directed.

Place the illumination system in operation after satisfactory completion of the circuit tests. Final acceptance will not be made until the system has operated satisfactorily for a period of at least 14 consecutive days. Consider all repairs and adjustments subsidiary to pertinent Items. Pay for electrical energy during the trial period.

Inspection of all completed work provided in the Contract will be performed. The Contractor will be released from further maintenance on that project if the work is found to be satisfactory. Partial acceptance will be made and will be in no way void or alter any items of the contract.

ITEM 618 & 620 - CONDUIT & ELECTRICAL CONDUCTORS

For electrical licensing and electrical certification requirements see Item 7 of the current Standard Specification book and any applicable Special Provisions to Item 7.

ITEM 618 - CONDUIT

Use materials from prequalified material producers list as shown on the Texas Department of Transportation (TxDOT) - Construction Division’s (CST) materials producers list. Category is “Roadway Illumination and Electrical Supplies.”

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Refer to plans and specifications for type of conduit. Waterproof and tighten all couplings and connections. Bring all proposed and existing conduit into a ground box and 'elbow' it unless otherwise shown on the plans. Provide a bushing to protect the wire from abrasion when a conduit run terminates.

Replace sections of conduit with the size and type shown on the plans in the event the existing conduit proves unusable due to location or damage.

Secure permission from the proper authority, as directed, before cutting into or removing any sidewalks or curbs for installation of this Item.

Saw cut and replace any riprap, which must be removed to install the conduit. Replace riprap with material and texture as directed.

The locations of conduit and ground boxes are diagrammatic and so shift, as directed, to accommodate field conditions.

Install conduit in an area not exceeding 2 feet in any direction from a straight line with the depth of the conduit at least 2 feet, unless otherwise shown on the plans. Installation of the conduit by jacking or boring method will be at a depth of at least 1 foot below the bottom of the base material of the roadway. Evidence of damage to the roadway during the jacking or boring operation will be enough grounds to stop the method being used.

Install conduit on a 2-inch sand cushion and backfill with at least 6 inches of sand. Backfill the remainder of the trench with flexible base, soil or two-sack concrete as required by the location of the conduit or as directed.

Consider all conduit elbows and rigid metal extensions required to be installed on PVC conduit systems subsidiary.

Install a high tension, non-metallic pull rope in all conduit runs. The pull ropes are for future use. Cap all empty conduit runs using standard weather tight conduit caps as directed. Consider this work subsidiary to the pertinent Item.

Install a continuous bare or green insulated copper wire No. 8 AWG or larger in every conduit throughout the electrical system including installed loop detectors and traffic signal cables which are in conformance with the Electrical Detail Standard Sheets and the latest edition of the National Electrical Code (NEC).

Placement of conduit under the existing pavement using the open trench method will not be allowed without prior approval.

Seal all conduit ends with a permanently soft, non-toxic duct seal. The duct seal must not adversely affect plastic materials or corrode metals.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

Use a coring device when drilling holes through concrete structures. Do not use masonry or concrete drills, unless otherwise approved.

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

Place conduit a minimum depth of 42 inches below the bottom of ties.

Existing conduit may be proposed for reuse in this project. If the existing conduit cannot be used to place or add new electrical conductors, repair or replace this conduit, as directed. Repair of the conduit will be paid as "Extra Work" on a "Force Account" basis. Probe the existing conduit when locating drill shafts so that the existing conduit's location will be known before it is needed.

When using existing conduit, ensure that all conduits have bushings and are cleaned of dirt, mud, grease, and other debris. Restrap conduit that is being relocated to new timber poles as if it were a new installation. Consider this work subsidiary to this Item.

Consider all fittings, brackets, and junction boxes necessary to complete the installations subsidiary to the pertinent Items.

ITEM 620 - ELECTRICAL CONDUCTORS

For both transformer and shoe-base type illumination poles, provide double-pole breakaway fuse holder from manufacturers pre-qualified by the Traffic Operations Division. Fuse holder is shown on the producer list under Items 610 & 620.

Provide and install approved 10 amp time delay fuses.

Provide breakaway disconnects in all breakaway poles. For Flashing Beacons (Item 685) and Pedestal 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. These breakaway connectors have a white colored marking and a permanently installed solid neutral.

Identify the conductors as shown on the Electrical Details Standard Sheets when two or more conductors are present in one conduit or enclosure. Use identification tag with two plastic straps. Each tag will indicate circuit number, letter, or other identification as shown on the plans.

Bond grounding conductors, which share the same conduit, junction box or structures, together at every accessible point, in accordance with the Electrical Detail Standard Sheets and the latest edition of the National Electrical Code (NEC).

All wiring will be in accordance with the National Electrical Code (NEC) and the appropriate Department standard sheets.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

ITEM 628 – ELECTRICAL SERVICES

Notify Austin District Signal Shop of TxDOT, in a timely manner, at (512) 832-7012, to make arrangements for a Service Account.

The service enclosure provided in this contract will have provisions for pad locking the enclosure shut.

ITEM 644 - SMALL ROADSIDE SIGN ASSEMBLIES

Fabricate all small signs not detailed on the plans in conformance with the latest edition of the “Standard Highway Sign Designs for Texas.”

<http://www.txdot.gov/business/resources/signage.html>

Store and handle sign components to be relocated in a manner to prevent damage. Contractor will replace components damaged during the relocation , handling and/or storage.

ITEM 644 & 647

All signs removed within this project (both Large and Small) shall be salvaged and delivered in shipping crates for recycling to the TxDOT South Travis Area Engineer’s Office located at 9275 S. IH 35, Austin, TX, 78744. Provide a 48-hour notice to TxDOT at (512) 282-2113, prior to delivery of salvaged material. Consider this subsidiary to various bid Items.

ITEM 658 – DELINEATOR AND OBJECT MARKER ASSEMBLIES

Installation and maintenance of portable and permanent CTB reflectors will be subsidiary to the barrier.

ITEM 662 - WORK ZONE PAVEMENT MARKINGS

Notify the Engineer at least 24 hours in advance of work for this item.

Maintain removable and short term markings daily. Remove within 48 hours after permanent striping has been completed.

Item 668 is not allowed for use as Item 662.

ITEM 666 - RETROREFLECTORIZED PAVEMENT MARKINGS

Notify the Engineer at least 24 hours in advance of work for this item.

If short term or removable markings are not included, place the Item 666 markings at the end of each work period. If short term or removable markings are included, place the Item 666 markings within 5 days of applying roadway surface.

Project Number:

County: Hays

Highway: IH 35

Sheet:

Control: 0016-02-145

TY II shall cure 48 hours prior to placing TY I markings. Roadway surface shall cure 72 hours prior to placing TY I.

Reference all existing stripes before commencing work. Obtain approval for placement of guide marks before installing permanent pavement markings. This work is subsidiary.

ITEM 672 - RAISED PAVEMENT MARKERS

Place the bituminous adhesive at a temperature range of 380°F to 390°F. Place the pavement marker on the bituminous adhesive approximately 20 seconds after the adhesive is placed on the pavement. Ensure the pavement marker rests solely on the adhesive and not the pavement surface. Ensure that a minimum of 1/8 in. layer of bituminous adhesive remains between the pavement marker and the pavement surface.

ITEM 677 - ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS

Remove and dispose of off the right of way any existing raised pavement markers and pavement markings before beginning operations. This work is subsidiary.

Black paint/thermo will not be allowed as the sole method of eliminating markings.

Remove markings on pavement surface to remain by blast method.

Remove markings on pavement surface to remain and not re-stripped by blast method followed by an application of black paint (Item 666-6218). Painting over markings wider than 4" shall be paid for by equivalent applications of 4" black shadow markings.

SS 3002 – SPRAY APPLIED UNDERSEAL MEMBRANE

Apply at a rate of 0.25 GAL/SY.

The Contractor must verify the application rate and supply calibration records for nozzles.

The Engineer shall verify the bond strength as directed.

ITEM 6001 – PORTABLE CHANGEABLE MESSAGE SIGN

Provide 2 "Electronic" Portable Changeable Message Sign(s) (EPCMS) as part of the traffic control operations and provide another one that is available to utilize when a backup is needed. Consider the one designated for backup as subsidiary to the various Items of the project. All EPCMS will be exclusive to this project, unless otherwise approved. Placement location and message as directed.

Place appropriate number of "Electronic" Portable Changeable Message Signs (EPCMS) at locations requiring lane closures for one-week prior to the closures, or as directed. Obtain approval for the actual message that will appear on the boards. If more than two phases of a message are required per board, provide additional EPCMS's to meet the two-phases-per-board requirement.

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