

# NOTIFICATION OF ADDENDUM

## ADDENDUM NO. 1

**DATED 8/04/2016**

<b>Control</b>	<b>0398-03-058, ETC.</b>
<b>Project</b>	<b>STP 2016(834)</b>
<b>Highway</b>	<b>SH 317</b>
<b>County</b>	<b>MCLENNAN, ETC.</b>

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(834)

CONTROL: 0398-03-058

COUNTY: MCLENNAN

LETTING: 08/09/2016

REFERENCE NO: 0803

**PROPOSAL ADDENDUMS**

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- PROPOSAL COVER
  - BID INSERTS (SH. NO.: 1-11 thru 11-11 )
  - GENERAL NOTES (SH. NO.: sheet 8 )
  
  - SPEC LIST (SH. NO.: 1-3 & 2-3 )
  - SPECIAL PROVISIONS:
  - ADDED:
  
  - DELETED:
  
  - SPECIAL SPECIFICATIONS:
  - ADDED:
  
  - DELETED:
  
  - OTHER:

DESCRIPTION OF ABOVE CHANGES  
(INCLUDING PLANS SHEET CHANGES)

GENERAL NOTES:

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SPEC DATA SHEET B - REVISED 'BASIS OF ESTIMATE - ALTERNATE BID' TABLE  
TO REVISE GRADE OF AGGREGATE TYPE.

BID ITEMS:

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ADDED ITEM 160-6003, ITEM 662-6032, ITEM 685-6003 & ITEM 685-6004.

REVISED ITEM 644-6060.

PLAN SHEETS:

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PLAN SHEET 2 - ADDED STANDARD SHEET SPFBA(1)-13.

PLAN SHEET 8 - REVISED 'BASIS OF ESTIMATE - ALTERNATE BID' TABLE  
TO REVISE GRADE OF AGGREGATE TYPE.

PLAN SHEET 9 - ADDED ITEM & QUANTITY FOR ITEM 160-6003.

PLAN SHEET 9A - ADDED ITEM & QUANTITY FOR ITEM 628-6002.

DESCRIPTION OF ABOVE CHANGES  
(INCLUDING PLANS SHEET CHANGES)

(CONTINUED)

REVISED ITEM & QUANTITY FOR ITEM 644-6060.

PLAN SHEET 9B - ADDED ITEM & QUANTITY FOR ITEM 662-6032, ITEM 685-6003  
AND ITEM 685-6004.

PLAN SHEET 10 - ADDED ITEM & QUANTITY FOR ITEM 628-6002, ITEM 662-6032,  
ITEM 685-6003 AND ITEM 685-6004.

PLAN SHEET 10 - REVISED ITEM & QUANTITY FOR ITEM 644-6060.

PLAN SHEET 11 - ADDED ITEM & QUANTITY FOR ITEM 160-6003.

PLAN SHEET 155 - ADDED NOTE FOR SIGN NUMBER 1.

PLAN SHEET 206A - ADDED SHEET.

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	5.000	1
	104	6009		REMOVING CONC (RIPRAP)  DOLLARS and CENTS	SY	769.000	2
	110	6001		EXCAVATION (ROADWAY)  DOLLARS and CENTS	CY	73,334.000	3
	132	6004		EMBANKMENT (FINAL)(DENS CONT)(TY B)  DOLLARS and CENTS	CY	40,698.000	4
	134	6001		BACKFILL (TY A)  DOLLARS and CENTS	STA	24.000	5
	160	6003		FURNISHING AND PLACING TOPSOIL (4")  DOLLARS and CENTS	SY	62,910.000	6
	164	6035		DRILL SEEDING (PERM) (RURAL) (CLAY)  DOLLARS and CENTS	SY	249,156.000	7
	164	6041		DRILL SEEDING (TEMP) (WARM)  DOLLARS and CENTS	SY	124,578.000	8
	164	6043		DRILL SEEDING (TEMP) (COOL)  DOLLARS and CENTS	SY	124,578.000	9
	168	6001		VEGETATIVE WATERING  DOLLARS and CENTS	MG	4,050.000	10
	169	6003		SOIL RETENTION BLANKETS (CL 1) (TY C)  DOLLARS and CENTS	SY	2,000.000	11
	216	6001		PROOF ROLLING  DOLLARS and CENTS	HR	72.000	12

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	247	6056		FL BS (CMP IN PLC)(TY D GR 4)(FNAL POS) DOLLARS and CENTS	CY	22,475.000	13
	310	6027		PRIME COAT(MC-30 OR AE-P) DOLLARS and CENTS	GAL	19,521.000	14
	316	6022		ASPH (CRS-2) DOLLARS and CENTS	GAL	43,908.000	15
	316	6397		AGGR(TY-D GR-4 OR TY-L GR-4) DOLLARS and CENTS	CY	781.000	16
	341	6008		D-GR HMA TY-B PG64-22 DOLLARS and CENTS	TON	27,318.000	17
	341	6027		D-GR HMA TY-C SAC-B PG70-22 DOLLARS and CENTS	TON	27,749.000	18
	341	6062		D-GR HMA TY-D PG64-22(LEVEL-UP) DOLLARS and CENTS	TON	10,084.000	19
	351	6004		FLEXIBLE PAVEMENT STRUCTURE REPAIR(8") DOLLARS and CENTS	SY	4,500.000	20
	354	6006		PLAN & TEXT ASPH CONC PAV(4" TO 6") DOLLARS and CENTS	SY	1,027.000	21
	354	6010		PLAN & TEXT ASPH CONC PAV(0" TO 6") DOLLARS and CENTS	SY	2,200.000	22
	356	6021		PAV JT UNDERSEAL (24") DOLLARS and CENTS	LF	258.000	23
	400	6005		CEM STABIL BKFL DOLLARS and CENTS	CY	93.000	24

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	400	6006		CUT & RESTORING PAV  DOLLARS and CENTS	SY	23.000	25
	432	6002		RIPRAP (CONC)(5 IN)  DOLLARS and CENTS	CY	121.500	26
	432	6044		RIPRAP (CONC)(FLUME)  DOLLARS and CENTS	CY	9.000	27
	432	6045		RIPRAP (MOW STRIP)(4 IN)  DOLLARS and CENTS	CY	194.600	28
	438	6002		CLEANING AND SEALING EXIST JOINTS(CL3)  DOLLARS and CENTS	LF	258.000	29
	438	6006		CLEANING AND SEALING JOINTS (CL 3)  DOLLARS and CENTS	LF	86.000	30
	462	6006		CONC BOX CULV (5 FT X 2 FT)  DOLLARS and CENTS	LF	88.000	31
	462	6045		CONC BOX CULV (3 FT X 2 FT)(EXTEND)  DOLLARS and CENTS	LF	65.000	32
	462	6047		CONC BOX CULV (4 FT X 2 FT)(EXTEND)  DOLLARS and CENTS	LF	25.000	33
	462	6049		CONC BOX CULV (4 FT X 4 FT)(EXTEND)  DOLLARS and CENTS	LF	8.000	34
	462	6051		CONC BOX CULV (5 FT X 3 FT)(EXTEND)  DOLLARS and CENTS	LF	82.000	35
	462	6052		CONC BOX CULV (5 FT X 4 FT)(EXTEND)  DOLLARS and CENTS	LF	9.000	36

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	462	6054		CONC BOX CULV (6 FT X 3 FT)(EXTEND) DOLLARS and CENTS	LF	81.000	37
	462	6055		CONC BOX CULV (6 FT X 4 FT)(EXTEND) DOLLARS and CENTS	LF	62.000	38
	462	6056		CONC BOX CULV (6 FT X 5 FT)(EXTEND) DOLLARS and CENTS	LF	19.000	39
	462	6062		CONC BOX CULV (7 FT X 7 FT)(EXTEND) DOLLARS and CENTS	LF	19.000	40
	462	6065		CONC BOX CULV (8 FT X 6 FT)(EXTEND) DOLLARS and CENTS	LF	15.000	41
	462	6067		CONC BOX CULV (8 FT X 8 FT)(EXTEND) DOLLARS and CENTS	LF	16.000	42
	462	6095		CONC BOX CULV (6 FT X 2 FT) (EXTEND) DOLLARS and CENTS	LF	5.000	43
	462	6130		CONC BOX CULV (3 FT X 1.5 FT)(EXTEND) DOLLARS and CENTS	LF	47.000	44
	462	6131		CONC BOX CULV (4 FT X 1.5 FT)(EXTEND) DOLLARS and CENTS	LF	6.000	45
	464	6003		RC PIPE (CL III)(18 IN) DOLLARS and CENTS	LF	2,587.000	46
	464	6005		RC PIPE (CL III)(24 IN) DOLLARS and CENTS	LF	104.000	47
	466	6144		WINGWALL (FW - 0) (HW=12 FT) DOLLARS and CENTS	EA	2.000	48

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	466	6154		WINGWALL (FW - 0) (HW=7 FT) DOLLARS and CENTS	EA	2.000	49
	466	6156		WINGWALL (FW - 0) (HW=9 FT) DOLLARS and CENTS	EA	1.000	50
	466	6165		WINGWALL (FW - S) (HW=4 FT) DOLLARS and CENTS	EA	1.000	51
	466	6166		WINGWALL (FW - S) (HW=5 FT) DOLLARS and CENTS	EA	1.000	52
	466	6173		WINGWALL (PW - 1) (HW=12 FT) DOLLARS and CENTS	EA	2.000	53
	466	6178		WINGWALL (PW - 1) (HW=3 FT) DOLLARS and CENTS	EA	1.000	54
	467	6106		SET (TY I)(S=3 FT)(HW=3FT)(4:1)(C) DOLLARS and CENTS	EA	16.000	55
	467	6111		SET (TY I)(S=3 FT)(HW= 4 FT)(3:1)(C) DOLLARS and CENTS	EA	1.000	56
	467	6121		SET (TY I)(S=3 FT)(HW= 6 FT)(3:1)(C) DOLLARS and CENTS	EA	1.000	57
	467	6122		SET (TY I)(S=3 FT)(HW= 6 FT)(4:1)(C) DOLLARS and CENTS	EA	1.000	58
	467	6139		SET (TY I)(S= 4 FT)(HW= 3 FT)(4:1) (C) DOLLARS and CENTS	EA	8.000	59
	467	6155		SET (TY I)(S= 4 FT)(HW= 6 FT)(4:1) (C) DOLLARS and CENTS	EA	1.000	60

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	467	6161		SET (TY I)(S= 4 FT)(HW= 8 FT)(4:1) (C) DOLLARS and CENTS	EA	1.000	61
	467	6172		SET (TY I)(S= 5 FT)(HW= 3 FT)(4:1) (C) DOLLARS and CENTS	EA	1.000	62
	467	6174		SET (TY I)(S= 5 FT)(HW= 3 FT)(6:1) (P) DOLLARS and CENTS	EA	1.000	63
	467	6177		SET (TY I)(S= 5 FT)(HW= 4 FT)(4:1) (C) DOLLARS and CENTS	EA	12.000	64
	467	6182		SET (TY I)(S= 5 FT)(HW= 5 FT)(4:1) (C) DOLLARS and CENTS	EA	2.000	65
	467	6197		SET (TY I)(S= 6 FT)(HW= 10 FT)(3:1) (C) DOLLARS and CENTS	EA	1.000	66
	467	6205		SET (TY I)(S= 6 FT)(HW= 3 FT)(4:1) (C) DOLLARS and CENTS	EA	1.000	67
	467	6212		SET (TY I)(S= 6 FT)(HW= 4 FT)(4:1) (C) DOLLARS and CENTS	EA	3.000	68
	467	6223		SET (TY I)(S= 6 FT)(HW= 6 FT)(3:1) (C) DOLLARS and CENTS	EA	2.000	69
	467	6224		SET (TY I)(S= 6 FT)(HW= 6 FT)(4:1) (C) DOLLARS and CENTS	EA	2.000	70
	467	6288		SET (TY I)(S= 8 FT)(HW= 9 FT)(3:1) (C) DOLLARS and CENTS	EA	2.000	71
	467	6363		SET (TY II) (18 IN) (RCP) (6: 1) (P) DOLLARS and CENTS	EA	135.000	72

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	467	6395		SET (TY II) (24 IN) (RCP) (6: 1) (P) and DOLLARS CENTS	EA	3.000	73
	480	6001		CLEAN EXIST CULVERTS and DOLLARS CENTS	EA	10.000	74
	496	6007		REMOV STR (PIPE) and DOLLARS CENTS	LF	1,519.000	75
	496	6008		REMOV STR (BOX CULVERT) and DOLLARS CENTS	LF	82.500	76
	500	6001		MOBILIZATION and DOLLARS CENTS	LS	1.000	77
	502	6001		BARRICADES, SIGNS AND TRAFFIC HAN- DLING and DOLLARS CENTS	MO	17.000	78
	506	6002	003	ROCK FILTER DAMS (INSTALL) (TY 2) and DOLLARS CENTS	LF	795.000	79
	506	6011	003	ROCK FILTER DAMS (REMOVE) and DOLLARS CENTS	LF	795.000	80
	506	6038	003	TEMP SEDMT CONT FENCE (INSTALL) and DOLLARS CENTS	LF	20,680.000	81
	506	6039	003	TEMP SEDMT CONT FENCE (REMOVE) and DOLLARS CENTS	LF	20,680.000	82
	530	6002		INTERSECTIONS (ACP) and DOLLARS CENTS	SY	2,594.000	83
	530	6004		DRIVEWAYS (CONC) and DOLLARS CENTS	SY	59.000	84

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	530	6005		DRIVEWAYS (ACP)  DOLLARS and CENTS	SY	7,556.000	85
	530	6008		TURNOUTS (ACP)  DOLLARS and CENTS	SY	108.000	86
	533	6002		RUMBLE STRIPS (CENTERLINE)  DOLLARS and CENTS	LF	38,980.000	87
	540	6002		MTL W-BEAM GD FEN (STEEL POST)  DOLLARS and CENTS	LF	2,087.500	88
	540	6006		MTL BEAM GD FEN TRANS (THRIE-BEAM)  DOLLARS and CENTS	EA	4.000	89
	542	6001		REMOVE METAL BEAM GUARD FENCE  DOLLARS and CENTS	LF	1,037.500	90
	542	6004		RM MTL BM GD FENCE TRANS (THRIE- BEAM)  DOLLARS and CENTS	EA	4.000	91
	544	6001		GUARDRAIL END TREATMENT (INSTALL)  DOLLARS and CENTS	EA	20.000	92
	544	6003		GUARDRAIL END TREATMENT (REMOVE)  DOLLARS and CENTS	EA	18.000	93
	560	6003		MAILBOX INSTALL-M (TWG-POST) TY 1  DOLLARS and CENTS	EA	1.000	94
	560	6007		MAILBOX INSTALL-S (WC-POST) TY 3  DOLLARS and CENTS	EA	33.000	95
	560	6008		MAILBOX INSTALL-D (WC-POST) TY 3  DOLLARS and CENTS	EA	5.000	96

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	628	6002		REMOVE ELECTRICAL SERVICES DOLLARS and CENTS	EA	1.000	97
	644	6007		IN SM RD SN SUP&AM TY10BWG(1)SA(U) DOLLARS and CENTS	EA	3.000	98
	644	6008		IN SM RD SN SUP&AM TY10BWG(1)SA(U- EXAL) DOLLARS and CENTS	EA	12.000	99
	644	6060		IN SM RD SN SUP&AM TYTWT(1)WS(P) DOLLARS and CENTS	EA	49.000	100
	644	6061		IN SM RD SN SUP&AM TYTWT(1)WS(T) DOLLARS and CENTS	EA	20.000	101
	644	6068		RELOCATE SM RD SN SUP&AM TY 10BWG DOLLARS and CENTS	EA	8.000	102
	644	6071		RELOCATE SM RD SN SUP&AM TY TWT DOLLARS and CENTS	EA	9.000	103
	644	6076		REMOVE SM RD SN SUP&AM DOLLARS and CENTS	EA	2.000	104
	644	6080		RELOCATE SM RD SN SUP & AM TY TEMP DOLLARS and CENTS	EA	79.000	105
	658	6048		INSTL OM ASSM (OM-2Z)(FLX)GND DOLLARS and CENTS	EA	54.000	106
	658	6062		INSTL DEL ASSM (D-SW)SZ 1(BRF)GF2(BI) DOLLARS and CENTS	EA	39.000	107
	662	6004		WK ZN PAV MRK NON-REMOV (W)4"(SLD) DOLLARS and CENTS	LF	95,190.000	108

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	662	6032		WK ZN PAV MRK NON-REMOV (Y)4"(BRK) DOLLARS and CENTS	LF	10,020.000	109
	662	6034		WK ZN PAV MRK NON-REMOV (Y)4"(SLD) DOLLARS and CENTS	LF	93,752.000	110
	662	6111		WK ZN PAV MRK SHT TERM (TAB)TY Y-2 DOLLARS and CENTS	EA	4,920.000	111
	666	6035	001	REFL PAV MRK TY I (W)8"(SLD)(090MIL) DOLLARS and CENTS	LF	4,510.000	112
	666	6047	001	REFL PAV MRK TY I (W)24"(SLD)(090MIL) DOLLARS and CENTS	LF	304.000	113
	666	6299	001	RE PM W/RET REQ TY I (W)4"(BRK)(090MIL) DOLLARS and CENTS	LF	2,640.000	114
	666	6302	001	RE PM W/RET REQ TY I (W)4"(SLD)(090MIL) DOLLARS and CENTS	LF	94,200.000	115
	666	6311	001	RE PM W/RET REQ TY I (Y)4"(BRK)(090MIL) DOLLARS and CENTS	LF	8,076.000	116
	666	6314	001	RE PM W/RET REQ TY I (Y)4"(SLD)(090MIL) DOLLARS and CENTS	LF	61,092.000	117
	668	6077		PREFAB PAV MRK TY C (W) (ARROW) DOLLARS and CENTS	EA	10.000	118
	668	6083		PREFAB PAV MRK TY C (W) (LNDP ARROW) DOLLARS and CENTS	EA	2.000	119
	668	6085		PREFAB PAV MRK TY C (W) (WORD) DOLLARS and CENTS	EA	10.000	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	6007	001	REFL PAV MRKR TY I-C  DOLLARS and CENTS	EA	1,070.000	121
	672	6009	001	REFL PAV MRKR TY II-A-A  DOLLARS and CENTS	EA	2,790.000	122
	685	6003		REMOVE RDS D FLASH BEACON ASSEMBLY  DOLLARS and CENTS	EA	1.000	123
	685	6004		INSTL RDS D FLSH BCN ASSM (SOLAR PWRD)  DOLLARS and CENTS	EA	1.000	124
1	3002	6001		MEMBRANE UNDERSEAL  DOLLARS and CENTS	GAL	43,625.000	125
	6001	6002		PORTABLE CHANGEABLE MESSAGE SIGN  DOLLARS and CENTS	EA	2.000	126
				ALTERNATE NO. 1A  DOLLARS and CENTS			
	316	6428		ASPH (CRS-2)(ALT)  DOLLARS and CENTS	GAL	43,625.000	127
	316	6429		AGGR (TY-D GR-5 OR TY-L GR-5)(ALT)  DOLLARS and CENTS	CY	1,246.000	128

**GENERAL NOTES AND SPECIFICATION DATA**

**SPECIFICATION DATA**

(PERCENT RETAINED-SIEVE)

DESCRIPTION	2 1/2"	1 3/4"	#4	#40	PI MAX	PI MIN
FLEXIBLE BASE (TYPE D, GRADE 4)	0	0-5	45-75	70-85	12	4

1. This material will be produced from a source which when tested in accordance with test method TEX-117-E, PART 1, will meet the requirements of class 1.0 material.

2. This material will be produced from a source which when tested in accordance with test method TEX-116-E, the maximum wet ball mill value will not exceed 45 and the maximum increase of material passing the No. 40 sieve will not exceed 20 percent.

3. Job control samples for gradation and P.I. testing will be taken from the windrow after blade mixing.

The material passing the No. 200 mesh sieve will generally be limited to 1/3 of the material passing the No. 40 mesh sieve.

**Basis of Estimate**

Item	Description	Rate	Basis	Quantities
*166	FERTILIZER (20-10-10) (PERMANENT)	300 LBS / AC	51.5 AC	7.7 TON
	FERTILIZER (20-10-10) (TEMPORARY)	300 LBS / AC	51.5 AC	7.7 TON
VEGETATIVE WATERING				
168	(3 APPLICATIONS - PERM)	13,100 GAL/AC/APP	51.5 AC	2,025 MG
	(3 APPLICATIONS - TEMP)	13,100 GAL/AC/APP	51.5 AC	2,025 MG
216	PROOF ROLLING	8 HR/ROADBED/MILE	9 ROADBED/MILE	72 HR
FLEXIBLE BASE				
247	(TY D GR 4 FNAL POS)	138 LB / CF	606,825 CF	*41,871 TON 22,475 CY
PRIME COAT				
310	PRIME COAT (MC-30 OR AE-P)	0.20 GAL / SY	97,605 SY	19,521 GAL
SEAL COAT				
316	ASPH (CRS-2)	0.45 GAL / SY	97,605 SY	43,908 GAL
	AGGR (TY-D GR-4 OR TY-L GR-4)	1 CY / 125 SY	97,605 SY	781 CY
DENSE-GRADED HOT MIX ASPHALT				
341	TY-B PG 64-22	660 LBS / SY	82,782 SY	27,318 TON
	TY-C PG 70-22	220 LBS / SY	252,264 SY	27,749 TON
	TY-D PG 64-22 (LEVEL-UP)	110 LBS / SY	183,349 SY	10,084 TON
3002	MEMBRANE UNDERSEAL	0.25 GAL / SY	174,500 SY	43,625 GAL

\* FOR CONTRACTOR'S INFORMATION ONLY

**Basis of Estimate - Alternate Bid**

Item	Description	Rate	Basis	Quantities
① 316	ASPH (CRS-2) (ALT)	0.25 GAL / SY	174,500 SY	43,625 GAL
	AGGR (TY-D GR-5 OR TY-L GR-5) (ALT)	1 CY / 140 SY	174,500 SY	1,246 CY

**GENERAL NOTES**

**LIST OF MODIFIED STANDARDS**

**SCC 3&4 (MOD)**

**SCC 5&6 (MOD)**

**ITEM 4: SCOPE OF WORK**

All new and existing concrete adjacent to the roadway must be free of stains, dirt, tire marks, etc., at the time of final acceptance. These items include but are not limited to bridge rails curb and gutter, inlets and riprap. Blast cleaning of these items will be required to achieve acceptance of the project and will be considered subsidiary to the applicable bid items.

Prior to final acceptance, all new structures and extensions will be cleaned out by the contractor. This work will not be paid for directly but will be considered subsidiary to the various bid items. Cleaning out of existing structures as shown on the plans will be paid for under Item 480, "Cleaning Existing Culverts."

**ITEM 5: CONTROL OF THE WORK**

All elevations are based on USC & GS datum.

Prior to beginning work in the area of existing utilities, the contractor will consult with the utility companies for exact locations to prevent any damage or interference with present facilities. This action will in no way be interpreted as relieving the contractor of his responsibilities, under the terms of the contract and as set out in the plans and specifications. The contractor will repair any damage caused by his operations, at his own expense and will restore facilities to service in a timely manner.

Prior to any excavation, contractor will contact Waco District Signal Shop crew to locate any loop detectors or other buried traffic facilities. The contractor will coordinate with the Signal Shop any required relocations or adjustments.

Submit all fabrication and shop drawings to the Area Engineer for review and approval, unless otherwise directed.

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

#### **ITEM 6: CONTROL OF MATERIALS**

Mixing of materials, storing of materials, storing of equipment, or repairing of equipment on top of concrete pavement or bridge decks will not be permitted unless specifically authorized. Permission will be granted to store materials on surfaces if, in the opinion of the Engineer, no damage or discoloration will result.

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

#### **ITEM 7: LEGAL RELATIONS AND RESPONSIBILITIES**

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

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

Follow all local ordinances when burning cleared trees or brush.

Where existing pavement adjoins new pavement, saw the existing pavement to a neat transverse and/or longitudinal line to permit adequate joining. This will not be paid for directly, but will be considered subsidiary to the various bid items.

Protect all adjoining pavement sections during all phases of construction. Any damages incurred due to contractor's operation will be repaired and/or replaced at the contractor's expense.

All materials, labor and incidentals required for the contractor to provide for traffic across the highway and for all weather ingress and egress to public and private property in accordance with Item 7.2.4 of the standard specifications will be considered as incidental to the various bid items. When construction is completed the access roadways will be restored to their original condition.

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

The contractor will not initiate activities in a project specific location (PSL) associated with a U.S. Army Corps of Engineers (USACE) permit area that has 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 permit area includes all waters of the U.S. or associated wetlands affected by activities associated with this project. Special restrictions may be required for such work. The contractor will be responsible for any and all consultations with the USACE regarding activities, including project specific locations (PSLs), which have not been previously evaluated by the USACE. The Contractor will provide the department with a copy of all consultation(s) or approval(s) from the USACE prior to initiating activities.

The contractor may proceed with activities in PSLs that do not affect a USACE permit area if a 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. The contractor is solely responsible for documenting any determination(s) that their activities do not affect a USACE permit area. The contractor will maintain copies of their determination(s) for review by the department or any regulatory agency.

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

- (1) Restricted Use of Materials for the Previously Evaluated Permit Areas.** The Contractor will document both the project specific location (PSL) and their authorization. The contractor will 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 is used for permanent or temporary fill (Item 132, Embankment) within a USACE permit area;
  - b. Suitable embankment (Item 132) from within the USACE permit area is used as fill within a USACE evaluated area; and,
  - c. Unsuitable excavation or excess excavation ["Waste"] (Item 110) that is disposed of at a location approved within a USACE evaluated area.

- (2) **Contractor Materials from Areas Other than Previously Evaluated Areas.** The Contractor will provide the department with a copy of all USACE coordination or approval(s) prior to initiating any activities for an 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 permit area; and,
  - b. Unsuitable excavation or excess excavation ["Waste"] (Item 110, Excavation) that is disposed of outside a USACE evaluated area.

The total area disturbed for this project is 51.5 acres. The disturbed area in this project, all project locations in the Contract, and the Contractor project specific locations (PSLs), within one (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 one (1) mile of the project limits exceeds five (5) acres, provide a copy of the Contractor NOI to the Engineer and to the local government that operates a separate storm sewer system.

Throughout the course of the project, when in the opinion of the Engineer, tall grass and weeds affect the safety of the public by restricting visibility, interfere with normal traffic flow or appear unsightly, the contractor will be required to mow same. Final cleanup will include mowing of grass and weeds. This work will not be paid for directly but will be considered as subsidiary to the various bid items.

Remove all vegetation from pavement edges, intersections and driveways prior to planing, seal coat or ACP operations. This work will not be paid for directly but will be subsidiary to the various bid items.

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

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

The Contractor will not dispose of or place demolished highway and bridge materials within any Waters of the US, wetland or within the Ordinary High Water Marks of any 404 stream, either on or off TxDOT property.

The Contractor will maintain all PSLs in an acceptable manner by removing empty chemical containers / drums, disposal of trash and debris, cleanup and disposal of spills and the proper storage of fuels. PSLs will not be used as a waste dumping area or for storage of removed trees or brush. Proper BMPs should be maintained for disturbed or stockpiled soils and seeding completed per permit requirements.

### **General Notes for Work in Waters of the US**

- 1.** TxDOT will establish “limits of waters of the United States” to designate stream banks (Ordinary High Water Marks) and wetland boundaries for the project with wood lathing and flagging. These areas have specific Corps of Engineer 404 permit requirements as stated in the following notes.
- 2.** For bridges, the contractor will provide and maintain orange plastic security fencing (called orange fencing) slightly above the Ordinary High Water Marks, on each side of the stream and from ROW line to ROW line. For culverts, the contractor will provide and maintain orange fencing slightly above the Ordinary High Water Marks, on each side of the stream on the upstream and downstream culvert ends outside the limits of permanent facilities to the ROW lines. No construction activities or access below the orange fencing will be allowed, unless approved by TxDOT. The boundaries for wetland areas will also be established with orange fencing and timber mats must be used to support heavy equipment.
- 3.** The Contractor will submit detailed site specific plans for work in each “water of the United States” designated on the EPIC sheet. These plans must be approved by the TxDOT Engineer prior to starting any work in these areas. The plans must also describe facilities and work activities adjacent the Ordinary High Water Marks. The plan must show actual dimensions and materials for:
  - Proposed construction roads and work areas leading to or in close proximity the Ordinary High Water Marks
  - Temporary material or equipment storage areas in close proximity to the Ordinary High Water Marks
  - Locations of proposed sediment and erosion control devices
  - Identification of construction equipment and construction techniques to accomplish the work

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

4. Storm water from disturbed soil areas draining towards wetlands will either be re-routed or adequate sediment control devices installed to protect the wetland.

5. The Contractor will select concrete bridge demolition methods that will meet all 404 requirements. Bridge demolition between Ordinary High Water Marks may typically include bridge slabs, girders, columns and foundations. The use of jack hammers or crushing techniques will be conducted over timber mats wide enough for the downed bridge and for access and use of construction equipment to fully remove the wrecked structure. Concrete structures requiring demolition will not be fully processed into small pieces between the Ordinary High Water Marks. Large sections of the wrecked concrete structure should be lifted or moved to an upland area for further processing with the processing area using appropriate sediment control devices. Demolitions should be avoided during high stream levels. Efforts will be made to minimize bridge rubble, including fine concrete materials produced through the demolition process, water from saw cutting activities or soils moved during demolition activities from entering the stream.

6. The construction or demolition of culverts should take place in a manner that does not block the flow in a 404 stream. Removal or demolition of bridge class culverts should be accomplished similar to bridge demolitions, but timber mats are not required. Efforts will be made to minimize culvert rubble, including fine concrete materials produced through the demolition process, concrete saw cutting water or soils moved during demolition activities from entering the stream. Minimal stream channel disturbance should occur both upstream and downstream of culverts between the Ordinary High Water Marks.

7. No excavated material, including spoils from drill shafts will be deposited within the Ordinary High Water Marks at any time. Excavated material will be immediately hauled to an approved temporary upland material storage area on TxDOT ROW. Excess material will be hauled from the project site or spread above the stream bank limits as directed. Adequate stabilization and sediment control devices will be provided for soil materials spread and graded above the stream bank limits on TxDOT ROW.

**8.** No equipment or chemicals will be stored overnight within waters of the US (between the Ordinary High Water Marks). Special care will be taken to contain all sanitary waste, petroleum products or chemicals from leaking or entering the stream. The Contractor will make provisions to collect all construction related trash and debris each work day and to provide adequate containers for storage and removal.

**9.** Upon completion of work, all excess construction materials, construction debris, timber mats, will be carefully removed from between the Ordinary High Water Marks of the stream while minimizing additional earth disturbance, protecting existing aquatic vegetation and limiting stream turbidity. Timber mats, located below the Ordinary High Water Marks will be carefully removed by construction equipment located above the Ordinary High Water Marks. Stream shaping below the Ordinary High Water Marks, after removal of timber mats or other construction activities will only be conducted when directed by TxDOT.

**10.** Adequate sediment and erosion control devices will be installed to preclude sediment from entering the stream and to the requirements of the storm water permit. Continuous silt fences with angled end sections and / or rock filter dams will be installed along the entire length of disturbed soils, slightly above and parallel the High Water Marks of the stream and upslope of orange fencing specified in Item 2. No rock filter dams or other controls will be installed across 404 streams below the Ordinary High Water Marks for either bridge or culvert installations. Large diameter compost logs will typically be used on the boundaries of timber mats located between the Ordinary High Water Marks. Vegetation will be established as soon as possible, beginning immediately when areas are brought to the proper lines and grades. Soil retention blankets and channel liners are encouraged to minimize erosion and promote vegetation development.

**11.** During any construction or demolition operations, soil will never be pushed from the high bank into the stream channel below the Ordinary High Water Marks. Soil may be removed and shaped as necessary along the stream bank slopes above the Ordinary High Water Marks to facilitate construction with excess material being moved to high ground.

**12.** Trees removed between the Ordinary High Water Marks will be saw cut. No mobile construction equipment will be used to remove vegetation between the Ordinary High Water Marks. Trees will be cut flush with the ground level and pulled above the Ordinary High Water Marks for further processing. Only trees designated by the TxDOT Engineer will be removed. No chemicals or stump grinding will be used between the Ordinary High Water Marks. Follow all local ordinances when burning cleared trees or brush.

**13.** No water will be pumped from any water of the US without a permit from the appropriate River Authority or the Texas Commission on Environmental Quality. Upland stock tanks are exempt from this requirement.

**14.** Temporary construction roads or ramps, if approved, will be constructed of material that will not erode and transport fine grain sediment downstream under high flows. Acceptable earthwork materials will be rock material of four (4") to six (6") inch diameter. The use of rock and inert materials such as structural steel sections, wood mats, concrete mats, filter fabrics and concrete barriers will be acceptable to build roads and ramps. Fills consisting of clay, sands or other fine grain materials will not be used between the Ordinary High Water Marks. Loose earth materials generated by excavation between the Ordinary High Water Marks will be re-compacted or moved to a high bank area before the end of each day. Temporary construction roads and ramps will be removed as soon as possible and the stream channel returned to a near original condition. Earth materials (clays and sand) that fall from construction equipment onto roads or ramps, between the Ordinary High Water Marks, will be cleaned and removed daily. Heavy duty wood mats are required for the operating surface for all temporary stream crossings and equipment platforms between Ordinary High Water Marks. Heavy duty wood mats are also required for all temporary stream crossings including shallow stream channels and stream channels with solid rock bottoms. Mats used without rock fill and that does not block flow in the stream channel can be used without a temporary culvert. Mats should be sized to be structurally sound under all equipment loads.

**15.** Temporary erosion control will be provided by Pneumatically Placed Concrete and will be provided to minimize erosion and limit sediment entering stream channels. The Contractor will minimize the time duration for leaving steep cut or fill areas that concentrate storm water flows and promotes erosion near stream channels. Additionally, the Contractor will not store or leave loose construction related soils located near or in stream channels.

**16.** Sediment found in 404 streams from the project, both on and off TxDOT property, will be removed with equipment that will cause minimum disturbance to the stream channel. The Contractor is to remove the sediment to a location on the high bank outside of the Ordinary High Water Marks.

**17.** To facilitate culvert or bridge construction work, low stream flows may be temporarily pumped or routed around construction activities. Stream flow should not be stopped. To facilitate pumping or routing of low flows, whatever sumps or obstructions used to control the stream flow will not be constructed of fine grained clays or sands.

The contractor will be familiar with the right of way map and the location of all the right of way monumentation.

Care will be taken by the contractor and its subcontractors to protect and avoid disturbance to the right of way monumentation.

If right of way monumentation is disturbed by the contractor, or its subcontractor, the contractor will notify the inspector. Monuments which are disturbed by the contractor, or its subcontractor, will be restored by a Registered Professional Land Surveyor designated by the Texas Department of Transportation District Surveyor at the expense of the contractor.

**ITEM 8: PROSECUTION AND PROGRESS**

For this project, working day charges will be charged in accordance with Article 8.3.1.1, “Five-Day Workweek”.

For this project, provide a Bar Chart progress schedule.

Prior to contract letting, the conceptual construction schedule as developed for the contract time determination will be made available by the state at the Area Engineers’ office for prospective bidders review. The schedule will be in hard copy form and made available for copying by the contractor. This supplied schedule is for informational purposes only. It is the responsibility of the prospective bidder to determine a construction schedule for the work in this contract.

In addition to the requirements in Special Provisions to Item 8, construction schedules provided by the Contractor will include line items required to maintain compliance with the storm water permit. Those line items will include, but not be limited to installing / removing storm water sediment controls, installing soil retention blankets/channel liners, top soil / compost placement, seeding (temporary and permanent), and placement of permanent erosion controls, earthwork and grading.

The contractor will be expected to schedule this work so that the base placement operations will follow the subgrade work as closely as practical in order to reduce the hazard to the traveling public and prevent undue delay from wet weather.

Do not begin work on the roadway until thirty (30) minutes after sunrise and all equipment and personnel must be off the road and lanes opened to traffic by thirty (30) minutes before sunset when utilizing temporary lane closures.

In the event utility lines needing unforeseen adjustments are encountered during construction operations, alter operations and continue to prosecute the contract in such a manner that will allow utility adjustments to be made by others.

For all subcontracts, physically attach all provisions listed in the “Contractor’s Assurance” to the subcontract agreement. Provide a copy of subcontracts, with attachments, for all DBE Subcontractors. Submit the subcontracts to the Engineer when submitting the subcontract approval request.

**ITEM 100: PREPARING RIGHT OF WAY**

Preserve trees within temporary construction easements in accordance with Article 100.2., unless otherwise directed.

Prune trees designated for preservation as directed. All work required in preserving and pruning trees will be included in the price bid for Item 100, “Preparing Right Of Way”.

The removal of trees and vegetation will be subsidiary to Item 100, "Preparing Right Of Way". Contractor will preserve all trees designated for preservation by whatever means necessary. The removal of any existing fence will not be paid for directly, but will be considered subsidiary to the bid Item 100, "Preparing Right Of Way".

All trees and brush removed each day will be disposed of within the same day of removal unless otherwise approved. If removed vegetation is burned, ashes from burned vegetation will not be placed or allowed to be transported by storm water into any stream. Burn locations, if approved, will be no closer than 300 feet from a stream. Earth berms must be used around burn areas to keep ash in place.

The Contractor is prohibited from removing grass vegetation throughout the entire project limits and then ceasing construction for long periods, typically over three weeks. The Contractor schedule will be developed based on staged vegetation removal, limiting disturbed soil to no more than 25 percent at one time, unless otherwise approved. Should the Contractor not be able to adequately control sediment and erosion for areas disturbed, TxDOT will substantially reduce the size of areas that the Contractor may disturb soil. Should the project be evaluated to have sediment control problems as a result of the Contractor disturbing excessive amounts of soil, the Contractor will be required to immediately re-vegetate (seed and water) those disturbed areas at no cost to TxDOT.

Prior to starting bridge or culvert removals, the Contractor will remove all public trash and dumped materials within the stream channel and property boundaries, with all work and disposal being subsidiary to Item 100, "Preparing Right Of Way" and /or Item 496 "Removing Structures".

### **ITEM 110: EXCAVATION**

In a cut section, when soils are encountered at subgrade depths that are unstable for reason other than excess moisture, undercut this material for a minimum depth of one (1.0) foot below the maximum depth as determined and replace with a material having a plasticity index less than 25 and a liquid limit of less than 50. This required undercutting will be paid at the price bid for Item 110, "Excavation". Replacement of more suitable material will be paid at the price bid for Item 132, "Embankment".

Proof Roll the completed subgrade to locate unstable areas. Proof rolling will be in accordance with Item 216, "Proof Rolling".

### **ITEM 132: EMBANKMENT**

Type B Embankment will consist of suitable earthen material such as rock, loam, clay or other materials as approved that will form a stable embankment.

Off-Site Borrow Sources: Test off-site borrow sources for plasticity index and liquid limit and other physical properties as designated. Provide the Engineer test reports for the tests listed above for each borrow source. Tests should be performed on all types, colors and/or textures of soil in the borrow source. The Engineer may perform additional testing of this material upon delivery to the project.

Proof Roll the completed subgrade to locate unstable areas. Proof rolling will be in accordance with Item 216 "Proof Rolling".

### **ITEMS 110 & 132: EXCAVATION & EMBANKMENT**

Salvage the existing topsoil from the cut/fill areas. Stockpile the salvaged topsoil material at locations as approved. Top soil will not be used for general fill, unless there is an excess quantity of top soil and use is approved by TxDOT. Top soil stockpiles or top soil placed along the ROW lines in windrows will be temporarily seeded to meet storm water permit requirements.

Topsoil not stored in small windrows will be stockpiled in locations with heights no greater than four (4) feet and dumped loose from Contractor equipment. The Contractor will minimize topsoil compaction and limit equipment being driven over stockpiled topsoil. Dozers may be used for limited shaping. Weeds will be periodically removed and grass vegetation established by broadcast seeding. For the best re-vegetation performance, stockpiled topsoil should be used within one year of stockpiling. Prior to stockpiled topsoil being re-distributed on the project, the soil will be mixed and tilled at the stockpile location. Contractor will adequately plan for the additional land requirements for top soil storage. All stockpiled topsoil activities will be subsidiary to Items 110 "Excavation" and 132 "Embankment".

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

Prior to contract letting, one copy of the earthwork cross sections will be made available by the state at the Area Engineers' office for prospective bidders review. Earthwork construction cross-section data is also available to the contractor on a department furnished compact disc at the Area Engineers' office. This supplied cross-section plot or computer data is for non-construction purposes. It is the responsibility of the prospective bidder to validate the supplied plot or data with the accompanying plans, specifications, and estimates for this contract.

Design cross-sections and cross-section data will be provided to the Contractor by TxDOT post letting and will be used to stake the lines and grades for the project, as directed.

When excavation is required to adjust stream flow lines at culvert ends, flatten the side slopes of channels and the back slopes of parallel ditches to the maximum extent possible within the existing right of way and channel easements.

Stormwater containing suspended sediment and turbidity needing to be removed from excavations or low areas will be pumped or gravity drained through vegetated buffer strips (50-foot minimum) or placed in ditches with temporary sediment controls prior to the water being discharged into a stream.

**ITEM 134: BACKFILLING PAVEMENT EDGES**

Backfill material will consist of reclaimed asphalt pavement.

**ITEM 164: SEEDING FOR EROSION CONTROL**

Final grading and stabilization (seeding) will be achieved as soon as possible and not scheduled only for the end of the project. Final grading and stabilization should be initiated as the overall work progresses and should be scheduled in sequence with completion of base course installation along the length of the road project.

Multiple mobilizations of the seeding crews will be expected to comply with the Construction General Permit of the Texas Pollution Elimination Discharge System requirements for re-vegetating disturbed soils.

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

Temporary cool seed mixtures will be as stated in the specification or at the option of TxDOT a direct substitution of wheat at thirty-four (34) lbs per acre or oats at twenty-four (24) lbs per acre. Tall fescue may be added to these applications and applied at a rate of four & one-half (4.5) lbs per acre.

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

The Contractor has overall responsibility to initiate and implement site preparation, grading and seeding in a timely manner to meet the current TXR 150000 permit re-vegetation requirements. Contractor will be required to expedite multiple seeding and re-vegetation activities will be subsidiary throughout the duration of the project.

Permanent and temporary seeding that does not produce uniform vegetation will be redone by the Contractor at no cost to TxDOT when seed is planted outside of TxDOT specifications; specifically but not limited to, planting the seed too deep, using incorrect or damaged drill seeding equipment, providing defective seed or inconsistent seed distribution and/or starting equipment watering out of specifications/notes where the seed germinates and then dies.

Re-seeding over existing soil retention blanket will be by broadcast seeding at twice the permanent or temporary seed rates (pounds per acre). Based on the increased seed quantity, the Contractor will be paid for two (2) acres of seeding for each one (1) acre of seeding over soil retention blankets. Initial seeding under soil retention blankets will be primarily by drill seeding, unless otherwise approved, utilizing the current seasonal temporary or permanent seed types in the TxDOT Specifications and/or General Notes.

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

For drill seeding installations, the pasture or rangeland type drill will have a minimum of three seeding compartments to separate the fine and fluffy seeds and must be capable of being calibrated so the seed mixtures will be planted uniformly.

#### **ITEM 166: FERTILIZER**

Fertilizer will be used for permanent and temporary seeding.

#### **ITEM 168: VEGETATIVE WATERING**

Watering between December 1<sup>st</sup> and February 1<sup>st</sup> can begin on seeded areas upon planting and before a natural rainfall. During other planting periods, unless approved by TxDOT, vegetation watering by means of water trucks will not be started on newly planted seeds until a natural rain of one-half (½) inch has occurred after planting.

#### **ITEM 247: FLEXIBLE BASE**

After the existing pavement is scarified and spread evenly over the proposed subgrade, incorporate additional flexible base into the scarified material. Spread the resulting mixture and compact to the required density as required for Item 247 and to the lines and grades set forth in the plans and as directed.

Place the material in approximately equal courses not to exceed four (4) inches in depth per course. During mixing and laying operations, sufficient water will be added to the material to insure that the moisture content is not less than optimum moisture as determined by test method TEX-113-E.

Recycled asphalt pavement (RAP) or crushed concrete generated on this project will be allowed to be blended in the flexbase. Do not exceed twenty (20%) percent Recycled Material (RAP, crushed concrete or a combination) by weight added to the flexible base. If contractor elects to utilize these materials as part of the flexible base mixture, payment will be made for the total quantity of RAP/Recycled concrete flexible base mixture.

Ride Quality will not be required on this project.

**ITEMS 310 & 316: PRIME COAT & SEAL COAT**

No asphalt treatments will be applied just prior to a rain event that could result in chemical asphalt or any asphalt by-product pollutant being washed into a stream.

**ITEMS 310, 316 & 341: PRIME COAT, SEAL COAT & DENSE-GRADED HOT-MIX ASPHALT**

The Contractor may request approval from TxDOT to clean equipment located on TxDOT ROW which is engaged in asphalt work such as trucks, lay down machines, and distributors. TxDOT may allow cleaning of asphalt equipment on TxDOT ROW only when all of the following conditions are met on a continuous basis:

1. Cleanup activities must take place no closer than three hundred (300) feet from an off ROW drainage discharge.
2. No diesel or fuel is used for cleaning.
3. The names of all cleaning agents have been previously submitted to TxDOT and the Contractor has submitted both a spill prevention and cleanup plan for the cleaning chemicals being used.
4. All excess cleaning liquid must be captured on plastic or tarps and disposed of properly off ROW.
5. Excess asphaltic products originally planned to be used for road construction but deposited along the roadway edge due to having too much material, or due to equipment start/stops and minor equipment upsets will be properly removed off ROW or to a location approved by TxDOT within forty-eight (48) hours.

**ITEM 310: PRIME COAT**

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

**ITEM 316: SEAL COAT**

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

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

Protect all existing bridges, curbs, and other exposed concrete surfaces within the limits of these projects from asphalt materials by any method that is approved. Remove any excessive asphalt materials deposited on these surfaces at the Contractor's expense in a manner approved. During application of the surface treatment, if existing conditions warrant, the lane widths, transitions, and intersection areas may be varied as directed.

Use a medium pneumatic roller meeting the requirements of Item 210, "Rolling", as directed. This work will be subsidiary to the various bid items.

Remove dirt and debris that has accumulated in the curb and gutter sections prior to beginning paving. Likewise, remove all vegetation from pavement edges prior to seal coat operations. This work will be subsidiary to various items.

### **ITEM 341: DENSE-GRADED HOT-MIX ASPHALT**

Target laboratory-molded density will be 97.0% if the Texas Gyratory Compactor is used for design and production control.

The contractor will provide a ticket writer during hot mix operations.

RAP will be allowed in all types of hot-mix under this item. The RAP must be obtained from this project or from one of the approved state owned stockpiles. The locations and availability of the RAP at various state owned stockpiles can be obtained from the Engineer at the time of letting.

RAP from Contractor owned sources may be used if the RAP is fractionated. The coarse fraction of contractor owned RAP will not be allowed if it consists primarily of siliceous aggregates.

Hydrated lime or an approved liquid surfactant-based warm mix additive will be added to the hot-mix asphalt as an additive to improve quality of the mixture. The lime will be added at a rate of one (1.0%) percent by weight of the total aggregate. The lime will meet the requirements of TYPE A, hydrated lime, or TYPE B, commercial lime slurry, that meets the requirements of DMS-6350, "Lime and Lime Slurry". The lime will be added to the fine aggregate, pug mill mixed and stockpiled a minimum of 24 hours prior to introduction to mixing plant. Other methods of adding lime that produce comparable results and that are acceptable to the Engineer may be considered. Lime will not be paid for directly, but will be considered as subsidiary to various bid items. The warm mix additive will be added at the rate recommended by the manufacturer. The warm mix additive will be metered and injected into the liquid asphalt at the mixing plant or as approved. Warm Mix Additive will not be paid for directly, but will be considered subsidiary to various bid items.

Provide methods and proposed documentation acceptable to the Engineer before beginning production that verifies the addition of lime or liquid surfactant-based warm mix additive as required above in the various mixes. Necessary equipment and additions to the plant to document and verify these quantities in the mixtures will be subsidiary to the HMAC items.

Evaluate the mixture proposed for use for moisture susceptibility in the mixture design and production stages by test method TEX-530-C, unless otherwise directed. Maximum stripping of 0% is required. If more than 0% stripping occurs, additional anti-stripping agent, Lime or liquid warm mix additive may be required.

The placement pay factors for shoulders placed separately from the travel lanes, will be based on in-place air void determinations.

For this contract, provide a continuous flow of material to the paver by means of a self-propelled MATERIAL TRANSFER VEHICLE (MTV). The (MTV) will consist of a mobile hopper with a sufficient storage capacity and conveyor that will provide a non-stop placement of the hot-mix asphalt pavement for the surface courses on the traffic lanes and shoulders. The MTV will have a system of augers or other approved systems to remix the mixture during the transfer process. The Engineer will approve the MTV before use. This is required to minimize segregation and improve the ride quality.

If contractor elects to use the Thermal Imaging System, an MTV is not required.

Utilize a paver ski or mobile string line at least forty (40) ft. long during placement of all hot mix placed with an asphalt paver unless otherwise approved.

Any Truck Bed Releasing Agent will be approved.

For hot-mix overlays tie-ins to existing hot-mix pavement, provide a butt joint by milling a 2-in. to 0-in. taper over a minimum of fifty (50) feet. This work will not be paid for, but will be considered subsidiary to the various bid items.

For tests specified, enter testing data in Department provided electronic testing template spreadsheets. Submit electronically to the Engineer at the interval directed.

#### **ITEM 354: PLANING AND TEXTURING PAVEMENT**

RAP generated on the project and not re-incorporated into the project will become the property of the Contractor and will be removed the project.

#### **ITEM 400: EXCAVATION AND BACKFILL FOR STRUCTURES**

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

CLASS B bedding is required if rock is encountered.

**ITEM 420: CONCRETE SUBSTRUCTURES**

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

All construction products used to construct concrete structures and bridges including but not limited to plastics, Styrofoam, grease, glues, caulking, adhesives, solvents, paints, cleaning agents and rubber will be handled in a manner that the construction products or empty containers/tubes will not be allowed into any stream. Construction debris developed from the cutting, grinding or sizing of solid construction products including plastics and Styrofoam will not be allowed on the ground or to blow into a stream.

Concrete curing compounds will not be applied in a manner that the chemical will be spilled, dripped or be discharged into streams. Containers and rags used during application of curing compound will be properly disposed of off project. Do not store curing compound containers and drums on TxDOT ROW.

Ensure steel forms are free of rust immediately prior to placing concrete.

Refer to Item 427, "Surface Finishes for Concrete", for additional requirements for formwork, concrete curing, and from removal for off-the-form finishes.

**ITEM 421: HYDRAULIC CEMENT CONCRETE**

The Engineer will provide compressive strength testing equipment.

**ITEM 432: RIPRAP**

Blast clean all concrete curb, curb and gutter and riprap in accordance with Item 427, "Surface Finishes For Concrete", as part of the final clean-up and acceptance process. Other methods may be approved to obtain a uniform clean appearance, free of marks, stains, etc., at the time of final acceptance.

Locations and quantities may be varied as directed to accommodate field conditions.

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

**ITEM 440: REINFORCEMENT FOR CONCRETE**

Uncoated steel reinforcement storage on the ground will be supported by nominal dimension four (4) inch by four (4) inch solid lumber or round posts spaced closely where any portion of the steel does not touch the ground. Larger timber is acceptable. As an alternate, new or used sound wooden pallets may be used. Broken supports will be replaced.

Prior to concrete placement, all dried mortar and splashed concrete, in addition to any other contaminates, will be removed from all steel reinforcement.

**ITEM 462: CONCRETE BOX CULVERTS AND DRAINS**

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

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

**ITEM 464: REINFORCED CONCRETE PIPE**

Install all reinforced concrete pipe on this project using pre-formed flexible joint sealant.

**ITEM 467 SAFETY END TREATMENT**

Welds are not allowed to splice Safety Pipe Runners. A Safety Pipe Runner must be one continuous pipe.

**ITEM 496: REMOVING STRUCTURES**

All pipe culverts removed under this contract will become the property of the contractor to be disposed of off the right of way unless otherwise directed.

**ITEM 502: BARRICADES, SIGNS AND TRAFFIC HANDLING**

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

Schedule and execute the work such that the portion of the roadway not sealed and striped at any given time is kept to a minimum and is no more than two and a half (2.5) miles.

All signs, delineators, object markers, and route markers must be in place prior to opening each phase of construction to traffic.

When a culvert extension, inlet construction and/or safety end treatment and open excavation, etc. is within thirty (30) feet of a travel lane then delineate these areas as shown on the BC standard sheets. In addition a four (4) foot high plastic construction fence will be required at or around any structure or obstruction that would be a hazard to pedestrians unless otherwise approved. This fence will be erected in a manner acceptable to the Engineer. Construction fencing will not be paid for separately, but will be considered subsidiary to Item 502, "Barricades, Signs and Traffic Handling".

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

In addition to providing a Contractor's Responsible Person and a phone number for emergency contact, have an employee(s) available to respond on the project for emergencies and for taking corrective measures within thirty (30) minutes.

Place advisory speed plates (CW13-1) in accordance with the TMUTCD and as directed. Signs (CW13-1) will not be used with any signs other than a warning sign, nor will it be used alone. Sign mounting height will be seven (7) feet minimum to the bottom of the speed plate.

The **shadow vehicle** with truck mounted attenuator (TMA) will not be optional but will be required as shown on the appropriate traffic control plan sheets. Truck mounted attenuators must meet the requirements of the Compliant Work Zone Traffic Control Device List. The use of truck mounted attenuators will not be paid for directly, but will be considered subsidiary to Item 502, "Barricades, Signs and Traffic Handling".

Open the pavement to traffic each night. Remove all material stockpiles, equipment left overnight or any obstruction within thirty (30) feet of a travel way or clearly mark by warning lights and barricades.

Unless otherwise shown on plans, where there is excavation adjacent to the pavement edge, provide adequate warning signs, vertical panels, drums and reflectors at the pavement edge. Treat pavement drop-offs created by ACP operations in a similar manner and in accordance with the details shown on the plans.

When excavation is required next to a travel lane carrying traffic and widening is not completed by the end of the day's operation, and unless otherwise permitted in the plans, place sufficient backfill against the edge of the travel lane in order to provide a 3:1 slope. The backfill used will be durable crushed stone type of flexible base or other materials approved. When work is resumed on this excavated area this backfill material will be incorporated into the road work or disposed of as approved. Materials and labor for this work will not be paid for directly but will be subsidiary to the various bid items.

Provide a pilot vehicle for this contract.

Do not perform base widening on both sides of the roadway simultaneously.

Prior to beginning work, the Contractor and Engineer will agree on the allowable length of lane closure.

The maximum allowable length of roadway sections for scarifying and reshaping the existing base and hauling base material, will be two (2) miles. Station competent flaggers at each end of the section being processed to instruct and/or direct the traveling public.

Equip all construction equipment involved in roadway work with a permanently mounted warning light with amber lens as approved.

#### **ITEM 504: FIELD OFFICE AND LABORATORY**

Furnish for the Engineer's exclusive use a laboratory meeting the specified Type D structure. The building will be located at the contractor's hot mix plant site and be separate from the contractor's laboratory.

The use of space heaters for the purpose of heating the structure is unacceptable. The building must be structurally sound and pose no safety hazards. The laboratory must meet all the above requirements within two (2) weeks prior to beginning of work.

#### **ITEM 506: TEMPORARY EROSION, SEDIMENTATION AND ENVIRONMENTAL CONTROLS**

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

Furnish one SW3P permit posting sign and sign support as detailed in the plans. Install this sign in an approved location. The sign and support should be removed upon completion of the project and is the property of the Contractor. The purchase of the sign and support, installation, relocation(s) if determined necessary and removal at project end will be subsidiary to Item 506, "Temporary Erosion, Sedimentation and Environmental Controls".

The SW3P for this contract will consist of using, as directed, any erosion or water pollution control measure deemed necessary. Any erosion or water pollution control measure deemed necessary will be implemented by the Contractor as prescribed by this item and in accordance with the applicable specification. Payment for erosion control measures for which applicable pay items are not included in the contract will be made in accordance with Article 9.7, "Force Account."

#### **ITEM 540: METAL BEAM GUARD FENCE**

In the event a guard post falls on top of an inlet, cut the post to the proper length and bolt it to the inlet top as shown on the plans.

The block-outs used on the Metal Beam Guard Fence will be made of a composite material from a source on the Department approved list of suppliers. The use of wooden block-outs will not be allowed.

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

W-Beam elements, steel posts and composite material blockouts deemed salvageable will remain the property of the State and will be dismantled and returned to the TxDOT Maintenance yard at Temple. All other guard fence, and SGT's deemed non-salvageable will become the property of the contractor.

#### **ITEM 544: GUARDRAIL END TREATMENTS**

The block-outs used on the Single Guardrail Terminals will be made of a composite material from a source on the Department approved list of suppliers. The use of wooden block-outs will not be allowed.

#### **ITEM 560: MAILBOX ASSEMBLIES**

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

**ITEM 585: RIDE QUALITY FOR PAVEMENT SURFACES**

The ride quality for the pavement surface will be surface test TYPE A.

The contractor will take care to ensure satisfactory profile results in the intermediate paving layers (mixture) to eliminate corrective action for excessive deviations in the final surface layers.

Milling will not be allowed as a corrective action for excessive deviations in the surface layer of hot mix.

**ITEM 636: SIGNS**

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

The sign locations as shown on the plans are for diagrammatic purposes and show the approximate location of the signs. Stake the location of the new signs to be approved.

**ITEM 644: SMALL ROADSIDE SIGN ASSEMBLIES**

Measure all dimensions in the field at the actual locations.

Place signs in accordance with lateral and vertical clearances as shown in Sign Mounting Details for Small Roadside Signs and in the Sign Crew Field Book.

Sign placement heights are a minimum of seven (7) feet and a maximum of seven feet six inches (7ft.-6in.) to the bottom of the sign or plaque. Mounting heights are measured as follows:

1. When the base of the sign is below the edge of the travel lane, the sign height is measured from the edge of the travel lane to the bottom of the sign.
2. When the base of the sign is above the edge of the travel lane, the sign height is measured from natural ground to the bottom of the sign.
3. When a supplemental plaque or secondary sign is used, the sign height is measured to the bottom of the supplemental plaque or secondary sign.
4. When a sign has two or more posts, all posts must be a minimum height above natural ground to the bottom of the sign. The sign also must be a minimum height above the edge of the travel lane.

Leave the existing sign assemblies in place until the proposed foundation, post and sign are in installed, and then remove the old sign assemblies.

Do not leave any sign foundation holes open overnight. Ensure all holes drilled are at least the minimum required depth with no loose material remaining in the hole.

Stake proposed sign locations and receive approval before installation of sign foundations. Determine each post length after the stub has been placed.

For sign assemblies using the "TEXAS UNIVERSAL TRIANGULAR SLIPBASE SYSTEM MOUNTS" furnish and install a #4 rebar at least 7 inches long through the 3/4-inch diameter hole in the stub to prevent the stub from rotating in the foundation as detailed on the Sign Mounting Details for Small Roadside Signs.

Furnish and install a 5/16-inch x 1 1/2-inch double roll pin between the slip base casting and the sign support post to prevent the sign assembly from rotating on the stub as detailed on the Sign Mounting Details for Small Roadside Signs.

Concrete for sign foundations is designated as "MISCELLANEOUS CONCRETE". It will be accepted based on a minimum seven (7) day flexural strength of 280 PSI.

Use trowel to finish all foundations for a neat appearance. Remove all excess material.

Expanded foam foundations are not permitted.

Tighten the slip base and the locking collar as shown on standard Sign Mounting Details for Small Signs. Do not tighten bolts greater than eighty (80) foot pounds except to clean threads. Over-torque bolts to clean the threads of any galvanization that might cause an incorrect torque reading. Then loosen the nuts and tighten to the required torque of eighty (80) foot pounds. Tighten bolts incrementally in a sequential manner such that the load is applied uniformly to the locking collar.

For splices in small signs, use bolts as shown on details A and B on the Sign Mounting Details for Small Roadside Signs.

Cut the bottom of all posts level.

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

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

Existing signs remain in place until the proposed sign post assembly is completed and ready for sign installation.

Maintain existing roadside signs within this project's limits during this contract. In order to accommodate the grading or other operations, relocate these signs and assemblies onto temporary supports in accordance with the TMUTCD and as directed. This work will be paid for as "Relocate Small Roadside Sign Supports and Assemblies". Moving the temporary supports for accommodating work and relocating for subsequent phases will not be paid for directly. The existing sign assemblies requiring relocation to a temporary support must be approved.

#### **ITEM 658: DELINEATOR AND OBJECT MARKER ASSEMBLIES**

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

#### **ITEM 662: WORK ZONE PAVEMENT MARKINGS**

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

#### **ITEM 666: RETROREFLECTORIZED PAVEMENT MARKINGS**

The Engineer will verify the beginning and ending points of No Pass Zones. The Contractor will provide traffic control for this activity as approved.

Before the application of pavement markings, sufficiently clean pavement surfaces to remove all forms of contamination and loose materials, in accordance with Item 678, "Pavement Surface Preparation for Markings". This work will not be paid for directly, but will be subsidiary to Item 666, "Retroreflectorized Pavement Markings".

All stop lines will be twenty-four (24) inches wide.

Pay Item for REFL PAV MRK TY I (W) (8") (DOT) will be used for intersection turning lane channelizing markings as shown in the 2011 Texas Manual on Uniform Traffic Control Devices, Section 3B.08, page 395, figure 3B-13c.

Remove markings at own expense that are not in alignment or sequence, as shown on the standard sheets or as stated in the specifications, or do not meet the specification and/or approval of the Project Manager. Removal will be in accordance with Item 677, "Eliminating Existing Pavement Markings and Markers", except for measurement and payment.

#### **ITEM 668: PREFABRICATED PAVEMENT MARKINGS**

Use Type C prefabricated pavement markings (TxDOT Spec DMS-8240) for all Word, Arrow and RR Crossing markings.

**ITEM 672: RAISED PAVEMENT MARKERS**

Place TYPE II-C-R and TYPE I-C markers for lane lines on eighty (80) feet centers regardless of the conditions listed on the Pavement Markings Standard Details.

Before the application of pavement markers, sufficiently clean pavement surfaces to remove all forms of contamination and loose materials, in accordance with Item 678, "Pavement Surface Preparation for Markings". This work will not be paid for directly, but will be subsidiary to Item 672, "Raised Pavement Markers".

Remove at Contractor's expense all markers placed that are not in alignment or sequence, as shown on the standard sheets or as stated in the specifications, or do not meet the specification and/or approval of the Project Manager. Removal will be in accordance with Item 677, "Eliminating Existing Pavement Markings and Markers", except for measurement and payment.

**ITEM 6001: PORTABLE CHANGEABLE MESSAGE SIGN**

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

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

Furnish two (2) portable changeable message signs. The portable changeable message sign(s) will be used for all lane closures and freeway closures as shown on the traffic control plan standard sheets.

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

CONTROL : 0398-03-058, ETC  
PROJECT : STP 2016(834)  
HIGHWAY : SH 317  
COUNTY : MCLENNAN, ETC

TEXAS DEPARTMENT OF TRANSPORTATION

**GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS**

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

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

ITEMS 1 TO 9 INCL., GENERAL REQUIREMENTS AND COVENANTS  
ITEM 100 PREPARING RIGHT OF WAY (103)  
ITEM 104 REMOVING CONCRETE  
ITEM 110 EXCAVATION (132)  
ITEM 132 EMBANKMENT (100) (204) (210) (216) (400)  
ITEM 134 BACKFILLING PAVEMENT EDGES (166) (168) (300)  
ITEM 160 TOPSOIL (168)  
ITEM 164 SEEDING FOR EROSION CONTROL (162) (166) (168)  
ITEM 168 VEGETATIVE WATERING  
ITEM 169 SOIL RETENTION BLANKETS  
ITEM 216 PROOF ROLLING (210)  
ITEM 247 FLEXIBLE BASE (204) (210) (216) (520)  
ITEM 310 PRIME COAT (300) (316)  
ITEM 316 SEAL COAT (210) (300) (302) (520)  
ITEM 341 DENSE-GRADED HOT-MIX ASPHALT (300) (301) (320) (520) (585)  
ITEM 351 FLEXIBLE PAVEMENT STRUCTURE REPAIR (132) (204) (247) (310)  
(316) (340)  
ITEM 354 PLANING AND TEXTURING PAVEMENT  
ITEM 356 FABRIC UNDERSEAL (300) (316) (520)  
ITEM 400 EXCAVATION AND BACKFILL FOR STRUCTURES (110) (132) (401)  
(402) (403) (416) (420) (421) (423)  
ITEM 432 RIPRAP (420) (421) (431) (440)  
ITEM 438 CLEANING AND SEALING JOINTS  
ITEM 462 CONCRETE BOX CULVERTS AND DRAINS (400) (402) (403) (420)  
(421) (422) (424) (440) (464)  
ITEM 464 REINFORCED CONCRETE PIPE (400) (402) (403) (467)  
ITEM 466 HEADWALLS AND WINGWALLS (400) (420) (421) (432) (440) (464)  
ITEM 467 SAFETY END TREATMENT (400) (420) (421) (432) (440) (442) (445)  
(464)  
ITEM 480 CLEANING EXISTING CULVERTS

ITEM 496 REMOVING STRUCTURES  
 ITEM 500 MOBILIZATION  
 ITEM 502 BARRICADES, SIGNS, AND TRAFFIC HANDLING  
 ITEM 504 FIELD OFFICE AND LABORATORY  
 ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL  
 CONTROLS (432)  
 ITEM 530 INTERSECTIONS, DRIVEWAYS, AND TURNOUTS (247) (316) (340)  
 (360) (421) (440)  
 ITEM 533 MILLED RUMBLE STRIPS  
 ITEM 540 METAL BEAM GUARD FENCE (421) (441) (445) (529)  
 ITEM 542 REMOVING METAL BEAM GUARD FENCE  
 ITEM 544 GUARDRAIL END TREATMENTS  
 ITEM 560 MAILBOX ASSEMBLIES  
 ITEM 628 ELECTRICAL SERVICES (441) (445) (449) (618) (620) (627) (656)  
 ITEM 644 SMALL ROADSIDE SIGN ASSEMBLIES (421) (440) (441) (442) (445)  
 (636) (643) (656)  
 ITEM 658 DELINEATOR AND OBJECT MARKER ASSEMBLIES (445)  
 ITEM 662 WORK ZONE PAVEMENT MARKINGS (666) (668) (672) (677)  
 ITEM 666 RETROREFLECTORIZED PAVEMENT MARKINGS (316) (502) (662) (677)  
 (678) (6040)  
 ITEM 668 PREFABRICATED PAVEMENT MARKINGS (678)  
 ITEM 672 RAISED PAVEMENT MARKERS (677) (678)  
 ITEM 685 ROADSIDE FLASHING BEACON ASSEMBLIES (441) (442) (445) (449)  
 (610) (618) (620) (621) (622) (624) (628) (656) (682) (684) (687)

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

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

WAGE RATES

SPECIAL PROVISION "SCHEDULE OF LIQUIDATED DAMAGES" (000---001)  
 SPECIAL PROVISION "NONDISCRIMINATION" (000---002)  
 SPECIAL PROVISION "CERTIFICATION OF NONDISCRIMINATION IN EMPLOYMENT"  
 (000---003)  
 SPECIAL PROVISION "NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO  
 ENSURE EQUAL EMPLOYMENT OPPORTUNITY" (000---004)  
 SPECIAL PROVISION "STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY  
 CONSTRUCTION CONTRACT SPECIFICATIONS" (000---005)  
 SPECIAL PROVISION "ON-THE-JOB TRAINING PROGRAM" (000---006)  
 SPECIAL PROVISION "DISADVANTAGED BUSINESS ENTERPRISE IN FEDERAL AID  
 CONTRACTS" (000---007)  
 SPECIAL PROVISION "IMPORTANT NOTICE TO CONTRACTORS" (000---010)  
 SPECIAL PROVISION "IMPORTANT NOTICE TO CONTRACTORS" (000---307)  
 SPECIAL PROVISION "CARGO PREFERENCE ACT REQUIREMENTS IN FEDERAL AID  
 CONTRACTS" (000---241)  
 SPECIAL PROVISION "CERTIFICATE OF INTERESTED PARTIES (FORM 1295)"  
 (000---249)  
 SPECIAL PROVISION TO ITEM 2 (002---004)  
 SPECIAL PROVISION TO ITEM 6 (006---001)  
 SPECIAL PROVISIONS TO ITEM 7 (007---001) (007---003) (007---004)

SPECIAL PROVISION TO ITEM 300 (300---009)  
SPECIAL PROVISION TO ITEM 421 (421---002)  
SPECIAL PROVISION TO ITEM 506 (506---003)  
SPECIAL PROVISION TO ITEM 666 (666---001)  
SPECIAL PROVISION TO ITEM 672 (672---001)

SPECIAL SPECIFICATIONS:

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ITEM 3002 SPRAY APPLIED UNDERSEAL MEMBRANE (320)  
ITEM 6001 PORTABLE CHANGEABLE MESSAGE SIGN  
ITEM 6040 MOBILE RETROREFLECTIVITY DATA COLLECTION FOR PAVEMENT  
MARKINGS

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.