

# NOTIFICATION OF ADDENDUM

## ADDENDUM NO. 1

**DATED 8/02/2013**

<b>Control</b>	<b>0338-11-051</b>
<b>Project</b>	<b>STP 2013(992)</b>
<b>Highway</b>	<b>LP 336</b>
<b>County</b>	<b>MONTGOMERY</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 2013(992) CONTROL: 0338-11-051  
COUNTY: MONTGOMERY  
LETTING: 08/07/2013  
REFERENCE NO: 0801

**PROPOSAL ADDENDUMS**

- \_ PROPOSAL COVER  
X BID INSERTS (SH. NO.: 3,5 OF 11 )  
X GENERAL NOTES (SH. NO.: T )  
  
\_ SPEC LIST (SH. NO.: )  
\_ SPECIAL PROVISIONS: )  
\_ ADDED: )  
  
DELETED:  
  
\_ SPECIAL SPECIFICATIONS:  
\_ ADDED:  
  
DELETED:  
  
X OTHER: PLAN SHEETS

DESCRIPTION OF ABOVE CHANGES  
(INCLUDING PLANS SHEET CHANGES)

BID INSERTS-  
\*\*\*\*\*  
ADDED BID ITEMS 467-2213 AND 476-2003  
REPLACED BID ITEM 545-2001 WITH BID ITEM 545-2002; TXDOT WILL PROVIDE  
CRASH CUSHION ATTENUATORS  
BID INSERT SHEETS 3,5 OF 11 CHANGED AS A RESULT

GENERAL NOTES-  
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SHEET T, ITEM 545: ADDED NOTE FOR LOCATION OF CRASH CUSHION ATTENUATORS  
BEING PROVIDED BY TXDOT

PLAN SHEETS-  
\*\*\*\*\*  
SHEET 2: REVISED INDEX TO INCLUDE ADDED STANDARD SHEETS  
SHEETS 4I-4M: REVISED GENERAL NOTES AS INDICATED ABOVE  
SHEETS 5,5A-5B: REVISED E&Q TO REFLECT QUANTITY CHANGES ABOVE  
SHEET 6: REVISED QUANTITIES  
SHEETS 133A-133B: ADDED CATCB STANDARD SHEETS  
SHEET 133C: ADDED SMTC STANDARD SHEET

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

SHEETS 136A-136B: ADDED SETP-CD STANDARD SHEETS

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	100	2001	002	PREPARING ROW  DOLLARS and CENTS	AC	32.300	1
	104	2017		REMOVING CONC (DRIVEWAYS)  DOLLARS and CENTS	SY	752.000	2
	105	2043		REMOVING STAB BASE & ASPH PAV (0-6")  DOLLARS and CENTS	SY	1,640.000	3
	110	2001		EXCAVATION (ROADWAY)  DOLLARS and CENTS	CY	42,691.000	4
	112	2001		SUBGRADE WIDENING (ORD COMP)  DOLLARS and CENTS	STA	158.000	5
	132	2006	011	EMBANKMENT (FINAL)(DENS CONT)(TY C)  DOLLARS and CENTS	CY	11,962.000	6
	162	2002		BLOCK SODDING  DOLLARS and CENTS	SY	114,455.000	7
	166	2001	001	FERTILIZER  DOLLARS and CENTS	AC	24.700	8
	168	2001		VEGETATIVE WATERING  DOLLARS and CENTS	MG	4,826.000	9
	275	2001	003	CEMENT  DOLLARS and CENTS	TON	790.000	10
	275	2019	003	CEMENT TREAT (SUBGRADE)(6")  DOLLARS and CENTS	SY	58,566.000	11

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	276	2224		CEM TRT(PLNT MX) (CL N)(TY E)(GR 4)(6") DOLLARS and CENTS	SY	61,284.000	12
	292	2007		ASPHALT STAB BASE (GR 2)(PG 64) DOLLARS and CENTS	TON	2,767.000	13
	360	2002	007	CONC PVMT (CONT REINF-CRCP)(9") DOLLARS and CENTS	SY	45,236.000	14
	361	2002	001	FULL-DEPTH REPAIR CRCP (9") DOLLARS and CENTS	SY	1,000.000	15
	400	2005		CEM STABIL BKFL DOLLARS and CENTS	CY	168.000	16
	400	2005	004	CEM STABIL BKFL DOLLARS and CENTS	CY	60.000	17
	400	2006	004	CUT & RESTORING PAV DOLLARS and CENTS	SY	50.000	18
	409	2002		PRESTR CONC PIL (18 IN SQ) DOLLARS and CENTS	LF	1,769.000	19
	409	2003		PRESTR CONC PIL (20 IN SQ) DOLLARS and CENTS	LF	600.000	20
	416	2032	001	DRILL SHAFT (TRF SIG POLE) (36 IN) DOLLARS and CENTS	LF	56.000	21
	416	2034	001	DRILL SHAFT (TRF SIG POLE) (48 IN) DOLLARS and CENTS	LF	88.000	22

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	420	2004	002	CL C CONC (BENT)  and  DOLLARS CENTS	CY	66.400	23
	420	2033	002	CL S CONC (APPR SLAB)  and  DOLLARS CENTS	CY	406.000	24
	425	2064	001	PRESTR CONC GIRDER (TX28)  and  DOLLARS CENTS	LF	912.000	25
	425	2065	001	PRESTR CONC GIRDER (TX34)  and  DOLLARS CENTS	LF	772.000	26
	430	2002		CL C CONC FOR EXT STR (ABUT)  and  DOLLARS CENTS	CY	128.600	27
	430	2158		CL S CONC FOR EXT STR (SLAB)  and  DOLLARS CENTS	SF	12,692.400	28
	432	2001		RIPRAP (CONC)(4 IN)  and  DOLLARS CENTS	CY	271.000	29
	450	2013	001	RAIL (TY SSTR)  and  DOLLARS CENTS	LF	868.600	30
	454	2005	003	ARMOR JOINT (WITH SEAL)  and  DOLLARS CENTS	LF	256.400	31
	467	2213		SET (TY II)(30 IN)(RCP)(3:1)(C)  and  DOLLARS CENTS	EA	2.000	32
	467	2288	001	SET (TY II)(24 IN)(RCP)(6:1)(P)  and  DOLLARS CENTS	EA	2.000	33

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	476	2003	003	JACK BOR OR TUN PIPE(30 IN)(RC)(CL III) DOLLARS and CENTS	LF	75.000	34
	480	2001		CLEAN EXIST CULVS DOLLARS and CENTS	EA	8.000	35
	496	2007		REMOV STR (PIPE) DOLLARS and CENTS	LF	20.000	36
	500	2001	011	MOBILIZATION DOLLARS and CENTS	LS	1.000	37
	502	2001	033	BARRICADES, SIGNS AND TRAFFIC HAN- DLING DOLLARS and CENTS	MO	10.000	38
	512	2004	002	PORT CTB (FUR & INST)(SNGL SLP)(TY 1) DOLLARS and CENTS	LF	2,725.000	39
	512	2097	002	REMOVE PRECAST PORTABLE TRAFFIC BARRIER DOLLARS and CENTS	LF	2,725.000	40
	529	2006		CONC CURB (MONO) (TY II) DOLLARS and CENTS	LF	614.000	41
	530	2030	006	DRIVEWAYS (ACP)(TYPE 1) DOLLARS and CENTS	SY	1,255.000	42
	530	2036	006	DRIVEWAYS (CONC)(TYPE 2) DOLLARS and CENTS	SY	975.000	43

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	531	2010	006	CURB RAMPS (TY 7)  DOLLARS and CENTS	EA	8.000	44
	533	2007	014	SHOULDER TEXTURING (MILLED)(CON- CRETE)  DOLLARS and CENTS	LF	31,220.000	45
	540	2011	031	MTL BEAM GD FEN TRANS (THRIE-BEAM)  DOLLARS and CENTS	EA	12.000	46
	540	2049	031	MTL BEAM GD FEN (TIM POST) W/MOW STRIP  DOLLARS and CENTS	LF	1,317.000	47
	542	2008		REMOV MTL BM GD FEN (W/MOW STRIP)  DOLLARS and CENTS	LF	1,802.000	48
	542	2009		REMOV GDRAIL END TRT (W/MOW STRIP)  DOLLARS and CENTS	EA	16.000	49
	545	2002		CRASH CUSH ATTEN (MOVE & RESET)  DOLLARS and CENTS	EA	16.000	50
	545	2003		CRASH CUSH ATTEN (REMOVE)  DOLLARS and CENTS	EA	16.000	51
	618	2034		CONDT (PVC) (SCHD 80) (2")  DOLLARS and CENTS	LF	135.000	52
	618	2038		CONDT (PVC) (SCHD 80) (3")  DOLLARS and CENTS	LF	370.000	53

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	ITEM NO	DESC CODE	S.P. NO.				
	618	2039		CONDT (PVC) (SCHD 80) (3") (BORE) DOLLARS and CENTS	LF	505.000	54
	620	2009	001	ELEC CONDR (NO. 6) BARE DOLLARS and CENTS	LF	915.000	55
	621	2004		TRAY CABLE (4 CONDR) (12 AWG) DOLLARS and CENTS	LF	980.000	56
	628	2100	003	ELC SRV TY D 120/240 070 (NS)SS(E)SP(O) DOLLARS and CENTS	EA	1.000	57
	644	2056		RELOCATE SM RD SN SUP & AM TY 10BWG DOLLARS and CENTS	EA	38.000	58
	644	2060		REMOVE SM RD SN SUP & AM DOLLARS and CENTS	EA	6.000	59
	662	2035		WK ZN PAV MRK NON-REMOV (Y) 6" (SLD) DOLLARS and CENTS	LF	33,800.000	60
	666	2015	014	REFL PAV MRK TY I (W) 6" (BRK)(100MIL) DOLLARS and CENTS	LF	8,533.000	61
	666	2018	014	REFL PAV MRK TY I (W) 6" (DOT)(100MIL) DOLLARS and CENTS	LF	100.000	62
	666	2024	014	REFL PAV MRK TY I (W) 6" (SLD)(100MIL) DOLLARS and CENTS	LF	33,706.000	63
	666	2036	014	REFL PAV MRK TY I (W) 8" (SLD)(100MIL) DOLLARS and CENTS	LF	1,580.000	64

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	ITEM NO	DESC CODE	S.P. NO.				
	666	2042	014	REFL PAV MRK TY I (W) 12"(SLD)(100MIL) DOLLARS and CENTS	LF	415.000	65
	666	2048	014	REFL PAV MRK TY I (W) 24"(SLD)(100MIL) DOLLARS and CENTS	LF	478.000	66
	666	2054	014	REFL PAV MRK TY I (W) (ARROW) (100MIL) DOLLARS and CENTS	EA	12.000	67
	666	2096	014	REFL PAV MRK TY I (W) (WORD) (100MIL) DOLLARS and CENTS	EA	12.000	68
	666	2120	014	REFL PAV MRK TY I (Y) 6" (SLD)(100MIL) DOLLARS and CENTS	LF	39,312.000	69
	666	2132	014	REFL PAV MRK TY I (Y) 24"(SLD)(100MIL) DOLLARS and CENTS	LF	288.000	70
	672	2012	034	REFL PAV MRKR TY I-C DOLLARS and CENTS	EA	504.000	71
	672	2015	034	REFL PAV MRKR TY II-A-A DOLLARS and CENTS	EA	1,053.000	72
	677	2001		ELIM EXT PAV MRK & MRKS ( 4") DOLLARS and CENTS	LF	31,350.000	73
	677	2003		ELIM EXT PAV MRK & MRKS ( 8") DOLLARS and CENTS	LF	200.000	74
	677	2005		ELIM EXT PAV MRK & MRKS (12") DOLLARS and CENTS	LF	600.000	75

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	677	2007		ELIM EXT PAV MRK & MRKS (24") DOLLARS and CENTS	LF	200.000	76
	677	2008		ELIM EXT PAV MRK & MRKS (ARROW) DOLLARS and CENTS	EA	5.000	77
	677	2009		ELIM EXT PAV MRK & MRKS (DBL ARROW) DOLLARS and CENTS	EA	2.000	78
	677	2010		ELIM EXT PAV MRK & MRKS (ENTR GORE) DOLLARS and CENTS	EA	1.000	79
	677	2018		ELIM EXT PAV MRK & MRKS (WORD) DOLLARS and CENTS	EA	5.000	80
	678	2002		PAV SURF PREP FOR MRK ( 6") DOLLARS and CENTS	LF	81,651.000	81
	678	2003		PAV SURF PREP FOR MRK ( 8") DOLLARS and CENTS	LF	1,580.000	82
	678	2004		PAV SURF PREP FOR MRK (12") DOLLARS and CENTS	LF	415.000	83
	678	2006		PAV SURF PREP FOR MRK (24") DOLLARS and CENTS	LF	758.000	84
	678	2007		PAV SURF PREP FOR MRK (ARROW) DOLLARS and CENTS	EA	12.000	85
	678	2018		PAV SURF PREP FOR MRK (WORD) DOLLARS and CENTS	EA	12.000	86

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	ITEM NO	DESC CODE	S.P. NO.				
	680	2001		INSTALL HWY TRF SIG (FLASH BEACON) DOLLARS and CENTS	EA	1.000	87
	680	2002		INSTALL HWY TRF SIG (ISOLATED) DOLLARS and CENTS	EA	1.000	88
	682	2001	003	BACK PLATE (12 IN) (3 SEC) DOLLARS and CENTS	EA	8.000	89
	682	2002	003	BACK PLATE (12 IN) (4 SEC) DOLLARS and CENTS	EA	2.000	90
	682	2014	003	PED SIG SEC (12 IN) LED (2 INDICATIONS) DOLLARS and CENTS	EA	6.000	91
	682	2022	003	VEH SIG SEC (12 IN) LED (GRN ARW) DOLLARS and CENTS	EA	2.000	92
	682	2023	003	VEH SIG SEC (12 IN) LED (GRN) DOLLARS and CENTS	EA	8.000	93
	682	2024	003	VEH SIG SEC (12 IN) LED (YEL ARW) DOLLARS and CENTS	EA	2.000	94
	682	2025	003	VEH SIG SEC (12 IN) LED (YEL) DOLLARS and CENTS	EA	14.000	95
	682	2026	003	VEH SIG SEC (12 IN) LED (RED ARW) DOLLARS and CENTS	EA	4.000	96
	682	2027	003	VEH SIG SEC (12 IN) LED (RED) DOLLARS and CENTS	EA	12.000	97

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	682	2028	003	BACK PLATE (12 IN) (1 SEC)  DOLLARS and CENTS	EA	10.000	98
	684	2007		TRF SIG CBL (TY A) (12 AWG) ( 2 CONDR)  DOLLARS and CENTS	LF	1,050.000	99
	684	2009		TRF SIG CBL (TY A) (12 AWG) ( 4 CONDR)  DOLLARS and CENTS	LF	1,115.000	100
	684	2012		TRF SIG CBL (TY A) (12 AWG) ( 7 CONDR)  DOLLARS and CENTS	LF	2,820.000	101
	686	2023		INS TRF SIG PL AM(S) 1 ARM (24')  DOLLARS and CENTS	EA	1.000	102
	686	2035		INS TRF SIG PL AM(S) 1 ARM (36')  DOLLARS and CENTS	EA	1.000	103
	686	2041		INS TRF SIG PL AM(S) 1 ARM (40') LUM  DOLLARS and CENTS	EA	1.000	104
	686	2045		INS TRF SIG PL AM(S) 1 ARM (44') LUM  DOLLARS and CENTS	EA	1.000	105
	686	2051		INS TRF SIG PL AM(S) 1 ARM (50')  DOLLARS and CENTS	EA	2.000	106
	686	2053		INS TRF SIG PL AM(S) 1 ARM (50') LUM  DOLLARS and CENTS	EA	1.000	107
	1122	2001	001	ROCK FILTER DAMS (INSTALL) (TY 1)  DOLLARS and CENTS	LF	380.000	108

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	1122	2009	001	ROCK FILTER DAMS (REMOVE) DOLLARS and CENTS	LF	380.000	109
	1122	2037	001	TEMPORARY SEDIMENT CONTROL FENCE INSTLL DOLLARS and CENTS	LF	30,255.000	110
	1122	2057	001	TEMPORARY SEDIMENT CONTROL FENCE REMOVE DOLLARS and CENTS	LF	30,255.000	111
	6004	2002		DETECTOR CARD RACK DOLLARS and CENTS	EA	1.000	112
	6004	2003		POWER SUPPLY DOLLARS and CENTS	EA	1.000	113
	6007	2001		REMOVING TRAFFIC SIGNALS DOLLARS and CENTS	EA	2.000	114
	8777	2001		LED RDWY LUMINAIRE (.25KW EQ) DOLLARS and CENTS	EA	4.000	115
	8835	2001		ACCESSIBLE PEDESTRIAN SIGNAL UNITS DOLLARS and CENTS	EA	6.000	116
	8948	2001		RADAR PRESENCE DETECTOR DOLLARS and CENTS	EA	4.000	117
	8958	2001		RADAR ADVANCE DETECTION DEVICE DOLLARS and CENTS	EA	2.000	118

**GENERAL NOTES:**

**General:**

If fixed features require, the governing slopes shown may vary between the limits shown and to the extent determined by the Engineer.

Superelevate the curves to match the existing surface.

Notify the Engineer immediately if discrepancies are discovered in the horizontal control or the benchmark data.

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, except for roadway illumination, electrical, and traffic signal items.

The cost for materials, labor, and incidentals to provide for traffic across the roadway and for ingress and egress to private property in accordance with Section 7.7 of the standard specifications is subsidiary to the various bid items. Restore access roadways to their original condition upon completing construction.

Grade street intersections and median openings for surface drainage.

If a foundation is to be placed where a riprap surface or an asphalt concrete surface presently exists, use caution in breaking out the existing surface for placement. Break out no greater area than is required to place the foundation. After placing the foundation, wrap the periphery with 0.5 in. pre-molded mastic expansion joint. Then replace the remaining portion of the broken out surface with Class A or Class C concrete or cold mix asphalt concrete to the exact slope, pattern, and thickness of the existing riprap or asphalt. Payment for breaking out the existing surface, wrapping the foundation, and replacing the surface is subsidiary to the various bid items.

The lengths of the posts for ground mounted signs and the tower legs for the overhead sign supports are approximate. Verify the lengths before ordering these materials to meet the existing field conditions and to conform to the minimum sign mounting heights shown in the plans.

Furnish aluminum Type A signs instead of plywood signs for signs shown on the Summary of Small Signs sheet.

Stencil the National Bridge Inventory (NBI) number on each existing bridge shown on these plans. The NBI number is shown above the title block for each bridge layout.

Clearly mark or highlight on the shop drawings, the items being furnished for this project. Submit required shop drawings in accordance with the shop drawing distribution list shown in the note for Item 5 for review and distribution.

Request additional soil information for this project at the Area Engineer's office.

Procure permits and licenses, which are to be issued by the City, County, or Municipal Utility District.

The existing bridges located at Alligator Creek, West Tributary No.1, and West Tributary No. 2 have been tested for Asbestos Containing Materials (ACM) and found to contain 1% or less ACM. No mitigation was required.

Any groundwater elevation information provided is representative of conditions existing on the day when and for the specific location where this information was collected. The actual groundwater elevation may fluctuate with time, climatic conditions, and construction activity.

**General: Roadway Illumination and Electrical**

For roadway illumination and electrical items, use materials from pre-qualified producers as shown on the Construction Division (CST) of the Department's material producers list. Check the latest link on the TxDOT website for this list. The category/item is "Roadway Illumination and Electrical Supplies." No substitutions will be allowed for materials found on this list.

Perform electrical work in conformance with the National Electrical Code (NEC) and Department standard sheets.

**General: Traffic Signals**

For traffic signal items, use materials from pre-qualified producers as shown on the General Services Division (GSD) of the Department's material producers list. Check the latest links on the TxDOT website for this list, including (but not limited to): [http://www.txdot.gov/txdot\\_library/consultants\\_contractors/publications/purchasing\\_specifications.htm](http://www.txdot.gov/txdot_library/consultants_contractors/publications/purchasing_specifications.htm) under "Supplemental Specifications and Attachments." No substitutions will be allowed for materials found on this list.

**General: Site Management**

Mow the grass and weeds within the project limits a maximum of 3 times a year as directed. This work is subsidiary to the various bid items.

Mark stations every 100 ft. and maintain the markings for the project duration. Remove the station markings at the completion of the project. This work is subsidiary to the various bid items.

Do not mix or store materials, or store or repair equipment, on top of concrete pavement or bridge decks unless authorized by the Engineer. Permission will be granted to store materials on surfaces if no damage or discoloration will result.

Personal vehicles of employees are not permitted to park within the right of way, including sections closed to public traffic. Employees may park on the right of way at the Contractor's office, equipment, and materials storage yard sites.

Highway: LP 336

Control: 0338-11-051

Assume ownership of debris and dispose of at an approved location. Do not dispose of debris on private property unless approved in writing by the District Engineer.

Control the dust caused by construction operations. For sweeping the base material in preparation for laying asphalt and for sweeping the finished concrete pavement, use one of the following types of sweepers or equal:

**Tricycle Type**  
 Wayne Series 900  
 Elgin White Wing  
 Elgin Pelican

**Truck Type - 4 Wheel**  
 M-B Cruiser II  
 Wayne Model 945  
 Mobile TE-3  
 Mobile TE-4  
 Murphy 4042

**General: Traffic Control and Construction**

Schedule work so that the base placement operations follow the subgrade work as closely as practical to reduce the hazard to the traveling public and to prevent undue delay caused by wet weather.

This project requires extensive grading operations in an environmentally sensitive area.

When design details are not shown on the plans, provide signs and arrows conforming to the latest "Standard Highway Sign Designs for Texas" manual.

**General: Utilities**

Consider the locations of underground utilities depicted in the plans as approximate and employ responsible care to avoid damaging utility facilities. Depending upon scope and magnitude of planned construction activities, advanced field confirmation by the utility owner or operator may be prudent. Where possible, protect and preserve permanent signs, markers, and designations of underground facilities.

If the Contractor damages or cause damage (breaks, leaks, nicks, dents, gouges, etc.) to the utility, contact the utility facility owner or operator immediately.

At least 48 hours before starting work, make arrangements for locating existing Department-owned above ground and underground fiber optic, communications, power, illumination, and traffic signal cabling and conduit. Do this by calling the Department's Houston District Traffic Signal Operations Office at 713-802-5662 to schedule marking of underground lines on the ground. Use caution if working in these areas to avoid damaging or interfering with existing facilities.

Install or remove poles and luminaires located near overhead or underground electrical lines using established industry and utility safety practices. Consult the appropriate utility company before beginning such work.

If overhead or underground power lines need to be de-energized, contact the electrical service provider to perform this work. Costs associated with de-energizing the power lines or other protective measures required are at no expense to the Department.

If working near power lines, comply with the appropriate sections of Texas State Law and Federal Regulations relating to the type of work involved.

Perform electrical work in conformance with the National Electrical Code (NEC) and Department standard sheets.

### Item 5: Control of the Work

Before contract letting, electronically generated earthwork cross-section data will be furnished free of charge to the prospective bidders on a compact high-density disk, in an ASCII print format. This will be available through the Association of General Contractors bulletin board service or through the Area Engineer's office. If the earthwork data is not available electronically, reproducible earthwork cross sections are available at the Area Engineer's office for borrowing by copying service companies for the purpose of making copies for the prospective bidders, at the prospective bidder's expense. The earthwork cross-section data provided above is for non-construction purposes only and it is the responsibility of the prospective bidder to validate the enclosed data with the appropriate plans, specifications, and estimates for the projects.

Submit shop drawings electronically for the fabrication of items as documented in Table 1 below. Information and requirements for electronic submittals can be viewed in the "Guide to Electronic Shop Drawing Submittal" which can be accessed through the following web link, [ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/e\\_submit\\_guide.pdf](ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/e_submit_guide.pdf). References to 11 in. x 17 in. sheets in individual specifications for structural items imply electronic CAD sheets.

**Table 1**  
**2004 Construction Specification Required Shop/Working Drawing Submittals**

Spec Item No.'s	Product	Submittal Required	Approval Required (Y/N)	Contractor/Fabricator P.E. Seal Required	Reviewing Party
7.8	Construction Load Analyses	Y	Y	Y	B
400	Excavation and Backfill for Structures (cofferdams)	Y	N	Y	A
403	Temporary Special Shoring	Y	N	Y	B
420	Formwork/Falsework	Y	N	Y	A
423	Retaining Walls, (calcs req'd.)	Y	Y	Y	C
425	Optional Design Calculations (Prstrs Bms)	Y	Y	Y	B
425	Prestr Concr Sheet Piling	Y	Y	N	B
425	Prestr Concr Beams	Y	Y	N	B
425	Prestr Concr Bent	Y	Y	N	B
426	Post Tension Details	Y	Y	N	B
434	Elastomeric Bearing Pads (All)	Y	Y	N	B
441	Bridge Protective Assembly	Y	Y	N	B
441	Misc Steel (various steel assemblies)	Y	Y	N	B

Spec Item No.'s	Product	Submittal Required	Approval Required (Y/N)	Contractor/Fabricator P.E. Seal Required	Reviewing Party
441	Steel Pedestals (bridge raising)	Y	Y	N	B
441	Steel Bearings	Y	Y	N	B
441	Steel Bent	Y	Y	N	B
441	Steel Diaphragms	Y	Y	N	B
441	Steel Finger Joint	Y	Y	N	B
441	Steel Plate Girder	Y	Y	N	B
441	Steel Tub-Girders	Y	Y	N	B
441	Erection Plans	Y	N	Y	A
449	Sign-Structure Anchor Bolts	Y	Y	N	T
450	Railing	Y	Y	N	A
462	Concrete Box Culvert	Y	Y	N	C
462	Concrete Box Culvert (Alternate Designs Only, calcs reqd.)	Y	Y	Y	B
464	Reinforced Concrete Pipe (Jack and Bore only; ONLY when requested)	Y	Y	Y	A
465	Pre-cast Junction Boxes, Grates, and Inlets	Y	Y	N	A
465	Pre-cast Junction Boxes, Grates, and Inlets (Alternate Designs Only, calcs req'd.)	Y	Y	Y	B
466	Pre-cast Headwalls and Wingwalls	Y	Y	N	A
467	Pre-cast Safety End Treatments	Y	Y	N	A
495	Raising Existing Structure (calcs reqd.)	Y	Y	Y	B
610	Roadway Illumination Supports (Non-Standard only, calcs reqd.)	Y	Y	Y	T
613	High Mast Illumination Poles (Non-standard only, calcs reqd.)	Y	Y	Y	T
627	Treated Timber Poles	Y	Y	N	T
644	Special Non-Standard Supports (Bridge Mounts, Barrier Mounts, Etc.)	Y	Y	Y	T
647	Large Roadside Sign Supports	Y	Y	Y	T
650	Cantilever Sign Structure Supports - Alternate Design Calcs.	Y	Y	Y	T
650	Sign Structures	Y	Y	N	T
652	Highway Sign Lighting Fixtures	Y	Y	N	T
654	Sign Walkways	Y	Y	N	T
680	Installation of Highway Traffic Signals	Y	Y	N	T
682	Vehicle and Pedestrian Signal Heads	Y	Y	N	T
684	Traffic Signal Cables	Y	Y	N	T
685	Roadside Flashing Beacon Assemblies	Y	Y	N	T
686	Traffic Signal Pole Assemblies (Steel) (Non-Standard only)	Y	Y	Y	T
687	Pedestal Pole Assemblies	Y	Y	N	T
688	Detectors	Y	Y	N	A
784	Repairing Steel Bridge Members	Y	Y	Y	B
SS	Prestr Concr Crown Span	Y	Y	N	B
SS	Sound Barrier Walls	Y	Y	N	B
SS	Camera Poles	Y	Y	Y	TMS
SS	Pedestrian Bridge (Calcs req'd.)	Y	Y	Y	B
SS	Screw-In Type Anchor Foundations	Y	Y	N	T
SS	Fiber Optic/Communication Cable	Y	Y	N	TMS
SS	Spread Spectrum Radios for Signals	Y	Y	N	T
SS	VIVDS System for Signals	Y	Y	N	T
SS	CTMS Equipment	Y	Y	N	TMS

**Key to Reviewing Party**

A - Area Office	
Area Office	Email Address
Brazoria Area Office	<a href="mailto:HOU-BRZAShpDrwgs@txdot.gov">HOU-BRZAShpDrwgs@txdot.gov</a>
Fort Bend Area Office	<a href="mailto:HOU-FBAShpDrwgs@txdot.gov">HOU-FBAShpDrwgs@txdot.gov</a>
Galveston Area Office	<a href="mailto:HOU-GALVAShpDrwgs@txdot.gov">HOU-GALVAShpDrwgs@txdot.gov</a>
Montgomery Area Office	<a href="mailto:HOU-MONTAShpDrwgs@txdot.gov">HOU-MONTAShpDrwgs@txdot.gov</a>
North Harris Area Office	<a href="mailto:HOU-NHAShpDrwgs@txdot.gov">HOU-NHAShpDrwgs@txdot.gov</a>
Southeast Area Area Office	<a href="mailto:HOU-SEHAShpDrwgs@txdot.gov">HOU-SEHAShpDrwgs@txdot.gov</a>
Traffic Systems Construction Office	<a href="mailto:HOU-TSCShpDrwgs@txdot.gov">HOU-TSCShpDrwgs@txdot.gov</a>
West/Central Harris Area Office	<a href="mailto:HOU-WWCHAOShpDrwgs@txdot.gov">HOU-WWCHAOShpDrwgs@txdot.gov</a>
B - Bridge Engineer	
Bridge Design (TxDOT)	<a href="mailto:HOU-BrgShpDrwgs@txdot.gov">HOU-BrgShpDrwgs@txdot.gov</a>
C - Construction Office	
Construction	<a href="mailto:HOU-ConstrShpDrwgs@txdot.gov">HOU-ConstrShpDrwgs@txdot.gov</a>
Laboratory	<a href="mailto:HOU-LabShpDrwgs@txdot.gov">HOU-LabShpDrwgs@txdot.gov</a>
T - Traffic Engineer	
Traffic Operations	<a href="mailto:HOU-TrfShpDrwgs@txdot.gov">HOU-TrfShpDrwgs@txdot.gov</a>
TMS – Traffic Management System	
Computerized Traffic Management Systems (CTMS)	<a href="mailto:HOU-CTMSShpDrwgs@txdot.gov">HOU-CTMSShpDrwgs@txdot.gov</a>

**Item 7: Legal Relations and Responsibilities**

Do not initiate activities in a Project Specific Location (PSL), associated with a U.S. Army Corps of Engineers (USACE) permit area, that have not been previously evaluated by the USACE as part of the permit review of this project. Such activities include those pertaining to, 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 the waters of the U.S. or associated wetlands affected by activities associated with this project. Special restrictions may be required for such work. Assume responsibility for consultations with the USACE regarding activities, including PSLs that have not been previously evaluated by the USACE. Provide the Department with a copy of consultations or approvals from the USACE before 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 if 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 determinations that their activities do not affect a USACE permit area. Maintain copies of their determinations for review by the Department or any regulatory agency.

Document and coordinate with the USACE, if required, before hauling any excavation from or hauling any embankment to a USACE permit area by either 1 or 2 below:

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

Document both the Project Specific Locations (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 the Item, "Excavation" is used for permanent or temporary fill (under the Item, "Embankment") within a USACE permit area.
- b. Suitable embankment (under the Item, "Embankment") from within the USACE permit area is used as fill within a USACE evaluated area.
- c. Unsuitable excavation or excess excavation, "Waste" (under the Item, "Excavation"), that is disposed of at a location approved within a USACE evaluated area.

**2. Contractor Materials from Areas Other than Previously Evaluated Areas.**

Provide the Department with a copy of USACE coordination or approvals before 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. The Item, "Embankment" used for temporary or permanent fill within a USACE permit area.
- b. Unsuitable excavation or excess excavation, "Waste" (under the Item, "Excavation"), that is disposed of outside a USACE evaluated area.

The total area disturbed for this project is 32.3 acres. The disturbed area in this project, the project locations in the Contract, and 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 (to the appropriate MS4 operator when on an off-state system route) and to the local government that operates a separate storm drain system.

Before bidding on this project, obtain a copy of the complete U.S. Army Corps of Engineers Nationwide *I4* Permit Number SWG-2011-01037 at the Area Engineer's office. Review the permit before bidding on the project and become aware of its conditions.

Place erosion control measures around the perimeter of impacted wetlands as shown in the above mentioned U.S. Army Corps of Engineers Nationwide permits. During staging and construction operations, equipment is not allowed in the Waters of the United States.

Avoid encroaching into the wetland areas delineated in the plans. Place erosion control measures around the wetlands as shown on the plans. No construction work or construction equipment is permitted within this delineated area. If applicable for bridge construction, construct drilled shafts outside of this delineated area. Secure approval for the locations of field offices, material storage sites, material disposal sites, plants, borrow pits, etc. in writing before use to ensure that the proposed location is not within Jurisdictional Waters of the United States (wetlands).

Do not store any material in Waters of the United States inside the right of way without written approval.

Before construction operations begin, provide a drawing of the location of proposed temporary access roads, haul roads, or temporary fill used during construction operations to ensure that they are not within Jurisdictional Waters of the United States.

If the Contractor elects to use an area not permitted and determined to be within Jurisdictional Waters of the United States during the prosecution of the work, the Contractor will hold the Department harmless for delays caused by procuring the necessary permits from the United States Army Corps of Engineers.

Do not place temporary fill in areas determined to be wetlands. This prohibition includes constructing staging areas, temporary fills or other actions that would result in placing fill in wetlands within the right of way, which are not addressed in the plans. The Engineer will coordinate with the Houston District Environmental Section to determine if wetlands are present on this project before placing temporary fill. If wetlands exist, obtain the appropriate permits from the U.S. Army Corps of Engineers.

Maintain the roadway slope stability. Maintaining slope stability is subsidiary to the various bid items.

The nesting / breeding season for migratory birds is March 1 through August 30.

Take measures to prevent the building of nests on any structures or trees within the project limits throughout the duration of the construction if work / removal will be performed during the nesting / breeding season. This can be accomplished by application of bird repellent gel, netting by hand every 3 to 4 days, or any other non-threatening method approved by the Houston District Environmental Section. Obtain this approval well in advance of the planned use. Contact the Houston District Environmental Section at 713-802-5244. The cost of this work is subsidiary to the various bid items.

**Item 8: Prosecution and Progress**

Working days will be computed and charged based on a standard workweek in accordance with Section 8.3.A.4

The Lane Closure Assessment Fee is \$ 300.00. This fee applies to the Contractor for closures or obstructions that overlap into restricted hour traffic for each hour or portion thereof, per lane, regardless of the length of lane closure or obstruction. For Restricted Hours subject to Lane Assessment Fee refer to Item 502, "Barricades, Signs, and Traffic Handling."

**Item 100: Preparing Right of Way**

Clean existing ditches under fill sections of undesirable materials including grass, muck, and trash. Perform this work in accordance with the Construction section of the Item, "Preparing Right of Way." This work is subsidiary to this bid Item.

The Item, "Preparing Right of Way" will be measured for payment only in those designated areas shown on the plans. Preparing right of way necessary to perform construction that is outside designated areas is subsidiary to this bid Item.

Remove abandoned utilities that are in conflict with the new utilities, at no expense to the Department.

Remove and assume ownership of the existing ground mounted signs within the limits of roadway construction unless otherwise noted or directed. This work is subsidiary to the Item, "Preparing Right of Way."

**Item 104: Removing Concrete**

Removing concrete curb is paid as a separate bid item if the existing pavement on which it rests is not removed at the same time.

**Item 110: Excavation**

If manipulating the excavated material requires moving the same material more than once to accomplish the desired results, the excavation is measured and paid for only once regardless of the manipulation required.

Transition the ditch grades and channel bottom widths at structure locations. Use only approved channel excavation in the embankment.

**Item 112: Subgrade Widening**

Removing obstructions within the right of way, such as trees, brush, overhanging limbs, fences, foundations and other miscellaneous debris that may interfere with grading (subgrade widening) is subsidiary to the Item, "Subgrade Widening."

**Item 132: Embankment**

If salvaged base is used for the embankment material, break it into small pieces to achieve the required density and to facilitate placing in the embankment. Obtain approval of the material before placing in the embankment.

Furnish Type C material with a maximum Liquid Limit (LL) of 65, a minimum Plasticity Index (PI) of 5, and composed of suitable earth material such as loam, clay, or other materials that form a suitable embankment.

The embankment material used on the project which has a Liquid Limit exceeding 45 will be tested for Liquid Limits at the rate of one test per 20,000 cu. yd. or per total quantity less than 20,000 cu. yd., unless otherwise directed. Only use material that passes the above tests.

**Item 162: Sodding for Erosion Control**

**Item 166: Fertilizer**

**Item 168: Vegetative Watering**

Refer to the “Fertilizer, Seed, Sod, Straw, Compost, and Water” standard sheet for material specifications, application rates, and for watering requirements.

**Item 204: Sprinkling**

Perform subsidiary sprinkling as required under various other items in accordance with the Item, “Sprinkling.”

Sprinkling for dust control is subsidiary to the various bid items.

**Item 210: Rolling**

Use a medium pneumatic roller meeting the requirements of Item 210 as directed. This work is subsidiary to the various bid items. On every asphalt shot, use a minimum of 3 pneumatic rollers or as directed. Use approved rolling patterns. Successive asphalt shots will not be allowed until acceptable rolling has been accomplished on the preceding asphalt shot.

**Item 260: Lime Treatment (Road-Mixed)**

For slurry placing, before discharging through the distributors, sufficiently agitate or mix the lime and water to place the lime in suspension and to obtain a uniform mixture.

The Engineer will observe the lime treatment that the Contractor elects to open to construction traffic immediately after compaction. If the construction traffic damages the subgrade, route the traffic off the damaged section in accordance with the standard specification. If the construction traffic does not damage the subgrade, cure the subgrade until other courses of material cover it. Apply these courses within 14 days with a maximum curing period of 7 days.

Place the commercial lime as a water suspension or slurry according to the slurry placing method shown in Section 260.4.C.2, “Slurry Placement.”

In limited areas, the Contractor may construct the lime slurry subgrade under a sequence of work in which the application, mixing, and compaction are completed in the same working day, if approved by the Engineer.

Provide documentation from certified public scales showing gross, tare, and net weights. Provide producer's delivery tickets also showing gross, tare, and net weights. Completely empty the lime trailers at the project site. The Engineer may direct the Contractor to reweigh any shipment of lime on certified scales. The cost of this operation is subsidiary to the Item, "Lime Treatment (Road-Mixed)."

The percentage of lime shown on the plans is estimated on the basis of engineering tests. If soil tests made during construction indicate properties different than those originally anticipated, the Engineer may vary the percentage of the lime to provide soil characteristics similar to those of the preliminary tests.

**Item 276: Cement Treatment (Plant-Mixed)**

Before placing the new base, wet and coat the vertical construction joints between the new base and the previously placed base with dry cement.

If the total thickness of the cement treatment is greater than 8 in., compact it in multiple lifts in accordance with Section 276.4.C, "Compaction." Place the courses in the same working day unless otherwise approved.

If using a 100 percent crushed stone aggregate for the proposed base or other aggregate, it must contain 4.5 percent cement based on the dry weight of the aggregate. There is no minimum compressive strength requirement for this Item.

The requirement for core drilling to determine the thickness of cement treatment is waived if using less than 500 sq. yd. at one location.

For widening the existing pavement, the Engineer may waive the requirements for preparing the subgrade by scarifying and compacting if the as-cut subgrade can be maintained to the density of the natural ground and to a uniform consistency when placing the base course. Keep the subgrade wet.

Compact in accordance with the standard specifications and complete the finishing operations within a period of 5 hours after adding the cement to the base material.

Cure the final course of cement treatment using an asphalt distributor that distributes the approved curing material and water mixture material at a rate of 0.25 gallons per square-yard evenly and smoothly or as recommended by the manufacturer at the recommended dilution rate, under a pressure necessary for proper distribution. Provide a curing material meeting the requirements of the Item, "Asphalts, Oils, and Emulsions" for curing the cement treatment. Use the following materials for curing the courses of cement treatment:

**Curing Material**

Water  
PCE

**Application**

All courses, except final course  
Final course

Continue curing until placing another course or opening the finished section to traffic.

Spread the material so that the layers of base are uniform in depth and in loose density before compacting.

Type E material consists of Type A material, crushed concrete (except under flexible pavement), or Reclaimed Asphalt Pavement (RAP) meeting the requirements of the Item, "Flexible Base." If approved, the 50 percent maximum RAP limitation may be waived.

Unless otherwise directed, place the next pavement layer within 7 working days of placing the base.

If using crushed stone for the Type E material under this Item, ensure it meets the requirements for the Item, "Flexible Base," Type A, Grade 1. Texas Test Method TEX-117-E is not required for this Item.

If using Recycled Type E cement treatment under proposed flexible pavement, produce it using the existing base salvaged from within this project or from other approved Department projects and salvaged asphalt concrete pavement. Do not use crushed concrete under flexible pavement.

If using Recycled Type E cement treatment under proposed concrete pavement, produce it using the existing base salvaged from within this project or from other approved Department projects, salvaged asphalt concrete pavement, or crushed concrete. If using crushed concrete as an aggregate, meet the requirements of Grade 3.

If using salvaged existing base and asphalt concrete pavement as described above, size it so that all the material, except the existing individual aggregate, passes the 2-in. sieve and is of a gradation that allows satisfactory compaction. Provide salvaged material that does not contain deleterious material such as clay or organic material. Provide material passing the No. 40 sieve, defined as soil binder, with a maximum Plasticity Index of 10 and a maximum Liquid Limit of 35 when tested in accordance with test method TEX-106-E.

Meet the following additional requirements if the base and ACP are salvaged from other Department projects:

1. Obtain written approval before using the material.
2. Salvage and stockpile by approved methods.
3. Stockpile the material for exclusive use by the Department.

**Item 292: Asphalt Treatment (Plant-Mixed)**

**Item 3268: Dense-Graded Hot Mix Asphalt**

Unless otherwise shown on the plans, RAP generated by this project will become the property of the Contractor for use in the current construction project or in future projects.

**Item 292: Asphalt Treatment (Plant-Mixed)**

If using the iron ore topsoil as the primary aggregate, meaning 80 percent or more by weight of the total mixture, the requirements for the water susceptibility test are waived.

Mixtures containing the iron ore topsoil are exempted from test methods TEX-217-F (Part I, separation of deleterious material and Part II, decantation test for coarse aggregate) and TEX-203-F (Sand Equivalent Test).

Assume responsibility for proportioning the materials entering the asphalt mixture, regardless of the type of plant used.

Furnish the mix designs for approval.

Compact the courses to a minimum density of 95 percent of the maximum density as determined using test method TEX-126-E.

Meet the following grading requirements:

<b>Sieve Size</b>	<b>Percent Passing Grade 4 (Bondbreaker)</b>
1-3/4 in.	-
1 in.	-
1/2 in.	100
No. 4	30 - 70
No. 40	15 - 45

Physical requirements are as follows:

- Maximum Plasticity Index (PI) = 8
- Maximum Liquid Limit (LL) = 35
- Maximum Wet Ball Mill = 50 (crushed stone)
- Maximum LA Abrasion = 50 (iron ore)

If blending the materials, perform the Wet Ball Mill test for the composite aggregate.

Form bituminous mix incorporating 3.5 to 7 percent asphaltic binder by dry weight.

For nominal aggregate size less than 0.5 in., design the mix in accordance with test method TEX-204-F. The minimum stability in accordance with TEX-208-F is 30 percent with a laboratory molded density of 96 percent plus or minus 1.5 percent.

If the layer thickness after placing is 1.25 in. or less, the bondbreaker is exempt from the in-place density control described in Section 292.4.E, "Compaction."

**Item 360: Concrete Pavement**

Where the pavement curb is left off for a later tie, provide the dowels or the tie bars as indicated on the paving detail sheets. The dowel bars and tie bars are subsidiary to the various bid items.

Repair portions of the concrete pavement surfaces that are damaged while in a plastic state before that area receives permanent pavement markings and opens to traffic. Perform repairs that are structurally equivalent to and cosmetically uniform with the adjacent undamaged areas. Do not repair by grouting onto the surface.

On pavement widening, hand finishing in place of the longitudinal float will be permitted.

Where existing pavement is widened with new pavement, place the new pavement a minimum of 2 ft. wide.

Equip the batching plants to proportion by weight, aggregates and bulk cement, using approved proportioning devices and approved automatic scales.

High-early strength cement may be used for frontage road and city street intersection construction.

Do not use limestone dust of fracture as fine aggregate.

If the concrete design requires greater than 5.5 sacks of cementitious material per cubic yard, obtain written approval. If placing concrete pavement mixes from April 1 to October 31, inclusive, use a minimum of 25 percent by weight of Class F Fly Ash.

Perform saw cutting as shown on the plans in accordance with Section 360.4.J, "Sawing Joints." This saw cutting is subsidiary to this bid Item.

Use coarse aggregate to produce concrete with a Coefficient of Thermal Expansion (CTE) of less than  $5.0 \times 10^{-6}$  in/in/°F. Before construction, submit test specimens to the TxDOT Construction Division for aggregate acceptance. Provide samples or test specimens as directed. The TxDOT Construction Division will perform the testing. Test results are final. Testing is required for naturally occurring aggregates.

**Items 360, 420, and 421: All Concrete Items**

For the Department's concrete cylinder split samples, transport the test cylinders to the Houston District Laboratory located at 7600 Washington Avenue in Houston, or to the appropriate Area Laboratory, when applicable. Transporting the test cylinders is subsidiary to the various bid items.

The approach pavement is paid for under the Item, "Concrete Pavement."

**Item 361: Full-Depth Repair of Concrete Pavement**

For full depth repair, remove only the quantity of pavement replaceable during the daily allowable work schedule.

Remove loose subbase material and replace it with concrete. Use a bondbreaker, such as a polyethylene sheet, at the interface between the replaced subbase material and the new concrete pavement.

Supply polyethylene fabric on the job site sufficient to cover the area of repair.

Do not place concrete placement if impending weather may result in rainfall or low temperatures that may impair the quality of the finished work.

Repair portions of the concrete pavement surfaces that are damaged while in a plastic state before those areas receive permanent pavement markings and open to traffic. Perform repairs that are structurally equivalent to and cosmetically uniform with adjacent undamaged areas. Do not repair by grouting onto the surface.

Ready mix concrete will be permitted if the equipment and construction methods can produce the desired results. Hand finishing will be permitted.

Perform saw cutting as shown on the plans in accordance with Section 360.4.J, "Sawing Joints." This saw cutting is subsidiary to this bid Item.

**Item 416: Drilled Shaft Foundations**

Include the cost for furnishing and installing anchor bolts mounted in the drilled shafts in the unit bid price for the various diameter drilled shafts.

The Department may test using ultrasonic methods the anchor bolts for overhead sign supports, light standards, and traffic signal poles after they are installed. Replace faulty anchor bolts as directed. Do not weld the anchor bolts.

**Item 420: Concrete Structures**

Unless otherwise noted, use Class C concrete with an ordinary surface finish for signal, lighting, or sign structure foundations.

**Item 421: Hydraulic Cement Concrete**

Entrained air is required in all slip formed concrete (bridge rail, concrete traffic barrier, pavement, etc.), but is not required for other structural concrete. Adjust the dosage of air entraining agent for low air content as directed or allowed by the Engineer. If entrained air is provided where not required, only the upper limits of the Special Provision will be enforced.

**Item 427: Surface Finishes for Concrete**

Provide a Surface Area I finish for structures. Use concrete paint for the surface finish.

**Item 449: Anchor Bolts**

Pipe joint compound, as used in this Item, is an electrically conducting protective thread lubricant compound to be used on the foundation anchor bolts for illuminations poles (Crouse-Hinds TL-2, 0z/Gedney Stl, or Thomas & Betts Kopr-Shield).

**Item 502: Barricades, Signs, and Traffic Handling**

Use a traffic control plan for handling traffic through the various phases of construction. Follow the phasing sequence unless otherwise agreed upon by the Area Engineer and the Project Manager. Ensure this plan conforms to the latest "Texas Manual on Uniform Traffic Control Devices" and the latest Barricade and Construction (BC) Standard Sheets. The latest versions of Work Zone Standard Sheets WZ (BTS-1) and WZ (BTS-2) are the traffic control plan for the signal installations.

Submit changes to the traffic control plan to the Area Engineer. Provide a layout showing the construction phasing, signs, striping, and signalizations for changes to the original traffic control plan.

Furnish and maintain the barricades and warning signs, including the necessary temporary and portable traffic control devices, during the various phases of construction. Place and construct these barricades and warning signs in accordance with the latest "Texas Manual on Uniform Traffic Control Devices" for typical construction layouts.

Cover work zone signs when work related to the signs is not in progress, or when any hazard related to the signs no longer exists.

Keep the delineation devices, signs, and pavement markings clean. This work is subsidiary to the Item, "Barricades, Signs, and Traffic Handling."

If a section is not complete before the end of the workday, pull back the base material to the existing pavement edge on a 6H: 1V slope. Edge drop-offs during the hours of darkness are not permitted.

Before detouring traffic onto the mainlane shoulders, remove dirt, debris, vegetation, and other deleterious material from the surface of the shoulders. Appropriately sign the detour in an approved manner. This work is subsidiary to the various bid items.

Cover or remove the permanent signs and construction signs that are incorrect or that do not apply to the current situation for a particular phase.

Replace the overhead signs, informational signs, and exit signs to be removed, with temporary signs providing the correct information to the traveling public. Size the replacement signs and include them in the traffic control plan.

Do not mount signs on drums or barricades, except those listed in the latest Barricades and Construction standard sheets.

Highway: LP 336

Control: 0338-11-051

Use traffic cones for daytime work only. Replace the cones with plastic drums during nighttime hours.

Place positive barriers to protect drop-off conditions greater than 2 ft. within the clear zone that remain overnight.

Use shadow vehicles with Truck Mounted Attenuators (TMA) for lane and shoulder closures. Do not reduce the existing number of lanes open to traffic except as shown on the following time schedule:

**One Lane Closure**

Day	Daytime Closure Hours	Nighttime Closure Hours	Restricted Hours Subject to Lane Assessment Fee
Monday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 PM - 07:00 PM
Tuesday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 AM - 07:00 PM
Wednesday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 PM - 07:00 PM
Thursday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 PM - 07:00 PM
Friday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 PM - 07:00 PM
Saturday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 PM - 07:00 PM
Sunday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 PM - 07:00 PM

**Two Lane Closure**

Day	Daytime Closure Hours	Nighttime Closure Hours	Restricted Hours Subject to Lane Assessment Fee
Monday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 PM - 07:00 PM
Tuesday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 PM - 07:00 PM
Wednesday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 PM - 07:00 PM
Thursday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 PM - 07:00 PM
Friday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 PM - 07:00 PM
Saturday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 PM - 07:00 PM
Sunday	09:00 AM - 04:00 PM	NONE	05:00 AM - 09:00 AM 04:00 PM - 07:00 PM

The above times are approved for the traffic control conditions listed. The Area Engineer may approve other closure times if traffic counts warrant. The Area Engineer may reduce the above times for special events.

Law enforcement assistance will be required for this project and is expected to be required for major traffic control changes and lane closures. Coordinate with local law enforcement and arrange for law enforcement as directed or agreed by the Engineer. Before payment will be made, complete the "Daily Report on Law Enforcement Force Account Work" (Form 318), provided by the Department and submit daily invoices that agree with this form for any day during the month in which approved services were provided.

Provide full-time, off-duty, uniformed, certified peace officers, as part of traffic control operations. The peace officers must be able to show proof of certification by the Texas Commission on Law Enforcement Officers Standards. The cost of the officers is paid for on a force account basis.

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.

**Item 504: Field Office and Laboratory**

Furnish a Type D structure for the asphalt mix control laboratory for the Engineer's exclusive use. In addition to the requirements of this Item, "Field Office and Laboratory," ensure this structure has a minimum height of 8 ft. Also ensure it has a minimum of 400 sq. ft. of gross floor area suitable for permanently located asphalt plants or 200 sq. ft. for temporarily located asphalt plants serving one project. Partition the floor area into a minimum of 2 interconnected rooms, and provide each room with an exterior door and a minimum of 2 windows. Construct the floor of sufficient strength to support the testing equipment and with an impervious covering.

Adequately air condition the Type D structure and furnish it with a minimum of one desk, 3 chairs, one file cabinet, a telephone, and one built-in equipment-storage cabinet suitable for storing nuclear equipment. Ensure the cabinet is a minimum of 3 ft. wide by 2 ft. deep by 3 ft. high and has a secure lock. Provide the structure with a 240-volt electrical service entrance. Use a licensed electrician to determine the service size and service entrance conductors. Provide a minimum service of four 120-volt circuits with 20 amp breakers, and a maximum of 2 grounded convenience outlets per circuit and a minimum of two 220-volt ovens with vents to the outside. Provide a structure with a minimum of 2 convenience outlets per wall and a utility sink with an adequate, clean potable water supply for testing. Do not use space heaters to heat the structure. Use support blocks for the portable structures, tie them down, and securely attach them to the ground.

Determine the asphalt content by the ignition method and meet the requirements of Section 504.2.B.4.b, "Asphalt Content by Ignition Method" except provide a NEMA 6-50R (204/240 volt, 50 A) outlet within 2.25 ft. of the ignition oven location.

If an asphalt mix plant is located at the project site, provide a Type D structure with the dimensions of a Type C structure, at the project site to perform the asphalt mix quality control tests.

If a commercial source is used for the asphalt mix, provide a Type D structure with the dimensions of a Type C structure, at the commercial source site to perform the asphalt mix quality control tests.

Equip each lab with a fire extinguisher and first aid kit. Also equip the labs with an eye wash station. Provide equipment that meets the minimum OSHA requirements. At a minimum, furnish 20 lb. fire extinguishers that are rated for Type A, B, and C fires.

Piped in water to the Engineer's building will not be required, but furnish water for curing concrete test specimens.

The above requirements are subsidiary to the various bid items.

Assume ownership of temporary chain link security fences.

Equip each field office with a fire extinguisher and first aid kit. At a minimum, furnish 20 lb. fire extinguishers that are rated for Type A, B, and C fires.

**Item 529: Concrete Curb, Gutter, and Combined Curb and Gutter**

**Item 530: Intersections, Driveways, and Turnouts**

**Item 531: Sidewalks**

An air-entraining admixture is not required.

For concrete curbs, use Grade 7 aggregate conforming to Section 421.2 of the Item, "Hydraulic Cement Concrete."

For driveways and turnouts, coarse aggregate Grade No. 3 through No. 8 conforming to the gradation requirements specified in the Item, "Hydraulic Cement Concrete" will be permitted.

For reinforcing steel in sidewalks and pedestrian ramps, use No. 4 bars at a maximum 18 in. spacing center-to-center in both directions.

**Item 540: Metal Beam Guard Fence**

Painting the timber posts is not required.

Use timber posts for galvanized steel metal beam guard fence, except for anchorage at turned down ends.

Furnish and install wood blocks between the rail elements and the timber posts as detailed on the plans. These block-outs are subsidiary to this bid Item.

The quantity of the metal beam guard fence is subject to change.

Provide a mow strip as shown on the plans, at metal beam guard fence locations, including any guardrail end treatments.

Galvanize the rail elements supplied for this project by using a Type II Zinc Coating.

**Item 542: Removing Metal Beam Guard Fence**

Remove and assume ownership of metal beam guard fence elements and posts.

**Item 545: Crash Cushion Attenuators**

Pick up and return crash cushion attenuators at the TxDOT Montgomery Area Office located at 901 N. FM 3083, Conroe, TX 77303.

**Item 585: Ride Quality for Pavement Surfaces**

To eliminate the need for corrective action due to excessive deviations in the final surface layers, exercise caution to ensure satisfactory profile results in the intermediate paving layers (mixture).

For Continuously Reinforced Concrete Pavement (CRCP), use Surface Test Type B and Pay Adjustment Schedule 3.

For all other roads (cross streets and intersections), use Surface Test Type A.

**Item 610: Roadway Illumination Assemblies**

The cost of providing the electrical conductor in the pole foundation or in the pole base to make connections is subsidiary to the roadway illumination assembly. The quantity for payment is the surface distance between locations.

**Item 616: Performance Testing of Lighting Systems**

The illumination plans provide for a complete illumination system installed, connected, tested, and ready for operation.

After satisfactory completion of tests, place the new lighting fixtures in operation. Final acceptance will be made after the fixtures operate satisfactorily for a minimum period of 14 days. The 14-day test period is included in the allowed working days.

Assume responsibility for the new lighting fixtures during the test period. Make adjustments or repairs as required and repair defects or damage at no expense to the Department.

**Item 618: Conduit**

**Item 620: Electrical Conductors**

**Item 628: Electrical Services**

If the specifications for electrical items require UL-listed products, this means UL-listed or CSA-listed.

**Item 618: Conduit**

When backfilling bore pits, ensure that the conduit is not damaged during installation or due to settling backfill material. Compact select backfill in 3 equal lifts to the bottom of the conduit; or if using sand, place it 2 in. above the conduit. Ensure backfill density is equal to that of the existing soil. Prevent material from entering the conduit.

Construct bore pits a minimum of 5 ft. from the edge of the base or pavement. Close the bore pit holes overnight.

Unless shown on the plans, install underground conduit a minimum of 24 in. deep. Install the conduit in accordance with the latest National Electrical Code (NEC) and applicable Department standard sheets. Place conduit under driveways or roadways a minimum of 24 in. below the pavement surface.

If using casing to place bored conduit, the casing is subsidiary to the conduit.

If placing the conduit under existing pavement to reach the service poles, bore the conduit in place and extend it a minimum distance of 5 ft. beyond the edge of shoulder or the back of curb.

**Item 620: Electrical Conductors**

Test each wire of each cable or conductor after installation. Incomplete circuits or damage to the wire or the cable are cause for immediate rejection of the entire cable being tested. Remove and replace the entire cable at no expense to the Department. Also test the replacement cable after installation.

When pulling cables or conductors through the conduit, do not exceed the manufacturer's recommended pulling tensions. Lubricate the cables or conductors with a lubricant recommended by the cable manufacturer.

For both transformer and shoe-base type illumination poles, provide double-pole breakaway fuse holders as shown on the Department's Construction Division (CST) material producers list. Check the latest link on the Department website for this list. The category is "Roadway Illumination and Electrical Supplies." The fuse holder is shown on the list under Items 610 and 620. Provide 10 Amp time delay fuses.

Ensure that circuits test clear of faults, grounds, and open circuits.

Split bolt connectors are allowed only for splices on the grounding conductors.

For Roadside Flashing Beacon Assemblies (Item 685) and Pedestal Pole Assemblies (Item 687) within the project, provide single-pole breakaway disconnects. Use Bussman HEBW, Littlefuse LEB, Ferraz-Shawmut FEB, or equal on ungrounded conductors. For grounded conductors, use Bussman HET, Littlefuse LET, Ferraz-Shawmut FEBN, or equal. These breakaway connectors have a white colored marking and a permanently installed solid neutral.

For electrical licensing and electrical certification requirements for this project, see Item 7 of the Standard Specifications and any applicable special provisions to Item 7.

#### **Item 624: Ground Boxes**

The ground box locations are approximate. Alternate ground box locations may be used as directed, to avoid placing in sidewalks or driveways.

Ground metal ground box covers. Bond the ground box cover and ground conductors to a ground rod located in the ground box and to the system ground.

Ground the existing metal ground box covers as shown on the latest standard sheet ED (3), III, B, 4 through 6.

During construction and until project completion, provide personnel and equipment necessary to remove ground box lids for inspection. Provide this assistance within 24 hours of notification.

Construct concrete aprons in accordance with the latest standard sheet ED (3). Make the depth of the concrete apron the same as the depth of the ground box, except for Type 1 and Type 2 ground boxes. For Type 1 or Type 2 ground boxes, construct the concrete apron in accordance with details shown on the "Ground Box Details Installations" standard.

#### **Item 628: Electrical Services**

Verify and coordinate the electrical service location with the engineering section of the appropriate utility district or company.

Identify the electrical service pole with an address number assigned by the Utility Service Provider. Provide 2-in. numerals visible from the highway. Provide numbers cut out aluminum figures nailed to wood poles or painted figures on steel poles or service cabinets.

#### **Item 644: Small Roadside Sign Supports and Assemblies**

Sign locations shown on the plans are approximate. Before placing them, obtain approval of and then stake the exact locations for these signs.

Use the Texas Universal Triangular Slip Base with the concrete foundation for small ground mounted signs, unless otherwise shown in the plans.

Remove existing street name signs from existing stop signs and re-install them above the new stop signs. Removing and re-installing existing street name signs is subsidiary to the Item, "Small Roadside Sign Supports and Assemblies."

When design details are not shown on the plans, provide signs and arrows conforming to the latest "Standard Highway Sign Designs for Texas" manual.

Assume ownership of the removed existing signs.

Replace existing signs that become damaged during relocation at no expense to the Department.

**Item 656: Foundations for Traffic Control Devices**

Using ready mix concrete for sign foundations is optional.

**Item 662: Work Zone Pavement Markings**

At the end of each day's work, mark roadways that remain open to traffic during construction operations with standard pavement markings, in accordance with the latest "Texas Manual on Uniform Traffic Control Devices."

Using raised markers for removable work zone pavement markings on final concrete surfaces is optional.

For transition lane lines and detour lane lines, use raised pavement markers as shown for solid lines on the latest Barricade and Construction standard sheet for "Work Zone Pavement Marking Details."

**Item 662: Work Zone Pavement Markings**

**Item 666: Reflectorized Pavement Markings**

**Item 668: Prefabricated Pavement Markings**

**Item 6153: Multipolymer Pavement Markings (MPM) with Warranty**

**Item 6473: Multipolymer Pavement Markings (MPM)**

**Item 6986: Longitudinal Prefabricated Pavement Markings (PPM) with Warranty**

Use Type III glass beads for thermoplastic and multipolymer pavement markings.

Use a 0.100 in. (100 mil) thickness for thermoplastic pavement markings, measured to the top of the thermoplastic, not including the exposed glass beads.

Use a 0.022 in. (22 mil) thickness for multipolymer pavement markings, measured to the top of the multipolymer, not including the exposed glass beads.

If the Type II markings become dirty and require cleaning by washing, brushing, compressed air, or other approved methods before applying the Type I thermoplastic markings, this additional cleaning is subsidiary to the Item, "Reflectorized Pavement Markings."

Establish the alignment and layout for work zone striping and permanent striping.

Stripe roadways before opening them to traffic.

Place pavement markings under these items in accordance with details shown on the plans, the latest "Texas Manual on Uniform Traffic Control Devices," or as directed.

When design details are not shown on the plans, provide pavement markings for arrows, words, and symbols conforming to the latest "Standard Highway Sign Designs for Texas" manual.

**Item 672: Raised Pavement Markers**

If other operations are complete on the project and if the curing time period is not yet elapsed, the contract time will be suspended until the curing is done.

Before placing the raised pavement markers on concrete pavement, blast clean the surface using an abrasive-blasting medium. This work is subsidiary to the Item, "Raised Pavement Markers."

Provide epoxy adhesive that is machine-mixed or nozzle-mixed and dispensed. Equip the machine or nozzle with a mechanism to ensure positive mix measurement control.

**Item 677: Eliminating Existing Pavement Markings and Markers**

Remove existing pavement markings on concrete or asphalt surfaces by flail milling or as directed.

**Item 678: Pavement Surface Preparation for Markings**

On new concrete pavement or on existing concrete pavement when placing a new stripe on a new location, remove the curing compounds and contamination from the pavement surface by flail milling or as directed. In addition, air-blast the surface with compressed air just before placing the new stripe.

On existing concrete pavement when placing a new stripe on an existing location, after removing the existing stripe under the Item, "Eliminating Existing Pavement Markings and Markers," air-blast the surface with compressed air just before placing the new stripe.

Perform air blasting with a compressor that is capable of generating air at a minimum of 100 psi using 5/16 in. or larger hosing for the air blast (equipment should have sufficient capacity to remove contaminants but not damage the pavement surface). Do not clean concrete pavement by grinding.

**Item 680: Installation of Highway Traffic Signals**

Clearly mark or highlight on the shop drawings the items being furnished for this project.

Complete traffic signal construction work, including correcting discrepancies shown on the Department inspector's "Traffic Signal Installation Inspection Report" before the beginning of the test period.

Provide a full-time qualified traffic signal technician responsible for installing, maintaining, or replacing traffic signal devices.

Staking in the field is subject to approval.

Make adjustments in project construction, if needed, due to conflicts with underground utilities.

Do not aim the luminaire arms mounted on traffic signal poles into the intersection. Aim each arm perpendicular to the centerline of the roadway it is intended to cover, to develop the proper illumination pattern for the intersection.

Allow the electrical work to be inspected by the City. Complying with the provisions and requirements of the City electrical ordinance is not required. Such inspection does not make the City a party to this contract.

Provide continuous conductors without splices from signal controller to signal heads. Route the conductors for luminaires to the service enclosure. Splices or attachments to the terminal block in the access compartment of the mast arm pole are not permitted except for the luminaire cable.

Abrasions to the conductor insulation caused while pulling cable for the traffic signal system are cause for immediate rejection. Remove and replace the entire damaged cable at no expense to the Department.

When pulling cables or conductors through conduit, do not exceed the manufacturer's recommended pulling tensions. Lubricate the cables or conductors with a lubricant as recommended by the cable manufacturer.

Bond the controller housing, signal poles, conduit, and spans to a minimum No. 6 AWG stranded copper conductor. An equipment grounding conductor is required in every conduit to form a continuous grounding system. Effectively connect the grounding system to ground rods or concrete encased grounding electrodes as indicated in the plans.

Wrap signal heads with dark plastic or suitable material to conceal the signal faces from the time of installation until placing into operation. Do not use burlap.

Furnish signal heads from the same manufacturer.

Use Type C High Specific Intensity grade sheeting for signs mounted under or adjacent to the signal heads.

For a steel mast arm or steel strain pole assembly, hold the anchor bolts and conduits rigidly in place with a welded steel template.

Leave a minimum of one full diameter thread exposed on each anchor bolt securing a signal pole.

Set the anchor bolts for steel strain poles so that two are in compression and two are in tension.

The Contractor may use ready mix concrete.

Apply membrane curing on concrete work in accordance with Section 420.4.J.3, "Membrane Curing."

The standard 4.5-in. galvanized pipe type poles, except the breakaway type, are subject only to the Engineer's inspection for their acceptance. Mill test reports or documentation will not be required.

**Item 682: Vehicle and Pedestrian Signal Heads**

Install two set screws on vehicle signal head mounting hardware fittings.

**Item 686: Traffic Signal Pole Assemblies (Steel)**

For a steel mast arm or steel strain pole assembly, hold the anchor bolts and conduits rigidly in place with a welded steel template.

Leave a minimum of one full diameter thread exposed on each anchor bolt securing a signal pole.

Set the anchor bolts for the steel strain poles so that two are in compression and two are in tension.

Use a Texas Cone Penetrometer reading of 10. The drilled shaft length is from the surface elevation to the bottom of the drilled shaft. Provide an additional length of the pole foundation from the surface level to the roadway level, if required for unusual locations. Provide the drilled shaft depth regardless of the length of the pole foundation. The pole foundation depth from the surface level to the roadway level is a maximum of 4 ft., or as approved.

Locate mast arm pole assemblies a minimum of 4 ft. from the roadway curb or pavement edge.

Place steel strain poles at a 10 ft. desirable minimum distance from the roadway curb or pavement edge.

After the traffic signal pole assembly is plumb and the nuts are tight, tack-weld each anchor bolt nut in two places to its washer. Tack-weld each washer to the base plate in two places. Do not weld components to the bolt. Perform tack-welding in accordance with the Item, "Steel Structures." After tack-welding, repair galvanizing damage on bolts, nuts, and washers in accordance with Section 445.3.D, "Repairs."

The Department may test the anchor bolts using ultrasonic methods for traffic signal poles after they are installed. Replace faulty anchor bolts as directed. Do not weld the anchor bolts.

**Item 1122: Temporary Erosion, Sedimentation and Environmental Controls**

A Storm Water Pollution Prevention Plan (SW3P) is required. Since the disturbed area is more than 5 acres, a "Notice of Intent" (NOI) is also required.

Use appropriate measures to prevent, minimize, and control the spill of hazardous materials in the construction staging area. Remove and dispose of materials in compliance with State and Federal laws.

Before starting construction, review with the Engineer the SW3P used for temporary erosion control as outlined on the plans. Before construction, place the temporary erosion and sedimentation control features as shown on the SW3P.

Schedule the sodding work as soon as possible. The project schedule provides for a vegetation management plan.

After completing earthwork operations, restore and reseed the disturbed areas in accordance with the Department's specifications for permanent or temporary erosion control.

Implement temporary and permanent erosion control measures to comply with the National Pollution Discharge Elimination System (NPDES) general permit under the Clean Water Act.

Before starting grading operations and during the project duration, place the temporary or permanent erosion control measures to prevent sediment from leaving the right of way.

**Item 3268: Dense-Graded Hot Mix Asphalt**

Taper the asphalt concrete pavement at the beginning and ending points.

Use a maximum 6H:1V slope for the asphalt concrete pavement edge.

Where the 6H:1V ACP edge taper extends over onto the unsurfaced shoulders, blade off the loose existing shoulder material to provide a solid base for the outside taper edge. After placing the ACP overlay, blade this material back against the edge taper. This work is subsidiary to the various bid items.

The stockpile will be the point of sampling of coarse aggregate for test method TEX-217-F (Part II, decantation).

Place the asphalt concrete pavement in courses as shown on the typical sections.

Do not use petroleum-based solvents in the beds of hot mix asphalt delivery vehicles.

Dilution of tack coat is not allowed.

For determining the Asphalt Content, only ignition ovens will be allowed.

**Item 8835: Accessible Pedestrian Signal Units**

At intersections where a minimum of 10 ft spacing between adjacent accessible pedestrian signal units is not possible, provide each accessible pedestrian pushbutton with the following features: a pushbutton locator tone, a tactile arrow, a speech walk message for the walking person indication and a speech pushbutton information message.

**Basis of Estimate**

<b>Item</b>	<b>Description</b>	<b>Limit and Rate</b>	<b>Unit</b>
260	Lime Treatment (Road-Mixed) For materials used as subgrade <ul style="list-style-type: none"> <li>• Commercial Lime Slurry</li> </ul>	6 % by weight based on 100 Lb. / Cu. Ft. subgrade	SY  TON
275	Cement Treatment (Road-Mixed) For materials used as subgrade * <ul style="list-style-type: none"> <li>• Cement</li> </ul>	6 % by weight based on 100 Lb. / Cu. Ft. subgrade	SY  TON
292	Asphalt Treatment (Plant-Mixed) <ul style="list-style-type: none"> <li>• Asphalt</li> <li>• Aggregate</li> </ul>	110 Lb. / Sq. Yd.-In. 5 % by weight 95 % by weight	TON