

NOTIFICATION OF ADDENDUM

ADDENDUM NO. 1

DATED 10/10/2008

Control	1327-02-021
Project	C 1327-2-21
Highway	FM 1451
County	FREESTONE

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: C 1327-2-21

CONTROL: 1327-02-021

COUNTY: FREESTONE

LETTING: 10/16/2008

REFERENCE NO: 1010

PROPOSAL ADDENDUMS

PROPOSAL COVER

X BID INSERTS (SH. NO.: 2-7 & 3-7)

X GENERAL NOTES (SH. NO.: B & G THRU L)

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:

1. SHEET 2-7: REPLACED ITEM 276-2262 WITH ITEM 276-2247. SAME QUANTITY.
2. SHEET 3-7: REPLACED ITEM 432-2005 WITH ITEM 432-2015. SAME QUANTITY.

GENERAL NOTES:

1. SHEET B: REVISED ITEM 7.
2. SHEET G: ADDED ITEM 275.
3. SHEETS G THRU I: REVISED ITEM 276.
4. SHEET J: ADDED ITEM 432.
5. SHEETS G THRU L: INFORMATION SHIFTED DUE TO ABOVE CHANGES.

PLAN SHEETS:

1. SHEETS 6, 6C, 6D & 6E (GENERAL NOTES): REVISED DUE TO ABOVE CHANGES.
2. SHEET 7 (E&Q): REVISED DUE TO ABOVE CHANGES UNDER BID INSERTS.
3. SHEET 8 (SUMMARY OF ROADWAY QUANTITIES): REVISED ITEMS 134 AND 276.
4. SHEET 11 (SUMMARY OF CROSSROAD CULVERT QUANTITIES): REVISED ITEM 432.
5. SHEETS 53 & 54 (MBGF DETAILS): CHANGED BACKFILL PAVEMENT EDGES TYPE FROM (TY B) TO (TY A).
6. SHEETS 76, 77 & 80 (STRUCTURE DETAIL): CHANGED RIPRAP (STONE TY R) (DRY) TO RIPRAP (STONE COMMON) (DRY) (6").

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	100	2012	002	PREP ROW (TREE) (18"-36" DIA.) DOLLARS and CENTS	EA	3.000	1
	110	2001		EXCAVATION (ROADWAY) DOLLARS and CENTS	CY	844.000	2
	112	2001		SUBGRADE WIDENING (ORD COMP) DOLLARS and CENTS	STA	293.510	3
	132	2005		EMBANKMENT (FINAL)(ORD COMP)(TY C) DOLLARS and CENTS	CY	97.000	4
	134	2001		BACKFILL (TY A) DOLLARS and CENTS	STA	301.510	5
	150	2001		BLADING DOLLARS and CENTS	STA	301.510	6
	160	2003		FURNISHING AND PLACING TOPSOIL (4") DOLLARS and CENTS	SY	66.000	7
	162	2002		BLOCK SODDING DOLLARS and CENTS	SY	737.000	8
	164	2021	002	CELL FBR MLCH SEED(PERM)(RURAL)(SANDY) DOLLARS and CENTS	SY	40,202.000	9
	164	2029	002	CELL FBR MLCH SEED(TEMP)(WARM) DOLLARS and CENTS	SY	20,101.000	10

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	164	2031	002	CELL FBR MLCH SEED(TEMP)(COOL) DOLLARS and CENTS	SY	20,101.000	11
	168	2001		VEGETATIVE WATERING DOLLARS and CENTS	MG	2,047.000	12
	247	2058	021	FL BS (CMP IN PLC)(TY E GR 2)(FNAL POS) DOLLARS and CENTS	CY	390.000	13
	247	2078	021	FL BS (CMP IN PLC)(TY E GR 2) (6") DOLLARS and CENTS	SY	74,693.000	14
	247	2327	021	FL BS (CMP IN PLC)(TY E GR 2)(9") DOLLARS and CENTS	SY	15,105.000	15
	251	2066		REWORK BS MATL (TY D)(9")(ORD COMP) DOLLARS and CENTS	SY	65,225.000	16
	275	2001		CEMENT DOLLARS and CENTS	TON	1,468.000	17
	275	2011		CEMENT TREAT(EXIST MATL)(8") DOLLARS and CENTS	SY	97,836.000	18
	276	2247		CEM TRT(PLNT MX)(CL M)(TY E)(GR 4)(14") DOLLARS and CENTS	SY	2,264.000	19
	316	2015		ASPH (RC-250) DOLLARS and CENTS	GAL	18,716.000	20
	316	2406		AGGR (TY-B GR-5 OR TY-L GR-5 SAC-B) DOLLARS and CENTS	CY	693.000	21

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	316	2588		AGGR (TY PB GR 3 OR TY PL GR 3 SAC A) DOLLARS and CENTS	CY	780.000	22
	316	2591		ASPH (AC-10-2TR OR AC-12-5TR) DOLLARS and CENTS	GAL	43,072.000	23
	400	2005		CEM STABIL BKFL DOLLARS and CENTS	CY	10.400	24
	420	2006	002	CL C CONC (RAIL FOUNDATION) DOLLARS and CENTS	CY	9.400	25
	420	2016	002	CL C CONC (COLLAR) DOLLARS and CENTS	EA	3.000	26
	432	2015		RIPRAP (STONE COMMON)(DRY)(6 IN) DOLLARS and CENTS	CY	83.000	27
	432	2040		RIPRAP (MOW STRIP)(5 IN) DOLLARS and CENTS	CY	42.000	28
	450	2001		RAIL (TY T101) DOLLARS and CENTS	LF	42.000	29
	460	2017		CMP AR (GAL STL DES 5) DOLLARS and CENTS	LF	8.000	30
	464	2003		RC PIPE (CL III)(18 IN) DOLLARS and CENTS	LF	8.000	31
	464	2005		RC PIPE (CL III)(24 IN) DOLLARS and CENTS	LF	6.000	32

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	467	2209		SET (TY II)(18 IN)(RCP)(3:1)(C) and DOLLARS CENTS	EA	2.000	33
	467	2211		SET (TY II)(24 IN)(RCP)(3:1)(C) and DOLLARS CENTS	EA	4.000	34
	467	2215		SET (TY II)(36 IN)(RCP)(3:1)(C) and DOLLARS CENTS	EA	2.000	35
	467	2318		SET (TY II)(DES 5)(CMP)(3:1)(C) and DOLLARS CENTS	EA	4.000	36
	467	2320		SET (TY II)(DES 7)(CMP)(3:1)(C) and DOLLARS CENTS	EA	2.000	37
	500	2001	005	MOBILIZATION and DOLLARS CENTS	LS	1.000	38
	502	2001	033	BARRICADES, SIGNS AND TRAFFIC HAN- DLING and DOLLARS CENTS	MO	6.000	39
	506	2002	011	ROCK FILTER DAMS (INSTALL) (TY 2) and DOLLARS CENTS	LF	645.000	40
	506	2009	011	ROCK FILTER DAMS (REMOVE) and DOLLARS CENTS	LF	645.000	41
	506	2025	011	EXCAVATOR WORK (EROSION & SEDM CONT) and DOLLARS CENTS	HR	32.000	42

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	506	2034	011	TEMPORARY SEDIMENT CONTROL FENCE DOLLARS and CENTS	LF	12,550.000	43
	529	2001		CONC CURB (TY I) DOLLARS and CENTS	LF	114.000	44
	530	2007		DRIVEWAYS (CONC) DOLLARS and CENTS	EA	1.000	45
	530	2009		DRIVEWAYS (SURF TREAT) DOLLARS and CENTS	EA	87.000	46
	530	2015		TURNOUTS (SURF TREAT) DOLLARS and CENTS	EA	37.000	47
	540	2002	002	MTL W-BEAM GD FEN (STEEL POST) DOLLARS and CENTS	LF	200.000	48
	540	2013	002	MTL BEAM GD FEN TRANS (T101) DOLLARS and CENTS	EA	8.000	49
	542	2001		REMOVING METAL BEAM GUARD FENCE DOLLARS and CENTS	LF	400.000	50
	542	2002		REMOVING TERMINAL ANCHOR SECTION DOLLARS and CENTS	EA	4.000	51
	544	2013	001	GDRAIL END TRT(INSTALL)(HBA POST) DOLLARS and CENTS	EA	8.000	52

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	560	2007	001	MAILBOX INSTALL-D (TWW-POST)TY 4 FND-TB DOLLARS and CENTS	EA	6.000	53
	560	2008	001	MAILBOX INSTALL-M (TWW-POST)TY 4 FND-TB DOLLARS and CENTS	EA	2.000	54
	560	2015	001	MAILBOX INSTALL-S(TWW-POST)TY 4 FND-TB DOLLARS and CENTS	EA	29.000	55
	636	2007		REPLACE EXISTING ALUMINUM SIGNS (TY A) DOLLARS and CENTS	SF	67.000	56
	644	2001		INS SM RD SN SUP&AM TY 10BWG(1) SA(P) DOLLARS and CENTS	EA	20.000	57
	644	2004		INS SM RD SN SUP&AM TY 10BWG(1) SA(T) DOLLARS and CENTS	EA	2.000	58
	644	2026		INS SM RD SN SUP&AM TY S80(1)SA(T-2EXT) DOLLARS and CENTS	EA	1.000	59
	644	2056		RELOCATE SM RD SN SUP & AM TY 10BWG DOLLARS and CENTS	EA	6.000	60
	644	2058		RELOCATE SM RD SN SUP & AM TY S80 DOLLARS and CENTS	EA	1.000	61

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	644	2060		REMOVE SM RD SN SUP & AM DOLLARS and CENTS	EA	22.000	62
	658	2261	006	INSTL DEL ASSM (D-SW)SZ (TYC)GF1(BI) DOLLARS and CENTS	EA	32.000	63
	658	2316	006	INSTL OM ASSM (OM-2Z)(FLX)GND DOLLARS and CENTS	EA	20.000	64
	662	2030		WK ZN PAV MRK NON-REMOV (Y) 4" (BRK) DOLLARS and CENTS	LF	12,678.000	65
	662	2032		WK ZN PAV MRK NON-REMOV (Y) 4" (SLD) DOLLARS and CENTS	LF	49,204.000	66
	662	2115		WK ZN PAV MRK SHT TERM (TAB) TY Y-2 DOLLARS and CENTS	EA	3,132.000	67
	666	2012		REFL PAV MRK TY I (W) 4" (SLD)(100MIL) DOLLARS and CENTS	LF	60,080.000	68
	666	2048		REFL PAV MRK TY I (W) 24"(SLD)(100MIL) DOLLARS and CENTS	LF	12.000	69
	666	2105		REFL PAV MRK TY I (Y) 4" (BRK)(100MIL) DOLLARS and CENTS	LF	6,339.000	70
	666	2111		REFL PAV MRK TY I (Y) 4" (SLD)(100MIL) DOLLARS and CENTS	LF	24,602.000	71

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County: Freestone

GENERAL NOTES:

BASIS OF ESTIMATE

ITEM	DESCRIPTION	COURSE	RATE	AMOUNT	QUANTITY
168	Vegetative Watering (10 Applications)		5 GAL/ SY	409,390 SY	2,047 MG
275	Cement (4.0%)	8" Subgrade (1)	0.015 TON/SY	97,836 SY	1,468 TONS
316	Asphalt (RC-250)	1st	0.20 GAL/SY	93,578 SY	18,716 GAL
316	Aggregate (TY-B or L GR-5 SAC-B)	1st	1 CY/135 SY	93,578 SY	693 CY
316	Asphalt (AC-10-2TR OR AC- 12-5TR)	2nd	0.46 GAL/ SY	93,634 SY	43,072 GAL
316	Aggregate (TY-PB or PL GR-3 SAC-A)	2nd	1 CY/120 SY	93,634 SY	780 CY

(1) SUBGRADE IS ESTMATED @ 125LBS/CF

BASIS OF ESTIMATE

(For Contractor's Information Only)

ITEM	DESCRIPTION	COURSE	RATE	AMOUNT	QUANTITY
134	Backfill		16.0 CY/STA	301.51 STA	4,824 CY
530	Asphalt (RC-250)	1st	0.20 GAL/SY	4,485 SY	897 GAL
530	Aggregate (TY-B or L GR-5 SAC-B)	1st	1 CY/135 SY	4,485 SY	34 CY
530	Asphalt (AC-10-2TR OR AC-12-5TR)	2nd	0.46 GAL/ SY	4,485 SY	2,063 GAL
530	Aggregate (TY-PB or PL GR-3 SAC-A)	2nd	1 CY/120 SY	4,485 SY	37 CY
530	Flexbase (TY-E GR-2)(6") Driveways		135 LBS/CF	3,302 SY	1,003 TONS
530	Concrete (CL A) Driveways	6"	0.17 CY/SY	17 SY	2.8 CY

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GENERAL:

Depth of cover over existing cross drainage structures may be insufficient to provide the proposed typical section. In those situations, modifications to the proposed construction operations shall be made to eliminate the possibility of damage to the existing structure.

ITEM 7 “LEGAL RELATIONS AND RESPONSIBILITIES”

Prove to the Engineer's satisfaction that employees operating equipment on the travel lanes have a valid State Drivers License issued by one of the United States of America.

Provide the Pilot Car Method of one-lane, two-way traffic control on this project. Operate the pilot vehicle in coordination with the flagging operations and other controls at the end of the one-lane sections in accordance with TCP (2-2). Mount a G20-4 sign at a conspicuous location on the rear of the vehicle. Traffic delays caused by one-lane, two-way traffic control, will not be allowed to exceed 5 minutes unless approved by the Engineer.

No more than 2 miles of non-surfaced roadway will be allowed at any time. After the first mile of roadway is scarified, sub-base is treated (if required) and compacted, and ready for placing new base or surface treatment (if new base is not required), scarifying of the second mile of roadway may begin. The third mile may not begin being scarified until the first mile receives the first surface treatment and the second mile is ready for placing of new base or surface treatment if new base is not required. The Engineer may consider extending the 2-mile limit or allow alternating 2-mile sections of concurrent work, only if the Contractor can demonstrate adequate workforce, equipment, material deliveries, work plan, and quality of work sufficient to handle the longer work zones. If the 2 miles of non-surfaced roadway are extended by the Engineer in writing, this will not exempt the Contractor from not exceeding the 5 minute delay and any additional signing/traffic control will be considered subsidiary to Item 502, Barricades, Signs, and Traffic Handling.

At the end of each work day, remove all grade differentials transverse to centerline.

At the end of each work day, provide 100 foot minimum grade tapers longitudinal to the centerline to transition differences in the profile grade line or roadway grade.

State contract mowers will mow the right of way during the growing season. The Contractor will be notified by the Engineer one week in advance of the anticipated time when mowers will be in the limits of the project. Clean the right of way to such a condition that allows the mowing contractors to safely mow.

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The nesting/breeding season for migratory birds is March 1 - September 1.

Do not destroy nests on structures or in trees within the project limits during the nesting/breeding season.

Prevent the building of nests on any structure or tree within the project limits throughout construction if work/removal is to be performed during the nesting/breeding season.

This can be accomplished by application of bird repellent gel, netting, removal by hand every 3-4 days, or any other non-threatening method. All methods must be approved by the Bryan District Environmental Section well in advance of planned use.

The Bryan District Environmental Section can be contacted at (979) 778-9766 to assist with removal of wildlife that will not leave on their own with gentle persuasion.

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, 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. Take responsibility for any and all consultations with the USACE regarding activities, including project specific locations (PSLs), that have not been previously evaluated by the USACE. Provide the department with a copy of all consultation(s) or approval(s) from the USACE prior to initiating activities.

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. Maintain copies of their determination(s) for review by the department or any regulatory agency.

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.

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

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- 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 by the Engineer within a USACE evaluated area.

(2) Contractor Materials from Areas Other than Previously Evaluated Areas. Provide the department with a copy of all USACE coordination or approvals 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.

This project is not on a hurricane evacuation route.

Contact utility companies and verify the location of all existing utilities in the area of construction. In the event utilities are encountered that conflict with the proposed construction, relocation or adjustment of the utilities shall be performed by the owner.

Contact one of the Texas underground utilities notification clearinghouses at least 72 hours prior to beginning work. Provide all location information for them to send excavation alerts to all potentially affected utility companies.

<u>Utility Co.</u>	<u>Telephone</u>
Enbridge	713-650-8900
Atmos Energy	979-774-2506
City of Teague	254-739-2547
Energy Transfer Co.	903-388-4986
XTO Energy	254-359-4658
Oncor Electric	254-750-5359
Southwestern Bell	254-757-7815
South Freestone Co. W.S.C.	903-389-5952

ITEM 8 “PROSECUTION AND PROGRESS”

Working days will be computed and charged in accordance with Article 8.3.A.4 Standard Workweek.

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Equipment and material may be pre-staged at approved locations.

The Contractor may choose which side of the road to do first, but may not work on both sides of the roadway at the same time, without prior written approval of the Engineer. The sides chosen in the sequence of work described below are for example only.

All travel lanes must be open to traffic at the end of each workday. Each day's excavation shall be limited to 800' unless approved in writing by the Engineer. By the conclusion of each workday, prior to resuming two lane, two-way traffic, place flex base as shown on the miscellaneous details sheet. Material and labor for this work will not be paid for directly, but will be subsidiary to various bid items.

By noon of each Wednesday, provide the Engineer a written outline of the daily work schedule for the following week. Include in the outline the times and places for proposed traffic control changes, lane and shoulder closures, and moving operations or other operations that affect traffic on the roadway. Unless otherwise authorized by the Engineer, prosecute the work on this project in accordance with the following sequence of work:

- 1) Set advance signing and barricades.

The construction sequence of Sections will be:

Station 13+34 to Station 139+12
Station 139+37 to Station 227+10
Station 227+10 to Station 315+10

Work will be completed through the 1st surface treatment before beginning the next section.

- 2) Place sediment control devices; windrow the existing sod and topsoil.
- 3) Prep ROW.
- 4) Begin extending culverts.
- 5) Once culvert work has sufficiently progressed, begin widening, earthwork, construct mailbox turnouts and driveways, stabilize subgrade, place flexbase and backfill pavement edges.
- 6) Replace the windrowed sod and topsoil along the front slope to the taper specified, seed, fertilize, and water.
- 7) Place 1st surface treatment.
Station 13+34 to Station 315+10
- 8) Place 2nd surface treatment.
- 9) Place permanent pavement markings and complete signing.
- 10) Remove sediment control devices.
- 11) Clean up.

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Some of these operations may be performed simultaneously.

Working days estimated for this project include curing, testing and performance periods. Time will not be suspended for curing, testing or performance periods, except no time will be charged during testing and performance periods which occur after the final inspection as described in Article 5.8.B.2 of the standard specifications.

ITEM 100 “PREPARING RIGHT OF WAY”

If a burn ban is in effect for Freestone county where the project is located, obtain written approval of all proposed burn locations and procedures from the commissioners court(s) of Freestone county prior to burning brush.

ITEM 110 AND 132 “EXCAVATION” AND “EMBANKMENT”

Provide embankment material with a plasticity index between 10 and 35.

Material containing greater than 3000 ppm of sulfate will not be allowed.

Material containing greater than 1 percent organic content will not be allowed in the top 1 foot of subgrade being stabilized.

ITEM 134 “BACKFILLING PAVEMENT EDGES”

Backfill material shall be Type A meeting the following specifications:
Station 13+34 to Station 315+10 = TY-E GR-3 Flexbase.

Provide Type E material consisting of crushed limestone produced and graded from oversize quarried aggregate that originates from a single, naturally occurring source. Do not use gravel or multiple sources. No blending of sources will be allowed in Type E material.

Continue compacting material until it is uniformly compacted by “ordinary compaction”.

Use RC-250 (rate of 0.12 gal/SY) for sealing backfill surfaces. This will not be paid for directly, but will be subsidiary to this item.

Pavement edges shall be backfilled within 2 calendar days after base placement.

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ITEM 150 “BLADING”

Use blading to remove sod which has encroached on top of existing pavement edges. The Engineer will determine the actual limits in the field.

ITEM 162 “SODDING FOR EROSION CONTROL”

Furnish and place Bermuda block sod.

ITEM 166 “FERTILIZER”

Fertilize all areas of project that are being seeded or sodded.

Furnish and apply fertilizer with analysis of 13-13-13.

ITEM 168 “VEGETATIVE WATERING”

Vegetative watering is required for all areas of the project that are being seeded or sodded. The application rate is shown in the “Basis of Estimate”.

ITEM 247 “FLEXIBLE BASE”

Use Type E Grade 2 flex base.

Place flexible base in two equal lifts unless otherwise approved by the Engineer.

Provide Type E material consisting of crushed limestone produced and graded from oversize quarried aggregate that originates from a single, naturally occurring source. Do not use gravel or multiple sources. No blending of sources will be allowed in Type E material.

Superelevations are to be built using base material and will not be paid for directly, but will be subsidiary to this Item. The base thickness may vary, but shall be a minimum of 8” to establish cross slopes in curves when superelevations are required in the plans.

ITEM 275 “CEMENT TREATMENT (ROAD MIXED)”

Cease stabilization when the sulfate content is greater than 3,000 ppm or when the organic content is greater than 1%. Additional testing will be performed to determine the target cement content when these conditions are encountered.

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ITEM 276 “CEMENT TREATMENT (PLANT-MIXED)”

Provide Type E material consisting of crushed concrete, crushed limestone or crushed gravel. Crushed limestone and crushed gravel shall be produced and graded from oversize quarried aggregate that originates from a single, naturally occurring source. Do not use multiple sources. Crushed concrete must meet the requirements in Section 247.2.A.3.b, “Recycled material (Including Crushed Concrete) Requirements,” and be managed in a way to provide for uniform quality. The Engineer may require separate dedicated stockpiles in order to verify compliance.

**Table 1
Flexible Base Material Requirements Before Cement Treatment**

Property	Test Method	Grade 4
Master gradation sieve size		% Retained
2-1/2 in.	Tex-110-E	0
1-3/4 in.		0-10
7/8 in.		-
3/8 in.		-
No. 4		45-75
No. 40		60-85
Liquid limit, % max. ¹	Tex-104-E	40
Plasticity index, max. ¹	Tex-106-E	12
Linear shrinkage, min	Tex-107-E	2
Wet Ball mill, % max	Tex-116-E	45
Wet ball mill, % max. increase passing the No. 40 sieve.		20

1. Determine plastic index in accordance with Tex-107-E (linear shrinkage) when liquid limit is unattainable as defined in Tex-104-E.

The Contractor shall furnish the Engineer with representative samples of the materials to be used in production of the cement treated base. The Engineer will designate a target cement content and optimum moisture content necessary to produce a stabilized mixture that meets the strength requirements and moisture susceptibility requirements shown in Table 2.

**Table 2
Requirements for Cement Treatment**

Description	Minimum	Maximum
Cement	1 ½ percent	5 percent
	Test Method	Requirement
7-Day Unconfined compressive Strength ¹	Tex-120-E, Part I	210 psi (min.)
Moisture Susceptibility Requirements	Tex-144-E	85% of 7-Day Unconfined Compressive Strength (min.)
Expansion ²	ASTM C 1567	0.10% (maximum)

1. Meet the unconfined compressive strength after addition of stabilizer.
2. Required when using crushed concrete or other material that contains cement. Provide the certified test report signed and sealed by a licensed professional engineer. This may be waived by the Engineer when the material has a known performance history based on previous ASTM C 1567 or ASTM C 1260 tests.

If the cement treated base fails these requirements a different flexible base source will be required. The Engineer may accept a mixture design from the Contractor that is performed in accordance with Test Method Tex-120-E, Part I and meets the moisture susceptibility requirement shown above.

ITEM 302 “AGGREGATES FOR SURFACE TREATMENTS”

Asphalt used to precoat aggregate shall be ionically compatible to the asphalt used for surface treatments.

ITEM 316 “SURFACE TREATMENTS”

Asphalt storage tanks may be used.

The Engineer may dictate sealing sequence of adjacent lanes to account for heavy truck traffic.

When placing surface treatment on base material, prepare surface by sweeping or other approved methods. Before applying bituminous material, lightly sprinkle the surface with water. When directed, sweep the surface after sprinkling with water. Do not apply bituminous material when water is puddling on the surface.

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After rolling is completed, control the speed of traffic at a maximum of 30 mph for a minimum of 2 hours or as directed before opening to the normal posted speed limit.

Sweep excess aggregate no sooner than 2 hours after rolling or as directed.

Provide 2 pneumatic tire rollers.

Vehicles used to haul aggregate from the stockpile to the chip spreader will not be overloaded. Any damage caused by vehicles will be repaired by the Contractor at his expense and subsequent loads will be reduced so as not to cause further damage to the surface.

Transverse variance rates shall be used as directed. The nozzles outside the wheel paths will output up to 20% more asphalt by volume than the nozzles over the wheel paths.

The Contractor may be required to furnish and set string line to insure straight and uniform alignment as directed by the Engineer. The Contractor may use other methods subject to approval of the Engineer.

Unless authorized by the Engineer, a minimum 7 day curing period will be required between the first and second surface treatment applications.

AC 10-2TR will be used during warm weather placement.

AC 12-5TR will be used for winter/cool weather placement as directed by the Engineer.

Air and surface temperature for asphalt material application will be in accordance with the specification and the manufacturer's recommendation.

RC 250 will be used during all weather placements.

Surface treat driveways before the roadway is surface treated (second course only).

ITEM 420 "CONCRETE STRUCTURES"

Do not use membrane curing for structural elements.

Mass Concrete will be (measured in place). (a plans quantity item).

Provide an Ordinary Surface Finish to the following elements:

Culverts and culvert wing walls.

Rail Anchor Curbs.

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ITEM 421 “HYDRAULIC CEMENT CONCRETE”

Strength-testing equipment will be provided by the State.

Perform test Tex-416-A or Tex-414-A to determine the air content of freshly-mixed concrete when the mix contains air entrainment.

Air entrainment is no longer required except in Class P and Class HES concrete. For all classes of concrete except P and HES, if air entrainment agent is used in the concrete batch, maximum air content will be measured for acceptance, but not minimum air content.

The Department will handle and transport test specimens prior to testing.

ITEM 432 “RIPRAP”

Locations, dimensions and side slopes of riprap shown on plans may vary to fit field conditions as directed by the Engineer.

Filter Fabric is required for all stone riprap.

ITEM 464 “REINFORCED CONCRETE PIPE”

Seal joints using cold applied plastic asphalt sewer compound or cold applied preformed plastic gaskets. When cohesionless material is used for backfill, wrap the joints prior to backfilling with sand proof tape following the manufacturer's recommendations or with an equivalent material and method.

ITEM 502 “BARRICADES, SIGNS AND TRAFFIC HANDLING”

Warning reflectors or approved substitutes may be mounted on plastic drums in place of Type C steady burn warning lights if approved by the Engineer.

Place "Pavement Ends" (CW8-3) signs until the first application of surface treatment is placed.

During one-way operations, station flaggers at all county roads and any other locations, such as private businesses, that may have traffic entering the work area.

Place "Slow Down On Wet Road" (CW8-5a) signs before pulverization of the existing pavement.

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Removal of ground mounted temporary signs and supports as specified on standard sheet BC(5)-07, shall include the immediate backfilling of support holes with Type B embankment material and the compaction of the backfill material

When the Pilot Car Method is used, centerline channelizing devices will not be required if approved by the Engineer.

ITEM 544 “GUARDRAIL END TREATMENT”

Provide a TYPE III SGT for this project.

ITEM 560 “MAILBOX ASSEMBLIES”

Use new materials for single mailbox assemblies.

Use “OM-2VP, CLASS 1” object markers for mailbox supports.

Retain and re-use newspaper holders removed or relocated during construction for placement on new mailbox assemblies in accordance with mailbox standard sheets.

Prior to performing this work, verify location and number of boxes required with the Postmaster. Consult Engineer as needed for issue resolution.

ITEM 666 “REFLECTORIZED PAVEMENT MARKINGS”

Furnish Type II drop-on glass traffic beads conforming to DMS-8290 for use with Type I marking materials.

Unless authorized by the Engineer, the Contractor will not place the pavement markings on the resurfaced roadway until it has cured for 3 days.

All striping limits must be approved by the Engineer before striping operations may begin.

A pavement sealer shall be an acrylic sealer.