

NOTIFICATION OF ADDENDUM

ADDENDUM NO. 1

DATED 7/31/2014

Control	0009-11-227, ETC.
Project	CM 1402(021)
Highway	IH 30, ETC.
County	DALLAS

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: CM 1402(021)

CONTROL: 0009-11-227

COUNTY: DALLAS

LETTING: 08/05/2014

REFERENCE NO: 0731

PROPOSAL ADDENDUMS

- _ PROPOSAL COVER
- X BID INSERTS (SH. NO.: 1-5 to 5-5)
- X GENERAL NOTES (SH. NO.: A-M)

- _ SPEC LIST (SH. NO.:)
- _ SPECIAL PROVISIONS:)
- ADDED:)

- DELETED:

- _ SPECIAL SPECIFICATIONS:
- ADDED:

- DELETED:

- X OTHER: See changes listed below.

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

Bid Inserts:

- Sheet 2-5: Revised quantity of Item 618-2022 from 1734 to 2494 LF.
- Sheet 2-5: Revised quantity of Item 618-2071 from 56526 to 55766 LF.
- Sheet 3-5: Changed Item 624-2008 to 624-2007.
- Sheet 3-5: Changed Item 624-2014 to 624-2013.
- Sheet 4-5: Revised quantity of Item 6277-2001 from 27013 to 26893 LF.
- Sheet 4-5: Revised quantity of Item 6277-2003 from 8361 to 8331 LF.

General Notes:

- Sheet E: Added Item 5 note.
- Sheets A-L: Revised Highway in header from IH 35E to IH 30.
- Sheet M: Eliminated sheet.

Plan Set:

- Sheet 3B: Added Item 5 note.
- Sheets 3-3E: Revised Highway in header from IH 35E to IH 30.
- Sheet 4: Revised quantity of Item 618-2022 from 1734 to 2494 LF.
- Revised quantity of Item 618-2071 from 56526 to 55766 LF.
- Changed Item 624-2008 to 624-2007.
- Changed Item 624-2014 to 624-2013.
- Revised quantity of Item 6277-2001 from 27013 to 26983 LF.
- Revised quantity of Item 6277-2003 from 8361 to 8331 LF.

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

Sheets 5-6: Revised sheets to match Sheet 4 above.

Sheets 30,31,34,71: Revised sheets to reflect removal of concrete aprons
from Item 624 Type A and D ground boxes.

Sheets 30,34,67: Added street addresses to new electrical services.

Sheet 27: Reduced quantities of Item 6277 to remove slack conduit.

Sheets 27-36: Revised quantities of Item 618 to distinguish between
concrete encased and non-concrete encased 3" PVC conduit.

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	416	2004	001	DRILL SHAFT (36 IN) DOLLARS and CENTS	LF	175.000	1
	500	2001	011	MOBILIZATION DOLLARS and CENTS	LS	1.000	2
	502	2001	033	BARRICADES, SIGNS AND TRAFFIC HAN- DLING DOLLARS and CENTS	MO	10.000	3
	540	2001	031	MTL W-BEAM GD FEN (TIM POST) DOLLARS and CENTS	LF	437.500	4
	540	2005	031	TERMINAL ANCHOR SECTION DOLLARS and CENTS	EA	2.000	5
	540	2011	031	MTL BEAM GD FEN TRANS (THRIE-BEAM) DOLLARS and CENTS	EA	2.000	6
	540	2044	031	DOWNSTREAM ANCHOR TERMI- NAL(DAT)SECTION DOLLARS and CENTS	EA	2.000	7
	542	2002		REMOVING TERMINAL ANCHOR SECTION DOLLARS and CENTS	EA	1.000	8
	544	2001		GUARDRAIL END TREATMENT (INSTALL) DOLLARS and CENTS	EA	1.000	9
	618	2018		CONDT (PVC) (SCHD 40) (2") DOLLARS and CENTS	LF	117.000	10

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	618	2022		CONDT (PVC) (SCHD 40) (3") and DOLLARS CENTS	LF	2,494.000	11
	618	2023		CONDT (PVC) (SCHD 40) (3") (BORE) and DOLLARS CENTS	LF	17,735.000	12
	618	2034		CONDT (PVC) (SCHD 80) (2") and DOLLARS CENTS	LF	276.000	13
	618	2052		CONDT (RM) (2") and DOLLARS CENTS	LF	40.000	14
	618	2056		CONDT (RM) (3") and DOLLARS CENTS	LF	1,880.000	15
	618	2071		CONDUIT (PVC)(SCHD 40)(3")(CONC ENCSE) and DOLLARS CENTS	LF	55,766.000	16
	620	2003	001	ELEC CONDR (NO. 2) BARE and DOLLARS CENTS	LF	480.000	17
	620	2004	001	ELEC CONDR (NO. 2) INSULATED and DOLLARS CENTS	LF	1,440.000	18
	620	2009	001	ELEC CONDR (NO. 6) BARE and DOLLARS CENTS	LF	5,070.000	19
	620	2010	001	ELEC CONDR (NO. 6) INSULATED and DOLLARS CENTS	LF	13,013.000	20
	620	2011	001	ELEC CONDR (NO. 8) BARE and DOLLARS CENTS	LF	1,334.000	21

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	620	2012	001	ELEC CONDR (NO. 8) INSULATED DOLLARS and CENTS	LF	55,345.000	22
	624	2007	014	GROUND BOX TY A (122311) DOLLARS and CENTS	EA	4.000	23
	624	2013	014	GROUND BOX TY D (162922) DOLLARS and CENTS	EA	4.000	24
	624	2025	014	GROUND BOX TY 2 (484860) W/APRON DOLLARS and CENTS	EA	6.000	25
	624	2027	014	GROUND BOX TY 1 (364860) W/APRON DOLLARS and CENTS	EA	40.000	26
	628	2158	003	REMOVE ELECTRICAL SERVICES DOLLARS and CENTS	EA	2.000	27
	628	2205	003	ELC SRV TY D 120/240 100 (NS)SS(N)PS(U) DOLLARS and CENTS	EA	2.000	28
	628	2359	003	ELC SRV TY D 120/240 060 (NS)SS(N)PS(U) DOLLARS and CENTS	EA	8.000	29
	1122	2049	002	BIOGRD EROSN CONT LOGS (18" DIA)INSTALL DOLLARS and CENTS	LF	1,300.000	30
	1122	2056	002	BIODEGRADBLE EROSION CONTROL LOGS REMOV DOLLARS and CENTS	LF	1,300.000	31

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	6009	2001		ITS SYSTEM SUPPORT EQUIPMENT DOLLARS and CENTS	LS	1.000	32
	6014	2010		FIBER OPTIC CBL (SNGLE-MODE)(6 FIBER) DOLLARS and CENTS	LF	23,429.000	33
	6014	2013		FIBER OPTIC CBL (SNGLE-MODE)(36 FIBER) DOLLARS and CENTS	LF	49,367.000	34
	6014	2014		FIBER OPTIC CBL (SNGLE-MODE)(48 FIBER) DOLLARS and CENTS	LF	49,892.000	35
	6016	2041		EQUIPMENT CABINET (RVSD) (POLE) DOLLARS and CENTS	EA	1.000	36
	6025	2001		CCTV FIELD EQUIPMENT DOLLARS and CENTS	EA	11.000	37
	6229	2003	003	CAMERA POLE STRUC W/CABINET (60 FT) DOLLARS and CENTS	EA	11.000	38
	6277	2001		MULTIDUCT CONDUIT SYS (PVC)(SCHD 40) DOLLARS and CENTS	LF	26,983.000	39
	6277	2002		MULTIDUCT CONDUIT SYS (RM)(4") DOLLARS and CENTS	LF	905.000	40
	6277	2003		MULTIDUCT COND SYS(PVC)(SCHD 40)4"BORE DOLLARS and CENTS	LF	8,331.000	41

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	6278	2001		FIBER OPTIC RS-232 DATA MODEM (S/M) DOLLARS and CENTS	EA	36.000	42
	8045	2001		FO COLOR VIDEO AND DATA TRANSMITTER DOLLARS and CENTS	EA	12.000	43
	8045	2002		FO COLOR VIDEO AND DATA RECEIVER DOLLARS and CENTS	EA	13.000	44
	8172	2001		COMMUNICATION CABINET DOLLARS and CENTS	EA	5.000	45
	8368	2003		CONDUIT (PREPARE) DOLLARS and CENTS	LF	19,210.000	46
	8368	2008		GROUND BOX (PREPARE) DOLLARS and CENTS	EA	47.000	47
	8740	2001		SYSTEM INTEGRATION DOLLARS and CENTS	LS	1.000	48
	8741	2001		RVSD POLE ASSEMBLY (40 FT) DOLLARS and CENTS	EA	1.000	49
	8821	2001	001	RADAR VEHICLE SENSING DEVICE DOLLARS and CENTS	EA	12.000	50

Project Number: 0009-11-227, etc.

Sheet A

County: Dallas

Highway: IH 30, etc.

GENERAL NOTES

SW3P RESPONSIBILITIES

TxDOT Area of Responsibility

Responsible for the area defined by the limits of the subject project, except for those areas utilized and operated by the contractor. These areas include, though are not limited to, areas used for field offices, equipment and/or material storage, and concrete or asphalt plants.

TxDOT Operational Responsibility

Responsible for seeking coverage under the TPDES Construction General Permit (CGP) and operating the project within the requirements of the CGP for discharging storm water from the subject project and to notify MS4 permit holders of the intent to discharge storm water.

File a Notice of Termination with TCEQ upon completion of the project when the exposed areas have been stabilized with a vegetative cover of at least 70%.

Contractor Area of Responsibility

Responsible for all areas under their direct operational control which includes, though not limited to, areas used for field offices, equipment and/or material storage, and concrete or asphalt plants. These areas may be located on or off the subject project's R.O.W.

Contractor Operational Responsibility

Responsible for seeking coverage under the TPDES Construction General Permit (CGP) and adhering to all requirements of the permit for discharging storm water from the areas under their operational control. Perform regular inspections, prepare a written report of deficiencies, and repair deficiencies within the time frame set forth by the permit. File a Notice of Termination with TCEQ upon completion of the project when the exposed areas have been stabilized with a vegetative cover of at least 70%.

Responsible under contractual obligations to TxDOT to install, clean, repair, replace or remove sediment and erosion control devices as indicated on TxDOT's Inspection Reports, or as required by daily construction practices, within the time frame set forth by the permit.

Project Number: 0009-11-227, etc.

Sheet B

County: Dallas

Highway: IH 30, etc.

GENERAL

Access will be provided to all business and residences at all times. Materials, labor and maintenance for these temporary accesses will not be paid for directly but will be considered subsidiary to the various bid items.

The construction, operation and maintenance of the proposed project will be consistent with the state implementation plan as prepared by the Texas Commission on Environmental Quality.

The disturbed area for this project, as shown on the plans is .15 acres. However, **the Total Disturbed Area** (TDA) will establish the required authorization for storm water discharges. The TDA of this project will be determined by the sum of the disturbed area in all project locations in the contract, and all disturbed area on all Project-Specific Locations (PSL) located in the project limits and/or within 1 mile of the project limits. The department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction site as shown on the plans, according to the TDA of the project. The contractor will obtain any required authorization from the TCEQ for the discharge of storm water from any PSL for construction support activities on or off of the project row according to the TDA of the project. When the TDA for the project exceeds 1 acre, provide a copy of the appropriate application of permit (NOI, or Construction Site Notice) to the engineer, for any PSL located in the project limits or within 1 mile of the project limits. Follow the directives and adhere to all requirements set forth in the TCEQ, Texas Pollution Discharge Elimination System, Construction General Permit (TPDES, CGP).

Leave all right of way areas undisturbed until actual construction is to be performed in said areas.

Use established industry and utility safety practices to erect poles, luminaries, signs or structures near any overhead or underground utility. Consult with the appropriate utility company prior to beginning such work.

Locate all utilities, both underground and above ground, in the project area prior to beginning work so that conflicts are avoided.

Underground utilities owned by the Texas Department of Transportation may be present within the Right-Of-Way on this project. For signal, illumination, surveillance, and communications & control maintained by TxDOT, call the TxDOT Traffic Signal Office (214-320-6682) for locates a minimum of 48 hours in advance of excavation. For irrigation systems, call TxDOT Maintenance Landscape Office (214-320-6205) for locates a minimum of 48 hours in advance of excavation. If city or town owned irrigation facilities are present, call the appropriate department of the local city or town a minimum of 48 hours in advance of excavation. The Contractor is liable for all damages incurred to the above mentioned utilities when working without having the utilities located prior to excavation.

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Sheet C

County: Dallas

Highway: IH 30, etc.

For the project to be deemed complete, permanently stabilize all unpaved disturbed areas of the project with a vegetative cover at a minimum of 70% density for the control of erosion.

Repair or replace any structures and utilities that might have been damaged by negligence or a failure to have utility locates performed.

Perform all electrical work in accordance with the National Electrical Code and Texas Department of Transportation Specifications.

Consult with appropriate electric company representatives according to their respective area to coordinate electrical services installations.

Electrical certification for this project will be as per Item 7 of the current TxDOT Standard Specifications and any Special Provisions to Item 7.

Provide electrical and illumination materials from the pre-qualified Material Producers List, Category "Roadway Illumination and Electrical Supplies", located on the Construction Division (CST) web site.

Submit all shop drawings, working drawings, or other documents which require review sufficiently in advance of scheduled construction to allow no less than thirty (30) calendar days for review and response.

Meet daily with the Engineer to notify him or her of planned work for the day and to provide 24 hour notice of lane closures for planned work for the next day. Do not close lanes for which this requirement is not met. No work is to be performed without prior coordination with the Engineer.

Submit all pre-letting questions by email to the following group of individuals as follows:

Christopher.Blain@txdot.gov

Gregory.Perkins@txdot.gov

John.Babovec@txdot.gov

Anthony.Block@txdot.gov

Questions by phone, fax, etc. will not be accepted.

All questions will be answered on the following FTP site:

Go to <ftp://ftp.dot.state.tx.us>

Click Page>Open FTP site in Windows Explorer

Click File>Login As

Enter the information below and click "Log On".

FTP Username: DallasTraffic-ro

Password: 15X33YS

Project Number: 0009-11-227, etc.

Sheet D

County: Dallas

Highway: IH 30, etc.

Open folder named "drop_off" and select the folder for the appropriate CSJ.

All files on this site are subject to the following License Agreement:

BY DOWNLOADING FILES FROM THIS FTP SERVICE, YOU ARE AGREEING TO THIS LICENSE AGREEMENT.

The Texas Department of Transportation (TxDOT) does not provide technical support with respect to these files. You must read the following disclaimer and accept its terms as a prerequisite to the use of these files.

1. TxDOT makes no warranty of any kind, express or implied, with respect to any file. TxDOT makes no warranty that any file is marketable or fit for any particular purpose. A description of a file shall not be deemed to create an express warranty that the file conforms to that description. You agree to accept the files in the format provided.
2. You assume all risk and liability for any losses, damages, claims, or expenses resulting from the use or possession of any file.
3. You agree to indemnify, defend, and hold harmless TxDOT and its officers, agents, and employees from and against any and all claims, suits, losses, damages, or costs, including reasonable attorney's fees, arising from or by reason of your use or possession of any file. This indemnification shall survive your acceptance of any file.
4. Revisions or additions may occur at any time. You agree to indemnify, defend, and hold harmless TxDOT and its officers, agents, and employees from and against any and all claims, suits, losses, damages, or costs, including reasonable attorney's fees, arising from the use of outdated files. This indemnification shall survive your acceptance of any file.
5. The files are copyrighted by TxDOT and may not be resold without the express written consent of TxDOT.

Material On Hand (MOH) will not be used in calculating partial payments for Mobilization.

Provide the Engineer with a copy of all DBE subcontractor agreements prior to commencing work.

Provide as-built cable interconnection diagrams and communication network schematics at least 30 days prior to the start of data communications testing.

All materials and services not expressly called for in the specification or not shown in the plans, which may be necessary for complete and proper construction of the "ITS" Network, will be performed, furnished and installed at no cost to the Department.

Contact the TxDOT Freeway Management Office (214-319-3631) at least 48 hours in advance of performing any work on this project that disconnects or reconnects existing TxDOT "ITS" fiber optic cable. TxDOT "ITS" personnel must be on-site while this work is performed.

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Sheet E

County: Dallas

Highway: IH 30, etc.

To minimize “down time” to the Dallas District Traffic Management System, the fiber optic cable relocation and tracer wire installation shall be performed during a single weekend.

Item 5:

Ensure a representative of the Prime Contractor is available on the project site at all times when work is being performed by the Prime Contractor or sub-contractor(s) to receive instructions from the Engineer or authorized Department representative.

Item 8:

This project will be a Standard Workweek in accordance with Article 8.3.A.4.

Item 416:

Drilled shaft foundations will extend a minimum of five feet into rock, at locations where rock is encountered, at a depth less than the drilled shaft lengths as shown on the plans or as directed.

Provide a formed smooth finish for all portions of drill shafts extending above proposed ground. Include cost for this work in the unit bid price for this item.

Pole foundations will be paid for once regardless of extra work caused by obstructions.

All drilled shaft foundations will be based on the lengths shown on the plans or those established in writing. Adequate calculations for measurements of foundations have been made in accordance with Item 9: Measurement and Payment, Article 9.1 of the Standard Specifications. Increases or decreases in the quantities required by change in design will be measured as specified and the revised quantities will be the basis for payment.

Concrete removal required for installation of drilled shafts will be subsidiary to Item 416.

Item 421:

Provide a commercial laboratory for concrete testing on this project. The commercial laboratory shall perform all sampling and testing of concrete as required by this item and the Engineer. Submit all sampling and testing results to the Engineer in a timely manner for approval. The commercial laboratory is responsible for all work performed, materials furnished, labor, tools, and incidentals required to complete the sampling and testing of concrete.

Furnish mix designs to the Engineer in a format compatible to the latest version of the Department’s Construction Management System (SiteManager). Mix Design templates will be provided by the Engineer.

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Sheet F

County: Dallas

Highway: IH 30, etc.

Provide sulfate resistant concrete for box culverts and all drilled shafts. At the contractor's option, a sulfate resistant high performance concrete may be used; however, high performance concrete is not considered sulfate resistant concrete when Class C fly ash and Type I cement is used in the mix design.

Item 440:

Fiber Reinforced Concrete (FRC) can be used as a substitute for Non-Structural Class Reinforced Concrete in Mow-Strip and Rip Rap Items as approved. FRC may also be used for other Non-Structural Class Reinforced Concrete Items as approved.

Item 442:

Use temperature Zone 1 for CVN testing.

Item 449:

Use Crouse Hinds TL-2, OZ/Gedney Stl, Thomas & Betts Kopr-Shield or other approved electrically conducting lubricant compound.

Item 502:

Place barricades and signs in locations that do not obstruct the sight distance of drivers entering the highway from driveways or side streets.

Do not commence work on the road before sunrise and adhere to the Freeway Lane Closure Table. Do not operate or park any equipment/machinery closer than 30 feet from the traveled roadway after sunset unless authorized by the engineer.

When moving unlicensed equipment on or across any pavement or public highways, protect the pavement from all damage using an acceptable method.

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Freeway Lane Closures				
Category of Work	Number of Rdwy Lanes per direction	Peak Times Monday-Friday 6:00 am - 9:00 am 3:30 pm - 7:00 pm Major Events and Major Holidays**	Off Peak Times Monday-Friday 9:00 am - 3:30pm 7:00 pm - 10:30 pm and Saturday	Lowest Volume Time Monday-Friday 10:30 pm to 6:00 am and Sunday
Placement of CTB, Pavement Markings, Full Depth Roadway Repair, Placement of Bridge Beams, Bridge Demolition* or Similar Operations	5	None	2	3
	4	None	2	3
	3	None	1	2
	2	None	1	2
Adjacent Construction, Lanes for Construction Traffic or Similar Operations	5	None	1	2
	4	None	1	2
	3	None	1	1
	2	None	None	1
* Provide a traffic control plan where bridge demolition cannot be accomplished with lane closures. Freeway closures will only be done during Lowest Volume Times.				
** Major Holidays are defined under Item 1.82 and also include the Easter Weekend.				

* The Table above is only to be used when traffic counts do not exceed 2000 Vehicles per Lane per Hour. (The capacity of all remaining open lanes must not exceed 2000 Vehicles per Lane per Hour). When traffic counts do or will exceed 2000 Vehicles per Lane per Hour, Director of Construction, Assistant District Engineer or District Engineer approval will be required for lane closures.

Additional lanes may be closed during Off Peak Times or Lowest Times with written permission of the Engineer. Lane Closures during Off Peak Times may be started earlier or be extended later with written permission of the Engineer.

Traffic Control Plans with Lane Closures causing backups of 20 minutes or greater in duration will be modified by the Engineer.

Work in other areas of the project is not restricted to this time frame.

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Sheet H

County: Dallas

Highway: IH 30, etc.

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.

Items 618, 6277:

The location of conduits and ground boxes are diagrammatic only and may be shifted to accommodate field conditions as directed.

Secure permission and approval from the proper authority prior to cutting into or removing any sidewalks or curbs for installation of this Item. After the work is completed, the Contractor shall restore any curbs or walkways, which have been removed, to their original condition and to the satisfaction of the engineer.

The Contractor shall request locates for any utilities that may interfere with the installation of "ITS" conduit and shall replace or repair any damage done to existing underground conduit or utilities. This work will be done at the expense of the Contractor and to the satisfaction of the Engineer.

"ITS" conduit shall be installed a minimum of 42 inches deep, when trenching methods are used, and a minimum of 60 inches deep when bored under existing pavement, unless shown otherwise in the plans.

When trenching through rocky soil, place non-concrete encased conduit on a two-inch sand cushion and backfill with a minimum of six inches of sand.

Where a trench is cut through the surfaced parking shoulder, median or driveways for laying conduit, the base and surfacing will be replaced with similar materials equal in appearance and quality to the original construction.

The minimum bending radius for all conduits supplied on this project shall be 18 inches, or as approved.

Use a colored cleaner-primer on all PVC to PVC joints before application of PVC cement.

Place conduit under existing pavement by an approved boring method. Do not place boring pits closer than 2 feet from the edge of the pavement unless otherwise directed. Do not use water jetting. When conduits are bored, do not exceed 18 inches in the vertical and horizontal tolerances as measured from the intended target point.

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Do not use a pneumatically driven device for punching holes beneath the pavement (commonly known as a "missile").

When holes are drilled through concrete structures, use a coring device. Do not use masonry or concrete drills.

Install a permanent non-metallic pull cord, with a minimum tensile strength of 600 pounds, in all new "ITS" conduits. For conduits installed for future use, plug conduits using a mechanical conduit plug. Ensure that the mechanical plug creates a water and airtight seal. This work will not be paid for directly but will be subsidiary to this item.

Existing conduit may be proposed for reuse in this project. Conduit prep will be paid for under Item 8368 or as directed by the Engineer. If the existing conduit cannot be used, repair or replace this conduit as directed.

If the Contractor chooses to combine multiple conduits into one bore, the Contractor will install a casing around the conduits. The casing will not be paid for directly, but will be considered subsidiary to this item.

Secure PVC conduit permanently using solvent cement joint compounds, commonly known as solvent welding. Perform cementing of the joints in accordance with standard construction practices, as well as the manufacturer's recommendations for their particular product. Ensure that the resulting joints have sufficient strength and tightness to withstand the procedures required for concrete encasement, as shown on the plans, or as directed. Ensure that the resulting joints are secured without breakage, leakage, or permanent deformation.

Use a pre-manufactured duct spacing system, such as Carlon "Snap-N-Stack" spacers, Underground Devices "Wunpeece", or an approved equal, as a preferred method to secure and support conduit prior to encasement, as required in Item 618: Conduit, Article 618.3.

Mark all "ITS" conduit runs by means of a white delineator marker at 1/3 points between ground boxes, and at locations where the conduit makes directional changes, or as directed. The type of delineator must be approved. This work will not be paid for directly, but will be considered subsidiary to this item.

Supply "Underground Utility" and "Fiber" warning stickers as approved by the engineer. One sticker will be placed on each side of the delineator. The cost of the warning stickers and any work required will not be paid for directly, but will be considered subsidiary to this item.

Install, for each "ITS" conduit run, a metallic underground warning tape, as detailed in the plans. This warning tape will be imprinted with "CAUTION BURIED FIBER OPTIC CABLE." This will not be paid for directly, but will be considered subsidiary to Item 618: Conduit. The warning tape does not need to be installed when conduit is bored under a roadway section or landscaped area. At locations where the Contractor chooses to bore conduit underground, in areas where trenching methods can be used, the Contractor will install the metallic underground warning tape.

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Highway: IH 30, etc.

Items 620, 6014:

The equipment grounding conductor shall be a bare wire or identified with continuous green colored jacket insulation. Grounded conductors (Neutral) shall be identified by a continuous white colored jacket. Ungrounded conductors (Hot) in a 120/240v system shall be identified by each pole or leg. For 240-volt branch circuit fed from 120/240 source, ensure one leg is identified by a continuous black colored jacket and the other leg by a continuous red colored jacket. White phasing tape is not allowed to be used to signify a neutral on any conductor 6 AWG and smaller as per TxDOT specifications and the NEC.

Extra cable length will be included in each run, to provide adequate slack, at each ground box, camera pole, communications hub, dynamic message sign, or radar vehicle sensing device, as determined.

All communication cables will be color-coded consistently, or permanently labeled, between all connections and splices, to ensure immediate identification. The Contractor will submit a chart or list identifying all cables, in a logical and sequential manner prior to installation, for the Engineer's approval.

The single mode fiber optic cable will be installed continuous, without splices, from the communications hub to hub, except at ground box shown on plans; No splicing of fiber optic cable will be permitted in ground boxes unless shown on the plans.

All fiber optic trunk cables and the insulated tracer wires will be installed in multiduct conduit. Electrical conductors will be installed in one three-inch conduit and any non-fiber communications cables are to be installed in the second three-inch conduit.

Insulated tracer wire shall have Orange colored insulation and shall be labeled as a "Tracer Wire" in each Satellite Building, Hub Cabinet, and CCTV Cabinet with one exception: CCTV Cabinets located near Hub Cabinets.

Fiber Optic Patch Panels will not be paid for separately and shall be considered subsidiary to Item 6014.

Item 624:

All "ITS" ground boxes will be constructed with aprons.

Submittal literature will be provided to the Engineer prior to installation.

Concrete removal required for installation of ground boxes will be subsidiary to Item 624.

Where existing Type 1 and Type 2 ground boxes have tack-welded lids, the Contractor shall break the weld and re-weld the lids in place at the completion of work in the ground box. This work will not be paid for separately, but will be considered subsidiary to this item.

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Each Type 1 or 2 ground box lid shall be tack-welded shut at the completion of work in the ground box.

Each Type A or D ground box shall be installed 12 inches below grade and covered with excavated material. The Contractor will be responsible for providing the latitude and longitude of each ground box.

Item 628:

Contact the appropriate utility company during the first three weeks of the project lead-time period to allow adequate time for any necessary utility adjustments, transformer installation, etc.

Label the service enclosures indicating service address as well as all required information as shown on the Electrical Detail (ED) standard sheets. Labeling shall be silk screening or other acceptable method. This work will not be paid for directly, but is subsidiary to this Item.

When concrete for service pole foundations is required, use Class A in accordance with Item 421, "Hydraulic Cement Concrete", except consider the concrete subsidiary to Item 628 for payment purposes.

Use only white insulated wire for neutral wire.

Bill the electrical service power usage to the Texas Department of Transportation.

Item 1122:

Install Biodegradable Erosion Control Logs as directed by the Engineer.

Item 6009: ITS System Support Equipment

The following items will be provided to TxDOT to be used as operational support equipment. This equipment will be the same make and model as the equipment installed in the field. These items will be paid for with the lump sum unit bid price for system support equipment.

(1 Ea) - CCTV Field Equipment (complete set to include camera, pressured camera housing, zoom lens, pan/tilt unit, camera control receiver, and camera control cable)

(1 Ea) – Radar Vehicle Sensing Device (complete system to include an RVSD unit, all mounting hardware and cabling necessary to provide communications and power from the pole mounted cabinet)

(1 Ea) – Fiber Optic Video and Data Transmitter

(1 Ea) – Fiber Optic Video and Data Receiver

(4 Ea) – Fiber Optic RS-232 Data Modems (Single mode)

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Item 6016: ITS Field Equipment Cabinet

RVSD equipment cabinet shall meet the requirements for a CCTV cabinet.

Item 6025: CCTV Field Equipment

The cables and harnesses will enter at the bottom of the CCTV housing. The CCTV will have gaskets, at entry points, to prevent moisture entry.

Item 6229: Camera Pole Structure with Cabinet

Mount the CCTV equipment cabinet to the camera pole structure as shown on the plans.

RM conduit from the bottom of the equipment cabinet to the ground connection to PVC conduit is considered subsidiary to this item.

Item 8172: Communication Cabinet

The equipment cabinet shall be located as shown on the plans or as directed, and will contain the following subassemblies:

1. Three point latch and lock system
2. 19 inch rack

All terminal blocks will be low profile nickel plated copper alloy with stainless steel captive screws. Insulating material will be molded glass reinforced thermoplastic engineering resin. Jumper bars will be hard rolled copper plated to prevent corrosion and unable to be removed from terminal block. Current and voltage ratings will be 30 amps and 600 volts.

Item 8368: Preparation of Existing Conduits, Ground Boxes, or Manholes:

The Contractor is responsible for damage done to existing cable during the preparation of existing conduit. The Contractor will repair or replace damage done to existing cables. The repairing or replacing of damage to existing cables will be done at the expense of the Contractor, and to the satisfaction of the Engineer.

Item 8741: RVSD Pole Assembly

RM conduit from the bottom of the equipment cabinet to the ground connection to PVC conduit is considered subsidiary to this item.