SUBJECT: PLANS AND PROPOSAL ADDENDUMS
PROJECT: F 2023(167) CONTROL: 0047-04-031
COUNTY: COLLIN
LETTING: 12/02/2022
REFERENCE NO: 1118

PROPOSAL ADDENDUMS

_ PROPOSAL COVER
X BID INSERTS (SH. NO.: ALL)
X GENERAL NOTES (SH. NO.: ALL)
_ SPEC LIST (SH. NO.:)
_ SPECIAL PROVISIONS:
ADDED:

DELETED:

_ SPECIAL SPECIFICATIONS:
ADDED:

DELETED:

X OTHER: PLAN SHEET AND OTHER CHANGES

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

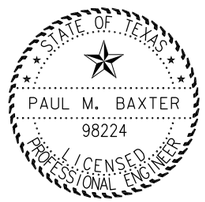
***** BID INSERTS *****

REVISED QUANTITIES FOR THE FOLLOWING BID ITEMS:
423-6004, 464-6008, 464-6009, 512-6049, 512-6057, 512-6058
450-6103, 260-6012, 400-6005

***** GENERAL NOTES *****
TABLE 2 ITEM 260 RATE REVISED

***** PLAN SHEETS *****
SHEET 0015, 0015A-0015K, 0016, 0016A-0016F, 0017, 0022, 0023, 0024, 0025, 0042, 0043, 0109 ARE REVISED

INDEX OF SHEETS



* THE STANDARD SHEETS SPECIFICALLY IDENTIFIED ON THIS SHEET HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

SIGNATURE OF REGISTRANT & , P.E. DATE 11/15/2022

*** THE STANDARD SHEETS SPECIFICALLY IDENTIFIED ON THIS SHEET HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

SIGNATURE OF REGISTRANT & , P.E. DATE 10/26/2022

10/26/2022 1:26:05 PM

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CivilTech Engineering, Inc.
11821 Telge Road
Cypress, Texas 77429
PH: (281) 304-0200 - FX: (281) 304-0210
Firm Registration No. F-382

SH 5

INDEX OF SHEETS

SHEET 1 OF 2

DSN: DC	FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
CK: CW	6	SEE TITLE SHEET		2
DRN: DA	STATE	DIST.	COUNTY	
APPVD: PB	TEXAS	18	COLLIN	
CONT.	SECT.	JOB	HIGHWAY NO.	
0047	04	031	SH 5	

SPECIFICATION DATA

Table 1: Soil Constants Requirements				
Item	Description	Plasticity Index		Note
		Max	Min	
132	EMBANKMENT (FINAL) (XX) (TY C1)	40	8	1
132	EMBANKMENT (FINAL) (XX) (TY C2)	25	8	2

Note 1: Material excavated from the project must meet the PI requirements when used in the top 10 feet of embankment that supports the pavement structure or other locations shown in the plans. Do not use shale and obtain approval to incorporate shaley clay produced by the construction project.

Note 2: Use as a non-select embankment backfill as defined under Item 423.2.4.1. Use as an embankment to backfill behind abutments to the extent of the approach slab or to backfill areas enclosed by an abutment and / or retaining walls or other locations as shown in the plans.

Table 2: Basis of Estimate for Permanent Construction					
Item	Description	Thickness	Rate		Quantity
162	Block Sod	N/A	See Specifications		52,633 SY
164	Drill Seed (Perm) (R) (C/S)	N/A	See Specifications		51,343 SY
166 *	Fertilizer (12-6-6)	N/A	500	Lbs./Ac	5.37 Ton
168	Vegetative Watering (Warm)**	N/A	12	MG/Ac/Day	15,474 MG
260 260 260	Hydrated Lime (slurry) Commercial Lime Slurry Quick Lime (slurry)			4% by wt.	1,898 Ton
3077	SP MIXESSP-BPG64-22 SP MIXESSP-CPG64-22	See Plans See Plans	110 110	Lbs./SY/In Lbs./SY/In	35,264 Ton 4,466 Ton
3077	Tack Coat (Undiluted Application Rate)		0.12	Gal/SY	963 Gal

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*For contractor's information only
**Use Summer rate for calculation, adjust for actual field conditions/temperatures as necessary. See Vegetation Establishment Plan Sheet for estimated daily rates.
***Portland Concrete Cement

Note: (1) Base material weight based on 1.50 Ton/CY (dry- compacted)
(2) Asphalt weight based on 110 Lbs./SY/In
(3) Subgrade weight based on 1.35 Ton/CY (dry-compacted)

Table 3: Basis of Estimate for Temporary Erosion Control Items				
Item	Description	Rate		Quantity
164	Drill Seeding (Temp) (Warm or Cool)	See Specifications		51,343 SY
166*	Fertilizer (12-6-6)	500	Lb/Ac	2.65 Ton
168	Vegetative Watering (Warm)**	12	MG/Ac/Day	7,631 MG

*For Contractor's Information Only.
**Use Summer rate for calculation, adjust for Actual Field Conditions/Temperatures as Necessary. See Vegetation Establishment Sheet for estimated daily rates.

GENERAL

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 63.08 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).

This project required permits with environmental resources agencies as outlined in the plan set Environmental Permits, Issues and Commitments (EPIC) Sheet. There is a high probability that an environmentally sensitive area could be encountered on the contractor designated Project-Specific Locations (PSL) for this project (haul roads, equipment staging areas, borrow pits,

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disposal sites, field offices, storage areas, parking areas, etc.). Item 7.6 “Project-Specific Locations”, provides a listing of regulatory agencies that may need to be contacted regarding this project.

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

Contractor questions on this project are to be addressed to the following individual(s):

Jennifer Vorster Jennifer.Vorster@txdot.gov
Gerald Waltman Gerald.Waltman@txdot.gov

Contractor questions will be accepted through email, phone, and in person by the above individuals.

All contractor questions will be reviewed by the Engineer. Once a response is developed, it will be posted to TxDOT’s Public FTP at the following Address:
https://ftp.dot.state.tx.us/pub/txdot-info/Pre-Letting%20Responses/

All questions submitted that generate a response will be posted through this site. The site is organized by District, Project Type (Construction or Maintenance), Letting Date, CCSJ/Project Name.

Paper copies of cross-sections may be produced by using the provided .pdf file located on the above FTP Website at the bidders' expense and at copying companies. This data is for non-construction purposes only and it is the responsibility of the prospective bidder to validate the enclosed data with appropriate plans, specifications and estimate for the project(s).

The following standard detail sheets have been modified*:*
TS-FD-12(MOD)

Item 2:
This project will use A+B bidding.

Item 5:
Place survey monuments, provided by the department, at points indicated and as detailed in the plans or as directed. Furnish surface coordinates and the elevation of the set monument and an azimuth from the monument to some prominent physical feature, preferably another survey monument on the project. This work will not be paid for directly, but will be considered subsidiary to the various bid items.

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 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

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minimum of 48 hours in advance of excavation. The Contractor is liable for all damages when utilities are damaged due to Contractor’s negligence including, but not limited to, repair or replacement at the Contractor’s expense.

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.

Place construction stakes/station markings at intervals of no more than 100 feet or as directed by the Engineer. Place stakes and markings so as not to interfere with normal construction operations.

ITEM 6: CONTROL OF MATERIALS

To comply with the latest provisions of Build America, Buy America Act (BABA Act) of the Bipartisan Infrastructure Law, the contractor must submit a notarized original of the TxDOT Construction Material Buy America Certification Form for all items classified as construction materials. This form is not required for materials classified as a manufactured product.

Refer to the Buy America Material Classification Sheet for clarification on material categorization.

The Buy America Material Classification Sheet is located at the below link.
https://www.txdot.gov/business/resources/materials/buy-america-material-classification-sheet.html for clarification on material categorization.

Buy America material classification sheet
The Buy America material classification sheet categorizes materials as iron and steel, construction material, or manufactured product on a per item basis.

Item 7:
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.

Holiday restrictions – The Engineer may decide that no lane closures or construction operations shall be allowed during the restricted periods listed in the following holiday schedule. TxDOT has the right to lengthen, shorten, or otherwise modify these restricted periods as actual, or expected, traffic conditions may warrant. Working days will not be charged for these restricted periods. No additional compensation will be allowed for these closures (i.e., overhead, delays, stand-by, barricades or any other associated cost impacts).

- New Year's Eve and Day (5 am on December 31 thru 10:00 pm January 1)
- Easter Holiday weekend (5 am on Friday thru 10:00 pm Sunday)
- Memorial Day weekend (5 am on Friday thru 10:00pm Monday)
- Independence Day (5 am on July 3 thru 10:00 pm on July 5)
- Labor Day weekend (5 am on Friday thru 10:00 pm Monday)
- Thanksgiving Holiday (5 am on Wednesday thru 10:00 pm Sunday)
- Christmas Holiday (5 am on December 23 thru 10:00 pm December 26)

No significant traffic generator events identified.

Item 8:
This Project will be a Six-Day Workweek in accordance with Article 8.3.1.2.

Critical Path Method (CPM) schedule in P6 format will be required for this project. Submit baseline schedule and obtain approval prior to beginning construction. The Estimate will be held if monthly schedule update is not submitted.

The minimum number of working days allowable for bid (B part) is 624.

The maximum number of working days is 780 days was calculated using a conceptual time determination schedule that assumed generic resources, production rates, sequence of construction and average weather conditions. The time determination schedule is provided for informational use only and is not intended for bidding or construction purposes.

Substantial completion of the contract is defined as the point in time at which the roadway and the cross streets are in their final geometric configuration and traffic is following the lane arrangement as shown in the plans for the finished roadway. All pavement construction is complete with traffic control devices and pavement markings in their final position.

The daily road-user cost incentive/disincentive for substantial completion of the project is $5,000 per day. The road user cost disincentive shall be limited to a maximum of 365 working days of damages charged to the contractor. The early substantial completion of work incentive shall be limited to a maximum of 120 calendar days. The road-user cost disincentive deductions will be in addition to any contract administration liquidated damages. The number of days for final completion, excluding vegetation and landscaping maintenance, will be 28 calendar days after the substantial completion of the project.

Item 100:
Remove the existing roadway small signs, delineators and object markers as shown on the plans, or as directed, during construction within the right of way. Small sign, delineator and object marker removals are subsidiary to this Item.

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The limits of preparing right of way will be measured from Sta. 118+82.75 to Sta. 286+00.00 along the centerline of construction.

Item 104:
In those areas where the pavement is not to be overlaid, provide a smooth surface after the curb removal. Planing or grinding is considered an acceptable method at these locations. Measurement and payment is in accordance with this item.

Sawing of concrete is not paid for directly, but is considered subsidiary to this item.

Items 105:
Saw existing asphalt along neat lines where portions are to be left in place temporarily or permanently. Sawing is not paid for directly, but is subsidiary to this item.

Take possession of recycled asphalt pavement from the project and recycle the material.

Properly dispose of unsalvageable material at your own expense.

Item 110:
Excavated shale is not an acceptable material for embankment.

Items 110 and 132:
Scarify and loosen the excavated areas, unpaved surface areas, except rock, to a depth of at least 8 inches and compact in accordance with the specifications.

Excavation and embankment for driveways, sleeper slabs, alleys and intersections will not be paid for directly, but will be considered subsidiary to these items.

Item 132:
Excavated material from the project site has not been determined to be suitable for embankment. The bidder assumes all risk for the use of excavated materials for embankment and is expected to meet all material requirements for embankment regardless of the source.

Perform Tex-106-E (Plasticity Index) by an approved laboratory on excavated soils from sources outside right of way when used in roadway embankment. Provide the test results at no expense to the department. The engineer will sample and test soils produced by the construction project for specification requirements or material sources specified in the plans.

Earth embankment Type C1 and C2, are mainly composed of material other than shale. Furnish material that is free from vegetation or other objectionable material and that conforms to the requirements of Table 1 (Sheet A). If necessary, treat material with lime slurry in accordance with Item 260, "Lime Treatment (Road-Mixed)" in order to meet these requirements. Use Tex-121-E, figure 1, page 4 to calculate the amount of lime required. When lime treated subgrade is specified, 3000 PPM is the maximum allowed sulfate content in the top 3 feet when material comes from borrow source. Follow recommendations of 260.4.4 for mixing and mellowing. The engineer will test material placed or excavated to a depth of one foot below and

laterally to one foot outside the proposed treatment limit. Lime treatment of this material will not be paid for directly, but will be considered subsidiary to this item.

Do not use shaley clays in embankment unless approved in writing.

Use embankment material Type C2 described in Table 1 “Soil Constants Requirements” for embankments behind bridge abutments to the extent of the bridge approach slabs, and other embankments enclosed by an abutment and / or retaining walls.

Item 160:
Sequence construction operations to salvage topsoil from one location and spread on areas ready to receive topsoil. Keep stockpiling of topsoil to a minimum.

Use fertile clay or loam from the project site not more than six inches below natural grade as topsoil.

Item 161:
Provide tickets representing quantity of compost delivered to site.

Item 260:
Furnish and distribute MS-2 smoothly and evenly at the rate of 0.20 gallons per square yard to cure lime, as directed.

Provide Commercial Lime Slurry, Hydrated Lime, or Quicklime and apply lime by slurry placement method.

Item 301:
Provide liquid antistripping agents unless otherwise directed. Add the minimum dosage determined by the manufacturer or higher dosage determined by design requirement and try subsequent trials at 0.25% increments.

Item 320:
The use of windrow pick-up equipment is allowed except on the first course of roadway material placed over the subgrade.

Item 360:
Use of multiple piece tiebars will be required. Provide chairs for multiple piece tiebars, threaded connectors or other adequate devices, used in concrete paving, or tie them to the pavement reinforcing steel. If approved by the engineer for specific areas, in lieu of multiple piece tiebars, drill holes into the pavement and grout straight tiebars in place with epoxy. Use a non-impact, rotary core drill to prevent damage to the pavement unless otherwise directed. Clean the drill holes and then completely fill with epoxy before inserting the tiebar. Do not bend the tiebars or insert them into plastic concrete without the approval of the engineer.

Provide curbs monolithically constructed with the concrete pavement. If continuous monolithic curb has to be temporarily omitted for any reason, provide dowelled curbs in the proposed areas, as detailed in the plans, and apply an approved epoxy resin to the pavement to receive

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the curb as directed. This work and materials will not be paid for directly, but is considered subsidiary to this item.

If asphalt curing is used, cure the concrete pavement with MS-2.

Stockpile the concrete aggregates at the plant site.

Provide pavement widening joints, as detailed in the plans, at all locations where concrete pavement is placed adjacent to existing concrete pavement. Installation of these joints is not paid for directly, but is considered subsidiary to this item.

Payment for furnishing and installing the pre-molded expansion joint material between the retaining walls and concrete pavement is not paid for directly, but is considered subsidiary to this item.

Provide a curing machine equipped with rubber tires, or other acceptable arrangement, so that the machine will span the pavement and monolithic curb.

Curb transition is paid for as Type II curb.

The installation of curb openings is not paid for directly, but is considered subsidiary to this item.

Place construction, sawed and contraction joints in accordance with the pavement detail sheet and as directed. Joint locations, other than as shown on the plans, are subject to approval.

Pavement leave outs are required on this project as necessary to provide for traffic at driveways and side streets as shown in the plans or as directed. The cost of providing these leaveouts, including the construction of a suitable crossover connection at each site, is not paid for directly but is considered subsidiary to this item.

If a traveling form paver is used, provide one equipped with an electronically operated horizontal control device.

Use "mechanical steel placing equipment” at the discretion of the engineer.

Provide Class HES concrete at the locations shown on the plans. Design Class HES to meet the requirements of Class P and a minimum average flexural strength of 450 psi or minimum average compressive strength of 3200 psi in 24 hr.

Supply the Engineer with a list of certified personnel and copies of their current ACI certificates before beginning production and when personnel changes are made. Supply hard copies of calibration reports for testing equipment when required by the Engineer.

If more than 30% of an area in any 1000-Ft section of roadway requires grinding, action will be taken by the Contractor to make that 1000-Ft full width section uniform without changing ride quality, compromising quality of pavement and decreasing skid resistance. Approved blasting method or other method approved by the Engineer will be performed at the Contractor’s expense.

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Item 400:
Structural Excavation is not paid for directly but is considered subsidiary to pertinent Items.

When placing concrete storm drain pipe on slopes of greater than 10 percent, provide cement stabilized backfill to a depth shown on the plans.

Item 416:
Provide a minimum of one core per bent, regardless of placement method.

Drilled shafts shall be drilled and poured on the same day unless directed by the engineer.

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.

Traffic signal pole foundations will be paid for once regardless of extra work caused by obstructions.

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

Item 421:
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.

Provide sulfate resistant concrete for all drilled shafts.

Item 423:
For concrete block retaining walls, provide a system from one of the following approved suppliers:

The following Concrete Block Retaining Wall systems are approved for unrestricted use on TxDOT projects:

Name	Manufacturer	Phone
Allan Block Retaining Walls	Jewell Concrete 400 Jewell Drive Waco, TX 76712	(254) 772-3440

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Name	Manufacturer	Phone
Anchor Wall System (Diamond Pro, Diamond Pro PS, Vertica)	Jewell Concrete Products, Inc 2561 Southwest Grapevine Parkway, #200 Grapevine, TX 75061	(817) 235-2914
Keystone Hardscapes (Compac III, Regal Stone Pro)	Pavestone Company P.O. Box 1868 Grapevine, TX 76051	(817) 481-5802
Mesa Retaining Wall System	Tensar International Corporation 2500 Northwinds Parkway, Suite 500 Alpharetta, GA 30009	(770) 344-2090
Redi-Rock Retaining Walls	Redi-Rock International, LLC 05481 US 31 S. Charlevoix, MI 49720	(866) 222-8400
Stone Strong Systems	Stone Strong, LLC 13460 Chandler Road, Suite 100 Omaha, NE 68138	(877) 501-5652

Restricted Status (Phase One)

The following Concrete Block Retaining Wall systems are on restricted status*:

Name	Manufacturer	Phone
ReCon Wall Systems	ReCon Wall Systems, Inc. 7600 W. 27th St., #229 St. Louis Park, MN 55426	(952) 922-0027

*Systems on restricted status have been reviewed and approved by TxDOT, but have not yet been approved for unrestricted status according to DMS-4800. These systems are expected to perform acceptably and should be considered for use on projects.

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Note: TxDOT policy does not allow the use of restricted systems on projects with:

- over 50,000 square feet of retaining wall,
- walls over 25 feet tall, or
- walls supporting or immediately adjacent to interstate highways.

Contact Us

TxDOT Bridge Division
(512) 416-2359

All retaining walls will have a uniform texture and appearance.

Unless otherwise noted in the plans, the top of the leveling pad is located 2 feet below the proposed ground.

Square foot surface area of retaining wall is measured from the top of retaining wall to the top of the leveling pad. Footing adjustments made to accommodate the available optional retaining walls are not measured.

Unless otherwise shown on the plans, provide Type AS backfill as defined under this item for permanent MSE or concrete block (CB) walls not subject to inundation. Unless otherwise shown on the plans, provide type DS backfill as defined under this item for permanent MSE or CB walls subject to inundation.

Supply drainage aggregate meeting the requirements of this item for use as filter material with the retaining wall.

Cement-Stabilized Backfill (CSB) is not permitted.

Unless otherwise noted on the plans, provide flowable backfill meeting the requirements of Item 401 between the back of panels and inlets or drainage pipes where the required compaction can not be achieved. Flowable backfill used for this purpose is subsidiary to this item.

Provide earth reinforcements with a minimum length of 8’ or longer as required by RW(MSE)-DD. Earth reinforcement length is measured perpendicular to the wall. Adjust skewed earth reinforcements as necessary of obtain required length.

Submit design calculations supporting the details necessary to incorporate coping, railing, inlets, drainage, electrical conduits and any additional necessary features.

The contractor has the option of constructing any of the types of retaining walls for which details and specifications are included in the plans. Footing adjustments made to accommodate the available optional retaining walls are not measured. Regardless of option or options chosen, use the same fascia pattern throughout the entire project, including cast in place full height retaining walls or retaining wall type abutments.

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Submit detailed drawings depicting the patterns and matching of precast with cast-in-place for approval.

Unless otherwise shown on the plans, form the map of Texas emblem into a wall panel next to each bridge abutment. Engineer approval of the exact location of each emblem is required. The cost of forming emblems is considered subsidiary to this item. Inset the map of Texas a minimum of ¾ inch into the face of the panel, and provide a smooth finish with an engineer approved contrasting color.

At contractor's expense, repair all damage to the precast units (such as chips) as required to match the fascia pattern.

Use Embankment Type C2 as non-select embankment backfill as defined under Item 423.2.4.1. For non-select embankment fill behind retaining walls provide and install fill in accordance with Item 132, Type C2.

For cut walls, the backfill between the select fill zone and the existing ground shall be either select material as required for the select fill zone or backfill meeting or exceeding the requirements of Item 132, type C2. Place material in accordance with Item 132, Type C2 requirements. If existing ground is laid back (i.e. not vertical), the lay back shall be done as a series of equal height benches so as to prevent the formation of a smooth surface at the material interface.

Avoid distinct vertical joints between select backfill and embankment (Non-Select) backfill as required by Section 423.3.4. This may be conveniently done by providing a zone of material behind the strap zone (1’ min width) in which alternating lifts of select and non-select materials are interlaced.

Items 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 449:
Use Thomas & Betts Kopr-Shield, MG Chemicals #846, MG Chemicals #8463, NYOGEL #756G, Pro-Shield #7308, Cho-Lube #4220, or other approved electrically conducting lubricant compound.

Item 464:
The concrete collars and the connections of pipes to existing or proposed concrete boxes or pipe will not be paid for directly but will be considered subsidiary to the various bid items.

At locations where storm drains dead-end, plug with a concrete plug of a thickness equal to 1 ½ inches per foot of diameter of pipe with a minimum thickness of 3 inches. The cost of the plugs shall be included in the unit price bid per foot of the various storm drain pipes.

Item 465:
All manholes, junction boxes and inlets will require inverts unless otherwise directed.

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Item 496:
Concrete pavement removed as a result of removing the inlets will not be paid for directly but will be considered as subsidiary to Item 496.

Inlet grates and manhole covers become the property of the contractor for disposal.

Item 500:
Material On Hand (MOH) will not be used in calculating partial payments for Mobilization.

Item 502:
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.

Access will be provided to all business and residences at all times. Where turning radii are limited during phased construction at intersections, provide all weather surfaces such as RAP or base in turning movements to accommodate and to protect the traffic from edge drop-offs. Materials, labor, maintenance and removal for these temporary accesses and radii will not be paid for directly but will be considered subsidiary to the various bid items.

Provide written proposed lane closure information by 1:00 pm on the business day prior to the proposed closures. Do not close lanes when this requirement is not met.

When excavation is required next to a pavement lane carrying traffic and the widening is not completed by the end of the work day, backfill against the edge of the pavement with at least a 3:1 slope using an acceptable material to support vehicular traffic. Carefully remove and dispose of this material when work resumes. Backfilling pavement edges, and the materials required for the work will be subsidiary to this item.

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

Provide rectangular shape (CW12-2P) Temporary Clearance Signs on all bridges where the existing vertical clearance has changed. Install Signs to the satisfaction of the Engineer prior to opening to traffic. Plywood sign blanks will have minimum dimensions of 84" X 12". Work performed and materials are subsidiary to this item.

Do not commence work on the road before sunrise. 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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As approved by the Engineer, provide uniformed off duty police officers and squad cars during lane or ramp closures, night time work or other situations that indicate a need for additional traffic control to protect the traveling public or the construction workforce. Provide documentation such as payroll, log sheets with signatures and badge number, or invoices from the government entity providing the officers for reimbursement. Complete the weekly tracking form provided by the department and submit invoices that agree with the tracking form for payment at the end of each month approved services were provided. Reimbursement will not be made for coordination fees charged by any party.

Limit lane closures along SH 5 to the hours between 9:00 am and 3:30 pm. Work in other areas of the project is not restricted to this time frame.

Traffic Control Plans with Lane Closures causing backups of 20 minutes or greater in duration will be modified by the Engineer up to and including removal of the lane closure and adjustment of lane closure times.

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

Additional lanes may be closed, started earlier, or extended later with written permission of the Engineer.

Item 506:
Take all practicable precautions to prevent debris from being discharged into the Waters of Texas or a designated wetland. Install Best Management Practices before demolition begins and maintain them during the demolition. Remove any debris or construction material that escapes containment devices and are discharged into the restricted areas, before the next rain event or within 24 hours of the discharge.

If temporary construction stream crossings are allowed under a Nationwide Permit, submit in writing for approval the type and location of each temporary stream crossing. Use temporary bridges, timber mats, or other structurally sound and non-eroding material for temporary stream crossings. A temporary culvert crossing will consist of storm sewer pipes and 4- to 8-inch nominal size rock. Temporary stream crossings must not cause more than minimal changes to the hydraulic flow characteristics of the stream, increase flooding, or cause more than minimal degradation of water quality. Remove the temporary stream crossings in their entirety and return the affected areas to their pre-existing elevation. All work and materials use for temporary construction stream crossings will not be paid for directly but are subsidiary to pertinent Items.

Provide SW3P Signs. Obtain from the Engineer a copy of the project's completed TPDES Storm Water Program Construction Site Notice and Contractor Site Notice. Laminate the sheets and bond with adhesive to 36" X 36" plywood sign blanks. Ensure the sheets remain dry. Apply Type C Blue reflective sheeting as the background and add the text "SW3P" in 5" white lettering, centered at the top. Attach the signs to approved temporary mounts and locate at each of the project limits just inside the right of way line at a readable height or as directed by the Engineer. If the sign cannot be placed outside the clear zone, it must adhere to the TMUTCD. SW3P

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signs, maintenance, and reposting (for replacement or as needed to ensure readability) will be subsidiary to Item 502.

Concrete Washouts are required per the CGP. The Concrete Washout Area(s) structural controls must consist of temporary berms, temporary shallow pits, and/or temporary storage tanks to prevent contaminated runoff and must be lined as to prevent contamination of underlying soil. Ensure pits properly maintained including removal of concrete as not to allow over flow. The location(s) of washout area will be approved by the Engineer. When washout pits are no longer needed, they will be removed and area will be restored to original condition. This work, materials and labor will not be measured or paid for directly but will be subsidiary to Item 506, “Temporary Erosion, Sedimentation, and Environmental Controls.”

Item 508:
Testing of materials used in the construction of a temporary detour may be waived when approved by the Engineer.

Item 529:
Provide grooved joints at 10-foot intervals and ¾ inch expansion joint material for doweled curb at the same locations as on the existing pavement.

For Curb and Gutter sections, provide grooved joints at 10-foot intervals and ¾ inch expansion joint material at a maximum of 50-foot centers and at all radius points and inlets.

Curb and Gutter transitions will be paid for by the foot at the unit price for the corresponding curb or curb and gutter section.

Saw joints at the same location as on the existing pavement.

Item 531:
Joint sealant is required when shown in the plans. This work will not be paid for directly but will be considered subsidiary to this Item.

Item 556:
The unit price bid per linear foot of "pipe underdrain" shall include the cost of making connections to storm sewer lines.

Place bell and spigot type pipe with an open joint of approximately ¾ inch.

In the event that Type 5 Underdrain Pipe is bid, make the connection as shown in the plans. The cost of making the connection will be considered subsidiary to this item.

The requirements for decantation of filter material are deleted for this project.

Item 585:
Use Surface Test Type A on all intersections and driveways.

Use Surface Test Type B pay adjustment schedule _2__ on the travel lanes.

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Item 618:
Place conduit under railroad tracks to maintain a minimum of 42" below the bottom of the ties.

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.

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

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.

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

Furnish and install a flat, high tensile strength polyester fiber pull tape in conduit runs in excess of 50 feet or for future use and protected with standard weather-tight conduit caps, as approved. Acceptable products include Garvin # PT-1250-3K, ComStar PUL 1250P3K, Ideal Part No. 31-315 or equal as approved by the Engineer. This work will not be paid for directly, but is subsidiary to this Item.

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

Seal all conduit ends with a permanently soft, non-toxic duct seal. Use a duct seal that does not adversely affect other plastic materials or corrode metals.

Where sidewalk is removed to install trenched conduit, replace sidewalk to match existing material. This work will be subsidiary to Item 618 except where shown otherwise in the plans.

2” Schedule 80 PVC will be used at the power pole to supply electricity to underground services.

Item 620:

The equipment grounding conductor shall be identified by a continuous green colored jacket insulation or bare wire. 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.

Item 624:

Slack conductors required by Standard Sheet ED(3)-14 will be subsidiary to Item 624.

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

Item 627:

Use the timber pole heights, as shown on the plans and in the material summary, for bidding purposes only. Coordinate pole locations, and make field measurements before construction to ensure a vertical clearance of 17 to 19 feet from the highest point on the roadway surface to the span. Except for supplemental nearside signal heads, all signal heads must be installed at least 40' from the stop line. If field adjustments result in the nearest signal head being more than 180' from the stop line, install a supplemental nearside signal head as directed by the engineer. Determine the field measurements and elevations from the actual field location of the poles, considering all above and below ground utilities and existing roadway elevations.

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.

For new Oncor supplied electrical services the Contractor shall submit an online request at ONCOR.com by following the steps below:
Select Construction and Development tab at top of screen.
Scroll down to New Construction and select Learn More.
Select the Start Request icon under the Commercial and Industrial project type.
Select the One Single Building Facility tab and fill in all required information.
Submit the request. An ONCOR representative will contact you within a few days.

The Meter Base shall be mounted facing the roadway and the service enclosure shall be mounted on the opposite side of the service pole or pedestal.

The Contractor shall obtain the street address of the new electrical service directly from the applicable City.

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.

A Licensed Master Electrician shall oversee the installation of all electrical services.

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

On the outside lower front of each electrical service meter base cover, install a 12 gauge minimum thickness stainless steel, aluminum or brass placard. The placard shall be engraved or stamped with the numeric portion of the street address and permanently affixed to the cover with exterior rated adhesive so as not to interfere with the operation of the latch. This work will not be paid for directly, but is subsidiary to this Item.

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Items 644:

Provide two (2) sets of shop drawings for signs. The shop drawings shall conform to the details shown on the plans. The shop drawings shall show the details of the panels, wind beams, stiffeners, joint backing plates, splices, fasteners, brackets, and sign support connections. The shop drawings shall show letter types and sizes, interline spacing and message arrangements.

Affix a sign identification decal to the back of all signs in accordance with Item 643.

Prior to taking elevations to determine lengths for fabrication of sign posts and/or sign support towers, obtain verification of all proposed locations.

All sign mounts shall have a clamp base system for all small roadside sign assemblies.

Item 662 and 672:

Black adhesive will be used on asphalt pavements and white adhesive will be used on concrete pavements.

Item 677:

A water blasting method approved by the Engineer will be the only method allowed for the removal of permanent and temporary pavement markings except on a sealcoat surface. A 2 foot wide sealcoat will be required on sealcoat surfaces to eliminate permanent and temporary pavement markings.

Item 680:

Requirements for this Item include the following work, all of which are subsidiary to this Item:

1. Notify the Traffic Projects Office at DAL_TPO@txdot.gov one week before beginning any work involving traffic signals. Supplement email correspondence with the District Signal Maintenance Office at (214)320-6682 and Construction Office at (214)319-6406.
2. Provide submittal literature for all traffic signal equipment before installation.
3. Furnish and install a new controller (eight phase NEMA TS 2 Type 1) and cabinet (NEMA TS 2 Size 6, 16 position load bay), meeting the requirements of Departmental Materials Specifications DMS-11170. Provide detector panel toggle switches that additionally permit the user to disconnect the detector. Provide new MMU with Ethernet port.
4. Deliver the cabinet, controller, and accessories (with all cabinet components completely connected and securely strapped down) to the District Signal Shop, 4777 E Hwy 80, Mesquite, for testing. Notify the District Signal Shop two working days before delivery at (214)320-6682.
5. Install the controller cabinet in an orientation as directed.
6. Connect all field wiring to the controller assembly. The District will assist in determining how the detection cables are to be connected, and will also program the controller for operation, hook up the malfunction management unit (MMU) or conflict monitor, detector units, and other equipment, and turn on the controller. Pick up the signal cabinet from the District Signal Shop.

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Have a qualified technician and a representative from the controller supplier on the project site to place the traffic signals in operation.

7. Furnish and install all sign panels for mounting on signal poles, mast arms, and span wires. Fabricate the sign panels in accordance with Item 636, and mount with Astro-Sign Brac, Signfix aluminum channel, or equal as approved by the Engineer. Submit five (5) sets of shop drawings for street name signs.
   Install the sign panels supplied for mounting on signal poles, mast arms, and span wires. Furnish and install all other signs in accordance to Item 636. Furnish all mounting hardware for all signs. Mount signs with Astro-Sign Brac, Signfix aluminum channel, or equal as approved by the Engineer.
8. Provide 250W Equivalent LED Fixtures with 240 volt electronic LED drivers as shown on the Material Producers List.
9. Remove the existing stop sign panels (or assemblies) after the traffic signals are in operation.
10. Install the emergency vehicle preemption equipment supplied by the City of Melissa and the City of Anna.
11. Have a qualified technician on the project site to place the traffic signal in operation.
12. Use qualified personnel to respond to and diagnose all trouble calls during the thirty-day test period. Repair any malfunction to Contractor-supplied signal equipment. Provide to the Engineer a local telephone number, not subject to frequent changes and available on a 24-hour basis, for reporting trouble calls. Response time to reported calls must be less than 2 hours. Make appropriate repairs within 24 hours. Place a logbook in the controller cabinet and keep a record of each trouble call reported. Notify the Engineer of each trouble call. Do not clear the error log in the conflict monitor or MMU during the thirty-day test period without approval.
13. Furnish a spare controller (eight-phase NEMA TS 2 Type 1) and base-mount (or pole-mount) cabinet (NEMA TS 2 Size 6, 16 position load bay), meeting the requirements of Departmental Materials Specifications DMS-11170. Provide detector panel toggle switches that additionally permit the user to disconnect the detector. Provide new MMU with Ethernet port. Provide three mounting brackets for a pole-mount controller cabinet.
14. When the work required by this contract has been satisfactorily completed on any individual or inter-connected system of signalized intersections, final clean-up has been performed, and the traffic signal equipment supplied has operated continuously and satisfactorily for at least 30 days, release from further maintenance on that particular intersection is authorized. This partial acceptance, made in writing, does not void or alter any of the terms of the contract.
15. Prevent any damage to property owner's poles, fences, shrubs, mailboxes, etc. Protect all underground and overhead utilities and repair any damage. Provide access to all driveways during construction.
16. Integrate the proposed traffic signal(s) into the existing closed loop system as shown on the plans. –CENTRACS closed loop software, which utilizes Econolite Cobalt controllers, is currently in use in the Dallas District. Provide controllers on this project that fully communicate with the existing closed loop system.
17. The concrete foundation for the controller as shown on standard TS-CF is diagrammatic and the dimensions will be adjusted in the field to fit existing conditions.
18. A 3 inch strip of red prismatic conformable sheeting shall be placed on all Do Not Enter sign assemblies. This sheeting shall be placed directly below the Do Not Enter sign for the entire length of the sign post facing wrong way traffic.
19. Salvage the existing traffic signals at SH 5 & FANNIN RD, SH 5 & HIGHLAND RD/PENNSYLVANIA AVE, SH 5 AT THROCKMORTON RD, AND SH 5 & COLLIN COUNTY

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OUTER LOOP, etc. as shown on the plans. Salvage poles, cabinets, service poles and equipment, exposed conduit, and any other equipment as directed. This equipment remains the property of the Texas Department of Transportation. The material listed above is to be stockpiled at the TxDOT District Signal Shop, 4777 E Hwy 80, Building N, Mesquite, TX 75150, as directed. Contact the District Signal Shop at 214-320-6682 48 hours in advance of delivery. All other material removed in this project will become the property of the Contractor. Dispose of material off the right of way in accordance with federal, state, and local regulations. Maintain the operation of the existing traffic signal until directed to remove it.

20. Completely remove timber poles not set in concrete without cutting off the pole. Timber poles set in concrete are considered unsalvageable.

Item 681:

Requirements for this Item include the following work, all of which are subsidiary to this Item:

1. Re-guy signal heads and re-strap the cable after making adjustments to head locations. Accomplish relocation of signal heads for a phase change during the same day.
2. Bottom tether cable for signal heads and signs will be required.
3. Provide submittal literature for all traffic signal equipment before installation.
4. Furnish and install a controller (eight phase NEMA TS 2 Type 1) and cabinet (NEMA TS 2 Size 6, 16 position load bay), meeting the requirements of Departmental Materials Specifications DMS-11170. Provide detector panel toggle switches that additionally permit the user to disconnect the detector. Provide MMU with Ethernet port. Provide a pole-mounted cabinet that has three brackets for pole mounting and install a 5' x 5' x 4" Class A concrete pad under the cabinet in accordance to Items 420 and 421. .
5. Operate and maintain the temporary signal. Provide a telephone number to the District for trouble calls. Check the signal equipment at least monthly, and within 24 hours in response to complaints, and immediately repair or replace any malfunctioning Contractor-supplied equipment. Notify the Department immediately upon finding malfunctioning Department-supplied equipment or a problem with the signal timing. If the controller is supplied by the Contractor, provide a reliable technical support person and phone number for the manufacturer of the controller. If the vehicle detection is Department-supplied, notify the TxDOT Dallas District Signal Shop one week prior to traffic switches to reprogram and re-aim the detectors.
6. CENTRACS closed loop software, which utilizes Econolite Cobalt controllers, is currently in use in the Dallas District.Provide controllers on this project that fully communicate with the existing closed loop system.
7. Relocate existing emergency vehicle preemption equipment to temporary signals.
8. Install pole-mounted BBU on the opposite side of the pole from the controller cabinet.

Item 682:

Install signal head attachments so that the wiring to each signal head passes from the mast arm through the attachment hardware to the signal head. Do not leave cable or wiring exposed.

Provide signal head attachments that allow for adjustment about the horizontal and vertical axis.

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Provide aluminum pedestrian and vehicle signal heads in the following color: Federal Yellow #13538 of Federal Standard 595. Provide non-painted aluminum tubing. Provide back plates, louvers, and the inside of visors with a flat black finish. Provide aluminum vented back plates for all traffic signal heads.

Turn down signal heads or cover with burlap or other material, as approved, until traffic signal is placed in operation.

Mount signal heads level and plumb and aim as directed.

Item 684:

Provide stranded 14 AWG Type A signal cables for LED signal heads and stranded 12 AWG Type C cables for APS units.

Provide a separate multi-conductor signal cable (14 AWG) inside pedestal poles and signal poles from the terminal strip to each signal head as shown on the plans.

Identify each cable as shown on the plans (cable 1, etc.) with permanent marking labels (Panduit Type PLM standard single marker tie, Thomas&Betts Type 548M, or equal) at each ground box, pole base, and controller.

Item 686:

Provide 12 circuit Buchanan Type 112SN, Kulka Type 985-GP-12 CU, or equal terminal strips in the signal pole access compartment. Provide additional terminal strips of 8 circuits each when more than 12 circuits are required. The conductors for the line and load side of the terminal strip shall be identified with a plastic label with two straps per tag. The load side shall have each signal head and ped head identified on the tag.

Mark pole shafts and mast arms with the identification numbers from the plans to facilitate field-assembly. Identify pole shafts and mast arms by intersection for projects with multiple intersections.

Provide nuts on top and bottom (double nuts) of the base plate as shown on the plans.

Set anchor bolts for mast arm signal poles and strain poles so that two are in tension and two are in compression. Obtain approval of anchor bolt placement before placing concrete.

Provide vertical clearance of 17 to 19 feet from the roadway to the lowest point of the signal head or mast arm. Except for supplemental nearside signal heads, all signal heads must be installed at least 40' from the stop line. If field adjustments result in the nearest signal head being more than 180' from the stop line, install a supplemental nearside signal head as directed by the engineer. Determine the field measurements and elevations from the actual field location of the poles, considering all above and below ground utilities and existing roadway elevations.

Provide vibration dampers for mast arms 28 feet to 48 feet in length. Install as shown on MA-DPD.

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For mast arm poles designated with an ILSN bid code, the ILSN arm, clamps, bolts, and washers will be considered part of the complete pole assembly. The ILSN signs and mounting hardware will be furnished by the applicable City.

Powder coating for signal poles will be considered subsidiary to this item and must meet the requirements of the City.

Item 687:

Powder coating for pedestal poles will be considered subsidiary to this item and must meet the requirements of the City.

Item 688:

Verify the location of the APS units and the direction of the arrows on the signs prior to installation.

Contractor shall provide a digital copy of the APS messages to TxDOT for all new APS Units on the project.

APS Units shall operate with hardwired connections for the communications path between the APS Units and the APS controller.

Item 730:
At the discretion of the Engineer, mow non-paved areas within the project prior to placement of permanent vegetation. Mow up to three (3) cycles per growing season.

Item 3077:
Use aggregate that meets the Surface Aggregate Classification (SAC) requirement of Class B.

Superpave Mixtures used as concrete pavement underlayment is deemed as "Exempt Production".

Provide PG binder 64-22 in Type SP-B & SP-C mixture.

Item 6058:

The BBU will be installed with the controller on the concrete pad paid for under Item 680. If a larger pad is needed to accommodate the BBU, the additional labor and material will be subsidiary to this item.

Item 6185:
The total number of truck mounted attenuators (TMAs) or trailer attenuators (TAs) required when utilizing the traffic control standards are shown in the tables below.

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TCP 2 Series	Scenario		Required TMA/TA	
(2-1)-18	All		1	
(2-3)-18	A	B	1	2

WZ (BTS) Series	Scenario	Required TMA/TA
(BTS-1)-13	Near Side Lane Closure	1

The contractor will be responsible for determining if one or more of these operations will be ongoing at the same time to determine the total number of TMAs/TAs needed for the project. Additional TMAs/TAs used that are not specified in the plans in which the contractor expects compensation will require prior approval from the Engineer.

Item 6292:

All additional items such as poles, conduit, cable, etc. required to achieve the detection specified in the plans will not be paid for separately, but will be considered subsidiary to this item.

The list of material below is for the Contractor's information only.
It is the responsibility of the Contractor to verify
all items and quantities listed below.

LIST OF MATERIAL/LABOR
SUBSIDIARY TO ITEM 680

DESCRIPTION	UNIT	QUANTITY
5/8" X 8' COPPERCLAD GROUND ROD W/CLAMP	EA	5
250W EQ LED LUMINAIRE	EA	19
8 PHASE NEMA CONTROLLER COMPLETE W/ CABINET AND ACCESSORIES	EA	5
TRAFFIC SIGNAL CONTROLLER BASE	EA	5
INSTALL OPTICOM EQUIPMENT (INTERSECTION)	LS	5
REGULATORY SIGN PANEL (R10-12,ETC)	EA	26

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INSTALL CITY SUPPLIED ILSN SIGNS	EA	19
REMOVE EXISTING STOP SIGN PANEL	EA	2
CONCRETE FOUNDATION (8' X 9' X 6", CLASS B)	CY	6.5

LIST OF MATERIAL/LABOR
SUBSIDIARY TO ITEM 681

See summary of temporary traffic signal quantities.

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Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0047-04-031 **DISTRICT** Dallas **COUNTY** Collin
HIGHWAY SH 5

			CONTROL SECTION JOB		**0047-04-031**	TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00129571**		
			COUNTY		**Collin**		
			HIGHWAY		**SH 5**		
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL		
	100-6002	PREPARING ROW	STA	174.170		174.170	
	104-6001	REMOVING CONC (PAV)	SY	40,458.000		40,458.000	
	104-6011	REMOVING CONC (MEDIANS)	SY	34.000		34.000	
	104-6013	REMOVING CONC (FOUNDATIONS)	SY	185.000		185.000	
	104-6015	REMOVING CONC (SIDEWALKS)	SY	1,638.000		1,638.000	
	104-6017	REMOVING CONC (DRIVEWAYS)	SY	2,801.000		2,801.000	
	104-6021	REMOVING CONC (CURB)	LF	810.000		810.000	
	104-6022	REMOVING CONC (CURB AND GUTTER)	LF	649.000		649.000	
	104-6024	REMOVING CONC (RETAINING WALLS)	SY	13.000		13.000	
	104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	90.000		90.000	
	105-6011	REMOVING STAB BASE AND ASPH PAV (2"-6")	SY	5,823.000		5,823.000	
	105-6077	REMOVING STAB BASE & ASPH PAV (8")	SY	39,097.000		39,097.000	
	105-6096	REMOV STAB BASE AND ASPH PAV (0"-12")	SY	58,166.000		58,166.000	
	110-6001	EXCAVATION (ROADWAY)	CY	45,660.000		45,660.000	
	132-6025	EMBANKMENT (FINAL) (DENS CONT) (TY C1)	CY	56,147.000		56,147.000	
	132-6026	EMBANKMENT (FINAL) (DENS CONT) (TY C2)	CY	9.000		9.000	
	161-6017	COMPOST MANUF TOPSOIL (4")	SY	103,976.000		103,976.000	
	162-6002	BLOCK SODDING	SY	52,633.000		52,633.000	
	164-6051	DRILL SEED (TEMP)(WARM OR COOL)	SY	51,343.000		51,343.000	
	164-6066	DRILL SEEDING (PERM)(WARM OR COOL)	SY	51,343.000		51,343.000	
	168-6001	VEGETATIVE WATERING	MG	23,105.000		23,105.000	
	260-6012	LIME(HYD,COM OR QK)(SLRY)OR QK(DRY)	TON	1,898.000		1,898.000	
	260-6027	LIME TRT (EXST MATL)(8")	SY	168,314.000		168,314.000	
	360-6005	CONC PVMT (CONT REINF - CRCP) (11")	SY	143,623.000		143,623.000	
	360-6058	CONC PVMT (CONT REINF-CRCP) (HES) (11")	SY	1,487.000		1,487.000	
	402-6001	TRENCH EXCAVATION PROTECTION	LF	28,182.000		28,182.000	
	416-6032	DRILL SHAFT (TRF SIG POLE) (36 IN)	LF	78.000		78.000	
	416-6034	DRILL SHAFT (TRF SIG POLE) (48 IN)	LF	286.000		286.000	
	423-6004	RETAINING WALL (CONC BLOCK)	SF	302.000		302.000	
	432-6002	RIPRAP (CONC)(5 IN)	CY	154.000		154.000	
	432-6044	RIPRAP (CONC)(FLUME)	CY	4.000		4.000	
	450-6103	RAIL (TY PR11)	LF	3,114.000		3,114.000	
	462-6001	CONC BOX CULV (3 FT X 2 FT)	LF	3,842.000		3,842.000	
	462-6003	CONC BOX CULV (4 FT X 2 FT)	LF	1,275.000		1,275.000	
	462-6004	CONC BOX CULV (4 FT X 3 FT)	LF	822.000		822.000	
	462-6005	CONC BOX CULV (4 FT X 4 FT)	LF	415.000		415.000	
	462-6006	CONC BOX CULV (5 FT X 2 FT)	LF	533.000		533.000	

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Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0047-04-031 **DISTRICT** Dallas **COUNTY** Collin
HIGHWAY SH 5

							TOTAL EST.	TOTAL FINAL
			CONTROL SECTION JOB		**0047-04-031**			
			PROJECT ID		**A00129571**			
			COUNTY		**Collin**			
			HIGHWAY		**SH 5**			
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**		EST.	FINAL		
	462-6008	CONC BOX CULV (5 FT X 4 FT)	LF		436.000		436.000	
	462-6010	CONC BOX CULV (6 FT X 3 FT)	LF		183.000		183.000	
	462-6019	CONC BOX CULV (8 FT X 4 FT)	LF		132.000		132.000	
	464-6003	RC PIPE (CL III)(18 IN)	LF		615.000		615.000	
	464-6005	RC PIPE (CL III)(24 IN)	LF		16,755.000		16,755.000	
	464-6007	RC PIPE (CL III)(30 IN)	LF		3,050.000		3,050.000	
	464-6008	RC PIPE (CL III)(36 IN)	LF		1,237.000		1,237.000	
	464-6009	RC PIPE (CL III)(42 IN)	LF		565.000		565.000	
	464-6010	RC PIPE (CL III)(48 IN)	LF		191.000		191.000	
	465-6005	JCTBOX(COMPL)(PJB)(3FTX3FT)	EA		2.000		2.000	
	465-6006	JCTBOX(COMPL)(PJB)(4FTX4FT)	EA		3.000		3.000	
	465-6011	JCTBOX(COMPL)(PJB)(6FTX6FT)	EA		1.000		1.000	
	465-6012	JCTBOX(COMPL)(PJB)(8FTX8FT)	EA		2.000		2.000	
	465-6013	INLET (COMPL)(PCO)(3FT)(NONE)	EA		5.000		5.000	
	465-6014	INLET (COMPL)(PCO)(3FT)(LEFT)	EA		41.000		41.000	
	465-6015	INLET (COMPL)(PCO)(3FT)(RIGHT)	EA		26.000		26.000	
	465-6016	INLET (COMPL)(PCO)(3FT)(BOTH)	EA		15.000		15.000	
	465-6017	INLET (COMPL)(PCO)(4FT)(NONE)	EA		1.000		1.000	
	465-6018	INLET (COMPL)(PCO)(4FT)(LEFT)	EA		16.000		16.000	
	465-6019	INLET (COMPL)(PCO)(4FT)(RIGHT)	EA		19.000		19.000	
	465-6020	INLET (COMPL)(PCO)(4FT)(BOTH)	EA		1.000		1.000	
	465-6023	INLET (COMPL)(PCO)(5FT)(RIGHT)	EA		4.000		4.000	
	465-6024	INLET (COMPL)(PCO)(5FT)(BOTH)	EA		1.000		1.000	
	465-6025	INLET (COMPL)(PCO)(6FT)(NONE)	EA		6.000		6.000	
	465-6026	INLET (COMPL)(PCO)(6FT)(LEFT)	EA		7.000		7.000	
	465-6027	INLET (COMPL)(PCO)(6FT)(RIGHT)	EA		5.000		5.000	
	465-6035	INLET (COMPL)(PCU)(4FT)(RIGHT)	EA		2.000		2.000	
	465-6036	INLET (COMPL)(PCU)(4FT)(BOTH)	EA		2.000		2.000	
	465-6039	INLET (COMPL)(PCU)(5FT)(RIGHT)	EA		2.000		2.000	
	465-6070	INLET (COMPL)(PSL)(RC)(3FTX3FT)	EA		3.000		3.000	
	465-6076	INLET (COMPL)(PSL)(RC)(6FTX6FT)	EA		1.000		1.000	
	465-6077	INLET (COMPL)(PSL)(RC)(8FTX8FT)	EA		1.000		1.000	
	465-6126	INLET (COMPL)(PSL)(FG)(3FTX3FT-3FTX3FT)	EA		57.000		57.000	
	465-6130	INLET (COMPL)(PSL)(FG)(3FTX5FT-3FTX5FT)	EA		1.000		1.000	
	465-6225	JCT BOX (COMPL)(SPL)	EA		2.000		2.000	
	466-6180	WINGWALL (PW - 1) (HW=5 FT)	EA		1.000		1.000	
	466-6181	WINGWALL (PW - 1) (HW=6 FT)	EA		3.000		3.000	

1 ADDENDUM #1 , 11/15/22 , REPLACE SHEET

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0047-04-031 **DISTRICT** Dallas **COUNTY** Collin
HIGHWAY SH 5

						TOTAL EST.	TOTAL FINAL
		CONTROL SECTION JOB		**0047-04-031**			
		PROJECT ID		**A00129571**			
		COUNTY		**Collin**			
		HIGHWAY		**SH 5**			
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL		
	467-6356	SET (TY II) (18 IN) (RCP) (3: 1) (C)	EA	2.000		2.000	
	467-6388	SET (TY II) (24 IN) (RCP) (3: 1) (C)	EA	2.000		2.000	
	467-6390	SET (TY II) (24 IN) (RCP) (4: 1) (C)	EA	3.000		3.000	
	467-6395	SET (TY II) (24 IN) (RCP) (6: 1) (P)	EA	2.000		2.000	
	467-6468	SET (TY II) (48 IN) (CMP) (4: 1) (C)	EA	1.000		1.000	
	496-6002	REMOV STR (INLET)	EA	3.000		3.000	
	496-6003	REMOV STR (MANHOLE)	EA	2.000		2.000	
	496-6004	REMOV STR (SET)	EA	66.000		66.000	
	496-6005	REMOV STR (WINGWALL)	EA	20.000		20.000	
	496-6006	REMOV STR (HEADWALL)	EA	12.000		12.000	
	496-6007	REMOV STR (PIPE)	LF	3,676.000		3,676.000	
	496-6008	REMOV STR (BOX CULVERT)	LF	511.000		511.000	
	496-6043	REMOV STR (SMALL FENCE)	LF	586.000		586.000	
	496-6072	REMOVING ROCK RIPRAP	LF	84.000		84.000	
	500-6001	MOBILIZATION	LS	1.000		1.000	
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	30.000		30.000	
	506-6001	ROCK FILTER DAMS (INSTALL) (TY 1)	LF	351.000		351.000	
	506-6002	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	501.000		501.000	
	506-6003	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	114.000		114.000	
	506-6011	ROCK FILTER DAMS (REMOVE)	LF	966.000		966.000	
	506-6020	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	354.000		354.000	
	506-6024	CONSTRUCTION EXITS (REMOVE)	SY	354.000		354.000	
	506-6038	TEMP SEDMT CONT FENCE (INSTALL)	LF	17,779.000		17,779.000	
	506-6039	TEMP SEDMT CONT FENCE (REMOVE)	LF	17,779.000		17,779.000	
	506-6041	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	3,680.000		3,680.000	
	506-6043	BIODEG EROSN CONT LOGS (REMOVE)	LF	3,680.000		3,680.000	
	508-6001	CONSTRUCTING DETOURS	SY	19,041.000		19,041.000	
	512-6001	PORT CTB (FUR & INST)(SGL SLOPE)(TY 1)	LF	2,440.000		2,440.000	
	512-6009	PORT CTB (FUR & INST)(LOW PROF)(TY 1)	LF	6,320.000		6,320.000	
	512-6010	PORT CTB (FUR & INST)(LOW PROF)(TY 2)	LF	1,200.000		1,200.000	
	512-6025	PORT CTB (MOVE)(SGL SLP)(TY 1)	LF	2,080.000		2,080.000	
	512-6033	PORT CTB (MOVE)(LOW PROF)(TY 1)	LF	1,260.000		1,260.000	
	512-6034	PORT CTB (MOVE)(LOW PROF)(TY 2)	LF	400.000		400.000	
	512-6049	PORT CTB (REMOVE)(SGL SLP)(TY 1)	LF	2,440.000		2,440.000	
	512-6057	PORT CTB (REMOVE)(LOW PROF)(TY 1)	LF	6,320.000		6,320.000	
	512-6058	PORT CTB (REMOVE)(LOW PROF)(TY 2)	LF	1,200.000		1,200.000	
	529-6005	CONC CURB (MONO) (TY II)	LF	64,544.000		64,544.000	

1 ADDENDUM #1 , 11/15/22 , REPLACE SHEET

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0047-04-031 **DISTRICT** Dallas **COUNTY** Collin
HIGHWAY SH 5

						TOTAL EST.	TOTAL FINAL
		CONTROL SECTION JOB		**0047-04-031**			
		PROJECT ID		**A00129571**			
		COUNTY		**Collin**			
		HIGHWAY		**SH 5**			
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL		
	530-6004	DRIVEWAYS (CONC)	SY	3,299.000		3,299.000	
	530-6017	DRIVEWAYS (CONC) (HES)	SY	2,791.000		2,791.000	
	531-6001	CONC SIDEWALKS (4")	SY	17,209.000		17,209.000	
	531-6004	CURB RAMPS (TY 1)	EA	6.000		6.000	
	531-6005	CURB RAMPS (TY 2)	EA	3.000		3.000	
	531-6010	CURB RAMPS (TY 7)	EA	36.000		36.000	
	531-6013	CURB RAMPS (TY 10)	EA	19.000		19.000	
	536-6002	CONC MEDIAN	SY	654.000		654.000	
	536-6005	CONCRETE MEDIAN (NOSE)	SY	87.000		87.000	
	542-6001	REMOVE METAL BEAM GUARD FENCE	LF	533.000		533.000	
	544-6003	GUARDRAIL END TREATMENT (REMOVE)	EA	6.000		6.000	
	545-6003	CRASH CUSH ATTEN (MOVE & RESET)	EA	6.000		6.000	
	545-6005	CRASH CUSH ATTEN (REMOVE)	EA	12.000		12.000	
	545-6019	CRASH CUSH ATTEN (INSTL)(S)(N)(TL3)	EA	6.000		6.000	
	550-6003	CHAIN LINK FENCE (REMOVE)	LF	2,600.000		2,600.000	
	550-6006	GATE (REMOVE)	EA	2.000		2.000	
	560-6001	MAILBOX INSTALL-S (TWG-POST) TY 1	EA	29.000		29.000	
	560-6002	MAILBOX INSTALL-D (TWG-POST) TY 1	EA	5.000		5.000	
	560-6003	MAILBOX INSTALL-M (TWG-POST) TY 1	EA	3.000		3.000	
	618-6023	CONDT (PVC) (SCH 40) (2")	LF	16,235.000		16,235.000	
	618-6029	CONDT (PVC) (SCH 40) (3")	LF	420.000		420.000	
	618-6033	CONDT (PVC) (SCH 40) (4")	LF	345.000		345.000	
	618-6034	CONDT (PVC) (SCH 40) (4") (BORE)	LF	2,305.000		2,305.000	
	618-6046	CONDT (PVC) (SCH 80) (2")	LF	225.000		225.000	
	620-6004	ELEC CONDR (NO.12) INSULATED	LF	1,520.000		1,520.000	
	620-6007	ELEC CONDR (NO.8) BARE	LF	2,545.000		2,545.000	
	620-6008	ELEC CONDR (NO.8) INSULATED	LF	5,590.000		5,590.000	
	620-6009	ELEC CONDR (NO.6) BARE	LF	305.000		305.000	
	620-6010	ELEC CONDR (NO.6) INSULATED	LF	610.000		610.000	
	621-6002	TRAY CABLE (3 CONDR) (12 AWG)	LF	4,576.000		4,576.000	
	624-6001	GROUND BOX TY A (122311)	EA	5.000		5.000	
	624-6002	GROUND BOX TY A (122311)W/APRON	EA	46.000		46.000	
	624-6008	GROUND BOX TY C (162911)W/APRON	EA	26.000		26.000	
	628-6185	ELC SRV TY D 120/240 070(NS)SS(E)GC(O)	EA	1.000		1.000	
	628-6187	ELC SRV TY D 120/240 070(NS)SS(E)PS(U)	EA	4.000		4.000	
	644-6001	IN SM RD SN SUP&AM TY10BWG(1)SA(P)	EA	46.000		46.000	
	644-6004	IN SM RD SN SUP&AM TY10BWG(1)SA(T)	EA	51.000		51.000	

1 ADDENDUM #1 , 11/15/22 , REPLACE SHEET

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0047-04-031 **DISTRICT** Dallas **COUNTY** Collin
HIGHWAY SH 5

						TOTAL EST.	TOTAL FINAL
		CONTROL SECTION JOB		**0047-04-031**			
		PROJECT ID		**A00129571**			
		COUNTY		**Collin**			
		HIGHWAY		**SH 5**			
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL		
	644-6007	IN SM RD SN SUP&AM TY10BWG(1)SA(U)	EA	1.000		1.000	
	644-6027	IN SM RD SN SUP&AM TYS80(1)SA(P)	EA	2.000		2.000	
	644-6036	IN SM RD SN SUP&AM TYS80(1)SA(U-BM)	EA	2.000		2.000	
	658-6047	INSTL OM ASSM (OM-2Y)(WC)GND	EA	8.000		8.000	
	662-6060	WK ZN PAV MRK REMOV (W)4"(BRK)	LF	1,442.000		1,442.000	
	662-6063	WK ZN PAV MRK REMOV (W)4"(SLD)	LF	45,932.000		45,932.000	
	662-6071	WK ZN PAV MRK REMOV (W)8"(SLD)	LF	2,577.000		2,577.000	
	662-6075	WK ZN PAV MRK REMOV (W)24"(SLD)	LF	2,772.000		2,772.000	
	662-6080	WK ZN PAV MRK REMOV (W)(ARROW)	EA	32.000		32.000	
	662-6086	WK ZN PAV MRK REMOV (W)(RR XING)	EA	15.000		15.000	
	662-6090	WK ZN PAV MRK REMOV (W)(WORD)	EA	32.000		32.000	
	662-6095	WK ZN PAV MRK REMOV (Y)4"(SLD)	LF	70,170.000		70,170.000	
	662-6102	WK ZN PAV MRK REMOV (Y)24"(SLD)	LF	1,092.000		1,092.000	
	666-6006	REFL PAV MRK TY I (W)4"(DOT)(100MIL)	LF	1,014.000		1,014.000	
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF	16,664.000		16,664.000	
	666-6042	REFL PAV MRK TY I (W)12"(SLD)(100MIL)	LF	6,649.000		6,649.000	
	666-6045	REFL PAV MRK TY I (W)18"(SLD)(100MIL)	LF	139.000		139.000	
	666-6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	3,161.000		3,161.000	
	666-6141	REFL PAV MRK TY I (Y)12"(SLD)(100MIL)	LF	680.000		680.000	
	666-6224	PAVEMENT SEALER 4"	LF	89,848.000		89,848.000	
	666-6226	PAVEMENT SEALER 8"	LF	16,664.000		16,664.000	
	666-6228	PAVEMENT SEALER 12"	LF	7,329.000		7,329.000	
	666-6229	PAVEMENT SEALER 18"	LF	139.000		139.000	
	666-6230	PAVEMENT SEALER 24"	LF	3,161.000		3,161.000	
	666-6231	PAVEMENT SEALER (ARROW)	EA	56.000		56.000	
	666-6232	PAVEMENT SEALER (WORD)	EA	56.000		56.000	
	666-6237	PAVEMENT SEALER (LNDP ARROW)	EA	4.000		4.000	
	666-6242	PAVEMENT SEALER (RR XING)	EA	9.000		9.000	
	666-6300	RE PM W/RET REQ TY I (W)4"(BRK)(100MIL)	LF	8,760.000		8,760.000	
	666-6303	RE PM W/RET REQ TY I (W)4"(SLD)(100MIL)	LF	37,582.000		37,582.000	
	666-6315	RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL)	LF	44,420.000		44,420.000	
	668-6077	PREFAB PAV MRK TY C (W) (ARROW)	EA	56.000		56.000	
	668-6083	PREFAB PAV MRK TY C (W) (LNDP ARROW)	EA	4.000		4.000	
	668-6085	PREFAB PAV MRK TY C (W) (WORD)	EA	56.000		56.000	
	668-6089	PREFAB PAV MRK TY C (W) (RR XING)	EA	9.000		9.000	
	672-6007	REFL PAV MRKR TY I-C	EA	793.000		793.000	
	672-6009	REFL PAV MRKR TY II-A-A	EA	234.000		234.000	

1 ADDENDUM #1 , 11/15/22 , REPLACE SHEET

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0047-04-031 **DISTRICT** Dallas **COUNTY** Collin
HIGHWAY SH 5

			CONTROL SECTION JOB		**0047-04-031**	TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00129571**		
			COUNTY		**Collin**		
			HIGHWAY		**SH 5**		
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL		
	672-6010	REFL PAV MRKR TY II-C-R	EA	435.000		435.000	
	677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	28,715.000		28,715.000	
	678-6001	PAV SURF PREP FOR MRK (4")	LF	91,776.000		91,776.000	
	678-6004	PAV SURF PREP FOR MRK (8")	LF	16,664.000		16,664.000	
	678-6006	PAV SURF PREP FOR MRK (12")	LF	7,329.000		7,329.000	
	678-6007	PAV SURF PREP FOR MRK (18")	LF	139.000		139.000	
	678-6008	PAV SURF PREP FOR MRK (24")	LF	2,855.000		2,855.000	
	678-6009	PAV SURF PREP FOR MRK (ARROW)	EA	58.000		58.000	
	678-6016	PAV SURF PREP FOR MRK (WORD)	EA	56.000		56.000	
	678-6020	PAV SURF PREP FOR MRK (RR XING)	EA	9.000		9.000	
	680-6002	INSTALL HWY TRF SIG (ISOLATED)	EA	5.000		5.000	
	680-6004	REMOVING TRAFFIC SIGNALS	EA	4.000		4.000	
	681-6001	TEMP TRAF SIGNALS	EA	4.000		4.000	
	682-6001	VEH SIG SEC (12")LED(GRN)	EA	43.000		43.000	
	682-6002	VEH SIG SEC (12")LED(GRN ARW)	EA	15.000		15.000	
	682-6003	VEH SIG SEC (12")LED(YEL)	EA	43.000		43.000	
	682-6004	VEH SIG SEC (12")LED(YEL ARW)	EA	30.000		30.000	
	682-6005	VEH SIG SEC (12")LED(RED)	EA	43.000		43.000	
	682-6006	VEH SIG SEC (12")LED(RED ARW)	EA	34.000		34.000	
	682-6018	PED SIG SEC (LED)(COUNTDOWN)	EA	34.000		34.000	
	682-6054	BACKPLATE W/REF BRDR(3 SEC)(VENT)ALUM	EA	41.000		41.000	
	682-6055	BACKPLATE W/REF BRDR(4 SEC)(VENT)ALUM	EA	10.000		10.000	
	682-6056	BACKPLATE W/REF BRDR(5 SEC)(VENT)ALUM	EA	9.000		9.000	
	684-6031	TRF SIG CBL (TY A)(14 AWG)(5 CONDR)	LF	5,618.000		5,618.000	
	684-6033	TRF SIG CBL (TY A)(14 AWG)(7 CONDR)	LF	705.000		705.000	
	684-6042	TRF SIG CBL (TY A)(14 AWG)(16 CONDR)	LF	3,780.000		3,780.000	
	684-6079	TRF SIG CBL (TY C)(12 AWG)(2 CONDR)	LF	5,297.000		5,297.000	
	685-6004	INSTL RDSD FLSH BCN ASSM (SOLAR PWRD)	EA	2.000		2.000	
	686-6036	INS TRF SIG PL AM(S)1 ARM(32')LUM&ILSN	EA	2.000		2.000	
	686-6044	INS TRF SIG PL AM(S)1 ARM(40')LUM&ILSN	EA	1.000		1.000	
	686-6048	INS TRF SIG PL AM(S)1 ARM(44')LUM&ILSN	EA	1.000		1.000	
	686-6052	INS TRF SIG PL AM(S)1 ARM(48')LUM&ILSN	EA	2.000		2.000	
	686-6060	INS TRF SIG PL AM(S)1 ARM(55')LUM&ILSN	EA	4.000		4.000	
	686-6064	INS TRF SIG PL AM(S)1 ARM(60')LUM&ILSN	EA	4.000		4.000	
	686-6068	INS TRF SIG PL AM(S)1 ARM(65')LUM&ILSN	EA	5.000		5.000	
	687-6001	PED POLE ASSEMBLY	EA	19.000		19.000	
	688-6001	PED DETECT PUSH BUTTON (APS)	EA	34.000		34.000	

1 ADDENDUM #1 , 1/15/22 , REPLACE SHEET

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0047-04-031 **DISTRICT** Dallas **COUNTY** Collin
HIGHWAY SH 5

			CONTROL SECTION JOB		**0047-04-031**	TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00129571**		
			COUNTY		**Collin**		
			HIGHWAY		**SH 5**		
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL		
	688-6003	PED DETECTOR CONTROLLER UNIT	EA	5.000		5.000	
	730-6107	FULL - WIDTH MOWING	CYC	6.000		6.000	
	3077-6001	SP MIXESSP-BPG64-22	TON	35,264.000		35,264.000	
	3077-6011	SP MIXESSP-CPG64-22	TON	4,466.000		4,466.000	
	3077-6075	TACK COAT	GAL	963.000		963.000	
	6001-6002	PORTABLE CHANGEABLE MESSAGE SIGN	EA	2.000		2.000	
	6058-6001	BBU SYSTEM (EXTERNAL BATT CABINET)	EA	5.000		5.000	
	6185-6002	TMA (STATIONARY)	DAY	1,196.000		1,196.000	
	6185-6003	TMA (MOBILE OPERATION)	HR	256.000		256.000	
	6292-6001	RVDS(PRESENCE DETECTION ONLY)	EA	9.000		9.000	
	6292-6003	RVDS(PRESENCE AND ADVANCE DET)	EA	10.000		10.000	
	6306-6006	VIVDS TEMPORARY	EA	4.000		4.000	
	18	LAW ENFORCEMENT: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000		1.000	
		SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000		1.000	
		EROSION CONTROL MAINTENANCE: CONTRACTOR FORCE ACCOUNT WORK (PART)	LS	1.000		1.000	

1 ADDENDUM #1 , 11/15/22 , REPLACE SHEET

SUMMARY OF TRAFFIC CONTROL QUANTITIES

LOCATION	508 6001 CONSTRUCTING DETOURS SY	512 6001 PORT CTB (FUR & INST) (SGL SLOPE) (TY 1) LF	512 6009 PORT CTB (FUR & INST) (LOW PROF) (TY 1) LF	512 6010 PORT CTB (FUR & INST) (LOW PROF) (TY 2) LF	512 6025 PORT CTB (MOVE) (SGL SLP) (TY 1) LF	512 6033 PORT CTB (MOVE) (LOW PROF) (TY 1) LF	512 6034 PORT CTB (MOVE) (LOW PROF) (TY 2) LF	512 6049 PORT CTB (REMOVE) (SGL SLP) (TY 1) LF	512 6057 PORT CTB (REMOVE) (LOW PROF) (TY 1) LF	512 6058 PORT CTB (REMOVE) (LOW PROF) (TY 2) LF	545 6003 CRASH CUSH ATTEN (MOVE & RESET) EA	545 6005 CRASH CUSH ATTEN (REMOVE) EA	545 6019 CRASH CUSH ATTEN (INSTL) (S) (N) (TL3) EA	662 6060 WK ZN PAV MRK REMOV (W) 4" (BRK) LF	662 6063 WK ZN PAV MRK REMOV (W) 4" (SLD) LF	662 6071 WK ZN PAV MRK REMOV (W) 8" (SLD) LF
PHASE 1																
SHEET 1 OF 10															281	
SHEET 2 OF 10	2,040		1,640	100											3,103	
SHEET 3 OF 10	2,435		940	120											4,030	
SHEET 4 OF 10	2,780		1,000	220											4,254	
SHEET 5 OF 10	1,893		1,320	300											4,433	332
SHEET 6 OF 10	152		140	60											401	
SHEET 7 OF 10	192															
SHEET 8 OF 10	87	800											1			
SHEET 9 OF 10	358	200											3			
SHEET 10 OF 10	2,711	1,440											2		2,200	
PHASE 1 INTERSECTIONS																
E MELISSA RD																
PHASE 1 STEP 1A	90		260	60											377	
PHASE 1 STEP 1B						160	40		100	20					907	
PHASE 1 STEP 1C									160	40				147	269	395
FANNIN RD																
PHASE 1 STEP 1A			80	60											154	
PHASE 1 STEP 1B			20			80	60								65	
PHASE 1 STEP 1C									100	60					465	
COLLIN COUNTY OUTER LOOP																
PHASE 1 STEP 1A	53		180	60											1,121	
PHASE 1 STEP 1B						160	60		20						912	
PHASE 1 STEP 1C									160	60					1,606	637
PHASE 1 SUBTOTAL	12,791	2,440	5,580	980	0	400	160	0	540	180	0	0	6	147	24,576	1,364

PHASE 2																
SHEET 1 OF 10															210	
SHEET 2 OF 10	847					100	40		1,540	60					2,206	
SHEET 3 OF 10	2,017								940	120					92	105
SHEET 4 OF 10	1,759								1,000	220					1,632	127
SHEET 5 OF 10	1,331				380				1,320	300	1				1,560	
SHEET 6 OF 10	296					80	40		60	20	1				351	
SHEET 7 OF 10																
SHEET 8 OF 10					440						1			267	495	321
SHEET 9 OF 10					660						2		0	623	1,381	660
SHEET 10 OF 10					600			2,440	180	80	1	6			2,082	
PHASE 2 INTERSECTIONS																
E MELISSA RD																
PHASE 2 STEP 1A			360	80											681	
PHASE 2 STEP 1B						320	40		40	40				56	791	
PHASE 2 STEP 1C									320	40					788	
PENNSYLVANIA AVE																
PHASE 2 STEP 1A			120	40											1,256	
PHASE 2 STEP 1B						80	40		40						1,784	
PHASE 2 STEP 1C									80	40					1,417	
THROCKMORTON RD																
PHASE 2 STEP 1A			80	40											1,165	
PHASE 2 STEP 1B			180	60		80	40								1,052	
PHASE 2 STEP 1C						200	40		60	60					1,468	
PHASE 2 STEP 1D									200	40				349	945	
TEMP PAV MARK LAYOUT															285	250
PHASE 2 SUBTOTAL	6,250	0	740	220	2,080	860	240	2,440	5,780	1,020	6	6	0	1,295	21,356	1,212

PROJECT TOTALS	19,041	2,440	6,320	1,200	2,080	1,260	400	2,440	6,320	1,200	6	6	6	1,442	45,932	2,577

1 ADDENDUM #1, 11/15/22, REPLACE SHEET

REV NO.	DATE	BY	REVISION

AECOM
AECOM Technical Services Inc.- 3580
19219 KATY FREEWAY
SUITE 100
HOUSTON, TX 77094

Texas Department of Transportation

SH 5

SUMMARY OF TRAFFIC CONTROL QUANTITIES

SHEET 1 OF 2

DSN: CC	FED.RD. DIV.NO.	PROJECT NO.	SHEET NO.
CK: CO	6	SEE TITLE SHEET	17
DRN: JM	STATE	DIST.	COUNTY
APPVD: DH	TEXAS	18	COLLIN
CONT.	SECT.	JOB	HIGHWAY NO.
0047	04	031	SH 5

SUMMARY OF ROADWAY QUANTITIES													
	260	260	360	360	450	529	530	530	531	531	531	531	531
	6012	6027	6005	6058	6103	6005	6004	6017	6001	6004	6005	6010	6013
LOCATION	LIME (HYD, COM OR QK) (SLRY) OR QK (DRY)	LIME TRT (EXST MATL) (8")	CONC PVMT (CONT REINF - CRCP) (11")	CONC PVMT (CONT REINF-CRCP) (HES) (11")	RAIL (TY PR11)	CONC CURB (MONO) (TY II)	DRIVEWAYS (CONC)	DRIVEWAYS (CONC) (HES)	CONC SIDEWALKS (4")	CURB RAMPS (TY 1)	CURB RAMPS (TY 2)	CURB RAMPS (TY 7)	CURB RAMPS (TY 10)
	TON	SY	SY	SY	LF	LF	SY	SY	SY	EA	EA	EA	EA
BEGIN TO STA 125+00	49	4,360	3,853			2,336		73	667				
STA 125+00 TO STA 136+00	106	9,421	8,240			4,232	370		1,117			1	
STA 136+00 TO STA 147+00	120	10,677	9,583			4,125	723	146	1,034			1	
STA 147+00 TO STA 158+00	157	13,923	12,848		59	4,224	695	559	1,014		2	6	
STA 158+00 TO STA 169+00	141	12,543	11,471			4,315		513	864		1	8	7
STA 169+00 TO STA 180+00	133	11,809	10,694		469	4,065	519	565	956				7
STA 180+00 TO STA 191+00	125	11,066	9,988	448		3,896	258	301	1,079	4			5
STA 191+00 TO STA 202+00	134	11,859	10,741			4,094	127	166	1,105			8	
STA 202+00 TO STA 213+00	92	8,112	6,904		280	4,320	146	129	1,192				
STA 213+00 TO STA 224+00	91	8,067	7,089			4,399		78	1,201				
STA 224+00 TO STA 235+00	91	8,065	7,087			4,409		69	1,199				
STA 235+00 TO STA 246+00	93	8,275	7,175		755	4,517		132	1,205				
STA 246+00 TO STA 257+00	100	8,857	7,875	1,039	250	4,113	461		1,085			2	
STA 257+00 TO STA 268+00	131	11,657	10,548		1,301	3,825			1,114			2	
STA 268+00 TO STA 277+00	93	8,225	7,227			3,622		60	983				
STA 277+00 TO STA 288+00	159	14,148	10,877			3,224			890			8	
STA 288+00 TO END	46	4,011											
N. CENTRAL ST.	18	1,604	1,423			828			504	2			
HIGHLAND RD.	19	1,635											
PROJECT TOTALS	1,898	168,314	143,623	1,487	3,114	64,544	3,299	2,791	17,209	6	3	36	19

SUMMARY OF ROADWAY QUANTITIES								
	536	536	560	560	560	3077	3077	3077
	6002	6005	6001	6002	6003	6001	6011	6075
LOCATION	CONC MEDIAN	CONC MEDIAN (NOSE)	MAILBOX INSTALL-S (TWG-POST) TY 1	MAILBOX INSTALL-D (TWG-POST) TY 1	MAILBOX INSTALL-M (TWG-POST) TY 1	SP MIXES SP-B PG64-22	SP MIXES SP-C PG64-22	TACK COAT
	SY	SY	EA	EA	EA	TON	TON	GAL
BEGIN TO STA 125+00	39			1		959		
STA 125+00 TO STA 136+00		3	1	1		2,073		
STA 136+00 TO STA 147+00		21	3			2,349		
STA 147+00 TO STA 158+00		8	4		1	3,063		
STA 158+00 TO STA 169+00		6	4			2,759		
STA 169+00 TO STA 180+00		6	5	2		2,598		
STA 180+00 TO STA 191+00	226	3	6	1		2,435		
STA 191+00 TO STA 202+00	389	3	3			2,609		
STA 202+00 TO STA 213+00			2			1,785		
STA 213+00 TO STA 224+00		10			1	1,775		
STA 224+00 TO STA 235+00						1,774		
STA 235+00 TO STA 246+00						1,821		
STA 246+00 TO STA 257+00		10	1		1	1,949		
STA 257+00 TO STA 268+00		11				2,565		
STA 268+00 TO STA 277+00						1,810		
STA 277+00 TO STA 288+00		6				2,590	1,176	285
STA 288+00 TO END							2,481	481
N. CENTRAL ST.						353		
HIGHLAND RD.							809	196
PROJECT TOTALS	654	87	29	5	3	35,264	4,466	963

REV NO.	DATE	BY	REVISION

CivilTech Engineering, Inc.
11821 Telge Road
Cypress, Texas 77429
PH: (281) 304-0200 - FX: (281) 304-0210
Firm Registration No. F-382

Texas Department of Transportation

SH 5

SUMMARY OF ROADWAY QUANTITIES

SHEET 1 OF 1

DSN: DC	FED.RD. DIV.NO.	PROJECT NO.	SHEET NO.
CK: CW	6	SEE TITLE SHEET	22
DRN: DA	STATE	DIST.	COUNTY
APPVD: PB	TEXAS	18	COLLIN
CONT.	SECT.	JOB	HIGHWAY NO.
0047	04	031	SH 5

1 ADDENDUM #1, 11/15/22, REPLACE SHEET

11/15/2022 11:57:55 AM

SUMMARY OF RETAINING WALL QUANTITIES				
LOCATION	132	423	432	*556
	6026	6004	6044	6006
	EMBANKMENT (FINAL) (DENS CONT) (TY C2)	RETAINING WALL (CONC BLOCK)	RIPRAP (CONC) (FLUME)	PIPE UNDERDRAINS (TY 6) (6")
	CY	SF	CY	LF
RETAINING WALL 1 LAYOUT	11	302	4	90
PROJECT TOTALS	11	302	4	90

*FOR CONTRACTOR'S INFORMATION ONLY. PAYMENT IS SUBSIDIARY TO ITEM 423-6004.

REV NO.	DATE	BY	REVISION

CivilTech Engineering, Inc.
11821 Telge Road
Cypress, Texas 77429
PH: (281) 304-0200 - FX: (281) 304-0210
Firm Registration No. F-382

Texas Department of Transportation

SH 5

SUMMARY OF RETAINING WALL QUANTITIES

SHEET 1 OF 1

DSN: DC	FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
CK: CW	6	SEE TITLE SHEET		23
DRN: DA	STATE	DIST.	COUNTY	
APPVD: PB	TEXAS	18	COLLIN	
CONT.	SECT.	JOB	HIGHWAY NO.	
0047	04	031	SH 5	

1 ADDENDUM #1, 11/15/22, REPLACE SHEET

11/15/2022 11:58:14 AM
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11/15/2022 11:58:14 AM

SUMMARY OF DRAINAGE QUANTITIES											
	*400	400	402	432	462	462	462	462	462	462	462
	6001	6005	6001	6002	6001	6003	6004	6005	6006	6008	6010
LOCATION	STRUCT EXCAV	CEM STABIL BKFL	TRENCH EXCAVATION PROTECTION	RIPRAP (CONC) (5 IN)	CONC BOX CULV (3 FT X 2 FT)	CONC BOX CULV (4 FT X 2 FT)	CONC BOX CULV (4 FT X 3 FT)	CONC BOX CULV (4 FT X 4 FT)	CONC BOX CULV (5 FT X 2 FT)	CONC BOX CULV (5 FT X 4 FT)	CONC BOX CULV (6 FT X 3 FT)
	CY	CY	LF	CY	LF	LF	LF	LF	LF	LF	LF
NB DRAINAGE PLAN & PROFILE											
BEGIN TO STA 125+00	261		133								
STA 125+00 TO STA 136+00	1,226		1,117								
STA 136+00 TO STA 147+00	381		451								
STA 147+00 TO STA 158+00	1,308		1,088								
STA 158+00 TO STA 169+00	1,229		1,151								
STA 169+00 TO STA 180+00	1,140		948								74
STA 180+00 TO STA 191+00	1,420		1,160								
STA 191+00 TO STA 202+00	609		757								
STA 202+00 TO STA 213+00	1,343		1,142								
STA 213+00 TO STA 224+00	1,108		1,100								
STA 224+00 TO STA 235+00	407										
STA 235+00 TO STA 246+00	898		928								
STA 246+00 TO STA 257+00	880		940								
STA 257+00 TO STA 268+00	1,710		1,124		913						
STA 268+00 TO STA 277+00	1,055		915		195						
STA 277+00 TO STA 288+00	663		640								
STA 288+00 TO END											
SB DRAINAGE PLAN & PROFILE											
BEGIN TO STA 125+00	355		150								
STA 125+00 TO STA 136+00	1,104		1,150								
STA 136+00 TO STA 147+00	720		721								
STA 147+00 TO STA 158+00	2,590		1,315					415		436	
STA 158+00 TO STA 169+00	1,654		1,204								
STA 169+00 TO STA 180+00	1,627		1,010	31			781				109
STA 180+00 TO STA 191+00	1,324		1,144				41				
STA 191+00 TO STA 202+00	828		740								
STA 202+00 TO STA 213+00	1,129		1,132						249		
STA 213+00 TO STA 224+00	1,090		1,100		590	171			284		
STA 224+00 TO STA 235+00	601		575								
STA 235+00 TO STA 246+00	346		233								
STA 246+00 TO STA 257+00	1,052		925		416						
STA 257+00 TO STA 268+00	1,406		1,100		258	814					
STA 268+00 TO STA 277+00	1,092		900		880						
STA 277+00 TO STA 288+00	831		608		590						
STA 288+00 TO END											
N. CENTRAL ST.	444		291								
CULVERT C4 LAYOUT	313		131	55							
CULVERT C6 LAYOUT	251		159	68		290					
PROJECT TOTALS	34,395	0	28,182	154	3,842	1,275	822	415	533	436	183

* FOR CONTRACTOR'S INFORMATION ONLY

REV NO.	DATE	BY	REVISION

CivilTech Engineering, Inc.
11821 Telge Road
Cypress, Texas 77429
PH: (281) 304-0200 - FX: (281) 304-0210
Firm Registration No. F-382

Texas Department of Transportation

SH 5

SUMMARY OF DRAINAGE QUANTITIES

SHEET 1 OF 5

DSN: DC	FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
CK: CW	6	SEE TITLE SHEET		24
DRN: DA	STATE	DIST.	COUNTY	
APPVD: PB	TEXAS	18	COLLIN	
CONT.	SECT.	JOB	HIGHWAY NO.	
0047	04	031	SH 5	

⚠1 ADDENDUM #1, 11/15/22, REPLACE SHEET

11/21/2022 1:08:59 PM

SUMMARY OF DRAINAGE QUANTITIES											
	462	464	464	464	464	464	464	465	465	465	465
	6019	6003	6005	6007	6008	6009	6010	6005	6006	6011	6012
LOCATION	CONC BOX CULV (8 FT X 4 FT)	RC PIPE (CL III) (18 IN)	RC PIPE (CL III) (24 IN)	RC PIPE (CL III) (30 IN)	RC PIPE (CL III) (36 IN)	RC PIPE (CL III) (42 IN)	RC PIPE (CL III) (48 IN)	JCTBOX (COMPL)(PJB) (3FTX3FT)	JCTBOX (COMPL)(PJB) (4FTX4FT)	JCTBOX (COMPL)(PJB) (6FTX6FT)	JCTBOX (COMPL)(PJB) (8FTX8FT)
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA
NB DRAINAGE PLAN & PROFILE											
BEGIN TO STA 125+00			376								
STA 125+00 TO STA 136+00		12	1076								
STA 136+00 TO STA 147+00		12	418								
STA 147+00 TO STA 158+00		45	556	505				1			
STA 158+00 TO STA 169+00		7	1097								
STA 169+00 TO STA 180+00		157	179	263	518						
STA 180+00 TO STA 191+00			723	376				1			
STA 191+00 TO STA 202+00		153	570								
STA 202+00 TO STA 213+00		15	275	821							
STA 213+00 TO STA 224+00			789	285							
STA 224+00 TO STA 235+00			580								
STA 235+00 TO STA 246+00			906								
STA 246+00 TO STA 257+00			913								
STA 257+00 TO STA 268+00		18	160								
STA 268+00 TO STA 277+00		10	685								
STA 277+00 TO STA 288+00		20	601								
STA 288+00 TO END											
SB DRAINAGE PLAN & PROFILE											
BEGIN TO STA 125+00			378								
STA 125+00 TO STA 136+00		14	1096								
STA 136+00 TO STA 147+00			372	102	176	35					
STA 147+00 TO STA 158+00			36			300	191				2
STA 158+00 TO STA 169+00		35	203	173	543	230			2		
STA 169+00 TO STA 180+00		65	76								
STA 180+00 TO STA 191+00			1065							1	
STA 191+00 TO STA 202+00		29	825								
STA 202+00 TO STA 213+00			390	525							
STA 213+00 TO STA 224+00			52								
STA 224+00 TO STA 235+00			564								
STA 235+00 TO STA 246+00			1010								
STA 246+00 TO STA 257+00			483								
STA 257+00 TO STA 268+00											
STA 268+00 TO STA 277+00											
STA 277+00 TO STA 288+00		23	34						1		
STA 288+00 TO END											
N. CENTRAL ST.			267								
CULVERT C4 LAYOUT	132										
CULVERT C6 LAYOUT											
PROJECT TOTALS	132	615	16,755	3,050	1,237	565	191	2	3	1	2

REV NO.	DATE	BY	REVISION

CivilTech Engineering, Inc.
11821 Telge Road
Cypress, Texas 77429
PH: (281) 304-0200 - FX: (281) 304-0210
Firm Registration No. F-382

Texas Department of Transportation

SH 5

SUMMARY OF DRAINAGE QUANTITIES

SHEET 2 OF 5

DSN: DC	FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
CK: CW	6	SEE TITLE SHEET		25
DRN: DA	STATE	DIST.	COUNTY	
APPVD: PB	TEXAS	18	COLLIN	
CONT.	SECT.	JOB	HIGHWAY NO.	
0047	04	031	SH 5	

1 ADDENDUM #1, 11/15/22, REPLACE SHEET

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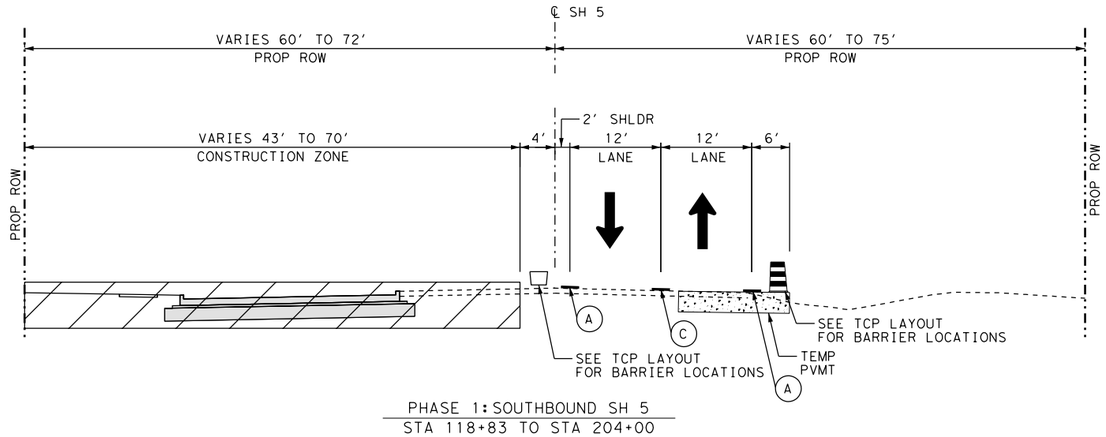
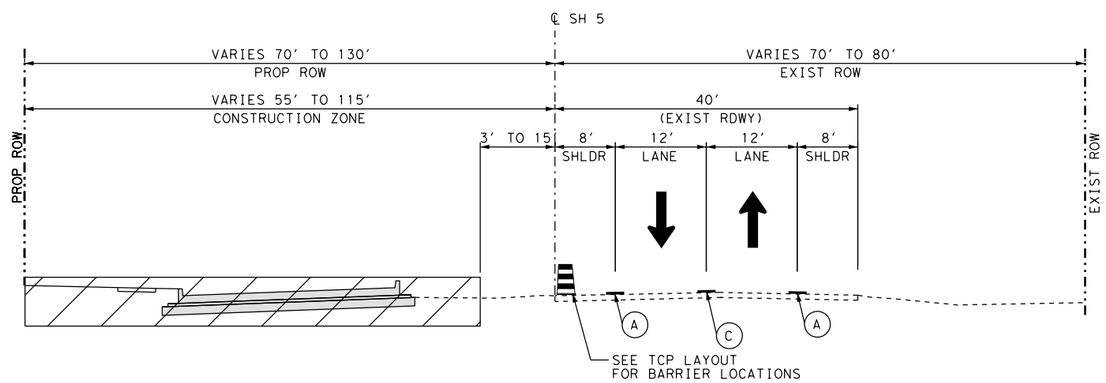


PHASE 1: SOUTHBOUND SH 5
STA 118+83 TO STA 204+00



PHASE 1: SOUTHBOUND SH 5
STA 204+00 TO STA 292+83

LEGEND:

- CONSTRUCTION ZONE THIS PHASE
- FAST TRACK PAVEMENT CONSTRUCTION
- PAVEMENT CONSTRUCTION THIS PHASE
- PAVEMENT CONSTRUCTED PREVIOUS PHASE
- TEMPORARY PAVEMENT CONSTRUCTION
- CHANNELIZING DRUMS @ 45' C-C
- LOW PROFILE CONCRETE BARRIER
- (A) WK ZN PAV MRK REMOV (W)4"(SLD)
- (C) WK ZN PAV MRK REMOV (Y)4"(SLD)(DBL)

2 YEAR TEMPORARY FLEXIBLE PAVEMENT
5" SP-C PG64-22 SAC B
8" LTS @ 4% LIME/SUBGRADE

REV NO.	DATE	BY	REVISION

STATE OF TEXAS
CHANSOTHI OUM
97349
LICENSED PROFESSIONAL ENGINEER

chansothi

11/15/2022

AECOM
AECOM Technical Services Inc. 3580
19219 KATY FREEWAY
SUITE 100
HOUSTON, TX 77094

Texas Department of Transportation

SH 5

TRAFFIC CONTROL PLAN TYPICAL SECTIONS

SHEET 1 OF 2

DSN: CC	FED.RD. DIV.NO.	PROJECT NO.	SHEET NO.
CK: CO	6	SEE TITLE SHEET	42
DRN: JM	STATE	DIST.	COUNTY
APPVD: DH	TEXAS	18	COLLIN
CONT.	SECT.	JOB	HIGHWAY NO.
0047	04	031	SH 5

1 ADDENDUM #1, 11/15/22, REPLACE SHEET

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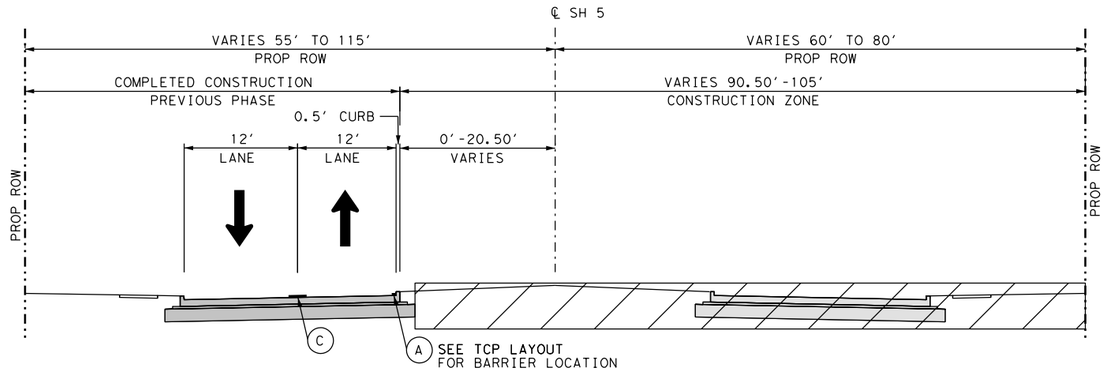

PHASE 2: NORTHBOUND SH 5
STA 118+83 TO STA 292+83

LEGEND:

- CONSTRUCTION ZONE THIS PHASE
- FAST TRACK PAVEMENT CONSTRUCTION
- PAVEMENT CONSTRUCTION THIS PHASE
- PAVEMENT CONSTRUCTED PREVIOUS PHASE
- TEMPORARY PAVEMENT CONSTRUCTION
- CHANNELIZING DRUMS @ 45' C-C
- LOW PROFILE CONCRETE BARRIER
- (A) WK ZN PAV MRK REMOV (W)4"(SLD)
- (C) WK ZN PAV MRK REMOV (Y)4"(SLD)(DBL)

2 YEAR TEMPORARY FLEXIBLE PAVEMENT
5" SP-C PG64-22 SAC B
8" LTS @ 4% LIME/SUBGRADE

REV NO.	DATE	BY	REVISION

STATE OF TEXAS
CHANSOTHI OUM
97349
LICENSED PROFESSIONAL ENGINEER

chansothi

11/15/2022

AECOM
AECOM Technical Services Inc. 3580
19219 KATY FREEWAY
SUITE 100
HOUSTON, TX 77094

Texas Department of Transportation

SH 5

TRAFFIC CONTROL PLAN TYPICAL SECTIONS

SHEET 2 OF 2

DSN: CC	FED.RD. DIV.NO.	PROJECT NO.	SHEET NO.
CK: CO	6	SEE TITLE SHEET	43
DRN: JM	STATE	DIST.	COUNTY
APPVD: DH	TEXAS	18	COLLIN
CONT.	SECT.	JOB	HIGHWAY NO.
0047	04	031	SH 5

1 ADDENDUM #1, 11/15/22, REPLACE SHEET

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LOC NO.	TCP PHASE	PLAN SHEET NUMBER	LOCATION	STA	TEST LEVEL	DIRECTION OF TRAFFIC (UNI/BI)	FOUNDATION PAD		BACKUP SUPPORT			AVAILABLE SITE LENGTH	CRASH CUSHION									
															MOVE / RESET		L	L	R	R	S	S
							PROPOSED MATERIAL	PROPOSED THICKNESS	DESCRIPTION	WIDTH	HEIGHT		INSTALL	REMOVE	MOVE/ RESET	FROM LOC. #	N	W	N	W	N	W
1	1	8 OF 10	SH5	℄ SH5 STA 260+00.00, 4.50' RT	3	UNI	N/A	N/A	PORTABLE TRAFFIC BARRIER	2'-0"	3'-6"		1								X	
2	1	9 OF 10	SH5	℄ SH5 STA 268+00.00, 6.50' RT	3	UNI	N/A	N/A	PORTABLE TRAFFIC BARRIER	2'-0"	3'-6"		1								X	
3	1	9 OF 10	SH5	℄ SH5 STA 286+00.00, 5.15' RT	3	UNI	N/A	N/A	PORTABLE TRAFFIC BARRIER	2'-0"	3'-6"		1								X	
4	1	9 OF 10	SH5	℄ SH5 STA 288+02.60, 46.27' RT	3	UNI	N/A	N/A	PORTABLE TRAFFIC BARRIER	2'-0"	3'-6"		1								X	
5	1	10 OF 10	SH5	℄ SH5 STA 295+00.00, 8.89' LT	3	UNI	N/A	N/A	PORTABLE TRAFFIC BARRIER	2'-0"	3'-6"		1								X	
6	1	10 OF 10	SH5	℄ SH5 STA 295+00.00, 7.50' RT	3	UNI	N/A	N/A	PORTABLE TRAFFIC BARRIER	2'-0"	3'-6"		1								X	
7	2	5 OF 10	SH5	℄ SH5 STA 198+30.00, 20.17' LT	3	UNI	N/A	N/A	PORTABLE TRAFFIC BARRIER	2'-0"	3'-6"			1	1	1					X	
8	2	6 OF 10	SH5	℄ SH5 STA 202+11.92, 19.00' LT	3	UNI	N/A	N/A	PORTABLE TRAFFIC BARRIER	2'-0"	3'-6"			1	1	2					X	
9	2	8 OF 10	SH5	℄ SH5 STA 263+60.72, 12.00' LT	3	UNI	N/A	N/A	PORTABLE TRAFFIC BARRIER	2'-0"	3'-6"			1	1	3					X	
10	2	9 OF 10	SH5	℄ SH5 STA 268+28.59, 20.50' LT	3	UNI	N/A	N/A	PORTABLE TRAFFIC BARRIER	2'-0"	3'-6"			1	1	4					X	
11	2	9 OF 10	SH5	℄ SH5 STA 281+23.88, 15.15' LT	3	UNI	N/A	N/A	PORTABLE TRAFFIC BARRIER	2'-0"	3'-6"			1	1	5					X	
12	2	10 OF 10	SH5	℄ SH5 STA 294+00.00, 4.73' LT	3	UNI	N/A	N/A	PORTABLE TRAFFIC BARRIER	2'-0"	3'-6"			1	1	6					X	
												TOTALS	6	6	6							

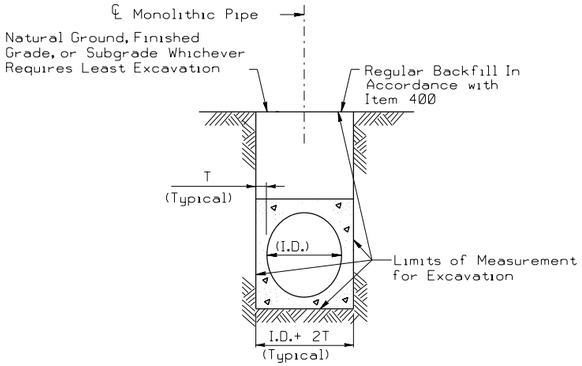
LEGEND:
L=LOW MAINTENANCE
R=REUSABLE
S=SACRIFICIAL
N=NARROW
W=WIDE

FOR DEFINITIONS SEE THE "CRASH CUSHION CATEGORIZATION CHART.PDF" AT THE DESIGN DIVISION (ROADWAY STANDARDS) WEBSITE. USE QUICK LINKS TO ACCESS ATTENUATORS / CRASH CUSHIONS SECTION.
http://www.dot.state.tx.us/insdtdot/orgchart/cmd/cserve/standard/rdwylse.htm

⚠ ADDENDUM #1, 11/15/22, REPLACE SHEET

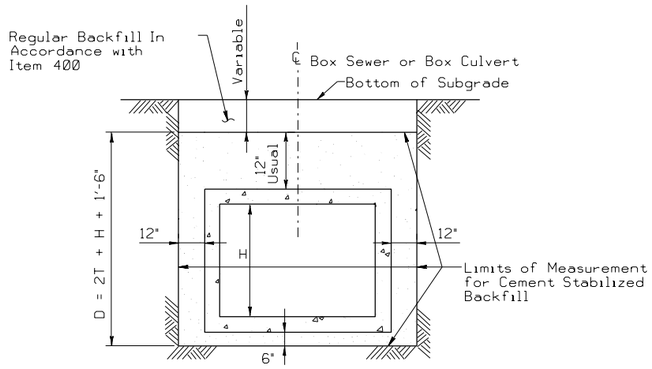
CRASH CUSHION SUMMARY SHEET

FILE: ccss.dgn	DN: TxDOT	CK:		CK:	
© TxDOT	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0047	04	031	SH 5	
	DIST	COUNTY			
	18	COLLIN			
	FEDERAL AID PROJECT			SHEET NO.	
				109	



EXCAVATION DETAIL

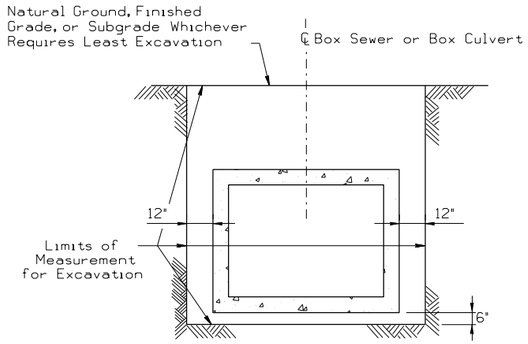
MONOLITHIC PIPE
IN A PAVED OR GRADED AREA



BACKFILL DETAIL

BOX CULVERTS
IN A GRADED OR PAVED AREA
INCLUDING DETOURS *

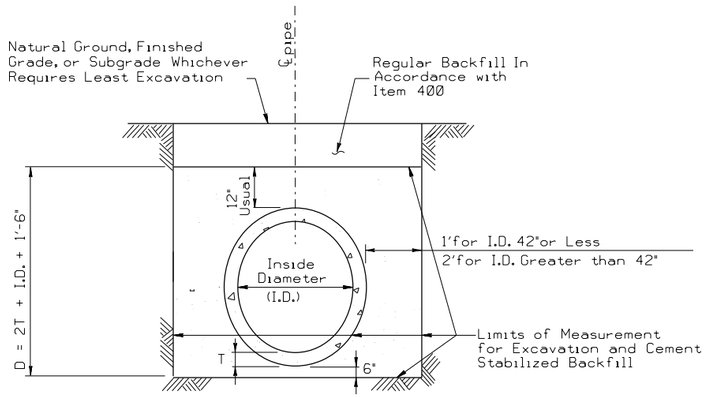
REINFORCED CONCRETE PIPE			
EXCAVATION AND BACKFILL QUANTITIES			
PIPE DIA. IN.	T FT.	CULVERT OR SEWER EXCAVATION IN A PAVED OR GRADED AREA C.Y.PER L.F.PER FT.OF DEPTH	CEMENT STABILIZED BACKFILL IN A PAVED OR GRADED AREA C.Y.PER L.F. OF PIPE
18	0.19	0.144	0.383
24	0.23	0.165	0.478
30	0.29	0.188	0.586
36	0.33	0.210	0.692
42	0.38	0.231	0.808
48	0.42	0.327	1.394
54	0.46	0.349	1.560
60	0.50	0.370	1.731
66	0.54	0.392	1.907
72	0.58	0.414	2.088
78	0.62	0.435	2.275
84	0.67	0.457	2.474



EXCAVATION DETAIL

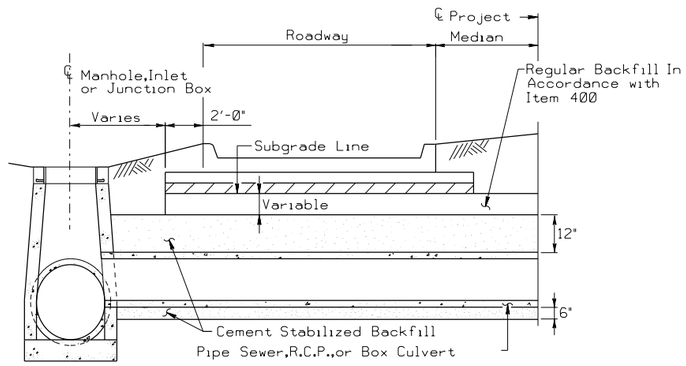
BOX CULVERTS
IN A GRADED AREA

MONOLITHIC PIPE		
EXCAVATION QUANTITIES		
PIPE DIA. IN.	T FT.	EXCAVATION C.Y.PER L.F.PER FT.OF DEPTH
36	0.417	0.142
42	0.458	0.164
48	0.458	0.182
54	0.500	0.204
60	0.583	0.228
66	0.583	0.247
72	0.625	0.269
78	0.625	0.287
84	0.625	0.306



EXCAVATION & BACKFILL DETAIL

REINFORCED CONCRETE PIPE
IN A GRADED OR PAVED AREA
INCLUDING DETOURS



BACKFILL DETAIL

AT MANHOLE, INLET OR JUNCTION BOX

NOTE:

Cement stabilized backfill may be omitted in private driveways as indicated elsewhere in the plans.

Rubber gaskets shall be required for all joints on proposed cross drainage, pipe culverts and proposed storm sewer systems, unless otherwise shown in the plans.

- Backfill with cement stabilized material will be required for all structures under detours unless noted otherwise in the General Notes.

SHEET 1 OF 1

STATE OF TEXAS
CURTIS W. WHITE
113382
LICENSED PROFESSIONAL ENGINEER

Curtis W. White

11/15/2022

1 ADDENDUM #1, 11/15/22, NEW SHEET

D = Depth
H = Height
T = Thickness
R = Radius
Dia = Diameter

Texas Department of Transportation

EXCAVATION AND BACKFILL DIAGRAMS

E&BD

FILE: STDE1.DGN	DN: TxDot	CK: TxDot	DW: TxDot	CK: TxDot
© TxDOT FEB 2010	DIST	FED REG	PROJECT NO.	SHEET
REVISIONS REVISED 11/05 REVISED 2/2010 Added note to Table 1,Sht 2 of 2. REVISED 6/12 REVISED 9/14	18	6	SEE TITLE SHEET	330A
	COUNTY		CONTROL SECT JOB	HIGHWAY
	COLLIN		0047 04 031	SH 5