

Project Manual

Maple Hill Avenue and Robbins Avenue Complete Streets Project

Newington, Connecticut

State Project No. L093-0001

Town Bid No. 1, 2021-22



Prepared for:

Town of Newington
200 Garfield Street
Newington, CT 06111

Prepared by:

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May 20, 2022

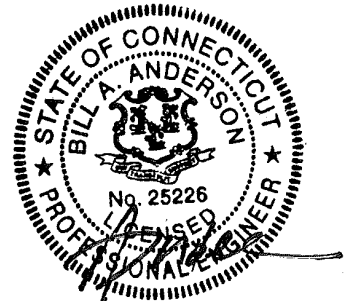


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INVITATION TO BID

The Town of Newington will accept bids from experienced Contractors for the Maple Hill Avenue and Robbins Avenue Complete Streets Project. All bids must be submitted in accordance with Town specifications and on forms supplied by the Town. Bid forms, specifications, and drawings are available online at the Town's website, www.newingtonct.gov under Doing Business, Bid Opportunities. Bids will be received in the Town Manager's Office and read publicly at 2:30 PM on June 22, 2022. A non-mandatory pre-bid conference will be held on June 8, 2022, at the Thompson Street Green. Addenda will be posted on the Town's website. A bid bond for 5% of the amount bid is required. A non-collusion affidavit must be completed and submitted with each bid. Any contract or award will be subject to State of Connecticut set-aside and contract compliance requirements. The Town of Newington reserves the right to reject any or all bids.

Keith Chapman

Town Manager

Bid No. 1, 2021-22

TOWN OF NEWINGTON

MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT

STATE PROJECT NO. L093-0001

BID SPECIFICATIONS

INTENT

It is the intent of these specifications to select an experienced Contractor to perform construction services for the resurfacing of approximately 8,400 linear feet of Maple Hill Avenue and Robbins Avenue beginning at New Britain Avenue (CT Route 174) and ending at Main Street (CT Route 176). Work under this contract includes, but is not limited to, milling of the existing pavement, crack sealing, repaving with hot mix asphalt, minor roadway widening, installing new catch basins and pipes, replacing catch basin tops, sidewalk and accessible curb ramp improvements, traffic signal improvements, pavement markings, replacing and resetting signs, landscaping and other necessary appurtenances such as maintenance and protection of traffic.

BID PROCEDURES

All bids shall be submitted on forms provided by the Town of Newington (hereafter the "Town") and addressed to the Town Manager's Office, Town Hall, 200 Garfield Street, Newington, CT 06111. Bids will be received until 2:30 P.M. on June 22, 2022 at Town Hall, Room 201, when the bids will be read publicly. Bids shall be in sealed envelopes clearly labeled "Bid No. 1, 2021-22, Maple Hill Avenue and Robbins Avenue Complete Streets Project". The Town reserves the right to waive informalities or to reject any or all bids when such action is deemed in the best interests of the Town. The Town reserves the right to delete such items as it deems necessary from these proposals. Bidders are directed to be certain that they understand the terms and conditions as specified in this bid. All exceptions of the bidder to the terms and specifications of this bid shall be made in writing and submitted in full with the Bid Form. It will be expected that all remaining terms and conditions expressed herein are acceptable and shall govern any resulting contract. The Town reserves the sole right to reject bids that contain exceptions which are unacceptable to the Town. All addenda will be posted on the Town's website, www.newingtonct.gov, under Doing Business, Bid Opportunities. Bidders are responsible for checking the website for the presence and content of any addenda. Addenda shall be made a part of the bid specifications and any resulting contract. No bids may be withdrawn, in whole or in part, without the written consent of the Town.

AWARD

Unless all bids are rejected, the Town shall award the bid to the entity it determines to be the lowest responsible bidder. The lowest responsible bidder shall be defined as that person or firm whose bid to perform the work or provide the product(s) specified is lowest, who is qualified and competent to do the work or provide the product(s)

specified, whose past performance of work is satisfactory to the Town, and whose bid documents comply with the procedural requirements stated herein or in any addenda. The award process may also include additional considerations such as the information provided on the Bid Form, the bidder's qualifications, approval of the bidder's Affirmative Action Plan by the Commission on Human Rights and Opportunities, and the bidder's perceived ability to fulfill its obligations as prescribed by these specifications. The Town may make such investigations as it deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Town all such information and data for this purpose as the Town may request. The Town reserves the right to reject any or all bids if evidence submitted by or investigation of the bidder fails to satisfy the Town that such bidder is properly qualified to carry out the obligations of the contract resulting from the bid and to complete the work or deliver the item(s) contemplated therein. The Town intends to contract with and award to, one entity. The Town reserves the right to reject any bid by a joint venture. Should the Town, at its sole discretion, choose to award to a joint venture each entity to such joint venture shall satisfy the Town's requirements as stated herein and the responsibilities of each entity in the joint venture shall be clearly identified. The Town will not accept the bid of a bidder whose firm, or any principal of the firm, is in default on the payment of taxes, licenses or other monies due the Town. As used in this section, a "principal" shall mean an individual who is a director, an officer, an owner, a limited partner or a general partner. As used in this section, "in default on the payment of taxes" shall mean the failure to pay taxes by the date such taxes are due and payable or the failure to be current with respect to a delinquent taxes payment schedule as set forth in a written agreement with the Revenue Collector.

BID PRICES

Bids from all bidders shall remain in effect for a period of one hundred eighty (180) calendar days from the date of the bid opening, unless written consent is provided by the Town to withdraw. Once a contract award has been made all of the Contractor's bid prices shall be held firm throughout the term of the contract and will be construed as all-inclusive. There shall not be any unilateral imposition of additional surcharges for fuel or deliveries.

PRE-BID CONFERENCE AND SITE INSPECTION

For the benefit of all bidders wishing to submit bids, a non-mandatory pre-bid conference will be held at the Thompson Street Green on June 8, 2022. Each bidder is responsible for any information discussed or presented at the pre-bid conference. Each bidder shall examine the work site and become fully acquainted with existing conditions so that the bidder fully understands the facilities, difficulties, and restrictions involved with this project. Each bidder shall perform its own due diligence and shall take all necessary measurements for this work. The Town does not accept any liability or financial responsibility for any and all conditions or information that bidders could have learned through reasonable investigation. Failure of the bidder to become acquainted with the

conditions at the job location shall in no way relieve the bidder from any obligation with respect to this bid or the resulting contract.

CONTRACTOR PERFORMANCE

Failure of the Contractor to adhere to the specifications, prices, terms or conditions of its Agreement with the Town may preclude the Contractor, at the Town's sole discretion, from bidding on future Town bids, in addition to any action that the Town may take as a result of the Contractor's failure to perform.

TERMINATION

All work done as a result of this bid shall be completed to the satisfaction of the Town Manager. The Town reserves the right to terminate this agreement upon ten (10) calendar days written notice of failure by the Contractor to provide service to the satisfaction of the Town Manager.

NONDISCRIMINATION

The Contractor shall agree and warrant that it will not discriminate or permit discrimination against any person or group of persons on the grounds of sex, race, color, religion, age, marital status, ancestry, national origin, past history of mental disorder, mental disability or physical disability or other basis in any manner prohibited by the laws of the United States, the State of Connecticut, or the Town of Newington.

AFFIRMATIVE ACTION

The Contractor shall comply with Connecticut General Statutes §§ 4a-60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f, inclusive, as amended. An Affirmative Action Plan shall be filed with and approved by the Commission on Human Rights and Opportunities prior to the commencement of construction. A minimum of twenty five percent (25%) of the contract award shall be to subcontractors holding current certification from the Connecticut Department of Administrative Services (hereafter "DAS") under the provisions of Connecticut General Statutes §4a-60g, as amended. Specifically, a minimum of twenty five percent (25%) of the contract award shall be with DAS certified Small and Minority owned businesses, and a minimum of twenty five percent (25%) of that work or portion of the contract award shall be with DAS certified Minority, Women and/or Disabled owned businesses. The Contractor shall demonstrate a good faith effort to meet the 25% set aside goals. The Contractor shall file a written or electronic non-discrimination certification with the Commission on Human Rights and Opportunities. Forms can be found at http://www.ct.gov/opm/cwp/view.asp?a=2982&q=390928&opmNav_GID=1806. The set aside requirements are for the total contract award, not simply the portion funded by the State of Connecticut.

HOLD HARMLESS

The Contractor agrees to indemnify, defend and hold harmless the Town of Newington and its respective officers, employees, agents and/or servants against all demands, claims, actions or causes of actions, losses, damages, liabilities, costs and expenses, including without limitation, interest, penalties, court costs and reasonable attorney's fees, asserted against, resultant to, imposed upon or incurred by the Town of Newington resulting from or arising out of:

1. Any breach by the Contractor of the terms of the specifications, or
2. Any injuries (including death) sustained by or alleged to have been sustained by the officers, employees, agents and/or servants of the Town of Newington or the Contractor or subcontractors or material men, or
3. Any injuries (including death) sustained by or alleged to have been sustained by any member of the public or otherwise any or all persons, or
4. Any damage to property, real or personal, (including property of the Town of Newington or its respective officers, agents and servants)

caused in whole or in part by the acts or omissions of the Contractor, any subcontractor, or any material men or anyone directly or indirectly employed by them while engaged in the performance of any work for the Town of Newington.

HAZARDOUS MATERIALS

The Contractor, when providing, using, storing, delivering or disposing of any toxic, hazardous or potentially dangerous materials, shall advise the Town, in writing, of the condition of such hazardous materials in advance of conducting any work and is responsible for protecting the Contractor's own employees, those of the Town, and all its' agents from the hazards associated with such materials. The Contractor shall furnish direction, precautions, or training, provided or made available from the supplier of the materials, or other acceptable source, for use by all persons who may be subject to the hazard. The Contractor shall comply with all applicable regulations and laws. The Contractor shall dispose of any hazardous or toxic substances in accordance with all applicable regulations or laws, including Environmental Protection Agency (E.P.A.) and Department of Transportation (D.O.T.), and shall provide the Town with the appropriate generator E.P.A. number. The Contractor shall do all things necessary to insure that there will be no discharge, spillage, uncontrolled loss, seepage or filtration of any hazardous or toxic waste on the site caused by the Contractor's operations. The Contractor is responsible for any and all costs and liabilities associated with the clean up of any such spillage, etc., or as required by any regulating authority, and holds the Town harmless against any current or future liabilities resulting from such an incident.

INSURANCE

The Contractor shall furnish a certificate of liability insurance on a standard ACORD form to the Town Manager for the following insurance coverage within ten (10) calendar days from contract execution. All insurance coverage shall be written with an insurance company licensed to conduct business in the State of Connecticut and with an A.M. Best's Key Rating of A-VII or better. Insurance coverage shall remain in full force for the duration of the contract term, including any and all extensions, at the Contractor's cost and expense. Such certificate of insurance shall specify that the Town of Newington will receive thirty (30) days prior written notice of any cancellation, non-renewal or reduction in coverage and limits originally provided. All deductibles, if any, are the sole responsibility of the Contractor to pay and/or indemnify. The requirements of this section shall apply to the Contractor and to any and all subcontractors. Limits identified are the required minimum limits. Umbrella Liability insurance coverage to satisfy the limits of coverage required hereunder is acceptable.

1. Commercial General Liability including Premises-Operations, Independent Contractors, Blanket Contractual, Products and Completed Operations:

\$2,000,000 Each Occurrence

\$4,000,000 Aggregate

Combined Single Limit for personal and advertising injury or property damage or both combined.

Such policy shall name the Town and the State of Connecticut as additional insured.

2. Comprehensive Automobile Liability covering owned, non-owned, hired or leased vehicles.

\$2,000,000 Each Accident

Combined Single Limit for bodily injury or property damage or both combined.

3. Workers Compensation Insurance in accordance with Connecticut State Statutes.

Employers Liability Limit - \$500,000 each accident for bodily injury by accident
- \$500,000 each employee for bodily injury by disease.

BONDS

Within ten calendar days following notice of any award the Contractor shall furnish Performance and Labor and Materials Payment bonds to the Town for the duration of the Contract, covering faithful performance of the Contract and the payment of obligations arising thereunder. Such bonds shall be equal to one hundred percent (100%) of the full amount of the Contract as a guarantee that the terms of the Contract shall be complied with in every particular. These bonds shall be issued from a surety company either licensed or approved by the State of Connecticut Insurance Commissioner and which has an A.M. Best's rating of A-VII or better. These bonds shall clearly state that on default by the Contractor the surety company shall pay all payables associated with this job that are outstanding. The form of said bonds shall be AIA Document A312 or equal. For bids of \$250,000 or greater, non-resident contractors and subcontractors shall comply with the bond requirements of Section 12-430(7) of the Connecticut General Statutes, which is regarding the posting of a bond with the Commissioner of Revenue Services. A bid bond in the amount of five per cent (5%) of the amount bid shall accompany each bid. The bid bond shall be issued by a surety company either licensed or approved by the State of Connecticut Insurance Commissioner.

PAYMENT

Payment for the work associated with this bid shall be made within thirty (30) calendar days by the Town, following the completion of all work invoiced to the satisfaction of the Town Manager and upon approval of an invoice submitted to the Town of Newington Finance Department, 200 Garfield Street, Newington, CT 06111.

SEVERABILITY

In the event of any inconsistencies between applicable general laws and this bid, or any Agreement resulting from this bid, the applicable general laws shall prevail. In the event that any terms or provisions of this bid, or any Agreement resulting from this bid, shall be found to be invalid or unenforceable pursuant to judicial decree or decision, then such term(s) or provision(s) shall be deemed to be stricken and the remainder of this bid, or any Agreement resulting from this bid, shall be valid and enforceable according to its terms. The validity, interpretation and enforcement of any Agreement resulting from this bid shall be governed by the laws of the State of Connecticut.

DISPUTE RESOLUTION

The sole remedy for any claim, dispute, or other matter in question arising out of or related to any Agreement resulting from this bid will either be by mediation or by legal or equitable suit filed in Superior Court for the Judicial District of New Britain. No party shall be entitled to arbitration for any claim, dispute or other matter in question.

PROTECTION

Precaution for the protection of persons and property must be exercised at all times. The safety provisions of applicable laws, as well as building, fire and construction codes, shall be observed at all times. The Contractor shall take such additional safety and health measures as are reasonably necessary. The Contractor shall be responsible for ensuring pedestrian and traffic safety in all work zones.

STORAGE AND HANDLING

All materials and equipment shall be delivered, handled and stored in a manner which prevents the intrusion of foreign materials and damage by breakage or weather. Such storage, delivery, and handling shall not interfere with Town operations nor impede access to any public areas. All equipment shall be stored in a clean, dry location. Material which is damaged shall be replaced with new material at no additional cost to the Town.

CLEANUP

Removal of material to be replaced is the responsibility of the Contractor. All accumulated rubbish and debris shall be removed daily from the job site and adjacent areas by the Contractor. Any such rubbish and debris shall not be placed in the Town's dumpster but shall be transported by the Contractor from the premises. All dumpster and trash disposal costs shall be included in the bid price. Any inflammable rubbish shall not be burned on the premises but shall be hauled away.

The work area(s) shall be left clean and ready for use by the Town. If the Contractor fails to properly clean up the job site the Town may do so or may hire another firm of its choosing to do so. In either case, the cost of such cleanup shall be charged to the Contractor.

APPEARANCE

All work shall be performed in a workmanlike and professional manner and shall be left with a neat appearance. All disturbed areas shall be restored to their original condition. Any damage to a building resulting from this work shall be repaired by the Contractor at no additional cost to the Town. All preparation and installation shall be performed in conformance with manufacturer's guidelines and appropriate building and fire codes. All work shall be performed to the satisfaction of the Town Manager.

QUALIFICATIONS

The Contractor shall have demonstrated experience by having been in business (as the same business with the same name as submitted on the Bid Form) for at least three (3) years and by having successfully completed at least three (3) similar projects, as

determined by the Town. If requested by the Town, the bidder shall provide a list of three similar projects, with telephone numbers and contact persons, prior to the award of this bid, and evidence of incorporation/business formation that will satisfy the requirements of this section. The Contractor and the Contractor's employees shall have the required background, license(s), technical knowledge, and equipment, labor force and satisfactory prior work history to perform this project in a satisfactory manner. Failure to meet the qualifications of this section alone is sufficient grounds for rejection of the bid by the Town.

COMPLETION

All work shall be completed within two hundred ten (210) calendar days following the issuance of a Town purchase order to the Contractor. Failure of the Contractor to complete work within the two hundred ten calendar day period, or to prosecute the work in a continuous manner following the start of work, shall be grounds for termination of the contract by the Town.

LIQUIDATED DAMAGES

If the contractor does not substantially complete the work within the 210 calendar days and has not received written approval from the Town for an extension to the duration of the contract, the Contractor shall pay as liquidated damages, one thousand two hundred dollars (\$1,200) per calendar day to the Town until the work is complete.

PERMITS

The Contractor shall obtain a Contractor License from the Engineering Department, prior to start of any work. The Town will waive the fee. The Contractor shall apply for and obtain an encroachment permit from CTDOT Maintenance District 1 prior to performing any work within state right-of-way. All costs associated with obtaining permits shall be included in the overall cost of the project. The Contractor and any subcontractors are also responsible for any other federal, state, regional or local permits and/or inspections required for installation. The Town already obtained approval from its Conservation Commission for the proposed improvements.

QUESTIONS

Appointments to examine the work site shall be arranged with Gary Fuerstenberg at gfuerstenberg@newingtonct.gov. All questions and RFIs (Requests for Interpretation) regarding this bid shall be addressed to Gary Fuerstenberg, Town Engineer in writing, either by fax to 860-665-8572 or e-mail at gfuerstenberg@newingtonct.gov, and shall be received no later than three business days prior to the bid opening date to allow for the timely preparation and posting of addenda. Questions received and the decisions regarding each question shall be set forth in a written addenda. Any addenda shall be posted on the Town's website in accordance with the section on Bid Procedures above.

No oral interpretations shall be made to any respondent as to the meaning of any portion of the bid documents.

TIME OF WORK

No work will be allowed between the hours of 7:00 p.m. and 7:00 am Monday through Friday. No work will be allowed on Saturdays, Sundays or holidays unless authorized by the Town. If work is authorized, any inspection will be required at the Contractor's expense.

FREEDOM OF INFORMATION

All bids and any related submittals to the Town are subject to the requirements of the State of Connecticut Freedom of Information Act, regardless of whether they are marked as confidential, proprietary, or in any other manner. By the act of submitting a bid, bidders agree that they will be subject to Connecticut General Statutes §1-200 et seq.

NON COLLUSION AFFIDAVIT OF BIDDER

- (1) He/she is _____ of
herein referred to as the “Bidder” that has submitted the attached bid;
- (2) He/she is fully informed respecting the preparation and content of the attached Bid and of all pertinent circumstances respecting such Bid;
- (3) Such Bid is genuine and is not a collusive or sham Bid;
- (4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Town of Newington, CT or any person interested in the proposed Contract; and
- (5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents,

representatives, owners, employees, or parties of interest, including this affiant.

- (6) That no officer or employee or person whose salary is payable in whole or in part from the Town of Newington is directly or indirectly interested in this Bid, or in the supplies, materials, equipment, work, or labor to which it relates, or in any of the profits thereof.

Signed _____

Title _____

Subscribed and sworn before me this

_____ day of _____ 20____

(Notary Public)

My Commission expires _____

TOWN OF NEWINGTON

MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT

STATE PROJECT NO. L093-0001

BID FORM

Town Manager
200 Garfield Street
Newington, CT 06111

In accordance with the specifications, the undersigned submits the following bid to furnish all labor, materials, tools and appliances required to complete the Maple Hill Avenue and Robbins Avenue Complete Streets Project:

BASE BID

Itemized Contract Items (Pages 18 to 35)

Total Bid \$_____.

The undersigned states that this bid is made in good faith and is not founded on, or in consequence of any collusion, agreement or understanding between themselves or any other interested party.

SUBMITTED FOR:

SUBMITTED BY:

Firm _____

Signature _____.

Address _____

Name _____.

Title _____.

Telephone _____.

TOWN OF NEWINGTON, CONNECTICUT
BID FORM

MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
State Contract No. L093-0001

ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
0201001A	1	LS	CLEARING AND GRUBBING at _____ dollars and _____ cents per lump sum	\$	\$
0202000	1460	CY	EARTH EXCAVATION at _____ dollars and _____ cents per cubic yard	\$	\$
0202529	3544	LF	CUT BITUMINOUS CONCRETE PAVEMENT at _____ dollars and _____ cents per linear foot	\$	\$
0209001	900	SY	FORMATION OF SUBGRADE at _____ dollars and _____ cents per square yard	\$	\$
0216011A	3	CY	FLOWABLE FILL at _____ dollars and _____ cents per cubic yard	\$	\$
0219001	1760	LF	SEDIMENTATION CONTROL SYSTEM at _____ dollars and _____ cents per linear foot	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
BID FORM

MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
State Contract No. L093-0001

ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
0219011A	96	EA	SEDIMENT CONTROL SYSTEM AT CATCH BASIN at _____ dollars and _____ cents per each	\$	\$
0304002	836	CY	PROCESSED AGGREGATE BASE at _____ dollars and _____ cents per cubic yard	\$	\$
406161A	75	TON	HOT MIX ASPHALT LEVELING/SHIM COURSE at _____ dollars and _____ cents per ton	\$	\$
0406171	469	TON	HMA S0.5 at _____ dollars and _____ cents per ton	\$	\$
0406172	5180	TON	HMA S0.375 at _____ dollars and _____ cents per ton	\$	\$
0406200A	8750	LF	CLEANING AND SEALING CRACKS at _____ dollars and _____ cents per linear foot	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
BID FORM

MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
State Contract No. L093-0001

ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
0406236	3256	GAL	MATERIAL FOR TACK COAT at _____ dollars and _____ cents per gallon	\$	\$
0406600	6121	TON	MATERIAL TRANSFER VEHICLE at _____ dollars and _____ cents per ton	\$	\$
0406999A	EST QUANTITY	EST	ASPHALT ADJUSTMENT COST at <u>FIVE THOUSAND</u> dollars and <u>ZERO</u> cents estimated	\$5,000.00	\$5,000.00
0409001	43659	SY	FINE MILLING BITUMINOUS CONCRETE (0" TO 4") at _____ dollars and _____ cents per square yard	\$	\$
0586001.10	3	EA	TYPE "C" CATCH BASIN - 0' - 10' DEEP at _____ dollars and _____ cents per each	\$	\$
0586025.10	1	EA	SPECIAL ROUND TYPE 'C' CATCH BASIN - 0' - 10' DEEP at _____ dollars and _____ cents per each	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
BID FORM

MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
State Contract No. L093-0001

ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
0586500.10	1	EA	MANHOLE - 0'-10' DEEP at _____ dollars and _____ cents per each	\$	\$
0586601	80	EA	RESET TYPE "C" CATCH BASIN at _____ dollars and _____ cents per each	\$	\$
0586603	1	EA	RESET TYPE "C" CATCH BASIN DOUBLE GRATE TYPE 1 at _____ dollars and _____ cents per each	\$	\$
0586605	2	EA	RESET TYPE "C" CATCH BASIN DOUBLE GRATE TYPE 2 at _____ dollars and _____ cents per each	\$	\$
0586620	4	EA	RESET TYPE "C-L" CATCH BASIN at _____ dollars and _____ cents per each	\$	\$
0586651	9	EA	RESET MANHOLE (STORM) at _____ dollars and _____ cents per each	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
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MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
State Contract No. L093-0001

ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
0586703	1	EA	CONVERT CB TO MANHOLE at _____ dollars and _____ cents per each	\$	\$
0586750	78	EA	TYPE "C" CATCH BASIN TOP at _____ dollars and _____ cents per each	\$	\$
0586751	1	EA	TYPE "C" CATCH BASIN TOP DOUBLE GRATE TYPE I at _____ dollars and _____ cents per each	\$	\$
0586752	3	EA	TYPE "C" CATCH BASIN TOP DOUBLE GRATE TYPE II at _____ dollars and _____ cents per each	\$	\$
0586760	4	EA	TYPE "C-L" CATCH BASIN TOP at _____ dollars and _____ cents per each	\$	\$
0586790.10	1	EA	REMOVE DRAINAGE STRUCTURE - 0' - 10' DEEP at _____ dollars and _____ cents per each	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
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MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
State Contract No. L093-0001

ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
0653001	98	EA	CLEAN EXISTING CATCH BASIN at _____ dollars and _____ cents per each	\$	\$
0653010	16	EA	CLEAN EXISTING MANHOLE at _____ dollars and _____ cents per each	\$	\$
0653100	8592	LF	CLEAN EXISTING CULVERT 12" - 42" DIAMETER at _____ dollars and _____ cents per linear foot	\$	\$
0686051.50	84	LF	18" X 36" R.C. PIPE ELLIPTICAL - 0'-10' DEEP at _____ dollars and _____ cents per linear foot	\$	\$
0686230.06	142	LF	6" HIGH DENSITY POLYETHYLENE PIPE - 0' - 10' DEEP at _____ dollars and _____ cents per linear foot	\$	\$
0686230.12	63	LF	12" HIGH DENSITY POLYETHYLENE PIPE - 0' - 10' DEEP at _____ dollars and _____ cents per linear foot	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
BID FORM

MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
State Contract No. L093-0001

ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
0686230.15	1030	LF	15" HIGH DENSITY POLYETHYLENE PIPE - 0' - 10' DEEP at _____ dollars and _____ cents per linear foot	\$	\$
0686230.24	324	LF	24" HIGH DENSITY POLYETHYLENE PIPE - 0' - 10' DEEP at _____ dollars and _____ cents per linear foot	\$	\$
0686950.10	60	LF	REMOVE EXISTING PIPE - 0' - 10' DEEP at _____ dollars and _____ cents per linear foot	\$	\$
0728014	82	CY	3/4" CRUSHED STONE at _____ dollars and _____ cents per cubic yard	\$	\$
0755014	740	SY	GEOTEXTILE (SEPARATION - HIGH SURVIVABILITY) at _____ dollars and _____ cents per square yard	\$	\$
0811105	1600	LF	CONCRETE CURBING CAST IN PLACE at _____ dollars and _____ cents per linear foot	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
BID FORM

MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
State Contract No. L093-0001

ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
0813021	164	LF	6" GRANITE STONE CURBING at _____ dollars and _____ cents per linear foot	\$	\$
0813031	14	LF	6" GRANITE CURVED STONE CURBING at _____ dollars and _____ cents per linear foot	\$	\$
0815001	10	LF	BITUMINOUS CONCRETE LIP CURBING at _____ dollars and _____ cents per linear foot	\$	\$
0816001	93	LF	GRANITE SLOPE CURBING at _____ dollars and _____ cents per linear foot	\$	\$
0816002	15	LF	CURVED GRANITE SLOPE CURBING at _____ dollars and _____ cents per linear foot	\$	\$
0912503	158	LF	REMOVE METAL BEAM RAIL at _____ dollars and _____ cents per linear foot	\$	\$

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MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
State Contract No. L093-0001

ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
0921001A	4853	SF	CONCRETE SIDEWALK at _____ dollars and _____ cents per square foot	\$	\$
0921002A	370	SF	CONCRETE SIDEWALK - 8" at _____ dollars and _____ cents per square foot	\$	\$
0921005A	2394	SF	CONCRETE SIDEWALK RAMP at _____ dollars and _____ cents per square foot	\$	\$
0921039	58	EA	DETECTABLE WARNING STRIP at _____ dollars and _____ cents per each	\$	\$
0922501	153	SY	BITUMINOUS CONCRETE DRIVEWAY at _____ dollars and _____ cents per square yard	\$	\$
0944000	2388	SY	FURNISHING AND PLACING TOPSOIL at _____ dollars and _____ cents per square yard	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
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MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
State Contract No. L093-0001

ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
0947303A	2	EA	BUS SHELTER - TYPE I at _____ dollars and _____ cents per each	\$	\$
0949838	2	EA	ACER RUBRUM "RED SUNSET", RED SUNSET RED MAPLE 2"-2 1/2" CAL. B.B at _____ dollars and _____ cents per each	\$	\$
0950000	2	EA	STYRAX JAPONICA, JAPANESE STORAX - 2"-2 1/2" CAL. B.B. at _____ dollars and _____ cents per each	\$	\$
0950005	2388	SY	TURF ESTABLISHMENT at _____ dollars and _____ cents per square yard	\$	\$
0970006	EST QUANTITY	EST	TRAFFICPERSON (TOWN POLICE OFFICER) at <u>ONE HUNDRED THIRTY EIGHT THOUSAND FIVE HUNDRED SIXTY</u> dollars and <u>ZERO</u> cents estimated	\$138,560.00	\$138,560.00
0970007	1733	HR	TRAFFICPERSON (UNIFORMED FLAGGER) at _____ dollars and _____ cents per hour	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
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MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
State Contract No. L093-0001

ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
0971001A	1	LS	MAINTENANCE AND PROTECTION OF TRAFFIC at _____ dollars and _____ cents per lump sum	\$	\$
0975004	1	LS	MOBILIZATION AND PROJECT CLOSEOUT at _____ dollars and _____ cents per lump sum	\$	\$
0980020	1	LS	CONSTRUCTION SURVEYING at _____ dollars and _____ cents per lump sum	\$	\$
1001001A	75	LF	TRENCHING AND BACKFILLING at _____ dollars and _____ cents per linear foot	\$	\$
1002101	1	EA	LIGHT STANDARD FOUNDATION - TYPE I at _____ dollars and _____ cents per each	\$	\$
1002203	2	EA	TRAFFIC CONTROL FOUNDATION - PEDESTAL - TYPE I at _____ dollars and _____ cents per each	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
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MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
State Contract No. L093-0001

ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
1003206	1	EA	LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM at _____ dollars and _____ cents per each	\$	\$
1008115	75	LF	2" RIGID METAL CONDUIT IN TRENCH at _____ dollars and _____ cents per linear foot	\$	\$
1008908A	300	LF	CLEAN EXISTING CONDUIT at _____ dollars and _____ cents per linear foot	\$	\$
1010060A	3	EA	CLEAN EXISTING CONCRETE HANDHOLE at _____ dollars and _____ cents per each	\$	\$
1010011	1	EA	CONCRETE HANDHOLE - TYPE I at _____ dollars and _____ cents per each	\$	\$
1102002	2	EA	8' ALUMINUM PEDESTAL at _____ dollars and _____ cents per each	\$	\$

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MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
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ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
1105518A	1	EA	LED TRAFFIC SIGNAL LAMP UNIT BI-COLORED ARROW 12" at _____ dollars and _____ cents per each	\$	\$
1106003A	2	EA	1 WAY PEDESTRIAN SIGNAL PEDESTAL MOUNTED at _____ dollars and _____ cents per each	\$	\$
1107011A	2	EA	ACCESSIBLE PEDESTRIAN SIGNAL AND DETECTOR (TYPE A) at _____ dollars and _____ cents per each	\$	\$
1108163A	4	EA	MODIFY EXISTING CONTROLLER at _____ dollars and _____ cents per each	\$	\$
1108725A	3	EA	PHASE SELECTOR (MODIFIED) at _____ dollars and _____ cents per each	\$	\$
1111600A	1	EA	EXTENSION BRACKET at _____ dollars and _____ cents per each	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
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MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
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ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
1112284A	4	EA	VEHICLE DETECTION MONITOR at _____ dollars and _____ cents per each	\$	\$
1112285A	2	EA	THERMAL VIDEO DETECTOR ASSEMBLY at _____ dollars and _____ cents per each	\$	\$
1112286A	3	EA	360 DEGREE CAMERA ASSEMBLY at _____ dollars and _____ cents per each	\$	\$
1112287A	3	EA	360 DEGREE VIDEO DETECTION PROCESSOR at _____ dollars and _____ cents per each	\$	\$
1112413A	11	EA	DETECTOR (TYPE A) (MODIFIED) at _____ dollars and _____ cents per each	\$	\$
1112471A	3	EA	PRE-EMPTION SYSTEM CHASSIS (MODIFIED) at _____ dollars and _____ cents per each	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
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MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
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ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
1113103	280	LF	7 CONDUCTOR NO. 14 CABLE at _____ dollars and _____ cents per linear foot	\$	\$
1113552A	1245	LF	DETECTOR CABLE (OPTICAL) (MODIFIED) at _____ dollars and _____ cents per linear foot	\$	\$
1113725A	475	LF	23 ASWG 4 TWISTED PAIR CATEGORY 6 CABLE at _____ dollars and _____ cents per linear foot	\$	\$
1113901A	520	LF	CAMERA CABLE at _____ dollars and _____ cents per linear foot	\$	\$
1114201A	3	EA	AUXILIARY EQUIPMENT CABINET at _____ dollars and _____ cents per each	\$	\$
1118012A	1	LS	REMOVAL AND/OR RELOCATION OF TRAFFIC EQUIPMENT at _____ dollars and _____ cents per lump sum	\$	\$

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MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
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ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
1206023A	1	LS	REMOVAL AND RELOCATION OF EXISTING SIGNS at _____ dollars and _____ cents per lump sum	\$	\$
1208931A	307	SF	SIGN FACE - SHEET ALUMINUM - (TYPE IX RETROREFLECTIVE SHEETING) at _____ dollars and _____ cents per square foot	\$	\$
1208938A	2	EA	PROJECT SIGN at _____ dollars and _____ cents per each	\$	\$
1210101	31794	LF	4" WHITE EPOXY RESIN PAVEMENT MARKINGS at _____ dollars and _____ cents per linear foot	\$	\$
1210102	15254	LF	4" YELLOW EPOXY RESIN PAVEMENT MARKINGS at _____ dollars and _____ cents per linear foot	\$	\$
1210105	5254	SF	EPOXY RESIN PAVEMENT MARKINGS, SYMBOLS AND LEGENDS at _____ dollars and _____ cents per square foot	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
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ITEM	EST. QTY.	UNITS	DESCRIPTION AND WRITTEN UNIT PRICE	UNIT BID PRICE	AMOUNT
1302060A	7	EA	ADJUST GATE BOX (WATER) at _____ dollars and _____ cents per each	\$	\$
1403501A	17	EA	RESET MANHOLE (SANITARY SEWER) at _____ dollars and _____ cents per each	\$	\$

TOWN OF NEWINGTON, CONNECTICUT
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MAPLE HILL AVENUE AND ROBBINS AVENUE COMPLETE STREETS PROJECT
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Total Proposal: \$	
The total amount of this Total Proposal at	
_____ dollars and	Add up all values in the “Amount” column and insert the total here and as your Total Proposal
_____ cents	

All prices must be written in ink, in words and in figures for the entire proposal. In case of discrepancy, words will take precedence over numbers and unit prices will take precedence over extended prices.

TABLE OF CONTENTS OF SPECIAL PROVISIONS

Note: This Table of Contents has been prepared for the convenience of those using this contract with the sole express purpose of locating quickly the information contained herein; and no claims shall arise due to omissions, additions, deletions, etc., as this Table of Contents shall not be considered part of the contract.

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SPECIAL PROVISIONS

GENERAL CONDITIONS

The work under this Contract consists of resurfacing of approximately 8,400 linear feet of Maple Hill Avenue and Robbins Avenue beginning at New Britain Avenue (CT Route 174) and ending at Main Street (CT Route 176).

The general limits of work are shown on the construction plans included in these contract documents. The exact limits of work will be confirmed by the Engineer prior to the Contractor beginning work.

The Contractor shall review and coordinate the location of all proposed improvements, and all other items that are not specifically detailed within these documents with the Engineer prior to the beginning of work. The Contractor is responsible for taking accurate measurements, as needed, of actual field conditions prior to ordering proposed materials or beginning construction.

Work under this contract includes, but is not limited to, milling of the existing pavement, crack sealing, repaving with hot mix asphalt, minor roadway widening, installing new catch basins and pipes, replacing catch basin tops, sidewalk and accessible curb ramp improvements, traffic signal improvements, pavement markings, replacing and resetting signs, landscaping and other necessary appurtenances such as maintenance and protection of traffic.

All work done under this Contract shall be in conformance with the following:

1. The State of Connecticut Department of Transportation Specifications for Roads, Bridges, Facilities and Incidental Construction Form 818 and supplementals dated January 2021;
2. The latest Manual on Uniform Traffic Control Devices for Streets and Highways;
3. The State of Connecticut Department of Transportation, Sign Catalog, dated July 3, 2019;
4. The Construction Plans and;
5. The Project Manual.

NOTICE TO CONTRACTOR – WORK SCHEDULE

The Contractor is required to submit a schedule of work to be completed to the Engineer and obtain approval from the Engineer on the schedule prior to commencing work and shall update the schedule monthly. Should construction occur at a rate different from that indicated in the approved schedule, the Contractor shall submit a revised work schedule to the Engineer for approval. At a minimum, and as applicable, the Contractor must submit this revised work schedule at the next monthly status meeting with the Engineer.

NOTICE TO CONTRACTOR – FIRE DEPARTMENT, POLICE, AND EMERGENCY MEDICAL SERVICES

The Contractor shall contact the Fire Department, Police, and Emergency Medical Services, prior to work and establish coordination necessary as to disruption of services during construction.

NOTICE TO CONTRACTOR – SAFEGUARDING OF RESIDENCES AND PEDESTRIANS

The Contractor shall maintain and protect traffic operations at all driveways and provide adequate sight lines. The Contractor shall not restrict sight lines with construction equipment when not actively working. The Contractor shall provide and maintain safe and accessible pedestrian operations on existing sidewalks or temporary bituminous walks at all times during and after construction hours. The Contractor shall provide adequate protection between work area and pedestrian sidewalk activities as directed by the Engineer.

NOTICE TO CONTRACTOR - EXISTING UTILITIES

Existing utilities shall be maintained during construction. The Contractor shall verify the location of underground, structure mounted and overhead utilities. Construction work within the vicinity of utilities shall be performed in accordance with current safety regulations.

The Contractor shall notify "Call Before You Dig", telephone: 1-800-922-4455 for the location of public utility underground facilities, in accordance with Section 16-345 of the Regulations of the Department of Public Utility Control.

Contractors are cautioned that it is their responsibility to verify locations, conditions, and field dimensions of all existing features, as actual conditions may differ from information shown on the plans or contained elsewhere in the specifications.

The Contractor is hereby notified that utility work scheduled will have to be accommodated prior to proceeding. The Contractor shall coordinate with the Utility Companies to accommodate his schedule with all utility company schedules. Any inconvenience or delay that may result from the utility company work shall be included in the contract proposal for the work.

All of the existing utility infrastructure must remain in service until the new facilities are acceptable to be put in service. The Contractor shall explore with the utilities this aspect of the project. This condition of serviceability applies to the work being done by the contractor for the utilities and to work that is being done under the control of the utility.

NOTICE TO CONTRACTOR – SUPPORT OF EXISTING UTILITY POLES WITHIN THE PROJECT LIMITS

The Contractor shall be aware that there may be a need to support utility poles within the project limits during excavation operations. Coordination with the appropriate pole custodian will be required by the Contractor as to means and methods of support. The Contractor shall incorporate the cost of all utility pole support within the cost of the project. There will be no direct payment associated with this item.

NOTICE TO CONTRACTOR – TEMPORARY ACCESS TO AREA MERCHANTS, BUSINESSES, AND RESIDENCES

Access to all businesses and residences must be maintained at all times.

The Contractor shall coordinate his/her work, provide safe and ready means of ingress and egress to all stores and shops, public and private professional offices, and any other businesses or residences in the project area, both day and night, for the duration of the project. As required by the Engineer, the Contractor shall install and maintain temporary ramps at driveways. The cost of installing, maintaining, and removing the temporary ramps shall be in accordance with Section 4.06.

The Contractor shall provide each abutter a minimum of 24-hour notice prior to beginning work affecting private driveway entrances.

NOTICE TO CONTRACTOR - COORDINATION OF WORK

The Contractor shall coordinate his/her work with any utility companies and other contractors working within the project area.

NOTICE TO CONTRACTOR – SHOP DRAWINGS

The Contractor shall submit electronic copies (adobe acrobat) of all shop drawings to the Engineer for review and approval prior to ordering or installing the items.

NOTICE TO CONTRACTOR – SAWCUTS

Existing pavement to remain shall be sawcut at all openings for utility work, drainage work, new or reset curb, and at all joints with proposed hot mix asphalt pavement and sidewalk, as shown on the plans or as directed by the Engineer.

NOTICE TO CONTRACTOR – PROPERTY BOUNDS

The Contractor shall exercise due care when working around all property bounds which are to remain. Should any damage to a bound result from the actions of the Contractor, the bound shall be replaced and/or realigned by a CT-licensed land surveyor as directed by the Engineer at the Contractor's expense.

NOTICE TO CONTRACTOR – QUALITY OF WORK

It is the Contractor's responsibility to perform the work of this Contract in accordance with the contract plans and specifications and as directed by the Engineer. The Town reserves the right to withhold payment for any quantity of work which, in the opinion of the Engineer and/or the Town, does not meet the contract requirements. Any and all improvements, or parts thereof, constructed as part of this contract, which in the Engineer and/or the Town's opinion, do not conform to the contract plans and specifications and has resulted in an unacceptable product, will not be measured for payment until corrected by the Contractor at the Contractor's own expense.

Upon receiving notification from the Town that such work has been identified as unacceptable, the Contractor shall within two (2) calendar days proceed to either repair or remove and replace the unacceptable work as directed by the Engineer and/or the Town.

When, in the opinion of the Engineer and/or the Town, the corrective work has been completed and accepted, the original pay items will be measured for payment.

NOTICE TO CONTRACTOR – TREE REMOVAL

If it is necessary to remove any trees within the project limits, the Contractor is required to contact the Town's Tree Warden prior to any removal. The Contractor will be responsible for flagging all public trees to be removed. The Engineer will then review the trees to insure conformance to the plans. The Town will then post the trees, with a 10-day notice/waiting period required. If the tree removal is protested, an appeal process with a Public Hearing will be held prior to the tree removal.

NOTICE TO CONTRACTOR – POLICE SERVICES

The Contractor shall be responsible for contacting the Town of Newington Department Safety Officer and coordinating and requesting the necessary Police Services. The Contractor shall provide the Town the schedule for review at least once a week.

The Contractor is advised that the Town of Newington Police Department personnel will charge for a minimum of four (4) hours and for a full eight (8) hours for any time beyond four (4) hours spent. Overtime will be charged for any work beyond eight (8) hours per day.

NOTICE TO CONTRACTOR - PROCUREMENT OF MATERIALS

Upon award, the Contractor shall proceed with shop drawings, working drawings, procurement of materials, and all other submittals required to complete the work in accordance with the contract documents.

NOTICE TO CONTRACTOR – MINIMUM TESTING REQUIREMENTS

Materials incorporated in the project shall be tested in accordance with the Department's Schedule of Minimum Testing, which can be found in the CTDOT's March 2019 LOTCIP Guidelines.

NOTICE TO CONTRACTOR – ASSIGNMENT OF CONTRACT

The Contractor shall perform with its own organization Contract work with a value under the Contract of at least fifty percent (50%) of the original total Contract value.

NOTICE TO CONTRACTOR - TRAFFIC SIGNALS

The Contractor is hereby notified that certain conditions pertaining to the installation of new signals and maintenance of traffic signal operations are required when relevant, as part of this contract.

Qualified/Unqualified Workers

U.S. Department of Labor

Occupational Safety & Health Administration (OSHA) www.osha.gov

Part Number 1910

Part Title Occupational Safety & Health Administration

Subpart S

Subpart Title Electrical

Standard Number 1910.333

Title Selection and use of work practices

Completion of this project will require Contractor employees to be near overhead utility lines. All workers and their activities when near utility lines shall comply with the above OSHA regulations. In general, unqualified workers are not allowed within 10 feet of overhead, energized lines. It is the contractor's responsibility to ensure that workers in this area are qualified in accordance with OSHA regulations.

The Controller Unit (CU) shall conform to the current edition of the Functional Specifications for Traffic Control Equipment. The Functional Specifications require the CU meet NEMA Standard Publication No. TS2-1992 Type 2. The Functional Specifications are available on the Departments' web site <http://www.ct.gov/dot/site/default.asp>, click on "Doing Business with CONNDOT", under Engineering Resources click on "Traffic Engineering", Scroll down to Traffic Documents click on "Functional_Specifications_for_Traffic_Control_Equip.pdf".

The contractor will be held liable for all damage to existing equipment resulting from his or his subcontractor's actions. A credit will be deducted from monies due the Contractor for all maintenance calls responded to by Department of Transportation personnel.

The 30 Day Test on traffic control equipment, as specified in Section 10.00, Article 10.00.10 - TESTS, will not begin until the items listed below are delivered to the Department of Transportation, Traffic Signal Lab in Rocky Hill.

Five (5) sets of cabinet wiring diagrams. Leave one set in the controller cabinet.
All spare load switches and flash relays.

NOTICE TO CONTRACTOR – RECENT REVISIONS

The Contractor is hereby notified that the following Traffic Engineering Special Provisions have been revised:

Section 10.00 – General Clauses for Highway Illumination and Traffic Signal Projects

- Updated as-built plan requirements

1105xxxA – X_Way_X_Section Traffic Signal:

- Changed the color of housing, brackets, and hardware
- Clarified color of housing door and visor.
- Backplates:
 - changed to louvered
 - changed retroreflective strip sheeting type
 - changed aluminum alloy to 5052-H32
 - provided range for acceptable thickness

1106xxxA – X_Way_Pedestrian Signal:

- Changed the color of housing, brackets, and hardware
- Clarified color of housing door and visor

1107007A – Pedestrian Pushbutton and Sign (Piezo)

- Changed the color of housing, brackets, and hardware

1107011A – Accessible Pedestrian Signal and Detector (Type A)

- Changed the color of housing, brackets, and hardware
- Changed the sign size to 9” x 15”
- Changed to include confirmation light

1112286A – 360 Degree Camera Assembly

1112288A – IP Video Detection Camera Assembly

- Added installation best practices guide

The Contractor is hereby notified that Traffic Engineering’s following Standard Sheets have been revised:

TR-1105_01 – Traffic Signals and Cable Assignments

- Revised grounding note for span and other minor revisions

TR-1107_01 – Pedestrian Push Buttons

- Updated pedestrian sign legends and notes.

TR-1114_01 – Bonding and Utility Pole Attachment Details, Sign Hanger, “Y” Clamp Detail

- Revised wood pole grounding details, added ground rod.

The Contractor is hereby notified that Traffic Engineering’s following guide sheets are included:

GS_Light Standard and Foundation

- Added J-Hook Mounting Detail.
- Added Aluminum Light Standard Base showing Grounding Lug Detail.

GS_Trenching and Backfilling

- Revised Pavement – Bituminous Concrete or Overlayed Portland Cement Concrete
- Revised granular fill and overlay requirements.

SECTION 1.01 - DEFINITION OF TERMS AND PERMISSIBLE ABBREVIATIONS

Article 1.01.01 is amended as follows:

All references to Commissioner, Department, Engineer and State anywhere within the 'Standard Specifications for Roads, Bridges, Facilities and Incidental Construction' or within the Supplemental Specifications or Special Provisions shall be interpreted to mean the Town of Newington or a duly authorized agent of the Town. Any question or ambiguity regarding any definitions shall be brought to the immediate attention of the Town.

Town: The Town of Newington, party of the first part to the contract, acting directly or through its agents or employees.

Contract Unit Price: The cost per established unit for each construction item as written on the Proposal Form.

Special Provisions: Additions and revisions to the Standard and Supplemental Specifications covering conditions peculiar to this individual project.

The words "as described", "as required", "as permitted", "as directed", or phrases of like effect or import as used herein shall mean that the direction, requirement, permission or allowance of the Engineer is intended, and similarly the words "approved", "reasonable", "suitable", "properly", "satisfactory", or words of like effect or import, unless otherwise particularly specified herein, shall mean approved, reasonable, suitable, properly or satisfactory in the judgment of the Engineer.

SECTION 1.05 - CONTROL OF THE WORK

Article 1.05.02 - Plans, Working Drawings and Shop Drawings are supplemented as follows:

Sub article 1.05.02 - (2) is supplemented by the following:

Traffic Signal Items:

When required by the contract documents or when ordered by the Engineer, The Contractor shall prepare and submit product data sheets, working drawings and/or shop drawings for all traffic signal items, except Steel Span Poles and Mast Arm Assemblies when applicable, to the Division of Traffic Engineering and Town of Newington for review and approval before fabrication. The packaged set of product data sheets, working drawings and/or shop drawings shall be submitted in an electronic portable document format (.pdf).

The packaged set submitted in an electronic portable document format (.pdf) shall be in an individual file with appropriate bookmarks for each item. The electronic files for product data sheets shall be created on ANSI A (8 ½" x 11"; 216 mm x 279mm; letter) sheets. Working drawings and shop drawings shall be created on ANSI B (11" x 17"; 279 mm x 432 mm; ledger/tabloid) sheets.

For State-owned traffic signal equipment, please send the pdf documents via email to:

DOT.TrafficElectrical@ct.gov

For Town-owned traffic signal equipment, please send the pdf documents via email to:

gfuerstenberg@newingtonct.gov

SECTION 1.06 - CONTROL OF MATERIALS**Article 1.06.01 - Source of Supply and Quality:**

Add the following:

Traffic Signal Items:

For the following traffic signal items the contractor shall submit a complete description of the item, shop drawings, product data sheets and other descriptive literature which completely illustrates such items presented for formal review and approval. Such review shall not change the requirements for a certified test report and materials certificate as may be called for. All documents shall be grouped into one separate file for each group of items as indicated by the Roman numerals below (for example, one pdf file for all of the pedestal items). The documents for all of the traffic signal items shall be submitted at one time, unless otherwise allowed by the engineer.

- I. 1003206 – Light Standard (15' Bracket, 30' Mounting Height)
- II. 10080XX – Rigid Metal Conduit
- III. 11020XX – Aluminum Pedestals
- IV. 11060XXA – Pedestrian Signals - LEDs, Housings, and Hardware
11070XXA – Accessible Pedestrian Signal & Detector - Button, Housings & Sign (Type)
- V. 11XXXXXA – Optical Pre-Emption - Detector, Phase Selector and Chassis
1114201A – Auxiliary Equipment Cabinet
- VI. 11122XXA – Vehicle Detection - Camera Assembly, Processor and Monitor
- VII. 1113XXXA – Cable - Control Cable, CAT6, VC, Detector Cable (optical)

SECTION 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES

Work under this item shall conform to the applicable provisions of Article 1.07.07 – Public Convenience and Safety of the Standard Specifications Form 818 amended as follows:

Add the following:

The Contractor shall provide the necessary access for emergency vehicles through the work zones to abutting properties at all times.

Sweeping and cleaning of surfaces beyond the limits of construction required for dust control or to clean up material caused by spillage or vehicular tracking during the various phases of the work shall be considered as incidental to the work being performed under the Contract and there will be no additional compensation.

The Contractor shall notify all public safety agencies at least 48 hours prior to beginning any construction operation which will provide less than an 11 foot travel lane along any project roadway.

Article 1.07.13 – Contractor's Responsibility for Adjacent Property, Facilities and Services is supplemented as follows:

Add the Following Section: "The Contractor shall coordinate his operations with the Owners of all underground or overhead utility lines within the project area. The following utilities exist or will exist within the limits of the project.

Electric Distribution – The Connecticut Light and Power Company dba Eversource Energy – Electric Distribution

Communication – The Southern New England Telephone Company dba Frontier Communications of Connecticut

Cable Television – CoxCom, LLC

Gas – Connecticut Natural Gas Corporation

Water – Metropolitan District

Representatives of the various utility companies shall be allowed access to the project site at all times.

The Contractor shall be liable for all damages or claims received or sustained by any persons, corporations or property in consequence of damage to the existing utilities, their appurtenances or other facilities caused directly or indirectly by the operations of the Contractor.

The Contractor shall cooperate fully with all Utility Companies by making timely contacts with the Company representatives having jurisdiction over the facilities adjacent to the work. The Contractor shall also schedule his own activities in harmony with those of each Utility Company so as to preclude any delays in utility relocation work and forestall any possibility of interruption of the service. The following is a listing of the Utility Companies to be contacted by the Contractor:

The Connecticut Light and Power Company dba Eversource Energy – Electric Distribution
22 East High Street
East Hampton, CT 0642
Attention: Mr. Thomas Woronik
Supervisor – Construction Engineering
860-267-3891
Email: Thomas.Woronik@eversource.com

The Southern New England Telephone Company dba Frontier Communications of Connecticut
1441 North Colony Road
Meriden, Connecticut 06450
Attention: Ms. Lynne DeLucia
Manager - Engineering & Construction
203-238-5000
860-967-4389 (cell)
Email: Lynne.m.delucia@ftr.com
Map Requests: FTR-CT-MAPREQUEST@ftr.com

CoxCom, LLC
9 JP Murphy Highway (3rd Floor)
West Warwick, RI 02893
Attention: Mr. David Velilla
Utility Coordinator
401-615-1284
Email: Dave.Velilla@cox.com

Connecticut Natural Gas Corporation, Engineering Department
76 Meadow Street, 2nd Floor
East Hartford, CT 06108
Attention: Mr. Jonathan Gould
Gas Engineer
860-727-3044
Email: jgould@ctgcorp.com

The Metropolitan District
555 Main Street, P.O. Box 800
Hartford, CT 06142
Attention: Richard Norris, P.E.
Project Engineer/Utility Liaison
860-278-8000 (Ext. 3450)
Email: rnorris@themdc.com

Connecticut Department of Transportation
Department of Transportation
Hartford, Connecticut

Attention: Mr. Augusto Grazuna
District 1 Electrical Supervisor
(860) 566-3153/3157

The Contractor, in constructing or installing facilities alongside or near sewers, drains, water or gas pipes, electric or telephone conduits, poles, sidewalks, walls, vaults, or other structures shall sustain them securely in place. The Contractor shall coordinate with the officers and agents of the various utility companies and municipal departments to assure that the services of these structures are maintained. The Contractor shall also be responsible for the repair or replacement, at no additional cost to the Town, of any damage to such structures caused by construction operations. The Contractor is responsible to leave them in the same condition as they existed prior to commencement of the work. In case of damage to utilities, the Contractor shall promptly notify the utility owner and shall, if requested by the Engineer, furnish labor and equipment to work temporarily under the utility owner's direction. Pipes or other structures damaged by the operation of the Contractor may be repaired by the utility owner which suffers the loss. The cost of such repairs shall be borne by the Contractor, without compensation from the Town.

If during construction there is an existing utility and/or structure found to be in conflict with the proposed work under this Contract, the Contractor shall protect and maintain the services to the utilities and structures and shall notify the Engineer of the conflict. The Engineer will, as soon as possible, identify the utilities to be relocated or other such activities deemed suitable for resolution.

If live service connections are to be interrupted by excavations of any kind, the Contractor shall not break the service until new services are provided. Abandoned services shall be plugged off or otherwise made secure.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all of the work involved in protecting or repairing property as specified in this Section shall be included in the prices paid for the various Contract items of work, and no additional compensation will be allowed.

Prior to opening an excavation, effort shall be made to determine whether underground installations, (i.e. sewer, water, fuel, electric lines, etc.) will be encountered and, if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined by careful probing or hand digging, and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation.

SECTION 1.08 – PROSECUTION AND PROGRESS

Section 1.08 – Prosecution and Progress is amended as follows:

Article 1.08.03 – Prosecution of Work of the Standard Specifications Form 818 is amended as follows:

Add the following:

Before starting any work under this Contract, the Contractor shall prepare, and submit to the Engineer for approval, a minimum of 30 days in advance, a plan illustrating the Typical Traffic Management Plan for all roadways to be milled/reconstructed during construction. This plan shall illustrate typical use and layout of construction signs, drums, and other traffic control devices to be employed during each time period of work to maintain traffic and access to abutting properties. The Contractor must obtain approval of the Typical Traffic Management Plan from the Engineer prior to commencing work on the specified roadways.

All appropriate Maintenance and Protection of Traffic devices are to be installed prior to commencing construction operations.

Particular care shall be taken to establish and maintain methods and procedures that will not create unnecessary or unusual hazards to public safety. Traffic control devices required only during working hour operations shall be removed at the end of each working day.

Signs having messages that are irrelevant to normal traffic conditions shall be removed or properly covered at the end of each work period. Signs shall be kept clean at all times and legends shall be distinctive and unmarred.

The Contractor shall notify all public safety agencies at least 48 hours prior to beginning any construction operation which will provide less than an 11 foot travel lane along any project roadway.

Article 1.08.04 – Limitation of Operations is supplemented by the following:

In order to provide for traffic operations as outlined in the special provision “Maintenance and Protection of Traffic”, the Contractor will not be permitted to perform any work which will interfere with normal traffic operation on any project road during the following periods:

On the following Legal Holidays:

New Year’s Day
Martin Luther King Day
President’s Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Veterans Day

Thanksgiving Day
Christmas Day

All construction activities, including the loading and unloading of materials and equipment, shall be limited to Monday through Friday, 7:00 A.M. to 7:00 P.M.

The Contractor shall further schedule construction operations to minimize the period of time that vehicle traffic is placed upon any intermediate or leveling overlay course. Prior to the construction of subsequent bituminous courses, any damage noted by the Engineer on the previously placed bituminous courses shall be repaired as directed by the Engineer at the Contractor's expense.

The Contractor shall notify the Engineer 24 hours in advance of the commencement of any paving operations. The purpose of this notice period is to allow ample time to conduct pre-paving condition inspection, obtain approval to pave and to secure paving inspection and testing personnel.

Detour of traffic outside of the project limits is prohibited.

SECTION 1.08 – GENERAL

Article 1.08.16 – Notification for Press Releases:

The Contractor shall give the Engineer a seven (7) calendar day advance written notice of proposed changes in construction activities that will alter traffic patterns that result in lane shifts, detours, temporary closures of lane(s), permanent closures of lane(s), or lane reductions. This advance notification will allow the Town to publish news releases and/or provide public radio announcements to inform the public of revised traffic patterns or possible traffic delays. Failure of the Contractor to provide such timely notice shall be considered a breach of contract and will subject the Contractor to stop work orders until such time as the seven (7) day notice has been accommodated.

SECTION 10.00 - GENERAL CLAUSES FOR HIGHWAY ILLUMINATION AND TRAFFIC SIGNAL PROJECTS

Article 10.00.03 – Plans:

In the first paragraph, replace the 2nd, 3rd, and 4th sentences with the following:

The Contractor shall digitally mark, in red, any changes on the plan(s) using a pdf program. Markups shall also include field-obtained GPS coordinates for installed span pole, mast arm assembly, controller, and light standard locations.

- The GPS technology used should be able to provide coordinates that are within 12” of accuracy.
- Coordinates provided are to be as accurate as possible for locations where satellite coverage is compromised by tree canopies, buildings, etc.

The Contractor shall submit the digital pdf file(s) to the Engineer, Gary Fuerstenberg at gfuerstenberg@newingtonct.gov for the Town owned signal and to DOT.TrafficElectrical@ct.gov, for State owned Traffic Signals, prior to requesting the Functional Inspection.

Also prior to requesting the Functional Inspection, the Contractor shall deliver to the Engineer the following:

In item no. 1, replace “Four (4)” with “Digital PDF Files and Five (5)” [paper prints of schematics and wiring diagrams...].

After item no. 3, add an item no. 4 as the following:

4. Digital field pictures, in .JPG format and labeled appropriately, of the following constructed items:
 - a. Signals heads facing each approach. The pictures are to be taken along each intersection approach in order to observe the relation between the signal faces and the approach centerline, lane line(s), and edge line.
 - b. Inside of hand holes
 - c. Inside of the controller cabinet
 - d. Traffic foundations (Span poles, MAA, Controller Cabinet, Light Standards, Pedestals)
 - e. Video detector locations and mountings
 - f. Utility Clearances from span wire and MAAs
 - g. Screen shots of detection zones

Article 10.00.10 Section 2. Subsection a) After Part 3, add the following:

4. **360-Degree Video Detection System Tests:** The following tests shall be performed on all traffic signals with 360-Degree Video Detection Systems. The test results shall be recorded and submitted to the Engineer prior to the functional inspection of the traffic signal. Refer to

the "Quality Best Practices" attachment to the special provision for Item # 1112286A - 360 DEGREE VIDEO DETECTION PROCESSOR:

- a) **Cabinet Grounding Test:** The cabinet ground shall be tested with a clamp-on ground meter in accordance with the detection system manufacturer's recommendations to ensure a ground reading of a maximum of 25 Ohms. The results of this test shall be recorded.
- b) **AC Power Test:** The AC outlet for the processor shall be checked with a digital voltmeter according to the detection system manufacturer's recommendations to ensure that all three connections for the outlet are properly connected and to verify that the AC voltage from the line to neutral and the line to ground is 120VAC. The results of this test shall be recorded.
- c) **Ethernet Cable Test:** Each Ethernet cable shall be tested with a digital Ethernet cable tester in accordance with the detection system manufacturer's recommendations to ensure the cable length does not exceed 300-ft and ensure a Real World Certification of at least 100 MB. The results of this test shall be recorded.
- d) **Drain Wire Resistance Test:** Each Ethernet cable drain wire shall be checked with a digital voltmeter in accordance with detection system manufacturer's recommendations to ensure that the resistance between the drain wire grounding post and the cabinet ground rod equals 0 Ohms. The results of this test shall be recorded.

Article 10.00.10 Section 2. Subsection b) Part 3. Functional Inspection:

In the first paragraph, after the 2nd sentence, add the following:

Prior to the Functional Inspection, the Contractor shall verify with the CTDOT Traffic Signal Lab that each detection camera is operating properly. In instances where the existing traffic control equipment is being revised or replaced, the verification with the CTDOT Traffic Signal Lab shall be prior to the required Preliminary Functional Test. The Contractor shall have a bucket truck with crew on site during the Functional Inspection to make any necessary aerial signal and detection equipment adjustments as directed by the Engineer.

After the fourth paragraph, add the following:

Upon the successful completion of the Functional Inspection and once all corrections and adjustments resulting from the Functional Inspection are completed, the Contractor shall update as-built plans and pictures to reflect any changes made and submit as required in Section 10.00.03 within 7 days of the completion of the 30-day test.

Article 10.00.12 - Negotiations with utility company: Add the following:

The Contractor shall give notice to utility companies a minimum of 30 days prior to required work or services to the utility company. Refer to Section 1.07 – Legal Relations and Responsibilities for the list of utility companies and representatives the contractor shall use.

The Contractor shall perform all work in conformance with Rules and Regulations of Public Utility Regulatory Authority (PURA) concerning Traffic Signals attached to Public Service Company Poles. The Contractor is cautioned that there may be energized wires in the vicinity of the specified installations. In addition to ensuring compliance with NESC and OSHA regulations, the Contractor

and/or its Sub-Contractors shall coordinate with the appropriate utility company for securing/protecting the site during the installation of traffic signal mast arms, span poles or illumination poles.

ITEM #0201001A – CLEARING AND GRUBBING

Section 2.01.01 is amended as follows:

2.01.01 Description: *Add after the first paragraph:*

This work shall include the removal of debris, silt, and sediment from Schoolhouse Brook within the project limits. This work shall also include the removal of existing bus enclosure, and concrete pad at the locations shown on the plans or as directed by the Engineer.

ITEM #0216011A – FLOWABLE FILL

Description: Work under this item shall include completely filling existing pipe with flowable fill at the locations shown on the plans or as directed by the Engineer.

All Flowable Fill material covered by this specification shall be designed to be hand excavatable at any time after placement.

Materials: All materials utilized in the Flowable Fill mix design shall be in accordance with the applicable requirements of Article M.03.01

Composition: The composition of the Flowable Fill shall be in accordance with the requirements set forth in Article M.03.01- Components Materials, as well as the applicable sections of ACI 229R. The Contractor shall submit each proposed mix design, with all supporting data, to the Engineer for review and approval at least two weeks prior to its use.

The setting time of Flowable Fill materials shall be designed so as to achieve the strength necessary to comply with the time constraints called for under the Maintenance and Protection of Traffic requirements of the project specifications. The use of chloride accelerators is not permitted.

The minimum compressive strength of the Flowable Fill material shall be 30 pounds per square inch (psi) and the maximum compressive strength shall be 150 pounds per square inch (psi) when tested in accordance with ASTM D4832 after 56 days.

The Flowable Fill mix design shall utilize a nominal maximum size of No. 8 aggregate as specified in M.01.01.

Flowable Fill mixes shall have a minimum of 20% entrained air when tested in accordance with AASHTO T152.

Construction Methods: Flowable Fill shall only be placed when the ambient temperature is at least 32° F and rising. Flowable Fill material shall be deposited within 2 hours of initial mixing.

Flowable Fill may be placed by chutes, conveyors, buckets or pumps depending upon the application and accessibility of the site. Should voids or cavities remain after the placement of the Flowable Fill, the Contractor shall modify the placement method or flow characteristics of the Flowable Fill. Voids or cavities which have not been filled properly shall be corrected as directed by the Engineer and at the Contractor's expense.

Method of Measurement: This work will be measured for payment by the actual number of cubic yards of "Flowable Fill" installed and accepted within the pay limits shown on the contract plans or as directed by the Engineer.

Basis of Payment: This work will be paid at the contract unit price per cubic yard “Flowable Fill,” which price shall include all materials, equipment, tools and labor incidental thereto.

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
ITEM #0216011A	FLOWABLE FILL	CY

ITEM #0219011A – SEDIMENT CONTROL SYSTEM AT CATCH BASIN

Work under this item shall conform to the applicable provisions of Section 2.19 of the Standard Specifications Form 818 amended as follows:

DESCRIPTION

This work shall consist of furnishing, placing, maintaining and removing sedimentation control systems at catch basins as shown on the plans and as directed by the Engineer. Maintaining shall include the cleanout and proper disposal of accumulated sediment.

MATERIALS

Geotextile for this work shall conform to Section 7.55 and M.08.

CONSTRUCTION METHODS

Sediment Control System at Catch Basin shall be installed by the Contractor at locations indicated on the plans or as directed by the Engineer in accordance with the applicable sections of Section 2.19 of the Standard Specifications and the details in the plans.

METHOD OF MEASUREMENT

This work will be measured for payment by the actual number of catch basins installed and accepted with a Sediment Control System at Catch Basin installation.

BASIS OF PAYMENT

This work will be paid for at the contract unit price each for ‘Sediment Control System at Catch Basin’ complete in place, which price shall include all materials, equipment, tools, and labor incidental to the installation, maintenance, replacement, removal and disposal of the system and surplus material. No payment shall be made for the cleanout or disposal of accumulated sediment.

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
ITEM #0219011A	SEDIMENT CONTROL SYSTEM AT CATCH BASIN	EA

ITEM #0406161A – HOT MIX ASPHALT LEVELING/SHIM COURSE**DESCRIPTION**

The Hot Mix Asphalt (HMA) Leveling/Shim Course consists of a thin application of hot mix asphalt, paver machine applied and roller compacted, placed on a clean, prepared roadway surface that may or may not have been milled, using an asphalt emulsion tack coat. The tack coat is distributor truck spray applied just prior to the application of the leveling/shim course to produce a bonded prepared surface that can be ready to receive subsequent hot mix asphalt layers. The finished leveling/shim course is to have a nominal thickness of 1/2" except where noted otherwise on the plans or directed by the Engineer. All pavement repairs, patching, and crack filling will be paid for under their appropriate items.

EQUIPMENT AND MATERIALS

HMA Leveling/Shim Course: The requirements of Section 4.06 of Form 818 apply, except as modified herein. The hot mix asphalt mixture to be used for this item shall be HMA S0.25, Level 2.

Tack Coat: Emulsified asphalt; AASHTO M140/ASTM D 997 or AASHTO M 208/ASTM D 2397, RS-1 or CRS-1.

CONSTRUCTION DETAILS

A. Surface Preparation: All surface preparations shall be completed prior to applying the leveling/shim course. Contractor to request and obtain approval of surface conditions from the Engineer prior to commencing operations for constructing Level/Shim Course.

1. Cover all manhole covers, water boxes, catch basins and other such utility structures.
2. Clean and flush fill all cracks and joints greater than three sixteenths of an inch (3/16") wide with material approved by the Engineer. No over banding will be permitted.
3. Patch all surface deficiencies indicating weak base as directed by the Engineer.
4. Thoroughly clean the entire area to be leveled/shimmed.

B. Tack Coat Application: Contact surfaces of manholes, structures, vertical pavement edges, etc. shall be painted with a thin, uniform tack coat just before the material is placed against them.

Tack coat is required on all surfaces to be paved. This includes freshly placed layers of HMA if one day has elapsed since HMA placement, or if dust or debris has contaminated the fresh surface.

A thin uniform coating of tack coat shall be applied to the pavement immediately before overlaying and be allowed sufficient time to break (set). This should be carefully applied by a distributor truck having calibrated nozzles set to provide a triple overlap of spray on the pavement surface that results in a uniform overlapping coverage at a target application rate of 0.03 to 0.05 gallons per square yard for a non-milled surface and a target application rate of 0.05 to 0.07 gallons per square yard for a milled surface. For areas where both milled and un-milled surfaces occur, the tack coat shall be a target application rate of 0.03 to 0.05 gallons per square yard. Dribbling emulsion on the surface is not acceptable. RS-1 and CRS-1 type asphalt emulsions for tack coating are preferred as little or no cure time is needed; brown to black occurs rapidly. The Engineer must approve the equipment and the method of measurement prior to use. The material for tack coat shall not be heated in excess of 160°F and shall not be further diluted. Tack coat shall be supplied and paid for as a separate item

Allow tack coat to dry from a brown color to a black color prior to paving.

- C. Leveling/Shim Application.** The minimum pavement surface temperature for application of the leveling/shim course is 50° F.
- D. Compaction.** Begin compaction immediately after the application of the HMA Leveling/Shim course.
 - 1. Use a minimum of two passes.
 - 2. Use an adequate number of rollers to complete compaction before the pavement temperature falls below 185° F. (85°C).
 - 3. Protect the Leveling/Shim course from traffic until the rolling operation is complete and the material has cooled sufficiently to resist damage.
- A. Traffic Control.** The Contractor shall control and protect public traffic adjacent to and within the project site. The Contractor shall provide a traffic control plan conforming to the Manual on Uniform Traffic Control Devices (MUTCD), latest edition.
- F. Emergency Operations.** The pavements shall be cleaned and open to travel at the end of each working day. The Contractor will designate an Emergency Operations Representative, who will be responsible for the project on a 24-hour basis, 7 days a week. The Contractor will provide the Engineer with the name and phone number of their representative who must respond to any emergency regardless of time, night or day, within a timely manner.

METHOD OF MEASUREMENT

The quantity of hot mix asphalt to be paid for shall be measured by the number of tons of hot mix asphalt Leveling/Shim Course used in the accepted work.

The quantity of each truckload shall be obtained from printed tickets indicating the recorded batch weights or certified truck scale weights that have been properly countersigned by an authorized representative of the Engineer at the time of delivery. HMA quantities shall be verified by the Engineer using HMA yield calculations which will include the in-place bulk specific gravity and actual area and nominal depth for the mixture placed.

BASIS OF PAYMENT

Payment shall be made at the contract unit prices per ton complete in place. This payment shall be full compensation for furnishing and placing all quality hot mix asphalt materials, including tack coat where specified, mechanical sweeping of streets, and for all labor, tools, equipment, materials, and all incidentals necessary to complete the work.

Asphalt Adjustment Cost will be applied to the 'Hot Mix Asphalt Leveling/Shim Course' item as specified in Item #0406999A – Asphalt Adjustment Cost of these Special Provisions.

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
ITEM #0406161A	HOT MIX ASPHALT LEVELING/SHIM COURSE	TON

ITEM #0406200A – CLEANING AND SEALING CRACKS

DESCRIPTION

The work covered under this item shall consist of performing all operations and furnishing all materials, labor, and equipment necessary for preparing, cleaning, drying, and flush-fill sealing of cracks in the existing pavement having an average width greater than 3/16" and less than 1-1/2". Vegetation removal and sterilization of cracks shall be completed where necessary. All materials and equipment shall be approved by the Town or designated agent prior to work commencing.

MATERIALS

1. Asphalt: The asphalt material shall conform to the following requirements:

PERFORMANCE GRADE BINDER: PG 58-28 (formerly AC-10), PG 64-22 (formerly AC-20), or PG 64-28 with a penetration of 75-100. The penetration shall be conducted in accordance with AASHTO T49.

The Asphalt Binder shall be a Performance Graded Asphalt Binder (PG) which meets the specification requirements of AASHTO M320 and AASHTO R29. Acceptance of the PG will be in accordance with AASHTO R26 "Standard Recommended Practice for Certifying Suppliers of Performance-Graded Asphalt Binders, Single User Digital Publication." PG shall be provided by an Approved Supplier (AS) under the Approved Supplier Certification (ASC) system.

The Contractor shall furnish vendor's certified test reports for each load of asphalt binder material shipped to the project. The vendor's certified test report for the asphalt binder material can be used for acceptance or tested independently by the Town or designated agent.

The blending at the project site of PG binders from different suppliers is strictly prohibited. Contractors who blend PG binders will be reclassified as a supplier and required to certify the binder in accordance with AASHTO R26.

A copy of the Material Certificate shall be provided in accordance with the frequency requirements established in the latest version of AASHTO M320, and shall include the following:

- 1) Flash point
- 2) Rotational viscosity at 135°C and 165°C
- 3) Specific gravity at 25°C
- 4) Original $G^*/\sin\delta$ and phase angle at test temperature
- 5) RTFO percent mass loss
- 6) RTFO - $G^*/\sin\delta$ and phase angle at test temperature
- 7) PAV Residue - $G^*(\sin\delta)$ and phase angle at test temperature
- 8) Creep stiffness and m-value at test temperature
- 9) Direct tension results (when equipment available)
- 10) Strain sweep in accordance with AASHTO T315 (optional)
- 11) Physical hardening after 24 hours in accordance with AASHTO T313 (optional)

2. Hot-Poured Elastomeric: The sealing compound may be a hot-poured rubberized joint-sealing material, which will form a resilient and adhesive compound conforming to AASHTO M324, Type II:
 - (a) Pour Point minimum of 20 deg. F. lower than the safe-heating temperature;
 - (b) Penetration: @ 77 deg. F./load 150 grams./5 sec. shall not exceed 90 dmm.;
 - (c) Resilience (ASTM D5329): @ 77 deg. F, minimum recovery of 60%;
 - (d) Flow (ASTM D5329): @ 140 deg. F. shall not exceed 3 mm.;
 - (e) Bond (ASTM D5329): @ -20 deg. F. for three cycles, at any time during the test, there shall not develop a crack, separation, or other opening which is at any point over 1/4" deep, in the sealer or between the sealer and mortar block;

The sealant shall be composed of a mixture of materials that will form a resilient and adhesive compound capable of effectively sealing cracks in asphaltic pavements without incompatibility bond failures, and against the infiltration of moisture and foreign material throughout repeated cycles of expansion and contraction with temperature changes, and that will not, at ambient temperatures, flow from the crack or be picked up by vehicle tire. The material shall be capable of being brought to a uniform pouring consistency suitable for completely filling the cracks without inclusion of large air holes or discontinuities and without damage to the material. It shall remain relatively unchanged in application characteristics for at least six hours at the recommended pouring temperature in the field.

3. Fiber Reinforced Asphalt Cement: The sealing compound will be a liquid asphalt material, conforming to the PG requirements above, which is reinforced with a polyester or polypropylene fiber conforming to the following properties:

- (a) Fibers: Polyester fiber
 - Concentration – 5% by weight to asphalt
 - Length - 1/4 inch (6.25mm)
 - Diameter - 0.0008 inch \pm 0.0001 inch
 - Specific Gravity - 1.32 to 1.40
 - Melt Temperature - 480 F minimum
 - Ignition Temperature - 1000 F minimum
 - Tensile Strength - 75,000 psi \pm 5,000 psi
 - Break Elongation - 33% \pm 9% (Fully drawn)

This fiber is a polyester which is the polymerized product of crude oil components. These fibers will not shrink, distort, or lose their strength at temperatures below 480 deg. F. The fibers are produced by continuous melt-spinning.

Composition: 5% minimum by weight of the asphalt material.

4. Cover Materials: Cover Materials to eliminate tracking from traffic shall be stone screenings, crusher dust, slag, toilet paper, or other material found to prevent adhesion of the crack sealer to tires or pedestrians.

EQUIPMENT

Equipment used in the performance of the work required by this section of the specification shall be subject to the approval of the Town or designated agent and maintained in a satisfactory working condition at all times.

- (a) Equipment for cleaning, heating, drying cracks: Equipment for cleaning, heating and drying cracks shall be a hot air lance, or approved equal. The hot air lance shall have a minimum heat capacity of 2500°F (1370°C) and a minimum blast velocity of 2001 ft/s (610 m/s).
 - (b) Air Compressor: Air compressors for cleaning cracks shall be portable and capable of furnishing a blast pressure not less than 90 lbs per square inch (690 kPa) and a minimum blast flow of 150 cubic feet of air per minute at the nozzle. The compressor shall be equipped with traps that will maintain the compressed air free of oil and water.
 - (c) Self-Propelled Vacuum Sweeper: Small self-propelled vacuum sweeper designed especially for use in cleaning highway and airfield pavements shall be used to remove debris, dirt, and dust from cleaned and dried cracks.
 - (d) Hand Tools: Hand tools shall consist of brooms, shovels, metal bars with chisel shaped ends, and any other tools which may be satisfactorily used to accomplish this work.
 - (e) Melting Kettle: The unit used to melt the joint sealing compound shall be a double boiler, indirect fired type. The space between the inner and outer shells shall be filled with a suitable heat transfer oil or substitute having a flash point not less than 530 deg. F. The kettle shall be equipped with separate automatic temperature controls for the oil and melting chamber. The kettle shall have accurately calibrated material and heating oil temperature gauges. The kettle shall be equipped with a satisfactory means of agitating the crack sealer at all times. This may be accomplished by continuous stirring with mechanically operated paddles and/or by a continuous circulating gear pump attached to the heating unit. The kettle must be equipped with thermostatic control calibrated between 200 deg. F. and 550 deg. F.
- Heavy duty application pumps, large hoses, and full-sweep agitation equipment is required. A 20 HP (15 kW) engine with a 2" (50mm) recirculating pump and discharge line is recommended.
- (f) Applicator: The application hose shall be insulated and the applicator wand shall meet or exceed the kettle manufacturer's specifications.
 - (g) Routers (only when directed by the Town):
 - Vertical-Spindle Router – equipped with sharp carbide tipped or diamond router bits.
 - Rotary-Impact Router – equipped with sharp carbide tipped router bits.
 - (h) Wirebrushing: Mechanical, power-driven wirebrushes shall be used in conjunction with some form of compressed air. The brush attachment shall contain bristles flexible enough to allow penetration into the crack channel, yet rigid enough to remove dirt and debris.

- (i) Finishing Tools: Squeegee - heavy-duty, industrial rubber U- or V- shaped squeegee. Prior to installation the Contractor shall demonstrate to the Town or designated agent, by the test strip, that the desired configuration is achieved with the finishing tool.

SAMPLING AND TESTING

The Town or designated agent shall be notified in writing of the proposed sources of crack sealants at least 60 days prior to the date the materials will be required at the project site. The Contractor shall supply to the Town or designated agent copies of all certified test reports for each load of sealant prior to use of the materials. Where installation procedures or any part thereof are required to be in accordance with the recommendations of the manufacturer of the materials and are in conflict with these specifications, printed copies of these recommendations shall be furnished to the Town or designated agent prior to use on the project. Installation of the material shall not be allowed until the recommendations are received and reviewed by the Town or designated agent.

Crack sealants may be tested for conformance to the referenced applicable material specifications. The Contractor shall furnish samples of materials, in sufficient quantity to be tested, upon request, at no additional cost. If a sample fails to meet specification requirements, the material represented by the sample shall be removed and replaced at no additional cost.

CONSTRUCTION DETAILS

Crack sealing will be applied to cracks on streets where the average crack width is greater than 3/16" (inch). Cracks with widths less than 3/16" will not be sealed. Cracks shall be cleaned to a depth of 1" and cracks greater than 1" depth shall have backer rod. Backer rod shall be placed to seal the full-width of the crack, multiple sections may be required. Cracks shall not be "over-filled" by more than 1/16". Checking for bond shall be conducted by peeling "cooled" material from crack channel. Cracks where the average crack width is greater than 1-1/2" shall be filled with hot mix asphalt applied at minimum temperature of 265 deg. F and a maximum temperature of 325 deg. F, or proprietary cold patch, unless otherwise directed by the Engineer.

Prior to applying the crack sealant material all cracks shall be thoroughly cleaned, removal of any loose materials or vegetation, dried and heated using a hot air lance or approved equal.

In areas where hot poured joint material was previously used and where bond has broken, that area shall be cleaned prior to sealing. After the cleaning of the cracks, all material removed from the cracks shall be removed from pavement surface by means of power sweepers, hand brooms or air brooms, to the satisfaction of the Town or designated agent. No crack sealing material shall be applied in wet cracks or where fog, frost, and snow or ice is present or when the ambient temperature is below 40 deg. F. All cracks are to be dried prior to material application.

The type of crack sealant material, crack preparation, and placement procedure to utilize will be determined by the maintenance or rehabilitation needs of the pavement and the type of cracks. Pavements that are to receive an overlay in conjunction with the cracking sealing operation can be sealed with fiber reinforced crack sealant.

Rubberized crack sealant can be utilized on pavements receiving greater than or equal to a 1-1/2" overlay provided, the finished product is level with the surface and, a leveling course is utilized prior to the overlay unless the Contractor warrants that no deformations will result in the subsequent overlay. Rubberized crack sealant or fiberized crack sealant can be utilized on roadways receiving routine or preventative maintenance.

Preparation of Cracks - The cracks shall be thoroughly cleaned, dried, and heated prior to application of the crack sealant. The hot air lance shall be utilized to remove dirt, debris, vegetation, and moisture, just prior to installation of the crack sealant. Loosened fragments encountered while cleaning shall be removed. The hot air lance shall provide a continuous stream of hot, high pressure air with no flame at the exit nozzle. The hot airblasting shall be conducted in two steps. The first pass shall be made along the crack in a steady fashion and should clean and heat but not burn the crack sidewalls. The hot air lance shall be held approximately 2" (50mm) above the crack channel. Proper heating is manifested by a slightly darkened color.

The pavement shall not be burned, which is apparent by a black color and gritty texture. The second pass of the hot air lance shall completely remove all debris and particles. The crack sealant shall follow the second pass of the hot air lance at a maximum distance of 5 minutes or 164 feet (50 meters).

Fiber-Reinforced Crack Sealing - The pre-packaged fibers shall be supplied in polyethylene bags which will dissolve when introduced into the hot (above 275 deg. F) asphalt binder. The melting kettle shall mix and agitate the compounds until a homogenous mixture is achieved. Prior to applying the sealant, it should be heated to a temperature recommended by the manufacturer. Following appropriate cleaning, the sealant should be applied to a slightly overfilled condition and then leveled with a squeegee. All applied sealant shall be "warm-rolled" or "squeegeed" in place such that the sealant forms a 3" to 5" (75mm to 125mm) band with a maximum thickness of 0.06" (1.5mm) over the crack. Any sealant which is greater than 3/16" below the pavement surface when cooled shall be resealed to the satisfaction of the Town or designated agent. Any sealant sunk into the crack or in insufficient quantity from the pavement surface shall be re-sealed such that its surface is not greater than 1/16" above the pavement surface. The finished band width shall not exceed 6".

For pavements receiving an overlay the cracks shall be filled flush with the pavement surface such that the membrane is well bonded to the pavement.

The crack sealant materials shall not be overheated, subject to prolonged heating, or reheated beyond the manufacturers' recommendations. Carbon buildup should be cleaned off the melting vat walls before the kettle is used. The heating oil temperature should be kept no more than 82°F to 108°F above the safe heating temperature of the material, as stated on the manufacturer's recommendations. Continuous recirculation of the material through the wand into the melting vat during idle periods is required.

Application - Joint sealing material shall be heated and applied at the temperature specified by the manufacturer and approved by the Town or designated agent. The minimum application temperature shall be 320 deg. F.

The crack sealant material shall be applied with the nozzle in the crack channel, so that the channel is filled from the bottom up and air is not trapped beneath the material. The material shall be applied in a continuous motion to the desired level. Material must be reapplied to crack segments where the material has sunk into the crack or an insufficient amount was furnished in the previous pass.

Following the filling operation, the crack sealant shall be leveled with a squeegee. The squeegee shall follow closely behind the wand and be centered over the crack channel. The squeegee shall be kept free of buildup material by regular scraping or use of a propane torch.

The crack sealant shall be installed and finished such that it conforms to the dimensions stated in preparation of cracks. Where traffic requires immediate use of the roadway, an approved covering material shall be utilized. The covering material shall be applied immediately after finishing and in a thin layer fully covering the exposed treatment material.

Spilled or excess material shall be removed from the pavement surface. Excessive crack sealing will not be allowed. Areas of alligator cracking should not be repaired by any crack sealing procedures unless directed by the Engineer to minimize deterioration.

Asphalt Kettle Cleanout - Prior to work commencing, the Contractor shall provide written details on the clean out operations to the Town or designated agent. At the end of each day's work, the applicator lines must be purged of sealant material. Non-heatable materials must be removed from the melting vat and discharged into containers for disposal. Reheatable materials may remain in the melting vat provided the quantity is minimized as much as possible. If flushing solvents are utilized, the operator must ensure that they do not contaminate the sealant or filler materials.

PERFORMANCE

Prior to work commencing, the Contractor must submit to the Town or designated agent a list of six (6) jobs, which he/she has successfully completed, giving the name and address of these projects so they can be investigated by the Town or designated agent.

The Contractor shall successfully perform a 200-foot test strip in the field prior to commencing work.

MEASUREMENT

The "Cleaning and Sealing Cracks" shall be measured by the total linear feet of roadway, as measured along the centerline, acceptably applied to the pavement. On divided roadways the total linear feet shall be measured for each direction.

The Town reserves the right to impose penalties or reject material not conforming to the dimensional criteria established by these specifications.

PAYMENT

"Cleaning and Sealing Cracks" will be paid for at the contract unit price proposal per linear feet of roadway, complete and accepted, including all materials, labor, equipment, all cleaning, drying, sealing and incidentals necessary to complete the work as specified.

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
ITEM #0406200A	CLEANING AND SEALING CRACKS	L.F.

ITEM #0406999A – ASPHALT ADJUSTMENT COST

Description: The Asphalt Adjustment Cost will be based on the variance in price for the performance-graded binder component of hot mix asphalt (HMA), Polymer Modified Asphalt (PMA), and Ultra-Thin Bonded Hot-Mix Asphalt mixtures completed and accepted during the Contract.

The Asphalt Price is available on the Department of Transportation website at:

<http://www.ct.gov/dot/asphaltadjustment>

Construction Methods:

An asphalt adjustment will be applied only if all of the following conditions are met:

- I. For HMA and PMA mixtures:
 - a. The HMA or PMA mixture for which the adjustment would be applied is listed as a Contract item with a pay unit of tons.
 - b. *The total quantity for all HMA and PMA mixtures in the Contract or individual purchase order (Department of Administrative Service contract awards) exceeds 1000 tons or the Project duration is greater than 6 months.*
 - c. The difference between the posted *Asphalt Base Price* and *Asphalt Period Price* varies by more than \$5.00 per ton.
- II. For Ultra-Thin Bonded HMA mixtures:
 - a. The Ultra-Thin Bonded HMA mixture for which the adjustment would be applied is listed as a Contract item.
 - b. The total quantity for Ultra-Thin Bonded HMA mixture in the Contract exceeds:
 - i. 800 tons if the Ultra-Thin Bonded HMA item has a pay unit of tons.
 - ii. 30,000 square yards if the Ultra-Thin Bonded HMA item has a pay unit of square yards.

Note: The quantity of Ultra-Thin Bonded HMA measured in tons shall be determined from the material documentation requirements set forth in the Ultra-Thin Bonded HMA item Special Provision.
 - c. The difference between the posted *Asphalt Base Price* and *Asphalt Period Price* varies by more than \$5.00 per ton.
 - d. No Asphalt Adjustment Cost will be applied to the liquid emulsion that is specified as part of the Ultra-Thin Bonded HMA mixture system.
- III. Regardless of the binder used in all HMA or PMA mixtures, the Asphalt Adjustment Cost will be based on PG 64-22.

The Connecticut Department of Transportation (CTDOT) will post on its website, the average per ton selling price (asphalt price) of the performance-graded binder. The average is based on the high and low selling price published in the most recent available issue of the **Asphalt Weekly Monitor®** furnished by Poten & Partners, Inc. under the “East Coast Market – New England, New Haven, Connecticut area,” F.O.B. manufacturer’s terminal.

The selling price furnished from the Asphalt Weekly Monitor ® is based on United States dollars per standard ton (US\$/ST).

Method of Measurement:

Formula: $\text{HMA} \times [\text{PG}\%/100] \times [(\text{Period Price} - \text{Base Price})] = \$ \underline{\hspace{2cm}}$

where

- **HMA:**
 1. For HMA, PMA, and Ultra-Thin Bonded HMA mixtures with pay units of tons:
The quantity in tons of accepted HMA, PMA, or Ultra-Thin Bonded HMA mixture measured and accepted for payment.
 2. For Ultra-Thin Bonded HMA mixtures with pay units of square yards:
The quantity of Ultra-Thin Bonded HMA mixture delivered, placed, and accepted for payment, calculated in tons as documented according to the Material Documentation provision (Construction Methods, paragraph G) of the Ultra-Thin Bonded HMA Special Provision.
- **Asphalt Base Price:** The asphalt price posted on the CTDOT website 28 days before the actual bid opening posted.
- **Asphalt Period Price:** The asphalt price posted on the CTDOT website during the period the HMA or PMA mixture was placed.
- **PG%:** Performance-Graded Binder percentage
 1. For HMA or PMA mixes:
 - PG% = 4.5 for HMA S1 and PMA S1
 - PG% = 5.0 for HMA S0.5 and PMA S0.5
 - PG% = 6.0 for HMA S0.375, PMA S0.375, HMA S0.25 and PMA S0.25
 2. For Ultra-Thin Bonded HMA mixes:
PG% = Design % PGB (Performance Graded Binder) in the approved job mix formula, expressed as a percentage to the tenth place (e.g. 5.1%)

The asphalt adjustment cost shall not be considered as a changed condition in the Contract as result of this provision since all bidders are notified before submission of bids.

Basis of Payment: The "Asphalt Adjustment Cost" will be calculated using the formula indicated above. A payment will be made for an increase in costs. A deduction from monies due the Contractor will be made for a decrease in costs.

The sum of money shown on the Estimate and in the itemized proposal as "Estimated Cost" for this item will be considered the bid price although the adjustment will be made as described above. The estimated cost figure is not to be altered in any manner by the bidder. If the bidder should alter the amount shown, the altered figure will be disregarded and the original cost figure will be used to determine the amount of the bid for the Contract.

Pay Item
Asphalt Adjustment Cost

Pay Unit
est.

ITEM #921001A – CONCRETE SIDEWALK**ITEM #921002A – CONCRETE SIDEWALK – 8”****ITEM #921005A – CONCRETE SIDEWALK RAMP**

Concrete sidewalk and sidewalk ramp shall be constructed in accordance with Article 9.21, supplemented as follows:

Article 9.21.02 – Materials is to be amended by the following:

The concrete sidewalk, and concrete sidewalk ramps shall be sealed with Consolideck Saltguard WB by ProSoCo, Inc., 3741 Greenway Circle Lawrence, Kansas 66046, www.prosoco.com, or approved equal. The sealant shall meet the test requirements outlined in NCHRP 244, ASTM E 514 and ASTM C 672.

Article 9.21.04 - Method of Measurement: Add the following:

The sealant will not be measured for payment, but the cost shall be included in the Bid price for Concrete Sidewalk and Concrete Sidewalk Ramp.

Article 9.21.05 - Basis of Payment: Replace the first paragraph with the following:

Construction of a concrete sidewalk or ramp will be paid for at the Contract unit price per square foot for "Concrete Sidewalk" or "Concrete Sidewalk Ramp" complete and accepted in place, which price shall include all excavation, backfill, disposal of surplus material, curb removal and any monolithic or separately cast sidewalk curb when required for the sidewalk ramp as shown on the plans, granular fill or reclaimed miscellaneous aggregate base, curing compound, sealant, equipment, tools, materials and labor incidental thereto.

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
ITEM #921001A	CONCRETE SIDEWALK	S.F.
ITEM #921002A	CONCRETE SIDEWALK – 8”	S.F.
ITEM #921005A	CONCRETE SIDEWALK RAMP	S.F.

ITEM # 0947303A – BUS SHELTER – TYPE I

Description: Work under this item shall consist of furnishing and installing bus shelter where indicated on the plans or as directed by the Engineer.

Materials: Bus Shelter – Type I shall be Brasco International, Inc., A-Line Series Model Number AL0612-BV-AC-25 supplied by Brasco International, Inc., 32400 Industrial Drive, Madison Heights, Michigan, 48071 (Phone No. 1-800-893-3665), or approved equal.

The bus shelter materials shall be as follows:

- Shelter structure shall be black polyester powder coat finish.
- Wall Panels shall be clear tempered glass
- Roof Panels shall be Bronze Acrylic
- Anchoring hardware shall be according to manufacturer's recommendations and to Contract Drawings. Provide all miscellaneous hardware appurtenances required to complete anchoring system.

Construction Methods: The bus shelters shall be installed per the manufacturer's recommendation including size and depth of concrete pad and base materials and in locations shown in the plans.

No field welding shall be permitted.

Bus shelters shall be installed level and plumb.

Method of Measurement: The work for “Bus Shelter – Type I” will be measured for payment by the actual number of bus shelters installed and accepted by the Engineer.

Basis of Payment: The work will be paid for at the Contract unit price for each “Bus Shelter – Type I” complete in place, which price shall include all materials, labor, equipment, tools and incidental expenses thereto.

Pay Item	Pay Unit
Bus Shelter – Type I	EA

ITEM #0971001A – MAINTENANCE AND PROTECTION OF TRAFFIC

Article 9.71.01 – Description is supplemented by the following:

The Contractor shall maintain and protect traffic as described by the following and as limited in the Special Provision "Prosecution and Progress":

Maple Hill Avenue and Robbins Avenue

The Contractor shall maintain and protect a minimum of one lane of traffic in each direction, each lane on a paved travel path not less than 11 feet in width.

Excepted therefrom will be those periods, during the allowable periods, when the Contractor is actively working, at which time the Contractor shall maintain and protect at least an alternating one-way traffic operation, on a paved travel path not less than 11 feet in width. The length of the alternating one-way traffic operation shall not exceed 300 feet and there shall be no more than one alternating one-way traffic operation within the project limits without prior approval of the Engineer.

Intermediate Term Sidewalk Closures

The Contractor shall maintain and protect existing pedestrian accommodations, or a minimum of 4 feet in width, on all existing sidewalks, sidewalk ramps, and access to pedestrian pushbuttons, with the following exception:

- During the allowable periods and when the Contractor is actively constructing pedestrian amenities or installing signal equipment, the Contractor will be allowed to close pedestrian sidewalks and sidewalk ramps and restrict access to pedestrian pushbuttons for no more than a continuous 48 hour period of time.

No more than two corners of an intersection may be closed for an intermediate term sidewalk closure at any time. Where all four corners of an intersection have sidewalks and sidewalk ramps, diagonal corners shall not be closed at the same time.

During the intermediate term sidewalk closure, all approaches to the sidewalk shall be blocked by Construction Barricade Detectable with Sidewalk Closed signs.

The Contractor shall ensure that traffic control signals with pedestrian phases where access to the pushbuttons cannot be provided are revised at the start of the closure to automatically activate the pedestrian phase every signal cycle.

Intermediate term sidewalk closures may be extended to 72 hours with prior approval of the Engineer.

Commercial and Residential Driveways

The Contractor shall maintain access to and egress from all commercial and residential driveways throughout the project limits. The Contractor will be allowed to close said driveways to perform the required work during those periods when the businesses are closed, unless permission is granted from the business owner to close the driveway during business hours. If a

temporary closure of a residential driveway is necessary, the Contractor shall coordinate with the owner to determine the time period of the closure.

Article 9.71.03 - Construction Method is supplemented as follows:

General

Unpaved travel paths will only be permitted for areas requiring full depth and full width reconstruction, in which case, the Contractor will be allowed to maintain traffic on processed aggregate for a duration not to exceed 7 calendar days. The unpaved section shall be the full width of the road and perpendicular to the travel lanes. Opposing traffic lane dividers shall be used as a centerline.

The Contractor is required to delineate any raised structures within the travel lanes, so that the structures are visible day and night, unless there are specific contract plans and provisions to temporarily lower these structures prior to the completion of work.

The Contractor shall schedule operations so that pavement removal and roadway resurfacing shall be completed full width across a roadway section by the end of a workday (work night), or as directed by the Engineer.

When the installation of all intermediate courses of bituminous concrete pavement is completed for the entire roadway, the Contractor shall install the final course of bituminous concrete pavement.

When the Contractor is excavating adjacent to the roadway, the Contractor shall provide a 3-foot shoulder between the work area and travel lanes, with traffic drums spaced every 50 feet. At the end of the workday, if the vertical drop-off exceeds 3 inches, the Contractor shall provide a temporary traversable slope of 4:1 or flatter that is acceptable to the Engineer.

The Contractor, during the course of active construction work on overhead signs and structures, shall close the lanes directly below the work area for the entire length of time overhead work is being undertaken. At no time shall an overhead sign be left partially removed or installed.

If applicable, when an existing sign is removed, it shall be either relocated or replaced by a new sign during the same working day.

The Contractor shall not store any material on-site which would present a safety hazard to motorists or pedestrians (e.g. fixed object or obstruct sight lines).

The field installation of a signing pattern shall constitute interference with existing traffic operations and shall not be allowed, except during the allowable periods.

Construction vehicles entering travel lanes at speeds less than the posted speed are interfering with traffic, and shall not be allowed without a lane closure. The lane closure shall be of sufficient length

to allow vehicles to enter or exit the work area at posted speeds, in order to merge with existing traffic.

Existing Signing

The Contractor shall maintain all existing overhead and side-mounted signs throughout the project limits during the duration of the project. The Contractor shall temporarily relocate signs and sign supports as many times as deemed necessary, and install temporary sign supports if necessary and as directed by the Engineer.

Requirements for Winter

The Contractor shall schedule a meeting with representatives from the Town to determine what interim traffic control measures the Contractor shall accomplish for the winter to provide safety to the motorists and permit adequate snow removal procedures. This meeting shall be held prior to October 31 of each year and will include, but not be limited to, discussion of the status and schedule of the following items: lane and shoulder widths, pavement restoration, traffic signal work, pavement markings, and signing.

Signing Patterns

The Contractor shall erect and maintain all signing patterns in accordance with the traffic control plans contained herein. Proper distances between advance warning signs and proper taper lengths are mandatory.

NOTES FOR TRAFFIC CONTROL PLANS

1. IF A TRAFFIC STOPPAGE OCCURS IN ADVANCE OF SIGN (A), THEN AN ADDITIONAL SIGN (A) SHALL BE INSTALLED IN ADVANCE OF THE STOPPAGE.
2. SIGNS (AA), (A), AND (D) SHOULD BE OMITTED WHEN THESE SIGNS HAVE ALREADY BEEN INSTALLED TO DESIGNATE A LARGER WORK ZONE THAN THE WORK ZONE THAT IS ENCOMPASSED ON THIS PLAN.
3. SEE TABLE 1 FOR ADJUSTMENT OF TAPERS IF NECESSARY.
4. IF THIS PLAN REMAINS IN CONTINUOUS OPERATION FOR MORE THAN 36 HOURS, THEN TRAFFIC DRUMS SHALL BE USED IN PLACE OF TRAFFIC CONES.
5. ANY LEGAL SPEED LIMIT SIGNS WITHIN THE LIMITS OF A ROADWAY / LANE CLOSURE AREA SHALL BE COVERED WITH AN OPAQUE MATERIAL WHILE THE CLOSURE IS IN EFFECT, AND UNCOVERED WHEN THE ROADWAY / LANE CLOSURE IS RE-OPENED TO ALL LANES OF TRAFFIC.
6. IF THIS PLAN REMAINS IN CONTINUOUS OPERATION FOR MORE THAN 36 HOURS, THEN ANY EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE ERADICATED OR COVERED, AND TEMPORARY PAVEMENT MARKINGS THAT DELINEATE THE PROPER TRAVELPATHS SHALL BE INSTALLED.
7. DISTANCES BETWEEN SIGNS IN THE ADVANCE WARNING AREA MAY BE REDUCED TO 100' ON LOW-SPEED URBAN ROADS (SPEED LIMIT < 40 MPH).
8. IF THIS PLAN IS TO REMAIN IN OPERATION DURING THE HOURS OF DARKNESS, INSTALL BARRICADE WARNING LIGHTS - HIGH INTENSITY ON ALL POST-MOUNTED DIAMOND SIGNS IN THE ADVANCE WARNING AREA.
9. A CHANGEABLE MESSAGE SIGN SHALL BE INSTALLED ONE HALF TO ONE MILE IN ADVANCE OF THE LANE CLOSURE TAPER.
10. SIGN (P) SHALL BE MOUNTED A MINIMUM OF 7 FEET FROM THE PAVEMENT SURFACE TO THE BOTTOM OF THE SIGN.

TABLE 1 - MINIMUM TAPER LENGTHS

POSTED SPEED LIMIT (MILES PER HOUR)	MINIMUM TAPER LENGTH FOR A SINGLE LANE CLOSURE
30 OR LESS	180' (55m)
35	250' (75m)
40	320' (100m)
45	540' (165m)
50	600' (180m)
55	660' (200m)
65	780' (240m)

METRIC CONVERSION CHART (1" = 25mm)

ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC
12"	300mm	42"	1050mm	72"	1800mm
18"	450mm	48"	1200mm	78"	1950mm
24"	600mm	54"	1350mm	84"	2100mm
30"	750mm	60"	1500mm	90"	2250mm
36"	900mm	66"	1650mm	96"	2400mm



SCALE: NONE

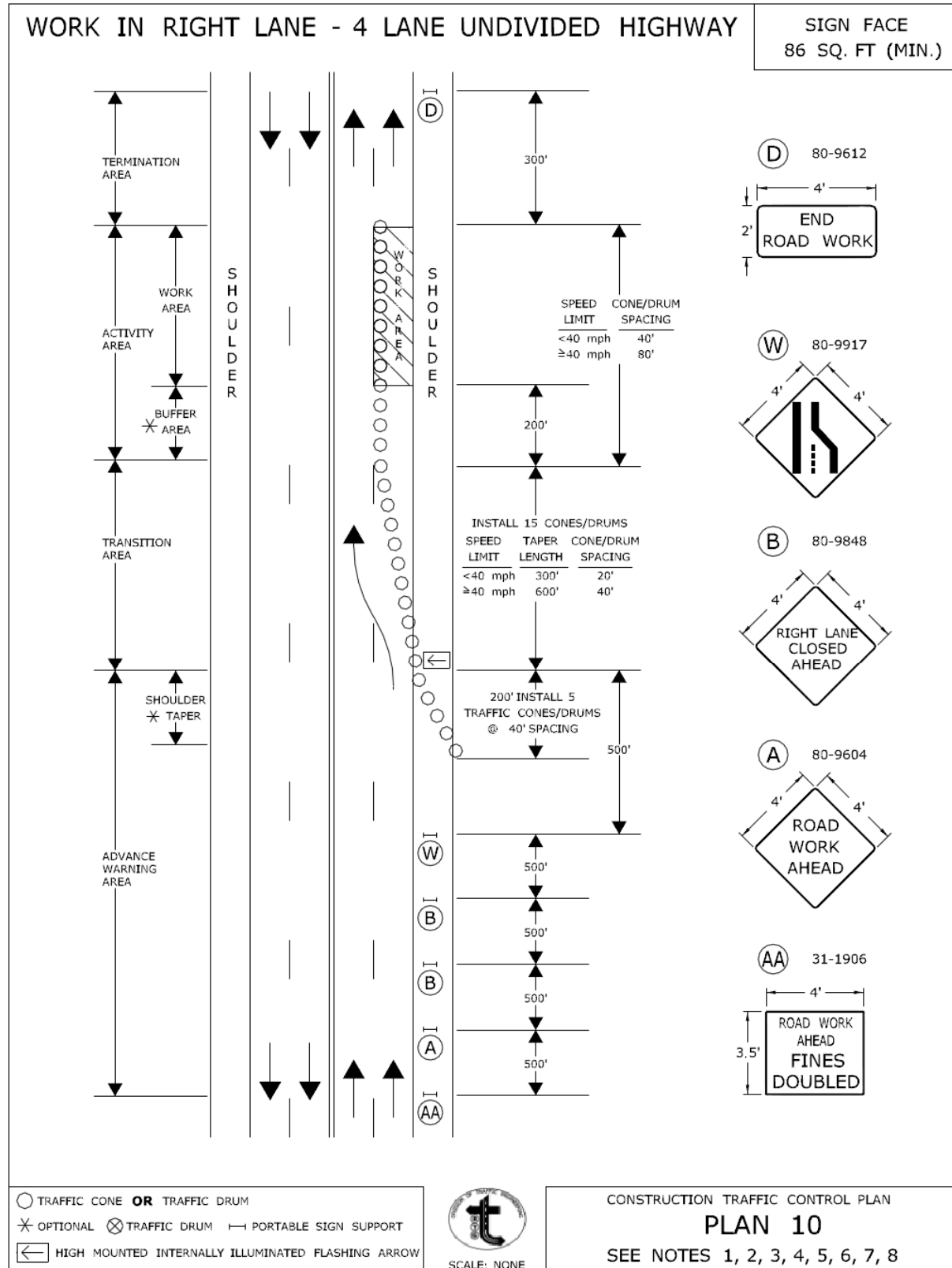
CONSTRUCTION TRAFFIC CONTROL PLAN NOTES

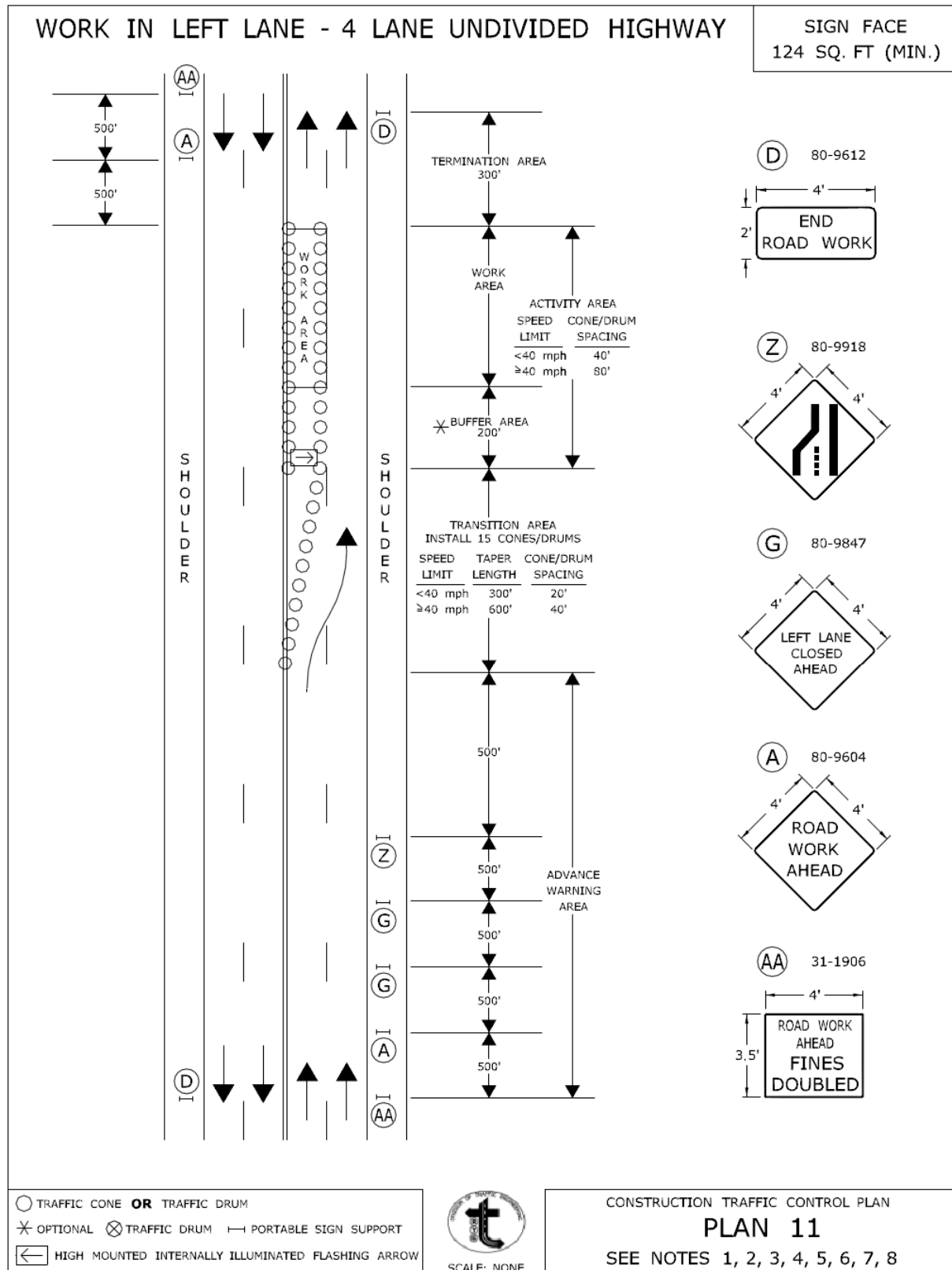
CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

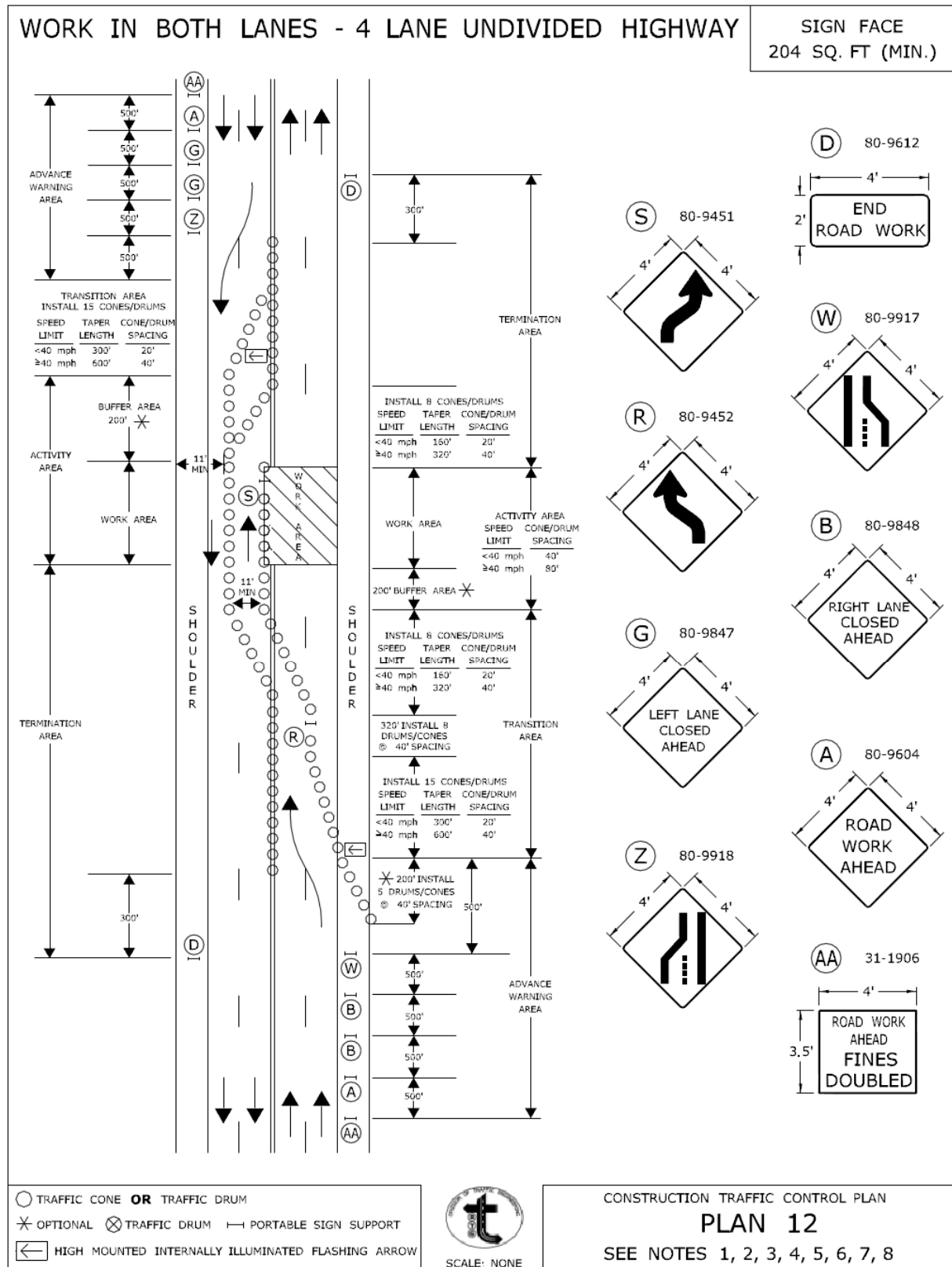
APPROVED

Charles S. Harlow
PRINCIPAL ENGINEER

Charles S. Harlow
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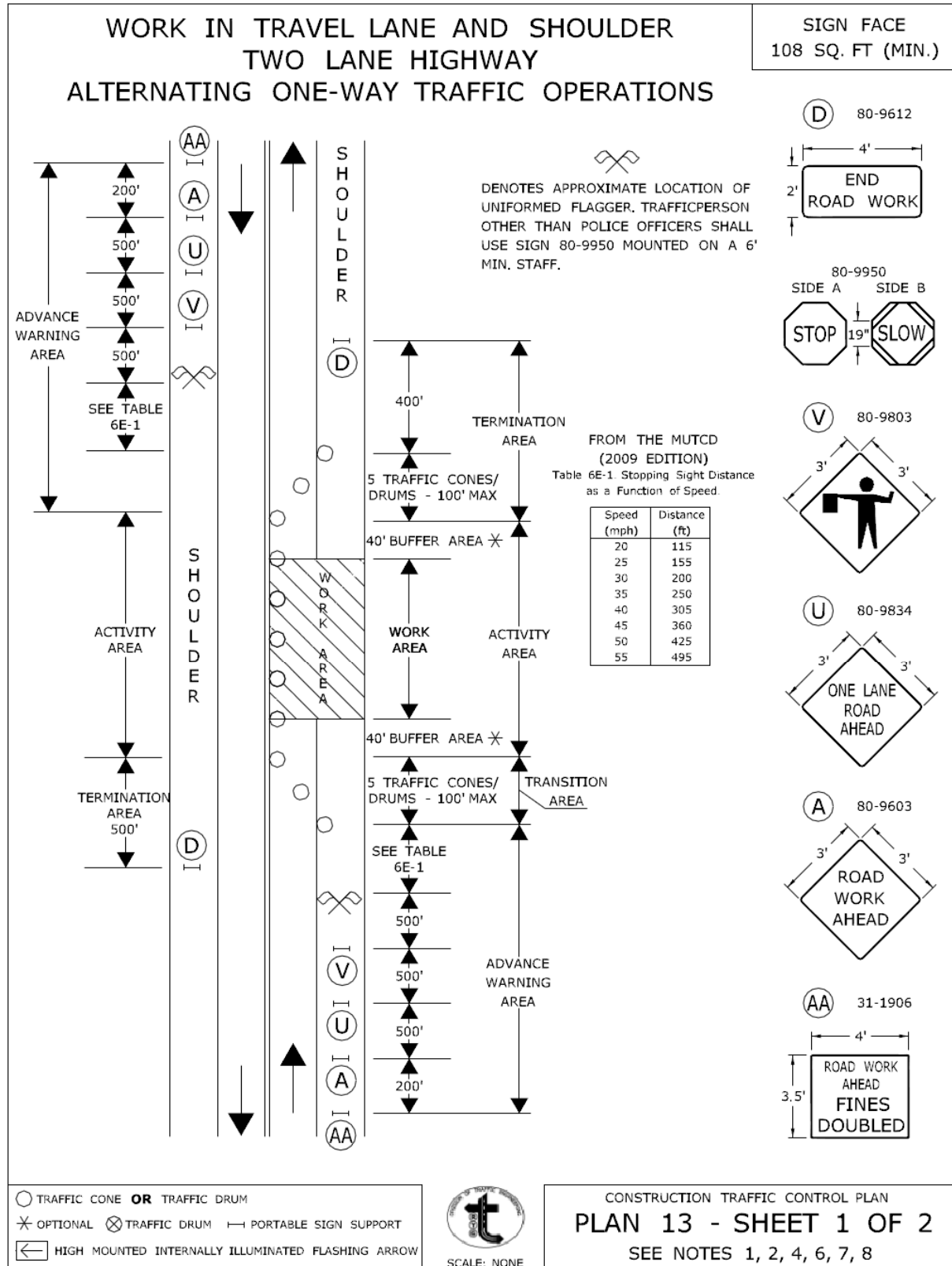




CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED

Charles S. Harlow
Charles S. Harlow
2012.06.05 15:55:01-0400
PRINCIPAL ENGINEER



CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED

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PRINCIPAL ENGINEER

WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY ALTERNATING ONE-WAY TRAFFIC OPERATIONS

SIGN FACE
108 SQ. FT (MIN.)

HAND SIGNAL METHODS TO BE USED BY UNIFORMED FLAGGERS

THE FOLLOWING METHODS FROM SECTION 6E.07, FLAGGER PROCEDURES, IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," SHALL BE USED BY UNIFORMED FLAGGERS WHEN DIRECTING TRAFFIC THROUGH A WORK AREA. THE STOP/SLOW SIGN PADDLE (SIGN NO. 80-9950) SHOWN ON THE TRAFFIC STANDARD SHEET TR-1220 01 ENTITLED, "SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS" SHALL BE USED.

A. TO STOP TRAFFIC

TO STOP ROAD USERS, THE FLAGGER SHALL FACE ROAD USERS AND AIM THE STOP PADDLE FACE TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. THE FREE ARM SHALL BE HELD WITH THE PALM OF THE HAND ABOVE SHOULDER LEVEL TOWARD APPROACHING TRAFFIC.



B. TO DIRECT TRAFFIC TO PROCEED

TO DIRECT STOPPED ROAD USERS TO PROCEED, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. THE FLAGGER SHALL MOTION WITH THE FREE HAND FOR ROAD USERS TO PROCEED.



C. TO ALERT OR SLOW TRAFFIC

TO ALERT OR SLOW TRAFFIC, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. TO FURTHER ALERT OR SLOW TRAFFIC, THE FLAGGER HOLDING THE SLOW PADDLE FACE TOWARD ROAD USERS MAY MOTION UP AND DOWN WITH THE FREE HAND, PALM DOWN.



○ TRAFFIC CONE **OR** TRAFFIC DRUM
✱ OPTIONAL ⊗ TRAFFIC DRUM ⇌ PORTABLE SIGN SUPPORT
◀ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW



SCALE: NONE

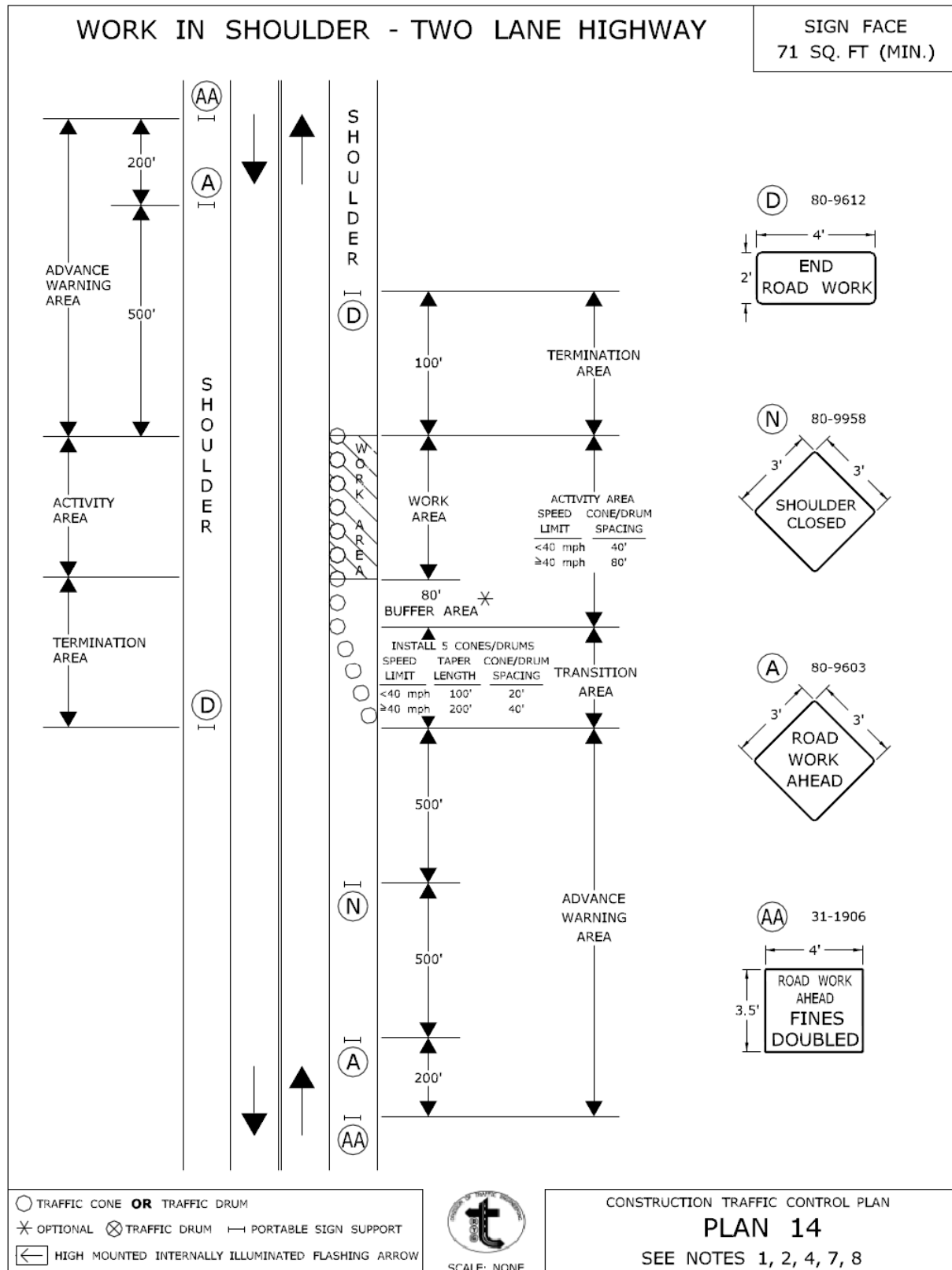
CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 13 - SHEET 2 OF 2
SEE NOTES 1, 2, 4, 6, 7, 8

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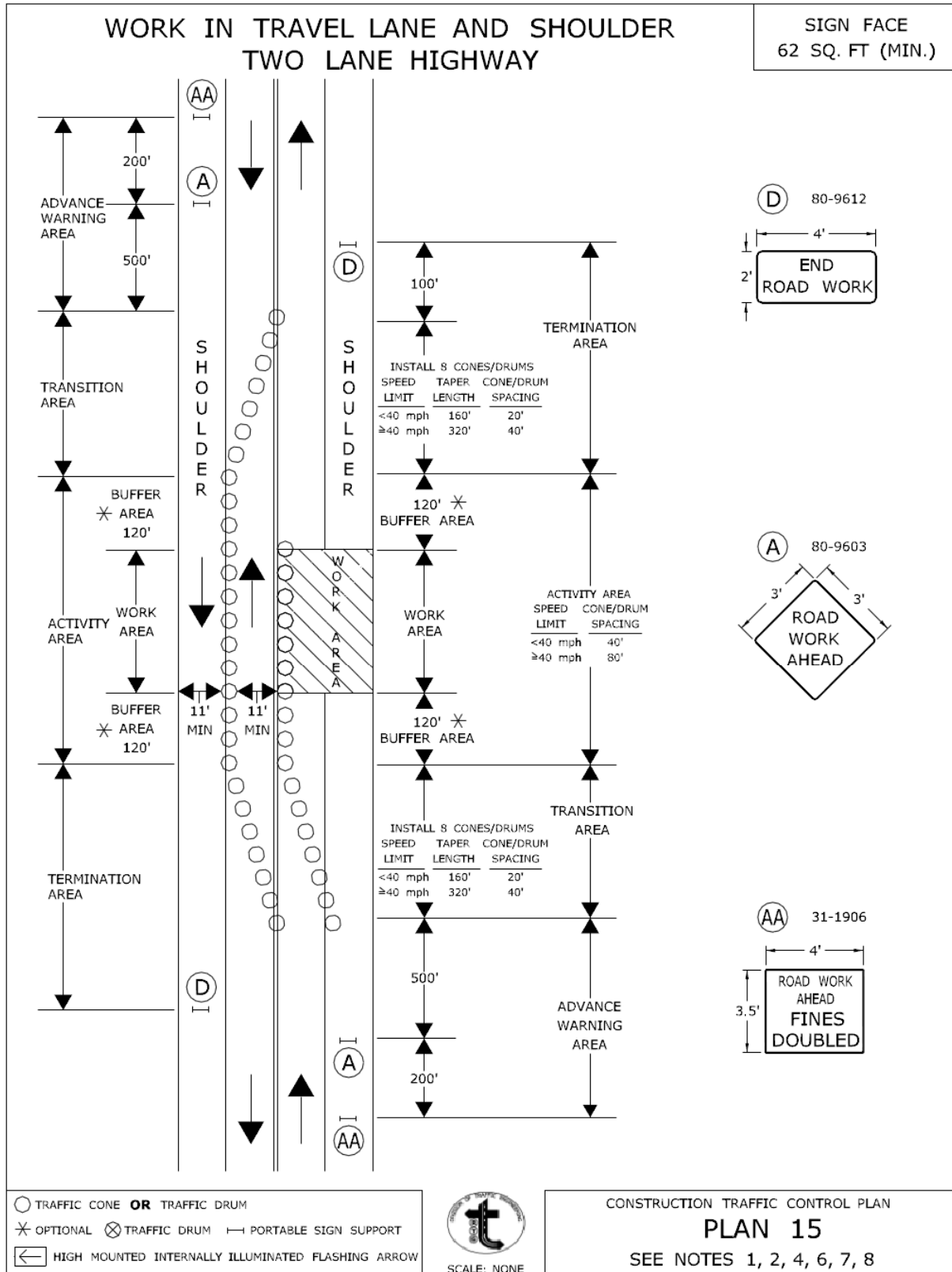
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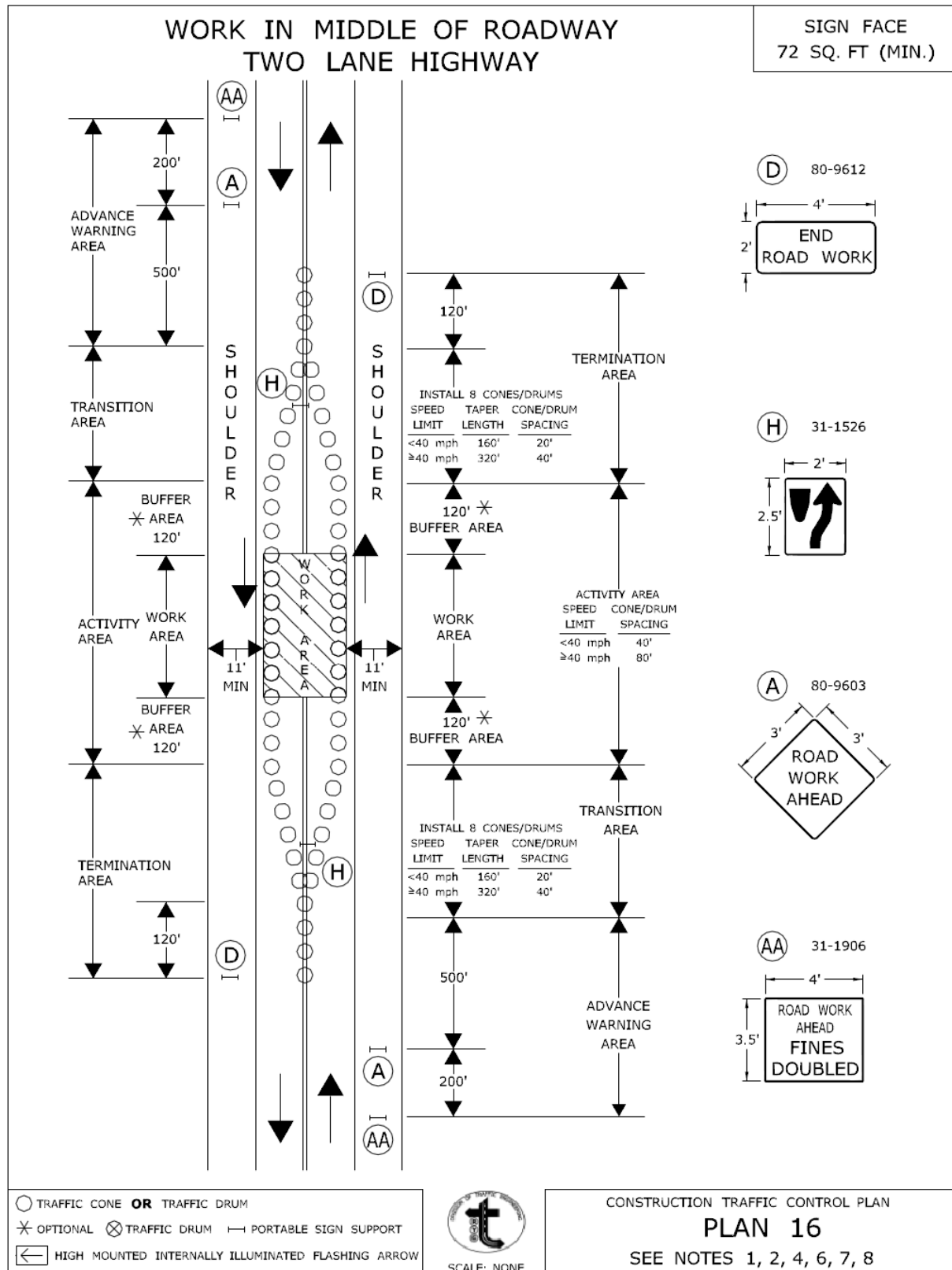


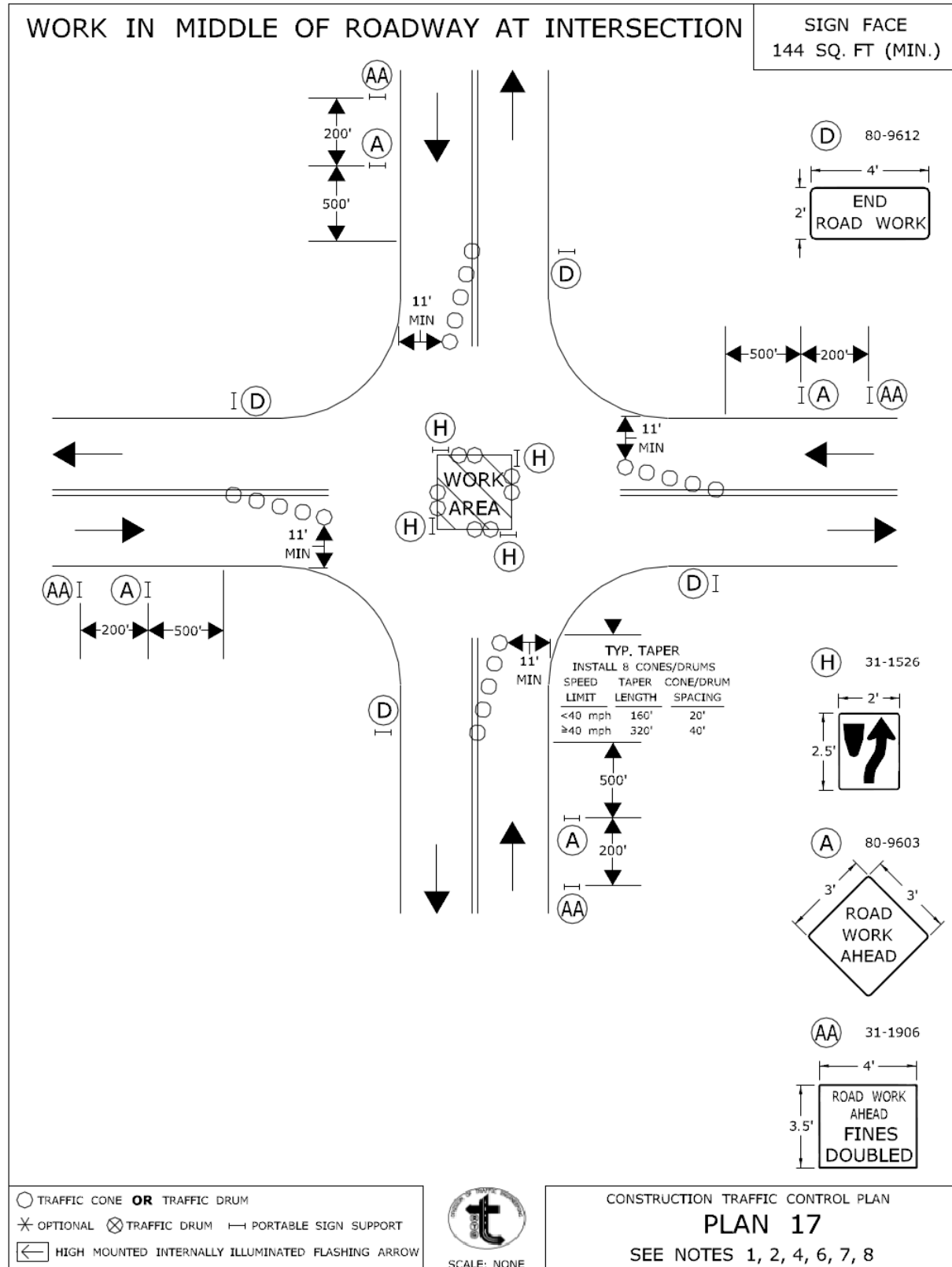
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Article 9.71.05 – Basis of Payment is supplemented by the following:

The contract lump sum price for “Maintenance and Protection of Traffic” shall also include furnishing, installing, and removing the material for the temporary traversable slope in those areas where a longitudinal dropdown exists and to maintain access to adjoining properties.

If there is no method for payment for the temporary transition in those areas where a transverse dropdown exists, then the contract lump sum price for the “Maintenance and Protection of Traffic” shall also include furnishing, installing, and removing the material for the temporary transitions and touchdowns.

The contract lump sum price for “Maintenance and Protection of Traffic” shall also include furnishing and installing all construction signs, sign supports, barricades, barricade warning lights, traffic drums, and traffic cones that may be necessary to maintain traffic through the various construction zones.

The contract lump sum price for “Maintenance and Protection of Traffic” shall also include temporarily relocating existing signs and sign supports as many times as deemed necessary and furnishing, installing, and removing temporary sign supports and foundations if necessary during construction of the project.

The contract lump sum price for “Maintenance and Protection of Traffic” shall also include all costs associated with developing, obtaining approval for, and implementing any and all required traffic control plans for the various project roadways.

ITEM #1001001A – TRENCHING AND BACKFILLING

Section 10.01 is amended as follows:

10.01.01 – Description: *Add after the first paragraph:*

Rock, insofar as it applies to trenching and backfilling, shall be defined as rock in definite ledge formation, boulders, or portions of boulders, cement masonry structures, concrete structures, reinforced concrete pipe, Portland cement concrete pavement or base, of 1/2 c.y. or more in volume, removed as indicated or directed from within the payment lines for trench excavation.

Revise the third paragraph to add:

“processed aggregate base, granular fill, suitable backfill material” after “crushed stone”.

10.01.02 – Materials: *Add the following:*

Processed Aggregate Base shall be as specified in M.05.01.

Granular fill shall be specified in M.02.01

10.01.03 – Construction Methods: *Replace the fourth paragraph with the following:*

Where trenching occurs in riprap or crushed stone areas, the surface material shall be replaced in kind. Where trenching in bituminous concrete sidewalk or paved areas, the trench shall be sawcut and backfilled to within the depth from the surface required to replace the removed sidewalk or pavement structure, which shall then be replaced. Suitable backfill material and granular fill shall be used for sidewalks and processed aggregate base shall be used as backfill material for pavement or bituminous concrete surfaces. The edges of all trenches in paved surfaces shall be sawcut to neat lines prior to paving. All trenches in existing paved surfaces, which parallel the curb, shall be no more than 1 1/2 feet from the curb, or when no curb is present, the apparent edge of road. The exception shall be to avoid existing appurtenances such as catch basins, water gates, manholes etc.

10.01.04—Method of Measurement: *Replace the second sentence with the following:*

If rock, conforming to the description given under 10.01.01, is encountered, the Contractor shall strip it of sufficient overlying material to allow for proper measurement, and shall notify the Engineer that the rock surface is ready for measurement.

10.01.05 -- Basis of Payment: *Replace the second paragraph with the following*

It shall also include all sand encasement, suitable backfill material, processed aggregate base, granular fill, backfilling, grading, seeding, fertilizing, mulching, clean-up and disposal of surplus material, sawcutting sidewalks and paved areas, as well as furnishing and installing curbing, riprap, crushed stone, topsoil, sidewalk, pavement or structure, as the case may be.

Replace the third paragraph with the following and remove the fourth paragraph entirely:

When rock, conforming to the description given under 10.01.01 is encountered within the limits of trenching, its removal will be classified; and the accepted quantities of rock in trench excavation will be paid for at the Contract unit price per cubic yard for "Rock in Trench Excavation." In the absence of a "Rock in Trench Excavation" item, the work will be compensated as extra work.

ITEM# 1008908A - CLEAN EXISTING CONDUIT**Description:**

Clean existing conduit as required, as shown on the plans or as directed by the Engineer to remove dirt and debris to facilitate the installation of new cable.

Construction Methods:

Where cable is to be installed in existing conduit the conduit may have to be cleared prior to the installation. Cleaning will only be necessary if the new cable cannot be easily installed in the existing conduit. By field inspection, and with the concurrence of the Engineer, determine the sections of conduit that require cleaning.

Remove all existing cable from conduit. Install temporary cable elsewhere, as necessary, to maintain normal signalization complete with vehicle & pedestrian detection, EVPS, and coordination. Clean the conduit by one of the following methods:

- 1) Rodding.
- 2) A high pressure jet spray, or air pressure.
- 3) By pulling a mandrel or ball through the conduit.

Submit in writing the anticipated method of cleaning the conduit to the Engineer for approval prior to cleaning any conduit.

If the conduit is found damaged to any extent that the cleaning process will not clear the obstruction, it will be the judgment of the Engineer whether to replace the entire conduit run or excavate and replace only the damaged section.

If the existing conduit is found to be missing hardware such as bonding bushings and bond wire, the missing material shall be provided and installed under this item prior to installation of the cable.

Method of Measurement:

This work shall be measured from termination point to termination point. This work shall be measured for payment on actual number of linear feet (meters)..

Basis of Payment:

The work under the Item "Clean Existing Conduit" shall be paid for at the contract unit price per linear foot (meters), which price shall include all material, tools, equipment, labor, and work incidental thereto. Work pertaining to temporary operation, if specified shall be paid for under Item 1108xxxA - Temporary Signalization (Site X). Replacement of any damaged conduit shall be paid for under the applicable conduit item.

Pay Item	Pay Unit
Clean Existing Conduit	l.f. (m)

ITEM #1010060A – CLEAN EXISTING CONCRETE HANDHOLE**DESCRIPTION:**

Clean all debris from an existing concrete handhole where shown on the plans or as directed by the Engineer.

MATERIAL:

Insulated Bonding Bushings:
 Specification Grade
 Threaded
 Malleable Iron or Steel
 Galvanized
 UL listed
 Bonding Wire:
 M.15.13
 Grout:
 M.03.05

CONSTRUCTION METHODS:

Remove to a level even with the bottom of the handhole all sand, silt and other debris. Remove any material that is accessible from the ends of conduit. Additional conduit cleaning will be paid for under Item 1008908A-Clean Existing Conduit. Place approximately 4" (100) of ¾" (19) crushed stone in bottom of handhole using care not to allow crushed stone to enter conduits. Grout around conduits to prevent future entrance of dirt and silt. Properly dispose all removed debris. Inspect bonding bushings. Tighten loose bushings. Secure loose bond connections. Install new bonding bushings on spare conduits and bond to other conduits.

METHOD OF MEASUREMENT:

This work will be measured for payment by the number of concrete handholes cleaned, complete and accepted.

BASES OF PAYMENT:

This work will be paid for at the contract unit price each for "Clean Existing Concrete Handhole", which price shall include the removal and disposal of debris from handhole and associated conduit, crushed stone, grout, bonding bushings, bonding wire, and all equipment and work incidental thereto.

Pay Item
 Clean Existing Concrete Handhole

Pay Unit
 Each (Ea)

ITEM # 1105518A LED TRAFFIC SIGNAL LAMP UNIT BI-COLORED ARROW 12"

Description:

This item shall consist of furnishing and installing a "LED TRAFFIC SIGNAL LAMP UNIT" of the type specified at locations shown on the plans or as indicated by the Engineer in conformity with these specifications.

Materials:

Sub Article 6 - Optical Unit, Light Emitting Diode:

(a) General:

Only Optical Units that meet the requirements contained herein supplied by the below manufacturers that have been tested by the Department's Signal Lab will be accepted. Final approval for model numbers will be done at the time of the catalog cut submittals.

Duralight
Trastar, Inc.
860 N. Dorothy Dr., Suite 600
Richardson, TX 75081

Dialight
1501 Foute 34 South
Farmingdale, NJ 07727

GE Lighting Solutions
Corporate Headquarters
1975 Noble Road Building338E
East Cleveland, OH 44112-6300

Leotek
726 South Hillview Drive
Milpitas, CA 95035

The materials for Light Emitting Diode (LED), Optical Unit, circular and arrow, shall conform to the following:

- The ITE Performance Specification for Vehicle Traffic Control Signal Heads – Light Emitting Diode (LED) Circular Signal Supplement for circular indications dated June 27, 2005.
- The ITE Performance Specification for Vehicle Traffic Control Signal Heads – Light Emitting Diode (LED) Vehicle Arrow Traffic Signal Supplement for arrow indications dated July 1, 2007.
- Section 4 Adjustable Traffic Signals and General Housing sections of the **Department of Transportation Functional Specifications for Traffic Control Equipment, current edition governs**. Where the Department of Transportation Functional Specifications conflict with this Special Provision or the 2005/2007 ITE Performance Specifications, this Special Provision and the 2005/2007 ITE Performance Specifications shall govern.

The Optical Unit shall have an Incandescent look and be made up of a smooth surfaced outer shell, multiple LED light sources, a filtered power supply and a backcover, assembled into a sealed unit. The Optical Unit shall be certified as meeting the 2005/2007 ITE Specifications by Intertek Testing Services, Inc. (ITSNA, formerly ETL) or another organization currently recognized by the Occupational Safety and Health Administration (OSHA) as a Nationally Recognized Testing Laboratory (NRTL.) The Optical Unit shall perform to the requirements of the ITE Specification for a minimum of 60 months.

A “Swing Test” will be performed by the Department to ensure no significant dimming or blanking occurs, until the lamp is obscured by the visor. All L.E.D Lamps may be subjected to further field testing for reliable operation.

The Arrow Optical Unit shall be “Omni-Directional” so that it may be oriented in a right, left or straight configuration without degradation of performance.

(b) Electrical Requirement:

• **Operating voltage:**

80 to 135 Volts AC with cutoff voltage (no visible indication) below 35Volts AC.

Power requirements:

Circular Indications: 12”, (300mm) - no more than 16 Watts

Circular Indications: 8”, (200mm) - no more than 16 Watts

Arrows Indications: 12”, (300mm) - no more than 16 Watts

Power Supply:

Fused and filtered to provide excess current protection and over voltage protection from electrical surges and transient voltages.

(c) Photometric Requirement:

Beam Color:

Meet 2005/2007 ITE Specifications

(d) Mechanical Requirements:

Diameter:

The Circular Optical Unit shall fit into standard 12" (300mm) or 8" (200mm) housing.
The Arrow Optical Unit shall fit 12" (300mm) housings only.

Enclosure:

Clear lens cover for all Red, Yellow and Green Circular Optical Units.
For Arrow Optical Units the arrow indication segment of the lens shall be clear.
Enclosure sealed and waterproofed to eliminate dirt contamination and be suitable for installation in all weather conditions.

Clearly mark on the housing the following information:

- Manufacturer & model number
- Date of manufacture

The model number shall end with the number of LEDs used to comprise the unit as the last digits of the model number. Example, if the unit comprised of 3 LEDs and the model is x12y, then the new model number shall read x12y3.

Operating temperature:

Meet 2005/2007 ITE Specification

Wiring: L.E.D. lamps shall have **color coded 16 AWG wires** for identification of heads as follows:

RED L.E.D. Lamps	RED with WHITE neutral
YELLOW L.E.D. Lamps	YELLOW with WHITE neutral
GREEN L.E.D. Lamps	GREEN or Brown with WHITE neutral
RED L.E.D. ARROWS	RED/WHITE with WHITE neutral
YELLOW L.E.D. ARROWS	YELLOW/WHITE with WHITE neutral
GREEN L.E.D. ARROWS	GREEN/WHITE or BROWN/WHITE with WHITE neutral
GREEN/YELLOW L.E.D. ARROWS	GREEN/WHITE or BROWN/WHITE, YELLOW/WHITE, with WHITE neutral

Wires shall be terminated with a Block Spade, 6-8 stud/ 16-14 wire size.

All Circular Optical Units shall be supplied with a minimum 40" pigtail and all Arrow Optical Units supplied with a minimum 60" pigtail.

Construction Methods:

This method is applicable where the contractor is required to retrofit the LED lamps to existing traffic signal heads.

- Replace corroded terminal blocks.
- Wire nutting doghouse signals is not allowed. Pull new wire through hardware to top head.

- Clips holding lamps in place to be replaced in kind, with a minimum of two clips installed on opposite sides.
- Remove LED, Optical Unit from housing.
- Install new gasket on the lamp.
- Insert lamp and gasket in housing and tighten holding screws.
- Make sure that the orientation of the lamp unit is proper. Circular indications that have an identification mark (such as an arrow) on the top of the lens, shall be installed with that mark at the 12 o'clock position.

Measure the off-state voltage of all green indications, with the lamp loads attached. An abnormally high reading may indicate a high impedance neutral or a defective load switch. If this condition exists make all necessary corrections prior to leaving the signal in operation.

Method of Measurement:

The quantity to be paid for under this item will be the number of completed, installed and accepted LED TRAFFIC SIGNAL LAMP UNITS of the type specified.

Basis of Payment:

This work will be paid for at the contract unit price each for "LED TRAFFIC SIGNAL LAMP UNIT" of the type and size specified which price shall include all materials, Lamp Unit miscellaneous fittings, parts, hardware and equipment, labor and work incidental thereto.

<u>Pay Item</u>	<u>Pay Unit</u>
LED Traffic Signal Lamp Unit Bi-Colored Arrow 12"	EA.

ITEM #1106003A - 1 WAY PEDESTRIAN SIGNAL PEDESTAL MOUNTED

Section 11.06.02 Pedestrian Signal, Materials

Section M.16.07 C. Optical Unit

Delete 2. LED: and replace with the following:

General

- Meet requirements of current MUTCD Section 4E.
- Meet current ITE specifications for Pedestrian Traffic Control Signal Indications - (PTCSI) Part 2: Light Emitting Diode (LED).
- Meet CT DOT, 2008 - 2010 Functional Specifications for Traffic Control Equipment; Section 5D, LED Pedestrian Signal with Countdown Timer.
- Meet EPA Energy Star® requirements for LED Pedestrian Signal Modules.

Operational

- Countdown display only during the flashing Pedestrian Clearance (Ped Clr) Interval. Timer goes blank at end of flashing ped clr even if countdown has not reached zero.

Physical

- Sealed optical module to prevent entrance of moisture and dust.
- Self-contained optical module, including necessary power supplies.
- Designed to securely fit into standard housing without the use of special tools or modifications to the housing.
- Identification information on module: manufacturer's name, model number, serial number, and date code.

Optical

- Multiple LED sources; capable of partial loss of LED's without loss of symbol or countdown message.
- Two complete self contained optical systems. One to display the walking person symbol (walk) and the hand symbol (don't walk). One to display the countdown timer digits.
- Visual Image similar to incandescent display; smooth, non-pixelated.
- Symbol and countdown digit size as shown on the plan.
- Solid hand/person symbol; outline display not allowed.
- Overlaid hand/person symbols and countdown digits arranged side by side.
- Countdown digit display color: Portland Orange in accordance with ITE requirements.
- Countdown digits comprised of two seven segments, each in a figure 8 pattern.
- Photometric Requirements: Luminance, Uniformity, and Distribution in accordance with ITE requirements.
- Color Uniformity in accordance with ITE requirements.

- Blank-Out design; symbols and digits illegible even in direct sunlight when not illuminated.

Electrical

- Operating voltage: 89 VAC to 135 VAC.
- Low Voltage Turn-Off: 35 VAC.
- Turn-On and Turn-Off times in accordance with ITE specifications.
- Combined Hand – Countdown Digits wattage: ≥ 20 Watts.
- Input impedance at 60 Hertz sufficient to satisfy Malfunction Management Unit (MMU) requirements.
- Two separate power supplies. One to power the walking person symbol. One to power the hand symbol and the countdown digits.
- Meet Federal Communication Commission (FCC) regulations concerning electronic noise.
- Filtered and protected against electrical transients and surges.

Warranty

- Five years from date ownership is accepted.

Section M.16.07 F. Painting:

Remove the 2nd and 3rd sentences referring to the color.

Third coat: Replace with the following:

The housing, housing door, and all brackets and hardware shall be painted black by the manufacturer. The color shall be No. 17038, Federal Standard No. 595.

The inside and outside of the visor shall have a dull black finish to minimize light reflection and to increase contrast between the signal indication and its background. The dull black finish shall meet Federal Specification TT-E-527.

ITEM #1107011A – ACCESSIBLE PEDESTRIAN SIGNAL AND DETECTOR (TYPE A)**Description:**

Furnish and install an Accessible Pedestrian Signal and Detector (APS&D). The APS&D provides audio and tactile information to augment the visual pedestrian signal.

Type A provides a low frequency percussive tone or a speech message during the walk interval and is used where there is an exclusive or a concurrent pedestrian phase.

Material:**A. General:**

- Conform to applicable sections of the current MUTCD Chapter 4E, Pedestrian Control Features as specified herein.
- All features fully operational when the traffic signal is in colors mode.
- All features non-operational when the traffic signal is in flash mode.
- Interchangeable with a non-accessible type pedestrian pushbutton with no modifications to the Controller Assembly (CA) or Controller Unit.
- Audible transducer integral with the APS&D housing, adjacent to the pushbutton.
- Operation programming method: Either or combination of:
 - Mechanically by dip switches or circuit board jumpers
 - Infrared remote-control hand-held device

B. Electrical:

- Metallic components either grounded or insulated to preclude an electrical hazard to pedestrians under all weather conditions.
- All features powered by the 110VAC Walk signal and the 110VAC Don't Walk signal so that additional conductors from the CA are not needed.

C. Audible Pushbutton Locator Tone

- Frequency: repeating tone at one (1) second intervals
- Tone duration: ≤ 0.15 seconds
- Volume:
 - Minimum setting of zero
 - Manually adjustable initial setting
 - Automatically adjusted after initial setting. Volume increased in response to a temporary increase in ambient noise and subsequently decreased with a decrease in ambient noise.
 - Maximum volume: 100 dBA which is the approximate sound pressure of a gasoline powered lawn mower nearby.
 - Automatic volume adjustment independent of other APS&Ds at the intersection.
 - May be disabled without affecting operation of other features.
- Silent only during walk interval. Active all other times.

D. Vibrotactile Arrow Pushbutton

- Pushbutton contained in a circular assembly which fits inside the housing and is attached to the housing with 4 screws.
- Actuation of pushbutton acknowledged by confirmation light.
- Actuation of pushbutton initiates speech message "Wait".
- ADA compliant: Size: ≥ 2.0 " (50) diameter, Actuation force: ≤ 5 ft-lb (22.2 N)
- Shape: Circular, raised slightly above housing so that it may be actuated with the back of a hand

- Tamper-proof, vandal-proof, weatherproof, freeze-proof, impact-resistant design and construction.
- Operation: Vibrates only during the walk interval (when the walk indication is displayed).
- Tactile Arrow:
 - Attached to surface of the button assembly by a tamperproof method.
 - Raised slightly above surface of pushbutton, minimum 0.125" (0.3)
 - Size: Length ≥ 1.5 " (38), Height ≥ 1.0 " (25)
 - Color: Sharp contrast to background color of pushbutton and housing

E. Audible Walk Interval

1. General:

- Operation independent of other APS&Ds at intersection.
- Active only during the walk interval (when the walk indication is displayed).
- Volume:
 - Minimum setting of zero
 - Manually adjustable initial setting
 - Automatically adjusted after initial setting. Volume increased in response to a temporary increase in ambient noise and subsequently decreased with a decrease in ambient noise.
 - Automatic volume adjustment independent of other APS&Ds at the intersection.
 - Maximum volume: 100 dBA which is the approximate sound pressure of a gasoline powered lawn mower nearby.
- Duration:
 - Default method: Automatically set by the duration of the visual walk signal display.
 - When selected: Manually set when rest-in-walk is used for a concurrent pedestrian movement.
- Audible sounds that mimic any bird call are not allowed.

2. Percussive Tone where called for on the signal plan:

- Repeating tone at eight (8) to ten (10) ticks per second.
- Tone frequency: Multiple frequencies with a dominant component at 880 Hz which creates a "tick - tick - tick..." sound.

3. Speech Message where called for on the signal plan:

- Clearly enunciate the name of the travel way to be crossed and the message that the walk signal is on for that crossing.. See signal plan for specific message.

F. Pushbutton Housing/Sign Frame/Sign

- One piece die cast aluminum meeting requirements of ASTM B85.
- Sign frame designed to accept 9" x 15" (230 x 380) four-hole advisory sign.
- Flat back to facilitate surface mount.
- Available brackets to either pedestal top-mount or pole side-mount on pole diameter range of 3½" (89) to 15" (380).
- Available brackets to allow mounting two (2) APS&Ds to the same 3½" (89) pole, facing ≥ 60 degrees apart, at the same height.
- Available extension bracket of a size indicated on the plan – 18" maximum.
 - Wire entrance through the rear.
 - Stainless steel mounting hardware.
 - Color: The color shall be black No. 17038, Federal Standard No. 595.
 - Finish: Housing/Frame and all mounting brackets either:
 1. Painted with 3 coats of infrared oven-baked paint before assembly.
 - Primer: Baked iron oxide which meets or exceeds FS TT-P-636.

Item #1107011A

- Second coat: Exterior-baking enamel, light gray, which meets or exceeds FS TT-E-527.
 - Third coat: Exterior-baking enamel, which meets or exceeds FS TT-E-489.
- 2. Electrostatic powder coated after chemically cleaned.
- Sign: CT DOT Sign No. 31-0856

Construction Methods:

Install the APS&D according to the manufacturer's instructions. Position the APS&D so the plane of the sign face is parallel to the crossing (sign is facing perpendicular) and the arrow is pointing in the same direction as the crossing, not necessarily at the ramp. Notify the Engineer if there is any discrepancy or ambiguity between the plans and field conditions that prevent placement of the APS&D as shown on the plan. Set the minimum sound levels of the locator tone and the audible walk indication when there is little or no ambient noise as in night time operation. Set the volume of audible walk indications and pushbutton locator tones to a maximum of 5dBA louder than ambient sound. The locator tone should be audible 6' to 12' (1.8 m to 3.6 m) from the pushbutton or to the building line, whichever is less. Confirm the volume of both audible walk indication and the locator tone increases with an increase in ambient sound and subsequently decreases when the ambient noise decreases.

If programming method is remote, by an infrared hand-held device, provide one device and operation manual for each intersection where APS&D is installed.

Method of Measurement:

This work is measured by the number of APS&Ds of the type specified, installed, tested, fully operational, and accepted.

Basis of Payment:

Payment for this work is based on the installation, inspection, successful completion of the 30 day test period, and final acceptance of the Accessible Pedestrian Signal and Detector of the type specified. Payment includes the sign, mounting brackets for adjacent buttons on the same structure, extension brackets, all necessary cable, all incidental materials, labor, tools, and equipment necessary to complete the installation. Payment also includes the warrantee, installation manual, and operation manual.

If programming method is remote by an infrared hand-held device, the total bid price of all APS&Ds includes one remote programming device and accompanying operation manual for each intersection where APS&D is installed.

Pay Item	Pay Unit
Accessible Pedestrian Signal and Detector (Type A)	Each

ITEM #1108163A – MODIFY EXISTING CONTROLLER

This item shall consist of modifying the existing traffic controller assembly to provide the revised operation as shown on the plans or as directed by the Engineer. The modification shall include, but not be limited to, revisions to the timing and sequence, cabinet wiring, coordination, pre-emption, field wiring and cabinet wiring diagrams.

MATERIAL

The material for this work shall conform to the requirements of the current edition of the Connecticut Department of Transportation Functional Specifications for Traffic Control Equipment. The material shall be compatible with the existing equipment. Any material in question shall be approved prior to installation by the Engineer or the Department of Transportation Signal Lab, 280 West Street, Rocky Hill. Contact Mr. Don Assard at (860) 258-0346 or Mr. Mark Zampini at (860) 258-0349 for approval.

CONSTRUCTION METHODS

All revisions to the cabinet wiring shall be neat and orderly. All additional wiring shall be from terminal to terminal. Splices will not be allowed. All changes, additions and deletions shall be documented, dated and drawn on the reproducible original or a reproducible copy of the original cabinet wiring diagram. Four paper copies shall be furnished to the Engineer upon completion of the revision.

METHOD OF MEASUREMENT

This item will be measured for payment as an "Each" item.

BASIS OF PAYMENT

This item will be paid for at the contract price each, for "Modify Existing Controller" which price shall include all necessary load switches, relays, components, hardware, tools, equipment, engineering and labor required to modify the existing controller as shown on the plan. This price shall also include four updated cabinet wiring diagrams.

Pay Item

Modify Existing Controller

Pay Unit

Ea.

ITEM #1108725A - PHASE SELECTOR (MODIFIED)

ITEM #1112413A - DETECTOR (TYPE A) (MODIFIED)

ITEM #1112471A - PRE-EMPTION SYSTEM CHASSIS (MODIFIED)

ITEM #1113552A - DETECTOR CABLE (OPTICAL) (MODIFIED)

SYSTEM DESCRIPTION:

The emergency vehicle traffic signal priority control system shall enable designated vehicles to remotely cause the traffic signal controller to advance to and/or hold a desired traffic signal display by using existing controller functions. The control shall be effective for a distance of up to 2500 feet (762 m) along an unobstructed "line of sight" path. The control shall not terminate until the vehicle is within 40 feet (12.2m) of the detector or at the intersection.

The system shall consist of the following components:

- A. Phase Selector {GTT (typ.) model 762 (2 channel) or model 764 (4 channel)} which shall cause the signal controller to advance to and/or hold the desired traffic signal display for the emergency vehicle. A pre-emption system chassis (GTT (typ.) model 770) shall house one phase selector and pre-emption system chassis model 760 shall house one multimode phase selector model 764.
- B. Optical Detector which shall be mounted on or near a traffic signal and shall receive the optical energy signals generated by the Vehicle Emitter.

Detector (Type A) 1 Direction, 1 Channel (GTT (typ.) model 711)

- C. Detector Cable (Optical) (GTT (typ.) model 138)

System Operation:

- A. The operating sequence shall be initiated when the Optical Detector receives the required optical energy signal from the Vehicle Emitter.
- B. The Phase Selector shall cause the traffic signal controller to advance to and/or hold the desired traffic signal display for the emergency vehicle.
- C. The Phase Selector shall cause the controller to advance to and/or hold the desired traffic signal display even if the optical energy signals cease before the desired display is obtained.
- D. The Phase Selector shall allow the traffic signal controller to resume normal operation within ten seconds after optical energy signals cease if the optical energy signals cease after the desired traffic signal display is obtained.
- E. The Phase Selector shall not respond to optical energy signals from an emergency vehicle if it is already processing optical energy signals from another emergency vehicle.

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System Components:

A. Optical Detector:

The optical detector receives the high intensity optical pulses produced by the emitter. These optical energy pulses are transformed by the detector into appropriate electrical signals which are transmitted to the phase selector. The optical detector is mounted at or near the intersection in a location which permits an unobstructed line of sight to vehicular approaches. The units may be mounted on signal span wires, mast arms or other appropriate structures.

1. Shall be of solid state construction.
2. Shall operate over an ambient temperature range of minus 30⁰ F. to plus 165⁰ F. (minus 34⁰ C to plus 74⁰ C.)
3. Shall have internal circuitry potted in a semi-flexible compound to ensure moisture resistance.
4. Shall operate in 5% to 95 % relative humidity.
5. Shall have a cone of detection of not more than 13 degrees. The detector and/or phase selector shall not sense a pre-emption signal from an emitter outside this cone.

B. Phase Selector

The Phase Selector utilizes solid state and relay circuitry to interface between the Optical Detector and the traffic signal controller. The Phase Selector supplies power to and receives electrical signals from the Optical Detector. When Detector signals are recognized as a valid call, the Phase Selector causes the signal controller to advance to and/or hold the desired traffic signal display. This is accomplished by utilizing Phase Selector circuitry in conjunction with normal internal controller functions, such as;

The phase selector is capable of assigning priority traffic movement to one of two channels on a first-come, first-serve basis. Each channel is connected to select a particular traffic movement from those normally available within the controller. Once a call is recognized, "commit to green" circuitry in the phase selector functions so that the desired green indication will be obtained even if optical communication is lost. After serving a priority traffic demand, the phase selector will release the controller to follow normal sequence operation.

1. Shall include an internal power supply to supply power to the optical detectors.
2. Shall have two channel operation with the capability of interfacing with an additional phase selector for expansion of channels of operation.
3. Shall have adjustable detector range controls for each channel of operation, from 40 feet (12m) to 2500 feet (762m).
4. Shall have solid state indicator lights for power on and channel called.
5. Shall operate over an ambient temperature range of minus 30⁰ F. to plus 165⁰ F. (minus 34⁰ C to plus 74⁰ C)

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6. Shall operate in 5% to 95 % relative humidity.

C. Pre-emption System Chassis.

1. Opticom Model 760 and 770 card racks shall consist of a metal enclosure.
2. Dedicated card slot for one Opticom phase selector.
3. Front panel shall include a terminal strip for connecting the Opticom detectors and outputs to a gate operator as well as a 9-pin circular connector and harness to connect to 120 VAC.
4. Stable “on-shelf” mounting.
5. Easy-to-read terminal designations.
6. Relay Specifications:
 - a. Shall be designed to actuate gate opener circuit.
 - b. Shall be designed to switch AC or DC.
 - c. Shall include normally open and closed contacts.

D. Detector Cable (Optical).

1. 3 Conductor cable with shield and ground wire.
2. AWG #20 (7x28) stranded.
3. Individually tinned copper strands.
4. Conductor insulation: 600 volt, 167O F. (75 deg. C).
5. 1 Conductor-yellow; 1 Conductor-blue; 1 Conductor-orange.
6. Aluminized mylar shield tape or equivalent.
7. AWG #20 (7x28) stranded uninsulated drain wire
8. DC resistance not to exceed 11.0 ohms per 1000 feet (305m).
9. Capacitance from one conductor to other two conductors and shield not to exceed 48 pf/ft. (157pf/m).
10. Jacket: 600 volts, 176O F. (80 deg. C), minimum average wall thickness – 0.045” (1.14mm).
11. Finished O.D.: 0.3” (7.62mm) max.

System Interface:

System shall be capable of operating in a computerized traffic management system when appropriate interfacing is provided by the computer supplier.

General:

The Contractor shall furnish the manufacturer the phasing diagrams indicating controller sequence and timing.

The optical equipment manufacturer shall replace or repair without charge, any component parts that prove to be defective within five years from the date of shipment from manufacturer. Manufacturer shall certify upon request that all materials furnished will conform to this specification. The manufacturer or his designated representative shall be responsible for determining and setting all required range and emitter intensity for the emergency vehicle operation.

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Construction Methods:

All equipment shall be installed and wired in a neat and orderly manner in conformance with the manufacturers' instructions.

Traffic signals owned and maintained by the State that have optical pre-emption equipment owned and maintained by the town shall have an Auxiliary Equipment Cabinet (AEC) attached to the controller cabinet. The optical preemption equipment shall be housed in the AEC. Traffic signals owned and maintained by the town do not require an AEC to house the pre-emption equipment.

Detector cables shall be installed continuous with no splices between the optical detector and the AEC.

Detector locations shown on the plan are for illustration purposes only. Exact location shall be determined by the manufacturer or the designated representative for the best possible line of sight.

If not present in an existing traffic controller cabinet, the following items shall be installed and connected, in conformance with the current Functional Specifications for Traffic Control Equipment, "D" Cabinet Requirements (Pre-emption Type):

- Controller "D" harness and adapter.
- Pre-emption termination panel with terminal block and relay bases.
- Pre-emption disconnect switch, mounted on the emergency switch panel (on inside of cabinet door).
- Pre-emption test buttons, mounted on the pre-emption termination panel.

All connections from the phase selector to the "D" harness and to the cabinet wiring shall be made at the termination panel. The termination panel shall have AC+ Lights, AC-, and a switched logic ground. The switched logic ground feeds all the pre-empt inputs to the phase selector. When switched off by the pre-emption disconnect switch, the traffic controller shall not be affected by pre-empt calls from the optical pre-emption system. A minimum of two test buttons shall be provided. If there are more than two pre-empt runs, a button for each shall be installed. A chart or print out, indicating the program steps and settings shall be provided along with the revised cabinet wiring diagrams.

Test the pre-emption system at the semi-final inspection according to the following guidelines:

1. Notify the system owner/user, such as the municipal fire chief or public works director, of the scheduled inspection
2. Request a fire department representative and an emergency vehicle, which has an emitter, to conduct the test. If not available, the contractor shall provide an emitter.
3. In the presence of the Engineer, and the municipal representative, test each pre-empted approach with the emergency vehicle. Test the following items of the system:
 - * Confirm the emitter activates the phase selector and the phase selector activates the correct pre-emption input to the controller.
 - * Confirm adequate range. The traffic signal must be pre-empted to green sufficiently in advance of the emergency vehicle arrival. The vehicle emitter shall initiate pre-emption at a minimum distance of 2500 FT. (760m).
 - * Confirm there are no false calls. Keep the emitter active as the emergency vehicle passes through the intersection. No other optical detectors shall sense the strobe.
4. Document the test. Provide the Engineer and, upon request, the municipality copies of the test results.

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If a malfunction is found or the system needs adjustment (such as range, emitter intensity, or detector location), schedule a follow-up test. Repeat the above steps for all approaches that did not pass.

All adjustments such as emitter intensity, phase selector range, sensitivity, detector placement, shall be made at the intersection, by the contractor so that the optical pre-emption operates correctly with other major manufacturers' equipment currently owned by the town.

Method of Measurement:

Optical Detectors (modified), Phase Selectors (modified), System Chassis (modified) will be measured for payment by the number of each supplied, installed and accepted. Detector Cable (Optical) (modified) will be measured by the number of linear feet (meters) supplied, installed and accepted.

Basis of Payment:

Payment for Optical Detectors (modified), Phase Selector (modified), System Chassis (modified) and Detector Cable (Optical) (modified) will include the item unit cost, including all manufacturer's required mounting hardware and the cost of installation and supervision by the manufacturer or his designated representative, including travel and subsistence, and all materials, equipment and labor incidental thereto. Payment for termination panel, "D" harness, test buttons, program chart (or print out) and revised cabinet wiring diagrams shall be included in the item PRE-EMPTION SYSTEM CHASSIS (MODIFIED).

<u>Pay Items</u>	<u>Pay Units</u>
Detector (TYPE A) (MODIFIED)	Ea.
Phase Selector (MODIFIED)	Ea.
Detector Cable (Optical) (MODIFIED)	L.F.
Pre-Emption System Chassis (MODIFIED)	Ea.

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ITEM# 1111600A – EXTENSION BRACKET**Description:**

Furnish and install an Extension Bracket as shown on the plans or as directed by the Engineer. This item includes both horizontal and vertical extension brackets. The Extension Bracket consists of mounting hardware, equipment and labor necessary to provide the specified vertical height or horizontal length.

Materials:

All hardware shall be new, corrosion resistant. All equipment shall be of current production.

Horizontal Extension Bracket:

- Single arm [8' (2.5m) or less], or Truss type [8' (2.5m) or greater].
- Length shown on plan.
- Clamp-on attachment to pole shaft 1' (300mm) from top of pole.
- Designed to support minimum 30 lbs. (13.6 Kg), 2 sq. ft. (.2 sq. M) end load with minimal movement from wind.
- Schedule 40, 2" IPS galvanized pipe.
- Heavy duty galvanized finish.
- Refer to detail drawing contained herein.

Vertical Extension Bracket:

- 10' Maximum Length.
- Schedule 40, 1.5" galvanized pipe.
- Astro-Brac banded bracket.
- Designed to support minimum 30 lbs. (13.6 Kg), 2 sq. ft. (.2 sq. M) end load with minimal movement from wind.
- Length shown on plan.
- Heavy duty galvanized finish.
- Refer to detail drawing contained herein.

Construction Methods:

Install Extension Bracket equipment in accordance with the manufacturer instructions. The Contractor shall install Extension Brackets as shown in the plans. Leave proper clearance(s) surrounding overhead utilities in accordance with current PURA and NESC regulations.

Method of Measurement:

The Extension Bracket will be measured for payment as the number of brackets furnished, installed and accepted.

Basis of Payment:

The unit bid price for Extension Bracket includes all labor, tools, material, and equipment necessary to install an extension bracket as specified on plans.

Pay Item

Extension Bracket

Pay Unit

Ea.

ITEM #1112284A — VEHICLE DETECTION MONITOR

Description:

Furnish and install a Vehicle Detection Monitor with stand in the Controller Cabinet.

Materials:

All hardware shall be new, corrosion-resistant. All equipment shall be current production.

Physical:

- Compact and easily accessible stand-mounted LCD/ LED Flat Panel Display.
- Diagonal screen size minimum 10 inches and maximum 15 inches.
- Withstand temperatures ranging from -4 to 140°F (-20 to 60°C).
- Operating humidity: 10-90% non-condensing.

Functional:

- Compatible with Color or Monochrome Detection systems.
- Industrial-grade video panel.
- ANSI contrast ratio of 300:1 minimum.
- Minimum brightness level: 400 candelas per square meter (400 lux).
- Native resolutions: 1024 (horizontal) x 768 (vertical).
- Support both National Television Standards Committee (NTSC) and Phase Alternating Line (PAL) video formats with auto-sensing.
- Minimum viewing angle: 140 degrees horizontally, 120 degrees vertically.
- On-Screen Display (OSD) controls brightness, contrast, color as well as horizontal and vertical positioning.
- Compatible with video detection processor output. Use appropriate converters/ adapters if necessary.
- Operable on 110 VAC or 220 VAC, 50 or 60 Hz.
- FCC, Voluntary Control Council for Interference (VCCI), Electromagnetic Compatibility (EMC), Consumer Electronics (CE) approved, UL listed and Energy Star efficient.
- MTBF Rating: 50,000 hours minimum.

Warranties and Guarantees:

Provide warranties and guarantees to the **Department of Transportation Office of Maintenance** in accordance with Article 1.06.08 of the Standard Specifications. Warranties for all equipment furnished as part of this Contract are to cover a period of 24 months following successful completion of the entire intersection acceptance test.

Method of Measurement:

The Vehicle Detection Monitor will be measured for payment as the number of units furnished, installed, operational and accepted.

Basis of Payment:

This work will be paid at the Contract unit price for each accepted "Vehicle Detection Monitor," which price shall include the Vehicle Detection Monitor, stand, documentation, warranty, labor, tools and equipment incidental thereto.

Pay Item	Pay Unit
Vehicle Detection Monitor	EA.

ITEM #1112285A – THERMAL VIDEO DETECTOR ASSEMBLY**Description:**

Furnish and install a Thermal Video Detector Assembly (TVDA) as shown on the plans or as directed by the Engineer.

Materials:

All hardware shall be new, corrosion resistant. All equipment shall be current production.

Thermal Detector Assembly:**Thermal Imaging Sensor:**

- Sensor Type: Focal Plane Array (FPA), Uncooled Vanadium Oxide Microbolometer
- Fixed mount pan and tilt unit bracket.
- Thermal Sensitivity: <75mk, <50 mK f/1.0 or lower.
- Active picture elements (pixels): 320(H) x 240(V), minimum. 25 micron pixel pitch.
- Thermal Output: Analog NTSC equivalent.
- Output impedance: 75 Ohms nominal.
- Operating Temperature Range: -50°C to 75°C (-58°F to 167°F)
- Lens Selection: Based on recommendation of manufacturer for each detector installed, per outcome of Site Survey.

Surge Protection

A thermal surge suppressor(s) shall be available for installation inside the traffic signal controller cabinet. The suppressor shall provide coaxial cable connection points to a Thomas Research CCTV-SP-NI or approved equal transient suppresser for each image sensor.

- Peak Surge Current (8 x 20 us) 20KA
- Technology Hybrid, Solid State
- Attenuation 0.1db @ 10Mhz
- Response Time <1 nanosecond
- Protection Line to Ground
- Shield to Ground (isolated shield modules)
- Clamp Voltage 6 volts
- Connectors BNC
- Impedance 75 Ohms
- Temperature -40 to +85 degrees C
- Humidity 0-95% non-condensing
- Dimensions 4.5" x 1.5" x 1.25"

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- UL Listed UL 497B

Detector Enclosure:

- Tamper proof constructed of painted or powder coated aluminum of at least 0.06-inch (1.59-mm) thickness.
- Environmentally sealed housing. IP-66 Rating
- Adequate adjustable sunshield should be provided.
- Internal Heater, window defroster, and a thermostat to control both.
- The enclosure shall include grounding and surge protection.

Documentation: (TVDA)

Provide to the **Department of Transportation Office of Maintenance** three (3) copies of equipment manuals furnished by the manufacturer, which includes the following:

- Installation and operation procedures.
- Performance specifications (functions, electrical, mechanical and environmental) of the unit.
- Schematic diagrams.
- Pictorial of component layout on circuit board.
- List of replaceable parts including names of vendors for parts not identified by universal part numbers such as JEDEC/RETMA or EIA.
- Troubleshooting, diagnostic and maintenance procedures.

Site Survey:

Perform a site survey with the TVDA manufacturer representative at all TVDA locations prior to the installations of the TVDA equipment. The purpose of the survey is to optimize the performance from the TVDA equipment when it is installed and insure that it will meet the accuracy requirements specified previously. Submit the results of this survey to the Engineer in a report, which lists all TVDA locations with any recommended changes to camera locations, mounting adjustments, camera lens adjustments, and desired detection zone locations. This report shall be provided to the Engineer no later than the semi-final inspection.

Warranties and Guarantees: (TVDA)

Provide warranties and guarantees to the **Department of Transportation Office of Maintenance** in accordance with Article 1.06.08 of the Standard Specifications. Warranties for all equipment furnished as part of this Contract are to cover a period of 24 months following successful completion of the entire intersection acceptance test.

Construction Methods:

Install TVDA equipment in accordance with the manufacturer instructions and recommendations to achieve the detection zones as shown in the plans and accuracy as described in these specifications. Conduct the Site Survey as specified above. The location of

the TVDA shown on the plan may be revised as a result of the Site Survey. Provide the Site Survey report to the Engineer and review proposed TVDA relocations prior to installation of TVDA equipment.

Method of Measurement:

The Thermal Video Detector Assembly will be measured for payment as the number of detectors furnished, installed operational and accepted.

Basis of Payment:

The unit bid price for Thermal Video Detector Assembly includes the detector, enclosure, surge protector, brackets used to attach the TVDA to a support structure or extension bracket, documentation, warrantee, labor, tools and equipment necessary to provide the specified video signal to the VDP.

<i>Pay Item</i>	<i>Pay Unit</i>
Thermal Video Detector Assembly	Ea.

ITEM #1112286A – 360 DEGREE CAMERA ASSEMBLY**ITEM #1112287A – 360 DEGREE VIDEO DETECTION PROCESSOR****ITEM #1113725A – 23 AWG 4 TWISTED PAIR CATEGORY 6 CABLE****Description:**

Furnish and install a 360 Degree Video Image Detection System (360VIDS) as shown on the plans or as directed by the Engineer. The 360VIDS consists of a 360 Degree Camera Assembly (360CA), 360 Degree Video Detection Processor (360VDP) and 23 AWG 4 Twisted Pair Category 6 Cable.

Materials:

All hardware shall be new, corrosion resistant. All equipment shall be current production.

360 Degree Camera Assembly:**Camera:**

- No-aim, no-focus camera
- Downward facing lens and camera shroud
- Single Power Over Ethernet (POE) connection for power and data collection.
- Color image camera with 360 degree point of view (POV)
- Active picture elements (pixels): 2560 (H) x 1920 (V), minimum.
- Signal to noise ratio : ≥ 55 dB
- Heated camera
- IP addressable

Camera Enclosure:

- Tamper proof constructed of painted or powder coated aluminum of at least 0.25 inch thickness.
- IP66-rated camera housing.

Camera Mounting Hardware:

- Smartmount bracket.
- Junction box.
- Banded bracket.
- 90 degree vertical riser:
 - For mast arms, use vertical riser height specified on the plans
 - For span poles with horizontal extension brackets, use shortest vertical riser height physically possible
 - For span poles with no horizontal extension brackets (Shaft mounted), use vertical riser height specified on the plans

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360 Degree Video Detection Processor: Functional:

- Connectivity: Local Area Network (LAN), Wide Area Network (WAN), Camera interfaces.
- NEMA TS1/ TS2, ATC, Type 170, and 2070 compatible
- Four (4) USB 3.0 expansion ports.
- Front panel LED indicators displays calls and light states.
- Twenty-four (24) optically isolated I/O interface.
- Two (2) camera ports – Up to two (2) 360 Degree Camera Assembly; or one (1) 360 Degree Camera Assembly and four (4) IP video detection camera assembly or thermal detector assembly; or eight (8) IP video detection camera assembly or thermal detector assembly.
- Phase and detection display.
- Shall include at least a built-in 4g modem (or higher) and be Wi-Fi capable
- Power – 110/220 VAC 50/60 Hz
- Point and click zone drawing feature
- Omni-directional vehicle tracking
- Zone level visibility monitoring
- Monitor phases and loops, generates calls to controllers
- Software required to support collection of data
- Environmental : -29F to +165F (-34C to +74C), 0-95% non-condensing
- Fail-safe in the event of loss of video from 360CA or loss of power to 360VDP.
- Shall be able to configure and adjust the detection zone with the cabinet mounted Vehicle Detection Monitor (VDM) or remotely.
- Shall be activated to collect and report traffic data such as turning movements/volume counts, vehicle classification, speed, and red/green occupancy.
- Shall be configured to transmit collected traffic data and alarm events from field devices to remote desktop PC.
- Shall be configured to sync with a cloud network resource to allow for data backup including signal performance metrics data such as the Purdue coordination diagram.

Application Software:

- Shall be freely available for installation on any number of computers used to manage the 360VIDS.
- Shall be capable of point and click zone drawing
- Shall support the assignment of a detector output(s) to each zone. These assignments can be modified at any time through the software.
- Shall have the ability to digitally flatten CA image
- Shall have the ability to mask objects that occlude the camera field of view and/or disrupt the camera automatic gain and exposure control.
- Shall store detection zone data non-volatile memory so that after recovery from power interruption, all parameters are returned to latest settings.

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- Shall have the ability to import and export program database to notebook PC or remote desktop PC. The program database shall also be allowed to be transferred via an external storage device.
- Shall be capable of superimposing detection zone on real time video image from selected camera with time stamping capabilities.
- Shall be capable of monitoring real time video and adjusting zones in field or remotely while 360VDP is actuating the traffic controller.
- Shall provide visual confirmation of detection by highlighting detection zone symbols.
- Shall allow for remote display of site/camera status for all connected sites.
- Shall provide visual indication of the light state for each zone within the graphical user interface.
- Shall be capable of searching the network for other 360VDP.
- Shall be compatible with Windows operating system supported by the Department.
- Shall maintain a historical log of all configurations when site is modified
- Shall feature the ability to digitally pan, tilt, and zoom within the camera assembly's field of view without movement of the camera.
- Shall support quad view video monitoring.
- Shall be capable of syncing with a cloud network resource to allow for group site sharing of site program database information and historical traffic data report generation.
- Shall maintain a database of current and historical traffic data
- Shall allow users to create reports for turning movements/volume counts, vehicle classification, speed, red/green occupancy, and site alerts remotely via the software and online reports/performance measures via the web.
- Shall display data in a graph, chart, and table format.
- Shall display data in 15, 30, and 60-minute intervals.
- Shall provide a means by which alerts can be configured to be delivered to different individuals via email
- Report output formats shall include at minimum PDF, rich text format, and Microsoft Excel formats.

Physical:

- Either shelf mounted, stand-alone design or modular card rack design.
- Aluminum card rack frame capable of accepting four (4) 360VDP modules.
- TS1 harness cable.
- Standard Ethernet and USB connectors for video input and video output.
- Female metal shell connector with latching clamp for NEMA TS 1 detector outputs and inputs.
- LED indications to monitor all detector outputs.
- Side or rear mounted connectors and controls are not allowed on stand-alone units.
- NEMA FR-4 glass epoxy or equivalent circuit boards.

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Antenna:

- Shall be mounted externally on top of traffic cabinet
- Shall be “Multiple-Input and Multiple-Output” (MIMO)
- Shall cover the Cellular, WIFI, DSRC, GPS, and Bluetooth networks
- Shall connect to the 360VDP

Ethernet Repeater:

- Utilize Ethernet repeater if CAT6 cable distance is over 300’.

Ethernet Switch:

- Power Over Ethernet (POE) switch
- Ports for up-to four (4) traditional or thermal cameras.
- Powder coated aluminum.
- Dual purpose LED port lights.
- RJ-45 CAT6 connectivity.
- Environmental: -29F to +165F (-34C to +74C).
- NEMA TS2 compliant.

Video Encoder:

- Power Over Ethernet (POE)
- Video: H.264 (MPEG-4 Part 10/AVC) Baseline and Main Profile
- Compression: Motion JPEG
- Resolutions: 176x120 to 720x576, 176x120 to 1536x1152 for quad view.
- Frame rate:
 - H.264: 25/30 (50/60 Hz) fps,
 - 15fps in quad view in full resolution,
 - Motion JPEG: 25/30 (50/60 Hz) fps,
 - 15fps in quad view in full resolution.
- Video Streaming: Multi-stream H.264 and Motion JPEG: One H.264 and one JPEG stream on each channel (8 streams in total) in full frame rate individually configured streams in max. resolution at 25/30 fps; more streams if identical or limited in frame rate/ resolution. Controllable frame rate and bandwidth; VBR/CBR H.264.
- Environmental: -40F to +167F (-40C to +75C), 10-95% non-condensing.
- NEMA TS2 compliant.

Ethernet Protection Module:

- Either shelf mounted or stand-alone design.
- Protect 360CA, IP video detection camera assembly, thermal cameras and 360VDP in the event of a surge or lightning.

Environmental:

- Comply with NEMA TS 2, Section 2 requirements for Controller Assembly.
- Pass following NEMA TS 2 tests and applicable test procedures.

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- Vibration: Section 3.13.3, Section 3.13.8.
- Shock: Section 3.13.4, Section 3.13.9.
- Transients, Temperature, Voltage and Humidity: Section 3.13.7.
- Power Interruption: Section 3.13.10.

Peripherals:

- Separable Keypad & Joystick or Computer Mouse including all necessary cables for connectivity to 360VDP.

23 AWG 4 Twisted Pair Category 6 Cable:

- Supply the 360CA power and return the video signal to the 360VDP.
- Outdoor Aerial CAT6 cable with UV insulation.
- Rated for 48VDC
- 250MHZ, shielded, gel-filled (flooded core) direct burial grade.
- Shall be equipped with a drain wire.
- Terminate with compatible connector.
- Polyethylene insulation.
- Shall be installed continuous between the 360CA and 360VDP.
- Cable shall be installed according to TIA/EIA-568-B.
- Other type cable may be substituted at the request of the 360VDP manufacturer with the Department's approval.

Documentation: (360VDP and 360CA)

Provide to the **Department of Transportation Office of Maintenance** three (3) copies of equipment manuals furnished by the manufacturer, which includes the following:

- Installation and operation procedures.
- Performance specifications (functions, electrical, mechanical and environmental) of the unit.
- Schematic diagrams (point to point wiring).
- Pictorial of component layout on circuit board.
- List of replaceable parts including names of vendors for parts not identified by universal part numbers such as JEDEC/RETMA or EIA.
- Troubleshooting, diagnostic and maintenance procedures.
- Testing results of grounding, voltage, and cable length measurements as indicated on the installation best practice verification at the end of this document.

Site Survey:

Perform a site survey with the 360VDP manufacturer representative at all 360VIDS locations prior to installation. The purpose of the survey is to optimize the performance from the 360VIDS equipment when it is installed. Prior to installation, submit the results of this survey to the Engineer in a report, which lists all 360VIDS locations with any recommended changes

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to camera locations, mounting adjustments, camera lens adjustments, and desired detection zone locations.

Warranties and Guarantees: (360VDP and 360CA)

Provide warranties and guarantees to the **Department of Transportation Office of Maintenance** in accordance with Article 1.06.08 of the Standard Specifications. Warranties for all equipment furnished as part of this Contract are to cover a period of 36 months following successful completion of the entire intersection acceptance test.

Construction Methods:

Install 360VIDS equipment in accordance with the manufacturer instructions. Detection zones shall be replicated as shown in the plans. The Contractor shall install vehicle-counting zones for each lanes as shown in the plans. The Contractor shall ensure the vehicle counting zones be as accurate as possible. The Contractor shall contact the Engineer to confirm detection zone and vehicle counting zone locations. The Contractor shall refer to the “Installation Best Practices Guide” attached below to this specification and the Intersection Design Guide located on the Manufacturer’s website. Note that all references to “Cat5e cable” in the attached “Installation Best Practices Guide” shall refer to “23 AWG 4 Twisted Pair Category 6 Cable” as specified above in this specification. In addition, any references to the SMARTMOUNT 7’ extension on the “System overview and Installation Guidance” shall follow the Camera Mounting Hardware section of this specification. The location of the 360CA shown on the plan may be revised as a result of the Site Survey. Peripherals are to be furnished and fully installed in an easily accessible position within the controller cabinet. Leave proper clearance(s) surrounding video monitor to allow for accessible connections and space to utilize surrounding equipment.

The Contractor shall forward the configuration file in electronic format to the Traffic Signal Lab’s Mr. Don Assard at Donald.Assard@ct.gov or Mr. Mark Zampini at Mark.Zampini@ct.gov, immediately upon completion of configuration of the detection zones. The Contractor shall address any comments/corrections identified by the Traffic Signal Lab.

Method of Measurement:

The 360 degree Camera Assembly will be measured for payment as the number of 360 degree cameras furnished, installed operational and accepted.

The 360 degree Video Detection Processor will be measured for payment as the number of units including all additional work and materials listed in Basis of Payment, furnished, installed, operational and accepted.

23 AWG 4 Twisted Pair Category 6 Cable will be measured for payment as linear feet, furnished, installed and accepted.

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Basis of Payment:

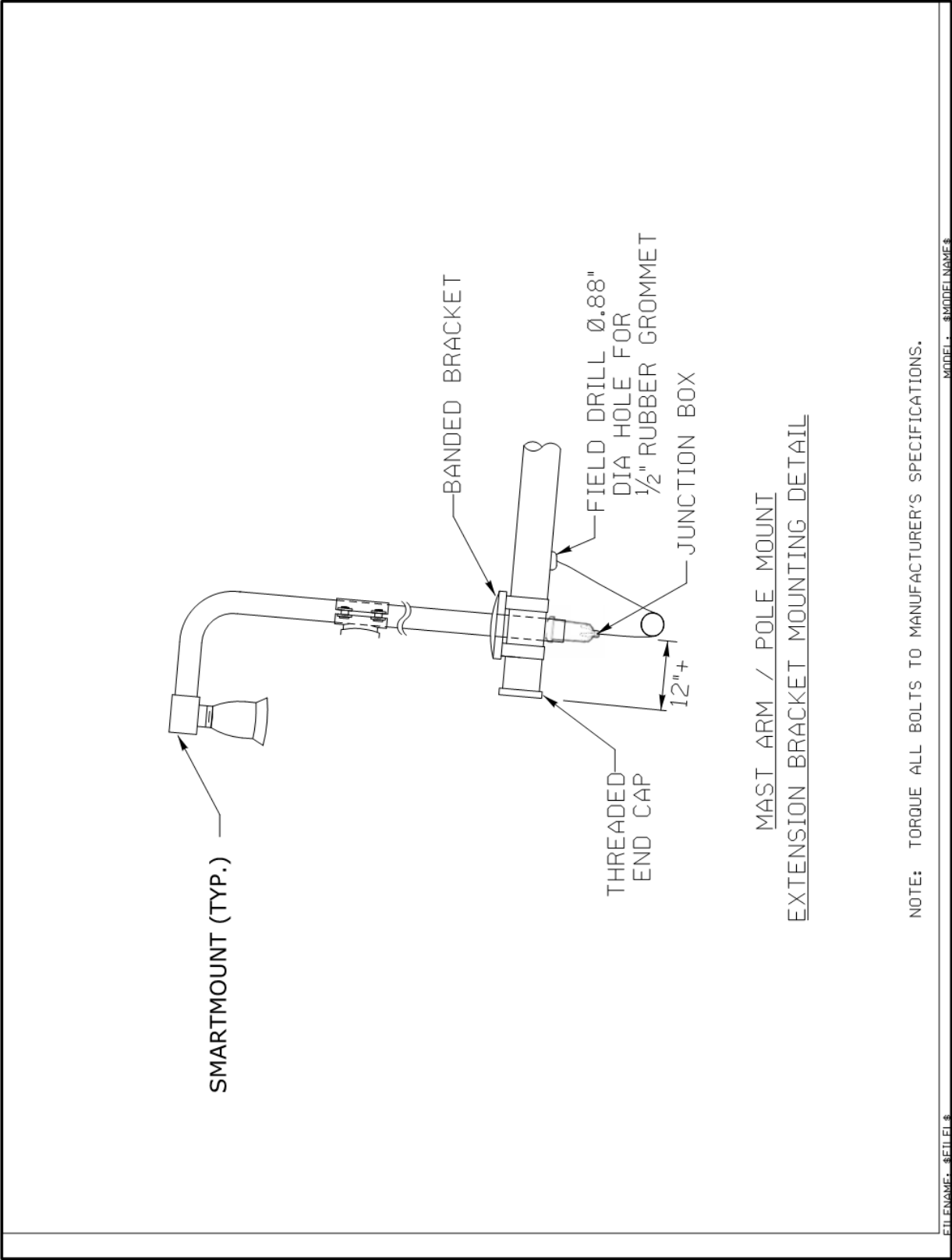
The unit bid price for 360 degree Camera Assembly includes the 360 degree camera, enclosure, vertical riser and hardware used to attach the 360CA to a support structure, documentation, warrantee, labor, tools and equipment necessary to provide the specified video signal to the 360VDP.

The unit bid price for 360 degree Video Detection Processor includes the manufacturers' site survey, unlimited number of any necessary 360VIDS configuration software and license, card rack frame, power supply, all miscellaneous hardware such as PC interface cable with connectors, necessary peripherals such as Ethernet repeater, Ethernet switch, video encoder, Ethernet protection module, documentation, warrantee, labor, tools and equipment necessary to make the 360VIDS fully operational.

The unit bid price for 23 AWG 4 Twisted Pair Category 6 Cable includes all connectors, labor, tools and equipment necessary to install the cable between the 360CA and the 360VDP.

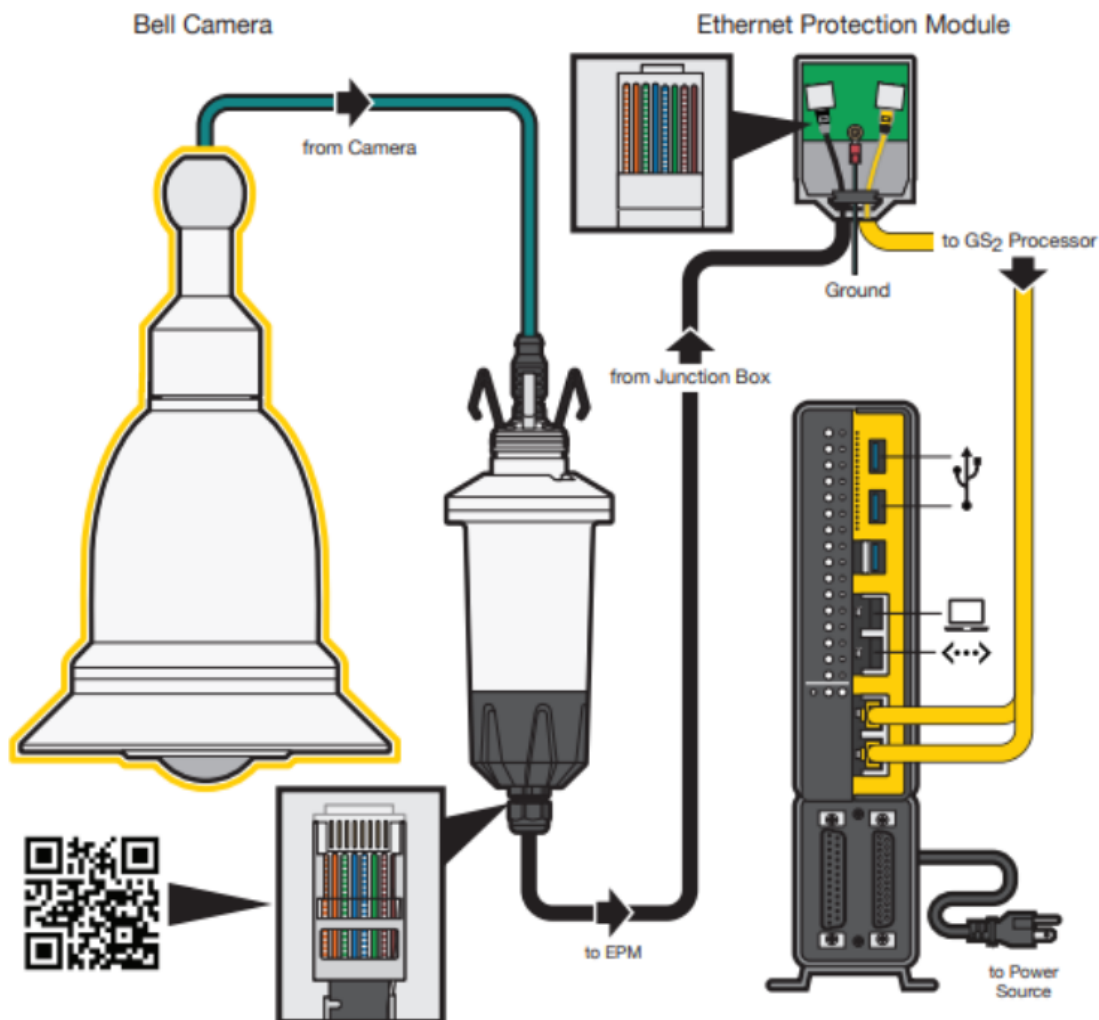
<u>Pay Item</u>	<u>Pay Unit</u>
360 Degree Camera Assembly	Ea.
360 Degree Video Detection Processor	Ea.
23 AWG 4 Twisted Pair Category 6 Cable	LF

Item #1112286A, #1112287A
#1113725A



Item #1112286A, #1112287A
#1113725A

SYSTEM CONNECTIONS

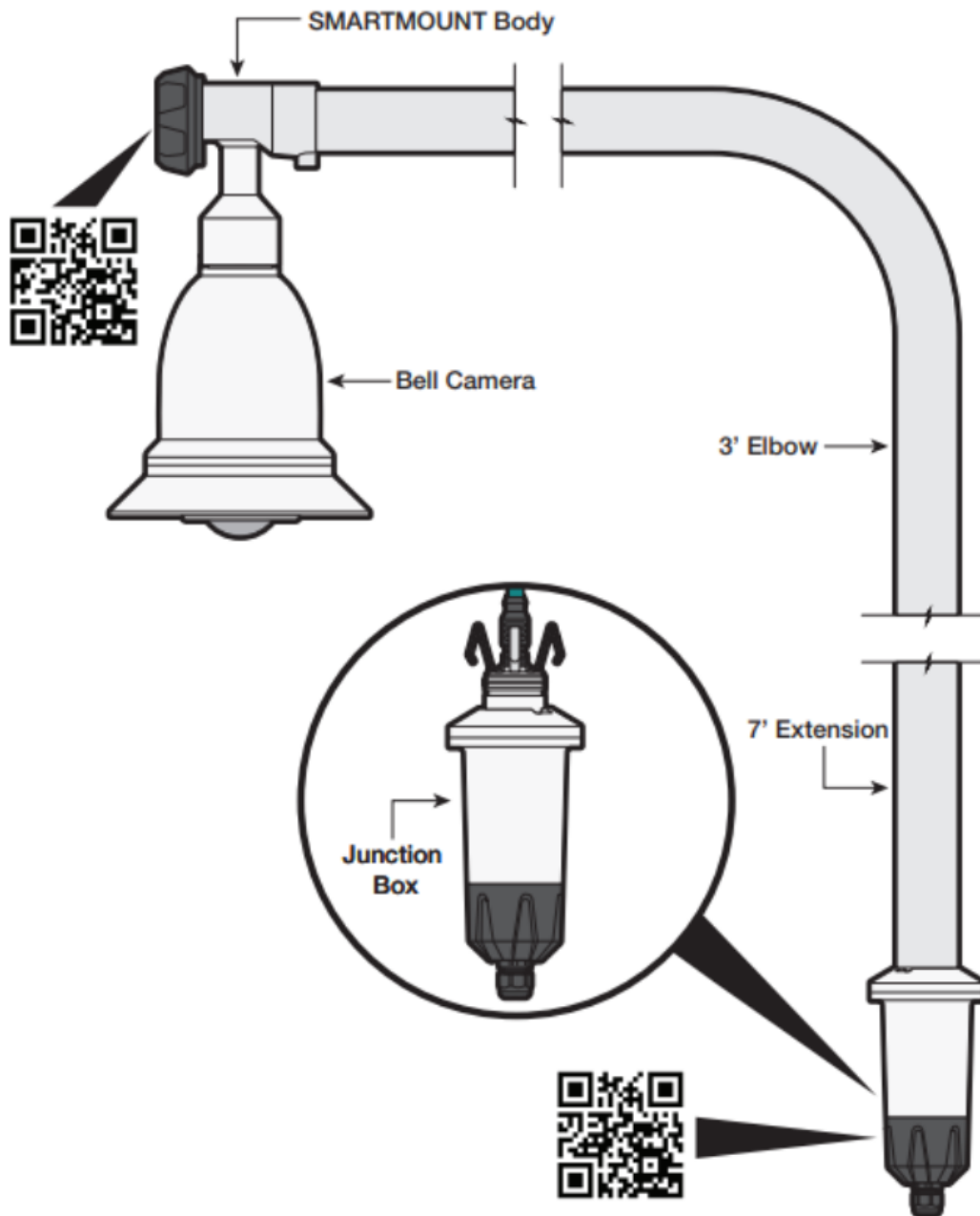


Pro Tips (Before Beginning Installation):

- Test Bell Camera (while still in foam packaging).
- Make sure unit is grounded correctly.
- Make sure Bell Camera is level and in front of stop bar.
- Check TS1 Wiring Harness Insert – TS1 connection.
- Check "Tool List" in installation guide.

Item #1112286A, #1112287A
#1113725A

SYSTEM OVERVIEW



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marketing@gridsmart.com | 1.866.652.5347 | GRIDSMART.com

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#1113725A

GRIDSMART®

INSTALLATION GUIDE

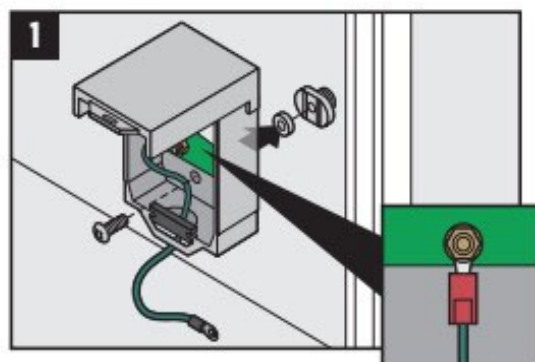
TOOLS AND ITEMS NEEDED

- 7/16" Wrench
- 1/2" Wrench
- 3/4" Wrench
- 1/4" Wrench
- 3/32" Wrench
- 17 mm Wrench
- Utility knife
- Phillips screwdriver
- Flat-head screwdriver
- 1/2" Drill bit
- 5/32" Allen wrench (included)
- Mounting bracket
- CAT5e test cable
- 24AWG Shielded CAT5e cable
- RJ-45 Crimper
- Laptop (with GRIDSMART Client installed)
- EXO Crimp frame
- Ground wire clamp (included)
- USB flash drive
- Cable tester
- Hand level
- DLG Di-120b Tester

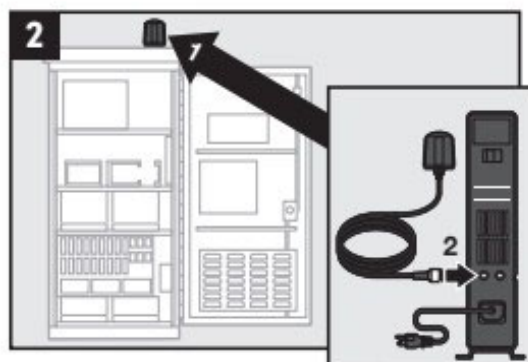


BEFORE INSTALLATION

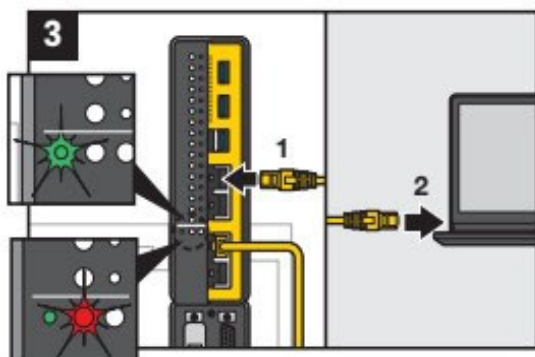
Helpful tip: On your laptop, verify that the GRIDSMART Client is updated to the latest software version. Download the latest update from GRIDSMARTCloud.com.



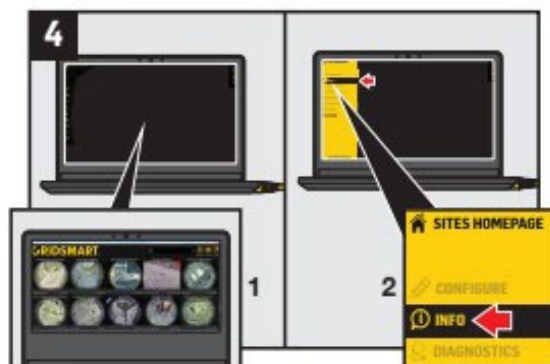
Install EPM onto cabinet DIN rail on opposite side from power distribution. Cut along rubber grommet "X". Connect 10AWG ground wire as close to ground rod as possible using ground wire clamp.



Mount Antenna to top of cabinet using 1/2" drill bit. Connect CELL Antenna lead to female connector on back of Processor.



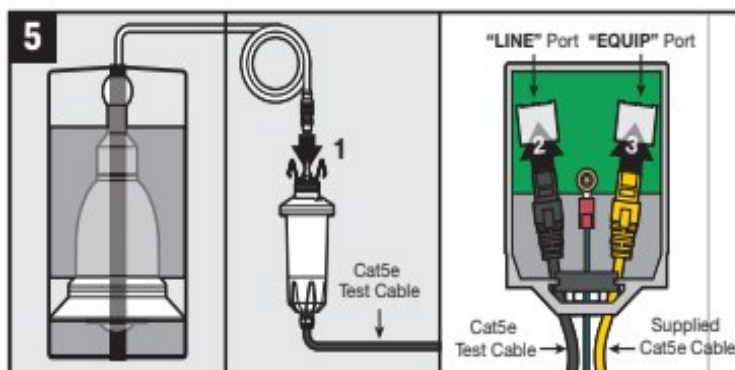
Connect Processor to power source and power on (status light turns green in 2-3 minutes). **DO NOT USE A GFCI TYPE OUTLET.** Connect laptop to "LAPTOP" port on Processor with a CAT5e cable.



Launch GRIDSMART Client on laptop. Select factory default site card. Select "Info", verify "Site Info" version.

NOTE: The Bell Camera has not yet been connected, so there will be no Camera image.

BEFORE INSTALLATION (continued)

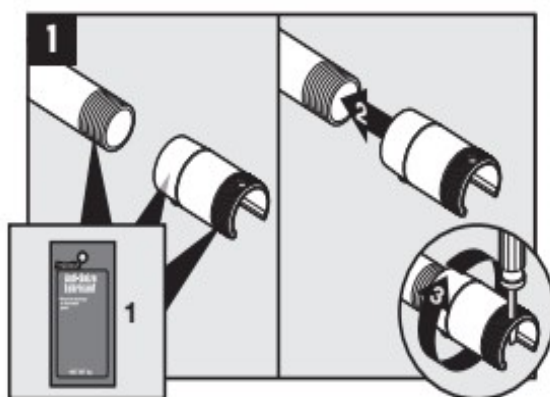


With Bell Camera in foam packaging, connect Camera cable to Junction Box upper connection. Connect one end of CAT5e test cable to Junction Box lower connection and remaining end to the EPM Module **"LINE"** port. Connect one end of supplied CAT5e cable to EPM Module **"EQUIP"** port and remaining end to Processor. Verify Bell Camera image. Camera status light turns green in 2-3 minutes.

After successful equipment test, disconnect cables to Junction Box, EPM, Processor and laptop. Leave cable connected to Bell Camera.

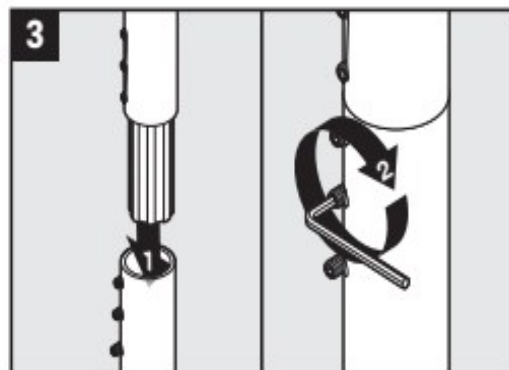
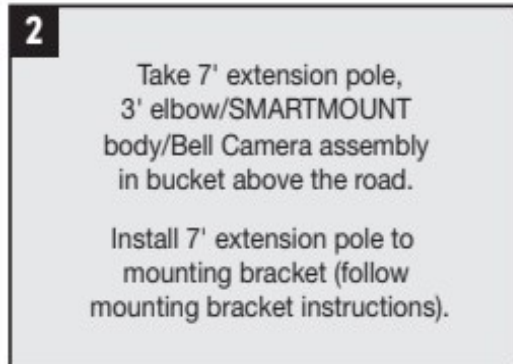
INSTALLATION

Helpful tip: Before proceeding, route 24 AWG gel-filled, shielded, burial grade CAT5e cable from traffic cabinet to the Bell Camera mounting location.



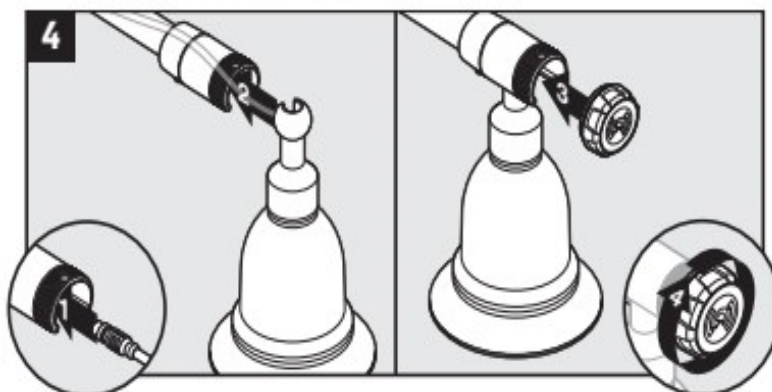
Apply anti-seize to 3' elbow and internal and external threads of SMARTMOUNT body. Install SMARTMOUNT body to upper end of 3' elbow turning clockwise to secure.

NOTE: SMARTMOUNT body opening must be facing down in final position. Tighten center set screw.



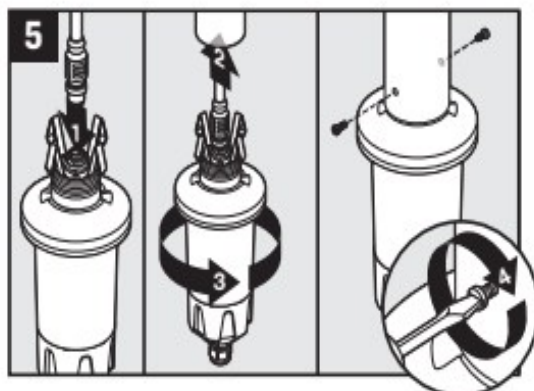
Insert 3' elbow connector into 7' extension using pole connector. Tighten screws with Allen wrench to secure.

Item #1112286A, #1112287A
#1113725A

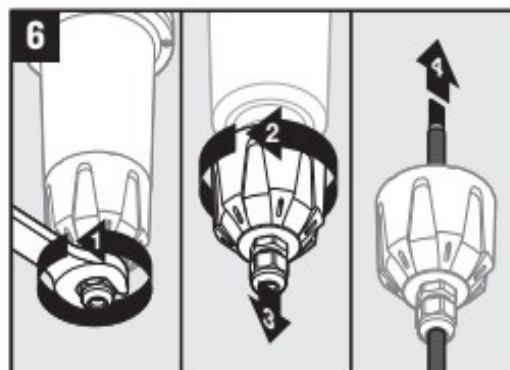
INSTALLATION (continued)

Feed Bell Camera cable through SMARTMOUNT body, 3' elbow and 7' pole extension. Slide Bell Camera ball joint into SMARTMOUNT body, being sure the ball joint opening is well aligned with body/pole opening so as not to damage cable.

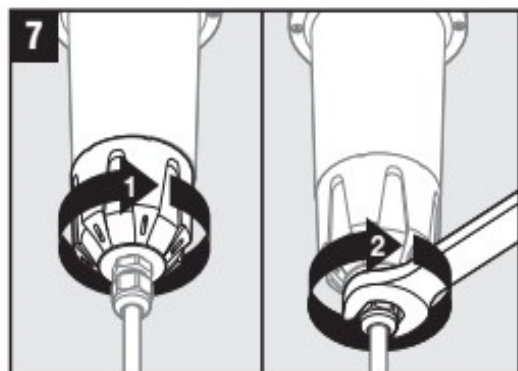
Secure Bell Camera to SMARTMOUNT body with cap. Turn cap clockwise to tighten.



Connect Bell Camera cable from 7' extension to junction box upper connection. Insert Junction Box (turning counter clockwise up to three times to prevent kinking or binding of cable) into 7' extension pole. Install Junction Box set screws to 7' extension pole to secure Junction Box. Tighten with flathead or hexhead screwdriver.



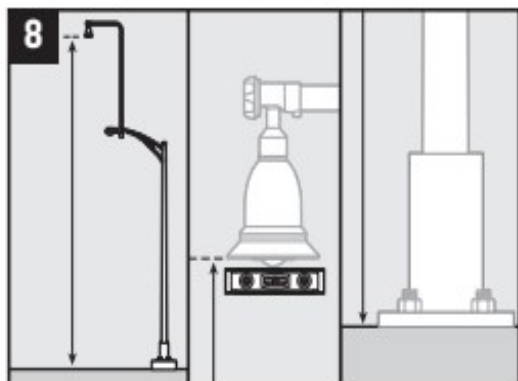
Using a 3/4" wrench, loosen cord grip from cap on bottom of Junction Box. Loosen cap and remove from Junction Box. Push unterminated field cable through cord grip and cap. **Do not tighten cord grip until step 7.** Terminate cable with RJ45, using standard 568B configuration color wiring.



Connect the RJ45 to receptacle and replace cap onto Junction Box (hand-tighten) until fully closed. Tighten cord grip using a 3/4" wrench, to 30 in-lbs max torque.

Item #1112286A, #1112287A
#1113725A

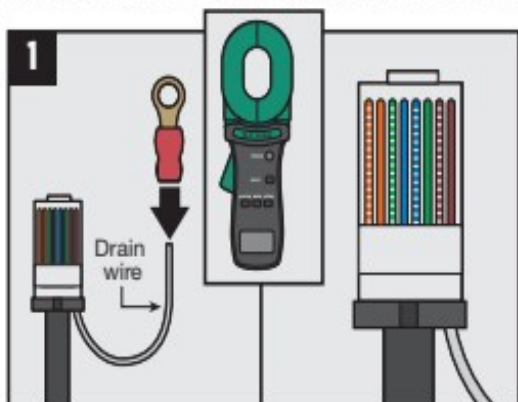
INSTALLATION (continued)



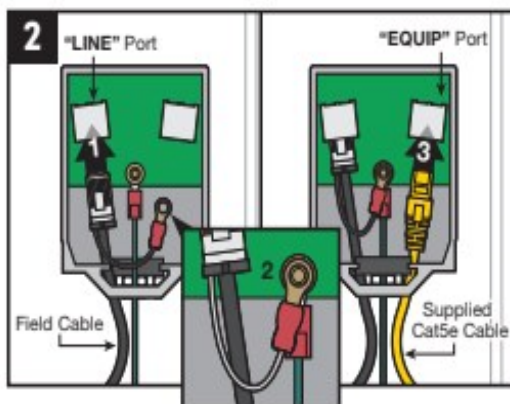
VERY IMPORTANT

Using a tape measure, measure height of Bell Camera. Record the height for use later to set up system. Orient the "G" logo away from area of consequence, level the Bell Camera and tighten the center set screw.

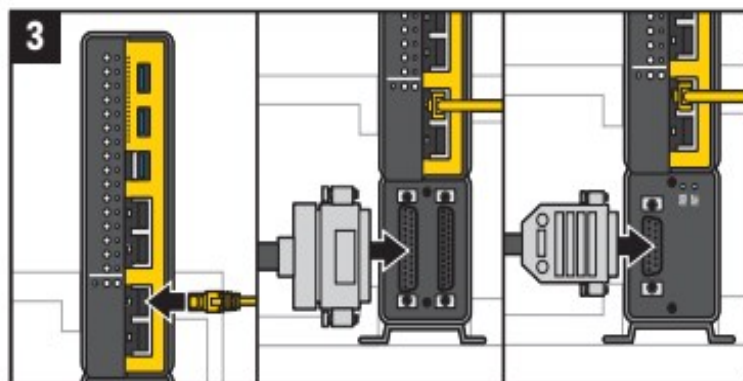
GROUNDING AND FINAL INSTALLATION



Crimp an RJ45 onto remaining end of field cable and verify with cable tester. Crimp the ring terminal to the CAT5e cable drain wire. Verify good crimp on drain wire ring terminal.



Connect field cable to EPM "LINE" port. Connect drain wire ring terminal to the EPM ground to eliminate signal noise and EMI. Connect supplied CAT5e cable EPM "EQUIP" port.



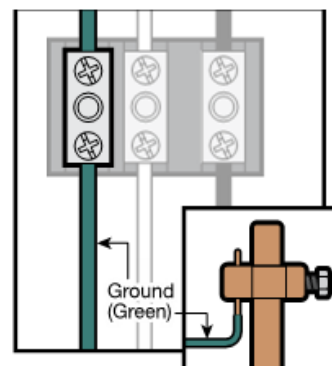
Connect supplied CAT5e to Processor "CAMERA" port. Reconnect the laptop to the "LAPTOP" port. Connect TS1, TS2 or ITS wiring harness to Processor.

1 CABINET GROUNDING

A proper cabinet ground helps mitigate interference from electrical noise at the intersection.

- The U.S. National Electrical Code (NEC) recommends a maximum of 25 ohms for touch safety and telecommunications; PLC industry standards require a maximum of 5.0 ohms for logic reference purposes.
- Use a clamp-on ground meter to verify the cabinet ground.
- GRIDSMART requires the Diligent Instruments DLG Di-120b Tester (<http://www.diligentinstruments.com/di-120.html>).
- If the ground reading is higher than the recommended NEC value, check the connection between the cabinet ground wire and the ground rod for corrosion; clean if corrosion is present. If you are in an area with poor grounds, you may need to add a ground rod to the grounding system to improve the ground.

SPECIFICATION:	25 Ohms Max
MEASURED:	



DLG Di-120b Tester

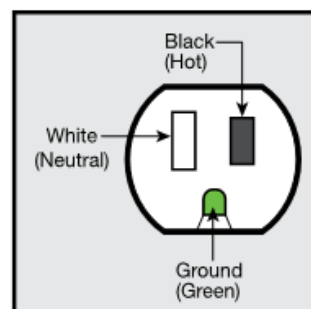


2 AC POWER

Plug the GRIDSMART Processor into an outlet on the filtered side of the cabinet power. Do not use GFCI type outlet.

- The outlet needs to be checked to verify that all three connections for the outlet are properly connected.
- Using a digital voltmeter (DVM), check the ac voltage from the line to the neutral and the line to ground. Both readings should be ~ 120/240VAC.

SPECIFICATION:	HOT/NEU: 120/240VAC HOT/GND: 120/240VAC
MEASURED:	HOT/NEU: HOT/GND:



3 CABLE TYPE & LENGTH

All GRIDSMART installations require burial grade, shielded, gel filled, CAT5e cable with solid core 24 AWG conductors. The shield will protect the data signals from radiated noise which is present in most intersections. LED streetlights have been found to be very noisy electrically and as more streetlights are switched to LED lights, the level of radiated noise will increase. The cable that GRIDSMART supplies and requires for all installations is Vertical Cable part #059-487/S/CMXF.

- The maximum length that a segment of CAT5e can be is 300 feet. If the distance from the EPM to the camera is more than 300 feet, a repeater (RBA) must be used.
- When determining length of the cable, a cable tester that measures the length of the cable is required. Do not rely on sight distance or "walking off" the distance.
- Many times, there are service loops in the pull boxes and at the base of the pole, which will not be accounted for when you do not use a meter for measuring the cable length. GRIDSMART recommends the Triplet Real World Certifier (www.triplett.com/shop/real-world-certifier-rwc1000k/) for testing the cable. The tester will provide length measurements as well as cable quality measurements.

SPECIFICATION:	Cable Length: 300 Ft Max Real World Certification: 100 MB Min Cable Type: Vertical Cable part #059-487/S/CMXF
MEASURED:	Cable Length: Real World Certification: Cable Type:

4 CONNECT DRAIN WIRE

The drain wire for the shielded CAT5e cable must be connected to the ground post in the EPM (Ethernet Protection Module). A crimp lug should be attached to the end of drain wire to attach it to the ground post. The drain should only be connected at the EPM end of the cable.

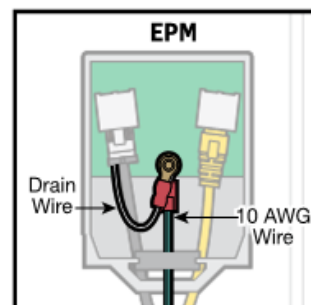
- If you are using an RBA, the drain must be spliced so the drain is continuous from the junction box to the EPM. A 10 AWG Wire is required to connect the EPM ground post to the traffic cabinet ground rod.
- Using a digital voltmeter, you should measure 0 Ohms between the EPM Ground Post and the traffic cabinet ground rod.

SPECIFICATION:	0 Ohms
MEASURED:	

Intersection:	
Camera Serial Number:	
GS₂ Processor Serial Number:	



Triplet Real World Certifier



ITEM #1113901A - CAMERA CABLE

Description: Furnish and install Camera Cable continuous between the Thermal Video Detector Assembly (TVDA) and Video Detection Processor (VDP).

Materials:**Camera Cable:**

- Supply the TVDA power and return the video signal to the VDP.
- Composite construction or as recommended by camera manufacturer.
 - Coaxial:
- 20 AWG, solid conductor.
- Polyethylene foam dielectric.
- Minimum 95% bare copper braid shield.
 - Power/ Control:
 - 5 conductors 18 AWG, 7 strand conductor, shielded.
 - Polyethylene or polyvinyl chloride jacket.
 - Other type cable may be substituted at the request of the VDP manufacturer.
 - Connectors:
 - Use compression type connectors with compression tool to make connections.

Method of Measurement:

Camera Cable will be measured for payment by the number of linear feet of cable furnished, installed and accepted.

Basis of Payment:

The Contract price per linear foot of "Camera Cable" shall include all connectors, labor, tools and equipment necessary to install the cable between the TVDA and the VDP.

Pay Item	Pay Unit
Camera Cable	l.f.

ITEM #1114201A - AUXILIARY EQUIPMENT CABINET**Description:**

Furnish and install an Auxiliary Equipment Cabinet (AEC), on a traffic control cabinet at the location shown on the plans and in accordance with the conditions set forth.

Materials:

- Conform to NEMA 3R enclosure specifications
- Type 5052-H32, 3.175mm (0.125") sheet aluminum
- Finish painted in accordance with the current D.O.T. specifications of Traffic Control Cabinets
- Seams continuously welded and ground smooth
- Dimensions as shown on D.O.T. Standard Sheets
- Door secured with Corbin lock - Ct. # 2.
- Continuous door hinge, 2.4mm (0.093") thick aluminum with 0.64mm (0.025") stainless steel hinge pin
- Door sealed with oil resistant gasket
- Back panel approximately 330mmH X 229mmW (13"H X 9"W)
- Rust and corrosion resistant mounting hardware
- Screened Vent

Construction Methods:

Mount the AEC on the left side of the controller cabinet, when facing the door. Confirm that the inside of the cabinet wall is clear, so that the installation of the AEC will not damage any equipment inside the controller cabinet. Drill a 25mm (1") hole in the back of the AEC and through the side of the controller cabinet. Install a close nipple through the 25mm (1") hole. Apply clear silicon caulk to both ends of the close nipple. Tighten lock-nuts and fiber bushings. Apply additional caulk if necessary to prevent moisture from entering controller cabinet and auxiliary equipment cabinet.

Method of Measurement:

This item shall be measured for payment by the actual number of Auxiliary Equipment Cabinets installed and accepted on traffic control cabinets.

Basis of Payment:

This item shall be paid for at the contract unit price each for "Auxiliary Equipment Cabinet" which price shall include mounting hardware, close nipple, insulated bushings, tools, and incidentals.

Pay Item

Auxiliary Equipment Cabinet

Pay Unit

Ea.

ITEM#1118012A - REMOVAL AND/OR RELOCATION OF TRAFFIC SIGNAL EQUIPMENT

Section 11.18: Replace the entire section with the following:

11.18.01 – Description:

Remove all abandoned traffic signal equipment. Restore the affected area. Where indicated on the plans remove and reinstall existing traffic signal equipment to the location(s) shown.

Lead paint is presumed present on the painted surface of all cabinets and structures located within project limits. Any activities performed by the contractor that results in a painted surface being impacted or altered, shall be performed in accordance OSHA Lead in Construction Standard 29CFR 1926.62, or the painted surface shall be tested prior to any paint being disturbed by a qualified third party hired by the contractor to confirm that no lead is present.

11.18.02 – Materials:

The related sections of the following specifications apply to all incidental and additional material required for the proper relocation of existing equipment and the restoration of any area affected by this work.

- Division III, “Materials Section” of the Standard Specifications.
- Current Supplemental Specifications to the Standard Specifications.
- Applicable Special Provisions to the Standard Specifications.
- Current Department of Transportation, Functional Specifications for Traffic Control Equipment.

Article 11.18.03 - Construction Methods:

Schedule/coordinate the removal and/or relocation of existing traffic signal equipment with the installation of new equipment to maintain uninterrupted traffic signal control. This includes but is not limited to vehicle signals and detectors, pedestrian signals and pushbuttons, coordination, and pre-emption.

Abandoned Equipment

The contract traffic signal plan usually does not show existing equipment that will be abandoned. Consult the existing traffic signal plan for the location of abandoned material especially messenger strand, conduit risers, and handholes that are a distance from the intersection. A copy of the existing plan is usually in the existing controller cabinet. If not, a plan is available from the Division of Traffic Engineering upon request.

Unless shown on the plans it is not necessary to remove abandoned conduit in-trench and conduit under-roadway

When a traffic signal support strand, rigid metal conduit, down guy, or other traffic signal equipment is attached to a utility pole, secure from the pole custodian permission to work on the pole. All applicable Public Utility Regulatory Authority (PURA) regulations and utility company requirements govern. Keep utility company apprised of the schedule and the nature of the work. Remove all abandoned hardware, conduit risers, and down guys, Remove anchor rods, to 6" (150mm) below grade.

When underground material is removed, backfill the excavation with clean fill material. Compact the fill to eliminate settling. Remove entirely the following material: pedestal foundation; controller foundation; handhole; pressure sensitive vehicle detector complete with concrete base. Unless otherwise shown on the plan, remove steel pole and mast arm foundation to a depth of 2 feet (600mm) below grade. Restore the excavated area to a grade and condition compatible with the surrounding area.

- If in an unpaved area apply topsoil and establish turf in accordance with Section 9.44 and Section 9.50 of the Standard Specifications.
- If in pavement or sidewalk, restore the excavated area in compliance with the applicable Sections of Division II, "Construction Details" of the Standard Specifications.

Relocated Equipment

In the presence of the Engineer, verify the condition of all material that will be relocated and reused at the site. Carefully remove all material, fittings, and attachments in a manner to safeguard parts from damage or loss. Replace at no additional cost, all material which becomes damaged or lost during removal, storage, or reinstallation.

Salvage Equipment

Salvage Material	Stock No.	Value
Video Detection Processor	330-03-7010	\$ 500.00
Aluminum Pedestal		
8 foot (2.4 m)	330-16-7108	\$ 100.00
4 foot, 4 inch (1.3 m)	330-16-7112	\$ 100.00

All material not listed as salvage becomes the property of the Contractor, which assumes all liabilities associated with material's final disposition.

In the presence of the Engineer, verify the condition and quantity of salvage material prior to removal. After removal transport and store the material protected from moisture, dirt, and other damage. Coil and secure copper cable separate from other cable such as galvanized support strand.

Within 4 working days of removal, return the State owned pedestals and video detection processor to the Department of Transportation Stores warehouse listed below. Supply all necessary manpower and equipment to load, transport, and unload the material. The condition and quantity of the material after unloading will be verified by the Engineer.

DOT Salvage Store #506
1640 Saybrook Rd.
Haddam, CT

Contact Materials Management Salvage Coordinator, at (860) 345-2258, at least 24 hours prior to delivery.

All other State owned Salvage material to be returned to the Department of Transportation Stores Warehouse listed below.

DOT Salvage Store #134
660 Brook Street
Rocky Hill, CT

Contact Materials Management Salvage Coordinator, at (860) 258-1980, at least 24 hours prior to delivery.

Municipal Owned Traffic Signal Equipment

Return all municipal owned material such as pre-emption equipment to the Town.

Article 11.18.04 – Method of Measurement:

This work will be measured as a Lump Sum.

Article 11.18.05 – Basis of Payment:

This work will be paid for at the contract lump sum price for “Removal and/or Relocation of Traffic Signal Equipment” which price shall include relocating signal equipment and associated hardware, all equipment, material, tools and labor incidental thereto. This price shall also include removing, loading, transporting, and unloading of signal equipment/materials designated for salvage and all equipment, material, tools and labor incidental thereto. This price shall also include removing and disposing of traffic signal equipment not to be salvaged and all equipment, material, tools and labor incidental thereto.

Payment is at the contract lump sum price for “Removal and/or Relocation of Traffic Signal Equipment” inclusive of all labor, vehicle usage, storage, and incidental material necessary for the complete removal of abandoned equipment/material and/or relocation of existing traffic signal equipment/material. Payment will also include the necessary labor, equipment, and material for the complete restoration of all affected areas.

A credit will be calculated and deducted from monies due the Contractor equal to the listed value of salvage material not returned or that has been damaged and deemed unsalvageable due to the Contractor’s operations.

Pay Item	Pay Unit
Removal and/or Relocation of Traffic Signal Equipment	L.S. (L.S.)

ITEM #1206023A – REMOVAL AND RELOCATION EXISTING SIGNS

Section 12.06 is supplemented as follows:

Article 12.06.01 – Description is supplemented with the following:

Work under this item shall consist of the removal and/or relocation of designated side-mounted extruded aluminum and sheet aluminum signs, sign posts, sign supports, and foundations where indicated on the plans or as directed by the Engineer. Work under this item shall also include furnishing and installing new sign posts and associated hardware for signs designated for relocation.

Article 12.06.03 – Construction Methods is supplemented with the following:

The Contractor shall take care during the removal and relocation of existing signs, sign posts, and sign supports that are to be relocated so that they are not damaged. Any material that is damaged shall be replaced by the Contractor at no cost to the Town.

Foundations and other materials designated for removal shall be removed and disposed of by the Contractor as directed by the Engineer and in accordance with existing standards for Removal of Existing Signing.

Sheet aluminum signs designated for relocation are to be re-installed on new sign posts.

Article 12.06.04 – Method of Measurement is supplemented with the following:

Payment under Removal and Relocation of Existing Signs shall be at the contract lump sum price which shall include all extruded aluminum and sheet aluminum signs, sign posts, and sign supports designated for relocation, all new sign posts and associated hardware for signs designated for relocation, all extruded aluminum signs, sheet aluminum signs, sign posts and sign supports designated for scrap, and foundations and other materials designated for removal and disposal, and all work and equipment required.

Article 12.06.05 – Basis of Payment is supplemented with the following:

This work will be paid for at the contract lump sum price for “Removal and Relocation of Existing Signs” which price shall include relocating designated extruded aluminum and sheet aluminum signs, sign posts, and sign supports, providing new posts and associated hardware for relocated signs, removing and disposing of foundations and other materials, and all equipment, material, tools and labor incidental thereto. This price shall also include removing, loading, transporting, and unloading of extruded aluminum signs, sheet aluminum signs, sign posts, and sign supports designated for scrap and all equipment, material, tools and labor incidental thereto.

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
ITEM # 1206023A	REMOVAL AND RELOCATION OF EXISTING SIGNS	LS

ITEM #1208931A – SIGN FACE – SHEET ALUMINUM (TYPE IX RETROREFLECTIVE SHEETING)

Section 12.08 is supplemented and amended as follows:

12.08.01—Description:

Add the following:

This item shall also include field testing of metal sign base posts as directed by the Engineer.

12.08.03—Construction Methods:

Delete the last sentence and add the following:

Metal sign base posts shall be whole and uncut. Sign base post embedment and reveal lengths shall be as shown on the plans. The Contractor shall drive the metal sign base posts by hand tools, by mechanical means or by auguring holes. If an obstruction is encountered while driving or placing the metal sign base post, the Contractor shall notify the Engineer who will determine whether the obstruction shall be removed, the sign base post or posts relocated, or the base post installation in ledge detail shall apply. Backfill shall be thoroughly tamped after the posts have been set level and plumb.

Field Testing of Metal Sign Posts: When the sign installations are complete, the Contractor shall notify the Engineer the Project is ready for field testing. Based on the number of posts in the Project, the Engineer will select random sign base posts which shall be removed by the Contractor for inspection and measurement by the Engineer. After such inspection is completed at each base post location, the Contractor shall restore or replace such portions of the work to the condition required by the Contract. Refer to the table in 12.08.05 for the number of posts to be field tested.

12.08.04—Method of Measurement:

Add the following:

The work required to expose and measure sign base post length and embedment depth using field testing methods, and restoration of such work, will not be measured for payment and shall be included in the general cost of the work.

12.08.05—Basis of Payment:

Replace the entire Article with the following:

This work will be paid for at the Contract unit price per square foot for “Sign Face - Sheet Aluminum” of the type specified complete in place, adjusted by multiplying by the applicable Pay Factor listed in the table below. The price for this work shall include the completed sign, metal

sign post(s), span-mounted sign brackets and mast arm-mounted brackets, mounting hardware, including reinforcing plates, field testing, restoration and replacement of defective base post(s), and all materials, equipment, and work incidental thereto.

Pay Factor Scale: Work shall be considered defective whenever the base post length or base post embedment depth is less than the specified length by more than 2 inches. If the number of defects results in rejection, the Contractor shall remove and replace all metal sign base posts on the Project, at no cost to the Town.

Number of Posts to be Tested and Pay Factors (Based on Number of Defects)

Number of Posts in Project =>	51-100	101-250	251-1000	>1000
Sample Size=>	5 Posts	10 Posts	40 Posts	60 Posts
0 Defects	1.0	1.0	1.025	1.025
1 Defect	0.9	0.95	0.975	0.983
2 Defects	Rejection	0.9	0.95	0.967
3 Defects	Rejection	Rejection	0.925	0.95
4 Defects	Rejection	Rejection	0.9	0.933
5 Defects	Rejection	Rejection	Rejection	0.917
6 Defects	Rejection	Rejection	Rejection	0.9
7 or more Defects	Rejection	Rejection	Rejection	Rejection

Note: Projects with 50 or fewer posts will not include field testing

ITEM #1208938A – PROJECT SIGN**DESCRIPTION**

This item shall consist of furnishing and installing project sign at the locations shown on the plans or as ordered.

MATERIALS

SIGN PANEL: Signs should be made from suitable materials to perform effectively for a minimum of 3 years. Example of allowable materials include ¾” MDO-EXT-APA Plywood or 0.125-gauge sheet aluminum. The following types of materials shall not be used: mesh, non-rigid, roll-up, corrugated or waffle board types substrates, foam core and composite aluminum sign substrates.

Suitable attachments shall be provided so that the signs can be firmly attached to the sign supports without causing damage to the signs.

Signs may be painted or use non-reflective plastic sheeting. Paint shall be extremely durable, high quality, semi-gloss enamel resistant to air, sun and water. Non-reflective plastic sheeting shall be permanently adhered to the backing. The material shall withstand 3 years’ vertical, south-facing exterior exposure.

COLORS: All letters and symbols shall be blue code #0000FF, rgb (0, 0, 255), pantone 294, or approved equal. Background shall be white code #FFFFFF, rgb (255, 255, 255), or approved equal. If plywood is used for the sign panel, the back of the panel shall be painted matte black.

TYPEFACE: Helvetica Medium

SIGN SUPPORT: Sign panels shall be attached to vertical sign support posts. All sign supports shall have breakaway features that meet AASHTO requirements contained in the current “Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals”. The breakaway features shall be structurally adequate to carry the sign panel at 60-mph wind loading. Installation shall be in accordance with the manufacturer’s recommendations. A minimum 2-ft embedment depth below the ground line is required.

CONSTRUCTION METHODS

LOCATION: The signs SHALL be installed parallel to the travelway, so they are NOT easily viewable by drivers, as the signs are not MUTCD compliant and not intended to be roadway signs.

The lateral offset from the edge of road to the face of sign should be 6-12 feet. 12 feet is preferred where space is available for installation. When installed on a trail, the lateral offset should be 2 feet.

The bottom of the sign should be mounted 7 feet above the edge of road.

DURATION: The signs shall be erected for the life of the construction project. This means that they should be erected only after Notice to Proceed has been given to the contractor and should be removed with all other construction related signs at the end of the project considered to be the point that acceptance of the construction work is given.

METHOD OF MEASUREMENT

This work will be measured for payment as a unit installed and accepted.

BASIS OF PAYMENT

This work will be paid for at the contract unit price each for "Project Sign" complete in place, which price shall include metal sign posts, mounting hardware, including brackets, and all material, equipment, labor and work incidental thereto.

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
ITEM #1208938A	PROJECT SIGN	EA

ITEM #1302060A – ADJUST GATE BOX (WATER)

Work under this item shall conform to the applicable provisions of the Standard Specifications Form 818 amended as follows:

DESCRIPTION

Reference to “District” in this item refers to “The Metropolitan District”.

The Contractor shall adjust to intermediate and final grades as required, the gate boxes and covers appurtenant to the water mains as required and furnish and install extension rings, extension stems and air valve extensions, if necessary, as shown on the Contract Drawings or as directed by the Engineer in accordance with these specifications.

MATERIALS

The District shall furnish standard District cast iron Dwyer type gate box sections as required and extension stems if necessary.

All additional materials, including any resurfacing materials and any additional fill required, shall be furnished and placed by the Contractor. Gravel shall conform to Article M.02.01.

CONSTRUCTION METHODS

The Contractor shall carefully excavate around the gate boxes, remove the boxes, install extension stems and air valve extensions, if necessary, reinstall the present gate box, if reusable, adjust the box to final grade using extension rings, if necessary, and refill the excavation. Care shall be taken to prevent material from filling the inside of the gate box.

Extension stems will be required if the gate box is raised 24-inches or more. Extension stems shall be fabricated according to the detail shown on sheet WS-25 of the District’s “Developers Manual.”

Any damage done to District facilities by the Contractor shall be repaired or replaced by the Contractor at his/her expense.

Contractor shall adjust/lower gate boxes to match the exposed aggregate or milled surface grades where necessary to provide for safe traffic operations. Prior to paving the final course, Contractor shall adjust/raise gate boxes to final grades.

METHOD OF MEASUREMENT

The resetting of gate boxes to the final grades, complete with extension stems, air valve extensions, gate box extension rings, and additional top or bottom sections, if necessary, will be measured for payment

as a unit. Adjustment of gate boxes to match the exposed aggregate or milled surface grades shall not be measured and paid for, but shall be included in the cost for Maintenance and Protection of Traffic.

BASIS OF PAYMENT

This work will be paid for at the contract unit price for “Adjust Gate Box (Water)” to the final grades, complete in place, which price shall include the cost of furnishing material, including labor and equipment to incorporate them into the work. It shall also include the clearing, trenching and disposal of excavated materials, refilling trenches, multiple adjustments, furnishing the additional material for refilling, grading, sheeting, bracing, and pumping.

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
ITEM #1302060A	ADJUST GATE BOX (WATER)	EA

ITEM #1403501A – RESET MANHOLE (SANITARY SEWER)

Work under this item shall conform to the applicable provisions of Section 5.07 of the Standard Specifications Form 818 amended as follows:

SUB-ARTICLE 5.07.05-5 RESET UNITS

Delete the term “Reset Manhole” and insert “Reset Manhole – Sanitary Sewer.”

DESCRIPTION

Add the following to Subarticle 5.07.01:

The Contractor shall reset to final grade the manhole frames and covers on the sanitary sewer, all as shown, specified or directed. Also included are furnishing and installing additional manhole riser sections, if necessary.

Reference to the “District” in this item refers to “The Metropolitan District.”

MATERIALS

Add the following to Subarticle 5.07.02:

BRICK UNITS - Shall conform to ASTM C-32, Grade MS

MORTAR – Shall conform to Section M.11

MANHOLE RISER SECTIONS - Shall conform to ASTM C-478

MANHOLE RUNGS (STEPS) - Shall be 14 inches x 10 7/8 inches forged aluminum safety rung fabricated from 6061-T6 aluminum alloy as manufactured by ALCOA, or equal; or copolymer polypropylene steps in conformance with ASTM D4101, Grade 60 steel reinforcing rod, ASTM A615, with epoxy coating, ASTM A-934/M-95. The steps shall be either Model PS-1B or PS2-PFSL as manufactured by M.A. Industries, Inc. or equal.

MANHOLE EXTENSION RINGS - Shall conform to Article M.08.02-5 Metal for Drainage Structures. The type of manhole extension rings will be designed so that the existing manhole cover, when set in place, will have substantially the same bearing, fitness and load carrying capacity as existed in the existing manhole frame. The extension rings shall be designed to fit into the original manhole frame resting specifically on the flange area that originally supported the manhole cover.

CONSTRUCTION METHODS

Add the following to Subarticle 5.07.03:

The Contractor shall carefully excavate the manhole frame and cover and add or delete brick masonry as necessary to reset the frame and cover to the final grade.

The present cover slab or cone section may be reused if it is not damaged. If the cover slab or cone section is damaged, it shall be replaced by the Contractor at his/her expense.

The Contractor may be required to “un-stack” the existing cone section so that riser sections can be added or deleted, where the change in grade is greater than 12 inches.

Any material damaged by the Contractor shall be repaired or replaced by the Contractor at no cost to the Town or District.

The Contractor shall adjust/lower manhole frame and cover to match the exposed aggregate or milled surface grades where necessary to provide for safe traffic operations. Prior to paving the final course, Contractor shall adjust/raise manhole frame and cover to final grades.

Where the change in grade is 3 inches or less, metal manhole extension rings shall be used to raise and support the existing manhole covers to the grade of the proposed roadway surface without disturbing the existing manhole frame.

METHOD OF MEASUREMENT

Add the following to Subarticle 5.07.04:

The work of resetting sanitary sewer manholes to the final grades will be measured for payment by the number of manholes (sanitary sewer) reset to grade and accepted by the Engineer. Adjustment of manhole frame and cover to match the exposed aggregate or milled surface grades shall not be measured and paid for, but shall be included in the cost for Maintenance and Protection of Traffic.

BASIS OF PAYMENT

Add the following to Subarticle 5.07.05:

The work of resetting sanitary sewer manholes to the final grades will be paid for at the contract unit price each bid for “Reset Manhole (Sanitary Sewer)” complete in place, which price shall include all labor and equipment necessary to incorporate the manhole into the work.

It shall also include the clearing, trenching, excavation and disposal of excavated materials, refilling trenches, furnishing additional material for refilling, grading, sheeting, bracing, pumping, and temporary and permanent resurfacing of disturbed areas.

The maximum 3 feet vertical adjustments shall not apply to adjusting sanitary sewer manholes, and there will be no extra compensation for adjusting the manhole in excess of 3 feet.

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
ITEM #1403501A	RESET MANHOLE (SANITARY SEWER)	EACH

**MAPLE HILL AVENUE AND ROBBINS
AVENUE COMPLETE STREETS PROJECT
STATE PROJECT NO. L093-0001
NEWINGTON, CT**

**ATTACHMENT A
Commission on Human Rights and Opportunities
Contract Compliance Regulations Notification to
Bidders**

COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
CONTRACT COMPLIANCE REGULATIONS
NOTIFICATION TO BIDDERS

(Revised 09/3/15)

The contract to be awarded is subject to contract compliance requirements mandated by Sections 4a-60 and 4a-60a of the Connecticut General Statutes; and, when the awarding agency is the State, Sections 46a-71(d) and 46a-81i(d) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at Section 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by Sections 4a-60 and 46a-71(d) of the Connecticut General Statutes.

According to Section 46a-68j-30(9) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to “aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials.” “Minority business enterprise” is defined in Section 4a-60 of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: “(1) Who are active in daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of Section 32-9n.” “Minority” groups are defined in Section 32-9n of the Connecticut General Statutes as “(1) Black Americans . . . (2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4) Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . .” An individual with a disability is also a minority business enterprise as provided by Section 4a-60g of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of Section 46a-68j-21(11) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the bidder’s qualifications under the contract compliance requirements:

- (a) the bidder’s success in implementing an affirmative action plan;
- (b) the bidder’s success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17 of the Administrative Regulations of Connecticut State Agencies, inclusive;
- (c) the bidder’s promise to develop and implement a successful affirmative action plan;
- (d) the bidder’s submission of employment statistics contained in the “Employment Information Form”, indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and
- (e) the bidder’s promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 46a-68j-30(10)(E) of the Contract Compliance Regulations.

INSTRUCTIONS AND OTHER INFORMATION

The following **BIDDER CONTRACT COMPLIANCE MONITORING REPORT** must be completed in full, signed, and submitted with the bid for this contract. The contract awarding agency and the Commission on Human Rights and Opportunities will use the information contained thereon to determine the bidders compliance to Sections 4a-60 and 4a-60a CONN. GEN. STAT., and Sections 46a-68j-23 of the Regulations of Connecticut State Agencies regarding equal employment opportunity, and the bidder’s good faith efforts to include minority business enterprises as subcontractors and suppliers for the work of the contract.

1) Definition of Small Contractor

Section 4a-60g CONN. GEN. STAT. defines a small contractor as a company that has been doing business under the same management and control and has maintained its principal place of business in Connecticut for a one year period immediately prior to its application for certification under this section, had gross revenues not exceeding fifteen million dollars in the most recently completed fiscal year, and at least fifty-one percent of the ownership of which is held by a person or persons who are active in the daily affairs of the company, and have the power to direct the management and policies of the company, except that a nonprofit corporation shall be construed to be a small contractor if such nonprofit corporation meets the requirements of subparagraphs (A) and (B) of subdivision 4a-60g CONN. GEN. STAT.

MANAGEMENT: Managers plan, organize, direct, and control the major functions of an organization through subordinates who are at the managerial or supervisory level. They make policy decisions and set objectives for the company or departments. They are not usually directly involved in production or providing services. Examples include top executives, public relations managers, managers of operations specialties (such as financial, human resources, or purchasing managers), and construction and engineering managers.

BUSINESS AND FINANCIAL OPERATIONS: These occupations include managers and professionals who work with the financial aspects of the business. These occupations include accountants and auditors, purchasing agents, management analysts, labor relations specialists, and budget, credit, and financial analysts.

MARKETING AND SALES: Occupations related to the act or process of buying and selling products and/or services such as sales engineer, retail sales workers and sales representatives including wholesale.

LEGAL OCCUPATIONS: In-House Counsel who is charged with providing legal advice and services in regards to legal issues that may arise during the course of standard business practices. This category also includes assistive legal occupations such as paralegals, legal assistants.

COMPUTER SPECIALISTS: Professionals responsible for the computer operations within a company are grouped in this category. Examples of job titles in this category include computer programmers, software engineers, database administrators, computer scientists, systems analysts, and computer support specialists.

ARCHITECTURE AND ENGINEERING: Occupations related to architecture, surveying, engineering, and drafting are included in this category. Some of the job titles in this category include electrical and electronic engineers, surveyors, architects, drafters, mechanical engineers, materials engineers, mapping technicians, and civil engineers.

OFFICE AND ADMINISTRATIVE SUPPORT: All clerical-type work is included in this category. These jobs involve the preparing, transcribing, and preserving of written communications and records; collecting accounts; gathering and distributing information; operating office machines and electronic data processing equipment; and distributing mail. Job titles listed in this category include telephone operators, bill and account collectors, customer service representatives, dispatchers, secretaries and administrative assistants, computer operators and clerks (such as payroll, shipping, stock, mail and file).

BUILDING AND GROUNDS CLEANING AND MAINTENANCE: This category includes occupations involving landscaping, housekeeping, and janitorial services. Job titles found in this category include supervisors of landscaping or housekeeping, janitors, maids, grounds maintenance workers, and pest control workers.

CONSTRUCTION AND EXTRACTION: This category includes construction trades and related occupations. Job titles found in this category include boilermakers, masons (all types), carpenters, construction laborers, electricians, plumbers (and related trades), roofers, sheet metal workers, elevator installers, hazardous materials removal workers, paperhangers, and painters. Paving, surfacing, and tamping equipment operators; drywall and ceiling tile installers; and carpet, floor and tile installers and finishers are also included in this category. First line supervisors, foremen, and helpers in these trades are also grouped in this category..

INSTALLATION, MAINTENANCE AND REPAIR: Occupations involving the installation, maintenance, and repair of equipment are included in this group. Examples of job titles found here are heating, ac, and refrigeration mechanics and installers; telecommunication line installers and repairers; heavy vehicle and mobile equipment service technicians and mechanics; small engine mechanics; security and fire alarm systems installers; electric/electronic repair, industrial, utility and transportation equipment; millwrights; riggers; and manufactured building and mobile home installers. First line supervisors, foremen, and helpers for these jobs are also included in the category.

MATERIAL MOVING WORKERS: The job titles included in this group are Crane and tower operators; dredge, excavating, and lading machine operators; hoist and winch operators; industrial truck and tractor operators; cleaners of vehicles and equipment; laborers and freight, stock, and material movers, hand; machine feeders and offbearers; packers and packagers, hand; pumping station operators; refuse and recyclable material collectors; and miscellaneous material moving workers.

PRODUCTION WORKERS: The job titles included in this category are chemical production machine setters, operators and tenders; crushing/grinding workers; cutting workers; inspectors, testers sorters, samplers, weighers; precious stone/metal workers; painting workers; cementing/gluing machine operators and tenders; etchers/engravers; molders, shapers and casters except for metal and plastic; and production workers.

<p><u>White</u> (not of Hispanic Origin)- All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.</p> <p><u>Black</u>(not of Hispanic Origin)- All persons having origins in any of the Black racial groups of Africa.</p> <p><u>Hispanic</u>- All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.</p>	<p><u>Asian or Pacific Islander</u>- All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippine Islands, and Samoa.</p> <p><u>American Indian or Alaskan Native</u>- All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.</p>
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BIDDER CONTRACT COMPLIANCE MONITORING REPORT

PART I - Bidder Information

Company Name Street Address City & State Chief Executive	Bidder Federal Employer Identification Number _____ Or Social Security Number _____
Major Business Activity (brief description)	Bidder Identification (response optional/definitions on page 1) -Bidder is a small contractor. Yes ___ No ___ -Bidder is a minority business enterprise Yes ___ No ___ (If yes, check ownership category) Black ___ Hispanic ___ Asian American ___ American Indian/Alaskan Native ___ Iberian Peninsula ___ Individual(s) with a Physical Disability ___ Female ___
Bidder Parent Company (If any)	- Bidder is certified as above by State of CT Yes ___ No ___
Other Locations in Ct. (If any)	

PART II - Bidder Nondiscrimination Policies and Procedures

1. Does your company have a written Affirmative Action/Equal Employment Opportunity statement posted on company bulletin boards? Yes___ No___	7. Do all of your company contracts and purchase orders contain non-discrimination statements as required by Sections 4a-60 & 4a-60a Conn. Gen. Stat.? Yes___ No___
2. Does your company have the state-mandated sexual harassment prevention in the workplace policy posted on company bulletin boards? Yes___ No___	8. Do you, upon request, provide reasonable accommodation to employees, or applicants for employment, who have physical or mental disability? Yes___ No___
3. Do you notify all recruitment sources in writing of your company's Affirmative Action/Equal Employment Opportunity employment policy? Yes___ No___	9. Does your company have a mandatory retirement age for all employees? Yes___ No___
4. Do your company advertisements contain a written statement that you are an Affirmative Action/Equal Opportunity Employer? Yes ___ No ___	10. If your company has 50 or more employees, have you provided at least two (2) hours of sexual harassment training to all of your supervisors? Yes ___ No ___ NA ___
5. Do you notify the Ct. State Employment Service of all employment openings with your company? Yes ___ No ___	11. If your company has apprenticeship programs, do they meet the Affirmative Action/Equal Employment Opportunity requirements of the apprenticeship standards of the Ct. Dept. of Labor? Yes ___ No ___ NA ___
6. Does your company have a collective bargaining agreement with workers? Yes___ No___ 6a. If yes, do the collective bargaining agreements contain non-discrimination clauses covering all workers? Yes___ No___ 6b. Have you notified each union in writing of your commitments under the nondiscrimination requirements of contracts with the state of Ct? Yes___ No___	12. Does your company have a written affirmative action Plan? Yes ___ No ___ If no, please explain. 13. Is there a person in your company who is responsible for equal employment opportunity? Yes ___ No ___ If yes, give name and phone number. _____

1. Will the work of this contract include subcontractors or suppliers? Yes__ No__

1a. If yes, please list all subcontractors and suppliers and report if they are a small contractor and/or a minority business enterprise. (defined on page 1 / use additional sheet if necessary)

1b. Will the work of this contract require additional subcontractors or suppliers other than those identified in 1a. above?

Yes__ No__

PART IV - Bidder Employment Information

Date:

JOB CATEGORY *	OVERALL TOTALS	WHITE (not of Hispanic origin)		BLACK (not of Hispanic origin)		HISPANIC		ASIAN or PACIFIC ISLANDER		AMERICAN INDIAN or ALASKAN NATIVE	
		Male	Female	Male	Female	Male	Female	Male	Female	male	female
Management											
Business & Financial Ops											
Marketing & Sales											
Legal Occupations											
Computer Specialists											
Architecture/Engineering											
Office & Admin Support											
Bldg/ Grounds Cleaning/Maintenance											
Construction & Extraction											
Installation , Maintenance & Repair											
Material Moving Workers											
Production Occupations											
TOTALS ABOVE											
Total One Year Ago											
FORMAL ON THE JOB TRAINEES (ENTER FIGURES FOR THE SAME CATEGORIES AS ARE SHOWN ABOVE)											
Apprentices											
Trainees											

*NOTE: JOB CATEGORIES CAN BE CHANGED OR ADDED TO (EX. SALES CAN BE ADDED OR REPLACE A CATEGORY NOT USED IN YOUR COMPANY)

PART V - Bidder Hiring and Recruitment Practices

(Page 5)

1. Which of the following recruitment sources are used by you? (Check yes or no, and report percent used)				2. Check (X) any of the below listed requirements that you use as a hiring qualification (X)		3. Describe below any other practices or actions that you take which show that you hire, train, and promote employees without discrimination
SOURCE	YES	NO	% of applicants provided by source			
State Employment Service					Work Experience	
Private Employment Agencies					Ability to Speak or Write English	
Schools and Colleges					Written Tests	
Newspaper Advertisement					High School Diploma	
Walk Ins					College Degree	
Present Employees					Union Membership	
Labor Organizations					Personal Recommendation	
Minority/Community Organizations					Height or Weight	
Others (please identify)					Car Ownership	
					Arrest Record	
					Wage Garnishments	

Certification (Read this form and check your statements on it CAREFULLY before signing). I certify that the statements made by me on this BIDDER CONTRACT COMPLIANCE MONITORING REPORT are complete and true to the best of my knowledge and belief, and are made in good faith. I understand that if I knowingly make any misstatements of facts, I am subject to be declared in non-compliance with Section 4a-60, 4a-60a, and related sections of the CONN. GEN. STAT.

(Signature)	(Title)	(Date Signed)	(Telephone)
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**MAPLE HILL AVENUE AND ROBBINS
AVENUE COMPLETE STREETS PROJECT
STATE PROJECT NO. L093-0001
NEWINGTON, CT**

**ATTACHMENT B
Commission on Human Rights and Opportunities
Non-Discrimination and Affirmative Action
Provisions**

Non-Discrimination and Affirmative Action Provisions

- (A)(1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, sexual orientation, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the state of Connecticut. The Contractor further agrees to take affirmative action to insure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved; (2) the Contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, to state that it is an "affirmative action-equal opportunity employer" in accordance with regulations adopted by the commission; (3) the Contractor agrees to provide each labor union or representative of workers with which such Contractor has a collective bargaining agreement or other contract or understanding and each vendor with which such Contractor has a contract or understanding, a notice to be provided by the commission advising the labor union or workers' representative of the Contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment; (4) the Contractor agrees to comply with each provision of this section and sections 46a-68e and 46a-68f and with each regulation or relevant order issued by said commission pursuant to sections 46a-56, 46a-68e, 46a-68f and 46a-86; (5) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor as relate to the provisions of this section and section 46a-56.
- (B) Any Contractor who is a party to a municipal public works contract or quasi-public agency project, where any such contract is valued at less than \$50,000 for each year of the contract, shall provide the Commission on Human Rights and Opportunities with a written or electronic representation that complies with the nondiscrimination agreement and warranty under subsection (A)(1) above, provided if there is any change in such representation, the Contractor shall provide the updated representation to the Commission not later than 30 days after such change. Any Contractor who is a party to a municipal public works contract or a quasi-public agency project, where any such contract is valued at \$50,000 or more for any year of the contract, shall provide the Commission with any one of the following: (1) Documentation in the form of a company or corporate policy adopted by resolution of the board of directors, shareholder, managers, members or other governing body of such Contractor that complies with the nondiscrimination agreement and warranty under subsection (A)(1) of this section; (2) Documentation in the form of a company or corporate policy adopted by a prior resolution of the board of directors, shareholders, managers, members or other governing body of such contractor if (a) the prior resolution is certified by a duly authorized corporate officer of such contractor to be in effect on the date the documentation is submitted, and the executive director of the Commission on Human Rights and Opportunities or designee certifies that the prior resolution complies with the nondiscrimination agreement and warranty under subdivision (A)(1) of this section; or (3) Documentation in the form of an affidavit signed under penalty of false statement by a chief executive officer, president, chairperson or other corporate officer duly authorized to adopt company or corporate policy that certifies that the company or corporate policy of the contractor complies with the nondiscrimination agreement and warranty under subdivision (A)(1) of this section and is in effect on the date the affidavit is signed..
- (C) If the Contract is a municipal public works contract or a quasi-public agency project, the

Contractor agrees and warrants that s/he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works project. The Contractor shall include the provisions of subdivision (A)(1) of this section in every subcontract or purchase order entered into to fulfill any obligation of a municipal public works contract or contract for a quasi-public agency project, and such provisions shall be binding on a subcontractor, vendor or manufacturer, unless exempted by regulations or orders of the Commission on Human Rights and Opportunities. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions, including sanctions for noncompliance in accordance with section 46a-56; provided, if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission regarding a state contract, the contractor may request the state of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the state and the state may so enter.

- (D) "Minority business enterprise" means any small contractor or supplier of materials fifty-one per cent or more of the capital stock, if any, or assets of which is owned by a person or persons: (1) Who are active in the daily affairs of the enterprise, (2) who have the power to direct the management and policies of the enterprise and (3) who are members of a minority, as such term is defined in subsection (a) of section 32-9n; and "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations. "Good faith efforts" shall include, but not be limited to, those reasonable initial efforts necessary to comply with statutory or regulatory requirements and additional or substituted efforts when it is determined that such initial efforts will not be sufficient to comply with such requirements. Determination of the Contractor's good faith efforts shall include, but shall not be eliminated to, the following factors: The contractor's employment and subcontracting policies, patterns and practices; affirmative advertising recruitment and training; technical assistance activities and such other reasonable activities or efforts as the Commission on Human Rights and Opportunities may prescribe that are designed to ensure the participation of minority business enterprises in municipal public works contracts or quasi-public agency projects. "Municipal public works project" means that portion of an agreement entered into on or after October 1, 2015, between any individual, firm or corporation and a municipality for the construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, which is financed in whole or in part by the state, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees but excluding any project of an alliance district, as defined in section 10-262u, finance by the state funding in an amount equal to fifty thousand dollars or less. "Quasi-public agency project" means the construction, rehabilitation, conversion, extension, demolition or repair of a building or other changes or improvements in real property pursuant to a contract entered into on or after October 1, 2015, which is financed in whole or in part by a quasi-public agency using state funds, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees.

**MAPLE HILL AVENUE AND ROBBINS
AVENUE COMPLETE STREETS PROJECT
STATE PROJECT NO. L093-0001
NEWINGTON, CT**

ATTACHMENT C
Construction Contracts – Required Contract
Provisions (State Funded Only Contracts)

Construction Contracts - Required Contract Provisions (State Funded Only Contracts)

Index

1. Contractor Work Force Utilization / Specific Equal Employment Opportunity
2. Contract Wage Rates
3. Americans with Disabilities Act of 1990, as Amended
4. Connecticut Statutory Labor Requirements
 - a. Construction, Alteration or Repair of Public Works Projects; Wage Rates
 - b. Debarment List - Limitation on Awarding Contracts
 - c. Construction Safety and Health Course
 - d. Awarding of Contracts to Occupational Safety and Health Law Violators Prohibited
 - e. Residents Preference in Work on Other Public Facilities (Not Applicable to Federal Aid Contracts)
5. Tax Liability - Contractor's Exempt Purchase Certificate (CERT – 141)
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1. Contractor Work Force Utilization / Equal Employment Opportunity

- (a) The Contractor shall comply with the Contractor Work Force Utilization / Equal Employment Opportunity requirements attached at Exhibit A and hereby made part of this Contract, whenever a contractor or subcontractor at any tier performs construction work in excess of \$10,000. These goals shall be included in each contract and subcontract. Goal achievement is calculated for each trade using the hours worked under each trade.
- (b) Companies with contracts, agreements or purchase orders valued at \$10,000 or more will develop and implement an Affirmative Action Plan utilizing the ConnDOT Affirmative Action Plan Guideline. This Plan shall be designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex or national origin, and to promote the full realization of equal employment opportunity through a positive continuation program. Plans shall be updated as required by ConnDOT.

2. Contract Wage Rates

The Contractor shall comply with:

The State wage rate requirements indicated in Exhibit C hereof are hereby made part of this Contract.

Prevailing Wages for Work on State Highways; Annual Adjustments. With respect to contracts for work on state highways and bridges on state highways, the Contractor shall comply with the provisions of Section 31-54 and 31-55a of the Connecticut General Statutes, as revised.

As required by section 1.05.12 (Payrolls) of the State of Connecticut, Department of Transportation's Standard Specification for Roads, Bridges and Incidental Construction (FORM 817), as may be revised, every Contractor or subcontractor performing project work on a federal aid project is required to post the relevant prevailing wage rates as determined by the United States Secretary of Labor. The wage rate determinations shall be posted in prominent and easily accessible places at the work site.

3. Americans with Disabilities Act of 1990, as Amended

This provision applies to those Contractors who are or will be responsible for compliance with the terms of the Americans with Disabilities Act of 1990, as amended (42 U.S.C. 12101 et seq.), (Act), during the term of the Contract. The Contractor represents that it is familiar with the terms of this Act and that it is in compliance with the Act. Failure of the Contractor to satisfy this standard as the same applies to performance under this Contract, either now or during the term of the Contract as it may be amended, will render the Contract voidable at the option of the State upon notice to the contractor. The Contractor warrants that it will hold the State harmless and indemnify the State from any liability which may be imposed upon the State as a result of any failure of the Contractor to be in compliance with this Act, as the same applies to performance under this Contract.

4. Connecticut Statutory Labor Requirements

- (a) **Construction, Alteration or Repair of Public Works Projects; Wage Rates.** The Contractor shall comply with Section 31-53 of the Connecticut General Statutes, as revised. The wages paid on an hourly basis to any person performing the work of any mechanic, laborer or worker on the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such person to any employee welfare fund, as defined in subsection (i)

of section 31-53 of the Connecticut General Statutes, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such public works project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such persons to any such employee welfare fund shall pay to each mechanic, laborer or worker as part of such person's wages the amount of payment or contribution for such person's classification on each pay day.

(b) Debarment List. Limitation on Awarding Contracts. The Contractor shall comply with Section 31-53a of the Connecticut General Statutes, as revised.

(c) Construction Safety and Health Course. The Contractor shall comply with section 31-53b of the Connecticut General Statutes, as revised. The contractor shall furnish proof to the Labor Commissioner with the weekly certified payroll form for the first week each employee begins work on such project that any person performing the work of a mechanic, laborer or worker pursuant to the classifications of labor under section 31-53 of the Connecticut General Statutes, as revised, on such public works project, pursuant to such contract, has completed a course of at least ten hours in duration in construction safety and health approved by the federal Occupational Safety and Health Administration or, has completed a new miner training program approved by the Federal Mine Safety and Health Administration in accordance with 30 CFR 48 or, in the case of telecommunications employees, has completed at least ten hours of training in accordance with 29 CFR 1910.268.

Any employee required to complete a construction safety and health course as required that has not completed the course, shall have a maximum of fourteen (14) days to complete the course. If the employee has not been brought into compliance, they shall be removed from the project until such time as they have completed the required training.

Any costs associated with this notice shall be included in the general cost of the contract. In addition, there shall be no time granted to the contractor for compliance with this notice. The contractor's compliance with this notice and any associated regulations shall not be grounds for claims as outlined in Section 1.11 – "Claims".

(d) Awarding of Contracts to Occupational Safety and Health Law Violators Prohibited. The Contract is subject to Section 31-57b of the Connecticut General Statutes, as revised.

(e) Residents Preference in Work on Other Public Facilities. NOT APPLICABLE TO FEDERAL AID CONTRACTS. Pursuant to Section 31-52a of the Connecticut General Statutes, as revised, in the employment of mechanics, laborers or workmen to perform the work specified herein, preference shall be given to residents of the state who are, and continuously for at least six months prior to the date hereof have been, residents of this state, and if no such person is available, then to residents of other states

5. Tax Liability - Contractor's Exempt Purchase Certificate (CERT – 141)

The Contractor shall comply with Chapter 219 of the Connecticut General Statutes pertaining to tangible personal property or services rendered that is/are subject to sales tax. The Contractor is responsible for determining its tax liability. If the Contractor purchases materials or supplies pursuant to the Connecticut Department of Revenue Services' "Contractor's Exempt Purchase Certificate (CERT-141)," as may be revised, the Contractor acknowledges and agrees that title to such materials and supplies installed or placed in the project will vest in the State simultaneously with passage of title

from the retailers or vendors thereof, and the Contractor will have no property rights in the materials and supplies purchased.

Forms and instructions are available anytime by:

Internet: Visit the DRS website at www.ct.gov/DRS to download and print Connecticut tax forms; or Telephone: Call 1-800-382-9463 (Connecticut calls outside the Greater Hartford calling area only) and select Option 2 or call 860-297-4753 (from anywhere).

6. Executive Orders and Other Enactments

- (a) All references in this Contract to any Federal, State, or local law, statute, public or special act, executive order, ordinance, regulation or code (collectively, "Enactments") shall mean Enactments that apply to the Contract at any time during its term, or that may be made applicable to the Contract during its term. This Contract shall always be read and interpreted in accordance with the latest applicable wording and requirements of the Enactments. At the Contractor's request, the Client Agency shall provide a copy of these Enactments to the Contractor. Unless otherwise provided by Enactments, the Contractor is not relieved of its obligation to perform under this Contract if it chooses to contest the applicability of the Enactments or the Client Agency's authority to require compliance with the Enactments.
- (b) This Contract is subject to the provisions of Executive Order No. Three of Governor Thomas J. Meskill, promulgated June 16, 1971, concerning labor employment practices, Executive Order No. Seventeen of Governor Thomas J. Meskill, promulgated February 15, 1973, concerning the listing of employment openings and Executive Order No. Sixteen of Governor John G. Rowland promulgated August 4, 1999, concerning violence in the workplace, all of which are incorporated into and are made a part of this Contract as if they had been fully set forth in it.
- (c) This Contract may be subject to (1) Executive Order No. 14 of Governor M. Jodi Rell, promulgated April 17, 2006, concerning procurement of cleaning products and services; (2) **Executive Order No. 61 of Governor Dannel P. Malloy promulgated December 13, 2017 concerning the Policy for the Management of State Information Technology Projects, as issued by the Office of Policy and Management, Policy ID IT-SDLC-17-04;** and (3) Executive Order Nos. 13F and 13G of Governor Ned Lamont, promulgated September 3, 2021 and September 10, 2021, respectively, concerning protection of public health and safety during COVID-19 pandemic, as extended by Executive Order No. 14A of Governor Ned Lamont, promulgated September 30, 2021. If any of the Executive Orders referenced in this subsection is applicable, it is deemed to be incorporated into and made a part of this Contract as if fully set forth in it.

7. Non Discrimination Requirement and Certification (pursuant to section 4a-60 and 4a-60a of the Connecticut General Statutes, as revised): References to "minority business enterprises" in this Section are not applicable to Federal-aid projects/contracts. Federal-aid projects/contracts are instead subject to the Federal Disadvantaged Business Enterprise Program.

(a) For purposes of this Section, the following terms are defined as follows:

- (1) "Commission" means the Commission on Human Rights and Opportunities;
- (2) "Contract" and "contract" include any extension or modification of the Contract or contract;
- (3) "Contractor" and "contractor" include any successors or assigns of the Contractor or contractor;

- (4) "Gender identity or expression" means a person's gender-related identity, appearance or behavior, whether or not that gender-related identity, appearance or behavior is different from that traditionally associated with the person's physiology or assigned sex at birth, which gender-related identity can be shown by providing evidence including, but not limited to, medical history, care or treatment of the gender-related identity, consistent and uniform assertion of the gender-related identity or any other evidence that the gender-related identity is sincerely held, part of a person's core identity or not being asserted for an improper purpose.
- (5) "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations;
- (6) "good faith efforts" shall include, but not be limited to, those reasonable initial efforts necessary to comply with statutory or regulatory requirements and additional or substituted efforts when it is determined that such initial efforts will not be sufficient to comply with such requirements;
- (7) "marital status" means being single, married as recognized by the state of Connecticut, widowed, separated or divorced;
- (8) "mental disability" means one or more mental disorders, as defined in the most recent edition of the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders", or a record of or regarding a person as having one or more such disorders;
- (9) "minority business enterprise" means any small contractor or supplier of materials fifty-one percent or more of the capital stock, if any, or assets of which is owned by a person or persons: (1) who are active in the daily affairs of the enterprise, (2) who have the power to direct the management and policies of the enterprise, and (3) who are members of a minority, as such term is defined in subsection (a) of Connecticut General Statutes § 32-9n; and
- (10) "public works contract" means any agreement between any individual, firm or corporation and the State or any political subdivision of the State other than a municipality for construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, or which is financed in whole or in part by the State, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees.

For purposes of this Section, the terms "Contract" and "contract" do not include a contract where each contractor is (1) a political subdivision of the State of Connecticut, including, but not limited to municipalities, unless the contract is a municipal public works contract or quasi-public agency project contract, (2) any other state of the United States, including but not limited to, the District of Columbia, Puerto Rico, U.S. territories and possessions, and federally recognized Indian tribal governments, as defined in Connecticut General Statutes § 1-267, (3) the federal government, (4) a foreign government, or (5) an agency of a subdivision, state or government described in subdivision (1), (2), (3), or (4) of this subsection.

- (b) (1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, status as a veteran, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the State of Connecticut; and the Contractor further agrees to take affirmative action to insure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, status as a veteran, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown

by the Contractor that such disability prevents performance of the work involved; (2) the Contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, to state that it is an "affirmative action-equal opportunity employer" in accordance with regulations adopted by the Commission; (3) the Contractor agrees to provide each labor union or representative of workers with which the Contractor has a collective bargaining agreement or other contract or understanding and each vendor with which the Contractor has a contract or understanding, a notice to be provided by the Commission, advising the labor union or workers' representative of the Contractor's commitments under this section and to post copies of the notice in conspicuous places available to employees and applicants for employment; (4) the Contractor agrees to comply with each provision of this Section and Connecticut General Statutes §§ 46a-68e and 46a-68f and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes §§ 46a-56, 46a-68e and 46a-68f; and (5) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor as relate to the provisions of this Section and Connecticut General Statutes § 46a-56. If the contract is a public works contract, the Contractor agrees and warrants that he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works projects.

- (c) Determination of the Contractor's good faith efforts shall include, but shall not be limited to, the following factors: The Contractor's employment and subcontracting policies, patterns and practices; affirmative advertising, recruitment and training; technical assistance activities and such other reasonable activities or efforts as the Commission may prescribe that are designed to ensure the participation of minority business enterprises in public works projects.
- (d) The Contractor shall develop and maintain adequate documentation, in a manner prescribed by the Commission, of its good faith efforts.
- (e) The Contractor shall include the provisions of subsection (b) of this Section in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Connecticut General Statutes §46a-56; provided if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.
- (f) The Contractor agrees to comply with the regulations referred to in this Section as they exist on the date of this Contract and as they may be adopted or amended from time to time during the term of this Contract and any amendments thereto.
- (g) (1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of sexual orientation, in any manner prohibited by the laws of the United States or the State of Connecticut, and that employees are treated when employed without regard to their sexual orientation; (2) the Contractor agrees to provide each labor union or representative of workers with which such Contractor has a collective bargaining agreement or other contract or understanding and each vendor with which such Contractor has a contract or understanding, a notice to be provided by the Commission on Human Rights and Opportunities advising the labor union or workers' representative of the Contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment; (3) the Contractor agrees to comply with each provision of this section and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes § 46a-56; and

(4) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor which relate to the provisions of this Section and Connecticut General Statutes § 46a-56.

- (h) The Contractor shall include the provisions of the foregoing paragraph in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Connecticut General Statutes § 46a-56; provided, if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.

(i) Nondiscrimination Certification

Pursuant to subsection (c) of section 4a-60 and subsection (b) of section 4a-60a of the Connecticut General Statutes, the Contractor, for itself and its authorized signatory of this Contract, affirms that it understands the obligations of this section and that it will maintain a policy for the duration of the Contract to assure that the Contract will be performed in compliance with the nondiscrimination requirements of such sections. The Contractor and its authorized signatory of this Contract demonstrate their understanding of this obligation by either (A) having provided an affirmative response in the required online bid or response to a proposal question which asks if the contractor understands its obligations under such sections, or (B) initialing this nondiscrimination affirmation in the following

box: ☐

8. Whistleblower Provision

The following clause is applicable if the Contract has a value of Five Million Dollars (\$5,000,000) or more.

Whistleblowing. This Contract may be subject to the provisions of Section 4-61dd of the Connecticut General Statutes. In accordance with this statute, if an officer, employee or appointing authority of the Contractor takes or threatens to take any personnel action against any employee of the Contractor in retaliation for such employee's disclosure of information to any employee of the contracting state or quasi-public agency or the Auditors of Public Accounts or the Attorney General under the provisions of subsection (a) of such statute, the Contractor shall be liable for a civil penalty of not more than five thousand dollars for each offense, up to a maximum of twenty per cent of the value of this Contract. Each violation shall be a separate and distinct offense and in the case of a continuing violation, each calendar day's continuance of the violation shall be deemed to be a separate and distinct offense. The State may request that the Attorney General bring a civil action in the Superior Court for the Judicial District of Hartford to seek imposition and recovery of such civil penalty. In accordance with subsection (f) of such statute, each large state contractor, as defined in the statute, shall post a notice of the provisions of the statute relating to large state contractors in a conspicuous place which is readily available for viewing by the employees of the Contractor.

9. Connecticut Freedom of Information Act

- (a) **Disclosure of Records.** This Contract may be subject to the provisions of section 1-218 of the Connecticut General Statutes. In accordance with this statute, each contract in excess of two million five hundred thousand dollars between a public agency and a person for the performance of a governmental function shall (a) provide that the public agency is entitled to receive a copy of records and files related to the performance of the governmental

function, and (b) indicate that such records and files are subject to FOIA and may be disclosed by the public agency pursuant to FOIA. No request to inspect or copy such records or files shall be valid unless the request is made to the public agency in accordance with FOIA. Any complaint by a person who is denied the right to inspect or copy such records or files shall be brought to the Freedom of Information Commission in accordance with the provisions of sections 1-205 and 1-206 of the Connecticut General Statutes.

- (b) Confidential Information.** The State will afford due regard to the Contractor's request for the protection of proprietary or confidential information which the State receives from the Contractor. However, all materials associated with the Contract are subject to the terms of the FOIA and all corresponding rules, regulations and interpretations. In making such a request, the Contractor may not merely state generally that the materials are proprietary or confidential in nature and not, therefore, subject to release to third parties. Those particular sentences, paragraphs, pages or sections that the Contractor believes are exempt from disclosure under the FOIA must be specifically identified as such. Convincing explanation and rationale sufficient to justify each exemption consistent with the FOIA must accompany the request. The rationale and explanation must be stated in terms of the prospective harm to the competitive position of the Contractor that would result if the identified material were to be released and the reasons why the materials are legally exempt from release pursuant to the FOIA. To the extent that any other provision or part of the Contract conflicts or is in any way inconsistent with this section, this section controls and shall apply and the conflicting provision or part shall not be given effect. If the Contractor indicates that certain documentation is submitted in confidence, by specifically and clearly marking the documentation as "CONFIDENTIAL," DOT will first review the Contractor's claim for consistency with the FOIA (that is, review that the documentation is actually a trade secret or commercial or financial information and not required by statute), and if determined to be consistent, will endeavor to keep such information confidential to the extent permitted by law. See, *e.g.*, Conn. Gen. Stat. §1-210(b)(5)(A-B). The State, however, has no obligation to initiate, prosecute or defend any legal proceeding or to seek a protective order or other similar relief to prevent disclosure of any information that is sought pursuant to a FOIA request. Should the State withhold such documentation from a Freedom of Information requester and a complaint be brought to the Freedom of Information Commission, the Contractor shall have the burden of cooperating with DOT in defense of that action and in terms of establishing the availability of any FOIA exemption in any proceeding where it is an issue. In no event shall the State have any liability for the disclosure of any documents or information in its possession which the State believes are required to be disclosed pursuant to the FOIA or other law.

10. Service of Process

The Contractor, if not a resident of the State of Connecticut, or, in the case of a partnership, the partners, if not residents, hereby appoints the Secretary of State of the State of Connecticut, and his successors in office, as agent for service of process for any action arising out of or as a result of this Contract; such appointment to be in effect throughout the life of this Contract and six (6) years thereafter.

11. Substitution of Securities for Retainages on State Contracts and Subcontracts

This Contract is subject to the provisions of Section 3-112a of the General Statutes of the State of Connecticut, as revised.

12. Health Insurance Portability and Accountability Act of 1996 (HIPAA)

The Contractor shall comply, if applicable, with the Health Insurance Portability and Accountability Act of 1996 and, pursuant thereto, the provisions attached at Exhibit B, and hereby made part of this Contract.

13. Forum and Choice of Law

Forum and Choice of Law. The parties deem the Contract to have been made in the City of Hartford, State of Connecticut. Both parties agree that it is fair and reasonable for the validity and construction of the Contract to be, and it shall be, governed by the laws and court decisions of the State of Connecticut, without giving effect to its principles of conflicts of laws. To the extent that any immunities provided by Federal law or the laws of the State of Connecticut do not bar an action against the State, and to the extent that these courts are courts of competent jurisdiction, for the purpose of venue, the complaint shall be made returnable to the Judicial District of Hartford only or shall be brought in the United States District Court for the District of Connecticut only, and shall not be transferred to any other court, provided, however, that nothing here constitutes a waiver or compromise of the sovereign immunity of the State of Connecticut. The Contractor waives any objection which it may now have or will have to the laying of venue of any Claims in any forum and further irrevocably submits to such jurisdiction in any suit, action or proceeding.

14. Summary of State Ethics Laws

Pursuant to the requirements of section 1-101qq of the Connecticut General Statutes (a) the State has provided to the Contractor the summary of State ethics laws developed by the State Ethics Commission pursuant to section 1-81b of the Connecticut General Statutes, which summary is incorporated by reference into and made a part of this Contract as if the summary had been fully set forth in this Contract; (b) the Contractor represents that the chief executive officer or authorized signatory of the Contract and all key employees of such officer or signatory have read and understood the summary and agree to comply with the provisions of state ethics law; (c) prior to entering into a contract with any subcontractors or consultants, the Contractor shall provide the summary to all subcontractors and consultants and each such contract entered into with a subcontractor or consultant on or after July 1, 2021, shall include a representation that each subcontractor or consultant and the key employees of such subcontractor or consultant have read and understood the summary and agree to comply with the provisions of state ethics law; (d) failure to include such representations in such contracts with subcontractors or consultants shall be cause for termination of the Contract; and (e) each contract with such contractor, subcontractor or consultant shall incorporate such summary by reference as a part of the contract terms.

15. Audit and Inspection of Plants, Places of Business and Records

- (a) The State and its agents, including, but not limited to, the Connecticut Auditors of Public Accounts, Attorney General and State's Attorney and their respective agents, may, at reasonable hours, inspect and examine all of the parts of the Contractor's and Contractor Parties' plants and places of business which, in any way, are related to, or involved in, the performance of this Contract. For the purposes of this Section, "Contractor Parties" means the Contractor's members, directors, officers, shareholders, partners, managers, principal officers, representatives, agents, servants, consultants, employees or any one of them or any other person or entity with whom the Contractor is in privity of oral or written contract and the Contractor intends for such other person or entity to Perform under the Contract in any capacity.

- (b) The Contractor shall maintain and shall require each of the Contractor Parties to maintain, accurate and complete Records. The Contractor shall make all of its and the Contractor Parties' Records available at all reasonable hours for audit and inspection by the State and its agents.
- (c) The State shall make all requests for any audit or inspection in writing and shall provide the Contractor with at least twenty-four (24) hours' notice prior to the requested audit and inspection date. If the State suspects fraud or other abuse, or in the event of an emergency, the State is not obligated to provide any prior notice.
- (d) The Contractor shall keep and preserve or cause to be kept and preserved all of its and Contractor Parties' Records until three (3) years after the latter of (i) final payment under this Agreement, or (ii) the expiration or earlier termination of this Agreement, as the same may be modified for any reason. The State may request an audit or inspection at any time during this period. If any Claim or audit is started before the expiration of this period, the Contractor shall retain or cause to be retained all Records until all Claims or audit findings have been resolved.
- (e) The Contractor shall cooperate fully with the State and its agents in connection with an audit or inspection. Following any audit or inspection, the State may conduct and the Contractor shall cooperate with an exit conference.
- (f) The Contractor shall incorporate this entire Section verbatim into any contract or other agreement that it enters into with any Contractor Party.

16. Campaign Contribution Restriction

For all State contracts, defined in section 9-612 of the Connecticut General Statutes as having a value in a calendar year of \$50,000 or more, or a combination or series of such agreements or contracts having a value of \$100,000 or more, the authorized signatory to this Contract represents that they have received the State Elections Enforcement Commission's notice advising state contractors of state campaign contribution and solicitation prohibitions, and will inform its principals of the contents of the notice.

17. Tangible Personal Property

- (a) The Contractor on its behalf and on behalf of its Affiliates, as defined below, shall comply with the provisions of Conn. Gen. Stat. §12-411b, as follows:
 - (1) For the term of the Contract, the Contractor and its Affiliates shall collect and remit to the State of Connecticut, Department of Revenue Services, any Connecticut use tax due under the provisions of Chapter 219 of the Connecticut General Statutes for items of tangible personal property sold by the Contractor or by any of its Affiliates in the same manner as if the Contractor and such Affiliates were engaged in the business of selling tangible personal property for use in Connecticut and had sufficient nexus under the provisions of Chapter 219 to be required to collect Connecticut use tax;
 - (2) A customer's payment of a use tax to the Contractor or its Affiliates relieves the customer of liability for the use tax;
 - (3) The Contractor and its Affiliates shall remit all use taxes they collect from customers on or before the due date specified in the Contract, which may not be later than the last day of the month next succeeding the end of a calendar quarter or other tax collection period during which the tax was collected;
 - (4) The Contractor and its Affiliates are not liable for use tax billed by them but not paid to them by a customer; and
 - (5) Any Contractor or Affiliate who fails to remit use taxes collected on behalf of its customers by the due date specified in the Contract shall be subject to the interest and penalties provided for persons required to collect sales tax under chapter 219 of the general statutes.
- (b) For purposes of this section of the Contract, the word "Affiliate" means any person, as defined in section 12-1 of the general statutes, that controls, is controlled by, or is under common control with another person. A person controls another person if the person owns, directly or indirectly, more than ten per cent of the voting securities of the other person. The word "voting security" means a

security that confers upon the holder the right to vote for the election of members of the board of directors or similar governing body of the business, or that is convertible into, or entitles the holder to receive, upon its exercise, a security that confers such a right to vote. "Voting security" includes a general partnership interest.

- (c) The Contractor represents and warrants that each of its Affiliates has vested in the Contractor plenary authority to so bind the Affiliates in any agreement with the State of Connecticut. The Contractor on its own behalf and on behalf of its Affiliates shall also provide, no later than 30 days after receiving a request by the State's contracting authority, such information as the State may require to ensure, in the State's sole determination, compliance with the provisions of Chapter 219 of the Connecticut General Statutes, including, but not limited to, §12-411b.

18. Bid Rigging and/or Fraud – Notice to Contractor

The Connecticut Department of Transportation is cooperating with the U.S. Department of Transportation and the Justice Department in their investigation into highway construction contract bid rigging and/or fraud.

A toll-free "HOT LINE" telephone number 800-424-9071 has been established to receive information from contractors, subcontractors, manufacturers, suppliers or anyone with knowledge of bid rigging and/or fraud, either past or current. The "HOT LINE" telephone number will be available during normal working hours (8:00 am – 5:00 pm EST). Information will be treated confidentially and anonymity respected.

19. Consulting Agreements Representation

Pursuant to section 4a-81 of the Connecticut General Statutes, the Contractor represents that it has not entered into any consulting agreements in connection with this Contract, except for the agreements listed below. "Consulting agreement" means any written or oral agreement to retain the services, for a fee, of a consultant for the purposes of (A) providing counsel to a contractor, vendor, consultant or other entity seeking to conduct, or conducting, business with the State, (B) contacting, whether in writing or orally, any executive, judicial, or administrative office of the State, including any department, institution, bureau, board, commission, authority, official or employee for the purpose of solicitation, dispute resolution, introduction, requests for information, or (C) any other similar activity related to such contracts. "Consulting agreement" does not include any agreements entered into with a consultant who is registered under the provisions of chapter 10 of the Connecticut General Statutes as of the date such contract is executed in accordance with the provisions of section 4a-81 of the Connecticut General Statutes.

Consultant's Name and Title

Name of Firm (if applicable)

Start Date

End Date

Cost

The basic terms of the consulting agreement are: _____

Description of Services Provided: _____

Is the consultant a former State employee or former public official? ☐ YES ☐ NO

If YES: _____

Name of Former State Agency

Termination Date of Employment

20. Sovereign Immunity

The parties acknowledge and agree that nothing in the Solicitation or the Contract shall be construed as a modification, compromise or waiver by the State of any rights or defenses of any immunities provided by Federal law or the laws of the State of Connecticut to the State or any of its officers and employees, which they may have had, now have or will have with respect to all matters arising out of the Contract. To the extent that this section conflicts with any other section, this section shall govern.

21. Large State Contract Representation for Contractor

Pursuant to section 4-252 of the Connecticut General Statutes and Acting Governor Susan Bysiewicz Executive Order No. 21-2, promulgated July 1, 2021, the Contractor, for itself and on behalf of all of its principals or key personnel who submitted a bid or proposal, represents:

- (1) That no gifts were made by (A) the Contractor, (B) any principals and key personnel of the Contractor, who participate substantially in preparing bids, proposals or negotiating State contracts, or (C) any agent of the Contractor or principals and key personnel, who participates substantially in preparing bids, proposals or negotiating State contracts, to (i) any public official or State employee of the State agency or quasi-public agency soliciting bids or proposals for State contracts, who participates substantially in the preparation of bid solicitations or requests for proposals for State contracts or the negotiation or award of State contracts, or (ii) any public official or State employee of any other State agency, who has supervisory or appointing authority over such State agency or quasi-public agency;
- (2) That no such principals and key personnel of the Contractor, or agent of the Contractor or of such principals and key personnel, knows of any action by the Contractor to circumvent such prohibition on gifts by providing for any other principals and key personnel, official, employee or agent of the Contractor to provide a gift to any such public official or State employee; and
- (3) That the Contractor is submitting bids or proposals without fraud or collusion with any person.

22. Large State Contract Representation for Official or Employee of State Agency

Pursuant to section 4-252 of the Connecticut General Statutes and Acting Governor Susan Bysiewicz Executive Order No. 21-2, promulgated July 1, 2021, the State agency official or employee represents that the selection of the most qualified or highest ranked person, firm or corporation was not the result of collusion, the giving of a gift or the promise of a gift, compensation, fraud or inappropriate influence from any person.

23. Iran Energy Investment Certification

(a) Pursuant to section 4-252a of the Connecticut General Statutes, the Contractor certifies that it

has not made a direct investment of twenty million dollars or more in the energy sector of Iran on or after October 1, 2013, as described in Section 202 of the Comprehensive Iran Sanctions, Accountability and Divestment Act of 2010, and has not increased or renewed such investment on or after said date.

(b) If the Contractor makes a good faith effort to determine whether it has made an investment described in subsection (a) of this section shall not be subject to the penalties of false statement pursuant to section 4-252a of the Connecticut General Statutes. A "good faith effort" for purposes of this subsection includes a determination that the Contractor is not on the list of persons who engage in certain investment activities in Iran created by the Department of General Services of the State of California pursuant to Division 2, Chapter 2.7 of the California Public Contract Code. Nothing in this subsection shall be construed to impair the ability of the State agency or quasi-public agency to pursue a breach of contract action for any violation of the provisions of the Contract.

24. Access to Contract and State Data

The Contractor shall provide to the Client Agency access to any data, as defined in Conn. Gen Stat. Sec. 4e-1, concerning the Contract and the Client Agency that are in the possession or control of the Contractor upon demand and shall provide the data to the Client Agency in a format prescribed by the Client Agency and the State Auditors of Public Accounts at no additional cost.

EXHIBIT A

CONTRACTOR WORKFORCE UTILIZATION / EQUAL EMPLOYMENT OPPORTUNITY

1. Project Workforce Utilization Goals:

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or Federally assisted or funded) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for the geographical area where the work is actually performed.

Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications which contain the applicable goals for minority and female participation.

The goals for minority and female utilization are expressed in percentage terms for the contractor's aggregate work-force in each trade on all construction work in the covered area, are referenced in the Appendix A below.

STATE FUNDED PROJECTS (only)

APPENDIX A

(Labor Market Goals)

LABOR MARKET AREA GOAL

Female

Minority

Bridgeport 1.4%	22.7%		
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Ansonia	Beacon Falls	Bridgeport	Derby
Easton	Fairfield	Milford	Monroe
Oxford	Seymour	Shelton	Stratford
Trumbull			

Danbury 3.8%	10.7%		
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Bethel	Bridgewater	Brookfield	Danbury
Kent	New Fairfield	New Milford	Newtown
Redding	Ridgefield	Roxbury	Sherman
Washington			

Danielson 1.8%	4.3%		
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Brooklyn	Eastford	Hampton	Killingly
Pomfret	Putnam	Scotland	Sterling
Thompson	Voluntown	Union	Woodstock

Hartford 2.1%	13.7%		
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Andover	Ashford	Avon	Barkhamsted
Belin	Bloomfield	Bolton	Bristol
Burlington	Canton	Chaplin	Colchester
Columbia	Coventry	Cromwell	Durham
East Granby	East Haddam	East Hampton	East Hartford
East Windsor	Ellington	Enfield	Farmington
Glastonbury	Granby	Haddam	Hartford
Harwinton	Hebron	Lebanon	Manchester
Mansfield	Marlborough	Middlefield	Middletown
Newington	Plainville	Plymouth	Portland
Rocky Hill	Simsbury	Somers	South Windsor
Southington	Stafford	Suffield	Tolland
Vernon	West Hartford	Wethersfield	Willington
Winchester	Windham	Windsor	Windsor Locks

Lower River 1.8%	4.3%		
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Chester	Deep River	Essex	Old Lyme
Westbrook			

LABOR MARKET AREA GOAL
Female

Minority

New Haven 3.1%	17.9%		
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Bethany	Branford	Cheshire	Clinton
East Haven	Guilford	Hamden	Killingworth

Madison
North Haven
Woodbridge

Meriden
Orange

New Haven
Wallingford

North Branford
West Haven

New London
3.1%

7.4%

Bozrah
Griswold
Montville
Old Lyme
Salem
Hopkinton

Canterbury
Groton
New London
Old Saybrook
Sprague
RI – Westerly Rhode Island

East Lyme
Ledyard
North Stonington
Plainfield
Stonington

Franklin
Lisbon
Norwich
Preston
Waterford

Stamford
2.1%

33.2%

Darien
Stamford

Greenwich
Weston

New Canaan
Westport

Norwalk
Wilton

Torrington
1.8%

4.3%

Canaan
Hartland
Norfolk
Torrington

Colebrook
Kent
North Canaan
Warren

Cornwall
Litchfield
Salisbury

Goshen
Morris
Sharon

Waterbury
1.6%

12.4%

Bethlehem
Southbury
Wolcott

Middlebury
Thomaston
Woodbury

Naugatuck
Waterbury

Prospect
Watertown

EXHIBIT B**Health Insurance Portability and Accountability Act of 1996 (“HIPAA”).**

- (a) If the Contactor is a Business Associate under the requirements of the Health Insurance Portability and Accountability Act of 1996 (“HIPAA”), the Contractor must comply with all terms and conditions of this Section of the Contract. If the Contractor is not a Business Associate under HIPAA, this Section of the Contract does not apply to the Contractor for this Contract.
- (b) The Contractor is required to safeguard the use, publication and disclosure of information on all applicants for, and all clients who receive, services under the Contract in accordance with all applicable federal and state law regarding confidentiality, which includes but is not limited to HIPAA, more specifically with the Privacy and Security Rules at 45 C.F.R. Part 160 and Part 164, subparts A, C, and E; and
- (c) The State of Connecticut Agency named on page 1 of this Contract (hereinafter the “Department”) is a “covered entity” as that term is defined in 45 C.F.R. § 160.103; and
- (d) The Contractor, on behalf of the Department, performs functions that involve the use or disclosure of “individually identifiable health information,” as that term is defined in 45 C.F.R. § 160.103; and
- (e) The Contractor is a “business associate” of the Department, as that term is defined in 45 C.F.R. § 160.103; and
- (f) The Contractor and the Department agree to the following in order to secure compliance with the HIPAA, the requirements of Subtitle D of the Health Information Technology for Economic and Clinical Health Act (hereinafter the HITECH Act), (Pub. L. 111-5, sections 13400 to 13423), and more specifically with the Privacy and Security Rules at 45 C.F.R. Part 160 and Part 164, subparts A, C, and E.
- (g) Definitions
 - (1) “Breach shall have the same meaning as the term is defined in section 13400 of the HITECH Act (42 U.S.C. §17921(1))
 - (2) “Business Associate” shall mean the Contractor.
 - (3) “Covered Entity” shall mean the Department of the State of Connecticut named on page 1 of this Contract.
 - (4) “Designated Record Set” shall have the same meaning as the term “designated record set” in 45 C.F.R. § 164.501.
 - (5) “Electronic Health Record” shall have the same meaning as the term is defined in section 13400 of the HITECH Act (42 U.S.C. §17921(5))

- (6) "Individual" shall have the same meaning as the term "individual" in 45 C.F.R. § 160.103 and shall include a person who qualifies as a personal representative as defined in 45 C.F.R. § 164.502(g).
 - (7) "Privacy Rule" shall mean the Standards for Privacy of Individually Identifiable Health Information at 45 C.F.R. part 160 and parts 164, subparts A and E.
 - (8) "Protected Health Information" or "PHI" shall have the same meaning as the term "protected health information" in 45 C.F.R. § 160.103, limited to information created or received by the Business Associate from or on behalf of the Covered Entity.
 - (9) "Required by Law" shall have the same meaning as the term "required by law" in 45 C.F.R. § 164.103.
 - (10) "Secretary" shall mean the Secretary of the Department of Health and Human Services or his designee.
 - (11) "More stringent" shall have the same meaning as the term "more stringent" in 45 C.F.R. § 160.202.
 - (12) "This Section of the Contract" refers to the HIPAA Provisions stated herein, in their entirety.
 - (13) "Security Incident" shall have the same meaning as the term "security incident" in 45 C.F.R. § 164.304.
 - (14) "Security Rule" shall mean the Security Standards for the Protection of Electronic Protected Health Information at 45 C.F.R. part 160 and parts 164, subpart A and C.
 - (15) "Unsecured protected health information" shall have the same meaning as the term as defined in section 13402(h)(1)(A) of HITECH. Act. (42 U.S.C. § 17932(h)(1)(A)).
- (h) Obligations and Activities of Business Associates.
- (1) Business Associate agrees not to use or disclose PHI other than as permitted or required by this Section of the Contract or as Required by Law.
 - (2) Business Associate agrees to use appropriate safeguards to prevent use or disclosure of PHI other than as provided for in this Section of the Contract.
 - (3) Business Associate agrees to use administrative, physical and technical safeguards that reasonably and appropriately protect the confidentiality, integrity, and availability of electronic protected health information that it creates, receives, maintains, or transmits on behalf of the Covered Entity.
 - (4) Business Associate agrees to mitigate, to the extent practicable, any harmful effect that is known to the Business Associate of a use or disclosure of PHI by Business Associate in violation of this Section of the Contract.

- (5) Business Associate agrees to report to Covered Entity any use or disclosure of PHI not provided for by this Section of the Contract or any security incident of which it becomes aware.
- (6) Business Associate agrees to insure that any agent, including a subcontractor, to whom it provides PHI received from, or created or received by Business Associate, on behalf of the Covered Entity, agrees to the same restrictions and conditions that apply through this Section of the Contract to Business Associate with respect to such information.
- (7) Business Associate agrees to provide access, at the request of the Covered Entity, and in the time and manner agreed to by the parties, to PHI in a Designated Record Set, to Covered Entity or, as directed by Covered Entity, to an Individual in order to meet the requirements under 45 C.F.R. § 164.524.
- (8) Business Associate agrees to make any amendments to PHI in a Designated Record Set that the Covered Entity directs or agrees to pursuant to 45 C.F.R. § 164.526 at the request of the Covered Entity, and in the time and manner agreed to by the parties.
- (9) Business Associate agrees to make internal practices, books, and records, including policies and procedures and PHI, relating to the use and disclosure of PHI received from, or created or received by, Business Associate on behalf of Covered Entity, available to Covered Entity or to the Secretary in a time and manner agreed to by the parties or designated by the Secretary, for purposes of the Secretary determining Covered Entity's compliance with the Privacy Rule.
- (10) Business Associate agrees to document such disclosures of PHI and information related to such disclosures as would be required for Covered Entity to respond to a request by an Individual for an accounting of disclosures of PHI in accordance with 45 C.F.R. § 164.528 and section 13405 of the HITECH Act (42 U.S.C. § 17935) and any regulations promulgated thereunder.
- (11) Business Associate agrees to provide to Covered Entity, in a time and manner agreed to by the parties, information collected in accordance with clause h. (10) of this Section of the Contract, to permit Covered Entity to respond to a request by an Individual for an accounting of disclosures of PHI in accordance with 45 C.F.R. § 164.528 and section 13405 of the HITECH Act (42 U.S.C. § 17935) and any regulations promulgated thereunder. Business Associate agrees at the Covered Entity's direction to provide an accounting of disclosures of PHI directly to an individual in accordance with 45 C.F.R. § 164.528 and section 13405 of the HITECH Act (42 U.S.C. § 17935) and any regulations promulgated thereunder.
- (12) Business Associate agrees to comply with any state or federal law that is more stringent than the Privacy Rule.
- (13) Business Associate agrees to comply with the requirements of the HITECH Act relating to privacy and security that are applicable to the Covered Entity and with the requirements of 45 C.F.R. sections 164.504(e), 164.308, 164.310, 164.312, and 164.316.

- (14) In the event that an individual requests that the Business Associate (a) restrict disclosures of PHI; (b) provide an accounting of disclosures of the individual's PHI; or (c) provide a copy of the individual's PHI in an electronic health record, the Business Associate agrees to notify the covered entity, in writing, within two business days of the request.
- (15) Business Associate agrees that it shall not, directly or indirectly, receive any remuneration in exchange for PHI of an individual without (1) the written approval of the covered entity, unless receipt of remuneration in exchange for PHI is expressly authorized by this Contract and (2) the valid authorization of the individual, except for the purposes provided under section 13405(d)(2) of the HITECH Act,(42 U.S.C. § 17935(d)(2)) and in any accompanying regulations

(16) Obligations in the Event of a Breach

- A. The Business Associate agrees that, following the discovery of a breach of unsecured protected health information, it shall notify the Covered Entity of such breach in accordance with the requirements of section 13402 of HITECH (42 U.S.C. 17932(b) and the provisions of this Section of the Contract.
- B. Such notification shall be provided by the Business Associate to the Covered Entity without unreasonable delay, and in no case later than 30 days after the breach is discovered by the Business Associate, except as otherwise instructed in writing by a law enforcement official pursuant to section 13402 (g) of HITECH (42 U.S.C. 17932(g)) . A breach is considered discovered as of the first day on which it is, or reasonably should have been, known to the Business Associate. The notification shall include the identification and last known address, phone number and email address of each individual (or the next of kin of the individual if the individual is deceased) whose unsecured protected health information has been, or is reasonably believed by the Business Associate to have been, accessed, acquired, or disclosed during such breach.
- C. The Business Associate agrees to include in the notification to the Covered Entity at least the following information:
1. A brief description of what happened, including the date of the breach and the date of the discovery of the breach, if known.
 2. A description of the types of unsecured protected health information that were involved in the breach (such as full name, Social Security number, date of birth, home address, account number, or disability code).
 3. The steps the Business Associate recommends that individuals take to protect themselves from potential harm resulting from the breach.
 4. A detailed description of what the Business Associate is doing to investigate the breach, to mitigate losses, and to protect against any further breaches.
 5. Whether a law enforcement official has advised either verbally or in writing the Business Associate that he or she has determined that notification or notice to

individuals or the posting required under section 13402 of the HITECH Act would impede a criminal investigation or cause damage to national security and; if so, include contact information for said official.

- D. Business Associate agrees to provide appropriate staffing and have established procedures to ensure that individuals informed by the Covered Entity of a breach by the Business Associate have the opportunity to ask questions and contact the Business Associate for additional information regarding the breach. Such procedures shall include a toll-free telephone number, an e-mail address, a posting on its Web site and a postal address. Business Associate agrees to include in the notification of a breach by the Business Associate to the Covered Entity, a written description of the procedures that have been established to meet these requirements. Costs of such contact procedures will be borne by the Contractor.
 - E. Business Associate agrees that, in the event of a breach, it has the burden to demonstrate that it has complied with all notifications requirements set forth above, including evidence demonstrating the necessity of a delay in notification to the Covered Entity.
- (i) Permitted Uses and Disclosure by Business Associate.
- (1) General Use and Disclosure Provisions Except as otherwise limited in this Section of the Contract, Business Associate may use or disclose PHI to perform functions, activities, or services for, or on behalf of, Covered Entity as specified in this Contract, provided that such use or disclosure would not violate the Privacy Rule if done by Covered Entity or the minimum necessary policies and procedures of the Covered Entity.
 - (2) Specific Use and Disclosure Provisions
 - (A) Except as otherwise limited in this Section of the Contract, Business Associate may use PHI for the proper management and administration of Business Associate or to carry out the legal responsibilities of Business Associate.
 - (B) Except as otherwise limited in this Section of the Contract, Business Associate may disclose PHI for the proper management and administration of Business Associate, provided that disclosures are Required by Law, or Business Associate obtains reasonable assurances from the person to whom the information is disclosed that it will remain confidential and used or further disclosed only as Required by Law or for the purpose for which it was disclosed to the person, and the person notifies Business Associate of any instances of which it is aware in which the confidentiality of the information has been breached.
 - (C) Except as otherwise limited in this Section of the Contract, Business Associate may use PHI to provide Data Aggregation services to Covered Entity as permitted by 45 C.F.R. § 164.504(e)(2)(i)(B).
- (j) Obligations of Covered Entity.

- (1) Covered Entity shall notify Business Associate of any limitations in its notice of privacy practices of Covered Entity, in accordance with 45 C.F.R. § 164.520, or to the extent that such limitation may affect Business Associate's use or disclosure of PHI.
 - (2) Covered Entity shall notify Business Associate of any changes in, or revocation of, permission by Individual to use or disclose PHI, to the extent that such changes may affect Business Associate's use or disclosure of PHI.
 - (3) Covered Entity shall notify Business Associate of any restriction to the use or disclosure of PHI that Covered Entity has agreed to in accordance with 45 C.F.R. § 164.522, to the extent that such restriction may affect Business Associate's use or disclosure of PHI.
- (k) Permissible Requests by Covered Entity. Covered Entity shall not request Business Associate to use or disclose PHI in any manner that would not be permissible under the Privacy Rule if done by the Covered Entity, except that Business Associate may use and disclose PHI for data aggregation, and management and administrative activities of Business Associate, as permitted under this Section of the Contract.
- (l) Term and Termination.
- (1) Term. The Term of this Section of the Contract shall be effective as of the date the Contract is effective and shall terminate when the information collected in accordance with clause h. (10) of this Section of the Contract is provided to the Covered Entity and all of the PHI provided by Covered Entity to Business Associate, or created or received by Business Associate on behalf of Covered Entity, is destroyed or returned to Covered Entity, or, if it is infeasible to return or destroy PHI, protections are extended to such information, in accordance with the termination provisions in this Section.
 - (2) Termination for Cause Upon Covered Entity's knowledge of a material breach by Business Associate, Covered Entity shall either:
 - (A) Provide an opportunity for Business Associate to cure the breach or end the violation and terminate the Contract if Business Associate does not cure the breach or end the violation within the time specified by the Covered Entity; or
 - (B) Immediately terminate the Contract if Business Associate has breached a material term of this Section of the Contract and cure is not possible; or
 - (C) If neither termination nor cure is feasible, Covered Entity shall report the violation to the Secretary.
 - (3) Effect of Termination
 - (A) Except as provided in (l)(2) of this Section of the Contract, upon termination of this Contract, for any reason, Business Associate shall return or destroy all PHI received from Covered Entity, or created or received by Business Associate on behalf of Covered Entity. Business Associate shall also provide the information collected in accordance with clause h. (10) of this Section of the Contract to the Covered Entity

within ten business days of the notice of termination. This provision shall apply to PHI that is in the possession of subcontractors or agents of Business Associate. Business Associate shall retain no copies of the PHI.

(B) In the event that Business Associate determines that returning or destroying the PHI is infeasible, Business Associate shall provide to Covered Entity notification of the conditions that make return or destruction infeasible. Upon documentation by Business Associate that return or destruction of PHI is infeasible, Business Associate shall extend the protections of this Section of the Contract to such PHI and limit further uses and disclosures of PHI to those purposes that make return or destruction infeasible, for as long as Business Associate maintains such PHI. Infeasibility of the return or destruction of PHI includes, but is not limited to, requirements under state or federal law that the Business Associate maintains or preserves the PHI or copies thereof.

(m) Miscellaneous Provisions.

- (1) Regulatory References. A reference in this Section of the Contract to a section in the Privacy Rule means the section as in effect or as amended.
- (2) Amendment. The Parties agree to take such action as is necessary to amend this Section of the Contract from time to time as is necessary for Covered Entity to comply with requirements of the Privacy Rule and the Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191.
- (3) Survival. The respective rights and obligations of Business Associate shall survive the termination of this Contract.
- (4) Effect on Contract. Except as specifically required to implement the purposes of this Section of the Contract, all other terms of the Contract shall remain in force and effect.
- (5) Construction. This Section of the Contract shall be construed as broadly as necessary to implement and comply with the Privacy Standard. Any ambiguity in this Section of the Contract shall be resolved in favor of a meaning that complies, and is consistent with, the Privacy Standard.
- (6) Disclaimer. Covered Entity makes no warranty or representation that compliance with this Section of the Contract will be adequate or satisfactory for Business Associate's own purposes. Covered Entity shall not be liable to Business Associate for any claim, civil or criminal penalty, loss or damage related to or arising from the unauthorized use or disclosure of PHI by Business Associate or any of its officers, directors, employees, contractors or agents, or any third party to whom Business Associate has disclosed PHI contrary to the provisions of this Contract or applicable law. Business Associate is solely responsible for all decisions made, and actions taken, by Business Associate regarding the safeguarding, use and disclosure of PHI within its possession, custody or control.

(7) Indemnification. The Business Associate shall indemnify and hold the Covered Entity harmless from and against any and all claims, liabilities, judgments, fines, assessments, penalties, awards and any statutory damages that may be imposed or assessed pursuant to HIPAA, as amended or the

HITECH Act, including, without limitation, attorney's fees, expert witness fees, costs of investigation, litigation or dispute resolution, and costs awarded thereunder, relating to or arising out of any violation by the Business Associate and its agents, including subcontractors, of any obligation of Business Associate and its agents, including subcontractors, under this section of the contract, under HIPAA, the HITECH Act, the Privacy Rule and the Security Rule.

EXHIBIT C

State Wages and Other Related Information

Please refer to the Department of Labor website for the latest updates, annual adjusted wage rate increases, certified payroll forms and applicable statutes.

<http://www.ctdol.state.ct.us/wgwkstnd/prevailwage.htm>

Prevailing Wage Law Poster Language

**THIS IS A PUBLIC WORKS PROJECT Covered by the
PREVAILING WAGE LAW CT General Statutes Section 31-53**

If you have QUESTIONS regarding your wages CALL (860) 263-6790

Section 31-55 of the CT State Statutes requires every contractor or subcontractor performing work for the state to post in a prominent place the prevailing wages as determined by the Labor Commissioner.

Informational Bulletin

THE 10-HOUR OSHA CONSTRUCTION SAFETY AND HEALTH COURSE (applicable to public building contracts entered into on or after July 1, 2007, where the total cost of all work to be performed is at least \$100,000)

- (1) This requirement was created by Public Act No. 06-175, which is codified in Section 31-53b of the Connecticut General Statutes (pertaining to the prevailing wage statutes);
- (2) The course is required for public building construction contracts (projects funded in whole or in part by the state or any political subdivision of the state) entered into on or after July 1, 2007;
- (3) It is required of private employees (not state or municipal employees) and apprentices who perform manual labor for a general contractor or subcontractor on a public building project where the total cost of all work to be performed is at least \$100,000;
- (4) The ten-hour construction course pertains to the ten-hour Outreach Course conducted in accordance with federal OSHA Training Institute standards, and, for telecommunications workers, a ten-hour training course conducted in accordance with federal OSHA standard, 29 CFR 1910.268;
- (5) The internet website for the federal OSHA Training Institute is http://www.osha.gov/fso/ote/training/edcenters/fact_sheet.html;
- (6) The statutory language leaves it to the contractor and its employees to determine who pays for the cost of the ten-hour Outreach Course;

(7) Within 30 days of receiving a contract award, a general contractor must furnish proof to the Labor Commissioner that all employees and apprentices performing manual labor on the project will have completed such a course;

(8) Proof of completion may be demonstrated through either: (a) the presentation of a bona fide student course completion card issued by the federal OSHA Training Institute; or (2) the presentation of documentation provided to an employee by a trainer certified by the Institute pending the actual issuance of the completion card;

(9) Any card with an issuance date more than 5 years prior to the commencement date of the construction project shall not constitute proof of compliance;

(10) Each employer shall affix a copy of the construction safety course completion card to the certified payroll submitted to the contracting agency in accordance with Conn. Gen. Stat. § 31-53(f) on which such employee's name first appears;

(11) Any employee found to be in non-compliance shall be subject to removal from the worksite if such employee does not provide satisfactory proof of course completion to the Labor Commissioner by the fifteenth day after the date the employee is determined to be in noncompliance;

(12) Any such employee who is determined to be in noncompliance may continue to work on a public building construction project for a maximum of fourteen consecutive calendar days while bringing his or her status into compliance;

(13) The Labor Commissioner may make complaint to the prosecuting authorities regarding any employer or agent of the employer, or officer or agent of the corporation who files a false certified payroll with respect to the status of an employee who is performing manual labor on a public building construction project;

(14) The statute provides the minimum standards required for the completion of a safety course by manual laborers on public construction contracts; any contractor can exceed these minimum requirements; and

(15) Regulations clarifying the statute are currently in the regulatory process, and shall be posted on the CTDOL website as soon as they are adopted in final form.

(16) Any questions regarding this statute may be directed to the Wage and Workplace Standards Division of the Connecticut Labor Department via the internet website of <http://www.ctdol.state.ct.us/wgwkstnd/wgemenu.htm>; or by telephone at (860)263-6790.

THE ABOVE INFORMATION IS PROVIDED EXCLUSIVELY AS AN EDUCATIONAL RESOURCE, AND IS NOT INTENDED AS A SUBSTITUTE FOR LEGAL INTERPRETATIONS WHICH MAY ULTIMATELY ARISE CONCERNING THE CONSTRUCTION OF THE STATUTE OR THE REGULATIONS.

November 29, 2006

Notice

To All Mason Contractors and Interested Parties Regarding Construction Pursuant to Section 31-53 of the Connecticut General Statutes (Prevailing Wage)

The Connecticut Labor Department Wage and Workplace Standards Division is empowered to enforce the prevailing wage rates on projects covered by the above referenced statute. Over the past few years the Division has withheld enforcement of the rate in effect for workers who operate a forklift on a prevailing wage rate project due to a potential jurisdictional dispute. The rate listed in the schedules and in our Occupational Bulletin (see enclosed) has been as follows:

Forklift Operator:

- **Laborers (Group 4) Mason Tenders** - operates forklift solely to assist a mason to a maximum height of nine feet only.

- **Power Equipment Operator (Group 9)** - operates forklift to assist any trade and to assist a mason to a height over nine feet.

The U.S. Labor Department conducted a survey of rates in Connecticut but it has not been published and the rate in effect remains as outlined in the above Occupational Bulletin.

Since this is a classification matter and not one of jurisdiction, effective January 1, 2007 the Connecticut Labor Department will enforce the rate on each schedule in accordance with our statutory authority.

Your cooperation in filing appropriate and accurate certified payrolls is appreciated.

**CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION**

**CONTRACTORS WAGE CERTIFICATION FORM
Construction Manager at Risk/General Contractor/Prime Contractor**

I, _____ of _____
Officer, Owner, Authorized Rep. Company Name

do hereby certify that the _____
Company Name

Street

City

and all of its subcontractors will pay all workers on the

Project Name and Number

Street and City

the wages as listed in the schedule of prevailing rates required for such project (a copy of which is attached hereto).

Signed

Subscribed and sworn to before me this _____ day of _____, _____.

Notary Public

Return to: Connecticut Department of Labor
Wage & Workplace Standards Division
200 Folly Brook Blvd.
Wethersfield, CT 06109

Rate Schedule Issued (Date): _____

Information Bulletin ***Occupational Classifications***

The Connecticut Department of Labor has the responsibility to properly determine "job classification" on prevailing wage projects covered under C.G.S. Section 31-53(d).

Note: This information is intended to provide a sample of some occupational classifications for guidance purposes only. It is not an all-inclusive list of each occupation's duties. This list is being provided only to highlight some areas where a contractor may be unclear regarding the proper classification. If unsure, the employer should seek guidelines for CTDOL.

Below are additional clarifications of specific job duties performed for certain classifications:

□ **ASBESTOS WORKERS**

Applies all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems.

□ **ASBESTOS INSULATOR**

Handle, install apply, fabricate, distribute, prepare, alter, repair, dismantle, heat and frost insulation, including penetration and fire stopping work on all penetration fire stop systems.

□ **BOILERMAKERS**

Erects hydro plants, incomplete vessels, steel stacks, storage tanks for water, fuel, etc. Builds incomplete boilers, repairs heat exchanges and steam generators.

□ **BRICKLAYERS, CEMENT MASONS, CEMENT FINISHERS, MARBLE MASONS, PLASTERERS, STONE MASONS, PLASTERERS. STONE MASONS, TERRAZZO WORKERS, TILE SETTERS**

Lays building materials such as brick, structural tile and concrete cinder, glass, gypsum, terra cotta block. Cuts, tools and sets marble, sets stone, finishes concrete, applies decorative steel, aluminum and plastic tile, applies cements, sand, pigment and marble chips to floors, stairways, etc.

□ **CARPENTERS, MILLWRIGHTS. PILEDRIVERMEN. LATHERS. RESILEINT FLOOR LAYERS, DOCK BUILDERS, DIKERS, DIVER TENDERS**

Constructs, erects, installs and repairs structures and fixtures of wood, plywood and wallboard. Installs, assembles, dismantles, moves industrial machinery. Drives piling into ground to provide foundations for structures such as buildings and bridges, retaining walls for earth embankments, such as cofferdams. Fastens wooden, metal or rockboard lath to walls, ceilings and partitions of buildings, acoustical tile layer, concrete form builder. Applies firestopping materials on fire resistive joint systems only. Installation of curtain/window walls only where attached to wood or metal studs. Installation of insulated material of all types whether blown, nailed or attached in other ways to walls, ceilings and floors of buildings. Assembly and installation of modular furniture/furniture systems. Free-standing furniture is not covered. This includes free standing:

student chairs, study top desks, book box desks, computer furniture, dictionary stand, atlas stand, wood shelving, two-position information access station, file cabinets, storage cabinets, tables, etc.

□ **LABORER, CLEANING**

- The clean up of any construction debris and the general (heavy/light) cleaning, including sweeping, wash down, mopping, wiping of the construction facility and its furniture, washing, polishing, and dusting.

□ **DELIVERY PERSONNEL**

- If delivery of supplies/building materials is to one common point and stockpiled there, prevailing wages are not required. If the delivery personnel are involved in the distribution of the material to multiple locations within the construction site then they would have to be paid prevailing wages for the type of work performed: laborer, equipment operator, electrician, ironworker, plumber, etc.

- An example of this would be where delivery of drywall is made to a building and the delivery personnel distribute the drywall from one "stockpile" location to further sub-locations on each floor. Distribution of material around a construction site is the job of a laborer or tradesman, and not a delivery personnel.

□ **ELECTRICIANS**

Install, erect, maintenance, alteration or repair of any wire, cable, conduit, etc., which generates, transforms, transmits or uses electrical energy for light, heat, power or other purposes, including the Installation or maintenance of telecommunication, LAN wiring or computer equipment, and low voltage wiring. *License required per Connecticut General Statutes: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9.

□ **ELEVATOR CONSTRUCTORS**

Install, erect, maintenance and repair of all types of elevators, escalators, dumb waiters and moving walks. *License required by Connecticut General Statutes: R-1, 2, 5, 6.

□ **FORK LIFT OPERATOR**

Laborers Group 4) Mason Tenders - operates forklift solely to assist a mason to a maximum height of nine (9) feet only.

Power Equipment Operator Group 9 - operates forklift to assist any trade, and to assist a mason to a height over nine (9) feet.

□ **GLAZIERS**

Glazing wood and metal sash, doors, partitions, and 2 story aluminum storefronts. Installs glass windows, skylights, store fronts and display cases or surfaces such as building fronts, interior walls, ceilings and table tops and metal store fronts. Installation of aluminum window walls and curtain walls is the "joint" work of glaziers and ironworkers, which require equal composite workforce.

□ **IRONWORKERS**

Erection, installation and placement of structural steel, precast concrete, miscellaneous iron, ornamental iron, metal curtain wall, rigging and reinforcing steel. Handling, sorting, and installation of reinforcing steel (rebar). Metal bridge rail (traffic), metal bridge handrail, and decorative security fence installation. Installation of aluminum window walls and curtain walls is the "joint" work of glaziers and ironworkers which require equal composite workforce.

□ **INSULATOR**

- Installing fire stopping systems/materials for "Penetration Firestop Systems": transit to cables, electrical conduits, insulated pipes, sprinkler pipe penetrations, ductwork behind radiation, electrical cable trays, fire rated pipe penetrations, natural polypropylene, HVAC ducts, plumbing bare metal, telephone and communication wires, and boiler room ceilings.

□ **LABORERS**

Acetylene burners, asphalt rakers, chain saw operators, concrete and power buggy operator, concrete saw operator, fence and guard rail erector (except metal bridge rail (traffic), decorative security fence (non-metal).

installation.), hand operated concrete vibrator operator, mason tenders, pipelayers (installation of storm drainage or sewage lines on the street only), pneumatic drill operator, pneumatic gas and electric drill operator, powermen and wagon drill operator, air track operator, block paver, curb setters, blasters, concrete spreaders.

□ **PAINTERS**

Maintenance, preparation, cleaning, blasting (water and sand, etc.), painting or application of any protective coatings of every description on all bridges and appurtenances of highways, roadways, and railroads. Painting, decorating, hardwood finishing, paper hanging, sign writing, scenic art work and drywall hhg for any and all types of building and residential work.

□ **LEAD PAINT REMOVAL**

- Painter's Rate 1. Removal of lead paint from bridges. 2. Removal of lead paint as preparation of any surface to be repainted. 3. Where removal is on a Demolition project prior to reconstruction. • Laborer's Rate 1. Removal of lead paint from any surface NOT to be repainted. 2. Where removal is on a TOTAL Demolition project only.

□ **PLUMBERS AND PIPEFITTERS**

Installation, repair, replacement, alteration or maintenance of all plumbing, heating, cooling and piping. ***License required per Connecticut General Statutes: P-1,2,6,7,8,9 J1,2,3,4 SP-1,2 S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4.**

☐ **POWER EQUIPMENT OPERATORS**

Operates several types of power construction equipment such as compressors, pumps, hoists, derricks, cranes, shovels, tractors, scrapers or motor graders, etc. Repairs and maintains equipment. ***License required, crane operators only, per Connecticut General Statutes.**

☐ **ROOFERS**

Covers roofs with composition shingles or sheets, wood shingles, slate or asphalt and gravel to waterproof roofs, including preparation of surface. (demolition or removal of any type of roofing and or clean-up of any and all areas where a roof is to be relaid.)

☐ **SHEETMETAL WORKERS**

Fabricate, assemble, install and repair sheetmetal products and equipment in such areas as ventilation, air-conditioning, warm air heating, restaurant equipment, architectural sheet metal work, sheetmetal roofing, and aluminum gutters. Fabrication, handling, assembling, erecting, altering, repairing, etc. of coated metal material panels and composite metal material panels when used on building exteriors and interiors as soffits, fascia, louvers, partitions, canopies, cornice, column covers, awnings, beam covers, cladding, sun shades, lighting troughs, spires, ornamental roofing, metal ceilings, mansards, copings, ornamental and ventilation hoods, vertical and horizontal siding panels, trim, etc. The sheet metal classification also applies to the vast variety of coated metal material panels and composite metal material panels that have evolved over the years as an alternative to conventional ferrous and non-ferrous metals like steel, iron, tin, copper, brass, bronze, aluminum, etc. Fabrication, handling, assembling, erecting, altering, repairing, etc. of architectural metal roof, standing seam roof, composite metal roof, metal and composite bathroom/toilet partitions, aluminum gutters, metal and composite lockers and shelving, kitchen equipment, and walk-in coolers. To include testing and air –balancing ancillary to installation and construction.

☐ **SPRINKLER FITTERS**

Installation, alteration, maintenance and repair of fire protection sprinkler systems. ***License required per Connecticut General Statutes: F-1, 2, 3, 4.**

☐ **TILE MARBLE AND TERRAZZO FINISHERS**

Assists and tends the tile setter, marble mason and terrazzo worker in the performance of their duties.

☐ **TRUCK DRIVERS**

~How to pay truck drivers delivering asphalt is under REVISION~

Truck Drivers are required to be paid prevailing wage for time spent "working" directly on the site. These drivers remain covered by the prevailing wage for any time spent transporting between the actual construction location and facilities (such as fabrication, plants, mobile factories, batch plant, borrow pits, job headquarters, tool yards, etc.) dedicated exclusively, or nearly so, to performance

of the contract or project, which are so located in proximity to the actual construction location that it is reasonable to include them. ***License required, drivers only, per Connecticut General Statutes.**

For example:

- Material men and deliverymen are not covered under prevailing wage as long as they are not directly involved in the construction process. If, they unload the material, they would then be covered by prevailing wage for the classification they are performing work in: laborer, equipment operator, etc.
- Hauling material off site is not covered provided they are not dumping it at a location outlined above.
- Driving a truck on site and moving equipment or materials on site would be considered covered work, as this is part of the construction process.

☐ Any questions regarding the proper classification should be directed to:

**Public Contract Compliance Unit
Wage and Workplace Standards Division
Connecticut Department of Labor
200 Folly Brook Blvd, Wethersfield, CT 06109
(860) 263-6543.**

**Connecticut Department of Labor
Wage and Workplace Standards Division
FOOTNOTES**

□ Please Note: If the “Benefits” listed on the schedule for the following occupations includes a letter(s) (+ a or + a+b for instance), refer to the information below.

Benefits to be paid at the appropriate prevailing wage rate for the listed occupation.

If the “Benefits” section for the occupation lists only a dollar amount, disregard the information below.

Bricklayers, Cement Masons, Cement Finishers, Concrete Finishers, Stone Masons
(Building Construction) and (Residential- Hartford, Middlesex, New Haven, New London and
Tolland Counties)

a. Paid Holiday: Employees shall receive 4 hours for Christmas Eve holiday provided the employee works the regularly scheduled day before and after the holiday. Employers may schedule work on Christmas Eve and employees shall receive pay for actual hours worked in addition to holiday pay.

Elevator Constructors: Mechanics

a. Paid Holidays: New Year’s Day, Memorial Day, Independence Day, Labor Day, Veterans’ Day, Thanksgiving Day, Christmas Day, plus the Friday after Thanksgiving.

b. Vacation: Employer contributes 8% of basic hourly rate for 5 years or more of service or 6% of basic hourly rate for 6 months to 5 years of service as vacation pay credit.

Glaziers

a. Paid Holidays: Labor Day and Christmas Day.

Power Equipment Operators
(Heavy and Highway Construction & Building Construction)

a. Paid Holidays: New Year’s Day, Good Friday, Memorial day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday. Holidays falling on Saturday may be observed on Saturday, or if the employer so elects, on the preceding Friday.

Ironworkers

a. Paid Holiday: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

Laborers (Tunnel Construction)

a. Paid Holidays: New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. No employee shall be eligible for holiday pay when he

fails, without cause, to work the regular work day preceding the holiday or the regular work day following the holiday.

Roofers

a. Paid Holidays: July 4th, Labor Day, and Christmas Day provided the employee is employed 15 days prior to the holiday.

Sprinkler Fitters

a. Paid Holidays: Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day, provided the employee has been in the employment of a contractor 20 working days prior to any such paid holiday.

Truck Drivers

(Heavy and Highway Construction & Building Construction)

a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas day, and Good Friday, provided the employee has at least 31 calendar days of service and works the last scheduled day before and the first scheduled day after the holiday, unless excused.

Rev. 7/1/19

SEE BELOW FOR STATE WAGE RATES

Minimum Rates and Classifications for Heavy/Highway Construction

ID#: 22-35078

Connecticut Department of Labor
Wage and Workplace Standards Division

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number: L0093-0001
State#:
Project: Road Improvements on Complete Street

Project Town: Newington
FAP#:

CLASSIFICATION	Hourly Rate	Benefits
1) Boilermaker	33.79	34% + 8.96
1a) Bricklayer, Cement Masons, Cement Finishers, Plasterers, Stone Masons	38.27	34.47
2) Carpenters, Piledrivermen	36.07	26.15
2a) Diver Tenders	36.07	26.15
3) Divers	44.53	26.15
03a) Millwrights	36.32	26.81
4) Painters: (Bridge Construction) Brush, Roller, Blasting (Sand, Water, etc.), Spray	54.0	22.90
4a) Painters: Brush and Roller	36.42	22.90
4b) Painters: Spray Only	39.42	22.90
4c) Painters: Steel Only	38.42	22.90

4d) Painters: Blast and Spray	39.42	22.90
4e) Painters: Tanks, Tower and Swing	38.42	22.90
5) Electrician (Trade License required: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	39.6	31.21+3% of gross wage
6) Ironworkers: Ornamental, Reinforcing, Structural, and Precast Concrete Erection	38.17	38.02 + a
7) Plumbers (Trade License required: (P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2) and Pipefitters (Including HVAC Work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4 G-1, G-2, G-8, G-9)	45.83	33.50
----LABORERS----		
8) Group 1: Laborer (Unskilled), Common or General, acetylene burner, concrete specialist	32.0	24.40
9) Group 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators, powdermen	32.25	24.40
10) Group 3: Pipelayers	32.5	24.40
11) Group 4: Jackhammer/Pavement breaker (handheld); mason tenders (cement/concrete), catch basin builders, asphalt rakers, air track operators, block paver, curb setter and forklift operators	32.5	24.40
12) Group 5: Toxic waste removal (non-mechanical systems)	34.0	24.40
13) Group 6: Blasters	33.75	24.40
Group 7: Asbestos/lead removal, non-mechanical systems (does not include leaded joint pipe)	33.0	24.40

Group 8: Traffic control signalmen	18.0	24.40
Group 9: Hydraulic Drills	32.75	24.40
----LABORERS (TUNNEL CONSTRUCTION, FREE AIR). Shield Drive and Liner Plate Tunnels in Free Air.----		
13a) Miners, Motormen, Mucking Machine Operators, Nozzle Men, Grout Men, Shaft & Tunnel Steel & Rodmen, Shield & Erector, Arm Operator, Cable Tenders	34.23	24.40 + a
13b) Brakemen, Trackmen, Miners' Helpers and all other men	33.26	24.40 + a
----CLEANING, CONCRETE AND CAULKING TUNNEL----		
14) Concrete Workers, Form Movers, and Strippers	33.26	24.40 + a
15) Form Erectors	33.59	24.40 + a
----ROCK SHAFT LINING, CONCRETE, LINING OF SAME AND TUNNEL IN FREE AIR:----		
16) Brakemen, Trackmen, Tunnel Laborers, Shaft Laborers, Miners Helpers	33.26	24.40 + a
17) Laborers Topside, Cage Tenders, Bellman	33.15	24.40 + a
18) Miners	34.23	24.40 + a
----TUNNELS, CAISSON AND CYLINDER WORK IN COMPRESSED AIR: ----		
18a) Blaster	40.72	24.40 + a

19) Brakemen, Trackmen, Groutman, Laborers, Outside Lock Tender, Gauge Tenders	40.52	24.40 + a
20) Change House Attendants, Powder Watchmen, Top on Iron Bolts	38.54	24.40 + a
21) Mucking Machine Operator, Grout Boss, Track Boss	41.31	24.40 + a
----TRUCK DRIVERS----(*see note below)		
Two Axle Trucks, Helpers	31.16	28.78 + a
Three Axle Trucks; Two Axle Ready Mix	31.27	28.78 + a
Three Axle Ready Mix	31.33	28.78 + a
Four Axle Trucks	31.39	28.78 + a
Four Axle Ready-Mix	31.44	28.78 + a
Heavy Duty Trailer (40 tons and over)	33.66	28.78 + a
Specialized earth moving equipment other than conventional type on-the road trucks and semi-trailer (including Euclids)	31.44	28.78 + a
Heavy Duty Trailer (up to 40 tons)	32.39	28.78 + a
Snorkle Truck	31.54	28.78 + a
----POWER EQUIPMENT OPERATORS----		
Group 1: Crane Handling or Erecting Structural Steel or Stone, Hoisting Engineer (2 drums or over). (Trade License Required)	50.27	26.80 + a

Group 1a: Front End Loader (7 cubic yards or over); Work Boat 26 ft. and over.	46.07	26.80 + a
Group 2: Cranes (100 ton rate capacity and over); Bauer Drill/Caisson. (Trade License Required)	49.91	26.80 + a
Group 2a: Cranes (under 100 ton rated capacity).	49.06	26.80 + a
Group 2b: Excavator over 2 cubic yards; Pile Driver (\$3.00 premium when operator controls hammer).	45.71	26.80 + a
Group 3: Excavator; Gradall; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Fine Grade (slopes, shaping, laser or GPS, etc.). (Trade License Required)	44.86	26.80 + a
Group 4: Trenching Machines; Lighter Derrick; CMI Machine or Similar; Koehring Loader (Skooper).	44.42	26.80 + a
Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Spreader; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" mandrel)	43.73	26.80 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller.	43.73	26.80 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	43.38	26.80 + a
Group 7: Asphalt Roller; Concrete Saws and Cutters (ride on types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under Mandrel)	42.99	26.80 + a
Group 8: Mechanic, Grease Truck Operator, Hydroblaster, Barrier Mover, Power Stone Spreader; Welder; Work Boat under 26 ft.; Transfer Machine.	42.54	26.80 + a
Group 9: Front End Loader (under 3 cubic yards), Skid Steer Loader regardless of attachments (Bobcat or Similar); Fork Lift, Power Chipper; Landscape Equipment (including hydroseeder), Vacuum Excavation Truck	42.04	26.80 + a

and Hydrovac Excavation Truck (27 HG pressure or greater).

Group 10: Vibratory Hammer, Ice Machine, Diesel and Air Hammer, etc.	39.7	26.80 + a
Group 11: Conveyor, Earth Roller; Power Pavement Breaker (whiphammer), Robot Demolition Equipment.	39.7	26.80 + a
Group 12: Wellpoint Operator.	39.63	26.80 + a
Group 13: Compressor Battery Operator.	38.97	26.80 + a
Group 14: Elevator Operator; Tow Motor Operator (Solid Tire No Rough Terrain).	37.66	26.80 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	37.2	26.80 + a
Group 16: Maintenance Engineer.	36.46	26.80 + a
Group 17: Portable Asphalt Plant Operator; Portable Crusher Plant Operator; Portable Concrete Plant Operator., Portable Grout Plant Operator, Portable Water Filtration Plant Operator.	41.39	26.80 + a
Group 18: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (minimum for any job requiring CDL license).	38.61	26.80 + a

****NOTE: SEE BELOW**

----LINE CONSTRUCTION----(Railroad Construction and Maintenance)----

20) Lineman, Cable Splicer, Technician	48.19	6.5% + 22.00
21) Heavy Equipment Operator	42.26	6.5% + 19.88

22) Equipment Operator, Tractor Trailer Driver, Material Men	40.96	6.5% + 19.21
23) Driver Groundmen	26.5	6.5% + 9.00
23a) Truck Driver	40.96	6.5% + 17.76
----LINE CONSTRUCTION----		
24) Driver Groundmen	30.92	6.5% + 9.70
25) Groundmen	22.67	6.5% + 6.20
26) Heavy Equipment Operators	37.1	6.5% + 10.70
27) Linemen, Cable Splicers, Dynamite Men	41.22	6.5% + 12.20
28) Material Men, Tractor Trailer Drivers, Equipment Operators	35.04	6.5% + 10.45

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional \$1.25 per hour for truck drivers.*

***Note: Hazardous waste premium \$3.00 per hour over classified rate*

Crane with 150 ft. boom (including jib) - \$1.50 extra

Crane with 200 ft. boom (including jib) - \$2.50 extra

Crane with 250 ft. boom (including jib) - \$5.00 extra

Crane with 300 ft. boom (including jib) - \$7.00 extra

Crane with 400 ft. boom (including jib) - \$10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyman instructing and supervising the work of each apprentice in a specific trade.

~~Connecticut General Statute Section 31-55a: Annual Adjustments to wage rates by contractors doing state work
~~

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page:

www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

As of: May 19, 2022

NOTICE

TO ALL CONTRACTING AGENCIES

Please be advised that Connecticut General Statutes Section 31-53, requires the contracting agency to certify to the Department of Labor, the total dollar amount of work to be done in connection with such public works project, regardless of whether such project consists of one or more contracts.

Please find the attached “Contracting Agency Certification Form” to be completed and returned to the Department of Labor, Wage and Workplace Standards Division, Public Contract Compliance Unit.

Inquiries can be directed to 860.263.6790.



CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION

Contracting Agency Certification Form

I, _____, acting in my official capacity as _____,
Authorized Representative Title
for _____, located at _____,
Contracting Agency Address

do hereby certify that the total dollar amount of work to be done in connection with

_____, located at _____,
Project name and number Address

shall be \$_____, which includes all work, regardless of whether such project
contains of one or more contracts.

Contractor Information

Name: _____

Address: _____

Authorized Representative: _____

Approximate Starting Date: _____

Approximate Completion Date: _____

Signature

Date

Return to:

Connecticut Department of Labor
Wage & Workplace Standards Division
200 Folly Brook Blvd.
Wethersfield, CT 06109

Rate Schedule Issued (Date): _____

CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION

CONTRACTORS WAGE CERTIFICATION FORM
Construction Manager at Risk/General Contractor/Prime Contractor

I, _____ of _____
Officer, Owner, Authorized Rep. Company Name

do hereby certify that the _____
Company Name

Street

City

and all of its subcontractors will pay all workers on the

Project Name and Number

Street and City

the wages as listed in the schedule of prevailing rates required for such project (a copy of which is attached hereto).

Signed

Subscribed and sworn to before me this _____ day of _____, _____.

Notary Public

Return to:

Connecticut Department of Labor
Wage & Workplace Standards Division
200 Folly Brook Blvd.
Wethersfield, CT 06109

Rate Schedule Issued (Date): _____

**Connecticut Department of Labor
Wage and Workplace Standards Division
FOOTNOTES**

- ⇒ Please Note: If the “Benefits” listed on the schedule for the following occupations includes a letter(s) (+ a or + a+b for instance), refer to the information below.

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If the “Benefits” section for the occupation lists only a dollar amount, disregard the information below.

Bricklayers, Cement Masons, Cement Finishers, Concrete Finishers, Stone Masons
(Building Construction) and
(Residential- Hartford, Middlesex, New Haven, New London and Tolland Counties)

- a. Paid Holiday: Employees shall receive 4 hours for Christmas Eve holiday provided the employee works the regularly scheduled day before and after the holiday. Employers may schedule work on Christmas Eve and employees shall receive pay for actual hours worked in addition to holiday pay.

Elevator Constructors: Mechanics

- a. Paid Holidays: New Year’s Day, Memorial Day, Independence Day, Labor Day, Veterans’ Day, Thanksgiving Day, Christmas Day, plus the Friday after Thanksgiving.
- b. Vacation: Employer contributes 8% of basic hourly rate for 5 years or more of service or 6% of basic hourly rate for 6 months to 5 years of service as vacation pay credit.

Glaziers

- a. Paid Holidays: Labor Day and Christmas Day.

Power Equipment Operators
(Heavy and Highway Construction & Building Construction)

- a. Paid Holidays: New Year’s Day, Good Friday, Memorial day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday. Holidays falling on Saturday may be observed on Saturday, or if the employer so elects, on the preceding Friday.

Ironworkers

- a. Paid Holiday: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

Laborers (Tunnel Construction)

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. No employee shall be eligible for holiday pay when he fails, without cause, to work the regular work day preceding the holiday or the regular work day following the holiday.

Roofers

- a. Paid Holidays: July 4th, Labor Day, and Christmas Day provided the employee is employed 15 days prior to the holiday.

Sprinkler Fitters

- a. Paid Holidays: Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day, provided the employee has been in the employment of a contractor 20 working days prior to any such paid holiday.

Truck Drivers

(Heavy and Highway Construction & Building Construction)

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas day, and Good Friday, provided the employee has at least 31 calendar days of service and works the last scheduled day before and the first scheduled day after the holiday, unless excused.

Informational Bulletin

THE 10-HOUR OSHA CONSTRUCTION SAFETY AND HEALTH COURSE

(applicable to public building contracts entered into *on or after July 1, 2007*, where the total cost of all work to be performed is at least \$100,000)

- (1) This requirement was created by Public Act No. 06-175, which is codified in Section 31-53b of the Connecticut General Statutes (pertaining to the prevailing wage statutes);
- (2) The course is required for public building construction contracts (projects funded in whole or in part by the state or any political subdivision of the state) entered into on or after July 1, 2007;
- (3) It is required of private employees (not state or municipal employees) and apprentices who perform manual labor for a general contractor or subcontractor on a public building project where the total cost of all work to be performed is at least \$100,000;
- (4) The ten-hour construction course pertains to the ten-hour Outreach Course conducted in accordance with federal OSHA Training Institute standards, and, for telecommunications workers, a ten-hour training course conducted in accordance with federal OSHA standard, 29 CFR 1910.268;
- (5) The internet website for the federal OSHA Training Institute is http://www.osha.gov/fso/ote/training/edcenters/fact_sheet.html;
- (6) The statutory language leaves it to the contractor and its employees to determine who pays for the cost of the ten-hour Outreach Course;
- (7) Within 30 days of receiving a contract award, a general contractor must furnish proof to the Labor Commissioner that all employees and apprentices performing manual labor on the project will have completed such a course;
- (8) Proof of completion may be demonstrated through either: (a) the presentation of a *bona fide* student course completion card issued by the federal OSHA Training Institute; *or* (2) the presentation of documentation provided to an employee by a trainer certified by the Institute pending the actual issuance of the completion card;
- (9) Any card with an issuance date more than 5 years prior to the commencement date of the construction project shall not constitute proof of compliance;

- (10) Each employer shall affix a copy of the construction safety course completion card to the certified payroll submitted to the contracting agency in accordance with Conn. Gen. Stat. § 31-53(f) on which such employee's name first appears;
- (11) Any employee found to be in non-compliance shall be subject to removal from the worksite if such employee does not provide satisfactory proof of course completion to the Labor Commissioner by the fifteenth day after the date the employee is determined to be in noncompliance;
- (12) Any such employee who is determined to be in noncompliance may continue to work on a public building construction project for a maximum of fourteen consecutive calendar days while bringing his or her status into compliance;
- (13) The Labor Commissioner may make complaint to the prosecuting authorities regarding any employer or agent of the employer, or officer or agent of the corporation who files a false certified payroll with respect to the status of an employee who is performing manual labor on a public building construction project;
- (14) The statute provides the minimum standards required for the completion of a safety course by manual laborers on public construction contracts; any contractor can exceed these minimum requirements; and
- (15) Regulations clarifying the statute are currently in the regulatory process, and shall be posted on the CTDOL website as soon as they are adopted in final form.
- (16) Any questions regarding this statute may be directed to the Wage and Workplace Standards Division of the Connecticut Labor Department via the internet website of <http://www.ctdol.state.ct.us/wgwkstnd/wgemenu.htm>; or by telephone at (860)263-6790.

THE ABOVE INFORMATION IS PROVIDED EXCLUSIVELY AS AN EDUCATIONAL RESOURCE, AND IS NOT INTENDED AS A SUBSTITUTE FOR LEGAL INTERPRETATIONS WHICH MAY ULTIMATELY ARISE CONCERNING THE CONSTRUCTION OF THE STATUTE OR THE REGULATIONS.

November 29, 2006

Notice
To All Mason Contractors and Interested Parties
Regarding Construction Pursuant to Section 31-53 of the
Connecticut General Statutes (Prevailing Wage)

The Connecticut Labor Department Wage and Workplace Standards Division is empowered to enforce the prevailing wage rates on projects covered by the above referenced statute.

Over the past few years the Division has withheld enforcement of the rate in effect for workers who operate a forklift on a prevailing wage rate project due to a potential jurisdictional dispute.

The rate listed in the schedules and in our Occupational Bulletin (see enclosed) has been as follows:

Forklift Operator:

- **Laborers (Group 4) Mason Tenders** - operates forklift solely to assist a mason to a maximum height of nine feet only.
- **Power Equipment Operator (Group 9)** - operates forklift to assist any trade and to assist a mason to a height over nine feet.

The U.S. Labor Department conducted a survey of rates in Connecticut but it has not been published and the rate in effect remains as outlined in the above Occupational Bulletin.

Since this is a classification matter and not one of jurisdiction, effective January 1, 2007 the Connecticut Labor Department will enforce the rate on each schedule in accordance with our statutory authority.

Your cooperation in filing appropriate and accurate certified payrolls is appreciated.

[New] In accordance with Section 31-53b(a) of the C.G.S. each contractor shall provide a copy of the OSHA 10 Hour Construction Safety and Health Card for each employee, to be attached to the first certified payroll on the project.

In accordance with Connecticut General Statutes, 31-53 Certified Payrolls with a statement of compliance shall be submitted monthly to the contracting agency.												PAYROLL CERTIFICATION FOR PUBLIC WORKS PROJECTS										Connecticut Department of Labor Wage and Workplace Standards Division 200 Folly Brook Blvd. Wethersfield, CT 06109					
CONTRACTOR NAME AND ADDRESS:												SUBCONTRACTOR NAME & ADDRESS						WORKER'S COMPENSATION INSURANCE CARRIER POLICY # EFFECTIVE DATE: EXPIRATION DATE:									
PAYROLL NUMBER		Week-Ending Date		PROJECT NAME & ADDRESS																							
PERSON/WORKER, ADDRESS and SECTION		APPR RATE %	MALE/ FEMALE AND RACE*	WORK CLASSIFICATION		DAY AND DATE						Total ST Hours	BASE HOURLY RATE	TYPE OF FRINGE BENEFITS Per Hour 1 through 6 (see back)	GROSS PAY FOR ALL WORK PERFORMED THIS WEEK	TOTAL DEDUCTIONS				GROSS PAY FOR THIS PREVAILING RATE JOB	CHECK # AND NET PAY						
						S	M	T	W	TH	F	S					FEDERAL	STATE	LIST OTHER								
				Trade License Type & Number - OSHA 10 Certification Number									Total O/T Hours	TOTAL FRINGE BENEFIT PLAN CASH	FICA	WITH- HOLDING	WITH- HOLDING										
HOURS WORKED EACH DAY																											
												\$ Base Rate	1. \$														
													2. \$														
													3. \$														
													4. \$														
													5. \$														
													6. \$														
												\$ Cash Fringe	1. \$														
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												\$ Base Rate	1. \$														
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													6. \$														
												\$ Base Rate	1. \$														
													2. \$														
													3. \$														
													4. \$														
													5. \$														
													6. \$														

12/9/2013
WWS-CP1

*IF REQUIRED

*SEE REVERSE SIDE

PAGE NUMBER ____OF

***FRINGE BENEFITS EXPLANATION (P):**

Bona fide benefits paid to approved plans, funds or programs, except those required by Federal or State Law (unemployment tax, worker’s compensation, income taxes, etc.).

Please specify the type of benefits provided:

- 1) Medical or hospital care _____
- 4) Disability_____
- 2) Pension or retirement _____
- 5) Vacation, holiday_____
- 3) Life Insurance _____
- 6) Other (please specify) _____

CERTIFIED STATEMENT OF COMPLIANCE

For the week ending date of _____,

I, _____ of _____, (hereafter known as Employer) in my capacity as _____ (title) do hereby certify and state:

Section A:

1. All persons employed on said project have been paid the full weekly wages earned by them during the week in accordance with Connecticut General Statutes, section 31-53, as amended. Further, I hereby certify and state the following:

a) The records submitted are true and accurate;

b) The rate of wages paid to each mechanic, laborer or workman and the amount of payment or contributions paid or payable on behalf of each such person to any employee welfare fund, as defined in Connecticut General Statutes, section 31-53 (h), are not less than the prevailing rate of wages and the amount of payment or contributions paid or payable on behalf of each such person to any employee welfare fund, as determined by the Labor Commissioner pursuant to subsection Connecticut General Statutes, section 31-53 (d), and said wages and benefits are not less than those which may also be required by contract;

c) The Employer has complied with all of the provisions in Connecticut General Statutes, section 31-53 (and Section 31-54 if applicable for state highway construction);

d) Each such person is covered by a worker’s compensation insurance policy for the duration of his employment which proof of coverage has been provided to the contracting agency;

e) The Employer does not receive kickbacks, which means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided directly or indirectly, to any prime contractor, prime contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a prime contractor in connection with a subcontractor relating to a prime contractor; and

f) The Employer is aware that filing a certified payroll which he knows to be false is a class D felony for which the employer may be fined up to five thousand dollars, imprisoned for up to five years or both.
2. OSHA~The employer shall affix a copy of the construction safety course, program or training completion document to the certified payroll required to be submitted to the contracting agency for this project on which such persons name first appears.

(Signature)

(Title)

Submitted on (Date)

*****THIS IS A PUBLIC DOCUMENT*****
*****DO NOT INCLUDE SOCIAL SECURITY NUMBERS*****

Weekly Payroll Certification For Public Works Projects (Continued)				PAYROLL CERTIFICATION FOR PUBLIC WORKS PROJECTS										Week-Ending Date: Contractor or Subcontractor Business Name:						
WEEKLY PAYROLL																				
PERSON/WORKER, ADDRESS and SECTION	APPR RATE %	MALE/ FEMALE AND RACE*	WORK CLASSIFICATION	DAY AND DATE							Total ST Hours	BASE HOURLY RATE	TYPE OF FRINGE BENEFITS Per Hour 1 through 6 (see back)	GROSS PAY FOR ALL WORK PERFORMED THIS WEEK	TOTAL DEDUCTIONS				GROSS PAY FOR THIS PREVAILING RATE JOB	CHECK # AND NET PAY
				S	M	T	W	TH	F	S	FICA				FEDERAL	STATE	OTHER			
			Trade License Type & Number - OSHA								Total	TOTAL FRINGE BENEFIT PLAN								
			10 Certification Number	HOURS WORKED EACH DAY							O/T Hours	CASH								
												\$ Base Rate	1. \$							
													2. \$							
													3. \$							
													4. \$							
													5. \$							
													6. \$							
												\$ Cash Fringe	1. \$							
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												\$ Base Rate	1. \$							
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													6. \$							

12/9/2013
WWS-CP2

*IF REQUIRED

NOTICE: THIS PAGE MUST BE ACCOMPANIED BY A COVER PAGE (FORM # WWS-CP1)

PAGE NUMBER ____ OF

[New] In accordance with Section 31-53b(a) of the C.G.S. each contractor shall provide a copy of the OSHA 10 Hour Construction Safety and Health Card for each employee, to be attached to the first certified payroll on the project.

PAYROLL CERTIFICATION FOR PUBLIC WORKS PROJECTS												Connecticut Department of Labor Wage and Workplace Standards Division 200 Folly Brook Blvd. Wethersfield, CT 06109									
WEEKLY PAYROLL																					
In accordance with Connecticut General Statutes, 31-53 Certified Payrolls with a statement of compliance shall be submitted monthly to the contracting agency.												WORKER'S COMPENSATION INSURANCE CARRIER Travelers Insurance Company POLICY # #BAC8888928 EFFECTIVE DATE: 1/1/09 EXPIRATION DATE: 12/31/09									
CONTRACTOR NAME AND ADDRESS: Landon Corporation, 15 Connecticut Avenue, Northford, CT 06472												SUBCONTRACTOR NAME & ADDRESS XYZ Corporation 2 Main Street Yantic, CT 06389									
PAYROLL NUMBER 1		Week-Ending Date 9/26/09		PROJECT NAME & ADDRESS DOT 105-296, Route 82																	
PERSON/WORKER, ADDRESS and SECTION	APPR RATE %	MALE/FEMALE AND RACE*	WORK CLASSIFICATION Trade License Type & Number - OSHA 10 Certification Number	DAY AND DATE							Total ST Hours Total O/T Hours	BASE HOURLY RATE TOTAL FRINGE BENEFIT PLAN CASH	TYPE OF FRINGE BENEFITS Per Hour 1 through 6 (see back)	GROSS PAY FOR ALL WORK PERFORMED THIS WEEK	TOTAL DEDUCTIONS				GROSS PAY FOR THIS PREVAILING RATE JOB	CHECK # AND NET PAY	
				S	M	T	W	TH	F	S					FICA	FEDERAL	STATE	LIST OTHER			
				20	21	22	23	24	25	26					WITH-HOLDING	WITH-HOLDING					
Robert Craft 81 Maple Street Willimantic, CT 06226		M/C	Electrical Lineman E-1 1234567 Owner OSHA 123456		8	8	8	8	8			S-TIME 40 O-TIME	\$ 30.75 Base Rate \$ 8.82 Cash Fringe	1. \$ 5.80 2. \$ 3. \$ 2.01 4. \$ 5. \$ 6. \$	\$1,582.80				P-xxxx	\$1,582.80	#123 \$ xxx.xx
Ronald Jones 212 Elm Street Norwich, CT 06360	65%	M/B	Electrical Apprentice OSHA 234567		8	8	8	8	8			S-TIME 40 O-TIME	\$ 19.99 Base Rate \$ 16.63 Cash Fringe	1. \$ 2. \$ 3. \$ 4. \$ 5. \$ 6. \$	\$1,464.80	xx.xx	xxx.xx	xx.xx	G-xxx	\$1,464.80	#124 \$xxx.xx
Franklin T. Smith 234 Washington Rd. New London, CT 06320 SECTION B		M/H	Project Manager			8						S-TIME 8 O-TIME	\$ Base Rate \$ Cash Fringe	1. \$ 2. \$ 3. \$ 4. \$ 5. \$ 6. \$	\$1,500.00	xx.xx	xx.xx	xx.xx	M-xx.x		#125 xxx.xx
												S-TIME O-TIME	\$ Base Rate \$ Cash Fringe	1. \$ 2. \$ 3. \$ 4. \$ 5. \$ 6. \$							

7/13/2009
WWS-CP1
*IF REQUIRED
*SEE REVERSE SIDE
PAGE NUMBER 1 OF 2

OSHA 10 ~ATTACH CARD TO 1ST CERTIFIED PAYROLL

***FRINGE BENEFITS EXPLANATION (P):**

Bona fide benefits paid to approved plans, funds or programs, except those required by Federal or State Law (unemployment tax, worker's compensation, income taxes, etc.).

Please specify the type of benefits provided:

- 1) Medical or hospital care Blue Cross 4) Disability _____
2) Pension or retirement _____ 5) Vacation, holiday _____
3) Life Insurance Utopia 6) Other (please specify) _____

CERTIFIED STATEMENT OF COMPLIANCE

For the week ending date of 9/26/09,

I, Robert Craft of XYZ Corporation, (hereafter known as

Employer) in my capacity as Owner (title) do hereby certify and state:

Section A:

1. All persons employed on said project have been paid the full weekly wages earned by them during the week in accordance with Connecticut General Statutes, section 31-53, as amended. Further, I hereby certify and state the following:

a) The records submitted are true and accurate;

b) The rate of wages paid to each mechanic, laborer or workman and the amount of payment or contributions paid or payable on behalf of each such employee to any employee welfare fund, as defined in Connecticut General Statutes, section 31-53 (h), are not less than the prevailing rate of wages and the amount of payment or contributions paid or payable on behalf of each such employee to any employee welfare fund, as determined by the Labor Commissioner pursuant to subsection Connecticut General Statutes, section 31-53 (d), and said wages and benefits are not less than those which may also be required by contract;

c) The Employer has complied with all of the provisions in Connecticut General Statutes, section 31-53 (and Section 31-54 if applicable for state highway construction);

d) Each such employee of the Employer is covered by a worker's compensation insurance policy for the duration of his employment which proof of coverage has been provided to the contracting agency;

e) The Employer does not receive kickbacks, which means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided directly or indirectly, to any prime contractor, prime contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a prime contractor in connection with a subcontractor relating to a prime contractor; and

f) The Employer is aware that filing a certified payroll which he knows to be false is a class D felony for which the employer may be fined up to five thousand dollars, imprisoned for up to five years or both.

2. OSHA~The employer shall affix a copy of the construction safety course, program or training completion document to the certified payroll required to be submitted to the contracting agency for this project on which such employee's name first appears.

Robert Craft owner 10/2/09
(Signature) (Title) Submitted on (Date)

Section B: Applies to CONNDOT Projects ONLY

That pursuant to CONNDOT contract requirements for reporting purposes only, all employees listed under Section B who performed work on this project are not covered under the prevailing wage requirements defined in Connecticut General Statutes Section 31-53.

Robert Craft owner 10/2/09
(Signature) (Title) Submitted on (Date)

Note: CTDOL will assume all hours worked were performed under Section A unless clearly delineated as Section B WWS-CP1 as such. Should an employee perform work under both Section A and Section B, the hours worked and wages paid must be segregated for reporting purposes.

THIS IS A PUBLIC DOCUMENT
DO NOT INCLUDE SOCIAL SECURITY NUMBERS



THIS IS A PUBLIC WORKS PROJECT

Covered by the

PREVAILING WAGE LAW

CT General Statutes Section 31-53

**If you have QUESTIONS regarding your wages
CALL (860) 263-6790**

Section 31-55 of the CT State Statutes requires every contractor or subcontractor performing work for the state to post in a prominent place the prevailing wages as determined by the Labor Commissioner.

Sec. 31-53b. Construction safety and health course. New miner training program. Proof of completion required for mechanics, laborers and workers on public works projects. Enforcement. Regulations. Exceptions. (a) Each contract for a public works project entered into on or after July 1, 2009, by the state or any of its agents, or by any political subdivision of the state or any of its agents, described in subsection (g) of section 31-53, shall contain a provision requiring that each contractor furnish proof with the weekly certified payroll form for the first week each employee begins work on such project that any person performing the work of a mechanic, laborer or worker pursuant to the classifications of labor under section 31-53 on such public works project, pursuant to such contract, has completed a course of at least ten hours in duration in construction safety and health approved by the federal Occupational Safety and Health Administration or, has completed a new miner training program approved by the Federal Mine Safety and Health Administration in accordance with 30 CFR 48 or, in the case of telecommunications employees, has completed at least ten hours of training in accordance with 29 CFR 1910.268.

(b) Any person required to complete a course or program under subsection (a) of this section who has not completed the course or program shall be subject to removal from the worksite if the person does not provide documentation of having completed such course or program by the fifteenth day after the date the person is found to be in noncompliance. The Labor Commissioner or said commissioner's designee shall enforce this section.

(c) Not later than January 1, 2009, the Labor Commissioner shall adopt regulations, in accordance with the provisions of chapter 54, to implement the provisions of subsections (a) and (b) of this section. Such regulations shall require that the ten-hour construction safety and health courses required under subsection (a) of this section be conducted in accordance with federal Occupational Safety and Health Administration Training Institute standards, or in accordance with Federal Mine Safety and Health Administration Standards or in accordance with 29 CFR 1910.268, as appropriate. The Labor Commissioner shall accept as sufficient proof of compliance with the provisions of subsection (a) or (b) of this section a student course completion card issued by the federal Occupational Safety and Health Administration Training Institute, or such other proof of compliance said commissioner deems appropriate, dated no earlier than five years before the commencement date of such public works project.

(d) This section shall not apply to employees of public service companies, as defined in section 16-1, or drivers of commercial motor vehicles driving the vehicle on the public works project and delivering or picking up cargo from public works projects provided they perform no labor relating to the project other than the loading and unloading of their cargo.

(P.A. 06-175, S. 1; P.A. 08-83, S. 1.)

History: P.A. 08-83 amended Subsec. (a) by making provisions applicable to public works project contracts entered into on or after July 1, 2009, replacing provision re total cost of work with reference to Sec. 31-53(g), requiring proof in certified payroll form that new mechanic, laborer or worker has completed a 10-hour or more construction safety course and adding provision re new miner training program, amended Subsec. (b) by substituting "person" for "employee" and adding "or program", amended Subsec. (c) by adding "or in accordance with Federal Mine Safety and Health Administration Standards" and setting new deadline of January 1, 2009, deleted former Subsec. (d) re "public building", added new Subsec. (d) re exemptions for public service company employees and delivery drivers who perform no labor other than delivery and made conforming and technical changes, effective January 1, 2009.

STATUTE 31-55a

- SPECIAL NOTICE -

To: All State and Political Subdivisions, Their Agents, and Contractors

Connecticut General Statute 31-55a - Annual adjustments to wage rates by contractors doing state work.

Each contractor that is awarded a contract on or after October 1, 2002, for (1) the construction of a state highway or bridge that falls under the provisions of section 31-54 of the general statutes, or (2) the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project that falls under the provisions of section 31-53 of the general statutes shall contact the Labor Commissioner on or before July first of each year, for the duration of such contract, to ascertain the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of each mechanic, laborer or worker employed upon the work contracted to be done, and shall make any necessary adjustments to such prevailing rate of wages and such payment or contributions paid or payable on behalf of each such employee, effective each July first.

- The prevailing wage rates applicable to any contract or subcontract awarded on or after October 1, 2002 are subject to annual adjustments each July 1st for the duration of any project which was originally advertised for bids on or after October 1, 2002.
- Each contractor affected by the above requirement shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.
- It is the **contractor's** responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's Web Site. The annual adjustments will be posted on the Department of Labor Web page: www.ctdol.state.ct.us. For those without internet access, please contact the division listed below.
- The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project. All subsequent annual adjustments will be posted on our Web Site for contractor access.

Any questions should be directed to the Contract Compliance Unit, Wage and Workplace Standards Division, Connecticut Department of Labor, 200 Folly Brook Blvd., Wethersfield, CT 06109 at (860)263-6790.

**MAPLE HILL AVENUE AND ROBBINS
AVENUE COMPLETE STREETS PROJECT
STATE PROJECT NO. L093-0001
NEWINGTON, CT**

ATTACHMENT D
**State of Connecticut Certificate of Compliance
with Connecticut General Statute Section 31-57b**

STATE OF CONNECTICUT
Certificate of Compliance with
Connecticut General Statute Section 31 - 57b

I hereby certify that all of the statements herein contained below have been examined by me, and to the best of my knowledge and belief are true and correct.

The _____ **HAS / HAS NOT**
Company Name (Cross out Non-applicable)

been cited for three (3) or more willful or serious or serious violations of any Occupational Safety and Health Act (OSHA) or of any standard, order or regulation promulgated pursuant to such act, during the three year period preceding the bid, provided such violations were cited in accordance with the provisions of any State Occupational Safety and Health Act of 1970, and not abated within the time fixed by the citation and such citation has not been set aside following appeal to the appropriate agency of court having jurisdiction or **HAS / HAS NOT** (Cross out Non-applicable) received one or more criminal convictions related to the injury or death of any employee in the three-year period preceding the bid.

The list of violations (if applicable) is attached.

(Name of Firm, Organization or Corporation)

Signed:

Written Signature:

Name Typed: (Corporation Seal)

Title:

(Title of Above Person, typed)

Dated:

State of _____)
County of _____) *ss:* *A.D., 20* _____
_____)

Sworn to and personally appeared before me for the above, _____,
(Name of Firm, Organization, Corporation)

Signer and Sealer of the foregoing instrument of and acknowledged the same to be the free act and deed of

_____, and his/her free act and deed as
(Name of Person appearing in front of Notary or Clerk)

(Title of Person appearing in front of Notary or Clerk)

My Commission Expires:

(Notary Public) (Seal)

**MAPLE HILL AVENUE AND ROBBINS
AVENUE COMPLETE STREETS PROJECT
STATE PROJECT NO. L093-0001
NEWINGTON, CT**

**ATTACHMENT E
Local Transportation Capital Improvement Program
Schedule of Minimum Testing**

Local Transportation Capital Improvement Program (LOTICIP)

4/2/2019

ONLY Applies to Municipal Administered LOTICIP Projects not on National Highway System

Material Name	Unit	Test/Documentation	Frequency 1 per	Notes
Anchor Bolts	ea.	MC	project	1 per size
Asphalt Emulsions (CSS-1, RS-1 or SS-1)	gal	MC	10k	
Bituminous Concrete (HMA)	ton	D 2950 FLDT	day	See Note 3
Cement - Portland Type I/II	bag	FLDT	project	empty bag
Chemical Anchor	lb.	QPL MC	project	
Concrete-Ready Mixed	c.y.	T22 FLDT	75	4 cylinders
Construction Signing	ea.	MC	project	
Geotextile	s.y.	QPL MC	project	
Gravel (Bank Run or Crushed)	c.y.	T27 LABT	5k	
Grout, Non-shrink	bag	MC	project	
Masonry Brick & Block (Solid)	ea.	FLDT	project	See Note 1
Pipe - Reinforced Concrete	l.f.	PC-1	project	See Note 1
Pipe (Metal & Plastic) All types	lf	MC	project	See Note 1
Pipe Arch - Aluminum	lf	MC	project	See Note 1
Precast Concrete Items (not pipe)	ea.	PC-1	Item type	
Prestressed Concrete Members	ea.	LABT	1	See Note 2 & 3
Reclaimed Misc. Aggregate	c.y.	T27/Chem Analysis	2500	See Note 5
Reclaimed Waste	c.y.	T180 LABT	50k	See Note 5
Sand (Masonry /Trenching & Backfilling)	c.y.	T27 LABT	2500	
Sheet Piling	l.f.	MC	project	See Note 4
Sign Post	ea	MC	project	See Note 1
Span Pole - Steel or Wood	ea.	MC	project	See Note 3
Steel Reinforcing Bars (Plain or Epoxy)	lb.	T244 MC	200t	
Stone (Broken/Crushed)	c.y.	T27 LABT	20k	
Structural Steel	cw	Shop Drawings	project	Notes 2, 3 & 4
Traffic Signal Equipment	ea.	MC	project	NA

Notes

1	Material should be inspected on the project site prior to use. Suspect material should be physically tested to determine conformance.
2	QC Inspection should be provided and documented during fabrication.
3	Contact the Department of Transportation Division of Materials Testing to determine vendor qualifications and QA inspection availability.
4	Documentation should be provided to determine conformance to Buy America requirements.
5	FORM MAT-212 should be completed and provided by the Contractor prior to use of material.

Test Method/Test Type

LABT	Laboratory Test
FLDT	Test performed in the field
QPL	ConnDOT Qualified Products List (http://www.ct.gov/dot/lib/dot/documents/dresearch/conndot_qpl.pdf)
PC-1	MAT-308 Required from producer with shipment
MC*	Materials Certificate

*Should comply with ConnDOT Standard Specification Section 1.06.07

**MAPLE HILL AVENUE AND ROBBINS
AVENUE COMPLETE STREETS PROJECT
STATE PROJECT NO. L093-0001
NEWINGTON, CT**

**ATTACHMENT F
Town of Newington Conservation Commission
Memorandum**



Tanya D. Lane
Town Manager

TOWN OF NEWINGTON

131 Cedar Street Newington, Connecticut 06111

Conservation Commission

Memorandum

To: Gary Fuerstenberg P.E., Town Engineer
From: Erik S. Hinckley, Inland Wetland Agent
Date: August 26, 2019
Re: Maple Hill Ave – Robbins Ave (LOTICIP Grant)

Gary,

The Conservation Commission takes no issues with the proposed work (as presented at the August 20, 2019 meeting). Described activities may include:

- Road improvements (local widening, visibility improvements [remove trees], curb replacement)
- Intersection improvements (may re-align Golf/Robbins/Thompson)
- Drainage improvements (cleaning Schoolhouse Brook, cleaning pipes/CB, replace CB frame/grate)
- Signal improvements (technology upgrade)
- Sidewalk improvements (pedestrian safety)
- New bike lanes (bicycle safety)

The described activities such as removal of dead trees and accumulated silt would fall under the maintenance clause of the Town's general permit 1. No local Inland Wetland permit will be required for this proposed project.