



## **TOWN OF ELSMERE**

### **REQUEST FOR PROPOSAL NO. 24-07**

### **Chestnut Run & Little Mill Creek Drainage Improvements**

**December 12, 2024**

**Deadline to Respond**  
**Wednesday, January 8, 2025**  
**12:00 PM**

## **BIDDING PROCEDURES**

### **1. RECEIPT AND OPENING OF BIDS**

Sealed bids for RFP 24-07 - Chestnut Run and Little Mill Creek Drainage Improvements will be received by the Town of Elsmere, New Castle County, Delaware until 12:00 P.M., E.D.S.T., on January 8, 2025 at the Town Office, at which time all bids that have been submitted in accordance with the contract documents and on the prescribed forms will be publicly opened and read aloud. The envelopes containing the bids must be sealed, addressed to: Town of Elsmere, New Castle County, Delaware and designated as "Chestnut Run and Little Mill Creek Drainage Improvements."

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 30 days after the actual date of the opening thereof.

### **2. PREPARATION OF BID**

Each bid must be submitted in triplicate on the prescribed form. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures. Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his address, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in the bid form.

### **3. SUBCONTRACTS**

The bidder is specifically advised that any person, firm or other party to whom it is proposed to award a subcontract under this contract must be acceptable to the Owner.

### **4. METHOD OF BIDDING**

The Owner invites the following bid:

Bid for Lump Sum Contract

### **5. ESTIMATED QUANTITIES:**

Any estimates of quantities herein furnished by the Engineer are approximate only and have been used by the Engineer as a basis for estimating the cost of the work. The Engineer has endeavored

to estimate these quantities correctly according to his knowledge and the information shown on the plans but it is not guaranteed that these estimated quantities are accurate, and if the Contractor, in making up and/or submitting his bid or bids, relies upon the accuracy of such estimated quantities, he does so at his own risk.

#### 6. PROPOSAL FORMS:

The Bidder will be furnished by the Town of Elsmere with proposal forms, which will show the prices for the work to be performed and materials to be furnished under the contract. The Bidder shall submit his proposal on the forms furnished by the Town of Elsmere. The blank spaces in the proposal shall be filled in correctly where indicated, for each and every item, and the Bidder shall state the price (written in ink, words and numerals) for which he proposes to do the work contemplated. In case of discrepancy between the written figures and the numerals, the written figures shall govern. The Bidder shall sign his proposal correctly. If the proposal is made by an individual, his name and post office address shall be shown. If made by a firm or partnership, the name and post office address of the firm or partnership and of each member thereof shall be shown. If a corporation, the successful bidder shall furnish a certificate from the Secretary of State or Commonwealth subsisting corporation of that State or Commonwealth and the date of its incorporation.

Further, the successful bidder shall furnish an original and two copies of excerpts from the minutes of the corporation authorizing its President or Vice President to execute the necessary Contract on behalf of the Corporation, and an original and two copies of the resolution authorizing the Secretary or the Assistant Secretary to attest the Contract documents and the names of all officers qualified to sign for the company.

#### 7. IRREGULAR PROPOSALS:

Proposals may be rejected if they show any omissions, alterations of form, additions not called for, conditional or alternative bids, or irregularities of any kind.

#### 8. UNRESPONSIVE OR UNBALANCED BIDS:

To better ensure fair competition, and to permit a determination of the lowest bidder, the Town of Elsmere may reject unresponsive bids or bids obviously unbalanced.

#### 9. CERTIFIED CHECK OR BID BOND:

Every bid submitted shall be accompanied by a deposit of either a good and sufficient bid bond to the Town of Elsmere with corporate surety authorized to do business in the State of Delaware, the form of the bond and the surety to be approved by the Town of Elsmere, or a certified check

of the bidder drawn up by some responsible banking institution to the order of the Town of Elsmere for a sum equal to ten percent (10%) of the bid. The bid bond need not be for a specific sum but may be stated to be for a sum equal to ten percent (10%) of the bid to which it related and not to exceed a certain stated sum, if said sum is equal to at least ten percent (10%) of the bid. Upon the execution of a formal contract and submission of a performance bond, the bid bond or certified check deposit shall be returned to the successful bidder. The deposit of the unsuccessful and successful bidders shall be returned to them upon the awarding of the contract and performance bond within twenty (20) days of the awarding of the contract, or if the bidder is unable to obtain corporate surety for said performance bond, the bid bond or certified check deposited by the successful bidder shall be taken and become the absolute property of the Town of Elsmere as liquidated damages, and not as a forfeiture or as a penalty. The Town of Elsmere shall either deposit the certified check in the Town of Elsmere's account or shall proceed to collect on the bid bond. The Town of Elsmere may award the Contract to the next lowest responsible bidder or re-advertise for new bids.

#### 10. FAMILIARITY WITH PROPOSED WORK:

The bidder is required to examine carefully the site of the work, the proposal, plans, specifications and other contract documents for the work contemplated and it will be assumed that he understands the scope of work as to the character, quality, phasing, and quantities of work to be performed and materials to be furnished, any obstacles to be encountered, and as to the requirements of these specifications, plans and other contract documents and he must be prepared to execute a finished job in every particular, without any extra charge whatever, except as may be specifically provided for elsewhere in these contract documents.

#### 11. FAMILIARITY WITH LAWS, ETC.:

The Bidder is assumed to have made himself familiar with all Federal, State, local and municipal laws, ordinances, rules and regulations which in any manner affect those engaged or employed in the work, or in any way affect the work, and no plea of misunderstanding will be considered on account of the ignorance thereof. If the Bidder or Contractor shall discover any provision in the plans, specification, or contract that is contrary to or inconsistent with any such law, ordinance, rule or regulation, he shall forthwith report it to the Engineer in writing.

#### 12. INTERPRETATIONS OF ADDENDUM:

If any person contemplating submitting a bid for this contract is in doubt as to the true meaning of any part of the plans, specifications of other proposed contract documents, he may submit to the Town of Elsmere a written request for interpretation thereof. The person submitting the request will be responsible for the prompt delivery at least seven calendar days prior to the date affixed for the opening of bids. Any interpretation of the proposed contract documents will be

made only by Addendum duly issued, and a copy of such documents. The Town of Elsmere will not be responsible for any other explanation or interpretations of the proposed documents.

#### 13. WITHDRAWAL OF PROPOSALS:

Any bid may be withdrawn prior to the scheduled time for the opening of bids or authorized postponement thereof. No bid may be withdrawn within thirty (30) days after the actual opening thereof.

#### 14. QUALIFICATIONS FOR BIDDERS:

No contract will be awarded to any Bidder who, in the judgment of the Town of Elsmere, is not a responsible bidder, or is not prepared with all necessary experience, capital, organization and equipment, to conduct and complete work for which the bidder proposes to contract, in strict accordance with all terms and provisions of the Contract documents.

In each instance when the qualifications of any bidder are questioned in any way, such bidders shall furnish information concerning his experience, capital, organization, and equipment as may be required by the Owner within five (5) days after written notice from the Town of Elsmere to do so, and the information received or possessed by the Owner will be taken into consideration by the Town of Elsmere, in awarding the contract.

#### 15. RIGHT TO REJECT BIDS:

The Town of Elsmere expressly reserves the right, at its discretion, to reject any or all bids, or to accept any bid, and/or waive technicalities as it may deem to be in the best interest of the Town of Elsmere. The Town, in deciding which bid or proposal will be the most advantageous to the Town, if any, may take any facts it considers relevant into consideration and shall not be bound to award a contract based solely upon the lowest bid price. The Town may consider such items as, but not limited to, price, quality of service, the contractor's qualifications and capabilities to provide the specified service, or the contractor's history with the Town. The Town shall have the right to accept any Alternates in any order or combination, or reject all Alternates.

#### 16. CONTRACT BOND:

The successful bidder must furnish, within ten (10) days after the award, a Performance bond and/or Labor and Materials bond for one hundred (100%) of the total cost of the Contract Price in triplicate, with corporate surety authorized to do business in the State of Delaware, the form and surety to be approved by the Town of Elsmere Solicitor with a Warrant of Attorney to confess judgment thereon attached thereto.

Whenever surety or sureties on the bond so furnished in accordance with the preceding paragraph shall be deemed by the owner to be insufficient or unsatisfactory, he may in his discretion, within ten (10) days after notice to that effect mailed to the address of the Contractor, require the Contractor to furnish and deliver a new bond in the same penalty and on the same conditions, with surety satisfactory to the Owner and this duty shall continue on the part of the Contractor whenever and so often as the owner shall require a new bond with a satisfactory surety or sureties. Upon failure of the Contractors to furnish the aforesaid new bond within ten (10) days after the said notice is mailed to his address, the owner may withhold all payments due to the Contractor, stop all further work under said Contract and re-let the unfinished work at the expense of the Contractor, in any manner in which it may be deemed best to protect the interests of the Town of Elsmere.

#### 17. EXECUTION OF THE CONTRACT:

The successful bidder will be required promptly within 7 working days to execute a formal contract upon blank forms with proper insertions furnished by the owner. The successful bidder will insert on the first page of the contract the date of the day the contract is executed by his company. All copies of the Contract and Bond must be properly executed by qualified officers of the company and the Corporate Seal affixed thereto.

#### 18. FAILURE TO EXECUTE CONTRACT AND BOND:

Failure to execute the contract in a sum equal to the full amount of the award within seven (7) working days after written notice of the award, shall be just cause for the annulment of the award, that the amount of the certified check or bid bond with the proposal may be forfeited to the use of the Town of Elsmere, not as a penalty, but as liquidated damages.

#### 19. COMPLIANCE WITH ELSMERE EMPLOYMENT REQUIREMENTS:

Prior to execution of the contract, the successful bidder will be required to sign an affidavit supplied by the Town of Elsmere certifying that all the employees of the company performing work within the Town of Elsmere are lawfully permitted to be employed by the company under both federal and state law.

## GENERAL CONDITIONS

### 1. DEFINITIONS OF TERMS:

Whenever in these specifications and other contract documents the following terms or pronouns in place of them are used, their intent and meaning shall be interpreted as follows:

“Town” Town of Elsmere

“Owner” Town of Elsmere

“Manager” The Town Manager for the Town of Elsmere or his/her duly authorized representative.

“Contractor” Party of the second part of the contract, acting directly or through his agent or employees.

“Work” Any of all things agreed to be furnished or done by or on the part of the Contractor, and which are required in the construction and completion of the project herein contemplated including also labor, materials and equipment.

“Engineer” The Town Engineer or his duly authorized representative.

All items contained or referred to herein, the Advertisement, the Instructions to the Bidders, the General Conditions, the Special Provisions, the Specifications, the Proposal, the Contract, the Bond, the Plans, Addenda, as well as any other papers or bulletins referred to therein are hereby made a part of these specifications and contract and are to be considered as one instrument constituting the “Contract Documents”. The intent is to make them explanatory, one to the other, but in the case of any inconsistency, the provisions of the Contract shall govern.

Whenever in these contract documents the words “directed”, “required”, “prescribed”, “permitted”, “approved”, “acceptable”, “in the judgment of”, and other word and phrases of like import refer to the work or its performance, they shall be taken to mean and intend “directed”, “required”, “prescribed”, “permitted”, “approved”, “acceptable”, “in the judgment of”, and the like by or to the Manager.

The headings and subheadings in these specifications are intended for convenience of reference only and shall not be considered as having any particular bearing on the interpretation thereof.

### 2. COMPENSATION AND LIABILITY INSURANCE:

Except as otherwise provided by law, the Contractors shall, at all times, maintain and keep in force such insurance as will protect them and the Town of Elsmere and any other claims for damages for personal injuries, including death, which may arise from operations under his contract, whether such operations be by the Contractor or by any subcontractor or anyone directly or indirectly employed by any of them, in any amount, as specified. The Contractor shall also, at all times, maintain and keep in force such insurance, in an amount specified as will protect him and the Town of Elsmere, its agents and employees from all suits, actions, claims, demands, damages, losses, expenses, and/or costs of every kind and description to which the Town of Elsmere may be subjected or put by reason of injury, (including death) to persons or property resulting from the manner or method employed by the contractor, his agents and employees, or subcontractors, or from any neglect or default of the Contractor, his agents, employees, or subcontractors, in the neglect or default of the Contractor, his agents and employees, or subcontractors, in the performance of this contract or any part thereof or from, by or on account of any act or omission of the Contractor, his agents, employees, or subcontractors, and whether such suits, claims, actions,

demands, damages, losses, expenses, and/or costs be against, suffered or sustained by other corporations and persons to who, the Town of Elsmere, its agents and employees may become liable therefore.

The Contractor shall maintain the following types of coverage:

A. GENERAL COVERAGE Minimum Limits

A.1 Workmen's Compensation (Including coverage under United States Longshoremen's and Harbor Workers Act, where applicable) Statutory

A.2 Comprehensive General (Public) Liability, including the following:

- (1) XCU coverage explosion, collapse, underground damage.
- (2) Products - Completed Operations Coverage.
- (3) Contractual Liability insuring the hold harmless and indemnification provisions of the Contract Documents.
- (4) Blasting hazards where applicable.
- (5) Personal Injury Aggregate Bodily Injury and \$3,000,000 Property Damage Per occurrence

A.3 Contractor's Protective Liability (If subcontractors are employed) \$3,000,000 Bodily Injury and Property Damage Per occurrence

A.4 Motor Vehicle Liability Bodily Injury \$3,000,000 and Property Damage Per occurrence

If Contractor has lower underlying coverage than required above, Contractor may provide additional minimum coverage to \$3,000,000 by excess or umbrella form. Contractor's insurance agent shall indicate on the insurance certificate or by separate letter that the limits required herein and shown on the certificate have not been reduced by an outstanding claim.

B. PROPERTY INSURANCE

Contractor shall purchase and maintain property insurance upon the work at the site in the full amount of the Contract Price (subject to such deductible amounts as may be provided in these Supplementary Conditions or required by Laws and Regulations).

This insurance shall:

B.1 Include the interests of Owner, Contractor, Subcontractors, Engineers, Engineer's Consultants and any other persons or entities identified, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

B.2 Be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss and damage to Work, temporary buildings, falsework and Work in transit and shall insure against at least the following perils: fire, lightning, extended coverage, theft, vandalism, and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils as may be specifically required by the Supplementary Conditions.

B.3 Include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges for engineers and architects).

B.4 Cover materials and equipment in transit for incorporation in the Work or stored at the Project site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer.

B.5 Be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineers within thirty days written notice to each other additional insured to whom a certificate of insurance has been issued.

C. Contractor shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws or Regulations which shall include the interests of Owner, Contractor, Subcontractors, Engineers, Engineer's Consultants and any other persons or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured. Limits shall be the same as required under Public Liability herein before specified.

D. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained by Contractor in accordance with Paragraphs B and C shall contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least thirty days prior written notice has been given to Owner and Engineer and to each other additional insured to whom a certificate of insurance has been issued.

E. The risk of loss within any identified deductible amount will be borne by Contractor, Subcontractors or others suffering any such loss. If any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at its own expense.

#### F. Professional Liability

The contractor/supplier or engineer/surveyor must maintain during the life of this contract Professional Liability Insurance to protect engineering and field surveying personnel hired by the Contractor in the performance of duties relative to project layout, stake-out, and calculations, reports, and other data required by the contract documents at the following limits:

Professional Liability Each Job site Limit \$250,000.00

General Aggregate Limit \$500,000.00

### 3. LIABILITY OF CONTRACTOR:

Whenever the Contractor is required by the existing State, Federal, local or municipal law, ordinance rules or regulations or by any State, Federal, local or municipal law, ordinances, rules or regulations that may be enacted hereafter pertaining to the work to be done under this contract to secure any permits or licenses to carry on any operation or operations in connection with the performance of the contract and/or to act under the direction or supervision of the Engineer and/or Town of Elsmere employee in connection with any such operation or operations, the Contractor shall be solely liable for all suits, actions, costs and damages of every kind and description resulting or which may result directly or indirectly, from any such operation or operations and shall indemnify and save harmless the Town of Elsmere from any and all suits, actions, costs, and damages of every kind and description arising or which may arise, directly or indirectly from the said operation(s).

#### 4. INDEMNIFICATION OF THE TOWN OF ELSMERE:

The Contractor shall indemnify, and save harmless the Town of Elsmere, its agents and employees from all suits, action, claims, demands, damages, losses, expenses, and/or costs of every kind and description to which the Town of Elsmere may be subjected or put by reason for injury (including death) to persons or property resulting from the manner or method employed by the Contractor, his agents, and employees, or subcontractors, or from neglect or default of the Contractor, his agents, and employees, or subcontractors in the performance of this contract or any part thereof or from, by or on account of any act or such omission of the Contractor, his agents and employees or subcontractor and whether such suits, actions, claims, demands, damages, losses, expenses, and/or costs against suffered or sustained by the Town of Elsmere, his agents and employees, may become liable therefore, and the whole or so much of the monies due, or become due to the Contractor under this contract or any other contract as may be considered necessary by the Engineer may be retained by the Town of Elsmere until such suits or claims for damages shall have been settled or otherwise disposed of the satisfactory evidence to that effect furnished by the Engineer.

#### 5. PERMITS, LICENSES, CHARGES, AND NOTICES:

The Contractor shall procure all permits and licenses, pay all royalties, charges and fees and give all notices necessary and incident to the due and lawful execution of the work.

#### 6. ENGINEER MAY INCREASE OR DECREASE QUANTITIES:

The Engineer reserves the right to increase or diminish the quantity of any unit price item included in the Bid or Proposal, wherever he deems it advisable or necessary so to do, and such increase or diminution shall in no way vitiate the contract. The Contractor shall be paid for the actual quantity of authorized work done or materials furnished under any unit price item of the "Bid" or "Proposal" at the price bid stipulated for such item. In case the quantity of any item is increased as above provided, the Contractor shall not be entitled to any damages, or increased compensation over and above the price bid, and in case the quantity of any item is diminished as above provided, the Contractor shall not have any claim for damages on account of loss of anticipated profits or otherwise, because of such diminution. No payment for items that are not constructed or for items listed as "Contingency Items" will be paid unless such items are constructed and accepted.

#### 7. EXTRA WORK:

The Contractors shall perform extra work, for which there is no quantity and price included in the contract, whenever, to complete fully the work contemplated, it is deemed necessary or desirable, by written authority of the Engineer, and such extra work shall be done in accordance with the specifications therefore, or in the best workmanlike manner as directed. This extra work will be paid for at a unit price or lump sum to be agreed upon previously, in writing, by the Contractor and the Engineer, or where such a price or sum cannot be agreed upon by both parties, or where this method of payment is impracticable, the Engineer may order the Contractor to do such work on a "Force Account" basis.

#### 8. FORCE ACCOUNT WORK:

All extra work done on a "Force Account" basis will be paid for in the following manner:

A. For all labor and foreman in direct charge of the specification, the Contractor shall receive the rates of wage applicable to this contract, for each and every hour that said labor and foreman are actually engaged in work.

B. For all materials used, the Contractor shall receive the actual cost of such materials, as shown by original receipted bills.

C. An additional amount of twenty-five percent (25%) of the total cost of labor and materials of 1 and 2 above, shall be added to allow for profit and overhead of subcontractors and a Contractor.

D. For any machine-powered tools or equipment and for any hauling equipment including fuel and lubricants, which it may be deemed necessary or desirable to use, the Engineer shall allow the Contractor a reasonable rental price, to be agreed upon in writing before such work is begun, for each and every hour that said tools or equipment are in use on such work, and to its sum no percentage shall be added.

E. The compensation as herein provided shall be received by the Contractor as payment in full for extra work done on a "Force Account" basis, and shall include superintendents, use of tools and equipment to which no rental is allowed, and profit. The Contractor's representative and the Inspector shall compare records of extra work on a "Force Account" basis at the end of each day. Copies of these records shall be made in duplicate, upon the Engineer's "Force Account" forms provided for this purpose by the Inspector and the Contractor's representative, one copy being forwarded respectively to the Engineer and the Contractor. All claims for extra work done on a "Force Account" basis shall be submitted to the Engineer by the Contractor upon certified triplicate statements, which shall also include the value of all material used in such work, and said statement shall be filed no later than the fifteenth (15th) day of the month following that in which the work was actually performed and shall include all labor charges, and material charges insofar as they can be verified. Should the Contractor refuse or fail to execute the work as directed or submit his claim as required, then the Engineer may withhold payment of all current estimates until the Contractor's refusal or failure is eliminated, or after giving the Contractor due notice, the Engineer may make payment for said work on the basis or reasonable estimate of the value of the work performed.

On extra work as defined in this paragraph, the Contractor will be reimbursed for his expenditures for Workman's Compensation Insurance, Social Security taxes, and Unemployment Compensation covering the men actually engaged upon such work. No percentage will be added to such payments, but the Contractor shall be entitled to receive only the actual Public Liability Insurance, Social Security taxes and Unemployment Compensation. Such payments shall be based upon the prevailing standard insurance rates supported by receipted vouchers from the insurance vendors and upon the actual amount of taxes paid for Social Security and Unemployment Compensation as evidenced by proper documents furnished by the Contractor.

## 9. EXTENSION OF TIME:

Should the Contractor allege to be delayed in the completion of the work by the act, neglect or default of the owner under the work, or by damage, caused by fire, flood, or other casualty for which the Contractor is not responsible, he may petition that the time fixed for completion of the work will be extended for a period equivalent for the time lost by any of all that causes aforesaid, which extended period shall be determined and fixed by the Engineer, but no such allowance will be made unless a claim therefore is presented in writing to the Engineer within five (5) days of the occurrence of such delay, and then only when granted in writing with the signature of the Engineer.

#### 10. TERMINATION; DELAYS; LIQUIDATED DAMAGES

If the Contractor refuses or fails to prosecute the work with such diligence as will ensure its completion within the time specified in these Contract Documents, or as modified as provided in these Contract Documents, the Owner, by written notice to the Contractor, may terminate the Contractor's right to proceed with the work. Upon such termination, the Owner may take over the work and prosecute the same to completion by contract or otherwise, and the Contractor and his sureties shall be liable to the Owner for additional cost incurred by the Owner for liquidated damages for any delay in the completion of the work as provided below. If the Contractor's right to proceed is so terminated, the Owner may take possession of and utilize, in completing the work, any materials, tools, equipment, and plant as may be on the site of the work and necessary therefore. If the work is not completed within the time stipulated, including any extensions of time for excusable delays as herein provided, the Contractor shall pay to the Owner Liquidated Damages for each calendar day of delay, as set forth in the Form of Agreement, and the Contractor and his sureties shall be liable to the Owner for the amount thereof.

The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with Liquidated Damages for any delays in the completion of the work due:

- A. To any acts of the Government, including controls or restriction upon or requisitioning of materials, equipment, tools, or labor by reason of war, national defense, or any other national emergency;
- B. To any acts of the Owner;
- C. To causes not reasonably foreseeable by the parties to this contract at the time of the execution of the contract which are beyond the control and without the fault of negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in the performance of some other contract with the Owner, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones, and other extreme weather conditions; and,
- D. To any delay of any subcontractor occasioned by any of the causes specified in sub-paragraphs above.

Provided, however, that the Contractor promptly notified the Owner within ten (10) days in writing of the cause of the delay. Upon receipt of such notification, the Owner shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this contract, the delay is properly excusable, the Owner shall extend the time of completing the work for a period of time commensurate with the period of excusable delay.

Should the completion of the work be delayed beyond the time herein specified for completion for any reason other than the act of neglect of the Owner, or an approved extension of time, the

Contractor shall pay the Owner the actual engineering expenses incurred by the Owner as a result of such delay and the Owner may deduct such engineering costs from any payments due or to become due the Contractor.

#### 11. UNAUTHORIZED WORK:

Work done beyond the lines and grades shown on the plans or as given, except as herein provided, or any extra work done without written authority, will be considered as unauthorized and at the expense of the Contractor and will not be measured by the Engineer or paid for by the Town of Elsmere. Work so done may be ordered removed and replaced by the Engineer at the Contractor's expense.

#### 12. EXECUTION OF WORK:

The Contractor shall begin work to be performed under the contract within times stipulated within the Work Schedule. The place where the work is to be started will be designated on the ground by the Engineer. The work shall be executed from as many different points, in such time as may be directed and shall be conducted in such a manner and with sufficient materials, equipment, and labor as is considered necessary to ensure its completion within the time set forth in the contract. Should the execution of the work for any reason be discontinued by the Contractor with the consent of the Engineer, he shall notify the Engineer at least twenty-four (24) hours before again resuming operations.

#### 13. COOPERATION OF CONTRACTOR AND REPRESENTATIVE:

The Contractor shall give the work his constant attention to facilitate the progress thereof and shall cooperate with the Engineer in every way possible. The Contractor shall have at all times competent and reliable English-speaking representatives on work authorized to receive orders and act for him.

#### 14. LAWS TO BE OBSERVED:

The Contractor at all times shall observe and comply with all Federal, State, local and municipal laws, ordinances, rules, regulations in any manner affecting the work, and all such orders or decrees as exist at present and those which may be enacted later, or bodies or tribunals having any jurisdiction or authority over the work and shall indemnify and save harmless the Town of Elsmere and all its officers and agents and servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, rule, order or decree, whether such violations by the Contractor, or any subcontractor, or any of their agents, and/or employees.

#### 15. SANITARY PROVISION:

The Contractor shall provide and maintain in a neat, sanitary condition such sanitary conveniences and accommodations for the use of his employees as may be necessary to comply with the requirements and regulations of the Department of Health or of other bodies or tribunals having jurisdiction thereof. He shall commit no public nuisance.

#### 16. WATER SUPPLY:

The Contractor shall provide and maintain water supplies and accommodations for the work contemplated and for the use of his employees as may be necessary to comply with the requirements and regulations of the Department of Health or of other bodies or tribunals having jurisdiction thereof. Water from hydrants is not free and the Contractor shall contact Artesian Water Company to make arrangements as necessary.

#### 17. PUBLIC CONVENIENCE AND SAFETY:

The Contractor at all times shall conduct the work in such a manner as to insure the least obstruction to traffic practicable. The convenience of the general public and of the residents and occupants of property along and adjacent to the work shall be provided for in an adequate and satisfactory manner. Materials stored upon highway shall be placed so as to cause as little obstruction to the traveling public as is considered necessary. Fire hydrants on or adjacent to the work shall be kept accessible to the fire apparatus at all times, and no material or obstruction shall be placed within fifteen (15) feet of any hydrant. Footways and portions of highways and streams adjoining the work under construction shall not be obstructed more than is absolutely necessary. All gutters and sewer inlets shall be kept unobstructed at all times. In no case, shall any traveled through fare be closed without permission of the Engineer.

#### 18. MAINTENANCE OF TRAFFIC:

The Contractor shall submit a maintenance of traffic plan for approval by the Engineer seven (7) days prior to start of work. The maintenance of traffic plan shall contain only approved traffic control devices and methods of operation in accordance with the State of Delaware Manual on Traffic Control for Street Highway Construction and Maintenance Operations. The Contractor shall not perform any work until the maintenance of traffic plan has been approved in writing by the Engineer.

The Contractor shall not enter upon private property for any purpose without obtaining permission, and shall be responsible for the preservation of all public and private property, trees, monuments, etc., along and adjacent to the work and shall use every precaution necessary to prevent damage or injury to property or persons. He shall use suitable precautions to prevent damage to pipes, conduits, and other underground structures and shall protect carefully from disturbance or damage all land monuments and property marks until an authorized agent witnesses or otherwise referenced their location, and shall not remove them until directed. The Contractor shall not willfully nor maliciously injure or destroy trees or shrubs and shall not remove or cut them without proper authority. He shall be strictly responsible for any and all damage or injury of every kind and description, which directly or indirectly may be done to any property or sustained by all persons during the execution of the work resulting from any wrongdoing, misconduct, want of skill, or any negligence of himself or his agents and or employees, or at any time due to defective work or materials. Where or when any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work or in consequence of the non-execution thereof on part of the Contractor, he shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done by repairing, rebuilding, or otherwise restoring as may be directed, or he shall make good such damage or injury in an acceptable manner. In case of the

failure on the part of the Contractor to make good such damage or injury, the Engineer may, upon three (3) days notice proceed to repair, rebuild or otherwise restore such property as may be deemed necessary, and the cost thereof may be deducted from any moneys due or which may become due to the Contractor under this contract.

#### 19. DAMAGE TO UTILITIES:

Should the Contractor or his workmen in the execution of this Contract cause damage to any underground construction, such as water, telephone, electric, and other conduit, such damage shall be repaired or replaced by the Contractor at his own expense and under the direction of the Engineer or such repairs to the damaged utility or utilities may be made by employees of the respective utility company or companies whose underground structure was damaged by the Contractor or his workman and such costs for these repairs shall be paid by the Contractor.

#### 20. CONTRACTOR'S RESPONSIBILITY FOR WORK:

Until the final acceptance of all work as indicated in writing by the Engineer, it shall be under the charge and care of the Contractor, and he shall take every precaution against the destruction, injury or damage to the work or to any part thereof by the action of the elements or from any other cause whatsoever. The Contractor shall rebuild, repair, restore, and make good, at his own expense, all destruction of, injuries or damage to the work, or any portion thereof, occasioned by any of the above causes before its final completion and acceptance as indicated in writing by the Engineer.

#### 21. SUPERVISION BY ENGINEER:

The work is to be carried out under the supervision of the Engineer or his representative to his entire satisfaction. The work and material shall be strictly of the best quality of the kinds specified herein, and should any work or materials other than those specified as shown be introduced into construction of the work, the Engineer, or his authorized agent, shall have full power to reject them, and they shall be removed from the premises within three (3) days by the Contractor after being notified to do so.

#### 22. AUTHORITY OF ENGINEER:

The Engineer shall in all cases determine the quantity, quality, acceptability of the work and materials which are to be paid for under this contract and shall decide all questions in relations to said work and the performance thereof; and shall, in all cases, decide questions which may arise relative to the fulfillment of the Contract to the obligations of the Contractor thereunder.

#### 23. AUTHORITY AND DUTIES OF INSPECTORS:

Inspectors employed by the Owner shall be authorized to inspect all work done and materials furnished. Such inspection may extend to all or part of the work to the preparation or manufacture of the materials to be used. An Inspector will be stationed on the work to report to the Engineer as to the progress of the work and the manner in which it is being performed; also to report whenever it appears that the materials furnished and the work performed by the Contractor fails to fulfill the requirements of the specifications and contract, and to call to the attention of the Contractor any

such failure or other default, but no inspection, nor any failure to inspect, any time or place, however, shall relieve the Contractor from any obligation to perform all of the work strictly in accordance with the requirements of the specifications. In case of any dispute arising between the Contractor and the Inspector as to the materials furnished or the manner of performing the work, the Inspector shall perform such other duties as are assigned to him. He shall not be authorized to revoke, alter, enlarge, relax or release any requirements of these specifications, to approve or accept any portion of the work, nor interfere with the management of the work by the Contractor. Any instructions which the Inspector may give the Contractor shall in no way be construed as binding by the Engineer or the Town of Elsmere in any way, nor release the Contractor from the fulfillment of the terms of the contract.

#### 24. INSPECTION OF MATERIALS AND WORK:

The Contractor shall furnish the Engineer with every reasonable facility for ascertaining whether or not the work as performed is in accordance with the requirements and intent of the specifications and contract. If the Engineer requests it, the Contractor, at any time before acceptance of the work, shall remove and/or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standards required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, removing, replacing the covering, and/or making good the parts removed shall be paid for, but should the work exposed or examined prove unacceptable, either in whole or in part, the uncovering, removing, replacing of the covering and/or making good of the parts removed, shall be at the Contractor's expense.

#### 25. DEFECTIVE MATERIALS AND WORK:

All materials not conforming to the requirements of these specifications shall be considered defective, and all such materials whether in place or not, shall be rejected and shall be removed immediately from the work unless otherwise permitted. No material that has been rejected, the effects of which have been corrected or removed, shall be used until approval has been given. All work that has been rejected or condemned shall be remedied, or if necessary, removed and replaced in an acceptable manner by the Contractor at his own expense.

#### 26. FAILURE TO REMOVE AND RENEW DEFECTIVE MATERIALS AND WORK:

Should the Contractor fail or refuse to remove and renew any defective materials used or work performed previously, or to make any necessary repairs in an acceptable manner, and in accordance with the requirements of these specifications, within the time indicated in writing, the Engineer shall have the authority to cause the unacceptable or defective materials of work to be removed and renewed for such repair to be made at the Contractor's expense. Any expense incurred by the Town of Elsmere in the making these removals, renewals, or repairs, which the contractor has failed or refused to make, shall be paid out of the moneys due or which are to become due to the Contractor, or may be charged against the "Contract Bond" deposited; and continued failure or refusal on the part of the Contractor to make any or all necessary repairs, removals, and renewals promptly, fully, and in an acceptable manner shall be sufficient cause for the Town of Elsmere to declare the contract forfeited, in which case the Town of Elsmere, at its option may perform the work, or may contract with any other individual, firm, or corporation to

perform the work. All expenses incurred hereby shall be charged against the defaulting contractor, and the amount thereof deducted from any moneys due or to become due him and/or shall be charged against the "Contract Bond" deposited. The performance of any work by the Town of Elsmere and/or others specified shall not relieve the contractor in any way from his responsibilities under this contract.

#### 27. CLEANING UP:

The Contractor shall at his own expense, keep the sites of his operations clean during the construction and remove all rubbish as it accumulates.

Upon failure of the Contractor to keep sites of his operation clean to the satisfaction of the Engineer, the Town of Elsmere may upon twenty-four (24) hours notice to the Contractor, remove any rubbish, materials, earth, etc., which the Engineer may deem necessary, charging the cost thereof to the Contractor and may deduct the amount from any moneys that may be due him.

#### 28. TEMPORARY SUSPENSION OF WORK:

The Engineer shall have the authority to suspend the work, wholly or in part, for such a period or periods as he may deem necessary, due to unsuitable weather, or such other conditions considered unfavorable for the suitable prosecution of the work or for such time as is necessarily due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract. If it should become necessary to stop work for an indefinite period, the Contractor shall store all materials in such a manner that they will not obstruct or impede the traveling public unnecessarily, nor become damaged in any way, and he shall take every precaution to prevent destruction, damage, or deterioration of the work performed, to provide suitable roof drainage, and erect temporary cover where necessary. The Contractor shall not suspend the work without authority. Neither the failure of the Engineer to notify the Contractor to suspend work on account of bad weather, or other unfavorable conditions nor permission by the Engineer to continue work during bad weather or other unfavorable conditions, shall be a cause for the acceptance of any work which does not comply in every respect with the contract and specifications.

#### 29. ANNULMENT OF CONTRACT:

If the Contractor fails to begin the work under the contract within the time specified, or fails to perform the work with sufficient materials to insure the proper completion of said work, except in cases for which an extension of time provided, or perform the work suitably, or neglect or refuse to promptly remove materials, or again promptly perform such work as shall be rejected as defective or unsuitable, or shall discontinue the prosecution of the work, or if the contractor becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or solvency, or any final judgment to stand against him unsatisfied for a period of forty-eight (48) hours, or shall make an assignment for the benefit of creditors or shall fail to make prompt payment for all sub-contractors and/or material, for material and/or labor supplied, or shall persistently disregard any State, Federal, local, or municipal laws, ordinances, rules or regulations pertaining to the work, or shall disregard the instructions of the engineer, or from any other cause whatsoever shall not carry on the work in an acceptable manner, the Engineer may give notice in writing, mailed to the Contractor and/or Surety of such delay, neglect, default, specifying same, and if the Contractor within the period of three (3) days after such written notice is mailed, shall not proceed in

accordance with the same, then the Town of Elsmere shall upon written certification from the Engineer of the fact of such delay, neglect, default and the Contractor's failure to comply with such notice, have full power and authority without prejudice to any of its other rights or remedies and without violating the contract, to terminate the employment of said Contractor and to take prosecution of the work out of the hands of said Contractor and to take possession of the premises and to appropriate the use of any or all materials, appliances, and equipment on the premises and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in its opinion, shall be deemed expedient and necessary for the completion of said contract in accordance with the plans and specification, and within such time as in the judgment of the Town of Elsmere, the public interests may require. In the event of any of the aforesaid circumstances arising at any time or times, the Town of Elsmere shall have the right to withhold, without the payment of interest, any sum or sums of money due or to become due to the Contractor until the interest of the Town of Elsmere has been fully protected to the satisfaction of the Engineer. All costs and expenses incurred by the Town of Elsmere together with the cost of completing the work under the contract, including the cost of additional material and administrative services, if any, shall be deducted from the moneys due or which may become due said Contractor. In the case of expense so incurred by the Town of Elsmere being less than the sum which would have been payable under the contract if it had been completed by said Contractor, then the said Contractor shall be entitled to receive the difference; and in case such expense shall exceed the sum which would have been payable under the contract, Contractor and/or Surety shall be liable therefore, and shall pay the amount of the difference to the Town of Elsmere within ten (10) days after the written notice is mailed to the Contractor and/or Surety. The expense, loss, or damage, including the cost of additional managerial and administrative services, if, any, incurred by the Town of Elsmere through the Contractor's defaults shall be certified by the Engineer, and such certification shall be conclusive and recognized and accepted as the correct amount of the loss sustained by the Town of Elsmere and all parties concerned.

### 30. MEASUREMENT OF QUANTITIES:

Any work completed under the contract that requires measurement shall be measured by the Engineer or his representative according to the United States Standards of Measures.

### 31. MATERIALS AND WORK NOT PAID FOR BY THE CONTRACTOR:

When written notice is given to the Engineer, before or within ten (10) days after the completion and conditional acceptance of the entire work under the contract, that there is money due and unpaid for any work or materials associated with this contract, the Contractor shall furnish the Engineer with satisfactory evidence that said money has been fully paid or satisfactorily secured by him. In case such evidence is not furnished as aforesaid, such amounts as may be necessary to meet the claims of the persons or aforesaid may be retained from any moneys due the contractor under the contract until the liabilities aforesaid shall be fully discharged or such notices withdrawn. The Town of Elsmere or the Engineer may also, with the written consent of the Contractor, use any money retained, due on both labor and materials for work, for which claims have been filed in the office of the Engineer.

### 32. NO ESTOPPEL OR WAIVER OF LEGAL RIGHTS:

The Town of Elsmere, or the Engineer, shall not be precluded or estopped by any measurement, estimate or certifications made or given by them or by any agent or employee of the Town of Elsmere, under any provision or provisions of the contract, at any time, either before or after the completion and acceptance of the work and payment, therefore, pursuant to any measurement, estimate or certificate from showing the true and correct amount and character of the work performed and materials furnished by the Contractor or from showing at any time that any such measurement, estimate, or certificate is untrue or incorrectly made in any particular, or that the work or the materials, or any part thereof, do not conform in fact to specifications and contract, and the Engineer shall have the right to reject the whole or any part of the aforesaid work or materials, should the said measurement, estimate, or certificate or payment be found or be known to be inconsistent with the terms of the contract, or otherwise improperly given. The Town of Elsmere shall not be precluded and estopped, notwithstanding any such measurement, estimate, or certificate, and payment in accordance therewith from demanding and recovering from the Contractor and his Surety such damages as it may sustain by reason of his failure to comply with terms of the specifications and contract. Neither the acceptance by the Town of Elsmere, the Engineer, or any agent or employee of the Town of Elsmere, nor any certificate by the Town of Elsmere for payment of money, nor any payment for, nor acceptance or use of the whole or any part of the work by the Town of Elsmere or the Engineer, nor any extension of time, nor any possession taken by the Town of Elsmere or its employees, shall operate as a waiver of any portion of the contract, or of any power herein reserved by the Town of Elsmere, or any right to damages herein provided, nor shall any waiver of any breach of the contract be held to be a waiver of any other or subsequent breach.

### 33. SUBCONTRACTORS:

The Contractor shall give his personal attention to the faithful performance of the work, shall keep the same under his control, and shall not assign the contract by power of attorney or otherwise, nor sublet the work or any part thereof without the previous written consent of the Engineer; he shall state to the Engineer in writing the name of each subcontractor he intends employing, the portion of work which he is to do or the materials which he is to furnish, his place of business and such other information as the Engineer may require, in order to know whether or not subcontractors are reputable and reliable and able to perform the work or to furnish the material as called for in the specifications. No subcontractor shall be engaged upon any branch of the work, who is not thoroughly practical and responsible, at the time of making this contract, to conduct business in the particular branch of trade of which he is employed. The Contractor shall not, either legally or equitably, assign any of the money payable under the contract, or his claims thereto, unless by and with the consent of the Engineer. The Contractor shall not be released from any of his liabilities or obligations under this contract should any subcontractor or subcontractors fail to perform in a satisfactory manner the work undertaken by him or them. The Contractor agrees that he is fully responsible to the Town of Elsmere for the acts or omissions of his subcontractor, and of persons either directly or indirectly employed by them, as he is for the acts or omissions of persons directly or indirectly employed by him. Subcontracts, if any, shall be let promptly after the signing of the contract. Subcontractors' names must be included in the Proposal form. Nothing constrained in the contract shall create any contractual relation between any subcontractor and the Town of Elsmere.

The Contractor shall furnish the Town of Elsmere with a written list of all subcontractors, if any, to

be used in connection with this contract. The Town of Elsmere reserves the right to reject the use of any subcontractors for any reason whatsoever.

#### 34. CLAIMS TO BE MADE PROMPTLY:

Should the Contractor be in the opinion, at any time, that he is entitled to any additional compensation whatsoever, (over and above the compensation stipulated in these contract documents or for quantities and/or amounts over and above the quantities and/or amounts allowed or approved by the Engineer) the damages, losses, costs, and/or expenses to have been sustained, suffered, or incurred by him in connection with the project herein contemplated, he shall in each instance within five (5) days after such alleged damages, losses, costs, and/or expenses shall be sustained, suffered, or incurred, make a written claim therefore to the Engineer. On or before the fifteenth (15th) day of the calendar month succeeding that in which such damages, losses, costs, and/or expenses shall have been sustained, suffered, or incurred, the Contractor shall file with the Engineer a written itemized statement of the detailed amounts of each such claim or damages, losses, costs, and/or expenses, unless such claim for such additional compensation shall be held and taken to be absolutely invalidated, and he shall not be entitled to any compensation on the account of each such alleged damage, loss, cost, and/or expense. The provisions of this section shall be held and taken to constitute a condition precedent to the right of the Contractor to recover; they shall also apply to all claims by the Contractor in anywise relating to the complete project; and even though the claims and/or work involved may be regarded as "outside the Contract". It is understood and agreed, however, that nothing in this section contained shall be held or taken to enlarge in anyway the rights of the Contractor or the obligations of the Town of Elsmere under these documents.

#### 35. EXTRA WORK A PART OF THE CONTRACT:

No order for extra work nor the doing of any extra work, at any time or place shall in any manner or to any extent relieve the Contractor, or the Surety of his bond, from any of their obligations under the contract documents; all extra work orders being given and all extra work being done, under, and in accordance with the contract, is to be considered a part of the same, subject to each and every one of the terms and requirements of the contract documents, and fully covered by the bond furnished by the Contractor.

#### 36. SCOPE OF PAYMENT:

The Contractor shall receive and accept the compensation, as provided in the Bid or Proposal, in full payment for furnishing all materials, labor, tools and equipment and for performing all work contemplated and embraced under the contract, also for all loss or damages arising out of the nature of the work, or from the action of the element or from any unforeseen difficulties or obstructions, which may arise or be encountered during the prosecution of the work, until its final acceptance by the Town of Elsmere, and for risks of every description connected with the prosecution of the work, until its final acceptance by the Town of Elsmere, and for all risks of every description connected with the prosecution of the work, also for all expenses incurred by, or in the consequence of the suspension or discontinuance of the prosecution of the work as herein specified and for any actual or alleged infringement of patent, trade name, or copyright and for completing the work and the whole thereof, in an acceptable manner according to the plans and

specifications. The payment of any current or final estimate, or of any retained percentage, shall in no way prejudice, or affect the obligations of the Contractor, at his own cost and expense, to renew or replace any defects and imperfections in the construction of the work or in the strength of the quality of materials used in appurtenances, as well as all damages due or attributable to such defects, which defects, imperfections, or damages shall be discovered on or before the final inspection and acceptance of the work, and of which defect, imperfection, or damages, the Engineer shall be the judge, and the said Contractor shall be liable to the Town of Elsmere for failure so to do.

### 37. PARTIAL PAYMENTS:

The Engineer will make current estimates in writing, once each month, of the materials in place complete and accepted, and the amount of work performed in accordance with the contract, during the preceding month or period and the value thereof figured at the unit prices of the contract, and in case of lump sum items, figured on the basis of the schedule to be agreed upon, as thereafter provided for.

From the total of the amounts so ascertained will be deducted an amount equivalent to ten (10%) percent of the whole to be retained by the Town of Elsmere. Ten percent (10%) will be retained on all Contractor's invoices until the project has reached 50% completion. At that time the retainage shall be reduced to five percent (5%).

### 38. CONDITIONAL ACCEPTANCE:

Whenever, in the opinion of the Engineer, the Contractor shall have completed the work in an acceptable manner in accordance with the terms of the contract, the Engineer shall make an inspection of the entire work, and upon inspection and acceptance, completion of all repairs or renewals which may appear, in the judgment of the Engineer, at the time to be necessary, he shall certify to the Owner in writing as to said completion and as to the value thereof. The aforesaid certificate shall be held and taken to evidence the conditional acceptance of the entire work by the Owner as of the date thereof. The Town of Elsmere shall continue to reserve and retain five percent (5%) for a period of six (6) months from and after the date of such certificate and conditional acceptance and the Town of Elsmere shall be authorized to apply the whole of any part of the said five percent (5%) so retained to any and all cost of repairs and renewals of the work and appurtenance which may become necessary, in the judgment of the Engineer, during such period of six (6) months on account of any failure or defects in the work, if the Contractor shall fail to make such repairs or renewals within three (3) days after receiving notice from the Town of Elsmere to do so.

### 39. FINAL ACCEPTANCE AND PAYMENT:

The Engineer shall make final inspection of the entire work and upon confirmation of all repairs and renewals which may appear, in the judgment of the Engineer, at that time to be necessary, he shall certify to the Owner in writing as to the final acceptance of the entire project. The Owner, upon receipt and approval of said certificate, shall pay, or cause to be paid, all sums due under the contract, except such sums which have already been paid and except such sum or sums as may have been expended by the Owner under the provisions of the contract documents and less any

other deductions the Owners may be otherwise entitled to make.

The last mentioned certificate issued by the Engineer shall be deemed and accepted by all the parties hereto as evidence of the final completion and acceptance of the entire project, and the payment made by the Owner to the Contractor pursuant to the issuance of said certificate of final completion and acceptance shall be deemed to be accepted by all of the parties hereto as the final payment to be made by the Owner to the Contractor, all prior certificates or estimates upon which payments may have been made being partial estimates and subject to correction in said final payment;

#### 40. LAST PAYMENT TO TERMINATE LIABILITY TO THE OWNER:

The acceptance by the Contractor of the final payment shall operate as and be a release to the Owner and every agent thereof from all claims and liabilities to the Contractor for anything done or furnished or relating to the work, or for any act or neglect of the Owner or any persons relating to or affecting this work.

#### 41. NO LIMITATION OF LIABILITY:

It is understood and agreed that any and all duties liabilities, and/or obligations imposed upon or assumed by the Contractor and the surety, or either of them by or under the contract documents, shall be taken and construed to be cumulative, and that the mention of any specific duty, liability, or obligation to be imposed upon or assumed by the Contractor and/or Surety under the contract documents shall not be taken or construed as a limitation or restriction upon any or all of the other duties, liabilities and/or obligations imposed upon or assumed by the Contractor and/or Surety by or under the contract documents.

#### 42. REMEDIES CUMULATIVE:

All remedies provided in the contract documents shall be taken and construed to be cumulative; that is, in addition to any and all other remedies provided therein and to any remedies in law of equity which the Town of Elsmere would have in any case.

#### 43. LEGAL ADDRESS:

The address given in the bid or proposals is hereby designated as the legal address of the Contractor. Such address may be changed at any time by notice in writing delivered to the Engineer. The delivering of such legal address or the depositing in any post office, in a post-paid, registered wrapper direct to the above mentioned address of any notice, letter, other communication to the Contractor, shall be deemed to be a legal and sufficient service thereof.

#### 44. CONTRACTOR'S EXPENSE:

All things required by the contract documents to be done, furnished, and/or installed shall be done, furnished, and/or installed by the Contractor at his entire cost and expense, unless otherwise provided therein.

#### 45. ACCESS TO WORK:

The Engineer or his representative may at any time enter upon the work and the premises used by the Contractor, and the Contractor shall provide proper and safe facilities by means of ladders or otherwise to secure convenient access to all parts of the work, and all other facilities necessary for inspection, as may be required by the Engineer.

#### 46. GUARANTEE:

The Contractor hereby guarantees all work performed under this contract for a period of eighteen (18) months from the date of the "Final Acceptance and Payment" thereof by the Town of Elsmere as follows:

A. Against all faulty or imperfect materials and against all imperfect, careless, and/or unskilled workmanship.

B. That the work performed under this contract, including all mechanical and electrical equipment and appurtenances, and each and every part thereof, shall operate (with proper care and maintenance) in a satisfactory and efficient manner and in accordance with the requirements of these contract documents.

The Contractor agrees to replace with proper workmanship and materials, and to re-execute, correct, or repair, without cost to the Town of Elsmere, any work which may be found to be improper or imperfect and/or which does not operate in a satisfactory manner or fails to perform as specified.

The guarantee obligations assumed by the Contractor under these contract documents shall not be held or taken to be in any way impaired because of the specifications, indication or approval by or on behalf of the Town of Elsmere or any articles, materials, means, combinations, or things used or to be used in the construction, performance, completion of the work or any part thereof.

No use or acceptance by the Town of Elsmere of the work or any part thereof nor any failure to use the same, nor any repairs, adjustments, replacements, or corrections made by the Town of Elsmere due to the Contractor's failure to comply with any of his obligations assumed under these contract documents, shall impair, in any way, the guarantee obligations of the Contractor under these documents.

#### 47. STATUTES REGULATING PUBLIC WORK:

As required by law regulating contracts for public work, the Contractor agrees:

(a) To accept, insofar as the work covered by this contract is concerned, the provisions of the Workmen's Compensation Act of 1915, and any supplements or amendments thereto, which may hereafter be passed, and that the said Contractor will insure his liability thereunder, or file with the State of Delaware, or the municipal corporation or board with whom the contract is made, a certificate of exemption from insurance from the Bureau of Workmen's Compensation of the Department of Labor and Industry, in accordance with provisions of the State of Delaware, and all other provisions of the Workmen's Compensation Law now in force. Proof that the said Contractor shall have accepted the Workmen's Compensation Act of 1915, its supplements and amendments and shall have insured his liability thereunder, or shall have issued him a certificate of exemption for insurance from the Bureau of

Workmen's Compensation of the Department of Labor and Industry shall be produced to the owner before the execution of any contract for the work therein designated.

(b) To accept and abide by the provisions of the State of Delaware, referring to racial discrimination, and;

(c) To abide by the provisions of all other laws, State and Federal, regulating public work, the furnishing of materials and contractors for the performance thereof now in force or which may hereafter be passed.

#### 48. DRUG AND ALCOHOL POLICY

Any contractor working for the Town of Elsmere who uses Commercial Drivers License (CDL) drivers to perform work for the Town of Elsmere shall provide to the Town of Elsmere, prior to doing any work, a notarized affidavit certifying that the contractor's employees covered by the DOT CDL regulations are participating in a valid Drug and Alcohol Testing Program, and shall submit to the Town of Elsmere a copy of the contractor's most recent DOT reporting form setting forth test results.

#### 49. CONFLICT WITH FEDERAL STATUTES OR REGULATIONS:

If any provision of this chapter conflicts or is inconsistent with any statute, rule or regulation of the Federal Government applicable to a project of activity the cost of which is to be paid or reimbursed in whole or in part, by the Federal Government, and due to such conflict or inconsistency the availability of Federal funds may be jeopardized, such provision shall not apply to such project or activity.

**PROPOSAL AND SCHEDULE OF PRICES**

The undersigned bidder has carefully examined the site of the proposed work, Standard Specifications, General and Special Provisions, Drawings, and Addenda, if any, forming a part of this contract designated as **TOWN OF ELSMERE – CHESTNUT RUN & LITTLE MILL CREEK DRAINAGE IMPROVEMENTS**. Upon notice of award by the Town, the Bidder agrees to execute a contract within ten (10) calendar days which shall incorporate said plans and specifications, and further, upon notice to proceed shall, at his own cost and expense, furnish the materials, supplies, machinery, equipment, tools, labor, supervision, insurance, any other accessories and services needed to complete said work either with his own organization or subcontractors. The work shall be completed to the satisfaction of the Town of Elsmere in accordance with the plans, specifications and terms of the contract for the prices listed below.  
Addendum Number(s) \_\_\_\_\_ have been considered.

**\*\*\*NOTE - It is the contractor’s responsibility to check if any Addendum(s) have been issued and include them in his bid price(s).**

For Individuals and Partnerships:

\_\_\_\_\_  
Signature

ATTEST: (seal)

Company Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Address: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

For Corporations:

\_\_\_\_\_  
Signature of Officer & Title (seal)

ATTEST: (seal)

Corporation: \_\_\_\_\_

Signature: \_\_\_\_\_

Address: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

TO BE EXECUTED ONLY IN THE EVENT THE ABOVE PROPOSAL IS ACCEPTED

TOWN OF ELSMERE

Accepted on: \_\_\_\_\_ (date)

By: \_\_\_\_\_ (signature)

\_\_\_\_\_ (title)

ATTEST:

\_\_\_\_\_ (Witness)

\_\_\_\_\_ (Title)

SEAL \_\_\_\_\_ (date)



**STATEMENT OF SURETY COMPANY**

(TO BE COMPLETED AFTER CONSTRUCTION)

IN ACCORDANCE with the provisions of the CONTRACT dated \_\_\_\_\_  
between the

\_\_\_\_\_  
(Owner)

and \_\_\_\_\_  
(Contractor)

the \_\_\_\_\_ (Surety)

SURETY on the Material and Labor Payment BOND of

\_\_\_\_\_ (Contractor)

after a careful examination of the books and records of said CONTRACTOR or after receipt of an affidavit from CONTRACTOR, which examination of affidavit satisfies SURETY that all claims for labor and materials have been satisfactorily settled, hereby approved of the final payment to the said CONTRACTOR and by these presents witnesseth that payment to the CONTRACTOR of the final estimates shall not relieve SURETY of any of its obligations to

\_\_\_\_\_ (Owner) as set forth in the said SURETY COMPANY'S BOND.

IN WITNESS WHEREOF, said SURETY has hereunto set its hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

ATTEST:

(SEAL) \_\_\_\_\_ BY \_\_\_\_\_

President

NOTE: This statement, if executed by any person other than the President or Vice President of the Company, must be accompanied by a certificate of even date showing authority conferred upon the person so signing to execute such instruments on behalf of the Company represented.

**PERFORMANCE BOND**

KNOW ALL MEN, that we, \_\_\_\_\_ as Principal, and \_\_\_\_\_ as Surety, are held and firmly bound unto \_\_\_\_\_

and is successors and assigns (hereinafter called the Obligee), in the just sum of:

\_\_\_\_\_ Dollars (\$ ),

for faithful performance of the Contract as specified below:

\_\_\_\_\_,  
in lawful money of the United States of America for payment of which sum truly to be made, we find ourselves and each of our respective heirs, personal representatives, successors and assigns, jointly and severally, firmly by these presents, this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_.

WHEREAS, the Principal has entered into a written agreement with the Obligee, dated as of \_\_\_\_\_, for performance of \_\_\_\_\_ Contract in connection with Obligee which agreement together with the specifications therefor (including all related drawings and documents) and such alterations as may be made in such specifications as therein provided are hereby made a part hereof as fully as if set out herein, and shall together be hereinafter referred to as the "Contract"; and it was a condition of the award of said Contract that this bond be furnished.

THEREFORE, THE CONDITIONS OF THE ABOVE OBLIGATIONS ARE:

That, if the Principal shall faithfully perform a Contract (including any alterations or additions thereto), in accordance with the specifications and conditions of the Contract, and satisfy all claims and demands to persons or property, or for wrongful death in the performance thereof, and shall fully indemnify and save harmless the Obligee from any and all costs and damage which the Obligee may suffer, and fully reimburse and repay the Obligee any and all outlay and expense which it may incur, by reason of any such default, then this part of the Obligation shall be void, but otherwise it shall remain in full force.

The Surety, for value received, hereby agrees that no change, extension of time, alterations or additions to the terms of any of the Contract Documents or to the items to be provided thereunder not any forbearance by either the Obligee or the Principal to the other, shall in any way affect its obligation on this bond, and it hereby waives notice of any such change, extension of time, alteration or addition.

Both Principal and Surety acknowledges that all references herein to the Principal, in singular form, shall include the plural, as may be appropriate to the Principal.

IN WITNESS WHEREOF, The Principal and Surety, intending to be legally bound, have executed this bond the day and year aforementioned.

\_\_\_\_\_  
Principal

By: \_\_\_\_\_

Surety

PER-2

X. PAYMENT BOND

KNOW ALL MEN, that we, \_\_\_\_\_ as Principal, and  
\_\_\_\_\_ as Surety, are held and firmly bound unto

\_\_\_\_\_  
and its successors and assigns (hereinafter called the Obligee), in the sum of  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_), lawful money of  
the United States of America, for the payment of which sum truly to be made we bind ourselves and  
each of our respective heirs, personal representatives, successors and assigns, jointly and severally,  
by these presents, this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

WHEREAS, the Principal has entered into a written agreement with the Obligee dated as of  
\_\_\_\_\_, 20\_\_\_\_, for performance of the Contract work in connection with the  
construction of \_\_\_\_\_, together with the plans and  
specifications therefor (including all related drawings and documents), and such alterations as may  
be made in such plans and specifications as therein provided, are hereby made a part hereof as fully  
as if set out herein, and shall together be hereinafter referred to as the "Contract"; and it was a  
condition of the award of said contract that this bond be furnished.

THEREFORE, THE CONDITION OF THIS OBLIGATION is that if the Principal and all  
of the Principal's subcontractors shall promptly make payment for all material furnished and  
labor supplied or performed in the prosecution of the work under the Contract, whether or not said  
material or labor enter into and become component parts of said work, then this obligation  
shall be void; but otherwise it shall remain in full force. "Labor" and "Materials", as used in this  
bond, shall include public utility services and reasonable rentals of equipment, but only for periods

when the equipment rented is actually used at the site of the work.

The Principal and Surety, for value received, hereby agree that no change, extension of time, alteration or addition to the terms of any Contract Documents or to the work to be performed thereunder, nor any forbearance by either the Obligee or the Principal to the other, shall in any way affect the obligation or either of them on this bond, and they hereby waive notice of any such change, extension of time, alteration or addition.

The Principal and Surety further acknowledge and agree that this bond is furnished pursuant to requirements of the Public Works Contractors' Bond Law of 1967, solely for the protection of the claimants supplying labor or material to the Principal or any of the Principal's subcontractors in the prosecution of the work under the Contract, and that this bond is subject to all provisions of said Law as fully as though and provisions were set forth herein at length. They also agree that any claimant entitled under the said Law to sue on this bond may use a copy of this obligation, certified by the Obligee, for the purpose of establishing his, or its or their claim without requiring production in court of an executed original, and that action by one or more claimants shall not bar any subsequent or concurrent action(s) by the same or other claimant(s). However, the Obligee shall in no event be liable for payment of any costs or expense of any claimant's suit.

Both Principal and Surety acknowledge that all references herein to the Principal in singular form shall include the plural, as may be appropriate to the Principal.

IN WITNESS WHEREOF, the Principal and Surety, intending to be legally bound, have executed this bond the day and year aforementioned.

Principal

By: \_\_\_\_\_

Attorney-in-Fact

Surety

#### XI. CONTRACTOR'S RELEASE

(TO BE COMPLETED AFTER CONSTRUCTION)

KNOW ALL MEN BY THESE PRESENTS THAT:

\_\_\_\_\_  
(Contractor) of \_\_\_\_\_ County and State of \_\_\_\_\_  
\_\_\_\_\_ does hereby acknowledge that he has received this day of \_\_\_\_\_  
and from the \_\_\_\_\_

\_\_\_\_\_  
(Owner) the sum of ONE DOLLAR (\$1.00) and other valuable consideration in full satisfaction and payment of all sums of money owing payable and belonging to \_\_\_\_\_

\_\_\_\_\_  
(Contractor)  
by any means whatsoever, for on account of certain agreement hereinafter called the CONTRACT, between the said \_\_\_\_\_

(Owner) \_\_\_\_\_  
and \_\_\_\_\_

(Contractor) dated \_\_\_\_\_

NOW THEREFORE, the said \_\_\_\_\_

(Contractor)

(for myself, my heirs, executors and administrators) (for itself, its successors and assigns) do by these presents remise, release, quit-claim and forever discharge the said \_\_\_\_\_



# TOWN OF ELSMERE

KCI Technologies, Inc. Bid List  
30% Bid Submission

Contract Title: Old Dupont Road @ Silverbrook Dr, Taylor Rd, & Southern Rd Drainage Improvements  
Contract ID: TBD  
County: NEW CASTLE, TOWN OF ELSMERE

Date: 12/12/2024  
Page: 001-1

Item No.	Item Description	Unit	Unit Price	Qty	Total Cost
<b>DIVISION 200 EARTHWORK</b>					
209004	BORROW, TYPE C	CY		300	
202000	EXCAVATION AND EMBANKMENT	CY		100	
202003	UNDERCUT EXCAVATION	CY		50	
211001	REMOVAL OF PORTLAND CEMENT CONCRETE PAVEMENT, CURB AND SIDEWALK	SY		450	
<b>DIVISION 200 =</b>					
<b>DIVISION 400 BITUMINOUS MATERIALS</b>					
401005	SUPERPAVE TYPE C, 9.5mm, PG 64-22 (CARBONATE STONE)	TON		550	
401036	SUPERPAVE TYPE C, 9.5mm, PG 64-22, WEDGE	TON		300	
<b>DIVISION 400 =</b>					
<b>DIVISION 500 RIGID PAVEMENT</b>					
501505	PCC PAVEMENT, CLASS A	SY		350	
505000	PCC PATCHING, PARTIAL DEPTH	SYIN		60	
<b>DIVISION 500 =</b>					
<b>DIVISION 600 STRUCTURES</b>					
601000	CLEANING DRAINAGE PIPE, 15"-24" DIAMETER	LF		650	
601012	REINFORCED CONCRETE PIPE, 18", CLASS III	LF		606	
602002	DRAINAGE INLET, 34" X 18"	EA		7	
602003	DRAINAGE INLET, 34" X 24"	EA		7	
602009	DRAINAGE INLET, 72" X 24"	EA		4	
602035	MANHOLE, ROUND	EA		1	
602100	DRAINAGE INLET GRATE(S)	EA		18	
602101	DRAINAGE INLET FRAME(S)	EA		18	
602102	MANHOLE COVER(S)	EA		1	
602103	MANHOLE FRAME(S)	EA		1	
<b>DIVISION 600 =</b>					
<b>DIVISION 700 MISCELLANEOUS CONSTRUCTION</b>					
701017	I.PCC CURB AND GUTTER, TYPE 1-6	LF		175	
701023	I.PCC CURB AND GUTTER, TYPE 3-8	LF		2100	
760010	PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT	SYIN		8520	
762000	SAW CUTTING, BITUMINOUS CONCRETE	LF		200	
763000	INITIAL EXPENSE/ DE-MOBILIZATION	LS		1	
<b>DIVISION 700 =</b>					
<b>DIVISION 800 TRAFFIC</b>					
801000	MAINTENANCE OF TRAFFIC	LS		1	
805001	PLASTIC TRAFFIC CONTROL DRUMS	EADY		750	
810001	TEMPORARY WARNING SIGNS AND PLAQUES	EADY		660	
811007	FLAGGER, NEW CASTLE COUNTY, FEDERAL	HOUR		480	
817013	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	LF		2200	
<b>DIVISION 800 =</b>					

# TOWN OF ELSMERE

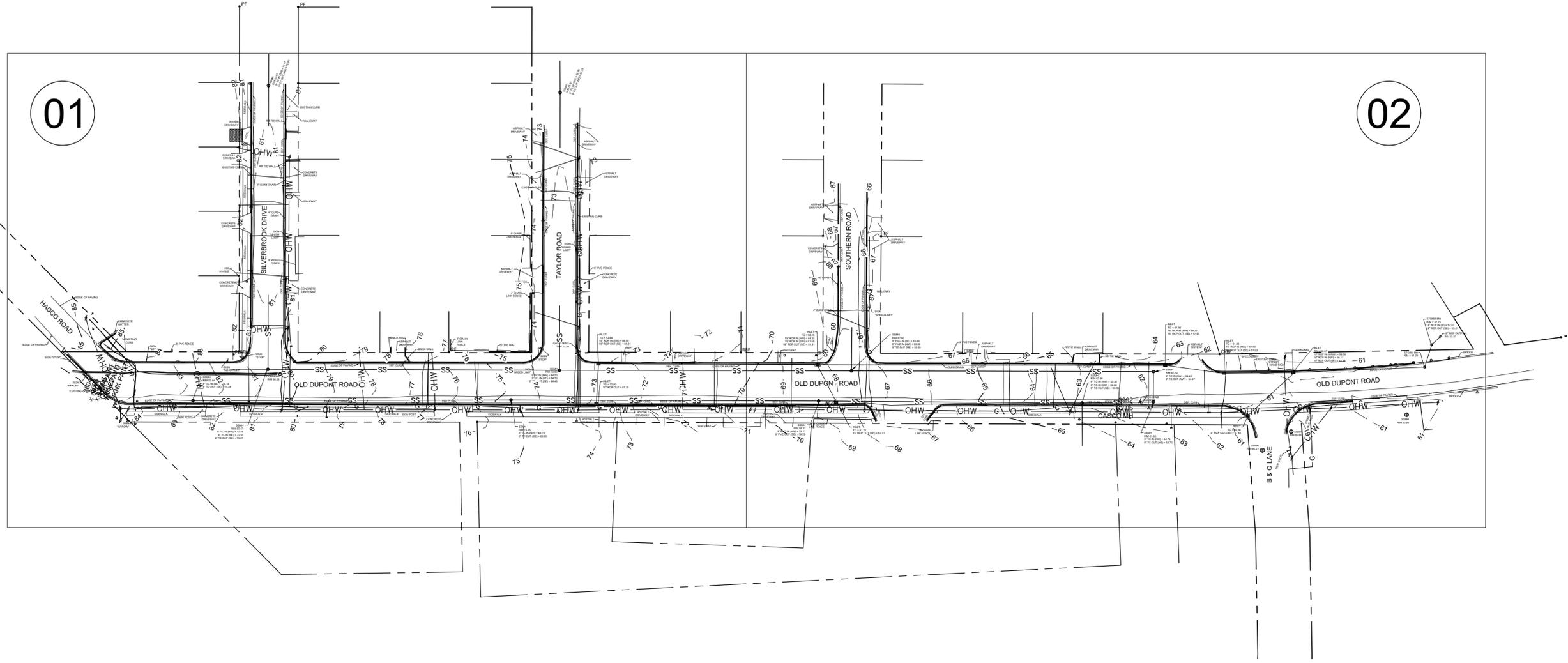
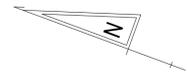
KCI Technologies, Inc. Bid List  
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Contract Title: Old Dupont Road @ Silverbrook Dr, Taylor Rd, & Southern Rd Drainage Improvements  
Contract ID: TBD  
County: NEW CASTLE, TOWN OF ELSMERE

Date: 12/12/2024  
Page: 001-1

Item No.	Item Description	Unit	Unit Price	Qty	Total Cost
<b>DIVISION 900 EROSION, SEDIMENT, AND STORMWATER MEASURES</b>					
908009	TOPSOILING, 4" DEPTH	SY		506	
908014	PERMANENT GRASS SEEDING, DRY GROUND	SY		506	
				<b>DIVISION 900 =</b>	
				DIVISION 200 =	
				DIVISION 400 =	
				DIVISION 500 =	
				DIVISION 600 =	
				DIVISION 700 =	
				DIVISION 800 =	
				DIVISION 900 =	
					<b>CONSTRUCTION COST =</b>





INDEX OF SHEETS	
SHEET DESCRIPTION	SHEET NO(S)
TITLE	1
INDEX OF SHEETS	2
LEGEND	3
TYPICAL SECTION DETAILS	4
CONSTRUCTION PLANS	5-6
CONSTRUCTION DETAILS	7-14
EROSION & SEDIMENT CONTROL VEGETATION DETAILS	15
MOT PLANS	16

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**KCI**  
 TECHNOLOGIES INC.  
 ENGINEERS AND PLANNERS  
 936 RIDGEBROOK ROAD  
 SPARKS, MARYLAND  
 21152  
 (410) 316-7800

ADDENDA / REVISIONS

OLD DUPONT ROAD AT SILVERBROOK DRIVE,  
 TAYLOR ROAD, & SOUTHERN ROAD  
 DRAINAGE IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
TXXXXXXXX	DESIGNED BY:	
COUNTY	CHECKED BY:	
NEW CASTLE		

SECTION	IS
SHEET NO.	02

INDEX OF SHEETS

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LEGEND	
EXISTING CONTOURS	--- 30 ---
RIGHT-OF-WAY	— — — — —
PROPERTY LINES	— — — — —
EASEMENT LINES	— — — — —
EXISTING TREE	○
EXISTING STORM DRAIN	— SD —
EXISTING STORM DRAIN INLET	□
EXISTING STORM DRAIN MANHOLE	⊙
SANITARY SEWER LINE	— S — S —
EXISTING SEWER MANHOLE	⊙
EXISTING METAL FENCE	— X —
EXISTING WOOD FENCE	— ○ —

LEGEND	
OVERHEAD ELECTRICAL LINE	— E —
UTILITY POLE	⊙
LIGHT POLE	⊙
GUY WIRE	—
EXISTING WATER LINE	— W —
EXISTING WATER METER / VALVE	⊙ ⊙
EXISTING FIRE HYDRANT	⊙
EXISTING GAS LINE	— G —
EXISTING GAS VALVE	⊙
EXISTING TELEPHONE LINE	— T —
EXISTING TELEPHONE BOX	⊙
EXISTING LIGHT POLE	⊙
EXISTING SIGN	—
EXISTING MAIL BOX	MB

LEGEND	
LIMIT OF DISTURBANCE	— LOD —
100-YEAR FLOODPLAIN	— 100yr —
SOILS BOUNDARY	AbC DeF
STEEP SLOPES $\geq 15\%$	■
EASEMENT TO BE ACQUIRED	■
ERODIBLE SOILS WITH K FACTOR GREATER THAN 0.35	■
PROPOSED CONTOUR	— 30 —
PROPOSED PIPE	— — — — —
DRAINAGE INLET	⊙
MANHOLE	⊙
STORM DRAIN PIPE	⊙
OVERLAY PAVEMENT	■
FULL DEPTH PAVEMENT	■
PARTIAL DEPTH PATCH	■
CURB AND GUTTER	— — — — —

NOT TO SCALE

OLD DUPONT ROAD AT SILVERBROOK DRIVE,  
TAYLOR ROAD, & SOUTHERN ROAD  
DRAINAGE IMPROVEMENTS

CONTRACT	BRIDGE NO.
TXXXXXXXX	N/A
COUNTY	DESIGNED BY:
NEW CASTLE	CHECKED BY:

BRIDGE NO.	N/A
DESIGNED BY:	
CHECKED BY:	

LEGEND

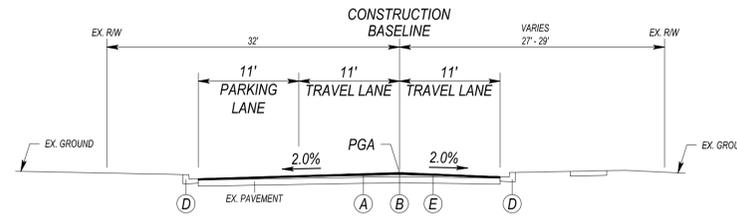
SECTION
L
SHEET NO.
03

**NOTES**

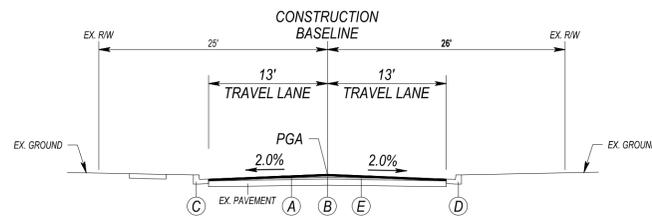
1. CONTRACTOR TO USE WEDGE AND LEVEL AS NEEDED TO ESTABLISH POSITIVE DRAINAGE.
2. REFER TO "CONSTRUCTION DETAILS" SHEET 7 FOR PERMANENT CROSS-ROAD PATCH OVER PIPE TRENCH DETAIL. SEE "CONSTRUCTION PLANS" FOR PROPOSED DRAINAGE PIPE LOCATIONS.
3. REFER TO "CONSTRUCTION DETAILS" SHEET 7 FOR PARTIAL-DEPTH PATCH DETAIL AS NEEDED WITHIN THE PROJECT LIMITS.

**LEGEND**

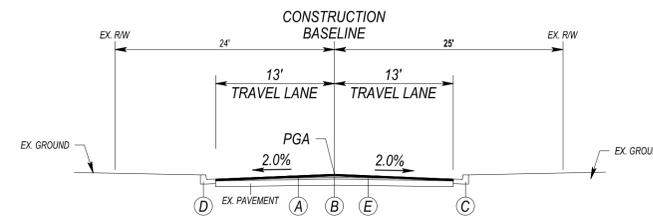
- (A) ITEM 401005 - SUPERPAVE TYPE C, 9.5mm, PG 64-22 (CARBONATE STONE)
- (B) ITEM 401036 - SUPERPAVE TYPE C, 9.5mm, PG 64-22, WEDGE
- (C) ITEM 701017 - INTEGRAL PCC CURB AND GUTTER, TYPE 1-6
- (D) ITEM 701023 - INTEGRAL PCC CURB AND GUTTER, TYPE 3-8
- (E) ITEM 760010 - PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT



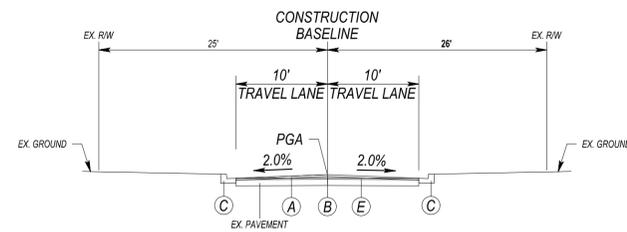
**OLD DUPONT ROAD**  
STATION 100+86 TO 109+50



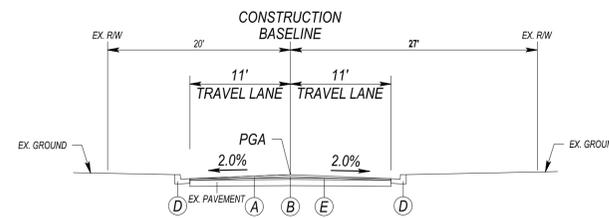
**SILVERBROOK DRIVE**  
STATION 10+32 TO 10+72



**TAYLOR ROAD**  
STATION 20+32 TO 20+98



**SOUTHERN ROAD**  
STATION 30+32 TO 30+72



**B&O LANE**  
STATION 40+61 TO 40+71

ADDENDA / REVISIONS

NOT TO SCALE

OLD DUPONT ROAD AT SILVERBROOK DRIVE,  
TAYLOR ROAD, & SOUTHERN ROAD  
DRAINAGE IMPROVEMENTS

CONTRACT  
TXXXXXXXXX  
COUNTY  
NEW CASTLE

BRIDGE NO.  
DESIGNED BY:  
CHECKED BY:

N/A

TYPICAL SECTION DETAILS

SECTION  
TS  
SHEET NO.  
04

**DRAINAGE INLET SCHEDULE**

NO.	STATION	OFFSET	BOX SIZE	TYPE	GRATE	T.G. EL.	INV. EL.
1	100+08.70	*	72" x 24"	B	1	**	69.59
2	100+59.92	*	72" x 24"	B	1	**	69.92
3	101+39.80	*	34" x 24"	B	1	**	69.07
4	10+44.63	*	34" x 18"	A	1	**	69.12
5	101+97.30	*	34" x 24"	B	1	**	68.29
6	102+96.40	*	34" x 24"	B	1	**	67.19
7	103+40.68	*	34" x 24"	B	1	**	66.61
8	103+88.28	*	34" x 24"	B	1	**	66.07
9	105+40.98	*	34" x 24"	B	1	**	64.83
11	102+91.52	*	34" x 18"	A	1	**	76.13
12	102+95.35	*	34" x 18"	A	1	**	75.99
13	103+40.56	*	34" x 18"	A	1	**	72.81
14	103+44.39	*	34" x 18"	A	1	**	72.67
15	104+48.63	*	34" x 18"	B	1	**	67.34
16	105+41.24	*	72" x 24"	A	1	**	67.87

\*MATCH CURB FLOWLINE OFFSET  
\*\*MATCH CURB FLOWLINE ELEVATION

**DRAINAGE PIPE SCHEDULE**

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INVERT EL.	DIS. EL.
1	18" RCP	III	57	0.0100	69.59	69.02
2	18" RCP	III	75	0.0100	69.92	69.17
3	18" RCP	III	18	0.0100	69.07	68.89
4	18" RCP	III	23	0.0100	69.12	68.89
5	18" RCP	III	40	0.0100	68.79	68.39
6	18" RCP	III	100	0.0100	68.29	67.29
7	18" RCP	III	48	0.0100	67.19	66.71
8	18" RCP	III	44	0.0100	66.61	66.17
9	18" RCP	III	66	0.0100	66.07	65.41
10	18" RCP	III	87	0.0100	65.31	64.88
12	18" RCP	III	4	0.0100	76.13	76.09
13	18" RCP	III	34	0.0500	75.99	74.29
14	18" RCP	III	4	0.0100	72.81	72.77
15	18" RCP	III	34	0.0500	72.67	70.97
16	18" RCP	III	4	0.0100	67.34	67.30
17	18" RCP	III	33	0.0500	67.87	66.17

**MANHOLE SCHEDULE**

NO.	STATION	OFFSET	TYPE/SIZE	T.G. EL.	INVERT EL.
1	101+57.11	22.34	48"	80.83	68.79

**CURB SCHEDULE**

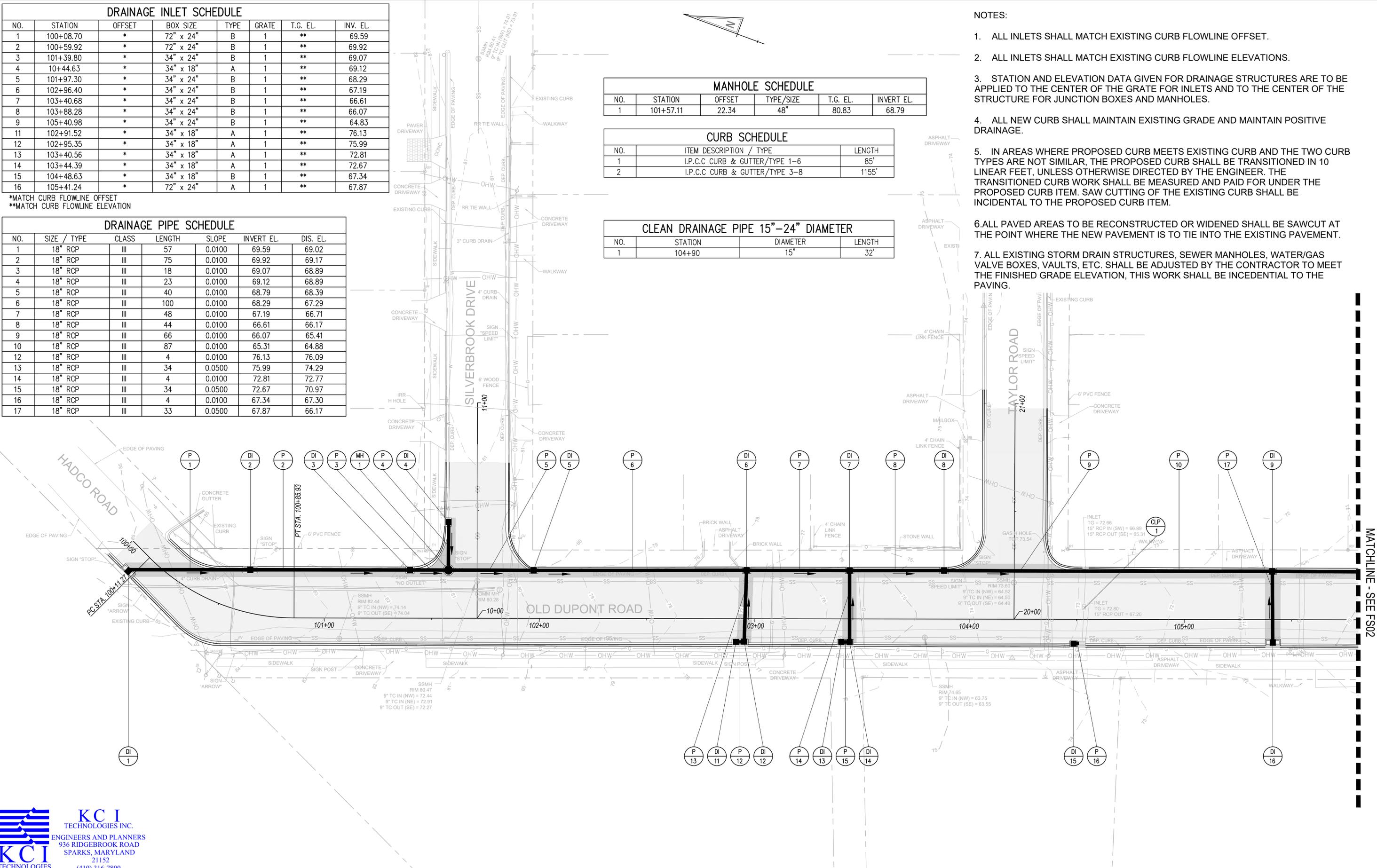
NO.	ITEM DESCRIPTION / TYPE	LENGTH
1	I.P.C.C CURB & GUTTER / TYPE 1-6	85'
2	I.P.C.C CURB & GUTTER / TYPE 3-8	1155'

**CLEAN DRAINAGE PIPE 15"-24" DIAMETER**

NO.	STATION	DIAMETER	LENGTH
1	104+90	15"	32'

**NOTES:**

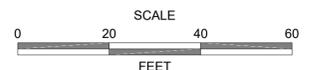
- ALL INLETS SHALL MATCH EXISTING CURB FLOWLINE OFFSET.
- ALL INLETS SHALL MATCH EXISTING CURB FLOWLINE ELEVATIONS.
- STATION AND ELEVATION DATA GIVEN FOR DRAINAGE STRUCTURES ARE TO BE APPLIED TO THE CENTER OF THE GRATE FOR INLETS AND TO THE CENTER OF THE STRUCTURE FOR JUNCTION BOXES AND MANHOLES.
- ALL NEW CURB SHALL MAINTAIN EXISTING GRADE AND MAINTAIN POSITIVE DRAINAGE.
- IN AREAS WHERE PROPOSED CURB MEETS EXISTING CURB AND THE TWO CURB TYPES ARE NOT SIMILAR, THE PROPOSED CURB SHALL BE TRANSITIONED IN 10 LINEAR FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE TRANSITIONED CURB WORK SHALL BE MEASURED AND PAID FOR UNDER THE PROPOSED CURB ITEM. SAW CUTTING OF THE EXISTING CURB SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.
- ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT.
- ALL EXISTING STORM DRAIN STRUCTURES, SEWER MANHOLES, WATER/GAS VALVE BOXES, VAULTS, ETC. SHALL BE ADJUSTED BY THE CONTRACTOR TO MEET THE FINISHED GRADE ELEVATION, THIS WORK SHALL BE INCIDENTAL TO THE PAVING.



MATCHLINE - SEE FS02

**KCI TECHNOLOGIES INC.**  
ENGINEERS AND PLANNERS  
936 RIDGEBROOK ROAD  
SPARKS, MARYLAND  
21152  
(410) 316-7800

ADDENDA / REVISIONS



OLD DUPONT ROAD AT SILVERBROOK DRIVE,  
TAYLOR ROAD, & SOUTHERN ROAD  
DRAINAGE IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
TXXXXXXXXXX	DESIGNED BY:	
COUNTY	CHECKED BY:	
NEW CASTLE		

SECTION	CP
SHEET NO.	05

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DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INVERT EL.	DIS. EL.
11	18" RCP	III	102	0.0100	64.83	64.32
18	18" RCP	III	4	0.0100	62.85	62.81

DRAINAGE INLET SCHEDULE							
NO.	STATION	OFFSET	BOX SIZE	TYPE	GRATE	T.G. EL.	INV. EL.
10	107+94.02	*	34" x 24"	B	1	**	59.74
17	106+53.83	*	34" x 18"	A	1	**	62.81
18	41+21.33	*	72" x 24"	B	1	**	57.61

\*MATCH CURB FLOWLINE OFFSET  
\*\*MATCH CURB FLOWLINE ELEVATION

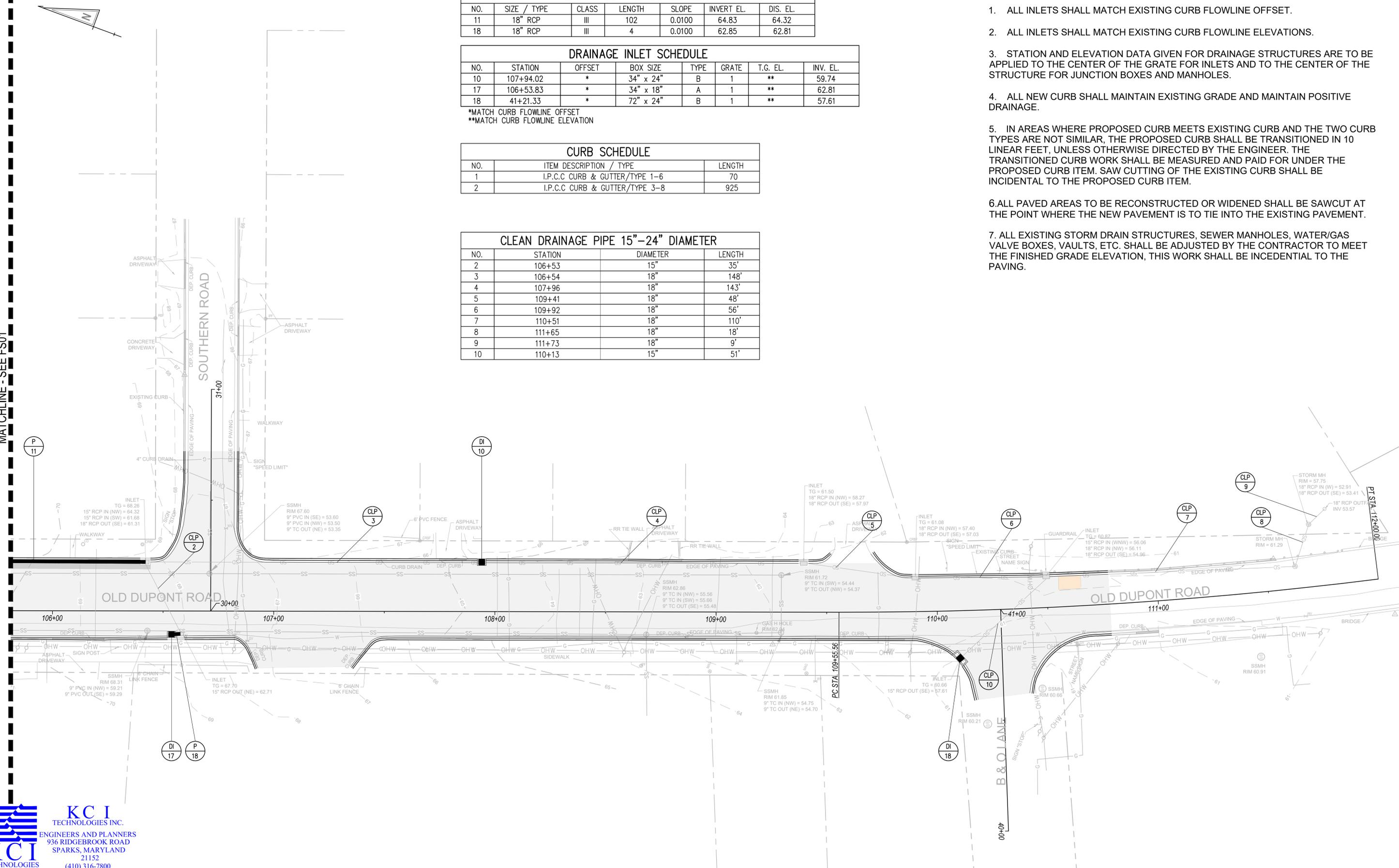
CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
1	I.P.C.C CURB & GUTTER / TYPE 1-6	70
2	I.P.C.C CURB & GUTTER / TYPE 3-8	925

CLEAN DRAINAGE PIPE 15"-24" DIAMETER			
NO.	STATION	DIAMETER	LENGTH
2	106+53	15"	35'
3	106+54	18"	148'
4	107+96	18"	143'
5	109+41	18"	48'
6	109+92	18"	56'
7	110+51	18"	110'
8	111+65	18"	18'
9	111+73	18"	9'
10	110+13	15"	51'

NOTES:

- ALL INLETS SHALL MATCH EXISTING CURB FLOWLINE OFFSET.
- ALL INLETS SHALL MATCH EXISTING CURB FLOWLINE ELEVATIONS.
- STATION AND ELEVATION DATA GIVEN FOR DRAINAGE STRUCTURES ARE TO BE APPLIED TO THE CENTER OF THE GRATE FOR INLETS AND TO THE CENTER OF THE STRUCTURE FOR JUNCTION BOXES AND MANHOLES.
- ALL NEW CURB SHALL MAINTAIN EXISTING GRADE AND MAINTAIN POSITIVE DRAINAGE.
- IN AREAS WHERE PROPOSED CURB MEETS EXISTING CURB AND THE TWO CURB TYPES ARE NOT SIMILAR, THE PROPOSED CURB SHALL BE TRANSITIONED IN 10 LINEAR FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE TRANSITIONED CURB SHALL BE MEASURED AND PAID FOR UNDER THE PROPOSED CURB ITEM. SAW CUTTING OF THE EXISTING CURB SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.
- ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT.
- ALL EXISTING STORM DRAIN STRUCTURES, SEWER MANHOLES, WATER/GAS VALVE BOXES, VAULTS, ETC. SHALL BE ADJUSTED BY THE CONTRACTOR TO MEET THE FINISHED GRADE ELEVATION, THIS WORK SHALL BE INCIDENTAL TO THE PAVING.

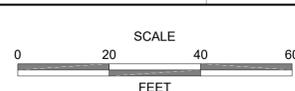
MATCHLINE - SEE FS01



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**KCI TECHNOLOGIES INC.**  
ENGINEERS AND PLANNERS  
936 RIDGEBROOK ROAD  
SPARKS, MARYLAND  
21152  
(410) 316-7800

ADDENDA / REVISIONS

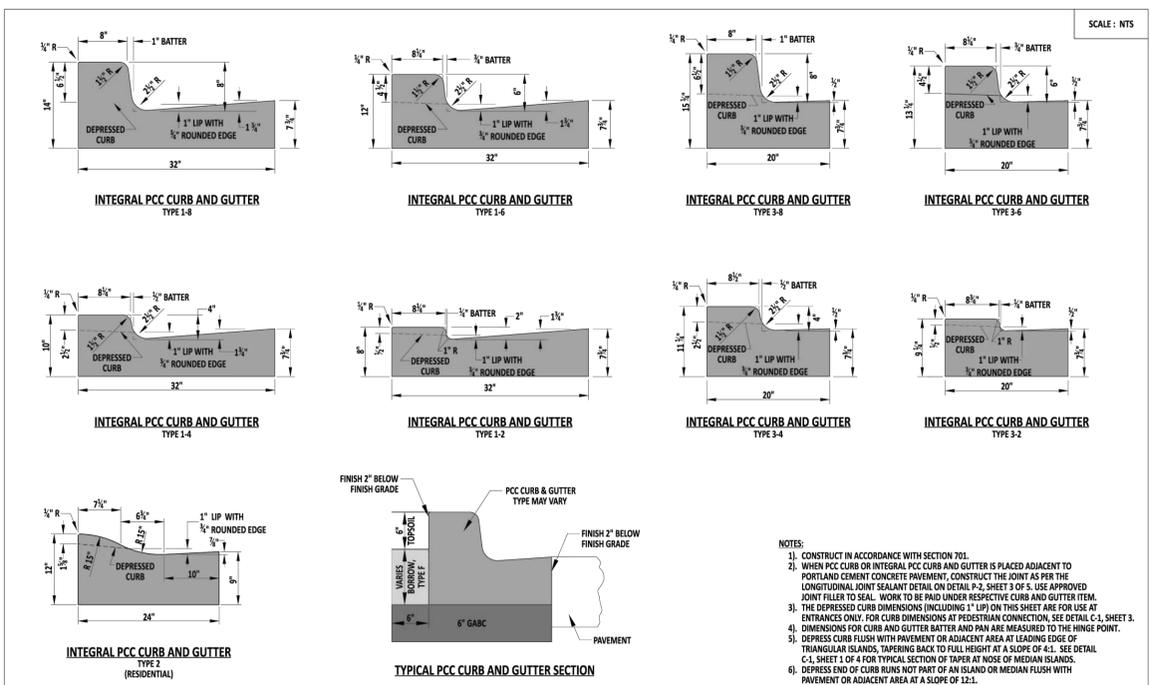


OLD DUPONT ROAD AT SILVERBROOK DRIVE,  
TAYLOR ROAD, & SOUTHERN ROAD  
DRAINAGE IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
TXXXXXXXX	DESIGNED BY:	
COUNTY	CHECKED BY:	
NEW CASTLE		

CONSTRUCTION PLANS

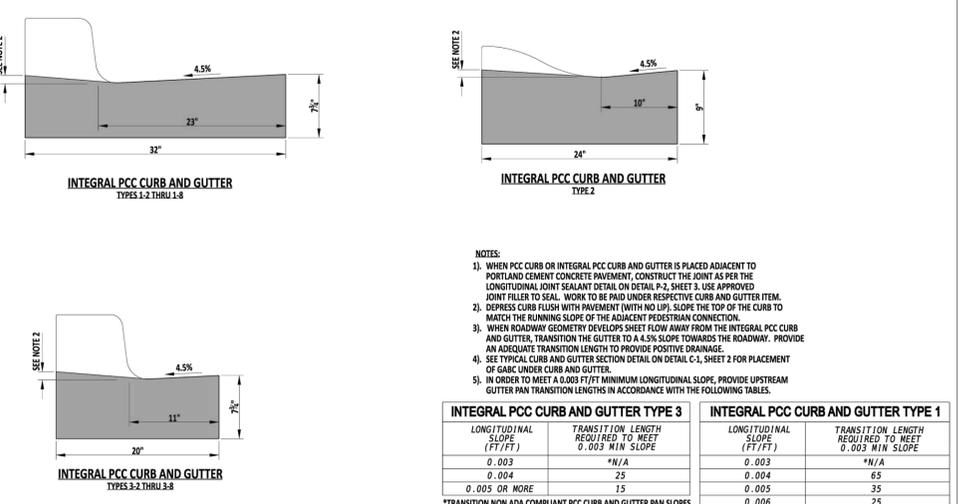
SECTION
CP
SHEET NO.
06



- NOTES:
1. CONSTRUCT IN ACCORDANCE WITH SECTION 701.
  2. WHEN PCC CURB OR INTEGRAL PCC CURB AND GUTTER IS PLACED ADJACENT TO PORTLAND CEMENT CONCRETE PAVEMENT, CONSTRUCT THE JOINT AS PER THE LONGITUDINAL JOINT SEALANT DETAIL ON DETAIL P-2, SHEET 3 OF 5. USE APPROVED JOINT FILLER TO SEAL. WORK TO BE PAID UNDER RESPECTIVE CURB AND GUTTER ITEM.
  3. THE DEPRESSED CURB DIMENSIONS (INCLUDING 1" LIP) ON THIS SHEET ARE FOR USE AT ENTRANCES ONLY. FOR CURB DIMENSIONS AT PEDESTRIAN CONNECTION, SEE DETAIL C-1, SHEET 3.
  4. DIMENSIONS FOR CURB AND GUTTER BATTER AND PAN ARE MEASURED TO THE HINGE POINT.
  5. DEPRESSED CURB FLUSH WITH PAVEMENT OR ADJACENT AREA AT LEADING EDGE OF TRIANGULAR ISLANDS, TAPERING BACK TO FULL HEIGHT AT A SLOPE OF 4:1. SEE DETAIL C-1, SHEET 1 OF 4 FOR TYPICAL SECTION OF TAPER AT NOSE OF MEDIAN ISLANDS.
  6. DEPRESS END OF CURB RUNS NOT PART OF AN ISLAND OR MEDIAN FLUSH WITH PAVEMENT OR ADJACENT AREA AT A SLOPE OF 12:1.

De/IDOT	RECOMMENDED	INTEGRAL PCC CURB & GUTTER			REVIEWED	23 October 2024	
		STANDARD NO.	C-1 (2025)	SHT.	2	OF	4

THIS DETAIL IS TO BE USED ONLY FOR THE SECTIONS OF CURB & GUTTER THAT ARE DIRECTLY IN FRONT OF THE PEDESTRIAN CONNECTIONS. REFER TO DETAIL C-1, SHEET 2 FOR TYPICAL CURB DIMENSIONS AND FOR DEPRESSING CURB AT ENTRANCES



- NOTES:
1. WHEN PCC CURB OR INTEGRAL PCC CURB AND GUTTER IS PLACED ADJACENT TO PORTLAND CEMENT CONCRETE PAVEMENT, CONSTRUCT THE JOINT AS PER THE LONGITUDINAL JOINT SEALANT DETAIL ON DETAIL P-2, SHEET 3. USE APPROVED JOINT FILLER TO SEAL. WORK TO BE PAID UNDER RESPECTIVE CURB AND GUTTER ITEM.
  2. DEPRESSED CURB FLUSH WITH PAVEMENT (WITH NO LIP). SLOPE THE TOP OF THE CURB TO MATCH THE RUNNING SLOPE OF THE ADJACENT PEDESTRIAN CONNECTION.
  3. WHEN ROADWAY GEOMETRY DEVELOPS SHEET FLOW AWAY FROM THE INTEGRAL PCC CURB AND GUTTER, TRANSITION THE GUTTER TO A 4.5% SLOPE TOWARDS THE ROADWAY. PROVIDE AN ADEQUATE TRANSITION LENGTH TO PROVIDE POSITIVE DRAINAGE.
  4. SEE TYPICAL CURB AND GUTTER SECTION DETAIL ON DETAIL C-1, SHEET 2 FOR PLACEMENT OF GABC UNDER CURB AND GUTTER.
  5. IN ORDER TO MEET A 0.003 FT/FT MINIMUM LONGITUDINAL SLOPE, PROVIDE UPSTREAM GUTTER PAN TRANSITION LENGTHS IN ACCORDANCE WITH THE FOLLOWING TABLES.

INTEGRAL PCC CURB AND GUTTER TYPE 3		INTEGRAL PCC CURB AND GUTTER TYPE 1	
LONGITUDINAL SLOPE (FT/FT)	TRANSITION LENGTH REQUIRED TO MEET 0.003 MIN SLOPE	LONGITUDINAL SLOPE (FT/FT)	TRANSITION LENGTH REQUIRED TO MEET 0.003 MIN SLOPE
0.003	N/A	0.003	N/A
0.004	25	0.004	65
0.005 OR MORE	15	0.005	35
		0.006	25
		0.007	20
		0.008 OR MORE	15

\*TRANSITION NON ADA COMPLIANT PCC CURB AND GUTTER PAN SLOPES OVER 15 FEET WHEN LOGITUDINAL SLOPE IS LESS THAN 0.004 FT/FT.

\*TRANSITION NON ADA COMPLIANT PCC CURB AND GUTTER PAN SLOPES OVER 15 FEET WHEN LOGITUDINAL SLOPE IS LESS THAN 0.004 FT/FT.

De/IDOT	RECOMMENDED	INTEGRAL PCC CURB & GUTTER (FOR USE AT PEDESTRIAN CONNECTIONS ONLY)			REVIEWED	22 December 2023	
		STANDARD NO.	C-1 (2024)	SHT.	3	OF	4

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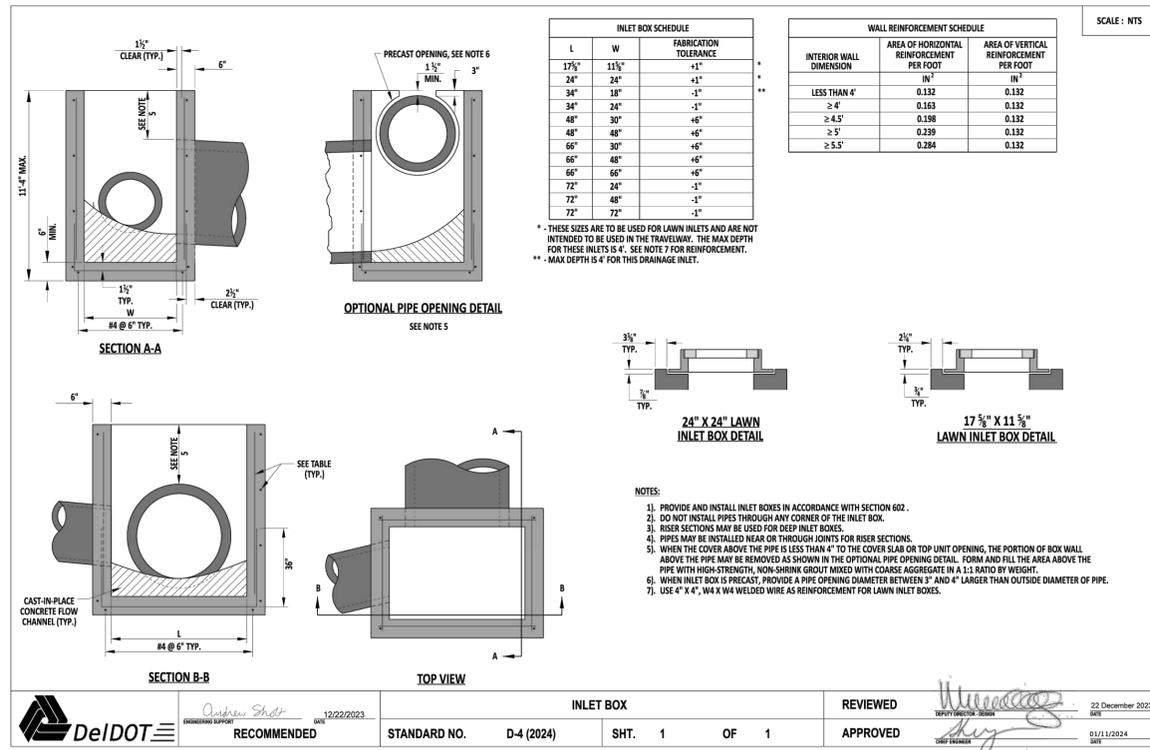
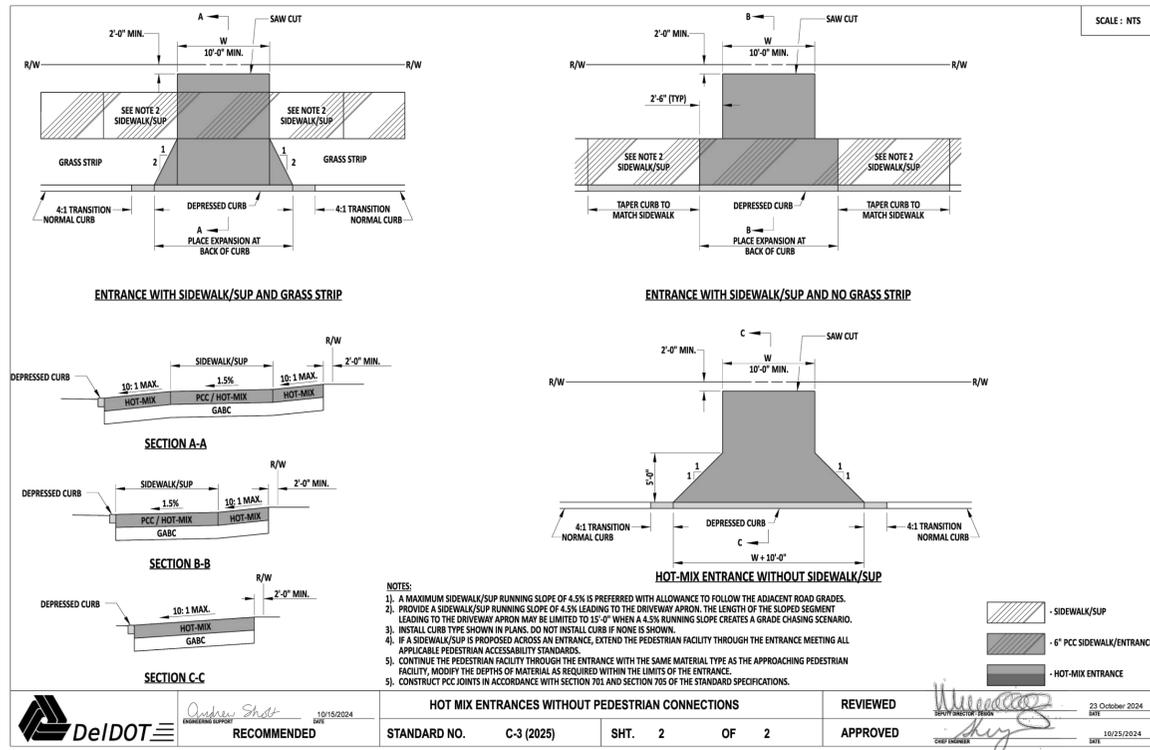
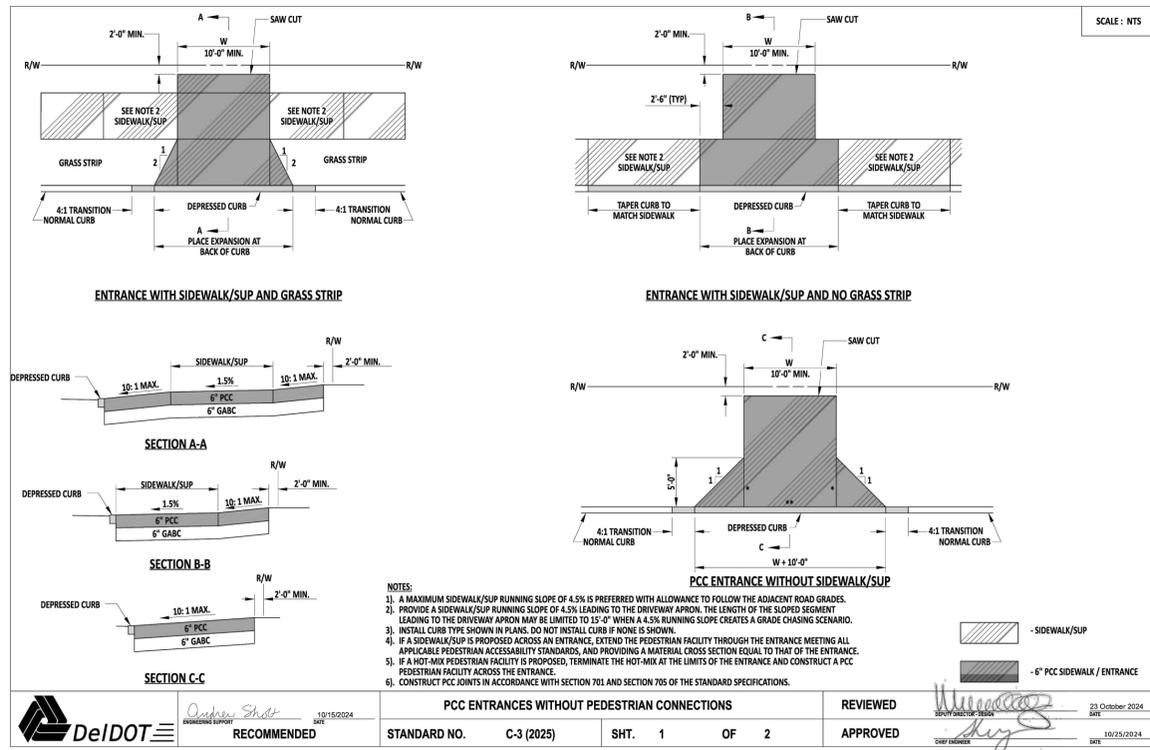
ADDENDA / REVISIONS

NOT TO SCALE

OLD DUPONT ROAD AT SILVERBROOK DRIVE, TAYLOR ROAD, & SOUTHERN ROAD DRAINAGE IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
TXXXXXXX	DESIGNED BY:	
COUNTY	CHECKED BY:	
NEW CASTLE		

CONSTRUCTION DETAILS	SECTION	
	CD	
	SHEET NO.	07



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ADDENDA / REVISIONS

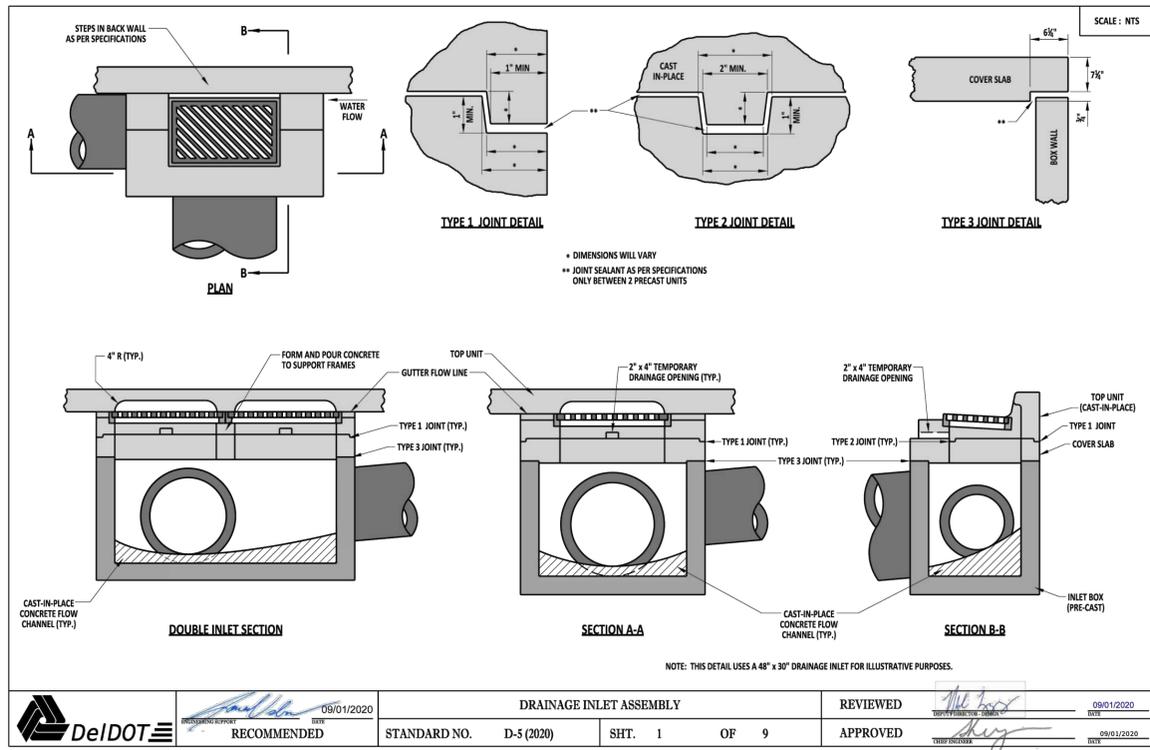
NOT TO SCALE

OLD DUPONT ROAD AT SILVERBROOK DRIVE,  
TAYLOR ROAD, & SOUTHERN ROAD  
DRAINAGE IMPROVEMENTS

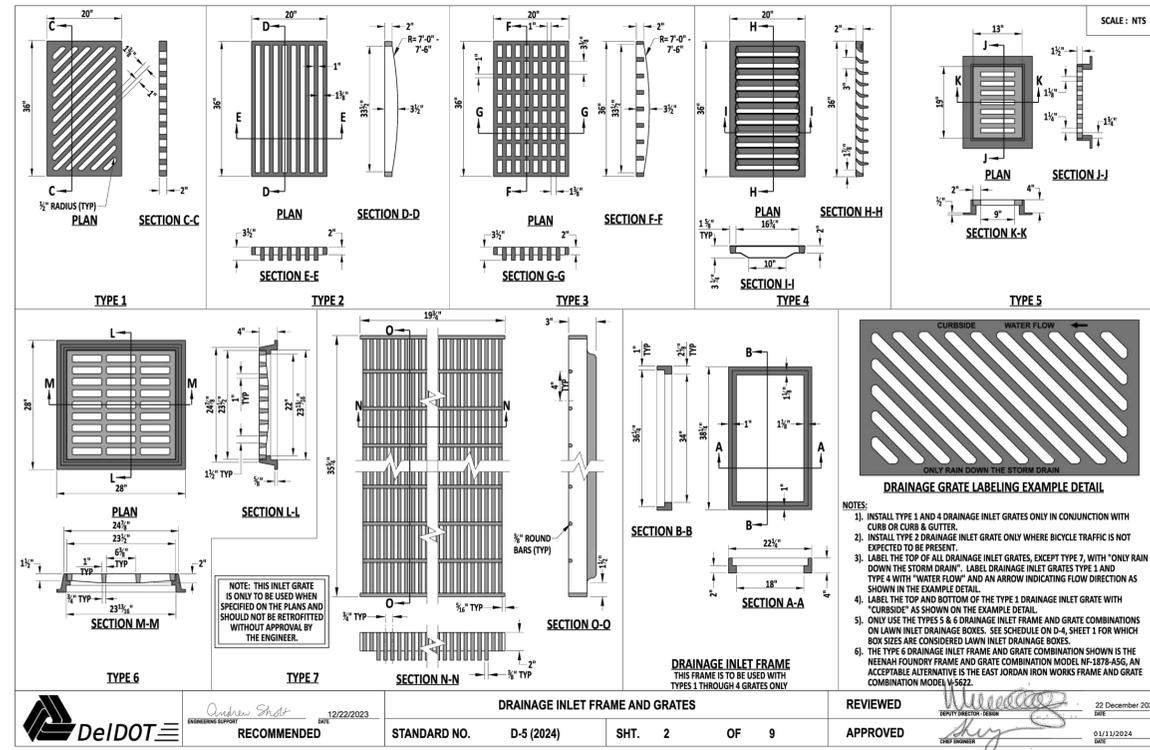
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TXXXXXXX	DESIGNED BY:	
COUNTY	CHECKED BY:	
NEW CASTLE		

CONSTRUCTION DETAILS

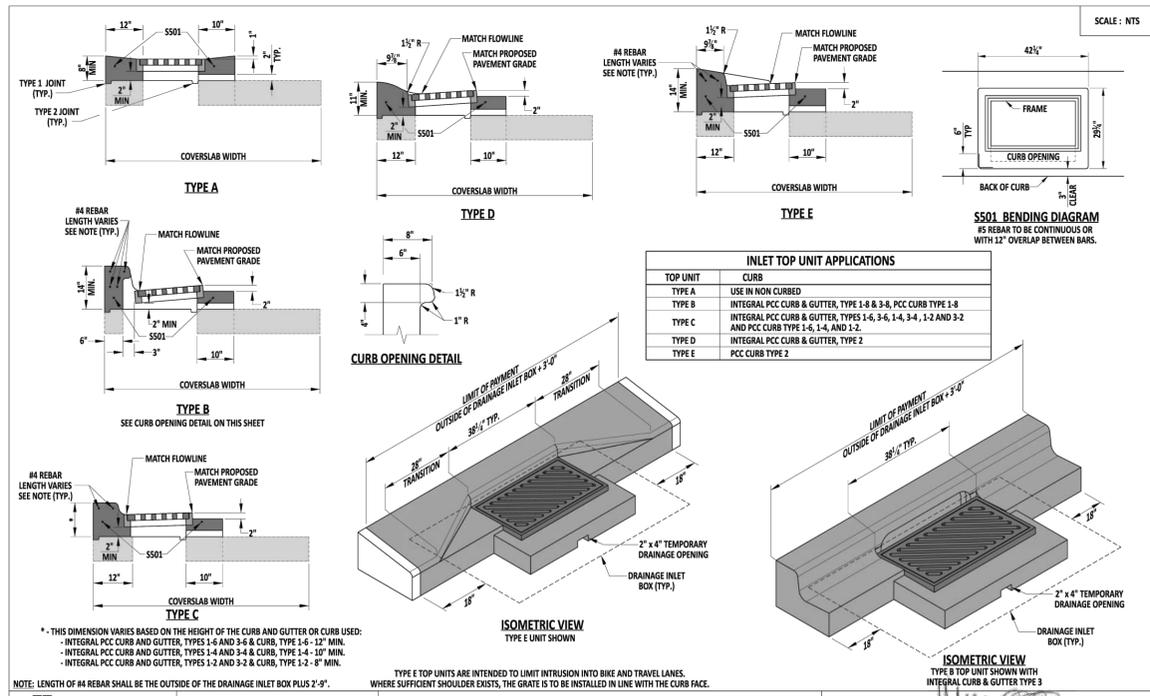
SECTION	CD
SHEET NO.	08



De/IDOT	RECOMMENDED	DATE: 09/01/2020	DRAINAGE INLET ASSEMBLY		REVIEWED	DATE: 09/01/2020
	STANDARD NO. D-5 (2020)	SHT. 1	OF 9	APPROVED	DATE: 09/01/2020	08/20/2020



De/IDOT	RECOMMENDED	DATE: 12/22/2023	DRAINAGE INLET FRAME AND GRATES		REVIEWED	DATE: 22 December 2023
	STANDARD NO. D-5 (2024)	SHT. 2	OF 9	APPROVED	DATE: 01/11/2024	22-DEC-2023



De/IDOT	RECOMMENDED	DATE: 12/22/2023	DRAINAGE INLET TOP UNITS		REVIEWED	DATE: 22 December 2023
	STANDARD NO. D-5 (2024)	SHT. 3	OF 9	APPROVED	DATE: 01/11/2024	22-DEC-2023

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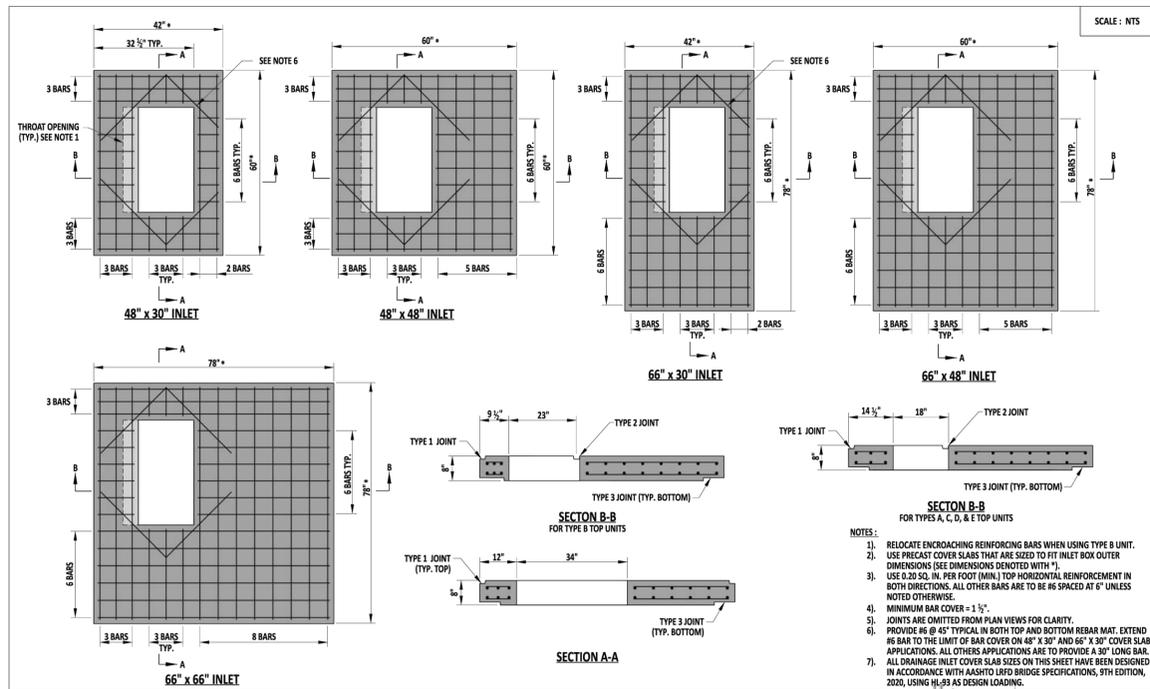
NOT TO SCALE

OLD DUPONT ROAD AT SILVERBROOK DRIVE, TAYLOR ROAD, & SOUTHERN ROAD DRAINAGE IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
TXXXXXXX	DESIGNED BY:	
COUNTY	CHECKED BY:	
NEW CASTLE		

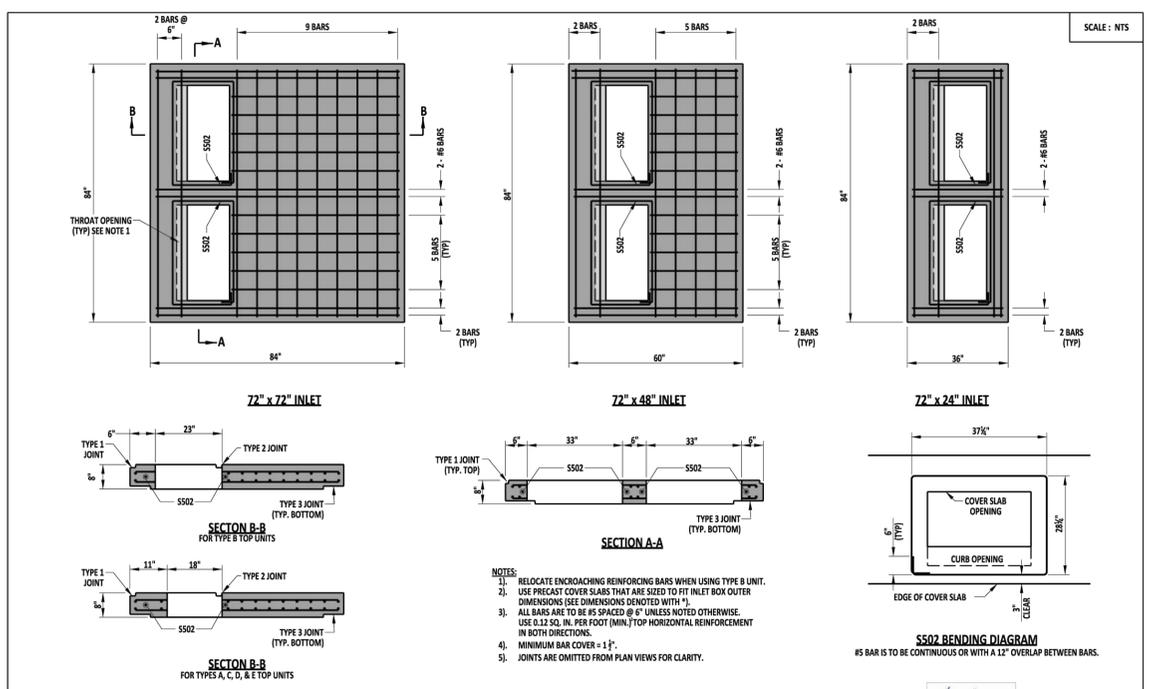
CONSTRUCTION DETAILS

SECTION	CD
SHEET NO.	09



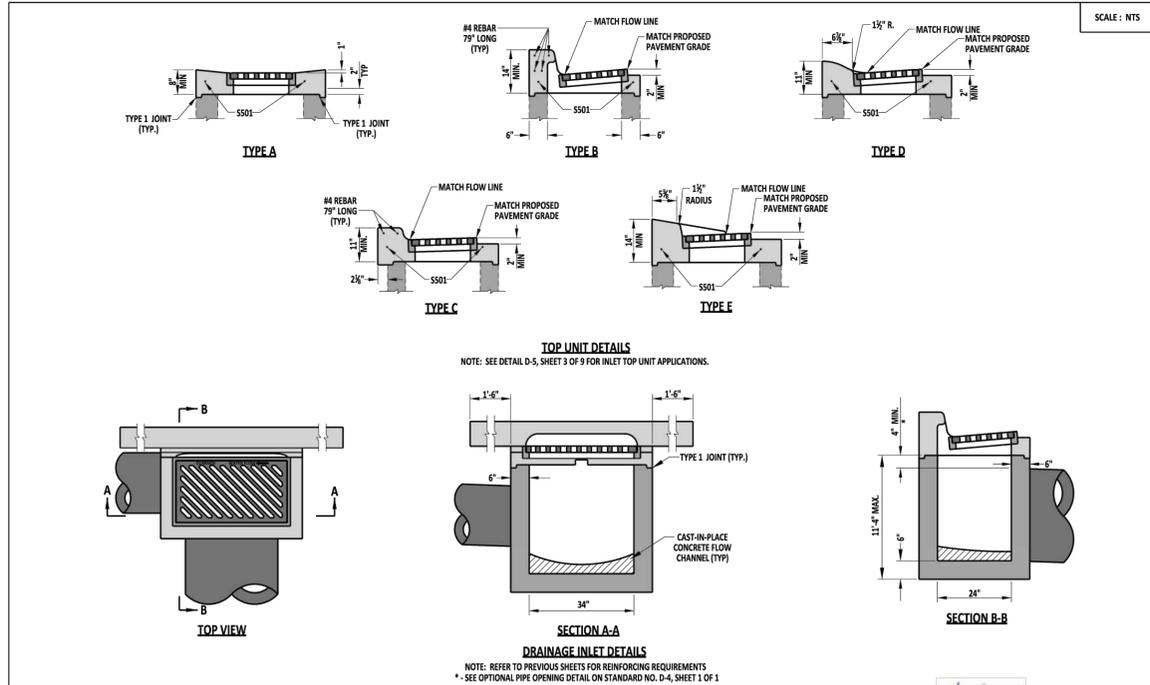
- NOTES:**
1. RELOCATE ENCRoACHING REINFORCING BARS WHEN USING TYPE B UNIT.
  2. USE PRECAST COVER SLABS THAT ARE SIZED TO FIT INLET BOX OUTER DIMENSIONS (SEE DIMENSIONS DENOTED WITH \*).
  3. USE 0.20 SQ. IN. PER FOOT (MIN.) TOP HORIZONTAL REINFORCEMENT IN BOTH DIRECTIONS. ALL OTHER BARS ARE TO BE #6 SPACED AT 6" UNLESS NOTED OTHERWISE.
  4. MINIMUM BAR COVER = 1 1/2".
  5. JOINTS ARE OMITTED FROM PLAN VIEWS FOR CLARITY.
  6. PROVIDE #6 @ 45° TYPICAL IN BOTH TOP AND BOTTOM REBAR MAT. EXTEND #6 BAR TO THE LIMIT OF BAR COVER ON 48" x 30" AND 66" x 30" COVER SLAB APPLICATIONS. ALL OTHER APPLICATIONS ARE TO PROVIDE A 30" LONG BAR.
  7. ALL DRAINAGE INLET COVER SLAB SIZES ON THIS SHEET HAVE BEEN DESIGNED IN ACCORDANCE WITH AASHTO LRFD BRIDGE SPECIFICATIONS, 9TH EDITION, 2020, USING HL-20 AS DESIGN LOADING.

De/IDOT	RECOMMENDED	DRAINAGE INLET COVER SLAB			REVIEWED	09/01/2024	
		STANDARD NO.	D-5 (2025)	SHT.	4	OF	9



- NOTES:**
1. RELOCATE ENCRoACHING REINFORCING BARS WHEN USING TYPE B UNIT.
  2. USE PRECAST COVER SLABS THAT ARE SIZED TO FIT INLET BOX OUTER DIMENSIONS (SEE DIMENSIONS DENOTED WITH \*).
  3. ALL BARS ARE TO BE #5 SPACED @ 6" UNLESS NOTED OTHERWISE.
  4. USE 0.12 SQ. IN. PER FOOT (MIN.) TOP HORIZONTAL REINFORCEMENT IN BOTH DIRECTIONS.
  5. MINIMUM BAR COVER = 1".
  6. JOINTS ARE OMITTED FROM PLAN VIEWS FOR CLARITY.

De/IDOT	RECOMMENDED	DOUBLE INLET COVER SLAB			REVIEWED	09/01/2020	
		STANDARD NO.	D-5 (2020)	SHT.	5	OF	9



**TOP UNIT DETAILS**  
NOTE: SEE DETAIL D-5, SHEET 3 OF 9 FOR INLET TOP UNIT APPLICATIONS.

**DRAINAGE INLET DETAILS**  
NOTE: REFER TO PREVIOUS SHEETS FOR REINFORCING REQUIREMENTS  
\* SEE OPTIONAL PIPE OPENING DETAIL ON STANDARD NO. D-4, SHEET 1 OF 1

De/IDOT	RECOMMENDED	34" x 24" DRAINAGE INLET			REVIEWED	09/01/2020	
		STANDARD NO.	D-5 (2020)	SHT.	6	OF	9

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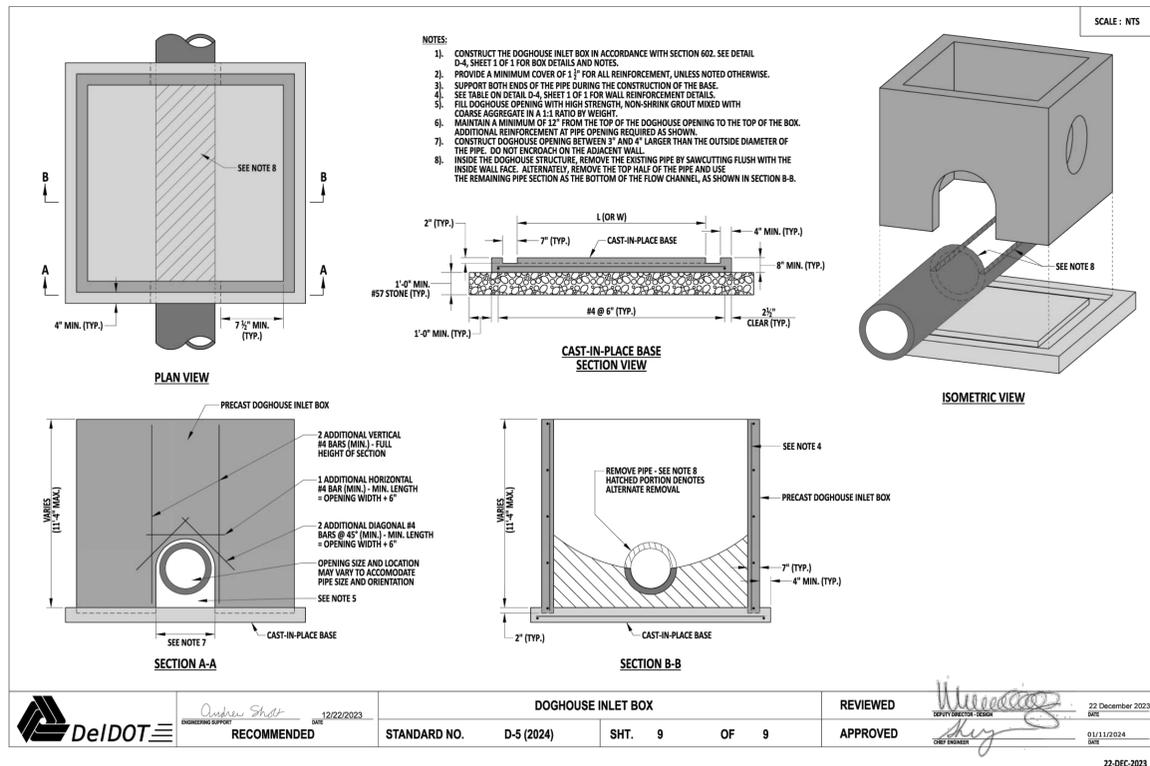
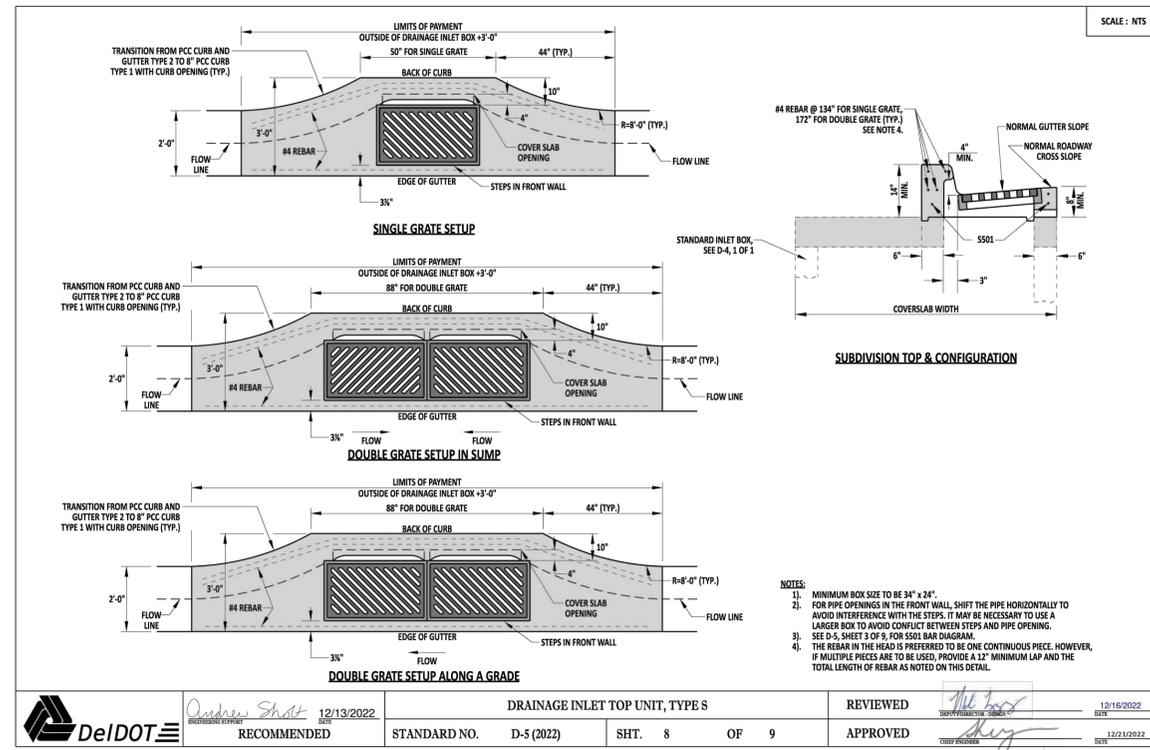
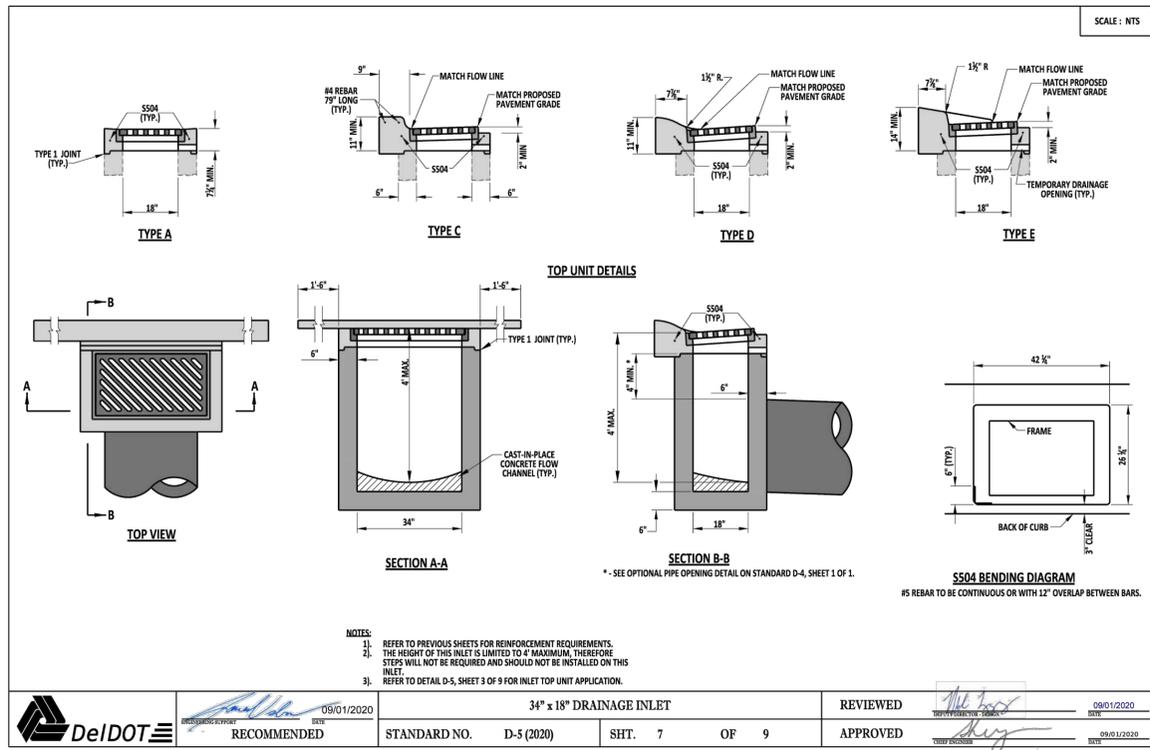
NOT TO SCALE

OLD DUPONT ROAD AT SILVERBROOK DRIVE, TAYLOR ROAD, & SOUTHERN ROAD DRAINAGE IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
TXXXXXXX	DESIGNED BY:	
COUNTY	CHECKED BY:	
NEW CASTLE		

CONSTRUCTION DETAILS

SECTION	CD
SHEET NO.	10



ADDENDA / REVISIONS

NOT TO SCALE

OLD DUPONT ROAD AT SILVERBROOK DRIVE,  
 TAYLOR ROAD, & SOUTHERN ROAD  
 DRAINAGE IMPROVEMENTS

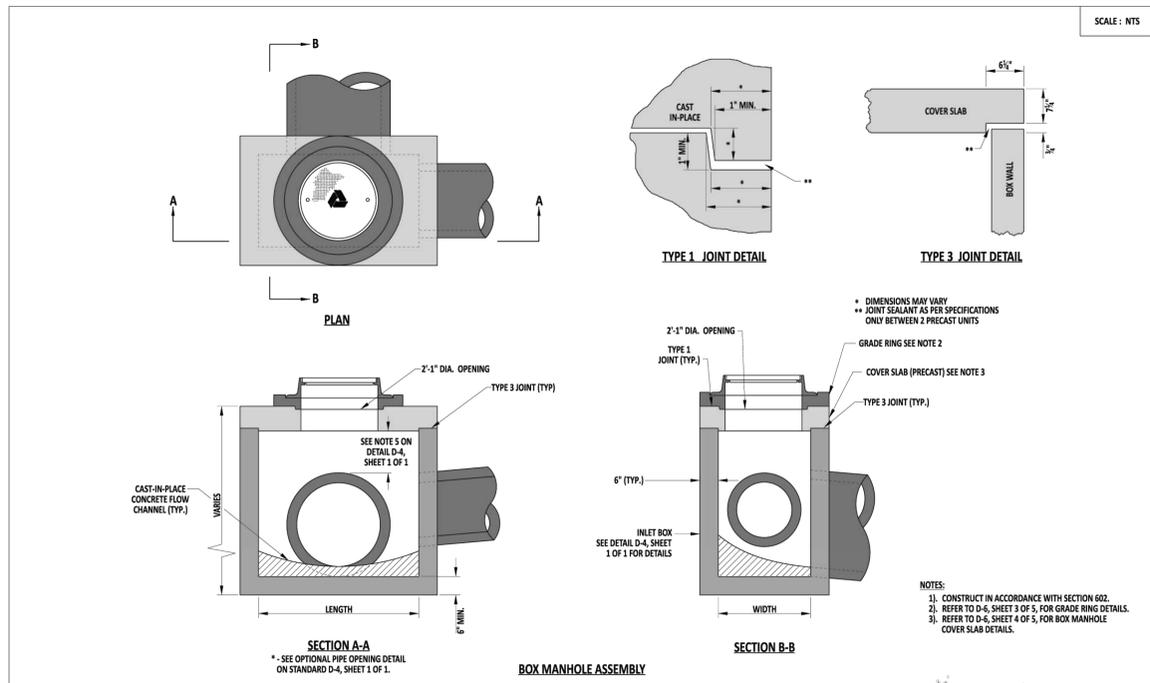
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TXXXXXXX	DESIGNED BY:	
COUNTY	CHECKED BY:	
NEW CASTLE		

CONSTRUCTION DETAILS

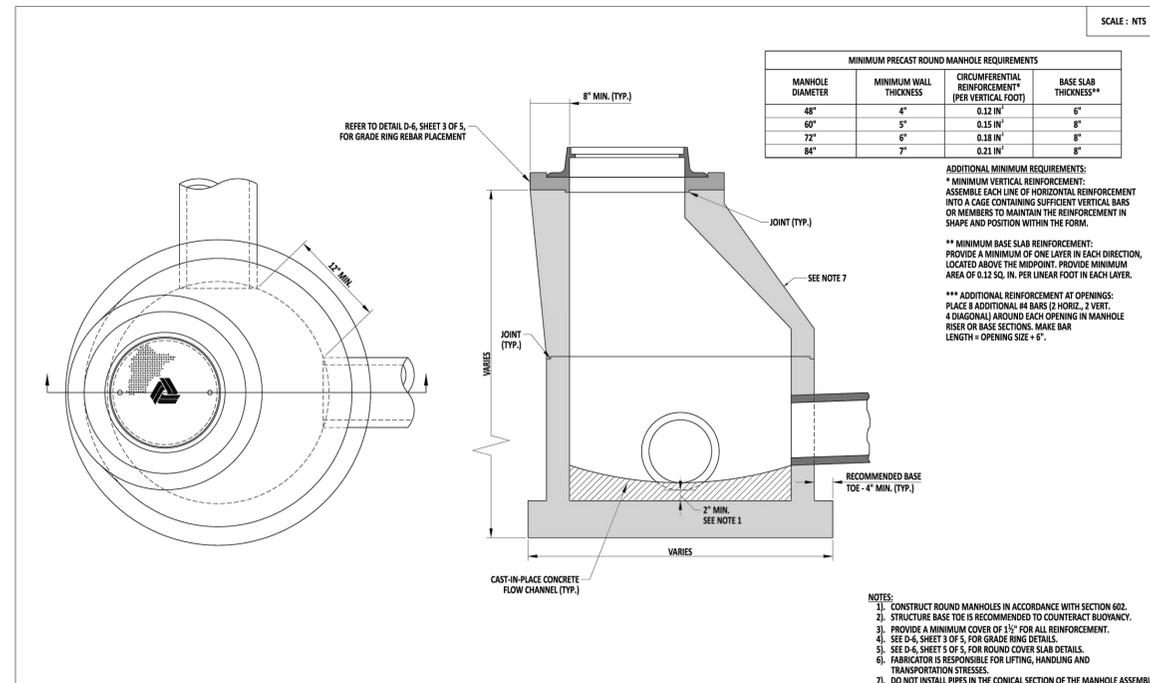
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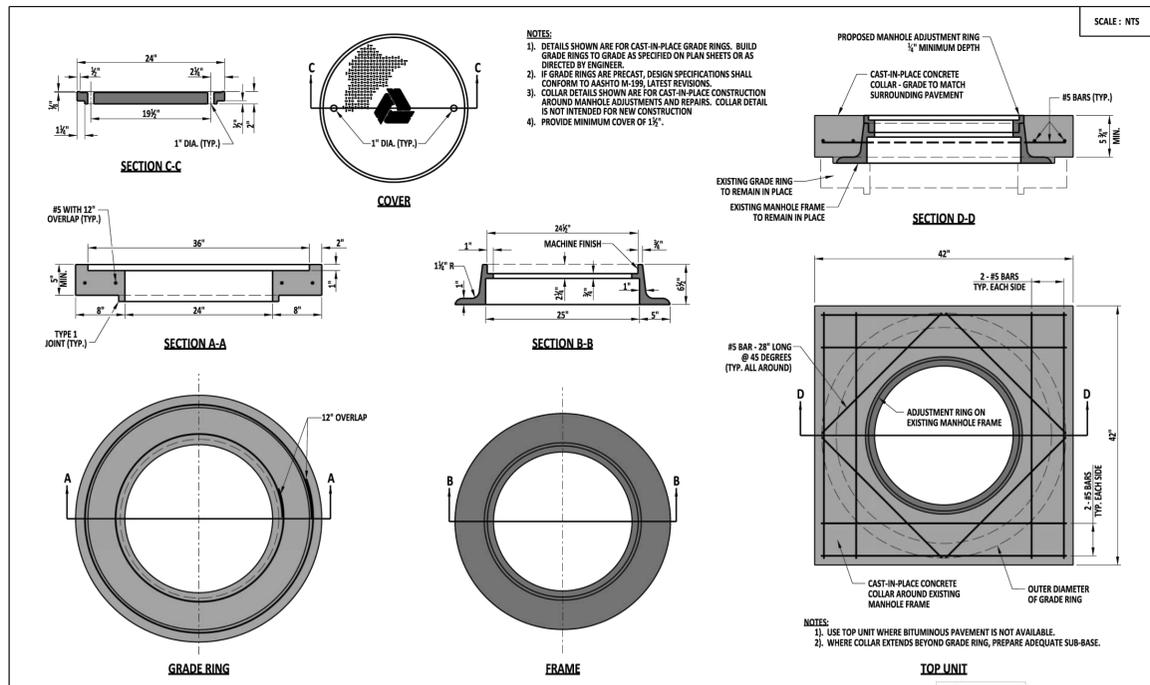




DeIDOT	RECOMMENDED	STANDARD NO.	BOX MANHOLE ASSEMBLY			REVIEWED	23 December 2023
			D-6 (2024)	SHT. 1	OF 5		



DeIDOT	RECOMMENDED	STANDARD NO.	ROUND MANHOLE ASSEMBLY			REVIEWED	23 October 2024
			D-6 (2025)	SHT. 2	OF 5		



DeIDOT	RECOMMENDED	STANDARD NO.	MANHOLE GRADE RING, TOP UNIT, FRAME AND COVER			REVIEWED	09/01/2020
			D-6 (2020)	SHT. 3	OF 5		

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ADDENDA / REVISIONS

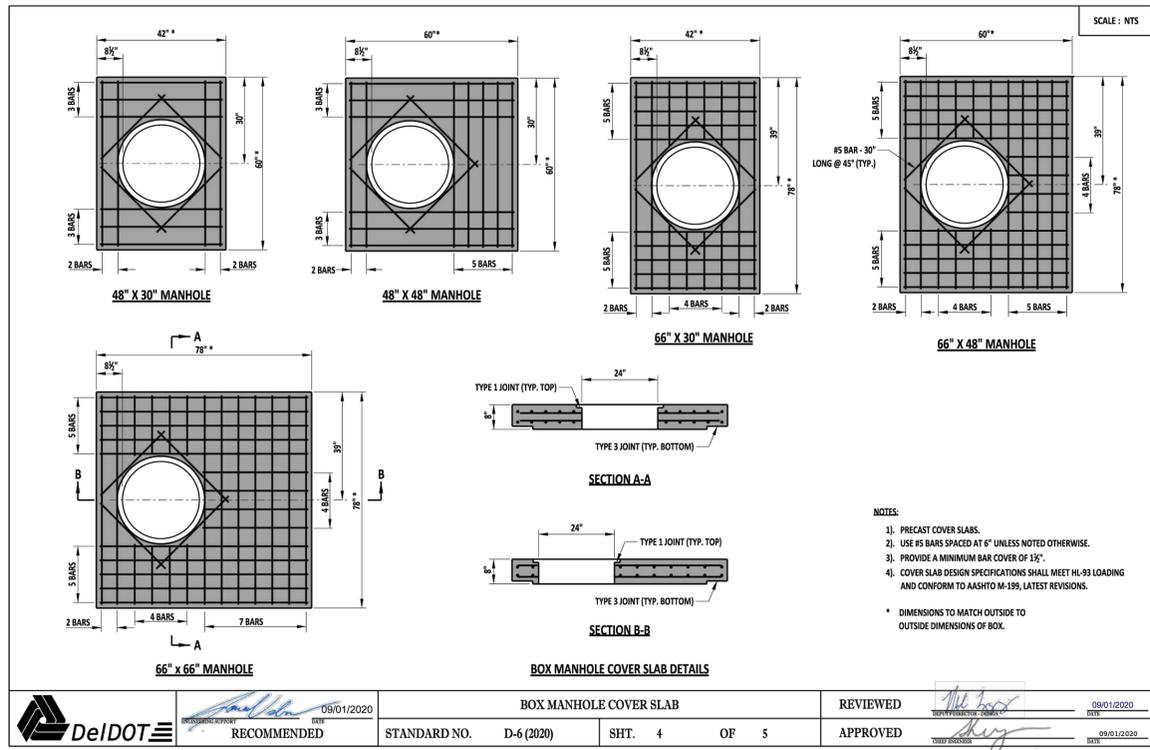
NOT TO SCALE

OLD DUPONT ROAD AT SILVERBROOK DRIVE, TAYLOR ROAD, & SOUTHERN ROAD DRAINAGE IMPROVEMENTS

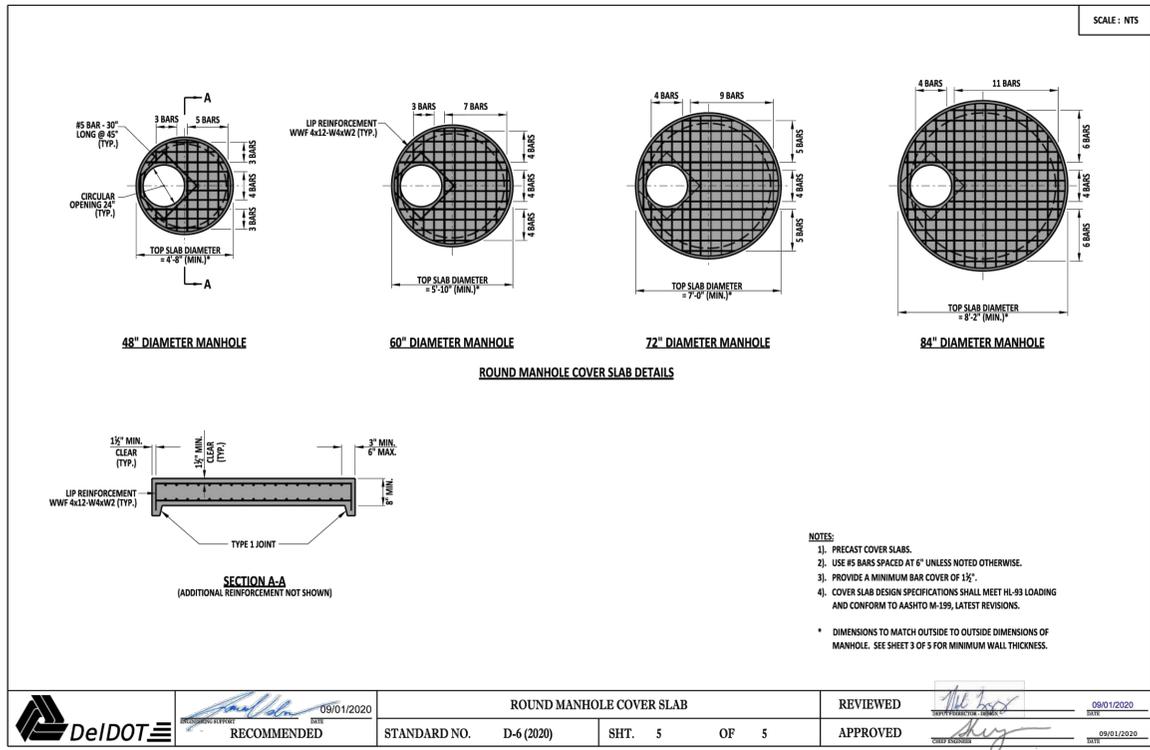
CONTRACT	BRIDGE NO.	N/A
TXXXXXXX	DESIGNED BY:	
COUNTY	CHECKED BY:	
NEW CASTLE		

CONSTRUCTION DETAILS

SECTION	CD
SHEET NO.	12



De/IDOT	RECOMMENDED	STANDARD NO. D-6 (2020)	SHT. 4	OF 5	APPROVED	REVIEWED	DATE 09/01/2020
							DATE 09/01/2020



De/IDOT	RECOMMENDED	STANDARD NO. D-6 (2020)	SHT. 5	OF 5	APPROVED	REVIEWED	DATE 09/01/2020
							DATE 09/01/2020

SCALE: NTS

INLET BOX SIZE L W	COVER SLAB SIZE (L X W)	DRAINAGE INLET TOP UNIT	INLET TOP UNIT REBAR LENGTH	INLET TOP UNIT LIMIT OF PAVEMENT	INLET TOP UNIT BAR BENDING DIAGRAM	FRAME & GRATE (SEE DETAIL D-5, SHEET 2) SEE NOTE 6	MAXIMUM PIPE SIZE (SEE NOTE 1)		MAXIMUM HEIGHT (INVERT TO TOP OF GRATE)
							L	W	
17 1/2"	11 1/2"	NO COVER SLAB	N/A	N/A	N/A	TYPE 5 (FRAME & GRATE COMBO)	N/A	N/A	4'-0"
24"	24"	NO COVER SLAB	N/A	N/A	N/A	TYPE 6 (FRAME & GRATE COMBO)	15"	15"	4'-0"
34"	18"	NO COVER SLAB (D-5, SHEET 7)	79"	82"	S504 (D-5, SHEET 7)	TYPES 1 THRU 4 AND 7 GRATE STANDARD DRAINAGE INLET FRAME	24"	N/A	4'-0"
34"	24"	NO COVER SLAB (D-5, SHEET 6)	79"	82"	S501 (SEE NOTE 4)	TYPES 1 THRU 4 AND 7 GRATE STANDARD DRAINAGE INLET FRAME	24"	15"	4'-0"
48"	30"	60" x 42" (D-5, SHEET 4)	93"	96"	S501 (SEE NOTE 4)	TYPES 1 THRU 4 AND 7 GRATE STANDARD DRAINAGE INLET FRAME	36"	21"	11'-4"
48"	48"	60" x 60" (D-5, SHEET 4)	93"	96"	S501 (SEE NOTE 4)	TYPES 1 THRU 4 AND 7 GRATE STANDARD DRAINAGE INLET FRAME	36"	36"	11'-4"
66"	30"	78" x 42" (D-4, SHEET 4)	111"	114"	S501 (SEE NOTE 4)	TYPES 1 THRU 4 AND 7 GRATE STANDARD DRAINAGE INLET FRAME	48"	21"	11'-4"
66"	48"	78" x 60" (D-5, SHEET 4)	111"	114"	S501 (SEE NOTE 4)	TYPES 1 THRU 4 AND 7 GRATE STANDARD DRAINAGE INLET FRAME	48"	36"	11'-4"
66"	66"	78" x 78" (D-5, SHEET 4)	111"	114"	S501 (SEE NOTE 4)	TYPES 1 THRU 4 AND 7 GRATE STANDARD DRAINAGE INLET FRAME	48"	48"	11'-4"
72"	24"	84" x 36" (D-5, SHEET 5)	117"	120"	S501 (SEE NOTE 4)	TYPES 1 THRU 4 AND 7 GRATE STANDARD DRAINAGE INLET FRAME	54"	15"	4'-0"
72"	48"	84" x 60" (D-5, SHEET 5)	117"	120"	S501 (SEE NOTE 4)	TYPES 1 THRU 4 AND 7 GRATE STANDARD DRAINAGE INLET FRAME	54"	36"	11'-4"
72"	72"	84" x 84" (D-5, SHEET 5)	117"	120"	S501 (SEE NOTE 4)	TYPES 1 THRU 4 AND 7 GRATE STANDARD DRAINAGE INLET FRAME	54"	54"	11'-4"

NOTES:  
1. MAXIMUM PIPE SIZES ARE CALCULATED USING REINFORCED CONCRETE PIPE PERPENDICULAR TO THE BOX WALL. FOR OTHER PIPE SIZES, TYPES AND SKEW ANGLES OTHER THAN PERPENDICULAR, SEE CHART ON DELDOT DESIGN RESOURCE CENTER. THESE PIPE SIZES ARE NOT APPLICABLE FOR DOGHOUSE BOX INLET SHOWN ON DETAIL D-5, SHEET 9.  
2. SEE D-4 OR APPROPRIATE DETAIL SHEET FOR ADDITIONAL NOTES.  
3. FOR A 34" X 24" DRAINAGE INLET, SEE DETAIL D-5, SHEET 6 FOR INLET TOP UNIT TYPES A, B, C, D, & E. FOR INLET TOP UNIT TYPES A, B, C, D, E & S, SEE NOTE 4.  
4. FOR MORE INFORMATION ON DRAINAGE INLET TOP UNIT TYPES A, B, C, D, & E SEE DETAIL D-5, SHEET 3 AND FOR DRAINAGE INLET TOP UNIT, TYPE S, SEE DETAIL D-5, SHEET 2.  
5. ONLY USE THE TYPE 7 DRAINAGE INLET GRATE WHEN SPECIFIED ON THE PLANS OR WITH APPROVAL OF THE ENGINEER.

De/IDOT	RECOMMENDED	STANDARD NO. D-R (2025)	SHT. 1	OF 1	APPROVED	REVIEWED	DATE 23 October 2024
							DATE 10/23/2024

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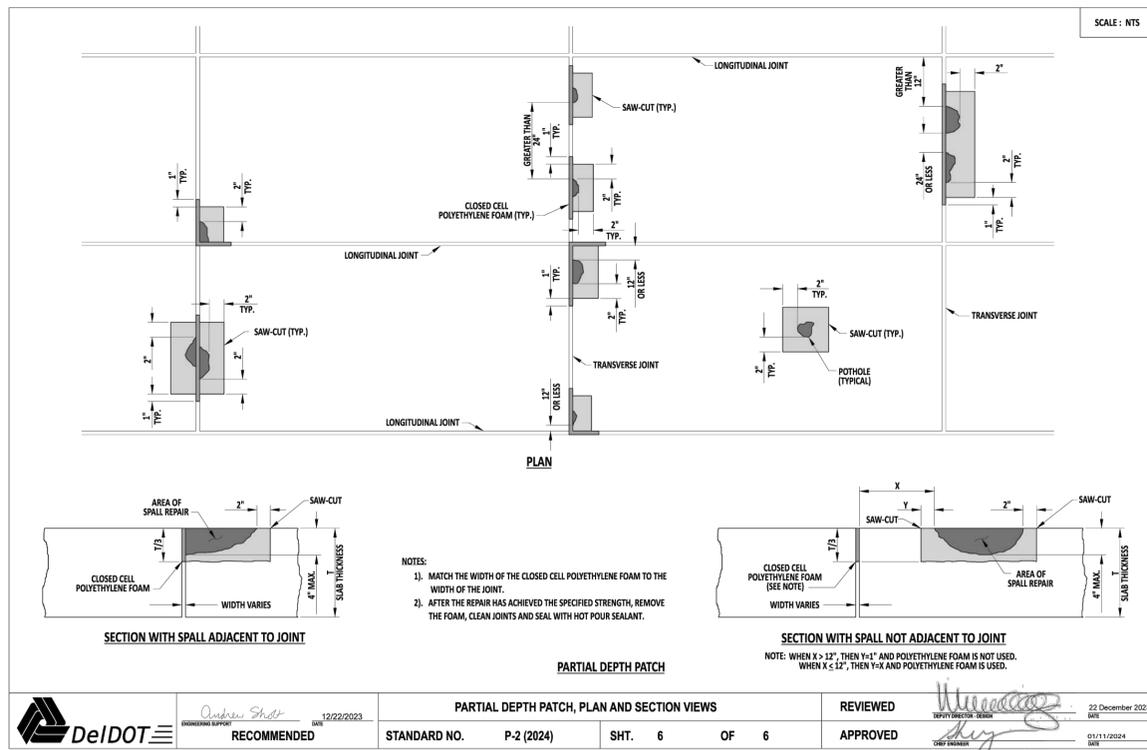
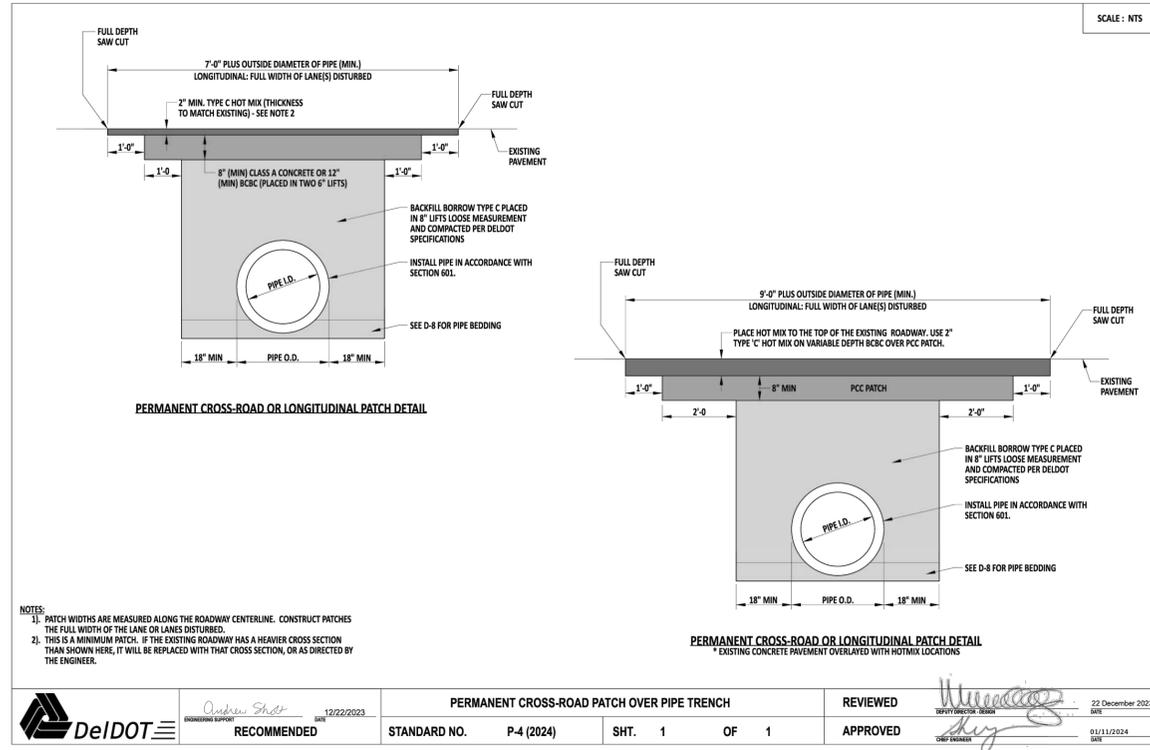
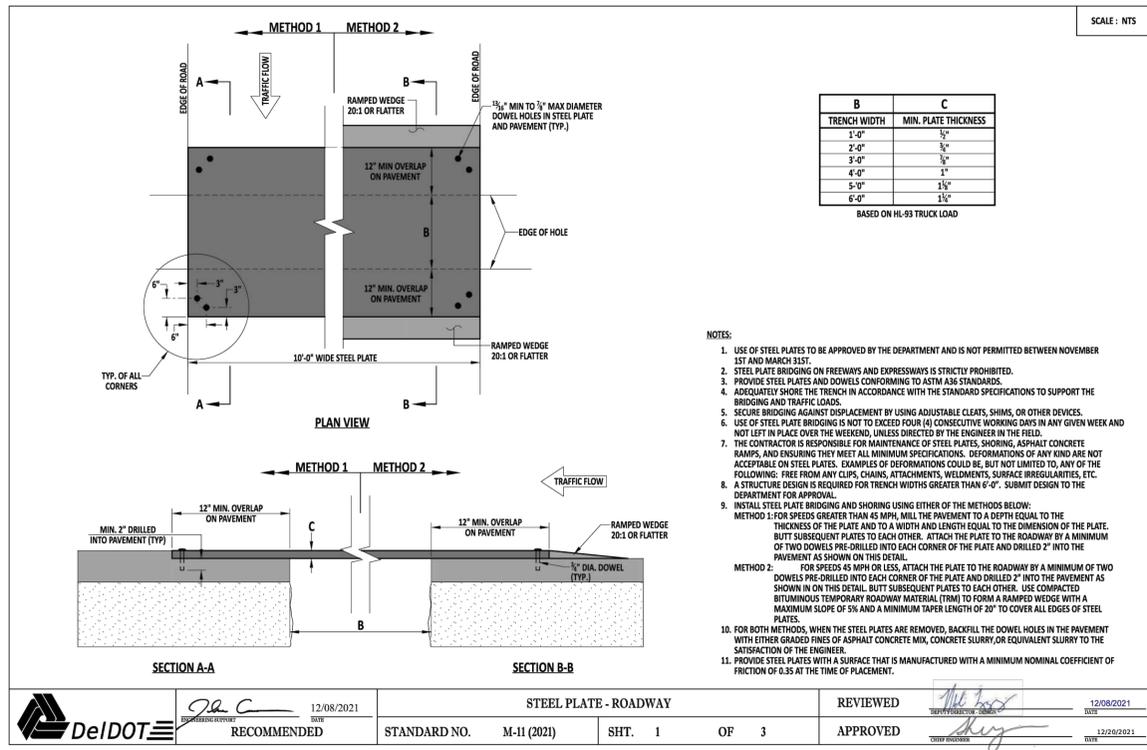
NOT TO SCALE

OLD DUPONT ROAD AT SILVERBROOK DRIVE, TAYLOR ROAD, & SOUTHERN ROAD DRAINAGE IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
TXXXXXXX	DESIGNED BY:	
COUNTY	CHECKED BY:	
NEW CASTLE		

CONSTRUCTION DETAILS

SECTION	CD
SHEET NO.	13



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ADDENDA / REVISIONS

NOT TO SCALE

OLD DUPONT ROAD AT SILVERBROOK DRIVE,  
 TAYLOR ROAD, & SOUTHERN ROAD  
 DRAINAGE IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
TXXXXXXX	DESIGNED BY:	
COUNTY	CHECKED BY:	
NEW CASTLE		

CONSTRUCTION DETAILS

SECTION
CD
SHEET NO.
14

**Standard Detail & Specifications**  
**Vegetative Stabilization**

TEMPORARY SEEDING BY RATES, DEPTHS AND DATES												
Mix #	Species <sup>2</sup>	Seeding Rate		Optimum Seeding Dates <sup>1</sup>								Planting Depth <sup>3</sup>
		lb/Ac <sup>4</sup>	lb/1000 sq.ft.	Coastal Plain				Piedmont				
	<b>Certified Seed</b>			2/1-4/30	5/1-8/14	8/15-10/31	3/1-4/30	5/1-7/31	8/1-10/31	10/31-2/1		
1	Barley	125	4	O	A	O	O	A	O		1-2 inches 2-3" sandy soils	
2	Oats	125	4	O	A	A	O	A	A		1-2 inches 2-3" sandy soils	
3	Rye	125	4	O	A	O	O	A	O	A	1-2 inches 2-3" sandy soils	
4	Perennial Ryegrass	125	4	O	A	O	O	A	O		0.5 inches 1-2" sandy soils	
5	Annual Ryegrass	125	4	O	A	O	O	A	O	A	0.5 inches 1-2" sandy soils	
6	Winter Wheat	125	4	O	A	O	O	A	O	A	1-2 inches 2-3" sandy soils	
7	Foxtail Millet	30 PLS	0.7								0.5 inches 1-2" sandy soils	
8	Pearl Millet	20 PLS	0.5								0.5 inches 1-2" sandy soils	

1. Winter seeding requires 3 tons per acre of straw mulch for proper stabilization.
2. May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
3. Applicable on slopes 3:1 or less.
4. Use varieties currently recommended for Delaware. Contact a County Extension Office for information.
5. Warm season grasses such as Millet may be used between 5/1 and 9/1 if desired. Seed at 3-5 lbs. per acre. Good on low fertility and acid areas. Seed after frost through summer at a depth of 0.5".

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		<b>DE-ESC-3.4.3</b> Sheet 1 of 4 Effective July 2023

**Standard Detail & Specifications**  
**Vegetative Stabilization**

PERMANENT SEEDING AND SEEDING DATES												
Mix No.	Certified Seed <sup>2</sup>	Seeding Rate <sup>1</sup>		Optimum Seeding Dates <sup>2</sup>								Remarks
		lb/Ac	lb/1000 sq.ft.	Coastal Plain				Piedmont				
	<b>Well Drained Soils</b>			2/1-4/30	5/1-8/14	8/15-10/31	3/1-4/30	5/1-7/31	8/1-10/31	10/31-2/1		
1	Tall Fescue Canada Wild Rye	140	3.2	A	O	A	A	O	A		Good erosion control mix Tolerant of low fertility soils Good for droughty sites	
2	Deertongue Sheep Fescue White Clover	30	0.69	A	O	A	A	O	A		Good erosion control mix Tolerant of low fertility soils Legume that fixes atmospheric N into soil	
3	Tall Fescue (Turf-type) or Strong Creeping Red Fescue or Perennial Ryegrass	50	1.15	O	A <sup>4</sup>	O	O	A <sup>4</sup>	O		Good erosion control mix Tall Fescue for droughty conditions. Creeping Red Fescue for heavy shade. Flatpea to suppress woody vegetation.	
4	Strong Creeping Red Fescue Kentucky Bluegrass Perennial Ryegrass or Redtop	100	2.3	O	A <sup>4</sup>	O	O	A <sup>4</sup>	O		Suitable wetway mix. Canada Bluegrass more drought tolerant. Use Redtop for increased drought tolerance.	
5	Switchgrass <sup>5</sup> or Kentucky Bluegrass Perennial Ryegrass Little Bluestem Indian Grass	10	0.23								Native warm-season mixture. Tolerant of low fertility soils. Drought tolerance. Poor shade tolerance. N fertilizer discouraged - weeds	
6	Tall Fescue (turf-type) (Blend of 3 cultivars)	150	3.5	O	A <sup>4</sup>	O	O	A <sup>4</sup>	O		Managed filter strip for nutrient uptake.	
7	Tall Fescue Ky. Bluegrass (Blend) Perennial Ryegrass	150	3.5	O	A <sup>4</sup>	O	O	A <sup>4</sup>	O		Three cultivars of Kentucky Bluegrass. Traffic tolerant.	
8	Big Bluestem <sup>6</sup> Little Bluestem <sup>7</sup> Creeping Red Fescue plus one of: Partridge Pea Bush Clover Wild Indigo Showy Tick-Trefoil	10	0.23	O	A <sup>4</sup>			O	A <sup>4</sup>		All species are native. Indian Grass and Bluestem have luffy seeds. Plant with a specialized native seed drill. Creeping Red Fescue will provide erosion protection while the warm season grasses get established.	

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		<b>DE-ESC-3.4.3</b> Sheet 2 of 4 Effective July 2023

**Standard Detail & Specifications**  
**Vegetative Stabilization**

PERMANENT SEEDING AND SEEDING DATES (cont.)												
Mix No.	Certified Seed <sup>2</sup>	Seeding Rate <sup>1</sup>		Optimum Seeding Dates <sup>2</sup>								Remarks
		lb/Ac	lb/1000 sq.ft.	Coastal Plain				Piedmont				
	<b>Poorly Drained Soils</b>			2/1-4/30	5/1-8/14	8/15-10/31	3/1-4/30	5/1-7/31	8/1-10/31	10/31-2/1		
9	Redtop Creeping Bentgrass Sheep Fescue Rough Bluegrass	75	1.72	O	A <sup>4</sup>	O	O	A <sup>4</sup>	O		Quick stabilization of disturbed sites and waterways	
10	Switchgrass <sup>5</sup>	10	0.23	A				O			Good erosion control, wildlife cover and wetland revegetation.	
<b>Residential Lawns</b>												
11	Tall Fescue Perennial Ryegrass Kentucky Bluegrass Blend	100	2.3	O	A <sup>4</sup>	O	O	A <sup>4</sup>	O		High value, high maintenance, light traffic, irrigation necessary. Well drained soils, full sun.	
12	Tall Fescue Perennial Ryegrass Sheep Fescue	100	2.3	O	A <sup>4</sup>	O	O	A <sup>4</sup>	O		Moderate value, low maintenance, traffic tolerant.	
13	Creeping Red Fescue Chewings Fescue Rough Bluegrass Kentucky Bluegrass	50	1.15	O	A <sup>4</sup>	O	O	A <sup>4</sup>	O		Shade tolerant, moderate traffic tolerance, moderate maintenance.	
14	Creeping Red Fescue Rough Bluegrass or Chewings Fescue	50	1.15	O	A <sup>4</sup>	O	O	A <sup>4</sup>	O		Shade tolerant, moisture tolerant.	
15	K-31 Tall Fescue	150	3.5	O	A <sup>4</sup>	O	O	A <sup>4</sup>	O		Monoculture, but performs well alone in lawns. Discouraged.	

1. When hydroseeding is the chosen method of application, the total rate of seed should be increased by 25%.
2. Winter seeding requires 3 tons per acre of straw mulch. Planting dates listed above are average for Delaware. These dates may require adjustment to reflect local conditions.
3. All seed shall meet the minimum purity and minimum germination percentages recommended by the Delaware Department of Agriculture. The maximum % of weed seeds shall be in accordance with Chapter 15, Title 3 of the Delaware Code.
4. Turf-type species may be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
5. It is recommended that all leguminous seed be inoculated.
6. Warm season grass mix and Switchgrass cannot be mowed more than 4 times per year.
7. Warm season grasses require a soil temperature of at least 50 degrees in order to germinate and will remain dormant until then.

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		<b>DE-ESC-3.4.3</b> Sheet 3 of 4 Effective July 2023

**Standard Detail & Specifications**  
**Vegetative Stabilization**

**Construction Notes:**

1. Site Preparation
  - a. Prior to seeding, install needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, grassed waterways, and sediment basins.
  - b. Final grading and shaping is not necessary for temporary seedings.

2. Seedbed Preparation

It is important to prepare a good seedbed to ensure the success of establishing vegetation. The seedbed should be well prepared, loose, uniform, and free of large clods, rocks, and other objectionable material. The soil surface should not be compacted or crusted.

3. Soil Amendments

- a. Lime - Apply liming materials based on the recommendations of a **soil test** in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply dolomitic limestone at the rate of 1 to 2 tons per acre. Apply limestone uniformly and incorporate into the top 4 to 6 inches of soil.
- b. Fertilizer - Apply fertilizer based on the recommendations of a **soil test** in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply a formulation of 10-10-10 at the rate of 600 pounds per acre. Apply fertilizer uniformly and incorporate into the top 4 to 6 inches of soils.

4. Seeding

- a. For **temporary stabilization**, select a mixture from **Sheet 1**. For a **permanent stabilization**, select a mixture from **Sheet 2** or **Sheet 3** depending on the conditions. Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.
- b. Apply seed uniformly with a broadcast seeder, drill, cultipacker seeder or hydroseeder. All seed will be applied at the recommended rate and planting depth.
- c. Seed that has been broadcast should be covered by raking or dragging and then **lightly** tamped into place using a roller or cultipacker. If hydroseeding is used and the seed and fertilizer is mixed, they will be mixed on site and the seeding shall be done immediately and without interruption.

5. Mulching

All mulching shall be done in accordance with detail **DE-ESC-3.4.5**.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		<b>DE-ESC-3.4.3</b> Sheet 4 of 4 Effective July 2023

ADDENDA / REVISIONS

NOT TO SCALE

OLD DUPONT ROAD AT SILVERBROOK DRIVE,  
TAYLOR ROAD, & SOUTHERN ROAD  
DRAINAGE IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
TXXXXXXXXX	DESIGNED BY:	
COUNTY	CHECKED BY:	
NEW CASTLE		

EROSION & SEDIMENT CONTROL  
VEGETATION DETAILS

SECTION
ES
SHEET NO.
15

TRAFFIC CONTROL NOTES:

1. ALL STANDARD REGULATORY AND WARNING SIGNS AND OTHER TRAFFIC CONTROL DEVICES USED FOR MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE 2011 DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION).
2. ALL TEMPORARY TRAFFIC SIGNS SHALL BE INSTALLED IN ACCORDANCE TO DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
3. ALL TEMPORARY SIGNS SHOWN ON THIS PLAN SHALL BE PLACED SO THAT THEY DO NOT OBSTRUCT EXISTING TRAFFIC CONTROL DEVICES (MINIMUM 100' SPACING).
4. ANY CORRECTIONS, MODIFICATIONS, OR ADDITIONS TO THIS PLAN MUST BE APPROVED BY THE TOWN OF ELSMERE.
5. MISS UTILITY MUST BE NOTIFIED PRIOR TO PLACEMENT OF SIGNING, IF MOUNTING ON POSTS.
6. SIGN INSTALLATION SHALL NOT LAST ANY LONGER THAN 15 MINUTES PER LOCATION. IF LONGER THAN 15 MINUTES APPROPRIATE TRAFFIC CONTROL AND PERMITS MUST BE USED.
7. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES. AT ANYTIME THE CONTRACTOR DOES NOT MAKE NECESSARY REPAIRS WITHIN 24 HOURS OF NOTIFICATION, APPROPRIATE WORK TIME REDUCTION AND/OR FINES MAY BE APPLIED.
8. ALL DRIVEWAY ENTRANCES MUST BE MAINTAINED AT ALL TIMES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THE SAFETY OF THE PUBLIC AND THE WORK CREW IS MAINTAINED AT ALL TIMES THROUGHOUT THE TERM OF THE CONTRACT. MOTORISTS SHALL BE GUIDED IN A CLEAR AND POSITIVE MANNER WHILE TRAVELING THROUGH THE WORK ZONE.
10. THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS FROM THE TRAVELED PORTION OF THE ROADWAY. NO EQUIPMENT OR MATERIALS SHOULD BE STORED IN A WAY THAT OBSTRUCTS SIGHT DISTANCE AT INTERSECTING ROADWAYS AND SHALL NOT BE STORED WITHIN THE 30-FOOT CLEAR ZONE WITHOUT POSITIVE PROTECTION. THE CONTRACTOR AND INSPECTORS SHALL NOT PARK VEHICLES BEHIND DRUMS WITHIN THE TAPER AND BUFFER AREAS.
11. ANY DAMAGE TO EXISTING STRUCTURES, SIGNS, POSTS AND HARDWARE AS A RESULT OF OPERATIONS DURING CONSTRUCTION SHALL BE REPLACED AT NO ADDITIONAL COST TO THE COUNTY.
12. IN THE EVENT THAT ADJACENT CONSTRUCTION PROJECTS OCCUR SIMULTANEOUSLY WITH THIS PROJECT, COORDINATION OF THE TRAFFIC CONTROL PLANS FOR EACH PROJECT WILL BE REQUIRED BY THE CONTRACTOR. SPECIFICALLY, THE LOCATION OF OVERLAPPING ADVANCED WARNING SIGNS SHALL BE ADJUSTED AS REQUIRED.
13. ALL TEMPORARY SIGNS INSTALLED FOR THIS PROJECT SHALL BE ADJUSTED TO AVOID CONFLICTS WITH EXISTING SIGNS. ANY EXISTING OR TEMPORARY SIGN THAT IS NO LONGER APPLICABLE SHALL BE COVERED OR REMOVED AND RESTORED WHEN THE PROJECT IS COMPLETE. TEMPORARY SIGNS SHALL MAINTAIN A MINIMUM SPACING OF 200 FEET BETWEEN SIGNS.
14. WORK HOURS ARE 9 A.M. TO 3 P.M. MONDAY THROUGH FRIDAY.
15. AT THE END OF THE WORKDAY BACKFILL OR COVER WITH STEEL PLATES ALL OPEN EXCAVATIONS. INCLUDE STEEL PLATE WARNING SIGNS WHEN NEEDED.
16. CONTRACTOR SHALL COORDINATE WITH THE TOWN OF ELSMERE TO REQUEST APPROVAL FOR A TRAFFIC DETOUR. THE DETOUR SHALL FOLLOW DELAWARE MUTCD FIGURE 6H-20. DETOUR FOR A CLOSED STREET (TA-20).
17. CONTRACTOR SHALL LIMIT ALL DROP-OFFS TO NO MORE THAN 2 INCHES. IF A DROP OFF IS GREATER THAN 2 INCHES, THE CONTRACTOR SHALL INSTALL TEMPORARY PAVEMENT/OR APPROPRIATE MATERIAL AS APPROVED BY THE TOWN OF ELSMERE AS NEEDED TO REDUCE THE DROP OFF TO 2 INCHES OR LESS.

SEQUENCE OF CONSTRUCTION

1. SETUP THE WORKZONE FOR THE DAY. INSTALL FLAGGING OPERATION.
2. COMPLETE CONSTRUCTION FOR THE WORK DAY.
3. ELIMINATE DROP-OFFS AND OPEN EXCAVATIONS. RESTORE ALL TRAFFIC LANES TO NORMAL OPERATIONS AT THE END OF THE WORK DAY.



ADDENDA / REVISIONS

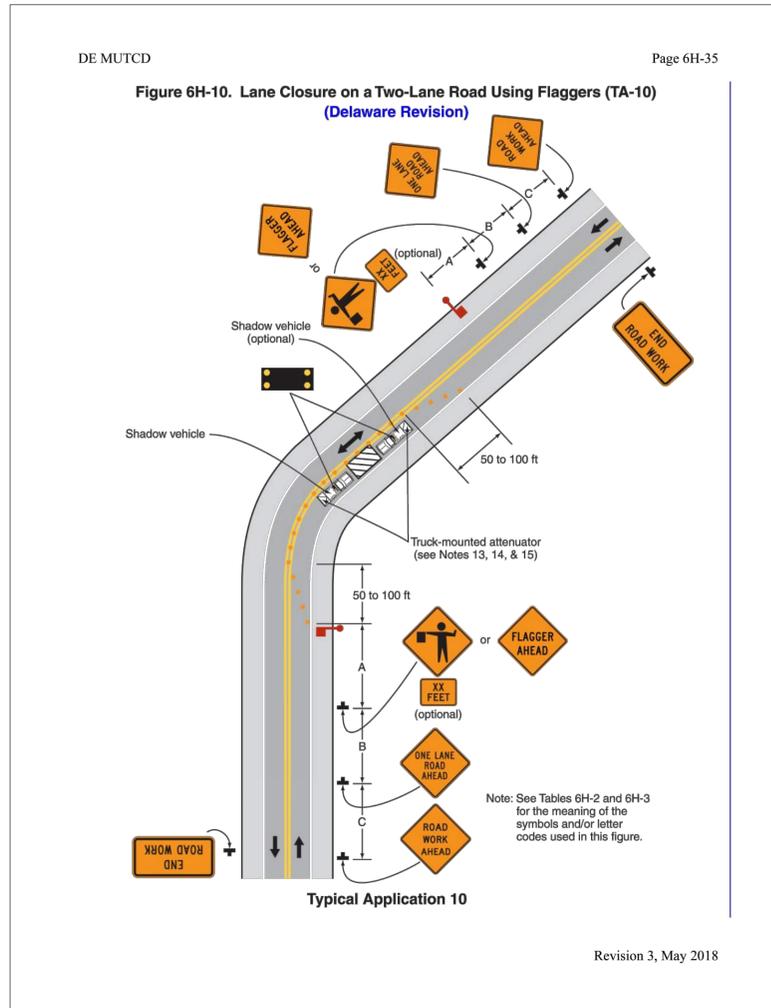

OLD DUPONT ROAD AT SILVERBROOK DRIVE, TAYLOR ROAD, & SOUTHERN ROAD DRAINAGE IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
TXXXXXXXX	DESIGNED BY:	
COUNTY	CHECKED BY:	
NEW CASTLE		

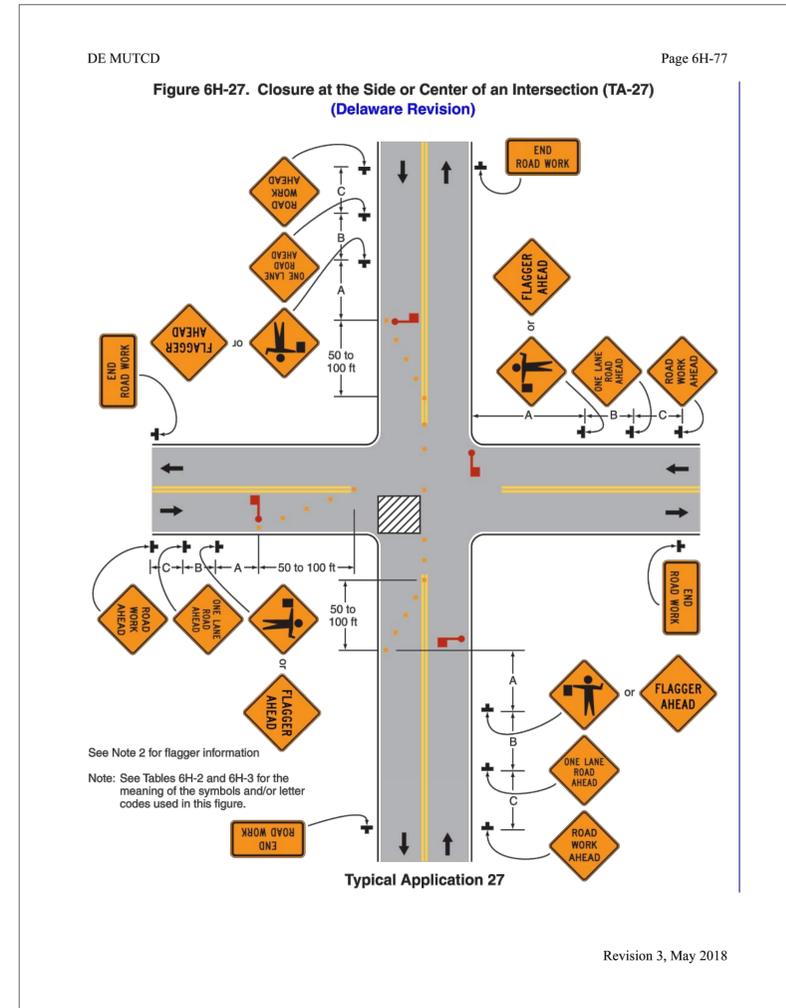
MAINTENANCE OF TRAFFIC PLAN

SECTION
MOT
SHEET NO.
16

MOT NOTE: USE THIS DETAIL WHEN WORK AND EQUIPMENT IS WITHIN THE ROADWAY.



MOT NOTE: USE THIS DETAIL WHEN WORK AND EQUIPMENT IS WITHIN THE ROADWAY AT OR NEAR AN INTERSECTION.



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